

## Extractor Hammer

NDS Drilling Supply  
26041 Newton Circle  
Elko, MN 55020  
952-461-3400





Left: 6" Casing Cutter, Middle: 200 lb Extractor hammer, Right: 6" Casing Perforator

### **Extract faster and more safely**

Extractor Hammers are a unique product line that uses the principle of a down hole hammer to vibrate loose stuck tools and to remove casing.

- Hammering on the upward stroke pounds casing out of the ground.
- Extract casing in minutes instead of hours.
- You can push, pull, or rotate while hammering for difficult cave-ins.
- Around 1000 BPM transfers vibrations down the drill string to reduce skin friction and free stuck tools.
- Four sizes of Extractor Hammer are available to cover all casing sizes.
- Three key parts make the tool tough and simple - just store it clean and keep it oiled when running.
- A variety of weldable pulling plugs, adapters, and fishing tools are available.

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# EXTRACTOR HAMMER PARTS

## Exploded Extractor Hammer Model

### **TOP SUB**

Available in 3-1/2 API or 2-7/8 IF Pin or Box. EX435 and EX900 come with a side-air inlet shackle adapter for isolation (hanging) from the top head drive.

### **SHOULDER PORTING RING**

Timing ring ports air to run the Extractor Hammer.

### **PISTON SLEEVE**

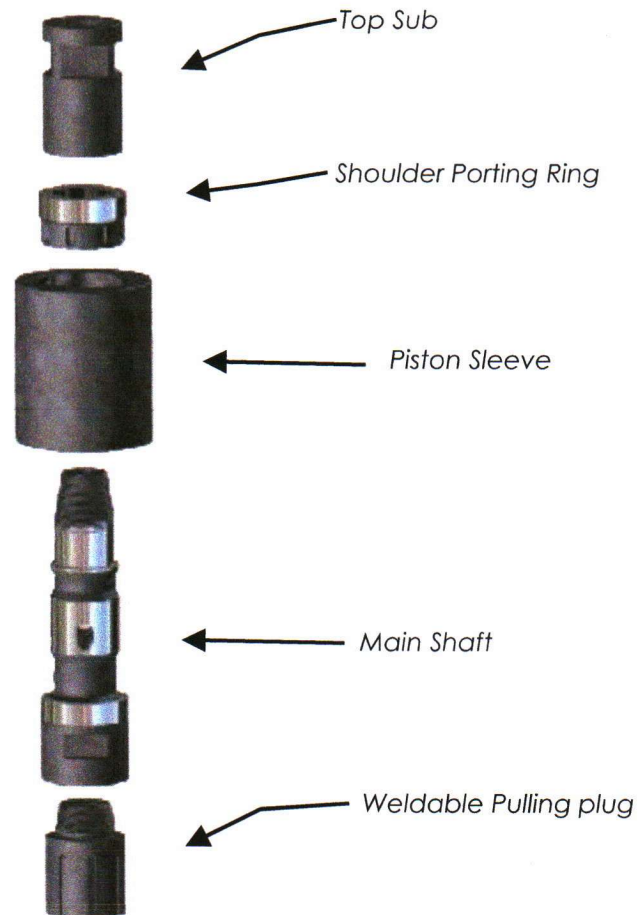
The Piston is designed to hammer on the upstroke and run around 1000 blows per minute.

### **MAIN SHAFT**

Hardened and precision machined, the Piston rides on the Main Shaft. In tandem with the Shoulder Porting Ring, the Main Shaft controls timing of the Piston firing.

### **WELDABLE PULLING PLUG**

Welds to casing. 6" plug has a 3-1/2 API or 2-7/8 IF Box. Accessory weldable pulling plugs available for up to 26". Multi-step plugs available for multiple sizes of casing in one plug.



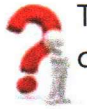
Extracting stuck tools can be a challenge and the Extractor Hammer is the best bet. Damaged drill strings, cave-ins, and unpredictable ground conditions can lead to varied results. We can't guaranty an Extractor Hammer will get you unstuck, but vibrating (hammering up) in addition to pushing, pulling, and rotating has given drillers the best advantage when removing stuck tools.

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# EXTRACTOR HAMMER AIR & SUBS



Tip: BPM increases with air. If it isn't doing the trick, add more air. Extractor Hammers can take air till the back pressure is maxed out (usually around 300 psi).

Extractor Hammers

Extractor Hammer Casing Size & Subs			
Extractor Hammer (lbs)	Casing Size* (in)	Standard Subs	Main Shaft Subs
35	up to 8"	2-7/8 IF	3.5 API PXB
200	6"-12"	3.5 API or 2-7/8 IF	4.5 API PXB
435	12"-24"	Side Air Shackle	6-5/8 API PXB
900	24"-48"	Side Air Shackle	6-5/8 API PXB

\*Larger Sizes Available on request.

Extractor Hammer Air Needed		
Extractor Hammer (lbs)	Casing Size (in)	Air (CFM) Requirement
35	up to 8"	100-650
200	6"-12"	600-2400
435	12"-24"	600-3500
900	24"-48"	100-4400

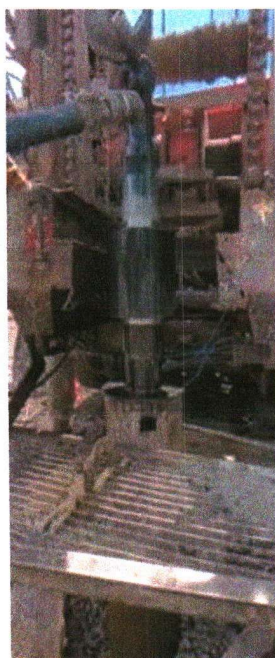
Specification subject to change. Ex435 and Ex900 do not have a bottom sub. Ex35 and Ex200 have top and bottom subs.

Our Team was helping a driller in Japan who's 8" casing had gotten stuck at 600 ft. We brought over an EX200. They were using a casing jack and had jacked up a foot, but the casing just wouldn't pull. We put 850 CFM to the Ex200 and before the tool came up to pressure the casing was already unstuck and easily extracting.

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# CASING EXTRACTION



**45**  
seconds



Determining the right extractor hammer for the job can be tricky. We recommend going bigger so you can always add more air if needed. Old wells full of silt can be the hardest to extract, followed by clay & sand, with rock requiring the least air.

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## Casing Extraction Estimates

Extractor Hammer (lbs)	Intended Casing Size	Example Casing	Estimated* (ft) depth in clay
35	up to 8"	4"	0-75
		6"	0-30
200	6"-12"	6"	400-600
		12"	200-400
435	12"-24"	12"	1000-2000
		24"	500-1000
900	24"-48"	24"	2000-4000
		48"	1000-2500

Specification subject to change. Depth ranges are an estimate based on experience and will not be true in all conditions. Casing sizes are recommended; Extractor Hammers may work outside range given.

Pulled 12" casing like butter; I honestly didn't even have to pull, just left slack in the winch line and it came right out. It was taking over a day per well to pull casing. With the EX200 it took 2-3 min. Pulling with the rig someone could've gotten hurt. The extractor hammer is by far the safest method to pull casing without a DR rig.

**-Dover Drilling**





## EXTRACTOR HAMMER ACCESSORIES

**Side Air  
Inlet Shackle**



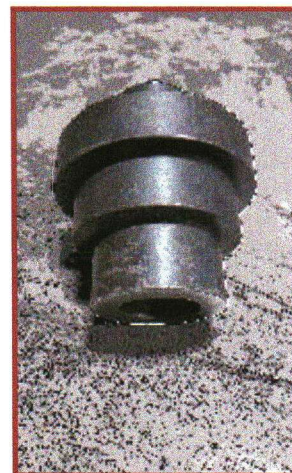
Prevent bearing damage  
by hanging the hammer or  
use a crane.

**Swivel Sub**



Swivel allows casing to be  
pulled away as Top head  
lowers

**Multi-size weldable  
pulling plugs**



6-8-10" & 6-8" all in one  
subbed plug

**Fishing Tools**



Various subs, normal and reverse  
thread, various tapers.

**Weldable Pulling Plugs**



6" weldable plugs:  
3.5 API or 2-7/8 IF

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