

HAMMER & BIT MODELS HDD Drilling Systems


HAMMERS AND BITS
The World's **Leading**
Drilling Technology





HDD DRILLING SYSTEMS

Drills holes from 3 7/8" to 10" (98 - 254 mm)

Numa offers a full arsenal of HDD hammers, bits, side sonde housings, bent subs, and adaptors for all your directional drilling needs.

All our HDD hammers are constructed with a hardened reversible case allowing drillers to use our products longer than competing brands. Furthermore, the single bore design allows for a maximum bore diameter in conjunction with optimum life against abrasion. Quite simply, the Numa HDD product line provides performance and dependability without sacrificing tool life.

Features

- Industry leading steerability
- Outstanding rate of penetration
- Simple design allows for field maintenance
- Reduced air requirements results in lower cost per foot
- More efficient and durable internal design
- High frequency operation provides less vibration

Unmatched Quality & Support

Our high quality, U.S. made products are customizable to meet the needs of your project application. We back that up with unparalleled customer support before, during, and after your drilling project.

- Convex & Slant face options available
- Carbide buttons positioned to effectively fracture rock providing for faster penetration rates
- Carbide grades selected for HDD Performance
- Other bit sizes may be available upon request



Hammer & Bit Specification Charts

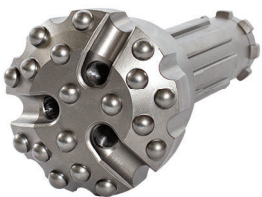
HDD HAMMERS

Hammer	Bit Shank	Hole Sizes	Diameter	Bore	Stroke	Weight	Length Shoulder to Shoulder	Length Shoulder to Bit Face	Suggested Air Pressure	Blows per Min	Min Oil Required	Thread Connection
		inch	inch	inch	inch	lbs	Inch	inch	psi	@350psi	Quarts or Litres per hour	
		mm	mm	mm	mm	kg	mm	mm	bar	@23.8bar		
HDD 35	HDD 35	3 7/8 to 4	3 1/4	2.5	3.1	49	28.6	31.1	200 to 350	1750	1	2 3/8 API Reg Pin
		98 to 102	82.6	63.5	79.4	22	727.1	790.6	13.8 to 24			
HDD 40	HDD 40	4 3/4 to 5	3 7/8	3.1	4.0	87	36.1	39.4	200 to 350	1960	1	2 3/8 API Reg Pin
		121 to 127	98.4	77.5	101.6	40	917.6	1000.1	13.8 to 24			
HDD 50	HDD 50	5 3/4 to 6 1/8	5	4.0	3.3	141	36.4	40.0	200 to 350	1950	2	3 1/2 API Reg Pin
		146 to 156	127.0	101.6	82.6	64	925.5	1016.0	13.8 to 24			
HDD 60	HDD 60	7 to 7 1/2	5 3/4	4.5	4.0	197	38.8	43.2	250 to 350	1950	2	3 1/2 API Reg Pin
		178 to 191	146.1	114.3	101.6	90	985.8	1097.3	17 to 24			
HDD 80	HDD 80	9 3/4 to 10	7 3/4	6.0	3.8	446	45.1	49.9	250 to 350	1850	3	4 1/2 API Reg Pin
		248 to 254	197.0	152.4	95.3	202	1145.5	1267.5	17 to 24			

DRILL BITS

S = Standard O = Optional

Size Class	Bit Shank	Face	Diameter Hole		Weight		Air Slots	Gauge Buttons	Carbide Size			
			inch	mm	lbs	kg			7/16"	9/16"	5/8"	3/4"
3" Class	HDD 35	Convex	3 7/8 to 4		10 to 11		2	8	S			
			98.4 to 102		4.5 to 5							
	HDD 35	Slant	4		11		2	6	S			
			102		5							
4" Class	HDD 40	Convex	4 3/4 to 5		21 to 22		3	9		S	S	
			121 to 127		9.5 to 10							
	HDD 40	Slant	5		22		2	7		S	S	
			127		10							
5" Class	HDD 50	Convex	5 3/4 to 6 1/8		36 to 39		2	8			S	
			146 to 156		16 to 18							
	HDD 50	Slant	6		40		2	9			S	
			152		18							
6" Class	HDD 60	Convex	7 to 7 1/2		59 to 62		3	8			S	
			178 to 191		27 to 28							
	HDD 60	Slant	7		60		3	7			S	
			178		27							
8" Class	HDD 80	Convex	9 3/4 to 10		124 to 125		3	12				S
			248 to 254		56 to 57							



CONVEX

Provides fast penetration rates in hard and abrasive formations. Face design allows for increased body support for gauge carbide.



SLANT FACE

Slant face bits are specially designed for use in softer and unconsolidated formations where steerability is limited.



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