

# HAMMER & BIT MODELS

# Large Conventional



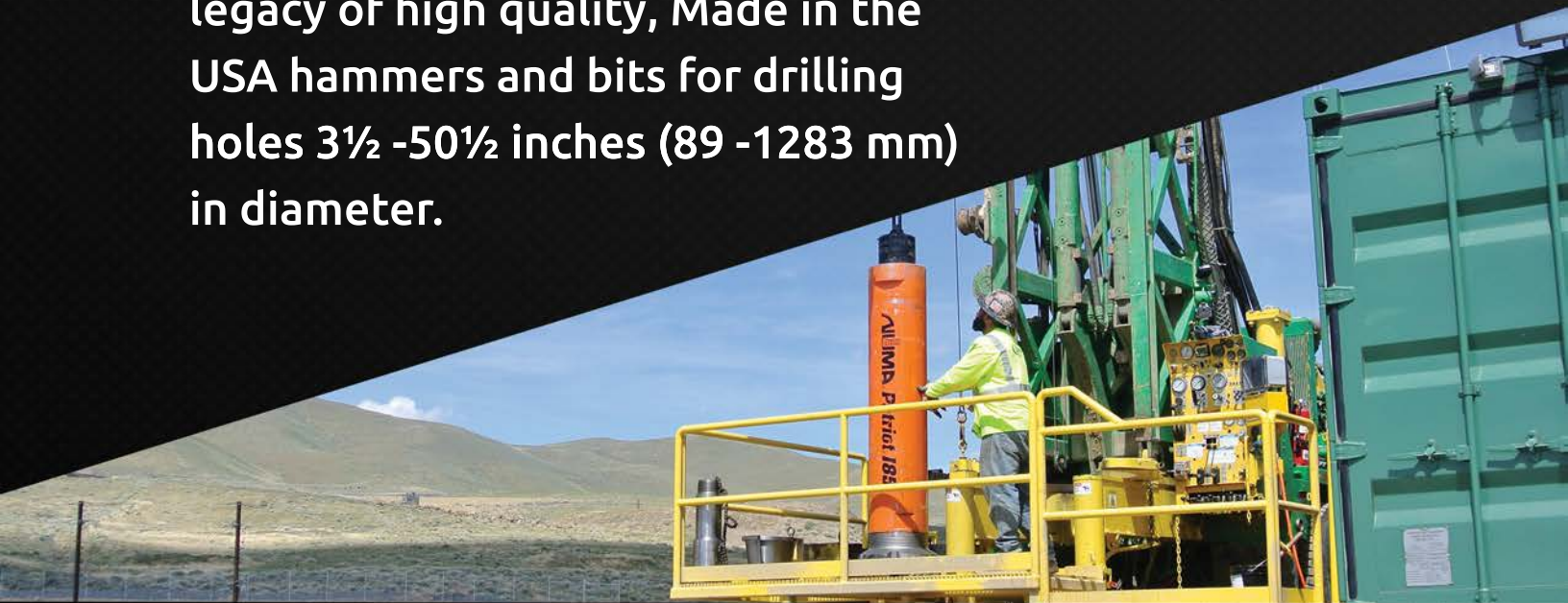
The World's **Leading**  
Rock Drilling Products





# Rock Drilling Hammers and Bits

Numa is the world's leading manufacturer of rock drilling products dedicated to ongoing innovation and results-oriented consistency. We've built a strong legacy of high quality, Made in the USA hammers and bits for drilling holes 3½ -50½ inches (89 -1283 mm) in diameter.



Foremost to the success of our customers is Numa's personal service and technological expertise.

We work with drillers on job sites around the world to support our products and gain first-hand insight for advancing rock drilling product design to satisfy every drilling environment.



**110+**

Drilling Products



**13+**

Patents & More Pending



**116+**

Countries Served



**11+**

Global Drilling Industries



**120m**

Feet Drilled



**40+**

Years of Experience



## LARGE HAMMERS AND BITS

Drills holes from 9⅞" to 50½" (251 - 1283 mm)

- Eight hammer models designed for unique applications
- Built for longevity and fast penetration rate
- Several high frequency/minimal air models available
- Exceptional performance against high heads of water
- Easy maintenance due to only 8 major hammer parts
- Exceptional bit strength & transfer of torque
- Increased spline life through durable plate drive system



## DTH PRODUCTS BUILT FOR YOUR NEEDS

Numa provides unparalleled customer support before, during and after your drilling project. Our years of experience working directly with customers on job sites means we consider your needs for every product we design. Some of the many benefits Numa customers enjoy from our Large Hammer & Bit models include:

- Construction: Configurable designs for specific needs
- Oil & Gas: Tough, dependable, proven deep hole drilling
- Geothermal: Fast penetration rates in deep, hot drilling applications
- Horizontal: Efficient hard rock borehole drilling
- Mining & Quarry: Reliable performance in various formations and conditions
- Utility: Consistent and fast drilling, day in and day out
- And many more...

## The Ultimate Rock Drilling Technology

Join the growing list of Numa customers experiencing the highest value in products, performance, and service in the drilling industry.

- Designs based upon 40+ years of experience with drillers
- Made in the USA quality and dependability
- Onsite and remote technical and product support
- Configurable designs for every drilling need
- Dedicated, in-house engineering team
- Fully tested products that come with Numa's Quality Test Certificate

## Other Ultimate Numa Products

- Small Hammers and Bits
- Reverse Circulation Hammers & Bits
- HDD Drilling Systems
- Super Jaws® Overburden Drilling Systems
- Impact Ring Bits
- Retainers
- Lubrication Systems
- Enviro Lube





# Hammer & Bit Specification Charts

## DTH HAMMERS Small Conventional Hammer Models

Hammer	Bit Shank	Hole Sizes		Diameter		Bore		Stroke		Weight		Length Shoulder to Shoulder		Length Shoulder to Bit Face		Thread Connection	Min Oil Required	Blows/Min	
		inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm	inch	mm		Quart/Hour	psi	bar
Challenger 100	N100	9 7⁄8 to 15	251 to 381	9	228.6	7.5	190.5	5.0	127.0	750	341	58.3	1480.0	65.3	1658.6	6 3⁄8 API Reg Pin	4	1235 @ 250	1235 @ 17
Patriot 100	N100	9 7⁄8 to 15	251 to 381	9	228.6	7.625	193.7	5.0	127.0	742	337	57.9	1470.7	64.9	1648.5	6 3⁄8 API Reg Pin	4	1350 @ 250	1350 @ 17
Patriot 120	P120	11 7⁄8 to 17 1⁄2	302 to 445	10 3⁄8	257.2	8.5	215.9	5.0	127.0	1067	485	66.7	1694.6	75.7	1923.2	6 3⁄8 API Reg Pin	5	1300 @ 250	1300 @ 17
Patriot 125	P125	12 1⁄4 to 20	311 to 508	10 3⁄4	273.1	9.25	235.0	5.0	127.0	1155	525	66.8	1695.5	75.8	1924.1	6 3⁄8 API Reg Pin	5	1150 @ 250	1150 @ 17
Patriot 180	P180	18 to 30	457 to 762	15 1⁄2	393.7	13.25	336.6	4.5	114.3	2452	1115	65.5	1663.7	75.4	1915.2	8 3⁄8 API Reg Pin	10	1100 @ 200	1100 @ 13.6
Patriot 185	P180	18 to 30	457 to 762	15 1⁄2	393.7	13.25	336.6	5.0	127.0	2665	1211	70.6	1793.2	80.6	2047.2	8 3⁄8 API Reg Pin	10	900 @ 200	900 @ 13.6
Patriot 240	P240	24 to 36	610 to 914	20	508.0	15.0	381.0	5.0	127.0	5156	2344	76.1	1933.6	90.1	2289.2	8 3⁄8 API Reg Pin	12	925 @ 200	925 @ 13.6
Champion 330	C330	32 to 48	813 to 1219	28	711.2	20.0	508.0	5.0	127.0	12208	5549	89.5	2273.3	105.5	2679.7	10 BECO Pin	20	925 @ 200	925 @ 13.6

## DTH BITS Small Conventional Bit Models

S = Standard      O = Optional

Size Class	Bit Shank	Diameter Hole		Weight		Air Slots	Face			Gauge Buttons	Carbide Size						Diamond	Wear Protection	Retained
		inch	mm	lbs	kgs		CC	CV	F		7⁄16"	9⁄16"	5⁄8"	3⁄4"	7⁄8"	1"			
10" Class	N100	9 7⁄8 to 15	251 to 381	235 to 377	107 to 171	3	S			12 or 15				S	O		O	O	O
12" Class	P120	11 7⁄8 to 20	302 to 508	337 to 748	153 to 339	3	S			12, 15 or 18				S	O		O	O	O
	P125	11 7⁄8 to 20	302 to 508	417 to 803	189 to 364	3	S			12, 15 or 18				S	O	O	O	O	O
	112	11 7⁄8 to 20	302 to 508	376 to 732	171 to 332	3	S			12, 15 or 18				S	O	O	O	O	O
18" Class	P180	18 to 30	457 to 762	1076 to 2362	488 to 1071	3	S			18				S	O	O	O	S	O
24" Class	P240	24 to 36	610 to 914	2174 to 3460	986 to 1569	6			S	30				S	O	O	O	S	O
33" Class	C330	32 to 48	813 to 1219	4697 to 9350	2131 to 4241	6			S	30				S	O	O	O	S	



### FLAT

Provides good performance in medium to hard formations. The strongest face design producing durable, long lasting drilling.



### CONCAVE

Provides consistent drilling in all formations. The cone shaped depression in the face has piloting effect to drill straighter holes.



### CONVEX

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



### SPHERICAL

Provides best overall performance in granite hard rock and granite formations. Known as the strongest carbide for deep hole drilling.



### BALLISTIC

Provides fastest penetration rates in soft/medium, less abrasive formations. Produces larger spoils/cuttings.



### DOUBLE DOME

Provides best performance in limestone and sandstone formations. Much stronger than ballistic and still performs when not sharpened.





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Rock Drilling Products

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MADE IN THE USA



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