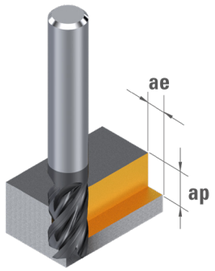
$$n\ [rpm] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

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

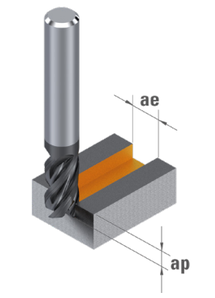
ROUTING

		VDI 3323		XIDUR Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5		**240**	<0.07×ØD1	<1×L1
S	Refractory alloy, Fe, Ni, Co base	31- 35		**65**	<0.04×ØD1	<1×L1
H	Hardened steel (45 à 55 HRC)	38		**200**	<0.03×ØD1	<1×L1
	Hardened steel (55 à 65 HRC)	39		**120**	<0.02×ØD1	<1×L1

Feed per tooth fz [mm]

Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.060 - 0.080	0.100 - 0.120	0.160 - 0.240
0.039 - 0.052	0.065 - 0.078	0.105 - 0.160
0.039 - 0.052	0.065 - 0.078	0.105 - 0.160
0.012 - 0.016	0.020 - 0.024	0.030 - 0.050

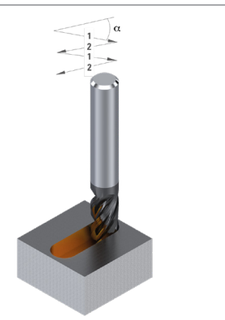
SLOTTING

		VDI 3323		XIDUR Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5		**200**	1×ØD1	<0.05×ØD1
S	Refractory alloy, Fe, Ni, Co base	31- 35		**55**	1×ØD1	<0.04×ØD1
H	Hardened steel (45 à 55 HRC)	38		**165**	1×ØD1	<0.04×ØD1
	Hardened steel (55 à 65 HRC)	39		**100**	1×ØD1	<0.02×ØD1

Feed per tooth fz [mm]

Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.054 - 0.072	0.090 - 0.108	0.145 - 0.220
0.035 - 0.047	0.058 - 0.07	0.095 - 0.140
0.035 - 0.047	0.058 - 0.07	0.095 - 0.140
0.011 - 0.014	0.018 - 0.022	0.025 - 0.050

RAMPING

		VDI 3323		XIDUR Vc [m/min]	Depth (mm)	Ramp angle α
P	Unalloyed steel, leaded steel	1 - 5		**180**	<1×ØD1	<5°
S	Refractory alloy, Fe, Ni, Co base	31- 35		**50**	<0.5×ØD1	<3°
H	Hardened steel (45 à 55 HRC)	38		**150**	<1×ØD1	<3°
	Hardened steel (55 à 65 HRC)	39		**90**	<0.8×ØD1	<2°

Feed per tooth fz [mm]

Ø D_1 3.00 - 4.00	Ø D_1 5.00 - 6.00	Ø D_1 8.00 - 12.00
0.054 - 0.072	0.090 - 0.108	0.145 - 0.220
0.035 - 0.047	0.058 - 0.07	0.095 - 0.140
0.035 - 0.047	0.058 - 0.07	0.095 - 0.140
0.011 - 0.014	0.018 - 0.022	0.025 - 0.050

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 !
For maximum tool life, use micro-lubrication for steels and hardened steels and cutting oil for refractory alloys