DIXI 7210
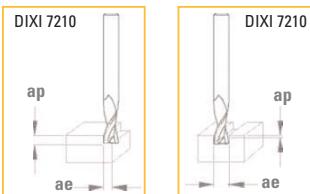
CUTTING CONDITIONS
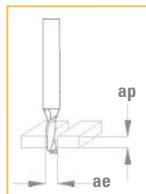

$$n\,[tr/min] = \frac{Vc\,[m/min] \times 1000}{\pi \times D_1\,[mm]}$$

$$Vf\,[mm/min] = n\,[tr/min] \times fz\,[mm] \times Z$$

Materials to be machined		CARBIDE Vc [m/min]	CUTINOX Vc [m/min]	ap [mm]	ae [mm]	ap [mm]	ae [mm]
P Unalloyed steel / Low alloyed steel	< 600 N/mm²	70 100	100 120	1.5 x ØD1	0.5 x ØD1	< 1.3 x ØD1	1 x ØD1
P Unalloyed steel / Low alloyed steel	600 – 1500 N/mm²		80 100	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
P Lead alloyed cutting steel		70 100		1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
P High alloyed steel	700 – 1500 N/mm²		50 70	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
M Stainless steel	400 – 700 N/mm²		80 100	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
K Grey cast iron / Nodular pearlitic iron	< 250 HB	70 100	100 120	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
K Alloyed cast iron / Nodular pearlitic iron	> 250 HB	40 70	80 100	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
K Nodular ferritic cast iron / Malleable cast iron		70 100	100 120	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
S Titanium, titanium alloys		30 45		1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	1 x ØD1
N Copper alloys - easy to machine (brass - bronze)		160 180	220 240	1.0 x ØD1	1.0 x ØD1	< 1.5 x ØD1	0.5 x ØD1
N Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	100 130	120 150	1.0 x ØD1	1.0 x ØD1	< 1.5 x ØD1	0.5 x ØD1
N Aluminium alloy	Si < 8%	130 250	200 300	1.5 x ØD1	0.5 x ØD1	< 1.0 x ØD1	
N Gold, silver		140 160	200 220	< 1.0 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1

Feed per tooth **fz [mm]**

	Ø D1 3.00 - 4.00	Ø D1 4.00 - 5.00	Ø D1 5.00 - 6.00	Ø D1 6.00 - 7.00	Ø D1 7.00 - 8.00	Ø D1 8.00 - 10.00	Ø D1 10.00 - 12.00
P	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
P	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
P	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
P	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
M	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
K	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
K	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
K	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
S	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
N	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
N	0.02 - 0.03	0.025 - 0.04	0.028 - 0.045	0.032 - 0.05	0.035 - 0.06	0.04 - 0.08	0.06 - 0.10
N	0.03 - 0.04	0.04 - 0.06	0.05 - 0.08	0.06 - 0.09	0.07 - 0.1	0.08 - 0.11	0.09 - 0.12
N	0.010 - 0.03	0.013 - 0.03	0.015 - 0.04	0.018 - 0.04	0.020 - 0.05	0.023 - 0.05	0.025 - 0.06

DIXI 7301 - 7302 - 7303 - 7304

Materials to be machined	CARBIDE Vc [m/min]	ap [mm]	ae [mm]
N Plastic	130 200	< 1.5 x ØD1	1 x ØD1

Feed per tooth **fz [mm]**

	Ø D1 2.00 - 2.50	Ø D1 2.50 - 3.00	Ø D1 3.00 - 4.00	Ø D1 4.00 - 5.00	Ø D1 5.00 - 6.00	Ø D1 6.00 - 8.00	Ø D1 8.00 - 10.00	Ø D1 10.00 - 12.00
N	0.020 - 0.05	0.025 - 0.06	0.03 - 0.08	0.04 - 0.10	0.05 - 0.12	0.06 - 0.16	0.08 - 0.20	0.10 - 0.28

The plunging feed (Vfp) of an end mill Z = 1 (drilling) must be reduced by 40 to 80 % depending on the material to be machined