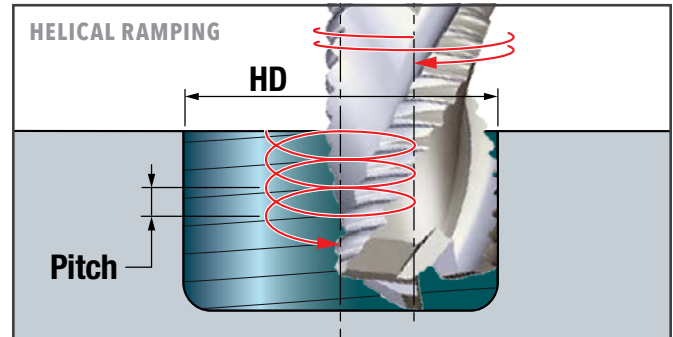
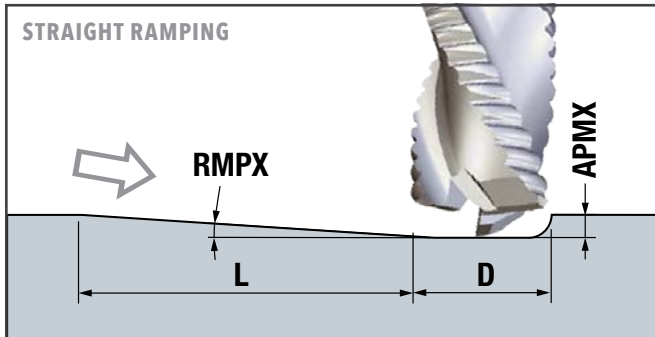


Ramping Guidelines



DC Cutter Dia.	STRAIGHT RAMPING			HELICAL RAMPING													
	RPMX Ramp Angle Max.	APMX Depth of Cut at 1.5xD	L Ramp Length Min.	HD Hole Diameter Max.							Pitch Max.						
				.015" RE	.030" RE	.060" RE	.090" RE	.125" RE	.188" RE	.250" RE	.015" RE	.030" RE	.060" RE	.090" RE	.125" RE	.188" RE	.250" RE
.250	3.5	.375	6.1	.447	-	-	-	-	-	-	.038	-	-	-	-	-	
.312	3.5	.469	7.7	.565	-	-	-	-	-	-	.048	-	-	-	-	-	
.375	3.5	.563	9.2	.684	-	-	-	-	-	-	.059	-	-	-	-	-	
.500	4.0	.750	10.8	.922	.893	.836	.779	.713	-	-	.092	.086	.074	.061	.047	-	-
.625	4.0	.938	13.4	1.159	1.131	1.074	1.017	.950	.831	-	.117	.111	.098	.086	.071	.045	-
.750	4.0	1.125	16.1	1.397	1.368	1.311	1.254	1.188	1.069	.950	.142	.135	.123	.110	.096	.070	.044
1.000	4.0	1.500	21.5	-	1.843	1.786	1.729	1.663	1.544	1.425	-	.185	.172	.160	.145	.119	.093

HD = Hole Diameter Max. formula when Helical Ramping HD = ((DC-(1 x RE)) x 1.9)	
EXAMPLES	
P3N2R-.500A075L250R030C	P3N2R-.750A112L375R125W
DC = .500" with RE = .03"	DC = .750" with RE = .125"
HD = ((DC-(1 x RE)) x 1.9)	HD = ((DC-(1 x RE)) x 1.9)
HD = ((.500-(1 x .03)) x 1.9)	HD = ((.750-(1 x .125)) x 1.9)
HD = .893	HD = 1.188

