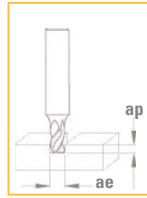


## DIXI 7543

### CUTTING CONDITIONS



#### Materials to be machined

|          |  | XIDUR                        |               |  |  | ap<br>[mm]  | ae<br>[mm] |
|----------|--|------------------------------|---------------|--|--|-------------|------------|
|          |  | Vc [m/min]                   |               |  |  |             |            |
| <b>P</b> | Unalloyed steel / Low alloyed steel              | < 600 N/mm <sup>2</sup>      | <b>90</b> 110 |  |  | < 1.0 x ØD1 | 1 x ØD1    |
| <b>P</b> | Unalloyed steel / Low alloyed steel              | 600 – 1500 N/mm <sup>2</sup> | <b>70</b> 90  |  |  | < 0.6 x ØD1 | 1 x ØD1    |
| <b>P</b> | Lead alloyed cutting steel                       |                              | <b>90</b> 110 |  |  | < 1.0 x ØD1 | 1 x ØD1    |
| <b>P</b> | High alloyed steel                               | 700 – 1500 N/mm <sup>2</sup> | <b>40</b> 55  |  |  | < 0.3 x ØD1 | 1 x ØD1    |
| <b>M</b> | Stainless steel                                  | 400 – 700 N/mm <sup>2</sup>  | <b>70</b> 90  |  |  | < 0.8 x ØD1 | 1 x ØD1    |
| <b>K</b> | Grey cast iron / Nodular pearlitic iron          | < 250 HB                     | <b>90</b> 110 |  |  | < 0.7 x ØD1 | 1 x ØD1    |
| <b>K</b> | Alloyed cast iron / Nodular pearlitic iron       | > 250 HB                     | <b>70</b> 90  |  |  | < 0.4 x ØD1 | 1 x ØD1    |
| <b>K</b> | Nodular ferritic cast iron / Malleable cast iron |                              | <b>90</b> 110 |  |  | < 0.4 x ØD1 | 1 x ØD1    |
| <b>S</b> | Titanium, titanium alloys                        |                              | <b>40</b> 60  |  |  | < 0.3 x ØD1 | 1 x ØD1    |

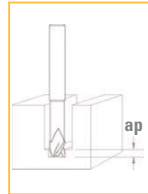
$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times fz \text{ [mm]} \times Z$$

Feed per tooth **fz [mm]**

| Ø D <sub>1</sub><br>1.00 - 1.50 | Ø D <sub>1</sub><br>1.50 - 3.00 | Ø D <sub>1</sub><br>3.00 - 5.00 | Ø D <sub>1</sub><br>5.00 - 7.00 | Ø D <sub>1</sub><br>7.00 - 10.00 | Ø D <sub>1</sub><br>10.00 - 12.00 |  |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------------------------------|-----------------------------------|--|
| <b>0.002</b> - 0.01             | <b>0.003</b> - 0.01             | <b>0.006</b> - 0.02             | <b>0.010</b> - 0.02             | <b>0.014</b> - 0.04              | <b>0.02</b> - 0.05                |  |
| <b>0.002</b> - 0.01             | <b>0.002</b> - 0.01             | <b>0.005</b> - 0.01             | <b>0.008</b> - 0.02             | <b>0.011</b> - 0.03              | <b>0.02</b> - 0.04                |  |
| <b>0.003</b> - 0.01             | <b>0.004</b> - 0.01             | <b>0.008</b> - 0.03             | <b>0.013</b> - 0.04             | <b>0.018</b> - 0.05              | <b>0.03</b> - 0.07                |  |
| <b>0.002</b> - 0.01             | <b>0.002</b> - 0.01             | <b>0.005</b> - 0.01             | <b>0.008</b> - 0.02             | <b>0.011</b> - 0.03              | <b>0.02</b> - 0.04                |  |
| <b>0.002</b> - 0.01             | <b>0.002</b> - 0.01             | <b>0.005</b> - 0.01             | <b>0.008</b> - 0.02             | <b>0.011</b> - 0.03              | <b>0.02</b> - 0.04                |  |
| <b>0.002</b> - 0.01             | <b>0.003</b> - 0.01             | <b>0.006</b> - 0.02             | <b>0.010</b> - 0.02             | <b>0.014</b> - 0.04              | <b>0.02</b> - 0.05                |  |
| <b>0.002</b> - 0.01             | <b>0.002</b> - 0.01             | <b>0.005</b> - 0.01             | <b>0.008</b> - 0.02             | <b>0.011</b> - 0.03              | <b>0.02</b> - 0.04                |  |
| <b>0.002</b> - 0.01             | <b>0.003</b> - 0.01             | <b>0.006</b> - 0.02             | <b>0.010</b> - 0.02             | <b>0.014</b> - 0.04              | <b>0.02</b> - 0.05                |  |
| <b>0.002</b> - 0.01             | <b>0.002</b> - 0.01             | <b>0.005</b> - 0.01             | <b>0.008</b> - 0.02             | <b>0.011</b> - 0.03              | <b>0.02</b> - 0.04                |  |

## DIXI 7593



DIXI 7593 Z = 3-4

**Aluminium**

( Vc 400 - 600 m/min )

| D <sub>1</sub> | Z | Vc<br>[m/min] | n<br>[min <sup>-1</sup> ] | Vf<br>[mm/min] | ap<br>[mm] | ae<br>[mm] | fz<br>[mm] |
|----------------|---|---------------|---------------------------|----------------|------------|------------|------------|
| 6              | 3 | 400           | 21220                     | 570            | 3          | 6          | 0.009      |
| 8              | 3 | 400           | 15920                     | 570            | 4          | 8          | 0.012      |
| 10             | 3 | 400           | 12730                     | 760            | 5          | 10         | 0.02       |
| 12             | 3 | 400           | 10610                     | 760            | 6          | 12         | 0.024      |
| 16             | 3 | 400           | 7960                      | 760            | 8          | 16         | 0.032      |
| 18             | 3 | 400           | 7070                      | 760            | 9          | 18         | 0.036      |
| 20             | 4 | 400           | 6370                      | 1020           | 10         | 20         | 0.04       |