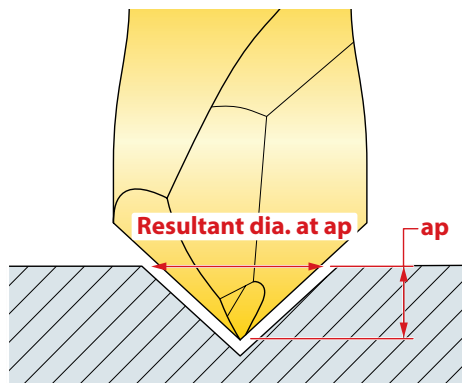


OPERATING GUIDELINES: 45Z_RA • SPOT DRILL

RPM Calculation



Calculation is to be made using the resultant diameter at ap.

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

ISO	Material		Brinnell Hardness	Vc Cutting Speed SFM	f* Feed/Rev (inch)	Coolant
P	Steel	Low Carbon 1018, 8620	150-250	200-500	.003-.008	No
		High Carbon F-6180	250-400			
		Alloyed Steel 4140, 4340	150-300			
M	Stainless Steel	300 Series, 304, 316	-	200-400	.003-.006	May not be needed at high speeds
		400 Series 15-5 PH	Up to 320			Yes
		13-8 PH	-			
K	Cast Iron	Gray	150-250	250-550	.003-.010	No
		Nodular	150-250			
S	Titanium	6AL-4V	-	70-150	.002-.005	Yes

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.