

General Purpose Solid Carbide End Mills • Roughing/Finishing

Application Data • Series D010 2848 4000 • VariMill™ GP



■ Series D010 2848 4000 • TiAlN • VariMill GP

| Material Group | Side Milling (A) and Slotting (B) | | TiAlN | | Recommended feed per tooth (fz = mm/th) for side milling (A). For slotting (B), reduce fz by 20%. | | | | | | | | | | | | | | | | |
|----------------|-----------------------------------|---------|---------|---------|---------------------------------------------------------------------------------------------------|-----|-----|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | A | | B | | Cutting Speed – vc m/min | | mm | D1 – Diameter | | | | | | | | | | | | | |
| | ap | ae | ap | min | max | 3,0 | | 4,0 | 5,0 | 6,0 | 8,0 | 10,0 | 12,0 | 14,0 | 16,0 | 18,0 | 20,0 | | | | |
| | ap1 | ae1 | ap | min | max | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | | | | |
| P | 0 | Ap1 max | 0,1 x D | 0,5 x D | 150 | – | 200 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | | |
| | 1 | Ap1 max | 0,1 x D | 0,5 x D | 150 | – | 200 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | | |
| | 2 | Ap1 max | 0,1 x D | 0,5 x D | 140 | – | 190 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | | |
| | 3 | Ap1 max | 0,1 x D | 0,5 x D | 120 | – | 160 | fz | 0,017 | 0,023 | 0,030 | 0,036 | 0,050 | 0,061 | 0,070 | 0,079 | 0,087 | 0,095 | 0,101 | | |
| M | 1 | Ap1 max | 0,1 x D | 0,5 x D | 90 | – | 150 | fz | 0,016 | 0,021 | 0,027 | 0,033 | 0,045 | 0,054 | 0,062 | 0,070 | 0,077 | 0,083 | 0,088 | | |
| | 2 | Ap1 max | 0,1 x D | 0,5 x D | 60 | – | 80 | fz | 0,014 | 0,019 | 0,024 | 0,029 | 0,040 | 0,048 | 0,056 | 0,063 | 0,070 | 0,076 | 0,081 | | |
| K | 1 | Ap1 max | 0,1 x D | 0,5 x D | 120 | – | 150 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | | |
| | 2 | Ap1 max | 0,1 x D | 0,5 x D | 110 | – | 140 | fz | 0,017 | 0,023 | 0,030 | 0,036 | 0,050 | 0,061 | 0,070 | 0,079 | 0,087 | 0,095 | 0,101 | | |

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machining centres, please adjust parameters accordingly on >12mm diameters.

Application Data • Series 4010 • VariMill™ GP

■ Series 4010 • TiAlN • VariMill GP

| Material Group | Side Milling (A) | | TiAlN | | Recommended feed per tooth (fz = mm/th) for side milling (A). | | | | | | | | | | | | | | |
|----------------|------------------|---------|--------------------------|-----|---------------------------------------------------------------|---------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | A | | Cutting Speed – vc m/min | | mm | D1 – Diameter | | | | | | | | | | | | | |
| | ap | ae | min | max | | 3,0 | 4,0 | 5,0 | 6,0 | 8,0 | 10,0 | 12,0 | 14,0 | 16,0 | 18,0 | 20,0 | | | |
| | ap1 | ae1 | min | max | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz | | | |
| P | 0 | Ap1 max | 0,1 x D | 150 | – | 200 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | |
| | 1 | Ap1 max | 0,1 x D | 150 | – | 200 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | |
| | 2 | Ap1 max | 0,1 x D | 140 | – | 190 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | |
| | 3 | Ap1 max | 0,1 x D | 120 | – | 160 | fz | 0,017 | 0,023 | 0,030 | 0,036 | 0,050 | 0,061 | 0,070 | 0,079 | 0,087 | 0,095 | 0,101 | |
| M | 1 | Ap1 max | 0,1 x D | 90 | – | 150 | fz | 0,016 | 0,021 | 0,027 | 0,033 | 0,045 | 0,054 | 0,062 | 0,070 | 0,077 | 0,083 | 0,088 | |
| | 2 | Ap1 max | 0,1 x D | 60 | – | 80 | fz | 0,014 | 0,019 | 0,024 | 0,029 | 0,040 | 0,048 | 0,056 | 0,063 | 0,070 | 0,076 | 0,081 | |
| K | 1 | Ap1 max | 0,1 x D | 120 | – | 150 | fz | 0,021 | 0,028 | 0,036 | 0,044 | 0,060 | 0,072 | 0,083 | 0,092 | 0,101 | 0,108 | 0,114 | |
| | 2 | Ap1 max | 0,1 x D | 110 | – | 140 | fz | 0,017 | 0,023 | 0,030 | 0,036 | 0,050 | 0,061 | 0,070 | 0,079 | 0,087 | 0,095 | 0,101 | |

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
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Above parameters are based on ideal conditions. For smaller taper machining centres, please adjust parameters accordingly on >12mm diameters.

