



HP-CD

"WE HIT HARDER, SO YOU DRILL FASTER"



CLUSTER DRILL

Heavy Duty Design Coupled With Hard Hitting CS8 Hammers And 10" Quick-change Bits Makes The Keystone Hp Superior For Large Hole Applications



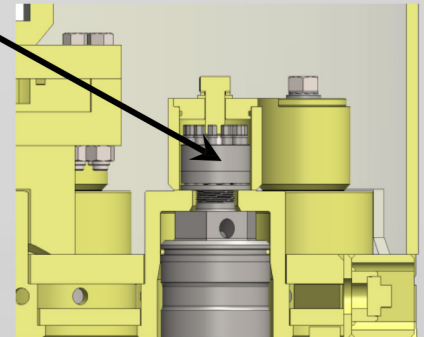
CHANGE BITS IN THE FIELD

- Patented Quick Change Technology Allows Bits To Be Replaced In The Field
- Bit Installation With All- Thread And Wrench
- Bit Removal With Air Powered Hydraulic Power Pack

POWERFUL CS8 8" HAMMER

SUPERNUT

- NO NEED FOR TORQUE MULTIPLIER
- SUPERIOR HAMMER RETENTION SYSTEM



BACKHEAD

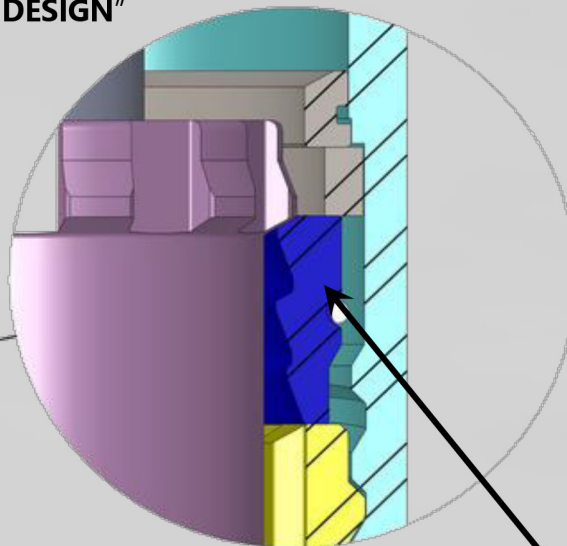


"LESS PARTS,
SIMPLE DESIGN"

100 LB.
REVERSIBLE
PISTON =
GREATER
IMPACT



SPLINED CHUCK



QUICK
CHANGE BIT
RETAINER

10" BIT
SELF INDEXING



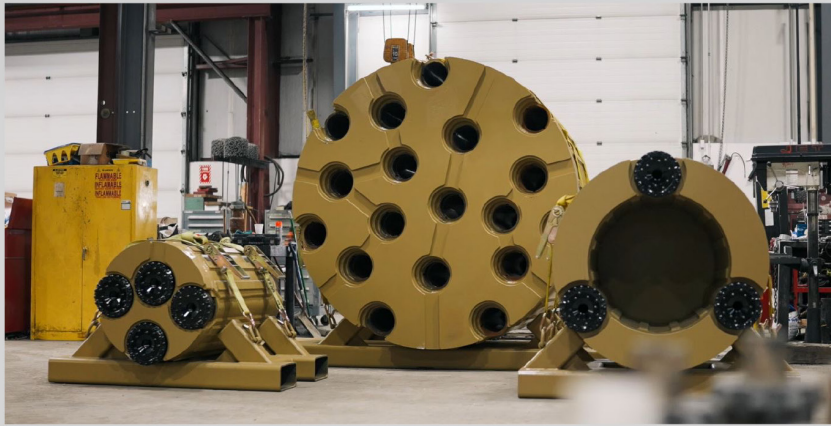


SERVICE AND RENTALS

AIR COMPRESSOR SALES AND RENTAL



- 750 – 1600 Cfm / 150 Psi Compressors
- 1170 – 1250 Cfm / 350 Psi Compressors
- Air Hose And Accessories
- Tier 3 And Tier 4f Diesel Packages
- Electric And Natural Gas Driven Packages



IN-HOUSE HAMMER AND BIT REPAIR

- Individual Broken Carbide Replacement
- Robotic Arm Dressing Of Worn Carbide
- Total Bit Face Reconstruction
- DTH Hammer Analysis, Service And Repair



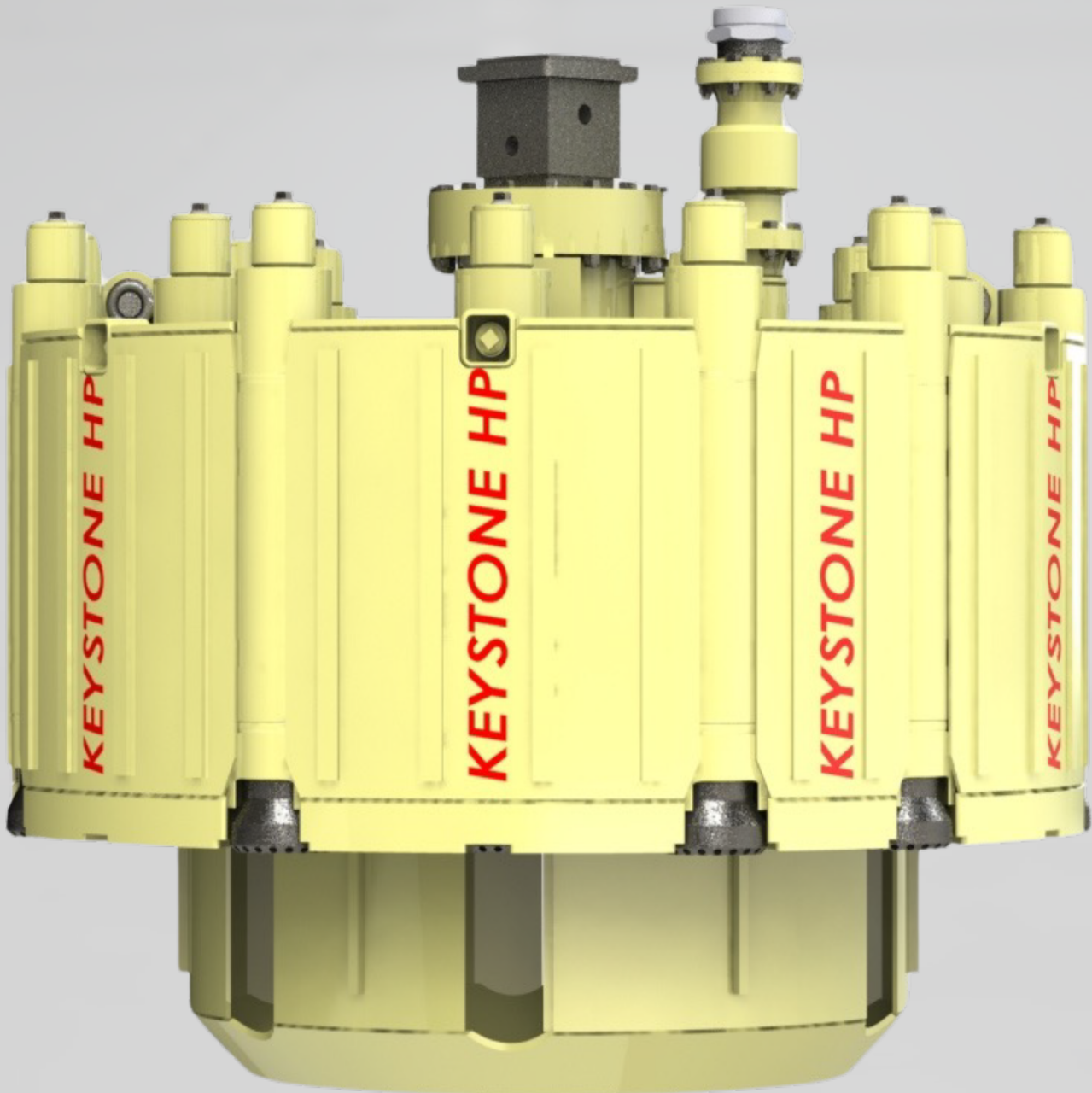
Service

- Customer Support
- Field Service Available 24 / 7
- Startup Service Available





HP-HO



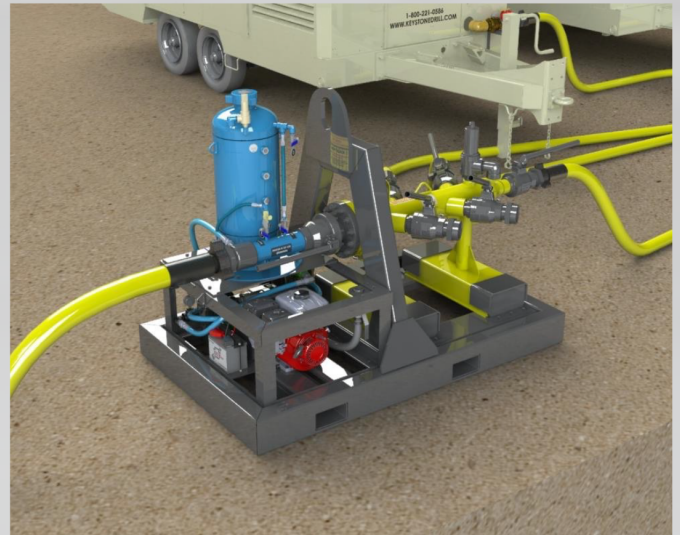
HOLE OPENER



HP-ACCESSORIES

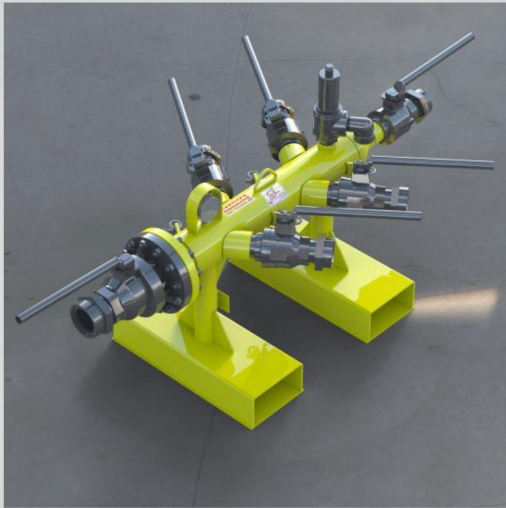
KEYSTONE SUPPORT MODULE

- COMBINATION OF AIR MANIFOLD, LUBRICATOR, AND WATER INJECTION ON A SINGLE PLATFORM
- HEAVY DUTY FRAME WITH FORKLIFT POCKETS
- SINGLE POINT LIFT
- MOVE ALL YOUR ACCESSORIES IN ONE TRIP!
- ELIMINATES 4" HOSE BETWEEN MANIFOLD AND LUBRICATOR



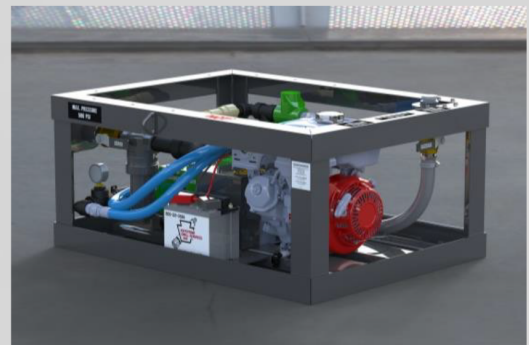
5-INLET AIR MANIFOLD

- (5) 3" INLETS W/VALVES, (1) 4" OUTLET VALVE
- CAN ADD A 6TH INLET IF REQUIRED
- RECONFIGURABLE FOR EITHER A 6" OUTLET OR 2" INLETS
- FORKLIFT POCKETS
- 600 PSI RELIEF VALVE (FULL FLOW)
- ASME CERTIFIED PRESSURE VESSEL (NATIONAL BOARD REGISTERED)



5-21 GPM WATER INJECTION

- SILICA DUST CONTROL
- 8.4 HP HONDA ENGINE W/ ELECTRIC START
- FLOW/PRESSURE CONTROL VALVE
- 500 PSI RELIEF VALVE



17-GALLON LUBRICATOR

- VENTURI STYLE (NO MOVING PARTS)
- NEEDLE VALVE TO ADJUST FLOW
- ASME CERTIFIED PRESSURE VESSEL (NATIONAL BOARD REGISTERED)
- 1000 PSI RELIEF VALVE





HP-AIR



CRAWLER COMPRESSOR

- 30° Gradeability
- Top Speed Of 3 mph
- Triple Grouser Track Shoes
- Industry Proven Undercarriage
- Heavy Duty Car Body Frame

Easy access
to hammers

Chiksan swivel

Calyx basket

Integrated "ratchet" air inlet

Clean-out
ports

SUPERNUT

Kelly box

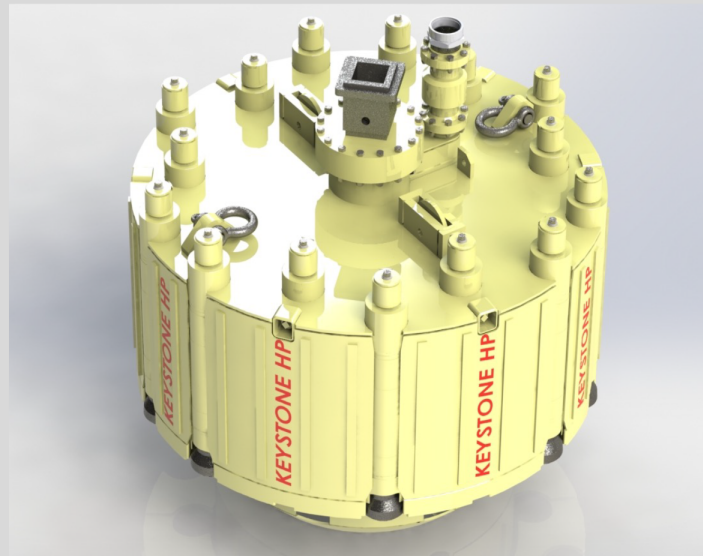
Kelly box
adapter plate

8"
HAMMER

Optimized Bit Layout For
Maximum Performance
And Minimum Tool Wear

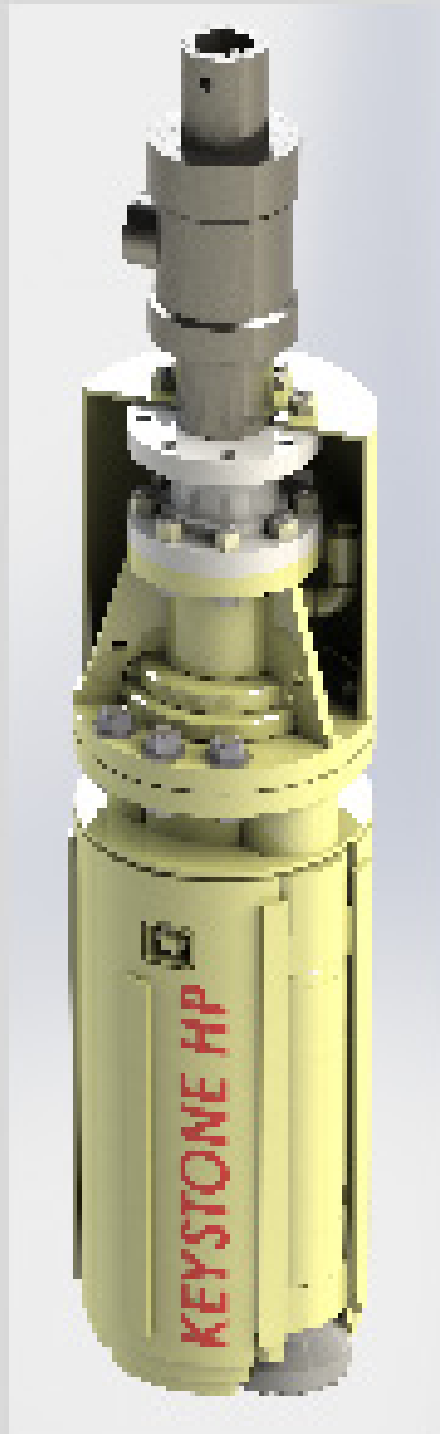
10" bit

**KEYSTONE
DRILL SERVICES**





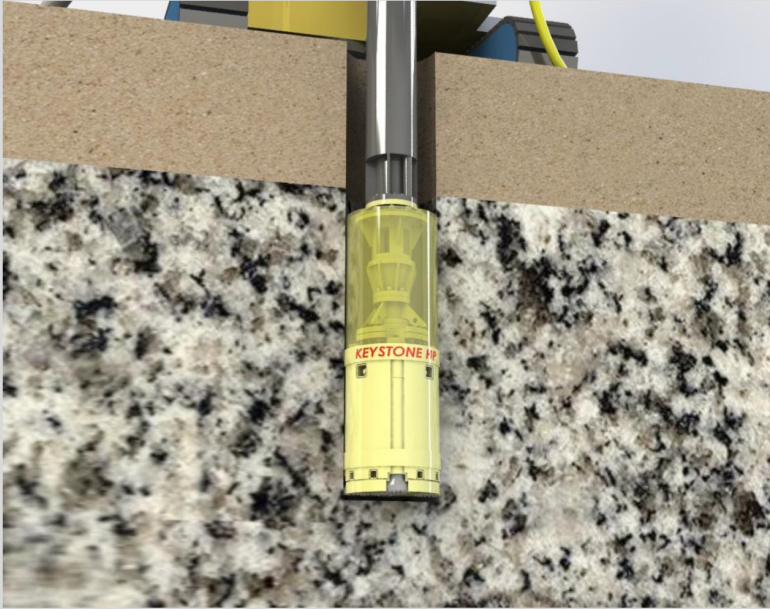
HP-PD



CLUSTER POLE DRILL



REVERSE CIRCULATION



- **Use A Conventional Cluster Drill In A Reverse Circulation Application**
- **Add Reverse Circulation Interchange /Crossover**
- **Add Sealing Plate To Direct Cuttings Into Interchange**

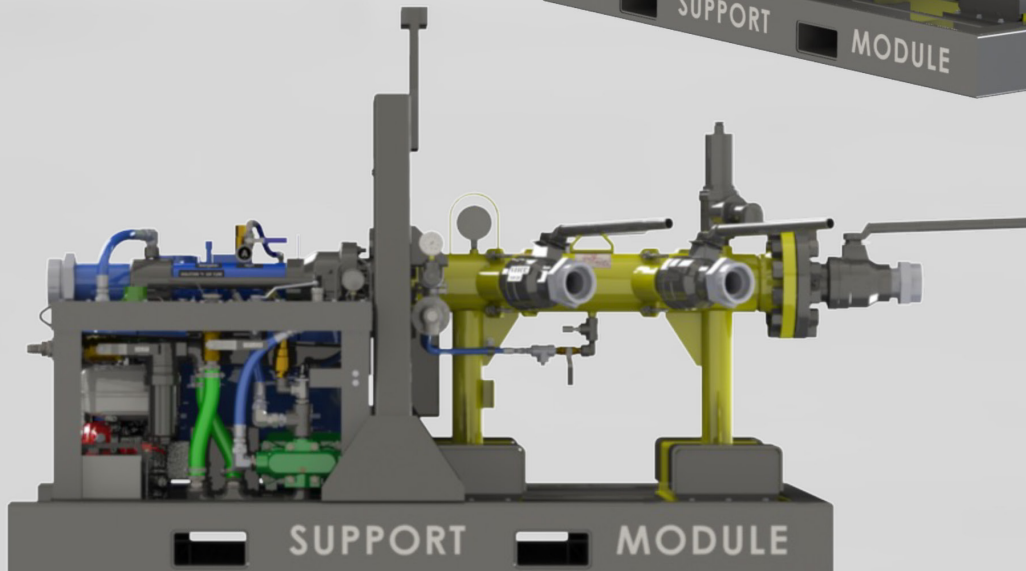
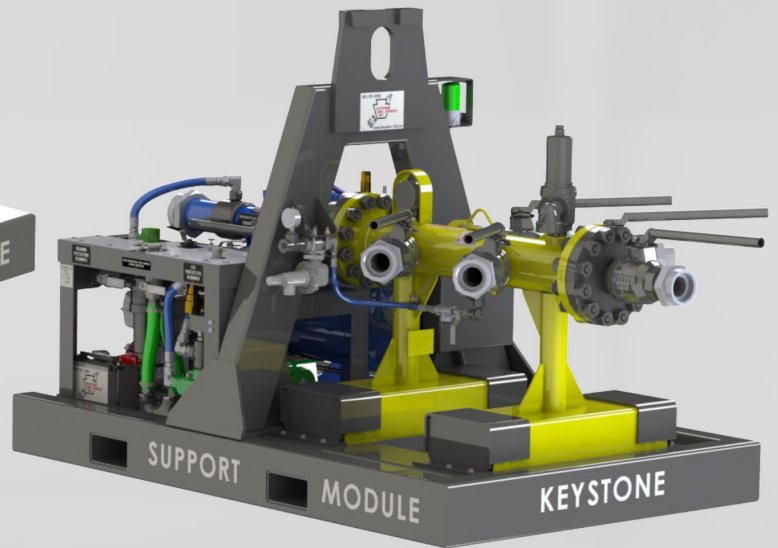
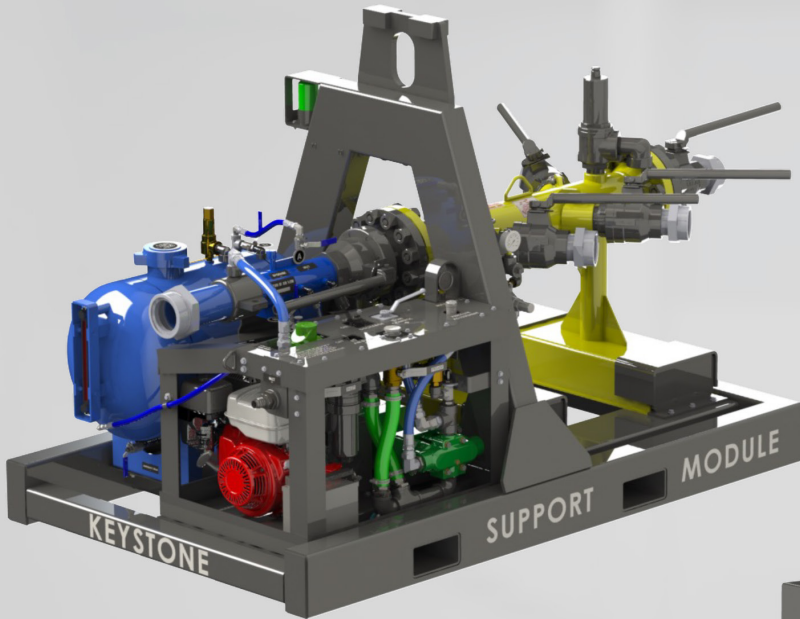
- **Specially Designed Canister To Route Cuttings Through Tubes Into Interchange**
- **Requires RC - Interchange, Pipe, And Swivel**
- **Complete Containment And Control Of Cuttings**
- **Perfect For Flooded Holes**



- **Continuous Rotation Drilling**
- **No Need To Trip Out Of The Hole**
- **Fastest, Most Efficient Way To Drill**
- **All The Benefits Of RC Without A Specialized Canister**

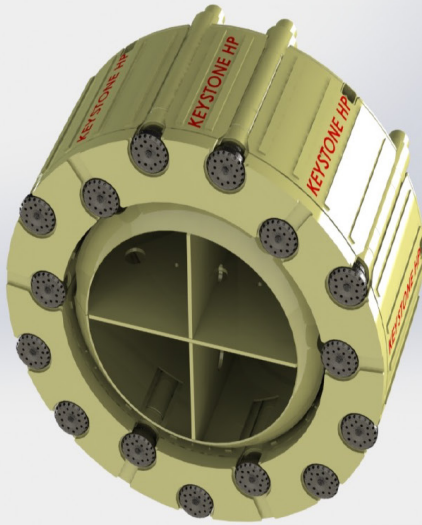


HP-AC



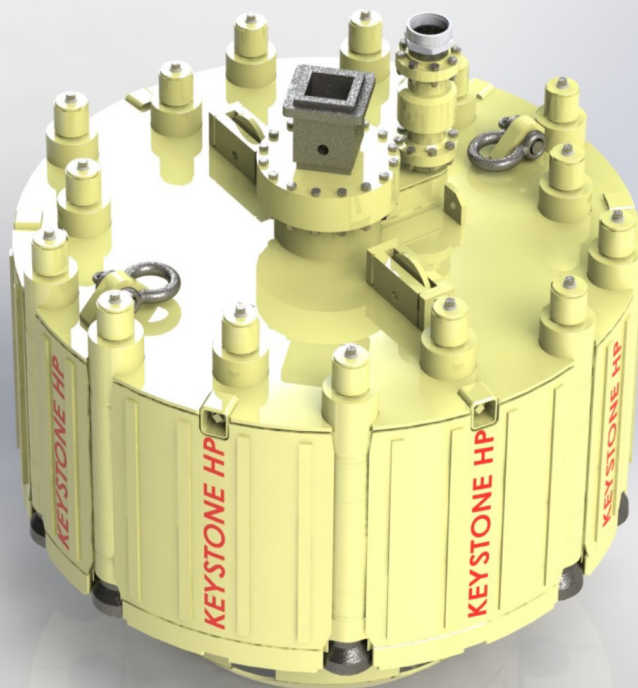
ACCESSORIES

HOLE OPENER



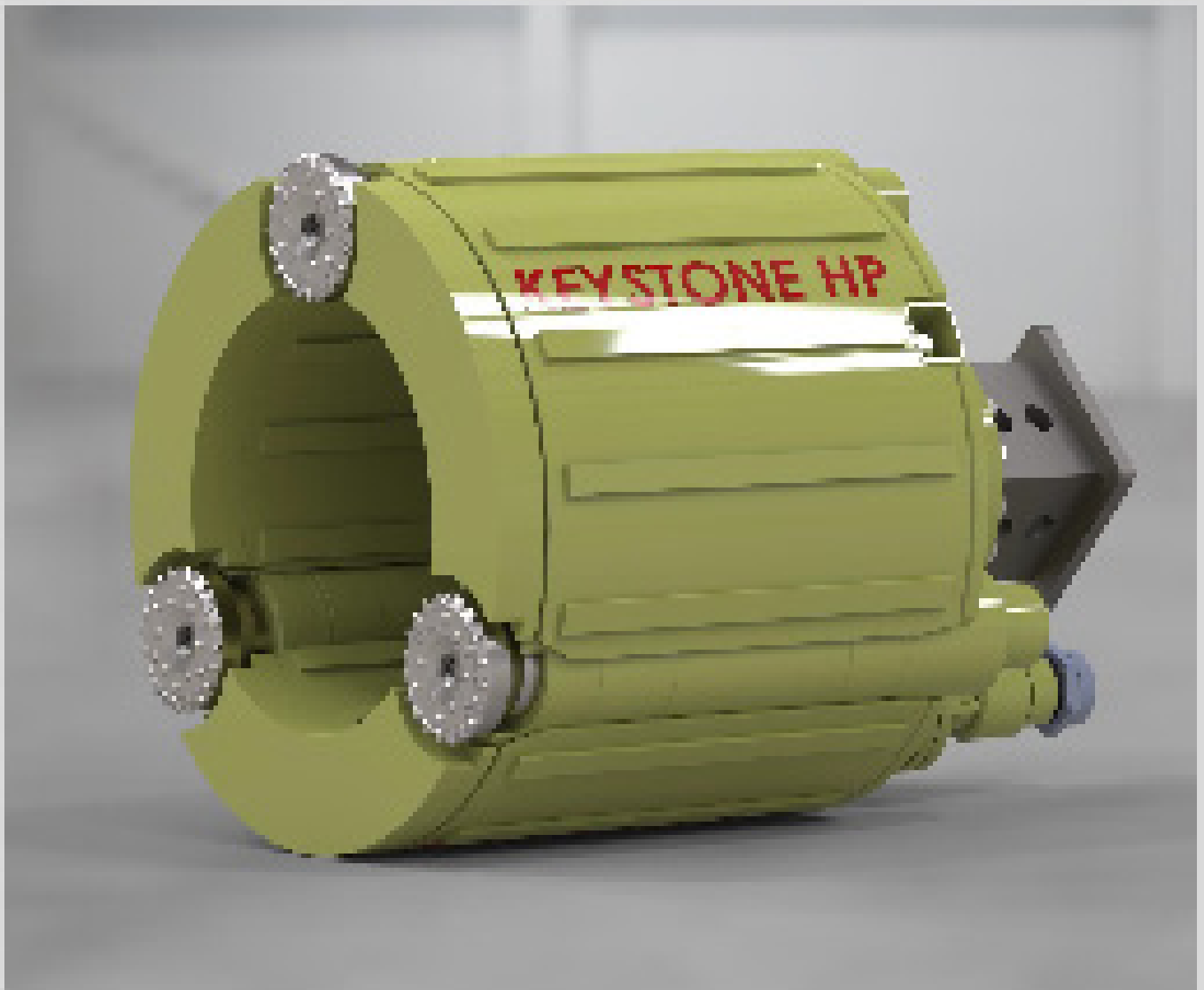
- Drill Large Diameter Holes With Less Bits/Hammers And Air Compressors
- Customizable Sizes Up To 144"

- Hole Openers Have A Guide Ring Designed To Follow A Smaller Pilot Hole
- Divide Hole Drilling Into Progressive Steps With The Same Bits, Hammers, And Air Requirements





HP-CB



PERCUSSION CORE BARREL



PERCUSSION CORE BARREL

- Reduce Number Of Compressors, Bits, And Hammers Needed To Drill Hole
- Ex. 48" Core Barrel – 3 Bits / Hammers, 48" Cluster Drill – 7 Bits / Hammers



- 5-1/2' Drilling Depth Until Stub Removal

- Integrated "Ratchet" Air Inlet
- 10" Wide Kerf (48" Core Barrel Leaves 28" Stub)
- Same Low Height As Traditional Cluster Drill
- Reduced Overall Weight
- Reduced Overall Weight On Bit Requirement
- Reduced Operating Torque
- Custom Sizes Available





HP-RC



REVERSE CIRCULATION

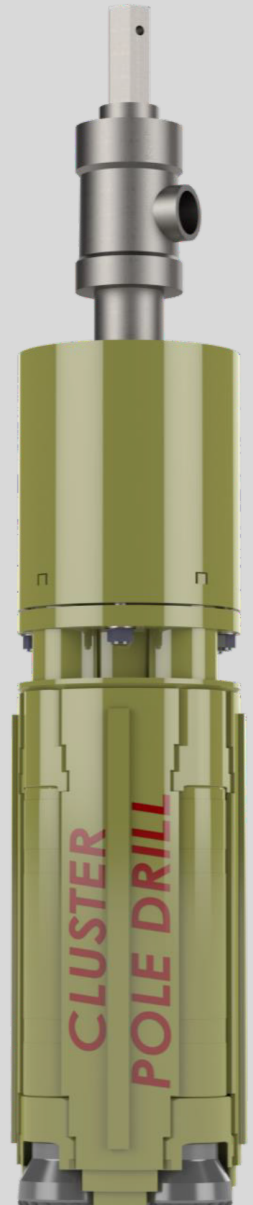


CLUSTER POLE DRILL



- Continuous Rotation Swivel Drilling
- Mark Vi, Side Inlet Swivel Included (4" NPT Inlet)
- 4,700 Lbs. Fully Loaded (24")
- Approximately 9-1/2' Tall
- Available In 24", 30", And 36" Diameters

- Adapter To Weld Hex Connection Or Kelly Box (Keystone Or Customer Supplied)
- 6' Standard Drilling Depth
- Add Custom Pipe Strings To Increase Drilling Depth To Your Specification



KEYSTONE **HP** DRILL SPECIFICATIONS - STANDARD SIZES

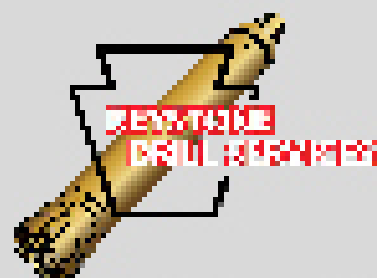
Diameter (IN)	Hammers/Bits	Air Requirements ⁽¹⁾ (SCFH)	Ratchet Air Inlet Size	Fully Loaded Weight (LBS)	Oil Required per Hour ⁽²⁾ (GAL)
24	3	1,605	2"	4,600	1.0
30	4	2,140	3"	6,100	1.0
34	5	2,675	4" (4)	7,600	1.5
36	5	2,675	4" (4)	8,300	1.5
40	6	3,210	4"	10,100	2.0
42	6	3,210	4"	10,600	2.0
46	7	3,745	4"	12,400	2.0
48	7	3,745	4"	12,800	2.0
52	9	4,815	4"	14,600	2.5
54	9	4,815	4"	15,100	2.5
58	11	5,885	4"	17,600	3.0
60	11	5,885	4"	18,000	3.0
66	13	6,955	4"	21,693	3.5
70	15	8,025	6"	24,200	4.0
72	15	8,025	6"	24,900	4.0
78	18	9,630	6"	28,600	5.0
84	18	9,630	6"	30,900	5.0
96	22	11,770	6"	38,600	6.0

CUSTOM SIZES (24"-144")

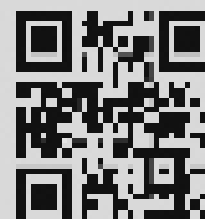
MADE TO ORDER IN ANY CONFIGURATION

CLUSTER DRILL HOLE OPENER PERCUSSION CORE BARREL

ALL OPTIONS AVAILABLE IN REVERSE CIRCULATION



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24 HOURS A DAY / 7 DAYS A WEEK