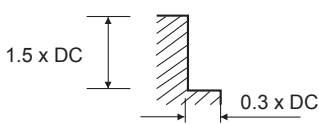
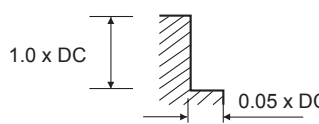


## CUTTING DATA

147370 (Multiflute Roughing)										
VDI MATERIAL GROUP	MATERIAL	HRc		Size (mm)						
				6.0	8.0	10.0	12.0	16.0	20.0	
<b>P</b>	1-5	Non-alloy Steel	<25	$v_c$ (m/min)	310	305	305	315	315	315
				$n$	16440	12135	9710	8355	6265	5010
				$f_z$	0.05	0.067	0.063	0.075	0.1	0.113
				$f$ (mm/min)	2465	2440	2450	2505	2505	2265
	6-9	Low alloy Steel	25-35	$v_c$ (m/min)	245	245	250	240	255	240
				$n$	12995	9750	7955	6365	5070	3820
				$f_z$	0.023	0.03	0.028	0.033	0.04	0.039
				$f$ (mm/min)	895	875	890	840	810	595
	10-11	High alloy Steel, Tool Steel	35-45	$v_c$ (m/min)	245	245	250	240	255	240
				$n$	12995	9750	7955	6365	5070	3820
				$f_z$	0.023	0.03	0.028	0.033	0.04	0.039
				$f$ (mm/min)	895	875	890	840	810	595
<b>M</b>	14	Austenitic Stainless Steel	$v_c$ (m/min)	165	165	170	165	175	160	
			$n$	8750	6565	5410	4375	3480	2545	
			$f_z$	0.023	0.03	0.028	0.064	0.039	0.038	
			$f$ (mm/min)	600	590	605	595	540	385	
<b>K</b>	15-20	Cast Iron	$v_c$ (m/min)	310	305	305	315	315	315	
			$n$	16440	12135	9710	8355	6265	5010	
			$f_z$	0.05	0.067	0.063	0.075	0.1	0.113	
			$f$ (mm/min)	2465	2440	2450	2505	2505	2265	
<b>H</b>	38	Hardened Steel	45-55	$v_c$ (m/min)	65	65	65	65	65	65
				$n$	3450	2585	2070	1720	1290	1035
				$f_z$	0.026	0.033	0.036	0.039	0.034	0.038
				$f$ (mm/min)	270	255	295	270	175	155

<p>MATERIAL GROUP P, M, K</p> 	<p>MATERIAL GROUP H</p> 
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Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.  
 All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.  
**For long series and long necked tools** it may be necessary to reduce feed rate by up to 50%.

$v_c$  - cutting speed (m/min)  
 $n$  - RPM (rev/min)  
 $f_z$  - feed per tooth (mm)  
 $f$  - feed rate (mm/min)  
 $a_p$  - axial depth of cut  
 $a_e$  - radial depth of cut