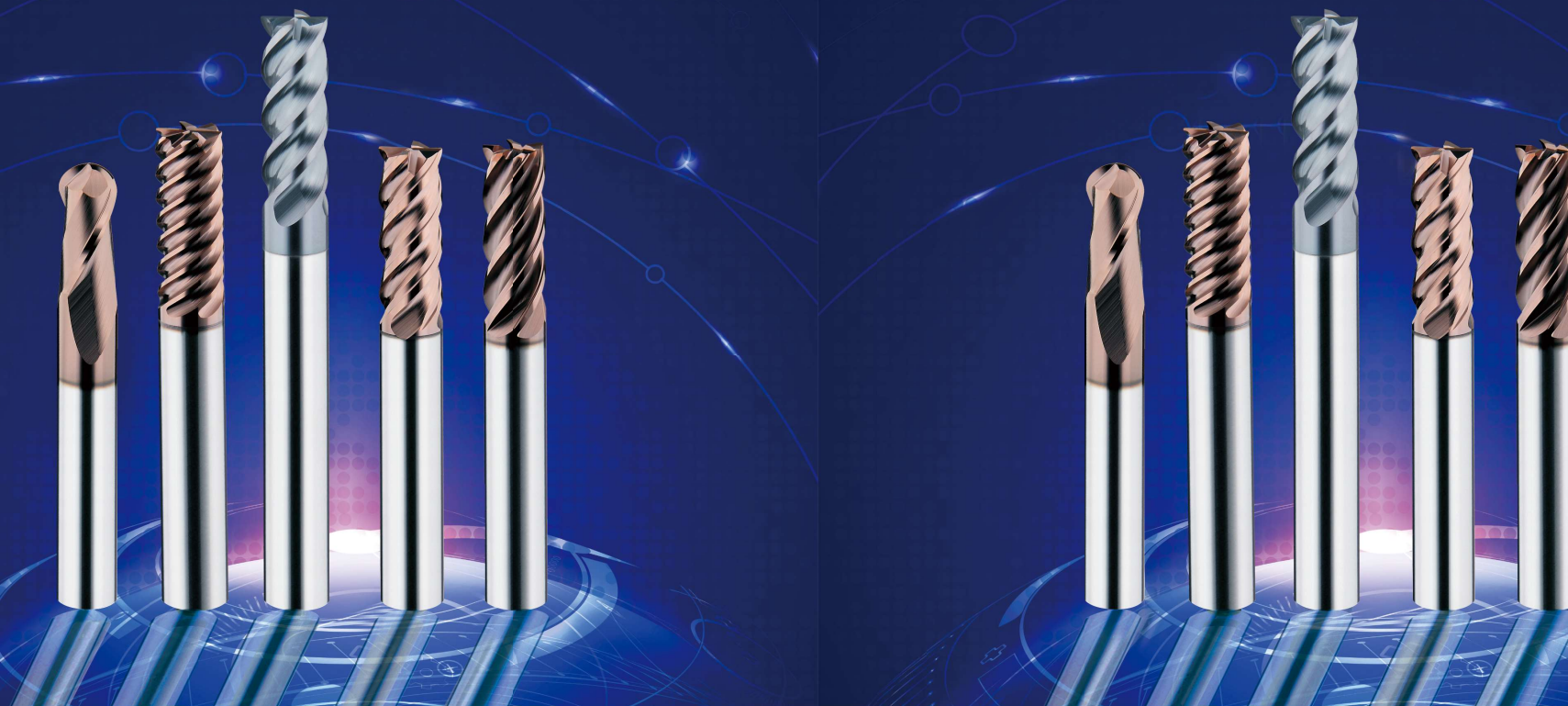


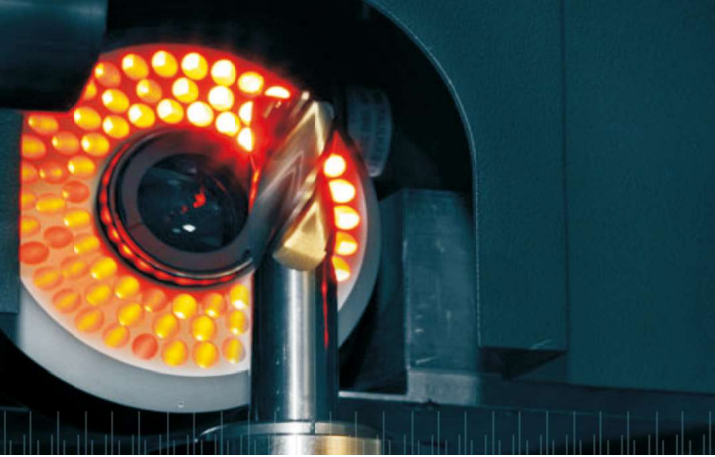
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刀具原料

| | |
|------------------------------------|------------------------------|
| MG 超微粒 Micro Grain | AMB 極超微粒 Mikrokorn |
| BMO 特級微粒 Super Mikrokorn | |

螺旋角

| | |
|-----------------------------------|-----------------------------|
| 30° 螺旋角 30° Helix | 35° 螺旋角 35° Helix |
| 39/41° 螺旋角 39/41° Helix | 55° 螺旋角 55° Helix |

底刃形狀

| | |
|-----------------------------|-----------------------|
| 平頭 Square End | 球頭 Ballnose |
| 圓角頭 Corner Radius | |

硬 度

| | |
|------------------------------------|------------------------------------|
| HRC 45s 硬度 < 35 < 35 HRC | HRC 48s 硬度 < 48 < 48 HRC |
| HRC 45B 硬度 < 58 < 58 HRC | HRC 46B 硬度 < 68 < 68 HRC |

塗 層

| | | |
|----------------------------|----------------------------|----------------------------|
| HX 塗層 HX Coating | AX 塗層 AX Coating | BX 塗層 BX Coating |
| TX 塗層 TX Coating | NB 塗層 NB Coating | |

刃 數

| | | |
|---|---|----------------------------------|
| 2 刃銼刀 2 Flute End Mill | 3 刃銼刀 3 Flute End Mill | 4 刃銼刀 4 Flute End Mill |
| 2 刃球頭銼刀 2 Flute Ballnose End Mill | 4 刃球頭銼刀 4 Flute Ballnose End Mill | 6 刃銼刀 6 Flute End Mill |

長度系列

| | |
|---------------------------|-------------------------------|
| 短刃型 Stub Length | 標準型 Standard Length |
| 加長型 Long Length | 長頸深溝 Reduced Neck |

工件材料

| | |
|---|------------------------------------|
| P 鋼 Steel | M 不銹鋼 Stainless Steel |
| N 非鐵材料 Non-ferrous Materials | K 鑄鐵 Cast Iron |
| S 高溫合金、鈦合金 Heat-resistant Super Alloys, Titanium Alloys | H 硬材料 Hardened Materials |



硬度換算表 Hardness Conversion Table 硬度変換表

| HRC | HB | HV10 | N/mm² | HRC | HB | HV10 | N/mm² | HRC | HB | HV10 | N/mm² | HRC | HB | HV10 | N/mm² |
|-----|-----|------|-------|-----|-----|------|-------|-----|-----|------|-------|-----|-----|------|-------|
| | 71 | 75 | 240 | | 171 | 180 | 575 | 28 | 273 | 287 | 920 | 49 | 472 | 497 | 1620 |
| | 76 | 80 | 255 | | 176 | 185 | 595 | 29 | 278 | 293 | 940 | 50 | 488 | 514 | 1680 |
| | 81 | 85 | 270 | | 181 | 190 | 610 | 30 | 287 | 302 | 970 | 51 | 501 | 527 | 1730 |
| | 86 | 90 | 285 | | 185 | 195 | 625 | 31 | 295 | 310 | 995 | 52 | 517 | 544 | 1790 |
| | 90 | 95 | 305 | | 190 | 200 | 640 | 32 | 301 | 317 | 1020 | 53 | 532 | 560 | 1845 |
| | 95 | 100 | 320 | | 195 | 205 | 660 | 33 | 311 | 327 | 1050 | 54 | 549 | 578 | 1910 |
| | 100 | 105 | 335 | | 199 | 210 | 675 | 34 | 319 | 336 | 1080 | 55 | 567 | 596 | 1980 |
| | 105 | 110 | 350 | | 204 | 215 | 690 | 35 | 328 | 345 | 1110 | 56 | 584 | 615 | 2050 |
| | 109 | 115 | 370 | | 209 | 220 | 705 | 36 | 337 | 355 | 1140 | 57 | 607 | 639 | 2140 |
| | 114 | 120 | 385 | | 214 | 225 | 720 | 37 | 346 | 364 | 1170 | 58 | 622 | 655 | |
| | 119 | 125 | 400 | | 219 | 230 | 740 | 38 | 354 | 373 | 1200 | 59 | | 675 | |
| | 124 | 130 | 415 | | 223 | 235 | 755 | 39 | 363 | 382 | 1230 | 60 | | 698 | |
| | 128 | 135 | 430 | | 228 | 240 | 770 | 40 | 372 | 392 | 1260 | 61 | | 720 | |
| | 133 | 140 | 450 | | 233 | 245 | 785 | 41 | 383 | 403 | 1300 | 62 | | 745 | |
| | 138 | 145 | 465 | 22 | 238 | 250 | 800 | 42 | 393 | 413 | 1330 | 63 | | 773 | |
| | 143 | 150 | 480 | 23 | 242 | 255 | 820 | 43 | 402 | 423 | 1360 | 64 | | 800 | |
| | 147 | 155 | 495 | 24 | 247 | 260 | 835 | 44 | 413 | 434 | 1400 | 65 | | 829 | |
| | 152 | 160 | 510 | 25 | 255 | 268 | 860 | 45 | 424 | 446 | 1440 | 66 | | 864 | |
| | 157 | 165 | 530 | 26 | 258 | 272 | 870 | 46 | 435 | 458 | 1480 | 67 | | 900 | |
| | 162 | 170 | 545 | 27 | 266 | 280 | 900 | 47 | 449 | 473 | 1530 | 68 | | 940 | |
| | 166 | 175 | 560 | | | | | 48 | 460 | 484 | 1570 | | | | |

PRM換算表 PRM Conversion PRM變換表

| 刃徑 Dia | VC 切削速度 m/min cutting speed | | | | | | | | | | | | | | | | |
|-----------|--------------------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 140 | 150 | 180 | 200 | 250 | 300 | |
| 0.2 | 31850 | 47770 | 63690 | 79620 | 95540 | 111460 | 127390 | 143310 | 159240 | 191080 | 222930 | 238850 | 286620 | 318470 | 398090 | 477710 | |
| 0.3 | 21230 | 31850 | 42460 | 53080 | 63690 | 74310 | 84930 | 95540 | 106160 | 127390 | 148620 | 159240 | 191080 | 212310 | 265590 | 318470 | |
| 0.4 | 15920 | 23890 | 31850 | 39810 | 47770 | 55730 | 63690 | 71660 | 79620 | 95540 | 111460 | 119430 | 143310 | 159240 | 199040 | 238850 | |
| 0.5 | 12740 | 19110 | 25480 | 31850 | 38220 | 44590 | 50960 | 57320 | 63690 | 76430 | 89170 | 95540 | 114650 | 127390 | 159240 | 191080 | |
| 0.6 | 10620 | 15920 | 21230 | 26540 | 31850 | 37150 | 42460 | 47770 | 53080 | 63690 | 74310 | 79620 | 95540 | 106160 | 132700 | 159240 | |
| 0.7 | 9100 | 13650 | 18200 | 22750 | 27300 | 31850 | 36400 | 40950 | 45500 | 54600 | 63690 | 68240 | 81890 | 90990 | 113740 | 136490 | |
| 0.8 | 7960 | 11940 | 15920 | 19900 | 23890 | 27870 | 31850 | 35830 | 39810 | 47770 | 55730 | 59710 | 71660 | 79620 | 99520 | 119430 | |
| 0.9 | 7080 | 10620 | 14150 | 17690 | 21230 | 24770 | 28310 | 31850 | 35390 | 42460 | 49540 | 53080 | 63690 | 70770 | 88460 | 106160 | |
| 1.0 | 6370 | 9550 | 12740 | 15920 | 19110 | 22290 | 25480 | 28660 | 31850 | 38220 | 44590 | 47770 | 57320 | 63690 | 79620 | 95540 | |
| 1.2 | 5310 | 7960 | 10620 | 13270 | 15920 | 18580 | 21230 | 23890 | 26540 | 31850 | 37150 | 39810 | 47770 | 53080 | 66350 | 79620 | |
| 1.5 | 4250 | 6370 | 8490 | 10620 | 12740 | 14860 | 16990 | 19110 | 21230 | 25480 | 29720 | 31850 | 38220 | 42460 | 53080 | 63690 | |
| 1.8 | 3540 | 5310 | 7080 | 8850 | 10620 | 12380 | 14150 | 15920 | 17690 | 21230 | 24770 | 26540 | 31850 | 35390 | 44230 | 53080 | |
| 2.0 | 3180 | 4780 | 6370 | 7960 | 9550 | 11150 | 12740 | 14330 | 15920 | 19110 | 22290 | 23890 | 28650 | 31850 | 39810 | 47770 | |
| 2.2 | 2900 | 4340 | 5790 | 7240 | 8690 | 10130 | 11580 | 13030 | 14480 | 17370 | 20270 | 21710 | 26050 | 28950 | 36190 | 43430 | |
| 2.5 | 2550 | 3820 | 5100 | 6370 | 7640 | 8920 | 10190 | 11460 | 12740 | 15290 | 17830 | 19110 | 22930 | 25480 | 31850 | 38220 | |
| 2.8 | 2270 | 3410 | 4550 | 5690 | 6820 | 7960 | 9100 | 10240 | 11370 | 13650 | 15920 | 17060 | 20470 | 22750 | 28430 | 34120 | |
| 3.0 | 2120 | 3180 | 4250 | 5310 | 6370 | 7430 | 8490 | 9550 | 10620 | 12740 | 14860 | 15920 | 19110 | 21230 | 26540 | 31850 | |
| 3.5 | 1820 | 2730 | 3640 | 4550 | 5460 | 6370 | 7280 | 8190 | 9100 | 10920 | 12740 | 13650 | 16380 | 18200 | 22750 | 27300 | |
| 4.0 | 1590 | 2390 | 3180 | 3980 | 4780 | 5570 | 6370 | 7170 | 7960 | 9550 | 11150 | 11940 | 14330 | 15920 | 19900 | 23890 | |
| 4.5 | 1420 | 2120 | 2830 | 3540 | 4250 | 4950 | 5660 | 6370 | 7080 | 8490 | 9910 | 10620 | 12740 | 14150 | 17690 | 21230 | |
| 5.0 | 1270 | 1910 | 2550 | 3180 | 3820 | 4460 | 5100 | 5730 | 6370 | 7640 | 8920 | 9550 | 11450 | 12740 | 15920 | 19110 | |
| 5.5 | 1160 | 1740 | 2320 | 2900 | 3470 | 4050 | 4630 | 5210 | 5790 | 6950 | 8110 | 8690 | 10420 | 11580 | 14480 | 17370 | |
| 6.0 | 1060 | 1590 | 2120 | 2650 | 3180 | 3720 | 4250 | 4780 | 5310 | 6370 | 7430 | 7960 | 9550 | 10620 | 13270 | 15920 | |
| 6.5 | 980 | 1470 | 1960 | 2450 | 2940 | 3430 | 3920 | 4410 | 4900 | 5880 | 6860 | 7350 | 8820 | 9800 | 12250 | 14700 | |
| 7.0 | 910 | 1360 | 1820 | 2270 | 2730 | 3180 | 3640 | 4090 | 4550 | 5460 | 6370 | 6820 | 81890 | 9100 | 11170 | 13650 | |
| 7.5 | 850 | 1270 | 1700 | 2120 | 2550 | 2970 | 3400 | 3820 | 4250 | 5100 | 5940 | 6370 | 7640 | 8490 | 10620 | 12740 | |
| 8.0 | 800 | 1190 | 1590 | 1990 | 2390 | 2790 | 3180 | 3580 | 3980 | 4780 | 5570 | 5970 | 7170 | 7960 | 9950 | 11940 | |
| 8.5 | 750 | 1120 | 1500 | 1870 | 2250 | 2620 | 3000 | 3370 | 3750 | 4500 | 5250 | 5620 | 6740 | 7490 | 9370 | 11240 | |
| 9.0 | 710 | 1060 | 1420 | 1770 | 2120 | 2480 | 2830 | 3180 | 3540 | 4250 | 4950 | 5310 | 6370 | 7080 | 8850 | 10620 | |
| 9.5 | 670 | 1010 | 1340 | 1680 | 2010 | 2350 | 2680 | 3020 | 3350 | 4020 | 4690 | 5030 | 6030 | 6700 | 8380 | 10060 | |
| 10 | 640 | 960 | 1270 | 1590 | 1910 | 2230 | 2550 | 2870 | 3180 | 3820 | 4460 | 4780 | 5730 | 6370 | 7960 | 9550 | |
| 11 | 580 | 870 | 1160 | 1450 | 1740 | 2030 | 2320 | 2610 | 2900 | 3470 | 4050 | 4340 | 5210 | 5790 | 7240 | 8690 | |
| 12 | 530 | 800 | 1060 | 1330 | 1590 | 1860 | 2120 | 2390 | 2650 | 3180 | 3720 | 3980 | 4780 | 5310 | 6630 | 7960 | |
| 13 | 490 | 730 | 980 | 1220 | 1470 | 1710 | 1960 | 2200 | 2450 | 2940 | 3430 | 3670 | 4410 | 4900 | 6120 | 7350 | |
| 14 | 450 | 680 | 910 | 1140 | 1360 | 1590 | 1820 | 2050 | 2270 | 2730 | 3180 | 3410 | 4090 | 4550 | 5690 | 6820 | |
| 15 | 420 | 640 | 850 | 1060 | 1270 | 1490 | 1700 | 1910 | 2120 | 2550 | 2970 | 3180 | 3820 | 4250 | 5310 | 6370 | |
| 16 | 400 | 600 | 800 | 1000 | 1190 | 1390 | 1590 | 1790 | 1990 | 2390 | 2790 | 2990 | 3580 | 3980 | 4980 | 5970 | |
| 17 | 370 | 560 | 750 | 940 | 1120 | 1310 | 1500 | 1690 | 1870 | 2250 | 2620 | 2810 | 3370 | 3750 | 4680 | 5620 | |
| 18 | 350 | 530 | 710 | 880 | 1060 | 1240 | 1420 | 1590 | 1770 | 2120 | 2480 | 2650 | 3180 | 3540 | 4420 | 5310 | |
| 19 | 340 | 500 | 670 | 840 | 1010 | 1170 | 1340 | 1510 | 1680 | 2010 | 2350 | 2510 | 3020 | 3350 | 4190 | 5030 | |
| 20 | 320 | 480 | 640 | 800 | 960 | 1110 | 1270 | 1430 | 1590 | 1910 | 2230 | 2390 | 2870 | 3180 | 3980 | 4780 | |
| 21 | 300 | 450 | 610 | 760 | 910 | 1060 | 1210 | 1360 | 1520 | 1820 | 2120 | 2270 | 2730 | 3030 | 3790 | 4550 | |
| 22 | 290 | 430 | 580 | 720 | 870 | 1010 | 1160 | 1300 | 1450 | 1740 | 2030 | 2170 | 2610 | 2900 | 3620 | 4340 | |
| 23 | 280 | 420 | 550 | 690 | 830 | 970 | 1110 | 1250 | 1380 | 1660 | 1940 | 2080 | 2490 | 2770 | 3460 | 4150 | |
| 24 | 270 | 400 | 530 | 660 | 800 | 930 | 1060 | 1190 | 1330 | 1590 | 1860 | 1990 | 2390 | 2650 | 3320 | 3980 | |
| 25 | 250 | 380 | 510 | 640 | 760 | 890 | 1020 | 1150 | 1270 | 1530 | 1780 | 1910 | 2290 | 2550 | 3180 | 3820 | |
| 26 | 240 | 370 | 490 | 610 | 730 | 860 | 980 | 1100 | 1220 | 1470 | 1710 | 1840 | 2200 | 2450 | 3060 | 3670 | |
| 27 | 240 | 350 | 470 | 590 | 710 | 830 | 940 | 1060 | 1180 | 1420 | 1650 | 1770 | 2120 | 2360 | 2950 | 3540 | |
| 28 | 230 | 340 | 450 | 570 | 680 | 800 | 910 | 1020 | 1140 | 1360 | 1590 | 1710 | 2050 | 2270 | 2840 | 3410 | |
| 29 | 220 | 330 | 440 | 550 | 660 | 770 | 880 | 990 | 1100 | 1320 | 1540 | 1650 | 1980 | 2200 | 2750 | 3290 | |
| 30 | 210 | 320 | 420 | 530 | 640 | 740 | 850 | 960 | 1060 | 1270 | 1490 | 1590 | 1910 | 2120 | 2650 | 3180 | |
| 31 | 210 | 310 | 410 | 510 | 620 | 720 | 820 | 920 | 1030 | 1230 | 1440 | 1540 | 1850 | 2050 | 2570 | 3080 | |
| 32 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1190 | 1390 | 1490 | 1790 | 1990 | 2490 | 2990 | |

切削公式表 Table of Cutting Formula 切削条件

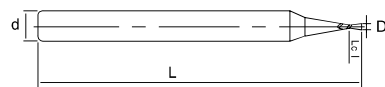
| | | | | |
|--|---------|---|---|----------|
| Metric MM | MM | ● | Metric MM | MM |
| $V_c = \frac{\pi \times D_c \times N}{1000}$ | | ● | $f_z = \frac{\text{每刃進給}}{\text{一刃送り量 (mm/刃)}}$ | mm/tooth |
| $N = \frac{V_c \times 1000}{\pi \times D_c}$ | | ● | $f_n = \frac{\text{每轉進給}}{\text{送り (mm/rev)}}$ | mm/rev |
| $V_f = N \times Z \times f_z$ | | ● | $Z = \frac{\text{刃數}}{\text{刃數}}$ | Z |
| $T = \frac{L}{V_f}$ | | ● | $T = \frac{\text{切削時間}}{\text{切削時間}}$ | mm |
| $V_c = \frac{\text{切削速度}}{\text{切削速度}}$ | m/min | ● | $L = \frac{\text{切削長度}}{\text{切削長さ}}$ | mm |
| $D_c = \frac{\text{切削直徑}}{\text{外徑}}$ | mm | ● | $A_p = \frac{\text{軸向切削深度}}{\text{軸方向切削深さ}}$ | mm |
| $N = \frac{\text{回轉速度}}{\text{回轉速度}}$ | rev/min | ● | $A_e = \frac{\text{切削寬度}}{\text{切削幅度}}$ | mm |
| $V_f = \frac{\text{每分鐘進給}}{\text{送り速度}}$ | mm/min | ● | | |
| Cutting Speed | | ● | | |
| Cutter Diameter | | ● | | |
| RPM | | ● | | |
| Feed Speed | | ● | | |

刀具系列目錄 END MILL INDEX

| 刀具系列號 Series No. | 刀具類型 Tool Type | 刀具外型 End Mill | 刀具名稱 Description | 尺寸範圍 Diameter Range | 頁次 Page | 炭素鋼 CARBON STEELS 工具鋼 ALLOY STEELS | 合金鋼 TOOL STEELS 預硬鋼 PREHARDENED STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|---------------------|-------------------|---|---|------------------------|------------|---|---|---|--------|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| | | | | | | ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 平頭 Square End | |  | 2 刃小徑平刀 2 Flutes End Mills | D0.4~0.9 | 7 | ⊙ | ⊙ | △ | | | | | ⊙ | ○ | | | | |
| | |  | 4 刃不等導程平刀(C角) 4 Flutes Variable Lead End Mills | D1~16 | 8 | ⊙ | ⊙ | △ | | | | | ⊙ | ○ | | | △ | △ |
| | |  | 4 刃強重型平刀 4 Flutes Heavy Duty Cutting End Mills | D1~20 | 9 | ⊙ | ⊙ | △ | | | | | ⊙ | ○ | | | △ | △ |
| | |  | 4 刃強重型平刀 長柄型 4 Flutes Heavy Duty Cutting End Mills, long handle | D1~20 | 10 | ⊙ | ⊙ | △ | | | | | ⊙ | ○ | | | △ | △ |
| | |  | 4 刃強重型平刀 4 Flutes Heavy Duty Cutting End Mills | D3~16 | 11 | ⊙ | ⊙ | ○ | | | | | ⊙ | | | | ○ | ○ |
| | |  | 4 刃強重型R角刀 4 Flutes Heavy Duty Cutting Corner Radius | D3~12 | 12 | ⊙ | ⊙ | ⊙ | ○ | | | | ⊙ | | ○ | | ○ | ○ |
| 球頭 Ballnose | |  | 4 刃球刀 4 Flutes Ball nose End Mills | D1~12 | 13 | ⊙ | ⊙ | ⊙ | ○ | | | ⊙ | △ | | | ○ | ○ | |
| | |  | 4 刃球刀 加長型 4 Flutes Ball nose End Mills, Long Shape | D2~12 | 14 | ⊙ | ⊙ | ⊙ | ○ | | | ⊙ | △ | | | ○ | ○ | |
| | |  | 4 刃R角刀 4 Flutes Corner Radius End Mills | D1~20 | 15~16 | ⊙ | ⊙ | ○ | △ | | | ⊙ | ○ | | | △ | △ | |
| | |  | 4 刃R角刀 加長型 4 Flutes Corner Radius Long Length | D1~16 | 17 | ⊙ | ⊙ | ○ | △ | | | ⊙ | ○ | | | △ | △ | |
| | |  | 2 刃球刀 2 Flutes Ball nose End Mills | D0.4~20 | 18 | ⊙ | ⊙ | ○ | △ | | | ⊙ | ○ | | | △ | △ | |
| | |  | 2 刃球刀 加長型 Flutes Ball nose End Mills, Long Length | D1~20 | 19 | ⊙ | ⊙ | ○ | △ | | | ⊙ | ○ | | | △ | △ | |
| 平頭 SquareEnd | |  | 4 刃不銹鋼專用平刀(尖角) 4 Flutes End Mills For Stainless | D1~16 | 20 | ⊙ | ○ | ○ | | | | ⊙ | | | | ○ | ○ | |
| | |  | 4 刃不銹鋼專用平刀(C角) 4 Flutes End Mills For Stainless | D1~16 | 21 | ⊙ | ○ | ○ | | | | ⊙ | | | | ○ | ○ | |
| | |  | 4 刃強重型R角刀 4 Flutes Heavy Duty Cutting Corner Radius | D3~16 | 22 | ⊙ | ⊙ | ⊙ | ○ | | | ⊙ | | ○ | | ○ | ○ | |
| | |  | 4 刃平刀 4 Flutes End Mills | D1~16 | 23 | ⊙ | ○ | ○ | | | | ⊙ | | | | ○ | ○ | |

BSS-P2 2 刃小徑平刀

2 Flutes End Mills



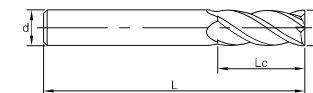
| D | 公差 Tol |
|--------|----------|
| D ≤ 12 | 0~-0.015 |
| D > 12 | 0~-0.02 |

單位unit (mm)

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BSS-P2-004 | 0.4 | 0.8 | 50 | 4 |
| BSS-P2-005 | 0.5 | 1 | 50 | 4 |
| BSS-P2-006 | 0.6 | 1.2 | 50 | 4 |
| BSS-P2-007 | 0.7 | 1.4 | 50 | 4 |
| BSS-P2-008 | 0.8 | 1.6 | 50 | 4 |
| BSS-P2-009 | 0.9 | 1.8 | 50 | 4 |

BSC-P 4 刃不等導程平刀 (C角)

4 Flutes Variable Lead End Mills



| D | 公差 Tol |
|--------|----------|
| D ≤ 12 | 0~-0.015 |
| D > 12 | 0~-0.02 |

單位unit (mm)

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BSC-P-010 | 1 | 3 | 50 | 4 |
| BSC-P-015 | 1.5 | 5 | 50 | 4 |
| BSC-P-020 | 2 | 6 | 50 | 4 |
| BSC-P-025 | 2.5 | 8 | 50 | 4 |
| BSC-P-030 | 3 | 9 | 50 | 4 |
| BSC-P-030d6 | 3 | 9 | 50 | 6 |
| BSC-P-035 | 3.5 | 9 | 50 | 4 |
| BSC-P-040 | 4 | 11 | 50 | 4 |
| BSC-P-040d6 | 4 | 11 | 50 | 6 |
| BSC-P-045 | 4.5 | 11 | 50 | 6 |
| BSC-P-050 | 5 | 13 | 50 | 6 |
| BSC-P-055 | 5.5 | 15 | 50 | 6 |
| BSC-P-060 | 6 | 15 | 50 | 6 |
| BSC-P-06018 | 6 | 18 | 50 | 6 |
| BSC-P-065 | 6.5 | 20 | 60 | 8 |
| BSC-P-080 | 8 | 20 | 60 | 8 |
| BSC-P-08025 | 8 | 25 | 60 | 8 |
| BSC-P-100 | 10 | 25 | 75 | 10 |
| BSC-P-10030 | 10 | 30 | 75 | 10 |
| BSC-P-120 | 12 | 30 | 75 | 12 |
| BSC-P-12036 | 12 | 36 | 75 | 12 |
| BSC-P-160 | 16 | 45 | 100 | 16 |

Work Material

| 炭素鋼 CARBON STEELS | 合金鋼 TOOL STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|-------------------------|-----------------------|---|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | |
| ○ | ○ | △ | | | | ○ | ○ | | | | |

○ 最適加工 Most Suitable ○ 適合加工 Suitable △ 可加工 Machinable

Work Material

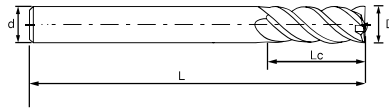
| 炭素鋼 CARBON STEELS | 合金鋼 TOOL STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|-------------------------|-----------------------|---|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | |
| ○ | ○ | △ | | | | ○ | ○ | | | △ | △ |

○ 最適加工 Most Suitable ○ 適合加工 Suitable △ 可加工 Machinable

BS-P

4 刃強重型平刀

4 Flutes Heavy Duty Cutting End Mills



| | |
|--------|----------|
| D | 公差 Tol |
| D ≤ 12 | 0--0.015 |
| D > 12 | 0--0.02 |

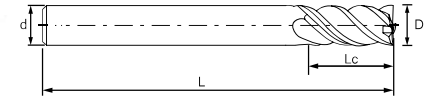
單位unit (mm)

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BS-P-010 | 1 | 3 | 50 | 4 |
| BS-P-015 | 1.5 | 5 | 50 | 4 |
| BS-P-020 | 2 | 6 | 50 | 4 |
| BS-P-020d6 | 2 | 6 | 50 | 6 |
| BS-P-025 | 2.5 | 8 | 50 | 4 |
| BS-P-030d3 | 3 | 9 | 50 | 3 |
| BS-P-030 | 3 | 9 | 50 | 4 |
| BS-P-030d6 | 3 | 9 | 50 | 6 |
| BS-P-035 | 3.5 | 10 | 50 | 4 |
| BS-P-035d6 | 3.5 | 10 | 50 | 6 |
| BS-P-040 | 4 | 12 | 50 | 4 |
| BS-P-040d6 | 4 | 12 | 50 | 6 |
| BS-P-045 | 4.5 | 13 | 50 | 6 |
| BS-P-050 | 5 | 13 | 50 | 6 |
| BS-P-050d5 | 5 | 13 | 50 | 5 |
| BS-P-05015 | 5 | 15 | 50 | 6 |
| BS-P-055 | 5.5 | 15 | 50 | 6 |
| BS-P-060 | 6 | 15 | 50 | 6 |
| BS-P-06018 | 6 | 18 | 50 | 6 |
| BS-P-070 | 7 | 20 | 60 | 8 |
| BS-P-080 | 8 | 20 | 60 | 8 |
| BS-P-08025 | 8 | 25 | 60 | 8 |
| BS-P-090 | 9 | 25 | 75 | 10 |
| BS-P-100 | 10 | 25 | 75 | 10 |
| BS-P-10030 | 10 | 30 | 75 | 10 |
| BS-P-110 | 11 | 30 | 75 | 12 |
| BS-P-120 | 12 | 30 | 75 | 12 |
| BS-P-12036 | 12 | 36 | 75 | 12 |
| BS-P-130 | 13 | 40 | 100 | 14 |
| BS-P-140 | 14 | 40 | 100 | 14 |
| BS-P-150 | 15 | 45 | 100 | 16 |
| BS-P-160 | 16 | 45 | 100 | 16 |
| BS-P-180 | 18 | 50 | 100 | 18 |
| BS-P-200 | 20 | 50 | 100 | 20 |

BS-P

4 刃強重型平刀 加長型

4 Flutes Heavy Duty Cutting End Mills, Long Shape



| | |
|--------|----------|
| D | 公差 Tol |
| D ≤ 12 | 0--0.015 |
| D > 12 | 0--0.02 |

單位unit (mm)

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BS-P-LL-01004 | 1 | 4 | 75 | 4 |
| BS-P-LL-01506 | 1.5 | 6 | 75 | 4 |
| BS-P-LL-02008 | 2 | 8 | 75 | 4 |
| BS-P-LL-02510 | 2.5 | 10 | 75 | 4 |
| BS-P-LL-030d3 | 3 | 12 | 75 | 3 |
| BS-P-100-03012d3 | 3 | 12 | 100 | 3 |
| BS-P-LL-03012 | 3 | 12 | 75 | 4 |
| BS-P-LL-03012d6 | 3 | 12 | 75 | 6 |
| BS-P-LL-04016 | 4 | 16 | 75 | 4 |
| BS-P-LL-04016d6 | 4 | 16 | 75 | 6 |
| BS-P-100-04016 | 4 | 16 | 100 | 4 |
| BS-P-LL-05020d5 | 5 | 20 | 75 | 5 |
| BS-P-100-05020d5 | 5 | 20 | 100 | 5 |
| BS-P-LL-05020 | 5 | 20 | 75 | 6 |
| BS-P-100-05020 | 5 | 20 | 100 | 6 |
| BS-P-LL-06015 | 6 | 15 | 75 | 6 |
| BS-P-LL-06025 | 6 | 25 | 75 | 6 |
| BS-P-LL-06030 | 6 | 30 | 75 | 6 |
| BS-P-100-06015 | 6 | 15 | 75 | 6 |
| BS-P-100-06025 | 6 | 25 | 75 | 6 |
| BS-P-150-06045 | 6 | 45 | 150 | 6 |
| BS-P-LL-07030 | 7 | 30 | 100 | 8 |
| BS-P-75-08020 | 8 | 20 | 75 | 8 |
| BS-P-75-08032 | 8 | 32 | 75 | 8 |
| BS-P-LL-08020 | 8 | 20 | 100 | 8 |
| BS-P-LL-08032 | 8 | 32 | 100 | 8 |

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BS-P-150-08050 | 8 | 50 | 150 | 8 |
| BS-P-LL-09040 | 9 | 40 | 100 | 10 |
| BS-P-LL-10025 | 10 | 25 | 100 | 10 |
| BS-P-LL-10040 | 10 | 40 | 100 | 10 |
| BS-P-LL-10050 | 10 | 50 | 100 | 10 |
| BS-P-150-10025 | 10 | 25 | 150 | 10 |
| BS-P-150-10055 | 10 | 55 | 150 | 10 |
| BS-P-LL-12030 | 12 | 30 | 100 | 12 |
| BS-P-LL-12050 | 12 | 50 | 100 | 12 |
| BS-P-150-12060 | 12 | 60 | 150 | 12 |
| BS-P-LL-16045 | 16 | 45 | 150 | 16 |
| BS-P-LL-16065 | 16 | 65 | 150 | 16 |
| BS-P-LL-20050 | 20 | 50 | 150 | 20 |
| BS-P-LL-20080 | 20 | 80 | 150 | 20 |

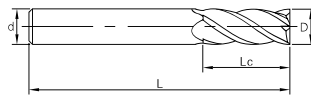
| 炭素鋼 CARBON STEELS 工具鋼 ALLOY STEELS | 合金鋼 TOOL STEELS 預硬鋼 PREHARDENED STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|---|---|---|--------|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | | |
| ○ | ○ | △ | | | | | ○ | ○ | | △ | △ | |

○ 最適合加工 Most Suitable ○ 適合加工 Suitable △ 可加工 Machinable

BS-PX

4 刃強重型平刀
4 Flutes Heavy Duty Cutting End Mills

K P M HRC 488



| D | 公差 Tol |
|--------|----------|
| D ≤ 12 | 0~-0.015 |
| D > 12 | 0~-0.02 |

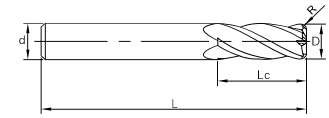
單位unit (mm)

| 型號 - 外徑 Type No. | 外徑 D | 刃長 Lc | 全長 L | 柄徑 d |
|---------------------|---------|----------|---------|---------|
| BS-PX-030 | 3 | 9 | 50 | 4 |
| BS-PX-040 | 4 | 12 | 50 | 4 |
| BS-PX-030d6 | 3 | 9 | 50 | 6 |
| BS-PX-040d6 | 4 | 12 | 50 | 6 |
| BS-PX-050 | 5 | 13 | 50 | 6 |
| BS-PX-060 | 6 | 15 | 50 | 6 |
| BS-PX-080 | 8 | 20 | 60 | 8 |
| BS-PX-100 | 10 | 25 | 75 | 10 |
| BS-PX-120 | 12 | 30 | 75 | 12 |
| BS-PX-160 | 16 | 45 | 100 | 16 |

BSR-PX

4 刃強重型R角刀
4 Flutes Heavy Duty Cutting Corner Radius

K P M HRC 488



| D | 公差 Tol |
|--------|----------|
| D ≤ 12 | 0~-0.015 |
| D > 12 | 0~-0.02 |

單位unit (mm)

| 型號 - 外徑 - R角 Type No. | 外徑 D | 刃長 Lc | R角 R | 全長 L | 柄徑 d |
|--------------------------|---------|----------|---------|---------|---------|
| BSR-PX-03002 | 3 | 3 | 0.2 | 50 | 4 |
| BSR-PX-03005 | 3 | 3 | 0.5 | 50 | 4 |
| BSR-PX-04002 | 4 | 4 | 0.2 | 50 | 4 |
| BSR-PX-04005 | 4 | 4 | 0.5 | 50 | 4 |
| BSR-PX-05002 | 5 | 5 | 0.2 | 50 | 6 |
| BSR-PX-05005 | 5 | 5 | 0.5 | 50 | 6 |
| BSR-PX-06002 | 6 | 6 | 0.2 | 50 | 6 |
| BSR-PX-06005 | 6 | 6 | 0.5 | 50 | 6 |
| BSR-PX-08002 | 8 | 8 | 0.2 | 60 | 8 |
| BSR-PX-08005 | 8 | 8 | 0.5 | 60 | 8 |
| BSR-PX-10002 | 10 | 10 | 0.2 | 75 | 10 |
| BSR-PX-10005 | 10 | 10 | 0.5 | 75 | 10 |
| BSR-PX-12002 | 12 | 12 | 0.2 | 75 | 12 |
| BSR-PX-12005 | 12 | 12 | 0.5 | 75 | 12 |

Work Material

| 炭素鋼 CARBON STEELS 工具鋼 ALLOY STEELS | 合金鋼 TOOL STEELS 預硬鋼 PREHARDENED STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|---|---|---|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | |
| ○ | ○ | ○ | | | | ○ | | | ○ | ○ | |

○ 最適合加工 Most Suitable ○ 適合加工 Suitable △ 可加工 Machinable

Work Material

| 炭素鋼 CARBON STEELS 工具鋼 ALLOY STEELS | 合金鋼 TOOL STEELS 預硬鋼 PREHARDENED STEELS | 預硬鋼 PREHARDENED STEELS 淬火鋼 HARDENED STEELS | | | | 不銹鋼 STAINLESS STEELS | 鑄鐵 CAST IRON 球墨鑄鐵 DUCTILE CAST IRON | 銅合金 COPPER ALLOYS | 鋁合金 ALUMINUM ALLOYS | 鈦合金 TITANIUM ALLOYS | 耐熱合金 HEAT RESISTANT ALLOYS |
|---|---|---|--------|--------|--------|----------------------------|---|-------------------------|---------------------------|---------------------------|-------------------------------------|
| ~30HRC | ~40HRC | ~45HRC | ~50HRC | ~60HRC | ~65HRC | ~35HRC | ~350HB | | | | |
| ○ | ○ | ○ | ○ | | | ○ | | ○ | ○ | ○ | |

○ 最適合加工 Most Suitable ○ 適合加工 Suitable △ 可加工 Machinable