

2MEM

• RPM : rev./min • Feed : mm/min

| 피삭재 Material | 일반구조강 / 쾌삭강 Mild steels / Free cutting steel HP / SM | | | | 구조용강 / 탄소강 / 회주철 Structural steel / Carbon Steels / Gray cast iron SS / SC / FC | | | | 알루미늄 합금 Aluminum alloys AL7075 | | | |
|---------------------------|--|------|-------------------|--------------------|---|------|-------------------|--------------------|--------------------------------------|------|-------------------|--------------------|
| | ~200HB | | | | ~30Hrc | | | | | | | |
| 경도 Hardness | | | | | | | | | | | | |
| 외경 Outside Diameter | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth |
| ø 1 | 12,900 | 125 | 0.15 | 0.07 | 11,400 | 90 | 0.15 | 0.07 | 43,000 | 510 | 0.15 | 0.07 |
| ø 1.5 | 8,600 | 125 | 0.75 | 0.11 | 7,700 | 90 | 0.75 | 0.11 | 29,000 | 580 | 0.75 | 0.11 |
| ø 2 | 6,500 | 125 | 1.00 | 0.14 | 5,800 | 110 | 1.00 | 0.14 | 22,000 | 650 | 1.00 | 0.14 |
| ø 2.5 | 5,100 | 150 | 1.25 | 0.18 | 4,600 | 110 | 1.25 | 0.18 | 17,200 | 680 | 1.25 | 0.18 |
| ø 3 | 4,300 | 170 | 1.50 | 0.45 | 3,800 | 120 | 1.50 | 0.45 | 14,300 | 720 | 1.50 | 0.45 |
| ø 4 | 3,200 | 200 | 3.00 | 0.60 | 2,900 | 120 | 3.00 | 0.60 | 10,700 | 750 | 3.00 | 0.60 |
| ø 5 | 2,600 | 210 | 3.75 | 0.75 | 2,300 | 135 | 3.75 | 0.75 | 8,600 | 775 | 3.75 | 0.75 |
| ø 6 | 2,200 | 220 | 4.50 | 0.90 | 1,900 | 150 | 4.50 | 0.90 | 7,200 | 790 | 4.50 | 0.90 |
| ø 8 | 1,600 | 200 | 6.00 | 1.20 | 1,400 | 145 | 6.00 | 1.20 | 5,400 | 700 | 6.00 | 1.20 |
| ø 10 | 1,300 | 180 | 7.50 | 1.50 | 1,200 | 145 | 7.50 | 1.50 | 4,300 | 650 | 7.50 | 1.50 |
| ø 12 | 1,100 | 170 | 9.00 | 1.80 | 1,000 | 135 | 9.00 | 1.80 | 3,600 | 610 | 9.00 | 1.80 |

3MEM

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| 피삭재 Material | 일반구조강 / 쾌삭강 Mild steels / Free cutting steel HP / SM | | | | 구조용강 / 탄소강 / 회주철 Structural steel / Carbon Steels / Gray cast iron SS / SC / FC | | | | 알루미늄 합금 Aluminum alloys AL7075 | | | |
|---------------------------|--|------|-------------------|--------------------|---|------|-------------------|--------------------|--------------------------------------|------|-------------------|--------------------|
| | ~200HB | | | | ~30Hrc | | | | | | | |
| 경도 Hardness | | | | | | | | | | | | |
| 외경 Outside Diameter | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth |
| ø 1 | 13,674 | 141 | 0.15 | 0.07 | 12,084 | 101 | 0.15 | 0.07 | 45,580 | 566 | 0.15 | 0.07 |
| ø 1.5 | 9,116 | 141 | 0.75 | 0.11 | 8,162 | 101 | 0.75 | 0.11 | 30,740 | 644 | 0.75 | 0.11 |
| ø 2 | 6,890 | 141 | 1.00 | 0.14 | 6,148 | 123 | 1.00 | 0.14 | 23,320 | 722 | 1.00 | 0.14 |
| ø 2.5 | 5,406 | 170 | 1.25 | 0.18 | 4,876 | 123 | 1.25 | 0.18 | 18,232 | 769 | 1.25 | 0.18 |
| ø 3 | 4,558 | 192 | 1.50 | 0.45 | 4,028 | 134 | 1.50 | 0.45 | 15,158 | 799 | 1.50 | 0.45 |
| ø 4 | 3,392 | 226 | 3.00 | 0.60 | 3,074 | 134 | 3.00 | 0.60 | 11,342 | 833 | 3.00 | 0.60 |
| ø 6 | 2,332 | 249 | 4.50 | 0.90 | 2,014 | 168 | 4.50 | 0.90 | 7,632 | 877 | 4.50 | 0.90 |

4MEM

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| 피삭재 Material | 일반구조강 / 쾌삭강 Mild steels / Free cutting steel HP / SM | | | | 구조용강 / 탄소강 / 회주철 Structural steel / Carbon Steels / Gray cast iron SS / SC / FC | | | | 알루미늄 합금 Aluminum alloys AL7075 | | | |
|---------------------------|--|------|-------------------|--------------------|---|------|-------------------|--------------------|--------------------------------------|------|-------------------|--------------------|
| | ~200HB | | | | ~30Hrc | | | | | | | |
| 경도 Hardness | | | | | | | | | | | | |
| 외경 Outside Diameter | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth | RPM | FEED | Ap Axial Depth | Ae Radial Depth |
| ø 1 | 14,084 | 153 | 0.15 | 1.00 | 12,483 | 107 | 0.15 | 1.00 | 46,583 | 594 | 0.15 | 1.00 |
| ø 1.5 | 9,389 | 153 | 0.75 | 1.50 | 8,431 | 107 | 0.75 | 1.50 | 31,416 | 676 | 0.75 | 1.50 |
| ø 2 | 7,097 | 153 | 1.00 | 2.00 | 6,351 | 131 | 1.00 | 2.00 | 23,833 | 758 | 1.00 | 2.00 |
| ø 2.5 | 5,568 | 183 | 1.25 | 2.50 | 5,037 | 131 | 1.25 | 2.50 | 18,633 | 808 | 1.25 | 2.50 |
| ø 3 | 4,695 | 207 | 1.50 | 3.00 | 4,161 | 142 | 1.50 | 3.00 | 15,491 | 839 | 1.50 | 3.00 |
| ø 4 | 3,494 | 244 | 3.00 | 4.00 | 3,175 | 142 | 3.00 | 4.00 | 11,592 | 874 | 3.00 | 4.00 |
| ø 6 | 2,402 | 268 | 4.50 | 6.00 | 2,080 | 178 | 4.50 | 6.00 | 7,800 | 921 | 4.50 | 6.00 |
| ø 8 | 2,509 | 258 | 6.00 | 8.00 | 1,957 | 156 | 6.00 | 8.00 | 6,006 | 889 | 6.00 | 8.00 |
| ø 10 | 1,720 | 234 | 7.50 | 10.00 | 1,342 | 133 | 7.50 | 10.00 | 4,625 | 826 | 7.50 | 10.00 |
| ø 12 | 1,279 | 210 | 9.00 | 12.00 | 998 | 116 | 9.00 | 12.00 | 3,561 | 744 | 9.00 | 12.00 |

절입량
Depth of Cut

$Ae \sim 2.9 = 0.07D$
 $\varnothing 1 \sim 2.9 = 0.07D$
 $\varnothing 3 \sim 0.15D$

$Ap \sim 1.2 = 0.15D$
 $\varnothing 1.5 \sim 3.5 = 0.5D$
 $\varnothing 4 \sim 0.75D$

- 날 끝이 정밀하게 연삭되어 있습니다. 파손을 피하기 위해 가능하면 비접촉 방식으로 측정 하십시오.
- 공구 진입시 피삭재 밖에서 진입 하십시오.
- 상기 절삭조건은 참고 수치이므로 실 가공시 가공 형상, 가공 목적, 적용 기계에 따라 조건변경 요망합니다.
- 조건표가 기계의 최대 스피들 속도를 초과하거나 버 및 적열 현상이 발생할 때 스피들 속도와 이송 속도를 비례하여 조정 하십시오.
- The edge of the flute precisely grinded. If you want to measure the tool, and to avoid damaging on the flutes, use non-contact measuring method.
- When entering the tool to the workpiece, enter the tool from outside to the workpiece.
- Use this table for your reference. Adjust the parameters depending on your machining geometry, machining purpose and CNC.
- If the table over the maximum RPM and feed of your machine, or found red heat on the material, adjust RPM and feed in the same proportion.