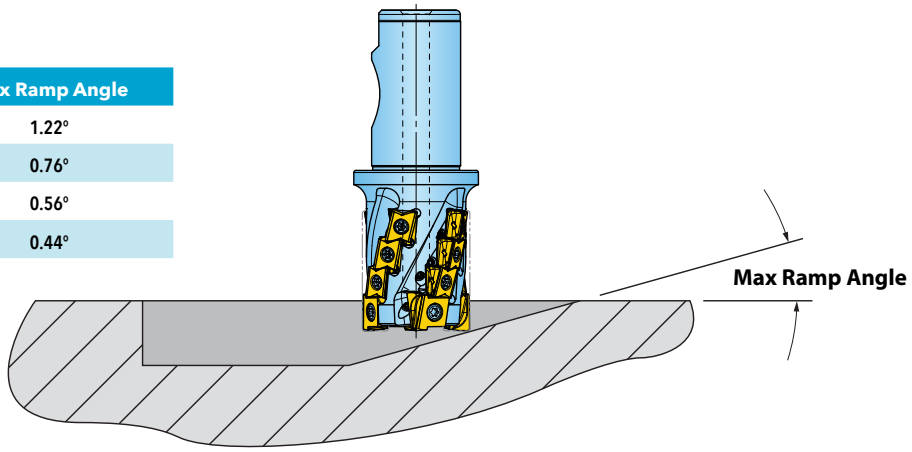
11 mm • Operating Guidelines

Ramping

Cutter Diameter	Max Ramp Angle
1.50	1.22°
2.00	0.76°
2.50	0.56°
3.00	0.44°



Materials				V_c Cutting Speed SFM	H_{max} Max. Chip Thickness (inch)	Harder <-------> Tougher				Coolant	Geometry
ISO	Material Group #VDI 3323	Type	Examples			IN4030	IN2530	IN4035	IN2535		ML
P	1-5	Non-Alloy Steel	1018, A36, 1045, A572, 1070	150-400	.004-.012	2	1	-	-	No	1
	6-9	Low-Alloy Steel	4140, 4340, P20, 8620, 300M	150-300	.004-.010	2	1	-	-	No	1
	10-11	High-Alloy Steel	H13, A2, D2, M2, T1	150-250	.004-.007	2	1	-	-	No	1
M	12-13	Stainless Steel (ferritic & martensitic)	410, 416, 440	150-300	.006-.010	4	3	2	1	Yes	1
	14	Stainless Steel (austenitic)	303, 304, 316, 15-5, 17-4	150-350	.004-.007	4	3	2	1	Yes	1
K	15-16	Gray Cast Iron	CLS. 20, 30, 45	150-400	.004-.012	1	2	-	-	Yes	1
	17-20	Nodular Cast Iron	60-40-18, 100-70-03	150-300	.004-.010	1	2	-	-	No	1
N	21-30	Aluminum	7075, 6061	150-700	.004-.020	1	2	-	-	Yes	1
S	31-35	High-Temp Alloys	Inconel, Hastelloy, Monel	50-100	.003-.006	4	3	2	1	Yes	1
	36-37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr	100-190	.002-.007	4	3	2	1	Yes	1
H	38-39	Hardened Steel >48	A2, 01, D2	50-150	.003-.004	2	1	-	-	No	1

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.