



**DRILL FASTER
RUN HARDER
WORK SMARTER**



LOW PROFILE CANISTER DRILLS



ADVANCED DESIGN DRILLS

Advanced engineering of Center Rock's LP Drills provide a cost effective solution for drilling excavation requirements up to 144" (3658 mm) in diameter. Our drills have been used by some of the nation's largest building, roadway, utility and mining contractors to quickly drill holes to the exact size required by their specifications.

- Standard and custom-built sizes from 24" - 144" (610 mm - 3658 mm).
- Models
 - Full Face and Hole Openers
 - Direct Circulation with Calyx Basket or Can Rod Recovery
 - Reverse Circulation
 - HDD Pull Reamers
 - Utility Pole Drills
 - Raise Bore / Mining
- All canisters from 24" - 144" (610 mm - 3658 mm) utilize the exact same 6" (152 mm) class hammer.
- Bits are free to spin which helps to maintain gage of bore hole and also reduces wear on bits.
- Cost effective solution for many drilling / hard rock excavation challenges.
- Easy to perform maintenance in the field.
- Reduced bit cost as compared to large diameter hammer bits.
- Low air consumption vs. competitive offerings.
- Simply mounted to any drill rig.
- Customer support service 24/7.
- Designed and Manufactured in the USA.

APPLICATIONS

- CONSTRUCTION
 - Pilings
 - Caissons
 - Footers
 - Utility Pole Holes
 - Curtain Walls
 - Drilled Shafts
- UNDERGROUND CONSTRUCTION TECHNOLOGY
 - Horizontal Directional Drilling
- OIL / GAS
- ACCESS AND VENTILATION SHAFTS
- MINING

MODELS AND APPLICATIONS

HDD LP PULL REAMER



- 12" (305 mm) and larger in diameter
- Capable of trailing drill pipe
- Equipped with back reamers
- Side protection carbide buttons for extended wear



MINING LP DRILL

- 22" (558.8 mm) and larger in diameter
- Push or pull applications
- Equipped with back reamers



REVERSE CIRCULATION LP DRILL

- 24" (610 mm) and larger in diameter
- Rock cuttings pickup point is at the base of the drill (yellow arrows)
- Can simply be converted between reverse circulation and direct circulation style

UTILITY LP DRILL

- 18" (457 mm) and larger in diameter
- Hex pin connection
- Low air consumption
- Shorter length for low clearance
- Lightweight design
- No shock sub required



SPECIFICATIONS

STANDARD SIZE LP DRILL SPECIFICATIONS								
LP FULL FACE DRILLS								
SIZE		NUMBER OF HAMMERS	MINIMUM AIR REQUIRED		RECOMMENDED AIR REQUIRED		WEIGHT WITH THE CALYX	
INCHES	MM		SCFM	M ³ /MIN	SCFM	M ³ /MIN	LBS	KG
24	610	4	1600	45	2000	57	3250	1474
25	635	5	2000	57	2500	71	3500	1587
26	660	5	2000	57	2500	71	4000	1814
28	711	5	2000	57	2500	71	4200	1905
30	762	5	2000	57	2500	71	4700	2131
32	813	6	2400	68	3000	85	5500	2494
33	838	6	2400	68	3000	85	6000	2721
34	864	6	2400	68	3000	85	6200	2812
35.5	900	7	2800	79	3500	99	6500	2948
36	914	7	2800	79	3500	99	6800	3084
41.5	1054	7	2800	79	3500	99	8300	3764
42	1067	7	2800	79	3500	99	8500	3855
48	1219	10	4000	113	5000	142	10700	4853
53	1346	12	4800	136	6000	170	12700	5760
58	1473	13	5200	147	6500	184	14900	6758
60	1524	13	5200	147	6500	184	16500	7484
66	1676	15	6000	170	7500	212	17250	7824
72	1829	17	6800	193	8500	241	19700	8935
84	2134	19	7600	215	9500	269	23000	10432

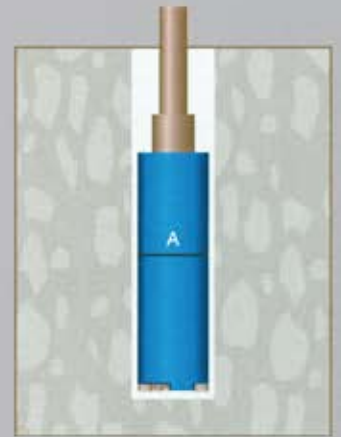
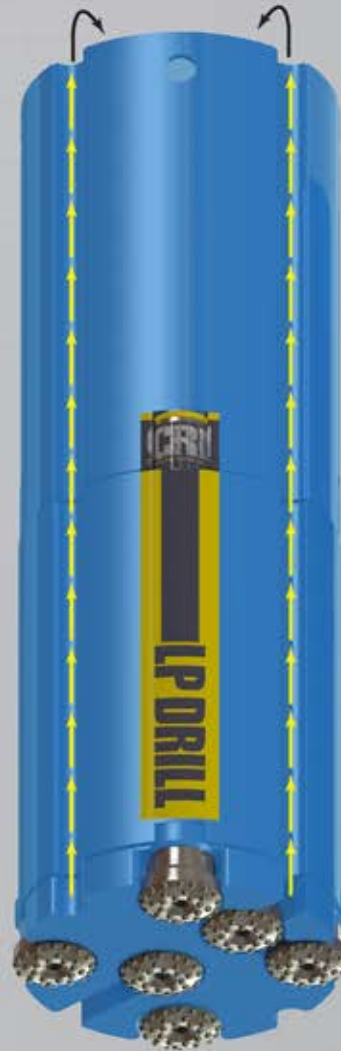
LP Hole Openers: Sizes up to 144" (3658 mm)

*** Recommended Operating Pressure: 150-250 psi (10.3-17.3 bars) (NOTE: With a head of water, greater air pressure may be required)**

HOW IT WORKS

CONVENTIONAL LP AND HOLE OPENER

Hammers fitted with button bits are positioned in a specially designed grid to ensure even cutting across the face of the hole and to promote proper flow of cuttings outward and upward into the calyx basket. For large diameter holes, a pilot shaft is drilled with a full face LP Drill (Figure A), then a larger diameter hole opener opens the pilot shaft to the required diameter up to 144" (3658 mm) (Figure B). This method allows for more efficient and faster rock drilling. Our drills have been used to cut holes up to 2,047 feet (623.9 m) deep and are designed to reach much greater depths.



REVERSE CIRCULATION (RC) LP DRILL

Center Rock's reverse circulation LP Drills are ideal for deep hole applications or discharge containment. We offer two styles which are capped flute recovery and center recovery. The capped flute recovery style consists of, a standard LP drill with larger flutes that are capped, a seal band added to the base and interchanges, along with a shroud bolted to the top. The advantage of the flute style is the canister may be converted between RC and direct circulation mode. Alternatively, the center recover style has integrated return tubes flowing through the center of the canister, along with a built-in air/cuttings interchange for a shorter top connection. Both style RC LP Drills exhibit base recovery for full containment, can be manufactured with any pipe connection, and utilizes standard LP hammers and bits.

JOBSITES



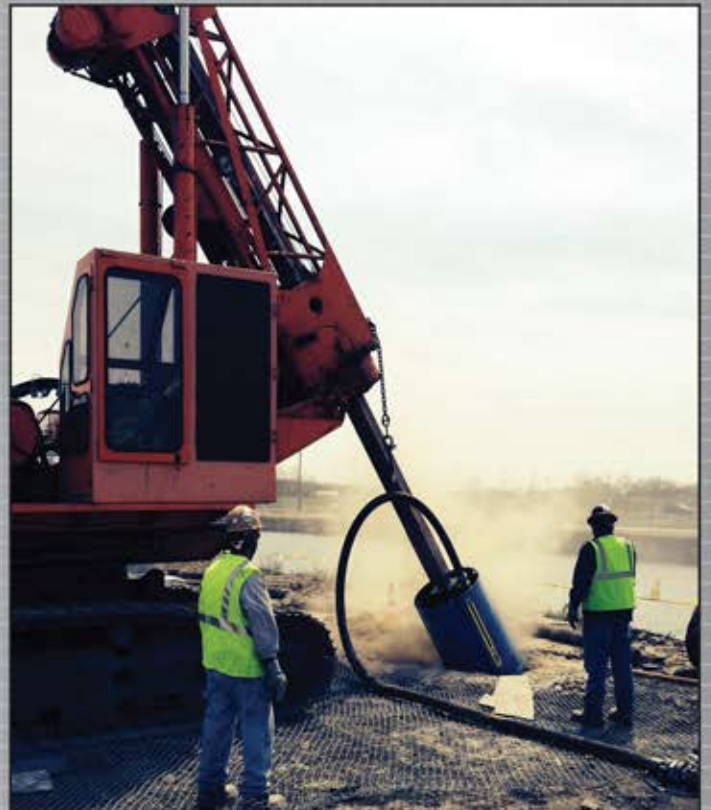
The LP emptying the calyx basket.



The LP drill on a small excavator mount.



Reverse circulation LP drill.



Battered Hole.

ACCESSORIES

WATER INJECTION SYSTEM

Ideal system for dust control. This unit is equipped with a 14.5 HP drive engine and a triple piston pump that puts out 3 - 22 GPM (11.4 - 83.3 LPH). Complete with electric start, mounted in a guarded frame, and supplied with 1.5" (38 mm) inlet and 1" (25 mm) discharge hose.



OIL INJECTION SYSTEM/BIODEGRADABLE ROCK DRILL OIL

The oil injection system is a self contained, air-actuated positive displacement system. It comes equipped with either a 7 gallon (3.8 liter) reservoir with sight glass infinitely variable from 0 - 1 GPH (0-3.8 LPH) or a 22 gallon (83.2 liter) reservoir with sight glass infinitely variable from 0 - 4 GPH (0-15 LPH).

The biodegradable rock drill oil meets all EPA standards for biodegradability. Available in 55-gallon (208.2 liter) drums and five gallon buckets.

RATCHET ATTACHMENT

The ratchet attachment is used to supply the LP drill with air when the drill rig is not equipped with air inlet. The ratchet is equipped with the LP's mating bolt flange, shoulder to shoulder lengths of 22" - 60" (559 mm - 1524 mm) and can be installed with any Kelly box. The ratchet will rotate 360° in one direction and 360° in the opposite direction allowing the unit to drill.



LOW PROFILE DRILL BREAKOUT STAND

Center Rock offers a specially designed breakout stand for quick bit changes and easy hammer maintenance or repair, on or off site.



AIR MANIFOLD

The air manifold connects multiple compressors to a single airline. This manifold is equipped with two 4" (102 mm) and five 3" (76 mm) inlets, two 1" (25 mm) and three 1/4" (6.35 mm) auxiliary ports, and one 4" (102 mm) outlet.



1450/200 AIR COMPRESSOR

Ideal air match / compressor for LP Drills. 1450 CFM (41,059 LM) at 200 psi (13.8 bars).

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