RHINODRILLS OPERATING GUIDELINES - 8XD

ISO	Material		Condition	Tensile Strength (N/mm^2)	Hardness HB	Mtl Group No.	Cutting Speed Vc (sfm)	Cutting Diameter IPR (inches/rev) 3.0-6.0mm (.125-.250")	6.0-9.0mm (.250-.375")	9.0-12.0mm (.375-.500")	12.0-16.0mm (.500-.625")	16.0-19.05mm (.625-750")	19.05-20.0mm (.750-.787")
P	Non-alloy steel and cast steel Free cutting steel	< 0.25 %C	Annealed	420	125	1	375	.003 - .005	.005 - .0075	.0075 - .010	.010 - .013	.013 - .016	.016 - .0175
		>= 0.25 %C	Annealed	650	190	2							
		< 0.55 %C	Quenched and tempered	850	250	3							
		>= 0.55 %C	Annealed	750	220	4							
		> 0.55 %C	Quenched and tempered	1000	300	5							
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6							
			Quenched and tempered	930	275	7							
				1000	300	8							
				1200	350	9							
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	10	275	.003 - .005	.005 - .0075	.0075 - .010	.010 - .013	.013 -.016	.016 -.0175
			Quenched and tempered	1100	325	11							
M	Stainless Steel (410, 416, 420, 440)		Ferritic/Martensitic	680	200	12	230	.0023 - .0047	.0047 - .0070	.0070 - .0094	.0094 - .0126	.0126 - .0140	.0140 - .0155
	Stainless Steel (15-5, 17-4 PH)		Martensitic	820	240	13							
	Stainless Steel (302, 303, 304)		Austenitic	600	180	14							
	Stainless Steel (310, 316, 321)						165-180	.0020 - .0038	.0038 - .0055	.0055 - .0075	.0075 - .0105	.0105 - .0120	.0120 - .0135
	Duplex Stainless Steel (323, 329, F55, 2205)		Austenitic / Ferritic	820	240	14	140-150	.0016 - .0028	.0028 - .0033	.0033 - .0038	.0038 - .0043	.0043 - .0050	.0050 - .0065
S	Titanium Ti alloys TI1100, TI6AL4V			Rm 400	110	36	135 - 150	.002 -.003	.003 - .004	.004 - .005	.005 - .0065	.0065 - .008	.008 - .0095
			Alpha + Beta alloys cured	Rm 1050	310	37							

For best results, reduce feed rate to 50% when breaking through the material.
For optimal chip evacuation, use high pressure coolant for deep holes.
Inspect run-out and tool alignment before running 8xD drills.
Pecking can be applied in cases where chip formation/evacuation is a problem.