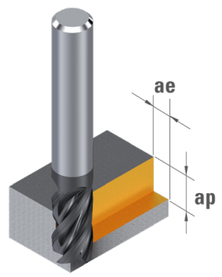
DIXI 7543

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

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

ROUTING

		VDI 3323	XIDUR Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5	**150**	<0.40 × ØD1	<1 × ØD1
P	Low alloyed steel < 800 N/mm²	6 - 9	**125**	<0.30 × ØD1	<1 × ØD1
P	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13	**100**	<0.25 × ØD1	<1 × ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2	**95**	<0.25 × ØD1	<1 × ØD1
M	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4	**65**	<0.2 × ØD1	<1 × ØD1
K	Grey cast iron < 250 HB	15 - 16	**180**	<0.40 × ØD1	<1 × ØD1
K	Ductile, malleable, nodular cast iron > 250 HB	17 - 20	**130**	<0.35 × ØD1	<1 × ØD1
S	Titanium, titanium alloy	36 - 37	**70**	<0.40 × ØD1	<1 × ØD1

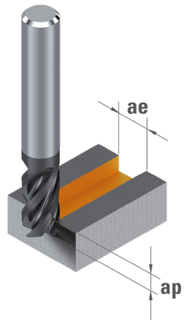


Feed per tooth fz [mm]

Ø D_1 1.00 - 1.50	Ø D_1 2.00 - 2.50	Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.010 - 0.014	0.019 - 0.024	0.029 - 0.038	0.048 - 0.058	0.062 - 0.094
0.009 - 0.013	0.018 - 0.022	0.026 - 0.035	0.044 - 0.053	0.057 - 0.086
0.008 - 0.012	0.016 - 0.020	0.024 - 0.032	0.040 - 0.048	0.052 - 0.078
0.008 - 0.012	0.016 - 0.020	0.024 - 0.032	0.040 - 0.048	0.052 - 0.078
0.007 - 0.011	0.014 - 0.018	0.022 - 0.029	0.036 - 0.043	0.047 - 0.070
0.011 - 0.017	0.022 - 0.028	0.034 - 0.045	0.056 - 0.067	0.073 - 0.109
0.010 - 0.014	0.019 - 0.024	0.029 - 0.038	0.048 - 0.058	0.062 - 0.094
0.010 - 0.014	0.019 - 0.024	0.029 - 0.038	0.048 - 0.058	0.062 - 0.094

SLOTTING

		VDI 3323	XIDUR Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5	**115**	1 × ØD1	<1 × ØD1
P	Low alloyed steel < 800 N/mm²	6 - 9	**95**	1 × ØD1	<1 × ØD1
P	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13	**75**	1 × ØD1	<0.8 × ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2	**70**	1 × ØD1	<1 × ØD1
M	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4	**50**	1 × ØD1	<0.8 × ØD1
K	Grey cast iron < 250 HB	15 - 16	**135**	1 × ØD1	<1 × ØD1
K	Ductile, malleable, nodular cast iron > 250 HB	17 - 20	**95**	1 × ØD1	<1 × ØD1
S	Titanium, titanium alloy	36 - 37	**55**	1 × ØD1	<1 × ØD1

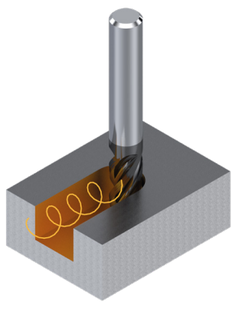


Feed per tooth fz [mm]

Ø D_1 1.00 - 1.50	Ø D_1 2.00 - 2.50	Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.006 - 0.008	0.011 - 0.014	0.017 - 0.023	0.029 - 0.035	0.038 - 0.055
0.005 - 0.008	0.011 - 0.013	0.016 - 0.021	0.026 - 0.032	0.034 - 0.050
0.005 - 0.007	0.010 - 0.012	0.014 - 0.019	0.024 - 0.029	0.032 - 0.045
0.005 - 0.007	0.010 - 0.012	0.014 - 0.019	0.024 - 0.029	0.032 - 0.045
0.004 - 0.007	0.008 - 0.011	0.013 - 0.017	0.022 - 0.026	0.028 - 0.040
0.007 - 0.010	0.013 - 0.017	0.020 - 0.027	0.034 - 0.040	0.044 - 0.065
0.006 - 0.008	0.011 - 0.014	0.017 - 0.023	0.029 - 0.035	0.038 - 0.055
0.006 - 0.008	0.011 - 0.014	0.017 - 0.023	0.029 - 0.035	0.038 - 0.055

TROCHOIDAL MILLING

		VDI 3323	XIDUR Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5	**380**	<0.06 × ØD1	<1 × ØD1
P	Low alloyed steel < 800 N/mm²	6 - 9	**290**	<0.05 × ØD1	<1 × ØD1
P	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13	**230**	<0.03 × ØD1	<1 × ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2	**190**	<0.03 × ØD1	<1 × ØD1
M	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4	**110**	<0.02 × ØD1	<1 × ØD1
K	Grey cast iron < 250 HB	15 - 16	**450**	<0.08 × ØD1	<1 × ØD1
K	Ductile, malleable, nodular cast iron > 250 HB	17 - 20	**330**	<0.07 × ØD1	<1 × ØD1
S	Titanium, titanium alloy	36 - 37	**110**	<0.08 × ØD1	<1 × ØD1



Feed per tooth fz [mm]

Ø D_1 1.00 - 1.50	Ø D_1 2.00 - 2.50	Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.013 - 0.019	0.026 - 0.032	0.039 - 0.052	0.065 - 0.078	0.084 - 0.126
0.012 - 0.018	0.024 - 0.030	0.036 - 0.048	0.059 - 0.071	0.077 - 0.116
0.011 - 0.016	0.022 - 0.027	0.032 - 0.043	0.054 - 0.065	0.070 - 0.105
0.011 - 0.016	0.022 - 0.027	0.032 - 0.043	0.054 - 0.065	0.070 - 0.105
0.010 - 0.015	0.019 - 0.024	0.029 - 0.039	0.049 - 0.058	0.063 - 0.095
0.015 - 0.023	0.030 - 0.038	0.045 - 0.060	0.076 - 0.091	0.098 - 0.147
0.013 - 0.019	0.026 - 0.032	0.039 - 0.052	0.065 - 0.078	0.084 - 0.126
0.013 - 0.019	0.026 - 0.032	0.039 - 0.052	0.065 - 0.078	0.084 - 0.126

Values based on cutting oil use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !