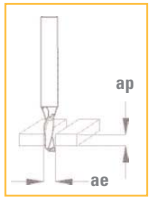
DIXI 7561

CUTTING CONDITIONS



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

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

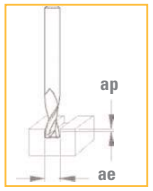
	Materials to be machined		CARBIDE Vc [m/min]		ap [mm]	ae [mm]
P	Lead alloyed cutting steel		**80**	100	< 0.7 x ØD1	1 x ØD1
N	Copper alloys - easy to machine (brass - bronze)		**100**	130	< 1 x ØD1	1 x ØD1
N	Aluminium alloys	Si < 8%	**120**	160	< 1 x ØD1	1 x ØD1
N	Cast aluminium	Si > 8%	**100**	130	< 1 x ØD1	1 x ØD1
N	Plastic		**130**	200	< 1.5 x ØD1	1 x ØD1

Feed per tooth **fz [mm]**

Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00
0.010 - 0.03	**0.013** - 0.04	**0.02** - 0.05	**0.02** - 0.06	**0.03** - 0.07	**0.03** - 0.10	**0.04** - 0.12	**0.05** - 0.17
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
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.

DIXI 7552 - 7562 - 7572 - 7582



	Materials to be machined		CARBIDE Vc [m/min]		TiAlN Vc [m/min]		DICUT Vc [m/min]		DIAMOND Vc [m/min]		ap [mm]	ae [mm]
P	Unalloyed steel / Low alloyed steel	< 600 N/mm²	**50**	80							< 1 x ØD1	< 1 x ØD1
P	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm²			**70**	100					< 0.5 x ØD1	< 1 x ØD1
P	High alloyed steel	700 – 1500 N/mm²			**40**	60					< 0.5 x ØD1	< 1 x ØD1
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	**100**	170							< 1 x ØD1	< 1 x ØD1
S	Titanium, titanium alloys		**60**	80							< 1 x ØD1	< 1 x ØD1
N	Copper alloys - easy to machine (brass - bronze)		**80**	120							< 1.5 x ØD1	< 1 x ØD1
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)					**100**	140			< 1 x ØD1	< 1 x ØD1
N	Aluminium alloys	Si < 8%	**150**	200							< 1.5 x ØD1	< 1 x ØD1
N	Cast aluminium	Si > 8%	**100**	200							< 1 x ØD1	< 1 x ØD1
N	Graphite								**200**	300	3 x ØD1	< 0.30 x ØD1
N	Plastic		**100**	130							< 2 x ØD1	< 1 x ØD1
N	Gold, silver		**90**	130	**100**	140					< 0.5 x ØD1	< 1 x ØD1

Feed per tooth **fz [mm]**

Ø D_1 1.00 - 2.00	Ø D_1 2.00 -3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 13.00	Ø D_1 13.00 - 16.00	Ø D_1 16.00 - 20.00
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.014 - 0.04	**0.018** - 0.05	**0.021** - 0.05	**0.025** - 0.06	**0.032** - 0.08	**0.04** - 0.09	**0.04** - 0.11	**0.05** - 0.12
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20