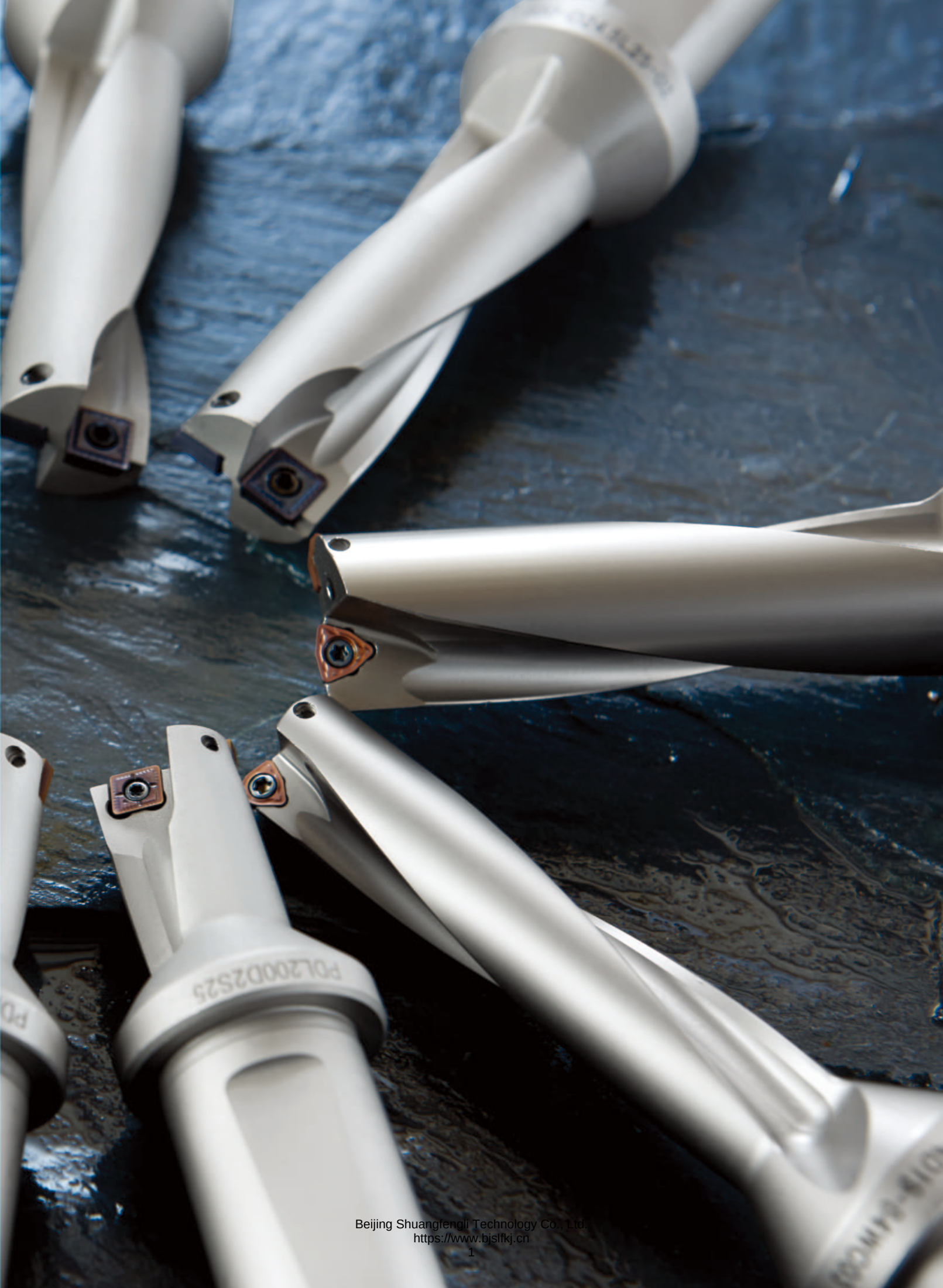




北京双利丰科技发展有限公司

Beijing Shuangfengli Technology Co., Ltd





# TDR-2 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 2 D

Holder diameter 2D: Φ13.0 ~ 60.0mm

加工公差標準 -0.25~+0.25

Range of machining tolerance:-0.25~+0.25

最大加工深度  $\ell \ 2 \times \Phi Dc$

Drilling depth: 2xdiameter

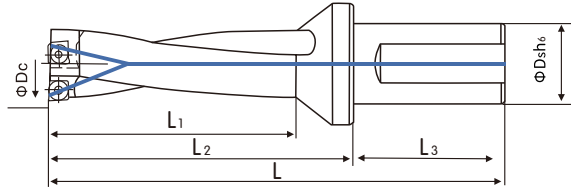


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  | 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|------|----------------|----------------|----------------|---------------------------|-----|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 10        |           | 2D10-22SP04              | ●           | 85.5 | 22             | 35.5           |                | SP..04T102                | 0.2 | 34        |           | 2D34-72SP09/11           | ●           | 156 | 72             | 96             |                | SP..090408                | 0.8 |
| 10.5      |           | 2D10.5-23SP04            | ●           | 86.5 | 22             | 35.5           |                |                           | 0.2 | 34.5      |           | 2D34.5-73SP09/11         | ●           | 157 | 73             | 97             |                | SP..110408                | 0.8 |
| 11        |           | 2D11-24SP04              | ●           | 87.5 | 24             | 36.5           |                |                           | 0.2 | 35        |           | 2D35-74SP11              | ●           | 158 | 74             | 98             |                | SP..110408                | 0.8 |
| 11.5      |           | 2D11.5-24SP04            | ●           | 88   | 24             | 38             |                |                           | 0.2 | 35.5      |           | 2D35.5-75SP11            | ●           | 159 | 75             | 99             |                |                           | 0.8 |
| 12        |           | 2D12-26SP04              | ●           | 90   | 25             | 40             |                | SP..050204                | 0.2 | 36        | 32        | 2D36-76SP11              | ●           | 160 | 76             | 100            | 60             |                           | 0.9 |
| 12.5      |           | 2D12.5-27SP04            | ●           | 93   | 27             | 43             |                |                           | 0.2 | 36.5      |           | 2D36.5-77SP11            | ●           | 161 | 77             | 101            |                |                           | 0.9 |
| 13        |           | 2D13-29SP05              | ●           | 88   | 29             | 44             |                |                           | 0.2 | 37        |           | 2D37-79SP11              | ●           | 169 | 79             | 109            |                |                           | 0.9 |
| 13.5      | 20        | 2D13.5-30SP05            | ●           | 89   | 30             | 45             | 44             |                           | 0.2 | 37.5      |           | 2D37.5-80SP11            | ●           | 170 | 80             | 110            |                |                           | 0.9 |
| 14        |           | 2D14-31SP05              | ●           | 90   | 31             | 46             |                | SP..060204                | 0.2 | 38        |           | 2D38-81SP11              | ●           | 171 | 81             | 111            |                | SP..110408                | 0.9 |
| 14.5      |           | 2D14.5-32SP05            | ●           | 91   | 32             | 47             |                |                           | 0.2 | 38.5      |           | 2D38.5-82SP11            | ●           | 172 | 82             | 112            |                |                           | 0.9 |
| 15        |           | 2D15-33SP05              | ●           | 92   | 33             | 48             |                |                           | 0.2 | 39        |           | 2D39-83SP11              | ●           | 173 | 83             | 113            |                |                           | 1.0 |
| 15.5      |           | 2D15.5-34SP05            | ●           | 93   | 34             | 49             |                |                           | 0.2 | 39.5      |           | 2D39.5-84SP11            | ●           | 174 | 84             | 114            |                |                           | 1.1 |
| 16        |           | 2D16-35SP06              | ●           | 94   | 35             | 50             |                | SP..07T308                | 0.2 | 40        |           | 2D40-85SP11              | ●           | 185 | 85             | 115            |                | SP..140512                | 1.1 |
| 16.5      |           | 2D16.5-36SP06            | ●           | 95   | 36             | 51             |                |                           | 0.2 | 40.5      |           | 2D40.5-86SP11            | ○           | 186 | 86             | 116            |                |                           | 1.1 |
| 17        |           | 2D17-37SP06              | ●           | 96   | 37             | 52             |                |                           | 0.2 | 41        |           | 2D41-87SP11              | ○           | 187 | 87             | 117            |                |                           | 1.1 |
| 17.5      |           | 2D17.5-38SP06            | ●           | 109  | 38             | 53             |                |                           | 0.2 | 41.5      |           | 2D41.5-88SP11            | ○           | 188 | 88             | 118            |                |                           | 1.1 |
| 18        |           | 2D18-39SP06              | ●           | 110  | 39             | 54             |                | SP..060204                | 0.3 | 42        |           | 2D42-89SP14              | ○           | 189 | 89             | 119            |                | SP..140512                | 1.1 |
| 18.5      |           | 2D18.5-40SP06            | ●           | 111  | 40             | 55             |                |                           | 0.3 | 42.5      |           | 2D42.5-90SP14            | ○           | 190 | 90             | 120            |                |                           | 1.3 |
| 19        |           | 2D19-41SP06              | ●           | 112  | 41             | 56             |                |                           | 0.3 | 43        |           | 2D43-91SP14              | ○           | 191 | 91             | 121            |                |                           | 1.5 |
| 19.5      |           | 2D19.5-42SP06            | ●           | 113  | 42             | 57             |                |                           | 0.3 | 43.5      |           | 2D43.5-92SP14            | ○           | 192 | 92             | 122            |                |                           | 1.5 |
| 20        |           | 2D20-43SP06              | ●           | 114  | 43             | 58             |                | SP..07T308                | 0.3 | 44        |           | 2D44-93SP14              | ○           | 193 | 93             | 123            |                | SP..140512                | 1.6 |
| 20.5      |           | 2D20.5-44SP06            | ●           | 115  | 44             | 59             |                |                           | 0.3 | 44.5      |           | 2D44.5-94SP14            | ○           | 194 | 94             | 124            |                |                           | 1.6 |
| 21        | 25        | 2D21-45SP06              | ●           | 116  | 45             | 60             | 56             |                           | 0.3 | 45        |           | 2D45-95SP14              | ○           | 195 | 95             | 125            |                |                           | 1.7 |
| 21.5      |           | 2D21.5-46SP06            | ●           | 117  | 46             | 61             |                |                           | 0.3 | 45.5      |           | 2D45.5-96SP14            | ○           | 196 | 96             | 126            |                |                           | 1.7 |
| 22        |           | 2D22-47SP07              | ●           | 118  | 47             | 62             |                | SP..07T308                | 0.4 | 46        |           | 2D46-97SP14              | ○           | 197 | 97             | 127            |                | SP..140512                | 1.7 |
| 22.5      |           | 2D22.5-48SP07            | ●           | 119  | 48             | 63             |                |                           | 0.4 | 46.5      |           | 2D46.5-98SP14            | ○           | 198 | 98             | 128            |                |                           | 1.8 |
| 23        |           | 2D23-49SP07              | ●           | 123  | 49             | 67             |                |                           | 0.4 | 47        |           | 2D47-99SP14              | ○           | 199 | 99             | 129            |                |                           | 1.8 |
| 23.5      |           | 2D23.5-50SP07            | ●           | 124  | 50             | 68             |                |                           | 0.4 | 47.5      | 40        | 2D47.5-100SP14           | ○           | 200 | 100            | 130            | 70             |                           | 1.8 |
| 24        |           | 2D24-51SP07              | ●           | 125  | 51             | 69             |                | SP..07T308                | 0.4 | 48        |           | 2D48-101SP14             | ○           | 201 | 101            | 131            |                | SP..140512                | 1.8 |
| 24.5      |           | 2D24.5-52SP07            | ●           | 126  | 52             | 70             |                |                           | 0.4 | 48.5      |           | 2D48.5-102SP14           | ○           | 202 | 102            | 132            |                |                           | 1.8 |
| 25        |           | 2D25-53SP07              | ●           | 127  | 53             | 71             |                |                           | 0.4 | 49        |           | 2D49-103SP14             | ○           | 203 | 103            | 133            |                |                           | 1.9 |
| 25.5      |           | 2D25.5-54SP07            | ●           | 134  | 54             | 74             |                |                           | 0.6 | 49.5      |           | 2D49.5-105SP14           | ○           | 204 | 104            | 134            |                |                           | 1.9 |
| 26        |           | 2D26-55SP07              | ●           | 135  | 55             | 75             |                | SP..07T308                | 0.6 | 50        |           | 2D50-105SP14             | ○           | 205 | 105            | 135            |                | SP..140512                | 1.9 |
| 26.5      |           | 2D26.5-56SP07            | ●           | 136  | 56             | 76             |                |                           | 0.6 | 51        |           | 2D51-107SP14             | ○           | 207 | 107            | 137            |                |                           | 2.0 |
| 27        |           | 2D27-57SP07              | ●           | 137  | 57             | 77             |                |                           | 0.6 | 52        |           | 2D52-109SP14             | ○           | 209 | 109            | 139            |                |                           | 2.0 |
| 27.5      |           | 2D27.5-58SP07            | ●           | 138  | 58             | 78             |                |                           | 0.6 | 53        |           | 2D53-111SP14             | ○           | 211 | 111            | 141            |                |                           | 2.1 |
| 28        |           | 2D28-59SP07/09           | ●           | 139  | 59             | 79             |                | SP..090408                | 0.6 | 54        |           | 2D54-113SP14             | ○           | 213 | 113            | 143            |                | SP..140512                | 2.2 |
| 28.5      |           | 2D28.5-60SP07/09         | ●           | 140  | 60             | 80             |                |                           | 0.6 | 55        |           | 2D55-115SP14             | ○           | 215 | 115            | 145            |                |                           | 2.3 |
| 29        |           | 2D29-62SP09              | ●           | 143  | 62             | 83             |                |                           | 0.7 | 56        |           | 2D56-120SP14             | ○           | 222 | 120            | 152            |                |                           | 2.4 |
| 29.5      | 32        | 2D29.5-63SP09            | ●           | 144  | 63             | 84             | 60             |                           | 0.7 | 57        |           | 2D57-122SP14             | ○           | 224 | 122            | 154            |                |                           | 2.5 |
| 30        |           | 2D30-64SP09              | ●           | 148  | 64             | 88             |                | SP..090408                | 0.7 | 58        |           | 2D58-124SP14             | ○           | 226 | 124            | 156            |                | SP..140512                | 2.6 |
| 30.5      |           | 2D30.5-65SP09            | ●           | 149  | 65             | 89             |                |                           | 0.7 | 59        |           | 2D59-126SP14             | ○           | 228 | 126            | 158            |                |                           | 2.7 |
| 31        |           | 2D31-66SP09              | ●           | 150  | 66             | 90             |                |                           | 0.7 | 60        |           | 2D60-128SP14             | ○           | 230 | 128            | 160            |                |                           | 2.8 |
| 31.5      |           | 2D31.5-67SP09            | ●           | 151  | 67             | 91             |                |                           | 0.7 |           |           |                          |             |     |                |                |                |                           |     |
| 32        |           | 2D32-68SP09              | ●           | 152  | 68             | 92             |                |                           | 0.8 |           |           |                          |             |     |                |                |                |                           |     |
| 32.5      |           | 2D32.5-69SP09            | ●           | 153  | 69             | 93             |                |                           | 0.8 |           |           |                          |             |     |                |                |                |                           |     |
| 33        |           | 2D33-70SP09              | ●           | 154  | 70             | 94             |                |                           | 0.8 |           |           |                          |             |     |                |                |                |                           |     |
| 33.5      |           | 2D33.5-71SP09            | ●           | 155  | 71             | 95             |                |                           | 0.8 |           |           |                          |             |     |                |                |                |                           |     |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示庫存 ○表示庫存預定品

# TDR-3 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: Φ13.0 ~ 60.0mm

加工公差標準 -0.25~+0.25

Range of machining tolerance: -0.25~+0.25

最大加工深度  $\ell \times \Phi D_c$

Drilling depth: 3xdiameter

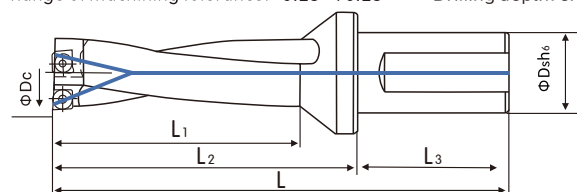


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|------|----------------|----------------|----------------|---------------------------|-----|
| 10        | 20        | 3D10-32SP04              | ●           | 97   | 32             | 47             | 44             | SP..04T102                | 0.2 |
| 10.5      |           | 3D10.5-34SP04            | ●           | 97.5 | 34             | 47.5           |                |                           | 0.2 |
| 11        |           | 3D11-34SP04              | ●           | 98.5 | 34             | 48.5           |                |                           | 0.2 |
| 11.5      |           | 3D11.5-37SP04            | ●           | 100  | 37             | 50             |                |                           | 0.2 |
| 12        |           | 3D12-38SP04              | ●           | 102  | 38             | 52             |                |                           | 0.2 |
| 12.5      |           | 3D12.5-41SP04            | ●           | 105  | 41             | 55             |                |                           | 0.2 |
| 13        |           | 3D13-42SP05              | ●           | 101  | 42             | 57             |                |                           | 0.2 |
| 13.5      |           | 3D13.5-44SP05            | ●           | 103  | 44             | 59             |                |                           | 0.2 |
| 14        |           | 3D14-45SP05              | ●           | 104  | 45             | 60             |                |                           | 0.2 |
| 14.5      |           | 3D14.5-47SP05            | ●           | 106  | 47             | 62             |                |                           | 0.2 |
| 15        |           | 3D15-48SP05              | ●           | 107  | 48             | 63             |                |                           | 0.2 |
| 15.5      |           | 3D15.5-50SP05            | ●           | 109  | 50             | 65             |                |                           | 0.2 |
| 16        |           | 3D16-51SP06              | ●           | 110  | 51             | 66             |                |                           | 0.2 |
| 16.5      |           | 3D16.5-53SP06            | ●           | 112  | 53             | 68             |                |                           | 0.2 |
| 17        |           | 3D17-54SP06              | ●           | 113  | 54             | 69             |                |                           | 0.2 |
| 17.5      | 25        | 3D17.5-56SP06            | ●           | 127  | 56             | 71             | 56             | SP..060204                | 0.2 |
| 18        |           | 3D18-57SP06              | ●           | 128  | 57             | 72             |                |                           | 0.2 |
| 18.5      |           | 3D18.5-59SP06            | ●           | 130  | 59             | 74             |                |                           | 0.2 |
| 19        |           | 3D19-60SP06              | ●           | 131  | 60             | 75             |                |                           | 0.2 |
| 19.5      |           | 3D19.5-62SP06            | ●           | 133  | 62             | 77             |                |                           | 0.2 |
| 20        |           | 3D20-63SP06              | ●           | 134  | 63             | 78             |                |                           | 0.2 |
| 20.5      |           | 3D20.5-65SP06            | ●           | 136  | 65             | 80             |                |                           | 0.2 |
| 21        |           | 3D21-66SP06              | ●           | 137  | 66             | 81             |                |                           | 0.2 |
| 21.5      |           | 3D21.5-68SP06            | ●           | 139  | 68             | 83             |                |                           | 0.2 |
| 22        |           | 3D22-69SP07              | ●           | 140  | 69             | 84             |                |                           | 0.2 |
| 22.5      |           | 3D22.5-71SP07            | ●           | 142  | 71             | 86             |                |                           | 0.2 |
| 23        |           | 3D23-72SP07              | ●           | 146  | 72             | 90             |                |                           | 0.2 |
| 23.5      |           | 3D23.5-74SP07            | ●           | 148  | 74             | 92             |                |                           | 0.2 |
| 24        |           | 3D24-75SP07              | ●           | 149  | 75             | 93             |                |                           | 0.2 |
| 24.5      |           | 3D24.5-77SP07            | ●           | 151  | 77             | 95             |                |                           | 0.2 |
| 25        |           | 3D25-78SP07              | ●           | 152  | 78             | 96             |                |                           | 0.2 |
| 25.5      | 32        | 3D25.5-80SP07            | ●           | 160  | 80             | 100            | 60             | SP..07T308                | 0.6 |
| 26        |           | 3D26-81SP07              | ●           | 161  | 81             | 101            |                |                           | 0.6 |
| 26.5      |           | 3D26.5-83SP07            | ●           | 163  | 83             | 103            |                |                           | 0.6 |
| 27        |           | 3D27-84SP07              | ●           | 164  | 84             | 104            |                |                           | 0.6 |
| 27.5      |           | 3D27.5-86SP07            | ●           | 166  | 86             | 106            |                |                           | 0.6 |
| 28        |           | 3D28-87SP07/09           | ●           | 167  | 87             | 107            |                |                           | 0.6 |
| 28.5      |           | 3D28.5-89SP07/09         | ●           | 169  | 89             | 109            |                |                           | 0.6 |
| 29        |           | 3D29-91SP09              | ●           | 172  | 91             | 112            |                |                           | 0.7 |
| 29.5      |           | 3D29.5-93SP09            | ●           | 174  | 93             | 114            |                |                           | 0.7 |
| 30        |           | 3D30-94SP09              | ●           | 178  | 94             | 118            |                |                           | 0.7 |
| 30.5      |           | 3D30.5-96SP09            | ●           | 180  | 96             | 120            |                |                           | 0.7 |
| 31        |           | 3D31-97SP09              | ●           | 181  | 97             | 121            |                |                           | 0.7 |
| 31.5      |           | 3D31.5-99SP09            | ●           | 183  | 99             | 123            |                |                           | 0.7 |
| 32        |           | 3D32-100SP09             | ●           | 184  | 100            | 124            |                |                           | 0.8 |
| 32.5      |           | 3D32.5-102SP09           | ●           | 186  | 102            | 126            |                |                           | 0.8 |
| 33        |           | 3D33-103SP09             | ●           | 187  | 103            | 127            |                |                           | 0.8 |
| 33.5      |           | 3D33.5-105SP09           | ●           | 189  | 105            | 129            |                |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 34        | 32        | 3D34-106SP09/11          | ●           | 190 | 106            | 130            | 60             | SP..090408                | 0.8 |
| 34.5      |           | 3D34.5-108SP09/11        | ●           | 192 | 108            | 132            |                |                           | 0.8 |
| 35        |           | 3D35-109SP11             | ●           | 193 | 109            | 133            |                |                           | 0.8 |
| 35.5      |           | 3D35.5-111SP11           | ●           | 195 | 111            | 135            |                |                           | 0.8 |
| 36        |           | 3D36-112SP11             | ●           | 196 | 112            | 136            |                |                           | 0.9 |
| 36.5      |           | 3D36.5-114SP11           | ●           | 198 | 114            | 138            |                |                           | 0.9 |
| 37        |           | 3D37-116SP11             | ●           | 206 | 116            | 146            |                |                           | 0.9 |
| 37.5      |           | 3D37.5-181SP11           | ●           | 208 | 118            | 148            |                |                           | 0.9 |
| 38        |           | 3D38-119SP11             | ●           | 209 | 119            | 149            |                |                           | 0.9 |
| 38.5      |           | 3D38.5-121SP11           | ●           | 211 | 121            | 151            |                |                           | 0.9 |
| 39        |           | 3D39-122SP11             | ●           | 212 | 122            | 152            |                |                           | 1.0 |
| 39.5      |           | 3D39.5-124SP11           | ●           | 214 | 124            | 154            |                |                           | 1.1 |
| 40        | 40        | 3D40-125SP11             | ●           | 225 | 125            | 155            | 70             | SP..140512                | 1.1 |
| 40.5      |           | 3D40.5-127SP11           | ○           | 227 | 127            | 157            |                |                           | 1.1 |
| 41        |           | 3D41-128SP11             | ○           | 228 | 128            | 158            |                |                           | 1.1 |
| 41.5      |           | 3D41.5-129SP11           | ○           | 229 | 129            | 159            |                |                           | 1.1 |
| 42        |           | 3D42-131SP14             | ○           | 231 | 131            | 161            |                |                           | 1.1 |
| 42.5      |           | 3D42.5-133SP14           | ○           | 233 | 133            | 163            |                |                           | 1.3 |
| 43        |           | 3D43-134SP14             | ○           | 234 | 134            | 164            |                |                           | 1.5 |
| 43.5      |           | 3D43.5-136SP14           | ○           | 236 | 136            | 166            |                |                           | 1.5 |
| 44        |           | 3D44-137SP14             | ○           | 237 | 137            | 167            |                |                           | 1.6 |
| 44.5      |           | 3D44.5-137SP14           | ○           | 237 | 137            | 167            |                |                           | 1.6 |
| 45        |           | 3D45-140SP14             | ○           | 240 | 140            | 170            |                |                           | 1.7 |
| 45.5      |           | 3D45.5-142SP14           | ○           | 242 | 142            | 172            |                |                           | 1.7 |
| 46        |           | 3D46-143SP14             | ○           | 243 | 143            | 173            |                |                           | 1.7 |
| 46.5      |           | 3D46.5-145SP14           | ○           | 245 | 145            | 175            |                |                           | 1.8 |
| 47        |           | 3D47-146SP14             | ○           | 246 | 146            | 176            |                |                           | 1.8 |
| 47.5      |           | 3D47.5-146SP14           | ○           | 246 | 146            | 176            |                |                           | 1.8 |
| 48        |           | 3D48-149SP14             | ○           | 249 | 149            | 179            |                |                           | 1.8 |
| 48.5      |           | 3D48.5-152SP14           | ○           | 252 | 152            | 182            |                |                           | 1.8 |
| 49        | 50        | 3D49-152SP14             | ○           | 252 | 152            | 182            | 70             | SP..140512                | 1.9 |
| 49.5      |           | 3D49.5-155SP14           | ○           | 255 | 155            | 185            |                |                           | 1.9 |
| 50        |           | 3D50-155SP14             | ○           | 255 | 155            | 185            |                |                           | 1.9 |
| 51        |           | 3D51-158SP14             | ○           | 258 | 158            | 188            |                |                           | 2.4 |
| 52        |           | 3D52-161SP14             | ○           | 261 | 161            | 191            |                |                           | 2.5 |
| 53        |           | 3D53-164SP14             | ○           | 264 | 164            | 194            |                |                           | 2.6 |
| 54        |           | 3D54-167SP14             | ○           | 267 | 167            | 197            |                |                           | 2.7 |
| 55        |           | 3D55-170SP14             | ○           | 270 | 170            | 200            |                |                           | 2.8 |
| 56        |           | 3D56-176SP14             | ○           | 278 | 176            | 208            |                |                           | 2.8 |
| 57        |           | 3D57-179SP14             | ○           | 281 | 179            | 211            |                |                           | 3.0 |
| 58        |           | 3D58-182SP14             | ○           | 284 | 182            | 214            |                |                           | 3.2 |
| 59        |           | 3D59-185SP14             | ○           | 287 | 185            | 217            |                |                           | 3.3 |
| 60        |           | 3D60-188SP14             | ○           | 290 | 188            | 220            |                |                           | 3.3 |

### ◎附件Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|--------------|
| SP         | 8.5-9.5        | SP03                | M1.8 X      | 3.6 T6       |
|            | 10-12.5        | SP04                | M1.8 X      | 4 T6         |
|            | 13-14.5        | SP05                | M2 X        | 4 T6         |



# TDR-4 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 4 D

Holder diameter 4D: Φ13.0 ~ 60.0mm

加工公差標準 -0.30~+0.30  
Range of machining tolerance: -0.30~+0.30

最大加工深度  $\ell$  4 × ΦDc  
Drilling depth: 4xdiameter

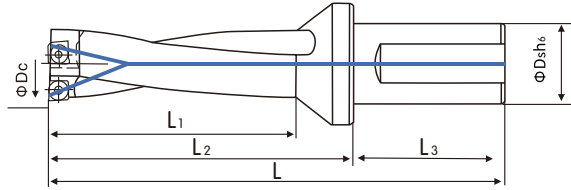


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 11.5      | 20        | 4D11.5-47SP04            | ●           | 111 | 47       | 61       | 44       | SP..04T102                | 0.2 |
| 12        |           | 4D12-50SP04              | ●           | 115 | 50       | 65       |          |                           | 0.2 |
| 12.5      |           | 4D12.5-52SP04            | ●           | 117 | 52       | 67       |          | SP..050204                | 0.2 |
| 13        |           | 4D13-55SP05              | ●           | 114 | 55       | 70       |          |                           | 0.2 |
| 13.5      |           | 4D13.5-57SP05            | ●           | 116 | 57       | 72       |          |                           | 0.2 |
| 14        |           | 4D14-59SP05              | ●           | 118 | 59       | 74       |          |                           | 0.2 |
| 14.5      |           | 4D14.5-61SP05            | ●           | 120 | 61       | 76       |          |                           | 0.2 |
| 15        |           | 4D15-63SP05              | ●           | 122 | 63       | 78       |          |                           | 0.2 |
| 15.5      |           | 4D15.5-65SP05            | ●           | 124 | 65       | 80       |          |                           | 0.2 |
| 16        |           | 4D16-67SP06              | ●           | 126 | 67       | 82       |          | SP..060204                | 0.2 |
| 16.5      |           | 4D16.5-69SP06            | ●           | 128 | 69       | 84       |          |                           | 0.2 |
| 17        | 25        | 4D17-71SP06              | ●           | 130 | 71       | 86       |          |                           | 0.2 |
| 17.5      |           | 4D17.5-73SP06            | ●           | 144 | 73       | 88       |          |                           | 0.2 |
| 18        |           | 4D18-75SP06              | ●           | 146 | 75       | 90       |          |                           | 0.3 |
| 18.5      |           | 4D18.5-77SP06            | ●           | 148 | 77       | 92       |          |                           | 0.3 |
| 19        |           | 4D19-79SP06              | ●           | 150 | 79       | 94       |          |                           | 0.3 |
| 19.5      |           | 4D19.5-81SP06            | ●           | 152 | 81       | 96       |          |                           | 0.3 |
| 20        |           | 4D20-83SP06              | ●           | 154 | 83       | 98       |          |                           | 0.3 |
| 20.5      |           | 4D20.5-85SP06            | ●           | 156 | 85       | 100      |          |                           | 0.3 |
| 21        |           | 4D21-87SP06              | ●           | 158 | 87       | 102      |          | SP..07T308                | 0.3 |
| 21.5      |           | 4D21.5-89SP06            | ●           | 160 | 89       | 104      |          |                           | 0.3 |
| 22        | 32        | 4D22-91SP07              | ●           | 162 | 91       | 106      |          |                           | 0.4 |
| 22.5      |           | 4D22.5-93SP07            | ●           | 164 | 93       | 108      |          |                           | 0.4 |
| 23        |           | 4D23-95SP07              | ●           | 169 | 95       | 113      |          |                           | 0.4 |
| 23.5      |           | 4D23.5-97SP07            | ●           | 171 | 97       | 115      |          |                           | 0.4 |
| 24        |           | 4D24-99SP07              | ●           | 173 | 99       | 117      |          |                           | 0.4 |
| 24.5      |           | 4D24.5-101SP07           | ●           | 175 | 101      | 119      |          |                           | 0.4 |
| 25        |           | 4D25-103SP07             | ●           | 177 | 103      | 121      |          |                           | 0.4 |
| 25.5      |           | 4D25.5-105SP07           | ●           | 185 | 105      | 125      |          |                           | 0.6 |
| 26        |           | 4D26-107SP07             | ●           | 187 | 107      | 127      |          |                           | 0.6 |
| 26.5      |           | 4D26.5-109SP07           | ●           | 189 | 109      | 129      |          |                           | 0.6 |
| 27        | 32        | 4D27-111SP07             | ●           | 191 | 111      | 131      |          |                           | 0.6 |
| 27.5      |           | 4D27.5-113SP07           | ●           | 193 | 113      | 133      |          |                           | 0.6 |
| 28        |           | 4D28-115SP07/09          | ●           | 195 | 115      | 135      |          |                           | 0.6 |
| 28.5      |           | 4D28.5-117SP07/09        | ●           | 197 | 117      | 137      |          |                           | 0.6 |
| 29        |           | 4D29-120SP09             | ●           | 201 | 120      | 141      |          |                           | 0.7 |
| 29.5      |           | 4D29.5-122SP09           | ●           | 203 | 122      | 143      |          |                           | 0.7 |
| 30        |           | 4D30-124SP09             | ●           | 208 | 124      | 148      |          |                           | 0.7 |
| 30.5      |           | 4D30.5-126SP09           | ●           | 210 | 126      | 150      |          |                           | 0.7 |
| 31        |           | 4D31-128SP09             | ●           | 212 | 128      | 152      |          |                           | 0.7 |
| 31.5      |           | 4D31.5-130SP09           | ●           | 214 | 130      | 154      |          |                           | 0.7 |
| 32        | 32        | 4D32-132SP09             | ●           | 216 | 132      | 156      |          | SP..090408                | 0.8 |
| 32.5      |           | 4D32.5-134SP09           | ●           | 218 | 134      | 158      |          |                           | 0.8 |
| 33        |           | 4D33-136SP09             | ●           | 220 | 136      | 160      |          |                           | 0.8 |
| 33.5      |           | 4D33.5-138SP09           | ●           | 222 | 138      | 162      |          |                           | 0.8 |
| 34        |           | 4D34-140SP09/11          | ●           | 224 | 140      | 164      |          |                           | 0.8 |
| 34.5      |           | 4D34.5-142SP09/11        | ●           | 226 | 142      | 166      |          |                           | 0.8 |
| 35        |           | 4D35-144SP11             | ●           | 228 | 144      | 168      |          |                           | 0.8 |
|           |           |                          |             |     |          |          |          |                           | 0.8 |
|           |           |                          |             |     |          |          |          |                           | 0.8 |
|           |           |                          |             |     |          |          |          |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 35.5      | 32        | 4D35.5-146SP11           | ●           | 230 | 146      | 170      | 60       | SP..110408                | 0.8 |
| 36        |           | 4D36-148SP11             | ●           | 232 | 148      | 172      |          |                           | 0.9 |
| 36.5      |           | 4D36.5-150SP11           | ●           | 236 | 150      | 174      |          |                           | 0.9 |
| 37        |           | 4D37-153SP11             | ●           | 243 | 153      | 183      |          |                           | 0.9 |
| 37.5      |           | 4D37.5-155SP11           | ●           | 245 | 155      | 185      |          |                           | 0.9 |
| 38        |           | 4D38-157SP11             | ●           | 247 | 157      | 187      |          |                           | 0.9 |
| 38.5      |           | 4D38.5-159SP11           | ●           | 249 | 159      | 189      |          |                           | 0.9 |
| 39        |           | 4D39-161SP11             | ●           | 251 | 161      | 191      |          |                           | 1.0 |
| 39.5      |           | 4D39.5-163SP11           | ●           | 253 | 163      | 193      |          |                           | 1.1 |
| 40        | 40        | 4D40-165SP11             | ●           | 265 | 165      | 195      |          |                           | 1.1 |
| 40.5      |           | 4D40.5-167SP11           | ○           | 267 | 167      | 197      |          |                           | 1.1 |
| 41        |           | 4D41-169SP11             | ○           | 269 | 169      | 199      |          |                           | 1.1 |
| 41.5      |           | 4D41.5-171SP11           | ○           | 271 | 171      | 201      |          |                           | 1.1 |
| 42        |           | 4D42-173SP14             | ○           | 273 | 173      | 203      |          |                           | 1.1 |
| 42.5      |           | 4D42.5-175SP14           | ○           | 275 | 175      | 205      |          |                           | 1.3 |
| 43        |           | 4D43-177SP14             | ○           | 277 | 177      | 207      |          |                           | 1.5 |
| 43.5      |           | 4D43.5-179SP14           | ○           | 279 | 179      | 209      |          |                           | 1.5 |
| 44        |           | 4D44-181SP14             | ○           | 281 | 181      | 211      |          |                           | 1.6 |
| 44.5      |           | 4D44.5-183SP14           | ○           | 283 | 183      | 213      |          |                           | 1.6 |
| 45        | 70        | 4D45-185SP14             | ○           | 285 | 185      | 215      | 70       | SP..140512                | 1.7 |
| 45.5      |           | 4D45.5-187SP14           | ○           | 287 | 187      | 217      |          |                           | 1.7 |
| 46        |           | 4D46-189SP14             | ○           | 289 | 189      | 219      |          |                           | 1.7 |
| 46.5      |           | 4D46.5-191SP14           | ○           | 291 | 191      | 221      |          |                           | 1.7 |
| 47        |           | 4D47-193SP14             | ○           | 293 | 193      | 223      |          |                           | 1.8 |
| 47.5      |           | 4D47.5-193SP14           | ○           | 295 | 195      | 225      |          |                           | 1.8 |
| 48        |           | 4D48-197SP14             | ○           | 297 | 197      | 227      |          |                           | 1.8 |
| 48.5      |           | 4D48.5-199SP14           | ○           | 299 | 199      | 229      |          |                           | 1.8 |
| 49        |           | 4D49-201SP14             | ○           | 301 | 201      | 231      |          |                           | 1.9 |
| 49.5      |           | 4D49.5-204SP14           | ○           | 303 | 203      | 233      |          |                           | 1.9 |
| 50        | 70        | 4D50-205SP14             | ○           | 305 | 205      | 235      |          |                           | 1.9 |
| 51        |           | 4D51-209SP14             | ○           | 309 | 209      | 239      |          |                           | 2.9 |
| 52        |           | 4D52-213SP14             | ○           | 313 | 213      | 243      |          |                           | 3.0 |
| 53        |           | 4D53-217SP14             | ○           | 317 | 217      | 247      |          |                           | 3.1 |
| 54        |           | 4D54-221SP14             | ○           | 321 | 221      | 251      |          |                           | 3.2 |
| 55        |           | 4D55-225SP14             | ○           | 325 | 225      | 255      |          |                           | 3.3 |
| 56        |           | 4D56-232SP14             | ○           | 334 | 232      | 264      |          |                           | 3.5 |
| 57        |           | 4D57-236SP14             | ○           | 338 | 236      | 268      |          |                           | 3.7 |
| 58        |           | 4D58-240SP14             | ○           | 342 | 240      | 272      |          |                           | 3.8 |
| 59        |           | 4D59-244SP14             | ○           | 346 | 244      | 276      |          |                           | 4.0 |
| 60        | 70        | 4D60-248SP14             | ○           | 350 | 248      | 280      |          |                           | 4.1 |

### ◎ 附件 Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|--------------|
| SP         | 15-15.5        | SP05                | M2          | X 5          |
|            | 16-21.5        | SP06                | M2.2        | X 5          |
|            | 22-28.5        | SP07                | M2.5        | X 6          |

# TDR-5 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 5 D

Holder diameter 5D: Φ13.0 ~ 60.0mm

加工公差標準 -0.30~+0.30  
Range of machining tolerance:-0.30~+0.30

最大加工深度  $\ell \times \Phi D_c$   
Drilling depth: 5xdiameter

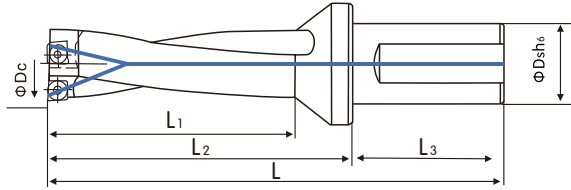


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  | 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        | 20        | 5D13-68SP05              | ●           | 129 | 68             | 85             | 44             | SP..050204                | 0.3 | 36        | 32        | 5D36-184SP11             | ●           | 268 | 184            | 208            | 60             | SP..110408                | 1.3 |
| 13.5      |           | 5D13.5-71SP05            | ●           | 131 | 71             | 87             |                |                           | 0.3 | 36.5      |           | 5D36.5-187SP11           | ●           | 271 | 187            | 211            |                |                           | 1.3 |
| 14        |           | 5D14-73SP05              | ●           | 133 | 73             | 89             |                |                           | 0.3 | 37        |           | 5D37-190SP11             | ●           | 280 | 190            | 220            |                |                           | 1.3 |
| 14.5      |           | 5D14.5-76SP05            | ●           | 135 | 76             | 91             |                |                           | 0.3 | 37.5      |           | 5D37.5-193SP11           | ●           | 283 | 193            | 223            |                |                           | 1.3 |
| 15        |           | 5D15-78SP05              | ●           | 137 | 78             | 93             |                |                           | 0.3 | 38        |           | 5D38-195SP11             | ●           | 285 | 195            | 225            |                |                           | 1.4 |
| 15.5      |           | 5D15.5-80SP05            | ●           | 140 | 80             | 95             |                |                           | 0.3 | 38.5      |           | 5D38.5-198SP11           | ●           | 288 | 198            | 228            |                |                           | 1.4 |
| 16        |           | 5D16-83SP06              | ●           | 142 | 83             | 98             |                |                           | 0.4 | 39        |           | 5D39-200SP11             | ●           | 290 | 200            | 230            |                |                           | 1.9 |
| 16.5      |           | 5D16.5-86SP06            | ●           | 145 | 86             | 101            |                |                           | 0.4 | 39.5      |           | 5D39.5-203SP11           | ●           | 293 | 203            | 233            |                |                           | 1.9 |
| 17        | 25        | 5D17-88SP06              | ●           | 147 | 88             | 103            | 56             | SP..060204                | 0.4 | 40        | 40        | 5D40-205SP11             | ●           | 305 | 205            | 235            | 70             | SP..140512                | 1.9 |
| 17.5      |           | 5D17.5-91SP06            | ●           | 162 | 91             | 106            |                |                           | 0.4 | 40.5      |           | 5D40.5-207SP11           | ●           | 307 | 207            | 237            |                |                           | 1.9 |
| 18        |           | 5D18-93SP06              | ●           | 164 | 93             | 108            |                |                           | 0.5 | 41        |           | 5D41-210SP11             | ●           | 310 | 210            | 240            |                |                           | 2.0 |
| 18.5      |           | 5D18.5-96SP06            | ●           | 167 | 96             | 111            |                |                           | 0.5 | 41.5      |           | 5D41.5-212SP11           | ●           | 312 | 212            | 242            |                |                           | 2.0 |
| 19        |           | 5D19-98SP06              | ●           | 169 | 98             | 113            |                |                           | 0.5 | 42        |           | 5D42-215SP14             | ●           | 315 | 215            | 245            |                |                           | 2.1 |
| 19.5      |           | 5D19.5-101SP06           | ●           | 172 | 101            | 116            |                |                           | 0.5 | 42.5      |           | 5D42.5-217SP14           | ●           | 317 | 217            | 247            |                |                           | 2.1 |
| 20        |           | 5D20-106SP06             | ●           | 174 | 103            | 118            |                |                           | 0.5 | 43        |           | 5D43-220SP14             | ●           | 320 | 220            | 250            |                |                           | 2.2 |
| 20.5      |           | 5D20.5-106SP06           | ●           | 177 | 106            | 121            |                |                           | 0.5 | 43.5      |           | 5D43.5-223SP14           | ●           | 323 | 223            | 253            |                |                           | 2.2 |
| 21        | 32        | 5D21-108SP06             | ●           | 179 | 108            | 123            | 60             | SP..07T308                | 0.5 | 44        | 55        | 5D44-225SP14             | ●           | 325 | 225            | 255            |                |                           | 2.3 |
| 21.5      |           | 5D21.5-111SP06           | ●           | 182 | 111            | 126            |                |                           | 0.5 | 44.5      |           | 5D44.5-225SP14           | ●           | 325 | 225            | 255            |                |                           | 2.3 |
| 22        |           | 5D22-113SP07             | ●           | 184 | 113            | 128            |                |                           | 0.5 | 45        |           | 5D45-230SP14             | ●           | 330 | 230            | 260            |                |                           | 2.4 |
| 22.5      |           | 5D22.5-116SP07           | ●           | 187 | 116            | 131            |                |                           | 0.5 | 45.5      |           | 5D45.5-232SP14           | ●           | 332 | 232            | 262            |                |                           | 2.4 |
| 23        |           | 5D23-118SP07             | ●           | 192 | 118            | 136            |                |                           | 0.6 | 46        |           | 5D46-235SP14             | ●           | 335 | 235            | 265            |                |                           | 2.5 |
| 23.5      |           | 5D23.5-121SP07           | ●           | 195 | 121            | 139            |                |                           | 0.6 | 46.5      |           | 5D46.5-235SP14           | ●           | 335 | 235            | 265            |                |                           | 2.5 |
| 24        |           | 5D24-123SP07             | ●           | 197 | 123            | 141            |                |                           | 0.6 | 47        |           | 5D47-240SP14             | ●           | 340 | 240            | 270            |                |                           | 2.6 |
| 24.5      |           | 5D24.5-126SP07           | ●           | 200 | 126            | 144            |                |                           | 0.8 | 47.5      |           | 5D47.5-240SP14           | ●           | 340 | 240            | 270            |                |                           | 2.6 |
| 25        | 32        | 5D25-128SP07             | ●           | 202 | 128            | 146            | 60             | SP..07T308                | 0.8 | 48        | 55        | 5D48-245SP14             | ●           | 345 | 245            | 275            |                |                           | 2.7 |
| 25.5      |           | 5D25.5-131SP07           | ●           | 213 | 131            | 153            |                |                           | 0.8 | 48.5      |           | 5D48.5-250SP14           | ●           | 350 | 250            | 280            |                |                           | 2.7 |
| 26        |           | 5D26-133SP07             | ●           | 216 | 133            | 156            |                |                           | 0.8 | 49        |           | 5D49-250SP14             | ●           | 350 | 250            | 280            |                |                           | 2.8 |
| 26.5      |           | 5D26.5-136SP07           | ●           | 217 | 136            | 157            |                |                           | 0.8 | 49.5      |           | 5D49.5-252SP14           | ●           | 352 | 252            | 282            |                |                           | 2.9 |
| 27        |           | 5D27-138SP07             | ●           | 218 | 138            | 158            |                |                           | 0.8 | 50        |           | 5D50-255SP14             | ●           | 355 | 255            | 285            |                |                           | 3.0 |
| 27.5      |           | 5D27.5-141SP07           | ●           | 221 | 141            | 161            |                |                           | 0.8 | 50.5      |           | 5D51-260SP14             | ○           | 360 | 260            | 290            |                |                           | 3.0 |
| 28        |           | 5D28-143SP07/09          | ●           | 223 | 143            | 163            |                | SP..07T308<br>SP..090408  | 0.9 | 51        |           | 5D52-265SP14             | ○           | 365 | 265            | 295            |                |                           | 3.1 |
| 28.5      |           | 5D28.5-146SP07/09        | ●           | 226 | 146            | 166            |                |                           | 0.9 | 51.5      |           | 5D53-270SP14             | ○           | 370 | 270            | 300            |                |                           | 3.2 |
| 29        | 32        | 5D29-149SP09             | ●           | 230 | 149            | 170            | 60             | SP..090408                | 0.9 | 52        | 55        | 5D54-275SP14             | ○           | 375 | 275            | 305            |                |                           | 3.3 |
| 29.5      |           | 5D29.5-151SP05           | ●           | 233 | 151            | 173            |                |                           | 0.9 | 52.5      |           | 5D55-280SP14             | ○           | 380 | 280            | 310            |                |                           | 3.4 |
| 30        |           | 5D30-154SP09             | ●           | 238 | 154            | 178            |                |                           | 1.0 | 53        |           | 5D56-285SP14             | ○           | 385 | 285            | 315            |                |                           | 3.6 |
| 30.5      |           | 5D30.5-157SP09           | ●           | 241 | 157            | 181            |                |                           | 1.0 | 53.5      |           | 5D57-290SP14             | ○           | 390 | 290            | 320            |                |                           | 3.8 |
| 31        |           | 5D31-159SP09             | ●           | 243 | 159            | 183            |                |                           | 1.0 | 54        |           | 5D58-295SP14             | ○           | 395 | 295            | 325            |                |                           | 3.9 |
| 31.5      |           | 5D31.5-162SP09           | ●           | 245 | 162            | 185            |                |                           | 1.0 | 54.5      |           | 5D59-300SP14             | ○           | 400 | 300            | 330            |                |                           | 4.1 |
| 32        |           | 5D32-164SP09             | ●           | 248 | 164            | 188            |                |                           | 1.1 | 55        |           | 5D60-305SP14             | ○           | 405 | 305            | 335            |                |                           | 4.2 |
| 32.5      |           | 5D32.5-167SP09           | ●           | 251 | 167            | 191            |                |                           | 1.1 |           |           |                          |             |     |                |                |                |                           |     |
| 33        | 32        | 5D33-169SP09             | ●           | 253 | 169            | 193            | 60             | SP..090408                | 1.1 |           |           |                          |             |     |                |                |                |                           |     |
| 33.5      |           | 5D33.5-172SP09           | ●           | 255 | 172            | 195            |                |                           | 1.1 |           |           |                          |             |     |                |                |                |                           |     |
| 34        |           | 5D34-174SP11             | ●           | 258 | 174            | 198            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |
| 34.5      |           | 5D34.5-177SP11           | ●           | 261 | 177            | 201            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |
| 35        |           | 5D35-179SP11             | ●           | 263 | 179            | 203            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |
| 35.5      |           | 5D35.5-182SP11           | ●           | 265 | 182            | 205            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |

### ◎ 附件 Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw |   |     | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|---|-----|--------------|
| SP         | 29-34.5        | SP09                | M3.5        | X | 8.5 | T15          |
|            | 35-41.5        | SP11                | M4          | X | 10  | T20          |
|            | 42-50          | SP14                | M5          | X | 11  | T20          |





# TOP-2 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 2 D

Holder diameter 2D: φ 13.0 ~ 60.0mm

加工公差標準 -0.25~+0.25  
Range of machining tolerance: -0.25~+0.25

最大加工深度  $l \geq 2 \times \Phi D_c$   
Drilling depth: 2x diameter

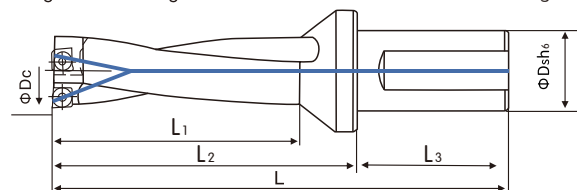


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | 2D13-29SOMT05            | ●           | 88  | 29             | 44             |                | SOMT050204                | 0.2 |
| 13.5      |           | 2D13.5-30SOMT05          | ●           | 89  | 30             | 45             |                |                           | 0.2 |
| 14        |           | 2D14-31SOMT05            | ●           | 90  | 31             | 46             |                |                           | 0.2 |
| 14.5      | 20        | 2D14.5-32SOMT05          | ●           | 91  | 32             | 47             |                |                           | 0.2 |
| 15        | /         | 2D15-33SOMT05            | ●           | 92  | 33             | 48             | 44             |                           | 0.2 |
| 15.5      | 25        | 2D15.5-34SOMT05          | ●           | 93  | 34             | 49             |                |                           | 0.2 |
| 16        |           | 2D16-35SOMT05            | ●           | 94  | 35             | 50             |                |                           | 0.2 |
| 16.5      |           | 2D16.5-36SOMT06          | ●           | 95  | 36             | 51             |                |                           | 0.2 |
| 17        |           | 2D17-37SOMT06            | ●           | 96  | 37             | 52             |                | SOMT060204                | 0.2 |
| 17.5      |           | 2D17.5-38SOMT06          | ●           | 109 | 38             | 53             |                |                           | 0.2 |
| 18        |           | 2D18-39SOMT06            | ●           | 110 | 39             | 54             |                |                           | 0.3 |
| 18.5      |           | 2D18.5-40SOMT06          | ●           | 111 | 40             | 55             |                |                           | 0.3 |
| 19        |           | 2D19-41SOMT06            | ●           | 112 | 41             | 56             |                |                           | 0.3 |
| 19.5      |           | 2D19.5-42SOMT07          | ●           | 113 | 42             | 57             |                |                           | 0.3 |
| 20        |           | 2D20-43SOMT07            | ●           | 114 | 43             | 58             |                |                           | 0.3 |
| 20.5      |           | 2D20.5-44SOMT07          | ●           | 115 | 44             | 59             |                |                           | 0.3 |
| 21        |           | 2D21-45SOMT07            | ●           | 116 | 45             | 60             |                | SOMT070306                | 0.3 |
| 21.5      | 25        | 2D21.5-46SOMT07          | ●           | 117 | 46             | 61             | 56             |                           | 0.3 |
| 22        |           | 2D22-47SOMT07            | ●           | 118 | 47             | 62             |                |                           | 0.4 |
| 22.5      |           | 2D22.5-48SOMT08          | ●           | 119 | 48             | 63             |                |                           | 0.4 |
| 23        |           | 2D23-49SOMT08            | ●           | 123 | 49             | 67             |                |                           | 0.4 |
| 23.5      |           | 2D23.5-50SOMT08          | ●           | 124 | 50             | 68             |                |                           | 0.4 |
| 24        |           | 2D24-51SOMT08            | ●           | 125 | 51             | 69             |                |                           | 0.4 |
| 24.5      |           | 2D24.5-52SOMT08          | ●           | 126 | 52             | 70             |                |                           | 0.4 |
| 25        |           | 2D25-53SOMT08            | ●           | 127 | 53             | 71             |                | SOMT08T306                | 0.4 |
| 25.5      |           | 2D25.5-54SOMT08          | ●           | 134 | 54             | 74             |                |                           | 0.6 |
| 26        |           | 2D26-55SOMT08            | ●           | 135 | 55             | 75             |                |                           | 0.6 |
| 26.5      |           | 2D26.5-56SOMT09          | ●           | 136 | 56             | 76             |                |                           | 0.6 |
| 27        |           | 2D27-57SOMT09            | ●           | 137 | 57             | 77             |                |                           | 0.6 |
| 27.5      |           | 2D27.5-58SOMT09          | ●           | 138 | 58             | 78             |                |                           | 0.6 |
| 28        |           | 2D28-59SOMT09            | ●           | 139 | 59             | 79             |                |                           | 0.6 |
| 28.5      |           | 2D28.5-60SOMT09          | ●           | 140 | 60             | 80             |                | SOMT09T308                | 0.6 |
| 29        |           | 2D29-62SOMT09            | ●           | 143 | 62             | 83             |                |                           | 0.7 |
| 29.5      |           | 2D29.5-63SOMT09          | ●           | 144 | 63             | 84             |                |                           | 0.7 |
| 30        |           | 2D30-64SOMT09            | ●           | 148 | 64             | 88             |                |                           | 0.7 |
| 30.5      | 32        | 2D30.5-65SOMT09          | ●           | 149 | 65             | 89             | 60             |                           | 0.7 |
| 31        |           | 2D31-66SOMT09            | ●           | 150 | 66             | 90             |                |                           | 0.7 |
| 31.5      |           | 2D31.5-67SOMT09          | ●           | 151 | 67             | 91             |                |                           | 0.7 |
| 32        |           | 2D32-68SOMT11            | ●           | 152 | 68             | 92             |                | SOMT11T308                | 0.8 |
| 32.5      |           | 2D32.5-69SOMT11          | ●           | 153 | 69             | 93             |                |                           | 0.8 |
| 33        |           | 2D33-70SOMT11            | ●           | 154 | 70             | 94             |                |                           | 0.8 |
| 33.5      |           | 2D33.5-71SOMT11          | ●           | 155 | 71             | 95             |                |                           | 0.8 |
| 34        |           | 2D34-72SOMT11            | ●           | 156 | 72             | 96             |                |                           | 0.8 |
| 34.5      |           | 2D34.5-73SOMT11          | ●           | 157 | 73             | 97             |                |                           | 0.8 |
| 35        |           | 2D35-74SOMT11            | ●           | 158 | 74             | 98             |                |                           | 0.8 |
| 35.5      |           | 2D35.5-75SOMT11          | ●           | 159 | 75             | 99             |                |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 36        |           | 2D36-76SOMT11            | ●           | 160 | 76             | 100            |                | SOMT11T308                | 0.9 |
| 36.5      |           | 2D36.5-77SOMT11          | ○           | 161 | 77             | 101            |                |                           | 0.9 |
| 37        |           | 2D37-79SOMT13            | ○           | 169 | 79             | 109            |                | SOMT130408                | 0.9 |
| 37.5      | 32        | 2D37.5-80SOMT13          | ○           | 170 | 80             | 110            | 60             |                           | 0.9 |
| 38        |           | 2D38-81SOMT13            | ○           | 171 | 81             | 111            |                |                           | 0.9 |
| 38.5      |           | 2D38.5-82SOMT13          | ○           | 172 | 82             | 112            |                |                           | 0.9 |
| 39        |           | 2D39-83SOMT13            | ○           | 173 | 83             | 113            |                |                           | 1.0 |
| 39.5      |           | 2D39.5-84SOMT13          | ○           | 174 | 84             | 114            |                |                           | 1.1 |
| 40        | 40        | 2D40-85SOMT13            | ○           | 185 | 85             | 115            | 70             |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder

**C20 - 2D 14 - 45 SOMT05**

接口尺寸  
Shank Diameter

倍徑  
Drill Length

鑽頭尺寸  
Diameter

長度  
Length

刀片型號  
Inserts type

### ◎附件Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw |   |     | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|---|-----|--------------|
| SO         | 13-16          | SO05                | M2          | X | 5   | T6           |
|            | 16.5-19        | SO06                | M2.2        | X | 5   | T7           |
|            | 19.5-22        | SO07                | M2.2        | X | 5   | T7           |
|            | 22.5-26        | SO08                | M2.5        | X | 6   | T8           |
|            | 26.5-31.5      | SO09                | M3.5        | X | 8.5 | T15          |
|            | 32-36.5        | SO11                | M3.5        | X | 8.5 | T15          |
|            | 37-43          | SO13                | M4          | X | 10  | T20          |
|            | 44-50          | SO15                | M5          | X | 11  | T20          |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定品

# TOP-3 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: φ 13.0 ~ 50.0mm

加工公差標準 -0.25~+0.25

Range of machining tolerance:-0.25~+0.25

最大加工深度  $\ell \ 3 \times \Phi Dc$

Drilling depth: 3xdiameter

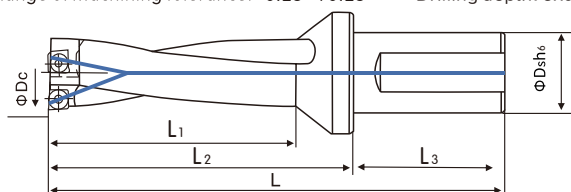


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 13        |           | 3D13-42SOMT05            | ●           | 101 | 42       | 57       |          | SOMT050204                | 0.2 |
| 13.5      |           | 3D13.5-44SOMT05          | ●           | 103 | 44       | 59       |          |                           | 0.2 |
| 14        |           | 3D14-45SOMT05            | ●           | 104 | 45       | 60       |          |                           | 0.2 |
| 14.5      | 20        | 3D14.5-47SOMT05          | ●           | 106 | 47       | 62       |          |                           | 0.2 |
| 15        | /         | 3D15-48SOMT05            | ●           | 107 | 48       | 63       | 44       |                           | 0.2 |
| 15.5      | 25        | 3D15.5-50SOMT05          | ●           | 109 | 50       | 65       |          |                           | 0.2 |
| 16        |           | 3D16-51SOMT05            | ●           | 110 | 51       | 66       |          |                           | 0.2 |
| 16.5      |           | 3D16.5-53SOMT06          | ●           | 112 | 53       | 68       |          |                           | 0.2 |
| 17        |           | 3D17-54SOMT06            | ●           | 113 | 54       | 69       |          | SOMT060204                | 0.2 |
| 17.5      |           | 3D17.5-56SOMT06          | ●           | 127 | 56       | 71       |          |                           | 0.2 |
| 18        |           | 3D18-57SOMT06            | ●           | 128 | 57       | 72       |          |                           | 0.3 |
| 18.5      |           | 3D18.5-59SOMT06          | ●           | 130 | 59       | 74       |          |                           | 0.3 |
| 19        |           | 3D19-60SOMT06            | ●           | 131 | 60       | 75       |          |                           | 0.3 |
| 19.5      |           | 3D19.5-62SOMT07          | ●           | 133 | 62       | 77       |          |                           | 0.3 |
| 20        |           | 3D20-63SOMT07            | ●           | 134 | 63       | 78       |          |                           | 0.3 |
| 20.5      |           | 3D20.5-65SOMT07          | ●           | 136 | 65       | 80       |          |                           | 0.3 |
| 21        |           | 3D21-66SOMT07            | ●           | 137 | 66       | 81       |          | SOMT070306                | 0.3 |
| 21.5      | 25        | 3D21.5-68SOMT07          | ●           | 139 | 68       | 83       | 56       |                           | 0.3 |
| 22        |           | 3D22-69SOMT07            | ●           | 140 | 69       | 84       |          |                           | 0.4 |
| 22.5      |           | 3D22.5-71SOMT08          | ●           | 142 | 71       | 86       |          |                           | 0.4 |
| 23        |           | 3D23-72SOMT08            | ●           | 146 | 72       | 90       |          |                           | 0.4 |
| 23.5      |           | 3D23.5-74SOMT08          | ●           | 148 | 74       | 92       |          |                           | 0.4 |
| 24        |           | 3D24-75SOMT08            | ●           | 149 | 75       | 93       |          |                           | 0.4 |
| 24.5      |           | 3D24.5-77SOMT08          | ●           | 151 | 77       | 95       |          |                           | 0.4 |
| 25        |           | 3D25-78SOMT08            | ●           | 152 | 78       | 96       |          | SOMT08T306                | 0.4 |
| 25.5      |           | 3D25.5-80SOMT08          | ●           | 160 | 80       | 100      |          |                           | 0.6 |
| 26        |           | 3D26-81SOMT08            | ●           | 161 | 81       | 101      |          |                           | 0.6 |
| 26.5      |           | 3D26.5-83SOMT09          | ●           | 163 | 83       | 103      |          |                           | 0.6 |
| 27        |           | 3D27-84SOMT09            | ●           | 164 | 84       | 104      |          |                           | 0.6 |
| 27.5      |           | 3D27.5-86SOMT09          | ●           | 166 | 86       | 106      |          |                           | 0.6 |
| 28        |           | 3D28-87SOMT09            | ●           | 167 | 87       | 107      |          |                           | 0.6 |
| 28.5      |           | 3D28.5-89SOMT09          | ●           | 169 | 89       | 109      |          | SOMT09T308                | 0.6 |
| 29        |           | 3D29-91SOMT09            | ●           | 172 | 91       | 112      |          |                           | 0.7 |
| 29.5      |           | 3D29.5-93SOMT09          | ●           | 174 | 93       | 114      |          |                           | 0.7 |
| 30        |           | 3D30-94SOMT09            | ●           | 178 | 94       | 118      |          |                           | 0.7 |
| 30.5      | 32        | 3D30.5-96SOMT09          | ●           | 180 | 96       | 120      | 60       |                           | 0.7 |
| 31        |           | 3D31-97SOMT09            | ●           | 181 | 97       | 121      |          |                           | 0.7 |
| 31.5      |           | 3D31.5-99SOMT09          | ●           | 183 | 99       | 123      |          |                           | 0.7 |
| 32        |           | 3D32-100SOMT11           | ●           | 184 | 100      | 124      |          | SOMT11T308                | 0.7 |
| 32.5      |           | 3D32.5-102SOMT11         | ●           | 186 | 102      | 126      |          |                           | 0.8 |
| 33        |           | 3D33-103SOMT11           | ●           | 187 | 103      | 127      |          |                           | 0.8 |
| 33.5      |           | 3D33.5-105SOMT11         | ●           | 189 | 105      | 129      |          |                           | 0.8 |
| 34        |           | 3D34-106SOMT11           | ●           | 190 | 106      | 130      |          |                           | 0.8 |
| 34.5      |           | 3D34.5-108SOMT11         | ●           | 192 | 108      | 132      |          |                           | 0.8 |
| 35        |           | 3D35-111SOMT11           | ●           | 193 | 109      | 133      |          |                           | 0.8 |
| 35.5      |           | 3D35.5-111SOMT11         | ●           | 195 | 111      | 135      |          |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 36        |           | 3D36-112SOMT11           | ●           | 196 | 112      | 136      |          | SOMT11T308                | 0.9 |
| 36.5      |           | 3D36.5-114SOMT11         | ○           | 198 | 114      | 138      |          |                           | 0.9 |
| 37        |           | 3D37-136SOMT13           | ○           | 206 | 116      | 146      |          |                           | 0.9 |
| 37.5      | 32        | 3D37.5-181SOMT13         | ○           | 208 | 118      | 148      | 60       |                           | 0.9 |
| 38        |           | 3D38-139SOMT13           | ○           | 209 | 119      | 149      |          |                           | 0.9 |
| 38.5      |           | 3D38.5-121SOMT13         | ○           | 211 | 121      | 151      |          |                           | 0.9 |
| 39        |           | 3D39-122SOMT13           | ○           | 212 | 122      | 152      |          |                           | 1.0 |
| 39.5      |           | 3D39.5-124SOMT13         | ○           | 214 | 124      | 154      |          |                           | 1.1 |
| 40        | 40        | 3D40-125SOMT13           | ○           | 225 | 125      | 155      | 70       |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder



### ◎ 附件 Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|--------------|
| SO         | 13-16          | SO05                | M2          | X 5 T6       |
|            | 16.5-19        | SO06                | M2.2        | X 5 T7       |
|            | 19.5-22        | SO07                | M2.2        | X 5 T7       |
|            | 22.5-26        | SO08                | M2.5        | X 6 T8       |
|            | 26.5-31.5      | SO09                | M3.5        | X 8.5 T15    |
|            | 32-36.5        | SO11                | M3.5        | X 8.5 T15    |
|            | 37-43          | SO13                | M4          | X 10 T20     |
|            | 44-50          | SO15                | M5          | X 11 T20     |

● Mark: Standard stock item,

No mark: Made to order item.

●● 表示庫存 ○ 表示庫存預定品



# TOP-4 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 4 D

Holder diameter 4D: φ 14.0 ~ 50.0mm

加工公差標準 -0.30~+0.30  
Range of machining tolerance:-0.30~+0.30

最大加工深度  $\ell \times \Phi Dc$   
Drilling depth: 4xdiameter

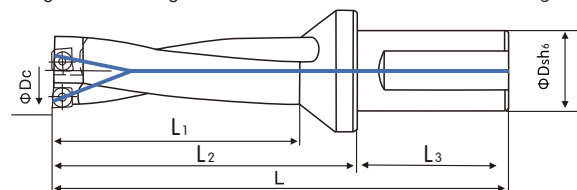


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | 4D13-55SOMT05            | ●           | 114 | 55             | 70             |                | SOMT050204                | 0.2 |
| 13.5      |           | 4D13.5-57SOMT05          | ●           | 116 | 57             | 72             |                |                           | 0.2 |
| 14        |           | 4D14-59SOMT05            | ●           | 118 | 59             | 74             |                |                           | 0.2 |
| 14.5      | 20        | 4D14.5-61SOMT05          | ●           | 120 | 61             | 76             |                |                           | 0.2 |
| 15        | /         | 4D15-63SOMT05            | ●           | 122 | 63             | 78             | 44             |                           | 0.2 |
| 15.5      | 25        | 4D15.5-65SOMT05          | ●           | 124 | 65             | 80             |                |                           | 0.2 |
| 16        |           | 4D16-67SOMT05            | ●           | 126 | 67             | 82             |                |                           | 0.2 |
| 16.5      |           | 4D16.5-69SOMT06          | ●           | 128 | 69             | 84             |                |                           | 0.2 |
| 17        |           | 4D17-71SOMT06            | ●           | 130 | 71             | 86             |                | SOMT060204                | 0.2 |
| 17.5      |           | 4D17.5-73SOMT06          | ●           | 144 | 73             | 88             |                |                           | 0.2 |
| 18        |           | 4D18-75SOMT06            | ●           | 146 | 75             | 90             |                |                           | 0.3 |
| 18.5      |           | 4D18.5-77SOMT06          | ●           | 148 | 77             | 92             |                |                           | 0.3 |
| 19        |           | 4D19-79SOMT06            | ●           | 150 | 79             | 94             |                |                           | 0.3 |
| 19.5      |           | 4D19.5-81SOMT07          | ●           | 152 | 81             | 96             |                |                           | 0.3 |
| 20        |           | 4D20-83SOMT07            | ●           | 154 | 83             | 98             |                |                           | 0.3 |
| 20.5      |           | 4D20.5-85SOMT07          | ●           | 156 | 85             | 100            |                |                           | 0.3 |
| 21        |           | 4D21-87SOMT07            | ●           | 158 | 87             | 102            |                | SOMT070306                | 0.3 |
| 21.5      | 25        | 4D21.5-89SOMT07          | ●           | 160 | 89             | 104            | 56             |                           | 0.3 |
| 22        |           | 4D22-91SOMT07            | ●           | 162 | 91             | 106            |                |                           | 0.4 |
| 22.5      |           | 4D22.5-93SOMT08          | ●           | 164 | 93             | 108            |                |                           | 0.4 |
| 23        |           | 4D23-95SOMT08            | ●           | 169 | 95             | 113            |                |                           | 0.4 |
| 23.5      |           | 4D23.5-97SOMT08          | ●           | 171 | 97             | 115            |                |                           | 0.4 |
| 24        |           | 4D24-99SOMT08            | ●           | 173 | 99             | 117            |                |                           | 0.4 |
| 24.5      |           | 4D24.5-101SOMT08         | ●           | 175 | 101            | 119            |                |                           | 0.4 |
| 25        |           | 4D25-103SOMT08           | ●           | 177 | 103            | 121            |                | SOMT08T306                | 0.4 |
| 25.5      |           | 4D25.5-105SOMT08         | ●           | 185 | 105            | 125            |                |                           | 0.6 |
| 26        |           | 4D26-107SOMT08           | ●           | 187 | 107            | 127            |                |                           | 0.6 |
| 26.5      |           | 4D26.5-109SOMT09         | ●           | 189 | 109            | 129            |                |                           | 0.6 |
| 27        |           | 4D27-111SOMT09           | ●           | 191 | 111            | 131            |                |                           | 0.6 |
| 27.5      |           | 4D27.5-113SOMT09         | ●           | 193 | 113            | 133            |                |                           | 0.6 |
| 28        |           | 4D28-115SOMT09           | ●           | 195 | 115            | 135            |                |                           | 0.6 |
| 28.5      |           | 4D28.5-117SOMT09         | ●           | 197 | 117            | 137            |                |                           | 0.6 |
| 29        |           | 4D29-120SOMT09           | ●           | 201 | 120            | 141            |                | SOMT09T308                | 0.7 |
| 29.5      |           | 4D29.5-122SOMT09         | ●           | 203 | 122            | 143            |                |                           | 0.7 |
| 30        |           | 4D30-124SOMT09           | ●           | 208 | 124            | 148            |                |                           | 0.7 |
| 30.5      | 32        | 4D30.5-126SOMT09         | ●           | 210 | 126            | 150            | 60             |                           | 0.7 |
| 31        |           | 4D31-128SOMT09           | ●           | 212 | 128            | 152            |                |                           | 0.7 |
| 31.5      |           | 4D31.5-130SOMT09         | ●           | 214 | 130            | 154            |                |                           | 0.7 |
| 32        |           | 4D32-132SOMT11           | ●           | 216 | 132            | 156            |                |                           | 0.8 |
| 32.5      |           | 4D32.5-134SOMT11         | ●           | 218 | 134            | 158            |                | SOMT11T308                | 0.8 |
| 33        |           | 4D33-136SOMT11           | ●           | 220 | 136            | 160            |                |                           | 0.8 |
| 33.5      |           | 4D33.5-138SOMT11         | ●           | 222 | 138            | 162            |                |                           | 0.8 |
| 34        |           | 4D34-140SOMT11           | ●           | 224 | 140            | 164            |                |                           | 0.8 |
| 34.5      |           | 4D34.5-142SOMT11         | ●           | 226 | 142            | 166            |                |                           | 0.8 |
| 35        |           | 4D35-144SOMT11           | ●           | 228 | 144            | 168            |                |                           | 0.8 |
| 35.5      |           | 4D35.5-146SOMT11         | ●           | 230 | 146            | 170            |                |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 36        |           | 4D36-148SOMT11           | ●           | 232 | 148            | 172            |                | SOMT11T308                | 0.9 |
| 36.5      |           | 4D36.5-150SOMT11         | ○           | 236 | 150            | 174            |                |                           | 0.9 |
| 37        |           | 4D37-153SOMT13           | ○           | 243 | 153            | 183            |                | SOMT130408                | 0.9 |
| 37.5      | 32        | 4D37.5-155SOMT13         | ○           | 245 | 155            | 185            | 60             |                           | 0.9 |
| 38        |           | 4D38-157SOMT13           | ○           | 247 | 157            | 187            |                |                           | 0.9 |
| 38.5      |           | 4D38.5-159SOMT13         | ○           | 249 | 159            | 189            |                |                           | 0.9 |
| 39        |           | 4D39-161SOMT13           | ○           | 251 | 161            | 191            |                |                           | 1.0 |
| 39.5      |           | 4D39.5-163SOMT13         | ○           | 253 | 163            | 193            |                |                           | 1.1 |
| 40        | 40        | 4D40-165SOMT13           | ○           | 265 | 165            | 195            | 70             |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder

**C20 - 4D 14 - 59 SOMT05**

接口尺寸  
Shank Diameter

倍徑  
Drill Length

鑽頭尺寸  
Diameter

長度  
Length

刀片型號  
Inserts type

### ◎附件Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw |   |     | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|---|-----|--------------|
| SO         | 13-16          | SO05                | M2          | X | 5   | T6           |
|            | 16.5-19        | SO06                | M2.2        | X | 5   | T7           |
|            | 19.5-22        | SO07                | M2.2        | X | 5   | T7           |
|            | 22.5-26        | SO08                | M2.5        | X | 6   | T8           |
|            | 26.5-31.5      | SO09                | M3.5        | X | 8.5 | T15          |
|            | 32-36.5        | SO11                | M3.5        | X | 8.5 | T15          |
|            | 37-43          | SO13                | M4          | X | 10  | T20          |
|            | 44-50          | SO15                | M5          | X | 11  | T20          |

● Mark:Standard stock item,  
No mark:Made to order item.

●表示库存 ○表示库存预定品

# TOP-5 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 5 D

Holder diameter 5D: φ 16.0 ~ 50.0mm

加工公差標準 -0.30~+0.30

Range of machining tolerance: -0.30~+0.30

最大加工深度  $\ell 5 \times \Phi Dc$

Drilling depth: 5xdiameter

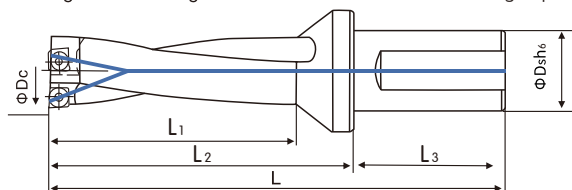


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 16        | 20        | 5D16-83SOMT05            | ●           | 142 | 83             | 98             |                | SOMT050204                | 0.4 |
| 16.5      | /         | 5D16.5-86SOMT06          | ●           | 145 | 86             | 101            | 44             |                           | 0.4 |
| 17        | 25        | 5D17-88SOMT06            | ●           | 147 | 88             | 103            |                |                           | 0.4 |
| 17.5      |           | 5D17.5-91SOMT06          | ●           | 162 | 91             | 106            |                | SOMT060204                | 0.4 |
| 18        |           | 5D18-93SOMT06            | ●           | 164 | 93             | 108            |                |                           | 0.5 |
| 18.5      |           | 5D18.5-96SOMT06          | ●           | 167 | 96             | 111            |                |                           | 0.5 |
| 19        |           | 5D19-98SOMT06            | ●           | 169 | 98             | 113            |                |                           | 0.5 |
| 19.5      |           | 5D19.5-101SOMT07         | ●           | 172 | 101            | 116            |                |                           | 0.5 |
| 20        |           | 5D20-107SOMT07           | ●           | 174 | 103            | 118            |                |                           | 0.5 |
| 20.5      |           | 5D20.5-107SOMT07         | ●           | 177 | 106            | 121            |                | SOMT070306                | 0.5 |
| 21        | 25        | 5D21-108SOMT07           | ●           | 179 | 108            | 123            | 56             |                           | 0.5 |
| 21.5      |           | 5D21.5-111SOMT07         | ●           | 182 | 111            | 126            |                |                           | 0.5 |
| 22        |           | 5D22-113SOMT07           | ●           | 184 | 113            | 128            |                |                           | 0.5 |
| 22.5      |           | 5D22.5-116SOMT08         | ●           | 187 | 116            | 131            |                |                           | 0.5 |
| 23        |           | 5D23-118SOMT08           | ●           | 192 | 118            | 136            |                |                           | 0.6 |
| 23.5      |           | 5D23.5-121SOMT08         | ●           | 195 | 121            | 139            |                |                           | 0.6 |
| 24        |           | 5D24-123SOMT08           | ●           | 197 | 123            | 141            |                | SOMT08T306                | 0.6 |
| 24.5      |           | 5D24.5-126SOMT08         | ●           | 200 | 126            | 144            |                |                           | 0.8 |
| 25        |           | 5D25-128SOMT08           | ●           | 202 | 128            | 146            |                |                           | 0.8 |
| 25.5      |           | 5D25.5-131SOMT08         | ●           | 213 | 131            | 153            |                |                           | 0.8 |
| 26        |           | 5D26-133SOMT08           | ●           | 216 | 133            | 156            |                |                           | 0.8 |
| 26.5      |           | 5D26.5-136SOMT09         | ●           | 217 | 136            | 159            |                |                           | 0.8 |
| 27        |           | 5D27-138SOMT09           | ●           | 218 | 138            | 160            |                |                           | 0.8 |
| 27.5      |           | 5D27.5-141SOMT09         | ●           | 221 | 141            | 161            |                |                           | 0.8 |
| 28        |           | 5D28-143SOMT09           | ●           | 223 | 143            | 163            |                |                           | 0.9 |
| 28.5      |           | 5D28.5-146SOMT09         | ●           | 226 | 146            | 166            |                | SOMT09T308                | 0.9 |
| 29        |           | 5D29-149SOMT09           | ●           | 230 | 149            | 170            |                |                           | 0.9 |
| 29.5      |           | 5D29.5-151SOMT05         | ●           | 233 | 151            | 173            |                |                           | 0.9 |
| 30        |           | 5D30-154SOMT09           | ●           | 238 | 154            | 178            |                |                           | 1.0 |
| 30.5      |           | 5D30.5-157SOMT09         | ●           | 241 | 157            | 181            |                |                           | 1.0 |
| 31        | 32        | 5D31-159SOMT09           | ●           | 243 | 159            | 183            | 60             |                           | 1.0 |
| 31.5      |           | 5D31.5-162SOMT09         | ●           | 245 | 162            | 185            |                |                           | 1.0 |
| 32        |           | 5D32-164SOMT11           | ●           | 248 | 164            | 188            |                |                           | 1.1 |
| 32.5      |           | 5D32.5-167SOMT11         | ●           | 251 | 167            | 191            |                |                           | 1.1 |
| 33        |           | 5D33-169SOMT11           | ●           | 253 | 169            | 193            |                |                           | 1.1 |
| 33.5      |           | 5D33.5-172SOMT11         | ●           | 255 | 172            | 195            |                | SOMT11T308                | 1.1 |
| 34        |           | 5D34-174SOMT11           | ●           | 258 | 174            | 198            |                |                           | 1.2 |
| 34.5      |           | 5D34.5-177SOMT11         | ●           | 261 | 177            | 201            |                |                           | 1.2 |
| 35        |           | 5D35-179SOMT11           | ●           | 263 | 179            | 203            |                |                           | 1.2 |
| 35.5      |           | 5D35.5-182SOMT11         | ●           | 265 | 182            | 205            |                |                           | 1.2 |
| 36        |           | 5D36-184SOMT11           | ○           | 268 | 184            | 208            |                |                           | 1.3 |
| 36.5      |           | 5D36.5-187SOMT11         | ○           | 271 | 187            | 211            |                | SOMT130408                | 1.3 |
| 37        |           | 5D37-190SOMT13           | ○           | 280 | 190            | 220            |                |                           | 1.3 |
| 37.5      |           | 5D37.5-193SOMT13         | ○           | 283 | 193            | 223            |                |                           | 1.3 |
| 38        |           | 5D38-195SOMT13           | ○           | 285 | 195            | 225            |                |                           | 1.4 |
| 38.5      |           | 5D38.5-198SOMT13         | ○           | 288 | 198            | 228            |                |                           | 1.4 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 39        | 32        | 5D39-200SOMT13           | ○           | 290 | 200            | 230            | 60             | SOMT130408                | 1.9 |
| 39.5      |           | 5D39.5-203SOMT13         | ○           | 293 | 203            | 233            |                |                           | 1.9 |
| 40        | 40        | 5D40-205SOMT13           | ○           | 305 | 205            | 235            | 70             |                           | 1.9 |

### SO鑽頭記號

Part number structure of type holder

|                        |          |                    |                  |          |              |                      |
|------------------------|----------|--------------------|------------------|----------|--------------|----------------------|
| <b>C20</b>             | <b>-</b> | <b>5D</b>          | <b>16</b>        | <b>-</b> | <b>88</b>    | <b>SOMT05</b>        |
| 接口尺寸<br>Shank Diameter |          | 倍徑<br>Drill Length | 鑽頭尺寸<br>Diameter |          | 長度<br>Length | 刀片型號<br>Inserts type |

### ◎ 附件 Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|--------------|
| SO         | 13-16          | SO05                | M2          | X 5 T6       |
|            | 16.5-19        | SO06                | M2.2        | X 5 T7       |
|            | 19.5-22        | SO07                | M2.2        | X 5 T7       |
|            | 22.5-26        | SO08                | M2.5        | X 6 T8       |
|            | 26.5-31.5      | SO09                | M3.5        | X 8.5 T15    |
|            | 32-36.5        | SO11                | M3.5        | X 8.5 T15    |
|            | 37-43          | SO13                | M4          | X 10 T20     |
|            | 44-50          | SO15                | M5          | X 11 T20     |

● Mark: Standard stock item,  
No mark: Made to order item.

●● 表示庫存 ○ 表示庫存預定品

# Customised Solution-0.2/0.3/0.4/0.7/0.8/0.9 (bottom hole of the thread) 非标/小数点螺纹底孔专用U钻-0.2/0.3/0.4/0.7/0.8/0.9

加工公差標準 -0.05 ~ +0.15  
Range of machining tolerance: -0.05 ~ +0.15

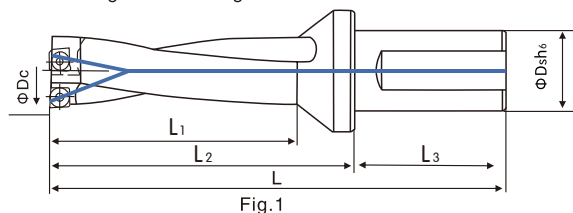


Fig.1



▲ H13/SKD61



| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item |
|------------|------------|--------------------------|
| 8.8        | 20         | KSD088-2D-S20-SP03       |
| 9          |            | KSD090-2D-S20-SP03       |
| 9.3        |            | KSD093-2D-S20-SP03       |
| 9.5        |            | KSD095-2D-S20-SP03       |
| 10.5       |            | KSD105-2D-S20-SP04       |
| 10.8       |            | KSD108-2D-S20-SP04       |
| 11         |            | KSD110-2D-S20-SP04       |
| 11.5       |            | KSD115-2D-S20-SP04       |
| 12.5       |            | KSD125-2D-S20-SP04       |
| 13         |            | C20-2D13-29SP05          |
| 14.5       |            | C20-2D14.5-32SP05        |
| 15         |            | C20-2D15-33SP05          |
| 16         |            | C20-2D16-35SP06          |
| 16.5       |            | C20-2D16.5-36SP06        |
| 17         |            | C20-2D17-37SP06          |
| 18         |            | C20-2D18-39SP06          |
| 18.5       |            | C20-2D18.5-40SP06        |
| 19         |            | C20-2D19-41SP06          |
| 20         |            | C20-2D20-43SP06          |
| 20.5       |            | C20-2D20.5-44SP06        |
| 21         |            | C20-2D21-45SP06          |
| 22         |            | C20-2D22-47SP07          |
| 22.5       | 32         | C20-2D22.5-48SP07        |
| 23         |            | C20-2D23-49SP07          |
| 25         |            | C20-2D25-53SP07          |
| 25.5       |            | C32-2D25.5-54SP07        |
| 26         |            | C32-2D26-55SP07          |
| 26.5       |            | C32-2D26.5-56SP07        |
| 27         |            | C32-2D27-57SP07          |
| 28         |            | C32-2D28-59SP07          |
| 28.5       |            | C32-2D28.5-60SP07        |
| 29         |            | C32-2D29-62SP09          |

| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item |
|------------|------------|--------------------------|
| 13.3       | 20         | C20-3D13.3-42SP05        |
| 14.8       |            | C20-3D14.8-48SP05        |
| 15.8       |            | C20-3D15.8-50SP05        |
| 16.3       |            | C20-3D16.3-54SP06        |
| 16.8       |            | C20-3D16.8-53SP06        |
| 17.3       |            | C25-3D17.3-56SP06        |
| 19.8       |            | C25-3D19.8-62SP06        |
| 20.8       |            | C25-3D20.8-66SP06        |
| 21.7       |            | C25-3D21.7-68SP06        |
| 21.8       |            | C25-3D21.8-69SP07        |
| 22.7       | 25         | C25-3D22.7-71SP07        |
| 22.8       |            | C25-3D22.8-71SP07        |
| 23.2       |            | C25-3D23.2-72SP07        |
| 23.3       |            | C25-3D23.3-72SP07        |
| 23.8       |            | C25-3D23.8-75SP07        |
| 24.3       |            | C25-3D24.3-77SP07        |
| 24.8       |            | C25-3D24.8-77SP07        |
| 23.3       |            | C32-3D23.3-74SP07        |
| 26.7       |            | C32-3D26.7-83SP07        |
| 26.8       |            | C32-3D26.8-84SP07        |
| 27.2       | 32         | C32-3D27.2-84SP07        |
| 27.3       |            | C32-3D27.3-83SP07        |
| 27.7       |            | C32-3D27.7-86SP07        |
| 27.8       |            | C32-3D27.8-87SP09        |
| 27.9       |            | C32-3D27.9-87SP09        |
| 28.3       |            | C32-3D28.3-89SP09        |
| 28.7       |            | C32-3D28.7-91SP09        |
| 28.8       |            | C32-3D28.8-91SP09        |
| 28.9       |            | C32-3D28.9-91SP09        |
| 29.2       |            | C32-3D29.2-93SP09        |
| 29.3       | 32         | C32-3D29.3-93SP09        |
| 29.8       |            | C32-3D29.8-94SP09        |

| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item |
|------------|------------|--------------------------|
| 30.2       | 32         | C32-3D30.2-94SP09        |
| 30.3       |            | C32-3D30.3-94SP09        |
| 30.7       |            | C32-3D30.7-96SP09        |
| 30.8       |            | C32-3D30.8-97SP09        |
| 31.2       |            | C32-3D31.2-97SP09        |
| 31.2       |            | C32-3D31.2-96SP09        |
| 31.3       |            | C32-3D31.3-99SP09        |
| 31.7       |            | C32-3D31.7-100SP09       |
| 31.8       |            | C32-3D31.8-100SP09       |
| 32.2       |            | C32-3D32.2-100SP09       |
| 32.7       |            | C32-3D32.7-103SP09       |
| 32.8       |            | C32-3D32.8-103SP09       |
| 33.2       |            | C32-3D33.2-103SP09       |
| 33.3       |            | C32-3D33.3-105SP09       |
| 33.7       |            | C32-3D33.7-105SP09       |
| 33.8       |            | C32-3D33.8-106SP11       |
| 34.2       |            | C32-3D34.2-106SP11       |
| 34.3       |            | C32-3D34.3-106SP11       |
| 34.8       |            | C32-3D34.8-109SP11       |
| 35.2       |            | C32-3D35.2-109SP11       |
| 35.3       |            | C32-3D35.3-108SP11       |
| 35.7       | 40         | C32-3D35.7-111SP11       |
| 35.8       |            | C32-3D35.8-112SP11       |
| 36.2       |            | C32-3D36.2-112SP11       |
| 36.3       |            | C32-3D36.3-114SP11       |
| 36.7       |            | C32-3D36.7-116SP11       |
| 36.8       |            | C32-3D36.8-116SP11       |
| 37.2       |            | C32-3D37.2-116SP11       |
| 37.3       |            | C32-3D37.3-118SP11       |
| 37.7       |            | C32-3D37.7-118SP11       |
| 38.2       |            | C32-3D38.2-119SP11       |
| 38.3       |            | C32-3D38.3-119SP11       |

| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item |
|------------|------------|--------------------------|
| 38.7       | 32         | C32-3D38.7-121SP11       |
| 38.8       |            | C32-3D38.8-122SP11       |
| 39.2       |            | C32-3D39.2-122SP11       |
| 39.3       |            | C32-3D39.3-124SP11       |
| 39.7       |            | C32-3D39.7-124SP11       |
| 39.8       |            | C40-3D39.8-125SP11       |
| 40.2       |            | C40-3D40.2-125SP11       |
| 40.7       |            | C40-3D40.7-127SP11       |
| 40.8       |            | C40-3D40.8-128SP11       |
| 41.2       |            | C40-3D41.2-128SP11       |
| 41.3       | 40         | C40-3D41.3-128SP11       |
| 41.7       |            | C40-3D41.7-129SP11       |
| 41.8       |            | C40-3D41.8-131SP14       |
| 42.2       |            | C40-3D42.2-131SP14       |
| 42.8       |            | C40-3D42.8-134SP14       |
| 42.7       |            | C40-3D42.7-134SP14       |
| 43.7       |            | C40-3D43.7-137SP14       |
| 43.8       |            | C40-3D43.8-137SP14       |
| 44.7       |            | C40-3D44.7-137SP14       |
| 44.8       |            | C40-3D44.8-140SP14       |
| 45.2       | 50.2       | C40-3D45.2-140SP14       |
| 46.2       |            | C40-3D46.2-143SP14       |
| 48.2       |            | C40-3D48.2-149SP14       |
| 49.2       |            | C40-3D49.2-152SP14       |
| 50.2       |            | C40-3D50.2-155SP14       |

◎ 刀片详细参数见前页





# WC-2XD (Φ13-100) Indexable drills with WC inserts

## WC 型 潜孔钻/U 钻 2D

Holder diameter 2D: Φ10.0 ~ 80.0mm

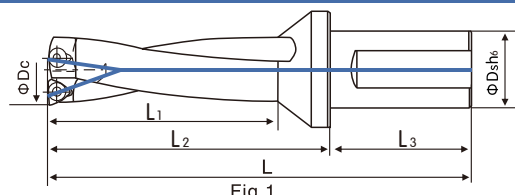


Fig.1

加工公差標準 -0.25~+0.25

Range of machining tolerance: -0.25~+0.25

最大加工深度  $l \geq 2 \times \Phi Dc$

Drilling depth: 2x diameter



| 刃徑<br>ΦDc | 柄徑<br>ΦDs     | 型號<br>Specification/Item | 庫存<br>Store   | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  | 刃徑<br>ΦDc    | 柄徑<br>ΦDs    | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  |            |     |     |
|-----------|---------------|--------------------------|---------------|------|----------------|----------------|----------------|---------------------------|-----------------------------------------------------------------------------------|--------------|--------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-------------------------------------------------------------------------------------|------------|-----|-----|
| 10        | 20            | 2D10-22WC02              | ●             | 85.5 | 22             | 35.5           | 44             | WC..020104                | 0.2                                                                               | 35.5         | 32           | 2D35.5-75WC06            | ●           | 159 | 75             | 99             | 60             | WC..06T308                | 0.8                                                                                 |            |     |     |
| 10.5      |               | 2D10.5-23WC02            | ●             | 86.5 | 22             | 35.5           |                |                           | 0.2                                                                               | 36           |              | 2D36-76WC06              | ●           | 160 | 76             | 100            |                |                           | 0.9                                                                                 |            |     |     |
| 11        |               | 2D11-24WC02              | ●             | 87.5 | 24             | 36.5           |                |                           | 0.2                                                                               | 36.5         |              | 2D36.5-77WC06            | ●           | 161 | 77             | 101            |                |                           | 0.9                                                                                 |            |     |     |
| 11.5      |               | 2D11.5-24WC02            | ●             | 88   | 24             | 38             |                |                           | 0.2                                                                               | 37           |              | 2D37-79WC06              | ●           | 169 | 79             | 109            |                |                           | 0.9                                                                                 |            |     |     |
| 12        |               | 2D12-26WC02              | ●             | 90   | 25             | 40             |                |                           | 0.2                                                                               | 37.5         |              | 2D37.5-80WC06            | ●           | 170 | 80             | 110            |                |                           | 0.9                                                                                 |            |     |     |
| 12.5      |               | 2D12.5-27WC02            | ●             | 93   | 27             | 43             |                |                           | 0.2                                                                               | 38           |              | 2D38-81WC06              | ●           | 171 | 81             | 111            |                |                           | 0.9                                                                                 |            |     |     |
| 13        | 20            | 2D13-29WC02              | ●             | 88   | 29             | 44             | 44             | WC..020104                | 0.2                                                                               | 38.5         | 32           | 2D38.5-82WC06            | ●           | 172 | 82             | 112            | 60             | WC..06T308                | 0.9                                                                                 |            |     |     |
| 13.5      |               | 2D13.5-30WC02            | ●             | 89   | 30             | 45             |                |                           | 0.2                                                                               | 39           |              | 2D39-83WC06              | ●           | 173 | 83             | 113            |                |                           | 1.0                                                                                 |            |     |     |
| 14        |               | 2D14-31WC02/03           | ●             | 90   | 31             | 46             |                |                           | 0.2                                                                               | 39.5         |              | 2D39.5-84WC06            | ●           | 174 | 84             | 114            |                |                           | 1.1                                                                                 |            |     |     |
| 14.5      |               | 2D14.5-32WC02/03         | ●             | 91   | 32             | 47             |                | WC..030208                | 0.2                                                                               | 40           |              | 2D40-85WC06              | ●           | 185 | 85             | 115            |                |                           | 70                                                                                  | WC..080412 | 1.1 |     |
| 15        |               | /                        | 2D15-33WC03   | ●    | 92             | 33             |                |                           | 48                                                                                | 0.2          |              | 41                       | 2D41-87WC06 | ●   | 187            | 87             |                |                           |                                                                                     |            | 117 | 1.1 |
| 15.5      |               | 25                       | 2D15.5-34WC03 | ●    | 93             | 34             |                |                           | 49                                                                                | 0.2          |              | 42                       | 2D42-89WC08 | ●   | 189            | 89             |                |                           |                                                                                     |            | 119 | 1.1 |
| 16        | 25            | 2D16-35WC03              | ●             | 94   | 35             | 50             | 0.2            | 43                        | 2D43-91WC08                                                                       | ●            | 191          | 91                       | 121         | 1.5 |                |                |                |                           |                                                                                     |            |     |     |
| 16.5      |               | 2D16.5-36WC03            | ●             | 95   | 36             | 51             | 0.2            | 44                        | 2D44-93WC08                                                                       | ●            | 193          | 93                       | 123         | 1.6 |                |                |                |                           |                                                                                     |            |     |     |
| 17        |               | 2D17-37WC03              | ●             | 96   | 37             | 52             | 0.2            | 45                        | 2D45-95WC08                                                                       | ●            | 195          | 95                       | 125         | 1.7 |                |                |                |                           |                                                                                     |            |     |     |
| 17.5      |               | 25                       | 2D17.5-38WC03 | ●    | 109            | 38             | 53             | 0.2                       | 46                                                                                | 2D46-97WC08  | ●            | 197                      | 97          | 127 | 1.7            |                |                |                           |                                                                                     |            |     |     |
| 18        |               |                          | 2D18-39WC03   | ●    | 110            | 39             | 54             | 0.3                       | 47                                                                                | 2D47-99WC08  | ●            | 199                      | 99          | 129 | 1.8            |                |                |                           |                                                                                     |            |     |     |
| 18.5      |               |                          | 2D18.5-40WC03 | ●    | 111            | 40             | 55             | 0.3                       | 48                                                                                | 2D48-101WC08 | ●            | 201                      | 101         | 131 | 1.8            |                |                |                           |                                                                                     |            |     |     |
| 19        | 2D19-41WC03   |                          | ●             | 112  | 41             | 56             | 0.3            | 49                        | 2D49-103WC08                                                                      | ●            | 203          | 103                      | 133         | 1.9 |                |                |                |                           |                                                                                     |            |     |     |
| 19.5      | 2D19.5-42WC03 |                          | ●             | 113  | 42             | 57             | 0.3            | 50                        | 2D50-105WC08                                                                      | ●            | 205          | 105                      | 135         | 1.9 |                |                |                |                           |                                                                                     |            |     |     |
| 20        | 2D20-43WC03   |                          | ●             | 114  | 43             | 58             | 0.3            | 51                        | 2D51-107WC08                                                                      | ●            | 207          | 107                      | 137         | 2.0 |                |                |                |                           |                                                                                     |            |     |     |
| 20.5      | 2D20.5-44WC03 |                          | ●             | 115  | 44             | 59             | 0.3            | 52                        | 2D52-109WC08                                                                      | ●            | 209          | 109                      | 139         | 2.0 |                |                |                |                           |                                                                                     |            |     |     |
| 21        | 2D21-45WC04   |                          | ●             | 116  | 45             | 60             | 56             | WC..040208                | 0.3                                                                               | 53           | 2D53-111WC08 | ●                        | 211         | 111 | 141            | 2.1            |                |                           |                                                                                     |            |     |     |
| 21.5      | 2D21.5-46WC04 |                          | ●             | 117  | 46             | 61             |                |                           | 0.3                                                                               | 54           | 2D54-113WC08 | ●                        | 213         | 113 | 143            | 2.2            |                |                           |                                                                                     |            |     |     |
| 22        | 2D22-47WC04   |                          | ●             | 118  | 47             | 62             |                |                           | 0.4                                                                               | 55           | 2D55-115WC08 | ●                        | 215         | 115 | 145            | 2.3            |                |                           |                                                                                     |            |     |     |
| 22.5      | 2D22.5-48WC04 |                          | ●             | 119  | 48             | 63             |                |                           | 0.4                                                                               | 56           | 2D56-120WC08 | ●                        | 222         | 120 | 152            | 2.4            |                |                           |                                                                                     |            |     |     |
| 23        | 2D23-49WC04   |                          | ●             | 123  | 49             | 67             |                |                           | 0.4                                                                               | 57           | 2D57-122WC08 | ●                        | 224         | 122 | 154            | 2.5            |                |                           |                                                                                     |            |     |     |
| 23.5      | 2D23.5-50WC04 |                          | ●             | 124  | 50             | 68             |                |                           | 0.4                                                                               | 58           | 2D58-124WC08 | ●                        | 226         | 124 | 156            | 2.6            |                |                           |                                                                                     |            |     |     |
| 24        | 2D24-51WC04   | ●                        | 125           | 51   | 69             | 0.4            |                |                           | 59                                                                                | 2D59-126WC08 | ●            | 228                      | 126         | 158 | 2.7            |                |                |                           |                                                                                     |            |     |     |
| 24.5      | 2D24.5-52WC04 | ●                        | 126           | 52   | 70             | 0.4            | 60             | 40                        | 2D60-128WC08                                                                      | ●            | 230          | 128                      | 160         | 2.8 |                |                |                |                           |                                                                                     |            |     |     |
| 25        | 2D25-53WC05   | ●                        | 127           | 53   | 71             | 0.4            | 61             |                           | 2D61-130WC06                                                                      | ●            | 232          | 130                      | 162         | 70  | WC..06T308     |                |                |                           |                                                                                     |            |     |     |
| 25.5      | 32            | 2D25.5-54WC05            | ●             | 134  | 54             | 74             | 60             |                           | WC..050308                                                                        | 0.6          | 62           | 2D62-132WC06             | ●           |     |                | 234            | 132            | 164                       |                                                                                     |            |     |     |
| 26        |               | 2D26-55WC05              | ●             | 135  | 55             | 75             |                |                           |                                                                                   | 0.6          | 63           | 2D63-134WC06             | ●           |     |                | 236            | 134            | 166                       |                                                                                     |            |     |     |
| 26.5      |               | 2D26.5-56WC05            | ●             | 136  | 56             | 76             |                |                           |                                                                                   | 0.6          | 64           | 2D64-136WC06             | ●           |     |                | 238            | 136            | 168                       |                                                                                     |            |     |     |
| 27        |               | 2D27-57WC05              | ●             | 137  | 57             | 77             |                |                           |                                                                                   | 0.6          | 65           | 2D65-138WC06             | ●           |     |                | 240            | 138            | 170                       |                                                                                     |            |     |     |
| 27.5      |               | 2D27.5-58WC05            | ●             | 138  | 58             | 78             |                |                           |                                                                                   | 0.6          | 66           | 2D66-140WC06             | ●           |     |                | 242            | 140            | 172                       |                                                                                     |            |     |     |
| 28        |               | 2D28-59WC05              | ●             | 139  | 59             | 79             |                |                           |                                                                                   | 0.6          | 67           | 2D67-142WC06             | ●           |     |                | 244            | 142            | 174                       |                                                                                     |            |     |     |
| 28.5      |               | 2D28.5-60WC05            | ●             | 140  | 60             | 80             |                |                           |                                                                                   | 0.6          | 68           | 2D68-144WC06             | ●           |     |                | 246            | 144            | 176                       |                                                                                     |            |     |     |
| 29        |               | 2D29-62WC05              | ●             | 143  | 62             | 83             |                |                           |                                                                                   | 0.7          | 69           | 2D69-146WC06             | ●           |     |                | 248            | 146            | 178                       |                                                                                     |            |     |     |
| 29.5      |               | 2D29.5-63WC05            | ●             | 144  | 63             | 84             |                |                           |                                                                                   | 0.7          | 70           | 2D70-148WC06             | ●           |     |                | 250            | 148            | 180                       |                                                                                     |            |     |     |
| 30        |               | 2D30-64WC05              | ●             | 148  | 64             | 88             |                | 0.7                       |                                                                                   | 71           | 2D71-150WC06 | ●                        | 252         |     |                | 150            | 182            |                           |                                                                                     |            |     |     |
| 30.5      |               | 2D30.5-65WC05            | ●             | 149  | 65             | 89             |                | 0.7                       |                                                                                   | 72           | 2D72-152WC06 | ●                        | 254         |     |                | 152            | 184            |                           |                                                                                     |            |     |     |
| 31        | 32            | 2D31-66WC06              | ●             | 150  | 66             | 90             | 60             | WC..06T308                | 0.7                                                                               | 73           | 2D73-154WC06 | ●                        | 256         |     |                | 154            | 186            |                           |                                                                                     |            |     |     |
| 31.5      |               | 2D31.5-67W06             | ●             | 151  | 67             | 91             |                |                           | 0.7                                                                               | 74           | 2D74-156WC06 | ●                        | 258         |     |                | 156            | 188            |                           |                                                                                     |            |     |     |
| 32        |               | 2D32-68WC06              | ●             | 152  | 68             | 92             |                |                           | 0.8                                                                               | 75           | 2D75-158WC06 | ●                        | 260         |     |                | 158            | 190            |                           |                                                                                     |            |     |     |
| 32.5      |               | 2D32.5-69WC06            | ●             | 153  | 69             | 93             |                |                           | 0.8                                                                               | 76           | 2D76-160WC06 | ●                        | 262         |     |                | 160            | 192            |                           |                                                                                     |            |     |     |
| 33        |               | 2D33-70WC06              | ●             | 154  | 70             | 94             |                |                           | 0.8                                                                               | 77           | 2D77-162WC06 | ●                        | 264         |     |                | 162            | 194            |                           |                                                                                     |            |     |     |
| 33.5      |               | 2D33.5-71WC06            | ●             | 155  | 71             | 95             |                |                           | 0.8                                                                               | 78           | 2D78-164WC06 | ●                        | 266         |     |                | 164            | 196            |                           |                                                                                     |            |     |     |
| 34        |               | 2D34-72WC06              | ●             | 156  | 72             | 96             |                |                           | 0.8                                                                               | 79           | 2D79-166WC06 | ●                        | 268         |     |                | 166            | 198            |                           |                                                                                     |            |     |     |
| 34.5      |               | 2D34.5-73WC06            | ●             | 157  | 73             | 97             |                |                           | 0.8                                                                               | 80           | 2D80-168WC06 | ●                        | 270         | 168 | 200            |                |                |                           |                                                                                     |            |     |     |
| 35        |               | 2D35-74WC06              | ●             | 158  | 74             | 98             |                |                           | 0.8                                                                               |              |              |                          |             |     |                |                |                |                           |                                                                                     |            |     |     |

●●表示库存 ○表示库存预定品

●表示库存 ○表示库存预定品

# WC-3 X D (Φ 14-100) Indexable drills with WC inserts

## WC 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: Φ 10.0 ~ 80.0mm

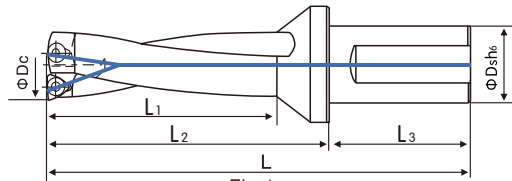


Fig.1

加工公差標準 -0.25~+0.25  
Range of machining tolerance: -0.25~+0.25

最大加工深度  $\ell \ 3 \times \Phi Dc$   
Drilling depth: 3x diameter



| 刃徑<br>ΦDc | 柄徑<br>ΦDs      | 型號<br>Specification/Item | 庫存<br>Store   | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  | 刃徑<br>ΦDc | 柄徑<br>ΦDs    | 型號<br>Specification/Item | 庫存<br>Store | L            | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  |            |     |            |     |            |
|-----------|----------------|--------------------------|---------------|------|----------------|----------------|----------------|---------------------------|-----------------------------------------------------------------------------------|-----------|--------------|--------------------------|-------------|--------------|----------------|----------------|----------------|---------------------------|-------------------------------------------------------------------------------------|------------|-----|------------|-----|------------|
| 10        | 20             | 3D10-32WC02              | ●             | 97   | 32             | 47             | 44             | WC..020104                | 0.2                                                                               | 35.5      | 32           | 3D35.5-111WC06           | ●           | 195          | 111            | 135            | 60             | WC..06T308                | 1.0                                                                                 |            |     |            |     |            |
| 10.5      |                | 3D10.5-34WC02            | ●             | 97.5 | 34             | 47.5           |                |                           | 0.2                                                                               | 36        |              | 3D36-112WC06             | ●           | 196          | 112            | 136            |                |                           | 1.0                                                                                 |            |     |            |     |            |
| 11        |                | 3D11-34WC02              | ●             | 98.5 | 34             | 48.5           |                |                           | 0.2                                                                               | 36.5      |              | 3D36.5-114WC06           | ●           | 198          | 114            | 138            |                |                           | 1.1                                                                                 |            |     |            |     |            |
| 11.5      |                | 3D11.5-37WC02            | ●             | 100  | 37             | 50             |                |                           | 0.2                                                                               | 37        |              | 3D37-116WC06             | ●           | 206          | 116            | 146            |                |                           | 1.1                                                                                 |            |     |            |     |            |
| 12        |                | 3D12-38WC02              | ●             | 102  | 38             | 52             |                |                           | 0.2                                                                               | 37.5      |              | 3D37.5-118WC06           | ●           | 208          | 118            | 148            |                |                           | 1.1                                                                                 |            |     |            |     |            |
| 12.5      |                | 3D12.5-41WC02            | ●             | 105  | 41             | 55             |                |                           | 0.2                                                                               | 38        |              | 3D38-119WC06             | ●           | 209          | 119            | 149            |                |                           | 1.1                                                                                 |            |     |            |     |            |
| 13        | 20             | 3D13-42WC02              | ●             | 101  | 42             | 57             | 44             | WC..020104                | 0.2                                                                               | 38.5      | 32           | 3D38.5-121WC06           | ●           | 211          | 121            | 151            | 60             | WC..06T308                | 1.1                                                                                 |            |     |            |     |            |
| 13.5      |                | 3D13.5-44WC02            | ●             | 103  | 44             | 59             |                |                           | 0.2                                                                               | 39        |              | 3D39-122WC06             | ●           | 212          | 122            | 152            |                |                           | 1.2                                                                                 |            |     |            |     |            |
| 14        |                | 3D14-45WC02/03           | ●             | 104  | 45             | 60             |                |                           | 0.2                                                                               | 39.5      |              | 3D39.5-124WC06           | ●           | 214          | 124            | 154            |                |                           | 1.3                                                                                 |            |     |            |     |            |
| 14.5      |                | 3D14.5-47WC02/03         | ●             | 106  | 47             | 62             |                | WC..030208                | 0.2                                                                               | 40        |              | 3D40-125WC06             | ●           | 225          | 125            | 155            |                |                           | 70                                                                                  | WC..080412 | 1.6 |            |     |            |
| 15        |                | /                        | 3D15-48WC03   | ●    | 107            | 48             |                |                           | 63                                                                                | 56        |              | WC..040208               | 0.2         | 41           | 3D41-128WC06   | ●              |                |                           |                                                                                     |            | 228 | 128        | 158 | 1.7        |
| 15.5      |                | 25                       | 3D15.5-50WC03 | ●    | 109            | 50             |                |                           | 65                                                                                |           |              |                          | 0.2         | 42           | 3D42-131WC08   | ●              |                |                           |                                                                                     |            | 231 | 131        | 161 | 1.7        |
| 16        | 3D16-51WC03    | ●                        | 110           | 51   | 66             | 0.2            | 43             | 3D43-134WC08              | ●                                                                                 |           | 234          |                          | 134         | 164          | 1.8            |                |                |                           |                                                                                     |            |     |            |     |            |
| 16.5      | 3D16.5-53WC03  | ●                        | 112           | 53   | 68             | 0.2            | 44             | 3D44-137WC08              | ●                                                                                 |           | 237          |                          | 137         | 167          | 1.8            |                |                |                           |                                                                                     |            |     |            |     |            |
| 17        | 3D17-54WC03    | ●                        | 113           | 54   | 69             | 0.2            | 45             | 3D45-140WC08              | ●                                                                                 |           | 240          |                          | 140         | 170          | 1.9            |                |                |                           |                                                                                     |            |     |            |     |            |
| 17.5      | 25             | 3D17.5-56WC03            | ●             | 127  | 56             | 71             | 56             | WC..030208                | 0.3                                                                               |           | 46           |                          | 40          | 3D46-143WC08 | ●              | 243            | 143            | 173                       | 70                                                                                  | WC..06T308 | 2.0 |            |     |            |
| 18        |                | 3D18-57WC03              | ●             | 128  | 57             | 72             |                |                           | 0.3                                                                               | 47        | 3D47-146WC08 |                          |             | ●            | 246            | 146            | 176            | 2.1                       |                                                                                     |            |     |            |     |            |
| 18.5      |                | 3D18.5-59WC03            | ●             | 130  | 59             | 74             |                |                           | 0.3                                                                               | 48        | 3D48-149WC08 |                          |             | ●            | 249            | 149            | 179            | 2.2                       |                                                                                     |            |     |            |     |            |
| 19        |                | 3D19-60WC03              | ●             | 131  | 60             | 75             |                |                           | 0.3                                                                               | 49        | 3D49-152WC08 |                          |             | ●            | 252            | 152            | 182            | 2.2                       |                                                                                     |            |     |            |     |            |
| 19.5      |                | 3D19.5-62WC03            | ●             | 133  | 62             | 77             |                |                           | 0.3                                                                               | 50        | 3D50-155WC08 |                          |             | ●            | 255            | 155            | 185            | 2.3                       |                                                                                     |            |     |            |     |            |
| 20        |                | 3D20-63WC03              | ●             | 134  | 63             | 78             |                |                           | 0.4                                                                               | 51        | 3D51-158WC08 |                          |             | ●            | 258            | 158            | 188            | 2.4                       |                                                                                     |            |     |            |     |            |
| 20.5      |                | 3D20.5-65WC03            | ●             | 136  | 65             | 80             | 0.4            | 52                        | 3D52-161WC08                                                                      | ●         | 261          |                          | 161         | 191          | 2.5            |                |                |                           |                                                                                     |            |     |            |     |            |
| 21        |                | 32                       | 3D21-66WC04   | ●    | 137            | 66             | 81             | 60                        | WC..050308                                                                        | 0.4       | 53           |                          | 40          | 3D53-164WC08 | ●              | 264            | 164            | 194                       |                                                                                     |            | 70  | WC..06T308 | 2.6 |            |
| 21.5      |                |                          | 3D21.5-68WC04 | ●    | 139            | 68             | 83             |                           |                                                                                   | 0.4       | 54           |                          |             | 3D54-167WC08 | ●              | 267            | 167            | 197                       |                                                                                     |            |     |            | 2.7 |            |
| 22        |                |                          | 3D22-69WC04   | ●    | 140            | 69             | 84             |                           |                                                                                   | 0.4       | 55           |                          |             | 3D55-170WC08 | ●              | 270            | 170            | 200                       |                                                                                     |            |     |            | 2.8 |            |
| 22.5      |                |                          | 3D22.5-71WC04 | ●    | 142            | 71             | 86             |                           |                                                                                   | 0.4       | 56           |                          |             | 3D56-176WC08 | ●              | 278            | 176            | 208                       |                                                                                     |            |     |            | 2.8 |            |
| 23        |                |                          | 3D23-72WC04   | ●    | 146            | 72             | 90             |                           |                                                                                   | 0.4       | 57           | 3D57-179WC08             |             | ●            | 281            | 179            | 211            | 3.0                       |                                                                                     |            |     |            |     |            |
| 23.5      |                |                          | 3D23.5-74WC04 | ●    | 148            | 74             | 92             |                           |                                                                                   | 0.4       | 58           | 3D58-182WC08             |             | ●            | 284            | 182            | 214            | 3.2                       |                                                                                     |            |     |            |     |            |
| 24        |                |                          | 3D24-75WC04   | ●    | 149            | 75             | 93             |                           |                                                                                   | 0.4       | 59           | 3D59-185WC08             |             | ●            | 287            | 185            | 217            | 3.3                       |                                                                                     |            |     |            |     |            |
| 24.5      | 3D24.5-77WC04  |                          | ●             | 151  | 77             | 95             | 0.4            |                           |                                                                                   | 60        | 3D60-188WC08 | ●                        |             | 290          | 188            | 220            | 3.3            |                           |                                                                                     |            |     |            |     |            |
| 25        | 3D25-78WC05    |                          | ●             | 152  | 78             | 96             | 0.4            |                           |                                                                                   | 61        | 3D61-191WC06 | ●                        |             | 291          | 191            | 221            |                |                           |                                                                                     |            |     |            |     |            |
| 25.5      | 32             |                          | 3D25.5-80WC05 | ●    | 160            | 80             | 100            |                           |                                                                                   | 60        | WC..06T308   | 0.6                      |             | 62           | 40             | 3D62-194WC06   | ●              | 296                       | 194                                                                                 | 226        |     |            | 70  | WC..06T308 |
| 26        |                | 3D26-81WC05              | ●             | 161  | 81             | 101            | 0.6            | 63                        | 3D63-197WC06                                                                      |           |              | ●                        | 299         | 197          |                | 229            |                |                           |                                                                                     |            |     |            |     |            |
| 26.5      |                | 3D26.5-83WC05            | ●             | 163  | 83             | 103            | 0.7            | 64                        | 3D64-200WC06                                                                      |           |              | ●                        | 302         | 200          |                | 232            |                |                           |                                                                                     |            |     |            |     |            |
| 27        |                | 3D27-84WC05              | ●             | 164  | 84             | 104            | 0.7            | 65                        | 3D65-203WC06                                                                      |           |              | ●                        | 305         | 203          |                | 235            |                |                           |                                                                                     |            |     |            |     |            |
| 27.5      |                | 3D27.5-86WC05            | ●             | 166  | 86             | 106            | 0.7            | 66                        | 3D66-206WC06                                                                      |           |              | ●                        | 308         | 206          |                | 238            |                |                           |                                                                                     |            |     |            |     |            |
| 28        |                | 3D28-87WC05              | ●             | 167  | 87             | 107            | 0.7            | 67                        | 3D67-209WC06                                                                      |           |              | ●                        | 311         | 209          |                | 241            |                |                           |                                                                                     |            |     |            |     |            |
| 28.5      |                | 3D28.5-89WC05            | ●             | 169  | 89             | 109            | 0.7            | 68                        | 3D68-212WC06                                                                      |           |              | ●                        | 314         | 212          |                | 244            |                |                           |                                                                                     |            |     |            |     |            |
| 29        |                | 3D29-91WC05              | ●             | 172  | 91             | 112            | 0.7            | 69                        | 3D69-215WC06                                                                      |           |              | ●                        | 317         | 215          |                | 247            |                |                           |                                                                                     |            |     |            |     |            |
| 29.5      |                | 3D29.5-93WC05            | ●             | 174  | 93             | 114            | 0.7            | 70                        | 3D70-218WC06                                                                      |           |              | ●                        | 320         | 218          |                | 250            |                |                           |                                                                                     |            |     |            |     |            |
| 30        |                | 3D30-94WC05              | ●             | 178  | 94             | 118            | 0.7            | 71                        | 3D71-221WC06                                                                      |           |              | ●                        | 323         | 221          |                | 253            |                |                           |                                                                                     |            |     |            |     |            |
| 30.5      |                | 3D30.5-96WC05            | ●             | 180  | 96             | 120            | 0.8            | 72                        | 3D72-224WC06                                                                      |           |              | ●                        | 326         | 224          |                | 256            |                |                           |                                                                                     |            |     |            |     |            |
| 31        |                | 3D31-97WC06              | ●             | 181  | 97             | 121            | 0.8            | 73                        | 3D73-227WC06                                                                      |           |              | ●                        | 329         | 227          |                | 259            |                |                           |                                                                                     |            |     |            |     |            |
| 31.5      |                | 3D31.5-99WC06            | ●             | 183  | 99             | 123            | 0.9            | 74                        | 3D74-230WC06                                                                      |           |              | ●                        | 332         | 230          |                | 262            |                |                           |                                                                                     |            |     |            |     |            |
| 32        |                | 3D32-100WC06             | ●             | 184  | 100            | 124            | 0.9            | 75                        | 3D75-233WC06                                                                      |           |              | ●                        | 335         | 233          |                | 265            |                |                           |                                                                                     |            |     |            |     |            |
| 32.5      |                | 3D32.5-102WC06           | ●             | 186  | 102            | 126            | 0.9            | 76                        | 3D76-236WC06                                                                      |           |              | ●                        | 338         | 236          |                | 268            |                |                           |                                                                                     |            |     |            |     |            |
| 33        |                | 3D33-103WC06             | ●             | 187  | 103            | 127            | 0.9            | 77                        | 3D77-239WC06                                                                      |           |              | ●                        | 341         | 239          |                | 271            |                |                           |                                                                                     |            |     |            |     |            |
| 33.5      |                | 3D33.5-105WC06           | ●             | 189  | 105            | 129            | 0.9            | 78                        | 3D78-242WC06                                                                      |           |              | ●                        | 344         | 242          |                | 274            |                |                           |                                                                                     |            |     |            |     |            |
| 34        |                | 3D34-106WC06             | ●             | 190  | 106            | 130            | 0.9            | 79                        | 3D79-245WC06                                                                      |           |              | ●                        | 347         | 245          |                | 277            |                |                           |                                                                                     |            |     |            |     |            |
| 34.5      | 3D34.5-108WC06 | ●                        | 192           | 108  | 132            | 1.0            | 80             | 3D80-248WC06              | ●                                                                                 | 350       | 248          | 280                      |             |              |                |                |                |                           |                                                                                     |            |     |            |     |            |
| 35        | 3D35-109WC06   | ●                        | 193           | 109  | 133            | 1.0            |                |                           |                                                                                   |           |              |                          |             |              |                |                |                |                           |                                                                                     |            |     |            |     |            |

●表示库存 ○表示库存预定品

●表示库存 ○表示库存预定义

# WC-4XD (Φ14-100) Indexable drills with WC inserts

## WC 型 潜孔钻/U 钻 4D

Holder diameter 4D: Φ10.0 ~ 70.0mm

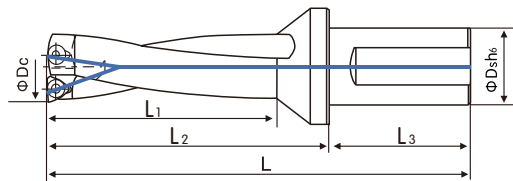


Fig.1

加工公差標準 -0.30~+0.30  
Range of machining tolerance: -0.30~+0.30

最大加工深度  $\ell \ 4 \times \Phi Dc$   
Drilling depth: 4x diameter



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  | 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 11.5      | 20        | 4D11.5-47WC02            | ●           | 111 | 47             | 61             | 44             | WC..020104                | 0.2 | 37        | 32        | 4D37-153WC06             | ●           | 243 | 153            | 183            | 60             | WC..06T308                | 1.2 |
| 12        |           | 4D12-50WC02              | ●           | 115 | 50             | 65             |                |                           | 0.2 | 37.5      |           | 4D37.5-155WC06           | ●           | 245 | 155            | 185            |                |                           | 1.2 |
| 12.5      |           | 4D12.5-52WC02            | ●           | 117 | 52             | 67             |                |                           | 0.2 | 38        |           | 4D38-157WC06             | ●           | 247 | 157            | 187            |                |                           | 1.3 |
| 13        |           | 4D13-55WC02              | ●           | 114 | 55             | 70             |                |                           | 0.2 | 38.5      |           | 4D38.5-159WC06           | ●           | 249 | 159            | 189            |                |                           | 1.3 |
| 13.5      | 20        | 4D13.5-57WC02            | ●           | 116 | 57             | 72             | 44             | WC..020104                | 0.2 | 39        | 32        | 4D39-161WC06             | ●           | 251 | 161            | 191            | 60             | WC..06T308                | 1.8 |
| 14        |           | 4D14-59WC02/03           | ●           | 118 | 59             | 74             |                |                           | 0.2 | 39.5      |           | 4D39.5-163WC06           | ●           | 253 | 163            | 193            |                |                           | 1.8 |
| 14.5      |           | 4D14.5-61WC02/03         | ●           | 120 | 61             | 76             |                | WC..030208                | 0.2 | 40        |           | 4D40-165WC06             | ●           | 265 | 165            | 195            |                |                           | 1.8 |
| 15        |           | 4D15-63WC03              | ●           | 122 | 63             | 78             |                |                           | 0.2 | 41        |           | 4D41-169WC06             | ●           | 269 | 169            | 199            |                |                           | 1.9 |
| 15.5      | 25        | 4D15.5-65WC03            | ●           | 124 | 65             | 80             | 56             | WC..030208                | 0.2 | 42        | 40        | 4D42-173WC08             | ●           | 273 | 173            | 203            | 70             | WC..080412                | 2.0 |
| 16        |           | 4D16-67WC03              | ●           | 126 | 67             | 82             |                |                           | 0.3 | 43        |           | 4D43-177WC08             | ●           | 277 | 177            | 207            |                |                           | 2.1 |
| 16.5      |           | 4D16.5-69WC03            | ●           | 128 | 69             | 84             |                |                           | 0.3 | 44        |           | 4D44-181WC08             | ●           | 281 | 181            | 211            |                |                           | 2.2 |
| 17        |           | 4D17-71WC03              | ●           | 130 | 71             | 86             |                |                           | 0.3 | 45        |           | 4D45-185WC08             | ●           | 285 | 185            | 215            |                |                           | 2.3 |
| 17.5      | 25        | 4D17.5-73WC03            | ●           | 144 | 73             | 88             | 56             | WC..030208                | 0.3 | 46        | 40        | 4D46-189WC08             | ●           | 289 | 189            | 219            | 70             | WC..080412                | 2.4 |
| 18        |           | 4D18-75WC03              | ●           | 146 | 75             | 90             |                |                           | 0.4 | 47        |           | 4D47-193WC08             | ●           | 293 | 193            | 223            |                |                           | 2.5 |
| 18.5      |           | 4D18.5-77WC03            | ●           | 148 | 77             | 92             |                |                           | 0.4 | 48        |           | 4D48-197WC08             | ●           | 297 | 197            | 227            |                |                           | 2.6 |
| 19        |           | 4D19-79WC03              | ●           | 150 | 79             | 94             |                |                           | 0.4 | 49        |           | 4D49-201WC08             | ●           | 301 | 201            | 231            |                |                           | 2.7 |
| 19.5      | 25        | 4D19.5-81WC03            | ●           | 152 | 81             | 96             | 56             | WC..040208                | 0.4 | 50        | 40        | 4D50-205WC08             | ●           | 305 | 205            | 235            | 70             | WC..080412                | 2.8 |
| 20        |           | 4D20-83WC03              | ●           | 154 | 83             | 98             |                |                           | 0.4 | 51        |           | 4D51-209WC08             | ●           | 309 | 209            | 239            |                |                           | 2.9 |
| 20.5      |           | 4D20.5-85WC03            | ●           | 156 | 85             | 100            |                |                           | 0.4 | 52        |           | 4D52-213WC08             | ●           | 313 | 213            | 243            |                |                           | 3.0 |
| 21        |           | 4D21-87WC04              | ●           | 158 | 87             | 102            |                |                           | 0.4 | 53        |           | 4D53-217WC08             | ●           | 317 | 217            | 247            |                |                           | 3.1 |
| 21.5      | 25        | 4D21.5-89WC04            | ●           | 160 | 89             | 104            | 56             | WC..040208                | 0.4 | 54        | 40        | 4D54-221WC08             | ●           | 321 | 221            | 251            | 70             | WC..080412                | 3.2 |
| 22        |           | 4D22-91WC04              | ●           | 162 | 91             | 106            |                |                           | 0.4 | 55        |           | 4D55-225WC08             | ●           | 325 | 225            | 255            |                |                           | 3.3 |
| 22.5      |           | 4D22.5-93WC04            | ●           | 164 | 93             | 108            |                |                           | 0.4 | 56        |           | 4D56-232WC08             | ●           | 334 | 232            | 264            |                |                           | 3.5 |
| 23        |           | 4D23-95WC04              | ●           | 169 | 95             | 113            |                |                           | 0.5 | 57        |           | 4D57-236WC08             | ●           | 338 | 236            | 268            |                |                           | 3.7 |
| 23.5      | 25        | 4D23.5-97WC04            | ●           | 171 | 97             | 115            | 56             | WC..040208                | 0.5 | 58        | 40        | 4D58-240WC08             | ●           | 342 | 240            | 272            | 70             | WC..080412                | 3.8 |
| 24        |           | 4D24-99WC04              | ●           | 173 | 99             | 117            |                |                           | 0.5 | 59        |           | 4D59-244WC08             | ●           | 346 | 244            | 276            |                |                           | 4.0 |
| 24.5      |           | 4D24.5-101WC04           | ●           | 175 | 101            | 119            |                |                           | 0.7 | 60        |           | 4D60-248WC08             | ●           | 350 | 248            | 280            |                |                           | 4.1 |
| 25        |           | 4D25-103WC05             | ●           | 177 | 103            | 121            |                |                           | 0.7 | 61        |           | 4D61-252WC06             | ●           | 354 | 252            | 284            |                |                           |     |
| 25.5      | 32        | 4D25.5-105WC05           | ●           | 185 | 105            | 125            | 60             | WC..050308                | 0.7 | 62        | 40        | 4D62-256WC06             | ●           | 358 | 256            | 288            | 70             | WC..06T308                |     |
| 26        |           | 4D26-107WC05             | ●           | 187 | 107            | 127            |                |                           | 0.7 | 63        |           | 4D63-260WC06             | ●           | 362 | 260            | 292            |                |                           |     |
| 26.5      |           | 4D26.5-109WC05           | ●           | 189 | 109            | 129            |                |                           | 0.7 | 64        |           | 4D64-264WC06             | ●           | 366 | 264            | 296            |                |                           |     |
| 27        |           | 4D27-111WC05             | ●           | 191 | 111            | 131            |                |                           | 0.7 | 65        |           | 4D65-268WC06             | ●           | 370 | 268            | 300            |                |                           |     |
| 27.5      | 32        | 4D27.5-113WC05           | ●           | 193 | 113            | 133            | 60             | WC..050308                | 0.7 | 66        | 40        | 4D66-272WC06             | ●           | 374 | 272            | 304            | 70             | WC..06T308                |     |
| 28        |           | 4D28-115WC05             | ●           | 195 | 115            | 135            |                |                           | 0.8 | 67        |           | 4D67-276WC06             | ●           | 378 | 276            | 308            |                |                           |     |
| 28.5      |           | 4D28.5-117WC05           | ●           | 197 | 117            | 137            |                |                           | 0.8 | 68        |           | 4D68-280WC06             | ●           | 382 | 280            | 312            |                |                           |     |
| 29        |           | 4D29-120WC05             | ●           | 201 | 120            | 141            |                |                           | 0.8 | 69        |           | 4D69-284WC06             | ●           | 386 | 284            | 316            |                |                           |     |
| 29.5      | 32        | 4D29.5-122WC05           | ●           | 203 | 122            | 143            | 60             | WC..050308                | 0.8 | 70        | 40        | 4D70-288WC06             | ●           | 390 | 288            | 320            | 70             | WC..06T308                |     |
| 30        |           | 4D30-124WC05             | ●           | 208 | 124            | 148            |                |                           | 0.9 | 71        |           | 4D71-292WC06             | ●           | 394 | 292            | 324            |                |                           |     |
| 30.5      |           | 4D30.5-126WC05           | ●           | 210 | 126            | 150            |                |                           | 0.9 | 72        |           | 4D72-296WC06             | ●           | 398 | 296            | 328            |                |                           |     |
| 31        |           | 4D31-128WC06             | ●           | 212 | 128            | 152            |                |                           | 0.9 | 73        |           | 4D73-300WC06             | ●           | 402 | 300            | 332            |                |                           |     |
| 31.5      | 32        | 4D31.5-130WC06           | ●           | 214 | 130            | 154            | 60             | WC..06T308                | 0.9 | 74        | 40        | 4D74-304WC06             | ●           | 406 | 304            | 336            | 70             | WC..06T308                |     |
| 32        |           | 4D32-132WC06             | ●           | 216 | 132            | 156            |                |                           | 1.0 | 75        |           | 4D75-308WC06             | ●           | 410 | 308            | 340            |                |                           |     |
| 32.5      |           | 4D32.5-134WC06           | ●           | 218 | 134            | 158            |                |                           | 1.0 | 76        |           | 4D76-312WC06             | ●           | 414 | 312            | 344            |                |                           |     |
| 33        |           | 4D33-136WC06             | ●           | 220 | 136            | 160            |                |                           | 1.0 | 77        |           | 4D77-316WC06             | ●           | 418 | 316            | 348            |                |                           |     |
| 33.5      | 32        | 4D33.5-138WC06           | ●           | 222 | 138            | 162            | 60             | WC..06T308                | 1.0 | 78        | 40        | 4D78-320WC06             | ●           | 422 | 320            | 352            | 70             | WC..06T308                |     |
| 34        |           | 4D34-140WC06             | ●           | 224 | 140            | 164            |                |                           | 1.1 | 79        |           | 4D79-324WC06             | ●           | 426 | 324            | 356            |                |                           |     |
| 34.5      |           | 4D34.5-142WC06           | ●           | 226 | 142            | 166            |                |                           | 1.1 | 80        |           | 4D80-328WC06             | ●           | 430 | 328            | 360            |                |                           |     |
| 35        |           | 4D35-144WC06             | ●           | 228 | 144            | 168            |                |                           | 1.1 |           |           |                          |             |     |                |                |                |                           |     |
| 35.5      | 32        | 4D35.5-146WC06           | ●           | 230 | 146            | 170            | 60             | WC..06T308                | 1.1 |           | 40        |                          |             |     |                |                | 70             | WC..06T308                |     |
| 36        |           | 4D36-148WC06             | ●           | 232 | 148            | 172            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |
| 36.5      |           | 4D36.5-150WC06           | ●           | 236 | 150            | 174            |                |                           | 1.2 |           |           |                          |             |     |                |                |                |                           |     |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定义



# WC-5XD (Φ14-100) Indexable drills with WC inserts

## WC型潜孔钻/U钻 5D

Holder diameter 5D: Φ15.0 ~ 100.0mm

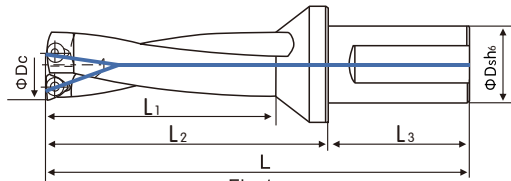


Fig.1

加工公差標準 -0.30~+0.30  
Range of machining tolerance: -0.30~+0.30

最大加工深度  $l \leq 5 \times \Phi Dc$   
Drilling depth: 5x diameter



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|----|
| 13        |           | 5D13-68WC02              | ●           | 129 | 68             | 85             |                | WC..020104                |    |
| 13.5      |           | 5D13.5-71WC02            | ●           | 131 | 71             | 87             |                |                           |    |
| 14        |           | 5D14-73WC03              | ●           | 133 | 73             | 89             |                |                           |    |
| 14.5      | 20        | 5D14.5-76WC03            | ●           | 135 | 76             | 91             |                |                           |    |
| 15        | /         | 5D15-78WC03              | ●           | 137 | 78             | 93             | 44             |                           |    |
| 15.5      | 25        | 5D15.5-81WC03            | ●           | 140 | 81             | 95             |                |                           |    |
| 16        |           | 5D16-83WC03              | ●           | 142 | 83             | 98             |                |                           |    |
| 16.5      |           | 5D16.5-86WC03            | ●           | 145 | 86             | 101            |                |                           |    |
| 17        |           | 5D17-88WC03              | ●           | 147 | 88             | 103            |                |                           |    |
| 17.5      |           | 5D17.5-91WC03            | ●           | 162 | 91             | 106            |                | WC..030208                |    |
| 18        |           | 5D18-93WC03              | ●           | 164 | 93             | 108            |                |                           |    |
| 18.5      |           | 5D18.5-96WC03            | ●           | 167 | 96             | 111            |                |                           |    |
| 19        |           | 5D19-98WC03              | ●           | 169 | 98             | 113            |                |                           |    |
| 19.5      |           | 5D19.5-101WC03           | ●           | 172 | 101            | 116            |                |                           |    |
| 20        |           | 5D20-103WC03             | ●           | 174 | 103            | 118            |                |                           |    |
| 20.5      |           | 5D20.5-106WC03           | ●           | 177 | 106            | 121            |                |                           |    |
| 21        | 25        | 5D21-108WC04             | ●           | 179 | 108            | 123            | 56             |                           |    |
| 21.5      |           | 5D21.5-111WC04           | ●           | 182 | 111            | 126            |                |                           |    |
| 22        |           | 5D22-113WC04             | ●           | 184 | 113            | 128            |                | WC..040208                |    |
| 22.5      |           | 5D22.5-116WC04           | ●           | 187 | 116            | 131            |                |                           |    |
| 23        |           | 5D23-118WC04             | ●           | 192 | 118            | 136            |                |                           |    |
| 23.5      |           | 5D23.5-121WC04           | ●           | 195 | 121            | 139            |                |                           |    |
| 24        |           | 5D24-123WC04             | ●           | 197 | 123            | 141            |                |                           |    |
| 24.5      |           | 5D24.5-126WC04           | ●           | 200 | 126            | 144            |                |                           |    |
| 25        |           | 5D25-128WC05             | ●           | 202 | 128            | 146            |                |                           |    |
| 25.5      |           | 5D25.5-131WC05           | ●           | 213 | 131            | 153            |                |                           |    |
| 26        |           | 5D26-133WC05             | ●           | 216 | 133            | 156            |                |                           |    |
| 26.5      |           | 5D26.5-136WC05           | ●           | 217 | 136            | 157            |                |                           |    |
| 27        |           | 5D27-138WC05             | ●           | 218 | 138            | 158            |                |                           |    |
| 27.5      |           | 5D27.5-141WC05           | ●           | 221 | 141            | 161            |                |                           |    |
| 28        |           | 5D28-143WC05             | ●           | 223 | 143            | 163            |                |                           |    |
| 28.5      |           | 5D28.5-146WC05           | ●           | 226 | 146            | 166            |                |                           |    |
| 29        |           | 5D29-149WC05             | ●           | 230 | 149            | 170            |                |                           |    |
| 29.5      |           | 5D29.5-151WC05           | ●           | 233 | 151            | 173            |                |                           |    |
| 30        |           | 5D30-154WC05             | ●           | 238 | 154            | 178            |                |                           |    |
| 30.5      |           | 5D30.5-157WC05           | ●           | 241 | 157            | 181            |                |                           |    |
| 31        |           | 5D31-159WC06             | ●           | 243 | 159            | 183            |                |                           |    |
| 31.5      | 32        | 5D31.5-162WC06           | ●           | 245 | 162            | 185            | 60             |                           |    |
| 32        |           | 5D32-164WC06             | ●           | 248 | 164            | 188            |                |                           |    |
| 32.5      |           | 5D32.5-167WC06           | ●           | 251 | 167            | 191            |                |                           |    |
| 33        |           | 5D33-169WC06             | ●           | 253 | 169            | 193            |                |                           |    |
| 33.5      |           | 5D33.5-172WC06           | ●           | 255 | 172            | 195            |                |                           |    |
| 34        |           | 5D34-174WC06             | ●           | 258 | 174            | 198            |                |                           |    |
| 34.5      |           | 5D34.5-177WC06           | ●           | 261 | 177            | 201            |                |                           |    |
| 35        |           | 5D35-179WC06             | ●           | 263 | 179            | 203            |                |                           |    |
| 35.5      |           | 5D35.5-182WC06           | ●           | 265 | 182            | 205            |                |                           |    |
| 36        |           | 5D36-184WC06             | ●           | 268 | 184            | 208            |                |                           |    |
| 36.5      |           | 5D36.5-187WC06           | ●           | 271 | 187            | 211            |                |                           |    |
| 37        |           | 5D37-190WC06             | ●           | 280 | 190            | 220            |                |                           |    |
| 37.5      |           | 5D37.5-193WC06           | ●           | 283 | 193            | 223            |                |                           |    |
| 38        |           | 5D38-195WC06             | ●           | 285 | 195            | 225            |                |                           |    |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 38.5      |           | 5D38.5-198WC06           | ●           | 288 | 198            | 228            |                |                           | 1.4 |
| 39        | 32        | 5D39-200WC06             | ●           | 290 | 200            | 230            | 60             | WC..06T308                | 1.9 |
| 39.5      |           | 5D39.5-203WC06           | ●           | 293 | 203            | 233            |                |                           | 1.9 |
| 40        |           | 5D40-205WC06             | ●           | 305 | 205            | 235            |                |                           | 1.9 |
| 41        |           | 5D41-210WC06             | ○           | 310 | 210            | 240            |                |                           | 2.0 |
| 42        |           | 5D42-215WC08             | ○           | 315 | 215            | 245            |                |                           | 2.1 |
| 43        |           | 5D43-220WC08             | ○           | 320 | 220            | 250            |                |                           | 2.2 |
| 44        |           | 5D44-225WC08             | ○           | 325 | 225            | 255            |                |                           | 2.3 |
| 45        |           | 5D45-230WC08             | ○           | 330 | 230            | 260            |                |                           | 2.4 |
| 46        |           | 5D46-235WC08             | ○           | 335 | 235            | 265            |                |                           | 2.5 |
| 47        |           | 5D47-240WC08             | ○           | 340 | 240            | 270            |                |                           | 2.6 |
| 48        |           | 5D48-245WC08             | ○           | 345 | 245            | 275            |                |                           | 2.7 |
| 49        |           | 5D49-250WC08             | ○           | 350 | 250            | 280            |                |                           | 2.8 |
| 50        |           | 5D50-255WC08             | ○           | 355 | 255            | 285            |                |                           | 2.9 |
| 51        |           | 5D51-260WC08             | ○           | 360 | 260            | 290            |                |                           | 3.0 |
| 52        |           | 5D52-265WC08             | ○           | 365 | 265            | 295            |                |                           | 3.1 |
| 53        |           | 5D53-270WC08             | ○           | 370 | 270            | 300            |                |                           | 3.2 |
| 54        |           | 5D54-275WC08             | ○           | 375 | 275            | 305            |                |                           | 3.3 |
| 55        | 40        | 5D55-280WC08             | ○           | 380 | 280            | 310            | 70             | WC..080412                | 3.4 |
| 56        |           | 5D56-285WC08             | ○           | 385 | 285            | 315            |                |                           | 3.6 |
| 57        |           | 5D57-295WC08             | ○           | 390 | 295            | 320            |                |                           | 3.8 |
| 58        |           | 5D58-300WC08             | ○           | 395 | 300            | 325            |                |                           | 3.9 |
| 59        |           | 5D59-305WC08             | ○           | 400 | 305            | 330            |                |                           | 4.1 |
| 60        |           | 5D60-310WC08             | ○           | 405 | 310            | 335            |                |                           | 4.2 |
| 61        |           | 5D61-315WC08             | ○           | 410 | 315            | 340            |                |                           | 4.3 |
| 62        |           | 5D62-320WC08             | ○           | 415 | 320            | 345            |                |                           | 4.4 |
| 63        |           | 5D63-325WC08             | ○           | 420 | 325            | 350            |                |                           | 4.5 |
| 64        |           | 5D64-330WC08             | ○           | 425 | 330            | 355            |                |                           | 4.6 |
| 65        |           | 5D65-335WC08             | ○           | 430 | 335            | 360            |                |                           | 4.7 |
| 66        |           | 5D66-340WC08             | ○           | 435 | 340            | 365            |                |                           | 4.8 |
| 67        |           | 5D67-345WC08             | ○           | 440 | 345            | 370            |                |                           | 4.9 |
| 68        |           | 5D68-350WC08             | ○           | 445 | 350            | 375            |                |                           | 5.0 |
| 69        |           | 5D69-355WC08             | ○           | 450 | 355            | 380            |                |                           | 5.1 |
| 70        |           | 5D70-360WC08             | ○           | 455 | 360            | 385            |                |                           | 5.2 |

### ◎附件Spare Parts

| 類型<br>type | 直徑<br>diameter | 刀片型號<br>Blade model | 螺絲<br>Screw |   |     | 扳手<br>Wrench |
|------------|----------------|---------------------|-------------|---|-----|--------------|
| WC         | 13-14.5        | WC02                | M1.8        | X | 5   | T6           |
|            | 14-14.5        | WC03                | M2.5        | X | 5.5 | T8           |
|            | 15-20.5        | WC03                | M2.5        | X | 6   | T8           |
|            | 21-24.5        | WC04                | M2.5        | X | 6   | T8           |
|            | 25-30.5        | WC05                | M3          | X | 7   | T8           |
|            | 31-41.5        | WC06                | M3.5        | X | 8.5 | T15          |
|            | 42-62          | WC08                | M4          | X | 10  | T15          |
|            | 63-80          | WC06                | M3.5        | X | 8.5 | T8           |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预制品



# TDR-2 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 2 D

Holder diameter 2D: Φ13.0 ~ 60.0mm

加工公差標準 -0.2~+0.2

Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times \Phi D_c$

Drilling depth: 2x diameter

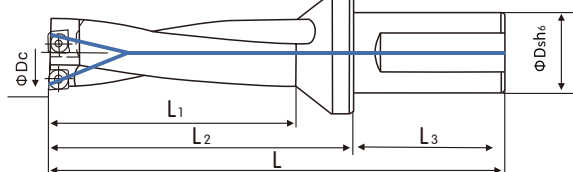


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs          | 型號<br>Specification/Item | 庫存<br>Store | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | <br>kg |     |
|-----------|--------------------|--------------------------|-------------|------|----------------|----------------|----------------|---------------------------|-----------------------------------------------------------------------------------------|-----|
| 8.5       | 20                 | KSD085-2D-S20-SP03       | ●           | 83.5 | 18             | 33.5           | 44             | SP..030202                | 0.2                                                                                     |     |
| 9         |                    | KSD090-2D-S20-SP03       | ●           | 84.5 | 19             | 34.5           |                |                           | 0.2                                                                                     |     |
| 9.5       |                    | KSD095-2D-S20-SP03       | ●           | 85.5 | 20             | 35.5           |                |                           | 0.2                                                                                     |     |
| 10        |                    | KSD100-2D-S20-SP04       | ●           | 85.5 | 22             | 35.5           |                |                           | SP..04T102                                                                              | 0.2 |
| 10.5      |                    | KSD105-2D-S20-SP04       | ●           | 86.5 | 22             | 36.5           |                | 0.2                       |                                                                                         |     |
| 11        |                    | KSD110-2D-S20-SP04       | ●           | 87.5 | 23             | 37.5           |                | 0.2                       |                                                                                         |     |
| 11.5      |                    | KSD115-2D-S20-SP04       | ●           | 88   | 24             | 38             |                | 0.2                       |                                                                                         |     |
| 12        |                    | KSD120-2D-S20-SP04       | ●           | 90   | 25             | 40             |                | 0.2                       |                                                                                         |     |
| 12.5      | KSD125-2D-S20-SP04 | ●                        | 93          | 27   | 43             | 0.2            | SP..050204     | 0.2                       |                                                                                         |     |
| 13        | 25                 | KSD130-2D-S20-SP05       | ●           | 88   | 29             | 44             |                | 0.2                       |                                                                                         |     |
| 13.5      |                    | KSD135-2D-S20-SP05       | ●           | 89   | 30             | 45             |                | 0.2                       |                                                                                         |     |
| 14        |                    | KSD140-2D-S20-SP05       | ●           | 90   | 31             | 46             |                | 0.2                       |                                                                                         |     |
| 14.5      |                    | KSD145-2D-S20-SP05       | ●           | 91   | 32             | 47             |                | 0.2                       |                                                                                         |     |
| 15        |                    | KSD150-2D-S20-SP05       | ●           | 92   | 33             | 48             |                | 0.2                       |                                                                                         |     |
| 15.5      |                    | KSD155-2D-S20-SP05       | ●           | 93   | 34             | 49             |                | 0.2                       |                                                                                         |     |
| 16        |                    | KSD160-2D-S20-SP06       | ●           | 94   | 35             | 50             |                | 0.2                       |                                                                                         |     |
| 16.5      |                    | KSD165-2D-S25-SP06       | ●           | 95   | 36             | 51             | 0.2            | SP..060204                | 0.2                                                                                     |     |
| 17        | KSD170-2D-S25-SP06 | ●                        | 96          | 37   | 52             | 0.2            |                |                           |                                                                                         |     |
| 17.5      | 25                 | KSD175-2D-S25-SP06       | ●           | 109  | 38             | 53             | 56             | SP..060204                | 0.2                                                                                     |     |
| 18        |                    | KSD180-2D-S25-SP06       | ●           | 110  | 39             | 54             |                |                           | 0.3                                                                                     |     |
| 18.5      |                    | KSD185-2D-S25-SP06       | ●           | 111  | 40             | 55             |                |                           | 0.3                                                                                     |     |
| 19        |                    | KSD190-2D-S25-SP06       | ●           | 112  | 41             | 56             |                |                           | 0.3                                                                                     |     |
| 19.5      |                    | KSD195-2D-S25-SP06       | ●           | 113  | 42             | 57             |                |                           | 0.3                                                                                     |     |
| 20        |                    | KSD200-2D-S25-SP06       | ●           | 114  | 43             | 58             |                |                           | 0.3                                                                                     |     |
| 20.5      |                    | KSD205-2D-S25-SP06       | ●           | 115  | 44             | 59             |                |                           | 0.3                                                                                     |     |
| 21        |                    | KSD210-2D-S25-SP06       | ●           | 116  | 45             | 60             |                |                           | 0.3                                                                                     |     |
| 21.5      |                    | KSD215-2D-S25-SP06       | ●           | 117  | 46             | 61             |                | 0.3                       | SP..07T308                                                                              | 0.4 |
| 22        |                    | KSD220-2D-S25-SP07       | ●           | 118  | 47             | 62             |                | 0.4                       |                                                                                         |     |
| 22.5      |                    | KSD225-2D-S25-SP07       | ●           | 119  | 48             | 63             |                | 0.4                       |                                                                                         |     |
| 23        |                    | KSD230-2D-S25-SP07       | ●           | 123  | 49             | 67             |                | 0.4                       |                                                                                         |     |
| 23.5      |                    | KSD235-2D-S25-SP07       | ●           | 124  | 50             | 68             |                | 0.4                       |                                                                                         |     |
| 24        |                    | KSD240-2D-S25-SP07       | ●           | 125  | 51             | 69             |                | 0.4                       |                                                                                         |     |
| 24.5      |                    | KSD245-2D-S25-SP07       | ●           | 126  | 52             | 70             |                | 0.4                       |                                                                                         |     |
| 25        |                    | KSD250-2D-S25-SP07       | ●           | 127  | 53             | 71             |                | 0.4                       |                                                                                         |     |
| 25.5      | 32                 | KSD255-2D-S32-SP07       | ●           | 134  | 54             | 74             | 60             | SP..07T308                | 0.6                                                                                     |     |
| 26        |                    | KSD260-2D-S32-SP07       | ●           | 135  | 55             | 75             |                |                           | 0.6                                                                                     |     |
| 26.5      |                    | KSD265-2D-S32-SP07       | ●           | 136  | 56             | 76             |                |                           | 0.6                                                                                     |     |
| 27        |                    | KSD270-2D-S32-SP07       | ●           | 137  | 57             | 77             |                |                           | 0.6                                                                                     |     |
| 27.5      |                    | KSD275-2D-S32-SP07       | ●           | 138  | 58             | 78             |                |                           | 0.6                                                                                     |     |
| 28        |                    | KSD280-2D-S32-SP07/09    | ●           | 139  | 59             | 79             |                |                           | 0.6                                                                                     |     |
| 28.5      |                    | KSD285-2D-S32-SP07/09    | ●           | 140  | 60             | 80             |                | SP..090408                | 0.6                                                                                     |     |
| 29        |                    | KSD290-2D-S32-SP09       | ●           | 143  | 62             | 83             |                |                           | 0.7                                                                                     |     |
| 29.5      |                    | KSD295-2D-S32-SP09       | ●           | 144  | 63             | 84             |                |                           | 0.7                                                                                     |     |
| 30        |                    | KSD300-2D-S32-SP09       | ●           | 148  | 64             | 88             |                |                           | 0.7                                                                                     |     |
| 30.5      |                    | KSD305-2D-S32-SP09       | ●           | 149  | 65             | 89             |                |                           | 0.7                                                                                     |     |
| 31        |                    | KSD310-2D-S32-SP09       | ●           | 150  | 66             | 90             |                |                           | 0.7                                                                                     |     |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 31.5      | 32        | KSD315-2D-S32-SP09       | ●           | 151 | 67       | 91       | 60       | SP..090408                | 0.7 |
| 32        |           | KSD320-2D-S32-SP09       | ●           | 152 | 68       | 92       |          |                           | 0.8 |
| 32.5      |           | KSD325-2D-S32-SP09       | ●           | 153 | 69       | 93       |          |                           | 0.8 |
| 33        |           | KSD330-2D-S32-SP09       | ●           | 154 | 70       | 94       |          |                           | 0.8 |
| 33.5      |           | KSD335-2D-S32-SP09       | ●           | 155 | 71       | 95       |          | SP..090408                | 0.8 |
| 34        |           | KSD340-2D-S32-SP09/11    | ●           | 156 | 72       | 96       |          |                           | 0.8 |
| 34.5      |           | KSD345-2D-S32-SP09/11    | ●           | 157 | 73       | 97       | 60       | SP..110408                | 0.8 |
| 35        |           | KSD350-2D-S32-SP11       | ●           | 158 | 74       | 98       |          | SP..110408                | 0.8 |
| 35.5      | 40        | KSD355-2D-S32-SP11       | ●           | 159 | 75       | 99       |          |                           | 0.8 |
| 36        |           | KSD360-2D-S32-SP11       | ●           | 160 | 76       | 100      |          |                           | 0.9 |
| 36.5      |           | KSD365-2D-S32-SP11       | ●           | 161 | 77       | 101      |          |                           | 0.9 |
| 37        |           | KSD370-2D-S32-SP11       | ●           | 169 | 79       | 109      |          |                           | 0.9 |
| 37.5      |           | KSD375-2D-S32-SP11       | ●           | 170 | 80       | 110      |          |                           | 0.9 |
| 38        |           | KSD380-2D-S32-SP11       | ●           | 171 | 81       | 111      |          |                           | 0.9 |
| 38.5      |           | KSD385-2D-S32-SP11       | ●           | 172 | 82       | 112      |          |                           | 0.9 |
| 39        |           | KSD390-2D-S32-SP11       | ●           | 173 | 83       | 113      |          |                           | 1   |
| 39.5      | 40        | KSD395-2D-S32-SP11       | ●           | 174 | 84       | 114      | 70       | SP..110408                | 1.1 |
| 40        |           | KSD400-2D-S40-SP11       | ●           | 185 | 85       | 115      |          |                           | 1.1 |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*3.6      | T6           | KSD085-2D-S20-SP03-KSD095-2D-S20-SP03 |
| M1.8*4        | T6           | KSD100-2D-S20-SP04-KSD125-2D-S20-SP04 |
| M2*4          | T6           | KSD130-2D-S20-SP05-KSD145-2D-S20-SP05 |
| M2*5          | T7           | KSD150-2D-S20-SP05-KSD155-2D-S20-SP05 |
| M2.2*5        | T7           | KSD160-2D-S20-SP06-KSD215-2D-S25-SP06 |
| M2.5*6        | T8           | KSD220-2D-S25-SP07-KSD285-2D-S32-SP07 |
| M3.5*8.5      | T15          | KSD280-2D-S32-SP07-KSD345-2D-S32-SP09 |
| M4*10         | T20          | KSD340-2D-S32-SP11-KSD400-2D-S40-SP11 |

● Mark: Standard stock item,

No mark: Made to order item.

●表示库存 ○表示库存预定品

# TDR-3 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: Φ13.0 ~ 60.0mm

加工公差標準 -0.2~+0.2

Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \ 3 \times \Phi D_c$

Drilling depth: 3x diameter

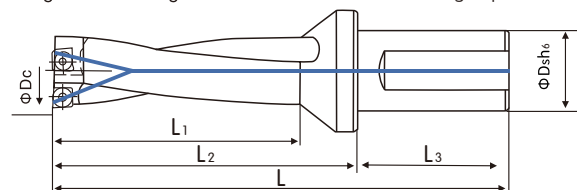


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store        | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | <br>kg |     |
|-----------|-----------|--------------------------|--------------------|------|----------------|----------------|----------------|---------------------------|-----------------------------------------------------------------------------------------|-----|
| 8.5       | 20        | KSD085-3D-S20-SP03       | ●                  | 92.5 | 27             | 42.5           | 44             | SP..030202                | 0.2                                                                                     |     |
| 9         |           | KSD090-3D-S20-SP03       | ●                  | 93.5 | 28             | 43.5           |                |                           | 0.2                                                                                     |     |
| 9.5       |           | KSD095-3D-S20-SP03       | ●                  | 94.5 | 29             | 44.5           |                |                           | 0.2                                                                                     |     |
| 10        |           | KSD100-3D-S20-SP04       | ●                  | 97   | 31             | 47             |                | SP..04T102                | 0.2                                                                                     |     |
| 10.5      |           | KSD105-3D-S20-SP04       | ●                  | 97.5 | 33             | 47.5           |                |                           | 0.2                                                                                     |     |
| 11        |           | KSD110-3D-S20-SP04       | ●                  | 98.5 | 34             | 48.5           |                |                           | 0.2                                                                                     |     |
| 11.5      |           | KSD115-3D-S20-SP04       | ●                  | 100  | 36             | 50             |                |                           | 0.2                                                                                     |     |
| 12        |           | KSD120-3D-S20-SP04       | ●                  | 102  | 37             | 52             |                |                           | 0.2                                                                                     |     |
| 12.5      |           | KSD125-3D-S20-SP04       | ●                  | 105  | 39             | 55             |                |                           | 0.2                                                                                     |     |
| 13        | 20        | KSD130-3D-S20-SP05       | ●                  | 101  | 42             | 57             | 44             | SP..050204                | 0.2                                                                                     |     |
| 13.5      |           | KSD135-3D-S20-SP05       | ●                  | 103  | 44             | 59             |                |                           | 0.2                                                                                     |     |
| 14        |           | KSD140-3D-S20-SP05       | ●                  | 104  | 45             | 60             |                |                           | 0.2                                                                                     |     |
| 14.5      |           | KSD145-3D-S20-SP05       | ●                  | 106  | 47             | 62             |                |                           | 0.2                                                                                     |     |
| 15        |           | KSD150-3D-S20-SP05       | ●                  | 107  | 48             | 63             |                |                           | 0.2                                                                                     |     |
| 15.5      |           | KSD155-3D-S20-SP05       | ●                  | 109  | 50             | 65             |                |                           | 0.2                                                                                     |     |
| 16        |           | 25                       | KSD160-3D-S20-SP06 | ●    | 110            | 51             |                | 66                        | SP..060204                                                                              | 0.2 |
| 16.5      |           |                          | KSD165-3D-S25-SP06 | ●    | 112            | 53             |                | 68                        |                                                                                         | 0.2 |
| 17        |           |                          | KSD170-3D-S25-SP06 | ●    | 113            | 54             |                | 69                        |                                                                                         | 0.2 |
| 17.5      | 25        | KSD175-3D-S25-SP06       | ●                  | 127  | 56             | 71             | 56             | SP..060204                | 0.2                                                                                     |     |
| 18        |           | KSD180-3D-S25-SP06       | ●                  | 128  | 57             | 72             |                |                           | 0.3                                                                                     |     |
| 18.5      |           | KSD185-3D-S25-SP06       | ●                  | 130  | 59             | 74             |                |                           | 0.3                                                                                     |     |
| 19        |           | KSD190-3D-S25-SP06       | ●                  | 131  | 60             | 75             |                |                           | 0.3                                                                                     |     |
| 19.5      |           | KSD195-3D-S25-SP06       | ●                  | 133  | 62             | 77             |                |                           | 0.3                                                                                     |     |
| 20        |           | KSD200-3D-S25-SP06       | ●                  | 134  | 63             | 78             |                |                           | 0.3                                                                                     |     |
| 20.5      |           | KSD205-3D-S25-SP06       | ●                  | 136  | 65             | 80             |                |                           | 0.3                                                                                     |     |
| 21        |           | KSD210-3D-S25-SP06       | ●                  | 137  | 66             | 81             |                |                           | 0.3                                                                                     |     |
| 21.5      |           | KSD215-3D-S25-SP06       | ●                  | 139  | 68             | 83             |                |                           | 0.3                                                                                     |     |
| 22        |           | KSD220-3D-S25-SP07       | ●                  | 140  | 69             | 84             |                | SP..07T308                | 0.4                                                                                     |     |
| 22.5      |           | KSD225-3D-S25-SP07       | ●                  | 142  | 71             | 86             |                |                           | 0.4                                                                                     |     |
| 23        |           | KSD230-3D-S25-SP07       | ●                  | 146  | 72             | 90             |                |                           | 0.4                                                                                     |     |
| 23.5      |           | KSD235-3D-S25-SP07       | ●                  | 148  | 74             | 92             |                |                           | 0.4                                                                                     |     |
| 24        |           | KSD240-3D-S25-SP07       | ●                  | 149  | 75             | 93             |                |                           | 0.4                                                                                     |     |
| 24.5      |           | KSD245-3D-S25-SP07       | ●                  | 151  | 77             | 95             |                |                           | 0.4                                                                                     |     |
| 25        |           | KSD250-3D-S25-SP07       | ●                  | 152  | 78             | 96             |                |                           | 0.4                                                                                     |     |
| 25.5      | 32        | KSD255-3D-S32-SP07       | ●                  | 160  | 80             | 100            | 60             | SP..07T308<br>SP..090408  | 0.6                                                                                     |     |
| 26        |           | KSD260-3D-S32-SP07       | ●                  | 161  | 81             | 101            |                |                           | 0.6                                                                                     |     |
| 26.5      |           | KSD265-3D-S32-SP07       | ●                  | 163  | 83             | 103            |                |                           | 0.6                                                                                     |     |
| 27        |           | KSD270-3D-S32-SP07       | ●                  | 164  | 84             | 104            |                |                           | 0.6                                                                                     |     |
| 27.5      |           | KSD275-3D-S32-SP07       | ●                  | 166  | 86             | 106            |                |                           | 0.6                                                                                     |     |
| 28        |           | KSD280-3D-S32-SP07/09    | ●                  | 167  | 87             | 107            |                |                           | 0.6                                                                                     |     |
| 28.5      |           | KSD285-3D-S32-SP07/09    | ●                  | 169  | 89             | 109            |                | SP..090408                | 0.6                                                                                     |     |
| 29        |           | KSD290-3D-S32-SP09       | ●                  | 172  | 91             | 112            |                |                           | 0.7                                                                                     |     |
| 29.5      |           | KSD295-3D-S32-SP09       | ●                  | 174  | 93             | 114            |                |                           | 0.7                                                                                     |     |
| 30        |           | KSD300-3D-S32-SP09       | ●                  | 178  | 94             | 118            |                |                           | 0.7                                                                                     |     |
| 30.5      |           | KSD305-3D-S32-SP09       | ●                  | 180  | 96             | 120            |                |                           | 0.7                                                                                     |     |
| 31        |           | KSD310-3D-S32-SP09       | ●                  | 181  | 97             | 121            |                |                           | 0.7                                                                                     |     |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 31.5      | 32        | KSD315-3D-S32-SP09       | ●           | 183 | 99             | 123            | 60             | SP..090408                | 0.7 |
| 32        |           | KSD320-3D-S32-SP09       | ●           | 184 | 100            | 124            |                |                           | 0.8 |
| 32.5      |           | KSD325-3D-S32-SP09       | ●           | 186 | 102            | 126            |                |                           | 0.8 |
| 33        |           | KSD330-3D-S32-SP09       | ●           | 187 | 103            | 127            |                |                           | 0.8 |
| 33.5      |           | KSD335-3D-S32-SP09       | ●           | 189 | 105            | 129            |                | SP..090408                | 0.8 |
| 34        |           | KSD340-3D-S32-SP09/11    | ●           | 190 | 106            | 130            |                |                           | 0.8 |
| 34.5      |           | KSD345-3D-S32-SP09/11    | ●           | 192 | 108            | 132            |                | SP..110408                | 0.8 |
| 35        |           | KSD350-3D-S32-SP11       | ●           | 193 | 109            | 133            |                |                           | 0.8 |
| 35.5      |           | KSD355-3D-S32-SP11       | ●           | 195 | 111            | 135            |                | SP..110408                | 0.8 |
| 36        |           | KSD360-3D-S32-SP11       | ●           | 196 | 112            | 136            |                |                           | 0.9 |
| 36.5      |           | KSD365-3D-S32-SP11       | ●           | 198 | 114            | 138            |                |                           | 0.9 |
| 37        |           | KSD370-3D-S32-SP11       | ●           | 206 | 116            | 146            |                |                           | 0.9 |
| 37.5      |           | KSD375-3D-S32-SP11       | ●           | 208 | 118            | 148            |                |                           | 0.9 |
| 38        |           | KSD380-3D-S32-SP11       | ●           | 209 | 119            | 149            |                |                           | 0.9 |
| 38.5      |           | KSD385-3D-S32-SP11       | ●           | 211 | 121            | 151            |                |                           | 0.9 |
| 39        |           | KSD390-3D-S32-SP11       | ●           | 212 | 122            | 152            |                |                           | 1.0 |
| 39.5      |           | KSD395-3D-S32-SP11       | ●           | 214 | 124            | 154            |                |                           | 1.1 |
| 40        | 40        | KSD400-3D-S40-SP11       | ●           | 225 | 125            | 155            | 70             |                           | 1.1 |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*3.6      | T6           | KSD085-2D-S20-SP03-KSD095-2D-S20-SP03 |
| M1.8*4        | T6           | KSD100-2D-S20-SP04-KSD125-2D-S20-SP04 |
| M2*4          | T6           | KSD130-2D-S20-SP05-KSD145-2D-S20-SP05 |
| M2*5          | T7           | KSD150-2D-S20-SP05-KSD155-2D-S20-SP05 |
| M2.2*5        | T7           | KSD160-2D-S20-SP06-KSD215-2D-S25-SP06 |
| M2.5*6        | T8           | KSD220-2D-S25-SP07-KSD285-2D-S32-SP07 |
| M3.5*8.5      | T15          | KSD280-2D-S32-SP07-KSD345-2D-S32-SP09 |
| M4*10         | T20          | KSD340-2D-S32-SP11-KSD400-2D-S40-SP11 |

● Mark: Standard stock item,

No mark: Made to order item.

●表示库存 ○表示库存预定品



# TDR-4 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 4 D

Holder diameter 4D: Φ13.0 ~ 60.0mm

加工公差標準 -0.2~+0.2

Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times \Phi Dc$

Drilling depth: 4x diameter

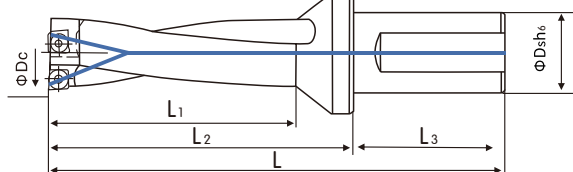


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs          | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  |
|-----------|--------------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----------------------------------------------------------------------------------|
| 11.5      | 20                 | KSD115-4D-S20-SP04       | ●           | 111 | 47             | 61             | 44             | SP..04T102                | 0.2                                                                               |
| 12        |                    | KSD120-4D-S20-SP04       | ●           | 115 | 50             | 65             |                |                           | 0.2                                                                               |
| 12.5      |                    | KSD125-4D-S20-SP04       | ●           | 117 | 52             | 67             |                |                           | 0.2                                                                               |
| 13        | 25                 | KSD130-4D-S20-SP05       | ●           | 114 | 55             | 70             | 56             | SP..050204                | 0.2                                                                               |
| 13.5      |                    | KSD135-4D-S20-SP05       | ●           | 116 | 57             | 72             |                |                           | 0.2                                                                               |
| 14        |                    | KSD140-4D-S20-SP05       | ●           | 118 | 59             | 74             |                |                           | 0.2                                                                               |
| 14.5      |                    | KSD145-4D-S20-SP05       | ●           | 120 | 61             | 76             |                |                           | 0.2                                                                               |
| 15        |                    | KSD150-4D-S20-SP05       | ●           | 122 | 63             | 78             |                |                           | 0.2                                                                               |
| 15.5      |                    | KSD155-4D-S20-SP05       | ●           | 124 | 65             | 80             |                |                           | 0.2                                                                               |
| 16        |                    | KSD160-4D-S20-SP06       | ●           | 126 | 67             | 82             |                |                           | 0.2                                                                               |
| 16.5      |                    | KSD165-4D-S25-SP06       | ●           | 128 | 69             | 84             |                |                           | 0.2                                                                               |
| 17        |                    | KSD170-4D-S25-SP06       | ●           | 130 | 71             | 86             |                |                           | 0.2                                                                               |
| 17.5      |                    | KSD175-4D-S25-SP06       | ●           | 144 | 73             | 88             |                |                           | 60                                                                                |
| 18        | KSD180-4D-S25-SP06 | ●                        | 146         | 75  | 90             | 0.3            |                |                           |                                                                                   |
| 18.5      | KSD185-4D-S25-SP06 | ●                        | 148         | 77  | 92             | 0.3            |                |                           |                                                                                   |
| 19        | KSD190-4D-S25-SP06 | ●                        | 150         | 79  | 94             | 0.3            |                |                           |                                                                                   |
| 19.5      | KSD195-4D-S25-SP06 | ●                        | 152         | 81  | 96             | 0.3            |                |                           |                                                                                   |
| 20        | KSD200-4D-S25-SP06 | ●                        | 154         | 83  | 98             | 0.3            |                |                           |                                                                                   |
| 20.5      | KSD205-4D-S25-SP06 | ●                        | 156         | 85  | 100            | 0.3            |                |                           |                                                                                   |
| 21        | KSD210-4D-S25-SP06 | ●                        | 158         | 87  | 102            | 0.3            |                |                           |                                                                                   |
| 21.5      | KSD215-4D-S25-SP06 | ●                        | 160         | 89  | 104            | 0.3            |                |                           |                                                                                   |
| 22        | KSD220-4D-S25-SP07 | ●                        | 162         | 91  | 106            | SP..07T308     | 0.4            |                           |                                                                                   |
| 22.5      | KSD225-4D-S25-SP07 | ●                        | 164         | 93  | 108            |                | 0.4            |                           |                                                                                   |
| 23        | KSD230-4D-S25-SP07 | ●                        | 169         | 95  | 113            |                | 0.4            |                           |                                                                                   |
| 23.5      | KSD235-4D-S25-SP07 | ●                        | 171         | 97  | 115            |                | 0.4            |                           |                                                                                   |
| 24        | KSD240-4D-S25-SP07 | ●                        | 173         | 99  | 117            |                | 0.4            |                           |                                                                                   |
| 24.5      | KSD245-4D-S25-SP07 | ●                        | 175         | 101 | 119            |                | 0.4            |                           |                                                                                   |
| 25        | KSD250-4D-S25-SP07 | ●                        | 177         | 103 | 121            |                | 0.4            |                           |                                                                                   |
| 25.5      | KSD255-4D-S32-SP07 | ●                        | 185         | 105 | 125            |                | 0.6            |                           |                                                                                   |
| 26        | 32                 | KSD260-4D-S32-SP07       | ●           | 187 | 107            |                | 127            | SP..07T308                | 0.6                                                                               |
| 26.5      |                    | KSD265-4D-S32-SP07       | ●           | 189 | 109            | 129            | 0.6            |                           |                                                                                   |
| 27        |                    | KSD270-4D-S32-SP07       | ●           | 191 | 111            | 131            | 0.6            |                           |                                                                                   |
| 27.5      |                    | KSD275-4D-S32-SP07       | ●           | 193 | 113            | 133            | 0.6            |                           |                                                                                   |
| 28        |                    | KSD280-4D-S32-SP07/09    | ●           | 195 | 115            | 135            | 0.6            |                           |                                                                                   |
| 28.5      |                    | KSD285-4D-S32-SP07/09    | ●           | 197 | 117            | 137            | SP..090408     | 0.6                       |                                                                                   |
| 29        |                    | KSD290-4D-S32-SP09       | ●           | 201 | 120            | 141            |                | 0.7                       |                                                                                   |
| 29.5      |                    | KSD295-4D-S32-SP09       | ●           | 203 | 122            | 143            | SP..090408     | 0.7                       |                                                                                   |
| 30        |                    | KSD300-4D-S32-SP09       | ●           | 208 | 124            | 148            |                | 0.7                       |                                                                                   |
| 30.5      |                    | KSD305-4D-S32-SP09       | ●           | 210 | 126            | 150            |                | 0.7                       |                                                                                   |
| 31        |                    | KSD310-4D-S32-SP09       | ●           | 212 | 128            | 152            |                | 0.7                       |                                                                                   |
| 31.5      |                    | KSD315-4D-S32-SP09       | ●           | 214 | 130            | 154            |                | 0.7                       |                                                                                   |
| 32        |                    | KSD320-4D-S32-SP09       | ●           | 216 | 132            | 156            |                | 0.8                       |                                                                                   |
| 32.5      |                    | KSD325-4D-S32-SP09       | ●           | 218 | 134            | 158            |                | 0.8                       |                                                                                   |
| 33        |                    | KSD330-4D-S32-SP09       | ●           | 220 | 136            | 160            |                | 0.8                       |                                                                                   |
| 33.5      |                    | KSD335-4D-S32-SP09       | ●           | 222 | 138            | 162            |                | 0.8                       |                                                                                   |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs          | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |  |
|-----------|--------------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-------------------------------------------------------------------------------------|
| 34        | 32                 | KSD340-4D-S32-SP09/11    | ●           | 224 | 140            | 164            | 60             | SP..090408                | 0.8                                                                                 |
| 34.5      |                    | KSD345-4D-S32-SP09/11    | ●           | 226 | 142            | 166            |                | SP..110408                | 0.8                                                                                 |
| 35        |                    | KSD350-4D-S32-SP11       | ●           | 228 | 144            | 168            |                | SP..110408                | 0.8                                                                                 |
| 35.5      |                    | KSD355-4D-S32-SP11       | ●           | 230 | 146            | 170            |                |                           | 0.8                                                                                 |
| 36        |                    | KSD360-4D-S32-SP11       | ●           | 232 | 148            | 172            |                |                           | 0.9                                                                                 |
| 36.5      |                    | KSD365-4D-S32-SP11       | ●           | 236 | 150            | 174            |                |                           | 0.9                                                                                 |
| 37        |                    | KSD370-4D-S32-SP11       | ●           | 243 | 153            | 183            |                |                           | 0.9                                                                                 |
| 37.5      |                    | KSD375-4D-S32-SP11       | ●           | 245 | 155            | 185            |                |                           | 0.9                                                                                 |
| 38        |                    | KSD380-4D-S32-SP11       | ●           | 247 | 157            | 187            |                |                           | 0.9                                                                                 |
| 38.5      |                    | KSD385-4D-S32-SP11       | ●           | 249 | 159            | 189            |                |                           | 0.9                                                                                 |
| 39        |                    | KSD390-4D-S32-SP11       | ●           | 251 | 161            | 191            |                |                           | 1.0                                                                                 |
| 39.5      | KSD395-4D-S32-SP11 | ●                        | 253         | 163 | 193            | 1.1            |                |                           |                                                                                     |
| 40        | 40                 | KSD400-4D-S40-SP11       | ●           | 265 | 165            | 195            | 70             | 1.1                       |                                                                                     |

### ◎ 附件 Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*4        | T6           | KSD115-4D-S20-SP04~KSD125-4D-S20-SP04 |
| M2*4          | T6           | KSD130-4D-S20-SP05~KSD145-4D-S20-SP05 |
| M2*5          | T7           | KSD150-4D-S20-SP05~KSD155-4D-S20-SP05 |
| M2.2*5        | T7           | KSD160-4D-S20-SP06~KSD215-4D-S25-SP06 |
| M2.5*6        | T8           | KSD220-4D-S25-SP07~KSD285-4D-S32-SP07 |
| M3.5*8.5      | T15          | KSD280-4D-S32-SP07~KSD345-4D-S32-SP09 |
| M4*10         | T20          | KSD340-4D-S32-SP11~KSD400-4D-S40-SP11 |

● Mark: Standard stock item,  
No mark: Made to order item.

◎ ● 表示库存 ○ 表示库存预定品

# TDR-5 X D (Φ 8.5-50) Indexable drills with SP inserts

## SP 型 潜孔钻/ U 钻 5 D

Holder diameter 5D: Φ13.0 ~ 60.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times \Phi D_c$   
Drilling depth: 5x diameter

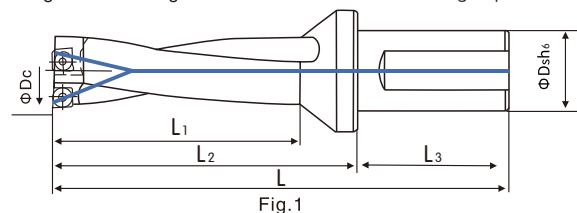


Fig.1

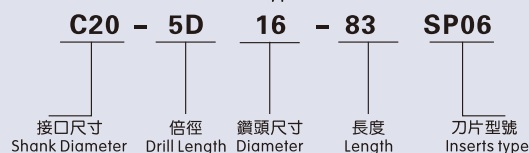


| 刃徑<br>ΦDc | 柄徑<br>ΦDs     | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|---------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 15.5      | 20<br>/<br>25 | KSD155-5D-S20-SP05       | ●           | 140 | 80             | 95             | 44             | SP..04T102                | 0.3 |
| 16        |               | KSD160-5D-S20-SP06       | ●           | 142 | 83             | 98             |                |                           | 0.4 |
| 16.5      |               | KSD165-5D-S25-SP06       | ●           | 145 | 86             | 101            |                |                           | 0.4 |
| 17        |               | KSD170-5D-S25-SP06       | ●           | 147 | 88             | 103            |                |                           | 0.4 |
| 17.5      | 25            | KSD175-5D-S25-SP06       | ●           | 162 | 91             | 106            | 56             | SP..060204                | 0.4 |
| 18        |               | KSD180-5D-S25-SP06       | ●           | 164 | 93             | 108            |                |                           | 0.5 |
| 18.5      |               | KSD185-5D-S25-SP06       | ●           | 167 | 96             | 111            |                |                           | 0.5 |
| 19        |               | KSD190-5D-S25-SP06       | ●           | 169 | 98             | 113            |                |                           | 0.5 |
| 19.5      |               | KSD195-5D-S25-SP06       | ●           | 172 | 101            | 116            |                |                           | 0.5 |
| 20        |               | KSD200-5D-S25-SP06       | ●           | 174 | 103            | 118            |                |                           | 0.5 |
| 20.5      |               | KSD205-5D-S25-SP06       | ●           | 177 | 106            | 121            |                |                           | 0.5 |
| 21        |               | KSD210-5D-S25-SP06       | ●           | 179 | 108            | 123            |                |                           | 0.5 |
| 21.5      |               | KSD215-5D-S25-SP06       | ●           | 182 | 111            | 126            |                | SP..07T308                | 0.5 |
| 22        |               | KSD220-5D-S25-SP07       | ●           | 184 | 113            | 128            |                |                           | 0.5 |
| 22.5      |               | KSD225-5D-S25-SP07       | ●           | 187 | 116            | 131            |                |                           | 0.5 |
| 23        |               | KSD230-5D-S25-SP07       | ●           | 192 | 118            | 136            |                |                           | 0.6 |
| 23.5      |               | KSD235-5D-S25-SP07       | ●           | 195 | 121            | 139            |                |                           | 0.6 |
| 24        |               | KSD240-5D-S25-SP07       | ●           | 197 | 123            | 141            |                |                           | 0.6 |
| 24.5      |               | KSD245-5D-S25-SP07       | ●           | 200 | 126            | 144            |                |                           | 0.8 |
| 25        |               | KSD250-5D-S25-SP07       | ●           | 202 | 128            | 146            |                |                           | 0.8 |
| 25.5      | 32            | KSD255-5D-S32-SP07       | ●           | 213 | 131            | 153            | 60             | SP..07T308                | 0.8 |
| 26        |               | KSD260-5D-S32-SP07       | ●           | 216 | 133            | 156            |                |                           | 0.8 |
| 26.5      |               | KSD265-5D-S32-SP07       | ●           | 217 | 136            | 157            |                | SP..090408                | 0.8 |
| 27        |               | KSD270-5D-S32-SP07       | ●           | 218 | 138            | 158            |                |                           | 0.8 |
| 27.5      |               | KSD275-5D-S32-SP07       | ●           | 221 | 141            | 161            |                | SP..090408                | 0.8 |
| 28        |               | KSD280-5D-S32-SP07/09    | ●           | 223 | 143            | 163            |                |                           | 0.9 |
| 28.5      |               | KSD285-5D-S32-SP07/09    | ●           | 226 | 146            | 166            |                |                           | 0.9 |
| 29        |               | KSD290-5D-S32-SP09       | ●           | 230 | 149            | 170            |                |                           | 0.9 |
| 29.5      |               | KSD295-5D-S32-SP09       | ●           | 233 | 151            | 173            |                |                           | 0.9 |
| 30        |               | KSD300-5D-S32-SP09       | ●           | 238 | 154            | 178            |                |                           | 1   |
| 30.5      |               | KSD305-5D-S32-SP09       | ●           | 241 | 157            | 181            |                |                           | 1   |
| 31        |               | KSD310-5D-S32-SP09       | ●           | 243 | 159            | 183            |                |                           | 1   |
| 31.5      |               | KSD315-5D-S32-SP09       | ●           | 245 | 162            | 185            |                |                           | 1.1 |
| 32        |               | KSD320-5D-S32-SP09       | ●           | 248 | 164            | 188            |                | SP..110408                | 1.1 |
| 32.5      |               | KSD325-5D-S32-SP09       | ●           | 251 | 167            | 191            |                |                           | 1.1 |
| 33        |               | KSD330-5D-S32-SP09       | ●           | 253 | 169            | 193            |                |                           | 1.1 |
| 33.5      |               | KSD335-5D-S32-SP09       | ●           | 255 | 172            | 195            |                |                           | 1.1 |
| 34        |               | KSD340-5D-S32-SP09/11    | ●           | 258 | 174            | 198            |                |                           | 1.2 |
| 34.5      |               | KSD345-5D-S32-SP09/11    | ●           | 261 | 177            | 201            |                |                           | 1.2 |
| 35        |               | KSD350-5D-S32-SP11       | ●           | 263 | 179            | 203            |                |                           | 1.2 |
| 35.5      |               | KSD355-5D-S32-SP11       | ●           | 265 | 182            | 205            |                |                           | 1.2 |
| 36        |               | KSD360-5D-S32-SP11       | ●           | 268 | 184            | 208            |                |                           | 1.3 |
| 36.5      |               | KSD365-5D-S32-SP11       | ●           | 271 | 187            | 211            |                |                           | 1.3 |
| 37        |               | KSD370-5D-S32-SP11       | ●           | 280 | 190            | 220            |                |                           | 1.3 |
| 37.5      |               | KSD375-5D-S32-SP11       | ●           | 283 | 193            | 223            |                |                           | 1.3 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 38        | 32        | KSD380-5D-S32-SP11       | ●           | 285 | 195            | 225            | 60             | SP..110408                | 1.4 |
| 38.5      |           | KSD385-5D-S32-SP11       | ●           | 288 | 198            | 228            |                |                           | 1.4 |
| 39        |           | KSD390-5D-S32-SP11       | ●           | 290 | 200            | 230            |                |                           | 1.9 |
| 39.5      |           | KSD395-5D-S32-SP11       | ●           | 293 | 203            | 233            |                |                           | 1.9 |
| 40        | 40        | KSD400-5D-S40-SP11       | ●           | 305 | 205            | 235            | 70             |                           | 1.9 |

### SP鑽頭記號

Part number structure of SP type holder



### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2*5          | T7           | KSD155-4D-S20-SP05-KSD155-4D-S20-SP05 |
| M2.2*5        | T7           | KSD160-4D-S20-SP06-KSD215-4D-S25-SP06 |
| M2.5*6        | T8           | KSD220-4D-S25-SP07-KSD285-4D-S32-SP07 |
| M3.5*8.5      | T15          | KSD280-4D-S32-SP07-KSD345-4D-S32-SP09 |
| M4*10         | T20          | KSD340-4D-S32-SP11-KSD400-4D-S40-SP11 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定品



# TOP-2 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 2 D

Holder diameter 2D: φ 13.0 ~ 60.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance:-0.2~+0.2

最大加工深度  $\ell \times \Phi D_c$   
Drilling depth: 2x diameter

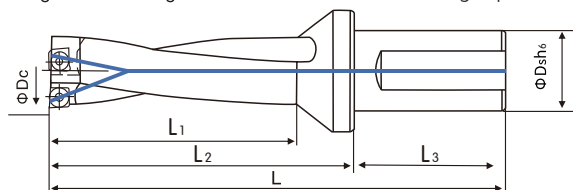


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 13        |           | KOD130-2D-S20/25-SO05    | ●           | 88  | 29       | 44       |          | SOMT050204                | 0.2 |
| 13.5      |           | KOD135-2D-S20/25-SO05    | ●           | 89  | 30       | 45       |          |                           | 0.2 |
| 14        |           | KOD140-2D-S20/25-SO05    | ●           | 90  | 31       | 46       |          |                           | 0.2 |
| 14.5      | 20        | KOD145-2D-S20/25-SO05    | ●           | 91  | 32       | 47       |          |                           | 0.2 |
| 15        | /         | KOD150-2D-S20/25-SO05    | ●           | 92  | 33       | 48       | 44       |                           | 0.2 |
| 15.5      | 25        | KOD155-2D-S20/25-SO05    | ●           | 93  | 34       | 49       |          |                           | 0.2 |
| 16        |           | KOD160-2D-S20/25-SO05    | ●           | 94  | 35       | 50       |          |                           | 0.2 |
| 16.5      |           | KOD165-2D-S20/25-SO06    | ●           | 95  | 36       | 51       |          |                           | 0.2 |
| 17        |           | KOD170-2D-S20/25-SO06    | ●           | 96  | 37       | 52       |          |                           | 0.2 |
| 17.5      |           | KOD175-2D-S25-SO06       | ●           | 109 | 38       | 53       |          | SOMT060204                | 0.2 |
| 18        |           | KOD180-2D-S25-SO06       | ●           | 110 | 39       | 54       |          |                           | 0.3 |
| 18.5      |           | KOD185-2D-S25-SO06       | ●           | 111 | 40       | 55       |          |                           | 0.3 |
| 19        |           | KOD190-2D-S25-SO06       | ●           | 112 | 41       | 56       |          |                           | 0.3 |
| 19.5      |           | KOD195-2D-S25-SO07       | ●           | 113 | 42       | 57       |          | SOMT070306                | 0.3 |
| 20        |           | KOD200-2D-S25-SO07       | ●           | 114 | 43       | 58       |          |                           | 0.3 |
| 20.5      |           | KOD205-2D-S25-SO07       | ●           | 115 | 44       | 59       |          |                           | 0.3 |
| 21        |           | KOD210-2D-S25-SO07       | ●           | 116 | 45       | 60       |          |                           | 0.3 |
| 21.5      | 25        | KOD215-2D-S25-SO07       | ●           | 117 | 46       | 61       | 56       |                           | 0.3 |
| 22        |           | KOD220-2D-S25-SO07       | ●           | 118 | 47       | 62       |          | SOMT08T306                | 0.4 |
| 22.5      |           | KOD225-2D-S25-SO08       | ●           | 119 | 48       | 63       |          |                           | 0.4 |
| 23        |           | KOD230-2D-S25-SO08       | ●           | 123 | 49       | 67       |          |                           | 0.4 |
| 23.5      |           | KOD235-2D-S25-SO08       | ●           | 124 | 50       | 68       |          |                           | 0.4 |
| 24        |           | KOD240-2D-S25-SO08       | ●           | 125 | 51       | 69       |          |                           | 0.4 |
| 24.5      |           | KOD245-2D-S25-SO08       | ●           | 126 | 52       | 70       |          |                           | 0.4 |
| 25        |           | KOD250-2D-S25-SO08       | ●           | 127 | 53       | 71       |          |                           | 0.4 |
| 25.5      |           | KOD255-2D-S32-SO08       | ●           | 134 | 54       | 74       |          | SOMT09T308                | 0.6 |
| 26        |           | KOD260-2D-S32-SO08       | ●           | 135 | 55       | 75       |          |                           | 0.6 |
| 26.5      |           | KOD265-2D-S32-SO09       | ●           | 136 | 56       | 76       |          |                           | 0.6 |
| 27        |           | KOD270-2D-S32-SO09       | ●           | 137 | 57       | 77       |          |                           | 0.6 |
| 27.5      |           | KOD275-2D-S32-SO09       | ●           | 138 | 58       | 78       |          |                           | 0.6 |
| 28        |           | KOD280-2D-S32-SO09       | ●           | 139 | 59       | 79       |          |                           | 0.6 |
| 28.5      |           | KOD285-2D-S32-SO09       | ●           | 140 | 60       | 80       |          |                           | 0.6 |
| 29        |           | KOD290-2D-S32-SO09       | ●           | 143 | 62       | 83       |          |                           | 0.7 |
| 29.5      |           | KOD295-2D-S32-SO09       | ●           | 144 | 63       | 84       |          |                           | 0.7 |
| 30        |           | KOD300-2D-S32-SO09       | ●           | 148 | 64       | 88       |          |                           | 0.7 |
| 30.5      | 32        | KOD305-2D-S32-SO09       | ●           | 149 | 65       | 89       | 60       |                           | 0.7 |
| 31        |           | KOD310-2D-S32-SO09       | ●           | 150 | 66       | 90       |          |                           | 0.7 |
| 31.5      |           | KOD315-2D-S32-SO09       | ●           | 151 | 67       | 91       |          | SOMT11T308                | 0.7 |
| 32        |           | KOD320-2D-S32-SO11       | ●           | 152 | 68       | 92       |          |                           | 0.7 |
| 32.5      |           | KOD325-2D-S32-SO11       | ●           | 153 | 69       | 93       |          |                           | 0.8 |
| 33        |           | KOD330-2D-S32-SO11       | ●           | 154 | 70       | 94       |          |                           | 0.8 |
| 33.5      |           | KOD335-2D-S32-SO11       | ●           | 155 | 71       | 95       |          |                           | 0.8 |
| 34        |           | KOD340-2D-S32-SO11       | ●           | 156 | 72       | 96       |          |                           | 0.8 |
| 34.5      |           | KOD345-2D-S32-SO11       | ●           | 157 | 73       | 97       |          |                           | 0.8 |
| 35        |           | KOD350-2D-S32-SO11       | ●           | 158 | 74       | 98       |          |                           | 0.8 |
| 35.5      |           | KOD355-2D-S32-SO11       | ●           | 159 | 75       | 99       |          |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 36        |           | KOD360-2D-S32-SO11       | ●           | 160 | 76       | 100      |          | SOMT11T308                | 0.9 |
| 36.5      |           | KOD365-2D-S32-SO11       | ○           | 161 | 77       | 101      |          |                           | 0.9 |
| 37        |           | KOD370-2D-S32-SO13       | ○           | 169 | 79       | 109      |          | SOMT130408                | 0.9 |
| 37.5      | 32        | KOD375-2D-S32-SO13       | ○           | 170 | 80       | 110      | 60       |                           | 0.9 |
| 38        |           | KOD380-2D-S32-SO13       | ○           | 171 | 81       | 111      |          |                           | 0.9 |
| 38.5      |           | KOD385-2D-S32-SO13       | ○           | 172 | 82       | 112      |          |                           | 0.9 |
| 39        |           | KOD390-2D-S32-SO13       | ○           | 173 | 83       | 113      |          |                           | 1.0 |
| 39.5      |           | KOD395-2D-S32-SO13       | ○           | 174 | 84       | 114      |          |                           | 1.1 |
| 40        | 40        | KOD400-2D-S40-SO13       | ○           | 185 | 85       | 115      | 70       |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder



### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2*5          | T6           | KOD130-2D-S20-SO05-KOD160-2D-S20-SO05 |
| M2.2*5        | T7           | KOD165-2D-S20-SO06-KOD190-2D-S25-SO06 |
| M2.2*5        | T7           | KOD195-2D-S25-SO07-KOD220-2D-S25-SO07 |
| M2.5*6        | T7           | KOD225-2D-S25-SO08-KOD260-2D-S32-SO08 |
| M3.5*8.5      | T7           | KOD265-2D-S32-SO09-KOD315-2D-S32-SO09 |
| M3.5*8.5      | T8           | KOD320-2D-S32-SO11-KOD365-2D-S32-SO11 |
| M4*10         | T15          | KOD370-2D-S32-SO13-KOD400-2D-S40-SO13 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定品



# TOP-3 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: φ 13.0 ~ 50.0mm

加工公差標準 -0.2~+0.2

Range of machining tolerance:-0.2~+0.2

最大加工深度  $\ell \ 3 \times \Phi Dc$

Drilling depth: 3xdiameter

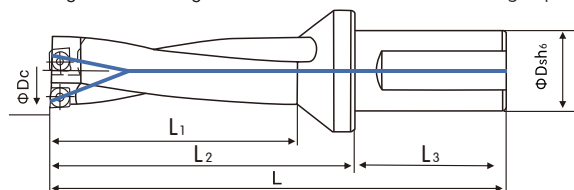


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | KOD130-3D-S20/25-SO05    | ●           | 101 | 42             | 57             |                | SOMT050204                | 0.2 |
| 13.5      |           | KOD135-3D-S20/25-SO05    | ●           | 103 | 44             | 59             |                |                           | 0.2 |
| 14        |           | KOD140-3D-S20/25-SO05    | ●           | 104 | 45             | 60             |                |                           | 0.2 |
| 14.5      | 20        | KOD145-3D-S20/25-SO05    | ●           | 106 | 47             | 62             |                |                           | 0.2 |
| 15        | /         | KOD150-3D-S20/25-SO05    | ●           | 107 | 48             | 63             | 44             |                           | 0.2 |
| 15.5      | 25        | KOD155-3D-S20/25-SO05    | ●           | 109 | 50             | 65             |                |                           | 0.2 |
| 16        |           | KOD160-3D-S20/25-SO05    | ●           | 110 | 51             | 66             |                |                           | 0.2 |
| 16.5      |           | KOD165-3D-S20/25-SO06    | ●           | 112 | 53             | 68             |                |                           | 0.2 |
| 17        |           | KOD170-3D-S20/25-SO06    | ●           | 113 | 54             | 69             |                |                           | 0.2 |
| 17.5      |           | KOD175-3D-S25-SO06       | ●           | 127 | 56             | 71             |                | SOMT060204                | 0.2 |
| 18        |           | KOD180-3D-S25-SO06       | ●           | 128 | 57             | 72             |                |                           | 0.3 |
| 18.5      |           | KOD185-3D-S25-SO06       | ●           | 130 | 59             | 74             |                |                           | 0.3 |
| 19        |           | KOD190-3D-S25-SO06       | ●           | 131 | 60             | 75             |                |                           | 0.3 |
| 19.5      |           | KOD195-3D-S25-SO07       | ●           | 133 | 62             | 77             |                | SOMT070306                | 0.3 |
| 20        |           | KOD200-3D-S25-SO07       | ●           | 134 | 63             | 78             |                |                           | 0.3 |
| 20.5      |           | KOD205-3D-S25-SO07       | ●           | 136 | 65             | 80             |                |                           | 0.3 |
| 21        |           | KOD210-3D-S25-SO07       | ●           | 137 | 66             | 81             |                |                           | 0.3 |
| 21.5      | 25        | KOD215-3D-S25-SO07       | ●           | 139 | 68             | 83             | 56             | SOMT08T306                | 0.3 |
| 22        |           | KOD220-3D-S25-SO07       | ●           | 140 | 69             | 84             |                |                           | 0.4 |
| 22.5      |           | KOD225-3D-S25-SO08       | ●           | 142 | 71             | 86             |                |                           | 0.4 |
| 23        |           | KOD230-3D-S25-SO08       | ●           | 146 | 72             | 90             |                |                           | 0.4 |
| 23.5      |           | KOD235-3D-S25-SO08       | ●           | 148 | 74             | 92             |                |                           | 0.4 |
| 24        |           | KOD240-3D-S25-SO08       | ●           | 149 | 75             | 93             |                |                           | 0.4 |
| 24.5      |           | KOD245-3D-S25-SO08       | ●           | 151 | 77             | 95             |                |                           | 0.4 |
| 25        |           | KOD250-3D-S25-SO08       | ●           | 152 | 78             | 96             |                |                           | 0.4 |
| 25.5      |           | KOD255-3D-S32-SO08       | ●           | 160 | 80             | 100            |                |                           | 0.6 |
| 26        |           | KOD260-3D-S32-SO08       | ●           | 161 | 81             | 101            |                | SOMT09T308                | 0.6 |
| 26.5      |           | KOD265-3D-S32-SO09       | ●           | 163 | 83             | 103            |                |                           | 0.6 |
| 27        |           | KOD270-3D-S32-SO09       | ●           | 164 | 84             | 104            |                |                           | 0.6 |
| 27.5      |           | KOD275-3D-S32-SO09       | ●           | 166 | 86             | 106            |                |                           | 0.6 |
| 28        |           | KOD280-3D-S32-SO09       | ●           | 167 | 87             | 107            |                |                           | 0.6 |
| 28.5      |           | KOD285-3D-S32-SO09       | ●           | 169 | 89             | 109            |                |                           | 0.6 |
| 29        |           | KOD290-3D-S32-SO09       | ●           | 172 | 91             | 112            |                |                           | 0.7 |
| 29.5      |           | KOD295-3D-S32-SO09       | ●           | 174 | 93             | 114            |                |                           | 0.7 |
| 30        |           | KOD300-3D-S32-SO09       | ●           | 178 | 94             | 118            |                |                           | 0.7 |
| 30.5      | 32        | KOD305-3D-S32-SO09       | ●           | 180 | 96             | 120            | 60             | SOMT11T308                | 0.7 |
| 31        |           | KOD310-3D-S32-SO09       | ●           | 181 | 97             | 121            |                |                           | 0.7 |
| 31.5      |           | KOD315-3D-S32-SO09       | ●           | 183 | 99             | 123            |                |                           | 0.7 |
| 32        |           | KOD320-3D-S32-SO11       | ●           | 184 | 100            | 124            |                |                           | 0.7 |
| 32.5      |           | KOD325-3D-S32-SO11       | ●           | 186 | 102            | 126            |                |                           | 0.8 |
| 33        |           | KOD330-3D-S32-SO11       | ●           | 187 | 103            | 127            |                |                           | 0.8 |
| 33.5      |           | KOD335-3D-S32-SO11       | ●           | 189 | 105            | 129            |                |                           | 0.8 |
| 34        |           | KOD340-3D-S32-SO11       | ●           | 190 | 106            | 130            |                |                           | 0.8 |
| 34.5      |           | KOD345-3D-S32-SO11       | ●           | 192 | 108            | 132            |                |                           | 0.8 |
| 35        |           | KOD350-3D-S32-SO11       | ●           | 193 | 109            | 133            |                |                           | 0.8 |
| 35.5      |           | KOD355-3D-S32-SO11       | ●           | 195 | 111            | 135            |                |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 36        |           | 3D36-112SOMT11           | ●           | 196 | 112            | 136            |                | SOMT11T308                | 0.9 |
| 36.5      |           | 3D36.5-114SOMT11         | ○           | 198 | 114            | 138            |                |                           | 0.9 |
| 37        |           | 3D37-136SOMT13           | ○           | 206 | 116            | 146            |                | SOMT130408                | 0.9 |
| 37.5      | 32        | 3D37.5-181SOMT13         | ○           | 208 | 118            | 148            | 60             |                           | 0.9 |
| 38        |           | 3D38-139SOMT13           | ○           | 209 | 119            | 149            |                |                           | 0.9 |
| 38.5      |           | 3D38.5-121SOMT13         | ○           | 211 | 121            | 151            |                |                           | 0.9 |
| 39        |           | 3D39-122SOMT13           | ○           | 212 | 122            | 152            |                |                           | 1.0 |
| 39.5      |           | 3D39.5-124SOMT13         | ○           | 214 | 124            | 154            |                |                           | 1.1 |
| 40        | 40        | 3D40-125SOMT13           | ○           | 225 | 125            | 155            | 70             |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder



### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2*5          | T6           | KOD130-3D-S20-SO05-KOD160-3D-S20-SO05 |
| M2.2*5        | T7           | KOD165-3D-S20-SO06-KOD190-3D-S25-SO06 |
| M2.2*5        | T7           | KOD195-3D-S25-SO07-KOD220-3D-S25-SO07 |
| M2.5*6        | T7           | KOD225-3D-S25-SO08-KOD260-3D-S32-SO08 |
| M3.5*8.5      | T7           | KOD265-3D-S32-SO09-KOD315-3D-S32-SO09 |
| M3.5*8.5      | T8           | KOD320-3D-S32-SO11-KOD365-3D-S32-SO11 |
| M4*10         | T15          | KOD370-3D-S32-SO13-KOD400-3D-S40-SO13 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定品

# TOP-4 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 4 D

Holder diameter 4D: φ 14.0 ~ 50.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance:-0.2~+0.2

最大加工深度  $\ell_4 \times \Phi D_c$   
Drilling depth: 4xdiameter

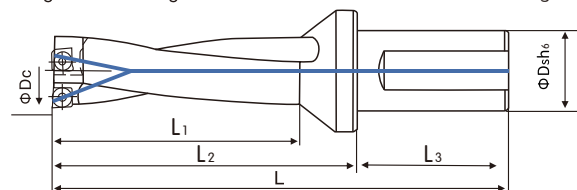


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | KOD130-4D-S20/25-SO05    | ●           | 114 | 55             | 70             |                | SOMT050204                | 0.2 |
| 13.5      |           | KOD135-4D-S20/25-SO05    | ●           | 116 | 57             | 72             |                |                           | 0.2 |
| 14        |           | KOD140-4D-S20/25-SO05    | ●           | 118 | 59             | 74             |                |                           | 0.2 |
| 14.5      | 20        | KOD145-4D-S20/25-SO05    | ●           | 120 | 61             | 76             |                |                           | 0.2 |
| 15        | /         | KOD150-4D-S20/25-SO05    | ●           | 122 | 63             | 78             | 44             |                           | 0.2 |
| 15.5      | 25        | KOD155-4D-S20/25-SO05    | ●           | 124 | 65             | 80             |                |                           | 0.2 |
| 16        |           | KOD160-4D-S20/25-SO05    | ●           | 126 | 67             | 82             |                |                           | 0.2 |
| 16.5      |           | KOD165-4D-S20/25-SO06    | ●           | 128 | 69             | 84             |                |                           | 0.2 |
| 17        |           | KOD170-4D-S20/25-SO06    | ●           | 130 | 71             | 86             |                | SOMT060204                | 0.2 |
| 17.5      |           | KOD175-4D-S25-SO06       | ●           | 144 | 73             | 88             |                |                           | 0.2 |
| 18        |           | KOD180-4D-S25-SO06       | ●           | 146 | 75             | 90             |                |                           | 0.3 |
| 18.5      |           | KOD185-4D-S25-SO06       | ●           | 148 | 77             | 92             |                |                           | 0.3 |
| 19        |           | KOD190-4D-S25-SO06       | ●           | 150 | 79             | 94             |                |                           | 0.3 |
| 19.5      |           | KOD195-4D-S25-SO07       | ●           | 152 | 81             | 96             |                |                           | 0.3 |
| 20        |           | KOD200-4D-S25-SO07       | ●           | 154 | 83             | 98             |                |                           | 0.3 |
| 20.5      |           | KOD205-4D-S25-SO07       | ●           | 156 | 85             | 100            |                |                           | 0.3 |
| 21        |           | KOD210-4D-S25-SO07       | ●           | 158 | 87             | 102            |                | SOMT070306                | 0.3 |
| 21.5      | 25        | KOD215-4D-S25-SO07       | ●           | 160 | 89             | 104            | 56             |                           | 0.3 |
| 22        |           | KOD220-4D-S25-SO07       | ●           | 162 | 91             | 106            |                |                           | 0.4 |
| 22.5      |           | KOD225-4D-S25-SO08       | ●           | 164 | 93             | 108            |                |                           | 0.4 |
| 23        |           | KOD230-4D-S25-SO08       | ●           | 169 | 95             | 113            |                |                           | 0.4 |
| 23.5      |           | KOD235-4D-S25-SO08       | ●           | 171 | 97             | 115            |                |                           | 0.4 |
| 24        |           | KOD240-4D-S25-SO08       | ●           | 173 | 99             | 117            |                |                           | 0.4 |
| 24.5      |           | KOD245-4D-S25-SO08       | ●           | 175 | 101            | 119            |                |                           | 0.4 |
| 25        |           | KOD250-4D-S25-SO08       | ●           | 177 | 103            | 121            |                | SOMT08T306                | 0.4 |
| 25.5      |           | KOD255-4D-S32-SO08       | ●           | 185 | 105            | 125            |                |                           | 0.6 |
| 26        |           | KOD260-4D-S32-SO08       | ●           | 187 | 107            | 127            |                |                           | 0.6 |
| 26.5      |           | KOD265-4D-S32-SO09       | ●           | 189 | 109            | 129            |                |                           | 0.6 |
| 27        |           | KOD270-4D-S32-SO09       | ●           | 191 | 111            | 131            |                |                           | 0.6 |
| 27.5      |           | KOD275-4D-S32-SO09       | ●           | 193 | 113            | 133            |                |                           | 0.6 |
| 28        |           | KOD280-4D-S32-SO09       | ●           | 195 | 115            | 135            |                |                           | 0.6 |
| 28.5      |           | KOD285-4D-S32-SO09       | ●           | 197 | 117            | 137            |                | SOMT09T308                | 0.6 |
| 29        |           | KOD290-4D-S32-SO09       | ●           | 201 | 120            | 141            |                |                           | 0.7 |
| 29.5      |           | KOD295-4D-S32-SO09       | ●           | 203 | 122            | 143            |                |                           | 0.7 |
| 30        |           | KOD300-4D-S32-SO09       | ●           | 208 | 124            | 148            |                |                           | 0.7 |
| 30.5      | 32        | KOD305-4D-S32-SO09       | ●           | 210 | 126            | 150            | 60             |                           | 0.7 |
| 31        |           | KOD310-4D-S32-SO09       | ●           | 212 | 128            | 152            |                |                           | 0.7 |
| 31.5      |           | KOD315-4D-S32-SO09       | ●           | 214 | 130            | 154            |                |                           | 0.7 |
| 32        |           | KOD320-4D-S32-SO11       | ●           | 216 | 132            | 156            |                | SOMT11T308                | 0.7 |
| 32.5      |           | KOD325-4D-S32-SO11       | ●           | 218 | 134            | 158            |                |                           | 0.8 |
| 33        |           | KOD330-4D-S32-SO11       | ●           | 220 | 136            | 160            |                |                           | 0.8 |
| 33.5      |           | KOD335-4D-S32-SO11       | ●           | 222 | 138            | 162            |                |                           | 0.8 |
| 34        |           | KOD340-4D-S32-SO11       | ●           | 224 | 140            | 164            |                |                           | 0.8 |
| 34.5      |           | KOD345-4D-S32-SO11       | ●           | 226 | 142            | 166            |                |                           | 0.8 |
| 35        |           | KOD350-4D-S32-SO11       | ●           | 228 | 144            | 168            |                |                           | 0.8 |
| 35.5      |           | KOD355-4D-S32-SO11       | ●           | 230 | 146            | 170            |                |                           | 0.8 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 36        |           | KOD360-4D-S32-SO11       | ●           | 232 | 148            | 172            |                | SOMT11T308                | 0.9 |
| 36.5      |           | KOD365-4D-S32-SO11       | ○           | 234 | 150            | 174            |                |                           | 0.9 |
| 37        |           | KOD370-4D-S32-SO13       | ○           | 243 | 153            | 183            |                | SOMT130408                | 0.9 |
| 37.5      | 32        | KOD375-4D-S32-SO13       | ○           | 245 | 155            | 185            | 60             |                           | 0.9 |
| 38        |           | KOD380-4D-S32-SO13       | ○           | 247 | 157            | 187            |                |                           | 0.9 |
| 38.5      |           | KOD385-4D-S32-SO13       | ○           | 249 | 159            | 189            |                |                           | 0.9 |
| 39        |           | KOD390-4D-S32-SO13       | ○           | 251 | 161            | 191            |                |                           | 1.0 |
| 39.5      |           | KOD395-4D-S32-SO13       | ○           | 253 | 163            | 193            |                |                           | 1.1 |
| 40        | 40        | KOD400-4D-S40-SO13       | ○           | 265 | 165            | 195            | 70             |                           | 1.1 |

### SO鑽頭記號

Part number structure of SO type holder

**C20 - 4D 14 - 59 SOMT05**

接口尺寸 倍徑 鑽頭尺寸 長度 刀片型號  
Shank Diameter Drill Length Diameter Length Inserts type

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2*5          | T6           | KOD130-4D-S20-SO05-KOD160-4D-S20-SO05 |
| M2.2*5        | T7           | KOD165-4D-S20-SO06-KOD190-4D-S25-SO06 |
| M2.2*5        | T7           | KOD195-4D-S25-SO07-KOD220-4D-S25-SO07 |
| M2.5*6        | T7           | KOD225-4D-S25-SO08-KOD260-4D-S32-SO08 |
| M3.5*8.5      | T7           | KOD265-4D-S32-SO09-KOD315-4D-S32-SO09 |
| M3.5*8.5      | T8           | KOD320-4D-S32-SO11-KOD365-4D-S32-SO11 |
| M4*10         | T15          | KOD370-4D-S32-SO13-KOD400-4D-S40-SO13 |

● Mark:Standard stock item,  
No mark:Made to order item.

●表示库存 ○表示库存预定品

# TOP-5 X D (Φ 13-50) Indexable drills with **SOMT** inserts

## SO 型 潜孔钻/ U 钻 5 D

Holder diameter 5D: φ 16.0 ~ 50.0mm

加工公差標準 -0.2~+0.2

Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell_5 \times \Phi D_c$

Drilling depth: 5xdiameter

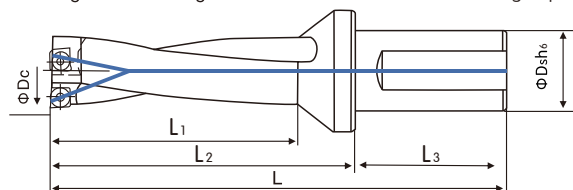


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 16        | 20        | KOD160-5D-S20-SO05       | ●           | 142 | 83             | 98             |                | SOMT050204                | 0.4 |
| 16.5      | /         | KOD165-5D-S20/25-SO06    | ●           | 145 | 86             | 101            | 44             |                           | 0.4 |
| 17        | 25        | KOD170-5D-S20/25-SO06    | ●           | 147 | 88             | 103            |                |                           | 0.4 |
| 17.5      |           | KOD175-5D-S25-SO06       | ●           | 162 | 91             | 106            |                | SOMT060204                | 0.4 |
| 18        |           | KOD180-5D-S25-SO06       | ●           | 164 | 93             | 108            |                |                           | 0.5 |
| 18.5      |           | KOD185-5D-S25-SO06       | ●           | 167 | 96             | 111            |                |                           | 0.5 |
| 19        |           | KOD190-5D-S25-SO06       | ●           | 169 | 98             | 113            |                |                           | 0.5 |
| 19.5      |           | KOD195-5D-S25-SO07       | ●           | 172 | 101            | 116            |                |                           | 0.5 |
| 20        |           | KOD200-5D-S25-SO07       | ●           | 174 | 103            | 118            |                |                           | 0.5 |
| 20.5      |           | KOD205-5D-S25-SO07       | ●           | 177 | 106            | 121            |                | SOMT070306                | 0.5 |
| 21        | 25        | KOD210-5D-S25-SO07       | ●           | 179 | 108            | 123            | 56             |                           | 0.5 |
| 21.5      |           | KOD215-5D-S25-SO07       | ●           | 182 | 111            | 126            |                |                           | 0.5 |
| 22        |           | KOD220-5D-S25-SO07       | ●           | 184 | 113            | 128            |                |                           | 0.5 |
| 22.5      |           | KOD225-5D-S25-SO08       | ●           | 187 | 116            | 131            |                |                           | 0.5 |
| 23        |           | KOD230-5D-S25-SO08       | ●           | 192 | 118            | 136            |                |                           | 0.6 |
| 23.5      |           | KOD235-5D-S25-SO08       | ●           | 195 | 121            | 139            |                | SOMT08T306                | 0.6 |
| 24        |           | KOD240-5D-S25-SO08       | ●           | 197 | 123            | 141            |                |                           | 0.6 |
| 24.5      |           | KOD245-5D-S25-SO08       | ●           | 200 | 126            | 144            |                |                           | 0.8 |
| 25        |           | KOD250-5D-S25-SO08       | ●           | 202 | 128            | 146            |                |                           | 0.8 |
| 25.5      |           | KOD255-5D-S32-SO08       | ●           | 213 | 131            | 153            |                |                           | 0.8 |
| 26        |           | KOD260-5D-S32-SO08       | ●           | 216 | 133            | 156            |                |                           | 0.8 |
| 26.5      |           | KOD265-5D-S32-SO09       | ●           | 217 | 136            | 157            |                |                           | 0.8 |
| 27        |           | KOD270-5D-S32-SO09       | ●           | 218 | 138            | 158            |                |                           | 0.8 |
| 27.5      |           | KOD275-5D-S32-SO09       | ●           | 221 | 141            | 161            |                |                           | 0.8 |
| 28        |           | KOD280-5D-S32-SO09       | ●           | 223 | 143            | 163            |                |                           | 0.9 |
| 28.5      |           | KOD285-5D-S32-SO09       | ●           | 226 | 146            | 166            |                |                           | 0.9 |
| 29        |           | KOD290-5D-S32-SO09       | ●           | 230 | 149            | 170            |                | SOMT09T308                | 0.9 |
| 29.5      |           | KOD295-5D-S32-SO09       | ●           | 233 | 151            | 173            |                |                           | 0.9 |
| 30        |           | KOD300-5D-S32-SO09       | ●           | 238 | 154            | 178            |                |                           | 1.0 |
| 30.5      |           | KOD305-5D-S32-SO09       | ●           | 241 | 157            | 181            |                |                           | 1.0 |
| 31        |           | KOD310-5D-S32-SO09       | ●           | 243 | 159            | 183            |                |                           | 1.0 |
| 31.5      |           | KOD315-5D-S32-SO09       | ●           | 245 | 162            | 185            |                |                           | 1.0 |
| 32        | 32        | KOD320-5D-S32-SO11       | ●           | 248 | 164            | 188            | 60             |                           | 1.1 |
| 32.5      |           | KOD325-5D-S32-SO11       | ●           | 251 | 167            | 191            |                |                           | 1.1 |
| 33        |           | KOD330-5D-S32-SO11       | ●           | 253 | 169            | 193            |                |                           | 1.1 |
| 33.5      |           | KOD335-5D-S32-SO11       | ●           | 255 | 172            | 195            |                |                           | 1.1 |
| 34        |           | KOD340-5D-S32-SO11       | ●           | 258 | 174            | 198            |                | SOMT11T308                | 1.2 |
| 34.5      |           | KOD345-5D-S32-SO11       | ●           | 261 | 177            | 201            |                |                           | 1.2 |
| 35        |           | KOD350-5D-S32-SO11       | ●           | 263 | 179            | 203            |                |                           | 1.2 |
| 35.5      |           | KOD355-5D-S32-SO11       | ●           | 265 | 182            | 205            |                |                           | 1.2 |
| 36        |           | KOD360-5D-S32-SO11       | ○           | 268 | 184            | 208            |                |                           | 1.3 |
| 36.5      |           | KOD365-5D-S32-SO11       | ○           | 271 | 187            | 211            |                |                           | 1.3 |
| 37        |           | KOD370-5D-S32-SO13       | ○           | 280 | 190            | 220            |                |                           | 1.3 |
| 37.5      |           | KOD375-5D-S32-SO13       | ○           | 283 | 193            | 223            |                | SOMT130408                | 1.3 |
| 38        |           | KOD380-5D-S32-SO13       | ○           | 285 | 195            | 225            |                |                           | 1.4 |
| 38.5      |           | KOD385-5D-S32-SO13       | ○           | 288 | 198            | 228            |                |                           | 1.4 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 39        | 32        | KOD390-5D-S32-SO13       | ○           | 290 | 200            | 230            | 60             |                           | 1.9 |
| 39.5      |           | KOD395-5D-S32-SO13       | ○           | 293 | 203            | 233            |                | SOMT130408                | 1.9 |
| 40        | 40        | KOD400-5D-S40-SO13       | ○           | 305 | 205            | 235            | 70             |                           | 1.9 |

### SO鑽頭記號

Part number structure of type holder

|                        |                    |                  |              |                      |
|------------------------|--------------------|------------------|--------------|----------------------|
| <b>C20</b>             | <b>- 5D</b>        | <b>16</b>        | <b>- 88</b>  | <b>SOMT05</b>        |
| 接口尺寸<br>Shank Diameter | 倍徑<br>Drill Length | 鑽頭尺寸<br>Diameter | 長度<br>Length | 刀片型號<br>Inserts type |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2*5          | T6           | KOD160-5D-S20-SO05                    |
| M2.2*5        | T7           | KOD165-5D-S20-SO06-KOD190-5D-S25-SO06 |
| M2.2*5        | T7           | KOD195-5D-S25-SO07-KOD220-5D-S25-SO07 |
| M2.5*6        | T7           | KOD225-5D-S25-SO08-KOD260-5D-S32-SO08 |
| M3.5*8.5      | T7           | KOD265-5D-S32-SO09-KOD315-5D-S32-SO09 |
| M3.5*8.5      | T8           | KOD320-5D-S32-SO11-KOD365-5D-S32-SO11 |
| M4*10         | T15          | KOD370-5D-S32-SO13-KOD400-5D-S40-SO13 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示庫存 ○表示庫存預定品

# WC-2XD (Φ13-100) Indexable drills with WC inserts

## WC 型 潜孔钻/U 钻 2D

Holder diameter 2D: Φ10.0 ~ 80.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \geq 2 \times \Phi D_c$   
Drilling depth: 2x diameter

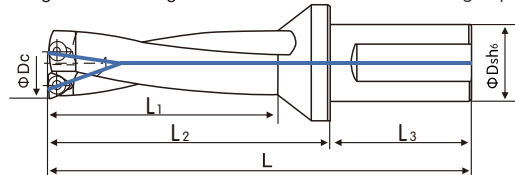


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item  | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|---------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | KCD130-2D-S20/S25-WC02    | ●           | 88  | 29             | 44             |                | WC..020104                | 0.2 |
| 13.5      |           | KCD135-2D-S20/S25-WC02    | ●           | 89  | 30             | 45             |                | WC..020104                | 0.2 |
| 14        |           | KCD140-2D-S20/S25-WC02/03 | ●           | 90  | 31             | 46             |                | WC..030208                | 0.2 |
| 14.5      | 20        | KCD145-2D-S20/S25-WC02/03 | ●           | 91  | 32             | 47             |                | WC..030208                | 0.2 |
| 15        | /         | KCD150-2D-S20/S25-WC03    | ●           | 92  | 33             | 48             | 44             |                           | 0.2 |
| 15.5      | 25        | KCD155-2D-S20/S25-WC03    | ●           | 93  | 34             | 49             |                |                           | 0.2 |
| 16        |           | KCD160-2D-S20/S25-WC03    | ●           | 94  | 35             | 50             |                |                           | 0.2 |
| 16.5      |           | KCD165-2D-S20/S25-WC03    | ●           | 95  | 36             | 51             |                |                           | 0.2 |
| 17        |           | KCD170-2D-S20/S25-WC03    | ●           | 96  | 37             | 52             |                |                           | 0.2 |
| 17.5      |           | KCD175-2D-S25-WC03        | ●           | 109 | 38             | 53             |                | WC..030208                | 0.2 |
| 18        |           | KCD180-2D-S25-WC03        | ●           | 110 | 39             | 54             |                | WC..030208                | 0.3 |
| 18.5      |           | KCD185-2D-S25-WC03        | ●           | 111 | 40             | 55             |                | WC..030208                | 0.3 |
| 19        |           | KCD190-2D-S25-WC03        | ●           | 112 | 41             | 56             |                | WC..030208                | 0.3 |
| 19.5      |           | KCD195-2D-S25-WC03        | ●           | 113 | 42             | 57             |                | WC..030208                | 0.3 |
| 20        |           | KCD200-2D-S25-WC03        | ●           | 114 | 43             | 58             |                | WC..030208                | 0.3 |
| 20.5      |           | KCD205-2D-S25-WC03        | ●           | 115 | 44             | 59             |                | WC..030208                | 0.3 |
| 21        | 25        | KCD210-2D-S25-WC04        | ●           | 116 | 45             | 60             | 56             | WC..040208                | 0.3 |
| 21.5      |           | KCD215-2D-S25-WC04        | ●           | 117 | 46             | 61             |                | WC..040208                | 0.3 |
| 22        |           | KCD220-2D-S25-WC04        | ●           | 118 | 47             | 62             |                | WC..040208                | 0.4 |
| 22.5      |           | KCD225-2D-S25-WC04        | ●           | 119 | 48             | 63             |                | WC..040208                | 0.4 |
| 23        |           | KCD230-2D-S25-WC04        | ●           | 123 | 49             | 67             |                | WC..040208                | 0.4 |
| 23.5      |           | KCD235-2D-S25-WC04        | ●           | 124 | 50             | 68             |                | WC..040208                | 0.4 |
| 24        |           | KCD240-2D-S25-WC04        | ●           | 125 | 51             | 69             |                | WC..040208                | 0.4 |
| 24.5      |           | KCD245-2D-S25-WC04        | ●           | 126 | 52             | 70             |                | WC..040208                | 0.4 |
| 25        |           | KCD250-2D-S25-WC05        | ●           | 127 | 53             | 71             |                | WC..040208                | 0.4 |
| 25.5      |           | KCD255-2D-S32-WC05        | ●           | 134 | 54             | 74             |                | WC..050308                | 0.6 |
| 26        |           | KCD260-2D-S32-WC05        | ●           | 135 | 55             | 75             |                | WC..050308                | 0.6 |
| 26.5      |           | KCD265-2D-S32-WC05        | ●           | 136 | 56             | 76             |                | WC..050308                | 0.6 |
| 27        |           | KCD270-2D-S32-WC05        | ●           | 137 | 57             | 77             |                | WC..050308                | 0.6 |
| 27.5      |           | KCD275-2D-S32-WC05        | ●           | 138 | 58             | 78             |                | WC..050308                | 0.6 |
| 28        |           | KCD280-2D-S32-WC05        | ●           | 139 | 59             | 79             |                | WC..050308                | 0.6 |
| 28.5      |           | KCD285-2D-S32-WC05        | ●           | 140 | 60             | 80             |                | WC..050308                | 0.6 |
| 29        |           | KCD290-2D-S32-WC05        | ●           | 143 | 62             | 83             |                | WC..050308                | 0.7 |
| 29.5      |           | KCD295-2D-S32-WC05        | ●           | 144 | 63             | 84             |                | WC..050308                | 0.7 |
| 30        |           | KCD300-2D-S32-WC05        | ●           | 148 | 64             | 88             |                | WC..050308                | 0.7 |
| 30.5      |           | KCD305-2D-S32-WC05        | ●           | 149 | 65             | 89             |                | WC..050308                | 0.7 |
| 31        | 32        | KCD310-2D-S32-WC06        | ●           | 150 | 66             | 90             | 60             | WC..06T308                | 0.7 |
| 31.5      |           | KCD315-2D-S32-WC06        | ●           | 151 | 67             | 91             |                | WC..06T308                | 0.7 |
| 32        |           | KCD320-2D-S32-WC06        | ●           | 152 | 68             | 92             |                | WC..06T308                | 0.8 |
| 32.5      |           | KCD325-2D-S32-WC06        | ●           | 153 | 69             | 93             |                | WC..06T308                | 0.8 |
| 33        |           | KCD330-2D-S32-WC06        | ●           | 154 | 70             | 94             |                | WC..06T308                | 0.8 |
| 33.5      |           | KCD335-2D-S32-WC06        | ●           | 155 | 71             | 95             |                | WC..06T308                | 0.8 |
| 34        |           | KCD340-2D-S32-WC06        | ●           | 156 | 72             | 96             |                | WC..06T308                | 0.8 |
| 34.5      |           | KCD345-2D-S32-WC06        | ●           | 157 | 73             | 97             |                | WC..06T308                | 0.8 |
| 35        |           | KCD350-2D-S32-WC06        | ●           | 158 | 74             | 98             |                | WC..06T308                | 0.8 |
| 35.5      |           | KCD355-2D-S32-WC06        | ●           | 159 | 75             | 99             |                | WC..06T308                | 0.8 |
| 36        |           | KCD360-2D-S32-WC06        | ●           | 160 | 76             | 100            |                | WC..06T308                | 0.9 |
| 36.5      |           | KCD365-2D-S32-WC06        | ●           | 161 | 77             | 101            |                | WC..06T308                | 0.9 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 37        |           | KCD370-3D-S32-WC06       | ●           | 206 | 116            | 146            |                | WC..06T308                | 1.1 |
| 37.5      |           | KCD375-3D-S32-WC06       | ●           | 208 | 118            | 148            |                | WC..06T308                | 1.1 |
| 38        | 32        | KCD380-3D-S32-WC06       | ●           | 209 | 119            | 149            | 60             | WC..06T308                | 1.1 |
| 38.5      |           | KCD385-3D-S32-WC06       | ●           | 211 | 121            | 151            |                | WC..06T308                | 1.1 |
| 39        |           | KCD390-3D-S32-WC06       | ●           | 212 | 122            | 152            |                | WC..06T308                | 1.2 |
| 39.5      |           | KCD395-3D-S32-WC06       | ●           | 214 | 124            | 154            |                | WC..06T308                | 1.3 |
| 40        | 40        | KCD400-3D-S40-WC06       | ○           | 225 | 125            | 155            | 70             | WC..06T308                | 1.6 |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*5        | T6           | KCD130-3D-S20-WC02-KCD145-3D-S25-WC02 |
| M2.5*5.5      | T8           | KCD140-3D-S20-WC03-KCD145-3D-S25-WC03 |
| M2.5*6        | T8           | KCD150-3D-S20-WC03-KCD205-3D-S25-WC03 |
| M2.5*6        | T8           | KCD210-3D-S25-WC04-KCD245-3D-S25-WC04 |
| M3*7          | T8           | KCD250-3D-S25-WC05-KCD305-3D-S32-WC05 |
| M3.5*8.5      | T15          | KCD310-3D-S32-WC06-KCD400-3D-S40-WC06 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预定品



# WC-3 X D (Φ14-100) Indexable drills with WC inserts

## WC 型 潜孔钻/ U 钻 3 D

Holder diameter 3D: Φ10.0 ~ 80.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times 3 \times \Phi D_c$   
Drilling depth: 3x diameter

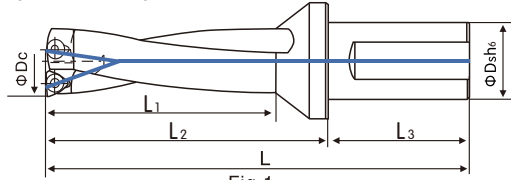


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item  | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|---------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | KCD130-3D-S20/S25-WC02    | ●           | 101 | 42             | 57             |                | WC..020104                | 0.2 |
| 13.5      |           | KCD135-3D-S20/S25-WC02    | ●           | 103 | 44             | 59             |                | WC..020104                | 0.2 |
| 14        |           | KCD140-3D-S20/S25-WC02/03 | ●           | 104 | 45             | 60             |                | WC..030208                | 0.2 |
| 14.5      | 20        | KCD145-3D-S20/S25-WC02/03 | ●           | 106 | 47             | 62             |                | WC..030208                | 0.2 |
| 15        | /         | KCD150-3D-S20/S25-WC03    | ●           | 107 | 48             | 63             | 44             |                           | 0.2 |
| 15.5      | 25        | KCD155-3D-S20/S25-WC03    | ●           | 109 | 50             | 65             |                |                           | 0.2 |
| 16        |           | KCD160-3D-S20/S25-WC03    | ●           | 110 | 51             | 66             |                |                           | 0.2 |
| 16.5      |           | KCD165-3D-S20/S25-WC03    | ●           | 112 | 53             | 68             |                |                           | 0.2 |
| 17        |           | KCD170-3D-S20/S25-WC03    | ●           | 113 | 54             | 69             |                |                           | 0.2 |
| 17.5      |           | KCD175-3D-S25-WC03        | ●           | 127 | 56             | 71             |                | WC..030208                | 0.3 |
| 18        |           | KCD180-3D-S25-WC03        | ●           | 128 | 57             | 72             |                | WC..030208                | 0.3 |
| 18.5      |           | KCD185-3D-S25-WC03        | ●           | 130 | 59             | 74             |                | WC..030208                | 0.3 |
| 19        |           | KCD190-3D-S25-WC03        | ●           | 131 | 60             | 75             |                | WC..030208                | 0.3 |
| 19.5      |           | KCD195-3D-S25-WC03        | ●           | 133 | 62             | 77             |                | WC..030208                | 0.3 |
| 20        |           | KCD200-3D-S25-WC03        | ●           | 134 | 63             | 78             |                | WC..030208                | 0.4 |
| 20.5      |           | KCD205-3D-S25-WC03        | ●           | 136 | 65             | 80             |                | WC..030208                | 0.4 |
| 21        | 25        | KCD210-3D-S25-WC04        | ●           | 137 | 66             | 81             | 56             | WC..040208                | 0.4 |
| 21.5      |           | KCD215-3D-S25-WC04        | ●           | 139 | 68             | 83             |                | WC..040208                | 0.4 |
| 22        |           | KCD220-3D-S25-WC04        | ●           | 140 | 69             | 84             |                | WC..040208                | 0.4 |
| 22.5      |           | KCD225-3D-S25-WC04        | ●           | 142 | 71             | 86             |                | WC..040208                | 0.4 |
| 23        |           | KCD230-3D-S25-WC04        | ●           | 146 | 72             | 90             |                | WC..040208                | 0.4 |
| 23.5      |           | KCD235-3D-S25-WC04        | ●           | 148 | 74             | 92             |                | WC..040208                | 0.4 |
| 24        |           | KCD240-3D-S25-WC04        | ●           | 149 | 75             | 93             |                | WC..040208                | 0.4 |
| 24.5      |           | KCD245-3D-S25-WC04        | ●           | 151 | 77             | 95             |                | WC..040208                | 0.4 |
| 25        |           | KCD250-3D-S25-WC05        | ●           | 152 | 78             | 96             |                | WC..040208                | 0.4 |
| 25.5      |           | KCD255-3D-S32-WC05        | ●           | 160 | 80             | 100            |                | WC..050308                | 0.6 |
| 26        |           | KCD260-3D-S32-WC05        | ●           | 161 | 81             | 101            |                | WC..050308                | 0.6 |
| 26.5      |           | KCD265-3D-S32-WC05        | ●           | 163 | 83             | 103            |                | WC..050308                | 0.7 |
| 27        |           | KCD270-3D-S32-WC05        | ●           | 164 | 84             | 104            |                | WC..050308                | 0.7 |
| 27.5      |           | KCD275-3D-S32-WC05        | ●           | 166 | 86             | 106            |                | WC..050308                | 0.7 |
| 28        |           | KCD280-3D-S32-WC05        | ●           | 167 | 87             | 107            |                | WC..050308                | 0.7 |
| 28.5      |           | KCD285-3D-S32-WC05        | ●           | 169 | 89             | 109            |                | WC..050308                | 0.7 |
| 29        |           | KCD290-3D-S32-WC05        | ●           | 172 | 91             | 112            |                | WC..050308                | 0.7 |
| 29.5      |           | KCD295-3D-S32-WC05        | ●           | 174 | 93             | 114            |                | WC..050308                | 0.7 |
| 30        |           | KCD300-3D-S32-WC05        | ●           | 178 | 94             | 118            |                | WC..050308                | 0.7 |
| 30.5      |           | KCD305-3D-S32-WC05        | ●           | 180 | 96             | 120            |                | WC..050308                | 0.8 |
| 31        | 32        | KCD310-3D-S32-WC06        | ●           | 181 | 97             | 121            | 60             | WC..06T308                | 0.8 |
| 31.5      |           | KCD315-3D-S32-WC06        | ●           | 183 | 99             | 123            |                | WC..06T308                | 0.9 |
| 32        |           | KCD320-3D-S32-WC06        | ●           | 184 | 100            | 124            |                | WC..06T308                | 0.9 |
| 32.5      |           | KCD325-3D-S32-WC06        | ●           | 186 | 102            | 126            |                | WC..06T308                | 0.9 |
| 33        |           | KCD330-3D-S32-WC06        | ●           | 187 | 103            | 127            |                | WC..06T308                | 0.9 |
| 33.5      |           | KCD335-3D-S32-WC06        | ●           | 189 | 105            | 129            |                | WC..06T308                | 0.9 |
| 34        |           | KCD340-3D-S32-WC06        | ●           | 190 | 106            | 130            |                | WC..06T308                | 0.9 |
| 34.5      |           | KCD345-3D-S32-WC06        | ●           | 192 | 108            | 132            |                | WC..06T308                | 1.0 |
| 35        |           | KCD350-3D-S32-WC06        | ●           | 193 | 109            | 133            |                | WC..06T308                | 1.0 |
| 35.5      |           | KCD355-3D-S32-WC06        | ●           | 195 | 111            | 135            |                | WC..06T308                | 1.0 |
| 36        |           | KCD360-3D-S32-WC06        | ●           | 196 | 112            | 136            |                | WC..06T308                | 1.0 |
| 36.5      |           | KCD365-3D-S32-WC06        | ●           | 198 | 114            | 138            |                | WC..06T308                | 1.1 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 37        |           | KCD370-3D-S32-WC06       | ●           | 206 | 116            | 146            |                | WC..06T308                | 1.1 |
| 37.5      |           | KCD375-3D-S32-WC06       | ●           | 208 | 118            | 148            |                | WC..06T308                | 1.1 |
| 38        |           | KCD380-3D-S32-WC06       | ●           | 209 | 119            | 149            |                | WC..06T308                | 1.1 |
| 38.5      | 32        | KCD385-3D-S32-WC06       | ●           | 211 | 121            | 151            | 60             | WC..06T308                | 1.1 |
| 39        |           | KCD390-3D-S32-WC06       | ●           | 212 | 122            | 152            |                | WC..06T308                | 1.2 |
| 39.5      |           | KCD395-3D-S32-WC06       | ●           | 214 | 124            | 154            |                | WC..06T308                | 1.3 |
| 40        | 40        | KCD400-3D-S40-WC06       | ○           | 225 | 125            | 155            | 70             | WC..06T308                | 1.6 |

### ◎ 附件 Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*5        | T6           | KCD130-3D-S20-WC02-KCD145-3D-S25-WC02 |
| M2.5*5.5      | T8           | KCD140-3D-S20-WC03-KCD145-3D-S25-WC03 |
| M2.5*6        | T8           | KCD150-3D-S20-WC03-KCD205-3D-S25-WC03 |
| M2.5*6        | T8           | KCD210-3D-S25-WC04-KCD245-3D-S25-WC04 |
| M3*7          | T8           | KCD250-3D-S25-WC05-KCD305-3D-S32-WC05 |
| M3.5*8.5      | T15          | KCD310-3D-S32-WC06-KCD400-3D-S40-WC06 |

● Mark: Standard stock item,  
No mark: Made to order item.

◎ ● 表示库存 ○ 表示库存预定品

# WC-4XD (Φ14-100) Indexable drills with WC inserts

## WC 型 潜孔钻/U 钻 4 D

Holder diameter 4D: Φ10.0 ~ 70.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times 4 \times \Phi D_c$   
Drilling depth: 4x diameter

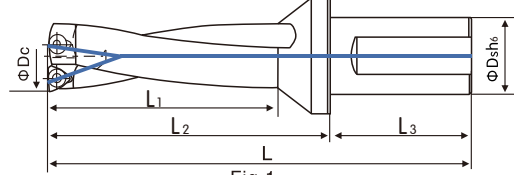


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item  | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|---------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 13        |           | KCD130-4D-S20/S25-WC02    | ●           | 114 | 55             | 70             |                | WC..020104                | 0.2 |
| 13.5      |           | KCD135-4D-S20/S25-WC02    | ●           | 116 | 57             | 72             |                | WC..020104                | 0.2 |
| 14        |           | KCD140-4D-S20/S25-WC02/03 | ●           | 118 | 59             | 74             |                | WC..030208                | 0.2 |
| 14.5      | 20        | KCD145-4D-S20/S25-WC02/03 | ●           | 120 | 61             | 76             |                |                           | 0.2 |
| 15        | /         | KCD150-4D-S20/S25-WC03    | ●           | 122 | 63             | 78             | 44             |                           | 0.2 |
| 15.5      | 25        | KCD155-4D-S20/S25-WC03    | ●           | 124 | 65             | 80             |                |                           | 0.2 |
| 16        |           | KCD160-4D-S20/S25-WC03    | ●           | 126 | 67             | 82             |                |                           | 0.3 |
| 16.5      |           | KCD165-4D-S20/S25-WC03    | ●           | 128 | 69             | 84             |                |                           | 0.3 |
| 17        |           | KCD170-4D-S20/S25-WC03    | ●           | 130 | 71             | 86             |                |                           | 0.3 |
| 17.5      |           | KCD175-4D-S25-WC03        | ●           | 144 | 73             | 88             |                | WC..030208                | 0.3 |
| 18        |           | KCD180-4D-S25-WC03        | ●           | 146 | 75             | 90             |                |                           | 0.4 |
| 18.5      |           | KCD185-4D-S25-WC03        | ●           | 148 | 77             | 92             |                |                           | 0.4 |
| 19        |           | KCD190-4D-S25-WC03        | ●           | 150 | 79             | 94             |                |                           | 0.4 |
| 19.5      |           | KCD195-4D-S25-WC03        | ●           | 152 | 81             | 96             |                |                           | 0.4 |
| 20        |           | KCD200-4D-S25-WC03        | ●           | 154 | 83             | 98             |                |                           | 0.4 |
| 20.5      |           | KCD205-4D-S25-WC03        | ●           | 156 | 85             | 100            |                |                           | 0.4 |
| 21        | 25        | KCD210-4D-S25-WC04        | ●           | 158 | 87             | 102            | 56             |                           | 0.4 |
| 21.5      |           | KCD215-4D-S25-WC04        | ●           | 160 | 89             | 104            |                | WC..040208                | 0.4 |
| 22        |           | KCD220-4D-S25-WC04        | ●           | 162 | 91             | 106            |                |                           | 0.4 |
| 22.5      |           | KCD225-4D-S25-WC04        | ●           | 164 | 93             | 108            |                |                           | 0.4 |
| 23        |           | KCD230-4D-S25-WC04        | ●           | 169 | 95             | 113            |                |                           | 0.5 |
| 23.5      |           | KCD235-4D-S25-WC04        | ●           | 171 | 97             | 115            |                |                           | 0.5 |
| 24        |           | KCD240-4D-S25-WC04        | ●           | 173 | 99             | 117            |                |                           | 0.5 |
| 24.5      |           | KCD245-4D-S25-WC04        | ●           | 175 | 101            | 119            |                |                           | 0.7 |
| 25        |           | KCD250-4D-S25-WC05        | ●           | 177 | 103            | 121            |                |                           | 0.7 |
| 25.5      |           | KCD255-4D-S32-WC05        | ●           | 185 | 105            | 125            |                | WC..050308                | 0.7 |
| 26        |           | KCD260-4D-S32-WC05        | ●           | 187 | 107            | 127            |                |                           | 0.7 |
| 26.5      |           | KCD265-4D-S32-WC05        | ●           | 189 | 109            | 129            |                |                           | 0.7 |
| 27        |           | KCD270-4D-S32-WC05        | ●           | 191 | 111            | 131            |                |                           | 0.7 |
| 27.5      |           | KCD275-4D-S32-WC05        | ●           | 193 | 113            | 133            |                |                           | 0.7 |
| 28        |           | KCD280-4D-S32-WC05        | ●           | 195 | 115            | 135            |                |                           | 0.8 |
| 28.5      |           | KCD285-4D-S32-WC05        | ●           | 197 | 117            | 137            |                |                           | 0.8 |
| 29        |           | KCD290-4D-S32-WC05        | ●           | 201 | 120            | 141            |                |                           | 0.8 |
| 29.5      |           | KCD295-4D-S32-WC05        | ●           | 203 | 122            | 143            |                |                           | 0.8 |
| 30        |           | KCD300-4D-S32-WC05        | ●           | 208 | 124            | 148            |                |                           | 0.9 |
| 30.5      |           | KCD305-4D-S32-WC05        | ●           | 210 | 126            | 150            |                |                           | 0.9 |
| 31        | 32        | KCD310-4D-S32-WC06        | ●           | 212 | 128            | 152            | 60             |                           | 0.9 |
| 31.5      |           | KCD315-4D-S32-WC06        | ●           | 214 | 130            | 154            |                | WC..06T308                | 0.9 |
| 32        |           | KCD320-4D-S32-WC06        | ●           | 216 | 132            | 156            |                |                           | 1.0 |
| 32.5      |           | KCD325-4D-S32-WC06        | ●           | 218 | 134            | 158            |                |                           | 1.0 |
| 33        |           | KCD330-4D-S32-WC06        | ●           | 220 | 136            | 160            |                |                           | 1.0 |
| 33.5      |           | KCD335-4D-S32-WC06        | ●           | 222 | 138            | 162            |                |                           | 1.0 |
| 34        |           | KCD340-4D-S32-WC06        | ●           | 224 | 140            | 164            |                |                           | 1.1 |
| 34.5      |           | KCD345-4D-S32-WC06        | ●           | 226 | 142            | 166            |                |                           | 1.1 |
| 35        |           | KCD350-4D-S32-WC06        | ●           | 228 | 144            | 168            |                |                           | 1.1 |
| 35.5      |           | KCD355-4D-S32-WC06        | ●           | 230 | 146            | 170            |                |                           | 1.1 |
| 36        |           | KCD360-4D-S32-WC06        | ●           | 232 | 148            | 172            |                |                           | 1.2 |
| 36.5      |           | KCD365-4D-S32-WC06        | ●           | 236 | 150            | 174            |                |                           | 1.2 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 37        |           | KCD370-3D-S32-WC06       | ●           | 243 | 153            | 183            |                |                           | 1.2 |
| 37.5      |           | KCD375-3D-S32-WC06       | ●           | 245 | 155            | 185            |                |                           | 1.2 |
| 38        | 32        | KCD380-3D-S32-WC06       | ●           | 247 | 157            | 187            | 60             | WC..06T308                | 1.3 |
| 38.5      |           | KCD385-3D-S32-WC06       | ●           | 249 | 159            | 189            |                |                           | 1.3 |
| 39        |           | KCD390-3D-S32-WC06       | ●           | 251 | 161            | 191            |                |                           | 1.8 |
| 39.5      |           | KCD395-3D-S32-WC06       | ●           | 253 | 163            | 193            |                |                           | 1.8 |
| 40        | 40        | KCD400-3D-S40-WC06       | ○           | 265 | 165            | 195            | 70             |                           | 1.8 |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M1.8*5        | T6           | KCD130-3D-S20-WC02-KCD145-3D-S25-WC02 |
| M2.5*5.5      | T8           | KCD140-3D-S20-WC03-KCD145-3D-S25-WC03 |
| M2.5*6        | T8           | KCD150-3D-S20-WC03-KCD205-3D-S25-WC03 |
| M2.5*6        | T8           | KCD210-3D-S25-WC04-KCD245-3D-S25-WC04 |
| M3*7          | T8           | KCD250-3D-S25-WC05-KCD305-3D-S32-WC05 |
| M3.5*8.5      | T15          | KCD310-3D-S32-WC06-KCD400-3D-S40-WC06 |

● Mark: Standard stock item,  
No mark: Made to order item.

●表示库存 ○表示库存预制品

# WC-5XD (Φ14-100) Indexable drills with WC inserts

## WC型潜孔钻/U钻 5D

Holder diameter 5D: Φ15.0 ~ 100.0mm

加工公差標準 -0.2~+0.2  
Range of machining tolerance: -0.2~+0.2

最大加工深度  $\ell \times 5 \times \Phi D_c$   
Drilling depth: 5x diameter

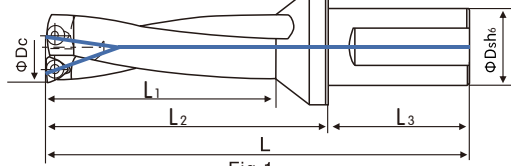


Fig.1



▲ H13/SKD61

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 16        | 20        | KCD160-5D-S20/S25-WC03   | ●           | 142 | 83             | 98             |                | WC..030208                | 0.4 |
| 16.5      | /         | KCD165-5D-S20/S25-WC03   | ●           | 145 | 86             | 101            | 44             |                           | 0.4 |
| 17        | 25        | KCD170-5D-S20/S25-WC03   | ●           | 147 | 88             | 103            |                |                           | 0.4 |
| 17.5      | 25        | KCD175-5D-S25-WC03       | ●           | 162 | 91             | 106            |                |                           | 0.4 |
| 18        |           | KCD180-5D-S25-WC03       | ●           | 164 | 93             | 108            |                |                           | 0.5 |
| 18.5      |           | KCD185-5D-S25-WC03       | ●           | 167 | 96             | 111            |                |                           | 0.5 |
| 19        |           | KCD190-5D-S25-WC03       | ●           | 169 | 98             | 113            |                |                           | 0.5 |
| 19.5      |           | KCD195-5D-S25-WC03       | ●           | 172 | 101            | 116            |                |                           | 0.5 |
| 20        |           | KCD200-5D-S25-WC03       | ●           | 174 | 103            | 118            |                |                           | 0.5 |
| 20.5      |           | KCD205-5D-S25-WC03       | ●           | 177 | 106            | 121            |                |                           | 0.5 |
| 21        |           | KCD210-5D-S25-WC04       | ●           | 179 | 108            | 123            | 56             | WC..040208                | 0.5 |
| 21.5      |           | KCD215-5D-S25-WC04       | ●           | 182 | 111            | 126            |                |                           | 0.5 |
| 22        |           | KCD220-5D-S25-WC04       | ●           | 184 | 113            | 128            |                |                           | 0.5 |
| 22.5      |           | KCD225-5D-S25-WC04       | ●           | 187 | 116            | 131            |                |                           | 0.5 |
| 23        |           | KCD230-5D-S25-WC04       | ●           | 192 | 118            | 136            |                |                           | 0.6 |
| 23.5      |           | KCD235-5D-S25-WC04       | ●           | 195 | 121            | 139            |                |                           | 0.6 |
| 24        |           | KCD240-5D-S25-WC04       | ●           | 197 | 123            | 141            |                |                           | 0.6 |
| 24.5      |           | KCD245-5D-S25-WC04       | ●           | 200 | 126            | 144            |                |                           | 0.8 |
| 25        |           | KCD250-5D-S25-WC05       | ●           | 202 | 128            | 146            |                | WC..050308                | 0.8 |
| 25.5      | 32        | KCD255-5D-S32-WC05       | ●           | 213 | 131            | 153            |                |                           | 0.8 |
| 26        |           | KCD260-5D-S32-WC05       | ●           | 216 | 133            | 156            |                |                           | 0.8 |
| 26.5      |           | KCD265-5D-S32-WC05       | ●           | 217 | 136            | 157            |                |                           | 0.8 |
| 27        |           | KCD270-5D-S32-WC05       | ●           | 218 | 138            | 158            |                |                           | 0.8 |
| 27.5      |           | KCD275-5D-S32-WC05       | ●           | 221 | 141            | 161            |                |                           | 0.8 |
| 28        |           | KCD280-5D-S32-WC05       | ●           | 223 | 143            | 163            |                |                           | 0.9 |
| 28.5      |           | KCD285-5D-S32-WC05       | ●           | 226 | 146            | 166            |                |                           | 0.9 |
| 29        |           | KCD290-5D-S32-WC05       | ●           | 230 | 149            | 170            |                |                           | 0.9 |
| 29.5      |           | KCD295-5D-S32-WC05       | ●           | 233 | 151            | 173            |                |                           | 0.9 |
| 30        |           | KCD300-5D-S32-WC05       | ●           | 238 | 154            | 178            |                | WC..06T308                | 1.0 |
| 30.5      | 32        | KCD305-5D-S32-WC05       | ●           | 241 | 157            | 181            |                |                           | 1.0 |
| 31        |           | KCD310-5D-S32-WC06       | ●           | 243 | 159            | 183            | 60             |                           | 1.0 |
| 31.5      |           | KCD315-5D-S32-WC06       | ●           | 245 | 162            | 185            |                |                           | 1.0 |
| 32        |           | KCD320-5D-S32-WC06       | ●           | 248 | 164            | 188            |                |                           | 1.1 |
| 32.5      |           | KCD325-5D-S32-WC06       | ●           | 251 | 167            | 191            |                |                           | 1.1 |
| 33        |           | KCD330-5D-S32-WC06       | ●           | 253 | 169            | 193            |                |                           | 1.1 |
| 33.5      |           | KCD335-5D-S32-WC06       | ●           | 255 | 172            | 195            |                |                           | 1.1 |
| 34        |           | KCD340-5D-S32-WC06       | ●           | 258 | 174            | 198            |                |                           | 1.2 |
| 34.5      |           | KCD345-5D-S32-WC06       | ●           | 261 | 177            | 201            |                |                           | 1.2 |
| 35        |           | KCD350-5D-S32-WC06       | ●           | 263 | 179            | 203            |                |                           | 1.2 |
| 35.5      | 36        | KCD355-5D-S32-WC06       | ●           | 265 | 182            | 205            |                | WC..06T308                | 1.2 |
| 36        |           | KCD360-5D-S32-WC06       | ●           | 268 | 184            | 208            |                |                           | 1.3 |
| 36.5      |           | KCD365-5D-S32-WC06       | ●           | 271 | 187            | 211            |                |                           | 1.3 |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|-----|
| 37        | 32        | KCD370-5D-S32-WC06       | ●           | 206 | 116            | 146            |                | WC..06T308                | 1.1 |
| 37.5      |           | KCD375-5D-S32-WC06       | ●           | 208 | 118            | 148            |                |                           | 1.1 |
| 38        |           | KCD380-5D-S32-WC06       | ●           | 209 | 119            | 149            |                |                           | 1.1 |
| 38.5      |           | KCD385-5D-S32-WC06       | ●           | 211 | 121            | 151            | 60             |                           | 1.1 |
| 39        |           | KCD390-5D-S32-WC06       | ●           | 212 | 122            | 152            |                |                           | 1.2 |
| 39.5      |           | KCD395-5D-S32-WC06       | ●           | 214 | 124            | 154            |                |                           | 1.3 |
| 40        | 40        | KCD400-5D-S40-WC06       | ○           | 225 | 125            | 155            | 70             |                           | 1.6 |

### ◎附件Spare Parts

| 平頭螺釘<br>Screw | 扳手<br>Wrench | 適用刀杆 Applicable Drill                 |
|---------------|--------------|---------------------------------------|
|               |              |                                       |
| M2.5*6        | T8           |                                       |
| M2.5*6        | T8           |                                       |
| M3*7          | T8           |                                       |
| M3.5*8.5      | T15          | KCD310-4D-S32-WC06-KCD400-4D-S40-WC06 |

● Mark: Standard stock item,  
No mark: Made to order item.

◎●表示库存 ○表示库存预定品







# WDX (Φ 15–30) flat-bottom drills with WDX inserts

## WDX/PDL型 平底钻

Holder diameter: Φ15.0 ~ 30.0mm

加工公差標準 -0.05 ~ +0.15

Range of machining tolerance: -0.05 ~ +0.15

最大加工深度  $\ell \times 2 \times \Phi D_c$

Drilling depth:  $2 \times \text{diameter}$

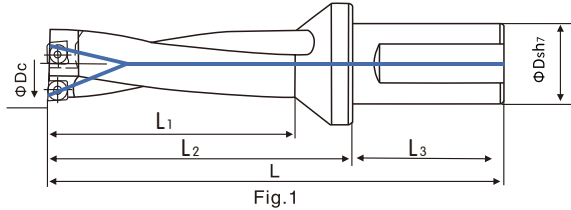


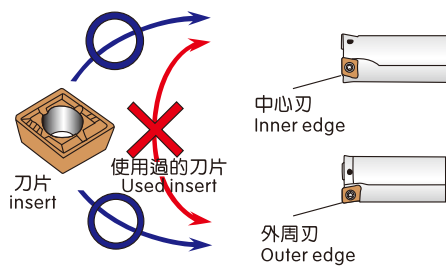
Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | $\ell_1$ | $\ell_2$ | $\ell_3$ | 適用刀片<br>Applicable Insert | kg  |
|-----------|-----------|--------------------------|-------------|-----|----------|----------|----------|---------------------------|-----|
| 15        | 25        | PDL150D2S25              | ●           | 92  | 33       | 48       | 56       | WDX T042004               | 0.2 |
| 16        |           | PDL160D2S25              | ●           | 94  | 35       | 50       |          | WDX T052504               | 0.2 |
| 17        |           | PDL170D2S25              | ●           | 96  | 37       | 52       |          |                           | 0.2 |
| 18        |           | PDL180D2S25              | ●           | 112 | 39       | 56       |          | WDX T063006               | 0.3 |
| 19        |           | PDL190D2S25              | ●           | 114 | 41       | 58       |          |                           | 0.3 |
| 20        |           | PDL200D2S25              | ●           | 116 | 43       | 60       |          |                           | 0.3 |
| 21        |           | PDL210D2S25              | ●           | 118 | 45       | 62       |          |                           | 0.3 |
| 22        |           | PDL220D2S25              | ●           | 120 | 47       | 64       |          | WDX T073506               | 0.4 |
| 23        |           | PDL230D2S25              | ●           | 122 | 49       | 66       |          |                           | 0.4 |
| 24        |           | PDL240D2S25              | ●           | 124 | 51       | 68       |          |                           | 0.4 |
| 25        |           | PDL250D2S25              | ●           | 126 | 53       | 70       |          |                           | 0.4 |
| 26        | 32        | PDL260D2S32              | ●           | 135 | 55       | 75       | 60       | WDX T094008               | 0.6 |
| 27        |           | PDL270D2S32              | ●           | 137 | 57       | 77       |          |                           | 0.6 |
| 28        |           | PDL280D2S32              | ●           | 139 | 59       | 79       |          |                           | 0.7 |
| 29        |           | PDL290D2S32              | ●           | 143 | 62       | 83       |          |                           | 0.7 |
| 30        |           | PDL300D2S32              | ●           | 148 | 64       | 88       |          | WDX T094008               | 0.7 |
| 31        |           | PDL310D2S32              | ○           | 150 | 66       | 90       |          |                           | 0.8 |
| 32        |           | PDL320D2S32              | ○           | 152 | 68       | 92       |          |                           | 0.8 |
| 33        |           | PDL330D2S32              | ○           | 154 | 70       | 94       |          |                           | 0.8 |
| 34        |           | PDL340D2S32              | ○           | 156 | 72       | 96       |          |                           | 0.8 |
| 35        |           | PDL350D2S32              | ○           | 158 | 74       | 98       |          |                           | 0.8 |

### ◎刀片安裝注意事項

#### Notes About Mounting Inserts(PDL Type)



PDL型：刀片外周刃和中心刃均可使用。作為外周刃使用的刀片，不能作為中心刃使用。同樣，作為中心刃使用的刀片，不能作為外周刃使用。

PCT型：僅限於外周刃，使用2刀尖

#### PCT型、PDL型的稱呼方法

Part number structure of PCT, PDL Type holder

**PCT**

**250**

**D3**

**S25**

鑽徑 Diameter  
(Φ 25.0)

鑽頭刃長L/D  
Drill Length  
(3D)

刀杆尺寸  
Shank Diameter  
(Φ 25.0)

#### PCT型、PDL型用刀片的稱呼方法

Part number structure of WDX T inserts

**WDX T**

**07**

**35**

**06**

**-**

**G**

對邊尺寸  
Width Across Flats  
(7.5)

厚度  
Thickness x 10  
(3.5)

刀尖  
Corner Radius R x 10  
(R0.6)

斷屑槽種類  
Breaker Type

| Application            | Angled Surface | Half Cylindrical | Pre-cast Hole | Intersecting Holes | Boring | External Turning | Laminated Plates | Back Boring    |
|------------------------|----------------|------------------|---------------|--------------------|--------|------------------|------------------|----------------|
|                        |                |                  |               |                    |        |                  |                  |                |
| Feed Rate(f)<br>mm/rev | 0.05           | 0.05             | 0.08          | 0.05               | 0.1    | 0.1              | Not applicable   | Not applicable |

# KSD-2 X D (Φ 13-35) Indexable drills with **XO/SP** inserts

## XO/SP型 潜孔钻/ U 钻 2 D

Holder diameter 2D: Φ13.0 ~ 35.0mm

加工公差標準 -0.05 ~ +0.15  
Range of machining tolerance: -0.05 ~ +0.15

最大加工深度  $2 \times \Phi D_c$   
Drilling depth: 2x diameter

◎ Threaded Fittings /Connection: PT

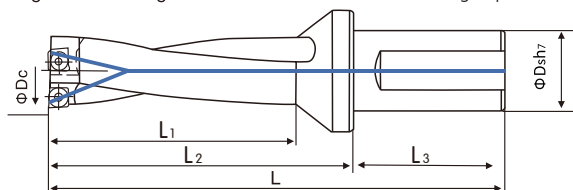


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 12        | 20        | K2D12020-04              | ●           | 90  | 25             | 40             | 50             | SPMT040204<br>XOMT040204  |
| 13        |           | K2D13020-04              | ●           | 88  | 29             | 44             |                |                           |
| 14        |           | K2D14020-05              | ●           | 90  | 31             | 46             |                |                           |
| 15        | 25        | K2D15020-05              | ●           | 92  | 33             | 48             | 56             | SPMT050204<br>XOMT050204  |
| 16        |           | K2D16020-05              | ●           | 94  | 35             | 50             |                |                           |
| 17        |           | K2D17025-06              | ●           | 96  | 37             | 52             |                |                           |
| 18        |           | K2D18025-06              | ●           | 110 | 39             | 54             | 56             | SPMT060205<br>XOMT060205  |
| 19        |           | K2D19025-06              | ●           | 112 | 41             | 56             |                |                           |
| 20        |           | K2D20025-07              | ●           | 114 | 43             | 58             |                |                           |
| 21        |           | K2D21025-07              | ●           | 116 | 45             | 60             | 56             | SPMT07T208<br>XOMT07T208  |
| 22        |           | K2D22025-07              | ●           | 118 | 47             | 62             |                |                           |
| 23        |           | K2D23025-07              | ●           | 123 | 49             | 67             |                |                           |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 24        | 25        | K2D24025-09              | ●           | 125 | 51             | 69             | 60             | SPMT090308<br>XOMT090308  |
| 25        |           | K2D25025-09              | ●           | 127 | 53             | 71             |                |                           |
| 26        | 32        | K2D26032-09              | ●           | 135 | 55             | 75             | 60             | SPMT11T308<br>XOMT11T308  |
| 27        |           | K2D27032-09              | ●           | 137 | 57             | 77             |                |                           |
| 28        |           | K2D28032-09              | ○           | 139 | 59             | 79             |                |                           |
| 29        |           | K2D29032-09              | ○           | 143 | 62             | 83             |                |                           |
| 30        |           | K2D30032-11              | ○           | 148 | 64             | 88             |                |                           |
| 31        |           | K2D31032-11              | ○           | 150 | 66             | 90             |                |                           |
| 32        |           | K2D32032-11              | ○           | 152 | 68             | 92             |                |                           |
| 33        |           | K2D33032-11              | ○           | 154 | 70             | 94             |                |                           |
| 34        |           | K2D34032-11              | ○           | 156 | 72             | 96             |                |                           |
| 35        |           | K2D35032-11              | ○           | 158 | 74             | 98             |                |                           |

# KSD-3 X D (Φ 13-35) Indexable drills with **XO/SP** inserts

## XO/SP型 潜孔钻/ U 钻 3 D

Holder diameter 3D: Φ13.0 ~ 35.0mm

加工公差標準 -0.05 ~ +0.15  
Range of machining tolerance: -0.05 ~ +0.15

最大加工深度  $3 \times \Phi D_c$   
Drilling depth: 3x diameter

◎ Threaded Fittings /Connection: PT

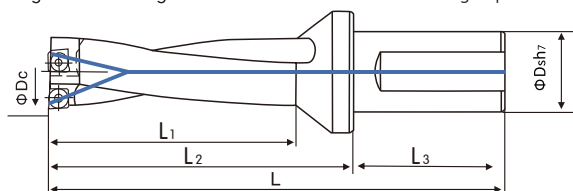


Fig.1



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 12        | 20        | K3D12020-04              | ●           | 102 | 37             | 52             | 50             | SPMT040204<br>XOMT040204  |
| 13        |           | K3D13020-04              | ●           | 101 | 42             | 57             |                |                           |
| 14        |           | K3D14020-05              | ●           | 104 | 45             | 60             |                |                           |
| 15        | 25        | K3D15020-05              | ●           | 107 | 48             | 63             | 56             | SPMT050204<br>XOMT050204  |
| 16        |           | K3D16020-05              | ●           | 110 | 51             | 66             |                |                           |
| 17        |           | K3D17025-06              | ●           | 113 | 54             | 69             |                |                           |
| 18        |           | K3D18025-06              | ●           | 128 | 57             | 72             | 56             | SPMT060205<br>XOMT060205  |
| 19        |           | K3D19025-06              | ●           | 131 | 60             | 75             |                |                           |
| 20        |           | K3D20025-07              | ●           | 134 | 63             | 78             |                |                           |
| 21        |           | K3D21025-07              | ●           | 137 | 66             | 81             | 56             | SPMT07T208<br>XOMT07T208  |
| 22        |           | K3D22025-07              | ●           | 140 | 69             | 84             |                |                           |
| 23        |           | K3D23025-07              | ●           | 146 | 72             | 90             |                |                           |

| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|-----------|-----------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 24        | 25        | K3D24025-09              | ●           | 149 | 75             | 93             | 60             | SPMT090308<br>XOMT090308  |
| 25        |           | K3D25025-09              | ●           | 152 | 78             | 96             |                |                           |
| 26        | 32        | K3D26032-09              | ●           | 161 | 81             | 101            | 60             | SPMT11T308<br>XOMT11T308  |
| 27        |           | K3D27032-09              | ●           | 164 | 84             | 104            |                |                           |
| 28        |           | K3D28032-09              | ○           | 167 | 87             | 107            |                |                           |
| 29        |           | K3D29032-09              | ○           | 172 | 91             | 112            |                |                           |
| 30        |           | K3D30032-11              | ○           | 178 | 94             | 118            |                |                           |
| 31        |           | K3D31032-11              | ○           | 181 | 97             | 121            |                |                           |
| 32        |           | K3D32032-11              | ○           | 184 | 100            | 124            |                |                           |
| 33        |           | K3D33032-11              | ○           | 187 | 103            | 127            |                |                           |
| 34        |           | K3D34032-11              | ○           | 190 | 106            | 130            |                |                           |
| 35        |           | K3D35032-11              | ○           | 193 | 109            | 133            |                |                           |

# KSD-4 X D (Φ 13-35) Indexable drills with **XO/SP** inserts

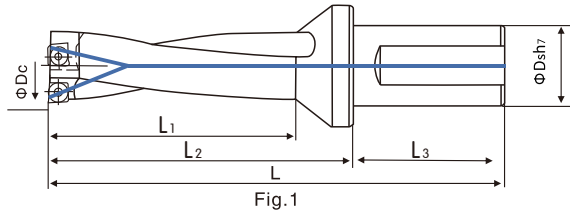
## XO/SP型 潜孔钻/ U 钻 4 D

Holder diameter 4D: Φ 13.0 ~ 35.0mm

加工公差標準 -0.05 ~ +0.15  
Range of machining tolerance: -0.05 ~ +0.15

最大加工深度 4 × Φ Dc  
Drilling depth: 4x diameter

◎ Threaded Fittings /Connection: PT



| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|------------|------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 12         | 20         | K4D12020-04              | ●           | 115 | 50             | 65             | 50             | SPMT040204<br>XOMT040204  |
| 13         |            | K4D13020-04              | ●           | 114 | 55             | 70             |                |                           |
| 14         |            | K4D14020-05              | ●           | 118 | 59             | 74             |                |                           |
| 15         | 25         | K4D15020-05              | ●           | 122 | 63             | 78             | 56             | SPMT050204<br>XOMT050204  |
| 16         |            | K4D16020-05              | ●           | 126 | 67             | 82             |                |                           |
| 17         |            | K4D17025-06              | ●           | 130 | 71             | 86             |                |                           |
| 18         |            | K4D18025-06              | ●           | 146 | 75             | 90             | 56             | SPMT060205<br>XOMT060205  |
| 19         |            | K4D19025-06              | ●           | 150 | 79             | 94             |                |                           |
| 20         |            | K4D20025-07              | ●           | 154 | 83             | 98             |                |                           |
| 21         |            | K4D21025-07              | ●           | 158 | 87             | 102            | 56             | SPMT07T208<br>XOMT07T208  |
| 22         |            | K4D22025-07              | ●           | 162 | 91             | 106            |                |                           |
| 23         |            | K4D23025-07              | ●           | 169 | 95             | 113            |                |                           |

| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|------------|------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 24         | 25         | K4D24025-09              | ●           | 173 | 99             | 117            | 60             | SPMT090308<br>XOMT090308  |
| 25         |            | K4D25025-09              | ●           | 177 | 103            | 121            |                |                           |
| 26         |            | K4D26032-09              | ●           | 187 | 107            | 127            |                |                           |
| 27         | 32         | K4D27032-09              | ●           | 191 | 111            | 131            | 60             | SPMT090308<br>XOMT090308  |
| 28         |            | K4D28032-09              | ○           | 195 | 115            | 135            |                |                           |
| 29         |            | K4D29032-09              | ○           | 201 | 120            | 141            |                |                           |
| 30         |            | K4D30032-11              | ○           | 208 | 124            | 148            | 60             | SPMT11T308<br>XOMT11T308  |
| 31         |            | K4D31032-11              | ○           | 212 | 128            | 152            |                |                           |
| 32         |            | K4D32032-11              | ○           | 216 | 132            | 156            |                |                           |
| 33         |            | K4D33032-11              | ○           | 220 | 136            | 160            | 60             | SPMT11T308<br>XOMT11T308  |
| 34         |            | K4D34032-11              | ○           | 224 | 140            | 164            |                |                           |
| 35         |            | K4D35032-11              | ○           | 228 | 146            | 168            |                |                           |

# KSD-5 X D (Φ 13-35) Indexable drills with **XO/SP** inserts

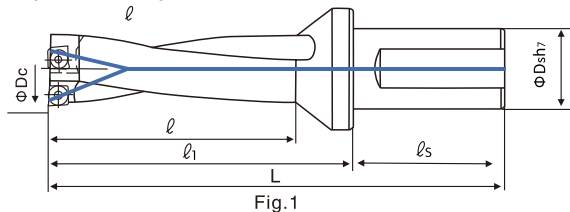
## XO/SP型 潜孔钻/ U 钻 5 D

Holder diameter 5D: Φ 13.0 ~ 35.0mm

加工公差標準 -0.05 ~ +0.15  
Range of machining tolerance: -0.05 ~ +0.15

最大加工深度 5 × Φ Dc  
Drilling depth: 5x diameter

◎ Threaded Fittings /Connection: PT



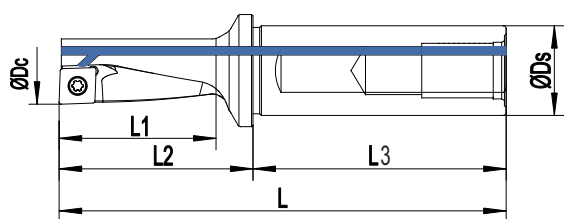
| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|------------|------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 12         | 20         | K5D12020-04              | ●           | 124 | 63             | 80             | 50             | SPMT040204<br>XOMT040204  |
| 13         |            | K5D13020-04              | ●           | 129 | 68             | 85             |                |                           |
| 14         |            | K5D14020-05              | ●           | 133 | 73             | 89             |                |                           |
| 15         | 25         | K5D15020-05              | ●           | 137 | 78             | 93             | 56             | SPMT050204<br>XOMT050204  |
| 16         |            | K5D16020-05              | ●           | 142 | 83             | 98             |                |                           |
| 17         |            | K5D17025-06              | ●           | 147 | 88             | 103            |                |                           |
| 18         |            | K5D18025-06              | ●           | 164 | 93             | 108            | 56             | SPMT060205<br>XOMT060205  |
| 19         |            | K5D19025-06              | ●           | 169 | 98             | 113            |                |                           |
| 20         |            | K5D20025-07              | ●           | 174 | 103            | 118            |                |                           |
| 21         |            | K5D21025-07              | ●           | 179 | 108            | 123            | 56             | SPMT07T208<br>XOMT07T208  |
| 22         |            | K5D22025-07              | ●           | 184 | 113            | 128            |                |                           |
| 23         |            | K5D23025-07              | ●           | 192 | 118            | 136            |                |                           |

| 刃徑<br>Φ Dc | 柄徑<br>Φ Ds | 型號<br>Specification/Item | 庫存<br>Store | L   | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert |
|------------|------------|--------------------------|-------------|-----|----------------|----------------|----------------|---------------------------|
| 24         | 25         | K5D24025-09              | ●           | 197 | 123            | 141            | 60             | SPMT090308<br>XOMT090308  |
| 25         |            | K5D25025-09              | ●           | 202 | 128            | 146            |                |                           |
| 26         |            | K5D26032-09              | ●           | 216 | 133            | 156            |                |                           |
| 27         | 32         | K5D27032-09              | ●           | 218 | 138            | 158            | 60             | SPMT090308<br>XOMT090308  |
| 28         |            | K5D28032-09              | ○           | 223 | 143            | 163            |                |                           |
| 29         |            | K5D29032-09              | ○           | 230 | 149            | 170            |                |                           |
| 30         |            | K5D30032-11              | ○           | 238 | 154            | 178            | 60             | SPMT11T308<br>XOMT11T308  |
| 31         |            | K5D31032-11              | ○           | 243 | 159            | 183            |                |                           |
| 32         |            | K5D32032-11              | ○           | 248 | 164            | 188            |                |                           |
| 33         |            | K5D33032-11              | ○           | 253 | 169            | 193            | 60             | SPMT11T308<br>XOMT11T308  |
| 34         |            | K5D34032-11              | ○           | 258 | 174            | 198            |                |                           |
| 35         |            | K5D35032-11              | ○           | 263 | 179            | 203            |                |                           |





## TCAP-2.25DN (8-32) Multifunction tools for drilling, boring, facing & external turning TCAP 2.25 D 单刃多功能钻镗一体快速钻

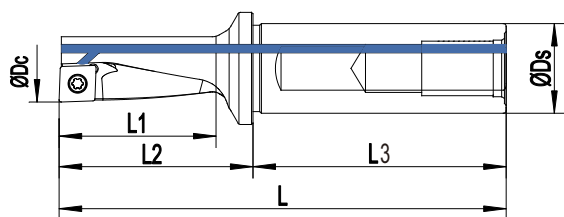


© Threaded Fittings /Connection: "G"



| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | 螺絲<br>Screw | 扳手<br>Wrench | kg  |
|-----------|-----------|--------------------------|-------------|------|----------------|----------------|----------------|---------------------------|-------------|--------------|-----|
| 8         | 12        | TCAP 08R 2.25D           | ●           | 64.5 | 18             | 22.5           | 42             | XCMT040104                | M2*4        | T6           | 0.2 |
| 10        | 12        | TCAP 10R 2.25D           | ●           | 69.5 | 22.5           | 27             | 42             | XCMT050204                | M2*4        | T6           | 0.2 |
| 12        | 16        | TCAP 12R 2.25D           | ●           | 78   | 27             | 33             | 45             | XCMT060204                | M2.2*5      | T7           | 0.2 |
| 14        | 16        | TCAP 14R 2.25D           | ●           | 83.5 | 31.5           | 38.5           | 45             | XCMT070304                | M2.5*6      | T8           | 0.2 |
| 16        | 20        | TCAP 16R 2.25D           | ●           | 94   | 36             | 44             | 44             | XCMT080304                | M3*7        | T8           | 0.2 |
| 20        | 25        | TCAP 20R 2.25D           | ●           | 111  | 45             | 55             | 55             | XCMT10T304                | M3.5*8.5    | T15          | 0.3 |
| 25        | 32        | TCAP 25R 2.25D           | ●           | 130  | 56.5           | 69             | 69             | XCMT130404                | M5*11       | T20          | 0.6 |
| 32        | 32        | TCAP 32R 2.25D           | ●           | 160  | 72             | 86             | 74             | XCMT170508                | M5*11       | T20          | 0.9 |

## TCAP-3DN (8-32) Multifunction tools for drilling, boring, facing & external turning TCAP 3 D 单刃多功能钻镗一体快速钻



© Threaded Fittings /Connection: "G"

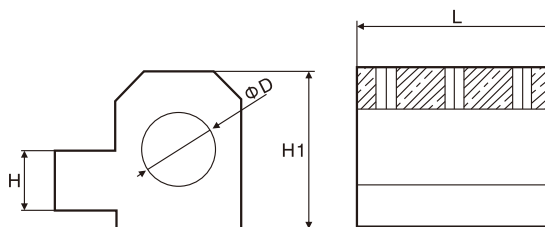


| 刃徑<br>ΦDc | 柄徑<br>ΦDs | 型號<br>Specification/Item | 庫存<br>Store | L    | ℓ <sub>1</sub> | ℓ <sub>2</sub> | ℓ <sub>3</sub> | 適用刀片<br>Applicable Insert | 螺絲<br>Screw | 扳手<br>Wrench | kg  |
|-----------|-----------|--------------------------|-------------|------|----------------|----------------|----------------|---------------------------|-------------|--------------|-----|
| 8         | 12        | TCAP 08R 3D              | ●           | 64.5 | 25             | 42             | 22.5           | XCMT040104                | M2*4        | T6           | 0.2 |
| 10        | 12        | TCAP 10R 3D              | ●           | 79   | 31             | 37             | 42             | XCMT050204                | M2*4        | T6           | 0.2 |
| 12        | 16        | TCAP 12R 3D              | ●           | 89   | 37             | 44             | 45             | XCMT060204                | M2.2*5      | T7           | 0.2 |
| 14        | 16        | TCAP 14R 3D              | ●           | 95   | 43             | 50             | 45             | XCMT070304                | M2.5*6      | T8           | 0.2 |
| 16        | 20        | TCAP 16R 3D              | ●           | 109  | 49             | 59             | 50             | XCMT080304                | M3*7        | T8           | 0.2 |
| 20        | 25        | TCAP 20R 3D              | ●           | 128  | 60             | 72             | 56             | XCMT10T304                | M3.5*8.5    | T15          | 0.3 |
| 25        | 32        | TCAP 25R 3D              | ●           | 145  | 75             | 89             | 56             | XCMT130404                | M5*11       | T20          | 0.6 |
| 32        | 32        | TCAP 32R 3D              | ●           | 170  | 96             | 110            | 60             | XCMT170508                | M5*11       | T20          | 0.9 |



# Boring Block for U Drills

## U钻刀座



| 型號<br>Specification/Item | H  | H1 | L   | D  |
|--------------------------|----|----|-----|----|
| DK20-16                  | 20 | 37 | 60  | 16 |
| DK20-20                  |    | 47 | 65  | 20 |
| DK20-25                  |    | 47 | 65  | 25 |
| DK20-32                  |    | 55 | 85  | 32 |
| DK25-16                  | 25 | 42 | 65  | 16 |
| DK25-25                  |    | 53 | 70  | 25 |
| DK25-32                  |    | 60 | 85  | 32 |
| DK25-40                  |    | 65 | 90  | 40 |
| DK32-40                  | 32 | 83 | 100 | 40 |
| DK32-50                  |    | 83 | 100 | 50 |

## 刀座可搭配配件示例 Set up example



1 刀座+導套安裝示例



2 內孔刀安裝示例



3 U鑽安裝示例



4 鑽夾頭安裝示例



5 錐柄鑽頭安裝示例



6 直柄鑽頭安裝示例



## U鑽配套螺紋接口 Threaded Fittings/Connection

(PT & G可供選擇) PT & G for your selection

| 型號<br>Specification | U鑽柄徑<br>Holder | 氣管外徑<br>Air Pipe External diameter<br>(mm) | 螺紋外徑<br>Threads External diameter | 螺距<br>Screw pitch<br>(mm) |
|---------------------|----------------|--------------------------------------------|-----------------------------------|---------------------------|
| PC10-M10*1.5        | C20            | 10                                         | M10                               | 1.5                       |
| PC10-M12*1.75       | C25            | 10                                         | M12                               | 1.75                      |
| PC12-M16*2          | C32            | 12                                         | M16                               | 2                         |
| PC12-M20*2.5        | C40            | 12                                         | M20                               | 2.5                       |



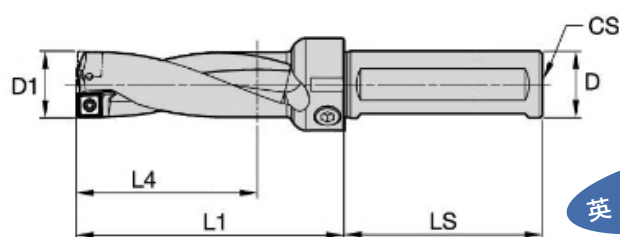
## 補芯 Connect

| 型號<br>Specification | U鑽柄徑<br>Holder | 螺紋外徑<br>Threads External diameter | 重量 (g)<br>Weight |
|---------------------|----------------|-----------------------------------|------------------|
| M10*1.5-PT1/8       | C20            | M10                               | 17.4             |
| M12*1.75-PT1/8      | C25            | M12                               | 34               |
| M16*2-PT1/4         | C32            | M16                               | 48               |
| M20*2.5-PT1/4       | C40            | M20                               | 56               |

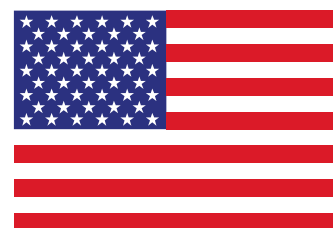


# Inch dimension Coolant Thru Indexable Drills (For America Market)

## 英制浅孔钻/出水钻/U钻 (SKD61)



英制(Imperial Units)



| 型號<br>Specification/Item | CS         | Metric  |         |         |       |       | INCH  |       |       |      |      |
|--------------------------|------------|---------|---------|---------|-------|-------|-------|-------|-------|------|------|
|                          |            | D1      | L1      | L4      | LS    | D     | D1    | L1    | L4    | LS   | D    |
| C0.75-3D0500             | 1/4-18 NPT | 12.7    | 66.1    | 38.1    | 50.8  | 19.05 | 0.5   | 2.602 | 1.5   | 2    | 0.75 |
| C0.75-3D0531             | 1/8-27 NPT | 13.4874 | 68.46   | 40.46   |       |       | 0.531 | 2.695 | 1.592 |      |      |
| C0.75-3D0563             | 1/8-27 NPT | 14.3    | 69.9    | 42.9    |       |       | 0.563 | 2.752 | 1.689 |      |      |
| C0.75-3D0594             | 1/8-27 NPT | 15.0876 | 72.26   | 45.26   |       |       | 0.594 | 2.844 | 1.781 |      |      |
| C0.75-3D0625             | 1/8-27 NPT | 15.875  | 73.625  | 47.625  |       |       | 0.625 | 2.898 | 1.875 |      |      |
| C0.75-3D0656             | 1/8-27 NPT | 16.6624 | 76.99   | 49.99   |       |       | 0.656 | 3.031 | 1.968 |      |      |
| C0.75-3D0688             | 1/8-27 NPT | 17.4752 | 78.43   | 52.43   |       |       | 0.688 | 3.087 | 2.064 |      |      |
| C1-3D0703                | 1/4-18 NPT | 17.8562 | 83.57   | 53.57   | 76.2  | 25.4  | 0.703 | 3.29  | 2.109 | 3    | 1    |
| C1-3D0734                | 1/4-18 NPT | 18.6436 | 84.93   | 55.93   |       |       | 0.734 | 3.343 | 2.202 |      |      |
| C1-3D0750                | 1/4-18 NPT | 19.05   | 86.15   | 57.15   |       |       | 0.75  | 3.391 | 2.25  |      |      |
| C1-3D0781                | 1/4-18 NPT | 19.8374 | 88.51   | 59.51   |       |       | 0.781 | 3.484 | 2.342 |      |      |
| C1-3D0813                | 1/4-18 NPT | 20.65   | 89.95   | 61.95   |       |       | 0.813 | 3.541 | 2.439 |      |      |
| C1-3D0844                | 1/4-18 NPT | 21.4376 | 92.31   | 64.31   |       |       | 0.844 | 3.634 | 2.531 |      |      |
| C1-3D0875                | 1/4-18 NPT | 22.225  | 93.68   | 66.68   |       |       | 0.875 | 3.688 | 2.625 |      |      |
| C1-3D0906                | 1/4-18 NPT | 23.0124 | 96.04   | 69.04   |       |       | 0.906 | 3.781 | 2.718 |      |      |
| C1-3D0938                | 1/4-18 NPT | 23.8252 | 98.48   | 71.48   |       |       | 0.938 | 3.877 | 2.814 |      |      |
| C1-3D0969                | 1/4-18 NPT | 24.6126 | 100.84  | 73.84   |       |       | 0.969 | 3.97  | 2.907 |      |      |
| C1-3D0984                | 1/4-18 NPT | 24.9936 | 101.98  | 74.98   |       |       | 0.984 | 4.015 | 2.952 |      |      |
| C1-3D1000                | 1/4-18 NPT | 25.4    | 103.2   | 77      |       |       | 1.0   | 4.063 | 3.0   |      |      |
| C1.25-3D1031             | 1/4-18 NPT | 26.1874 | 108.56  | 78.56   | 82.55 | 31.75 | 1.031 | 4.274 | 3.092 | 3.25 | 1.25 |
| C1.25-3D1063             | 1/4-18 NPT | 27      | 110     | 81      |       |       | 1.063 | 4.33  | 3.189 |      |      |
| C1.25-3D1094             | 1/4-18 NPT | 27.7876 | 112.36  | 83.36   |       |       | 1.094 | 4.423 | 3.281 |      |      |
| C1.25-3D1125             | 1/4-18 NPT | 28.575  | 114.725 | 85.725  |       |       | 1.125 | 4.516 | 3.375 |      |      |
| C1.25-3D1156             | 1/4-18 NPT | 29.3624 | 116.09  | 88.09   |       |       | 1.156 | 4.57  | 3.468 |      |      |
| C1.25-3D1188             | 1/4-18 NPT | 30.1752 | 118.53  | 90.53   |       |       | 1.188 | 4.666 | 3.564 |      |      |
| C1.25-3D1219             | 1/4-18 NPT | 30.9626 | 119.89  | 92.89   |       |       | 1.219 | 4.72  | 3.657 |      |      |
| C1.5-3D1250              | 1/4-18 NPT | 31.75   | 124.42  | 95.25   | 95.25 | 38.1  | 1.25  | 4.898 | 3.75  | 3.75 | 1.5  |
| C1.5-3D1281              | 1/4-18 NPT | 32.5374 | 127.61  | 97.61   |       |       | 1.281 | 5.024 | 3.842 |      |      |
| C1.5-3D1313              | 1/4-18 NPT | 33.35   | 129.05  | 100.05  |       |       | 1.313 | 5.08  | 3.939 |      |      |
| C1.5-3D1375              | 1/4-18 NPT | 34.925  | 133.77  | 104.775 |       |       | 1.375 | 5.266 | 4.125 |      |      |
| C1.5-3D1406              | 1/4-18 NPT | 35.7124 | 135.14  | 107.14  |       |       | 1.406 | 5.32  | 4.218 |      |      |
| C1.5-3D1438              | 1/4-18 NPT | 36.5252 | 137.58  | 109.58  |       |       | 1.438 | 5.416 | 4.314 |      |      |
| C1.5-3D1469              | 1/4-18 NPT | 37.3126 | 138.94  | 111.94  |       |       | 1.469 | 5.47  | 4.407 |      |      |
| C1.5-3D1500              | 1/4-18 NPT | 38.1    | 144.3   | 114.3   |       |       | 1.5   | 5.681 | 4.5   |      |      |
| C1.5-3D1531              | 1/4-18 NPT | 38.8874 | 146.66  | 116.66  |       |       | 1.531 | 5.774 | 4.592 |      |      |
| C1.5-3D1563              | 1/4-18 NPT | 39.7    | 149.1   | 119.1   |       |       | 1.563 | 5.87  | 4.689 |      |      |
| C1.5-3D1625              | 1/4-18 NPT | 41.275  | 153.82  | 123.825 |       |       | 1.625 | 6.055 | 4.875 |      |      |
| C1.5-3D1656              | 1/4-18 NPT | 42.0624 | 156.19  | 126.19  |       |       | 1.656 | 6.149 | 4.968 |      |      |
| C1.5-3D1688              | 1/4-18 NPT | 42.8752 | 157.63  | 128.63  | 50.8  | 50.8  | 1.688 | 6.205 | 5.064 | 4    | 2    |
| C1.5-3D1750              | 1/4-18 NPT | 44.45   | 161.35  | 133.35  |       |       | 1.75  | 6.352 | 5.25  |      |      |
| C2-3D1813                | 1/4-18 NPT | 46.05   | 168.15  | 138.15  |       |       | 1.813 | 6.62  | 5.439 |      |      |
| C2-3D1875                | 1/4-18 NPT | 47.625  | 171.88  | 142.875 |       |       | 1.875 | 6.766 | 5.625 |      |      |
| C2-3D1938                | 1/4-18 NPT | 49.2252 | 176.68  | 147.68  |       |       | 1.938 | 6.955 | 5.814 |      |      |
| C2-3D2000                | 1/4-18 NPT | 50.8    | 183.4   | 152.4   |       |       | 2.0   | 7.22  | 6.0   |      |      |
| C2-3D2125                | 1/4-18 NPT | 53.975  | 192.92  | 161.92  |       |       | 2.125 | 7.595 | 6.374 |      |      |
| C2-3D2250                | 1/4-18 NPT | 57.15   | 208.45  | 171.45  | 101.6 | 50.8  | 2.25  | 8.206 | 6.75  | 4    | 2    |
| C2-3D2375                | 1/4-18 NPT | 60.325  | 217.98  | 180.98  |       |       | 2.375 | 8.581 | 7.125 |      |      |
| C2-3D2500                | 1/4-18 NPT | 63.5    | 227.5   | 190.5   |       |       | 2.5   | 8.956 | 7.5   |      |      |





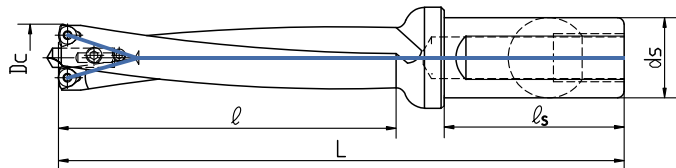
# WC Turbo Drill 6D&8D

## WC 帶中心鑽快速鑽 6D&8D

Holder diameter 6D:  $\Phi 25.0 \sim 40.0\text{mm}$

加工公差標準  $-0.09 \sim +0.1$   
Range of machining tolerance:  $-0.09 \sim +0.1$

最大加工深度  $\ell \times \Phi D_c$   
Drilling depth:  $6 \times \text{diameter}$



| 刃徑<br>$\Phi D_c$ | 柄徑<br>$\Phi D_s$ | 型號<br>Specification/Item | L   | $\ell$ | $\ell_s$ | 中心鑽<br>Pilot Drill | 適用刀片<br>Applicable Insert | 螺釘<br>Screw | 扳手<br>WRENCH |
|------------------|------------------|--------------------------|-----|--------|----------|--------------------|---------------------------|-------------|--------------|
| 18               | 25               | C25-6D18-115WC02         | 196 | 115    | 56       | 0620               | WC..020104                | M1.8*4      | T6           |
| 19               |                  | C25-6D19-121WC02         | 202 | 121    | 56       |                    |                           |             |              |
| 20               |                  | C25-6D20-127WC03         | 208 | 127    | 56       |                    | WC..030208                | M2.5*6      | T8           |
| 21               |                  | C25-6D21-133WC03         | 214 | 133    | 56       |                    |                           |             |              |
| 22               |                  | C25-6D22-139WC03         | 220 | 139    | 56       |                    |                           |             |              |
| 23               |                  | C25-6D23-145WC03         | 226 | 145    | 56       |                    |                           |             |              |
| 24               |                  | C25-6D24-151WC03         | 232 | 151    | 56       |                    |                           |             |              |
| 25               |                  | C25-6D25-157WC03         | 238 | 157    | 56       |                    |                           |             |              |
| 26               | 32               | C32-6D26-163WC04         | 251 | 163    | 60       | 0620               | WC..040208                | M2.5*6      | T8           |
| 27               |                  | C32-6D27-169WC04         | 257 | 169    | 60       |                    |                           |             |              |
| 28               |                  | C32-6D28-175WC04         | 263 | 175    | 60       |                    |                           |             |              |
| 29               |                  | C32-6D29-181WC04         | 269 | 181    | 60       |                    |                           |             |              |
| 30               |                  | C32-6D30-187WC04         | 275 | 187    | 60       |                    |                           |             |              |
| 31               |                  | C32-6D31-193WC04         | 281 | 193    | 60       |                    |                           |             |              |
| 32               |                  | C32-6D32-199WC05         | 287 | 199    | 60       | 0825               | WC..050308                | M3*7        | T15          |
| 33               |                  | C32-6D33-205WC05         | 293 | 205    | 60       |                    |                           |             |              |
| 34               |                  | C32-6D34-211WC05         | 299 | 211    | 60       |                    |                           |             |              |
| 35               |                  | C32-6D35-217WC05         | 305 | 217    | 60       |                    |                           |             |              |
| 36               |                  | C32-6D36-223WC05         | 311 | 223    | 60       |                    |                           |             |              |
| 37               |                  | C32-6D37-229WC05         | 317 | 229    | 60       |                    |                           |             |              |
| 38               |                  | C32-6D38-235WC05         | 323 | 235    | 60       |                    |                           |             |              |
| 39               |                  | C32-6D39-241WC05         | 329 | 241    | 60       |                    |                           |             |              |

| 刃徑<br>$\Phi D_c$ | 柄徑<br>$\Phi D_s$ | 型號<br>Specification/Item | L   | $\ell$ | $\ell_s$ | 中心鑽<br>Pilot Drill | 適用刀片<br>Applicable Insert | 螺釘<br>Screw | 扳手<br>WRENCH |
|------------------|------------------|--------------------------|-----|--------|----------|--------------------|---------------------------|-------------|--------------|
| 18               | 25               | C25-8D18-151WC02         | 232 | 151    | 56       | 0620               | WC..020104                | M1.8*4      | T6           |
| 19               |                  | C25-8D19-159WC02         | 240 | 159    | 56       |                    |                           |             |              |
| 20               |                  | C25-8D20-167WC03         | 248 | 167    | 56       |                    | WC..030208                | M2.5*6      | T8           |
| 21               |                  | C25-8D21-175WC03         | 256 | 175    | 56       |                    |                           |             |              |
| 22               |                  | C25-8D22-183WC03         | 264 | 183    | 56       |                    |                           |             |              |
| 23               |                  | C25-8D23-191WC03         | 272 | 191    | 56       |                    |                           |             |              |
| 24               |                  | C25-8D24-199WC03         | 280 | 199    | 56       |                    |                           |             |              |
| 25               |                  | C25-8D25-207WC03         | 288 | 207    | 56       |                    |                           |             |              |
| 26               | 32               | C32-8D26-215WC04         | 303 | 215    | 60       | 0620               | WC..040208                | M2.5*6      | T8           |
| 27               |                  | C32-8D27-223WC04         | 311 | 223    | 60       |                    |                           |             |              |
| 28               |                  | C32-8D28-231WC04         | 319 | 231    | 60       |                    |                           |             |              |
| 29               |                  | C32-8D29-239WC04         | 327 | 239    | 60       |                    |                           |             |              |
| 30               |                  | C32-8D30-247WC04         | 335 | 247    | 60       |                    |                           |             |              |
| 31               |                  | C32-8D31-255WC04         | 343 | 255    | 60       |                    |                           |             |              |
| 32               |                  | C32-8D32-263WC05         | 351 | 263    | 60       | 0825               | WC..050308                | M3*7        | T15          |
| 33               |                  | C32-8D33-271WC05         | 359 | 271    | 60       |                    |                           |             |              |
| 34               |                  | C32-8D34-279WC05         | 367 | 279    | 60       |                    |                           |             |              |
| 35               |                  | C32-8D35-287WC05         | 375 | 287    | 60       |                    |                           |             |              |
| 36               |                  | C32-8D36-295WC05         | 383 | 295    | 60       |                    |                           |             |              |
| 37               |                  | C32-8D37-303WC05         | 391 | 303    | 60       |                    |                           |             |              |
| 38               |                  | C32-8D38-311WC05         | 399 | 311    | 60       |                    |                           |             |              |
| 39               |                  | C32-8D39-319WC05         | 407 | 319    | 60       |                    |                           |             |              |



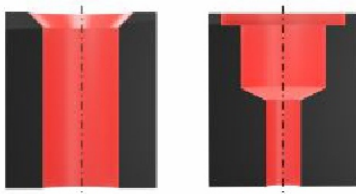
# INDEXABLE DRILL



## 當標準品無法滿足您的加工要求時， 訂制解決方案按照您的確切需求進一步優化

---

- 非標直徑（12 – 84mm）。
- 非標有效切削長度（1 – 5DC）。
- 階梯與倒角鑽削，直徑（12–63mm），鑽頭長度可達3倍直徑（DC1和DC2）。
- 接口類型PSC，Varilock，ABS，HSK，削平直柄等其他接口。



---

## 使用我們880系列改進您的加工，一步加工出高質量的孔

創新型設計，可變雙螺旋內冷鑽體和內側外側不同的刀片讓880系列可轉位鑽頭具有極高的剛性，穩定性和出色的效率。從而給客戶帶來巨大收益。

**步進技術：**提供最佳的切削力平衡，以更低的切削力逐階鑽入，獲得更高的進給量以及嚴密的孔公差。

**經濟高效的多功能可轉位鑽頭：**中心及周邊刀片都具備真正的四個切削刃，配合多種材質及槽型，在具有良好經濟性的同時可以滿足多種材質和應用場景。

**堅固耐用的鑽體：**擁有堅固耐用的抗疲勞鑽體，極高的剛性減少了偏差，振動和噪音。

**變螺旋式冷却液孔：**變螺旋式冷却液孔設計，可保持鑽體的剛性，同時提高排屑能力并延長刀具壽命。

**精磨周邊，修光刃設計：**可以獲得更加嚴密的孔公差，可預測性和一致性。創造卓越的表面光潔度和孔質量。

# 880 U drill 880 U钻

## • 孔公差

880系列鑽頭能够實現最佳切削力平衡并鑽出正公差尺寸加大孔，因為大多數孔為H公差。

|              |         |             |             |          |
|--------------|---------|-------------|-------------|----------|
| ◇ 鑽深: 2-3xDC | 孔直徑, mm | 12.00-43.99 | 44.00-52.99 | 53.00-63 |
|              | 孔公差, mm | 0/+0.25     | 0/+0.28     | 0/+0.30  |
| ◇ 鑽深: 4-5xDC | 孔直徑, mm | 12.00-43.99 | 44.00-52.99 | 53.00-63 |
|              | 孔公差, mm | 0/+0.28     | 0/+0.33     | 0/+0.35  |

## • 表面質量

| 進給 | Ra, $\mu\text{m}$ | Rz, $\mu\text{m}$ |
|----|-------------------|-------------------|
| 低  | 0.6-1             | 4-6               |
| 中等 | 1-2               | 6-15              |
| 高  | 2-4               | 15-30             |

### 備注:

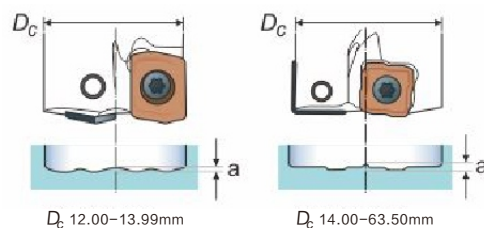
880系列鑽頭的直徑公差是鑽體中刀片座公差和刀片公差的組合。鑽頭和刀片制造公差包含在孔公差中。

鑽頭長徑比、對準、跳動、機床、工裝夾具穩定性和工件材料冷卻液供應和冷卻液壓力等因素對孔公差和光潔度產生影響。

**ACC** **大研**

## • 底部輪廓

底部輪廓不完全平整并根據鑽頭和刀片尺寸變化。



### ◇ 每個刀片尺寸的最大值

| 刀片尺寸       | 01          | 02          | 03          | 04          | 05          | 06          | 07          | 08          | 09          |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| α量最大值 (mm) | 0.4         | 0.6         | 0.7         | 0.9         | 1.1         | 1.1         | 1.4         | 1.6         | 2.0         |
| Dc (mm)    | 12.00-13.99 | 14.00-16.49 | 15.50-19.99 | 20.00-23.99 | 24.00-29.99 | 30.00-35.99 | 36.00-43.99 | 44.00-52.99 | 53.00-63.50 |

# 880 U drill

## 880 U钻

### • 槽型和材質

#### ◇ 槽型應用建議

**LM**  **P M N S** 長切屑材料 中等

- 低至中等進給
- 在加工長屑材料時有良好的切屑控制
- 輕切削
- 大的刀尖圓角半徑
- LM-長切屑材料的首選

**GM**  **P M K N S H** 普通材料 中等

- 低至中等進給
- 輕切削
- 短且淺的斷屑槽在進給區域提供了杰出的切屑控制
- 小的刀尖圓角半徑保證了很低的鑽頭偏斜

**GR**  **P K** 普通材料 粗加工

- 低至高進給
- 強，加強型切削刃
- 大的刀尖圓角半徑
- 在高進給區域中良好的切屑控制

|          |     | 首選 | 其他 |
|----------|-----|----|----|
| <b>P</b> | 低碳鋼 | LM | GM |
|          | 合金鋼 | GR | GM |
| <b>M</b> |     | LM | GM |
| <b>K</b> |     | GR | GM |
| <b>N</b> |     | LM | GM |
| <b>S</b> |     | LM | GM |
| <b>H</b> |     | GM |    |

#### ◇ 材質

|        |                                                                                                                                              |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------|
| MP2130 | 加工ISO P、K、和H材料的PVD塗層刀片材質。                                                                                                                    |
|        | 高强度細晶粒基體和采用塗層(AITiN)，讓刀片具有極高的耐磨性和出色的抗積屑性能。                                                                                                   |
| MP3150 | 加工ISO P,M,K,S和N材料的PVD塗層刀片材質。                                                                                                                 |
|        | 帶有高鉻含量，細晶粒高强度基體和采用PVD塗層(AITiN)。高可溶性結合更高的刃緣安全性可確保抗積屑和抗崩刃性能。                                                                                   |
| MM4325 | 加工ISO M,S和N材料的PVD塗層材質。                                                                                                                       |
|        | 采用中等顆粒的硬質合金材質，具有極好的韌性，超光滑、無缺陷的PVD除層，具有出色的結合力和極高的硬度和出色的耐磨性，同時還具有很好的耐高溫性。在加工不銹鋼及難加工材料時也沒有粘屑和積屑的形成。                                             |
| MPK30  | 加工ISO P,K的CVD塗層刀片材質。                                                                                                                         |
|        | 先進的化學氣相沉積TiCN+Al <sub>2</sub> O <sub>3</sub> +TiN塗層，同時采用高鈷硬質合金基體材料。具有極佳的抗變形和刃口韌性平衡。因此具有卓越的耐磨性和抗月牙磨損性能，可用于鋼和鑄鐵材料的高速加工。可采用極高的切削速度，以及低進給和中等進給量。 |



# 880 Indexable Drill Coding Rules

## 880系列钻头编码规则

### 880 可轉位鑽頭編碼規則

880 Indexable Drill Coding Rules

|     |   |     |   |    |    |   |    |    |
|-----|---|-----|---|----|----|---|----|----|
| 880 | 3 | 260 | — | FC | 20 | — | SP | 05 |
| 1   | 2 | 3   |   | 4  | 5  |   | 6  | 7  |

|                          |                                 |                        |
|--------------------------|---------------------------------|------------------------|
| 1 系列 System              | 2 長徑比 Length-diameter ratio     | 3 切制直徑 Dia.            |
| 880                      | 3=3 × DC                        | 260=26mm               |
| 4 安裝類型 Installation type | 6 刀片類型 Inserts Type             | 7 適配刀片 Adaptor Inserts |
| FC=側固式 FC=Weldon         | SP=非ISO刀片<br>SP=Not ISO Inserts | 05=SC05 SP05           |
| 5 接口型號 Interface type    |                                 |                        |
| 20=20mm                  |                                 |                        |

### 880 鑽削刀片編碼規則

880 Indexable Inserts Coding Rules

|   |   |   |   |   |   |    |    |    |   |    |        |
|---|---|---|---|---|---|----|----|----|---|----|--------|
| D | — | S | C | G | X | 05 | 03 | 05 | — | GR | Mp2150 |
| 1 |   | 2 | 3 | 4 | 5 | 6  | 7  | 8  |   | 9  | 10     |

|                                                                                    |                                                                       |                                                                                                                           |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1 刀片類型 Inserts Type                                                                | 2 刀片形狀 Inserts Shape                                                  | 3 安裝位置 Installation position                                                                                              |
| D=鑽削刀片<br>D=Drilling Inserts                                                       | S=正方形<br>S=Square                                                     | C=中心刀片 P=周邊刀片<br>C=Center Inserts<br>P=Peripheral Inserts                                                                 |
| 4 精度等級 Accuracy levels                                                             | 5 螺釘孔類型 Screw hole type                                               | 6 刀片規格 Inserts Specifications                                                                                             |
| G=G級公差<br>G=G tolerance                                                            | X=非標孔型<br>X=non-standard                                              | 05=05刀片<br>05=05 inserts                                                                                                  |
| 7 厚度S(mm) Thickness S(mm)                                                          | 8 刃尖圓角Re(mm) Inserts point Angle Re                                   | 9 刀片槽形 Inserts groove                                                                                                     |
| 02=2      04=3.5<br>02=2.4    04=4<br>05=2.6    05=4.5<br>03=2.8    06=5.5<br>05=3 | 4=0.4      10=1.0<br>05=0.5      12=1.2<br>06=0.6<br>07=0.7<br>08=0.8 | LM=輕型加工<br>LM=Light Machining<br>GM=中等/通用加工<br>GM=Medium/general purpose processing<br>GR=重載加工<br>GR=Heavy duty machining |
|                                                                                    |                                                                       | 10 刀片材質 Inserts material                                                                                                  |
|                                                                                    |                                                                       |                                                                                                                           |



一種鑽，讓您的制造成本更低  
產品質量更穩定

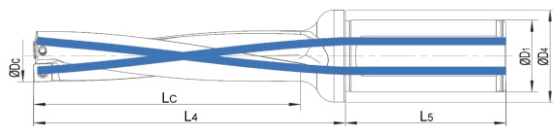
A drill that makes your manufacturing cost  
lower and product quality more stable.

# 880 Inserts U Drill 880系列刀杆型号

接口類型：削平直柄 ISO 9766

冷却方式：内冷設計

標準產品範圍：2XDC



| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度  | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|-------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC    | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU2120_FC20_SP01        | SC01 | SP01 | 12        | 24    | 45         | 50   | 20   | 25   | 10  | 0.149 | ★  |
| MGU2125_FC20_SP01        | SC01 | SP01 | 12.5      | 25    | 46         | 50   | 20   | 25   | 10  | 0.152 | ★  |
| MGU2130_FC20_SP01        | SC01 | SP01 | 13        | 26    | 47         | 50   | 20   | 25   | 10  | 0.155 | ★  |
| MGU2135_FC20_SP01        | SC01 | SP01 | 13.5      | 27    | 47         | 50   | 20   | 25   | 10  | 0.158 | ★  |
| MGU2140_FC20_SP02        | SC02 | SP02 | 14        | 31    | 44         | 50   | 20   | 25   | 10  | 0.159 | ★  |
| MGU2145_FC20_SP02        | SC02 | SP02 | 14.5      | 33    | 46         | 50   | 20   | 25   | 10  | 0.16  | ★  |
| MGU2150_FC20_SP02        | SC02 | SP02 | 15        | 34    | 47         | 50   | 20   | 25   | 10  | 0.163 | ★  |
| MGU2155_FC20_SP02        | SC02 | SP02 | 15.5      | 36.26 | 49         | 50   | 20   | 25   | 10  | 0.167 | ★  |
| MGU2160_FC20_SP02        | SC02 | SP02 | 16        | 36.33 | 51         | 50   | 20   | 25   | 10  | 0.175 | ★  |
| MGU2165_FC20_SP03        | SC02 | SP02 | 16.5      | 37.51 | 52         | 50   | 20   | 25   | 10  | 0.173 | ★  |
| MGU2170_FC25_SP03        | SC03 | SP03 | 17        | 38.45 | 53         | 56   | 25   | 32   | 10  | 0.283 | ★  |
| MGU2175_FC25_SP03        | SC03 | SP03 | 17.5      | 40.52 | 55         | 56   | 25   | 32   | 10  | 0.288 | ★  |
| MGU2180_FC25_SP03        | SC03 | SP03 | 18        | 40.27 | 56         | 56   | 25   | 32   | 10  | 0.293 | ★  |
| MGU2185_FC25_SP03        | SC03 | SP03 | 18.5      | 41.39 | 57         | 56   | 25   | 32   | 10  | 0.297 | ★  |
| MGU2188_FC25_SP03        | SC03 | SP03 | 18.8      | 40.4  | 56         | 56   | 25   | 32   | 10  | 0.297 | ★  |
| MGU2190_FC25_SP03        | SC03 | SP03 | 19        | 42.52 | 58         | 56   | 25   | 32   | 10  | 0.302 | ★  |
| MGU2195_FC25_SP03        | SC03 | SP03 | 19.5      | 44.66 | 60         | 56   | 25   | 32   | 10  | 0.307 | ★  |
| MGU2200_FC25_SP04        | SC04 | SP04 | 20        | 44.2  | 61         | 56   | 25   | 32   | 10  | 0.316 | ★  |
| MGU2205_FC25_SP04        | SC04 | SP04 | 20.5      | 46.39 | 64         | 56   | 25   | 32   | 10  | 0.327 | ★  |
| MGU2210_FC25_SP04        | SC04 | SP04 | 21        | 46.59 | 64         | 56   | 25   | 32   | 10  | 0.323 | ★  |
| MGU2215_FC25_SP04        | SC04 | SP04 | 21.5      | 47.8  | 65         | 56   | 25   | 32   | 10  | 0.323 | ★  |
| MGU2220_FC25_SP04        | SC04 | SP04 | 22        | 48    | 66         | 56   | 25   | 32   | 10  | 0.339 | ★  |
| MGU2230_FC25_SP04        | SC04 | SP04 | 23        | 51.48 | 69         | 56   | 25   | 32   | 10  | 0.351 | ★  |
| MGU2240_FC25_SP05        | SC05 | SP05 | 24        | 53.21 | 71         | 56   | 25   | 32   | 10  | 0.35  | ★  |
| MGU2250_FC25_SP05        | SC05 | SP05 | 25        | 56.13 | 74         | 56   | 25   | 32   | 10  | 0.369 | ★  |
| MGU2260_FC32_SP05        | SC05 | SP05 | 26        | 56.6  | 77         | 60   | 32   | 39.6 | 10  | 0.587 | ★  |
| MGU2270_FC32_SP05        | SC05 | SP05 | 27        | 59.49 | 79         | 60   | 32   | 39.6 | 10  | 0.604 | ★  |
| MGU2280_FC32_SP05        | SC05 | SP05 | 28        | 60.79 | 82         | 60   | 32   | 39.6 | 10  | 0.63  | ★  |
| MGU2290_FC32_SP05        | SC05 | SP05 | 29        | 62.54 | 84         | 60   | 32   | 39.6 | 10  | 0.653 | ★  |
| MGU2300_FC32_SP06        | SC05 | SP05 | 30        | 65.1  | 87         | 60   | 32   | 39.6 | 10  | 0.653 | ★  |

# 880 Inserts U Drill

## 880系列刀杆型号

| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度   | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|--------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC     | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU2310_FC40_SP06        | SC06 | SP06 | 31        | 66.75  | 90         | 70   | 40   | 48   | 10  | 1.02  | ★  |
| MGU2320_FC40_SP06        | SC06 | SP06 | 32        | 68.18  | 92         | 70   | 40   | 48   | 10  | 1.04  | ★  |
| MGU2330_FC40_SP06        | SC06 | SP06 | 33        | 70.74  | 95         | 70   | 40   | 48   | 10  | 1.07  | ★  |
| MGU2340_FC40_SP06        | SC06 | SP06 | 34        | 73.43  | 98         | 70   | 40   | 48   | 10  | 1.1   | ★  |
| MGU2350_FC40_SP06        | SC06 | SP06 | 35        | 76.24  | 101        | 70   | 40   | 48   | 10  | 1.14  | ★  |
| MGU2360_FC40_SP07        | SC07 | SP07 | 36        | 77.35  | 104        | 70   | 40   | 48   | 10  | 1.16  | ★  |
| MGU2370_FC40_SP07        | SC07 | SP07 | 37        | 79     | 105        | 70   | 40   | 48   | 10  | 1.193 | ★  |
| MGU2380_FC40_SP07        | SC07 | SP07 | 38        | 80.37  | 108        | 70   | 40   | 48   | 10  | 1.244 | ★  |
| MGU2390_FC40_SP07        | SC07 | SP07 | 39        | 82.53  | 110        | 70   | 40   | 48   | 10  | 1.29  | ★  |
| MGU2400_FC40_SP07        | SC07 | SP07 | 40        | 85.83  | 113        | 70   | 40   | 48   | 10  | 1.32  | ★  |
| MGU2410_FC40_SP07        | SC07 | SP07 | 41        | 90.75  | 117        | 70   | 40   | 48   | 10  | 1.38  | ★  |
| MGU2420_FC40_SP07        | SC07 | SP07 | 42        | 93.74  | 119        | 70   | 40   | 48   | 10  | 1.42  | ★  |
| MGU2430_FC40_SP07        | SC07 | SP07 | 43        | 91.12  | 122        | 70   | 40   | 49.5 | 10  | 1.47  | ★  |
| MGU2440_FC40_SP08        | SC08 | SP08 | 44        | 93.23  | 124        | 70   | 40   | 62.5 | 10  | 1.65  | ★  |
| MGU2450_FC40_SP08        | SC08 | SP08 | 45        | 95.33  | 127        | 70   | 40   | 62.5 | 10  | 1.71  | ★  |
| MGU2460_FC40_SP08        | SC08 | SP08 | 46        | 98.82  | 130        | 70   | 40   | 62.5 | 10  | 1.75  | ★  |
| MGU2470_FC40_SP08        | SC08 | SP08 | 47        | 101.34 | 132        | 70   | 40   | 62.5 | 10  | 1.8   | ★  |
| MGU2480_FC40_SP08        | SC08 | SP08 | 48        | 104.88 | 135        | 70   | 40   | 62.5 | 10  | 1.86  | ★  |
| MGU2490_FC40_SP08        | SC08 | SP08 | 49        | 107.44 | 137        | 70   | 40   | 62.5 | 10  | 1.92  | ★  |
| MGU2500_FC40_SP08        | SC08 | SP08 | 50        | 105.46 | 140        | 70   | 40   | 62.5 | 10  | 1.99  | ★  |
| MGU2510_FC40_SP08        | SC08 | SP08 | 51        | 108.78 | 144        | 70   | 40   | 62.5 | 10  | 2.11  | ★  |
| MGU2520_FC40_SP08        | SC08 | SP08 | 52        | 110.37 | 146        | 70   | 40   | 62.5 | 10  | 2.17  | ★  |
| MGU2530_FC40_SP09        | SC09 | SP09 | 53        | 113.41 | 149        | 70   | 40   | 62.5 | 10  | 2.15  | ☆  |
| MGU2540_FC40_SP09        | SC09 | SP09 | 54        | 114.73 | 151        | 70   | 40   | 62.5 | 10  | 2.22  | ☆  |
| MGU2550_FC40_SP09        | SC09 | SP09 | 55        | 116.67 | 154        | 70   | 40   | 62.5 | 10  | 2.31  | ☆  |
| MGU2560_FC40_SP09        | SC09 | SP09 | 56        | 118.52 | 157        | 70   | 40   | 62.5 | 10  | 2.4   | ☆  |
| MGU2570_FC40_SP09        | SC09 | SP09 | 57        | 120.68 | 159        | 70   | 40   | 62.5 | 10  | 2.48  | ☆  |
| MGU2580_FC40_SP09        | SC09 | SP09 | 58        | 122.93 | 162        | 70   | 40   | 62.5 | 10  | 2.57  | ☆  |
| MGU2590_FC40_SP09        | SC09 | SP09 | 59        | 124.85 | 164        | 70   | 40   | 62.5 | 10  | 2.61  | ☆  |
| MGU2600_FC40_SP09        | SC09 | SP09 | 60        | 126.60 | 167        | 70   | 40   | 62.5 | 10  | 2.77  | ☆  |
| MGU2610_FC40_SP09        | SC09 | SP09 | 61        | 129.80 | 171        | 70   | 40   | 62.5 | 10  | 2.89  | ☆  |
| MGU2620_FC40_SP09        | SC09 | SP09 | 62        | 131.55 | 173        | 70   | 40   | 62.5 | 10  | 2.95  | ☆  |
| MGU2630_FC40_SP09        | SC09 | SP09 | 63        | 133.60 | 176        | 70   | 40   | 62.5 | 10  | 3.06  | ☆  |

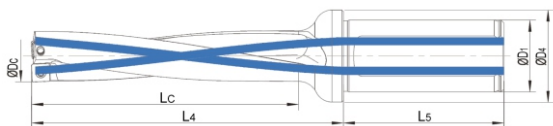


# 880 Inserts U Drill 880系列刀杆型号

接口類型：削平直柄 ISO 9766

冷却方式：内冷設計

標準產品範圍：3XDC



| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度  | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|-------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC    | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU3120_FC20_SP01        | SC01 | SP01 | 12        | 36    | 57         | 50   | 20   | 25   | 10  | 0.156 | ★  |
| MGU3125_FC20_SP01        | SC01 | SP01 | 12.5      | 37.5  | 58.5       | 50   | 20   | 25   | 10  | 0.159 | ★  |
| MGU3130_FC20_SP01        | SC01 | SP01 | 13        | 39    | 60         | 50   | 20   | 25   | 10  | 0.162 | ★  |
| MGU3135_FC20_SP01        | SC01 | SP01 | 13.5      | 40.5  | 60.5       | 50   | 20   | 25   | 10  | 0.165 | ★  |
| MGU3140_FC20_SP02        | SC02 | SP02 | 14        | 44.88 | 58         | 50   | 20   | 25   | 10  | 0.165 | ★  |
| MGU3145_FC20_SP02        | SC02 | SP02 | 14.5      | 47    | 60         | 50   | 20   | 25   | 10  | 0.165 | ★  |
| MGU3150_FC20_SP02        | SC02 | SP02 | 15        | 49.12 | 62         | 50   | 20   | 25   | 10  | 0.17  | ★  |
| MGU3155_FC20_SP02        | SC02 | SP02 | 15.5      | 51.25 | 64         | 50   | 20   | 25   | 10  | 0.174 | ★  |
| MGU3160_FC20_SP02        | SC02 | SP02 | 16        | 51.33 | 66         | 50   | 20   | 25   | 10  | 0.185 | ★  |
| MGU3165_FC20_SP03        | SC03 | SP03 | 16.5      | 53.51 | 68         | 50   | 20   | 25   | 10  | 0.183 | ★  |
| MGU3170_FC25_SP03        | SC03 | SP03 | 17        | 54.45 | 69         | 56   | 25   | 32   | 10  | 0.292 | ★  |
| MGU3175_FC25_SP03        | SC03 | SP03 | 17.5      | 57.52 | 72         | 56   | 25   | 32   | 10  | 0.297 | ★  |
| MGU3180_FC25_SP03        | SC03 | SP03 | 18        | 57.27 | 73         | 56   | 25   | 32   | 10  | 0.306 | ★  |
| MGU3185_FC25_SP03        | SC03 | SP03 | 18.5      | 59.39 | 75         | 56   | 25   | 32   | 10  | 0.311 | ★  |
| MGU3190_FC25_SP03        | SC03 | SP03 | 19        | 60.52 | 76         | 56   | 25   | 32   | 10  | 0.318 | ★  |
| MGU3193_FC25_SP03        | SC03 | SP03 | 19.25     | 63.57 | 79         | 56   | 25   | 32   | 10  | 0.322 | ★  |
| MGU3195_FC25_SP03        | SC03 | SP03 | 19.5      | 63.66 | 79         | 56   | 25   | 32   | 10  | 0.324 | ★  |
| MGU3200_FC25_SP04        | SC04 | SP04 | 20        | 63.2  | 81         | 56   | 25   | 32   | 10  | 0.339 | ★  |
| MGU3205_FC25_SP04        | SC04 | SP04 | 20.5      | 64.39 | 82         | 56   | 25   | 32   | 10  | 0.346 | ★  |
| MGU3210_FC25_SP04        | SC04 | SP04 | 21        | 66.59 | 84         | 56   | 25   | 32   | 10  | 0.344 | ★  |
| MGU3215_FC25_SP04        | SC04 | SP04 | 21.5      | 68.8  | 86         | 56   | 25   | 32   | 10  | 0.352 | ★  |
| MGU3220_FC25_SP04        | SC04 | SP04 | 22        | 69.02 | 87         | 56   | 25   | 32   | 10  | 0.365 | ★  |
| MGU3225_FC25_SP04        | SC04 | SP04 | 22.5      | 72.24 | 90         | 56   | 25   | 32   | 10  | 0.375 | ★  |
| MGU3230_FC25_SP04        | SC04 | SP04 | 23        | 73.48 | 91         | 56   | 25   | 32   | 10  | 0.382 | ★  |
| MGU3235_FC25_SP04        | SC04 | SP04 | 23.5      | 75.72 | 93         | 56   | 25   | 32   | 10  | 0.392 | ★  |
| MGU3240_FC25_SP05        | SC05 | SP05 | 24        | 77.21 | 95         | 56   | 25   | 32   | 10  | 0.386 | ★  |
| MGU3245_FC25_SP05        | SC05 | SP05 | 24.5      | 79.5  | 97         | 56   | 25   | 32   | 10  | 0.396 | ★  |
| MGU3250_FC25_SP05        | SC05 | SP05 | 25        | 81.81 | 99         | 56   | 25   | 32   | 10  | 0.41  | ★  |
| MGU3253_FC40_SP05        | SC05 | SP05 | 25        | 81.81 | 99         | 56   | 25   | 32   | 10  | 0.41  | ★  |
| MGU3255_FC25_SP05        | SC05 | SP05 | 25.5      | 83.13 | 100        | 56   | 25   | 32   | 10  | 0.419 | ★  |
| MGU3260_FC32_SP05        | SC05 | SP05 | 26        | 81.6  | 102        | 60   | 32   | 39.6 | 10  | 0.631 | ★  |
| MGU3265_FC32_SP05        | SC05 | SP05 | 26.5      | 83.79 | 104        | 60   | 32   | 39.6 | 10  | 0.643 | ★  |
| MGU3270_FC32_SP05        | SC05 | SP05 | 27        | 85.49 | 105        | 60   | 32   | 39.6 | 10  | 0.657 | ★  |
| MGU3275_FC32_SP05        | SC05 | SP05 | 27.5      | 88.69 | 108        | 60   | 32   | 39.6 | 10  | 0.672 | ★  |
| MGU3280_FC32_SP05        | SC05 | SP05 | 28        | 86.65 | 109        | 60   | 32   | 39.6 | 10  | 0.682 | ★  |
| MGU3285_FC32_SP05        | SC05 | SP05 | 28.5      | 88.95 | 111        | 60   | 32   | 39.6 | 10  | 0.695 | ★  |
| MGU3290_FC32_SP05        | SC05 | SP05 | 29        | 90.25 | 112        | 60   | 32   | 39.6 | 10  | 0.708 | ★  |
| MGU3295_FC32_SP05        | SC05 | SP05 | 29.5      | 93.57 | 115        | 60   | 32   | 39.6 | 10  | 0.724 | ★  |

# 880 Inserts U Drill

## 880系列刀杆型号

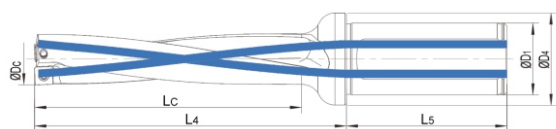
| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度   | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|--------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC     | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU3300_FC32_SP06        | SC06 | SP06 | 30        | 95.11  | 117        | 60   | 32   | 39.6 | 10  | 0.717 | ★  |
| MGU3305_FC32_SP06        | SC06 | SP06 | 30.5      | 96.11  | 118        | 60   | 32   | 39.6 | 10  | 0.729 | ★  |
| MGU3310_FC40_SP06        | SC06 | SP06 | 31        | 97.75  | 121        | 70   | 40   | 48   | 10  | 1.09  | ★  |
| MGU3315_FC40_SP06        | SC06 | SP06 | 31.5      | 98.94  | 122        | 70   | 40   | 48   | 10  | 1.101 | ★  |
| MGU3320_FC40_SP06        | SC06 | SP06 | 32        | 100.18 | 124        | 70   | 40   | 48   | 10  | 1.123 | ★  |
| MGU3325_FC40_SP06        | SC06 | SP06 | 32.5      | 102.39 | 126        | 70   | 40   | 48   | 10  | 1.14  | ★  |
| MGU3330_FC40_SP06        | SC06 | SP06 | 33        | 103.74 | 128        | 70   | 40   | 48   | 10  | 1.159 | ★  |
| MGU3335_FC40_SP06        | SC06 | SP06 | 33.5      | 105.98 | 130        | 70   | 40   | 48   | 10  | 1.178 | ★  |
| MGU3340_FC40_SP06        | SC06 | SP06 | 34        | 106.43 | 131        | 70   | 40   | 48   | 10  | 1.196 | ★  |
| MGU3345_FC40_SP06        | SC06 | SP06 | 34.5      | 109.7  | 134        | 70   | 40   | 48   | 10  | 1.219 | ★  |
| MGU3350_FC40_SP06        | SC06 | SP06 | 35        | 110.24 | 135        | 70   | 40   | 48   | 10  | 1.24  | ★  |
| MGU3355_FC40_SP06        | SC06 | SP06 | 35.5      | 112.54 | 137        | 70   | 40   | 48   | 10  | 1.261 | ★  |
| MGU3360_FC40_SP07        | SC07 | SP07 | 36        | 112.35 | 139        | 70   | 40   | 48   | 10  | 1.282 | ★  |
| MGU3370_FC40_SP07        | SC07 | SP07 | 37        | 115.9  | 142        | 70   | 40   | 48   | 10  | 1.329 | ★  |
| MGU3380_FC40_SP07        | SC07 | SP07 | 38        | 118.37 | 146        | 70   | 40   | 48   | 10  | 1.391 | ★  |
| MGU3383_FC40_SP07        | SC07 | SP07 | 38.35     | 119.75 | 147.5      | 70   | 40   | 48   | 10  | 1.41  | ★  |
| MGU3385_FC40_SP07        | SC07 | SP07 | 38.5      | 119.94 | 147.5      | 70   | 40   | 48   | 10  | 1.418 | ★  |
| MGU3390_FC40_SP07        | SC07 | SP07 | 39        | 121.54 | 149        | 70   | 40   | 48   | 10  | 1.445 | ★  |
| MGU3395_FC40_SP07        | SC07 | SP07 | 39.5      | 123.39 | 151        | 70   | 40   | 48   | 10  | 1.449 | ★  |
| MGU3400_FC40_SP07        | SC07 | SP07 | 40        | 125.83 | 153        | 70   | 40   | 48   | 10  | 1.475 | ★  |
| MGU3405_FC40_SP07        | SC07 | SP07 | 40.5      | 127.89 | 153        | 70   | 40   | 48   | 10  | 1.57  | ★  |
| MGU3410_FC40_SP07        | SC07 | SP07 | 41        | 127.82 | 157        | 70   | 40   | 48   | 10  | 1.623 | ★  |
| MGU3420_FC40_SP07        | SC07 | SP07 | 42        | 130.88 | 160        | 70   | 40   | 48   | 10  | 1.689 | ★  |
| MGU3430_FC40_SP07        | SC07 | SP07 | 43        | 133.12 | 164        | 70   | 40   | 49.5 | 10  | 1.771 | ★  |
| MGU3440_FC40_SP08        | SC08 | SP08 | 44        | 136.54 | 167        | 70   | 40   | 49.5 | 10  | 1.815 | ★  |
| MGU3450_FC40_SP08        | SC08 | SP08 | 45        | 140.57 | 172        | 70   | 40   | 49.5 | 10  | 1.902 | ★  |
| MGU3460_FC40_SP08        | SC08 | SP08 | 46        | 144    | 176        | 70   | 40   | 49.5 | 10  | 1.98  | ★  |
| MGU3470_FC40_SP08        | SC08 | SP08 | 47        | 146.07 | 179        | 70   | 40   | 62.5 | 10  | 2.12  | ★  |
| MGU3480_FC40_SP08        | SC08 | SP08 | 48        | 149.33 | 183        | 70   | 40   | 62.5 | 10  | 2.3   | ★  |
| MGU3490_FC40_SP08        | SC08 | SP08 | 49        | 152.41 | 186        | 70   | 40   | 62.5 | 10  | 2.39  | ★  |
| MGU3495_FC40_SP08        | SC08 | SP08 | 49.5      | 153.7  | 188        | 70   | 40   | 59   | 10  | 2.31  | ★  |
| MGU3500_FC40_SP08        | SC08 | SP08 | 50        | 155.46 | 190        | 70   | 40   | 62.5 | 10  | 2.37  | ★  |
| MGU3510_FC40_SP08        | SC08 | SP08 | 51        | 158.29 | 194        | 70   | 40   | 62.5 | 10  | 2.58  | ★  |
| MGU3520_FC40_SP08        | SC08 | SP08 | 52        | 161.37 | 197        | 70   | 40   | 62.5 | 10  | 2.69  | ★  |
| MGU3530_FC40_SP09        | SC09 | SP09 | 53        | 164.4  | 201        | 70   | 40   | 62.5 | 10  | 2.71  | ☆  |
| MGU3540_FC40_SP09        | SC09 | SP09 | 54        | 167.73 | 204        | 70   | 40   | 62.5 | 10  | 2.81  | ☆  |
| MGU3550_FC40_SP09        | SC09 | SP09 | 55        | 171.67 | 209        | 70   | 40   | 62.5 | 10  | 2.94  | ☆  |
| MGU3560_FC40_SP09        | SC09 | SP09 | 56        | 174.52 | 213        | 70   | 40   | 62.5 | 10  | 3.07  | ☆  |
| MGU3570_FC40_SP09        | SC09 | SP09 | 57        | 177.68 | 216        | 70   | 40   | 62.5 | 10  | 3.19  | ☆  |
| MGU3580_FC40_SP09        | SC09 | SP09 | 58        | 180.93 | 220        | 70   | 40   | 62.5 | 10  | 3.32  | ☆  |
| MGU3590_FC40_SP09        | SC09 | SP09 | 59        | 183.85 | 223        | 70   | 40   | 62.5 | 10  | 3.41  | ☆  |
| MGU3600_FC40_SP09        | SC09 | SP09 | 60        | 186.89 | 227        | 70   | 40   | 62.5 | 10  | 3.55  | ☆  |
| MGU3610_FC40_SP09        | SC09 | SP09 | 61        | 190.8  | 232        | 70   | 40   | 62.5 | 10  | 3.71  | ☆  |
| MGU3620_FC40_SP09        | SC09 | SP09 | 62        | 193.78 | 235        | 70   | 40   | 62.5 | 10  | 3.94  | ☆  |
| MGU3630_FC40_SP09        | SC09 | SP09 | 63        | 196.6  | 239        | 70   | 40   | 62.5 | 10  | 4.1   | ☆  |

# 880 Inserts U Drill 880系列刀杆型号

接口類型：削平直柄 ISO 9766

冷却方式：内冷設計

標準產品範圍：4XDC



| 型號<br>Specification/Item | 適配刀片 |      | 切削刀<br>直徑 | 刀刃長度   | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|--------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC     | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU4120_FC20_SP01        | SC01 | SP01 | 12        | 48     | 69         | 50   | 20   | 25   | 10  | 0.163 | ★  |
| MGU4125_FC20_SP01        | SC01 | SP01 | 12.5      | 50     | 71         | 50   | 20   | 25   | 10  | 0.166 | ★  |
| MGU4130_FC20_SP01        | SC01 | SP01 | 13        | 52     | 73         | 50   | 20   | 25   | 10  | 0.169 | ★  |
| MGU4135_FC20_SP01        | SC01 | SP01 | 13.5      | 54     | 74         | 50   | 20   | 25   | 10  | 0.172 | ★  |
| MGU4140_FC20_SP02        | SC02 | SP02 | 14        | 59.01  | 72         | 50   | 20   | 25   | 10  | 0.174 | ★  |
| MGU4145_FC20_SP02        | SC02 | SP02 | 14.5      | 62.13  | 75         | 50   | 20   | 25   | 10  | 0.175 | ★  |
| MGU4150_FC20_SP02        | SC02 | SP02 | 15        | 64.87  | 77         | 50   | 20   | 25   | 10  | 0.178 | ★  |
| MGU4155_FC20_SP02        | SC02 | SP02 | 15.5      | 66.4   | 79         | 50   | 20   | 25   | 10  | 0.184 | ★  |
| MGU4160_FC20_SP02        | SC02 | SP02 | 16        | 67.51  | 82         | 50   | 20   | 25   | 10  | 0.194 | ★  |
| MGU4165_FC20_SP03        | SC03 | SP03 | 16.5      | 69.7   | 84         | 50   | 20   | 25   | 10  | 0.195 | ★  |
| MGU4170_FC25_SP03        | SC03 | SP03 | 17        | 71.54  | 86         | 56   | 25   | 32   | 10  | 0.305 | ★  |
| MGU4175_FC25_SP03        | SC03 | SP03 | 17.5      | 73.79  | 89         | 56   | 25   | 32   | 10  | 0.317 | ★  |
| MGU4180_FC25_SP03        | SC03 | SP03 | 18        | 75.4   | 91         | 56   | 25   | 32   | 10  | 0.323 | ★  |
| MGU4185_FC25_SP03        | SC03 | SP03 | 18.5      | 77.53  | 93         | 56   | 25   | 32   | 10  | 0.330 | ★  |
| MGU4190_FC25_SP03        | SC03 | SP03 | 19        | 79.66  | 95         | 56   | 25   | 32   | 10  | 0.34  | ★  |
| MGU4193_FC25_SP03        | SC03 | SP03 | 19.25     | 83.7   | 99         | 56   | 25   | 32   | 10  | 0.343 | ★  |
| MGU4195_FC25_SP03        | SC03 | SP03 | 19.5      | 83.8   | 99         | 56   | 25   | 32   | 10  | 0.347 | ★  |
| MGU4200_FC25_SP04        | SC04 | SP04 | 20        | 83.38  | 101        | 56   | 25   | 32   | 10  | 0.365 | ★  |
| MGU4205_FC25_SP04        | SC04 | SP04 | 20.5      | 86.58  | 104        | 56   | 25   | 32   | 10  | 0.375 | ★  |
| MGU4210_FC25_SP04        | SC04 | SP04 | 21        | 89.78  | 105        | 56   | 25   | 32   | 10  | 0.374 | ★  |
| MGU4215_FC25_SP04        | SC04 | SP04 | 21.5      | 89.56  | 107.5      | 56   | 25   | 32   | 10  | 0.387 | ★  |
| MGU4220_FC25_SP04        | SC04 | SP04 | 22        | 91.22  | 109        | 56   | 25   | 32   | 10  | 0.397 | ★  |
| MGU4225_FC25_SP04        | SC04 | SP04 | 22.5      | 93.63  | 112        | 56   | 25   | 32   | 10  | 0.406 | ★  |
| MGU4230_FC25_SP04        | SC04 | SP04 | 23        | 95.9   | 114        | 56   | 25   | 32   | 10  | 0.417 | ★  |
| MGU4240_FC25_SP05        | SC05 | SP05 | 24        | 101.48 | 119        | 56   | 25   | 32   | 10  | 0.426 | ★  |
| MGU4245_FC25_SP05        | SC05 | SP05 | 24.5      | 102.36 | 121.5      | 56   | 25   | 32   | 10  | 0.443 | ★  |
| MGU4250_FC25_SP05        | SC05 | SP05 | 25        | 107.1  | 124        | 56   | 25   | 32   | 10  | 0.456 | ★  |
| MGU4253_FC25_SP05        | SC05 | SP05 | 25.25     | 107.24 | 124        | 56   | 25   | 32   | 10  | 0.46  | ★  |
| MGU4260_FC32_SP05        | SC05 | SP05 | 26        | 107.79 | 128        | 60   | 32   | 39.6 | 10  | 0.686 | ★  |
| MGU4265_FC32_SP05        | SC05 | SP05 | 26.5      | 109.98 | 130        | 60   | 32   | 39.6 | 10  | 0.702 | ★  |

# 880 Inserts U Drill

## 880系列刀杆型号

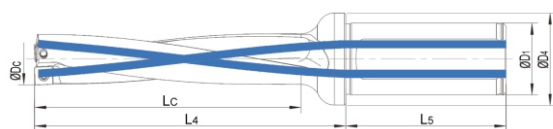
| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度    | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|---------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC      | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU4270_FC32_SP05        | SC05 | SP05 | 27        | 112.19  | 132        | 60   | 32   | 39.6 | 10  | 0.717 | ★  |
| MGU4280_FC32_SP05        | SC05 | SP05 | 28        | 115.66  | 137        | 60   | 32   | 39.6 | 10  | 0.748 | ★  |
| MGU4290_FC32_SP05        | SC05 | SP05 | 29        | 120.24  | 141        | 60   | 32   | 39.6 | 10  | 0.781 | ★  |
| MGU4295_FC32_SP05        | SC05 | SP05 | 29.5      | 123.2   | 144        | 60   | 32   | 39.6 | 10  | 0.801 | ★  |
| MGU4300_FC32_SP06        | SC06 | SP06 | 30        | 125.5   | 147        | 60   | 32   | 39.6 | 10  | 0.801 | ★  |
| MGU4310_FC40_SP06        | SC06 | SP06 | 31        | 128     | 152        | 70   | 40   | 48   | 10  | 1.18  | ★  |
| MGU4320_FC40_SP06        | SC06 | SP06 | 32        | 131.98  | 156        | 70   | 40   | 48   | 10  | 1.218 | ★  |
| MGU4330_FC40_SP06        | SC06 | SP06 | 33        | 136.61  | 161        | 70   | 40   | 48   | 10  | 1.264 | ★  |
| MGU4340_FC40_SP06        | SC06 | SP06 | 34        | 140.74  | 165        | 70   | 40   | 48   | 10  | 1.312 | ★  |
| MGU4350_FC40_SP06        | SC06 | SP06 | 35        | 145.58  | 170        | 70   | 40   | 48   | 10  | 1.369 | ★  |
| MGU4360_FC40_SP07        | SC07 | SP07 | 36        | 148.89  | 175        | 70   | 40   | 48   | 10  | 1.431 | ★  |
| MGU4370_FC40_SP07        | SC07 | SP07 | 37        | 151.71  | 179        | 70   | 40   | 48   | 10  | 1.484 | ★  |
| MGU4380_FC40_SP07        | SC07 | SP07 | 38        | 157.09  | 184        | 70   | 40   | 48   | 10  | 1.546 | ★  |
| MGU4390_FC40_SP07        | SC07 | SP07 | 39        | 161.85  | 188        | 70   | 40   | 48   | 10  | 1.62  | ★  |
| MGU4400_FC40_SP07        | SC07 | SP07 | 40        | 167.65  | 193        | 70   | 40   | 48   | 10  | 1.771 | ★  |
| MGU4410_FC40_SP07        | SC07 | SP07 | 41        | 168.69  | 198        | 70   | 40   | 48   | 10  | 1.86  | ★  |
| MGU4420_FC40_SP07        | SC07 | SP07 | 42        | 172.18  | 202        | 80   | 50   | 62.5 | 10  | 2.64  | ★  |
| MGU4430_FC40_SP07        | SC07 | SP07 | 43        | 176     | 207        | 80   | 50   | 62.5 | 10  | 2.74  | ★  |
| MGU4440_FC40_SP08        | SC08 | SP08 | 44        | 180.04  | 211        | 80   | 50   | 62.5 | 10  | 2.833 | ★  |
| MGU4450_FC40_SP08        | SC08 | SP08 | 45        | 185.224 | 217        | 80   | 50   | 62.5 | 10  | 2.953 | ★  |
| MGU4460_FC40_SP08        | SC08 | SP08 | 46        | 188.97  | 222        | 80   | 50   | 62.5 | 10  | 3.056 | ★  |
| MGU4470_FC40_SP08        | SC08 | SP08 | 47        | 193.1   | 226        | 80   | 50   | 62.5 | 10  | 3.124 | ★  |
| MGU4480_FC40_SP08        | SC08 | SP08 | 48        | 197     | 231        | 80   | 50   | 62.5 | 10  | 3.25  | ★  |
| MGU4490_FC40_SP08        | SC08 | SP08 | 49        | 201.18  | 235        | 80   | 50   | 62.5 | 10  | 3.365 | ★  |
| MGU4500_FC40_SP08        | SC08 | SP08 | 50        | 204.98  | 240        | 80   | 50   | 62.5 | 10  | 3.51  | ★  |
| MGU4505_FC40_SP08        | SC08 | SP08 | 50.5      | 208.229 | 242        | 80   | 50   | 62.5 | 10  | 3.56  | ★  |
| MGU4510_FC40_SP08        | SC08 | SP08 | 51        | 209.17  | 245        | 80   | 50   | 62.5 | 10  | 3.61  | ★  |
| MGU4520_FC40_SP08        | SC08 | SP08 | 52        | 213.03  | 249        | 80   | 50   | 62.5 | 10  | 3.75  | ★  |
| MGU4530_FC40_SP09        | SC09 | SP09 | 53        | 218     | 253        | 80   | 50   | 62.5 | 10  | 3.83  | ☆  |
| MGU4540_FC40_SP09        | SC09 | SP09 | 54        | 221.98  | 258        | 80   | 50   | 62.5 | 10  | 3.92  | ☆  |
| MGU4550_FC40_SP09        | SC09 | SP09 | 55        | 226     | 263        | 80   | 50   | 62.5 | 10  | 4.12  | ☆  |
| MGU4560_FC40_SP09        | SC09 | SP09 | 56        | 230.68  | 269        | 80   | 50   | 62.5 | 10  | 4.32  | ☆  |
| MGU4570_FC40_SP09        | SC09 | SP09 | 57        | 234     | 273        | 80   | 50   | 62.5 | 10  | 4.45  | ☆  |
| MGU4580_FC40_SP09        | SC09 | SP09 | 58        | 238.95  | 277        | 80   | 50   | 62.5 | 10  | 4.63  | ☆  |
| MGU4590_FC40_SP09        | SC09 | SP09 | 59        | 242     | 282        | 80   | 50   | 62.5 | 10  | 4.92  | ☆  |
| MGU4600_FC40_SP09        | SC09 | SP09 | 60        | 246     | 287        | 80   | 50   | 62.5 | 10  | 5.23  | ☆  |
| MGU4610_FC40_SP09        | SC09 | SP09 | 61        | 250     | 292        | 80   | 50   | 62.5 | 10  | 5.55  | ☆  |
| MGU4620_FC40_SP09        | SC09 | SP09 | 62        | 254     | 296        | 80   | 50   | 62.5 | 10  | 5.87  | ☆  |
| MGU4630_FC40_SP09        | SC09 | SP09 | 63        | 258     | 301        | 80   | 50   | 62.5 | 10  | 6.18  | ☆  |

# 880 Inserts U Drill 880系列刀杆型号

接口類型：削平直柄 ISO 9766

冷却方式：内冷設計

標準產品範圍：5XDC



| 型號<br>Specification/Item | 適配刀片 |      | 切削刀<br>直徑 | 刀刃長度   | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|--------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC     | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU5120_FC20_SP01        | SC01 | SP01 | 12        | 60.0   | 81         | 50   | 20   | 25   | 10  | 0.167 | ★  |
| MGU5125_FC20_SP01        | SC01 | SP01 | 12.5      | 62.5   | 84         | 50   | 20   | 25   | 10  | 0.170 | ★  |
| MGU5130_FC20_SP01        | SC01 | SP01 | 13        | 65.0   | 86         | 50   | 20   | 25   | 10  | 0.173 | ★  |
| MGU5135_FC20_SP01        | SC01 | SP01 | 13.5      | 67.5   | 88         | 50   | 20   | 25   | 10  | 0.176 | ★  |
| MGU5140_FC20_SP02        | SC02 | SP02 | 14        | 73.65  | 86         | 50   | 20   | 25   | 10  | 0.180 | ★  |
| MGU5145_FC20_SP02        | SC02 | SP02 | 14.5      | 76.76  | 89         | 50   | 20   | 25   | 10  | 0.181 | ★  |
| MGU5150_FC20_SP02        | SC02 | SP02 | 15        | 79.26  | 92         | 50   | 20   | 25   | 10  | 0.187 | ★  |
| MGU5155_FC20_SP02        | SC02 | SP02 | 15.5      | 82.4   | 95         | 50   | 20   | 25   | 10  | 0.194 | ★  |
| MGU5160_FC20_SP02        | SC02 | SP02 | 16        | 83.5   | 98         | 50   | 20   | 25   | 10  | 0.208 | ★  |
| MGU5165_FC20_SP03        | SC03 | SP03 | 16.5      | 86.7   | 101        | 50   | 20   | 25   | 10  | 0.207 | ★  |
| MGU5170_FC25_SP03        | SC03 | SP03 | 17        | 88.0   | 103        | 56   | 25   | 32   | 10  | 0.317 | ★  |
| MGU5175_FC25_SP03        | SC03 | SP03 | 17.5      | 91.27  | 107        | 56   | 25   | 32   | 10  | 0.331 | ★  |
| MGU5180_FC25_SP03        | SC03 | SP03 | 18        | 93.4   | 109        | 56   | 25   | 32   | 10  | 0.339 | ★  |
| MGU5185_FC25_SP03        | SC03 | SP03 | 18.5      | 96.52  | 112        | 56   | 25   | 32   | 10  | 0.348 | ★  |
| MGU5190_FC25_SP03        | SC03 | SP03 | 19        | 98.66  | 114        | 56   | 25   | 32   | 10  | 0.356 | ★  |
| MGU5193_FC25_SP03        | SC03 | SP03 | 19.25     | 102.73 | 118        | 56   | 25   | 32   | 10  | 0.363 | ★  |
| MGU5195_FC25_SP03        | SC03 | SP03 | 19.5      | 102.8  | 118        | 56   | 25   | 32   | 10  | 0.367 | ★  |
| MGU5200_FC25_SP04        | SC04 | SP04 | 20        | 103.38 | 121        | 56   | 25   | 32   | 10  | 0.388 | ★  |
| MGU5205_FC25_SP04        | SC04 | SP04 | 20.5      | 105.57 | 123        | 56   | 25   | 32   | 10  | 0.398 | ★  |
| MGU5210_FC25_SP04        | SC04 | SP04 | 21        | 108.78 | 126        | 56   | 25   | 32   | 10  | 0.401 | ★  |
| MGU5215_FC25_SP04        | SC04 | SP04 | 21.5      | 111.0  | 129        | 56   | 25   | 32   | 10  | 0.411 | ★  |
| MGU5220_FC25_SP04        | SC04 | SP04 | 22        | 113.22 | 131        | 56   | 25   | 32   | 10  | 0.425 | ★  |
| MGU5230_FC25_SP04        | SC04 | SP04 | 23        | 119.89 | 138        | 56   | 25   | 32   | 10  | 0.459 | ★  |
| MGU5240_FC25_SP05        | SC05 | SP05 | 24        | 125.47 | 143        | 56   | 25   | 32   | 10  | 0.470 | ★  |
| MGU5250_FC25_SP05        | SC05 | SP05 | 25        | 132.09 | 149        | 56   | 25   | 32   | 10  | 0.502 | ★  |
| MGU5253_FC25_SP05        | SC05 | SP05 | 25.25     | 132.22 | 149        | 56   | 25   | 32   | 10  | 0.507 | ★  |
| MGU5260_FC32_SP05        | SC05 | SP05 | 26        | 133.78 | 154        | 60   | 32   | 39.6 | 10  | 0.739 | ★  |
| MGU5265_FC32_SP05        | SC05 | SP05 | 26.5      | 136.49 | 157        | 60   | 32   | 39.6 | 10  | 0.755 | ★  |
| MGU5270_FC32_SP05        | SC05 | SP05 | 27        | 139.18 | 159        | 60   | 32   | 39.6 | 10  | 0.775 | ★  |
| MGU5280_FC32_SP05        | SC05 | SP05 | 28        | 143.28 | 165        | 60   | 32   | 39.6 | 10  | 0.814 | ★  |



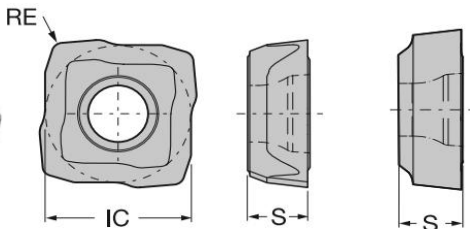
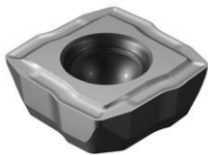
# 880 Inserts U Drill

## 880系列刀杆型号

| 型號<br>Specification/Item | 適配刀片 |      | 切削刃<br>直徑 | 刀刃長度   | 最大<br>懸伸長度 | 夾緊長度 | 柄部直徑 | 法蘭直徑 | 冷却液 | 重量    | 庫存 |
|--------------------------|------|------|-----------|--------|------------|------|------|------|-----|-------|----|
|                          | 中心刀片 | 周邊刀片 | DC        | LC     | L4         | L5   | D1   | D4   | BAR | KG    |    |
| MGU5290_FC32_SP05        | SC05 | SP05 | 29        | 149.53 | 171        | 60   | 32   | 39.6 | 10  | 0.855 | ★  |
| MGU5300_FC32_SP06        | SC06 | SP06 | 30        | 155.49 | 177        | 60   | 32   | 39.6 | 10  | 0.880 | ★  |
| MGU5310_FC40_SP06        | SC06 | SP06 | 31        | 159.0  | 183        | 70   | 40   | 48   | 10  | 1.260 | ★  |
| MGU5320_FC40_SP06        | SC06 | SP06 | 32        | 164.42 | 188        | 70   | 40   | 48   | 10  | 1.310 | ★  |
| MGU5330_FC40_SP06        | SC06 | SP06 | 33        | 169.2  | 194        | 70   | 40   | 48   | 10  | 1.364 | ★  |
| MGU5340_FC40_SP06        | SC06 | SP06 | 34        | 175.73 | 200        | 70   | 40   | 48   | 10  | 1.426 | ★  |
| MGU5350_FC40_SP06        | SC06 | SP06 | 35        | 181.57 | 206        | 70   | 40   | 48   | 10  | 1.495 | ★  |
| MGU5360_FC40_SP07        | SC07 | SP07 | 36        | 186.0  | 212        | 70   | 40   | 48   | 10  | 1.574 | ★  |
| MGU5370_FC40_SP07        | SC07 | SP07 | 37        | 189.0  | 216        | 70   | 40   | 48   | 10  | 1.643 | ★  |
| MGU5380_FC40_SP07        | SC07 | SP07 | 38        | 195.08 | 222        | 70   | 40   | 48   | 10  | 1.720 | ★  |
| MGU5390_FC40_SP07        | SC07 | SP07 | 39        | 201.84 | 228        | 70   | 40   | 48   | 10  | 1.793 | ★  |
| MGU5400_FC40_SP07        | SC07 | SP07 | 40        | 208.64 | 234        | 70   | 40   | 48   | 10  | 1.841 | ★  |
| MGU5410_FC40_SP07        | SC07 | SP07 | 41        | 215.51 | 240        | 70   | 40   | 48   | 10  | 2.110 | ★  |
| MGU5420_FC40_SP07        | SC07 | SP07 | 42        | 219.85 | 245        | 80   | 50   | 62.5 | 10  | 2.854 | ★  |
| MGU5430_FC40_SP07        | SC07 | SP07 | 43        | 236.16 | 251        | 80   | 50   | 62.5 | 10  | 2.969 | ★  |
| MGU5440_FC40_SP08        | SC08 | SP08 | 44        | 223.99 | 255        | 80   | 50   | 62.5 | 10  | 3.153 | ☆  |
| MGU5450_FC40_SP08        | SC08 | SP08 | 45        | 230.14 | 262        | 80   | 50   | 62.5 | 10  | 3.281 | ☆  |
| MGU5460_FC40_SP08        | SC08 | SP08 | 46        | 234.97 | 268        | 80   | 50   | 62.5 | 10  | 3.410 | ☆  |
| MGU5470_FC40_SP08        | SC08 | SP08 | 47        | 240.1  | 273        | 80   | 50   | 62.5 | 10  | 3.520 | ☆  |
| MGU5480_FC40_SP08        | SC08 | SP08 | 48        | 245.0  | 279        | 80   | 50   | 62.5 | 10  | 3.675 | ☆  |
| MGU5490_FC40_SP08        | SC08 | SP08 | 49        | 250.18 | 284        | 80   | 50   | 62.5 | 10  | 3.827 | ☆  |
| MGU5500_FC40_SP08        | SC08 | SP08 | 50        | 254.92 | 290        | 80   | 50   | 62.5 | 10  | 3.990 | ☆  |
| MGU5510_FC40_SP08        | SC08 | SP08 | 51        | 259.47 | 296        | 80   | 50   | 62.5 | 10  | 4.131 | ☆  |
| MGU5520_FC40_SP08        | SC08 | SP08 | 52        | 265.0  | 301        | 80   | 50   | 62.5 | 10  | 4.305 | ☆  |

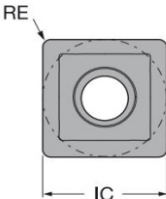
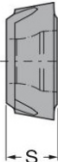
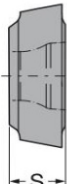
# 880 Sem inserts 880系列钻削刀片

## 中心刀片

|                                                                                                                                                                               |                                                                                     |         |     |     |      |        |        |        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|-----|-----|------|--------|--------|--------|--|
| <div></div> |                                                                                     |         |     |     |      |        |        |        |  |
|                                                                                                                                                                               |                                                                                     |         |     |     |      |        |        |        |  |
|                                                                                                                                                                               |                                                                                     |         |     |     |      |        |        |        |  |
|                                                                                                                                                                               |                                                                                     |         |     |     |      |        |        |        |  |
| P                                                                                                                                                                             |  | ●       | ●   | ○   |      |        |        |        |  |
| M                                                                                                                                                                             |  | ○       | ○   | ●   |      |        |        |        |  |
| K                                                                                                                                                                             |  | ●       | ●   |     |      |        |        |        |  |
| N                                                                                                                                                                             |  |         | ○   | ○   |      |        |        |        |  |
| S                                                                                                                                                                             |  |         | ○   | ●   |      |        |        |        |  |
| H                                                                                                                                                                             |  | ●       | ○   |     |      |        |        |        |  |
| <div></div>                                                                                  | 型號<br>Specification/Item                                                            | 尺寸 (mm) |     |     |      | 材質     |        |        |  |
|                                                                                                                                                                               |                                                                                     | IC      | S   | RE  | 效率   | Mp2150 | Mp3150 | Mm4235 |  |
| 01                                                                                                                                                                            | D-SCGX010203-LM                                                                     | 4.57    | 2   | 0.3 | 中等進給 |        |        | ●      |  |
|                                                                                                                                                                               | D-SCGX010203-GR                                                                     | 4.57    | 2   | 0.3 | 高進給  |        | ●      |        |  |
| 02                                                                                                                                                                            | D-SCGX020204-LM                                                                     | 4.9     | 2.4 | 0.4 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX020204-GM                                                                     | 4.9     | 2.4 | 0.4 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX020204-GR                                                                     | 4.9     | 2.4 | 0.4 | 高進給  | ●      | ●      |        |  |
| 03                                                                                                                                                                            | D-SCGX030305-LM                                                                     | 5.7     | 2.6 | 0.5 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX030305-GM                                                                     | 5.7     | 2.6 | 0.5 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX030305-GR                                                                     | 5.7     | 2.6 | 0.5 | 高進給  | ●      | ●      |        |  |
| 04                                                                                                                                                                            | D-SCGX040305-LM                                                                     | 6.8     | 2.8 | 0.5 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX040305-GM                                                                     | 6.8     | 2.8 | 0.5 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX040305-GR                                                                     | 6.8     | 2.8 | 0.5 | 高進給  | ●      | ●      |        |  |
| 05                                                                                                                                                                            | D-SCGX050305-LM                                                                     | 8.4     | 3   | 0.5 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX050305-GM                                                                     | 8.4     | 3   | 0.5 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX050305-GR                                                                     | 8.4     | 3   | 0.5 | 高進給  | ●      | ●      |        |  |
| 06                                                                                                                                                                            | D-SCGX060406-LM                                                                     | 10.2    | 3.5 | 0.6 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX060406-GM                                                                     | 10.2    | 3.5 | 0.6 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX060406-GR                                                                     | 10.2    | 3.5 | 0.6 | 高進給  | ●      | ●      |        |  |
| 07                                                                                                                                                                            | D-SCGX070406-LM                                                                     | 12.4    | 4   | 0.6 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX070406-GM                                                                     | 12.4    | 4   | 0.6 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX070406-GR                                                                     | 12.4    | 4   | 0.6 | 高進給  | ●      | ●      |        |  |
| 08                                                                                                                                                                            | D-SCGX080508-LM                                                                     | 14.9    | 4.5 | 0.8 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX080508-GM                                                                     | 14.9    | 4.5 | 0.8 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX080508-GR                                                                     | 14.9    | 4.5 | 0.8 | 高進給  | ●      | ●      |        |  |
| 09                                                                                                                                                                            | D-SCGX090608-LM                                                                     | 17.9    | 5.5 | 0.8 | 中等進給 |        | ●      | ●      |  |
|                                                                                                                                                                               | D-SCGX090608-GM                                                                     | 17.9    | 5.5 | 0.8 |      | ●      | ●      |        |  |
|                                                                                                                                                                               | D-SCGX090608-GR                                                                     | 17.9    | 5.5 | 0.8 | 高進給  | ●      | ●      |        |  |

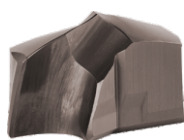
# 880 Sem inserts 880系列钻削刀片

## ◎ 周心刀片

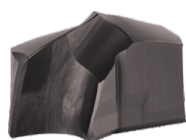
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     |      |        |        |        |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|-----|-----|------|--------|--------|--------|---|---|
|     |                          |         |     |     |      |        |        |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | P    |        | ●      | ●      | ○ | ● |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | M    |        | ○      | ○      | ● |   |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | K    |        | ●      | ●      |   | ● |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | N    |        |        | ○      | ○ |   |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | S    |        |        | ○      | ● |   |
|                                                                                                                                                                                                                                                                                                                                         |                          |         |     |     | H    |        | ●      | ○      |   |   |
|                                                                                                                                                                                                                                                        | 型號<br>Specification/Item | 尺寸 (mm) |     |     | 效率   | 材質     |        |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         |                          | IC      | S   | RE  |      | Mp2150 | Mp3150 | Mm4235 |   |   |
| 01                                                                                                                                                                                                                                                                                                                                      | D-SPGX010204-LM          | 4.6     | 2   | 0.4 | 中等進給 |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX010204-GR          | 4.6     | 2   | 0.4 | 高進給  |        | ●      |        |   |   |
| 02                                                                                                                                                                                                                                                                                                                                      | D-SPGX020204-GM          | 5.1     | 2.4 | 0.4 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX020205-LM          | 5.1     | 2.4 | 0.5 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX020205-MS          | 5.1     | 2.4 | 0.5 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX020205-GR          | 5.1     | 2.4 | 0.5 |      |        | ●      |        |   |   |
| 03                                                                                                                                                                                                                                                                                                                                      | D-SPGX030305-GM          | 6.0     | 2.6 | 0.5 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX030306-LM          | 6.0     | 2.6 | 0.6 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX030305-MS          | 6.0     | 2.6 | 0.6 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX030306-GR          | 6.0     | 2.6 | 0.6 |      |        | ●      |        |   |   |
| 04                                                                                                                                                                                                                                                                                                                                      | D-SPGX040305-GM          | 7.4     | 2.8 | 0.5 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX040307-LM          | 7.4     | 2.8 | 0.7 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX040307-MS          | 7.4     | 2.8 | 0.7 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX040307-GR          | 7.4     | 2.8 | 0.7 |      |        | ●      |        |   |   |
| 05                                                                                                                                                                                                                                                                                                                                      | D-SPGX050305-GM          | 8.9     | 3.0 | 0.5 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX050308-LM          | 8.9     | 3.0 | 0.8 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX050308-MS          | 8.9     | 3.0 | 0.8 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX050308-GR          | 8.9     | 3.0 | 0.8 |      |        | ●      |        |   |   |
| 06                                                                                                                                                                                                                                                                                                                                      | D-SPGX060406-GM          | 10.7    | 3.5 | 0.6 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX060408-LM          | 10.7    | 3.5 | 0.8 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX060408-MS          | 10.7    | 3.5 | 0.8 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX060410-GR          | 10.7    | 3.5 | 1.0 |      |        | ●      |        |   |   |
| 07                                                                                                                                                                                                                                                                                                                                      | D-SPGX070406-GM          | 12.7    | 4.0 | 0.6 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX070410-LM          | 12.7    | 4.0 | 1.0 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX070410-MS          | 12.7    | 4.0 | 1.0 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX070412-GR          | 12.7    | 4.0 | 1.2 |      |        | ●      |        |   |   |
| 08                                                                                                                                                                                                                                                                                                                                      | D-SPGX080508-GM          | 15.5    | 4.5 | 0.8 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX080510-LM          | 15.5    | 4.5 | 1.0 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX080510-MS          | 15.5    | 4.5 | 1.0 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX080512-GR          | 15.5    | 4.5 | 1.2 |      |        | ●      |        |   |   |
| 09                                                                                                                                                                                                                                                                                                                                      | D-SPGX090608-GM          | 18.6    | 5.5 | 0.8 | 中等進給 | ●      | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX090610-LM          | 18.6    | 5.5 | 1.0 |      |        | ●      |        |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX090610-MS          | 18.6    | 5.5 | 1.0 | 高進給  |        |        | ●      |   |   |
|                                                                                                                                                                                                                                                                                                                                         | D-SPGX090612-GR          | 18.6    | 5.5 | 1.2 |      |        | ●      |        |   |   |

# SEM DRILL

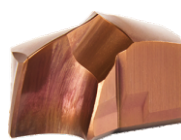
## SEM皇冠钻

S  
OW  
CS  
PP  
D  
LW  
D  
X刀柄系列  
Chuck刀片系列  
Carbide Inserts粗镗刀系列  
Rough Boring Head精镗刀系列  
Finish Boring Head镗刀柄系列  
Chuck小刀夾系列  
Accessories镗刀倒角環系列  
Chamfering ToolsO.D.系列槽銑刀  
Slot Milling Cutters

Ac7315 材質，以 TiAlN 為基體材料的複合塗層，可用于高速切削適合中高碳鋼，合金鋼，調質鋼和鑄鐵等加工應用。



Ac7320 材質採用以 AlTiN 為基體材料的 PVD 塗層，特別適合不銹鋼材料的鑽削加工應用。



ACPM45 材質，TiAlN 複合塗層韌性極佳的基體材料。改善了抗崩刃性能，斷削好，壽命高，特別適合軟硬剛材質的加工應用。



## 特点及优势

### ◎ Hz鑽尖類型

- 低鑽入力，可避免工件出現彎曲現象。
- 卓越的定中心性能。
- 根據應用類型選擇槽型，確保最佳加工性能。

### ◎ 可修磨刀片

- 大研刀具公司及其合作伙伴提供快速可靠的刀具修磨服務。
- 修磨鑽尖價格是按照新鑽尖價格的30%收取費用每個規格10個起修。

### ◎ 堅固的刀窩設計，便于更換刀片

- 堅固的刀窩設計，延長刀片和鑽杆的使用壽命
- 四面封閉型刀窩確保刀片安裝穩固。
- 在拆除刀片時祇需一把簡單的扳手即可。

### ◎ 修磨注意事項

- 刀片刃口沒有較大崩缺現象，修磨次數較少且修磨餘量足夠
- 韌帶磨損較小，否則修磨後鑽孔直徑容易變小
- 最好能提供被加工材質和材料硬度

# SEM DRILL SEM皇冠钻



- S
- O
- W
- C
- S
- P
- P
- D
- L
- W
- D
- X
- 刀柄系列 Chuck
- 刀片系列 Carbide Inserts
- 粗鏜刀系列 Rough Boring Head
- 精鏜刀系列 Finish Boring Head
- 鏜刀柄系列 Chuck
- 小刀夾系列 Accessories
- 鏜刀倒角環系列 Chamfering Tools
- OB 系列槽銑刀 Slot Milling Cutters





# SEM皇冠钻

## 硬質合金鑽和可轉位鑽的完美結合

SEM模塊化鑽刀具系統有長度更長，直徑更大的特點  
SEM在多種應用中可以採用極高的進給率，確保高生產率水平

該產品刀窩非常堅固，適合更換刀片  
可延長鋼質鑽杆和硬質合金鑽尖的使用壽命  
該設計使得SEM有極好的經濟性  
性能非常可靠  
適合中等直徑的鑽孔加工

標準型產品的鑽孔深度可達 $12 \times D$   
鑽孔直徑範圍為12,5–40mm  
多種鑽削材質產品  
幾乎可用于各種類型  
各種材料的加工應用

# SEM INSERTS

## SEM皇冠钻钻尖

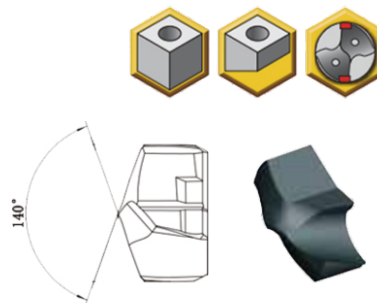
SEM HZ AC7315 切削刃在鋼材料加工中有極高的金屬去除率和超長的使用壽命。HZ 槽型刀片有一個寬型并且堅固的 HZ 型橫刃，可以避免芯部出現淬火，從而提高進給率。經過倒圓處理的鏟刀形刃具有卓越的切屑控制性能和超長的刀具壽命，即使在長切屑材料加工中也有出色的表現。

AC7315 是一種細晶粒硬質合金材質，采用TiAlN 基體的 PVD 復合塗層。

它具有很高的耐磨性，在穩定工況下可以采用極高的切削速度參數。

AC7315 HZ 切削刃特別適合合金鋼和高合金鋼的鑽孔加工。

AC7315 HZ 切削刃可作為鑄鐵材料加工的備選。



### ◎ SEM刀片 · HZ · AC7315



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM1250 | 12.5 | C    |
| 后拉式钻尖 | SEM1260 | 12.6 | C    |
| 后拉式钻尖 | SEM1270 | 12.7 | C    |
| 后拉式钻尖 | SEM1280 | 12.8 | C    |
| 后拉式钻尖 | SEM1290 | 12.9 | C    |
| 后拉式钻尖 | SEM1300 | 13.0 | C    |
| 后拉式钻尖 | SEM1310 | 13.1 | C    |
| 后拉式钻尖 | SEM1320 | 13.2 | C    |
| 后拉式钻尖 | SEM1330 | 13.3 | C    |
| 后拉式钻尖 | SEM1340 | 13.4 | C    |
| 后拉式钻尖 | SEM1350 | 13.5 | C    |
| 后拉式钻尖 | SEM1360 | 13.6 | B    |
| 后拉式钻尖 | SEM1370 | 13.7 | B    |
| 后拉式钻尖 | SEM1380 | 13.8 | B    |
| 后拉式钻尖 | SEM1390 | 13.9 | B    |
| 后拉式钻尖 | SEM1400 | 14.0 | B    |
| 后拉式钻尖 | SEM1410 | 14.1 | B    |
| 后拉式钻尖 | SEM1420 | 14.2 | B    |
| 后拉式钻尖 | SEM1430 | 14.3 | B    |
| 后拉式钻尖 | SEM1440 | 14.4 | B    |
| 后拉式钻尖 | SEM1450 | 14.5 | B    |
| 后拉式钻尖 | SEM1460 | 14.6 | A    |
| 后拉式钻尖 | SEM1470 | 14.7 | A    |
| 后拉式钻尖 | SEM1480 | 14.8 | A    |
| 后拉式钻尖 | SEM1490 | 14.9 | A    |
| 后拉式钻尖 | SEM1500 | 15.0 | A    |
| 后拉式钻尖 | SEM1510 | 15.1 | A    |
| 后拉式钻尖 | SEM1520 | 15.2 | A    |
| 后拉式钻尖 | SEM1530 | 15.3 | A    |
| 后拉式钻尖 | SEM1540 | 15.4 | A    |
| 后拉式钻尖 | SEM1550 | 15.5 | A    |
| 后拉式钻尖 | SEM1560 | 15.6 | A    |
| 后拉式钻尖 | SEM1570 | 15.7 | A    |
| 后拉式钻尖 | SEM1580 | 15.8 | A    |
| 后拉式钻尖 | SEM1590 | 15.9 | 1    |
| 后拉式钻尖 | SEM1600 | 16.0 | 1    |
| 后拉式钻尖 | SEM1610 | 16.1 | 1    |
| 后拉式钻尖 | SEM1620 | 16.2 | 1    |

| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM1630 | 16.3 | 1    |
| 后拉式钻尖 | SEM1640 | 16.4 | 1    |
| 后拉式钻尖 | SEM1650 | 16.5 | 1    |
| 后拉式钻尖 | SEM1660 | 16.6 | 1    |
| 后拉式钻尖 | SEM1670 | 16.7 | 1    |
| 后拉式钻尖 | SEM1680 | 16.8 | 1    |
| 后拉式钻尖 | SEM1690 | 16.9 | 1    |
| 后拉式钻尖 | SEM1700 | 17.0 | 1    |
| 后拉式钻尖 | SEM1710 | 17.1 | 1    |
| 后拉式钻尖 | SEM1720 | 17.2 | 1    |
| 后拉式钻尖 | SEM1730 | 17.3 | 1    |
| 后拉式钻尖 | SEM1740 | 17.4 | 1    |
| 后拉式钻尖 | SEM1750 | 17.5 | 1    |
| 后拉式钻尖 | SEM1760 | 17.6 | 1    |
| 后拉式钻尖 | SEM1770 | 17.7 | 1    |
| 后拉式钻尖 | SEM1780 | 17.8 | 1    |
| 后拉式钻尖 | SEM1790 | 17.9 | 1    |
| 后拉式钻尖 | SEM1800 | 18.0 | 1    |
| 后拉式钻尖 | SEM1810 | 18.1 | 2    |
| 后拉式钻尖 | SEM1820 | 18.2 | 2    |
| 后拉式钻尖 | SEM1830 | 18.3 | 2    |
| 后拉式钻尖 | SEM1840 | 18.4 | 2    |
| 后拉式钻尖 | SEM1850 | 18.5 | 2    |
| 后拉式钻尖 | SEM1860 | 18.6 | 2    |
| 后拉式钻尖 | SEM1870 | 18.7 | 2    |
| 后拉式钻尖 | SEM1880 | 18.8 | 2    |
| 后拉式钻尖 | SEM1890 | 18.9 | 2    |
| 后拉式钻尖 | SEM1900 | 19.0 | 2    |
| 后拉式钻尖 | SEM1910 | 19.1 | 2    |
| 后拉式钻尖 | SEM1920 | 19.2 | 2    |
| 后拉式钻尖 | SEM1930 | 19.3 | 2    |
| 后拉式钻尖 | SEM1940 | 19.4 | 2    |
| 后拉式钻尖 | SEM1950 | 19.5 | 2    |
| 后拉式钻尖 | SEM1960 | 19.6 | 2    |
| 后拉式钻尖 | SEM1970 | 19.7 | 2    |
| 后拉式钻尖 | SEM1980 | 19.8 | 2    |
| 后拉式钻尖 | SEM1990 | 19.9 | 2    |
| 后拉式钻尖 | SEM2000 | 20.0 | 3    |

# SEM INSERTS

## SEM皇冠钻钻尖

◎ SEM刀片 · HZ · AC7315-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM2010 | 20.1 | 3    | 后拉式钻尖 | SEM2490 | 24.9 | 5    |
| 后拉式钻尖 | SEM2020 | 20.2 | 3    | 后拉式钻尖 | SEM2500 | 25.0 | 5    |
| 后拉式钻尖 | SEM2030 | 20.3 | 3    | 后拉式钻尖 | SEM2510 | 25.1 | 5    |
| 后拉式钻尖 | SEM2040 | 20.4 | 3    | 后拉式钻尖 | SEM2520 | 25.2 | 5    |
| 后拉式钻尖 | SEM2050 | 20.5 | 3    | 后拉式钻尖 | SEM2530 | 25.3 | 5    |
| 后拉式钻尖 | SEM2060 | 20.6 | 3    | 后拉式钻尖 | SEM2540 | 25.4 | 5    |
| 后拉式钻尖 | SEM2070 | 20.7 | 3    | 后拉式钻尖 | SEM2550 | 25.5 | 5    |
| 后拉式钻尖 | SEM2080 | 20.8 | 3    | 后拉式钻尖 | SEM2560 | 25.6 | 5    |
| 后拉式钻尖 | SEM2090 | 20.9 | 3    | 后拉式钻尖 | SEM2570 | 25.7 | 5    |
| 后拉式钻尖 | SEM2100 | 21.0 | 3    | 后拉式钻尖 | SEM2580 | 25.8 | 5    |
| 后拉式钻尖 | SEM2110 | 21.1 | 3    | 后拉式钻尖 | SEM2590 | 25.9 | 5    |
| 后拉式钻尖 | SEM2120 | 21.2 | 3    | 后拉式钻尖 | SEM2600 | 26.0 | 5    |
| 后拉式钻尖 | SEM2130 | 21.3 | 3    | 后拉式钻尖 | SEM2610 | 26.1 | 6    |
| 后拉式钻尖 | SEM2140 | 21.4 | 3    | 后拉式钻尖 | SEM2620 | 26.2 | 6    |
| 后拉式钻尖 | SEM2150 | 21.5 | 3    | 后拉式钻尖 | SEM2630 | 26.3 | 6    |
| 后拉式钻尖 | SEM2160 | 21.6 | 3    | 后拉式钻尖 | SEM2640 | 26.4 | 6    |
| 后拉式钻尖 | SEM2170 | 21.7 | 3    | 后拉式钻尖 | SEM2650 | 26.5 | 6    |
| 后拉式钻尖 | SEM2180 | 21.8 | 3    | 后拉式钻尖 | SEM2660 | 26.6 | 6    |
| 后拉式钻尖 | SEM2190 | 21.9 | 3    | 后拉式钻尖 | SEM2670 | 26.7 | 6    |
| 后拉式钻尖 | SEM2200 | 22.0 | 3    | 后拉式钻尖 | SEM2680 | 26.8 | 6    |
| 后拉式钻尖 | SEM2210 | 22.1 | 4    | 后拉式钻尖 | SEM2690 | 26.9 | 6    |
| 后拉式钻尖 | SEM2220 | 22.2 | 4    | 后拉式钻尖 | SEM2700 | 27.0 | 6    |
| 后拉式钻尖 | SEM2230 | 22.3 | 4    | 后拉式钻尖 | SEM2710 | 27.1 | 6    |
| 后拉式钻尖 | SEM2240 | 22.4 | 4    | 后拉式钻尖 | SEM2720 | 27.2 | 6    |
| 后拉式钻尖 | SEM2250 | 22.5 | 4    | 后拉式钻尖 | SEM2730 | 27.3 | 6    |
| 后拉式钻尖 | SEM2260 | 22.6 | 4    | 后拉式钻尖 | SEM2740 | 27.4 | 6    |
| 后拉式钻尖 | SEM2270 | 22.7 | 4    | 后拉式钻尖 | SEM2750 | 27.5 | 6    |
| 后拉式钻尖 | SEM2280 | 22.8 | 4    | 后拉式钻尖 | SEM2760 | 27.6 | 6    |
| 后拉式钻尖 | SEM2290 | 22.9 | 4    | 后拉式钻尖 | SEM2770 | 27.7 | 6    |
| 后拉式钻尖 | SEM2300 | 23.0 | 4    | 后拉式钻尖 | SEM2780 | 27.8 | 6    |
| 后拉式钻尖 | SEM2310 | 23.1 | 4    | 后拉式钻尖 | SEM2790 | 27.9 | 6    |
| 后拉式钻尖 | SEM2320 | 23.2 | 4    | 后拉式钻尖 | SEM2800 | 28.0 | 6    |
| 后拉式钻尖 | SEM2330 | 23.3 | 4    | 后拉式钻尖 | SEM2810 | 28.1 | 7    |
| 后拉式钻尖 | SEM2340 | 23.4 | 4    | 后拉式钻尖 | SEM2820 | 28.2 | 7    |
| 后拉式钻尖 | SEM2350 | 23.5 | 4    | 后拉式钻尖 | SEM2830 | 28.3 | 7    |
| 后拉式钻尖 | SEM2360 | 23.6 | 4    | 后拉式钻尖 | SEM2840 | 28.4 | 7    |
| 后拉式钻尖 | SEM2370 | 23.7 | 4    | 后拉式钻尖 | SEM2850 | 28.5 | 7    |
| 后拉式钻尖 | SEM2380 | 23.8 | 4    | 后拉式钻尖 | SEM2860 | 28.6 | 7    |
| 后拉式钻尖 | SEM2390 | 23.9 | 4    | 后拉式钻尖 | SEM2870 | 28.7 | 7    |
| 后拉式钻尖 | SEM2400 | 24.0 | 4    | 后拉式钻尖 | SEM2880 | 28.8 | 7    |
| 后拉式钻尖 | SEM2410 | 24.1 | 5    | 后拉式钻尖 | SEM2890 | 28.9 | 7    |
| 后拉式钻尖 | SEM2420 | 24.2 | 5    | 后拉式钻尖 | SEM2900 | 29.0 | 7    |
| 后拉式钻尖 | SEM2430 | 24.3 | 5    | 后拉式钻尖 | SEM2910 | 29.1 | 7    |
| 后拉式钻尖 | SEM2440 | 24.4 | 5    | 后拉式钻尖 | SEM2920 | 29.2 | 7    |
| 后拉式钻尖 | SEM2450 | 24.5 | 5    | 后拉式钻尖 | SEM2930 | 29.3 | 7    |
| 后拉式钻尖 | SEM2460 | 24.6 | 5    | 后拉式钻尖 | SEM2940 | 29.4 | 7    |
| 后拉式钻尖 | SEM2470 | 24.7 | 5    | 后拉式钻尖 | SEM2950 | 29.5 | 7    |
| 后拉式钻尖 | SEM2480 | 24.8 | 5    | 后拉式钻尖 | SEM2960 | 29.6 | 7    |

# SEM INSERTS

## SEM皇冠钻钻尖

### ◎ SEM刀片 · HZ · AC7315-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM2970 | 29.7 | 7    | 后拉式钻尖 | SEM3090 | 30.9 | 8    |
| 后拉式钻尖 | SEM2980 | 29.8 | 7    | 后拉式钻尖 | SEM3100 | 31.0 | 8    |
| 后拉式钻尖 | SEM2990 | 29.9 | 7    | 后拉式钻尖 | SEM3110 | 31.1 | 8    |
| 后拉式钻尖 | SEM3000 | 30.0 | 7    | 后拉式钻尖 | SEM3120 | 31.2 | 8    |
| 后拉式钻尖 | SEM3010 | 30.1 | 8    | 后拉式钻尖 | SEM3130 | 31.3 | 8    |
| 后拉式钻尖 | SEM3020 | 30.2 | 8    | 后拉式钻尖 | SEM3140 | 31.4 | 8    |
| 后拉式钻尖 | SEM3030 | 30.3 | 8    | 后拉式钻尖 | SEM3150 | 31.5 | 8    |
| 后拉式钻尖 | SEM3040 | 30.4 | 8    | 后拉式钻尖 | SEM3160 | 31.6 | 8    |
| 后拉式钻尖 | SEM3050 | 30.5 | 8    | 后拉式钻尖 | SEM3170 | 31.7 | 8    |
| 后拉式钻尖 | SEM3060 | 30.6 | 8    | 后拉式钻尖 | SEM3180 | 31.8 | 8    |
| 后拉式钻尖 | SEM3070 | 30.7 | 8    | 后拉式钻尖 | SEM3190 | 31.9 | 8    |
| 后拉式钻尖 | SEM3080 | 30.8 | 8    | 后拉式钻尖 | SEM3200 | 32.0 | 8    |

### ◎ 公差HZ · 公制

| D1公制    | 公差h8          |
|---------|---------------|
| 12.5-1  | +0.000/-0.027 |
| > 18-30 | +0.000/-0.033 |
| > 30-32 | +0.000/-0.039 |

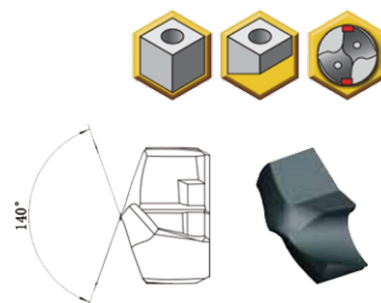
### ◎ 模塊化鑽硬質合金刀片 · SEM · HZ槽型 · 材質 Ac7315 · 內冷 · 公制

| 材料分組 |           | 切削速度(VC)<br>範圍(m/min) |     |     | 公制           |           |           |           |           |           |
|------|-----------|-----------------------|-----|-----|--------------|-----------|-----------|-----------|-----------|-----------|
|      |           |                       |     |     | 根據直徑推薦進給率(f) |           |           |           |           |           |
|      |           | 最小值                   | 初始值 | 最大值 |              | 12.5      | 16.0      | 20.0      | 25.4      | 32.0      |
| P    | 低碳鋼       | 100                   | 100 | 120 | 毫米/轉         | 0.15-0.31 | 0.17-0.36 | 0.19-0.41 | 0.25-0.53 | 0.29-0.60 |
|      | 中碳鋼/高碳鋼   | 80                    | 95  | 110 | 毫米/轉         | 0.15-0.31 | 0.17-0.36 | 0.19-0.41 | 0.25-0.53 | 0.29-0.60 |
|      | 合金鋼/工具鋼   | 65                    | 70  | 80  | 毫米/轉         | 0.15-0.31 | 0.17-0.36 | 0.19-0.41 | 0.25-0.53 | 0.29-0.60 |
| M    | 奧氏體不銹鋼    | 30                    | 60  | 90  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |
|      | 奧氏體/鑄造不銹鋼 | 30                    | 50  | 90  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |
|      | 雙相不銹鋼     | 20                    | 40  | 60  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |
| K    | 灰鑄鐵       | 90                    | 135 | 175 | 毫米/轉         | 0.17-0.35 | 0.21-0.42 | 0.25-0.48 | 0.31-0.59 | 0.37-0.70 |
|      | 球墨鑄鐵/蠕墨鑄鐵 | 90                    | 110 | 125 | 毫米/轉         | 0.17-0.33 | 0.21-0.41 | 0.25-0.48 | 0.31-0.59 | 0.37-0.70 |
|      | 高強度延展性鐵   | 40                    | 95  | 125 | 毫米/轉         | 0.18-0.36 | 0.20-0.41 | 0.21-0.44 | 0.23-0.48 | 0.25-0.53 |

# SEM INSERTS

## SEM皇冠钻钻尖

SEM HM AC7320 切削刃在不銹鋼材料加工中有出色的加工性能，和極高的加工效率。  
 HM槽型刀片的每個切削刃可以形成兩條切屑，可以形成連續的切屑流。  
 AC3220 產品有極高的金屬去除率和可靠的鑽孔性能，鑽孔深度可達10xD  
 是不銹鋼材料鑽孔加工中的首選產品。  
 AC7320 材質在通用型細晶粒硬質合金材料上有含Al量較高的TAIN 塗層。  
 該產品具有極好的氧化穩定性，韌性適中的硬質合金材質在奧氏體、不銹鋼和其它不銹鋼材料加工中具有極好的耐磨性。



### ◎ SEM刀片 · HM · AC7320



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM1250 | 12.5 | C    | 后拉式钻尖 | SEM1630 | 16.3 | 1    |
| 后拉式钻尖 | SEM1260 | 12.6 | C    | 后拉式钻尖 | SEM1640 | 16.4 | 1    |
| 后拉式钻尖 | SEM1270 | 12.7 | C    | 后拉式钻尖 | SEM1650 | 16.5 | 1    |
| 后拉式钻尖 | SEM1280 | 12.8 | C    | 后拉式钻尖 | SEM1660 | 16.6 | 1    |
| 后拉式钻尖 | SEM1290 | 12.9 | C    | 后拉式钻尖 | SEM1670 | 16.7 | 1    |
| 后拉式钻尖 | SEM1300 | 13.0 | C    | 后拉式钻尖 | SEM1680 | 16.8 | 1    |
| 后拉式钻尖 | SEM1310 | 13.1 | C    | 后拉式钻尖 | SEM1690 | 16.9 | 1    |
| 后拉式钻尖 | SEM1320 | 13.2 | C    | 后拉式钻尖 | SEM1700 | 17.0 | 1    |
| 后拉式钻尖 | SEM1330 | 13.3 | C    | 后拉式钻尖 | SEM1710 | 17.1 | 1    |
| 后拉式钻尖 | SEM1340 | 13.4 | C    | 后拉式钻尖 | SEM1720 | 17.2 | 1    |
| 后拉式钻尖 | SEM1350 | 13.5 | C    | 后拉式钻尖 | SEM1730 | 17.3 | 1    |
| 后拉式钻尖 | SEM1360 | 13.6 | B    | 后拉式钻尖 | SEM1740 | 17.4 | 1    |
| 后拉式钻尖 | SEM1370 | 13.7 | B    | 后拉式钻尖 | SEM1750 | 17.5 | 1    |
| 后拉式钻尖 | SEM1380 | 13.8 | B    | 后拉式钻尖 | SEM1760 | 17.6 | 1    |
| 后拉式钻尖 | SEM1390 | 13.9 | B    | 后拉式钻尖 | SEM1770 | 17.7 | 1    |
| 后拉式钻尖 | SEM1400 | 14.0 | B    | 后拉式钻尖 | SEM1780 | 17.8 | 1    |
| 后拉式钻尖 | SEM1410 | 14.1 | B    | 后拉式钻尖 | SEM1790 | 17.9 | 1    |
| 后拉式钻尖 | SEM1420 | 14.2 | B    | 后拉式钻尖 | SEM1800 | 18.0 | 1    |
| 后拉式钻尖 | SEM1430 | 14.3 | B    | 后拉式钻尖 | SEM1810 | 18.1 | 2    |
| 后拉式钻尖 | SEM1440 | 14.4 | B    | 后拉式钻尖 | SEM1820 | 18.2 | 2    |
| 后拉式钻尖 | SEM1450 | 14.5 | B    | 后拉式钻尖 | SEM1830 | 18.3 | 2    |
| 后拉式钻尖 | SEM1460 | 14.6 | A    | 后拉式钻尖 | SEM1840 | 18.4 | 2    |
| 后拉式钻尖 | SEM1470 | 14.7 | A    | 后拉式钻尖 | SEM1850 | 18.5 | 2    |
| 后拉式钻尖 | SEM1480 | 14.8 | A    | 后拉式钻尖 | SEM1860 | 18.6 | 2    |
| 后拉式钻尖 | SEM1490 | 14.9 | A    | 后拉式钻尖 | SEM1870 | 18.7 | 2    |
| 后拉式钻尖 | SEM1500 | 15.0 | A    | 后拉式钻尖 | SEM1880 | 18.8 | 2    |
| 后拉式钻尖 | SEM1510 | 15.1 | A    | 后拉式钻尖 | SEM1890 | 18.9 | 2    |
| 后拉式钻尖 | SEM1520 | 15.2 | A    | 后拉式钻尖 | SEM1900 | 19.0 | 2    |
| 后拉式钻尖 | SEM1530 | 15.3 | A    | 后拉式钻尖 | SEM1910 | 19.1 | 2    |
| 后拉式钻尖 | SEM1540 | 15.4 | A    | 后拉式钻尖 | SEM1920 | 19.2 | 2    |
| 后拉式钻尖 | SEM1550 | 15.5 | A    | 后拉式钻尖 | SEM1930 | 19.3 | 2    |
| 后拉式钻尖 | SEM1560 | 15.6 | A    | 后拉式钻尖 | SEM1940 | 19.4 | 2    |
| 后拉式钻尖 | SEM1570 | 15.7 | A    | 后拉式钻尖 | SEM1950 | 19.5 | 2    |
| 后拉式钻尖 | SEM1580 | 15.8 | A    | 后拉式钻尖 | SEM1960 | 19.6 | 2    |
| 后拉式钻尖 | SEM1590 | 15.9 | 1    | 后拉式钻尖 | SEM1970 | 19.7 | 2    |
| 后拉式钻尖 | SEM1600 | 16.0 | 1    | 后拉式钻尖 | SEM1980 | 19.8 | 2    |
| 后拉式钻尖 | SEM1610 | 16.1 | 1    | 后拉式钻尖 | SEM1990 | 19.9 | 2    |
| 后拉式钻尖 | SEM1620 | 16.2 | 1    | 后拉式钻尖 | SEM2000 | 20.0 | 3    |



# SEM INSERTS

## SEM皇冠钻钻尖

### ◎ SEM刀片 · HM · AC7320-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM2010 | 20.1 | 3    |
| 后拉式钻尖 | SEM2020 | 20.2 | 3    |
| 后拉式钻尖 | SEM2030 | 20.3 | 3    |
| 后拉式钻尖 | SEM2040 | 20.4 | 3    |
| 后拉式钻尖 | SEM2050 | 20.5 | 3    |
| 后拉式钻尖 | SEM2060 | 20.6 | 3    |
| 后拉式钻尖 | SEM2070 | 20.7 | 3    |
| 后拉式钻尖 | SEM2080 | 20.8 | 3    |
| 后拉式钻尖 | SEM2090 | 20.9 | 3    |
| 后拉式钻尖 | SEM2100 | 21.0 | 3    |
| 后拉式钻尖 | SEM2110 | 21.1 | 3    |
| 后拉式钻尖 | SEM2120 | 21.2 | 3    |
| 后拉式钻尖 | SEM2130 | 21.3 | 3    |
| 后拉式钻尖 | SEM2140 | 21.4 | 3    |
| 后拉式钻尖 | SEM2150 | 21.5 | 3    |
| 后拉式钻尖 | SEM2160 | 21.6 | 3    |
| 后拉式钻尖 | SEM2170 | 21.7 | 3    |
| 后拉式钻尖 | SEM2180 | 21.8 | 3    |
| 后拉式钻尖 | SEM2190 | 21.9 | 3    |
| 后拉式钻尖 | SEM2200 | 22.0 | 3    |
| 后拉式钻尖 | SEM2210 | 22.1 | 4    |
| 后拉式钻尖 | SEM2220 | 22.2 | 4    |
| 后拉式钻尖 | SEM2230 | 22.3 | 4    |
| 后拉式钻尖 | SEM2240 | 22.4 | 4    |
| 后拉式钻尖 | SEM2250 | 22.5 | 4    |
| 后拉式钻尖 | SEM2260 | 22.6 | 4    |
| 后拉式钻尖 | SEM2270 | 22.7 | 4    |
| 后拉式钻尖 | SEM2280 | 22.8 | 4    |
| 后拉式钻尖 | SEM2290 | 22.9 | 4    |
| 后拉式钻尖 | SEM2300 | 23.0 | 4    |
| 后拉式钻尖 | SEM2310 | 23.1 | 4    |
| 后拉式钻尖 | SEM2320 | 23.2 | 4    |
| 后拉式钻尖 | SEM2330 | 23.3 | 4    |
| 后拉式钻尖 | SEM2340 | 23.4 | 4    |
| 后拉式钻尖 | SEM2350 | 23.5 | 4    |
| 后拉式钻尖 | SEM2360 | 23.6 | 4    |
| 后拉式钻尖 | SEM2370 | 23.7 | 4    |
| 后拉式钻尖 | SEM2380 | 23.8 | 4    |
| 后拉式钻尖 | SEM2390 | 23.9 | 4    |
| 后拉式钻尖 | SEM2400 | 24.0 | 4    |
| 后拉式钻尖 | SEM2410 | 24.1 | 5    |
| 后拉式钻尖 | SEM2420 | 24.2 | 5    |
| 后拉式钻尖 | SEM2430 | 24.3 | 5    |
| 后拉式钻尖 | SEM2440 | 24.4 | 5    |
| 后拉式钻尖 | SEM2450 | 24.5 | 5    |
| 后拉式钻尖 | SEM2460 | 24.6 | 5    |
| 后拉式钻尖 | SEM2470 | 24.7 | 5    |
| 后拉式钻尖 | SEM2480 | 24.8 | 5    |

| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM2490 | 24.9 | 5    |
| 后拉式钻尖 | SEM2500 | 25.0 | 5    |
| 后拉式钻尖 | SEM2510 | 25.1 | 5    |
| 后拉式钻尖 | SEM2520 | 25.2 | 5    |
| 后拉式钻尖 | SEM2530 | 25.3 | 5    |
| 后拉式钻尖 | SEM2540 | 25.4 | 5    |
| 后拉式钻尖 | SEM2550 | 25.5 | 5    |
| 后拉式钻尖 | SEM2560 | 25.6 | 5    |
| 后拉式钻尖 | SEM2570 | 25.7 | 5    |
| 后拉式钻尖 | SEM2580 | 25.8 | 5    |
| 后拉式钻尖 | SEM2590 | 25.9 | 5    |
| 后拉式钻尖 | SEM2600 | 26.0 | 5    |
| 后拉式钻尖 | SEM2610 | 26.1 | 6    |
| 后拉式钻尖 | SEM2620 | 26.2 | 6    |
| 后拉式钻尖 | SEM2630 | 26.3 | 6    |
| 后拉式钻尖 | SEM2640 | 26.4 | 6    |
| 后拉式钻尖 | SEM2650 | 26.5 | 6    |
| 后拉式钻尖 | SEM2660 | 26.6 | 6    |
| 后拉式钻尖 | SEM2670 | 26.7 | 6    |
| 后拉式钻尖 | SEM2680 | 26.8 | 6    |
| 后拉式钻尖 | SEM2690 | 26.9 | 6    |
| 后拉式钻尖 | SEM2700 | 27.0 | 6    |
| 后拉式钻尖 | SEM2710 | 27.1 | 6    |
| 后拉式钻尖 | SEM2720 | 27.2 | 6    |
| 后拉式钻尖 | SEM2730 | 27.3 | 6    |
| 后拉式钻尖 | SEM2740 | 27.4 | 6    |
| 后拉式钻尖 | SEM2750 | 27.5 | 6    |
| 后拉式钻尖 | SEM2760 | 27.6 | 6    |
| 后拉式钻尖 | SEM2770 | 27.7 | 6    |
| 后拉式钻尖 | SEM2780 | 27.8 | 6    |
| 后拉式钻尖 | SEM2790 | 27.9 | 6    |
| 后拉式钻尖 | SEM2800 | 28.0 | 6    |
| 后拉式钻尖 | SEM2810 | 28.1 | 7    |
| 后拉式钻尖 | SEM2820 | 28.2 | 7    |
| 后拉式钻尖 | SEM2830 | 28.3 | 7    |
| 后拉式钻尖 | SEM2840 | 28.4 | 7    |
| 后拉式钻尖 | SEM2850 | 28.5 | 7    |
| 后拉式钻尖 | SEM2860 | 28.6 | 7    |
| 后拉式钻尖 | SEM2870 | 28.7 | 7    |
| 后拉式钻尖 | SEM2880 | 28.8 | 7    |
| 后拉式钻尖 | SEM2890 | 28.9 | 7    |
| 后拉式钻尖 | SEM2900 | 29.0 | 7    |
| 后拉式钻尖 | SEM2910 | 29.1 | 7    |
| 后拉式钻尖 | SEM2920 | 29.2 | 7    |
| 后拉式钻尖 | SEM2930 | 29.3 | 7    |
| 后拉式钻尖 | SEM2940 | 29.4 | 7    |
| 后拉式钻尖 | SEM2950 | 29.5 | 7    |
| 后拉式钻尖 | SEM2960 | 29.6 | 7    |

# SEM INSERTS

## SEM皇冠钻钻尖

### ◎ SEM刀片 · HM · AC7320-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM2970 | 29.7 | 7    | 后拉式钻尖 | SEM3090 | 30.9 | 8    |
| 后拉式钻尖 | SEM2980 | 29.8 | 7    | 后拉式钻尖 | SEM3100 | 31.0 | 8    |
| 后拉式钻尖 | SEM2990 | 29.9 | 7    | 后拉式钻尖 | SEM3110 | 31.1 | 8    |
| 后拉式钻尖 | SEM3000 | 30.0 | 7    | 后拉式钻尖 | SEM3120 | 31.2 | 8    |
| 后拉式钻尖 | SEM3010 | 30.1 | 8    | 后拉式钻尖 | SEM3130 | 31.3 | 8    |
| 后拉式钻尖 | SEM3020 | 30.2 | 8    | 后拉式钻尖 | SEM3140 | 31.4 | 8    |
| 后拉式钻尖 | SEM3030 | 30.3 | 8    | 后拉式钻尖 | SEM3150 | 31.5 | 8    |
| 后拉式钻尖 | SEM3040 | 30.4 | 8    | 后拉式钻尖 | SEM3160 | 31.6 | 8    |
| 后拉式钻尖 | SEM3050 | 30.5 | 8    | 后拉式钻尖 | SEM3170 | 31.7 | 8    |
| 后拉式钻尖 | SEM3060 | 30.6 | 8    | 后拉式钻尖 | SEM3180 | 31.8 | 8    |
| 后拉式钻尖 | SEM3070 | 30.7 | 8    | 后拉式钻尖 | SEM3190 | 31.9 | 8    |
| 后拉式钻尖 | SEM3080 | 30.8 | 8    | 后拉式钻尖 | SEM3200 | 32.0 | 8    |

### ◎ 公差HZ · 公制

| D1公制    | 公差h8          |
|---------|---------------|
| 12.5-1  | +0.000/-0.027 |
| > 18-30 | +0.000/-0.033 |
| > 30-32 | +0.000/-0.039 |

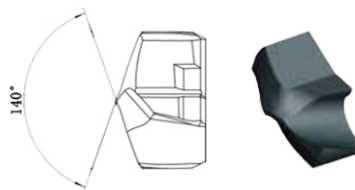
### ◎ 模塊化鑽硬質合金刀片 · SEM · HM槽型 · 材質 Ac7320 · 內冷 · 公制

| 材料分組 |           | 切削速度(VC)<br>範圍(m/min) |     |     | 公制           |           |           |           |           |           |
|------|-----------|-----------------------|-----|-----|--------------|-----------|-----------|-----------|-----------|-----------|
|      |           |                       |     |     | 根據直徑推薦進給率(f) |           |           |           |           |           |
|      |           | 最小值                   | 初始值 | 最大值 |              | 12.5      | 16.0      | 20.0      | 25.4      | 32.0      |
| M    | 奧氏體不銹鋼    | 30                    | 60  | 90  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |
|      | 奧氏體/鑄造不銹鋼 | 30                    | 50  | 90  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |
|      | 雙相不銹鋼     | 20                    | 40  | 60  | 毫米/轉         | 0.09-0.14 | 0.11-0.17 | 0.13-0.20 | 0.16-0.25 | 0.18-0.28 |

# SEM INSERTS

## SEM皇冠钻钻尖

SEM HQ ACPM45切削刀在軟鋼類材料加工中有出色的加工性能，極高的加工效率，和極好的耐磨性。  
ACPM45 材質，TiAlN 複合塗層韌性極佳的基體材料。改善了抗崩刃性能  
斷削好，壽命高，特別適合軟硬剛材質的加工應用。



### ◎ SEM刀片 · HQ · ACPM45



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM1250 | 12.5 | C    |
| 后拉式钻尖 | SEM1260 | 12.6 | C    |
| 后拉式钻尖 | SEM1270 | 12.7 | C    |
| 后拉式钻尖 | SEM1280 | 12.8 | C    |
| 后拉式钻尖 | SEM1290 | 12.9 | C    |
| 后拉式钻尖 | SEM1300 | 13.0 | C    |
| 后拉式钻尖 | SEM1310 | 13.1 | C    |
| 后拉式钻尖 | SEM1320 | 13.2 | C    |
| 后拉式钻尖 | SEM1330 | 13.3 | C    |
| 后拉式钻尖 | SEM1340 | 13.4 | C    |
| 后拉式钻尖 | SEM1350 | 13.5 | C    |
| 后拉式钻尖 | SEM1360 | 13.6 | B    |
| 后拉式钻尖 | SEM1370 | 13.7 | B    |
| 后拉式钻尖 | SEM1380 | 13.8 | B    |
| 后拉式钻尖 | SEM1390 | 13.9 | B    |
| 后拉式钻尖 | SEM1400 | 14.0 | B    |
| 后拉式钻尖 | SEM1410 | 14.1 | B    |
| 后拉式钻尖 | SEM1420 | 14.2 | B    |
| 后拉式钻尖 | SEM1430 | 14.3 | B    |
| 后拉式钻尖 | SEM1440 | 14.4 | B    |
| 后拉式钻尖 | SEM1450 | 14.5 | B    |
| 后拉式钻尖 | SEM1460 | 14.6 | A    |
| 后拉式钻尖 | SEM1470 | 14.7 | A    |
| 后拉式钻尖 | SEM1480 | 14.8 | A    |
| 后拉式钻尖 | SEM1490 | 14.9 | A    |
| 后拉式钻尖 | SEM1500 | 15.0 | A    |
| 后拉式钻尖 | SEM1510 | 15.1 | A    |
| 后拉式钻尖 | SEM1520 | 15.2 | A    |
| 后拉式钻尖 | SEM1530 | 15.3 | A    |
| 后拉式钻尖 | SEM1540 | 15.4 | A    |
| 后拉式钻尖 | SEM1550 | 15.5 | A    |
| 后拉式钻尖 | SEM1560 | 15.6 | A    |
| 后拉式钻尖 | SEM1570 | 15.7 | A    |
| 后拉式钻尖 | SEM1580 | 15.8 | A    |
| 后拉式钻尖 | SEM1590 | 15.9 | 1    |
| 后拉式钻尖 | SEM1600 | 16.0 | 1    |
| 后拉式钻尖 | SEM1610 | 16.1 | 1    |
| 后拉式钻尖 | SEM1620 | 16.2 | 1    |

| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|
| 后拉式钻尖 | SEM1630 | 16.3 | 1    |
| 后拉式钻尖 | SEM1640 | 16.4 | 1    |
| 后拉式钻尖 | SEM1650 | 16.5 | 1    |
| 后拉式钻尖 | SEM1660 | 16.6 | 1    |
| 后拉式钻尖 | SEM1670 | 16.7 | 1    |
| 后拉式钻尖 | SEM1680 | 16.8 | 1    |
| 后拉式钻尖 | SEM1690 | 16.9 | 1    |
| 后拉式钻尖 | SEM1700 | 17.0 | 1    |
| 后拉式钻尖 | SEM1710 | 17.1 | 1    |
| 后拉式钻尖 | SEM1720 | 17.2 | 1    |
| 后拉式钻尖 | SEM1730 | 17.3 | 1    |
| 后拉式钻尖 | SEM1740 | 17.4 | 1    |
| 后拉式钻尖 | SEM1750 | 17.5 | 1    |
| 后拉式钻尖 | SEM1760 | 17.6 | 1    |
| 后拉式钻尖 | SEM1770 | 17.7 | 1    |
| 后拉式钻尖 | SEM1780 | 17.8 | 1    |
| 后拉式钻尖 | SEM1790 | 17.9 | 1    |
| 后拉式钻尖 | SEM1800 | 18.0 | 1    |
| 后拉式钻尖 | SEM1810 | 18.1 | 2    |
| 后拉式钻尖 | SEM1820 | 18.2 | 2    |
| 后拉式钻尖 | SEM1830 | 18.3 | 2    |
| 后拉式钻尖 | SEM1840 | 18.4 | 2    |
| 后拉式钻尖 | SEM1850 | 18.5 | 2    |
| 后拉式钻尖 | SEM1860 | 18.6 | 2    |
| 后拉式钻尖 | SEM1870 | 18.7 | 2    |
| 后拉式钻尖 | SEM1880 | 18.8 | 2    |
| 后拉式钻尖 | SEM1890 | 18.9 | 2    |
| 后拉式钻尖 | SEM1900 | 19.0 | 2    |
| 后拉式钻尖 | SEM1910 | 19.1 | 2    |
| 后拉式钻尖 | SEM1920 | 19.2 | 2    |
| 后拉式钻尖 | SEM1930 | 19.3 | 2    |
| 后拉式钻尖 | SEM1940 | 19.4 | 2    |
| 后拉式钻尖 | SEM1950 | 19.5 | 2    |
| 后拉式钻尖 | SEM1960 | 19.6 | 2    |
| 后拉式钻尖 | SEM1970 | 19.7 | 2    |
| 后拉式钻尖 | SEM1980 | 19.8 | 2    |
| 后拉式钻尖 | SEM1990 | 19.9 | 2    |
| 后拉式钻尖 | SEM2000 | 20.0 | 3    |

# SEM INSERTS

## SEM皇冠钻钻尖

### ◎SEM刀片·HQ·ACPM45-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM2010 | 20.1 | 3    | 后拉式钻尖 | SEM2490 | 24.9 | 5    |
| 后拉式钻尖 | SEM2020 | 20.2 | 3    | 后拉式钻尖 | SEM2500 | 25.0 | 5    |
| 后拉式钻尖 | SEM2030 | 20.3 | 3    | 后拉式钻尖 | SEM2510 | 25.1 | 5    |
| 后拉式钻尖 | SEM2040 | 20.4 | 3    | 后拉式钻尖 | SEM2520 | 25.2 | 5    |
| 后拉式钻尖 | SEM2050 | 20.5 | 3    | 后拉式钻尖 | SEM2530 | 25.3 | 5    |
| 后拉式钻尖 | SEM2060 | 20.6 | 3    | 后拉式钻尖 | SEM2540 | 25.4 | 5    |
| 后拉式钻尖 | SEM2070 | 20.7 | 3    | 后拉式钻尖 | SEM2550 | 25.5 | 5    |
| 后拉式钻尖 | SEM2080 | 20.8 | 3    | 后拉式钻尖 | SEM2560 | 25.6 | 5    |
| 后拉式钻尖 | SEM2090 | 20.9 | 3    | 后拉式钻尖 | SEM2570 | 25.7 | 5    |
| 后拉式钻尖 | SEM2100 | 21.0 | 3    | 后拉式钻尖 | SEM2580 | 25.8 | 5    |
| 后拉式钻尖 | SEM2110 | 21.1 | 3    | 后拉式钻尖 | SEM2590 | 25.9 | 5    |
| 后拉式钻尖 | SEM2120 | 21.2 | 3    | 后拉式钻尖 | SEM2600 | 26.0 | 5    |
| 后拉式钻尖 | SEM2130 | 21.3 | 3    | 后拉式钻尖 | SEM2610 | 26.1 | 6    |
| 后拉式钻尖 | SEM2140 | 21.4 | 3    | 后拉式钻尖 | SEM2620 | 26.2 | 6    |
| 后拉式钻尖 | SEM2150 | 21.5 | 3    | 后拉式钻尖 | SEM2630 | 26.3 | 6    |
| 后拉式钻尖 | SEM2160 | 21.6 | 3    | 后拉式钻尖 | SEM2640 | 26.4 | 6    |
| 后拉式钻尖 | SEM2170 | 21.7 | 3    | 后拉式钻尖 | SEM2650 | 26.5 | 6    |
| 后拉式钻尖 | SEM2180 | 21.8 | 3    | 后拉式钻尖 | SEM2660 | 26.6 | 6    |
| 后拉式钻尖 | SEM2190 | 21.9 | 3    | 后拉式钻尖 | SEM2670 | 26.7 | 6    |
| 后拉式钻尖 | SEM2200 | 22.0 | 3    | 后拉式钻尖 | SEM2680 | 26.8 | 6    |
| 后拉式钻尖 | SEM2210 | 22.1 | 4    | 后拉式钻尖 | SEM2690 | 26.9 | 6    |
| 后拉式钻尖 | SEM2220 | 22.2 | 4    | 后拉式钻尖 | SEM2700 | 27.0 | 6    |
| 后拉式钻尖 | SEM2230 | 22.3 | 4    | 后拉式钻尖 | SEM2710 | 27.1 | 6    |
| 后拉式钻尖 | SEM2240 | 22.4 | 4    | 后拉式钻尖 | SEM2720 | 27.2 | 6    |
| 后拉式钻尖 | SEM2250 | 22.5 | 4    | 后拉式钻尖 | SEM2730 | 27.3 | 6    |
| 后拉式钻尖 | SEM2260 | 22.6 | 4    | 后拉式钻尖 | SEM2740 | 27.4 | 6    |
| 后拉式钻尖 | SEM2270 | 22.7 | 4    | 后拉式钻尖 | SEM2750 | 27.5 | 6    |
| 后拉式钻尖 | SEM2280 | 22.8 | 4    | 后拉式钻尖 | SEM2760 | 27.6 | 6    |
| 后拉式钻尖 | SEM2290 | 22.9 | 4    | 后拉式钻尖 | SEM2770 | 27.7 | 6    |
| 后拉式钻尖 | SEM2300 | 23.0 | 4    | 后拉式钻尖 | SEM2780 | 27.8 | 6    |
| 后拉式钻尖 | SEM2310 | 23.1 | 4    | 后拉式钻尖 | SEM2790 | 27.9 | 6    |
| 后拉式钻尖 | SEM2320 | 23.2 | 4    | 后拉式钻尖 | SEM2800 | 28.0 | 6    |
| 后拉式钻尖 | SEM2330 | 23.3 | 4    | 后拉式钻尖 | SEM2810 | 28.1 | 7    |
| 后拉式钻尖 | SEM2340 | 23.4 | 4    | 后拉式钻尖 | SEM2820 | 28.2 | 7    |
| 后拉式钻尖 | SEM2350 | 23.5 | 4    | 后拉式钻尖 | SEM2830 | 28.3 | 7    |
| 后拉式钻尖 | SEM2360 | 23.6 | 4    | 后拉式钻尖 | SEM2840 | 28.4 | 7    |
| 后拉式钻尖 | SEM2370 | 23.7 | 4    | 后拉式钻尖 | SEM2850 | 28.5 | 7    |
| 后拉式钻尖 | SEM2380 | 23.8 | 4    | 后拉式钻尖 | SEM2860 | 28.6 | 7    |
| 后拉式钻尖 | SEM2390 | 23.9 | 4    | 后拉式钻尖 | SEM2870 | 28.7 | 7    |
| 后拉式钻尖 | SEM2400 | 24.0 | 4    | 后拉式钻尖 | SEM2880 | 28.8 | 7    |
| 后拉式钻尖 | SEM2410 | 24.1 | 5    | 后拉式钻尖 | SEM2890 | 28.9 | 7    |
| 后拉式钻尖 | SEM2420 | 24.2 | 5    | 后拉式钻尖 | SEM2900 | 29.0 | 7    |
| 后拉式钻尖 | SEM2430 | 24.3 | 5    | 后拉式钻尖 | SEM2910 | 29.1 | 7    |
| 后拉式钻尖 | SEM2440 | 24.4 | 5    | 后拉式钻尖 | SEM2920 | 29.2 | 7    |
| 后拉式钻尖 | SEM2450 | 24.5 | 5    | 后拉式钻尖 | SEM2930 | 29.3 | 7    |
| 后拉式钻尖 | SEM2460 | 24.6 | 5    | 后拉式钻尖 | SEM2940 | 29.4 | 7    |
| 后拉式钻尖 | SEM2470 | 24.7 | 5    | 后拉式钻尖 | SEM2950 | 29.5 | 7    |
| 后拉式钻尖 | SEM2480 | 24.8 | 5    | 后拉式钻尖 | SEM2960 | 29.6 | 7    |

# SEM INSERTS

## SEM皇冠钻钻尖

### ◎ SEM刀片 · HQ · ACPM45-續



| 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 | 產品名稱  | 規格型號    | 切削直徑 | 尺寸刀座 |
|-------|---------|------|------|-------|---------|------|------|
| 后拉式钻尖 | SEM2970 | 29.7 | 7    | 后拉式钻尖 | SEM3090 | 30.9 | 8    |
| 后拉式钻尖 | SEM2980 | 29.8 | 7    | 后拉式钻尖 | SEM3100 | 31.0 | 8    |
| 后拉式钻尖 | SEM2990 | 29.9 | 7    | 后拉式钻尖 | SEM3110 | 31.1 | 8    |
| 后拉式钻尖 | SEM3000 | 30.0 | 7    | 后拉式钻尖 | SEM3120 | 31.2 | 8    |
| 后拉式钻尖 | SEM3010 | 30.1 | 8    | 后拉式钻尖 | SEM3130 | 31.3 | 8    |
| 后拉式钻尖 | SEM3020 | 30.2 | 8    | 后拉式钻尖 | SEM3140 | 31.4 | 8    |
| 后拉式钻尖 | SEM3030 | 30.3 | 8    | 后拉式钻尖 | SEM3150 | 31.5 | 8    |
| 后拉式钻尖 | SEM3040 | 30.4 | 8    | 后拉式钻尖 | SEM3160 | 31.6 | 8    |
| 后拉式钻尖 | SEM3050 | 30.5 | 8    | 后拉式钻尖 | SEM3170 | 31.7 | 8    |
| 后拉式钻尖 | SEM3060 | 30.6 | 8    | 后拉式钻尖 | SEM3180 | 31.8 | 8    |
| 后拉式钻尖 | SEM3070 | 30.7 | 8    | 后拉式钻尖 | SEM3190 | 31.9 | 8    |
| 后拉式钻尖 | SEM3080 | 30.8 | 8    | 后拉式钻尖 | SEM3200 | 32.0 | 8    |

### ◎ 公差HZ · 公制

| D1公制    | 公差h8          |
|---------|---------------|
| 12.5-1  | +0.000/-0.027 |
| > 18-30 | +0.000/-0.033 |
| > 30-32 | +0.000/-0.039 |

### ◎ 模塊化鑽硬質合金刀片 · SEM · HQ槽型 · 材質 ACPM45 · 內冷 · 公制

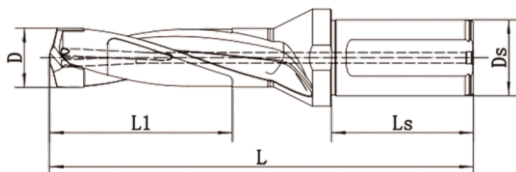
| 材料分組 |                  | 切削速度(VC)<br>範圍(m/min) |     |     | 公制           |           |           |           |           |           |
|------|------------------|-----------------------|-----|-----|--------------|-----------|-----------|-----------|-----------|-----------|
|      |                  |                       |     |     | 根據直徑推薦進給率(f) |           |           |           |           |           |
|      |                  | 最小值                   | 初始值 | 最大值 |              | 12.5      | 16.0      | 20.0      | 25.4      | 32.0      |
| P    | 低碳鋼              | 90                    | 100 | 110 | 毫米/轉         | 0.14-0.23 | 0.17-0.25 | 0.19-0.29 | 0.23-0.38 | 0.26-0.43 |
|      | 中碳鋼/高碳鋼          | 80                    | 90  | 100 | 毫米/轉         | 0.17-0.23 | 0.19-0.25 | 0.22-0.29 | 0.29-0.38 | 0.32-0.43 |
|      | 合金鋼/工具鋼          | 55                    | 65  | 75  | 毫米/轉         | 0.14-0.20 | 0.15-0.23 | 0.17-0.25 | 0.23-0.34 | 0.26-0.38 |
|      | 合金鋼/工具鋼          | 50                    | 65  | 70  | 毫米/轉         | 0.11-0.20 | 0.13-0.23 | 0.14-0.25 | 0.18-0.34 | 0.21-0.38 |
|      | 奧氏體/鑄造不銹鋼        | 45                    | 50  | 60  | 毫米/轉         | 0.08-0.11 | 0.10-0.13 | 0.11-0.14 | 0.14-0.18 | 0.15-0.20 |
|      | 高強度鐵素體<br>馬氏體不銹鋼 | 45                    | 55  | 65  | 毫米/轉         | 0.11-0.17 | 0.13-0.18 | 0.14-0.20 | 0.18-0.28 | 0.21-0.31 |



# SEM DRILL 3D

## SEM皇冠钻钻杆 3 D

所有鑽體應使用指定型號刀片。  
了解備選產品，請參看刀片配合表。  
與鑽頭產品一同發送中心鎖緊螺釘、扳手。



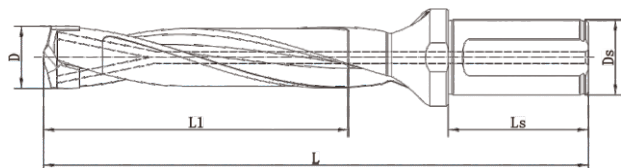
### ◎ SEM · WD柄 · 3xD · 公制

| <br>3 x D型號 | D/mm  |       | L/mm | L1/mm | Ls/mm | Ds/mm | 刀座尺寸 | <br>扳手 | <br>鎖緊螺絲 |
|------------------------------------------------------------------------------------------------|-------|-------|------|-------|-------|-------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                                                                | MIN   | MAX   |      |       |       |       |      |                                                                                             |                                                                                               |
| SEM125R3WD16M                                                                                  | 12.5  | 13    | 109  | 39    | 45    | 16    | C    | T5x160                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM130R3WD16M                                                                                  | 13    | 13.5  | 109  | 39    | 45    | 16    | C    | T5x160                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM136R3WD16M                                                                                  | 13.51 | 14    | 111  | 42    | 45    | 16    | B    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM140R3WD16M                                                                                  | 14    | 14.5  | 111  | 42    | 45    | 16    | B    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM146R3WD16M                                                                                  | 14.51 | 15    | 126  | 46    | 50    | 20    | A    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM150R3WD20M                                                                                  | 15    | 15.87 | 126  | 46    | 50    | 20    | A    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM160R3WD20M                                                                                  | 15.88 | 17    | 129  | 49    | 50    | 20    | 1    | T7x185                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM170R3WD20M                                                                                  | 17    | 18    | 132  | 52    | 50    | 20    | 1    | T7x185                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM181R3WD25M                                                                                  | 18.01 | 19    | 147  | 55    | 56    | 25    | 2    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM190R3WD25M                                                                                  | 19    | 20    | 151  | 58    | 56    | 25    | 2    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM200R3WD25M                                                                                  | 20    | 21    | 154  | 61    | 56    | 25    | 3    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM210R3WD25M                                                                                  | 21    | 22    | 157  | 64    | 56    | 25    | 3    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM221R3WD25M                                                                                  | 22.01 | 23    | 161  | 68    | 56    | 25    | 4    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM230R3WD25M                                                                                  | 23    | 24    | 163  | 70    | 56    | 25    | 4    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM241R3WD32M                                                                                  | 24.01 | 25    | 176  | 73    | 60    | 32    | 5    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM250R3WD32M                                                                                  | 25    | 26    | 179  | 76    | 60    | 32    | 5    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM261R3WD32M                                                                                  | 26.01 | 27    | 182  | 79    | 60    | 32    | 6    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM270R3WD32M                                                                                  | 27    | 28    | 184  | 81    | 60    | 32    | 6    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM281R3WD32M                                                                                  | 28.01 | 29    | 189  | 86    | 60    | 32    | 7    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM290R3WD32M                                                                                  | 29    | 30    | 192  | 89    | 60    | 32    | 7    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM301R3WD32M                                                                                  | 30.01 | 31    | 195  | 92    | 60    | 32    | 8    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM310R3WD32M                                                                                  | 31    | 32    | 198  | 95    | 60    | 32    | 8    | H3x265                                                                                      | M6/M5x28                                                                                      |

# SEM DRILL 5D

## SEM皇冠钻钻杆 5 D

所有鑽體應使用指定型號刀片。  
了解備選產品，請參看刀片配合表。  
與鑽頭產品一同發送中心鎖緊螺釘、扳手。



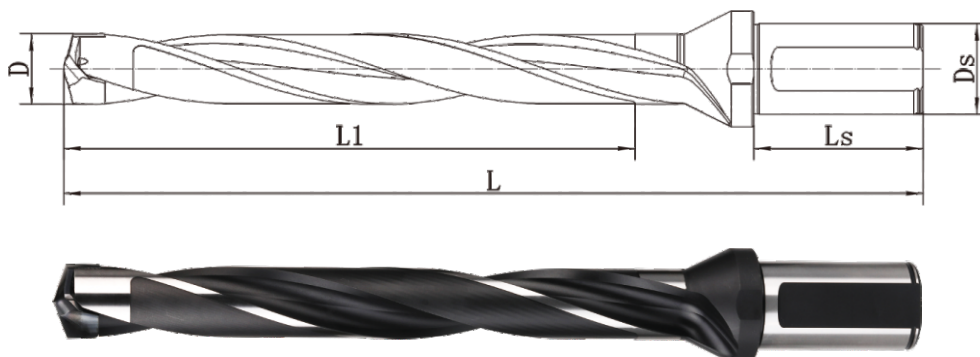
### ◎ SEM · WD柄 · 5xD · 公制

| <br>5 x D型號 | D/mm  |       | L/mm | L1/mm | Ls/mm | Ds/mm | 刀座尺寸 | <br>扳手 | <br>鎖緊螺絲 |
|------------------------------------------------------------------------------------------------|-------|-------|------|-------|-------|-------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                                                                | MIN   | MAX   |      |       |       |       |      |                                                                                             |                                                                                               |
| SEM125R5WD16M                                                                                  | 12.5  | 13    | 133  | 65    | 45    | 16    | C    | T5x160                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM130R5WD16M                                                                                  | 13    | 13.5  | 133  | 65    | 45    | 16    | C    | T5x160                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM136R5WD16M                                                                                  | 13.51 | 14    | 138  | 70    | 45    | 16    | B    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM140R5WD16M                                                                                  | 14    | 14.5  | 138  | 70    | 45    | 16    | B    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM146R5WD16M                                                                                  | 14.51 | 15    | 156  | 76    | 50    | 20    | A    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM150R5WD20M                                                                                  | 15    | 15.87 | 156  | 76    | 50    | 20    | A    | T6x160                                                                                      | M3/M2.5x14                                                                                    |
| SEM160R5WD20M                                                                                  | 15.88 | 17    | 161  | 81    | 50    | 20    | 1    | T7x185                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM170R5WD20M                                                                                  | 17    | 18    | 166  | 86    | 50    | 20    | 1    | T7x185                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM181R5WD25M                                                                                  | 18.01 | 19    | 183  | 91    | 56    | 25    | 2    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM190R5WD25M                                                                                  | 19    | 20    | 189  | 96    | 56    | 25    | 2    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM200R5WD25M                                                                                  | 20    | 21    | 194  | 101   | 56    | 25    | 3    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM210R5WD25M                                                                                  | 21    | 22    | 199  | 106   | 56    | 25    | 3    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM221R5WD25M                                                                                  | 22.01 | 23    | 205  | 112   | 56    | 25    | 4    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM230R5WD25M                                                                                  | 23    | 24    | 209  | 116   | 56    | 25    | 4    | H2x210                                                                                      | M4/M3x19                                                                                      |
| SEM241R5WD32M                                                                                  | 24.01 | 25    | 224  | 121   | 60    | 32    | 5    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM250R5WD32M                                                                                  | 25    | 26    | 229  | 126   | 60    | 32    | 5    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM261R5WD32M                                                                                  | 26.01 | 27    | 234  | 131   | 60    | 32    | 6    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM270R5WD32M                                                                                  | 27    | 28    | 238  | 135   | 60    | 32    | 6    | H2.5x240                                                                                    | M5/M4x23                                                                                      |
| SEM281R5WD32M                                                                                  | 28.01 | 29    | 245  | 142   | 60    | 32    | 7    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM290R5WD32M                                                                                  | 29    | 30    | 250  | 147   | 60    | 32    | 7    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM301R5WD32M                                                                                  | 30.01 | 31    | 256  | 153   | 60    | 32    | 8    | H3x265                                                                                      | M6/M5x28                                                                                      |
| SEM310R5WD32M                                                                                  | 31    | 32    | 260  | 157   | 60    | 32    | 8    | H3x265                                                                                      | M6/M5x28                                                                                      |

# SEM DRILL 8D

## SEM皇冠钻钻杆 8 D

所有鑽體應使用指定型號刀片。  
了解備選產品，請參看刀片配合表。  
與鑽頭產品一同發送中心鎖緊螺釘、扳手。



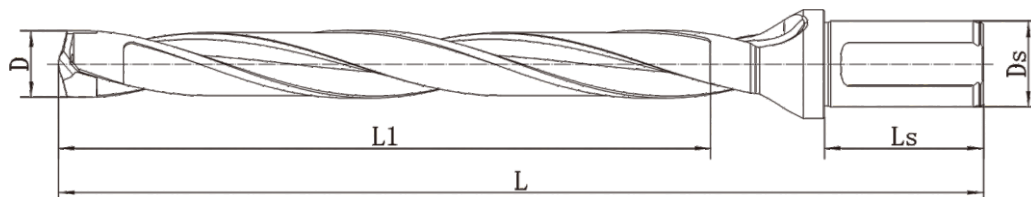
### ◎ SEM · WD柄 · 8xD · 公制

| <br>8 x D型號 | D/mm  |       | L/mm | L1/mm | Ls/mm | Ds/mm | 刀座尺寸 | <br>扳手 | <br>鎖緊螺絲 |
|------------------------------------------------------------------------------------------------|-------|-------|------|-------|-------|-------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                                                                | MIN   | MAX   |      |       |       |       |      |                                                                                             |                                                                                               |
| SEM125R8WD16M                                                                                  | 12.5  | 13    | 172  | 104   | 45    | 16    | C    | T5x190                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM130R8WD16M                                                                                  | 13    | 13.5  | 172  | 104   | 45    | 16    | C    | T5x190                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM136R8WD16M                                                                                  | 13.51 | 14    | 180  | 112   | 45    | 16    | B    | T6x190                                                                                      | M3/M2.5x14                                                                                    |
| SEM140R8WD16M                                                                                  | 14    | 14.5  | 180  | 112   | 45    | 16    | B    | T6x190                                                                                      | M3/M2.5x14                                                                                    |
| SEM146R8WD16M                                                                                  | 14.51 | 15    | 201  | 121   | 50    | 20    | A    | T6x190                                                                                      | M3/M2.5x14                                                                                    |
| SEM150R8WD20M                                                                                  | 15    | 15.87 | 201  | 121   | 50    | 20    | A    | T6x190                                                                                      | M3/M2.5x14                                                                                    |
| SEM160R8WD20M                                                                                  | 15.88 | 17    | 209  | 129   | 50    | 20    | 1    | T7x225                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM170R8WD20M                                                                                  | 17    | 18    | 217  | 137   | 50    | 20    | 1    | T7x225                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM181R8WD25M                                                                                  | 18.01 | 19    | 237  | 145   | 56    | 25    | 2    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM190R8WD25M                                                                                  | 19    | 20    | 246  | 153   | 56    | 25    | 2    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM200R8WD25M                                                                                  | 20    | 21    | 254  | 161   | 56    | 25    | 3    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM210R8WD25M                                                                                  | 21    | 22    | 262  | 169   | 56    | 25    | 3    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM221R8WD25M                                                                                  | 22.01 | 23    | 270  | 177   | 56    | 25    | 4    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM230R8WD25M                                                                                  | 23    | 24    | 278  | 185   | 56    | 25    | 4    | H2x260                                                                                      | M4/M3x19                                                                                      |
| SEM241R8WD32M                                                                                  | 24.01 | 25    | 296  | 193   | 60    | 32    | 5    | H2.5x295                                                                                    | M5/M4x23                                                                                      |
| SEM250R8WD32M                                                                                  | 25    | 26    | 304  | 201   | 60    | 32    | 5    | H2.5x295                                                                                    | M5/M4x23                                                                                      |
| SEM261R8WD32M                                                                                  | 26.01 | 27    | 312  | 209   | 60    | 32    | 6    | H2.5x295                                                                                    | M5/M4x23                                                                                      |
| SEM270R8WD32M                                                                                  | 27    | 28    | 319  | 216   | 60    | 32    | 6    | H2.5x295                                                                                    | M5/M4x23                                                                                      |
| SEM281R8WD32M                                                                                  | 28.01 | 29    | 329  | 226   | 60    | 32    | 7    | H3x330                                                                                      | M6/M5x28                                                                                      |
| SEM290R8WD32M                                                                                  | 29    | 30    | 337  | 234   | 60    | 32    | 7    | H3x330                                                                                      | M6/M5x28                                                                                      |
| SEM301R8WD32M                                                                                  | 30.01 | 31    | 345  | 242   | 60    | 32    | 8    | H3x330                                                                                      | M6/M5x28                                                                                      |
| SEM310R8WD32M                                                                                  | 31    | 32    | 353  | 250   | 60    | 32    | 8    | H3x330                                                                                      | M6/M5x28                                                                                      |

# SEM DRILL 10D

## SEM皇冠钻钻杆 10 D

所有鑽體應使用指定型號刀片。  
了解備選產品，請參看刀片配合表。  
與鑽頭產品一同發送中心鎖緊螺釘、扳手。

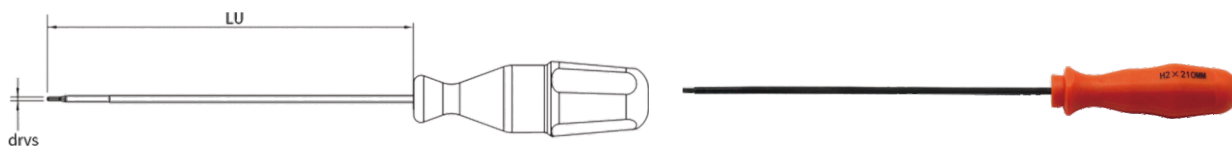


◎ SEM · WD柄 · 10xD · 公制

| <br>10 x D型號 | D/mm  |       | L/mm | L1/mm | Ls/mm | Ds/mm | 刀座尺寸 | <br>扳手 | <br>鎖緊螺絲 |
|-------------------------------------------------------------------------------------------------|-------|-------|------|-------|-------|-------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                                                                 | MIN   | MAX   |      |       |       |       |      |                                                                                             |                                                                                               |
| SEM125R5WD16M                                                                                   | 12.5  | 13    | 266  | 130   | 45    | 16    | C    | T5x290                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM130R5WD16M                                                                                   | 13    | 13.5  | 266  | 130   | 45    | 16    | C    | T5x290                                                                                      | M2.5/M2.5x13                                                                                  |
| SEM136R5WD16M                                                                                   | 13.51 | 14    | 276  | 140   | 45    | 16    | B    | T6x290                                                                                      | M3/M2.5x14                                                                                    |
| SEM140R5WD16M                                                                                   | 14    | 14.5  | 276  | 140   | 45    | 16    | B    | T6x290                                                                                      | M3/M2.5x14                                                                                    |
| SEM146R5WD16M                                                                                   | 14.51 | 15    | 312  | 152   | 50    | 20    | A    | T6x290                                                                                      | M3/M2.5x14                                                                                    |
| SEM150R5WD20M                                                                                   | 15    | 15.87 | 312  | 152   | 50    | 20    | A    | T6x290                                                                                      | M3/M2.5x14                                                                                    |
| SEM160R5WD20M                                                                                   | 15.88 | 17    | 322  | 162   | 50    | 20    | 1    | T7x300                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM170R5WD20M                                                                                   | 17    | 18    | 332  | 172   | 50    | 20    | 1    | T7x300                                                                                      | M3.5/M2.5x16                                                                                  |
| SEM181R5WD25M                                                                                   | 18.01 | 19    | 366  | 182   | 56    | 25    | 2    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM190R5WD25M                                                                                   | 19    | 20    | 378  | 192   | 56    | 25    | 2    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM200R5WD25M                                                                                   | 20    | 21    | 388  | 202   | 56    | 25    | 3    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM210R5WD25M                                                                                   | 21    | 22    | 398  | 212   | 56    | 25    | 3    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM221R5WD25M                                                                                   | 22.01 | 23    | 410  | 224   | 56    | 25    | 4    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM230R5WD25M                                                                                   | 23    | 24    | 418  | 232   | 56    | 25    | 4    | H2x345                                                                                      | M4/M3x19                                                                                      |
| SEM241R5WD32M                                                                                   | 24.01 | 25    | 448  | 242   | 60    | 32    | 5    | H2.5x395                                                                                    | M5/M4x23                                                                                      |
| SEM250R5WD32M                                                                                   | 25    | 26    | 458  | 252   | 60    | 32    | 5    | H2.5x395                                                                                    | M5/M4x23                                                                                      |
| SEM261R5WD32M                                                                                   | 26.01 | 27    | 468  | 262   | 60    | 32    | 6    | H2.5x395                                                                                    | M5/M4x23                                                                                      |
| SEM270R5WD32M                                                                                   | 27    | 28    | 476  | 270   | 60    | 32    | 6    | H2.5x395                                                                                    | M5/M4x23                                                                                      |
| SEM281R5WD32M                                                                                   | 28.01 | 29    | 490  | 284   | 60    | 32    | 7    | H3x440                                                                                      | M6/M5x28                                                                                      |
| SEM290R5WD32M                                                                                   | 29    | 30    | 500  | 294   | 60    | 32    | 7    | H3x440                                                                                      | M6/M5x28                                                                                      |
| SEM301R5WD32M                                                                                   | 30.01 | 31    | 512  | 306   | 60    | 32    | 8    | H3x440                                                                                      | M6/M5x28                                                                                      |
| SEM310R5WD32M                                                                                   | 31    | 32    | 520  | 314   | 60    | 32    | 8    | H3x440                                                                                      | M6/M5x28                                                                                      |

# SEM DRILL ACCESSORIES

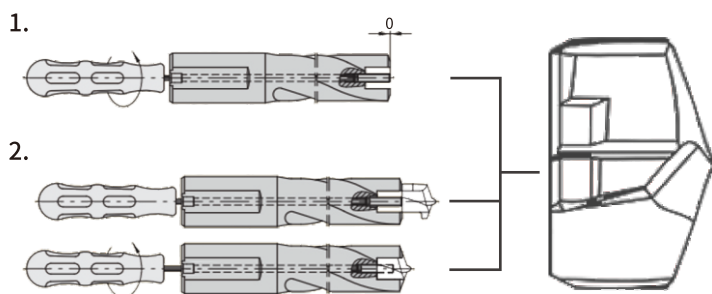
## SEM皇冠钻配件



### ◎ SEM · 扳手

| 扳手       | 鎖緊螺絲         | drvs  | Lu     |
|----------|--------------|-------|--------|
| T5x160   | M2.5/M2.5x13 | T5    | 160.00 |
| T5x190   | M2.5/M2.5x13 | T5    | 190.00 |
| T5x290   | M2.5/M2.5x13 | T5    | 290.00 |
| T6x160   | M3/M2.5x14   | T6    | 160.00 |
| T6x190   | M3/M2.5x14   | T6    | 190.00 |
| T6x290   | M3/M2.5x14   | T6    | 290.00 |
| T7x185   | M3.5/M2.5x16 | T7    | 185.00 |
| T7x225   | M3.5/M2.5x16 | T7    | 225.00 |
| T7x300   | M3.5/M2.5x16 | T7    | 300.00 |
| H2x210   | M4/M3x19     | 2mm   | 210.00 |
| H2x260   | M4/M3x19     | 2mm   | 260.00 |
| H2x345   | M4/M3x19     | 2mm   | 345.00 |
| H2.5x240 | M5/M4x23     | 2.5mm | 240.00 |
| H2.5x295 | M5/M4x23     | 2.5mm | 295.00 |
| H2.5x395 | M5/M4x23     | 2.5mm | 395.00 |
| H3x265   | M6/M5x28     | 3mm   | 265.00 |
| H3x330   | M6/M5x28     | 3mm   | 330.00 |
| H3x440   | M6/M5x28     | 3mm   | 440.00 |

### ◎ 安裝刀片



- 1-使用螺絲刀對螺紋銷進行設置：  
安裝時刀片應對齊鑽頭面高度。
- 2-使用螺絲刀對刀片進行緊固，將  
其穩固地定位於刀片座內。

更換刀片時，逆時針轉動夾持螺  
釘，直至刀片鬆開。

### ◎ 損壞螺紋銷的維修

如果中心螺紋銷損壞，可以在將其與刀體分離後去除。進行這個操作時，可對刀體上刀座下面進行鑽孔。然後可以去除刀片和螺紋銷。

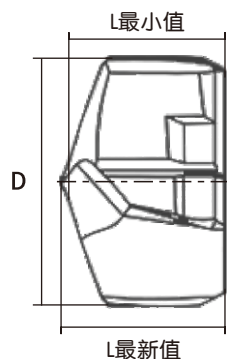
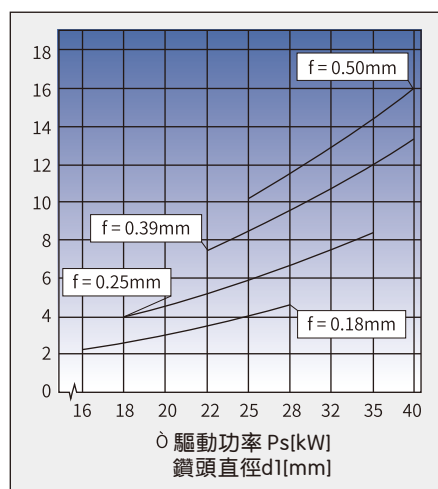
（注：對於沒有聯接銷的刀片，在安裝過程中精確定位時應避免卡滯）



# SEM DRILL CUTTING CONDITION

## SEM皇冠钻加工参数

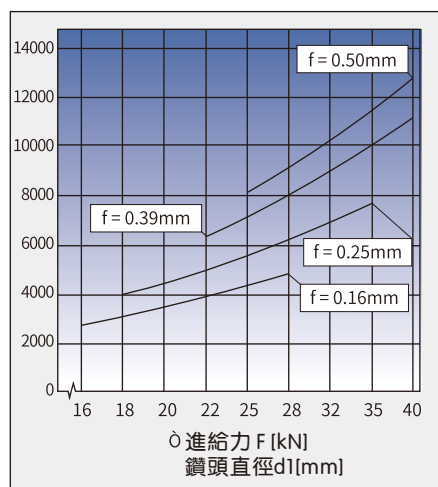
### ◎ 驅動功率 (KW)



### ◎ 建議采用以下冷却壓力参数：

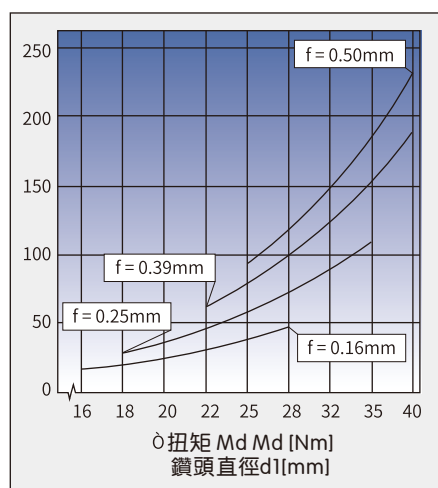
| 相對鑽孔深度 | 冷却劑壓力   |
|--------|---------|
| 3 x D  | 8 bars  |
| 5 x D  | 12 bars |
| 8 x D  | 20 bars |
| 10 x D | 30 bars |

### ◎ 進給力 (KN)



| 刀片<br>安裝座尺寸 | 直徑範圍D<br>(mm) | L最小值<br>(mm) | L最新值<br>(mm) |
|-------------|---------------|--------------|--------------|
| C           | 12.50-13.50   | 8.5          | 9.6          |
| B           | 13.51-14.50   | 8.9          | 10.1         |
| A           | 14.51-15.89   | 9.4          | 10.6         |
| 1           | 15.90-18.00   | 10.3         | 11.6         |
| 2           | 18.01-19.99   | 11.2         | 12.6         |
| 3           | 20.00-22.00   | 12.1         | 13.6         |
| 4           | 22.01-24.00   | 13.0         | 14.6         |
| 5           | 24.01-26.00   | 13.9         | 15.6         |
| 6           | 26.01-28.00   | 14.8         | 16.6         |
| 7           | 28.01-30.00   | 15.7         | 17.6         |
| 8           | 30.01-32.00   | 16.6         | 18.6         |

### ◎ 扭矩 (Nm)



◀注：左側圖表作為確定驅動功率、進給力、以及扭矩參數使用。它們是根據對切削材料分組6中的回火鋼材料在加工過程中的切削力測量而得出的。  
抗拉強度： $R_m = 600 \text{ N/mm}^2$ 。  
採用的基礎切削速度為： $v_c = 80 \text{ m/min}$ 。



# YLMD MAX DRILL

## YLMD 帶定心大直径快速钻

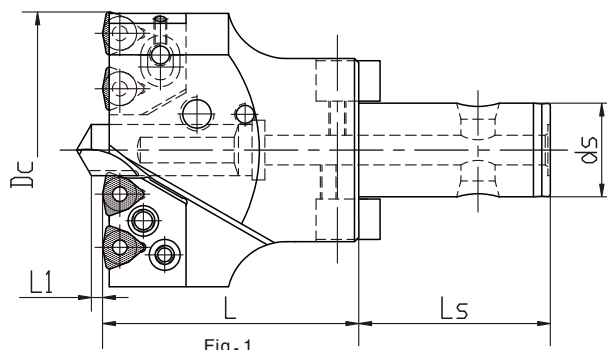
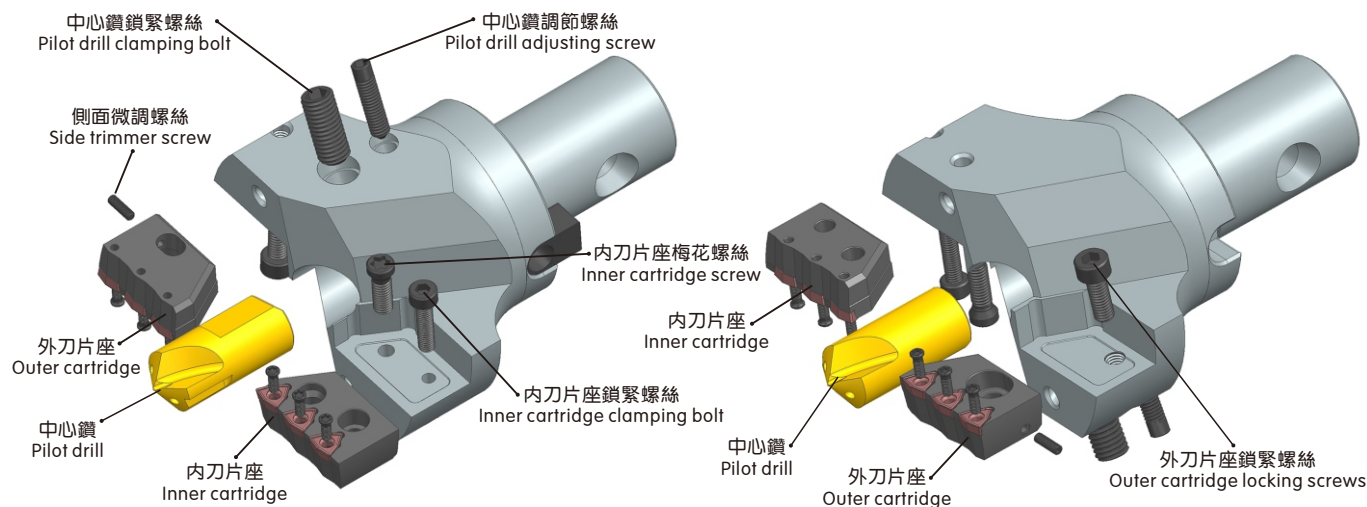


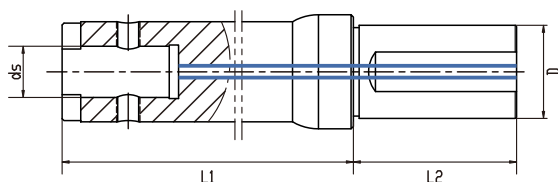
Fig. 1

| 型號<br>Specification/Item | 尺寸 Size |    |    |    |     | 內刀片座(螺絲) |       | 外刀片座(螺絲) |       | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 定位塊/螺絲 |       | 中心鑽<br>Pilot Drill | 中心鑽(螺絲) |       |
|--------------------------|---------|----|----|----|-----|----------|-------|----------|-------|----------------|-------------|--------------|--------|-------|--------------------|---------|-------|
|                          | Dc      | ds | Ls | L  | L1  | 鎖緊       | 梅花    | 鎖緊       | 調節    |                |             |              | 型號     | 鎖緊    |                    | 鎖緊      | 調節    |
| YLMD-045050-C16          | 45-50   | 16 | 40 | 55 | 1.6 | /        | M5*12 | M5*18    | M3*6  | WC..040208     | M2.5*6      | T8           | FMB22  | M4*12 | PLD1035            | M8*20   | M5*20 |
| YLMD-050055-C16          | 50-55   | 16 | 40 | 55 | 1.6 | /        | M5*12 | M5*18    | M3*6  |                |             |              | FMB22  | M4*12 |                    | M8*20   | M5*20 |
| YLMD-055060-C22          | 55-60   | 22 | 45 | 60 | 1.6 | /        | M5*12 | M5*18    | M3*6  |                |             |              | FMB22  | M4*12 | PLD1238            | M8*20   | M5*20 |
| YLMD-060065-C22          | 60-65   | 22 | 45 | 60 | 1.8 | M4*16    | M5*16 | M5*18    | M3*6  | WC..050308     | M3*7        | T8           | FMB22  | M4*12 |                    | M8*20   | M5*20 |
| YLMD-065070-C22          | 65-70   | 22 | 45 | 60 | 1.8 | M4*16    | M5*16 | M5*18    | M3*6  |                |             |              | FMB22  | M4*12 |                    | M8*20   | M5*20 |
| YLMD-070075-C22          | 70-75   | 22 | 45 | 60 | 1.8 | M4*16    | M5*16 | M5*18    | M3*6  |                |             |              | FMB22  | M4*12 |                    | M8*20   | M5*20 |
| YLMD-075080-C28          | 75-80   | 28 | 50 | 65 | 2.2 | M5*18    | M6*16 | M6*20    | M3*8  | WC..06T308     | M3.5*8.5    | T15          | FMB22  | M4*12 | PLD1645            | M10*20  | M6*20 |
| YLMD-080085-C28          | 80-85   | 28 | 50 | 65 | 2.2 | M5*18    | M6*16 | M6*20    | M3*8  |                |             |              | FMB22  | M4*12 |                    | M10*20  | M6*20 |
| YLMD-085090-C28          | 85-90   | 28 | 50 | 65 | 2.2 | M5*18    | M6*16 | M6*20    | M3*8  |                |             |              | FMB22  | M4*12 |                    | M10*20  | M6*20 |
| YLMD-090095-C28          | 90-95   | 28 | 50 | 65 | 2.2 | M5*18    | M6*16 | M6*20    | M3*8  | WC..050308     | M3*7        | T8           | FMB22  | M4*12 | PLD1645            | M10*20  | M6*20 |
| YLMD-095100-C28          | 95-100  | 28 | 50 | 65 | 2.2 | M5*18    | M6*16 | M6*20    | M3*8  |                |             |              | FMB22  | M4*12 |                    | M10*20  | M6*20 |
| YLMD-100105-C36          | 100-105 | 36 | 55 | 70 | 2.4 | M5*18    | M6*16 | M6*20    | M3*8  |                |             |              | FMB27  | M5*16 | PLD2045            | M12*20  | M8*20 |
| YLMD-105110-C36          | 105-110 | 36 | 55 | 70 | 2.4 | M5*18    | M6*16 | M6*20    | M3*8  | WC..06T308     | M3.5*8.5    | T15          | FMB27  | M5*16 |                    | M12*20  | M8*20 |
| YLMD-110115-C36          | 110-115 | 36 | 55 | 70 | 2.4 | M5*18    | M6*16 | M6*20    | M3*8  |                |             |              | FMB27  | M5*16 |                    | M12*20  | M8*20 |
| YLMD-115120-C40          | 115-120 | 40 | 60 | 76 | 2.4 | M5*18    | M6*16 | M6*20    | M3*10 | WC..080412     | M4*10       | T15          | FMB32  | M6*16 | PLD2556            | M12*20  | M8*20 |
| YLMD-120125-C40          | 120-125 | 40 | 60 | 76 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB32  | M6*16 |                    | M12*20  | M8*20 |
| YLMD-125130-C40          | 125-130 | 40 | 60 | 76 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB32  | M6*16 |                    | M12*20  | M8*20 |
| YLMD-130135-C40          | 130-135 | 40 | 60 | 76 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 | WC..080412     | M4*10       | T15          | FMB32  | M6*16 | PLD2556            | M12*20  | M8*20 |
| YLMD-135140-C40          | 135-140 | 40 | 60 | 76 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB32  | M6*16 |                    | M12*20  | M8*20 |
| YLMD-140150-C50          | 140-150 | 50 | 60 | 98 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB40  | M6*16 |                    | M12*20  | M8*20 |
| YLMD-150160-C50          | 150-160 | 50 | 60 | 98 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 | WC..080412     | M4*10       | T15          | FMB40  | M6*16 | PLD2556            | M12*20  | M8*20 |
| YLMD-160170-C50          | 160-170 | 50 | 60 | 98 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB40  | M6*16 |                    | M12*20  | M8*20 |
| YLMD-170180-C50          | 170-180 | 50 | 60 | 98 | 3.2 | M5*18    | M6*16 | M6*20    | M3*10 |                |             |              | FMB40  | M6*16 |                    | M12*20  | M8*20 |



# YLMD HOLDER & PILOT DRILL

## YLMD刀柄&中心钻



| 型號<br>Specification/Item | 數據 Data |    |     |    |
|--------------------------|---------|----|-----|----|
|                          | D       | L2 | L1  | ds |
| C40-D16-125              | 40      | 70 | 125 | 16 |
| C40-D16-165              | 40      | 70 | 165 | 16 |
| C40-D16-205              | 40      | 70 | 205 | 16 |
| C40-D22-125              | 40      | 70 | 125 | 22 |
| C40-D22-165              | 40      | 70 | 165 | 22 |
| C40-D22-205              | 40      | 70 | 205 | 22 |
| C40-D22-255              | 40      | 70 | 255 | 22 |
| C40-D22-305              | 40      | 70 | 305 | 22 |
| C40-D22-355              | 40      | 70 | 355 | 22 |
| C40-D28-125              | 40      | 70 | 125 | 28 |
| C40-D28-165              | 40      | 70 | 165 | 28 |
| C40-D28-205              | 40      | 70 | 205 | 28 |
| C40-D28-255              | 40      | 70 | 255 | 28 |
| C40-D28-305              | 40      | 70 | 305 | 28 |
| C40-D28-355              | 40      | 70 | 355 | 28 |
| C40-D28-405              | 40      | 70 | 405 | 28 |
| C40-D36-125              | 40      | 70 | 125 | 36 |
| C40-D36-165              | 40      | 70 | 165 | 36 |
| C40-D36-205              | 40      | 70 | 205 | 36 |

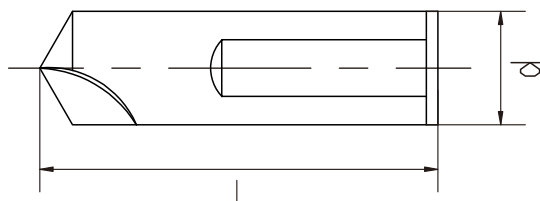
| 型號<br>Specification/Item | 數據 Data |    |     |    |
|--------------------------|---------|----|-----|----|
|                          | D       | L2 | L1  | ds |
| C40-D36-255              | 40      | 70 | 255 | 36 |
| C40-D36-305              | 40      | 70 | 305 | 36 |
| C40-D36-355              | 40      | 70 | 355 | 36 |
| C40-D36-405              | 40      | 70 | 405 | 36 |
| C50-D40-125              | 50      | 80 | 125 | 40 |
| C50-D40-165              | 50      | 80 | 165 | 40 |
| C50-D40-205              | 50      | 80 | 205 | 40 |
| C50-D40-255              | 50      | 80 | 255 | 40 |
| C50-D40-305              | 50      | 80 | 305 | 40 |
| C50-D40-355              | 50      | 80 | 355 | 40 |
| C50-D40-405              | 50      | 80 | 405 | 40 |
| C50-D50-125              | 50      | 80 | 125 | 50 |
| C50-D50-165              | 50      | 80 | 165 | 50 |
| C50-D50-205              | 50      | 80 | 205 | 50 |
| C50-D50-255              | 50      | 80 | 255 | 50 |
| C50-D50-305              | 50      | 80 | 305 | 50 |
| C50-D50-355              | 50      | 80 | 355 | 50 |
| C50-D50-405              | 50      | 80 | 405 | 50 |

▲ 使用時要堵住螺紋孔，防止漏水。  
使用內冷時，請用堵頭堵住出水孔。

Plug the thread hole when using to prevent water leakage. When using internal cooling, plug the water outlet hole with a plug



### ◎ 中心鑽 PILOT DRILL



### ◎ The hole tolerance of U Drill

| 型號<br>Specification/Item | 數據 Data |    |
|--------------------------|---------|----|
|                          | D       | L  |
| PLD-0620                 | 06      | 20 |
| PLD-0825                 | 08      | 25 |
| PLD-1035                 | 10      | 35 |
| PLD-1238                 | 12      | 38 |
| PLD-1645                 | 16      | 45 |
| PLD-2045                 | 20      | 45 |
| PLD-2556                 | 25      | 56 |

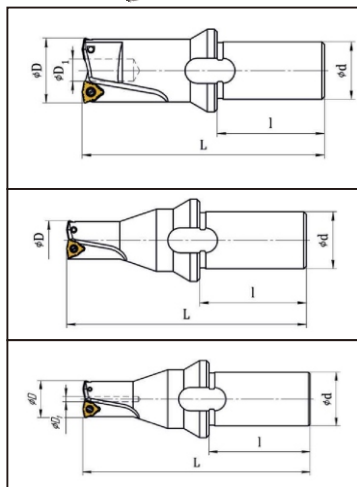




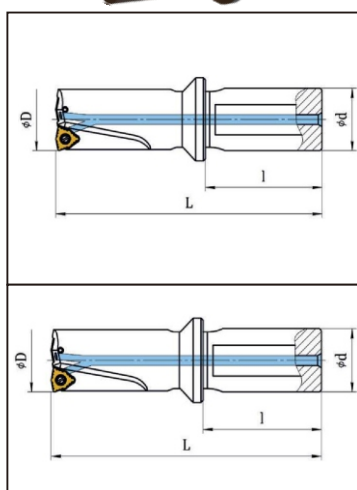




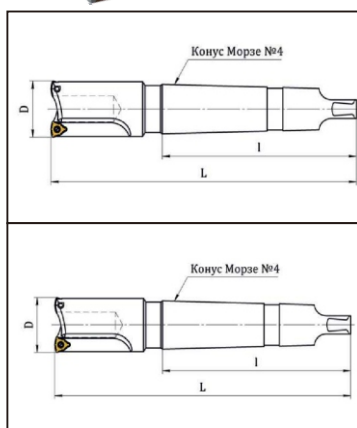
# TRACK DRILL 轨道钻



| 型號<br>Specification/Item | 尺寸 Size |     |    |     |    | 適用刀片<br>Insert |
|--------------------------|---------|-----|----|-----|----|----------------|
|                          | D       | D1  | I  | L   | d  |                |
| 420-28                   | 28      | 13  | 60 | 137 | 32 | WCMX06...      |
| 420-30                   | 30      | 13  | 60 | 137 | 32 | WCMX06...      |
| 420-32                   | 32      | 13  | 60 | 137 | 32 | WCMX06...      |
| 420-36                   | 36      | 13  | 60 | 137 | 32 | WCMX06...      |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |
| 422-22                   | 22      | -   | 60 | 137 | 32 | WCMX05...      |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |
| 459-22                   | 22      | 3.2 | 60 | 137 | 32 | WCMX05...      |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |
|                          |         |     |    |     |    |                |



| 型號<br>Specification/Item | 尺寸 Size |    |     |    | 適用刀片<br>Insert |
|--------------------------|---------|----|-----|----|----------------|
|                          | D       | I  | L   | d  |                |
| 424-25                   | 25      | 60 | 137 | 32 | WCMX06...      |
| 424-26                   | 26      | 60 | 137 | 32 | WCMX06...      |
| 424-28                   | 28      | 60 | 137 | 32 | WCMX06...      |
| 424-30                   | 30      | 60 | 137 | 32 | WCMX06...      |
| 424-32                   | 32      | 60 | 137 | 32 | WCMX06...      |
| 424-34                   | 34      | 60 | 137 | 32 | WCMX06...      |
| 424-36                   | 36      | 60 | 137 | 32 | WCMX06...      |
|                          |         |    |     |    |                |
|                          |         |    |     |    |                |
| 469-22                   | 22      | 60 | 137 | 32 | WCMX05...      |
|                          |         |    |     |    |                |
|                          |         |    |     |    |                |
|                          |         |    |     |    |                |
|                          |         |    |     |    |                |
|                          |         |    |     |    |                |



| 型號<br>Specification/Item | 尺寸 Size |      |     |     | 適用刀片<br>Insert |
|--------------------------|---------|------|-----|-----|----------------|
|                          | D       | D1   | I   | L   |                |
| 315-28                   | 28      | 16.7 | 124 | 195 | WCMX05...      |
| 315-30                   | 30      | 16.7 | 124 | 195 | WCMX05...      |
| 315-32                   | 32      | 16.7 | 124 | 195 | WCMX05...      |
| 315-36                   | 36      | 16.7 | 124 | 195 | WCMX05...      |
|                          |         |      |     |     |                |
|                          |         |      |     |     |                |
| 330-22                   | 22      | 3.2  | 124 | 195 | WCMX05...      |
|                          |         |      |     |     |                |
|                          |         |      |     |     |                |
|                          |         |      |     |     |                |
|                          |         |      |     |     |                |
|                          |         |      |     |     |                |

# InDexable Insert Drill Cutting Condition

## U钻切削条件表

◎加工状况良好，切削参数可增加1.5~2倍

◎推荐切削条件（2D~3D）Recommended Cutting Conditions (2D~3D)

(下限值 - 推荐值 - 上限值)

Minimum value-Recommended value-Maximum value

|    |   | 被加工材料<br>Work Material                                                                     | 工件<br>硬度<br>Hardness of<br>Workpiece<br>HB | 推荐<br>断屑槽<br>Recommended<br>Chipbreaker | 推荐刀片<br>材質<br>Recommended<br>Insert Grade | Vc切削速度<br>Cutting Speed<br>(m/min) | F进给量Feed Rate (mm/rev) |                |                |                |                |
|----|---|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------|------------------------|----------------|----------------|----------------|----------------|
|    |   |                                                                                            |                                            |                                         |                                           |                                    | φ 13.0~ φ 18.0         | φ 18.5~ φ 29.0 | φ 29.5~ φ 36.0 | φ 37.0~ φ 55.0 | φ 56.0~ φ 68.0 |
| 2D | P | 钢<br>Carbon Steel                                                                          |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | A3钢/SS400                                                                                  | 125                                        | G                                       | ACP300                                    | 105-155-205                        | 0.04-0.07-0.09         | 0.04-0.07-0.09 | 0.04-0.07-0.10 | 0.04-0.07-0.11 | 0.05-0.08-0.12 |
|    |   | " 15#钢/S15C                                                                                | 125                                        | L                                       | ACP300                                    | 115-145-190                        | 0.03-0.07-0.11         | 0.03-0.07-0.11 | 0.03-0.07-0.12 | 0.05-0.10-0.14 | 0.06-0.11-0.16 |
|    |   | " 45#钢/S45C Hardened                                                                       | 190                                        | G                                       | ACP300                                    | 85-130-170                         | 0.07-0.12-0.22         | 0.07-0.12-0.22 | 0.07-0.13-0.24 | 0.08-0.15-0.27 | 0.09-0.16-0.30 |
|    |   | " 45#钢 淬火/S45C                                                                             | 250                                        | G                                       | ACP300                                    | 70-105-140                         | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.07-0.13-0.22 |
|    |   | " 60#钢/S75C                                                                                | 270                                        | G                                       | ACP300                                    | 85-115-140                         | 0.07-0.12-0.20         | 0.07-0.12-0.20 | 0.07-0.13-0.21 | 0.08-0.15-0.24 | 0.09-0.16-0.27 |
|    |   | " 60#钢 淬火/S75C Hardened                                                                    | 300                                        | G                                       | ACP300                                    | 60-85-120                          | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | 低合金钢<br>Low Alloy Steel                                                                    |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 20crmo-42crmo/SCM,SNM                                                                      | 180                                        | L                                       | ACP300                                    | 85-120-155                         | 0.04-0.09-0.13         | 0.04-0.07-0.13 | 0.04-0.07-0.15 | 0.05-0.08-0.16 | 0.06-0.09-0.18 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 275                                        | G                                       | ACP300                                    | 70-105-140                         | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 300                                        | G                                       | ACP300                                    | 65-95-120                          | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 350                                        | G                                       | ACP300                                    | 55-75-95                           | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    | M | 高合金钢<br>High Alloy Steel                                                                   |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 高速钢和合金工具钢/SKD,SKT,SKH                                                                      | 200                                        | G                                       | ACP300                                    | 85-115-140                         | 0.07-0.12-0.22         | 0.07-0.12-0.22 | 0.07-0.13-0.24 | 0.08-0.15-0.27 | 0.09-0.16-0.30 |
|    |   | 高速钢和合金工具钢淬火/SKD,SKT,SKH                                                                    | 325                                        | G                                       | ACP300                                    | 70-85-105                          | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.07-0.13-0.22 |
|    | K | 不锈钢<br>Stainless Steel                                                                     |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 405-440及其他 (马氏体系/铁素体系)<br>SUS403 and other's (Martensite/Ferrite)                          | 200                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.08-0.13-0.22 |
|    |   | 405-440及其他 马氏体系 (淬火)<br>SUS403 and other's Martensitic (Hardened)                          | 240                                        | G                                       | ACP300                                    | 80-105-130                         | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.08-0.13-0.22 |
|    | S | 304-316 奥氏体系<br>SUS304, SUS316 Austenitic                                                  | 180                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.08-0.13-0.22 |
|    |   | 铸铁 Cast Iron                                                                               |                                            | H                                       | ACK300                                    | 105-140-170                        | 0.08-0.19-0.30         | 0.09-0.20-0.34 | 0.10-0.22-0.37 | 0.11-0.24-0.41 | 0.12-0.27-0.45 |
|    | N | 球墨铸铁 Ductile Cast Iron                                                                     |                                            | H                                       | ACK300                                    | 80-105-130                         | 0.08-0.19-0.30         | 0.09-0.20-0.34 | 0.10-0.22-0.37 | 0.11-0.24-0.41 | 0.12-0.27-0.45 |
|    |   | 难削材(耐热合金、超合金、钛合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) | 200                                        | G                                       | ACP300                                    | 25-45-60                           | 0.05-0.10-0.17         | 0.05-0.10-0.17 | 0.05-0.11-0.18 | 0.06-0.12-0.20 | 0.07-0.13-0.22 |
| 3D | P | 铝合金 Aluminum Alloy                                                                         |                                            | G                                       | DL1500                                    | 170-225-275                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | 铜合金 Copper Alloy                                                                           |                                            | G                                       | DL1500                                    | 155-200-240                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | 钢<br>Carbon Steel                                                                          |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | A3钢/SS400                                                                                  | 125                                        | G                                       | ACP300                                    | 105-155-205                        | 0.04-0.06-0.09         | 0.04-0.06-0.09 | 0.04-0.07-0.10 | 0.04-0.07-0.11 | 0.05-0.08-0.12 |
|    |   | " 15#钢/S15C                                                                                | 125                                        | L                                       | ACP300                                    | 115-145-190                        | 0.03-0.06-0.09         | 0.03-0.06-0.09 | 0.03-0.07-0.10 | 0.04-0.08-0.11 | 0.05-0.09-0.12 |
|    |   | " 45#钢/S45C Hardened                                                                       | 190                                        | G                                       | ACP300                                    | 85-130-170                         | 0.07-0.11-0.19         | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |
|    |   | " 45#钢 淬火/S45C                                                                             | 250                                        | G                                       | ACP300                                    | 70-105-140                         | 0.06-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | " 60#钢/S75C                                                                                | 270                                        | G                                       | ACP300                                    | 85-115-140                         | 0.08-0.11-0.17         | 0.07-0.11-0.17 | 0.07-0.12-0.18 | 0.08-0.13-0.20 | 0.09-0.15-0.22 |
|    |   | " 60#钢 淬火/S75C Hardened                                                                    | 300                                        | G                                       | ACP300                                    | 60-85-120                          | 0.06-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | 低合金钢<br>Low Alloy Steel                                                                    |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 20crmo-42crmo/SCM,SNM                                                                      | 180                                        | L                                       | ACP300                                    | 85-120-155                         | 0.04-0.06-0.11         | 0.04-0.06-0.11 | 0.04-0.07-0.12 | 0.05-0.07-0.14 | 0.06-0.08-0.15 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 275                                        | G                                       | ACP300                                    | 70-105-140                         | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 300                                        | G                                       | ACP300                                    | 65-95-120                          | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 350                                        | G                                       | ACP300                                    | 55-75-95                           | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    | M | 高合金钢<br>High Alloy Steel                                                                   |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 高速钢和合金工具钢/SKD,SKT,SKH                                                                      | 200                                        | G                                       | ACP300                                    | 85-115-140                         | 0.07-0.11-0.19         | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |
|    |   | 高速钢和合金工具钢淬火/SKD,SKT,SKH                                                                    | 325                                        | G                                       | ACP300                                    | 70-85-105                          | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    | K | 不锈钢<br>Stainless Steel                                                                     |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 405-440及其他 (马氏体系/铁素体系)<br>SUS403 and other's (Martensite/Ferrite)                          | 200                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | 405-440及其他 马氏体系 (淬火)<br>SUS403 and other's Martensitic (Hardened)                          | 240                                        | G                                       | ACP300                                    | 80-105-130                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    | S | 304-316 奥氏体系<br>SUS304, SUS316 Austenitic                                                  | 180                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | 铸铁 Cast Iron                                                                               |                                            | H                                       | ACK300                                    | 105-140-170                        | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |
|    | N | 球墨铸铁 Ductile Cast Iron                                                                     |                                            | H                                       | ACK300                                    | 80-105-130                         | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |
|    |   | 难削材(耐热合金、超合金、钛合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) | 200                                        | G                                       | ACP300                                    | 25-45-60                           | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
| 3D | P | 铝合金 Aluminum Alloy                                                                         |                                            | G                                       | DL1500                                    | 170-225-275                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | 铜合金 Copper Alloy                                                                           |                                            | G                                       | DL1500                                    | 155-200-240                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |
|    |   | 钢<br>Carbon Steel                                                                          |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | A3钢/SS400                                                                                  | 125                                        | G                                       | ACP300                                    | 105-155-205                        | 0.04-0.06-0.09         | 0.04-0.06-0.09 | 0.04-0.07-0.10 | 0.04-0.07-0.11 | 0.05-0.08-0.12 |
|    |   | " 15#钢/S15C                                                                                | 125                                        | L                                       | ACP300                                    | 115-145-190                        | 0.03-0.06-0.09         | 0.03-0.06-0.09 | 0.03-0.07-0.10 | 0.04-0.08-0.11 | 0.05-0.09-0.12 |
|    |   | " 45#钢/S45C Hardened                                                                       | 190                                        | G                                       | ACP300                                    | 85-130-170                         | 0.07-0.11-0.19         | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |
|    |   | " 45#钢 淬火/S45C                                                                             | 250                                        | G                                       | ACP300                                    | 70-105-140                         | 0.06-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | " 60#钢/S75C                                                                                | 270                                        | G                                       | ACP300                                    | 85-115-140                         | 0.08-0.11-0.17         | 0.07-0.11-0.17 | 0.07-0.12-0.18 | 0.08-0.13-0.20 | 0.09-0.15-0.22 |
|    |   | " 60#钢 淬火/S75C Hardened                                                                    | 300                                        | G                                       | ACP300                                    | 60-85-120                          | 0.06-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | 低合金钢<br>Low Alloy Steel                                                                    |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 20crmo-42crmo/SCM,SNM                                                                      | 180                                        | L                                       | ACP300                                    | 85-120-155                         | 0.04-0.06-0.11         | 0.04-0.06-0.11 | 0.04-0.07-0.12 | 0.05-0.07-0.14 | 0.06-0.08-0.15 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 275                                        | G                                       | ACP300                                    | 70-105-140                         | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 300                                        | G                                       | ACP300                                    | 65-95-120                          | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |   | " 20crmo-42crmo 淬火/SCM,SNM Hardened                                                        | 350                                        | G                                       | ACP300                                    | 55-75-95                           | 0.05-0.09-0.13         | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    | M | 高合金钢<br>High Alloy Steel                                                                   |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 高速钢和合金工具钢/SKD,SKT,SKH                                                                      | 200                                        | G                                       | ACP300                                    | 85-115-140                         | 0.07-0.11-0.19         | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |
|    |   | 高速钢和合金工具钢淬火/SKD,SKT,SKH                                                                    | 325                                        | G                                       | ACP300                                    | 70-85-105                          | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    | K | 不锈钢<br>Stainless Steel                                                                     |                                            |                                         |                                           |                                    |                        |                |                |                |                |
|    |   | 405-440及其他 (马氏体系/铁素体系)<br>SUS403 and other's (Martensite/Ferrite)                          | 200                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | 405-440及其他 马氏体系 (淬火)<br>SUS403 and other's Martensitic (Hardened)                          | 240                                        | G                                       | ACP300                                    | 80-105-130                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    | S | 304-316 奥氏体系<br>SUS304, SUS316 Austenitic                                                  | 180                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |   | 铸铁 Cast Iron                                                                               |                                            | H                                       | ACK300                                    | 105-140-170                        | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |
|    | N | 球墨铸铁 Ductile Cast Iron                                                                     |                                            | H                                       | ACK300                                    | 80-105-130                         | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |
|    |   | 难削材(耐热合金、超合金、钛合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) | 200                                        | G                                       | ACP300                                    | 25-45-60                           | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |

It the first recommended insert grades for P and K. In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

|    |                          | 被加工材料<br>Work Material                                                                     | 工件<br>硬度<br>Hardness of<br>Workpiece                             | 推薦<br>斷屑槽<br>Recommended<br>Chipbreaker                           | 推薦刀片<br>材質<br>Recommended<br>Insert Grade | Vc切削速度<br>Cutting Speed<br>(m/min) | F進給量Feed Rate (mm/rev) |                |                |                |                |                |
|----|--------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------|------------------------------------|------------------------|----------------|----------------|----------------|----------------|----------------|
|    |                          |                                                                                            | HB                                                               |                                                                   |                                           |                                    | φ 13.0~ φ 18.0         | φ 18.5~ φ 29.0 | φ 29.5~ φ 36.0 | φ 37.0~ φ 55.0 | φ 56.0~ φ 68.0 |                |
| 3D | P                        | 钢<br>Carbon Steel                                                                          | A3钢/SS400                                                        | 125                                                               | G                                         | ACP300                             | 105-155-205            | 0.04-0.06-0.09 | 0.04-0.06-0.09 | 0.04-0.07-0.10 | 0.04-0.07-0.11 | 0.05-0.08-0.12 |
|    |                          | "                                                                                          | 15#鋼/S15C                                                        | 125                                                               | L                                         | ACP300                             | 115-145-190            | 0.03-0.06-0.09 | 0.03-0.06-0.09 | 0.03-0.07-0.10 | 0.04-0.08-0.11 | 0.05-0.09-0.12 |
|    |                          | "                                                                                          | 45#鋼/S45C Hardened                                               | 190                                                               | G                                         | ACP300                             | 85-130-170             | 0.07-0.11-0.19 | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |
|    |                          | "                                                                                          | 45#鋼 淬火/S45C                                                     | 250                                                               | G                                         | ACP300                             | 70-105-140             | 0.06-0.09-0.14 | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |                          | "                                                                                          | 60#鋼/S75C                                                        | 270                                                               | G                                         | ACP300                             | 85-115-140             | 0.08-0.11-0.17 | 0.07-0.11-0.17 | 0.07-0.12-0.18 | 0.08-0.13-0.20 | 0.09-0.15-0.22 |
|    |                          | "                                                                                          | 60#鋼 淬火/S75C Hardened                                            | 300                                                               | G                                         | ACP300                             | 60-85-120              | 0.06-0.09-0.13 | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |                          | 低合金鋼<br>Low Alloy Steel                                                                    | 20crmo-42crmo/SCM,SNCM                                           | 180                                                               | L                                         | ACP300                             | 85-120-155             | 0.04-0.06-0.11 | 0.04-0.06-0.11 | 0.04-0.07-0.12 | 0.05-0.07-0.14 | 0.06-0.08-0.15 |
|    |                          | "                                                                                          | 20crmo-42crmo 淬火/SCM,SNCM Hardened                               | 275                                                               | G                                         | ACP300                             | 70-105-140             | 0.05-0.09-0.13 | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |                          | "                                                                                          | 20crmo-42crmo 淬火/SCM,SNCM Hardened                               | 300                                                               | G                                         | ACP300                             | 65-95-120              | 0.05-0.09-0.13 | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
|    |                          | "                                                                                          | 20crmo-42crmo 淬火/SCM,SNCM Hardened                               | 350                                                               | G                                         | ACP300                             | 55-75-95               | 0.05-0.09-0.13 | 0.05-0.09-0.13 | 0.05-0.10-0.14 | 0.06-0.11-0.16 | 0.07-0.12-0.18 |
| M  | 高合金鋼<br>High Alloy Steel | 高速鋼和合金工具鋼/SKD,SKT,SKH                                                                      | 200                                                              | G                                                                 | ACP300                                    | 85-115-140                         | 0.07-0.11-0.19         | 0.07-0.11-0.19 | 0.07-0.12-0.20 | 0.08-0.13-0.22 | 0.09-0.15-0.25 |                |
|    |                          | "                                                                                          | 高速鋼和合金工具鋼淬火/SKD,SKT,SKH                                          | 325                                                               | G                                         | ACP300                             | 70-85-105              | 0.05-0.09-0.14 | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    |                          | 不銹鋼<br>Stainless Steel                                                                     | 405-440及其他 (馬氏體系/鐵素體系)<br>SUS403 and others (Martensite/Ferrite) | 200                                                               | G                                         | ACP300                             | 85-120-155             | 0.05-0.09-0.14 | 0.05-0.09-0.14 | 0.05-0.10-0.10 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
|    | K                        | 球墨鑄鐵<br>Ductile Cast Iron                                                                  | "                                                                | 405-440及其他 馬氏體系 (淬火)<br>SUS403 and other's Martensitic (Hardened) | 240                                       | G                                  | ACP300                 | 80-105-130     | 0.05-0.09-0.14 | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 |
| "  |                          |                                                                                            | 304-316 奧氏體系<br>SUS304, SUS316 Austenitic                        | 180                                                               | G                                         | ACP300                             | 85-120-155             | 0.05-0.09-0.14 | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |
| S  | N                        | 鑄鐵<br>Cast Iron                                                                            |                                                                  | H                                                                 | ACK300                                    | 105-140-170                        | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |                |
|    |                          | 球墨鑄鐵<br>Ductile Cast Iron                                                                  |                                                                  | H                                                                 | ACK300                                    | 80-105-130                         | 0.08-0.17-0.25         | 0.09-0.19-0.28 | 0.10-0.20-0.30 | 0.11-0.22-0.34 | 0.12-0.24-0.38 |                |
| N  | S                        | 難削材(耐熱合金、超合金、鈦合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) | 200                                                              | G                                                                 | ACP300                                    | 25-45-60                           | 0.05-0.09-0.14         | 0.05-0.09-0.14 | 0.05-0.10-0.15 | 0.06-0.11-0.17 | 0.07-0.12-0.19 |                |
|    |                          | 鋁合金<br>Aluminium Alloy                                                                     |                                                                  | G                                                                 | DL1500                                    | 170-225-275                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |                |
| N  | S                        | 銅合金<br>Copper Alloy                                                                        |                                                                  | G                                                                 | DL1500                                    | 155-200-240                        | 0.05-0.10-0.16         | 0.05-0.10-0.16 | 0.05-0.11-0.17 | 0.06-0.12-0.19 | 0.07-0.13-0.20 |                |

# InDexable Insert Drill Cutting Condition

## U钻切削条件表

◎加工状况良好，切削参数可增加1.5-2倍

◎推荐切削条件（4D~5D）Recommended Cutting Conditions (4D~5D)

(下限值 - 推荐值 - 上限值)

Minimum value-Recommended value-Maximum value

|    |                                                                                            | 被加工材料<br>Work Material                                            | 工件<br>硬度<br>Hardness of<br>Workpiece<br>HB | 推薦<br>斷屑槽<br>Recommended<br>Chipbreaker | 推薦刀片<br>材質<br>Recommended<br>Insert Grade | Vc切削速度<br>Cutting Speed<br>(m/min) | F進給量Feed Rate (mm/rev) |                |                |                |                |                |
|----|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------|------------------------|----------------|----------------|----------------|----------------|----------------|
|    |                                                                                            |                                                                   |                                            |                                         |                                           |                                    | φ 13.0~ φ 18.0         | φ 18.5~ φ 29.0 | φ 29.5~ φ 36.0 | φ 37.0~ φ 55.0 | φ 56.0~ φ 68.0 |                |
| 4D | P                                                                                          | 鋼<br>Carbon Steel                                                 | A3鋼/SS400                                  | 125                                     | G                                         | ACP300                             | 105-155-205            | 0.04-0.06-0.09 | 0.04-0.06-0.09 | 0.04-0.06-0.09 | 0.04-0.07-0.09 | 0.05-0.08-0.10 |
|    |                                                                                            | "                                                                 | 15#鋼/S15C                                  | 125                                     | L                                         | ACP300                             | 115-145-190            | 0.03-0.06-0.08 | 0.03-0.06-0.08 | 0.03-0.06-0.08 | 0.04-0.07-0.09 | 0.05-0.08-0.10 |
|    |                                                                                            | "                                                                 | 45#鋼/S45C Hardened                         | 190                                     | G                                         | ACP300                             | 85-130-170             | 0.07-0.10-0.16 | 0.07-0.10-0.16 | 0.07-0.11-0.17 | 0.08-0.13-0.20 | 0.09-0.14-0.21 |
|    |                                                                                            | "                                                                 | 45#鋼 淬火/S45C                               | 250                                     | G                                         | ACP300                             | 70-105-140             | 0.05-0.09-0.12 | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |
|    |                                                                                            | "                                                                 | 60#鋼/S75C                                  | 270                                     | G                                         | ACP300                             | 85-115-140             | 0.07-0.10-0.14 | 0.07-0.10-0.14 | 0.07-0.11-0.16 | 0.08-0.13-0.18 | 0.09-0.14-0.19 |
|    |                                                                                            | "                                                                 | 60#鋼 淬火/S75C Hardened                      | 300                                     | G                                         | ACP300                             | 60-85-120              | 0.05-0.09-0.11 | 0.05-0.09-0.11 | 0.05-0.09-0.12 | 0.06-0.10-0.13 | 0.07-0.11-0.15 |
|    |                                                                                            | 低合金鋼<br>Low Alloy Steel                                           | 20crmo-42crmo/SCM, SNCM                    | 180                                     | L                                         | ACP300                             | 85-120-155             | 0.04-0.06-0.09 | 0.04-0.06-0.09 | 0.04-0.06-0.10 | 0.05-0.07-0.11 | 0.06-0.08-0.13 |
|    |                                                                                            | "                                                                 | 20crmo-42crmo 淬火/SCM, SNCM Hardened        | 275                                     | G                                         | ACP300                             | 70-105-140             | 0.05-0.09-0.11 | 0.05-0.09-0.11 | 0.05-0.09-0.12 | 0.06-0.10-0.13 | 0.07-0.11-0.15 |
|    |                                                                                            | "                                                                 | 20crmo-42crmo 淬火/SCM, SNCM Hardened        | 300                                     | G                                         | ACP300                             | 65-95-120              | 0.05-0.09-0.11 | 0.05-0.09-0.11 | 0.05-0.09-0.12 | 0.06-0.10-0.13 | 0.07-0.11-0.15 |
|    |                                                                                            | "                                                                 | 20crmo-42crmo 淬火/SCM, SNCM Hardened        | 350                                     | G                                         | ACP300                             | 55-75-95               | 0.05-0.09-0.11 | 0.05-0.09-0.11 | 0.05-0.09-0.12 | 0.06-0.10-0.13 | 0.07-0.11-0.15 |
| M  | 高合金鋼<br>High Alloy Steel                                                                   | 高速鋼和合金工具鋼/SKD, SKT, SKH                                           | 200                                        | G                                       | ACP300                                    | 85-115-140                         | 0.07-0.10-0.16         | 0.07-0.10-0.16 | 0.07-0.11-0.17 | 0.08-0.13-0.20 | 0.09-0.14-0.21 |                |
|    | "                                                                                          | 高速鋼和合金工具鋼淬火/SKD, SKT, SKH                                         | 325                                        | G                                       | ACP300                                    | 70-85-105                          | 0.05-0.09-0.12         | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |                |
|    | 不銹鋼<br>Stainless Steel                                                                     | 405-440及其他 (馬氏體系/鐵素體系)<br>SUS403 and others (Martensite/Ferrite)  | 200                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.12         | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |                |
| K  | "                                                                                          | 405-440及其他 馬氏體系 (淬火)<br>SUS403 and other's Martensitic (Hardened) | 240                                        | G                                       | ACP300                                    | 80-105-130                         | 0.05-0.09-0.12         | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |                |
|    | "                                                                                          | 304-316 奧氏體系<br>SUS304, SUS316 Austenitic                         | 180                                        | G                                       | ACP300                                    | 85-120-155                         | 0.05-0.09-0.12         | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |                |
| S  | 鑄鐵 Cast Iron                                                                               |                                                                   |                                            | H                                       | ACK300                                    | 105-140-170                        | 0.08-0.16-0.21         | 0.09-0.18-0.24 | 0.10-0.20-0.26 | 0.11-0.21-0.29 | 0.12-0.23-0.32 |                |
|    | 球墨鑄鐵 Ductile Cast Iron                                                                     |                                                                   |                                            | H                                       | ACK300                                    | 80-105-130                         | 0.08-0.16-0.21         | 0.09-0.18-0.24 | 0.10-0.20-0.26 | 0.11-0.21-0.29 | 0.12-0.23-0.32 |                |
| N  | 難削材(耐熱合金、超合金、鈦合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) |                                                                   | 200                                        | G                                       | ACP300                                    | 25-45-60                           | 0.06-0.10-0.13         | 0.05-0.09-0.12 | 0.05-0.09-0.13 | 0.06-0.10-0.14 | 0.07-0.11-0.16 |                |
|    | 鋁合金 Aluminum Alloy                                                                         |                                                                   |                                            | G                                       | DL1500                                    | 170-225-275                        | 0.04-0.09-0.14         | 0.04-0.09-0.14 | 0.05-0.10-0.15 | 0.05-0.11-0.17 | 0.06-0.12-0.19 |                |
|    | 銅合金 Copper Alloy                                                                           |                                                                   |                                            | G                                       | DL1500                                    | 155-200-240                        | 0.04-0.09-0.14         | 0.04-0.09-0.14 | 0.05-0.10-0.15 | 0.05-0.11-0.17 | 0.06-0.12-0.19 |                |

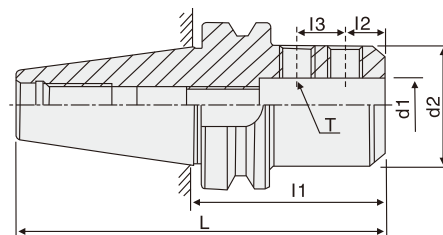
It the first recommended insert grades for P and K. In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

|    |   | 被加工材料<br>Work Material                                                                      | 工件<br>硬度<br>Hardness of<br>Workpiece<br>HB                       | 推荐<br>断屑槽<br>Recommended<br>Chipbreaker | 推荐刀片<br>材質<br>Recommended<br>Insert Grade | Vc切削速度<br>Cutting Speed<br>(m/min) | F進給量Feed Rate (mm/rev) |                |                |                |                |
|----|---|---------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------|------------------------|----------------|----------------|----------------|----------------|
|    |   |                                                                                             |                                                                  |                                         |                                           |                                    | φ 13.0~ φ 18.0         | φ 18.5~ φ 29.0 | φ 29.5~ φ 36.0 | φ 37.0~ φ 55.0 | φ 56.0~ φ 68.0 |
| 5D | P | 钢<br>Carbon Steel                                                                           | A3钢/SS400                                                        | 125                                     | G                                         | ACP300                             | 105-155-205            | 0.04-0.05-0.08 | 0.04-0.05-0.08 | 0.04-0.05-0.08 | 0.04-0.06-0.08 |
|    |   | "                                                                                           | 15#钢/S15C                                                        | 125                                     | L                                         | ACP300                             | 115-145-190            | 0.03-0.05-0.07 | 0.03-0.05-0.07 | 0.03-0.05-0.07 | 0.04-0.06-0.08 |
|    |   | "                                                                                           | 45#钢/S45C Hardened                                               | 190                                     | G                                         | ACP300                             | 85-130-170             | 0.06-0.09-0.14 | 0.06-0.09-0.14 | 0.07-0.10-0.16 | 0.08-0.11-0.18 |
|    |   | "                                                                                           | 45#钢淬火/S45C                                                      | 250                                     | G                                         | ACP300                             | 70-105-140             | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    |   | "                                                                                           | 60#钢/S75C                                                        | 270                                     | G                                         | ACP300                             | 85-115-140             | 0.06-0.09-0.13 | 0.06-0.09-0.13 | 0.07-0.10-0.14 | 0.08-0.11-0.16 |
|    |   | "                                                                                           | 60#钢淬火/S75C Hardened                                             | 300                                     | G                                         | ACP300                             | 60-85-120              | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.12 |
|    |   | 低合金钢<br>Low Alloy Steel                                                                     | 20crmo-42crmo/SCM, SNCM                                          | 180                                     | L                                         | ACP300                             | 85-120-155             | 0.04-0.05-0.08 | 0.04-0.05-0.08 | 0.04-0.05-0.09 | 0.04-0.06-0.10 |
|    |   | "                                                                                           | 20crmo-42crmo 淬火/SCM, SNCM Hardened                              | 275                                     | G                                         | ACP300                             | 70-105-140             | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.12 |
|    |   | "                                                                                           | 20crmo-42crmo 淬火/SCM, SNCM Hardened                              | 300                                     | G                                         | ACP300                             | 65-95-120              | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.12 |
|    |   | "                                                                                           | 20crmo-42crmo 淬火/SCM, SNCM Hardened                              | 350                                     | G                                         | ACP300                             | 55-75-95               | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.12 |
|    | M | 高合金钢<br>High Alloy Steel                                                                    | 高速钢和合金工具钢/SKD, SKT, SKH                                          | 200                                     | G                                         | ACP300                             | 85-115-140             | 0.06-0.09-0.14 | 0.06-0.09-0.14 | 0.07-0.10-0.16 | 0.08-0.11-0.18 |
|    |   | "                                                                                           | 高速钢和合金工具钢淬火/SKD, SKT, SKH                                        | 325                                     | G                                         | ACP300                             | 70-85-105              | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    |   | 不锈钢<br>Stainless Steel                                                                      | 405-440及其他 (马氏体系/铁素体系)<br>SUS403 and others (Martensite/Ferrite) | 200                                     | G                                         | ACP300                             | 85-120-155             | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    | K | "                                                                                           | 405-440及其他 马氏体系 (淬火)<br>SUS403 and others Martensitic (Hardened) | 240                                     | G                                         | ACP300                             | 80-105-130             | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    |   | "                                                                                           | 304-316 奥氏体系<br>SUS304, SUS316 Austenitic                        | 180                                     | G                                         | ACP300                             | 85-120-155             | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    | S | 铸铁 Cast Iron                                                                                |                                                                  |                                         | H                                         | ACK300                             | 105-140-170            | 0.07-0.14-0.20 | 0.08-0.16-0.21 | 0.08-0.17-0.23 | 0.10-0.19-0.26 |
|    |   | 球墨铸铁 Ductile Cast Iron                                                                      |                                                                  |                                         | H                                         | ACK300                             | 80-105-130             | 0.07-0.14-0.20 | 0.08-0.16-0.21 | 0.08-0.17-0.23 | 0.10-0.19-0.26 |
|    | N | 难削材 (耐热合金、超合金、钛合金 etc.)<br>Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.) |                                                                  | 200                                     | G                                         | ACP300                             | 25-45-60               | 0.04-0.08-0.10 | 0.04-0.08-0.10 | 0.05-0.08-0.11 | 0.05-0.09-0.13 |
|    | N | 铝合金 Aluminum Alloy                                                                          |                                                                  |                                         | G                                         | DL1500                             | 170-225-275            | 0.04-0.09-0.14 | 0.04-0.09-0.14 | 0.05-0.10-0.15 | 0.05-0.11-0.17 |
|    |   | 铜合金 Copper Alloy                                                                            |                                                                  |                                         | G                                         | DL1500                             | 155-200-240            | 0.04-0.09-0.14 | 0.04-0.09-0.14 | 0.05-0.10-0.15 | 0.05-0.11-0.17 |

It the first recommended insert grades for P and K. In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

# Weldon Tool Holder 侧固式刀柄

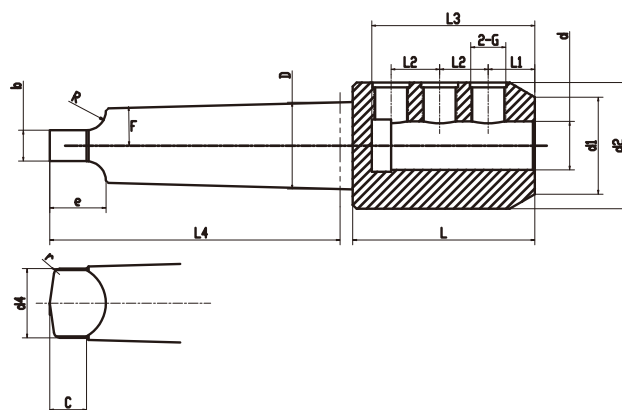
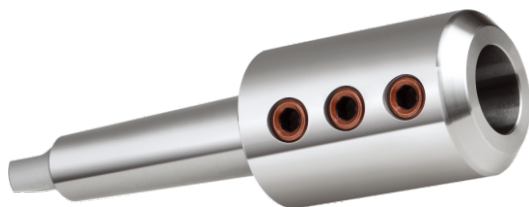
## BT-SLA Weldon Tool Holder BT-SLA侧固式刀柄



| 型號Cat.No |            | d1 | d2    | l1  | l2 | l3 | T        |
|----------|------------|----|-------|-----|----|----|----------|
| BT40     | -SLA20-75  | 20 | 52    | 75  | 25 | 20 | M16×2.0P |
|          | -SLA25-90  | 25 | 65    | 90  | 30 | 22 |          |
|          | -SLA32-90  | 32 | 72    |     | 30 | 22 |          |
|          | -SLA40-100 | 40 | 90    | 100 | 35 | 25 |          |
| BT50     | -SLA20-90  | 20 | 52    | 90  | 25 | 20 | M16×2.0P |
|          | -SLA25-105 | 25 | 60    | 105 | 30 | 22 | M16×2.0P |
|          | -SLA32-105 | 32 | 63    | 105 | 30 | 22 | M16×2.0P |
|          | -SLA40-105 | 40 | 78/90 | 105 | 35 | 25 | M16×2.0P |

※非標件可訂制 Non-standard parts can be ordered

## Morse Tap Holder 莫氏側固式刀柄



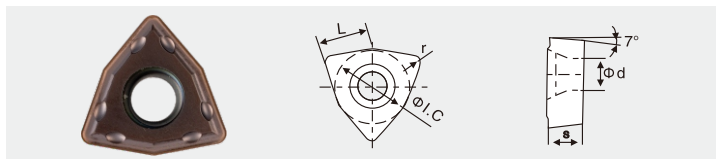
| 規格型號          | 尺寸 | D     | d  | d1 | d2 | d4   | G   | F       | b    | C  | e  | L   | L1 | L2 | L3 | L4    | R  | r   |
|---------------|----|-------|----|----|----|------|-----|---------|------|----|----|-----|----|----|----|-------|----|-----|
| MTA4-SLA25-80 |    | 31.27 | 25 | 38 | 55 | 24.5 | M14 | 1:19.25 | 11.9 | 16 | 24 | 100 | 24 | 25 | 82 | 117.5 | 8  | 2.5 |
| MTA4-SLA32-85 |    | 31.27 | 32 | 45 | 65 | 24.5 | M14 | 1:19.25 | 11.9 | 16 | 24 | 105 | 24 | 28 | 86 | 117.5 | 8  | 2.5 |
| MTA4-SLA40-95 |    | 31.27 | 40 | 55 | 75 | 24.5 | M14 | 1:19.25 | 11.9 | 16 | 24 | 115 | 30 | 32 | 98 | 117.5 | 8  | 2.5 |
| MTA5-SLA25-80 |    | 44.40 | 25 | 38 | 55 | 35.7 | M14 | 1:19.0  | 15.9 | 19 | 29 | 100 | 24 | 25 | 82 | 149.5 | 12 | 3   |
| MTA5-SLA32-85 |    | 44.40 | 32 | 45 | 65 | 35.7 | M14 | 1:19.0  | 15.9 | 19 | 29 | 105 | 24 | 28 | 86 | 149.5 | 12 | 3   |
| MTA5-SLA40-95 |    | 44.40 | 40 | 55 | 75 | 35.7 | M14 | 1:19.0  | 15.9 | 19 | 29 | 115 | 30 | 32 | 98 | 149.5 | 12 | 3   |





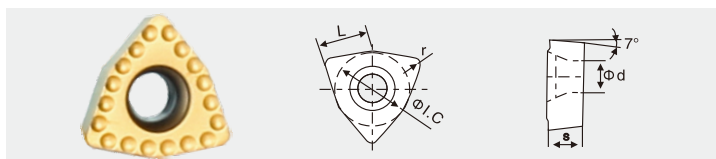
# Indexable Insert Recommendation U钻适配刀片推荐表

## ◎ WC系列刀片選型 / WC insert



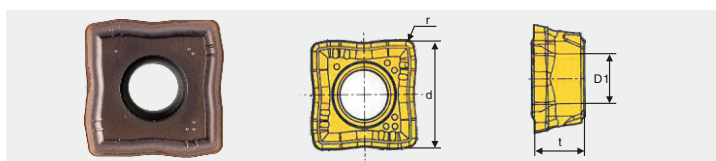
| 型號<br>Specification/Item | 牌號    | 基本尺寸 (mm) |       |      |     |     | U鑽直徑<br>(mm) |
|--------------------------|-------|-----------|-------|------|-----|-----|--------------|
|                          |       | L         | IC    | s    | d   | r   |              |
| WCMT 030208 FN           | AZ330 | 3.8       | 5.56  | 2.38 | 2.8 | 0.8 | 15-20.5      |
| WCMT 040208 FN           | AZ330 | 4.3       | 6.35  | 2.38 | 3.1 | 0.8 | 21-24.5      |
| WCMT 050308 FN           | AZ330 | 5.4       | 7.94  | 3.18 | 3.5 | 0.8 | 25-30.5      |
| WCMT 06T308 FN           | AZ330 | 6.5       | 9.525 | 3.97 | 3.7 | 0.8 | 31-41/63-80  |
| WCMT 080412 FN           | AZ330 | 8.7       | 12.7  | 4.76 | 4.3 | 1.2 | 42-62        |

## ◎ WC系列DS刀片（不銹鋼斷屑專用） / WC type DS inserts (SS chip breaking)



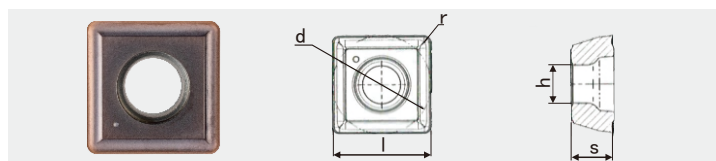
| 型號<br>Specification/Item | 牌號     | 基本尺寸 (mm) |       |      |     |     | U鑽直徑<br>(mm) |
|--------------------------|--------|-----------|-------|------|-----|-----|--------------|
|                          |        | L         | IC    | s    | d   | r   |              |
| WCMT 030208 DS           | BK9030 | 3.8       | 5.56  | 2.38 | 2.8 | 0.8 | 15-20.5      |
| WCMT 040208 DS           | BK9030 | 4.3       | 6.35  | 2.38 | 3.1 | 0.8 | 21-24.5      |
| WCMT 050308 DS           | BK9030 | 5.4       | 7.94  | 3.18 | 3.5 | 0.8 | 25-30.5      |
| WCMT 06T308 DS           | BK9030 | 6.5       | 9.525 | 3.97 | 3.7 | 0.8 | 31-41/63-80  |
| WCMT 080412 DS           | BK9030 | 8.7       | 12.7  | 4.76 | 4.3 | 1.2 | 42-62        |

## ◎ SO系列刀片選型 / SO insert



| 型號<br>Specification/Item | 牌號     | 基本尺寸 (mm) |      |      |     | U鑽直徑<br>(mm) |
|--------------------------|--------|-----------|------|------|-----|--------------|
|                          |        | d         | t    | D1   | r   |              |
| SOMT 050204 DP           | AP9030 | 4.9       | 2.38 | 2.25 | 0.4 | 13-16        |
| SOMT 060204 DP           | AP9030 | 5.7       | 2.38 | 2.6  | 0.4 | 16.5-19      |
| SOMT 070306 DP           | AP9030 | 6.8       | 2.8  | 2.6  | 0.6 | 19.5-22      |
| SOMT 08T306 DP           | AP9030 | 7.9       | 3.97 | 2.85 | 0.6 | 22.5-26      |
| SOMT 09T308 DP           | AP9030 | 9.2       | 3.97 | 3.8  | 0.8 | 26.5-31.5    |
| SOMT 11T308 DP           | AP9030 | 11        | 3.97 | 3.8  | 0.8 | 32-36.5      |
| SOMT 130408 DP           | AP9030 | 12.8      | 4.4  | 4.4  | 0.8 | 37-43        |
| SOMT 150510 DP           | AP9030 | 15        | 4.8  | 5.4  | 1.0 | 44-50        |

## ◎ SP系列刀片選型 / SP insert

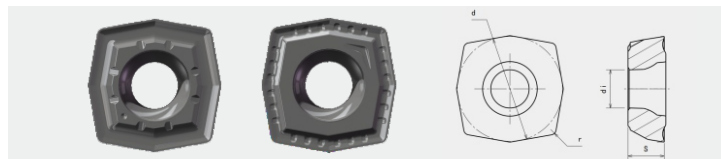


| 型號<br>Specification/Item | 牌號     | 基本尺寸 (mm) |      |      |     | U鑽直徑<br>(mm) |
|--------------------------|--------|-----------|------|------|-----|--------------|
|                          |        | d         | s    | h    | r   |              |
| SPGT 030104 DG           | AT9030 | 3.5       | 1.4  | 1.9  | 0.4 | 8.5-9.5      |
| SPGT 04T102 DG           | AT9030 | 4         | 1.8  | 2.05 | 0.2 | 10-12.5      |
| SPGT 050204 DG           | AT9030 | 5         | 2.38 | 2.3  | 0.4 | 13-15.5      |
| SPGT 060204 DG           | AT9030 | 6         | 2.38 | 2.61 | 0.4 | 16-21.5      |
| SPGT 07T308 DG           | AT9030 | 7.94      | 3.97 | 2.85 | 0.8 | 22-28.5      |
| SPGT 090408 DG           | AT9030 | 9.8       | 4.3  | 4.05 | 0.8 | 29-34.5      |
| SPGT 110408 DG           | AT9030 | 11.5      | 4.8  | 4.45 | 0.8 | 35-41.5      |
| SPGT 140512 DG           | AT9030 | 14.3      | 5.2  | 5.75 | 1.2 | 42-50        |

# Indexable Insert Recommendation

## U钻适配刀片推荐表

### ◎ SP/XO系列刀片選型/SP/XO insert



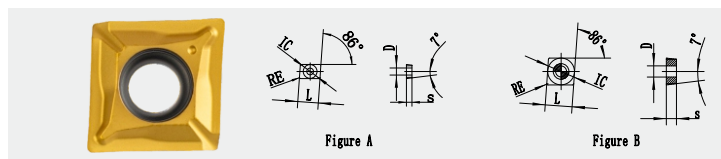
| 型號<br>Specification/Item |                | 基本尺寸 (mm) |     |      |      | U鑽直徑<br>(mm) |
|--------------------------|----------------|-----------|-----|------|------|--------------|
|                          |                | d         | r   | s    | di   |              |
|                          | SPMT 040204 DP | 4.7       | 0.4 | 2.4  | 2.4  | 12-14        |
|                          | SPMT 050204 DP | 5.1       | 0.4 | 2.4  | 2.4  | 14-16        |
| SPMT 060205 DL           | SPMT 060205 DP | 6.2       | 0.5 | 2.5  | 2.7  | 17-19        |
| SPMT 07T208 DL           | SPMT 07T208 DP | 7.5       | 0.7 | 2.8  | 2.95 | 20-23        |
| SPMT 090308 DL           | SPMT 090308 DP | 9.2       | 0.8 | 3.3  | 3.5  | 24-29        |
| SPMT 11T308 DL           | SPMT 11T308 DP | 11        | 0.8 | 4    | 4.1  | 30-35        |
| SPMT 130410 DL           | SPMT 130410 DP | 13        | 1   | 4.5  | 4.6  |              |
| SPMT 15M510 DL           | SPMT 15M510 DP | 15.2      | 1   | 4.98 | 5.65 |              |

### ◎ SP/XO系列刀片選型/SP/XO insert



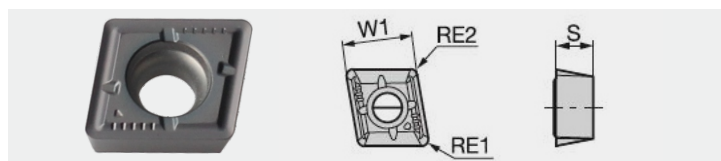
| 型號<br>Specification/Item |                | 基本尺寸 (mm) |     |      |      | U鑽直徑<br>(mm) |
|--------------------------|----------------|-----------|-----|------|------|--------------|
|                          |                | d         | r   | s    | di   |              |
|                          | XOMT 040204 DP | 4.9       | 0.4 | 2.42 | 2.35 | 12-14        |
|                          | XOMT 050204 DP | 5.4       | 0.4 | 2.4  | 2.4  | 14-16        |
| XOMT 060204 DL           | XOMT 060204 DP | 6.6       | 0.4 | 2.5  | 2.7  | 17-19        |
| XOMT 07T205 DL           | XOMT 07T205 DP | 7.8       | 0.5 | 2.9  | 2.95 | 20-23        |
| XOMT 090305 DL           | XOMT 090305 DP | 9.6       | 0.5 | 3.3  | 3.5  | 24-29        |
| XOMT 11T306 DL           | XOMT 11T306 DP | 11.4      | 0.6 | 4    | 4.1  | 30-35        |
| XOMT 130406 DL           | XOMT 130406 DP | 13.6      | 0.6 | 4.5  | 4.6  |              |
| XOMT 15M508 DL           | XOMT 15M508 DP | 15.9      | 0.8 | 5.04 | 5.65 |              |

### ◎ XC系列刀片選型 / XC insert



| 型號<br>Specification/Item | 基本尺寸 (mm) |       |      |      |      | Figure | 單刃鑽<br>型號 |
|--------------------------|-----------|-------|------|------|------|--------|-----------|
|                          | IC        | L     | S    | RE   | D    |        |           |
| XCMT 040104R TC          | 4.40      | 6.40  | 1.70 | 0.40 | 2.10 | A      | TCAP 08R  |
| XCMT 040104L TC          | 4.40      | 6.40  | 1.70 | 0.40 | 2.10 | A      | TCAP 08L  |
| XCMT 050204 TC           | 5.60      | 5.60  | 2.10 | 0.40 | 2.30 | B      | TCAP 10R  |
| XCMT 060204 TC           | 6.40      | 6.40  | 2.38 | 0.40 | 2.60 | B      | TCAP 12R  |
| XCMT 070304 TC           | 7.50      | 7.50  | 3.18 | 0.40 | 2.80 | B      | TCAP 14R  |
| XCMT 080304 TC           | 8.40      | 8.40  | 3.18 | 0.40 | 3.40 | B      | TCAP 16R  |
| XCMT 10T304 TC           | 10.50     | 10.50 | 3.97 | 0.40 | 4.20 | B      | TCAP 20R  |
| XCMT 10T308 TC           | 10.50     | 10.50 | 3.97 | 0.80 | 4.20 | B      | TCAP 20R  |
| XCMT 130404 TC           | 13.40     | 13.40 | 4.76 | 0.40 | 5.20 | B      | TCAP 25R  |
| XCMT 130408 TC           | 13.40     | 13.40 | 4.76 | 0.80 | 5.20 | B      | TCAP 25R  |
| XCMT 170508 TC           | 17.40     | 17.40 | 5.56 | 0.80 | 5.20 | B      | TCAP 32R  |

### ◎ G系列刀片選型 / G INSERT



| 型號<br>Specification/Item | 牌號    | 基本尺寸 (mm) |      |     |     | U鑽直徑<br>(mm) |
|--------------------------|-------|-----------|------|-----|-----|--------------|
|                          |       | W1        | s    | RE1 | RE2 |              |
| WDXT042004-G             | AP300 | 4.20      | 2.00 | 0.4 | 0.4 | 15           |
| WDXT052504-G             | AP300 | 5.00      | 2.50 | 0.4 | 0.4 | 16-18        |
| WDXT063006-G             | AP300 | 6.00      | 3.00 | 0.6 | 0.6 | 19-22        |
| WDXT073506-G             | AP300 | 7.50      | 3.50 | 0.6 | 0.6 | 23-28        |
| WDXT094008-G             | AP300 | 9.60      | 4.00 | 0.8 | 0.8 | 29-35        |
| WDXT125012-G             | AP300 | 12.40     | 5.00 | 1.2 | 1.2 | /            |
| WDXT156012-G             | AP300 | 15.20     | 6.00 | 1.2 | 1.2 | /            |



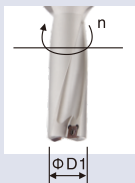
# Indexable Insert Drill Cutting Condition

## 孔加工的计算式

### 轉速 (N)

$$N = \frac{V_c}{\pi \times D_1} \times 1000 (\text{m/min})$$

\*用1000去除，為將mm換算成m



$V_c$  (m/min): 切削速度  $D_1$  (mm): 鑽頭直徑  
 $\pi$  (3.14): 圓周率  $N$ : 主軸轉速

(例題) 切削速度  $V_c=130\text{m/min}$  鑽頭直徑  $\phi 25$   
 求轉速 (N)

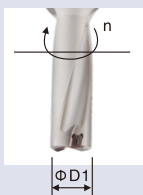
(答) 將  $\pi=3.14$ ,  $D_1=25$ ,  $V_c=130$  代入公式,

$$N = \frac{130}{3.14 \times 25} \times 1000 = 1656 \text{r/min}$$

據此，得出轉速為1656r/min。

### 主軸進給量 ( $V_f$ )

$$V_f = f \cdot n (\text{mm/min})$$



$V_f$  (mm/min): 主軸 (Z軸) 進給速度  
 $f$  (mm/rev): 每轉進給量  
 $n$  (min<sup>-1</sup>): 主軸轉速

(例題) 每轉進給量為0.2mm/rev

轉速為1350min<sup>-1</sup> 求主軸進給速度

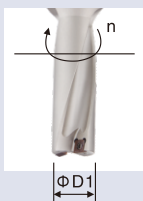
(答) 代入公式

$$V_f = f \cdot n = 0.2 \times 1350 = 270 \text{mm/min}$$

由此得出主軸每分鐘進給量為270mm/min

### 孔加工時間 ( $T_c$ )

$$T_c = \frac{L_d \cdot i}{n \cdot f}$$



$T_c$  (min): 加工時間  
 $n$  (min<sup>-1</sup>): 主軸轉速

$L_d$  (mm): 鑽孔深  
 $f$  (mm/rev): 每轉進給量  
 $i$ : 孔數

(例題) 在SCM440鋼上鑽  $\phi 15$ , 深30mm的孔。切削速度為50m/min, 每轉進給量為0.15mm/rev, 求鑽削時間

$$(答) \text{ 主軸轉速 } n = \frac{50 \times 1000}{15 \times 3.14} = 1061.57 \text{min}^{-1}$$

$$T_c = \frac{30 \times 1}{1061.57 \times 0.15} = 0.188$$

= 0.188 × 60 ≈ 11.3 秒可鑽削完畢

### ● Cutting speed ( $V_c$ )

$$V_c = \frac{D_c \times \pi \times n}{1000}$$

$V_c$  (m/min): cutting speed  
 $D_c$  (mm): drill diameter  
 $n$  (rev/min): rotating speed

◆Example  
 spindle speed is 1600 rev/min. Drill diameter is 20 mm, thus cutting speed is:

$$V_c = \frac{D_c \times \pi \times n}{1000} = \frac{20 \times 3.14 \times 1600}{1000} = 100 (\text{m/min})$$

### ● Feed speed

$$V_f = f_r \times n (\text{mm/min})$$

$V_f$  (mm/min): feed speed  
 $f_r$  (mm/rev): feed rate per revolution  
 $n$  (rev/min): spindle speed

◆Example  
 Spindle speed is 1500 rev/min, feed rate per revolution is 0.1mm/rev, thus feed speed is:

$$V_f = f_r \times n = 0.1 \times 1500 = 150 (\text{mm/min})$$

### ● Machining time

$$T_c = \frac{L_d \times i}{n \times f}$$

$T_c$  (min): machining time  
 $f_r$  (mm/rev): feed rate per revolution  
 $i$ : number of holes  $L_d$  (mm): drilling depth  
 $n$  (rev/min): spindle speed

◆Example  
 Drilling a hole with a diameter of 20 mm and a depth of 40 mm, cutting speed is 100m/min and feed rate per revolution is 0.1mm/rev. Calculate the drilling time.

$$n = \frac{V_c \times 1000}{D_c \times \pi} = \frac{100 \times 1000}{20 \times 3.14} = 1600 (\text{rev/min})$$

$$T_c = \frac{L_d \times i}{n \times f_r} = \frac{40 \times 1}{1600 \times 0.1} = 0.25 (\text{min})$$

### ● Metal removal rate

$$Q = \frac{V_f \times \pi \times D_c^2}{4 \times 1000}$$

$Q$  (cm<sup>3</sup>/min): metal removal rate  
 $D_c$  (mm): drill diameter  
 $V_f$  (mm/min): feed speed

◆Example  
 Drill diameter is 20mm, feed speed is 160mm/rev, thus metal removal rate is:

$$Q = \frac{V_f \times \pi \times D_c^2}{4 \times 1000} = \frac{160 \times 3.14 \times 20^2}{4 \times 1000} = 50.24 (\text{cm}^3/\text{min})$$

# Indexable U drill and Boring Head spares

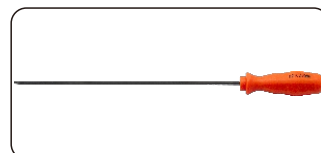
## U钻、镗刀配件表



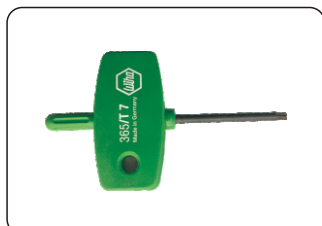
黄黑盒acckee yellow box



白盒acckee white box



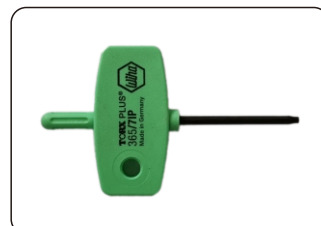
皇冠钻扳手Sem drill wrench



扳手（德国威汉）T6/T7/T8/T15  
WRENCH(wiha)



扳手（黑色大研）T6/T7/T8/T15  
WRENCH(black acckee)



扳手（德国威汉）PLUS T6/T7/T8/T15  
WRENCH(wiha)PLUS



镗刀刀柄侧固螺丝（1-6#）  
side fastening screw for chuck(1-6#)



压刀片座螺丝（1-6#）  
cutter block screw(1-6#)



堵头  
end cap



粗镗刀配件-粗镗刀压紧杯头螺丝  
roug boring head fitting-tightening,  
screws for rough boring head



侧固螺丝/精镗球头螺丝  
side fastening screw  
screw for finish boring head



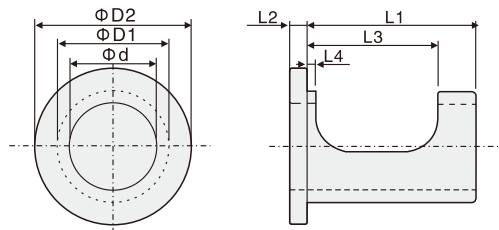
梅花螺丝  
screw



皇冠钻双头螺丝  
Sem drill Screw



## SHE型

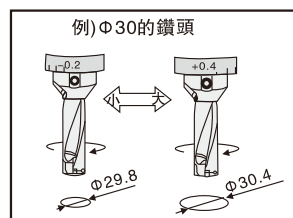


## 套筒尺寸

| 型號         | 庫存 | 尺寸(mm) |     |     |    |    |    |     | ※加工徑調整範圍  | 中心高調整範圍    |
|------------|----|--------|-----|-----|----|----|----|-----|-----------|------------|
|            |    | Φd     | ΦD1 | ΦD2 | L1 | L2 | L3 | L4  |           |            |
| SHE2025-43 | ●  | 20     | 25  | 41  | 43 | 4  | 36 | 3.0 | +0.4~-0.2 | +0.2~-0.15 |
| SHE2532-48 | ●  | 25     | 32  | 49  | 48 | 6  | 38 | 2.5 | +0.4~-0.2 | +0.2~-0.15 |
| SHE3240-53 | ●  | 32     | 40  | 58  | 53 | 6  | 43 | 2.5 | +0.4~-0.2 | +0.2~-0.15 |
| SHE4050-63 | ●  | 40     | 50  | 74  | 63 | 6  | 49 | 3.0 | +0.6~-0.2 | +0.2~-0.2  |

●:標準庫存

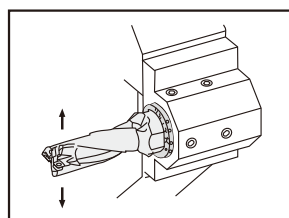
## 1.加工徑調整~在加工中心上進行偏心加工~



## ●加工徑調整範圍(mm)

| 刀杆直徑 | 調整量       |
|------|-----------|
| Φ20  | +0.4~-0.2 |
| Φ25  |           |
| Φ32  |           |
| Φ40  | +0.6~-0.2 |

## 2.調整中心高~在車床上通過調整中心高解決加工故障~



## ●中心高調整量(mm)

| 刀杆直徑 | 調整量        |
|------|------------|
| Φ20  | +0.2~-0.15 |
| Φ25  |            |
| Φ32  |            |
| Φ40  | +0.3~-0.2  |

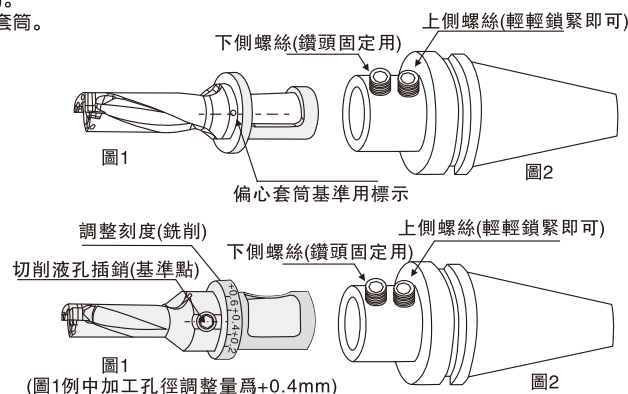
## ◎使用方法

## 1.調整加工徑時

- ①以鑽頭的偏心套筒基準用標示(切削液插銷的中央)為基準,對準套筒的法蘭外側的調整刻度(參考圖1)
- ②要擴大加工徑時,套筒向(+)方向轉動;要縮小加工徑時,套筒向(-)方向轉動。
- ③轉動套筒時,把鑽頭附的扳手插入套筒凸緣上的小孔,即可轉動調整套筒。
- ④使用側固定式軸把的下側螺絲,從套筒的開口窗直接緊固鑽頭。

上側螺絲則在不傷及套筒的情況下緊鎖。(圖2)

注意: 1.不可使用彈簧筒夾固定型刀杆。  
2.套筒上的刻度為標準值。  
調整後檢查實際加工徑。



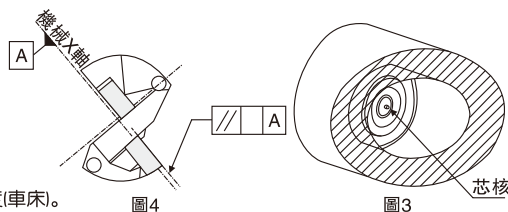
## 2.調整中心高時

車床上鑽頭加工故障的原因幾乎都是由中心高偏移引起的。  
芯核的高度是在加工盲孔時,如圖3在被加工孔內側端面的中心處殘留直徑為0.5mm的芯核,則中心高是合適的。

- 完全無芯核殘留 或者 ●直徑大于1mm以上的芯核殘留

- ①設定鑽頭外刃面與刀具控制臺的傾斜角度成平行狀態。(參閱圖4)
- ②以裝恰在鑽頭法蘭上切削液孔插銷的中央為基準,對準套筒的法蘭端面上的調整刻度(車床)。
- ③完全沒有芯核殘留時,向(+)方向轉動套筒;當芯核殘留為直徑1mm以上時,向(-)方向轉動套筒。
- ④轉動套筒時,把鑽頭的專用扳手插入套筒法蘭外側的孔內,即可轉動調整套筒。
- ⑤用車床上的刀把固定螺釘時,從套筒開口窗直接固定鑽頭。

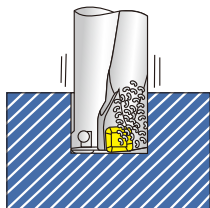
注意: 通過偏心套筒來調整中心高時,加工徑同時會有所變化。設定完畢後,請必須確認孔徑尺寸。



# The Solutions Of Common Problems

## 问题与对策

### 振動



1. 檢查鑽頭的安裝。
2. 檢查工件的安裝。
3. 提高進給量。如果是非常軟的材料，降低進給量并提高切削速度。
4. 降低切削速度。

### 扭矩不足

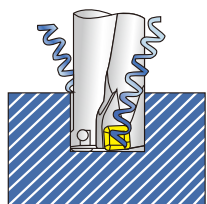
- 降低進給量。
- 選擇用于較低進給量的針對更硬材料斷屑的槽型。

### 功率不足

- 降低切削速度。
- 降低進給量。
- 選擇用于較低進給量的針對更硬材料斷屑的槽型。(SCGX-P1)

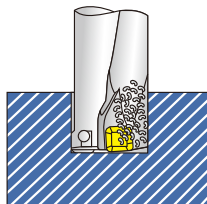
### 切屑堵塞問題

長切屑引起的切屑堵塞



- 提高進給量。如果是非常軟的材料，降低進給量并提高切削速度。
- 選擇用于較低進給量的針對更硬材料斷屑的槽型。(SCGX-P1)

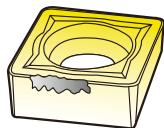
盡管是短切屑，切屑仍堵塞



- 提高冷卻液壓力/流量。
- 降低切削速度。

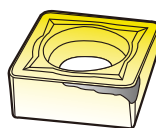
### 刀具壽命問題

外緣刀片微崩



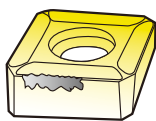
- 降低入口處的進給量。
- 選擇韌性更好的材質等級。
- 選擇用于較高進給量的針對更軟材料斷屑的槽型。(SCGX-P2)
- 降低進給量。
- 降低切削速度。

外緣刀片後刀面磨損太快



- 降低切削速度。
- 提高冷卻液壓力/流量。
- 選擇耐磨性更好的材質等級。

中心刀片微崩



- 檢查鑽頭的安裝。
- 檢查工件的安裝。
- 降低入口處的進給量。
- 提高進給量。
- 降低切削速度。

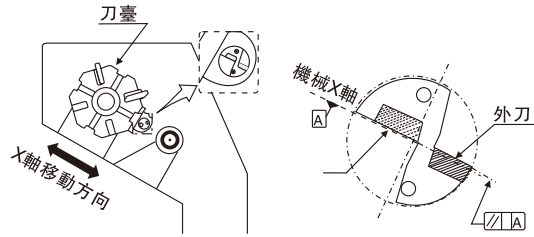
# Working Condition In VMC Machine

## 快速钻在车床的应用

S

### ◎車床上正確的安裝方法

1. 外刃表面要與設備X成平行狀態(通過X軸的移動可以調整加工徑)
2. 建議外刃的安裝朝向應使到外刃面朝向操作者。(如圖1)(但也可逆向180°使用)當車床上有上下兩個轉塔時, 當需要將鑽頭安裝在下轉塔上時, 則外刃面一定要朝向操作者。(此時逆向旋轉180°也可)



(圖1)在車床上的安裝狀態

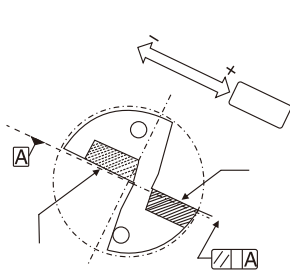
### ◎加工徑的調整方法

#### 1. 加工徑的調整方法

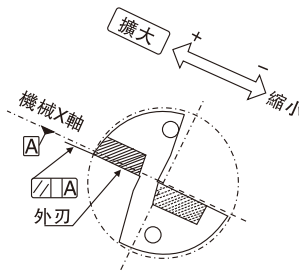
- ① 可利用刀具的X軸方向移動來調整加工徑。X軸移動的方向取決於刀把的位置。
  - ② 要擴大孔徑, 可沿X軸向外刃方向移動刀具。(圖-2, 圖-3)要減小孔徑, 可沿X軸向相反方向移動刀具。(這種平移叫偏心)但要確保孔徑不會比鑽頭直徑小超過0.2mm或更多。否則, 刀柄就會與孔干涉。(圖-4)
- 例在使用 $\Phi 20$ 的鑽頭時, 孔徑不能小於19.8mm。

#### 2. 加工徑的偏心極限值

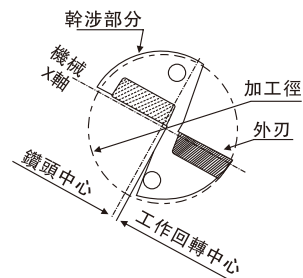
參考刀柄尺寸表中的“半徑方向偏心可能範圍”一欄, 可以得到加工徑偏心極限。(這個數據表示半徑方向上能設定多大的偏心的尺寸。)例可以使用 $\Phi 20$ 鑽頭時鑽出一個 $\Phi 21$ 的孔, 這是因為“半徑方向偏心可能範圍”是+0.5mm



(圖2)外刃面向上



(圖3)外刃面向下



(圖4)過分偏心(較小的孔徑)

### ◎中心高的調整方法

#### 1. 內刃的中心高

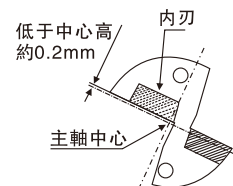
如圖-1所示方式安裝, 內刃的中心高將低於中心高約0.2mm。(圖-5)這是通常的中心高且內刃被設計為這樣的高。但是, 車床的轉塔與主軸中心偏移不準的時候, 中心太高或太低的情況也是有的。為了穩定加工, 確認內刃中心高是很重要的。

#### 2. 如何確認內刃中心高

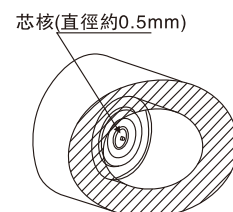
要確認內刃中心高, 要看鑽孔凹面的端面中心部的殘留芯核。(圖-6)若內刃中心高在正常位置, 殘留芯核的直徑應約為0.5mm。若有以下情況, 則要調整中心高:

1. 無殘留芯核
2. 芯直徑大於1mm

★試切確認中心高時, 先以0.1mm/刃以下的小進給量, 作深度為10mm的鑽孔加工。



(圖5)鑽頭正面圖



(圖6)中心部芯核

# Working Condition In VMC Machine

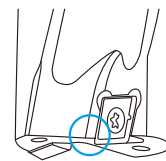
## 快速钻在车床的应用

### 3. 內刃中心高的調整方法

a) 完全無芯核殘留(或者是非常小的芯核殘留)

這是在內刃高于中心高時發生的。

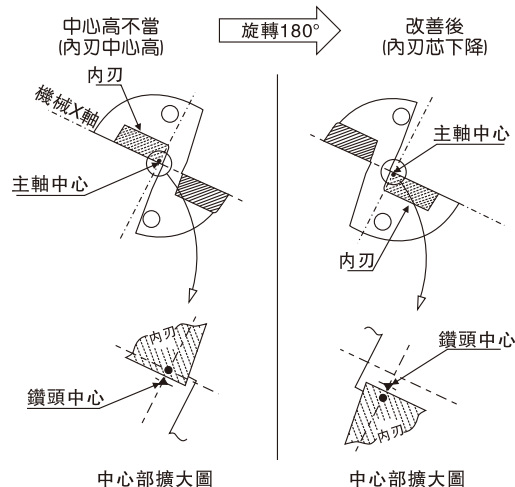
在這種情況下，內刃靠近鑽頭中心時，特別容易發生崩損，所以必須校正。(圖-7)



(圖7)內刃靠近鑽頭中心時崩損

#### 【調整方法】

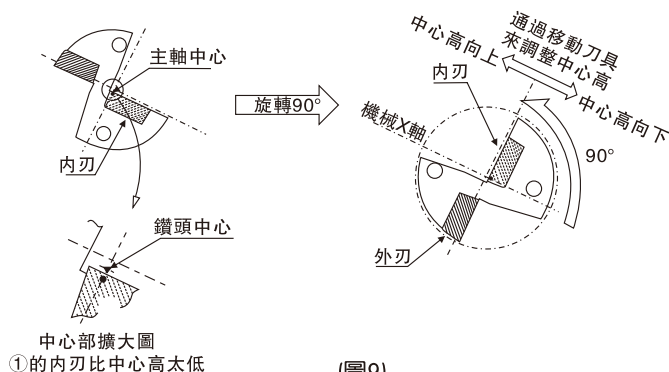
- ① 使鑽頭本體成180° 旋轉進行安裝。  
大部分問題都可以通過這個方法解決。(圖8)



(圖8)

#### 【調整方法】

- ② 通過①進行安裝、加工後仍然存在大芯核時，如圖-9所示，請將鑽頭本體成90° 旋轉、外刃靠下側、沿設備X軸方向移動刀具來調整中心高。(但是，這就不可能調整加工徑)此外，若用相反的方法安裝刀柄(外刃靠上側)，則加工徑變小，這可能會引起刀柄與鑽孔的干涉，請注意。  
根本的對策，是調整轉塔本身的中心高。



(圖9)

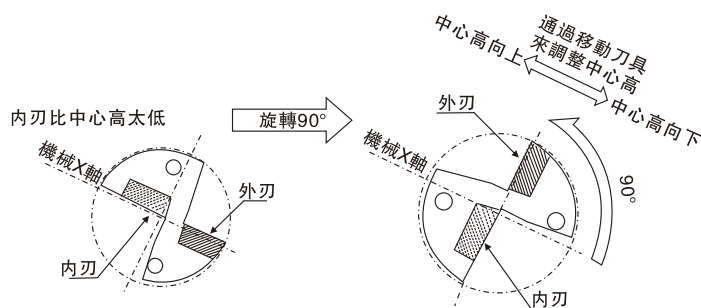
b) 芯核直徑過大(1mm以上)

這是在內刃低于中心高時發生的。

這會影響切屑排出性，有必要調整。

#### 【調整方法】

逆時針旋轉90° 安裝鑽頭，如圖-10所示。(外刃靠上側)，且沿X軸方向移動工具來調整中心高。(但是，這就不可能調整加工徑)此外，若用相反的方法安裝刀杆(外刃靠下側)，則加工徑變小，這可能會引起刀杆與鑽孔的干涉。  
根本的對策，是調整轉塔本身的中心高。



(圖10)



# 镗刀世界 U钻天下







# TWN Twin-Cutter Boring Head

## TWN系列双刃粗镗刀



◎加工範圍:  $\phi 20 - \phi 150$

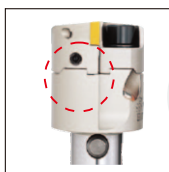
◎重視粗加工時的剛性

◎刀片座和鏜頭間採用三個面貼緊方式緊固，增強剛性

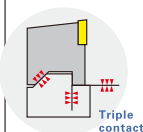
◎刀片座等高誤差 $\leq 0.02\text{mm}$

### Priority is given to rigidity.

◎Triple contact for highest rigidity.



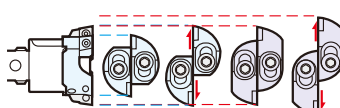
Cartridge and head are clamped together with face contact, increasing the rigidity for heavy duty boring.



◎Capacity dia. 20-150mm!

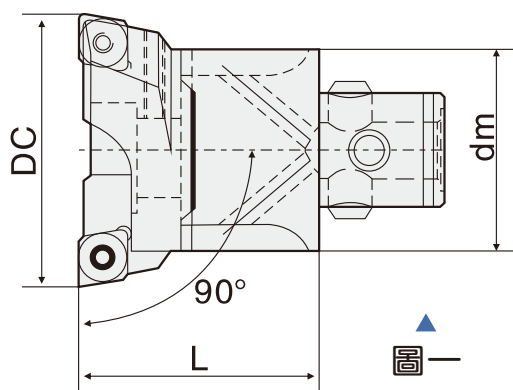
**Wide diameter range**

1 head accepts 2 different size cartridges.  
Example: CKB1-TWN2026-35 provides capacity of dia.20 to 26 mm

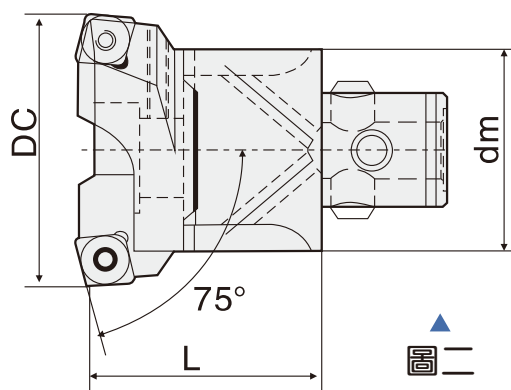


Covered by 8 different heads only!

Massive thickness of cartridge eliminates vibration even under heavy cutting on 20mm or boring with overlap set of cartridges. (Stepped cutting is not available.)



盲孔用 Blind hole



通孔用 Through hole  
定制款 Made to order item

◎ 盲孔用粗鏜刀-90°(Rough boring head for blind hole-90°)

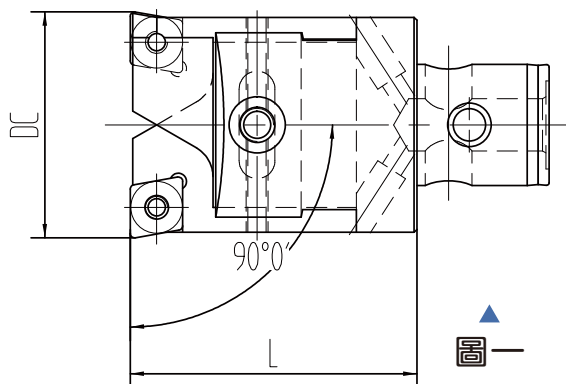
| 型號<br>Specification | Dc      | dm | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 適用刀片座<br>Cutter block | 刀片螺絲<br>Screw | 壓刀片座螺絲<br>Cutter block screw | 側面微調螺絲<br>Side trimmer screw | kg   | 圖 |
|---------------------|---------|----|----|----------------|-------------|--------------|-----------------------|---------------|------------------------------|------------------------------|------|---|
| CKB1-TWN2026-35     | 20-26   | 19 | 35 | CC..0602..     | M2.5×6.5    | T8           | TW20-26M              | M2.5*6        | M4-0.7*16                    | M3*5                         | 0.07 | 1 |
| CKB2-TWN2533-38     | 25-33   | 24 | 38 | CC..0602..     | M2.5×6.5    | T8           | TW25-33M              | M2.5*6        | M5-0.8*18                    | M3*6                         | 0.14 |   |
| CKB3-TWN3242-43     | 32-42   | 31 | 43 | CC..09T3..     | M4×10       | T15          | TW32-42M              | M4*10         | M6-1.0*20                    | M3*8                         | 0.23 |   |
| CKB4-TWN4154-50     | 41-54   | 39 | 50 | CC..09T3..     | M4×10       | T15          | TW41-54M              | M4*10         | M8-1.25*25                   | M3*10                        | 0.43 |   |
| CKB5-TWN5372-60     | 53-72   | 49 | 60 | CC..1204..     | M5×13       | T20          | TW53-72M              | M5*12         | M10-1.5*35                   | M4*12                        | 0.82 |   |
| CKB6-TWN6890-75     | 68-90   | 63 | 75 | CC..1204..     | M5×13       | T20          | TW68-90M              | M5*12         | M10-1.5*35                   | M4*16                        | 1.75 |   |
| CKB6-TWN89120-75    | 89-120  | 63 | 75 | CC..1204..     | M5×13       | T20          | TW89-120M             | M5*12         | M10-1.5*35                   | M4*16                        | 2.25 |   |
| CKB6-TWN115150-75   | 115-150 | 63 | 75 | CC..1204..     | M5×13       | T20          | TW115-150M            | M5*12         | M10-1.5*35                   | M4*20                        | 2.35 |   |

◎ 通孔用粗鏜刀-75°(Rough boring head for through holes-75°)

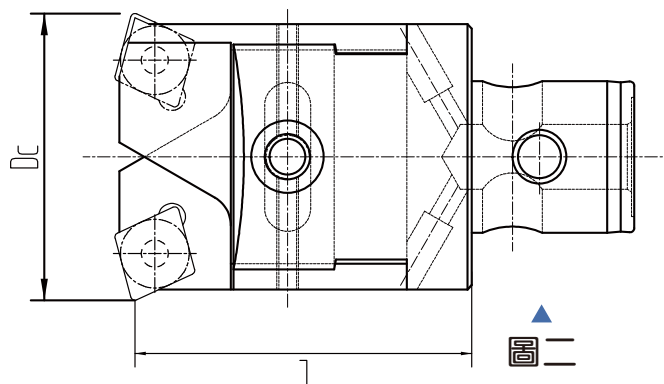
| 型號<br>Specification | Dc      | dm | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 適用刀片座<br>Cutter block | 刀片螺絲<br>Screw | 壓刀片座螺絲<br>Cutter block screw | 側面微調螺絲<br>Side trimmer screw | kg   | 圖 |
|---------------------|---------|----|----|----------------|-------------|--------------|-----------------------|---------------|------------------------------|------------------------------|------|---|
| CKB5-TWN5372-60-T   | 53-7    | 49 | 60 | CC..1204..     | M5×13       | T20          | TW53-72M              | M5*12         | M10-1.5*35                   | M4*12                        | 0.82 | 2 |
| CKB6-TWN6890-75-T   | 68-90   | 63 | 75 | CC..1204..     | M5×13       | T20          | TW68-90M              | M5*12         | M10-1.5*35                   | M4*16                        | 1.75 |   |
| CKB6-TWN89120-75-T  | 89-120  | 63 | 75 | CC..1204..     | M5×13       | T20          | TW89-120M             | M5*12         | M10-1.5*35                   | M4*16                        | 2.25 |   |
| CKB6-TWN115150-75-T | 115-150 | 63 | 75 | CC..1204..     | M5×13       | T20          | TW115-150M            | M5*12         | M10-1.5*35                   | M4*20                        | 2.35 |   |

# Heavy Cutting Rough Boring Head 重切削型粗鏜刀 (Φ25-Φ90)

◎ 加工范围Diameter:Φ25-Φ90



盲孔用 Blind hole



通孔用 Through hole

◎ 盲孔用粗鏜刀-90°(Rough boring head for blind hole-90°)

| 型號<br>Specification | Dc    | dm | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 壓刀片座螺絲<br>Cutter block screw | L扳手<br>Wrench | 側面微調螺絲<br>Side trimmer screw | 扳手<br>Wrench | kg   | 圖 |
|---------------------|-------|----|----|----------------|-------------|--------------|------------------------------|---------------|------------------------------|--------------|------|---|
| CKB2-TWN2533-38-A   | 25-33 | 24 | 38 | CC..0602..     | M2.5*6      | T8           | M5-0.8*18                    | L4            | M3*6                         | L1.5         | 0.14 | 1 |
| CKB3-TWN3242-43-A   | 32-42 | 31 | 45 | CC..09T3..     | M4*10       | T15          | M6-1.0*20                    | L5            | M3*8                         | L1.5         | 0.23 |   |
| CKB4-TWN4154-50-A   | 41-54 | 39 | 52 | CC..09T3..     | M4*10       | T15          | M8-1.25*25                   | L6            | M3*10                        | L1.5         | 0.43 |   |
| CKB5-TWN5372-60-A   | 53-72 | 49 | 66 | CC..1204..     | M5*12       | T20          | M10-1.5*35                   | L8            | M4*12                        | L2           | 0.82 |   |
| CKB6-TWN6890-75-A   | 68-90 | 63 | 75 | CC..1204..     | M5*12       | T20          | M10-1.5*35                   | L8            | M4*16                        | L2           | 1.75 |   |

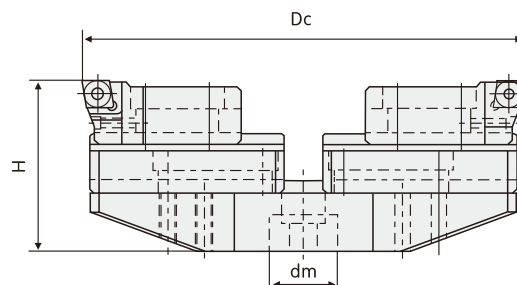
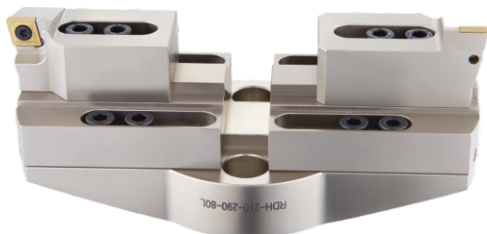
◎ 通孔用粗鏜刀-75°(Rough boring head for through holes-75°)

| 型號<br>Specification   | Dc    | dm | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 壓刀片座螺絲<br>Cutter block screw | L扳手<br>Wrench | 側面微調螺絲<br>Side trimmer screw | 扳手<br>Wrench | kg   | 圖 |
|-----------------------|-------|----|----|----------------|-------------|--------------|------------------------------|---------------|------------------------------|--------------|------|---|
| CKB2-TWN2533-38-A-75° | 25-33 | 24 | 35 | CC..0602..     | M2.5*6      | T8           | M5-0.8*18                    | L4            | M3*6                         | L1.5         | 0.14 | 2 |
| CKB3-TWN3242-43-A-75° | 32-42 | 31 | 41 | CC..09T3..     | M4*10       | T15          | M6-1.0*20                    | L5            | M3*8                         | L1.5         | 0.23 |   |
| CKB4-TWN4154-50-A-75° | 41-54 | 39 | 48 | CC..09T3..     | M4*10       | T15          | M8-1.25*25                   | L6            | M3*10                        | L1.5         | 0.43 |   |
| CKB5-TWN5372-60-A-75° | 53-72 | 49 | 61 | CC..1204..     | M5*12       | T20          | M10-1.5*35                   | L8            | M4*12                        | L2           | 0.82 |   |
| CKB6-TWN6890-75-A-75° | 68-90 | 63 | 70 | CC..1204..     | M5*12       | T20          | M10-1.5*35                   | L8            | M4*16                        | L2           | 1.75 |   |



# TWN Large Diameter Boring Head 桥式大孔径双刃粗镗刀 (Φ151-Φ750)

◎ 加工范围Diameter:Φ151-Φ750

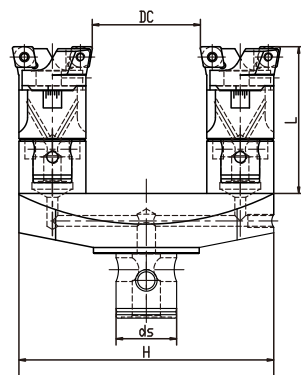


◎ 兩種材質：鋼制和鋁制 Two Kinds Of Material, Steel And Aluminum.

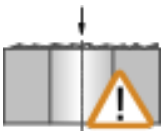
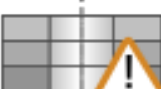
| 型號<br>Specification | Dc      | dm | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 滑塊緊固螺絲<br>Slide fastening screws | 刀片座緊固螺絲<br>boring cutter fastening screws | 滑塊側面螺絲<br>Slide side screws | 刀片座側面螺絲<br>boring cutter side screws | kg    |
|---------------------|---------|----|----|----------------|-------------|--------------|----------------------------------|-------------------------------------------|-----------------------------|--------------------------------------|-------|
| RDH-D151-211-80L    | 151-211 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*20                       | M6*20                                | 4.95  |
| RDH-D210-290-80L    | 210-290 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 5.85  |
| RDH-D290-370-80L    | 290-370 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 6.81  |
| RDH-D370-450-80L    | 370-450 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 7.80  |
| RDH-D450-550-80L    | 450-550 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 8.75  |
| RDH-D550-650-80L    | 550-650 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 9.85  |
| RDH-D650-750-80L    | 650-750 | 32 | 80 | CC..1204..     | M5*13       | T20          | M8*25                            | M8*26                                     | M6*25                       | M6*25                                | 10.85 |

# Pin Turning Boring Head-for Roughing Boring 套镗粗镗刀 (Φ13-Φ128)

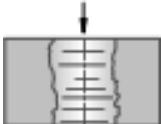
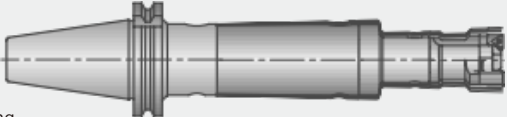
◎ 加工范围Diameter:Φ13-Φ128



| 型號<br>Specification/Item | 鏜孔範圍 (外圓)<br>Range (excircle) |         | 深度<br>depth<br>(L) | 長度<br>length<br>(H) | 鏜孔範圍 (內孔)<br>Range (Inner) | 接口<br>ds | 鏜刀模塊<br>Head Model |
|--------------------------|-------------------------------|---------|--------------------|---------------------|----------------------------|----------|--------------------|
| CKB5-TW2230-56CK2        | TWN2-1                        | 22-30   | 56                 | 79                  | 80-88                      | 28       | CKB2-TWN2533-38    |
| CKB5-TW3240-56CK2        | TWN2-1                        | 32-40   | 56                 | 89                  | 90-98                      | 28       | CKB2-TWN2533-38    |
| CKB5-TW4555-67CK3        | TWN3-1                        | 45-55   | 67                 | 118                 | 119-129                    | 28       | CKB3-EWN3242-43    |
| CKB6-TW5565-67CK3        | TWN3-1                        | 55-65   | 67                 | 128                 | 129-139                    | 36       | CKB3-EWN3242-43    |
| CKB6-TW6575-67CK3        | TWN3-1                        | 65-75   | 67                 | 138                 | 139-149                    | 36       | CKB3-EWN3242-43    |
| CKB6-TW87100-77CK4       | TWN4-1                        | 89-100  | 77                 | 179                 | 182-195                    | 36       | CKB4-EWN4154-50    |
| CKB6-TW114127-77CK4      | TWN4-1                        | 114-127 | 77                 | 206                 | 209-222                    | 36       | CKB4-EWN4154-50    |

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>起始面不平整（铸造表面） starting on uneven surfaces (cast surfaces)</p> <ul style="list-style-type: none"> <li>在加工开始时根据表面质量状况降低进给</li> <li>subject to the starting angle, the feed must be reduced when starting the bore.</li> <li>经验规则: 3° = 30%; 10° = 40%; 25° = 60% Rule of thumb: 3° = 30%; 10° = 40%; 25° = 60%</li> <li>使用强壮的刀片 use tough insert</li> <li>使用稳定的刀尖圆角 use stable corner radius</li> </ul> |
|    | <p>出口为斜面 Angled bore exit</p> <ul style="list-style-type: none"> <li>加工至斜面发生断续切削后降低进给至 50% 以下</li> <li>from wear cut is interrupted reduce feed rate up to 50%</li> <li>使用强壮的刀片 use tough insert</li> <li>使用稳定的刀尖圆角 use stable corner radius</li> </ul>                                                                                                                                                 |
|    | <p>起始面为弧面 starting on cambered surfaces</p> <ul style="list-style-type: none"> <li>没问题 no problems</li> <li>必要时降低进给 reduce feed rate if necessary</li> </ul>                                                                                                                                                                                                                                            |
|    | <p>粗镗贯穿孔 Roughing through a cross bore</p> <ul style="list-style-type: none"> <li>必要时降低 50% 进给 reduce feed rate 50% if necessary</li> <li>注意刀具上的缠屑情况 watch for chip jamming around tool</li> <li>使用强壮的刀片 use tough insert</li> <li>使用稳定的刀尖圆角 use stable corner radius</li> </ul>                                                                                                                        |
|  | <p>起始面有台阶 starting on an edge</p> <ul style="list-style-type: none"> <li>降低 50% 进给 reduce feed rate by 50%</li> <li>使用强壮的刀片 use tough insert</li> <li>使用稳定的刀尖圆角 use stable corner radius</li> </ul>                                                                                                                                                                                                     |
|  | <p>起始面有焊缝 starting on a welded seam</p> <ul style="list-style-type: none"> <li>降低进给 reduce feed rate</li> <li>最大使用 3 × D 刀具 use max. 3 × D tools</li> </ul>                                                                                                                                                                                                                                             |
|  | <p>粗镗叠层板 Roughing through stacked plates</p> <ul style="list-style-type: none"> <li>使用 80° 主偏角刀夹 use holder with 80° approach angle</li> <li>需要良好的工件压紧 good workpiece clamping required</li> <li>最大间隙 = 1 mm max. gap = 1 mm</li> </ul>                                                                                                                                                                 |

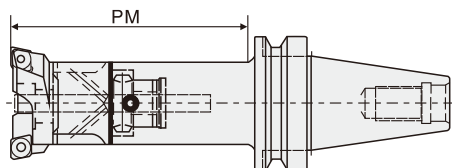
问题 → 可能原因 → 解决方案 Problems → Possible causes → solutions

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>长切屑 Long chips</p> <ul style="list-style-type: none"> <li>不是最佳的刀片槽型 not optimum geometry</li> <li>选择合适的切深 select correct cutting depth</li> <li>选择合适的切削参数 select correct cutting values</li> </ul>                                                                                                                                                                                                               |
|  | <p>表面质量不好 Bad surface finish</p> <ul style="list-style-type: none"> <li>进给太快 → 改善切削参数: 增加切削速度, 降低进给</li> <li>feed rate too high → improve cutting parameters: increase cutting speed, reduce feed</li> <li>长切屑 long chips</li> </ul>                                                                                                                                                                                |
|  | <p>振动 Vibrations</p> <ul style="list-style-type: none"> <li>进给太快 feed rate too high</li> <li>切削速度太高 cutting speed too high</li> <li>刀片槽型不够锋利 geometry too obtuse</li> <li>检查轴向/径向设置 check axial / radial setting</li> <li>检查刀具装配 check tool assembly</li> <li>如有需要使用抗振到并 if required, use a damping element adaptor</li> </ul>  |



# TWN Rough Boring Cutting Conditions–BT40/BT50

## TWN系列双刃粗镗刀切削条件表



### ◎BT40 MAS 403 BT (ISO40)

| 型號<br>Specification | 被加工<br>材料<br>Material | PM  | 刀尖半徑R<br>Nose<br>radius | 切削速度<br>Vc(m/min) | 切削量ap (mm/φ)     |            | 進給率f (mm/rev)    |            |
|---------------------|-----------------------|-----|-------------------------|-------------------|------------------|------------|------------------|------------|
|                     |                       |     |                         |                   | 推薦值<br>Recommend | 最大值<br>MAX | 推薦值<br>Recommend | 最大值<br>MAX |
| CKB1-TWN2026-35     | P 低碳鋼                 | 73  | 0.4                     | 110               | 1.7              | 2.0        | 0.16             | 0.20       |
|                     | M 合金鋼                 |     |                         | 95                | 1.4              | 2.0        | 0.13             | 0.20       |
|                     | K 不銹鋼                 |     |                         | 60                | 1.4              | 2.0        | 0.14             | 0.20       |
|                     | S 鑄鐵                  |     |                         | 80                | 1.7              | 2.0        | 0.13             | 0.20       |
|                     | S 鋁合金                 |     |                         | 130               | 2.0              | 2.5        | 0.20             | 0.25       |
| CKB2-TWN2533-38     | P 低碳鋼                 | 89  | 0.4                     | 110               | 2.2              | 3.0        | 0.18             | 0.25       |
|                     | M 合金鋼                 |     |                         | 95                | 1.8              | 3.0        | 0.16             | 0.25       |
|                     | K 不銹鋼                 |     |                         | 60                | 2.0              | 3.0        | 0.18             | 0.25       |
|                     | K 鑄鐵                  |     |                         | 80                | 2.2              | 3.0        | 0.16             | 0.25       |
|                     | S 鋁合金                 |     |                         | 130               | 3.0              | 4.0        | 0.25             | 0.30       |
| CKB3-TWN3242-43     | P 低碳鋼                 | 105 | 0.8                     | 150               | 3.2              | 4.0        | 0.22             | 0.30       |
|                     | M 合金鋼                 |     |                         | 130               | 2.7              | 3.5        | 0.18             | 0.28       |
|                     | K 不銹鋼                 |     |                         | 70                | 2.7              | 3.5        | 0.22             | 0.30       |
|                     | K 鑄鐵                  |     |                         | 80                | 3.2              | 4.0        | 0.18             | 0.25       |
|                     | S 鋁合金                 |     |                         | 130               | 3.5              | 5.0        | 0.25             | 0.30       |
| CKB4-TWN4154-50     | P 低碳鋼                 | 113 | 0.8                     | 150               | 3.5              | 4.5        | 0.22             | 0.32       |
|                     | M 合金鋼                 |     |                         | 130               | 3.5              | 4.5        | 0.20             | 0.30       |
|                     | K 不銹鋼                 |     |                         | 70                | 3.2              | 4.3        | 0.20             | 0.30       |
|                     | K 鑄鐵                  |     |                         | 80                | 3.5              | 5.5        | 0.20             | 0.30       |
|                     | S 鋁合金                 |     |                         | 130               | 4.5              | 6.5        | 0.28             | 0.35       |
| CKB5-TWN5372-60     | P 低碳鋼                 | 122 | 0.8                     | 150               | 5.3              | 6.5        | 0.25             | 0.35       |
|                     | M 合金鋼                 |     |                         | 130               | 5.3              | 6.5        | 0.20             | 0.28       |
|                     | K 不銹鋼                 |     |                         | 70                | 4.5              | 5.5        | 0.20             | 0.28       |
|                     | K 鑄鐵                  |     |                         | 80                | 6.3              | 7.5        | 0.25             | 0.32       |
|                     | S 鋁合金                 |     |                         | 130               | 7.5              | 9.0        | 0.30             | 0.38       |
| CKB6-TWN6890-75     | P 低碳鋼                 | 138 | 0.8                     | 150               | 7.0              | 9.0        | 0.25             | 0.35       |
| CKB6-TWN89120-75    | M 合金鋼                 |     |                         | 130               | 6.3              | 9.0        | 0.22             | 0.30       |
| CKB6-TWN115150-75   | K 不銹鋼                 |     |                         | 70                | 6.3              | 8.0        | 0.22             | 0.30       |
|                     | K 鑄鐵                  |     |                         | 80                | 7.2              | 9.0        | 0.25             | 0.32       |
|                     | S 鋁合金                 |     |                         | 130               | 8.0              | 10.0       | 0.30             | 0.38       |

### ◎BT50 MAS 403 BT (ISO50)

| 型號<br>Specification | 被加工<br>材料<br>Material | PM  | 刀尖半徑R<br>Nose<br>radius | 切削速度<br>Vc(m/min) | 切削量ap (mm/φ)     |            | 進給率f (mm/rev)    |            |
|---------------------|-----------------------|-----|-------------------------|-------------------|------------------|------------|------------------|------------|
|                     |                       |     |                         |                   | 推薦值<br>Recommend | 最大值<br>MAX | 推薦值<br>Recommend | 最大值<br>MAX |
| CKB1-TWN2026-35     | P 低碳鋼                 | 81  | 0.4                     | 110               | 1.7              | 2.0        | 0.16             | 0.20       |
|                     | M 合金鋼                 |     |                         | 95                | 1.4              | 2.0        | 0.13             | 0.20       |
|                     | K 不銹鋼                 |     |                         | 60                | 1.4              | 2.0        | 0.14             | 0.20       |
|                     | K 鑄鐵                  |     |                         | 80                | 1.7              | 2.0        | 0.13             | 0.20       |
|                     | S 鋁合金                 |     |                         | 130               | 2.0              | 2.5        | 0.20             | 0.25       |
| CKB2-TWN2533-38     | P 低碳鋼                 | 98  | 0.4                     | 120               | 2.2              | 3.2        | 0.18             | 0.25       |
|                     | M 合金鋼                 |     |                         | 110               | 1.8              | 3.2        | 0.16             | 0.25       |
|                     | K 不銹鋼                 |     |                         | 70                | 2.0              | 3.2        | 0.18             | 0.25       |
|                     | K 鑄鐵                  |     |                         | 85                | 2.2              | 3.2        | 0.16             | 0.25       |
|                     | S 鋁合金                 |     |                         | 130               | 3.0              | 4.5        | 0.25             | 0.30       |
| CKB3-TWN3242-43     | P 低碳鋼                 | 125 | 0.8                     | 170               | 3.2              | 4.5        | 0.22             | 0.30       |
|                     | M 合金鋼                 |     |                         | 150               | 2.7              | 4.0        | 0.18             | 0.28       |
|                     | K 不銹鋼                 |     |                         | 85                | 2.7              | 3.5        | 0.22             | 0.30       |
|                     | K 鑄鐵                  |     |                         | 85                | 3.2              | 4.5        | 0.18             | 0.25       |
|                     | S 鋁合金                 |     |                         | 130               | 3.5              | 5.0        | 0.25             | 0.30       |
| CKB4-TWN4154-50     | P 低碳鋼                 | 130 | 0.8                     | 170               | 4.0              | 4.5        | 0.22             | 0.32       |
|                     | M 合金鋼                 |     |                         | 150               | 3.5              | 4.5        | 0.20             | 0.30       |
|                     | K 不銹鋼                 |     |                         | 85                | 3.5              | 4.5        | 0.20             | 0.30       |
|                     | K 鑄鐵                  |     |                         | 85                | 3.5              | 5.5        | 0.20             | 0.30       |
|                     | S 鋁合金                 |     |                         | 150               | 4.5              | 6.5        | 0.28             | 0.35       |
| CKB5-TWN5372-60     | P 低碳鋼                 | 140 | 0.8                     | 180               | 6.3              | 7.2        | 0.25             | 0.38       |
|                     | M 合金鋼                 |     |                         | 150               | 6.3              | 7.2        | 0.20             | 0.32       |
|                     | K 不銹鋼                 |     |                         | 100               | 5.3              | 6.3        | 0.20             | 0.32       |
|                     | K 鑄鐵                  |     |                         | 85                | 7.2              | 9.0        | 0.25             | 0.35       |
|                     | S 鋁合金                 |     |                         | 170               | 8.0              | 11.0       | 0.30             | 0.40       |
| CKB6-TWN6890-75     | P 低碳鋼                 | 150 | 0.8                     | 180               | 8.0              | 10.0       | 0.25             | 0.38       |
| CKB6-TWN89120-75    | M 合金鋼                 |     |                         | 150               | 7.0              | 10.0       | 0.25             | 0.32       |
| CKB6-TWN115150-75   | K 不銹鋼                 |     |                         | 100               | 6.5              | 8.0        | 0.25             | 0.32       |
|                     | K 鑄鐵                  |     |                         | 85                | 8.0              | 10.0       | 0.25             | 0.35       |
|                     | S 鋁合金                 |     |                         | 170               | 9.0              | 11.0       | 0.30             | 0.40       |



# EWN Precision Boring Head

## EWN系列微调精镗刀

有預平衡設計，可獲得穩定的加工精度

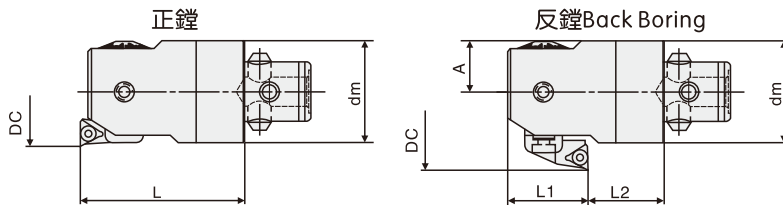
**Reliable scale screw, 1 div=0.01mm on diameter and vernier scale.**

- Stable and higher precision achieved by pre-balanced design.
- Back boring is available as standard feature for greater versatility.

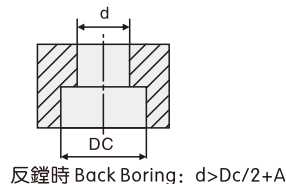
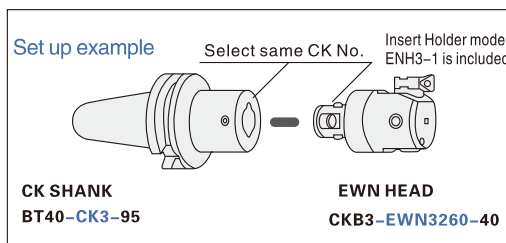
PAT. Diameter  $\phi 20 - \phi 203$

Coolant-Through hole

Vc max. 1200m/min



- 微調精度: 0.01mm/格
- 加工範圍: D20-D203
- 1 div = 0.01mm
- PAT. Diameter D20-D203

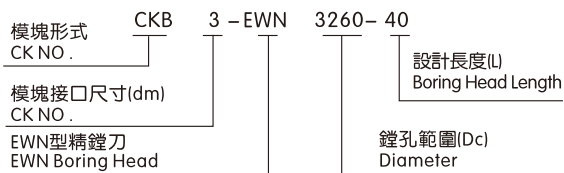


调节更精准  
1刻度=0.01mm/φ

| 型號<br>Specification | 正鏜 Boring |    |      |                     | 反鏜 Counter boring |    |    |      |                     | 適配<br>刀片<br>Insert<br>Size | 螺釘<br>Clamp<br>screw | 扳手<br>wrench | kg   |
|---------------------|-----------|----|------|---------------------|-------------------|----|----|------|---------------------|----------------------------|----------------------|--------------|------|
|                     | Dc        | dm | L    | 刀片座<br>Cutter block | 加工範圍<br>Dc        | L1 | L2 | A    | 刀片座<br>Cutter block |                            |                      |              |      |
| CKB1-EWN2036-32.5   | 20-26     | 19 | 32.5 | ENH1-1              | 30-31             | 20 | 10 | 10   | ENH1-2              | TP..0802..                 | M2.2*5               | T7           | 0.09 |
|                     | 25-31     |    |      | ENH1-2              |                   |    |    |      | ENH1-3              |                            |                      |              |      |
|                     | 30-36     |    |      | ENH1-3              |                   |    |    |      | ENH1-3              |                            |                      |              |      |
| CKB2-EWN2547-35.5   | 25-33     | 24 | 35.5 | ENH2-1              | 38-41             | 22 | 10 | 12.5 | ENH2-2              |                            |                      |              | 0.15 |
|                     | 32-40     |    |      | ENH2-2              |                   |    |    |      | ENH2-3              |                            |                      |              |      |
|                     | 39-47     |    |      | ENH2-3              |                   |    |    |      | ENH2-3              |                            |                      |              |      |
| CKB3-EWN3260-40     | 32-42     | 31 | 40   | ENH3-1              | 48-52             | 25 | 9  | 16   | ENH3-2              |                            |                      |              | 0.25 |
|                     | 41-51     |    |      | ENH3-2              |                   |    |    |      | ENH3-3              |                            |                      |              |      |
|                     | 50-60     |    |      | ENH3-3              |                   |    |    |      | ENH3-3              |                            |                      |              |      |
| CKB4-EWN4174-47     | 41-54     | 39 | 47   | ENH4-1              | 59-67             | 30 | 13 | 20   | ENH4-2              | TC..1102..                 | M2.5*6               | T8           | 0.43 |
|                     | 53-66     |    |      | ENH4-2              |                   |    |    |      | ENH4-3              |                            |                      |              |      |
|                     | 61-74     |    |      | ENH4-3              |                   |    |    |      | ENH4-3              |                            |                      |              |      |
| CKB5-EWN5395-57     | 53-70     | 49 | 57   | ENH5-1              | 61-73             | 34 | 19 | 25.5 | ENH5-1              | TP..1103..                 | M3*7                 | T8           | 1.25 |
|                     | 68-85     |    |      | ENH5-2              |                   |    |    |      | ENH5-2              |                            |                      |              |      |
|                     | 78-95     |    |      | ENH5-3              |                   |    |    |      | ENH5-3              |                            |                      |              |      |
| CKB6-EWN68150-71    | 68-100    | 63 | 71   | ENH6-1              | 77-98             | 45 | 23 | 32.5 | ENH6-1              | TC..1102..                 | M2.5*6               | T8           | 1.78 |
|                     | 93-125    |    |      | ENH6-2              |                   |    |    |      | ENH6-2              |                            |                      |              |      |
|                     | 125-150   |    |      | ENH6-3              |                   |    |    |      | ENH6-3              |                            |                      |              |      |
| CKB6-EWN100203-71   | 100-153   | 63 | 71   | ENH6-1              | 107-155           | 45 | 23 | 45.5 | ENH6-1              | TP..1103..                 | M3*7                 | T8           | 2.53 |
|                     | 125-178   |    |      | ENH6-2              |                   |    |    |      | ENH6-2              |                            |                      |              |      |
|                     | 150-203   |    |      | ENH6-3              |                   |    |    |      | ENH6-3              |                            |                      |              |      |

### ◎ 鏜刀模塊型號說明

Part Number Structure of Finish Boring Head



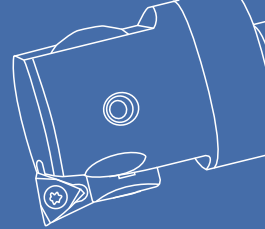
- 附帶ENH○-1刀片座。ENH○-2、ENH○-3刀片座需要另購。
- 反鏜加工時，主軸應反轉。
- 不附帶刀片。
- CKB4以上有TP1103刀片和TC1102刀片座，可跟進需求訂購。

- Insert Holder model ENH-1 is included. ENH-2 and ENH-3 are optional accessories.
- Rotation becomes reverse when back-boring.
- Insert must be ordered separately.

4. Insert

# ABS-EWN Precision Boring Head

## ABS-EWN系列微调精镗刀

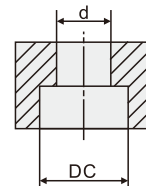
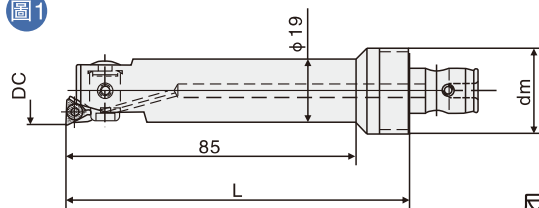


调节更精准  
1刻度=0.01mm/φ

有預平衡設計，可獲得穩定的加工精度

◎微調精度:D0.01mm/格 ◎加工範圍:D20-D150

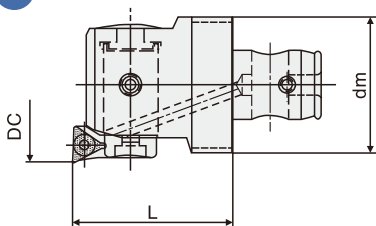
圖1



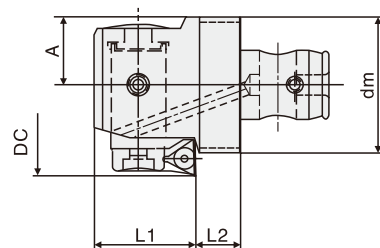
反鏜時 Back Boring:  $d > Dc/2 + A$

圖2

正鏜



反鏜 Back Boring



| 型號<br>Specification     | 圖 | 正鏜 Boring |    |      |                     | 反鏜 Counter boring |    |    |      |                     | 適配<br>刀片<br>Insert Size | 螺釘<br>Clamp<br>screw | 扳手<br>wrench | kg   |
|-------------------------|---|-----------|----|------|---------------------|-------------------|----|----|------|---------------------|-------------------------|----------------------|--------------|------|
|                         |   | Dc        | dm | L    | 刀片座<br>Cutter block | 加工範圍<br>Dc        | L1 | L2 | A    | 刀片座<br>Cutter block |                         |                      |              |      |
| 21CD25-<br>EWN2036-85   | 1 | 20-26     | 25 | 101  | ENH1-1              | 30-31             | 20 | 10 | 10   | ENH1-2              | TP..0802..              | M2×5                 | T6           | 0.13 |
|                         |   | 25-31     |    |      | ENH1-2              |                   |    |    |      | ENH1-3              |                         |                      |              |      |
|                         |   | 30-36     |    |      | ENH1-3              |                   |    |    |      | ENH1-3              |                         |                      |              |      |
| 21CD25-<br>EWN2647-35.5 | 2 | 26-33     | 25 | 35.5 | ENH2-1              | 36-40             | 22 | 10 | 12.5 | ENH2-2              | TP..0802..              | M2×5                 | T6           | 0.16 |
|                         |   | 32-40     |    |      | ENH2-2              |                   |    |    |      | ENH2-3              |                         |                      |              |      |
|                         |   | 39-47     |    |      | ENH2-3              |                   |    |    |      | ENH2-3              |                         |                      |              |      |
| 21CD32-<br>EWN3360-40   | 2 | 33-42     | 32 | 40   | ENH3-1              | 46-51             | 25 | 9  | 16   | ENH3-2              | TP..0902..              | M2.5×6               | T8           | 0.27 |
|                         |   | 41-51     |    |      | ENH3-2              |                   |    |    |      | ENH3-3              |                         |                      |              |      |
|                         |   | 50-60     |    |      | ENH3-3              |                   |    |    |      | ENH3-3              |                         |                      |              |      |
| 21CD40-<br>EWN4174-47   | 2 | 41-54     | 40 | 47   | ENH4-1              | 53-63             | 30 | 13 | 20   | ENH4-2              | TC..1102..              | M2.5×6               | T8           | 0.47 |
|                         |   | 50-63     |    |      | ENH4-2              |                   |    |    |      | ENH4-3              |                         |                      |              |      |
|                         |   | 61-74     |    |      | ENH4-3              |                   |    |    |      | ENH4-3              |                         |                      |              |      |
| 21CD50-<br>EWN5395-57   | 2 | 53-70     | 50 | 57   | ENH5-1              | 62-70             | 34 | 19 | 25.5 | ENH5-1              | TP..1103..              | M3×8                 | T10          | 1.32 |
|                         |   | 65-82     |    |      | ENH5-2              |                   |    |    |      | ENH5-2              |                         |                      |              |      |
|                         |   | 78-95     |    |      | ENH5-3              |                   |    |    |      | ENH5-3              |                         |                      |              |      |
| 21CD63-<br>EWN68150-71  | 2 | 68-100    | 63 | 71   | ENH6-1              | 80-100            | 45 | 23 | 32.5 | ENH6-1              | TC..1102..              | M2.5×6               | T8           | 1.78 |
|                         |   | 94-126    |    |      | ENH6-2              |                   |    |    |      | ENH6-2              |                         |                      |              |      |
|                         |   | 118-150   |    |      | ENH6-3              |                   |    |    |      | ENH6-3              |                         |                      |              |      |

### CAUTION

The max. allowable spindle speed for the EWN Head is 1200m/min. However, since the rigidity of machine spindle and workpiece, the length of boring tool and usage of Extension and Reduction adapters influence the condition, please increase the speed gradually to determine the best cutting condition.

### 刀片座(另售) Insert Holder Pat.(Option)



| 刀片座<br>Cutter block | 形狀圖<br>Figure | 對應鏜刀模塊<br>Head Model | 加工範圍<br>Diameter φ |
|---------------------|---------------|----------------------|--------------------|
| ENH1-1              |               | CKB1-EWN2036-32.5    | 20-26              |
| ENH1-2              |               |                      | 25-31              |
| ENH1-3              |               |                      | 30-36              |
| ENH2-1              |               | CKB2-EWN2547-35.5    | 25-33              |
| ENH2-2              |               |                      | 32-40              |
| ENH2-3              |               |                      | 39-47              |
| ENH3-1              |               | CKB3-EWN3260-40      | 32-42              |
| ENH3-2              |               |                      | 41-51              |
| ENH3-3              |               |                      | 50-60              |
| ENH4-1              |               | CKB4-EWN4174-47      | 41-54              |
| ENH4-2              |               |                      | 50-66              |
| ENH4-3              |               |                      | 61-74              |
| ENH5-1              |               | CKB5-EWN5395-57      | 53-70              |
| ENH5-2              |               |                      | 65-85              |
| ENH5-3              |               |                      | 78-95              |
| ENH6-1              |               | CKB6-EWN68150-71     | 68-100             |
| ENH6-2              |               |                      | 93-125             |
| ENH6-3              |               |                      | 125-150            |
| ENH6-1              |               | CKB6-EWN100203-71    | 100-153            |
| ENH6-2              |               |                      | 125-178            |
| ENH6-3              |               |                      | 150-203            |

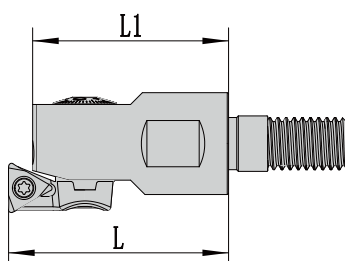






# High Accuracy Precision Boring Head

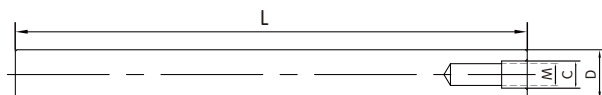
## EWN 螺纹接口小径精镗刀



| 塘頭型號             | L1   | L    | 鏜孔範圍              | 配套刀片     |
|------------------|------|------|-------------------|----------|
| M8-EWN1626-32.5  | 36   | 37.5 | 16-21/21-26       | TPGT0802 |
| M10-EWN2036-32.5 | 29.5 | 32.5 | 20-26/25-31/30-36 | TPGT0802 |
| M12-EWN2547-35.5 | 32.5 | 35.5 | 25-33/32-40/39-47 | TPGT0802 |
| M16-EWN3260-40   | 35   | 40   | 32-42/41-51/50-60 | TPGT0802 |

## Carbide boring head holder

### 超硬整体钨钢抗震精搪刀杆

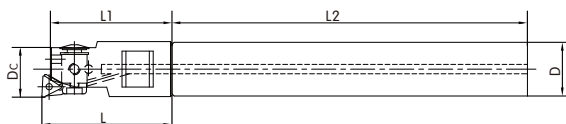


| 對應刀柄型號      | 柄徑D  | 螺紋M | 總長  |
|-------------|------|-----|-----|
| 14-M8-100   | 14   | M8  | 100 |
| 14-M8-150   | 14   | M8  | 150 |
| 14-M8-200   | 14   | M8  | 200 |
| 15-M8-100   | 15   | M8  | 100 |
| 15-M8-150   | 15   | M8  | 150 |
| 15-M8-200   | 15   | M8  | 200 |
| 15.6-M8-100 | 15.6 | M8  | 100 |
| 15.6-M8-150 | 15.6 | M8  | 150 |
| 15.6-M8-200 | 15.6 | M8  | 200 |
| 15.6-M8-250 | 15.6 | M8  | 250 |
| 16-M8-100   | 16   | M8  | 100 |
| 16-M8-150   | 16   | M8  | 150 |
| 16-M8-200   | 16   | M8  | 200 |
| 16-M8-250   | 16   | M8  | 250 |
| 16-M8-300   | 16   | M8  | 300 |
| 19-M10-100  | 19   | M10 | 100 |
| 19-M10-150  | 19   | M10 | 150 |
| 19-M10-200  | 19   | M10 | 200 |
| 19-M10-250  | 19   | M10 | 250 |

| 對應刀柄型號     | 柄徑D | 螺紋M | 總長  |
|------------|-----|-----|-----|
| 20-M10-100 | 20  | M10 | 100 |
| 20-M10-150 | 20  | M10 | 150 |
| 20-M10-200 | 20  | M10 | 200 |
| 20-M10-250 | 20  | M10 | 250 |
| 20-M10-300 | 20  | M10 | 300 |
| 24-M12-150 | 24  | M12 | 150 |
| 24-M12-200 | 24  | M12 | 200 |
| 24-M12-250 | 24  | M12 | 250 |
| 24-M12-300 | 24  | M12 | 300 |
| 25-M12-150 | 25  | M12 | 150 |
| 25-M12-200 | 25  | M12 | 200 |
| 25-M12-250 | 25  | M12 | 250 |
| 25-M12-300 | 25  | M12 | 300 |
| 32-M16-150 | 32  | M16 | 150 |
| 32-M16-200 | 32  | M16 | 200 |
| 32-M16-250 | 32  | M16 | 250 |
| 32-M16-300 | 32  | M16 | 300 |
| 32-M16-350 | 32  | M16 | 350 |

## Carbide boring head holder

### 超硬整体钨钢抗震精搪刀杆



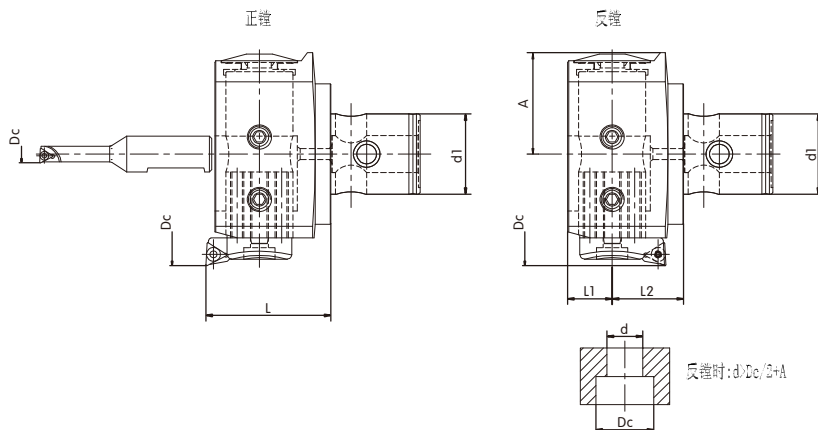
| 型號                    | DC    | L1 | L2  | L  | D  |
|-----------------------|-------|----|-----|----|----|
| ST15W-EWN1621-195TP08 | 16-21 | 36 | 157 | 38 | 15 |
| ST16W-EWN1822-195TP08 | 18-22 | 36 | 157 | 38 | 16 |



# High Accuracy Precision Boring Head ( 2084 )

## 高精度多功能镗刀 ( 2084 )

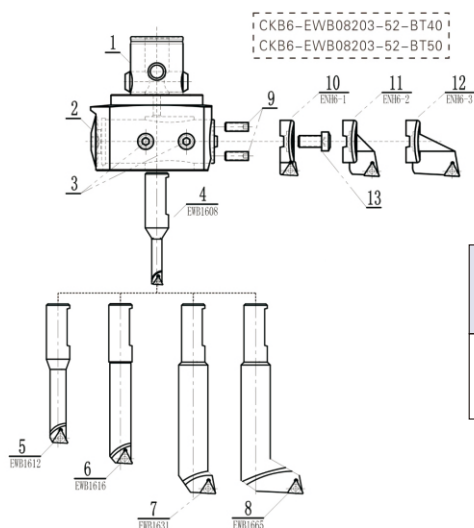
- ◎ 微調精度:  $\phi 0.01\text{mm}/\text{格}$
- ◎ 加工範圍:  $\phi 8 - \phi 203\text{mm}$
- ◎ 反鏜功能:  $\phi 112 - \phi 203\text{mm}$
- ◎ 1 div = 0.01mm
- ◎ PAT. Diameter  $\phi 8 - \phi 203$
- ◎ Counter Boring Functions:  $\phi 112 - \phi 203\text{mm}$



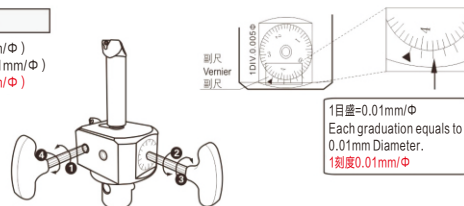
| 精鏜刀模塊型號<br>Specification | 正 鏜<br>Boring |    |    |                       | 深度<br>Depth | 適配刀片<br>Insert | 螺釘<br>Clamp<br>screw | 扳手<br>wrench | <br>kg |
|--------------------------|---------------|----|----|-----------------------|-------------|----------------|----------------------|--------------|-------------------------------------------------------------------------------------------|
|                          | Dc            | d1 | L  | 適用鏜刀座<br>Cutter Block |             |                |                      |              |                                                                                           |
| CKB6-EWB08203-52         | 08-43         | 63 | 52 | YBJ1608               | 32          | TB..0601       | M2.2*5               | T7           | 0.11                                                                                      |
|                          | 12-47         |    |    | YBJ1612               | 50          | TP..0902       | M2.5*6               | T8           | 0.12                                                                                      |
|                          | 16-51         |    |    | YBJ1616               | 65          |                |                      |              | 0.18                                                                                      |
|                          | 31-66         |    |    | YBJ1631               | 90          | TP..1103       | M3*7                 |              | 0.47                                                                                      |
|                          | 65-100        |    |    | YBJ1665               | 90          |                |                      |              | 0.65                                                                                      |
|                          | 100-135       |    |    | ENH6-1                | —           |                |                      |              | —                                                                                         |
|                          | 134-169       |    |    | ENH6-2F               | —           |                |                      |              | —                                                                                         |
|                          | 168-203       |    |    | ENH6-3F               | —           |                |                      |              | —                                                                                         |

### ◎ 鏜刀模塊型號說明

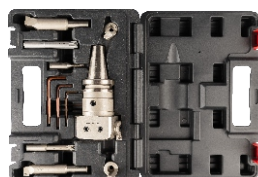
#### Part Number Structure of Finish Boring Head



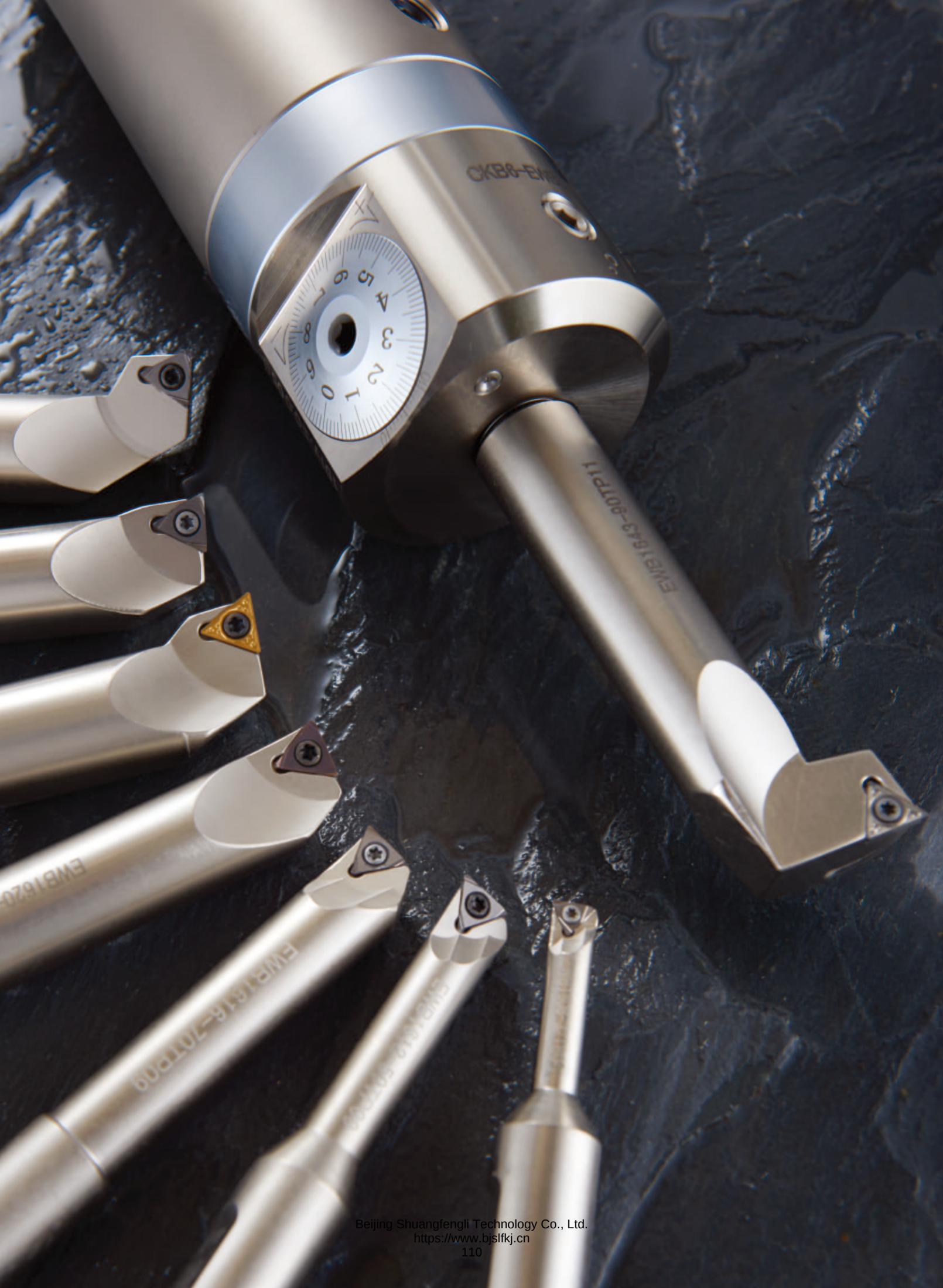
**EWB08203**  
目盛板 (1目盛0.01mm/Φ)  
Scale dial (1div.0.01mm/Φ)  
刻度盘 (1刻度0.01mm/Φ)



| 精鏜刀模塊型號<br>Specification | 反 鏜 Counter Boring |    |    |   |                       |
|--------------------------|--------------------|----|----|---|-----------------------|
|                          | Dc                 | L1 | L2 | A | 適用鏜刀座<br>Cutter Block |
| CKB6-EWB08203-52         | 112-135            | 20 | 32 | — | ENH6-1                |
|                          | 134-169            | 20 | 32 | — | ENH6-2F               |
|                          | 168-203            | 20 | 32 | — | ENH6-3F               |

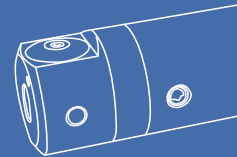




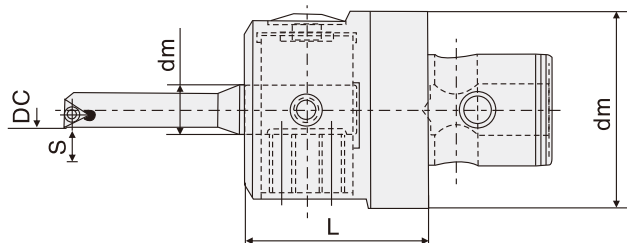


# EWB Precision Boring Heads

## EWB小孔径微调精镗刀



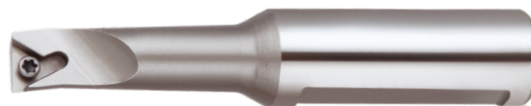
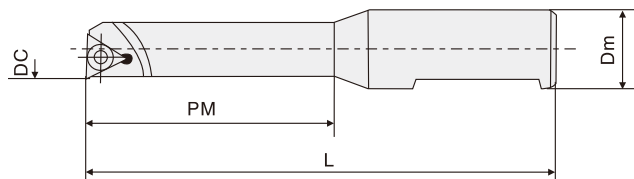
- ◎ 微調精度:  $\phi 0.01\text{mm}/\text{格}$
- ◎ 加工範圍:  $\phi 8 - \phi 50$
- ◎ 1 div = 0.01mm
- ◎ PAT. Diameter  $\phi 8 - \phi 50$



| 型號<br>Specification | 鏜孔範圍Dc<br>Boring range | 適用鏜杆D1<br>Modular Holder | 微調行程S<br>Micro distance | L  | dm | kg  |
|---------------------|------------------------|--------------------------|-------------------------|----|----|-----|
| CKB6-EWB0850-65     | 08-50                  | YBJ16                    | 3.5                     | 65 | 63 | 1.1 |

## EWB Boring Bar System

### EWB鏜杆系列

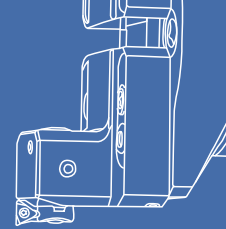


| 型號<br>Specification | 尺寸    |    |    |     | 適配刀片<br>Insert | 螺釘<br>Clamp<br>screw | 扳手<br>wrench | kg   |
|---------------------|-------|----|----|-----|----------------|----------------------|--------------|------|
|                     | Dc    | dm | PM | L   |                |                      |              |      |
| EWB1608-32          | 08-15 | 16 | 32 | 80  | TB..0601       | M2.2*5               | T7           | 0.11 |
| EWB1612-50          | 12-19 |    | 50 | 98  | TP..0902       | M2.5*6               | T8           | 0.12 |
| EWB1616-65          | 16-23 |    | 65 | 115 |                |                      |              | 0.18 |
| EWB1620-85          | 20-27 |    | 85 | 135 | TP..1103       | M3*7                 | T8           | 0.29 |
| EWB1625-90          | 25-32 |    | 90 | 145 |                |                      |              | 0.37 |
| EWB1631-90          | 31-38 |    | 90 | 145 |                |                      |              | 0.47 |
| EWB1637-90          | 37-44 |    | 90 | 145 |                |                      |              | 0.58 |
| EWB1643-90          | 43-50 |    | 90 | 145 |                |                      |              | 0.65 |



# EWN Large Diameter Boring Head

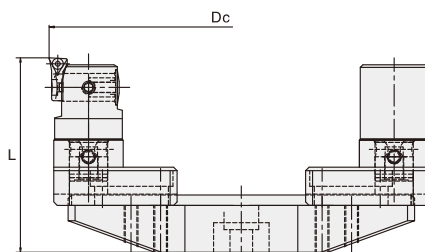
## 桥式大孔径微调精镗刀



◎加工範圍:  $\phi 151 - \phi 750$     ◎ PAT. Diameter  $\phi 151 - \phi 750$     ◎微調精度:  $\phi 0.01\text{mm}/\text{格}$     ◎ 1 div = 0.01mm



鋁制 Aluminum



鋼制 Steel

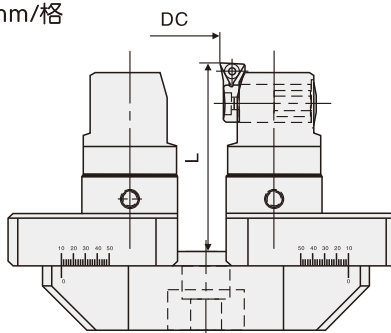
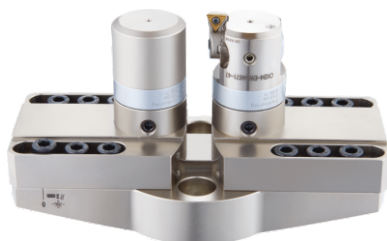
◎ 兩種材質: 鋼制和鋁制    Two Kinds Of Material, Steel And Aluminum.

| 型號<br>Specification | Dc      | L  | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 滑塊緊固螺絲<br>Slide fastening screws | 扳手<br>Wrench | 滑塊側固調節螺絲<br>Slider retaining adjustment screws | 扳手<br>Wrench | kg    |
|---------------------|---------|----|----------------|-------------|--------------|----------------------------------|--------------|------------------------------------------------|--------------|-------|
| CDH-D151-211-84L    | 151-211 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*20                                          | L2.5         | 4.75  |
| CDH-D210-290-84L    | 210-290 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 5.15  |
| CDH-D290-370-84L    | 290-370 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 6.12  |
| CDH-D370-450-84L    | 370-450 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 7.05  |
| CDH-D450-550-84L    | 450-550 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 8.00  |
| CDH-D550-650-84L    | 550-650 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 9.05  |
| CDH-D650-750-84L    | 650-750 | 84 | TP1103..       | M3*7        | M3*7         | M8*25                            | L6           | M6*25                                          | L2.5         | 10.05 |

## Pin Turning Boring Head – For Finishing Boring

### 套鏜外徑微调精鏜刀

◎加工範圍:  $\phi 8 - \phi 120$     ◎微調精度:  $\phi 0.01\text{mm}/\text{格}$   
 ◎ PAT. Diameter  $\phi 8 - \phi 120$     ◎ 1 div = 0.01mm



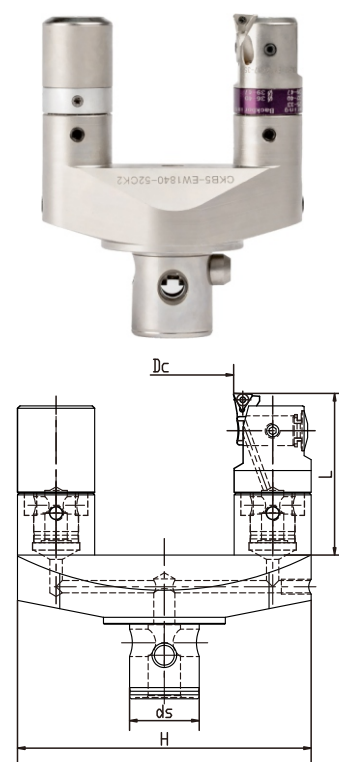
◎ 兩種材質: 鋼制和鋁制    Two Kinds Of Material, Steel And Aluminum.

| 型號<br>Specification | Dc     | L  | 適配刀片<br>Insert | 螺釘<br>Clamp screw | 扳手<br>wrench | kg  |
|---------------------|--------|----|----------------|-------------------|--------------|-----|
| CDH2-D8-55-78L      | 8-55   | 78 | TP1103...      | M3X7              | T8           | 2.9 |
| CDH3-D30-120-78L    | 30-120 | 78 | TP1103...      | M3X7              | T8           | 3.4 |

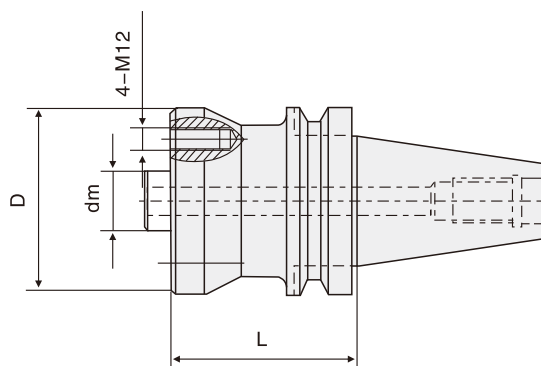
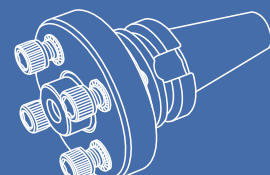


# Pin Turning Boring Head–for Finishing Boring 套镗精镗刀

| 型號<br>Specification/Item | 鏜孔範圍DC |        |         | 內孔範圍    | 接口<br>ds | 深度<br>depth<br>(L) | 長度<br>length<br>(H) | 鏜刀模塊<br>Head Model |
|--------------------------|--------|--------|---------|---------|----------|--------------------|---------------------|--------------------|
| CKB5-EW0830-52CK2        | 8-30   | ENH2-1 | 22-30   | 80-88   | 28       | 52                 | 79                  | CKB2-EWN2547-35.5  |
|                          |        | ENH2-2 | 15-23   | 87-95   |          |                    |                     |                    |
|                          |        | ENH2-3 | 8-16    | 94-102  |          |                    |                     |                    |
| CKB5-EW1840-52CK2        | 18-40  | ENH2-1 | 32-40   | 90-98   | 28       | 52                 | 89                  | CKB2-EWN2547-35.5  |
|                          |        | ENH2-2 | 25-33   | 97-105  |          |                    |                     |                    |
|                          |        | ENH2-3 | 18-26   | 104-112 |          |                    |                     |                    |
| CKB5-EW2855-63CK3        | 28-55  | ENH3-1 | 46-55   | 119-129 | 28       | 63                 | 118                 | CKB3-EWN3260-40    |
|                          |        | ENH3-2 | 36-46   | 128-138 |          |                    |                     |                    |
|                          |        | ENH3-3 | 28-37   | 137-147 |          |                    |                     |                    |
| CKB6-EW3865-63CK3        | 38-65  | ENH3-1 | 56-65   | 129-139 | 36       | 63                 | 128                 | CKB3-EWN3260-40    |
|                          |        | ENH3-2 | 46-56   | 138-148 |          |                    |                     |                    |
|                          |        | ENH3-3 | 38-47   | 147-157 |          |                    |                     |                    |
| CKB6-EW4875-63CK3        | 48-75  | ENH3-1 | 65-75   | 139-149 | 36       | 63                 | 138                 | CKB3-EWN3260-40    |
|                          |        | ENH3-2 | 56-66   | 148-158 |          |                    |                     |                    |
|                          |        | ENH3-3 | 48-57   | 157-167 |          |                    |                     |                    |
| CKB6-EW68100-74CK4       | 68-100 | ENH4-1 | 87-100  | 182-195 | 36       | 74                 | 179                 | CKB4-EWN4174-47    |
|                          |        | ENH4-2 | 75-88   | 194-207 |          |                    |                     |                    |
|                          |        | ENH4-3 | 68-80   | 202-215 |          |                    |                     |                    |
| CKB6-EW95127-74CK4       | 95-127 | ENH4-1 | 114-127 | 209-222 | 36       | 74                 | 206                 | CKB4-EWN4174-47    |
|                          |        | ENH4-2 | 102-115 | 221-234 |          |                    |                     |                    |
|                          |        | ENH4-3 | 95-107  | 229-242 |          |                    |                     |                    |



## Chuck for Large Diameter Boring Head 桥式镗刀柄

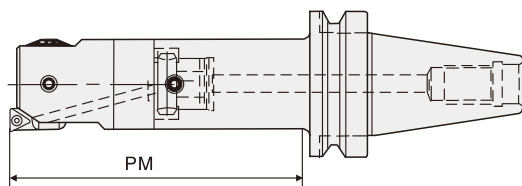


| 型號<br>Specification | L   | D   | dm | G     | kg   |
|---------------------|-----|-----|----|-------|------|
| BT40-DM32-60        | 60  | 100 | 32 | 4-M12 | 2.42 |
| BT50-DM32-100       | 100 | 100 | 32 | 4-M12 | 6.3  |
| BT50-DM32-150       | 150 | 100 | 32 | 4-M12 | 9.2  |
| BT50-DM32-200       | 200 | 100 | 32 | 4-M12 | 11.1 |
| BT50-DM32-250       | 250 | 100 | 32 | 4-M12 | 12.9 |
| BT50-DM32-300       | 300 | 100 | 32 | 4-M12 | 14.8 |

# EWN Precision Boring Bar Cutting Conditions–BT40/BT50

## EWN系列精镗刀切削条件表

◎MAS 403 BT40



◎BT40 MAS 403 BT (ISO40)

| 型號<br>Specification                                      | 被加工材料<br>Material | PM  | 刀尖半徑R<br>Nose radius | 切削速度Vc<br>(m/min) | 切削量ap<br>(mm/φ) | 進給率f (mm/rev)    |            |
|----------------------------------------------------------|-------------------|-----|----------------------|-------------------|-----------------|------------------|------------|
|                                                          |                   |     |                      |                   |                 | 推薦值<br>Recommend | 最大值<br>MAX |
| CKB1-EWN2036-32.5                                        | P 碳鋼/合金鋼          | 78  | 0.2                  | 130               | 0.18            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 100               | 0.18            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.2                  | 65                | 0.15            | 0.04             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.2                  | 80                | 0.25            | 0.05             | 0.10       |
|                                                          | S 鋁合金             |     | 0.4                  | 170               | 0.25            | 0.05             | 0.12       |
| CKB2-EWN2547-35.5                                        | P 碳鋼/合金鋼          | 93  | 0.2                  | 150               | 0.25            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 120               | 0.25            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.2                  | 80                | 0.15            | 0.04             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.2                  | 80                | 0.25            | 0.05             | 0.10       |
|                                                          | S 鋁合金             |     | 0.4                  | 180               | 0.25            | 0.08             | 0.12       |
| CKB3-EWN3260-40                                          | P 碳鋼/合金鋼          | 105 | 0.2                  | 150               | 0.30            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 120               | 0.30            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.10       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 210               | 0.35            | 0.08             | 0.12       |
| CKB4-EWN4174-47                                          | P 碳鋼/合金鋼          | 105 | 0.4                  | 150               | 0.30            | 0.06             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.4                  | 120               | 0.30            | 0.06             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 210               | 0.35            | 0.08             | 0.12       |
| CKB5-EWN5395-57<br>CKB6-EWN68150-71<br>CKB6-EWN100203-71 | P 碳鋼/合金鋼          | 105 | 0.4                  | 150               | 0.30            | 0.06             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.4                  | 120               | 0.30            | 0.06             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 210               | 0.35            | 0.08             | 0.12       |

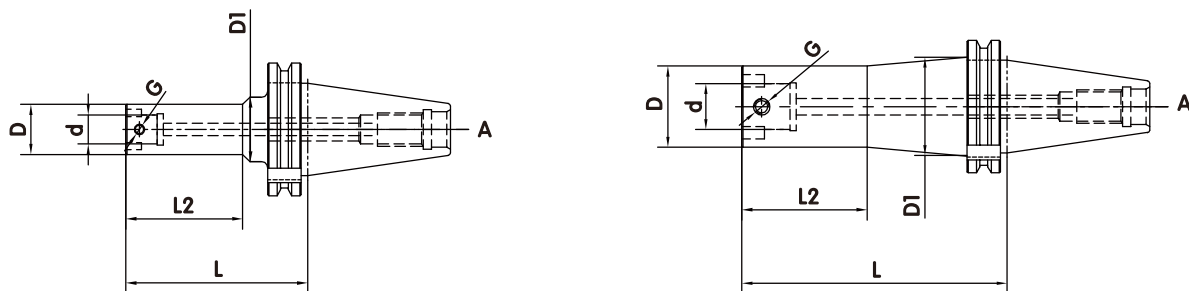
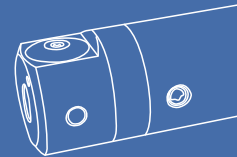
◎BT50 MAS 403 BT (ISO50)

| 型號<br>Specification                                      | 被加工材料<br>Material | PM  | 刀尖半徑R<br>Nose radius | 切削速度Vc<br>(m/min) | 切削量ap<br>(mm/φ) | 進給率f (mm/rev)    |            |
|----------------------------------------------------------|-------------------|-----|----------------------|-------------------|-----------------|------------------|------------|
|                                                          |                   |     |                      |                   |                 | 推薦值<br>Recommend | 最大值<br>MAX |
| CKB1-EWN2036-32.5                                        | P 碳鋼/合金鋼          | 78  | 0.2                  | 130               | 0.18            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 100               | 0.18            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.2                  | 65                | 0.15            | 0.04             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.2                  | 80                | 0.25            | 0.05             | 0.10       |
|                                                          | S 鋁合金             |     | 0.4                  | 170               | 0.25            | 0.05             | 0.12       |
| CKB2-EWN2547-35.5                                        | P 碳鋼/合金鋼          | 105 | 0.2                  | 150               | 0.25            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 120               | 0.25            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.2                  | 80                | 0.15            | 0.04             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.2                  | 80                | 0.25            | 0.05             | 0.10       |
|                                                          | S 鋁合金             |     | 0.4                  | 180               | 0.25            | 0.08             | 0.12       |
| CKB3-EWN3260-40                                          | P 碳鋼/合金鋼          | 122 | 0.2                  | 150               | 0.30            | 0.05             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.2                  | 120               | 0.30            | 0.05             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.10       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 210               | 0.35            | 0.08             | 0.12       |
| CKB4-EWN4174-47                                          | P 碳鋼/合金鋼          | 122 | 0.4                  | 150               | 0.30            | 0.06             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.4                  | 120               | 0.30            | 0.06             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 210               | 0.35            | 0.08             | 0.12       |
| CKB5-EWN5395-57<br>CKB6-EWN68150-71<br>CKB6-EWN100203-71 | P 碳鋼/合金鋼          | 138 | 0.4                  | 150               | 0.30            | 0.06             | 0.12       |
|                                                          | M 不銹鋼             |     | 0.4                  | 120               | 0.30            | 0.06             | 0.12       |
|                                                          | N 淬火鋼             |     | 0.4                  | 80                | 0.15            | 0.06             | 0.08       |
|                                                          | K 鑄鐵              |     | 0.4                  | 80                | 0.35            | 0.08             | 0.12       |
|                                                          | S 鋁合金             |     | 0.4                  | 230               | 0.35            | 0.08             | 0.12       |



# SK Chuck

## SK系列镗刀柄



### ◎DIN69871-A/AD-SK

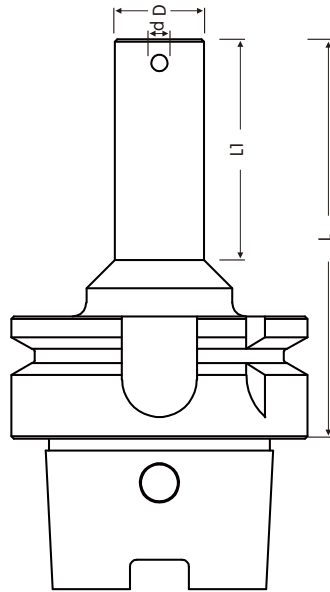
| 型號<br>Specification | 圖<br>Figure | L   | L2  | D  | d  | D1 | G       | kg   |
|---------------------|-------------|-----|-----|----|----|----|---------|------|
| SK30-CKB1-80        | A           | 80  | 46  | 19 | 11 | 31 | M4*0.5  | 0.75 |
| SK30-CKB2-80        |             | 80  | 46  | 24 | 14 | 31 | M5*0.5  | 0.83 |
| SK30-CKB3-80        |             | 80  | 58  | 31 | 18 | 31 | M6*0.75 | 0.91 |
| SK30-CKB4-80        |             | 80  | 58  | 39 | 22 | 39 | M8*0.75 | 1.02 |
| SK40-CKB1-85        |             | 85  | 49  | 19 | 11 | 31 | M4*0.5  | 1.18 |
| SK40-CKB1-115       |             | 115 | 79  | 19 | 11 | 31 | M4*0.5  | 1.21 |
| SK40-CKB2-85        |             | 85  | 49  | 24 | 14 | 31 | M5*0.5  | 1.21 |
| SK40-CKB2-115       |             | 115 | 79  | 24 | 14 | 31 | M5*0.5  | 1.27 |
| SK40-CKB3-95        |             | 95  | 68  | 31 | 18 | 31 | M6*0.75 | 1.32 |
| SK40-CKB3-125       |             | 125 | 80  | 31 | 18 | 31 | M6*0.75 | 1.46 |
| SK40-CKB3-155       | B           | 155 | 85  | 31 | 18 | 37 | M6*0.75 | 1.62 |
| SK40-CKB3-185       |             | 185 | 115 | 31 | 18 | 37 | M6*0.75 | 1.75 |
| SK40-CKB4-95        | A           | 95  | 68  | 39 | 22 | 39 | M8*0.75 | 1.54 |
| SK40-CKB4-125       |             | 125 | 98  | 39 | 22 | 39 | M8*0.75 | 1.86 |
| SK40-CKB4-155       | B           | 155 | 128 | 39 | 22 | 46 | M8*0.75 | 2.15 |
| SK40-CKB4-185       |             | 185 | 148 | 39 | 22 | 46 | M8*0.75 | 2.42 |
| SK40-CKB5-95        | A           | 95  | 68  | 49 | 28 | /  | M10*1   | 1.81 |
| SK40-CKB5-125       |             | 125 | 98  | 49 | 28 | /  | M10*1   | 2.35 |
| SK40-CKB5-155       |             | 155 | 128 | 49 | 28 | /  | M10*1   | 2.75 |
| SK40-CKB5-185       |             | 185 | 155 | 49 | 28 | /  | M10*1   | 3.05 |
| SK40-CKB5-215       |             | 215 | 180 | 49 | 28 | /  | M10*1   | 3.3  |
| SK40-CKB6-70        |             | 70  | 43  | 63 | 36 | /  | M12*1   | 2.2  |
| SK40-CKB6-95        |             | 95  | 68  | 63 | 36 | /  | M12*1   | 2.75 |
| SK40-CKB6-125       |             | 125 | 98  | 63 | 36 | /  | M12*1   | 3.2  |
| SK40-CKB6-155       |             | 155 | 128 | 63 | 36 | /  | M12*1   | 3.4  |
| SK40-CKB6-185       |             | 185 | 158 | 63 | 36 | /  | M12*1   | 3.6  |
| SK40-CKB6-215       |             | 215 | 188 | 63 | 36 | /  | M12*1   | 3.8  |



# HSK Holder

## HSK 刀柄

**Runout:**0.005 mm  
**Bore Tolerance:**H5  
**Balancing:**G6.3/15000 RPM  
 Balancing G2.5 can be made by request.  
**Usage:**for clamping tools with straight shank and inclined flat DIN1835-B.

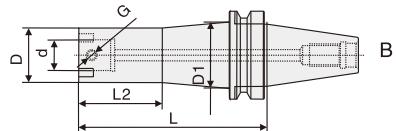
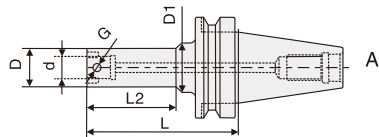
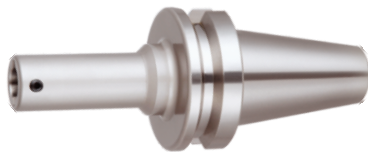


| 型號<br>Specification | D  | d  | L   | L1  | kg   |
|---------------------|----|----|-----|-----|------|
| HSK63A-CKB1-85      | 19 | 11 | 85  | 47  | 1.18 |
| HSK63A-CKB1-115     | 19 | 11 | 115 | 77  | 1.21 |
| HSK63A-CKB2-85      | 24 | 14 | 85  | 47  | 1.21 |
| HSK63A-CKB2-115     | 24 | 14 | 115 | 77  | 1.27 |
| HSK63A-CKB2-145     | 24 | 14 | 145 | 107 | 1.30 |
| HSK63A-CKB3-95      | 31 | 18 | 95  | 69  | 1.32 |
| HSK63A-CKB3-125     | 31 | 18 | 125 | 99  | 1.46 |
| HSK63A-CKB3-155     | 31 | 18 | 155 | 129 | 1.62 |
| HSK63A-CKB4-95      | 39 | 22 | 95  | 69  | 1.54 |
| HSK63A-CKB4-125     | 39 | 22 | 125 | 99  | 1.86 |
| HSK63A-CKB4-155     | 39 | 22 | 155 | 129 | 2.15 |
| HSK63A-CKB5-95      | 50 | 28 | 95  | 69  | 1.81 |
| HSK63A-CKB5-125     | 50 | 28 | 125 | 99  | 2.35 |
| HSK63A-CKB5-155     | 50 | 28 | 155 | 129 | 2.75 |
| HSK63A-CKB6-95      | 63 | 36 | 95  | 69  | 2.75 |
| HSK63A-CKB6-125     | 63 | 36 | 125 | 99  | 3.2  |
| HSK63A-CKB6-155     | 63 | 36 | 155 | 129 | 3.4  |

Unit: mm

# CKB Chuck

## CKB系列镗刀柄



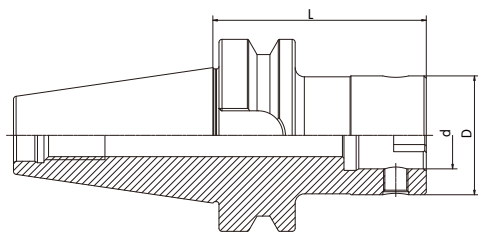
### ◎BT40 MAS 403 BT (IOS40)

| 型號<br>Specification | 圖<br>Figure | L   | L2  | D  | d  | D1 | G       | kg   |
|---------------------|-------------|-----|-----|----|----|----|---------|------|
| BT30-CKB1-80        | A           | 80  | 46  | 19 | 11 | 31 | M4×0.5  | 0.75 |
| BT30-CKB2-80        |             | 80  | 46  | 24 | 14 | 31 | M5×0.5  | 0.83 |
| BT30-CKB3-80        |             | 80  | 58  | 31 | 18 | 31 | M6×0.75 | 0.91 |
| BT30-CKB4-80        |             | 80  | 58  | 39 | 22 | 39 | M8×0.75 | 1.02 |
| BT30-CKB5-65        |             | 65  | 42  | 49 | 28 | 49 | M10×1   | 1.45 |
| BT40-CKB1-85        |             |     |     |    |    |    |         |      |
| BT40-CKB1-115       |             | 115 | 79  | 19 | 11 | 31 | M4×0.5  | 1.21 |
| BT40-CKB2-85        |             | 85  | 49  | 24 | 14 | 31 | M5×0.5  | 1.21 |
| BT40-CKB2-115       |             | 115 | 79  | 24 | 14 | 31 | M5×0.5  | 1.27 |
| BT40-CKB2-145       |             | 145 | 105 | 24 | 14 | 31 | M5×0.5  | 1.3  |
| BT40-CKB3-95        | B           | 95  | 68  | 31 | 18 | 31 | M6×0.75 | 1.32 |
| BT40-CKB3-125       |             | 125 | 80  | 31 | 18 | 37 | M6×0.75 | 1.46 |
| BT40-CKB3-155       |             | 155 | 85  | 31 | 18 | 37 | M6×0.75 | 1.62 |
| BT40-CKB3-185       | A           | 185 | 115 | 31 | 18 | 37 | M6×0.75 | 1.75 |
| BT40-CKB4-95        |             | 95  | 68  | 39 | 22 | 39 | M8×0.75 | 1.54 |
| BT40-CKB4-125       |             | 125 | 98  | 39 | 22 | 39 | M8×0.75 | 1.86 |
| BT40-CKB4-155       | B           | 155 | 128 | 39 | 22 | 46 | M8×0.75 | 2.15 |
| BT40-CKB4-185       |             | 185 | 120 | 39 | 22 | 46 | M8×0.75 | 2.42 |
| BT40-CKB5-95        | A           | 95  | 68  | 49 | 28 | 49 | M10×1   | 1.81 |
| BT40-CKB5-125       |             | 125 | 98  | 49 | 28 | 49 | M10×1   | 2.35 |
| BT40-CKB5-155       |             | 155 | 128 | 49 | 28 | 49 | M10×1   | 2.75 |
| BT40-CKB5-185       |             | 185 | 155 | 49 | 28 | 49 | M10×1   | 3.05 |
| BT40-CKB5-215       |             | 215 | 180 | 49 | 28 | 49 | M10×1   | 3.30 |
| BT40-CKB6-65        |             | 65  | 43  | 63 | 36 | 63 | M12×1   | 2.20 |
| BT40-CKB6-95        |             | 95  | 68  | 63 | 36 | 63 | M12×1   | 2.75 |
| BT40-CKB6-125       |             | 125 | 98  | 63 | 36 | 63 | M12×1   | 3.20 |
| BT40-CKB6-155       |             | 155 | 128 | 63 | 36 | 63 | M12×1   | 3.40 |
| BT40-CKB6-185       |             | 185 | 158 | 63 | 36 | 63 | M12×1   | 3.60 |
| BT40-CKB6-215       |             | 215 | 188 | 63 | 36 | 63 | M12×1   | 3.80 |

### ◎BT50 MAS 403 BT (IOS50)

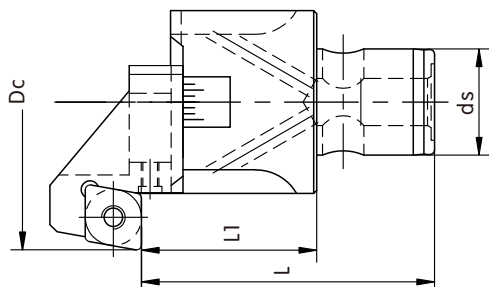
| 型號<br>Specification | 圖<br>Figure | L   | L2  | D  | d  | D1 | G       | kg   |
|---------------------|-------------|-----|-----|----|----|----|---------|------|
| BT50-CKB1-125       | A           | 125 | 67  | 19 | 11 | 27 | M4×0.5  | 3.93 |
| BT50-CKB1-165       | B           | 165 | 75  | 19 | 11 | 27 | M4×0.5  | 4.05 |
| BT50-CKB2-125       | A           | 125 | 67  | 24 | 14 | 31 | M5×0.5  | 4.08 |
| BT50-CKB2-165       | B           | 165 | 75  | 24 | 14 | 35 | M5×0.5  | 4.20 |
| BT50-CKB3-125       | A           | 125 | 75  | 31 | 18 | 36 | M6×0.75 | 4.10 |
| BT50-CKB3-165       |             | 165 | 90  | 31 | 18 | 36 | M6×0.75 | 4.35 |
| BT50-CKB3-205       | B           | 205 | 130 | 31 | 18 | 36 | M6×0.75 | 4.70 |
| BT50-CKB4-125       |             | 125 | 82  | 39 | 22 | 45 | M8×0.75 | 4.35 |
| BT50-CKB4-165       | A           | 165 | 95  | 39 | 22 | 45 | M8×0.75 | 4.70 |
| BT50-CKB4-205       |             | 205 | 110 | 39 | 22 | 45 | M8×0.75 | 5.02 |
| BT50-CKB4-245       | B           | 245 | 150 | 39 | 22 | 45 | M8×0.75 | 5.30 |
| BT50-CKB5-125       |             | 125 | 82  | 49 | 28 | 49 | M10×1   | 4.75 |
| BT50-CKB5-165       | A           | 165 | 95  | 49 | 28 | 58 | M10×1   | 5.20 |
| BT50-CKB5-205       |             | 205 | 110 | 49 | 28 | 58 | M10×1   | 5.53 |
| BT50-CKB5-245       | B           | 245 | 150 | 49 | 28 | 58 | M10×1   | 5.95 |
| BT50-CKB6-125       |             | 125 | 87  | 63 | 36 | 73 | M12×1   | 5.15 |
| BT50-CKB6-165       | A           | 165 | 127 | 63 | 36 | 73 | M12×1   | 6.10 |
| BT50-CKB6-205       |             | 205 | 165 | 63 | 36 | 73 | M12×1   | 7.40 |
| BT50-CKB6-245       | B           | 245 | 150 | 63 | 36 | 73 | M12×1   | 7.75 |
| BT50-CKB6-285       |             | 285 | 185 | 63 | 36 | 73 | M12×1   | 8.10 |

# BBT BORING HOLDER BBT镗刀刀柄



| 型號<br>Specification/Item | CK NO | D  | d  | L   |
|--------------------------|-------|----|----|-----|
| BBT40-CK1-115            | CK1   | 19 | 11 | 115 |
| BBT40-CK2-125            | CK2   | 24 | 14 | 125 |
| BBT40-CK3-125            | CK3   | 31 | 18 | 125 |
| BBT40-CK4-135            | CK4   | 39 | 22 | 135 |
| BBT40-CK5-165            | CK5   | 50 | 28 | 165 |
| BBT40-CK6-60             | CK6   | 64 | 36 | 60  |
| BBT40-CK6-160            | CK6   | 64 | 36 | 160 |

# Counter Rough Boring Modular 反镗刀粗镗刀模块



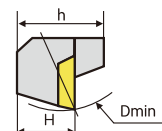
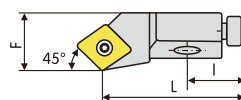
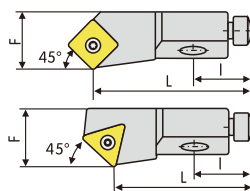
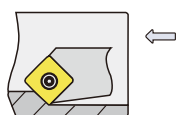
| 型號<br>Specification/Item | 數據 Data |    |    |    | 適用刀片<br>Applicable Insert | 螺釘<br>Screw | 扳手<br>WRENCH | kg    |
|--------------------------|---------|----|----|----|---------------------------|-------------|--------------|-------|
|                          | Dc      | ds | L1 | L  |                           |             |              |       |
| CKB2-TWN3038F-29         | 30-38   | 14 | 29 | 65 | CC..0602..                | M2.5*6.5    | T8           | 0.049 |
| CKB3-TWN3747F-30         | 37-47   | 18 | 30 | 50 | CC..09T3..                | M4*10       | T15          | 0.098 |
| CKB4-TWN4660F-36         | 46-60   | 22 | 36 | 55 | CC..09T3..                | M4*10       | T15          | 0.161 |
| CKB5-TWN6081F-41         | 60-81   | 28 | 41 | 65 | CC..1204..                | M5*13       | T20          | 0.301 |
| CKB6-TWN79101F-56        | 79-101  | 36 | 56 | 70 | CC..1204..                | M5*13       | T20          | 0.574 |
| CKB6-TWN99130F-56        | 99-130  | 36 | 56 | 75 | CC..1204..                | M5*13       | T20          | 1.225 |
| CKB6-TWN129160F-56       | 129-160 | 36 | 56 | 75 | CC..1204..                | M5*13       | T20          | 1.575 |



# Accessories for Special Tools

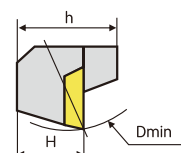
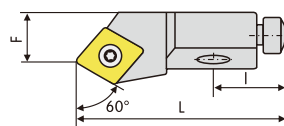
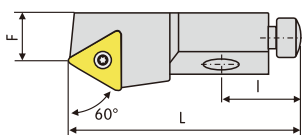
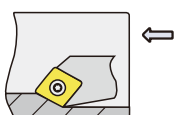
## 可转位精密小刀夹

### S□S□R/L45° 小刀夹



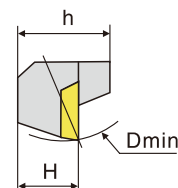
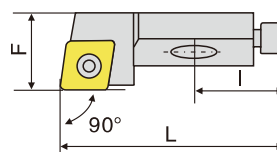
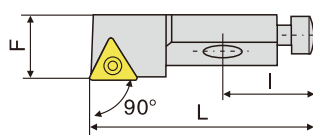
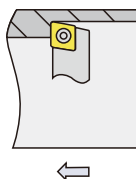
| 型號 Specification |              | 尺寸 Size |    |     |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw | 扳手 Wrench |
|------------------|--------------|---------|----|-----|----|----|------|------------|------------|----------|-----------|----------|-----------|-----------|----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F  | h   | I  | L  | Dmin |            |            |          |           |          |           |           |          |           |
| SCSCL06CA-06     | SCSCR06CA-06 | 6       | 8  | 8.5 | 12 | 21 | 20   | CC..060204 | SIC025065  | FT07     | SDC035120 | S2.5     | SAC030085 |           |          |           |
| SCSCL08CA-06     | SCSCR08CA-06 | 8       | 10 | 11  | 17 | 28 | 25   | CC..060204 | SIC025065  | FT07     | SCC040160 | S3       | SAC040130 | SSC030050 |          | S1.5      |
| STSCCL08CA-09    | STSCR08CA-09 | 8       | 10 | 11  | 17 | 28 | 25   | TC..090204 | SIC022063  |          |           |          |           |           |          |           |
| SCSCL10CA-09     | SCSCR10CA-09 | 10      | 14 | 15  | 20 | 44 | 40   | CC..09T308 | SIC035080  | FT15     | SCC060200 | S4       | SAC050145 | SSC040080 |          | S2        |
| SSSCL10CA-09     | SSSCR10CA-09 | 10      | 14 | 15  | 20 | 44 | 40   | SC..09T308 |            |          |           |          |           |           |          |           |
| STSCCL10CA-11    | STSCR10CA-11 | 10      | 14 | 15  | 20 | 44 | 40   | TC..110204 | SIC025065  | FT07     |           |          |           |           |          |           |
| SSSCL12CA-09     | SSSCR12CA-09 | 12      | 20 | 20  | 20 | 47 | 50   | SC..09T308 | SIC035080  |          |           |          |           |           |          |           |
| SSSCL12CA-12     | SSSCR12CA-12 | 12      | 20 | 20  | 20 | 47 | 50   | SC..120408 | SID040110  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 |          | S2.5      |
| STSCCL12CA-16    | STSCR12CA-16 | 12      | 20 | 20  | 20 | 47 | 50   | TC..16T308 | SIC035080  |          |           |          |           |           |          |           |
| SSSCL16CA-12     | SSSCR16CA-12 | 16      | 25 | 25  | 25 | 53 | 60   | SC..120408 | SID040110  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 |          | S3        |
| STSCCL16CA-16    | STSCR16CA-16 | 16      | 25 | 25  | 25 | 53 | 60   | TC..16T308 | SIC035080  |          |           |          |           |           |          |           |

### S□T□R/L60° 小刀夹



| 型號 Specification |              | 尺寸 Size |     |     |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw  | 扳手 Wrench |
|------------------|--------------|---------|-----|-----|----|----|------|------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F   | h   | I  | L  | Dmin |            |            |          |           |           |           |           |           |           |
| SCTCL06CA-06     | SCTCR06CA-06 | 6       | 5.5 | 8.5 | 12 | 25 | 20   | CC..060204 | SIC025065  |          |           | SDC035120 | S2.5      | SAC030085 | SSC030050 | S1.5      |
| SCTCL08CA-06     | SCTCR08CA-06 | 8       | 6   | 11  | 17 | 32 | 25   | CC..060204 | SIC025065  | FT07     |           | SCC040160 | S3        | SAC040130 | SSC030050 | S1.5      |
| STTCL08CA-09     | STTCR08CA-09 | 8       | 6   | 11  | 17 | 32 | 25   | TC..090204 | SIC022063  |          |           |           |           |           |           |           |
| STTCL10CA-11     | STTCR10CA-11 | 10      | 9   | 15  | 20 | 50 | 40   | TC..110204 | SIC025065  |          |           | SCC060200 | S4        | SAC050145 | SSC040080 | S2        |
| STTCL12CA-16     | STTCR12CA-16 | 12      | 13  | 20  | 20 | 55 | 50   | TC..120408 |            |          |           | SCC060250 |           | SAC060145 | SSC050120 | S2.5      |
| STTCL16CA-16     | STTCR16CA-16 | 16      | 15  | 25  | 25 | 63 | 60   | TC..16T308 | SIC035080  | FT15     | SCC080350 | S5        |           |           | SSC060160 | S3        |
| SCTCL10CA-09     | SCTCR10CA-09 | 10      | 9   | 15  | 20 | 50 | 40   | CC..09T308 |            |          |           | SCC060200 | S4        | SAC050145 | SSC040080 | S2        |

### S□G□R/L90° 小刀夹

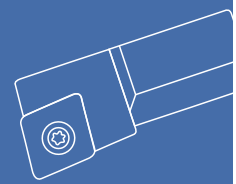


| 型號 Specification |              | 尺寸 Size |    |    |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw | 扳手 Wrench |
|------------------|--------------|---------|----|----|----|----|------|------------|------------|----------|-----------|----------|-----------|-----------|----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F  | h  | I  | L  | Dmin |            |            |          |           |          |           |           |          |           |
| SCGCL08CA-06     | SCGCR08CA-06 | 8       | 10 | 11 | 17 | 32 | 25   | CC..060204 | SIC025065  | FT07     | SCC040160 | S3       | SAC040130 | SSC030050 |          | S1.5      |
| SCGCL10CA-09     | SCGCR10CA-09 | 10      | 14 | 15 | 20 | 50 | 40   | CC..09T308 | SIC035080  | FT15     | SCC060200 | S4       | SAC050145 | SSC040080 |          | S2        |
| SCGCL12CA-09     | SCGCR12CA-09 | 12      | 20 | 20 | 20 | 55 | 50   | CC..09T308 | SIC035080  | FT15     | SCC060250 | S4       | SAC060145 |           |          |           |
| SCGCL12CA-12     | SCGCR12CA-12 | 12      | 20 | 20 | 20 | 55 | 50   | CC..120408 | SID040110  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 |          | S2.5      |
| SCGCL16CA-12     | SCGCR16CA-12 | 16      | 25 | 25 | 25 | 63 | 60   | CC..120408 | SID040110  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 |          | S3        |
| STGCL08CA-09     | STGCR08CA-09 | 8       | 10 | 11 | 17 | 32 | 25   | TC..090204 | SIC022063  | FT07     | SCC040160 | S3       | SAC040130 | SSC030050 |          | S1.5      |
| STGCL10CA-11     | STGCR10CA-11 | 10      | 14 | 15 | 20 | 50 | 40   | TC..110204 | SIC025065  | FT07     | SCC060200 | S4       | SAC050145 | SSC040080 |          | S2        |
| STGCL12CA-16     | STGCR12CA-16 | 12      | 20 | 20 | 20 | 55 | 50   | TC..16T308 | SIC035080  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 |          | S2.5      |
| STGCL16CA-16     | STGCR16CA-16 | 16      | 25 | 25 | 25 | 63 | 60   | TC..16T308 | SIC035080  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 |          | S3        |

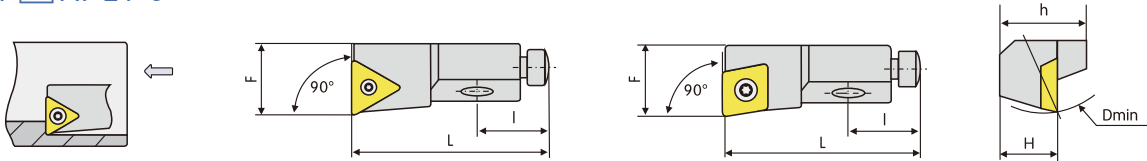


# Accessories for Special Tools

## 可转位精密小刀夹

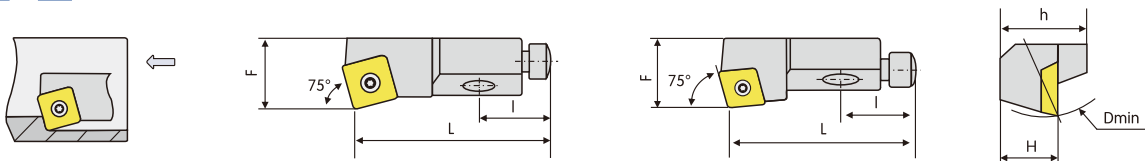


### S□F□R/L90°



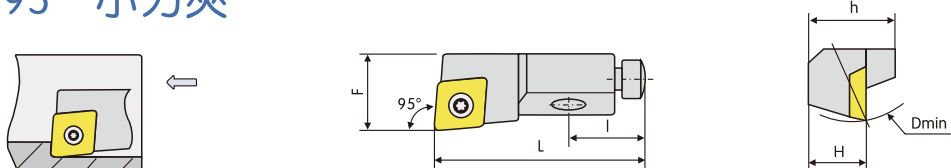
| 型號 Specification |              | 尺寸 Size |    |     |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw | 扳手 Wrench |
|------------------|--------------|---------|----|-----|----|----|------|------------|------------|----------|-----------|----------|-----------|-----------|----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F  | h   | I  | L  | Dmin |            |            |          |           |          |           |           |          |           |
| SCFCL06CA-06     | SCFCR06CA-06 | 6       | 8  | 8.5 | 12 | 25 | 20   | CC..060204 | SIC025065  | FT07     | SDC035120 | S2.5     | SAC030085 | SSC030050 | S1.5     |           |
| SCFCL08CA-06     | SCFCR08CA-06 | 8       | 10 | 11  | 17 | 32 | 25   | CC..060204 | SIC025065  | FT07     | SCC040160 | S3       | SAC040130 | SSC030050 | S1.5     |           |
| SCFCL10CA-09     | SCFCR10CA-09 | 10      | 14 | 15  | 20 | 50 | 40   | CC..09T308 | SIC035080  | FT15     | SCC060200 | S4       | SAC050145 | SSC040080 | S2       |           |
| SCFCL12CA-09     | SCFCR12CA-09 | 12      | 20 | 20  | 20 | 55 | 50   | CC..09T308 | SIC035080  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 | S2.5     |           |
| SCFCL12CA-12     | SCFCR12CA-12 | 12      | 20 | 20  | 20 | 55 | 50   | CC..120408 | SID040110  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 | S2.5     |           |
| SCFCL16CA-12     | SCFCR16CA-12 | 16      | 25 | 25  | 25 | 63 | 60   | CC..120408 | SID040110  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 | S3       |           |
| STFCL08CA-09     | STFCR08CA-09 | 8       | 10 | 11  | 17 | 32 | 25   | TC..090204 | SIC022063  | FT07     | SCC040160 | S3       | SAC040130 | SSC030050 | S1.5     |           |
| STFCL10CA-11     | STFCR10CA-11 | 10      | 14 | 15  | 20 | 50 | 40   | TC..110204 | SIC025065  | FT07     | SCC060200 | S4       | SAC050145 | SSC040080 | S2       |           |
| STFCL12CA-16     | STFCR12CA-16 | 12      | 20 | 20  | 20 | 55 | 50   | TC..16T308 | SIC035080  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 | S2.5     |           |
| STFCL16CA-16     | STFCR16CA-16 | 16      | 25 | 25  | 25 | 63 | 60   | TC..16T308 | SIC035080  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 | S3       |           |

### S□k□R/L75°



| 型號 Specification |              | 尺寸 Size |    |     |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw | 扳手 Wrench |
|------------------|--------------|---------|----|-----|----|----|------|------------|------------|----------|-----------|----------|-----------|-----------|----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F  | h   | I  | L  | Dmin |            |            |          |           |          |           |           |          |           |
| SCKCL06CA-05     | SCKCR06CA-05 | 6       | 8  | 8.5 | 12 | 25 | 20   | CC..060204 | SIC025063  | FT07     | SDC035120 | S2.5     | SAC030085 | SSC030050 | S1.5     |           |
| SCKCL08CA-06     | SCKCR08CA-06 | 8       | 10 | 11  | 17 | 32 | 25   | CC..060204 | SIC025065  | FT07     | SCC040160 | S3       | SAC040130 |           |          |           |
| SSKCL10CA-09     | SSKCR10CA-09 | 10      | 14 | 15  | 20 | 50 | 40   | SC..09T308 | SIC035080  | FT15     | SCC060200 | S4       | SAC050145 | SSC040080 | S2       |           |
| SSKCL12CA-09     | SSKCR12CA-09 | 12      | 20 | 20  | 20 | 55 | 50   | SC..09T308 | SIC035080  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 | S2.5     |           |
| SSKCL12CA-12     | SSKCR12CA-12 | 12      | 20 | 20  | 20 | 55 | 50   | SC..120408 | SID040110  | FT15     | SCC060250 | S4       | SAC060145 |           |          |           |
| SSKCL16CA-12     | SSKCR16CA-12 | 16      | 25 | 25  | 25 | 63 | 60   | SC..120408 | SID040110  | FT15     | SCC080350 | S5       | SAC060145 | SSC060160 | S3       |           |

### SCL□R/L95° 小刀夾



| 型號 Specification |              | 尺寸 Size |    |     |    |    |      |            | 刀片 Inserts | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw | 扳手 Wrench | 螺釘 Screw  | 螺釘 Screw | 扳手 Wrench |
|------------------|--------------|---------|----|-----|----|----|------|------------|------------|----------|-----------|----------|-----------|-----------|----------|-----------|
| 左刀 Left          | 右刀 Right     | H       | F  | h   | I  | L  | Dmin |            |            |          |           |          |           |           |          |           |
| SCLCL06CA-06     | SCLCR06CA-06 | 6       | 8  | 8.5 | 12 | 25 | 20   | CC..060204 | SIC025065  | FT07     | SDC035120 | S2.5     | SAC030085 | SSC030050 | S1.5     |           |
| SCLCL08CA-06     | SCLCR08CA-06 | 8       | 10 | 11  | 17 | 32 | 25   | CC..060204 | SIC025065  | FT07     | SCC040160 | S3       | SAC040130 |           |          |           |
| SCLCL10CA-09     | SCLCR10CA-09 | 10      | 14 | 15  | 20 | 50 | 40   | CC..09T308 | SIC035080  | FT15     | SCC060200 | S4       | SAC050145 | SSC040080 | S2       |           |
| SCLCL12CA-12     | SCLCR12CA-12 | 12      | 20 | 20  | 20 | 55 | 50   | CC..120408 | SID040110  | FT15     | SCC060250 | S4       | SAC060145 | SSC050120 | S2.5     |           |

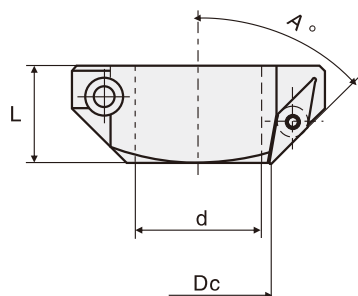
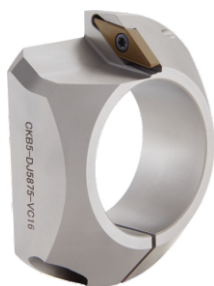






# Chamfering Tools

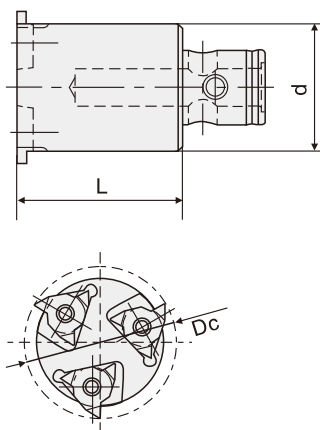
## TWN系列鏜刀倒角环



| 型號<br>Specification | Dc     | d  | L  | A   | 適用刀片<br>Insert | 螺釘<br>Screw | 扳手<br>Wrench | 庫存<br>Store |
|---------------------|--------|----|----|-----|----------------|-------------|--------------|-------------|
| CKB1-DJ2228-20A     | 22-28  | 19 | 20 | 45° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB1-DJ2430-20B     | 24-30  | 19 | 20 | 30° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB2-DJ2735-20A     | 27-35  | 24 | 20 | 45° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB2-DJ2937-20B     | 29-37  | 24 | 20 | 30° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB2-DJ3038-20A     | 30-38  | 24 | 20 | 45° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB2-DJ3240-20B     | 32-40  | 24 | 20 | 30° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB3-DJ3949-20A     | 39-49  | 31 | 20 | 45° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB3-DJ4151-20B     | 41-51  | 31 | 20 | 30° | VCMT110304     | M2.5X6.5    | T8           | ○           |
| CKB4-DJ4861-30A     | 48-61  | 39 | 30 | 45° | VCMT160408     | M4X10       | T15          | ○           |
| CKB4-DJ5063-30B     | 50-63  | 39 | 30 | 30° | VCMT160408     | M4X10       | T15          | ○           |
| CKB5-DJ6077-30A     | 60-77  | 49 | 30 | 45° | VCMT160408     | M4X10       | T15          | ○           |
| CKB5-DJ6279-30B     | 62-79  | 49 | 30 | 30° | VCMT160408     | M4X10       | T15          | ○           |
| CKB6-DJ7698-30A     | 76-98  | 63 | 30 | 45° | VCMT160408     | M4X10       | T15          | ○           |
| CKB6-DJ78100-30B    | 78-100 | 63 | 30 | 30° | VCMT160408     | M4X10       | T15          | ○           |

# Slot Milling Cutters

## CKB系列槽銑刀

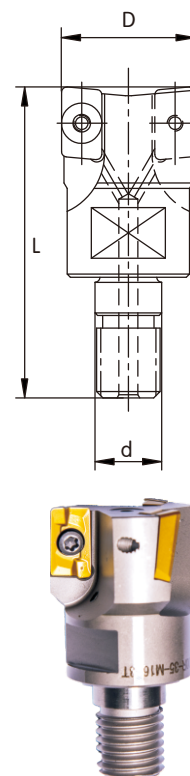


| 型號<br>Specification | Dc | d  | L  | 適用刀片<br>Insert        | 螺釘<br>Screw | 刃數<br>Teeth | 扳手<br>Wrench | 緊定螺釘<br>Screw | kg   | 庫存<br>Store |
|---------------------|----|----|----|-----------------------|-------------|-------------|--------------|---------------|------|-------------|
| CKB2-CZ28-35TGF32   | 28 | 24 | 35 | TGF32L3050-TGF32L3280 | M4X10       | 2           | T15          | TW40TS        | 0.14 | ○           |
| CKB3-CZ37-40TGF32   | 37 | 31 | 40 | TGF32L3050-TGF32L3280 | M4X10       | 3           | T15          | TW40TS        | 0.23 | ○           |
| CKB4-CZ45-47TGF32   | 45 | 39 | 47 | TGF32L3050-TGF32L3280 | M4X10       | 4           | T15          | TW40TS        | 0.43 | ○           |
| CKB5-CZ55-57TGF32   | 55 | 50 | 57 | TGF32L3050-TGF32L3280 | M4X10       | 5           | T15          | TW40TS        | 0.82 | ○           |
| CKB6-CZ70-70TGF32   | 70 | 63 | 70 | TGF32L3050-TGF32L3280 | M4X10       | 6           | T15          | TW40TS        | 1.75 | ○           |

# Modular Type Milling Cutter

## 可换式锁牙刀头

| 型號<br>Specification | 尺寸毫米 Dimensions(mm) |      |    |     | 牙Teeth | 刀片規格Insert | kg   |
|---------------------|---------------------|------|----|-----|--------|------------|------|
|                     | D                   | d    | L  | M   |        |            |      |
| 300R-16-M8-2T       | 16                  | 8.5  | 25 | M8  | 2      | APMT1135   | 0.05 |
| 300R-17-M8-2T       | 17                  | 8.5  | 25 | M8  | 2      |            | 0.05 |
| 300R-20-M10-2T      | 20                  | 10.5 | 30 | M10 | 2      |            | 0.07 |
| 300R-20-M10-3T      | 20                  | 10.5 | 30 | M10 | 3      |            | 0.07 |
| 300R-21-M10-2T      | 21                  | 10.5 | 30 | M10 | 2      |            | 0.07 |
| 300R-21-M10-3T      | 21                  | 10.5 | 30 | M10 | 3      |            | 0.07 |
| 300R-22-M10-3T      | 22                  | 10.5 | 30 | M10 | 3      |            | 0.09 |
| 300R-25-M12-3T      | 25                  | 12.5 | 35 | M12 | 3      |            | 0.12 |
| 300R-25-M12-3T      | 25                  | 12.5 | 35 | M12 | 4      |            | 0.11 |
| 300R-26-M12-3T      | 26                  | 12.5 | 35 | M12 | 3      |            | 0.12 |
| 300R-26-M12-3T      | 26                  | 12.5 | 35 | M12 | 4      |            | 0.12 |
| 300R-32-M16-4T      | 32                  | 17   | 43 | M16 | 4      |            | 0.24 |
| 300R-32-M16-5T      | 32                  | 17   | 43 | M16 | 5      |            | 0.23 |
| 300R-33-M16-4T      | 33                  | 17   | 43 | M16 | 4      |            | 0.25 |
| 300R-33-M16-5T      | 33                  | 17   | 43 | M16 | 5      |            | 0.24 |
| 300R-35-M16-4T      | 35                  | 17   | 43 | M16 | 4      |            | 0.31 |
| 300R-35-M16-5T      | 35                  | 17   | 43 | M16 | 5      |            | 0.31 |
| 300R-36-M16-5T      | 36                  | 17   | 43 | M16 | 5      |            | 0.32 |
| 400R-25-M12-2T      | 25                  | 12.5 | 38 | M12 | 2      | APMT1604   | 0.13 |
| 400R-26-M12-2T      | 26                  | 12.5 | 38 | M12 | 2      |            | 0.14 |
| 400R-32-M16-2T      | 32                  | 17   | 43 | M16 | 2      | APMT1604   | 0.26 |
| 400R-32-M16-3T      | 32                  | 17   | 43 | M16 | 3      |            | 0.25 |
| 400R-33-M16-2T      | 33                  | 17   | 43 | M16 | 2      |            | 0.27 |
| 400R-33-M16-3T      | 33                  | 17   | 43 | M16 | 3      |            | 0.27 |
| 400R-35-M16-3T      | 35                  | 17   | 43 | M16 | 3      |            | 0.30 |







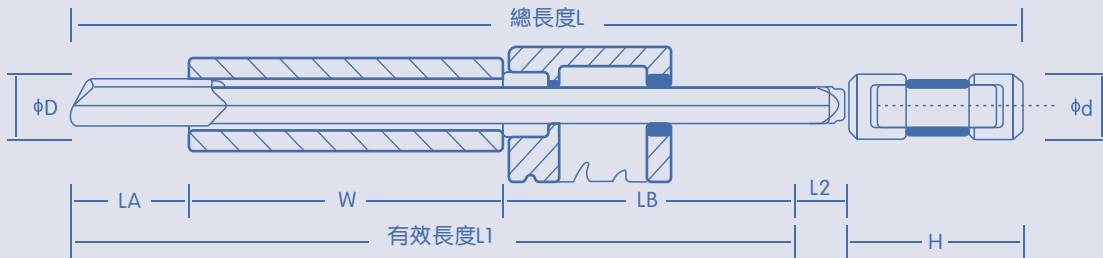


# GUN DRILL 枪钻

## ◎ 槍鑽訂貨標注格式及長度計算

- 槍鑽刃部直徑根據客戶需要，公稱尺寸可細分至0.001mm
- 訂貨時請按如下標準標注

D (鑽頭直徑) \* L (總長) - 柄部編號



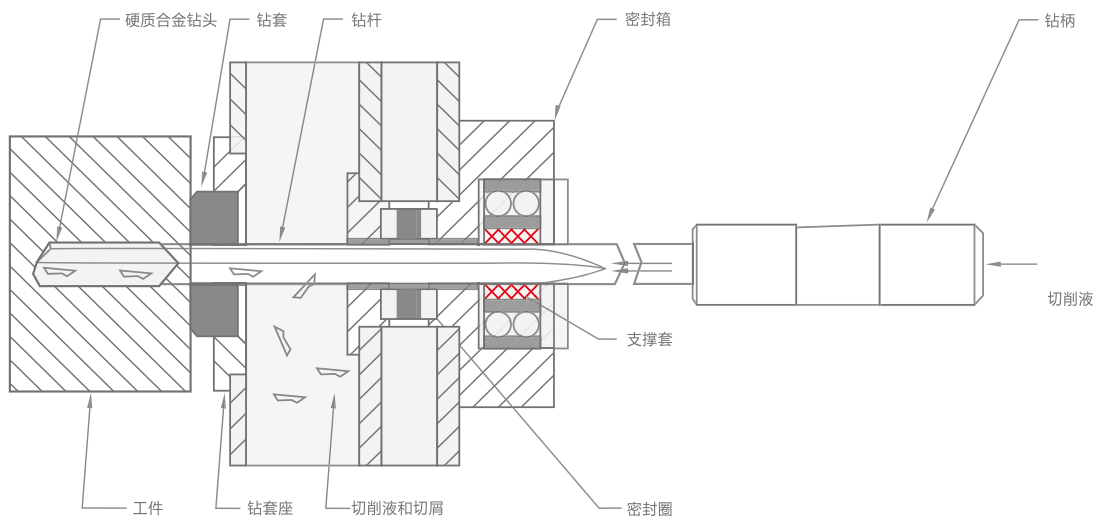
|        |        |         |           |             |
|--------|--------|---------|-----------|-------------|
| 總長度L   | D=鑽頭直徑 | W=加工深度  | L=鑽槍總長    | LB=導向支撐機構寬度 |
| 有效長度L1 | H=鑽柄柄長 | LA=再研長度 | L1=鑽槍有效長度 | L2=最短排屑距離   |

槍鑽總長度按下式確定：

$$L = LA (\text{在研長度}) + W (\text{孔深}) + LB (\text{導向支撐機構寬度}) + L2 (\text{最短排屑距離}) + H (\text{柄長})$$

- 訂貨時請注明被加工材料，硬度，內孔公差，光潔度

槍鑽可生產直徑1mm-50mm範圍，長徑比可達250倍以上，最長總長可達5000mm，槍鑽的種類分為：標準槍鑽，异形槍鑽(階梯槍鑽，球型槍鑽等)，塗層槍鑽，PCD槍鑽，整體硬質合金槍鑽，機夾式槍鑽等。

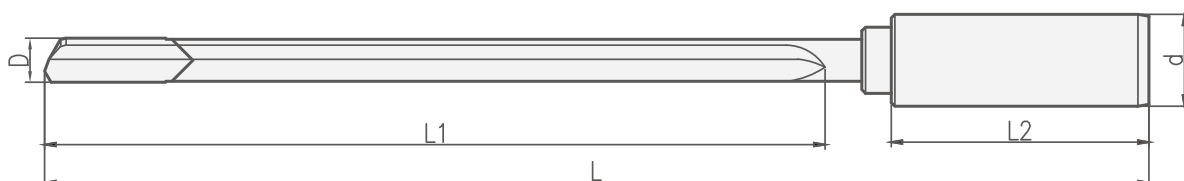


- 使用具備高壓內冷系統之立、臥式設備。
- 使用深孔鑽專用切削油或冷却液，并保證和提供足够的壓力和流量。  
因槍鑽不具備自定心的能力，所以在加工時，必須使用配套的導向套。
- 或引導孔以作為槍鑽加工的定心。
- 使用正確的加工參數，以達到最佳的孔加工效果。

# BRAZED GUNDRILLS 焊接式枪钻

## ◎ 焊接式單刃槍鑽

焊接式單刃槍鑽是由鑽尖、鑽杆和鑽柄三部分通過焊接成爲一個整體，可根據被加工材料的不同選擇不同牌號的硬質合金材料進行合理的刀具設計。鑽頭通常採用整體硬質合金，刀頭部分與經過熱處理的鑽杆釐焊在一起，然後再與精磨過的鋼制鑽柄進行釐焊銲接。對於特殊材料也可以通過不同種類的塗層來應對。



## ◎ 焊接式单刃枪钻库存表 Stock of brazed single flute gun drills

| 規格<br>specification | 235mm (L)      |               | 270mm(L)       |               | 刀柄<br>handle/driver | 800mm<br>(L) | 1000mm<br>(L) | 1200mm<br>(L) | 1440mm<br>(L) | 1650mm<br>(L) | 1800mm<br>(L) | 刀柄<br>handle/driver |
|---------------------|----------------|---------------|----------------|---------------|---------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------------|
|                     | 標準<br>standrad | 塗層<br>coating | 標準<br>standrad | 塗層<br>coating |                     |              |               |               |               |               |               |                     |
| φ 3.02              | ●              | ●             |                |               | 10*40               | ●            | ●             |               |               |               |               | 25*70               |
| φ 3.52              | ●              | ●             |                |               |                     | ●            | ●             |               |               |               |               |                     |
| φ 4.02              | ●              | ●             |                |               |                     | ●            | ●             | ●             |               |               |               |                     |
| φ 4.52              | ●              | ●             |                |               |                     | ●            | ●             | ●             |               |               |               |                     |
| φ 5.02              | ●              | ●             |                |               |                     | ●            | ●             | ●             | ●             |               |               |                     |
| φ 5.52              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             |               |               |                     |
| φ 6.02              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 6.52              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 7.02              | ●              | ●             | ●              |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 7.52              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 8.02              | ●              | ●             | ●              |               |                     |              | ●             | ●             | ●             | ●             | ●             |                     |
| φ 8.52              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 9.02              | ●              | ●             | ●              |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 9.52              | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 10.02             | ●              | ●             | ●              |               |                     |              | ●             | ●             | ●             | ●             | ●             |                     |
| φ 10.52             | ●              | ●             |                |               |                     |              | ●             | ●             | ●             | ●             |               |                     |
| φ 11.02             | ●              | ●             | ●              |               |                     |              |               | ●             | ●             | ●             |               |                     |
| φ 11.52             | ●              | ●             |                |               |                     |              |               | ●             | ●             | ●             |               |                     |
| φ 12.02             | ●              | ●             | ●              |               |                     |              |               | ●             | ●             | ●             | ●             |                     |

●= available stock

# BRAZED GUNDRILLS

## 焊接式枪钻

### ◎ 焊接式枪钻标准柄 Standard driver of the brazed gun drills

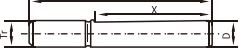
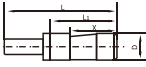
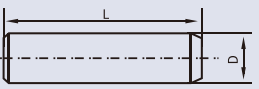
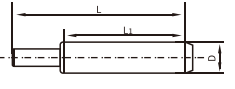
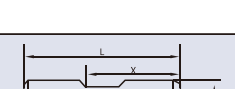
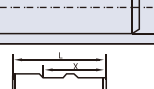
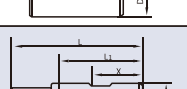
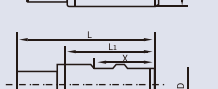
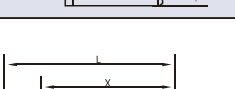
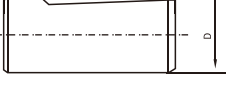
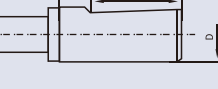
| 型號<br>specification | 外形尺寸D<br>Φdia.(mm)<br>diameter<br>Φdia.(mm) | 簡圖<br>drawing | 刀具長度計算<br>tool length calculation |                                | 定位槽 X<br>fix position X | 螺紋規格 M<br>screw spec M |
|---------------------|---------------------------------------------|---------------|-----------------------------------|--------------------------------|-------------------------|------------------------|
|                     |                                             |               | 鑽柄夾緊部 L1<br>clamping part L1      | 鑽柄過渡部 L<br>transitional part L |                         |                        |
| SH10-00             | 10                                          |               | 40                                |                                | 24.0                    |                        |
| SH16-03             | 16                                          |               | 45                                | 53                             | 31.0                    |                        |
| SH25-00             | 25                                          |               | 70                                | 78                             | 34.0                    |                        |
| SH10-01             | 10                                          |               | 40                                | 57                             | 24.0                    |                        |
| SH16-04             | 16                                          |               | 45                                | 72                             | 31.0                    |                        |
| SH25-01             | 25                                          |               | 70                                | 105                            | 34.0                    |                        |
| SH16-02             | 16                                          |               | 50                                | 58                             | 47.5                    |                        |
| SH16-33             | 16                                          |               | 50                                | 77                             | 47.5                    |                        |
| SH10-06             | 10                                          |               |                                   | 60                             |                         | M6x0.5                 |
| SH16-15             | 16                                          |               |                                   | 80                             |                         | M10x1                  |
| SH25-08             | 25                                          |               |                                   | 100                            |                         | M16x1.5                |
| SH10-28             | 10                                          |               | 60                                | 77                             |                         | M6x0.5                 |
| SH16-22             | 16                                          |               | 60                                | 105                            |                         | M10x1                  |
| SH25-10             | 25                                          |               | 100                               | 140                            |                         | M16x1.5                |
| SH12.7-00           | 12.7                                        |               |                                   | 38.1                           |                         | 25.3                   |
| SH19.05-01          | 19.05                                       |               |                                   | 70                             |                         | 45.0                   |
| SH25.4-00           | 25.4                                        |               |                                   | 70                             |                         | 57.5                   |
| SH31.7-00           | 31.7                                        |               |                                   | 70                             |                         | 57.5                   |
| SH38.1-01           | 38.1                                        |               |                                   | 70                             |                         | 57.5                   |
| SH19.05-11          | 19.05                                       |               | 70                                | 97                             |                         | 45.0                   |
| SH25.4-11           | 25.4                                        |               | 70                                | 100                            |                         | 57.5                   |
| SH31.7-01           | 31.7                                        |               | 70                                | 111                            |                         | 57.5                   |
| SH38.1-01           | 38.1                                        |               | 70                                | 110                            |                         | 57.5                   |
| SH10-44             | 10                                          |               | 60                                | 68                             | 35                      | M6x0.5                 |
| SH16-31             | 16                                          |               | 80                                | 90                             | 37                      | M10x1                  |
| SH25-34             | 25                                          |               | 100                               | 100                            | 45                      | M16x1.5                |
| SH16-66             | 16                                          |               | 80                                | 80                             | 37                      | M10x1                  |
| SH25-40             | 25                                          |               | 100                               | 100                            | 45                      | M16x1.5                |
| SH10-30             | 10                                          |               | 40                                | 40                             |                         | 28.0                   |
| SH12-14             | 12                                          |               | 45                                | 45                             |                         | 33.0                   |
| SH16-70             | 16                                          |               | 48                                | 48                             |                         | 36.0                   |
| SH20-56             | 20                                          |               | 50                                | 50                             |                         | 38.0                   |



# BRAZED GUNDRILLS

## 焊接式枪钻

### ◎ 焊接式枪钻标准柄 Standard driver of the brazed gun drills

| 型號<br>specification | 外形尺寸D<br>Φ dia.(mm)<br>diameter<br>Φ dia.(mm) | 簡圖<br>drawing                                                                       | 刀具長度計算<br>tool length calculation |                                | 定位槽 X<br>fix position X | 螺紋規格 M<br>screw spec M |
|---------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|-------------------------|------------------------|
|                     |                                               |                                                                                     | 鑽柄夾緊部 L1<br>clamping part L1      | 鑽柄過渡部 L<br>transitional part L |                         |                        |
| SH16-00             | 16                                            |    |                                   | 112                            | 73.0                    | TR16x1.5               |
| SH20-00             | 20                                            |                                                                                     |                                   | 126                            | 82.0                    | TR 20x2                |
| SH28-00             | 28                                            |                                                                                     |                                   | 126                            | 82.0                    | TR 28x2                |
| SH36-00             | 36                                            |                                                                                     |                                   | 162                            | 109.0                   | TR 36x2                |
| SH16-21             | 16                                            |    |                                   | 40                             | 28.0                    |                        |
| SH25-16             | 25                                            |                                                                                     |                                   | 50                             | 35.0                    |                        |
| SH35-00             | 35                                            |                                                                                     |                                   | 60                             | 40.0                    |                        |
| SH16-30             | 16                                            |                                                                                     |                                   | 40                             | 28.0                    |                        |
| SH25-20             | 25                                            |    | 40                                | 67                             | 35.0                    |                        |
| SH35-01             | 35                                            |                                                                                     | 50                                | 77                             | 40.0                    |                        |
| SH10-40             | 10                                            |                                                                                     | 60                                | 100                            |                         |                        |
| SH12-18             | 12                                            |                                                                                     | 40                                |                                |                         |                        |
| SH16-11             | 16                                            |    | 45                                |                                |                         |                        |
| SH20-01             | 20                                            |                                                                                     | 48                                |                                |                         |                        |
| SH25-11             | 25                                            |                                                                                     | 50                                |                                |                         |                        |
| SH32-24             | 32                                            |                                                                                     | 56                                |                                |                         |                        |
| SH40-03             | 40                                            |    | 60                                |                                |                         |                        |
| SH10-41             | 10                                            |                                                                                     | 70                                |                                |                         |                        |
| SH12-19             | 12                                            |                                                                                     | 40                                | 57                             |                         |                        |
| SH16-20             | 16                                            |                                                                                     | 45                                | 62                             |                         |                        |
| SH20-60             | 20                                            |   | 48                                | 75                             |                         |                        |
| SH25-21             | 25                                            |                                                                                     | 50                                | 77                             |                         |                        |
| SH32-23             | 32                                            |                                                                                     | 56                                | 86                             |                         |                        |
| SH40-04             | 40                                            |                                                                                     | 60                                | 100                            |                         |                        |
| SH10-11             | 10                                            |  | 70                                | 110                            |                         |                        |
| SH12-07             | 12                                            |                                                                                     |                                   | 40                             | 23.5                    |                        |
| SH16-32             | 16                                            |                                                                                     |                                   | 45                             | 26.5                    |                        |
| SH20-29             | 20                                            |                                                                                     |                                   | 48                             | 29.0                    |                        |
| SH25-22             | 25                                            |  |                                   | 50                             | 30.5                    |                        |
| SH32-10             | 32                                            |                                                                                     |                                   | 56                             | 38.0                    |                        |
| SH40-13             | 40                                            |                                                                                     |                                   | 60                             | 43.0                    |                        |
| SH10-23             | 10                                            |                                                                                     |                                   | 70                             | 47.0                    |                        |
| SH12-02             | 12                                            |  | 40                                | 57                             | 23.5                    |                        |
| SH16-53             | 16                                            |                                                                                     | 45                                | 62                             | 26.5                    |                        |
| SH20-34             | 20                                            |                                                                                     | 48                                | 75                             | 29.0                    |                        |
| SH25-31             | 25                                            |                                                                                     | 50                                | 77                             | 30.5                    |                        |
| SH32-11             | 32                                            |  | 56                                | 86                             | 38.0                    |                        |
| SH40-14             | 40                                            |                                                                                     | 60                                | 100                            | 43.0                    |                        |
| SH10-20             | 10                                            |                                                                                     | 70                                | 110                            | 47.0                    |                        |
| SH12-08             | 12                                            |                                                                                     |                                   | 40                             | 28.0                    |                        |
| SH16-47             | 16                                            |  |                                   | 45                             | 33.0                    |                        |
| SH20-40             | 20                                            |                                                                                     |                                   | 48                             | 36.0                    |                        |
| SH25-36             | 25                                            |                                                                                     |                                   | 50                             | 38.0                    |                        |
| SH32-12             | 32                                            |                                                                                     |                                   | 56                             | 44.0                    |                        |
| SH40-18             | 40                                            |  |                                   | 60                             | 48.0                    |                        |
| SH10-24             | 10                                            |                                                                                     |                                   | 70                             | 66.0                    |                        |
| SH12-05             | 12                                            |                                                                                     | 40                                | 57                             | 28.0                    |                        |
| SH16-51             | 16                                            |                                                                                     | 45                                | 62                             | 33.0                    |                        |
| SH20-43             | 20                                            |  | 48                                | 75                             | 36.0                    |                        |
| SH25-37             | 25                                            |                                                                                     | 50                                | 77                             | 38.0                    |                        |
| SH32-13             | 32                                            |                                                                                     | 56                                | 86                             | 44.0                    |                        |
| SH40-17             | 40                                            |                                                                                     | 60                                | 100                            | 48.0                    |                        |
| SH10-29             | 10                                            |  | 70                                | 110                            | 66.0                    |                        |
| SH12-13             | 12                                            |                                                                                     |                                   | 40                             | 28.0                    |                        |
| SH16-62             | 16                                            |                                                                                     |                                   | 45                             | 33.0                    |                        |
| SH20-55             | 20                                            |                                                                                     |                                   | 48                             | 36.0                    |                        |
|                     |                                               |                                                                                     |                                   | 50                             | 38.0                    |                        |

# BRAZED GUNDRILL

## 焊接式枪钻

◎ 焊接式單刃槍鑽加工參數表 Machining parameters of the brazed single flute gun drill

| 工件材質          | 彈簧鋼<br>淬硬鋼<br>耐熱鋼<br>鑄鋼<br>冷硬鑄鐵<br>鈹合金<br>特殊合金<br>(鎳基耐熱合金<br>鎳合金等) | 不銹鋼<br>耐酸不銹鋼<br>奧氏不銹鋼<br>18~25%Cr<br>Ni > 8% | 馬氏不銹鋼<br>鐵素體不銹鋼<br>(普通不銹鋼<br>不銹鋼)<br>13~25%Cr<br>易切削鋼<br>(硫化鋼) | 合金鋼<br>調質鋼<br>表面硬化鋼<br>氮處理鋼<br>工具鋼<br>> 900N/mm <sup>2</sup> | 鑄鐵<br>灰口鑄鐵<br><300N/mm <sup>2</sup><br>球墨鑄鐵<br>< 400N/mm <sup>2</sup> | 鑄鐵灰口鑄鐵<br>< 300N/mm <sup>2</sup><br>球墨鑄鐵<br>< 400N/mm <sup>2</sup><br>可鍛鑄鐵<br>白心可鍛鑄鐵<br>黑心可鍛鑄鐵 | 結構鋼<br>調質鋼<br>高碳低合金鋼<br>表面硬化鋼<br>氮處理鋼<br>工具鋼<br>> 900N/mm <sup>2</sup><br>易切削鋼 | 黃銅<br>青銅<br>紫銅<br>塑料 | 鋁<br>鑄鋁<br>Si> 5%<br>易加工鋁 | 鋁<br>鑄鋁<br>Si> 5%<br>非淬硬鋁 |
|---------------|--------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------|---------------------------|---------------------------|
| 切削速度<br>m/min | 25~60                                                              | 30~60                                        | 40~70                                                          | 60~80                                                        | 60~90                                                                 | 70~100                                                                                         | 70~100                                                                         | 80~150               | 80~160                    | 100~300                   |

| 直徑 Φ<br>diameter Φ | 進給速度:毫米/轉: mm/rev<br>feed rate: mm/rev |             |             |              |             |             |             |             |             |             |
|--------------------|----------------------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 2.0-2.49           | 0.001~0.002                            | 0.002~0.005 | 0.002~0.006 | 0.002~0.005  | 0.005~0.018 | 0.005~0.019 | 0.003~0.007 | 0.003~0.015 | 0.002~0.012 | 0.005~0.005 |
| 2.5-2.99           | 0.001~0.005                            | 0.004~0.007 | 0.004~0.007 | 0.004~0.006  | 0.008~0.028 | 0.008~0.02  | 0.005~0.010 | 0.005~0.020 | 0.004~0.026 | 0.004~0.008 |
| 3.0-3.49           | 0.002~0.007                            | 0.006~0.008 | 0.005~0.009 | 0.005~0.007  | 0.009~0.038 | 0.009~0.038 | 0.007~0.012 | 0.006~0.030 | 0.006~0.037 | 0.006~0.012 |
| 3.5-3.99           | 0.004~0.008                            | 0.008~0.009 | 0.007~0.011 | 0.007~0.010  | 0.011~0.042 | 0.011~0.046 | 0.009~0.015 | 0.007~0.045 | 0.007~0.055 | 0.007~0.025 |
| 4.0-4.49           | 0.006~0.009                            | 0.009~0.010 | 0.008~0.013 | 0.008~0.012  | 0.012~0.047 | 0.012~0.050 | 0.012~0.019 | 0.008~0.050 | 0.008~0.071 | 0.008~0.026 |
| 4.5-4.99           | 0.008~0.011                            | 0.010~0.013 | 0.009~0.017 | 0.011~0.015  | 0.016~0.052 | 0.016~0.057 | 0.014~0.020 | 0.009~0.057 | 0.009~0.094 | 0.009~0.028 |
| 5.0-5.99           | 0.010~0.014                            | 0.012~0.015 | 0.013~0.019 | 0.013~0.018  | 0.018~0.065 | 0.018~0.068 | 0.016~0.026 | 0.010~0.069 | 0.010~0.109 | 0.010~0.036 |
| 6.0-6.99           | 0.012~0.016                            | 0.014~0.017 | 0.015~0.023 | 0.015~0.022  | 0.024~0.071 | 0.024~0.074 | 0.018~0.028 | 0.012~0.079 | 0.012~0.125 | 0.012~0.045 |
| 7.0-7.99           | 0.015~0.018                            | 0.016~0.019 | 0.18~0.026  | 0.018~0.025  | 0.028~0.084 | 0.028~0.085 | 0.021~0.035 | 0.014~0.092 | 0.018~0.130 | 0.014~0.049 |
| 8.0-8.99           | 0.018~0.021                            | 0.018~0.021 | 0.020~0.031 | 0.020~0.027  | 0.032~0.092 | 0.032~0.096 | 0.024~0.036 | 0.016~0.101 | 0.020~0.144 | 0.016~0.056 |
| 9.0-9.99           | 0.021~0.025                            | 0.020~0.028 | 0.023~0.034 | 0.023~0.030  | 0.36~0.110  | 0.036~0.114 | 0.027~0.040 | 0.018~0.113 | 0.023~0.158 | 0.018~0.034 |
| 10.0-11.99         | 0.025~0.030                            | 0.025~0.033 | 0.025~0.041 | 0.025~0.038  | 0.045~0.116 | 0.050~0.120 | 0.030~0.04  | 0.020~0.139 | 0.025~0.174 | 0.020~0.074 |
| 12.0-13.99         | 0.027~0.033                            | 0.030~0.044 | 0.030~0.045 | 0.029~0.044  | 0.051~0.126 | 0.060~0.138 | 0.036~0.060 | 0.024~0.156 | 0.030~0.182 | 0.024~0.087 |
| 14.0-15.99         | 0.029~0.040                            | 0.035~0.044 | 0.035~0.052 | 0.035~0.050  | 0.057~0.138 | 0.070~0.154 | 0.042~0.071 | 0.028~0.179 | 0.035~0.194 | 0.028~0.099 |
| 16.0-17.99         | 0.033~0.044                            | 0.041~0.050 | 0.042~0.060 | 0.039~0.053  | 0.620~0.158 | 0.079~0.170 | 0.048~0.079 | 0.033~0.199 | 0.050~0.209 | 0.033~0.108 |
| 18.0-19.99         | 0.037~0.049                            | 0.045~0.062 | 0.045~0.067 | 0.044~0.060  | 0.066~0.173 | 0.090~0.191 | 0.054~0.091 | 0.036~0.244 | 0.054~0.228 | 0.036~0.130 |
| 20.0-23.99         | 0.041~0.054                            | 0.049~0.071 | 0.050~0.079 | 0.049~0.069  | 0.069~0.189 | 0.106~0.207 | 0.060~0.107 | 0.040~0.249 | 0.060~0.254 | 0.040~0.146 |
| 24.0-27.99         | 0.045~0.057                            | 0.052~0.083 | 0.054~0.090 | 0.054~0.0077 | 0.076~0.210 | 0.120~0.221 | 0.069~0.117 | 0.048~0.291 | 0.072~0.295 | 0.048~0.169 |
| 28.0-31.99         | 0.049~0.062                            | 0.057~0.091 | 0.059~0.098 | 0.059~0.085  | 0.079~0.212 | 0.140~0.237 | 0.079~0.134 | 0.056~0.327 | 0.084~0.360 | 0.056~0.194 |
| 32.0-40.0          | 0.052~0.065                            | 0.063~0.098 | 0.065~0.107 | 0.063~0.098  | 0.086~0.228 | 0.160~0.245 | 0.085~0.154 | 0.064~0.380 | 0.096~0.455 | 0.064~0.221 |

● 切削速度和進給量取決于:刀具直徑、刀具長度、切削液、工件材質、機床組件的穩定性和工裝夾緊情況，以上表格中的加工參數為標準參考值，以現場實際工況為準。  
The cutting speed and feed rate depend on : tool diameter, tool lenath, cutting fluid, vorkpiece material, characterization ofmachine and clamping condition.  
The processing parameters in the above table are the standard normal value for reference.The practical actual working conditions on site are the true value.

# SOLID CARBIDE GUN DRILL

## 整体硬质合金枪钻

### ■ Solid carbide gun drill

The solid carbide gun drill is made of drill body (drill tip and drill rod integrated) and the drill handle from two parts by welding as a whole. It can also be made by the whole carbide. (drill tip, drill rod and handle integrated) Its stability, efficiency and useful life are better than the welding type. This design ensures higher reliability and cutting performance, while it compromise higher rigidity and less distorted vibration. It is therefore enjoy a longer tool life.

整體硬質合金槍鑽是由鑽身(鑽尖與鑽杆一體)鑽柄兩部分通過焊接成一個整體，也可以為全部整體硬質合金制做而成(鑽尖、鑽杆、鑽柄一體)，它的穩定性、效率以及壽命均優于焊接式。這種設計能夠保證更高的可靠性相切前性能，同時它較高的剛性和較低的扭曲振動可以使刀具壽命更長。

Made it up for  
maximum 550mm  
overall length  
制作长度~550mm

Drilling diameter  
range: 1.00- 12.00  
制作范围  
φ1.0~φ12.0



整體硬質合金槍鑽庫存表  
Solid carbide gun drill stock table

|                    |                     |                     |
|--------------------|---------------------|---------------------|
| Φ 1.52*160-10*55   | Φ 2.0*250-10*135    | Φ 3.8*185-4*38/50-L |
| Φ 1.80*160-10*55   | Φ 2.2*170-4*38/50   | Φ 3.8*240-10*100-L  |
| Φ 2.02*160-10*55   | Φ 2.5*175-4*38/50-L | Φ 3.8*275-10*135-L  |
| Φ 2.02*180-10*55   | Φ 2.5*230-10*100-L  | Φ 4.0*185-4*38/50-L |
| Φ 2.02*180-10*55-L | Φ 2.5*265-10*135-L  | Φ 4.0*240-10*100-L  |
| Φ 2.02*200-10*55   | Φ 2.6*175-4*38/50-L | Φ 4.0*275-10*135-L  |
| Φ 2.02*200-10*55-L | Φ 2.6*265-10*135-L  | Φ 4.2*185-4*38/50-L |
| Φ 2.52*180-10*55   | Φ 2.8*175-4*38/50-L | Φ 4.2*240-10*100-L  |
| Φ 2.52*180-10*55-L | Φ 2.8*265-10*135-L  | Φ 4.2*275-10*135-L  |
| Φ 3.02*180-10*55   | Φ 3.0*175-4*38/50-L | Φ 4.5*285-10*135-L  |
| Φ 3.02*200-10*55   | Φ 3.0*230-10*100-L  | Φ 4.8*250-10*100-L  |
| Φ 3.02*200-10*55-L | Φ 3.0*265-10*135-L  | Φ 5.0*250-10*100-L  |
| Φ 2.8*170-2.9*30-L | Φ 3.2*180-4*38/50-L | Φ 5.0*260-10*100-L  |
| Φ 3.0*170-2.9*30-L | Φ 3.2*230-10*100-L  | Φ 6.0*260-10*100-L  |
| Φ 3.2*170-3.1*30-L | Φ 3.2*265-10*135-L  | Φ 6.0*295-10*135-L  |
| Φ 1.80*200-10*100  | Φ 3.5*180-4*38/50-L | Φ 7.0*280-10*100-L  |
| Φ 2.0*170-4*38/50  | Φ 3.5*230-10*100-L  | Φ 9.0*280-10*100-L  |
| Φ 2.0*220-10*100   | Φ 3.5*265-10*135-L  | Φ 10.0*280-10*100-L |

● L: TIALN

# SOLID CARBIDE GUN DRILL

## 整体硬质合金枪钻

◎ 整体硬质合金枪钻标准刀柄表 Table of solid carbide gun drill handle

| 規格<br>specification | 外形尺寸(mm) $\Phi$ dia.<br>diamete(mm) $\Phi$ dia. | 圖紙<br>drawing | 刀具長度計算<br>handle length calculation |                                | 定位槽 x<br>fix position x | 螺紋規格 M<br>screw spec M |
|---------------------|-------------------------------------------------|---------------|-------------------------------------|--------------------------------|-------------------------|------------------------|
|                     |                                                 |               | 鑽柄夾緊部 D<br>clamping part D          | 鑽柄過渡部 L<br>transitional part L |                         |                        |
| SH6-03              | 6                                               |               | 30                                  | 45                             | 17                      |                        |
| SH10-15             | 10                                              |               | 55                                  | 70                             |                         | M6*0.5                 |
| SH10-37             | 10                                              |               | 40                                  | 55                             | 32.7                    | M6*0.5                 |
| SH10-42             | 10                                              |               | 40                                  | 55                             | 24                      |                        |
| SH12.7-01           | 12.7                                            |               | 38                                  | 48                             | 25.4                    |                        |
| SH12.7-09           | 12.7                                            |               | 51                                  | 65                             |                         | M6*0.5                 |
| SH16-75             | 16                                              |               | 80                                  | 105                            | 37                      | M10*1                  |
| SH4-08              | 4                                               |               | 34                                  | 46                             |                         |                        |
| SH6-12              | 6                                               |               | 36                                  | 50                             |                         |                        |
| SH10-51             | 10                                              |               | 40                                  | 55                             |                         |                        |
| SH12-27             | 12                                              |               | 45                                  | 60                             |                         |                        |
| SH16-86             | 16                                              |               | 48                                  | 63                             |                         |                        |
| SH6-13              | 6                                               |               | 36                                  | 50                             | 20                      |                        |
| SH10-47             | 10                                              |               | 40                                  | 55                             | 23.5                    |                        |
| SH12-30             | 12                                              |               | 45                                  | 60                             | 26.5                    |                        |
| SH16-78             | 16                                              |               | 48                                  | 63                             | 29                      |                        |
| SH6-01              | 6                                               |               | 36                                  | 50                             | 25                      |                        |
| SH10-49             | 10                                              |               | 40                                  | 55                             | 28                      |                        |
| SH12-28             | 12                                              |               | 45                                  | 60                             | 33                      |                        |
| SH16-84             | 16                                              |               | 48                                  | 63                             | 36                      |                        |

# SOLID CARBIDE GUN DRILL

## 整体硬质合金枪钻

◎ 焊接式單刃槍鑽加工參數表 Machining parameters of the brazed single flute gun drill

| 工件材質          | 彈簧鋼<br>淬硬鋼<br>耐熱鋼<br>鑄鋼<br>冷硬鑄鐵<br>鈹合金<br>特殊合金<br>(鎳基耐熱合金<br>鎳合金等) | 不銹鋼<br>耐酸不銹鋼<br>奧氏不銹鋼<br>18~25%Cr<br>Ni > 8% | 馬氏不銹鋼<br>鐵素體不銹鋼<br>(普通不銹鋼<br>不銹鋼)<br>13~25%Cr<br>易切削鋼<br>(硫化鋼) | 合金鋼<br>調質鋼<br>表面硬化鋼<br>氮處理鋼<br>工具鋼<br>> 900N/mm <sup>2</sup> | 鑄鐵<br>灰口鑄鐵<br><300N/mm <sup>2</sup><br>球墨鑄鐵<br>< 400N/mm <sup>2</sup> | 鑄鐵灰口鑄鐵<br>< 300N/mm <sup>2</sup><br>球墨鑄鐵<br>< 400N/mm <sup>2</sup><br>可鍛鑄鐵<br>白心可鍛鑄鐵<br>黑心可鍛鑄鐵 | 結構鋼<br>調質鋼<br>高碳低合金鋼<br>表面硬化鋼<br>氮處理鋼<br>工具鋼<br>> 900N/mm <sup>2</sup><br>易切削鋼 | 黃銅<br>青銅<br>紫銅<br>塑料 | 鋁<br>鑄鋁<br>Si> 5%<br>易加工鋁 | 鋁<br>鑄鋁<br>Si> 5%<br>非淬硬鋁 |
|---------------|--------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------|---------------------------|---------------------------|
| 切削速度<br>m/min | 25~60                                                              | 30~60                                        | 40~70                                                          | 60~80                                                        | 60~90                                                                 | 70~100                                                                                         | 70~100                                                                         | 80~150               | 80~160                    | 100~300                   |

| 直徑Φ<br>diameter Φ | 進給速度:毫米/轉: mm/rev<br>feed rate: mm/rev |               |               |               |               |               |               |               |               |               |
|-------------------|----------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 0.7~0.79          | 0.0004~0.0012                          | 0.0005~0.0012 | 0.0007~0.0012 | 0.0005~0.0012 | 0.0009~0.0014 | 0.0007~0.0018 | 0.0004~0.0018 | 0.0005~0.0012 | 0.0007~0.0012 | 0.0005~0.0009 |
| 0.8~0.89          | 0.0006~0.0016                          | 0.0007~0.0015 | 0.0011~0.0014 | 0.0006~0.0015 | 0.0012~0.0018 | 0.0010~0.0023 | 0.0004~0.0022 | 0.0008~0.0015 | 0.0012~0.0014 | 0.0008~0.0012 |
| 0.9~0.99          | 0.0009~0.0020                          | 0.0011~0.0019 | 0.0014~0.0017 | 0.0009~0.0019 | 0.0015~0.0024 | 0.0014~0.0028 | 0.0007~0.0026 | 0.0011~0.0019 | 0.0017~0.0020 | 0.0011~0.0017 |
| 1.0~1.09          | 0.0013~0.0024                          | 0.0014~0.0022 | 0.0019~0.0022 | 0.0010~0.0023 | 0.0019~0.0029 | 0.0018~0.0032 | 0.0010~0.0032 | 0.0015~0.0024 | 0.0020~0.0024 | 0.0015~0.0024 |
| 1.1~1.19          | 0.0017~0.0028                          | 0.0017~0.0025 | 0.0022~0.0026 | 0.0013~0.0029 | 0.0025~0.0035 | 0.0022~0.0038 | 0.0014~0.0038 | 0.0019~0.0029 | 0.0022~0.0029 | 0.0019~0.0034 |
| 1.2~1.29          | 0.0020~0.0033                          | 0.0020~0.0027 | 0.0024~0.0028 | 0.0015~0.0035 | 0.0031~0.0041 | 0.0030~0.0048 | 0.0018~0.0041 | 0.0024~0.0034 | 0.0024~0.0034 | 0.0024~0.0041 |
| 1.3~1.39          | 0.0023~0.0036                          | 0.0022~0.0029 | 0.0031~0.0035 | 0.0020~0.0041 | 0.0040~0.0051 | 0.0039~0.0060 | 0.0020~0.0050 | 0.0028~0.0039 | 0.0026~0.0045 | 0.0026~0.0044 |
| 1.4~1.49          | 0.0026~0.0038                          | 0.0023~0.0031 | 0.0034~0.0037 | 0.0021~0.0047 | 0.0047~0.0060 | 0.0049~0.0079 | 0.0021~0.0054 | 0.0031~0.0047 | 0.0028~0.0055 | 0.0032~0.0048 |
| 1.5~1.59          | 0.0029~0.0042                          | 0.0024~0.0035 | 0.0035~0.0042 | 0.0021~0.0051 | 0.0053~0.0068 | 0.0056~0.0100 | 0.0021~0.0067 | 0.0032~0.0053 | 0.0035~0.0066 | 0.0038~0.0059 |
| 1.6~1.79          | 0.0035~0.0054                          | 0.0036~0.0049 | 0.0040~0.0051 | 0.0024~0.0066 | 0.0064~0.0095 | 0.0064~0.0150 | 0.0028~0.0075 | 0.0035~0.0095 | 0.0040~0.0085 | 0.0040~0.0075 |
| 1.8~1.99          | 0.0040~0.0065                          | 0.0040~0.0065 | 0.0050~0.0065 | 0.0030~0.0075 | 0.0070~0.0130 | 0.0070~0.0220 | 0.0030~0.0095 | 0.0040~0.0130 | 0.0050~0.0110 | 0.0050~0.0110 |
| 2.0~2.49          | 0.0050~0.0075                          | 0.0050~0.0075 | 0.0050~0.0075 | 0.0030~0.0095 | 0.0100~0.0220 | 0.0090~0.0330 | 0.0040~0.0120 | 0.0040~0.0180 | 0.0050~0.0200 | 0.0070~0.0130 |
| 2.5~2.99          | 0.0060~0.0095                          | 0.0060~0.0095 | 0.0060~0.0110 | 0.0040~0.0110 | 0.0130~0.0320 | 0.0110~0.0430 | 0.0050~0.0160 | 0.0050~0.0250 | 0.0060~0.0360 | 0.0080~0.0170 |
| 3.0~3.49          | 0.0080~0.0110                          | 0.0080~0.0110 | 0.0080~0.0130 | 0.0050~0.0140 | 0.0150~0.0390 | 0.0140~0.0530 | 0.0080~0.0180 | 0.0060~0.0370 | 0.0080~0.0540 | 0.0100~0.0200 |
| 3.5~3.99          | 0.0090~0.0125                          | 0.0100~0.0160 | 0.0090~0.0160 | 0.0070~0.0160 | 0.0180~0.0480 | 0.0180~0.0620 | 0.0090~0.0230 | 0.0070~0.0490 | 0.0110~0.0750 | 0.0100~0.0250 |
| 4.0~4.49          | 0.0100~0.0135                          | 0.0110~0.0180 | 0.0100~0.0190 | 0.0080~0.0190 | 0.0200~0.0560 | 0.0200~0.0690 | 0.0120~0.0260 | 0.0080~0.0600 | 0.0120~0.0950 | 0.0130~0.0300 |
| 4.5~4.99          | 0.0110~0.0160                          | 0.0140~0.0220 | 0.0110~0.0220 | 0.0110~0.0210 | 0.0230~0.0640 | 0.0230~0.0780 | 0.0140~0.0280 | 0.0090~0.0690 | 0.0140~0.1300 | 0.0160~0.0360 |
| 5.0~5.99          | 0.0130~0.0220                          | 0.0150~0.0240 | 0.0130~0.0250 | 0.0120~0.0250 | 0.0250~0.0760 | 0.0250~0.0950 | 0.0150~0.0380 | 0.0100~0.0800 | 0.0150~0.1550 | 0.0200~0.0470 |
| 6.0~7.99          | 0.0150~0.0300                          | 0.0180~0.0290 | 0.0150~0.0370 | 0.0150~0.0330 | 0.0300~0.1100 | 0.0300~0.1250 | 0.0180~0.0490 | 0.0120~0.0960 | 0.0180~0.0250 | 0.0260~0.0660 |
| 8.0~12.0          | 0.0180~0.0380                          | 0.0210~0.0330 | 0.0170~0.0410 | 0.0180~0.0380 | 0.0330~0.1190 | 0.0350~0.1360 | 0.0210~0.0570 | 0.0140~0.1100 | 0.0210~0.2080 | 0.0290~0.0780 |

- 切削速度和進給量取決於: 刀具直徑、刀具長度、切削液、工件材質、機床組件的穩定性和工裝夾緊情況，以上表格中的加工參數為標準參考值，以現場實際工況為準。  
The cutting speed and feed rate depend on : tool diameter, tool length, cutting fluid, workpiece material, characterization of machine and clamping condition.  
The processing parameters in the above table are the standard normal value for reference. The practical actual working conditions on site are the true value.



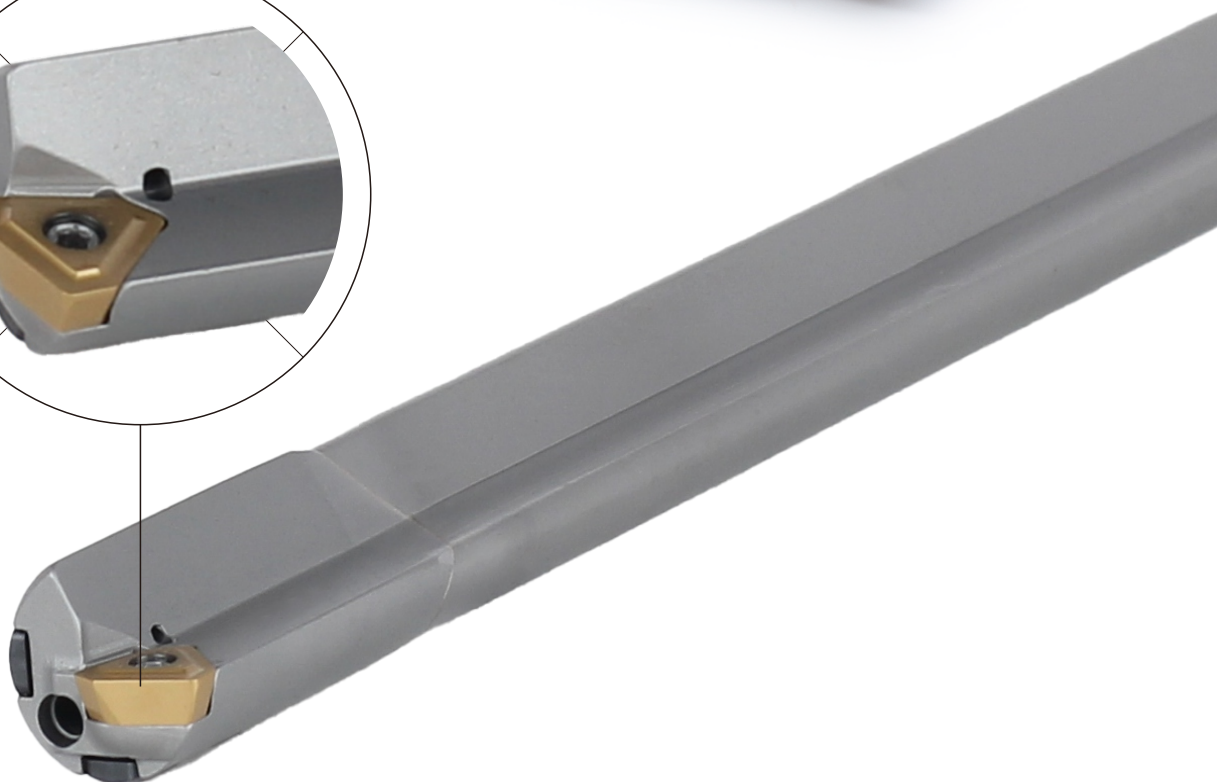
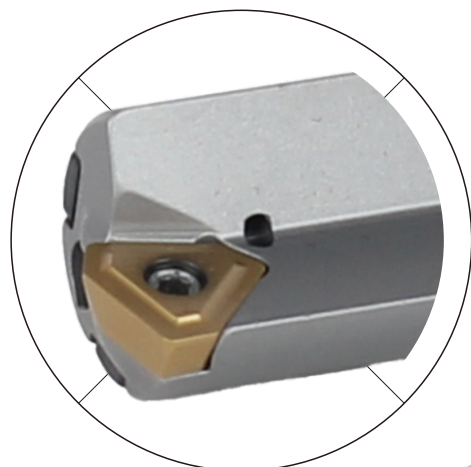
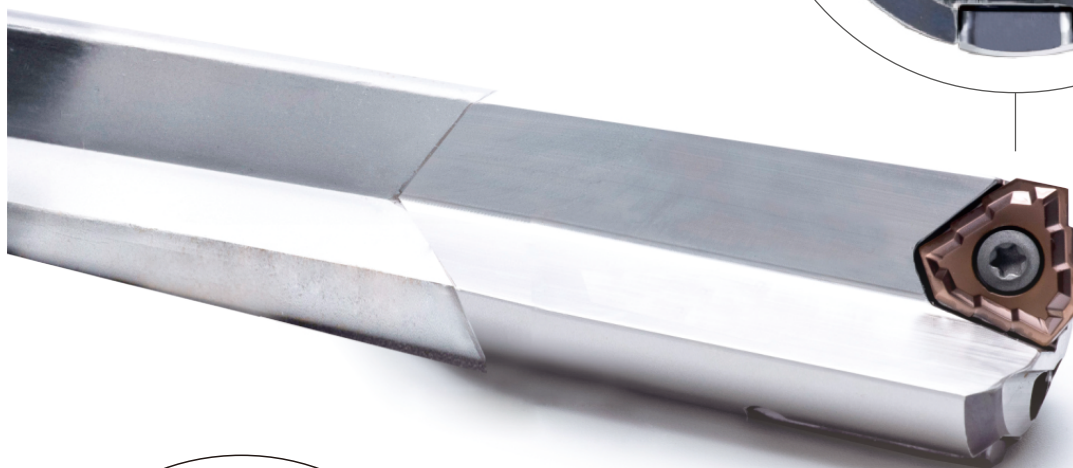
# INDEXABLE INSERT GUN DRILL 机夹式枪钻

## ◎ 焊接式单刃枪钻

- 枪钻刃部直径根据客户需要，公称尺寸可细分至0.001mm

## ◎ 产品特性

- 无需再研磨，易于更换刀片及导向部。
- 采用特殊刃口处理具有较高的切削速度和切削能力。



## INDEXABLE INSERT GUN DRILL (TPMX) 机夹式枪钻 (TPMX)

◎ 配比表

| 刀頭直徑  | 配套刀片編號   | 螺絲型號   | 扳手型號 |
|-------|----------|--------|------|
| 14-17 | TPMX0902 | M2.5*6 | T8   |
| 18-21 | TPMX1403 | M2.5*6 | T8   |
| 22-25 | TPMX1704 | M3.5*9 | T15  |
| 26-29 | TPMX2204 | M4*10  | T15  |
| 30-35 | TPMX2405 | M4*10  | T15  |
| 36-42 | TPMX2807 | M5*12  | T20  |

◎ 配比表

| 刀頭直徑      | 導條編號      | 螺絲型號     | 扳手型號 |
|-----------|-----------|----------|------|
| 13.5-15   | 05-18-060 | M2.2*4.5 | T7   |
| 15.5-17   | 05-18-075 | M2.2*4.5 | T7   |
| 17.5-19.8 | 06-20-085 | M2.5*6   | T8   |
| 20.3-23.8 | 06-20-100 | M2.5*6   | T8   |
| 24.2-28   | 06-20-120 | M2.5*6   | T8   |
| 30-39     | 07-20-120 | M3*6.5   | T8   |

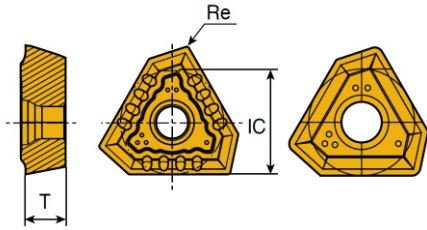
## INDEXABLE INSERT GUN DRILL (TOGT) 机夹式枪钻 (TOGT)

◎ 配比表

| 刀頭直徑        | 刀片型號       | 螺絲型號     | 扳手型號 | 導條型號         | 螺絲型號     | 扳手型號 |
|-------------|------------|----------|------|--------------|----------|------|
| 14.00-15.99 | TOGT070304 | M2.5*5   | T8   | GPS05-18-060 | M2.2*4.5 | T7   |
| 16.00-18.00 | TOGT080305 | M2.5*5   | T8   | GPS05-18-075 | M2.2*4.5 | T7   |
| 18.01-19.99 | TOGT090305 | M2.5*5   | T8   | GPS06-20-085 | M2.5*5   | T8   |
| 20.00-20.99 | TOGT100305 | M3.0*6.5 | T8   | GPS06-20-085 | M2.5*5   | T8   |
| 21.00-21.99 | TOGT100305 | M3.0*6.5 | T8   | GPS06-20-100 | M2.5*5   | T8   |
| 22.00-25.00 | TOGT110405 | M3.5*9   | T15  | GPS06-20-100 | M2.5*5   | T8   |
| 25.01-28.99 | TOGT120405 | M4*10    | T15  | GPS06-20-120 | M2.5*5   | T8   |
| 29.00-29.99 | TOGT130408 | M5*11    | T20  | GPS06-20-120 | M2.5*5   | T8   |
| 30.00-32.02 | TOGT140510 | M5*11    | T20  | GPS07-20-120 | M3.0*6.4 | T8   |

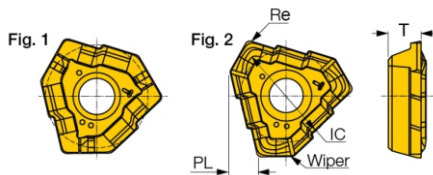
# GUN DRILL COMPATIBLE INSERT 枪钻适配刀片选型

## ◎ TPMX系列刀片選型/TPMX insert



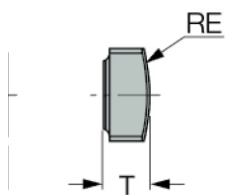
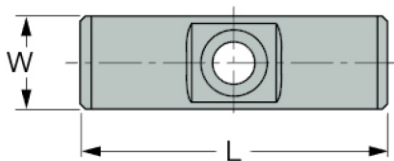
| 型號<br>Specification/Item | 基本尺寸 (mm) |     |     |
|--------------------------|-----------|-----|-----|
|                          | IC        | T   | Re  |
| TPMX0902                 | 7.5       | 2.3 | 0.8 |
| TPMX1403                 | 8.45      | 3.5 | 0.4 |
| TPMX1403                 | 8.45      | 3.5 | 0.8 |
| TPMX1704                 | 10.3      | 4.0 | 0.4 |
| TPMX1704                 | 10.3      | 4.0 | 0.8 |
| TPMX2204                 | 12.3      | 4.4 | 1.0 |
| TPMX2405                 | 14.2      | 5.5 | 0.4 |
| TPMX2405                 | 14.2      | 5.5 | 1.2 |
| TPMX2807                 | 17        | 7.5 | 0.8 |
| TPMX2807                 | 17        | 7.5 | 1.6 |

## ◎ TOGT系列刀片選型/TOGT insert



| 型號<br>Specification/Item | 基本尺寸 (mm) |     |      |      |     |
|--------------------------|-----------|-----|------|------|-----|
|                          | IC        | Re  | RL   | T    | Fig |
| TOGT070304               | 7.69      | 0.4 | 1.95 | 2.3  | 1   |
| TOGT080305               | 8.55      | 0.5 | 2.2  | 2.8  | 1   |
| TOGT090305               | 8.32      | 0.5 | 3.0  | 3.0  | 2   |
| TOGT100305               | 9.23      | 0.5 | 3.2  | 3.3  | 2   |
| TOGT110405               | 10.4      | 0.5 | 3.4  | 3.8  | 2   |
| TOGT120405               | 11.59     | 0.5 | 3.6  | 4.3  | 2   |
| TOGT130408               | 12.85     | 0.8 | 4.57 | 4.76 | 2   |
| TOGT140510               | 16.85     | 1.0 | 5.43 | 5.26 | 2   |

## ◎ 槍鑽配飾導條選型/Gun drill Compatible guide



| 型號<br>Specification/Item | 基本尺寸 (mm) |     |      |      |
|--------------------------|-----------|-----|------|------|
|                          | W         | T   | L    | Re   |
| GPS04-16-045             | 4.0       | 1.8 | 16.0 | 4.5  |
| GPS04-16-050             | 4.0       | 1.8 | 16.0 | 5.5  |
| GPS04-16-055             | 4.0       | 2.0 | 16.0 | 5.5  |
| GPS05-18-060             | 5.0       | 2.5 | 18.0 | 6.0  |
| GPS05-18-075             | 5.0       | 2.5 | 18.0 | 7.5  |
| GPS06-20-075             | 6.0       | 3.0 | 20.0 | 7.5  |
| GPS06-20-085             | 6.0       | 3.0 | 20.0 | 8.5  |
| GPS06-20-100             | 6.0       | 3.0 | 20.0 | 10.0 |
| GPS06-20-120             | 6.0       | 3.0 | 20.0 | 12.0 |
| GPS07-20-120             | 7.0       | 3.5 | 20.0 | 12.0 |
| GPS08-25-155             | 8.0       | 4.5 | 25.0 | 15.5 |
| GPS10-30-200             | 10.0      | 4.5 | 30.0 | 20.0 |
| GPS10-35-200             | 10.0      | 6.0 | 35.0 | 20.0 |

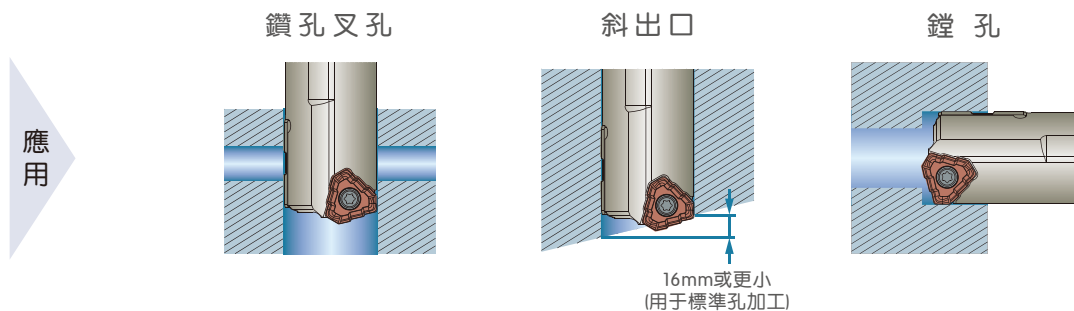
# CUTTING CONDITION

## 加工参数

### ◎ 標準加工參數

| 工件材料                                                            | 切綫速度Vc<br>(m/min) | 進給         |           |            |            |
|-----------------------------------------------------------------|-------------------|------------|-----------|------------|------------|
|                                                                 |                   | Φ12-Φ13.99 | Φ14-Φ18   | Φ18.01-Φ28 | Φ28.01-Φ50 |
| 低碳鋼(C<0.3)<br>SS400/S142-1, SM/S152-3,<br>S25C/C25, 等           | 50-100            | -          | 0.03-0.1  | 0.03-0.1   | -          |
|                                                                 | 80-140            | 0.05-0.1   | 0.05-0.1  | 0.05-0.1   | 0.1-0.2    |
| 碳鋼(C>0.3)<br>S45C/C45, S55C/C55 etc.                            | 50-100            | -          | 0.03-0.1  | 0.03-0.12  | -          |
|                                                                 | 80-140            | 0.05-0.1   | 0.05-0.16 | 0.05-0.2   | 0.1-0.2    |
| 低合金鋼(C<0.3)<br>SCM415, 18CrMo4, etc.                            | 50-100            | -          | 0.03-0.1  | 0.03-0.1   | -          |
|                                                                 | 80-140            | 0.05-0.16  | 0.05-0.1  | 0.05-0.1   | 0.1-0.2    |
| 合金鋼(C>0.3)<br>SCM440/42CrMo4, etc.                              | 50-100            | -          | 0.03-0.1  | 0.03-0.2   | -          |
|                                                                 | 80-120            | 0.05-0.1   | 0.05-0.16 | 0.05-0.2   | 0.1-0.2    |
| 不銹鋼(奧氏體)<br>SUS304/x5CrNi18-9, SUS316/<br>X5CrNiMo17-12-3, etc. | 50-100            | -          | 0.03-0.06 | 0.03-0.06  | -          |
|                                                                 | 60-100            | 0.05-0.1   | 0.05-0.1  | 0.05-0.1   | 0.1-0.15   |
| 不銹鋼(馬氏體, 鐵素體)<br>SUS430/X6Cr17, SUS416/<br>X12CrS13, 等          | 50-100            | -          | 0.03-0.06 | 0.03-0.06  | -          |
|                                                                 | 60-100            | 0.05-0.1   | 0.05-0.1  | 0.05-0.1   | 0.1-0.15   |
| 不銹鋼(沉澱硬化)<br>SUS630/X5CrNiCuNb16-4, etc.                        | 50-100            | -          | 0.03-0.06 | 0.03-0.06  | -          |
|                                                                 | 60-100            | 0.05-0.1   | 0.05-0.1  | 0.05-0.1   | 0.1-0.3    |
| 灰鑄鐵<br>FC250/250-2, etc.                                        | 50-100            | -          | 0.03-0.15 | 0.05-0.18  | -          |
|                                                                 | 80-140            | 0.05-0.25  | 0.05-0.25 | 0.05-0.3   | 0.1-0.3    |
| 球墨鑄鐵<br>FCD700/700-2, etc.                                      | 50-100            | -          | 0.03-0.15 | 0.05-0.18  | -          |
|                                                                 | 80-140            | 0.05-0.25  | 0.05-0.25 | 0.05-0.3   | 0.1-0.3    |
| 鋁合金                                                             | 80-160            | -          | 0.03-0.15 | 0.03-0.15  | -          |
|                                                                 | 100-200           | 0.05-0.2   | 0.05-0.2  | 0.05-0.2   | 0.1-0.25   |
| 耐熱合金<br>Inconel 718, etc.                                       | 20-50             | -          | 0.03-0.06 | 0.03-0.08  | -          |
|                                                                 | 20-50             | 0.04-0.08  | 0.04-0.08 | 0.04-0.1   | 0.06-0.13  |
| 鈦合金<br>Ti-6AL-4V, etc.                                          | 30-160            | -          | 0.03-0.1  | 0.03-0.12  | -          |
|                                                                 | 30-60             | 0.05-0.13  | 0.05-0.13 | 0.05-0.15  | 0.1-0.18   |
| 淬火鋼<br>≥40HRC                                                   | 40-100            | -          | 0.03-0.08 | 0.03-0.08  | -          |
|                                                                 | 50-100            | 0.04-0.08  | 0.04-0.08 | 0.04-0.1   | 0.06-0.13  |

| 進給量 f (mm/rec) | 0.03-0.05 | 0.03-0.05 | 0.1-0.5 |
|----------------|-----------|-----------|---------|
|----------------|-----------|-----------|---------|

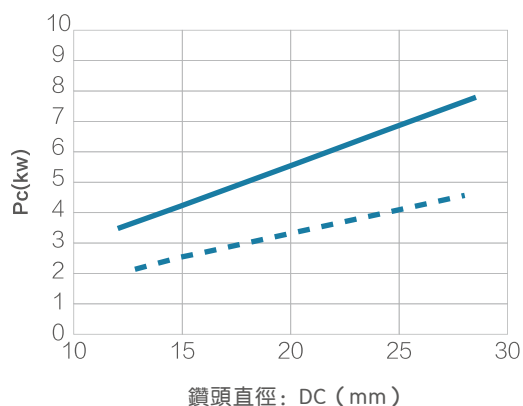


- 當加工交叉孔或者斜出孔時，請確保導條與工件內壁貼合
- 在鏜孔加工前要先鑽一個引導孔。

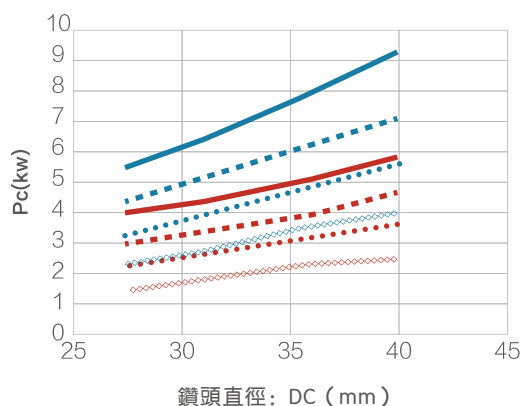
# CUTTING CONDITION 加工参数

## ◎ 所需的主轴功率和内冷压力

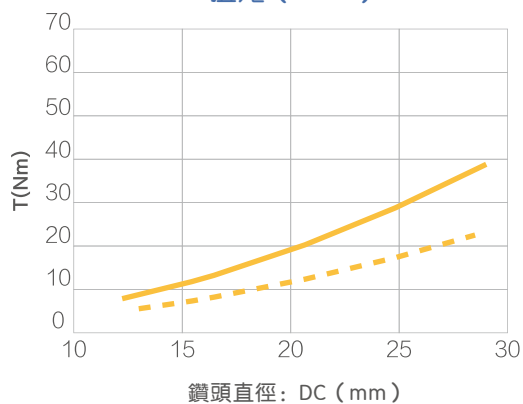
净功率 (S45C)



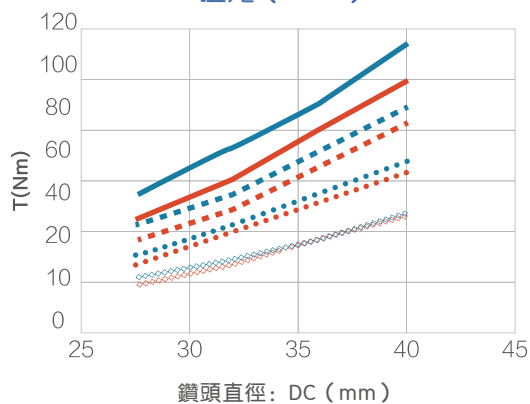
净功率 (S45C)



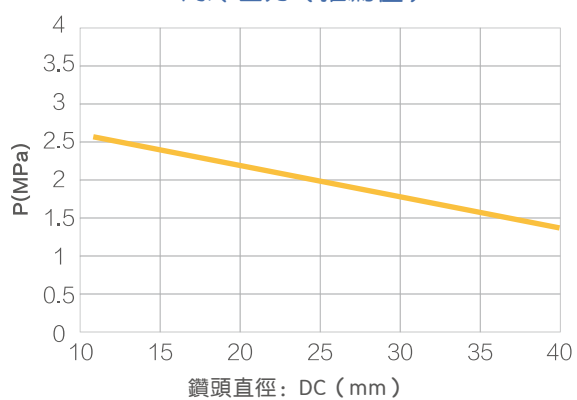
扭矩 (S45C)



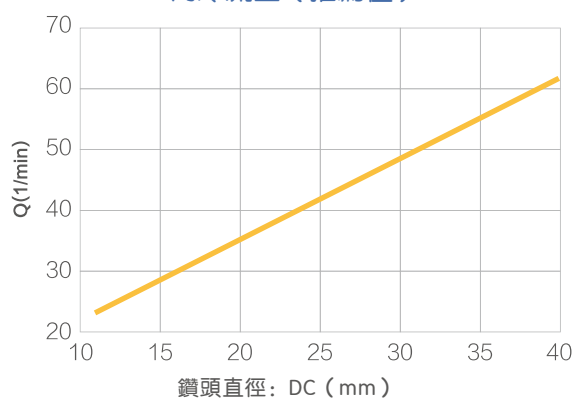
扭矩 (S45C)



内冷压力 (推薦值)



内冷流量 (推薦值)



- |                                          |                                         |
|------------------------------------------|-----------------------------------------|
| — Vc = 120 m/min<br>fn = 0.1 mm/rev      | - - - Vc = 80 m/min<br>fn = 0.05 mm/rev |
| - - - Vc = 120 m/min<br>fn = 0.05 mm/rev | — Vc = 40 m/min<br>fn = 0.1 mm/rev      |
| — Vc = 80 m/min<br>fn = 0.1 mm/rev       | - - - Vc = 40 m/min<br>fn = 0.05 mm/rev |

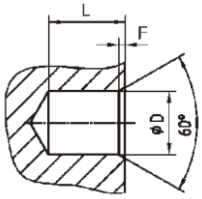
- |                                         |                                        |
|-----------------------------------------|----------------------------------------|
| — Vc = 100 m/min<br>fn = 0.25 mm/rev    | — Vc = 60 m/min<br>fn = 0.25 mm/rev    |
| - - - Vc = 100 m/min<br>fn = 0.2 mm/rev | - - - Vc = 60 m/min<br>fn = 0.2 mm/rev |
| ... Vc = 100 m/min<br>fn = 0.15 mm/rev  | ... Vc = 60 m/min<br>fn = 0.15 mm/rev  |
| ◇◇◇◇ Vc = 100 m/min<br>fn = 0.1 mm/rev  | ◇◇◇◇ Vc = 60 m/min<br>fn = 0.1 mm/rev  |



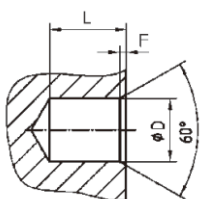
# GUN DRILL APPLY ON CNC MACHINERY

## 枪钻在加工中心的使用

### ◎ 焊接式枪钻引导孔的尺寸

| 直径范围                                                                              | 钻头直径                    | 引导孔直径                  | 引导孔孔深与刀具长度对应表 |                   |                   |                    |                     |                     |                     |                     |
|-----------------------------------------------------------------------------------|-------------------------|------------------------|---------------|-------------------|-------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
|                                                                                   |                         |                        | LxD<br>钻深     | 引导孔孔深             |                   |                    |                     |                     |                     |                     |
|                                                                                   |                         |                        |               | Φ 1.805<br>-4.000 | Φ 4.001<br>-8.500 | Φ 8.501<br>-12.000 | Φ 12.001<br>-20.999 | Φ 21.000<br>-30.999 | Φ 31.000<br>-40.999 | Φ 41.000<br>-55.000 |
|  | 1.85mm<br>-<br>4.00mm   | +0.005<br>to<br>+0.010 | ap.10xD       | 2.0xD             | 1.0xD             | 1.0xD              | 1.0xD               | 1xD                 | 1xD                 | 1xD                 |
|                                                                                   | 4.01mm<br>-<br>12.00mm  | +0.010<br>to<br>+0.020 | ap.20xD       | 3.0xD             | 1.5xD             | 1.5xD              | 1.5xD               |                     |                     |                     |
|                                                                                   | 12.01mm<br>-<br>50.00mm | +0.015<br>to<br>+0.040 | ap.25xD       | 4.0xD             | 2.0xD             | 2.0xD              | 1.5xD               |                     |                     |                     |
|                                                                                   |                         |                        | ap.30xD       | 6.0xD             | 3.0xD             | 3.0xD              | 1.5xD               |                     |                     |                     |
|                                                                                   |                         |                        | ap.35xD       | 30mm              | 35mm              | 3.0xD              | 1.5xD               |                     |                     |                     |
|                                                                                   |                         |                        | ap.40xD       | 30mm              | 35mm              | 3.0xD              | 1.5xD               |                     |                     |                     |

### ◎ 整体硬质合金枪钻引导孔的尺寸

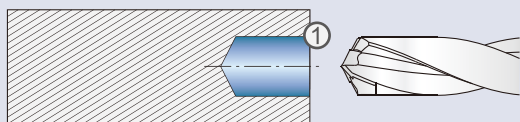
| 直徑範圍                                                                                | 鑽頭直徑                     | 引導孔直徑                  | 引導孔孔深與道具長度對應表 |               |               |               |                |  |  |
|-------------------------------------------------------------------------------------|--------------------------|------------------------|---------------|---------------|---------------|---------------|----------------|--|--|
|                                                                                     |                          |                        | LxD<br>鑽深     | 引導孔孔深         |               |               |                |  |  |
|                                                                                     |                          |                        |               | Φ 0.500-1.599 | Φ 1.600-3.999 | Φ 4.000-6.999 | Φ 7.000-12.000 |  |  |
|  | 0.500mm<br>-<br>4.000mm  | +0.005<br>to<br>+0.010 | ap.20xD       | 2.0xD         | 2.0xD         | 2.0xD         | 2.5xD          |  |  |
|                                                                                     | 4.001mm<br>-<br>12.000mm | +0.010<br>to<br>+0.020 | ap.30xD       |               | 3.0xD         | 3.0xD         | 3.5xD          |  |  |
|                                                                                     |                          |                        | ap.40xD       |               | 4.0xD         | 4.0xD         | 40mm           |  |  |
|                                                                                     |                          |                        | ap.50xD       | 6.0xD         | 6.0xD         | 35mm          |                |  |  |
|                                                                                     |                          |                        | ap.60xD       |               | 30mm          |               |                |  |  |
|                                                                                     |                          |                        | > 40xD        |               |               |               |                |  |  |

# GUN DRILL APPLY ON CNC MACHINERY

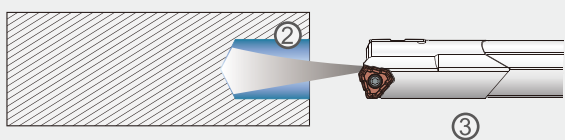
## 枪钻在加工中心的使用

### ◎ 機夾式槍鑽在加工中心和車床上的鑽削工藝

● 爲了保證發揮刀具的最大性能請按照下面的指示操作



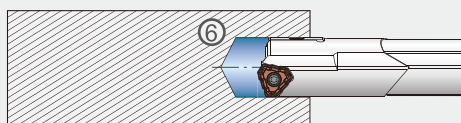
- ① 加工引導孔  
孔徑公差： $+0.01-+0.1\text{mm}$   
孔深： $H=15\text{mm}$



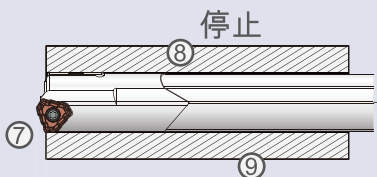
- ② 打開內冷
- ③ 刀片慢慢進入引導孔  
轉速： $n=50-100\text{min}^{-1}$   
進給速度： $V_f=100-300\text{mm/min}$   
注意：不要以高速旋轉的方式進入引導孔



- ④ 在進入孔內10mm處停止
- ⑤ 開始用正常速度旋轉



- ⑥ 開始軸向進給  
入口處（ $H=10-20\text{mm}$ ）  
→進給速度： $f=\text{編程進給速度的}80\%$   
孔深：  
孔深； $H \geq 20\text{mm}$  → 進給速度： $f=100\%$



- ⑦ 鑽通孔  
連續加工直到鑽尖超出工件5mm
- ⑧ 主軸停轉并關閉內冷
- ⑨ 退回鑽頭