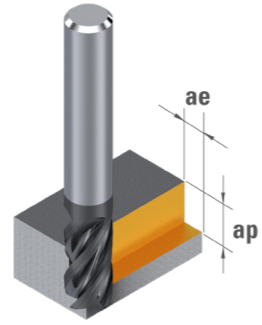


**ROUTING**

	VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
<b>P</b>	Unalloyed steel, leaded steel	1 - 5	<b>70</b>	<0.40×ØD1	<0.95×L1
<b>N</b>	Wrought aluminium alloy < 12% Si	21 - 22	<b>200</b>	<0.50×ØD1	<0.95×L1
	Cast aluminium alloy >12% Si	23 - 35	<b>175</b>	<0.50×ØD1	<0.95×L1
	Copper alloy good machinability with Pb	26	<b>150</b>	<0.40×ØD1	<0.95×L1
	Copper alloy with difficult machinability	27 - 28	<b>100</b>	<0.25×ØD1	<0.95×L1
	Gold, silver	-	<b>120</b>	<0.25×ØD1	<0.95×L1
<b>S</b>	Titanium, titanium alloy	36 - 37	<b>45</b>	<0.30×ØD1	<0.95×L1



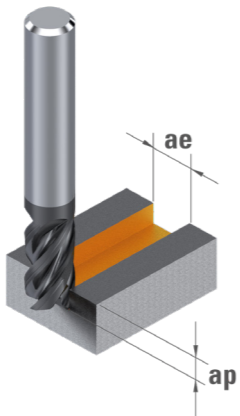
$$n \text{ [rpm]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

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

Feed per tooth fz [mm]					
Ø D <sub>1</sub> 0.50 - 0.70	Ø D <sub>1</sub> 0.80 - 1.00	Ø D <sub>1</sub> 1.10 - 1.50	Ø D <sub>1</sub> 1.60 - 1.90	Ø D <sub>1</sub> 2.00 - 2.50	Ø D <sub>1</sub> 3.00 - 8.00
0.002 - 0.003	0.003 - 0.004	0.005 - 0.006	0.007 - 0.008	0.008 - 0.009	0.010 - 0.026
0.007 - 0.009	0.010 - 0.013	0.014 - 0.020	0.021 - 0.025	0.025 - 0.029	0.033 - 0.083
0.006 - 0.008	0.010 - 0.012	0.013 - 0.018	0.019 - 0.023	0.023 - 0.027	0.031 - 0.077
0.005 - 0.007	0.008 - 0.010	0.011 - 0.015	0.016 - 0.019	0.019 - 0.023	0.026 - 0.064
0.004 - 0.006	0.006 - 0.008	0.009 - 0.012	0.013 - 0.015	0.015 - 0.018	0.020 - 0.051
0.004 - 0.006	0.006 - 0.008	0.009 - 0.012	0.013 - 0.015	0.015 - 0.018	0.020 - 0.051
0.004 - 0.008	0.006 - 0.010	0.009 - 0.014	0.013 - 0.017	0.015 - 0.020	0.020 - 0.053

**SLOTING**

	VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
<b>P</b>	Unalloyed steel, leaded steel	1 - 5	<b>70</b>	1×ØD1	<0.95×L1
<b>N</b>	Wrought aluminium alloy < 12% Si	21 - 22	<b>200</b>	1×ØD1	<0.95×L1
	Cast aluminium alloy >12% Si	23 - 35	<b>175</b>	1×ØD1	<0.95×L1
	Copper alloy good machinability with Pb	26	<b>150</b>	1×ØD1	<0.95×L1
	Copper alloy with difficult machinability	27 - 28	<b>100</b>	1×ØD1	<0.95×L1
	Gold, silver	-	<b>120</b>	1×ØD1	<0.95×L1
<b>S</b>	Titanium, titanium alloy	36 - 37	<b>45</b>	1×ØD1	<0.95×L1



Feed per tooth fz [mm]					
Ø D <sub>1</sub> 0.50 - 0.70	Ø D <sub>1</sub> 0.80 - 1.00	Ø D <sub>1</sub> 1.10 - 1.50	Ø D <sub>1</sub> 1.60 - 1.90	Ø D <sub>1</sub> 2.00 - 2.50	Ø D <sub>1</sub> 3.00 - 8.00
0.001 - 0.002	0.002 - 0.003	0.004 - 0.004	0.005 - 0.006	0.006 - 0.006	0.007 - 0.018
0.005 - 0.006	0.007 - 0.009	0.010 - 0.014	0.015 - 0.018	0.018 - 0.020	0.023 - 0.058
0.004 - 0.006	0.007 - 0.008	0.009 - 0.013	0.013 - 0.016	0.016 - 0.019	0.022 - 0.054
0.004 - 0.005	0.006 - 0.007	0.008 - 0.011	0.011 - 0.013	0.013 - 0.016	0.018 - 0.045
0.003 - 0.004	0.004 - 0.006	0.006 - 0.008	0.009 - 0.011	0.011 - 0.013	0.014 - 0.036
0.003 - 0.004	0.004 - 0.006	0.006 - 0.008	0.009 - 0.011	0.011 - 0.013	0.014 - 0.036
0.001 - 0.002	0.002 - 0.003	0.004 - 0.004	0.005 - 0.006	0.006 - 0.006	0.007 - 0.018

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 !