

# Recommended Cutting Condition

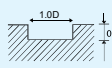
# Technical Data

## [ WAR502 series ] ▶ Side Cutting, Slotting, General Cutting

| WORKPIECE    | ALUMINIUM ALLOY (A7075) |       | ALUMINIUM ALLOY CASTING (Si13%) |       | MAGNESIUM ALLOY-COPPER ALLOYS |      |
|--------------|-------------------------|-------|---------------------------------|-------|-------------------------------|------|
| DIAMETER(mm) | RPM                     | FEED  | RPM                             | FEED  | RPM                           | FEED |
| 1            | 32,000                  | 220   | 32,000                          | 220   | 23,000                        | 220  |
| 1.2          | 32,000                  | 230   | 32,000                          | 230   | 19,000                        | 220  |
| 1.4          | 32,000                  | 260   | 32,000                          | 260   | 16,500                        | 220  |
| 1.5          | 32,000                  | 280   | 32,000                          | 280   | 15,500                        | 220  |
| 1.6          | 32,000                  | 320   | 32,000                          | 320   | 14,500                        | 220  |
| 1.8          | 32,000                  | 360   | 32,000                          | 360   | 13,000                        | 220  |
| 2            | 32,000                  | 420   | 32,000                          | 420   | 11,500                        | 220  |
| 2.5          | 25,000                  | 600   | 25,000                          | 600   | 9,500                         | 250  |
| 3            | 21,000                  | 700   | 21,000                          | 700   | 7,950                         | 250  |
| 4            | 15,500                  | 725   | 15,500                          | 725   | 5,950                         | 280  |
| 5            | 12,500                  | 760   | 12,500                          | 760   | 4,750                         | 295  |
| 6            | 10,500                  | 830   | 10,500                          | 830   | 3,950                         | 310  |
| 8            | 7,950                   | 890   | 7,950                           | 890   | 2,950                         | 300  |
| 10           | 6,350                   | 995   | 6,350                           | 995   | 2,350                         | 365  |
| 12           | 5,300                   | 1,050 | 5,300                           | 1,050 | 1,950                         | 390  |

RPM = rev. / min.  
FEED = mm / min.





## [ WAR502 series ] ▶ Side Cutting, Slotting, High Speed Cutting

| WORKPIECE    | ALUMINIUM ALLOY (A7075) |       | ALUMINIUM ALLOY CASTING (Si13%) |       | MAGNESIUM ALLOY-COPPER ALLOYS |       |
|--------------|-------------------------|-------|---------------------------------|-------|-------------------------------|-------|
| DIAMETER(mm) | RPM                     | FEED  | RPM                             | FEED  | RPM                           | FEED  |
| 1            | 50,000                  | 1,000 | 50,000                          | 950   | 42,000                        | 700   |
| 1.2          | 50,000                  | 1,200 | 50,000                          | 1,150 | 36,000                        | 700   |
| 1.4          | 50,000                  | 1,400 | 50,000                          | 1,250 | 31,000                        | 700   |
| 1.5          | 50,000                  | 1,600 | 48,000                          | 1,250 | 29,500                        | 700   |
| 1.6          | 50,000                  | 1,700 | 45,000                          | 1,250 | 28,000                        | 700   |
| 1.8          | 50,000                  | 1,850 | 41,000                          | 1,250 | 26,500                        | 750   |
| 2            | 50,000                  | 2,000 | 38,000                          | 1,250 | 24,000                        | 750   |
| 2.5          | 48,000                  | 2,100 | 31,000                          | 1,250 | 20,000                        | 750   |
| 3            | 40,000                  | 2,100 | 26,000                          | 1,250 | 17,000                        | 750   |
| 4            | 33,000                  | 2,250 | 20,000                          | 1,350 | 14,000                        | 800   |
| 5            | 31,000                  | 2,800 | 19,200                          | 1,650 | 12,500                        | 950   |
| 6            | 26,000                  | 2,800 | 15,900                          | 1,700 | 10,500                        | 1,000 |
| 8            | 19,500                  | 2,900 | 12,000                          | 1,800 | 7,900                         | 1,000 |
| 10           | 15,500                  | 3,200 | 9,600                           | 1,900 | 6,350                         | 1,100 |
| 12           | 13,000                  | 3,200 | 8,000                           | 1,900 | 5,300                         | 1,100 |

RPM = rev. / min.  
FEED = mm / min.



|                                 |      |
|---------------------------------|------|
| ALUMINIUM ALLOY (A7075)         | 0.1D |
| ALUMINIUM ALLOY CASTING (Si13%) | 0.1D |
| MAGNESIUM ALLOY-COPPER ALLOYS   | 0.1D |



|                                 |      |
|---------------------------------|------|
| ALUMINIUM ALLOY (A7075)         | 0.1D |
| ALUMINIUM ALLOY CASTING (Si13%) | 0.1D |
| MAGNESIUM ALLOY-COPPER ALLOYS   | 0.1D |

## [ WAR503 series ] ▶ Side cutting , General Cutting

| WORKPIECE    | ALUMINIUM ALLOY (A7075) |       | ALUMINIUM ALLOY CASTING (Si13%) |       | MAGNESIUM ALLOY-COPPER ALLOYS |      |
|--------------|-------------------------|-------|---------------------------------|-------|-------------------------------|------|
| DIAMETER(mm) | RPM                     | FEED  | RPM                             | FEED  | RPM                           | FEED |
| 3            | 21,000                  | 1,100 | 21,000                          | 1,100 | 7,950                         | 325  |
| 4            | 15,500                  | 1,250 | 15,500                          | 1,250 | 5,950                         | 365  |
| 5            | 12,500                  | 1,300 | 12,500                          | 1,275 | 4,750                         | 385  |
| 6            | 10,500                  | 1,400 | 10,500                          | 1,400 | 3,950                         | 400  |
| 8            | 7,950                   | 1,500 | 7,950                           | 1,500 | 2,950                         | 460  |
| 10           | 6,350                   | 1,700 | 6,350                           | 1,700 | 2,350                         | 475  |
| 12           | 5,300                   | 1,750 | 5,300                           | 1,750 | 1,950                         | 510  |
| 16           | 3,950                   | 1,750 | 3,950                           | 1,750 | 1,450                         | 510  |
| 20           | 3,150                   | 1,750 | 3,150                           | 1,750 | 1,150                         | 510  |

RPM = rev. / min.  
FEED = mm / min.



## [ WAR503 series ] ▶ Side cutting , High Speed Cutting

| WORKPIECE    | ALUMINIUM ALLOY (A7075) |       | ALUMINIUM ALLOY CASTING (Si13%) |       | MAGNESIUM ALLOY-COPPER ALLOYS |       |
|--------------|-------------------------|-------|---------------------------------|-------|-------------------------------|-------|
| DIAMETER(mm) | RPM                     | FEED  | RPM                             | FEED  | RPM                           | FEED  |
| 3            | 40,000                  | 2,100 | 24,000                          | 1,250 | 17,000                        | 625   |
| 4            | 32,000                  | 2,250 | 19,200                          | 1,550 | 14,300                        | 800   |
| 5            | 32,000                  | 3,250 | 19,200                          | 1,950 | 12,700                        | 925   |
| 6            | 26,500                  | 3,500 | 15,900                          | 2,150 | 10,600                        | 960   |
| 8            | 20,000                  | 3,750 | 12,000                          | 2,250 | 8,000                         | 1,130 |
| 10           | 16,000                  | 4,300 | 9,600                           | 2,580 | 6,350                         | 1,150 |
| 12           | 13,300                  | 4,400 | 8,000                           | 2,650 | 5,300                         | 1,250 |
| 16           | 10,000                  | 4,400 | 6,000                           | 2,650 | 4,000                         | 1,250 |
| 20           | 8,000                   | 4,400 | 4,800                           | 2,650 | 3,200                         | 1,250 |

RPM = rev. / min.  
FEED = mm / min.



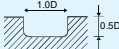
Recommended Cutting Condition

Technical Data

[ WAR503 series ] ▶ Slotting, General Cutting

| WORKPIECE    | ALUMINIUM ALLOY<br>(A7075) |       | ALUMINUM ALLOY CASTING<br>(Si13%) |       | MAGNESIUM ALLOY-COPPER ALLOYS<br>(AZ91-AZ80A-C1100) |      |
|--------------|----------------------------|-------|-----------------------------------|-------|-----------------------------------------------------|------|
| DIAMETER(mm) | RPM                        | FEED  | RPM                               | FEED  | RPM                                                 | FEED |
| 3            | 21,000                     | 770   | 2,100                             | 770   | 7,950                                               | 325  |
| 4            | 15,500                     | 810   | 15,500                            | 810   | 5,950                                               | 375  |
| 5            | 12,500                     | 860   | 12,500                            | 860   | 4,750                                               | 385  |
| 6            | 10,500                     | 950   | 10,500                            | 950   | 3,950                                               | 400  |
| 8            | 8,000                      | 1,000 | 8,000                             | 1,000 | 2,950                                               | 460  |
| 10           | 6,350                      | 1,150 | 6,350                             | 1,150 | 2,350                                               | 475  |
| 12           | 5,300                      | 1,200 | 5,300                             | 1,200 | 1,950                                               | 510  |
| 16           | 3,950                      | 1,200 | 3,950                             | 1,200 | 1,450                                               | 510  |
| 20           | 3,150                      | 1,200 | 3,150                             | 1,200 | 1,150                                               | 510  |

RPM = rev. / min.  
FEED = mm / min.



[ WAF303 series ] ▶ Slotting

| WORKPIECE    | ALUMINIUM, NONFERROUS METALS |      |        |       |
|--------------|------------------------------|------|--------|-------|
| DIAMETER(mm) | RPM                          | FEED | RPM    | FEED  |
| 6            | 10,500                       | 800  | 13,500 | 1,050 |
| 8            | 8,000                        | 700  | 10,500 | 900   |
| 10           | 6,500                        | 750  | 8,500  | 950   |
| 12           | 5,250                        | 800  | 6,800  | 1,050 |
| 16           | 4,000                        | 800  | 5,200  | 1,050 |
| 20           | 3,200                        | 800  | 4,200  | 1,050 |

RPM = rev. / min.  
FEED = mm / min.



[ WAR503 series ] ▶ Slotting, High Speed Cutting

| WORKPIECE    | ALUMINIUM ALLOY<br>(A7075) |       | ALUMINUM ALLOY CASTING<br>(Si13%) |       |
|--------------|----------------------------|-------|-----------------------------------|-------|
| DIAMETER(mm) | RPM                        | FEED  | RPM                               | FEED  |
| 3            | 40,000                     | 1,450 | 24,000                            | 880   |
| 4            | 32,000                     | 1,700 | 19,200                            | 1,000 |
| 5            | 32,000                     | 2,200 | 19,200                            | 1,350 |
| 6            | 26,500                     | 2,400 | 15,900                            | 1,450 |
| 8            | 20,000                     | 2,500 | 12,000                            | 1,500 |
| 10           | 16,000                     | 2,800 | 9,600                             | 1,700 |
| 12           | 13,300                     | 2,950 | 8,000                             | 1,800 |
| 16           | 10,000                     | 3,000 | 6,000                             | 1,800 |
| 20           | 8,000                      | 3,000 | 4,800                             | 1,800 |

RPM = rev. / min.  
FEED = mm / min.

