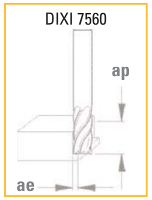
DIXI 7560

CUTTING CONDITIONS



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

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

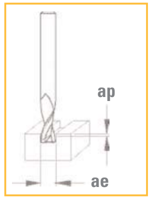
Materials to be machined

	Material		CARBIDE Vc [m/min]	TiAlN Vc [m/min]	DLC Vc [m/min]	ap [mm]	ae [mm]
P	Unalloyed steel / Low alloyed steel	< 600 N/mm²	**90** 110	**110** 130		1.50 x ØD1	< 0.10 x ØD1
P	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm²		**80** 100		1.50 x ØD1	< 0.10 x ØD1
P	Lead alloyed cutting steel		**80** 110			1.50 x ØD1	< 0.30 x ØD1
P	High alloyed steel	700 – 1500 N/mm²		**60** 80		1.50 x ØD1	< 0.05 x ØD1
M	Stainless steel	400 – 700 N/mm²		**80** 100		1.50 x ØD1	< 0.05 x ØD1
M	DUPLEX stainless steel	> 800 N/mm²		**60** 80		1.50 x ØD1	< 0.05 x ØD1
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	**80** 110	**110** 140		1.50 x ØD1	< 0.20 x ØD1
K	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	**50** 70	**80** 100		1.50 x ØD1	< 0.05 x ØD1
K	Nodular ferritic cast iron / Malleable cast iron		**80** 110	**110** 130		1.50 x ØD1	< 0.10 x ØD1
S	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy		**35** 50		1.50 x ØD1	< 0.05 x ØD1
S	Titanium, titanium alloys		**40** 55		**50** 80	1.50 x ØD1	< 0.10 x ØD1
N	Copper alloys - easy to machine (brass - bronze)		**160** 200		**200** 300	1.50 x ØD1	< 0.30 x ØD1
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	**140** 160	**170** 220	**200** 270	1.50 x ØD1	< 0.10 x ØD1

Feed per tooth fz [mm]

	Material	Ø D_1 0.35 - 1.90 (Z = 3)	Ø D_1 2.00 - 3.00 (Z = 5)	Ø D_1 3.00 - 5.00 (Z = 5)	Ø D_1 5.00 - 8.00 (Z = 5)	Ø D_1 8.00 - 10.00 (Z = 6)	Ø D_1 10.00 - 14.00 (Z = 6)	Ø D_1 14.00 - 16.00 (Z = 6)	Ø D_1 16.00 - 20.00 (Z = 6)
P	Unalloyed steel / Low alloyed steel < 600 N/mm²	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
P	Unalloyed steel / Low alloyed steel 600 – 1500 N/mm²	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
P	Lead alloyed cutting steel	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.07** - 0.10	**0.08** - 0.11
P	High alloyed steel	**0.002** - 0.015	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
M	Stainless steel	**0.002** - 0.015	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
M	DUPLEX stainless steel	**0.002** - 0.015	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
K	Grey cast iron / Nodular pearlitic iron	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
K	Alloyed cast iron / Nodular pearlitic iron	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
K	Nodular ferritic cast iron / Malleable cast iron	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
S	Special alloys / Heat resistant stainless steel	**0.002** - 0.01	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
S	Titanium, titanium alloys	**0.002** - 0.01	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11
N	Copper alloys - easy to machine (brass - bronze)	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.07** - 0.10	**0.08** - 0.11
N	Copper alloys - difficult to machine / Aluminium bronze	**0.004** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.09	**0.06** - 0.10	**0.07** - 0.11

DIXI 7060 - 7232



Materials to be machined

	Material		CARBIDE Vc [m/min]	ap [mm]	ae [mm]
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	**100** 150	< 1 x ØD1	1 x ØD1
N	Copper alloys - easy to machine (brass - bronze)		**140** 160	< 1 x ØD1	1 x ØD1
N	Gold, silver		**140** 160	< 0.9 x ØD1	1 x ØD1
N	Plastic		**240** 260	< 1.2 x ØD1	1 x ØD1
N			**240** 300	< 1.2 x ØD1	1 x ØD1

Feed per tooth fz [mm]

	Material	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00
K	Grey cast iron / Nodular pearlitic iron	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
N	Copper alloys - easy to machine (brass - bronze)	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
N	Gold, silver	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
N	Plastic	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
N		**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11