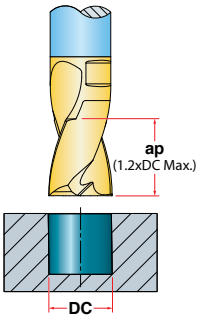
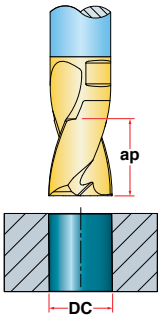
CHIPSURFER™ OPERATING GUIDELINES: CND • DRILL

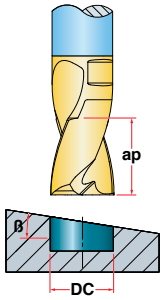
When drilling/ counterboring, depth of cut (ap) should not exceed 1.2 x DC.



For through bores, reduce feed rate by 50% before exiting workpiece material.



For drilling on inclined surfaces up to 30°, reduce parameters by 30% and on surfaces up to 45° by 50%.



*Feed / Rev is based on Two-Effective (do not double).

Materials				Vc Cutting Speed SFM	DC Cutting Dia. (inch)	f* Feed/Rev (inch)	Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples				
P	1 - 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	170-450	0.312	.004-.008	No
					0.375	.004-.009	
					0.500	.005-.010	
					0.625	.006-.012	
					0.750	.007-.013	
	6 - 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	140-350	0.312	.004-.008	
					0.375	.004-.009	
					0.500	.005-.010	
					0.625	.006-.012	
					0.750	.007-.013	
	10 - 11	High-alloy Steel	H13, A2, D2, M2, T1	130-300	0.312	.004-.007	
					0.375	.004-.008	
					0.500	.005-.009	
					0.625	.005-.010	
					0.750	.006-.012	
M	12 - 14	Stainless Steel	410, 416, 440, 303, 304, 316, 15-5, 17-4	100-230	0.312	.004-.006	May be required at high speeds
					0.375	.005-.007	
					0.500	.006-.008	
					0.625	.006-.009	
					0.750	.006-.010	
K	15 - 18	Iron	CLS. 20, 30, 45, 60-40-18, 100-70-03	265-550	0.312	.004-.010	No
					0.375	.004-.011	
					0.500	.005-.012	
					0.625	.005-.013	
					0.750	.006-.014	

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.