



ROTARY CATALOG

www.holePRODUCTS.com

 **hole PRODUCTS®**



OUR LOCATIONS

Arizona

Toll free (844) 836-6225
Phone (480) 626-0099

California - North

Toll free (888) 601-1996
Phone (707) 452-3891

California - South

Toll free (844) 573-0854
Phone (909) 939-2581

Florida

Toll free (877) 544-4211
Phone (407) 792-2670

Georgia

Toll free (888) 448-4430
Phone (770) 279-8755

Minnesota

Toll free (888) 531-2930
Phone (320) 616-0701

Missouri

Toll free (877) 699-2159
Phone (314) 282-2740

New Jersey

Toll free (888) 379-0371
Phone (862) 254-8000

Washington

Toll free (888) 535-2911
Phone (206) 761-4121

Wisconsin

Toll free (888) 465-3704
Phone (715) 842-0000

British Columbia, Canada

Toll free (888) 486-1915
Phone (604) 670-1343

Ontario, Canada

Toll free (877) 377-8257
Phone (647) 241-6916

Global Sales (888) 465-1569

INDUSTRIES & MARKETS

CONSTRUCTION

We provide tooling & supplies for sub-surface investigation, utility installation, Geothermal and Water Well projects, and geotechnical and environmental needs.

DIRECT PUSH - PROBE

A full line of Geoprobe® compatible direct push tooling and accessories innovatively designed and manufactured to provide consistency, durability, and longevity.

ENVIRONMENTAL & GEOTECHNICAL

Auger tools, rods and subs, bits, sampling equipment, well completion products, and more. One call for all of your environmental and geotechnical product needs.

GEOTHERMAL

Our experienced staff can provide quality products and solutions for both geothermal installations and geothermal drilling.

HDD

A full line of Ditch Witch® and Vermeer® compatible HDD drilling tools and accessories, backed by second to none service and support.

MINERAL EXPLORATION

Quality, innovative tooling, and accessories to support all methods of exploratory drilling. Large on-hand inventory and worldwide shipping capabilities.

ROTARY

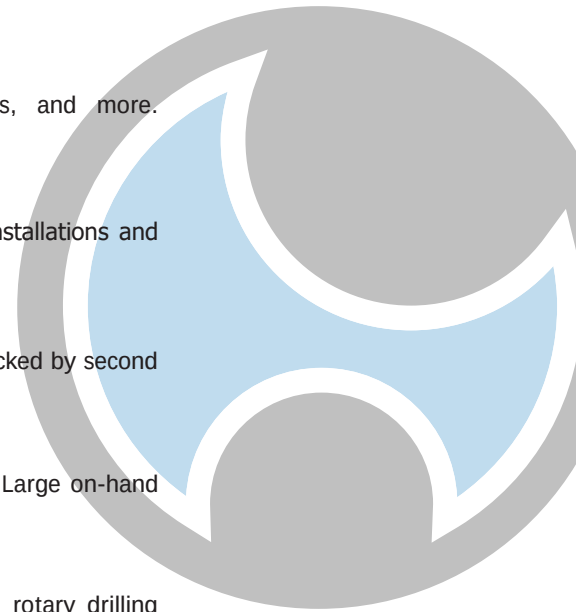
A vast inventory of tooling and accessories to service air, mud, and reverse circulation rotary drilling operations.

SONIC

World class Boart Longyear® compatible tooling, designed and manufactured by Hole Products, specifically to withstand the rigors unique to sonic drilling. On-site solutions you just can't find anywhere else.

WATER WELL

A complete line of water well products from the world's leading manufacturers. Unmatched supply network and large on-hand inventory for all your water well drilling needs.





CONTENTS

DRILL BITS	4
• New Tricone Bits	5
• Tricone Bits - Standard Connection Sizes	5
• Re-Tip Steel Tooth Tricone Bits	6
• Re-Run Carbide Insert Tricone Bits	6
• Hole Openers	6
• IADC Code - Tricone Bits	7
• PDC Bits	8
• Drag Bits	9
• Claw Bits	10
DRILL RODS & SUBS	11
• API Thread Guide	11
• Rotary Drill Rod Ordering Guide	12
• Rotary Drill Rod	13
• Reverse Circulation Drill Rods	14
• Rod Wipers	15
• Split Rubber Wipers	16
• Compounds & Greases	17
• Dope Brushes	17
• Stabilizers	18
• API Adapter Subs	19
• Floating Subs	20
• Shock Subs	20
• Fishing Tools	20
DTH HAMMERS & BITS	21
• Mincon® DTH Hammers (3"-7")	21
• Mincon® DTH Hammers (8"-40")	22
• Sandvik® DTH Hammers	23
• Kovai DTH Hammers	24
• Mincon Reverse Circulation Hammers	25
• Sandvik - SCX Reverse Circulation Hammers	26
• Bit Head Designs	27
• Tungsten Carbide Inserts	27
• DTH Hole Openers	27
• Foot Valves/Exhaust Tubes	29
• Grinder And Sharpening Tools	29
• Diverters	29
OVERBURDEN SYSTEMS	30
• Large ID System	31
• Drive Shoes	32
• Hammer Oil	33
• Hammer Lube	33
PUMPING EQUIPMENT AND SPARES	34
• Mud Puppy Mud Cleaning Systems	35
• Pumping Units	36
• Mud Puppy Pumps & Parts	37
• Centrifugal Pumps	38
• AO413 Piston Pump	39
• EO413 Piston Pump	40
• Duplex Pumps	41
• Duplex Pump Parts	41
• Progressive Cavity Pumps	42
• Grouters	43
• Grout Mixers	43
• Loop Reels	43
• Hose Reels	43

SWIVELS.....	44
• 25CHD Swivel	44
• 46DME Swivel	45
• 30WX Swivel.....	46
• 5JW Swivel	47
• 4JW Swivel	48
• 3JW Swivel	49
• 2JW Swivel	50
DRILLING FLUIDS, GROUTS, ADDITIVES & SANDS	51
• Drilling Fluids	52
• Grouts.....	53
• Thermally Enhanced Grouts	54
• Additives, Polymers, Foams, LCM	55
• Sands.....	57
• Portland Cement	58
• Glass Beads	58
• Well Development & Rehabilitation Chemicals	59
DRILLING FLUID EQUIPMENT & ACCESSORIES	61
• Mud Scale/Balance	62
• Marsh Funnel And Measuring Cup	62
• Sand Content Test Kit	62
• Test Strip Indicators	62
• Grout Shoes	63
• Mini-Mud Desander	64
• Ground Cover Protection.....	65
HOSES & FITTINGS	66
• High Pressure Air Hose	66
• Whip Checks.....	66
• Multi-Purpose Drillers Hose	67
• EPDM Suction Hose.....	67
• PVC Layflat Discharge Hose	67
• Boss™ Air Fittings	68
• Boss™ Clamps	69
• Cam Lock Fittings.....	70
PIPE HANDLING AND HOISTING	71
• Rod Spinners	71
• Hoisting Plugs.....	72
• Pipe Elevators	73
• Casing Lifters.....	74
• Pipe Tongs.....	74
• Gunnebo Hooks	74
• PE/FJ Casing Handling Accessories	75
• Kwik Klamps™	76
• Chain Wrenches.....	77
• Petol Tools®	77
• Straight Pipe Wrenches.....	78
• Pipe Wrench Replacement Parts	78
SCREEN, CASING, FITTINGS & ACCESSORIES	79
• SHUR-A-LOK PVC Casing.....	79
• SHUR-GRIP PVC Casing	80
• Stainless Steel	81
• Low Carbon Steel.....	82
WATER LEVEL INDICATORS	83
• Solinst Water Level Meter	83
• Tag Lines.....	83
SAFETY EQUIPMENT	84

DRILL BITS



Hole Products offers a large selection of tricone and bicone roller bits, polycrystalline diamond compact (PDC) bits, drag bits, claw bits, and accessories for use in a wide range of drilling industries including construction, environmental/geotechnical, geothermal, HDD, mineral exploration, rotary, and more.

Tricone and bicone bits are available in steel tooth and tungsten carbide insert, sizes from 1 7/8" to 36", open bearing, sealed bearing and journal sealed bearing, jet or regular circulation, and with a number of additional custom features.

PDC bits are offered with steel or matrix bodies, sizes from 2 15/16" to 17 1/2"+, blade counts from 3 to 8, and with a variety of custom PDC cutter options.

Drag bits are offered in Chevron and Step types, with 3 or 4 wings and in sizes from 1 7/8" to 26".

Claw bits are available in sizes from 3 1/2" to 24" and with a variety of cutter quantity options.

All bits are available with a number of custom manufacturing options and any thread connection, to fit a wide range of drilling requirements.

Please contact your Hole Products representative for detailed bit specifications and assistance selecting the correct bit for your specific drilling application.

NEW TRICONE BITS

Hole Products offers new steel tooth and tungsten carbide insert (tci) tricone bits in sizes from 2 1/2" – 36", with open or sealed bearings, regular or jet circulation, and a wide range of additional custom features for ideal performance in any formation. Tricone bits can be customized to optimize penetration rates and bit life in particular formations and under specific operating weights and rotation speeds.

Steel teeth or carbide inserts come in a variety of shapes, sizes, and grades of tungsten carbides to address specific drilling conditions. TCI bits offer increased durability over steel tooth bits but also carry a higher cost.

Open bearing bits feature bearings without a seal that are open to outside debris. Open bearing bits are generally cheaper than sealed bearing bits, and recommended for shallower holes. Sealed bearing tricone bits are available for use in applications where, historically, bearing life has limited bit performance. Sealed roller bearing bits extend the bearing life, allowing for increased utilization of the cutting structure.

Refer to the IADC codes on page 7 for additional tricone bit ordering guidelines.

Please contact your Hole Products representative for additional details and assistance selecting the tricone bit designed to maximize performance and increase bit life under your specific drilling conditions.



Steel Tooth Tricones



Tungsten Carbide Insert Tricones

TRICONE BITS - STANDARD CONNECTION SIZES

TRICONE BITS - STANDARD CONNECTION SIZES *	
SIZE	STANDARD PIN CONNECTION
2 1/2" to 2 3/4" inclusive	A - AW Rod
2 7/8" to 3 3/8" inclusive	N4 Rod
3 1/2" to 4 1/2" inclusive	2 3/8" API
4 5/8" to 5" inclusive	2 7/8" API
5 1/8" to 7 3/8" inclusive	3 1/2" API
7 1/2" to 9 3/8" inclusive	4 1/2" API
9 1/2" to 14 3/8" inclusive	6 5/8" API
14 1/2" to 18 1/2" inclusive	6 5/8" API or 7 5/8" API
18 5/8" to 26" inclusive	7 5/8" API or 8 5/8" API
27" and larger	8 5/8" API

**Tricone bits are available with alternate connection sizes on request.*

RE-TIP STEEL TOOTH TRICONE BITS

Re-tip steel tooth tricone bits are gently used bits that usually come from the oil fields. They are refurbished for use in non-oilfield rotary applications, such as water wells, HDD, and construction type drilling. These bits offer significant cost savings over new bits.

Hole Products offers a wide range of premium, oil field quality re-tip steel tooth bits in sizes ranging from 2 1/2" to 36".

Contact your Hole Products representative for additional details and ordering assistance.



RE-RUN CARBIDE INSERT TRICONE BITS

Re-run carbide insert bits are used bits that have been re-worked, cleaned, and often times painted. Re-runs offer significant cost savings over new carbide insert bits.

Hole Products offers a variety of re-run carbide bits in sizes ranging from 2 1/2" to 36". All re-runs are premium quality and available for use in soft, medium, and hard formations.

Contact your Hole Products representative for additional details and ordering assistance.



HOLE OPENERS

When hole enlargement becomes necessary, a reamer bit/ hole opener can be used. A roller cone type reamer has a pilot bit which is designed to follow the original pilot hole. Subsequent roller cones are attached above the pilot bit to expand the borehole size to the completion diameter.



ROLLER CONE HOLE OPENER ORDERING GUIDE			
Pilot Hole Diameter:		Borehole Completion Dia.:	
Pilot Bit Connection:		Drill Rod / Collar Connection:	
Formation to be Drilled:		Circulation Fluid:	Mud Air
Roller Cone Type:	Steel tooth or TCI	Bearing Type Req'd.:	Open / Sealed / Sealed Journal

IADC CODE - TRICONE BITS

First Digit - 1, 2, and 3 designate steel tooth bits and the formation being drilled, with 1 for soft, 2 for medium, and 3 for hard formations. 4, 5, 6, 7, and 8 designate tungsten carbide insert bits and the formation being drilled, with 4 being the softest and 8 the hardest formation.

Second Digit - 1, 2, 3 and 4 are further broken down by the formation, with 1 being the softest and 4 the hardest.

Third Digit - Classifies the bit according to bearing/seal type and special gauge/wear protection.

1. **Open Bearing** - On these bits the cones will spin freely. The bit has a front row of ball bearings and a back row of roller bearings.
2. **Open Bearing, Air-Cooled** - Cones are similar to #1, but have air injection directly to the cones to cool the bearings. Air flows into the cone through the passage ways inside the pin. (Not for use in mud applications.)
3. **Open Bearing with Gauge Protection** - Carbide inserts in the heel of the cone.
4. **Sealed Roller Bearing** - These bits have an o-ring seal with a grease reservoir for bearing cooling. The seal acts as a barrier against mud and cuttings to protect the bearings.
5. **Sealed Roller Bearing with Gauge Protection** - Carbide inserts in the heel of the cone.
6. **Sealed Journal Roller Bearing** - These bits are strictly oil/grease cooled with nose bearings, o-ring seal and a race for maximum performance.
7. **Sealed Journal Rolling Bearing with gauge protection** - Carbide inserts in the heel of the cone.

Fourth Digit – used to indicate additional features.

- | | | |
|-------------------------|---------------------------|-----------------------|
| A. Air Application | E. Extended Jet | X. Chisel Insert |
| C. Center Jet | G. Extra Gauge Protection | Y. Conical Insert |
| S. Standard Steel Tooth | J. Jet Deflection | Z. Other Insert Shape |
| D. Deviation Control | R. Reinforced Welds | |

Example 1:

IADC Code: 321

Bit Description:

- 3 = Steel Tooth, Hard Formations
 2 = Semi-Abrasive and Abrasive Formations.
 1 = Open Bearing

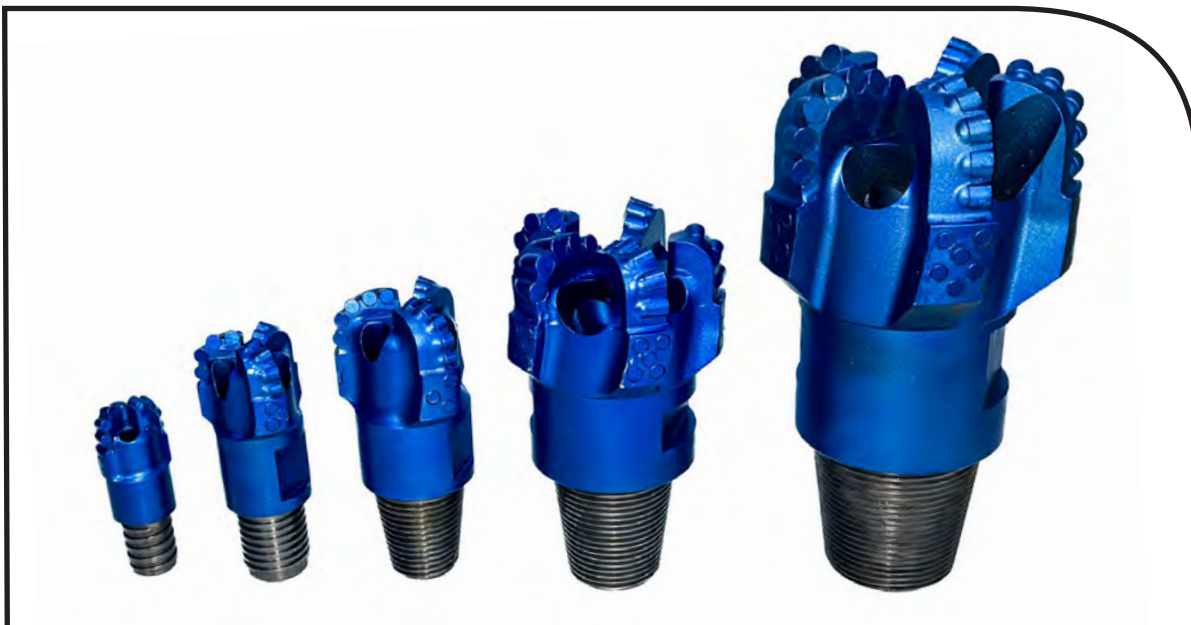
Example 2:

IADC Code: 514

Bit Description:

- 5 = Tungsten Carbide Insert, Soft to Medium Formation
 1 = Soft Formations
 4 = Sealer Roller Bearing

PDC BITS



Polycrystalline diamond compact (PDC) bits are designed to increase the ROP and longevity of the bit. Hole Products offers a wide range of PDC bits in sizes up to 24". All PDC bits are fully customizable to meet specific drilling requirements, depending on the formation being drilled and the equipment being used.

PDC BIT OPTIONS

Body: **Steel body** PDC bits are a lower cost alternative, to matrix body bits. They are generally preferred in soft formations, such as sandstone. **Matrix body** PDC bits provide excellent resistance to wear. They are commonly used in harder more abrasive formations such as limestone and dolomite.

Number of Blades: The number of blades on a PDC bit depends on the formation being drilled. Harder formations typically require more blades and cutters, while softer formations use fewer blades to increase ROP. Gauge protection is applied to all blades to ensure longevity and maintain a straighter hole, which boosts ROP.

Cutter Characteristics (count and size): Cutter count and size can be adjusted for drilling in specific formations. Small cutters and high cutter count are chosen for hard and abrasive rock formations, whereas large cutters and a reduced cutter count are preferred for soft to medium formations.

Hydraulics: PDC bits are available with flushing holes or open center and either fixed or adjustable nozzles. Options are available for all varieties of PDC bits and are designed specific to those PDC bits to maximize bit performance and longevity. Please contact your Hole Products representative for additional PDC bit design details and assistance selecting the correct bit for your specific drilling application.

DRAG BITS

Hole Products offers a wide selection of Step and Chevron type drag bits for use in a variety of formations. Drag bits are offered with three or four wings in sizes ranging from 2 3/4" to 26".

Step Type:

Bits are primarily designed for rapid penetration in soft to medium formations such as clay, sand rock, or shale. Step bits are available with regular and heavy steps. Heavy steps are recommended for harder formations. They feature more cutting carbides and offer increased durability.

Chevron Type:

Bits are designed for harder, more consolidated formations such as hard shale or limestone, areas with rock, and for drilling out concrete casings and plugs. The Chevron type drag bit does not penetrate as fast as the Step type, but will cut harder formations.

As a general rule three wing bits offer faster penetration, whereas four wing bits offer increased durability. Replaceable blade drag bits are available on request.



DRAG BIT ORDERING GUIDE

Drag bits are offered with a variety of custom options to optimize penetration in a variety of formations.

Please refer to the guide below when ordering drag bits.

STEP TYPE* DRAG BIT ORDERING GUIDE	
Size:	
Number of Wings:	
Regular or Heavy Step:	
Connection:	

CHEVRON TYPE* DRAG BIT ORDERING GUIDE	
Size:	
Number of Wings:	
Connection:	

Please contact your Hole Products representative for additional details and drag bit ordering assistance.

CLAW BITS



Claw bits are designed for drilling in soft to medium, unconsolidated formations including gravels, sandstone, and shales. They feature field replaceable bullet shaped cutters. Cutters are designed to rotate in their blocks to provide a self sharpening effect, thus extending the life of the bit.

Hole Products offers claw bits in a wide range of sizes, with a number of thread connections, and a variety of custom manufacturing options including:

- Sizes from 3 1/2" - 24"
- 4 or 5 cutters
- Any thread connection
- Button or Blade style pilot bits

Please contact your Hole Products representative for custom design details and availability of replacement blocks, cutters, and pilot bits.

CLAW BITS			
PART #	SIZE	# OF CUTTERS	CONNECTION
2550004	4 3/4"	4	2 3/8" API
2550008	4 3/4"	4	2 7/8" API
2550006	5 1/8"	4	2 3/8" API
2550007	5 1/4"	4	2 7/8" API
2550009	5 1/2"	4	3 1/2" API
2550010	5 7/8"	4	3 1/2" API
2550001	6"	5	3 1/2" API
2550003	6 1/4"	5	3 1/2" API

DRILL RODS & SUBS

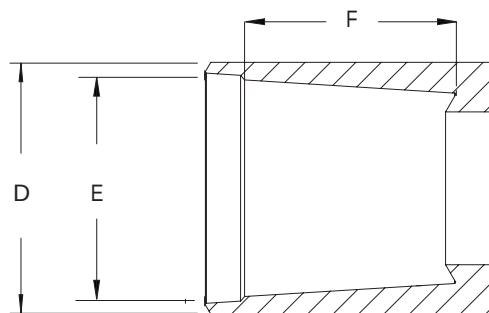
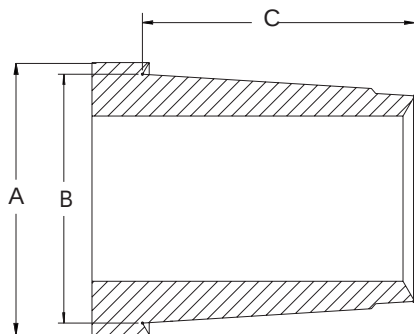


Hole Products offers a complete line of quality rotary, geotechnical, sonic, wireline and reverse circulation drill rods, and a vast range of subs. In addition, we offer a variety of components and accessories including stabilizers, float valves, rod wipers, rod grease, and more.

All products are quality manufactured using premium materials and advanced manufacturing techniques reliability, ensuring superior performance, and longevity in even the most demanding drilling conditions.

Drill rods and subs listed in the catalog are representative of the drilling industry's most common sizes and styles. Custom rods and subs are available on request.

API THREAD GUIDE



THREAD	O.D. (A)	THREAD DIA. (PIN) (B)	PIN LENGTH (C)	O.D. (D)	MAJOR THREAD DIA. (BOX) (E)	BOX LENGTH (F)
2 3/8" API Reg.	3 3/8"	2 1/2"	2 7/8"	3 3/8"	2 11/16"	3 1/8"
2 7/8" API Reg.	3 7/8"	2 7/8"	3 3/8"	3 7/8"	3 1/16"	3 5/8"
3 1/2" API Reg.	4 3/8"	3 3/8"	3 5/8"	4 3/8"	3 9/16"	3 7/8"
4 1/2" API Reg.	5 3/4"	4 1/2"	4 1/8"	5 3/4"	4 3/8"	4 11/16"
2 3/8" API IF	3 5/8"	2 3/4"	2 7/8"	3 5/8"	2 15/16"	3 1/8"
2 7/8" API IF	4 1/4"	3 1/4"	3 3/8"	4 1/4"	3 1/2"	3 5/8"
3 1/2" API IF	5"	3 7/8"	3 7/8"	5"	4 1/8"	4 1/8"
4 1/2" API IF	6 3/4"	5 1/8"	4 3/8"	6 3/4"	5 5/16"	4 5/8"
2 3/8" MHJR	2 3/4"	2 21/64"	2 1/4"	4"	2"	1 1/2"

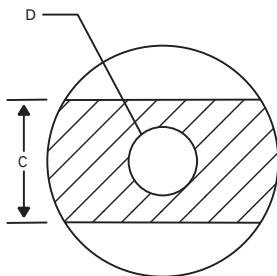
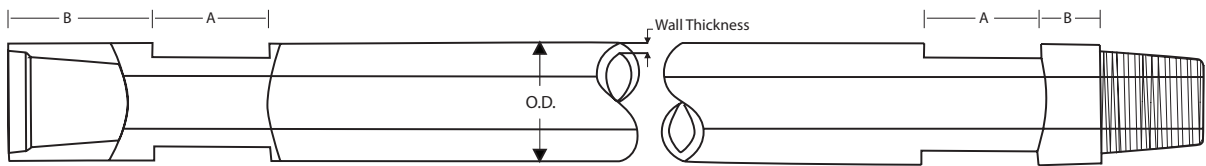
ROTARY DRILL ROD ORDERING GUIDE

Hole Products offers a complete line of premium rotary drill rods for use on rigs from a variety of rig manufacturers including Atlas Copco/Epiroc, CP/Reichdrill, Driltech, Foremost, Ingersoll-Rand, Schramm, Versadrill, and more. All rotary rods are manufactured using high quality alloy materials ensuring excellent performance and durability.

Rotary rods are offered with a variety of custom options including multiple thread profiles, lengths, O.D.s, wall thicknesses, wrench flat options, and more.

Please contact your Hole Products representative for assistance ordering the rotary drill rods best suited for your specific drilling application.

ROTARY DRILL ROD ORDERING GUIDE		
O.D.:		
Wall Thickness:		
Length:		
Threads:		
Rod Style:		
Flats:	Box End	Pin End
A: (Long)		
B: (Up)		
C:		
D: (Tool Joint I.D.)		
Other Info:		



Cross Section of Flats

ROTARY DRILL ROD

Hole Products offers a wide range of rotary drill rods. Rotary rods are available in any size, length, and wall thickness, and with all thread connections and any custom flat configurations.

Due to the vast number of rotary drill rod options, we have listed only a sample of our standard offering in the table below. Cyclone style rods are typically stocked for immediate access when you need them - Hole Products has you covered. Please contact your representative for additional details.

ROTARY DRILL ROD					
PART #	O.D.	WALL THICKNESS	LENGTH	THREAD	STYLE / FLATS
3200091	2 3/8"	.254"	20'	2 3/8" IF	N/A
3200069	2 7/8"	.280"	5'	2 3/8" MAYHEW JR.	N/A
3201007	2 7/8"	.362"	5'	2 3/8" MAYHEW JR.	N/A
3200100	2 7/8"	.308"	10'	2 3/8" MAYHEW JR.	N/A
3201008	2 7/8"	.362"	10'	2 3/8" MAYHEW JR.	N/A
3201033	3 1/2"	.250"	10'	2 3/8" IF	CYCLONE
3200032	3 1/2"	.250"	20'	2 3/8" IF	FLATS ON BOX END
3200026	3 1/2"	.368"	20'	2 3/8" IF	SCHRAMM BOTTLENECK
3200162	3 1/2"	.368"	20'	2 3/8" IF	CYCLONE
3200116	4"	.330"	20'	2 7/8" IF	REICHDRILL POCKETS
3201019	4 1/2"	.337"	5'	3 1/2" API	FLATS BOTH ENDS
3200105	4 1/2"	.337"	10'	2 7/8" API	FOREMOST FLATS BOTH ENDS
3200034	4 1/2"	.337"	10'	2 7/8" IF	CYCLONE
3200071	4 1/2"	.337"	20'	2 7/8" IF	SPEEDSTAR FLATS
3200163	4 1/2"	.337"	20'	2 7/8" IF	CYCLONE
3200009	4 1/2"	.337"	20'	2 7/8" IF	SCHRAMM BOTTLENECK
3200010	4 1/2"	.337"	20'	3 1/2" API	SCHRAMM BOTTLENECK
3200110	4 1/2"	.337"	20'	3 1/2" API	FLATS BOTH ENDS



REVERSE CIRCULATION DRILL RODS

Hole Products offers a complete line of premium quality reverse circulation, dual wall drill rods, in a wide range of sizes, and with a number of thread connections. All RC rods are manufactured using the most advanced technologies and specifically engineered to provide high strength, excellent wear resistance and long life.

Reverse Circulation, dual wall drill rods are manufactured with an outer drill rod and an inner tube located inside the rod. When the drill rods are threaded together, the inner tubes seal together to provide a continuous route for cuttings to travel from the bit face to the surface for collection.

Please contact your Hole Products representative for additional details and ordering assistance.

REVERSE CIRCULATION DRILL ROD SPECIFICATIONS							
Thread Type	Remet	Remet	Remet	Metzke	Metzke	Matrix	Matrix
Rod O.D.	3.5"	4"	4.5"	4"	4.5"	4"	4.5"
Outer tube O.D.	3.5"	4"	4.5"	4"	4.5"	4"	4.5"
Outer tube I.D.	3.22"	3.72"	4.22"	3.72"	4.22"	3.72"	4.22"
Inner tube O.D.	1.5"	2.0"	2.5"	2.0"	2.5"	2.0"	2.5"
Inner tube I.D.	1.28"	1.78"	2.28"	1.78"	2.28"	1.78"	2.28"
Weight 10'	135 lb.	165 lb.	210 lb.	165 lb.	210 lb.	165 lb.	210 lb.
Weight 20'	265 lb.	331 lb.	420 lb.	331 lb.	420 lb.	331 lb.	420 lb.

ROD WIPERS

Hole Products provides high quality rod wipers to remove soil, mud, and water from drill rods.

Rods are drawn through the wipers allowing them to act as a squeegee while removing tooling from the hole.

Additional sizes and styles including rubber crown profile and dual split are available on request.

Please refer to the guidelines below when ordering wipers.



ROD WIPER ORDERING GUIDELINES

I.D.:*	
O.D.:	
Rod Size:	
Steel or No Steel:	

*Recommended 1/4" smaller than rod O.D.

ROD WIPER WITH STEEL* - FLAT PROFILE

PART #	O.D.	I.D.	THICKNESS	RECOMMENDED ROD O.D.
3151041	9"	1 1/2"	3/4"	1 3/4"
3150045	9"	2"	3/4"	2 1/4"
3150012	9"	2 1/8"	3/4"	2 1/2"
3151042	9"	2 1/4"	3/4"	2 1/2"
3150165	8"	2 1/2"	1"	2 3/4"
3151024	9"	2 1/2"	3/4"	2 3/4"
3150170	8"	3 1/4"	1"	3 1/2"
3150010	9"	3 1/4"	3/4"	3 1/2"
3150020	12"	3 1/4"	3/4"	3 1/2"
3150175	8"	3 1/2"	1"	3 3/4"
3150180	8"	3 3/4"	1"	4"
3150185	5"	4 1/4"	3/4"	4 1/2"
3150190	6"	4 1/4"	3/4"	4 1/2"
3150195	8"	4 1/4"	1"	4 1/2"
3150015	9"	4 1/4"	3/4"	4 1/2"
3151001	11"	4 1/4"	3/4"	4 1/2"
3150025	12"	4 1/4"	3/4"	4 1/2"
3151039	14"	4 1/4"	3/4"	4 1/2"
3150028	19"	4 1/4"	3/4"	4 1/2"
3150200	8"	4 1/2"	1"	4 3/4"

*More rigid less flexible wiper.

ROD WIPERS

ROD WIPER NO STEEL * - FLAT PROFILE				
PART #	O.D.	I.D.	THICKNESS	RECOMMENDED ROD O.D.
3150035	9"	1 1/2"	3/4"	1 3/4"
3150040	9"	2"	3/4"	2 1/4"
3150133	9"	2 1/4"	3/4"	2 1/2"
3151008	8"	2 1/2"	1"	2 3/4"
3151025	9"	2 1/2"	3/4"	2 3/4"
3151012	8"	3 1/4"	1"	3 1/2"
3150011	9"	3 1/4"	3/4"	3 1/2"
3150021	12"	3 1/4"	3/4"	3 1/2"
3151013	8"	3 3/4"	1"	4"
3151009	8"	3 1/2"	1"	3 3/4"
3151031	5"	4 1/4"	3/4"	4 1/2"
3151030	6"	4 1/4"	3/4"	4 1/2"
3151011	8"	4 1/4"	1"	4 1/2"
3150016	9"	4 1/4"	3/4"	4 1/2"
3150135	11"	4 1/4"	3/4"	4 1/2"
3150140	14"	4 1/4"	3/4"	4 1/2"
3150145	19"	4 1/4"	3/4"	4 1/2"
3151010	8"	4 1/2"	1"	4 3/4"
3150031	12"	5"	3/4"	5 1/2"
3150041	12"	7"	3/4"	7 1/4"
3150029	12"	8 5/8"	3/4"	9"

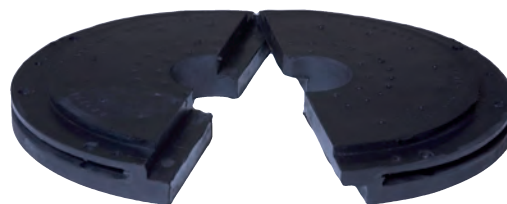
*A more flexible wiper.

SPLIT RUBBER WIPERS

Split rubber wipers are designed to remove, soil, mud, and water from the drill string. They seal around the drill pipe and can be used with compression or pneumatic systems.

Additional sizes and styles are available on request.

SPLIT RUBBER WIPERS	
PART #	DESCRIPTION
4850142	3 1/2" ROD
4850138	4 1/2" ROD



COMPOUNDS & GREASES

Hole Products offers a variety of high quality thread compounds, locking compounds, and rod grease available to meet any criteria from environmental concerns, extreme temperatures, exposure to the elements, high pressure, and more.

THREAD ARMOUR TJC:

- Hydrocarbon **FREE**
- PFAS – PFOS **FREE**
- **NO** Heavy Metals
- **BETTER ANTI-SEIZE** than Copper Grease as proven in API RP 7A1 Test Results.
- NSF-ANSI-61 Approved for Water Wells
- *Higher Performance, Less Mess*



THREAD ARMOUR BIODEGRADABLE THREAD AND JOINT COMPOUND			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3100026	1 GAL.	THREAD ARMOUR TJC	THREAD ARMOUR TJC is a premium quality, non-toxic alternative to petroleum oil-based thread compounds - many of which contain a high percentage of metallic solids.
3110027	2.5 GAL.		
3100068	5 GAL.		
3100033	1 GAL.	THREAD ARMOUR ARCTIC GRADE TJC	THREAD ARMOUR ARCTIC GRADE TJC is a thread and joint compound specifically formulated for easier application in colder environments.
3100034	2.5 GAL.		
3100029	5 GAL.		
OTHER THREAD COMPOUNDS			
3100005	1 GAL.	COPR PLUS	COPR PLUS is and environmentally friendly non-lead, non-zinc thread compound, which provides protection against galling and seizing.
3100010	2 GAL.		
3100011	5 GAL.		
3100050	1 GAL.	KOPR-KOTE®	KOPR-KOTE® is formulated to help reduce downhole joint make-up. It has a very high static friction factor that helps reduce downhole joint make-up when excessive drilling torques are encountered.
3100055	2 GAL.		
3100070	1 GAL.	KOPR-KOTE® ARCTIC	KOPR-KOTE® ARCTIC is designed for extreme cold weather environments where fluid film strength is important and grease consistency remains the same.
3100071	2 GAL.		
3100060	1 GAL.	WELL-GUARD®	WELL-GUARD® is designed for critical monitor well and other environmentally sensitive drilling applications requiring the use of a petroleum hydrocarbon-free product.

DOPE BRUSHES

DOPE BRUSHES			
PART #	DESCRIPTION	TRIM LENGTH	OVERALL LENGTH
6100020	TAPERED W/ GUARD	2 1/2"	16"
3100025	BEVELED W/ GUARD	2 1/2"	16"

STABILIZERS

Hole Products' stabilizers are designed to reduce unintentional sidetracking and vibrations, thus keeping the drill string centered in the borehole. All stabilizers are manufactured from high strength steel and feature heat treated tool joints and hard faced wear surfaces.

Each style can be customized with a variety of options including O.D., length (body and neck), thread connection, flats, and more.

Additional stabilizers including replaceable sleeve and integral blade stabilizers are available on request.

Please refer to the guide below when ordering stabilizers.

STABILIZER STYLES	
	SMOOTH BODY: standard stabilizer with no blades.
	STRAIGHT BLADE: feature welded straight blades on the body.
	SPIRAL BLADE: spiral blades provide constant wall contact to assist in cutting removal.
	STRAIGHT-SPIRAL BLADE: designed to provide the benefits of the spiral blade stabilizer at a reduced cost.
	FLOW THROUGH: allows cuttings to pass between the inner and outer barrel.

STABILIZER ORDERING REFERENCE GUIDE									
STYLE:	SMOOTH		FLOW - THROUGH		STRAIGHT BLADE		SPIRAL BLADE		STRAIGHT- SPIRAL RIBBED
	SPECIFY # OF BLADES	---	SPECIFY # OF BLADES	---	SPECIFY # OF BLADES		SPECIFY # OF BLADES		SPECIFY # OF BLADES
BODY O.D.:									
BODY LENGTH:									
NECK LENGTH:									
TOP CONNECTION:									
BOTTOM CONNECTION:									
FLATS:									
OTHER INFO:									

API ADAPTER SUBS



API BOX x PIN



API BOX x BOX



API PIN x PIN

API BOX X PIN		
PART #	BOX	PIN
3305050	1 1/4" NPT	AWJ
3301184	1 1/4" 7	AWJ
3301003	2 3/8" IF	2 3/8" REG
3301014	2 3/8" IF	3 1/2" REG
3301304	2 3/8" IF	NW ROD
3301016	2 3/8" IF	NWJ
3301013	2 3/8" IF	NWL
3302133	2 3/8" IF	HWL
3302075	2 3/8" IF	HWT CASING
3301151	2 3/8" REG	2 7/8" REG
3301152	2 3/8" REG	HWT CASING
3301189	2 3/8" MHJR	2 3/8" MHJR
3302026	2 3/8" MHJR	3 1/2" REG
3302040	2 3/8" MHJR	AWJ
3302047	2 3/8" MHJR	NWJ
3302015	2 3/8" MHJR	NWL
3301250	2 3/8" MHJR	HWL
3302016	2 3/8" MHJR	HW CASING
3302023	2 7/8" IF	2 3/8" IF
3305077	2 7/8" REG	2 3/8" REG
3300034	2 7/8" REG	NWJ
3301255	2 7/8" IF	HWL
3300111	3 1/2" REG	2 3/8" IF
3305062	3 1/2" REG	3 1/2" IF
3300036	4 1/2" REG	2 3/8" IF
3305068	4 1/2" REG	2 7/8" REG
3301041	7 5/8" REG	6 5/8" REG

API BOX X BOX		
PART #	BOX	BOX
3300101	1 1/4" 7	AW
3301120	2 3/8" IF	2 7/8" REG
3305061	2 3/8" IF	3 1/2" REG
3301171	2 3/8" REG	2 3/8" IF
3302025	2 3/8" REG	2 3/8" REG
3300115	2 3/8" REG	2 7/8" REG
3300155	2 3/8" REG	3 1/2" REG
3301156	2 3/8" REG	4 1/2" REG
3302030	2 3/8" REG	N4 ROD
3301153	2 3/8" REG	NWL
3301154	2 3/8" REG	HWL
3302207	2 3/8" REG	NW CASING
3301188	2 3/8" MHJR	2 3/8" REG
3301300	2 3/8" MHJR	3 1/2" REG
3302024	2 7/8" IF	3 1/2" REG
3300046	2 7/8" IF	4 1/2" REG
3301190	3 1/2" REG	3 1/2" REG
3300030	3 1/2" REG	4 1/2" REG
3300041	3 1/2" REG	6 5/8" REG
3300042	3 1/2" REG	7 5/8" REG
3301019	4 1/2" REG	NWJ

API PIN X PIN		
PART #	PIN	PIN
3301164	2 3/8" IF	2 7/8" REG
3300120	2 3/8" REG	2 3/8" REG
3305079	2 3/8" MJR	NWJ
3302081	2 3/8" MHJR	2 3/8" MHJR
3301036	3 1/2" REG	3 1/2" REG

FLOATING SUBS

Floatation subs are attached to the tophead spindle. These subs help eliminate cross-threading with 2"-4" of float travel. They will also reduce the damaging vibrations going back to the tophead gears and bearings. Float subs can be set up as Pin-to-Pin, Box-to-Box, Pin-to-Box or Flange-to-Pin with API (Reg, IF, FH, XH), Beco, NWJ, AWJ or MH/MHJ joints.

The Standard Duty type float sub is commonly used for water well and geothermal applications, having 70,000-80,000 lbs. of holdback & up to 45,000 ft. lbs. of torque with 2"-4" of float with a 6" diameter body. The Heavy Duty float sub is used with larger drills requiring 110,000-120,000 lbs. of holdback. This float sub has 3" of float with a 7" diameter body. No matter what your needs are, Hole Products can provide a float sub to your custom specifications for a perfect fit.



SHOCK SUBS

Shock subs are typically run in the hole, directly above the down-the-hole hammer. Shock absorbers are engineered to dampen the vibrations to protect your drill rig, rotary head, and drill string.

SHOCK SUBS				
HAMMER SIZE	PART #	BOX x PIN CONNECTIONS	O.D.	LENGTH
3"	3300313	2 3/8" API REG.	3.13"	18"
4"	3300297	2 3/8" API REG.	3.76"	22.28"
5"	3300592	3 1/2" API REG.	4.49"	24.65"
6"	3300471	3 1/2" API REG.	5.50"	26.77"
8"	3300580	4 1/2" API REG.	7.17"	31.42"

Other sizes available upon request



FISHING TOOLS

From taper taps to overshots and magnets to junk mill bits, Hole Products offers a complete range of quality fishing tools for retrieving stuck, damaged, or lost tooling. Available in multiple sizes, styles, and thread connections, our fishing tools are made from premium quality materials, ensuring performance and durability.



MAGNETS	
PART #	DESCRIPTION
3850015	3½" O.D., 150 lbs. capacity
3850020	4½" O.D., 150 lbs. capacity
3850025	5½" O.D., 150 lbs. capacity
3850024	6½" O.D., 150 lbs. capacity



DTH HAMMERS & BITS

MINCON® DTH HAMMERS (3"-7")



	Part #	Shank	Foot valve	Hammer OD	Tool Length	Piston weight	Hammer weight	Standard backhead thread
3" MINCON HAMMERS								
MP30-DH	3750004	DHD3.5	Yes	3.05"	33.8"	9 lbs	49.2 lbs	2 3/8" API Reg Pin
MP35-MD	3750077	MD3.5	Yes	3.35"	34.2"	8.7 lbs	54 lbs	2 3/8" API Reg Pin
MP35-DH	3750005	DHD3.5	Yes	3.35"	34.2"	8.7 lbs	54 lbs	2 3/8" API Reg Pin
4" MINCON HAMMERS								
MP4H-DH	3751001	DHD340	Yes	3.86"	37.6"	16.1 lbs	84.9 lbs	2 3/8" API Reg Pin
MP40-TD	3751014	TD40	Yes	3.86"	37.6"	16.1 lbs	84.9 lbs	2 3/8" API Reg Pin
MP40-MQ	3750052	MQ40	No	3.86"	40.2"	17.4 lbs	88.4 lbs	2 3/8" API Reg Pin
5" MINCON HAMMERS								
MP50-QL	3751001	QL50	Yes	4.53"	39.1"	27.6 lbs	122.1 lbs	3 1/2" API Reg Pin
MP50-MQ	3751014	MQ50	No	4.53"	41.6"	30.1lbs	132.1 lbs	3 1/2" API Reg Pin
MC55	3750048	MC51	No	4.90"	39.3"	33.6 lbs	148.0 lbs	3 1/2" API Reg Pin
MP58-MC	3750157	MC51	No	5.10"	37.7"	37.5 lbs	164.0 lbs	3 1/2" API Reg Pin
6" MINCON HAMMERS								
MC60	3750016	MC61	No	5.51"	41.1"	46 lbs	201.0 lbs	3 1/2" API Reg Pin
MP60-QL	3750063	QL60	Yes	5.55"	39.4"	47.6 lbs	184.5 lbs	3 1/2" API Reg Pin
MP60-MQ	3750062	MQ60	No	5.55"	39.4"	42.5 lbs	187.4 lbs	3 1/2" API Reg Pin
7" MINCON HAMMER								
MP70-MC	3750000	MC71	No	6.30"	43.9"	66.8 lbs	346.1 lbs	4 1/2" API Reg Pin

MINCON® DTH HAMMERS (8"-40")



	Part #	Shank	Foot valve	Hammer OD	Tool Length	Piston weight	Hammer weight	Standard backhead thread
8" MINCON HAMMERS								
MP8H-DH	3750158	DHD380	Yes	7.15"	47.5"	86.0 lbs	388.0 lbs	4 1/2" API Reg Pin
MP80-MC	3750065	MC81	No	7.15"	47.1"	102.0 lbs	405.0 lbs	4 1/2" API Reg Pin
MP80-QL	3750159	QL80	Yes	7.15"	46.7"	85.8 lbs	379.4 lbs	4 1/2" API Reg Pin
MP80-MQ	3750296	MQ80	No	7.15"	51.4"	102.1 lbs	425.5 lbs	4 1/2" API Reg Pin
9" MINCON HAMMER								
MP90-TD	3750161	TD90	Yes	7.70"	53.3"	131.0 lbs	516.0 lbs	4 1/2" API Reg Pin
10" MINCON HAMMER								
MP100-SD	3750067	SD10	Yes	8.62"	53.5"	171.5 lbs	650.4 lbs	6 5/8" API Reg Pin
12" MINCON HAMMERS								
MP120-N125	3750162	N125	Yes	10.75"	57.1"	305.3 lbs	1003 lbs	6 5/8" API Reg Pin
MP120-QL	3750001	QL120	Yes	10.75"	57.2"	305.3 lbs	1008 lbs	6 5/8" API Reg Pin
MP120-MC	3750163	MC120	No	10.75"	57.2"	334.7 lbs	1032 lbs	6 5/8" API Reg Pin
15" MINCON HAMMER								
MP150-MC	3750164	MC150	No	13.39"	65.4"	454.2 lbs	1889 lbs	8 5/8" API Reg Pin
18" MINCON HAMMERS								
MP180-N180	3750014	N180	Yes	15.75"	66.7"	621.7 lbs	2632 lbs	8 5/8" API Reg Pin
MP180-QL	3750165	QL200	Yes	15.75"	65.3"	626.1 lbs	2679 lbs	8 5/8" API Reg Pin
MP180-MQ	3750166	MQ180	No	15.75"	70.1"	705.5 lbs	2754 lbs	8 5/8" API Reg Pin
24" MINCON HAMMERS								
MP240-N240	3750167	N240	Yes	20.67"	79.4"	1208 lbs	5699 lbs	HEX 275 Pin
MP240-MQ	3750168	MQ240	No	20.67"	78.2"	1199 lbs	6111 lbs	HEX 275 Pin
34" MINCON HAMMERS								
MP340	3750169	MF34	No	29.53"	92.0"	2315 lbs	12802 lbs	HEX 370 Pin
40" MINCON HAMMERS								
MP400	3750170	MF34	No	29.53"	92.0"	3307 lbs	13334 lbs	HEX 370 Pin

SANDVIK® DTH HAMMERS



	Part #	Bit Shank Type	Outside Diameter	Bit Size Range	Hammer Length	Hammer Weight	Backhead Thread*
3" SANDVIK HAMMER							
RH550r	3751075	M30	3.2"	3.5" - 4.125"	32.4"	55 lbs.	2 3/8" API Reg Pin
4" SANDVIK HAMMER							
RH550r	3751080	M40	3.56"	4.375" - 5.25"	36"	83 lbs.	2 3/8" API Reg Pin
5" SANDVIK HAMMERS							
RH550	3751085	M50	4.72"	5.125" - 6.0"	38.86"	145 lbs.	3 1/2" API Reg Pin
RH550g	3751090	M50	4.96"	5.125" - 6.0"	38.86"	160 lbs.	3 1/2" API Reg Pin
RH550r	3751095	M50	4.96"	5.125" - 6.0"	38.86"	160 lbs.	3 1/2" API Reg Pin
6" SANDVIK HAMMERS							
RH550w	3750095	M60	5.6"	6.0" - 8.0"	36.3"	158 lbs.	3 1/2" API Reg Pin
RH550g	3750090	M60	5.9"	6.0" - 8.0"	36.3"	180 lbs.	3 1/2" API Reg Pin
RH550r	3750009	M60	5.9"	6.0" - 8.0"	36.3"	180 lbs.	3 1/2" API Reg Pin
8" SANDVIK HAMMERS							
RH550w	3750068	M80	7.12"	7.875" - 12.0"	50"	380 lbs.	4 1/2" API Reg Pin
RH550r	3750076	M80	7.12"	7.875" - 12.0"	50"	380 lbs.	4 1/2" API Reg Pin

*Other backhead thread connections are available.

KOVAI DTH HAMMERS



	Part #	Bit Shank	Outside Diameter	Bit Size Range	Hammer Length	Hammer Weight	Backhead Thread*
KOVAI DTH HAMMERS							
4" Mission	KM400M	M40	3.88"	4.25" - 5.0"	39.0"	84lbs	2 3/8" API Reg Pin
4" QL	KM400QL	QL40	3.88"	4.25" - 5.0"	39.0"	84lbs	2 3/8" API Reg Pin
5" Mission	KM500M	M50	4.88"	5.25" - 6.5"	41.3"	153lbs	2 7/8" API Reg Pin
5.5" XL Mission	KM550M	M50	5.04"	5.5" - 6.5"	41.3"	165lbs	2 7/8" API Reg Pin
5" QL	KM500QL	QL50	4.88"	5.25" - 6.5"	41.3"	153lbs	2 7/8" API Reg Pin
5.5" XL QL	KM550QL	QL50	5.04"	5.5" - 6.5"	41.3"	165lbs	2 7/8" API Reg Pin
5" QL Footvalve	KF500QL	QL50	4.88"	5.25" - 6.5"	39.0"	154lbs	2 7/8" API Reg Pin
5.5" XL QL Footvalve	KF550QL	QL50	5.04"	5.5" - 6.5"	39.0"	160lbs	2 7/8" API Reg Pin
6" Mission	KH600M	M60	5.63"	6.0" - 7.5"	41.2"	183lbs	3 1/2" API Reg Pin
6.5" XL Mission	KH650M	M60	5.84"	6.25" - 8.0"	41.2"	204lbs	3 1/2" API Reg Pin
6" QL	KH600QL	QL60	5.63"	6.0" - 7.5"	41.2"	189lbs	3 1/2" API Reg Pin
6.5" XL QL	KH650QL	QL60	5.84"	6.25" - 8.0"	41.2"	208lbs	3 1/2" API Reg Pin
8" Mission	KM800M	M80	7.12"	8.0" - 12.0"	47.4"	465lbs	4 1/2" API Reg Pin
8" QL	KM800QL	QL80	7.12"	8.0" - 12.0"	47.4"	465lbs	4 1/2" API Reg Pin

MINCON REVERSE CIRCULATION HAMMERS



	MRXT 82	MRXT 92	MRXT 109	MRXT 116	MRXT 120	MRXT 132
Hammer OD	3.23"	3.62"	4.3"	4.5"	4.7"	5.2"
Hammer length	41.9"	45.1"	49.9"	46.6"	53.6"	53.6"
Hammer weight	59.5 lb	88.2 lb	128.1lb	145.5 lb	165.8 lb	192.7 lb
Backhead spanner flat size	2.76"	3"	3.7"	3.7"	3.7"	3.98"
Drill bit shank type	MR82	MR92	MR109	MR116	MR120	MR132
Backhead threads available	73 ARD, 3" Remet	90 ARDA, 3.5" Remet	4" Remet, 4" Metzke	4" Remet, 4" Metzke, 4.5" Remet, 4.5" Metzke, 115 ARDX	4" Remet, 4" Metzke, 4.5" Remet, 4.5" Metzke, 115 ARDX	4.5" Remet, 4.5" Metzke, 115 ARDX
Minimum bit size	3.4"	4"	4.53"	4.88"	5"	5.51"
Maximum bit size	4"	4.5"	5"	5.24"	5.75"	5.75"
Maximum drill bit weight	11.9 lb	17 lb	26.5 lb	30.6 lb	37.5 lb	42.3 lb
Piston weight	9.9 lb	17 lb	27.05 lb	30.89 lb	33.86 lb	40.19 lb
Backhead stand-off	0.03"	0.03"	0.037"	0.037"	0.037"	0.039"
Minimum air package	300 cfm @ 200 psi	900 cfm @ 350 psi	900 cfm @ 350 psi	900 cfm @ 350 psi	900 cfm @ 350 psi	900 cfm @ 350 psi

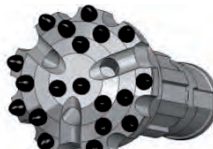
SANDVIK - SCX REVERSE CIRCULATION HAMMERS



	RE531	RE542	RE543	RE545	RE120	RE040	RE052	RE054
Hammer OD	3 1/4"	4 5/16"	4 9/16"	4 9/16"	4 5/8"	4 3/4"	4 3/4"	4 9/16"
Min. bit size	3 3/8"	4 5/8"	4 7/8"	5"	5"	5 1/8"	5 1/4"	5"
Max. bit size	4"	5 1/4"	5 1/4"	5 1/2"	5 1/2"	5 1/2"	5 5/8"	5 1/2"
Usage	Ideal for medium to hard ground, a good alternative to air core drilling.	Ideal for medium depth RC holes in all ground conditions.	Ideal for medium depth RC holes in all ground conditions.	Ideal for medium depth RC holes in all ground conditions.	Ideal for deep, dry exploration holes or grade control applications where high efficiency and power are required.	Ideal for grade control or shallow pre-collar holes in harder ground.	Exploration hammer best suited for harder ground conditions. Deep hole applications with High resistance to back pressure and in-hole water.	Exploration hammer best suited for harder ground conditions. Deep hole applications with High resistance to back pressure and in-hole water.

BIT HEAD DESIGNS

Hammer bits are available with multiple head designs suitable for a variety of rock formations. Concave, flat, and convex are the most common head designs, however, additional designs are available on request.

BIT HEAD DESIGNS		DESCRIPTION
CONCAVE		The concave bit design is an excellent all around bit, suitable for soft and hard formations. The cone shaped face design provides good stability during drilling, allowing for straighter holes while reducing equipment vibration. The carbide configuration design gives added penetration in many formations.
FLAT		Used for general purpose drilling, the flat face design is considered effective in very broken ground as well as hard formations that tend to over drill.
CONVEX		Convex are suitable for most drilling applications, particularly hard, abrasive rock to give a combination of speed and good service life.

TUNGSTEN CARBIDE INSERTS

Hammer bits are offered with a variety of insert shapes. Dome/spherical and ballistic are the most common inserts. Additional tungsten carbide insert grades and shapes, as well as diamond enhanced inserts are available on request.

	
DOME/SPHERICAL Tough shape for very hard abrasive rock and deep hole drilling.	BALLISTIC Ideal for less abrasive sedimentary deposits where speed is vital.

DTH HOLE OPENERS

Hole opener bits are available up to 60" diameter and for all major shank designs. Refer to the guide below for required ordering information.



DTH HOLE OPENER ORDERING GUIDE	
Finished Hole Diameter:	
Pilot Hole Diameter: (pilot diameter should be 1/4" smaller than borehole)	
DTH Hammer Model & Shank Type:	
Type of Buttons Required (Spherical/Ballistic):	
Required Length of Pilot:	

BIT SHANK IDENTIFICATION CHART

MD3.5 • 3"	L = 7.126" (181 mm) 8 Splines Bit size: 3.5" - 4.1"	QL50 • 5"	L = 9.45" (240 mm) 12 Splines Bit size: 5.0" - 6.0"
M30 • 3"	L = 8.82" (224 mm) 8 Splines Bit size: 3.5" - 4.1"	MC61 • 6"	L = 7.441" (189 mm) 12 Splines Bit size: 5.9" - 8.7"
DHD3.5 • 3"	L = 7.126" (181 mm) 8 Splines Bit size: 3.3" - 4.1"	M60 • 6"	L = 9.05" (230 mm) 8 Splines Bit size: 6.0" - 6.7"
M40 • 4"	L = 8.98" (228 mm) 12 Splines Bit size: 4.1" - 5.0"	DHD360 • 6"	L = 12.126" (308 mm) 8 Splines Bit size: 5.98" - 8.7"
MD4 • 4"	L = 8.228" (209 mm) 10 Splines Bit size: 4.3" - 5.2"	SD6/5315 • 6"	L = 12.756" (324 mm) 8 Splines Bit size: 5.9" - 8.7"
TD40/MQ40 • 4"	L = 8.98" (228 mm) 12 Splines Bit size: 4.3" - 5.2"	QL60 • 6"	L = 9.97" (254 mm) 12 Splines Bit size: 5.98" - 8.7"
DHD340 • 4"	L = 8.228" (209 mm) 8 Splines Bit size: 4.1" - 5.2"	MC71 • 7"	L = 8.86" (225 mm) 14 Splines Bit size: 7.6" - 10.0"
SD4/3415 • 4"	L = 10.236" (260 mm) 8 Splines Bit size: 4.0" - 5.2"	MC81 • 8"	L = 8.740" (222 mm) 16 Splines Bit size: 7.9" - 12.2"
MC51 • 5"	L = 7.007" (178 mm) 12 Splines Bit size: 5.0" - 6.0"	M80 • 8"	L = 12.95" (329 mm) 12 Splines Bit size: 8.0" - 12.0"
M50 • 5"	L = 10.2" (259 mm) 12 Splines Bit size: 5.2" - 6.0"	DHD380 • 8"	L = 13.780" (350 mm) 10 Splines Bit size: 7.9" - 12.2"
DHD350R • 5"	L = 10.276" (261 mm) 8 Splines Bit size: 5.0" - 6.0"	SD8 • 8"	L = 12.638" (321 mm) 8 Splines Bit size: 7.9" - 12.2"
SD5/4315 • 5"	L = 10.236" (260 mm) 8 Splines Bit size: 5.0" - 6.0"	QL8 • 8"	L = 13.059" (331.7 mm) 16 Splines Bit size: 7.9" - 12.2"

FOOT VALVES / EXHAUST TUBES

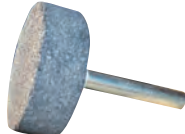
Replacement foot valves are available to fit a wide range of hammer bit shanks. Contact your Hole Products representative to find out what options are available.

NOTE: OEM specifications vary on foot valves - when ordering, please specify bit manufacturer and model number.



GRINDER AND SHARPENING TOOLS

Hole Products offers a complete line of grinders and grinding stones to increase efficiency and add to the life of the DTH bit. Additional sharpening tools, sizes, and styles are available.

GRINDER & SHARPENING TOOLS		
PART #	DESCRIPTION	
3551022	HG-105 GRINDER	
3550017	GRINDING STONE - 16MM ROUND - STRAIGHT SHAFT	
3550016	GRINDING STONE - 18MM ROUND - STRAIGHT SHAFT	
3550018	GRINDING STONE - 19MM ROUND - STRAIGHT SHAFT	
3550015	GRINDING WHEEL - 1 1/2" X 1/2" X 1/4"	

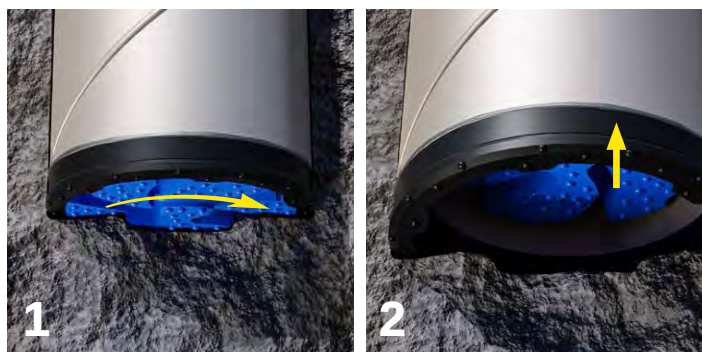
DIVERTERS

Diverters are used with casing advancement systems when drilling through overburden. The diverters slip over the top of the casing to direct cutting, and fluids away from the hole. A hose can be connected to the diverter outlet to further direct the flow away from the hole.

DIVERTERS			
PART #	CASING SIZE	THRU HOLE	OUTLET
4850130	6 5/8"	3 1/4"	6" MALE NPT
4850125	6 5/8"	4 1/4"	6" MALE NPT
4850131	6 5/8"	4 3/4"	6" MALE NPT

OVERBURDEN SYSTEMS

Piles are drilled using a DTH hammer and a suitable casing system (also called ring bit systems). When the casing is drilled to the desired depth, the pilot bit is released by turning it slightly backwards (1) and then pulled up (2) and used again in the next pile.



Solitary system

The casing shoe and the ring bit are separated. Uses the same double shoulder pilot bit as the large integrated system and the M-Wall systems.



Drill through system

The pilot bit can be drilled through the ring bit. This can save time in deep foundations that require rock sockets.



Integrated system, small

The casing shoe and the ring bit are connected together at the factory. Uses a single shoulder pilot that is not compatible with the solitary system.



Retrievable system

The ring bit has been designed to reduce the friction against the soil, allowing an easy retrieval of the casing. This way the ring bit can be reused in the next pile.



Integrated system, large

The casing shoe and the ring bit are connected together at the factory. Uses the same double shoulder pilot as the solitary system and the M-Wall systems..



Drill through retrievable system

Combines the features of DT and retrievable systems for situations where piles with temporary casings and rock sockets are needed.



Integrated gen 2 system

Combines single-shoulder integrated and drill through systems into an affordable package. Single-shoulder M-Wall system is also available.



M-Wall solitary system

Used for M-Wall pipe-pile retaining walls. The casing shoe and the ring bit are separated. Uses the same pilot bit as the solitary and large integrated systems.



Large ID System (featured on next page)

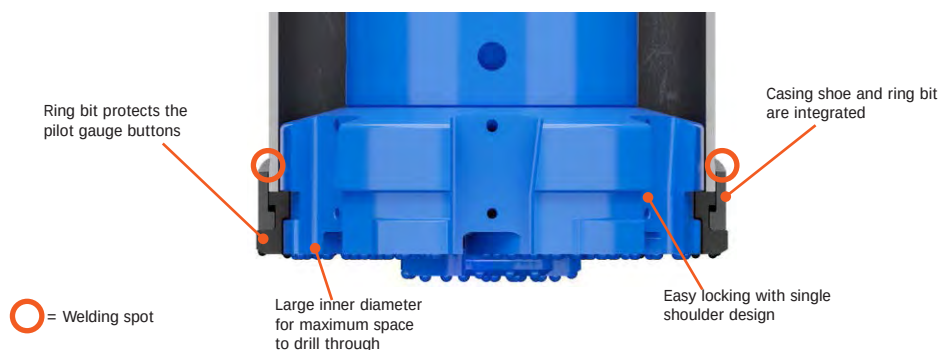
The most recommended tool for creating rock sockets. The large inner diameter of the ring bit allows for the maximum size rock bit to be drilled through the ring bit.



M-Wall integrated system

Used for M-Wall pipe-pile retaining walls. The ring bit is permanently connected to the casing shoe. Uses the same pilot bit as the solitary and large integrated systems.

LARGE ID SYSTEM



LARGE ID RING BIT SYSTEM

System product code	Casing OD (in)	Max wall (in)	Ring bit ID (in)	Ring bit OD (in)	Pilot bit OD (in)	Recommended Hammer
I114-5.5-91	4.5"	0.22"	3.58"	5.24"	4.00"	MP30-DH
I127-5.5-103	5"	0.22"	4.06"	5.79"	4.49"	MP30-DH
I140-5.5-116	5.5"	0.22"	4.56"	6.30"	5.02"	MP4H-MQ
HDI140-5.5-116*	5.5"	0.22"	4.56"	6.61"	5.02"	MP4H-MQ
HCI140-5.5-116**	5.5"	0.22"	4.56"	6.54"	5.02"	MP4H-MQ
I152-6-128	6"	0.24"	5.04"	6.85"	5.47"	MP4H-MQ
I159-6-134	6.25"	0.24"	5.28"	7.05"	5.71"	MP4H-MQ
I168-6-142	6.63"	0.24"	5.59"	7.44"	6.06"	MP50-MQ
HDI168-6-142*	6.63"	0.24"	5.59"	7.72"	6.06"	MP50-MQ
HCI168-7-142**	6.63"	0.28"	5.59"	7.64"	5.98"	MP50-MQ
I178-7-153	7"	0.28"	6.02"	8.03"	6.38"	MP50-MQ
I194-6-166	7.63"	0.24"	6.54"	8.66"	7.05"	MP60-MQ
I219-6.5-190	8.63"	0.26"	7.48"	9.65"	8.03"	MP70-MC-D160
I244-8-212	9.63"	0.31"	8.35"	10.63"	8.86"	MP80-MQ
I254-8-222	10"	0.31"	8.74"	11.02"	9.25"	MP80-MQ
I273-8-242	10.75"	0.31"	9.53"	11.77"	10"	MP80-MQ
I301-10-260	11.87"	0.39"	10.24"	12.87"	10.98"	MP80-MQ
I323-10-280	12.75"	0.39"	11.02"	13.78"	11.73"	MP100-MC
I339-10-295	13.37"	0.39"	11.61"	14.41"	12.44"	MP100-MC
I355-10-311	14"	0.39"	12.24"	15.08"	13.07"	MP100-MC
I406-10-365	16"	0.39"	14.37"	17.17"	15.04"	MP120-MC
I457-10-405	18"	0.39"	15.94"	19.17"	17.01"	MP120-MC
I508-12.7-450	20"	0.5"	17.72"	21.18"	18.82"	MP150-MC
I559-12.7-500	22"	0.5"	19.69"	23.19"	20.79"	MP150-MC
I610-12.7-555	24"	0.5"	21.85"	25.35"	22.83"	MP180-MQ
I660-12.7-600***	26"	0.5"	23.62"	27.17"	24.76"	MP180-MQ
I711-12.7-641***	28"	0.5"	25.24"	29.17"	26.73"	MP240-MQ
I762-12.7-690***	30"	0.5"	27.1"	31.26"	28.70"	MP240-MQ
I813-12.7-735***	32"	0.5"	28.94"	33.27"	30.71"	MP240-MQ

*Heavy duty systems for deep casing drilling. Special design with large ID.

**Hardcore design for extremely deep casing drilling. Requires special HC pilot bit.

***Mid-diameter systems can be engineered based on the specific customer requirements (25.98"–32.01"). Larger-diameter systems can be engineered based on the specific customer requirements.

DRIVE SHOES

Drive shoes are designed to protect the pipe or casing from splitting during casing advancement. Hole Products offers drive shoes ranging in sizes from 2" - 60", cable tool, and rotary styles for weld on or threaded applications.

CABLE TOOL STYLE

Cable tool style drive shoes are standard design for cable tool drilling and are often used in rotary drilling. The outer surface of the shoe is straight with the bevel on the inside edge.



ROTARY STYLE

Rotary style drive shoes have an outside bevel above the cutting edge to ensure a good seat where driving may not be possible.



CABLE TOOL STYLE - WELD ON*		
PART #	CASING O.D.	SHOE O.D.
4550037	4 1/2"	5"
4550040	5 9/16"	6 1/20"
4550005	6 5/8"	7 3/8"
4550000	6 5/8"	7 5/8"
4550045	7"	7 21/32"
4550050	8 5/8"	9 5/8"
4550060	10 3/4"	11 3/4"
4550065	12 3/4"	14"
4550067	14"	15"
4550070	16"	17"
4550072	18"	19"
4550074	20"	21"
4550078	24"	25"

*Threaded cable tool style drive shoes available on request.

ROTARY STYLE - WELD ON*		
PART #	CASING O.D.	SHOE O.D.
4550038	4 1/2"	5"
4550043	5 9/16"	6"
4550015	6 5/8"	7 3/8"
4550026	6 5/8"	7"
4550055	8 5/8"	9"
4550061	10 3/4"	11"
4550066	12 3/4"	14"
4550068	14"	15"
4550069	16"	17"

*Threaded rotary style drive shoes available on request.

DUAL ROTARY SHOES

Dual rotary shoes are designed for use on dual rotary drilling operations. They are welded to the bottom casing section and feature carbide studs to cut through the overburden. Available with domed or ballistic profile buttons.

DUAL ROTARY SHOES			
STD. PART #	HD PART #	CASING O.D.	SHOE O.D.
4850120	4850205	6 5/8"	7 5/8"
4850121	4850174	8 5/8"	9 5/8"
4850132	4850007	10 3/4"	11 3/4"
4850122	4850008	12 3/4"	13 5/8"
4850165	4850202	14"	15"
4850168	4850978	16"	16 5/8"



*Dual rotary shoes have the same I.D. as the casing I.D.

HAMMER OIL

Specially formulated oil for use with DTH hammers designed to reduce wear and increase the longevity of the hammer.



RD Armour Rock Drill Oil features:

- NO Hydrocarbons
- Readily biodegradable for safer use in the environment
- Industry's **Highest Flashpoint** @ 600°F (Competition ranges 350-550°F)
- Better Lubricity & Penetration as Proven in Falex® Load Tests (ASTM D2509 & ASTM D2782)
- High Viscosity Index (Less Thinning When Hot)
- Low Odor
- Additional Grades Available for Wide Range of Climates



RD ARMOUR HAMMER OIL *	
PART #	DESCRIPTION
3551250	ISO40 HAMMER OIL - 5 GAL.
3551253	ISO40 HAMMER OIL - 55 GAL.
3551254	ISO150 HAMMER OIL - 5 GAL.
3551257	ISO220 HAMMER OIL - 5 GAL.

HAMMER LUBE

Hole Products offers nontoxic, biodegradable hammer lube designed to lubricate the interior workings of the hammer, thus increasing hammer life and productivity. Lube is designed for hammers up to 6" in diameter. Apply 2-3 oz. of lube into the drill string for every 300' or 3 hours of continuous drilling.



HAMMER LUBE	
PART #	DESCRIPTION
3550037	HAMMER LUBE - 10 OZ. TUBE

PUMPING EQUIPMENT AND SPARES



Hole Products offers a full range of pumps and spares for use within the construction, rotary, sonic, environmental, geotechnical, surface and underground coring, and water well drilling markets.

Our product offering includes: centrifugal pumps, American Manufacturing piston pumps, FMC Technologies® “Bean” piston pumps, American Manufacturing duplex power pumps, Gardner Denver® duplex power pumps, and progressive cavity (Moyno®) pumps.

Pumps shown in this catalog are a sample of some of our most common sizes and styles. Additional pumps are available in a wide range of sizes and with a variety of capacities for use in all drilling, mining, and industrial applications.

Please contact your Hole Products representative for pump selection assistance, specific performance details, detailed installation and operation guides, and ordering assistance.

MUD PUPPY MUD CLEANING SYSTEMS

Hole Products offers the complete line of Mud Puppy portable mud cleaning systems. These systems are available in a range of sizes for use on all drill sites.

These portable systems are designed to clean and recycle drilling mud by removing rocks and sand, thus reducing wear and tear on pumps, tooling and other parts. In addition, mud cleaning systems eliminate the need for settling pits and mud pans, and reduce the amount of water needed to drill, thus helping to maintain clean and safe jobsites.

MP170-2SC



- Process and Clean up to 350 gal/min. of drill mud
- 600 Gallon Patented Mud Puppy Mud Tank
- 3' x 5' Double Shaker Screen:
Bottom 10 Mesh / Top 100 Mesh
- Two, three or four 5" Desander Cones
- 2" x 3" 118 Centrifugal Mud Pump set at 30-35 PSI
- 9" patented Tetra Greene Sand Guzzler pick up pump
- Caterpillar 2.8 Cylinder Diesel Engine - 74 hp
- Complete Hydraulic System

MP255-2SC



- Process and Clean up to 500 gal./min. of drill mud
- 1000 Gallon Patented Mud Puppy Mud Tank
- 4' x 5' Double Shaker Screen:
Bottom 10 Mesh / Top 100 Mesh
- Three, four or five 5" Desander Cones
- 2" x 3" 118 Centrifugal Mud Pump set at 30 - 35 PSI
- 11" patented Tetra Greene Sand Guzzler pick up pump
- Caterpillar 2.8 Cylinder Diesel Engine - 74 hp
- Complete Hydraulic System

MP255-100



- Process and Clean up to 500 gal/min of drill mud
- 1000 Gallon Patented Mud Puppy Mud Tank
- 4' x 5' Double Shaker Screen:
Bottom 10 Mesh / Top 100 Mesh
- Three, four or five 5" Desander Cones
- 2" x 3" 118 Centrifugal Mud Pump set at 30 - 35 PSI
- 3" x 4" x 13" Centrifugal Mud Pump set at 200 PSI @ 500 gallons/minute, 100 horsepower
- 11" patented Tetra Greene Sand Guzzler pick up pump
- Caterpillar 7.1 Cylinder Diesel Engine - 254 hp
- Complete Hydraulic System

MP255-400



- Process and Clean up to 500 gal/min of drill mud
- 1000 Gallon Patented Mud Puppy Mud Tank
- 4' x 5' Double Shaker Screen:
Bottom 10 Mesh / Top 100 Mesh
- Three, four or five 5" Desander Cones
- 2" x 3" size 1-1/8" Centrifugal Mud Pump set at 30 PSI
- Centerline Triplex Pump 7.5" x 10" - 400 PSI @ 4 50 gallons/minute OR 4x3x13 Centrifugal Pump
- 11" patented Tetra Greene Sand Guzzler pick up pump
- Caterpillar 7.1 Cylinder Diesel Engine - 254 hp
- Complete Hydraulic System

* Custom options and other models are also available.

Contact your Hole Products representative for further details.

PUMPING UNITS



4x3x13 PUMPING UNIT

PART #	ITEM DESCRIPTION
5300149	4x3x13 Pump, 74hp Tier 4 diesel w/clutch, Rated Performance: 500 gpm @ 200 psi



E0413 PUMPING UNIT

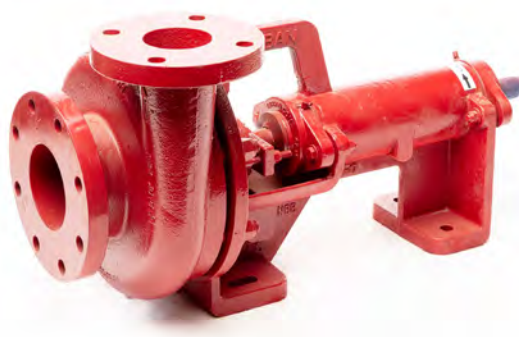
PART #	ITEM DESCRIPTION
5350178	E0413 Pump w/ 8hp Honda Engine Powder coated base Rated performance: 20 gpm, up to 600 psi This high-pressure transfer pump unit will get you the water you need where you need it. It can be plumbed into your rig's existing supply line to boost the flow volume going down hole or use it to irrigate your food plots in hard to reach places.



3L8 PUMPING UNIT

PART #	ITEM DESCRIPTION
5450550	3L8 pump, Hydraulic drive with 1-piece channel base (hyd. flow required: 20 gpm @2000 psi) Rated performance: 100 gpm, up to 225 psi Used to pump water, grouts, or drilling fluids when your existing pump doesn't have the flow or pressure to get the job done. Quick couple it to your rig's hydraulic system or use a stand-alone hydraulic power pack for remote versatility.

MUD PUPPY PUMPS & PARTS



4x3x13 250 PUMPS	
PART #	DESCRIPTION
5300263	250 LONG BODY DUCTILE
5300137	250 SHORT BODY DUCTILE
5300138	250 SHORT BODY CHROME
250 PARTS	
5653063	250 WET END DUCTILE
5300077	250 WET END CHROME
5300078	250 SHAFT SLEEVE
5300047	250 MECH. SEAL

3x2x8.5 118 PUMPS	
PART #	DESCRIPTION
5653148	118 DUCTILE
5300008	118 CHROME
118 PARTS	
5300088	118 WET END DUCTILE
5300104	118 WET END CHROME
5300136	118 MECH. SEAL
5300056	118 SHAFT

SAND GUZZLERS	
PART #	DESCRIPTION
5561221	T11 TETRA GREEN
5561219	T11 CAST IRON
5561222	T09 TETRA GREEN
5560021	T09 CAST IRON
5561217	T06 CHROME
5653000	T06 CAST IRON

SAND GUZZLER PARTS	
PART #	DESCRIPTION
5561224	T11 TETRA GREEN HOUSING
5561226	T11 CAST IRON HOUSING
5561231	T11 TETRA GREEN IMPELLER
5651046	T11 CAST IRON IMPELLER
5561101	T09 TETRA GREEN HOUSING
5561225	T09 CAST IRON HOUSING
5561230	T09 TETRA GREEN IMPELLER
5561229	T09 TCAST IRON IMPELLER
5561228	T11 TOP PLATE
5652028	T09 TOP PLATE
5652018	T11/T09 SPLASHER PLATE



CENTRIFUGAL PUMPS



Hole Products offers a complete line of centrifugal pumps and spares with a wide range of capacities.

Centrifugal pumps feature high volume, low pressure performance, making them suitable for a wide variety of drilling, mud processing, and industrial applications.

When properly selected and installed, centrifugal pumps will provide long lasting and dependable service.

Detailed pump diagrams are available upon request to aid in identifying spare parts for service. Please contact your Hole Products representative for specific pump performance details and ordering assistance.

AO413 PISTON PUMP



AO413 PUMP SPECIFICATIONS	
PUMP MODEL	A0413
CONFIGURATION	VERTICAL DUPLEX PISTON
NUMBER OF PISTONS	2
STROKE LENGTH	1"
PUMP WEIGHT (AVERAGE)	43 LBS.
INTERMITTENT DUTY SPEED RATING	500 RPM
CONTINUOUS DUTY SPEED RATING	400 RPM
MINIMUM SPEED	300 RPM
LUBRICATION SYSTEM (STANDARD)	SPLASH, GRAVITY RETURN
LUBE OIL CAPACITY	1 QUART
LUBE OIL TYPE	SAE 30
STANDARD SUCTION SIZE	1" NPT
STANDARD DISCHARGE SIZE	3/4" NPT
FLUID END MATERIAL	CAST IRON, ALUMINUM BRONZE
VALVE TYPES	DISC VALVES
DRIVE OPTIONS	• 13T SPLINED SHAFT (HYDRAULIC DRIVE) • KEYED 7/8" SHAFT (MECHANICAL DRIVE)

AO413 PUMP PERFORMANCE							
PISTON DIAMETER (IN)	DISPLACEMENT (GAL/REV)	MAXIMUM PRESSURE (PSI)	PUMP CAPACITY (GPM @ INPUT SPEED RPM)				
			300 RPM	350 RPM	375 RPM	400 RPM	500 RPM
1.625"	0.0180	550	5.39	6.28	6.73	7.18	8.98
Horsepower based on 85 or 90% mechanical efficiency. Actual application horsepower requirements can be calculated using the equation: $BHP = (GPM * PSI) / (1714 * 0.85 \text{ or } 0.90)$							
Pump capacities shown are based on 100% volumetric efficiency.							

AO413 COMPLETE PUMP ASSEMBLIES	
PART #	ITEM DESCRIPTION
5350004	AO413 2 CYL. BEAN PUMP ASSEMBLY WITH 7/8" DIA. KEYED SHAFT
5350005	AO413 2 CYL. BEAN PUMP ASSEMBLY WITH 13-TOOTH SPLINED SHAFT
AO413 FLUID END REBUILT KITS	
5350690	CYLINDER GROUP KIT
5350058	VALVE CHAMBER GROUP KIT

Hole Products is the largest stocking distributor in the industry for all FMC/Bean pump assemblies and spares

EO413 PISTON PUMP



EO413 PUMP SPECIFICATIONS	
PUMP MODEL	EO413
CONFIGURATION	VERTICAL QUADRUPEX PISTON
NUMBER OF PISTONS	4
STROKE LENGTH	1"
PUMP WEIGHT (AVERAGE)	80 LBS.
INTERMITTENT DUTY SPEED RATING	575 RPM
CONTINUOUS DUTY SPEED RATING	450 RPM
MINIMUM SPEED	390 RPM
LUBRICATION SYSTEM (STANDARD)	SPLASH, GRAVITY RETURN
LUBE OIL CAPACITY	1 QUART
LUBE OIL TYPE	SAE 30
STANDARD SUCTION SIZE	1 1/4" NPT
STANDARD DISCHARGE SIZE	3/4" NPT
FLUID END MATERIAL	CAST IRON, ALUMINIUM BRONZE
VALVE TYPES	DISC VALVES
DRIVE OPTIONS	- SPLINED SHAFT (HYDRAULIC DRIVE) - KEYED 1 1/8" SHAFT (MECHANICAL DRIVE)

EO413 PUMP PERFORMANCE

PISTON DIAMETER (IN)	DISPLACEMENT (GAL/REV)	MAXIMUM PRESSURE (PSI)	PUMP CAPACITY (GPM @ INPUT SPEED RPM)				
			390 RPM	400 RPM	425 RPM	450 RPM	575 RPM
1.625"	0.0359	600	14.01	14.36	15.26	16.16	20.65

Horsepower based on 85 or 90% mechanical efficiency. Actual application horsepower requirements can be calculated using the equation: $BHP = (GPM * PSI) / (1714 * 0.85 \text{ or } 0.90)$

Pump capacities shown are based on 100% volumetric efficiency.

EO413 COMPLETE PUMP ASSEMBLIES

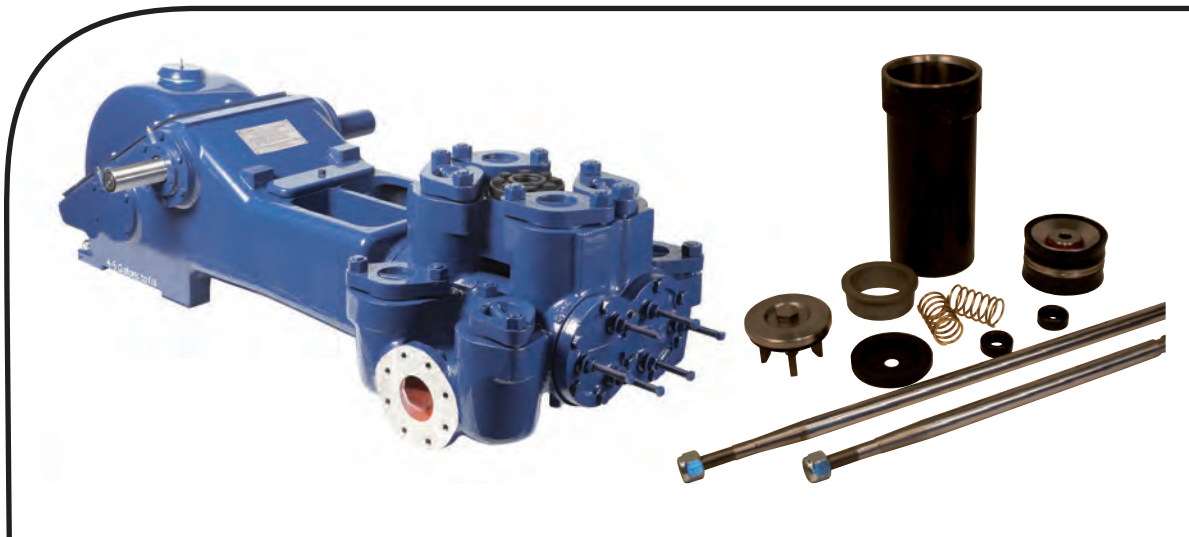
PART #	ITEM DESCRIPTION
5350371	EO413 4 CYL. BEAN PUMP ASSEMBLY WITH 1 1/8" DIA. KEYED SHAFT
5250003	EO413 4 CYL. BEAN PUMP ASSEMBLY WITH SPLINED SHAFT

EO413 FLUID END REBUILT KITS

5350490	CYLINDER GROUP KIT
5260309	VALVE CHAMBER GROUP KIT

Hole Products is the largest stocking distributor in the industry for all FMC/Bean pump assemblies and spares

DUPLEX PUMPS



Hole Products offers a complete line of American Manufacturing and Gardner Denver® duplex reciprocating type pumps and interchangeable pump parts for use in a variety of mud pumping, drilling, and industrial applications. Duplex power pumps can be used for numerous drilling, mud, oil field, and industrial applications.

Detailed pump diagrams are available upon request to aid in identifying spare parts for service. Please contact your Hole Products representative for specific pump performance details and ordering assistance.

DUPLEX PUMPS					
PART #	SIZE	FLOW	PRESSURE	SUCTION PORT	DISCHARGE PORT
5400245	5X6	150 gpm	310 psi max	4"	2"
5403000	7.5X10	300 gpm	800 psi max	4"	3"

DUPLEX PUMP PARTS

5 x 6 DUPLEX PUMP PARTS	
PART #	DESCRIPTION
5400065	LINER, 5X6 STD GD
5400040	VALVE, GRAVEL 5X6 W/RUBBER
5400006	PISTON, 5 API1
5400095	GASKET, CYLINDER HEAD 5X6
5400100	RING, JUNK 5X6 FLUID END
5400010	PACKING, CROWN RING 1 13/16x1 (1LB BOX)
5400090	PACKING, LINER 5X6 GD
5400076	ROD, PISTON 5X6 API1 GEAR DRIVE FLUID END
5400030	SEAT, GRAVEL 5X6 5X8 5-1/2X8

7.5 x 10 DUPLEX PUMP PARTS	
PART #	DESCRIPTION
5400158	LINER, 7.5X10 CENT
5400004	PISTON, 7 1/2 X 8 API-3
5400213	VALVE, GRAVEL W/POLY INSERT 7.5X10
5480007	PACKING, LINER 7.5X8 THRU 7.5X14 CENT
5400000	SPRING, BRASS VALVE 7.5X10
5401013	RING, JUNK 7.5X8 & 7.5X10 CENT
5480016	SEAL, OIL RETAINER GLAND
5400057	INSERT, GRAVEL VALVE 7 1/2 POLY
5401175	GASKET, CYLINDER HEAD 7 1/2 x 8
5401000	PACKING, CROWN RING 2 1/2X1 1/2
5480000	ROD, PISTON 7.5X10 CENT

PROGRESSIVE CAVITY PUMPS



MATERIALS OF CONSTRUCTION:

Pump Body: Cast Iron 316 Stainless Steel

Internals, Including Rotor: Alloy Steel, 316 Stainless Steel

Stators: EPDM (TO 260° F)
 FLUORELASTOMER (TO 350° F)
 NITRILE (TO 210° F)
 NATURAL RUBBER (TO 185° F)

OPTIONS:

- Variety of drives and mounting configurations
- Mechanical or packing seals

PROGRESSIVE CAVITY PUMPS									
MODEL	HP PART #	MAX. GPM	MAX. RPM	MAX. PRESSURE (PSI)	SHAFT DIAMETER	KEYWAY	WEIGHT	PORT SIZES SUCTION	PORT SIZES DISCHARGE
2L4	5450040	24	2,100	150	15/16"	1/4" x 1/8"	91 bs.	2 1/2"	2"
3L4	5450041	24	1,200	225	15/16"	1/4" x 1/8"	97 lbs.	2 1/2"	2"
2L6	5450046	46	900	150	1 1/8"	1/4" x 1/8"	159 lbs.	3"	2 1/2"
3L6	5450015	46	900	225	1 1/8"	1/4" x 1/8"	192 lbs.	3"	2 1/2"
2L8	5450080	100	900	150	1 3/8"	3/8" x 3/16"	332 lbs.	4"	4"
3L8	5450020	100	900	225	1 3/8"	3/8" x 3/16"	372 lbs.	4"	4"

SPARE PARTS:

- Hydraulic motor kits and spare/repair parts for all models available.
 Contact your Hole Products representative for more information.

GROUTERS

Hole Products offers custom designed powerful grout pumps in a variety of sizes and styles and with multiple accessory options. Grouters help by increasing grouting productivity, which in turn, increase overall project profits.

Pumps are available with numerous mixing tank sizes, hose reel options, gas or diesel motors, and with a variety of custom accessories to fulfill even the most demanding gallons per minute, weight, and footprint requirements.



GROUT MIXERS

GROUT MIXERS	
PART #	DESCRIPTION
3710025	GROUT MIXER
3710274	WHIRLY BIRD GROUT MIXER



3710025

3710274

LOOP REELS

Hole Products offers a variety of durable, powered and non-powered loop reels with small and large diameter spools. Loop reels feature adjustable width and diameter, making them suitable for a variety of applications. Large loop reels feature fork lift pockets on both ends of the framework to allow for jobsite mobility.

Loop/Hose reel combos are available on request.



HOSE REELS

Hose reels come standard with a powder coated finish, quick couplers for hydraulics, and are available with a variety of options including small or large diameter spools, remote control, depth counter, and more.

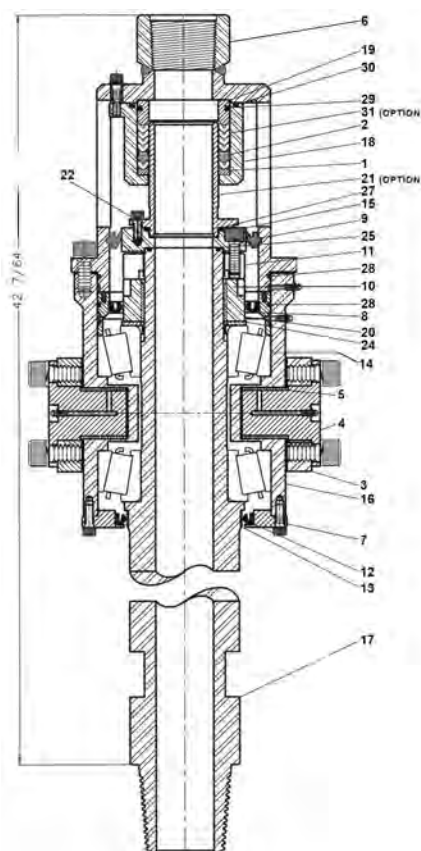
Hose/Loop reel combos are available on request.



25CHD SWIVEL

- 2½" Fluid Passage
- For pulldown rigs
- Adjustable tapered roller bearings
- Grease lubricated packing & bearing
- Fits all TH60, T-3W and other drills

SPECIFICATIONS	
LENGTH	45 1/2"
WIDTH	26 5/8"
WEIGHT	345 lbs.
HOSE CONNECTION	3" NPT RH Box
LOWER CONNECTION	3-1/2" IF LH Pin
WATERCOURSE	2 1/2"
MAX PRESSURE	to 1500 PSI
STATIC LOAD	90,000 lbs.
ROTATING LOAD	40,000 lbs. @100rpm

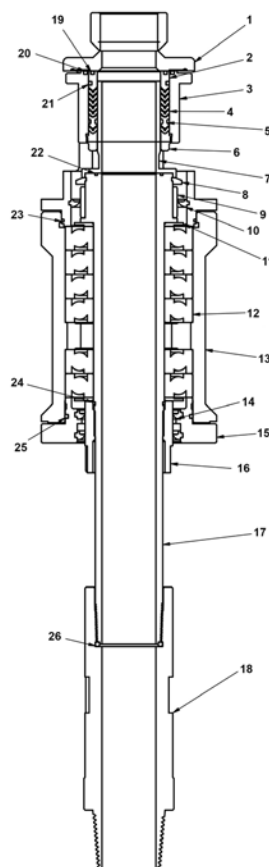


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7650004	25CHD Swivel, 3" NPT Female H/C, 3 1/2" IF LH Pin	
1	7700031	PACKING SEAT RING	1
2	7700032	LANTERN RING	1
3	7650334	YOKE ASSEMBLY	1
4	7650335	TRUNNION PINS	2
5	7650336	BUSHING, TRUNNION PINS	2
6	7650337	BONNET, 3" NPT FEMALE HOSE CONNECTION STRAIGHT UP	1
7	7650338	LOWER SEAL BOX	1
8	7650339	SEAL, UPPER HOUSING (SEAL BOX)	1
9	7650174	SEAL, UPPER HOUSING (BONNET)	1
10	7650341	BEARING ADJUSTING NUT	1
11	7650342	BEARING LOCK NUT	1
12	7650344	SEAL, LOWER HOUSING	1
13	7650345	SLEEVE, LOWER WEAR	1
14	7650346	BEARING (CUP AND CONE)	2
15	7650348	ADAPTER, WASHPIPE	1
16	7650349	BEARING HOUSING	1
17	7650350	SPINDLE, 3 ½" IF LH PIN	1
18	7651056	PACKING BOX	1
19	7700056	PACKING GLAND	1
20	7650351	SEAL BOX, UPPER	1
21	7651049	WASHPIPE	1
21	7651057	WASHPIPE, 2.9840"	OPTION
22	7650281	CAP SCREWS, WASHPIPE	4
23	7650352	SLINGER RING	1
24	7650353	BEARING SHIELD	1
25	7652003	O RING, SPINDLE THREAD	1
26	7650354	O RING, SPINDLE	1
27	7651052	O RING, WASHPIPE	1
28	7650277	O RING, SEAL BOX AND BONNET	2
29	7651051	O RING, PACKING GLAND	1
30	7651050	O RING, PACKING BOX	1
31	7651027	PACKING	1
31	7651025	PACKING (LOW PRESSURE)	OPTION

46DME SWIVEL

- 3" Fluid Passage
- Available with or without trunnion pins
- Adjustable packing & bearing assemblies
- Available with rubber ring or v-packing
- Designed to replace the 40RM and 40 PGDR swivels

SPECIFICATIONS	
LENGTH	48"
WEIGHT	300 lbs.
HOSE CONNECTION	3" NPT RH Box
LOWER CONNECTION	3-1/2" IF LH Pin
WATERCOURSE	3"
MAX PRESSURE	1500 PSI
STATIC LOAD	140,000 lbs.

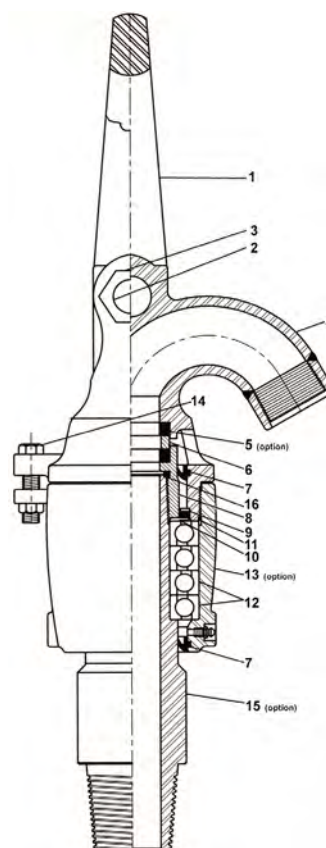


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7650359	46 DME SWIVEL, 3" NPT BOX H/C, 3 1/2" IF LH PIN	
1	7650229	GOOSENECK, 3" NPT RH BOX	Option
2	7650240	PACKING GLAND	1
3	7650218	PACKING BOX	Option
4	7650122	PACKING SET	Option
5	7651022	LANTERN RING	1
6	7650248	PACKING ADJUSTING GLAND	1
7	7650219	WASHPIPE	1
8	7650245	MUD SLINGER	1
9	7650228	WEARSLEEVE	1
10	7650174	HOUSING SEAL	1
11	7650244	BEARING SHIELD	2
12	7650246	BEARING	6
13	7650262	BEARING HOUSING	1
14	7650123	HOUSING SEAL	2
15	7650263	LOWER SEAL BOX	2
16	7650267	BEARING ADJUSTING NUT	1
17	7650268	BEARING SPINDLE	1
18	7650276	LOWER CONNECTION, 3-1/2" IF LH PIN	2
19	7650131	PACKING GLAND O-RING	1
20	7650233	PACKING BOX O-RING	1
21	7650132	PACKING GLAND O-RING	1
22	7650238	SPINDLE O-RING	1
23	7650277	GOOSENECK O-RING	1
24	7650278	BEARING ADJUSTING NUT O-RING	1
25	7650279	LOWER SEAL BOX O-RING	1
26	7650280	LOWER CONNECTION O-RING	1
	7650281	CAP SCREW WITH WASHER	4
	7650282	SET SCREW	4

30WX SWIVEL

- For WATER, GEOPHYSICAL, and MONITORING well drilling
- Large Watercourse
- For Pulldown or Kelly Bar machines
- Flexible BAIL or ELEVATOR SHANK available
- Thrust ball bearings support drill pipe load while providing radial capacity.
- Seal Bearing Case with grease lubrication
- TRUNNION PINS available

SPECIFICATIONS	
LENGTH	39"
WEIGHT	205 lbs.
HOSE CONNECTION	3" NPT RH Box
LOWER CONNECTION	4-1/2" O.D. 8-V LH Pin
WATERCOURSE	3"
MAX PRESSURE	300 PSI
STATIC LOAD	90,000 lbs.
ROTATING LOAD	50,000 lbs.

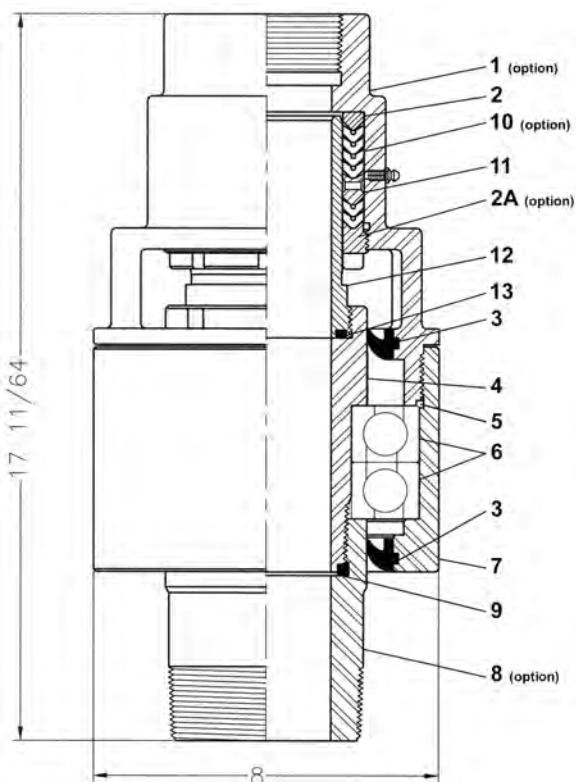


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7650259	30WX SWIVEL W/BAIL, 3" NPT BOX H/C WITH 4 1/2" OD 8-V LH PIN LOWER CONNECTION	
1	7650283	BAIL (5" X 8")	1
2	7650284	BAIL PIN	1
3	7650285	BAIL PIN NUT	2
4	7650286	GOOSENECK, 3" NPT FEMALE HOSE CONNECTION	1
5	7650022	+ PACKING	2
5	7650034	PACKING, 90 DURO (HIGH PRESSURE)	OPTION
6	7650030	+ WEARBUSHING	1
7	7650261	+ HOUSING SEAL	2
8	7650287	SPINDLE NUT	1
9	7650242	+ SHIELD SEAL	1
10	7650244	+ BEARING SHIELD	1
11	7650243	BEARING RETAINER WIRE	1
12	7650246	+ BEARINGS	4
13	7650288	BEARING HOUSING	1
13	7650357	BEARING HOUSING WITH PINS, 2" OD, 8 15/16" SHOULDERS	OPTION
14	7650289	HOUSING BOLT AND NUT	1
15	7650290	SPINDLE, 4 1/2" OD 8-V LH PIN	1
15	7650355	SPINDLE, 3 1/2" FULL HOLE LH PIN	OPTION
15	7650356	SPINDLE, 3 1/2" IF LH PIN	OPTION
16	7650247	+ SPINDLE THREAD SEAL	1
	7650291	MAINTENANCE KIT (8) 7650022; (1) 7650030	
	7650292	REPAIR KIT + Included in Repair Kit	

5JW SWIVEL

- Fluid Passage – 3" Maximum
- Thrust Ball Bearings for pressure and radial load support
- Choice of hose and lower connection threads
- Easy field maintenance and repair
- Working Pressure to 2500 PSI

SPECIFICATIONS	
LENGTH	17 1/2"
WEIGHT	95 lbs.
HOSE CONNECTION	3" NPT RH box
LOWER CONNECTION	3" NPT RH/LH Box/Pin 4" NPT RH/LH Box/Pin
WATERCOURSE	3"
MAX PRESSURE	2500 PSI
STATIC LOAD	30,000 lbs.

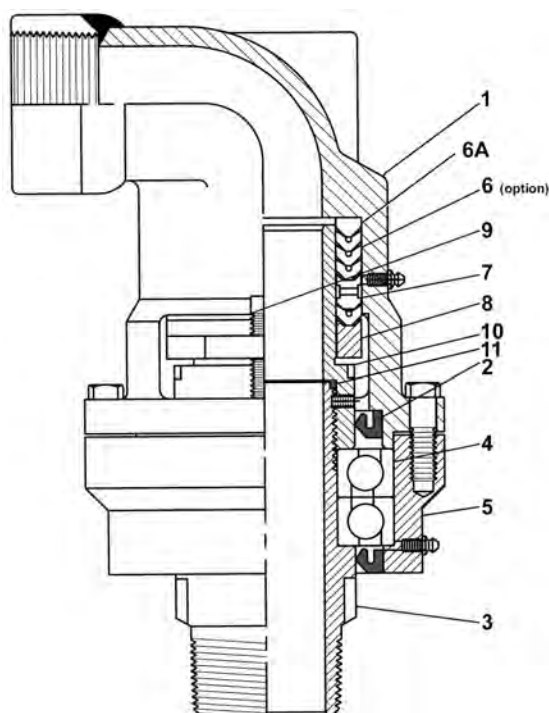


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7650101	SWIVEL, 3" FEMALE HOSE CONNECTION STRAIGHT UP, WITH 3" NPT, LEFT HAND, PIN LOWER CONNECTION	1
1	7650293	GOOSENECK, 3" NPT FEMALE HOSE	1
1	7650294	GOOSENECK, 4" MALE HOSE CONNECTION	OPTION
2	7650248	PACKING ADJUSTING GLAND	1
2A	7650124	+ PACKING SEAT RING	1
2A	7650295	PACKING SEAT RING (STEEL)	OPTION
3	7650261	+ HOUSING SEAL	2
4	7650296	BEARING SPINDLE, 3" FLUID PASSAGE	1
5	7650243	BEARING RETAINER WIRE	1
6	7650246	+ BEARING	2
7	7650297	BEARING HOUSING	1
8	7650298	LOWER CONNECTION, 3" NPT RH BOX	OPTION
8	7650103	LOWER CONNECTION, 3" NPT RH PIN	OPTION
8	7650299	LOWER CONNECTION, 3" NPT LH BOX	1
8	7650309	LOWER CONNECTION, 3" NPT LH PIN	1
8	7650310	LOWER CONNECTION, 4" NPT RH BOX	OPTION
8	7650311	LOWER CONNECTION, 4" NPT RH PIN	OPTION
8	7650312	LOWER CONNECTION, 4" NPT LH BOX	OPTION
8	7650313	LOWER CONNECTION, 4" NPT LH PIN	OPTION
9	7650247	+ SPINDLE THREAD SEAL	1
10	7650122	+ PACKING SET (STANDARD)	1
10	7650314	PACKING (LOW PRESSURE)	OPTION
10	7650221	PACKING SET (HIGH PRESSURE)	OPTION
11	7651022	LANTERN RING	1
12	7650126	+ WASHPIPE	1
13	7650127	+ O RING, WASHPIPE	1
	7650102	REPAIR KIT + Included in Repair Kit	

4JW SWIVEL

- For all types of drilling
- For rotating speed to 500 RPM
- Grease lubricated thrust ball bearings in a sealed housing
- Available with or without stiff bail
- Large Watercourse, 2" and 2-1/4"
- Choice of lower connection threads

SPECIFICATIONS	
LENGTH	13" (w/o bail)
WEIGHT	50 lbs.
HOSE CONNECTION	2-1/2" NPT RH box
LOWER CONNECTION	2" NPT RH/LH Box/Pin 2-1/2" NPT RH/LH Box/Pin
WATERCOURSE	2-1/4"
MAX PRESSURE	1500 PSI
STATIC LOAD	20,000 lbs.
ROTATING LOAD	10,500 lbs.

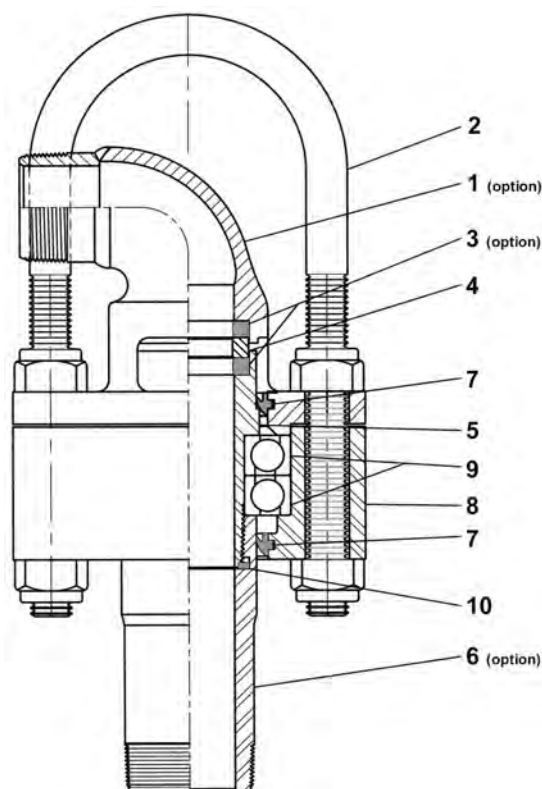


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7650177	4JW SWIVEL, NO BAIL, 2 1/2" NPT FEMALE HOSE CONNECTION WITH 2 1/2" NPT LH PIN LOWER CONNECTION	1
1	7650315	GOOSENECK, NO BAIL, 2 1/2" NPT FEMALE H/C	1
2	7650316	+ HOUSING SEAL, UPPER	2
3	7650358	SPINDLE, 2 1/2" NPT LH PIN LOWER CONN	1
4	7650159	+ BEARINGS	2
5	7650500	BEARING HOUSING	1
5	7650318	CAP SCREW W/LOCK WASHER	4
6	7650264	+ PACKING SET	1
6	7650024	PACKING SET LOW PRESSURE	OPTION
6A	7650072	+ ADAPTER, MALE (FABRIC)	1
6	7650319	ADAPTER, MALE (STEEL)	OPTION
7	7650025	LANTERN RING	1
8	7650321	PACKING ADJUSTING GLAND	1
9	7650322	PACKING ADJUSTING BOLT AND NUT	2
10	7650121	+ WASHPIPE (SPINDLE NUT)	1
10	7650324	+ SET SCREW, WASHPIPE	1
11	7650182	+ O'RING, WASHPIPE	1
	7650326	REPAIR KIT + Included in Repair Kit	
	7650260	MAINTENANCE KIT	

3JW SWIVEL

- For all types of drilling
- For rotating speed to 500 RPM
- Constructed from a high grade alloy steel
- Grease lubricated thrust ball bearings in a sealed housing
- Available with or without stiff bail
- Choice of lower connection threads

SPECIFICATIONS	
LENGTH	19"
WEIGHT	36 lbs.
HOSE CONNECTION	2" RH Box/Pin 2-1/2" RH Box/Pin
LOWER CONNECTION	2" NPT RH or LH box or pin 2-1/2" NPT RH or LH box or pin
WATERCOURSE	MAX. 2"
MAX PRESSURE	300 PSI
STATIC LOAD	10,000 lbs.
ROTATING LOAD	7,200 lbs.

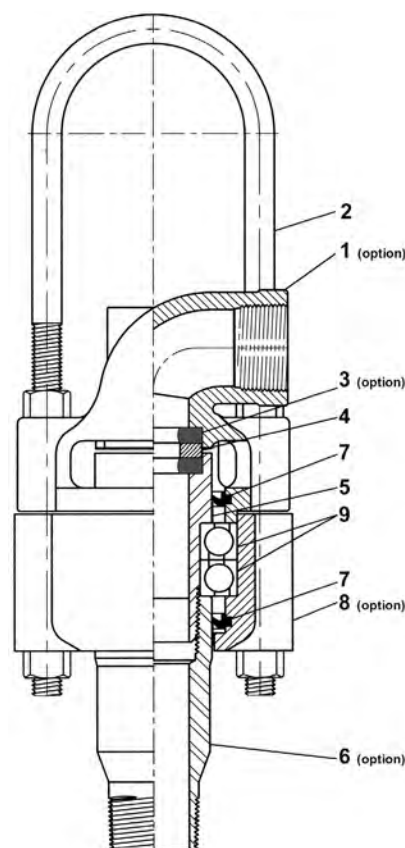


PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7651005	3JW SWIVEL, 2" NPT BOX HOSE CONNECTION, WITH 2" LH NPT PIN LOWER CONNECTION	
	7651037	3JW SWIVEL, 2" NPT BOX HOSE CONNECTION, WITH 2 3/8" IF RH PIN LOWER CONNECTION	
1	7651033	GOOSENECK, 2" NPT MALE HOSE CONNECTION	Option
2	7650256	BAIL WITH NUTS	1
2	7650327	STUDS WITH NUTS	Option
3	7650000	+ PACKING	2
3	7650017	PACKING, 90 DURO	Option
4	7651026	+ WEARBUSHING	1
5	7650086	BEARING SPINDLE	1
6	7650328	LOWER CONNECTION, 2" NPT RH PIN	Option
6	7651014	LOWER CONNECTION, 2" NPT LH PIN	1
6	7650329	LOWER CONNECTION, 2 1/2" NPT RH PIN	Option
6	7650330	LOWER CONNECTION, 2 1/2" NPT LH PIN	Option
7	7650067	+ HOUSING SEAL	2
8	7650331	BEARING HOUSING	1
9	7650018	+ BEARING	2
10	7650054	+ SPINDLE THREAD SEAL	1
	7650066	MAINTENANCE KIT (8) 7650000; (1) 7651026	
	7651045	REPAIR KIT + Included in Repair Kit	

2JW SWIVEL

- For all types of drilling requiring a small light weight swivel
- Alloy steel BAIL, SPINDLE, and LOWER CONNECTION
- High thrust ball bearings in a grease lubricated sealed housing
- Simple design allows quick packing replacement and easy field repairs.
- Available with several different hose connections.

SPECIFICATIONS	
LENGTH	16"
WEIGHT	14 lbs. (alum.), 21 lbs. (iron)
HOSE CONNECTION	1-1/2" NPT right-hand box 2" NPT right-hand pin
LOWER CONNECTION	1-1/2" or 2" NPT RH or LH pin
WATERCOURSE	1 1/2"
MAX PRESSURE	300 PSI
STATIC LOAD	7,000 lbs.



PARTS LIST			
CALLOUT	PART #	DESCRIPTION	QTY REQ.
	7651006	2J SWIVEL, 1 1/2" NPT BOX HOSE CONNECTION WITH 1 1/2" LH NPT PIN LOWER CONNECTION	
	7651042	2J SWIVEL, 2" NPT PIN HOSE CONNECTION WITH 2" LH NPT PIN LOWER CONNECTION	
1	7650056	IRON GOOSENECK, 1 1/2" FEMALE	1
1	7650140	IRON GOOSENECK, 2" MALE	Option
2	7650061	BAIL WITH NUTS	1
3	7650005	+ PACKING	2
3	7650014	PACKING, 90 DURO	Option
4	7650010	+ WEARBUSHING	1
5	7650058	BEARING SPINDLE	1
6	7650062	LOWER CONNECTION, 1 1/2" NPT RH PIN	Option
6	7650051	LOWER CONNECTION, 1 1/2" NPT LH PIN	Option
6	7651051	LOWER CONNECTION, 2" NPT RH PIN	Option
6	7650053	LOWER CONNECTION, 2" NPT LH PIN	1
7	7650007	+ HOUSING SEAL	2
8	7650057	IRON, BEARING HOUSING	1
9	7650012	+ BEARING	2
	7650065	MAINTENANCE KIT: (8) 7650005; (1) 7650010	
	7650002	REPAIR KIT + Included in Repair Kit	

DRILLING FLUIDS, GROUTS, ADDITIVES & SANDS



Hole Products offers a complete line of specially designed, high performance bentonite drilling fluids, additives, grouts, polymers, chemicals, sands, equipment, and accessories from the industry's leading manufacturers including Baroid, Cetco, NuWell, ChemGrout, GeoLoop, Johnson, PDS, Red Flint, Unimin, and more.

These products are specifically designed to improve drilling, grouting, well development and well completion performance in a variety of drilling industries including, construction, environmental, geotechnical, geothermal, horizontal directional drilling (HDD), mineral exploration, water well, and more.

All products are supported by our experienced team, offering the industry's best technical advice, service, and support.

Please contact your Hole Products representative for additional product information, data sheets, MSDS's or technical assistance.

Products listed in the catalog are representative of the most common industry sizes and styles. Please contact your Hole Products representative for additional product offerings.

DRILLING FLUIDS

BAROID® DRILLING FLUIDS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400084	50 lbs.	AQUAGEL®	AQUAGEL® bentonite functions as a viscosifier and filtrate reducer in freshwater drilling fluids.
3400085	50 lbs.	AQUAGEL GOLD SEAL®	AQUAGEL GOLD SEAL® contains no polymer additives or chemical treatments. It functions as a viscosifier and filtrate reducer in freshwater drilling fluids.
3400205	3000 lbs.		
3451009	50 lbs.	BIO-BORE™	BIO-BORE™ concentrate is a free-flowing dry powder for use in various HDD drilling applications, particularly in situations where clay-based drilling fluids are restricted.
3400055	50 lbs.	BORE-GEL®	BORE-GEL® fluid system is a single sack, boring fluid system specially formulated for use in (HDD) applications.
3400125	20 lbs.	POLY BORE™	When mixed with fresh water, a small quantity of POLY BORE™ polymer provides a clear, solid-free, viscous borehole stabilizing fluid.
3400180	35 lbs.		
3400080	50 lbs.	QUIK GEL®	QUIK GEL® viscosifier imparts viscosity, fluid loss control and gelling characteristics to freshwater-based drilling fluids.
3400210	50 lbs.	ZEOGEL®	ZEOGEL® attapulgite clay helps provide high yield and rheological stability in systems that contain large concentrations of salt.
CETCO® DRILLING FLUIDS			
3400145	50 lbs.	HYDRAUL-EZ®	HYDRAUL-EZ® is designed to maintain borehole integrity in horizontally drilled boreholes.
3400115	50 lbs.	PREMIUM GEL®	PREMIUM GEL® is used for all types of freshwater mud rotary drilling where higher solids are desired.
3400133	50 lbs.	PUREGOLD® GEL	PUREGOLD® GEL is recommended for environmental rotary drilling where ambient groundwater quality and soil chemistry must be maintained.
3400110	50 lbs.	SUPER GEL X®	SUPER GEL X® may be used for all types of freshwater mud rotary drilling.
OTHER MANUFACTURERS' DRILLING FLUIDS			
3400132	50 lbs.	FLORIGEL® H-Y	FLORIGEL® H-Y is designed for use in drill fluids whenever ionic contamination from materials such as salts, gypsum, sea water and cement is encountered or anticipated.
3400114	5 gal.	SUPER MUD	SUPER MUD is a liquid polymer slurry which is primarily used as a soil stabilizer to prevent sloughing and/or collapse of a borehole.

GROUTS

BAROID® GROUTS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400070	50 lbs.	AQUAGUARD®	AQUAGUARD® is designed for sealing the annular space around monitor or water well casing. Can develop a 30% solid slurry.
3400075	50 lbs.	BENSEAL®	BENSEAL® granular (8-mesh), used in sealing and grouting of well casing and earthen structures. Benseal has a high swelling capacity and allows for hole re-entry.
3400230	5 gal.	1/4" BENTONITE PELLETS	BENTONITE PELLETS are used to seal wells, boreholes, and monitoring wells.
3400235	5 gal.	1/2" BENTONITE PELLETS	
3400150	5 gal.	3/8" BENTONITE PELLETS	
3400056	50 lbs.	BORE-GROUT™	BORE-GROUT™ is a bentonite grout designed for use in grouting boreholes containing horizontally-installed ground source heat loops.
3400096	50 lbs.	CASING-SEAL™	CASING-SEAL™ bentonite (8 to 14 mesh), is an effective sealing and plugging material for sealing a leaking pond, and for use as a clay liner.
3400005	50 lbs.	3/8" HOLEPLUG®	HOLEPLUG® is sized and graded chip material used to seal and plug earthen boreholes.
3400050	50 lbs.	QUIK-GROUT®	QUIK-GROUT® is designed for grouting water wells, monitoring wells, and for plugging holes. Can develop a 20% active slurry.
CETCO® GROUTS			
3400112	5 gal.	1/4" BENTONITE PELLETS	BENTONITE PELLETS are designed to seal wells, boreholes, and monitoring wells.
3400105	5 gal.	3/8" BENTONITE PELLETS	
3400109	50 lbs.	ACCU-VIS™/ BELLE CRUMBLES™	ACCU-VIS™/BELLE CRUMBLES™ is a quick activating liquid polymer which provides a way to seal and grout boreholes, well casings, and earthen structures.
3400345	50 lbs.	CETCO® GROUT	CETCO® GROUT is a 20% solids, polymer-free, single-component, easy-to-use sodium bentonite grout available in powdered form. CETCO GROUT allows placement in a low viscosity state. NSF/ANSI/CAN Standard 60 Certified.
3400111	50 lbs.	GRANULAR GROUT	GRANULAR GROUT offers reduced friction going down the tremie pipe, and has a firm set-up with little settling.
3400348	50 lbs.	PUREGOLD® CHIPS	PUREGOLD® CHIPS are used for sealing shallow boreholes and seismic shot holes, decommissioning wells, providing an interface between gravel pack and bentonite.
3400107	50 lbs.	PUREGOLD® GROUT	PUREGOLD® GROUT is engineered to form a contaminant resistant seal without affecting groundwater chemistry. To achieve a 30% solids slurry, add one 50 lb bag of grout to 14 gallons of freshwater.
PDS GROUTS			
3400118	50 lbs.	3/8" BENTONITE CHIPS	Sealant to seal wells, boreholes, and monitoring wells.
3400104	5 gal.	1/2" BENTONITE PELLETS	
3400105	5 gal.	3/8" BENTONITE PELLETS	
3400111	50 lbs.	GRANULAR GROUT	GRANULAR GROUT offers reduced friction going down the tremie pipe, and has a firm set-up with little settling.
3400101	50 lbs.	VOLCLAY® GROUT CG-50	VOLCLAY® GROUT CG-50 is recommended for slurry wall applications. VOLCLAY® GROUT CG-50 can be used to seal earthen structures, general sealing, and slurry wall construction.
PDS TIME RELEASE PELLETS			
3400103	5 gal.	1/4" COATED PELLETS TR30	Coated bentonite pellets prevent swelling upon contact with water for a specific time period. Most suitable for use in deep hole sealing.
3400139	5 gal.	1/4" COATED PELLETS TR90	
3400113	5 gal.	3/8" COATED PELLETS TR30	
3400136	5 gal.	3/8" COATED PELLETS TR60	
3400130	5 gal.	1/2" COATED PELLETS TR30	

- 3,000 lb. super sacks are available for specific products on request.

THERMALLY ENHANCED GROUTS

BAROID® THERMALLY ENHANCED GROUTS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400140	50 lbs.	BAROTHERM® GOLD	BAROTHERM® GOLD a bentonite material designed for use in grouting boreholes containing ground source heat loops. When combined with silica sand at various concentrations yields grout w/thermal conductivity values ranging between 0.4 and 1.2 BTU/hr • ft • °F (0.69-2.08 watts/m - °C).
3400164	50 lbs.	MAX-YIELD™ HP	MAX-YIELD™ HP, low solids geothermal grout, is a bentonite based grout designed for use in the grouting of boreholes containing ground source heat loops, and related applications. MAX-YIELD HP low solids geothermal grout is designed to be combined with MAX-YIELD™ TCM, thermally conductive media, at various water concentrations to yield a grout with a resultant thermal conductivity ranging from 1.0 to 1.2 BTU/ft• hr•°F (1.73 – 2.08 watts/m•°C)
3400165	36 lbs.	MAX-YIELD™ TCM	MAX-YIELD™ TCM, thermally conductive media, in conjunction with MAX-YIELD™ HP, low solids geothermal grout, is specifically designed to develop a low permeable, thermally enhanced grout for use in boreholes containing ground source heat loops and related applications. MAX-YIELD TCM, thermally conductive media, is designed to be combined with MAX-YIELD™ HP, low solids geothermal grout, at specific water ratios to yield a grout with a thermal conductivity ranging from 1.0 to 1.2 BTU/hr •ft• °F (1.73 – 2.08 watts/m•°C).

CETCO® THERMALLY ENHANCED GROUTS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400122	50 lbs.	GEO THERMAL GROUT™	GEO THERMAL GROUT™ is an easy pumping grout that has been carefully developed to efficiently suspend solids (silica sand) for enhanced thermal conductivity. When combined with silica sand at various concentrations yields grout w/thermal conductivity values ranging between 0.4 and 1.00 BTU/hr • ft • °F (0.68-1.69 watts/m - °C).
3400240	50 lbs.	HIGH TC GEO THERMAL GROUT™	HIGH TC GEO THERMAL GROUT™ is an easy pumping grout that has been developed to efficiently suspend solids (silica sand) for enhanced thermal conductivity. When combined with silica sand at various concentrations yields grout w/thermal conductivity values ranging between 0.4 and 1.21 BTU/hr • ft • °F (0.68-2.05 watts/m - °C).
3400372	48 lbs.	TC BOOSTER™	CETCO TC BOOSTER is an additive used to boost the thermal conductivity of CETCO GEO THERMAL GROUT. The shape of the CETCO TC BOOSTER is a large flake which maximizes the thermal conductivity potential while reducing the amount of dust produced when utilizing the product in the field.

GEOPRO THERMALLY ENHANCED GROUTS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400090	50 lbs.	BH 20 GROUT	BH 20 GROUT mixed as a 20% - 25% solids grout, BH20 sets into a semi-rigid plug well suited for sealing well casings, decommissioning abandoned wells and for geothermal heating and cooling systems. Thermal conductivity of 0.40 - 0.42 BTU/hr • ft.
3400361	32 lbs.	POWERTEC	PowerTEC is an engineered graphite alternative to silica sand. It is specifically formulated for use with TG Lite or TG Select to achieve thermal conductivities ranging from 0.79 to 1.60Btu/hr • ft•°F.
3400095	50 lbs.	THERMAL GROUT LITE	THERMAL GROUT LITE is designed to optimize the performance of ground heat exchangers for the geothermal heating and cooling industry. Thermal conductivity of 0.45 - 1.00 BTU/hr • ft.
3400100	50 lbs.	THERMAL GROUT SELECT	THERMAL GROUT SELECT is designed to optimize the performance of ground heat exchangers for the geothermal heating and cooling industry. Thermal conductivity of 0.45 - 1.20 BTU/hr • ft.

ADDITIVES, POLYMERS, FOAMS, LCM

BAROID® ADDITIVES			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400021	5 gal.	AQF-2™ XG	AQF-2™ Next generation foaming agent can be added to fresh water for air/foam, air/gel-foam, or mist drilling applications.
3400117	4 - 1 gal. jars	AQUA-CLEAR® PFD	AQUA-CLEAR® PFD concentrated liquid polymer is a dispersant that provides superior mud and sediment removal from the producing formation and gravel pack.
3450037	5 gal.		
3451010	5 lbs.	BARA-DEFOAM® 500	BARA-DEFOAM® 500 defoamer is designed for topical applications to break down foam associated with air/foam drilling operations.
3400403	5 gal.	BARA-LUBE® W	BARA-LUBE® W is a lubricant additive for the reduction of torque and drag, compatible with polymer and bentonite fluids.
3400128	50 lbs.	BARAFOS®	BARAFOS® non-glassy, modified polyphosphate is used as a thinner and dispersant in freshwater drilling fluids and as an aid in water well development.
3400060	50 lbs.	BAROID® 41	BAROID® 41 weighting material has a specific gravity of 4.1 and can be used to increase the density of drilling fluids up to 21 lbs./gal. (2.40 SG).
3400025	5 gal.	CON DET®	CON DET® is used as a wetting agent that promotes bit cleaning and reduces stickiness of clay.
3451012	25 lbs.	CORE-LUBE™	CORE-LUBE™ is a natural, linseed-based soft soap which is used as an inner tube lubricant and minimizes core blockage caused by fractured/ broken formations.
3450026	10 lbs.	DIAMOND SEAL®	DIAMOND SEAL® is intended for use primarily as a lost circulation material for horizontal directional drilling.
3400035	1 gal.	EZ-MUD® POLYMER EMULSION	EZ-MUD® is used primarily as a borehole stabilizer. It can also be added to low-solids drilling fluids to help increase lubricity, fluid viscosity, and to help improve carrying capacity of air/foam injection fluids.
3400030	5 gal.		
3400036	14 lbs.	EZ-MUD® DP	EZ-MUD® DP is a water-soluble polymer that disperses and dissolves in fresh water rapidly. When mixed with fresh water, EZ-MUD DP hydrates quickly and forms a clear, viscous fluid.
3400098	20 lbs.	EZ-MUD® GOLD	EZ-MUD® GOLD clay & shale stabilizer can be mixed with water to improve drill hole stability for rotary mud-circulation drilling and to improve carrying capacity for air or air/foam drilling.
3400099	40 lbs.		
3400094	5 lbs.	EZ-MUD® PLUS	EZ-MUD® PLUS is used primarily as a viscosifier and borehole stabilizer to help prevent reactive shales and clays from swelling and sloughing.
3451015	5 gal.	EP MUDLUBE®	EP MUDLUBE® modified tall oil fatty acid can be used to reduce drill rod torque and impart extreme pressure lubricating properties to drilling fluids.
3451013	5 gal.	FUSE-IT®	FUSE-IT® is a fast-acting lost circulation material designed to help seal off loss circulation zones, allowing the operator to return to normal drilling activities.
3450010	30 lbs.	N-SEAL™	N-SEAL™ lost circulation material can be used as an additive for loss of circulation in concentrations up to 70 lbs./100 gal.
3400040	20 lbs.	NO-SAG®	NO-SAG® is used to enhance the carrying capacity of both clay and polymer-base drilling fluids.
3400065	5 gal.	PENETROL®	PENETROL® wetting agent is designed to help counteract the sticking tendencies of clay and enhances the rate of penetration.
3450093	20 lbs.	PERFORMATROL® 930	PERFORMATROL® 930 is designed to provide borehole stabilization, minimize core infiltration, and maximize clay & shale inhibition as a single-sack clay-free fluid.
3450094	40 lbs.		

ADDITIVES

BAROID® ADDITIVES			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400020	5 gal.	QUIK-FOAM® HP	QUIK-FOAM® High-Performance foaming agent can be added to fresh, brine, or brackish water for air/foam, air/gel-foam, or mist drilling applications.
3400015	55 gal.		
3400185	5 gal.	QUIK-MUD® D-50	QUIK-MUD® D-50 liquid polymer dispersion is used primarily as a viscosifier and borehole stabilizer to prevent reactive shale and clay from swelling and sloughing.
3400044	20 lbs.	QUIK-TROL® GOLD LV	QUIK-TROL® GOLD LV filtration control additive, when added to an AQUAGEL, QUIK-GEL or BORE-GEL slurry, yields a low filtrate drilling fluid system suitable for drilling in water sensitive formations.
3400046	40 lbs.		
3400220	50 lbs.		
3450005	50 lbs.	SODA ASH	SODA ASH granular powder is primarily used to help condition and soften make-up water and raise pH.
3400360	5 gal.	SYSTEM FLOC 360®	SYSTEM FLOC 360® polymeric flocculant is used to flocculate clays and shales encountered in drilling operations and facilitate disposal of water-based drilling fluids.

CETCO® ADDITIVES			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400340	5 gal.	CLAY CUTTER™	CLAY CUTTER™ is an ideal additive for HDD bores in reactive clay soils.
3400086	5 gal.	DRILL-TERGE™	DRILL-TERGE™ is designed to control interfacial tension and inhibit the hydration and dispersion of clay and shale.
3400137	14 lbs.	INSTA-VIS™ DRY	INSTA-VIS DRY™ improves drilling efficiency in both horizontal and vertically drilled holes by controlling shales and clays.
3400108	5 gal.	INSTA-VIS™ PLUS	INSTA-VIS™ PLUS is a multi-functional liquid polymer designed to improve drilling efficiency in both horizontal and vertical drilled holes.
3400068	5 gal.	LIQUI-TROL™	LIQUI-TROL™ viscosifier is a modified natural cellulosic polymer, in an ultra-clean oil. It is suitable for drilling in water sensitive formations.
3400331	25 lbs.	REL PAC®	REL-PAC® is designed to increase borehole stability in a variety of rotary and horizontal drilling applications.
3400353	50 lbs.		
3400335	5 gal.	SUPER PAC™	SUPER PAC™ is an easy mixing, liquid polymer that enhances the properties of a bentonite drilling fluid.
3400135	45 lbs.	SUPER THIN™	SUPER THIN™ is a highly concentrated additive which reduces drilling fluid viscosity, and assist in settling solids.
3400332	35 lbs.	SUSPEND-IT™	SUSPEND-IT™ is designed to enhance gel strength of the drilling fluid for improved suspension and transporting of drill cuttings, gravel, and cobble on long bores.
3400116	25 lbs.	VARIFLO® QD	VARIFLO® QD is a coarse granular, high-viscosity blend of guar gum formulated for easy and quick dispersion in drilling applications.
3400119	43 lbs.	VERSAFOAM® PLUS	VERSAFOAM® PLUS is an ultra high-yielding, biodegradable, liquid foaming agent for use in fresh and saltwater air rotary drilling.

SANDS

WELL PACK SAND

Hole Products offers a full range of fine, medium, and coarse well pack sands to complement any well screen slot size and ground formation. All sands are washed, kiln dried, and screened, ensuring a clean and uniform product. Additional sand sizes available on request.

SILICA SAND

Hole Products offers a full line of premium quality silica sands available in 50 lb. or 100 lb. bags and 3,000 lb. super sacks. Silica sand is combined with geothermal grout at various concentrations to help yield a specific thermal conductivity rating.

Bulk dump loads and additional sand sizes are available on request.



WELL SAND					
50 LB. BAG	3000 LB. SUPER SACK	DESCRIPTION	MESH SIZE	EFFECTIVE SIZE (MM)	UNIFORMITY COEFFICIENT
3500198	3501208	Well Sand	20/40	.45 - .65	<1.4
3500197	3500210	Well Sand	16/30	.65 - .75	<1.4
3500076	3502018	Well Sand	12/20	.90 - 1.08	<1.4
3500196	3502017	Well Sand	10/20	.92 - 1.02	<1.5
3500058	3500228	Well Sand	8/16	1.41 - 1.55	<1.4

GEOTHERMAL SAND	
3000 LB. SUPER SACK	DESCRIPTION
3500046	4030 Silica Sand
3500150	4070 Silica Sand
3500196	5010 Silica Sand
3500165	5020 Silica Sand
3500045	5030 Silica Sand
3500180	5040 Silica Sand

PORTLAND CEMENT

PORTLAND CEMENT	
PART #	DESCRIPTION
3500061	CEMENT,PORTLAND 94 LB, CLASS H
3500062	CEMENT,PORTLAND 47 LB TYPE G
3500063	CEMENT,PORTLAND 92.60 LB TYPE I/II
3500065	CEMENT,PORTLAND 94 LB TYPE I/II
3500066	CEMENT,PORTLAND 47 LB TYPE I/II
3500176	CEMENT,PORTLAND ECO-CEM,94# BAG
3500220	CEMENT,PORTLAND TYPE V 94LB
3500265	CEMENT,PORTLAND TYPE 1L PLC 94#
3500266	CEMENT,PORTLAND TYPE 1L PLC 47#
3500268	CEMENT,PORTLAND IP POZZOLAN 94#
3500317	CEMENT,PORTLAND NON SHRINK GENERAL PURPOSE



GLASS BEADS

Glass Beads are used as an upgrade from traditional filter packs for water wells. Glass beads are easy to handle, can be sized and installed using similar methods and techniques, and they provide:

- Uniform and consistent bead size
- Stronger crush strength than gravel and less compaction over the well life
- Faster development than gravel (40%-60% reduction of time)
- Higher well efficiency
- Less loss of capacity from reduced bio-fouling and mineral scaling
- Reduced operational costs
- NSF/ANSI/CAN Standard 61 - Drinking Water System Components Certified



GLASS BEADS					
PART #		PRODUCT DESCRIPTION	US MESH (APPROX)	BEAD DIAMETER (IN.)	BULK DENSITY (LB. FT. ³)
2200 LB. SUPER SAK	55 LB. BAG				
3500270	5650636	Glass Beads 30-40	30 - 40	0.024 - 0.016	101.13
3500271	3500278	Glass Beads 20-30	20 - 30	0.033 - 0.024	101.13
3500272	5650637	Glass Beads 16-20	16 - 20	0.046 - 0.033	101.13
3500273	3500277	Glass Beads 12-16	12 - 16	0.067 - 0.046	101.13
4026014	4016015	Glass Beads 10-12	10 - 12	0.079 - 0.067	100.51
3500274	5650640	Glass Beads 6-10	6 - 10	0.118 - 0.079	99.88
3500275	3500276	Glass Beads 5-7	5 - 7	0.157 - 0.118	98.01

WELL DEVELOPMENT & REHABILITATION CHEMICALS



Hole Products offers a complete line of Baroid® and Johnson® well development and rehabilitation chemicals. These chemicals are designed for removing minerals and/or biological debris (mud and sediment) to develop new wells and/or rehabilitate existing wells. Chemicals can help improve well productivity, lengthen the life of well, and lower operating cost by improving pumping efficiency.

BAROID® CHEMICALS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3400123	5 gal.	AQUA-CLEAR® AE	AQUA-CLEAR® AE liquid blend of acids and acid enhancers are formulated to control bacterial slime contamination due to the presence of iron-related and sulphate-reducing bacteria.
3400138	50 lbs.	AQUA-CLEAR® MGA	AQUA-CLEAR® MGA dry blend of granular acid and additives is used in the removal of iron, manganese and carbonate scale.
3400117	4 - 1 gal. jars	AQUA-CLEAR® PFD	AQUA-CLEAR® PFD concentrated liquid polymer is a dispersant that provides superior mud and sediment removal from the producing formation and gravel pack.
3450037	5 gal.		

WELL DEVELOPMENT & REHABILITATION CHEMICALS

NUWELL™ REHABILITATION PRODUCTS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3451002	4 - 1 gal. jars	NUWELL™ 220 DISPERSANT POLYMER	NUWELL™ 220 is designed to remove mud and clay from the well environment. It successfully develops new wells without using phosphate and rehabilitates old wells plugged with clays, silts and fines.
3451001	5 gal.		
3451020	30 gal.		
3451025	55 gal.		
3450040	5 gal.	NUWELL™ 310 BIOACID POLYMER	NUWELL™ 310 is used for breaking down biofilm and dispersing mineral salts. It may be used to treat potable water systems and related equipment in addition to large municipal and industrial wells.
3450043	30 gal.		
3450045	55 gal.		
3451030	4 - 1 gal. jars	NUWELL™ 320 BIOCAUSTIC DISPERSANT	NUWELL™ 320 enhances solubility of minerals and biological debris when used with caustic products for cleaning wells, potable water distribution lines or other structural systems.
3451035	5 gal.		
3451040	30 gal.		
3451045	55 gal.		
3451018	4 - 1 gal. jars	NUWELL™ 400 NON-IONIC SURFACTANT	NUWELL™ 400 is for use over a wide pH range. It is ideal for improving penetration of hard deposits or for wetting surfaces to be cleaned.
3451004	5 gal.		
3451055	30 gal.		
3451060	55 gal.		
3451003	4 - 1 gal. jars	NUWELL™ 410 CHLORINE ENHANCER	NUWELL™ 410 is used with hypochlorite to increase effectiveness of chlorination. It increases the hypochlorous acid and bacteriological activity.
3451007	5 gal.		
3451006	30 gal.		
3451005	55 gal.		
3451070	4 - 1 gal. jars	NUWELL™ 500 CHLOROUT	NUWELL™ 500 is a concentrated crystal that is used to neutralize chlorine solutions before their disposal. It is used on the surface, after the well or system discharge has been pumped into a tank.
3451075	5 gal.		
3451080	30 gal.		
3451085	55 gal.		

NUWELL™ ACIDS			
PART #	UNIT SIZE	PRODUCT	PRODUCT DESCRIPTION
3450015	9 lbs.	DESCALE RIGHT NUWELL™ 100 PELLETIZED ACID	NUWELL™ 100 is a pelletized acid designed for pouring directly into the well. NuWell 100 is best for wells with short to moderate lengths of screen at the bottom.
3450055	45 lbs.		
3450060	70 lbs.		
3450065	450 lbs.		
3450070	50 lbs.	DESCALE PLUS NUWELL™ 110 GRANULAR ACID	NUWELL™ 110 granular acid blend is used for cleaning residential, irrigation, commercial, and municipal water wells.
3450016	80 lbs.		
3450017	450 lbs.		
3450053	15 gal.	DESCALE SAFE NUWELL™ 120 LIQUID ACID	NUWELL™ 120 liquid food-grade phosphoric mineral acid which effectively removes common mineral deposits found in wells, filter beds, and water system equipment.
3450050	55 gal.		
3450047	15 gal.	DESCALE HEAVY NUWELL™ 130	NUWELL™ 130 is an aggressive hydrochloric acid for use in wells with heavy accumulation of calcium carbonate and calcium sulfate scale.
3450048	55 gal.		
3450049	275 gal.		
3451043	15 gal.	DESCALE SHIELD NUWELL™ 140	NUWELL™ 140 is an NSF-certified synthetic acid with organic and metal inhibitors that is environmentally safe to handle and non-damaging to steel well components.
3451044	55 gal.		
3451042	275 gal.		

DRILLING FLUID EQUIPMENT & ACCESSORIES



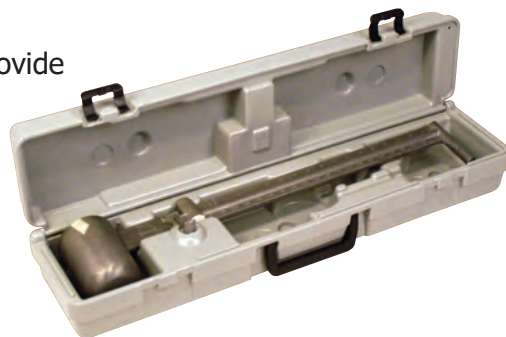
Hole Products offers a wide range of equipment and accessories to complement our drilling fluids, additives, grouts, and sands product offerings.

Our range of products includes everything successful drilling and grouting operations need to complete projects on time and under budget.

Custom designed and manufactured grouting equipment and accessories are available to fit any requirement.

MUD SCALE / BALANCE

Hole Products offers durable mud scales/balances to provide simple and accurate measurements of drilling fluid density (weight). Our complete kits include a high impact plastic case to protect the scale/balance during transport and to provide a solid working platform.



MUD SCALE / BALANCE	
PART #	DESCRIPTION
3710000	COMPLETE MUD SCALE W/CASE

MARSH FUNNEL AND MEASURING CUP

Marsh funnels and measuring cups are used to determine an accurate measure of the drilling fluid's viscosity. Viscosity is a measurement of a fluid's resistance to flow; the greater the resistance, the higher the viscosity.



FUNNEL & MEASURING CUP	
PART #	DESCRIPTION
3710001	MARSH FUNNEL
3710002	1000 mL MARSH CUP

SAND CONTENT TEST KIT

Sand content kits measure the percentage of sand (by volume) suspended within the drilling fluid. Excessive sand may result in the deposition of a thick filter cake on the wall of the hole. High sand content may also cause excessive abrasion affecting pump parts and pipe connections.



SAND CONTENT TEST KIT	
PART #	DESCRIPTION
3710033	SAND CONTENT TEST KIT

TEST STRIP INDICATORS

Quick and accurate field tests for determining pH, iron, and calcium levels in drilling fluids and water.

TEST STRIP INDICATORS	
PART #	DESCRIPTION
3710005	pH TEST STRIPS - 50/pack
3710006	IRON TEST STRIPS - 100/pack
3710075	HARDNESS TEST STRIPS - 50/pack
3710090	CALCIUM TEST STRIPS - 25/pack



GROUT SHOES

Hole Products offers a wide range of custom grout shoes manufactured from aluminium and made to any size to fit your specific project requirements.

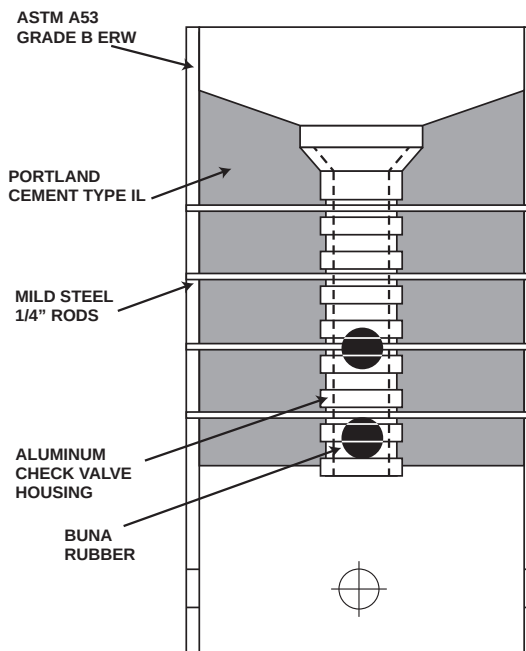
Grout shoes are designed to simplify the process of grouting casing into overburden formations.

Grouting:

The grout shoe is welded to the end of the casing and installed into the borehole. A stinger is attached to a tremie line and lowered into the casing until the stinger o-rings seat into the grout shoe funnel, providing a tight seal.

As grout is pumped through the tremie line, it exits the grout shoe side outlets and is forced up the annulus of the borehole. Double ball valves prevent the grout from traveling back up into the I.D. of the casing.

Upon completion of the grouting process, the aluminium grout shoe is simply drilled out, and the borehole can continue into bedrock.



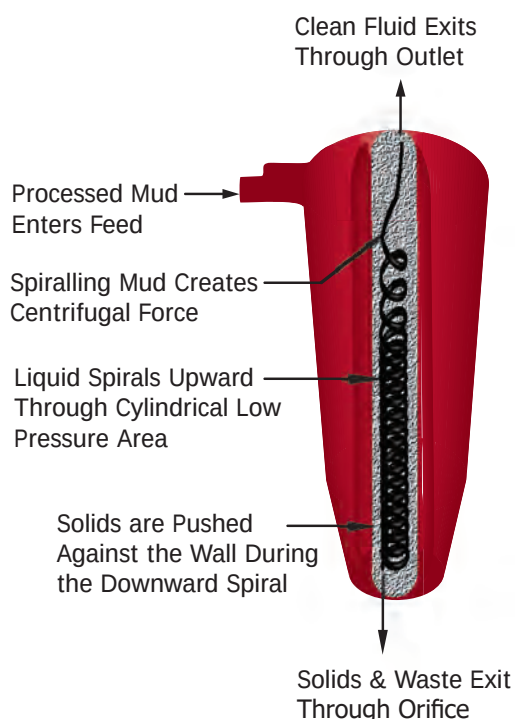
GROUT SHOES	
PART #	DESCRIPTION
3951005	6" GROUT SHOE
3951010	8" GROUT SHOE
3951015	10" GROUT SHOE
3951025	12" GROUT SHOE
3951030	14" GROUT SHOE
3951035	16" GROUT SHOE
3951040	18" GROUT SHOE
3951045	20" GROUT SHOE
3951047	22" GROUT SHOE
3951050	24" GROUT SHOE
3951051	26" GROUT SHOE

STINGER	
PART #	DESCRIPTION
3951000	2" FEMALE NPT



MINI-MUD DESANDER

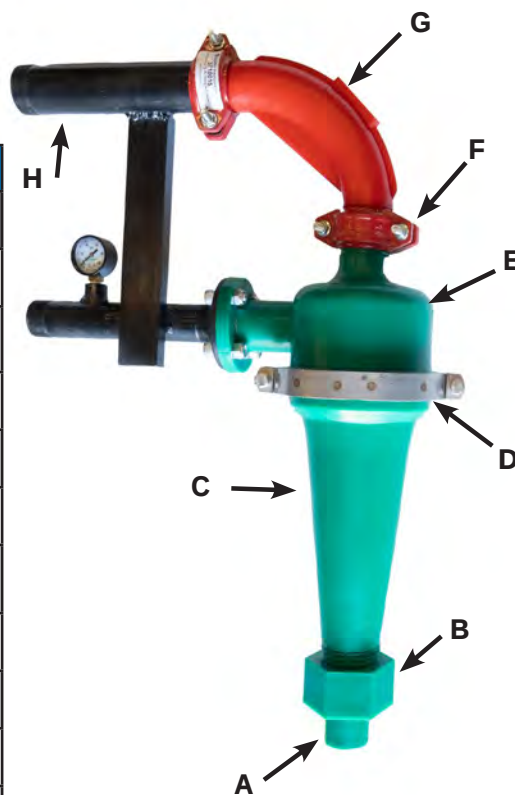
The mini-mud desander is designed to separate fine particles from your drilling fluids that would otherwise be recirculated. Maintaining clean drilling fluid with good density and weight will help increase the life of pumps, swivels, and hoses, and ensure cuttings are carried away from the borehole.



HOW THE MINI-MUD DESANDER WORKS

There are no moving parts in the cone. Centrifugal forces are generated within the cone by high speed rotation of the drilling fluid which separates solids from liquids. The mini-desander has two exits on the axis; the smaller on the bottom (underflow) and larger (outlet) at the top. The underflow is used for denser or thicker waste products, while the overflow takes the cleaned fluid up the center of the cone and back into the circulating system for reuse. The 5" desander cone will process up to 65 GPM and must be operated at 30-35 PSI to effectively separate the sand from your fluid.

MINI MUD DESANDER		
ITEM	PART #	DESCRIPTION
A-H	3710010	COMPLETE MINI MUD DESANDER
A	3710177	APEX 5/8"
B	3710178	NUT APEX HOLDER
C	3710173	BOTTOM CONE SECTION
D	3720022	5" CLAMP
E	3720021	TOP CONE SECTION (Overflow located at the neck of this opening)
A-E	3710086	COMPLETE 5" TETRA GREEN CONE ASSY.
F	3710015	VITAULIC W/ EPDM GASKET
G	3710013	ELBOW 90°
H	3710100	PIPE ASSEMBLY



GROUND COVER PROTECTION



Hole Products offers a complete line of AlturnaMATS® rugged ground cover protection mats, outrigger pads, and accessories.

Ground cover protection mats protect lawns and landscaped areas from damage caused by heavy vehicles and foot traffic and make getting stuck next to impossible. Mats are great for creating temporary roadways, walkways, and drilling platforms.

Outrigger Pads are lightweight and heavy duty and will not splinter, warp, or bend.

All ground cover protection products are available in a variety of sizes and styles to fit your specific application.

Please contact your Hole Products representative for additional details and ordering assistance.

OUTRIGGER PAD	
PART #	SIZE
3900160	15" X 15" X 3/4"
3900042	18" X 18" X 1"
3900025	24" X 24" X 1"
3900030	24" X 24" X 2"
3900060	36" X 36" X 2"



HOSES & FITTINGS

Hole Products offers a complete line of high pressure air hose, multi-purpose driller's hose, EPDM suction hose, PVC layflat hose, fittings, and accessories for a variety of suction, discharge, and transfer applications. Hoses are available in a wide range of sizes, psi ratings, and lengths to meet any requirement. Pre-coupled assemblies are available in any length with a variety of custom fittings.

HIGH PRESSURE AIR HOSE

High pressure air hoses are mandrel built and wrapped with a special blended cover compound to provide excellent performance and cut/abrasion resistance in even the most demanding drilling applications. Pre-coupled assemblies with custom Boss fittings are available on request.

Sizes: 1" to 3" I.D.

Temp. Range: -30° to +200° F



HIGH PRESSURE AIR HOSE*				
I.D.	O.D.	APPROX. WT LBS/FT	PART #	
			500 WP P.S.I.	600 WP P.S.I.
1"	1 1/2"	.75	4351009	
1 1/2"	2"	1.25	4351008	4351020
2"	2 31/50"	1.90	4350000	4351005
2 1/2"	3 5/32"	2.40	4351025	4351006
3"	3 23/32"	2.90	4351030	4350010

*Additional sizes and P.S.I. ratings are available on request.

WHIP CHECKS

Add whip checks at each hose connection and from tool to hose to prevent serious injury due to hose or coupling failure.

All whip checks are highly resistant to rust and corrosion and are available to fit hoses from 1/2" to 4" I.D.



WHIP CHECKS			
HOSE I.D.	WHIP CHECK LENGTH	CONNECTION TYPE	PART #
1/2" - 1 1/4"	20 1/4"	HOSE TO HOSE	4310039
1/2" - 2"	28"	HOSE TO HOSE	4310115
1 1/2" - 3"	38"	HOSE TO HOSE	4310040
UP TO 4"	44"	HOSE TO HOSE	4310120
1/2"- 1 1/4"	20 1/4"	HOSE TO TOOL	4310125
1/2" - 2"	28"	HOSE TO TOOL	4310130
1 1/2" - 3"	38"	HOSE TO TOOL	4310135
UP TO 4"	44"	HOSE TO TOOL	4310140

MULTI-PURPOSE DRILLERS HOSE

Hole Products offers multi-purpose drillers hose designed for use with air, water, and diluted chemicals. Drillers hose offers resistance to heat and weathering and is oil mist resistant. Multi-purpose hoses feature a smooth red cover, black EPDM tube, and are reinforced with layers of high tensile polyester yarn. Pre-coupled assemblies with custom Boss fittings are available on request. Sizes: 1/4" to 2" I.D. Temp. Range: -40° to +93° F



MULTI-PURPOSE DRILLERS HOSE*				
I.D.	O.D.	MAX WP P.S.I.	APPROX. WT LBS/FT	PART #
3/4"	1.16"	250	.38	4351040
1"	1.37"	200	.51	4351045
1 1/4"	1.78"	200	.81	4351050
1 1/2"	2.03"	200	.95	4351055
2"	2.50"	200	1.13	4350007

*Additional sizes and P.S.I. ratings are available on request.

EPDM SUCTION HOSE

Hole Products offers EPDM suction hose for wet or dry applications. These hoses provide an excellent blend of durability, chemical resistance, and cold weather flexibility. Pre-coupled assemblies with custom cam lock fittings are available on request.

Sizes: 1" to 6" I.D. Temp Range: -40° to 140° F



EPDM SUCTION HOSE				
I.D.	O.D.	WP P.S.I. 72° F	APPROX. WT LBS/FT	PART #
1"	1.34"	50	.23	4400115
1.5"	1.84"	50	.40	4400100
2"	2.43"	50	.67	4400080
3"	3.52"	43	1.10	4400120
4"	4.61"	38	1.84	4400049
6"	6.81"	23	3.07	4400205

PVC LAYFLAT DISCHARGE HOSE

Hole Products offers a large selection of PVC layflat hose. Layflat hose is constructed of premium quality PVC and a reinforced cover. Layflat is lightweight, flexible, and easy to transfer and store. It is an excellent hose for drilling, mining, construction, and industrial applications. Pre-coupled assemblies with custom cam lock fittings are available on request. Please contact your Hole Products representative for details.



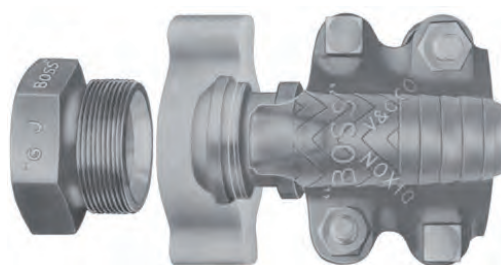
Sizes: 1" to 6" I.D. Temp Range: -5° to 170° F WP P.S.I.: 50 to 600 P.S.I.

BOSS™ AIR FITTINGS

Boss™ air fittings provide a convenient threaded fitting to connect two lengths of high pressure hose or a single length to a threaded NPT outlet on a piece of equipment.

Hole Products offers a variety of plated iron Boss™ fittings, ranging in size from 1" through 3".

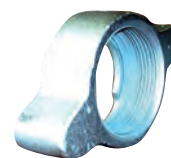
Plated steel fittings are available on request.



*COMPLETE
FEMALE



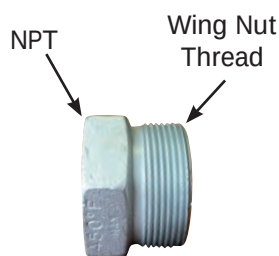
TAPERED TOP
STEM



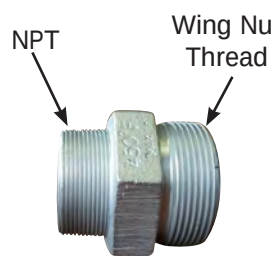
WING
NUT

BOSS™ AIR FITTINGS			
HOSE SHANK X NPT	COMPLETE FEMALE* PART #	STEM PART #	WING NUT PART #
1"	4250060	4250075	4250100
1 1/2"	4250065	4250080	4250105
2"	4250005	4250085	4250110
2 1/2"	4250055	4250090	4250115
3"	4250070	4250095	4250120

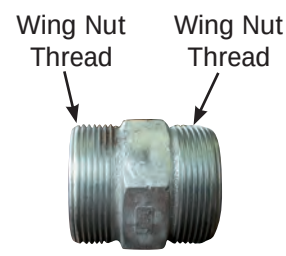
*Complete fittings include a female spud, stem, and wing nut. Fittings are available as complete assemblies or as individual parts.



FEMALE SPUD



MALE SPUD



DOUBLE SPUD

BOSS™ AIR FITTINGS			
HOSE SHANK X NPT	FEMALE SPUD PART #	MALE SPUD PART #	DOUBLE SPUD PART #
1"	4250125	4250140	4250150
1 1/2"	4250040	4250045	4250155
2"	4250010	4250025	4250030
2 1/2"	4250026	4250050	4250160
3"	4250135	4250145	4250165

BOSS™ CLAMPS

Hole Products offers four bolt, plated malleable iron clamps, available in 2 grip and 4 grip styles to fit hose I.D.s, ranging from 1" through 3".

The bolts used in the Boss™ interlocking clamps are not standard bolts. Speciality replacement nuts and bolts are available.

Additional Boss™ clamps including stainless steel and brass clamps are available on request.

BOSS CLAMPS					
HOSE I.D.	HOSE O.D.		PSI	2 GRIP	4 GRIP
	FROM	TO			
1"	1 1/2"	1 3/4"	600	4250170	4250190
1 1/2"	2"	2 1/4"	600	4250175	4250195
2"	2 1/2"	2 3/4"	600	4250020	4250200
2 1/2"	3 1/2"	3 3/4"	450	4250180	4250205
3"	3 1/2"	3 3/4"	450	4250185	4250210

- This chart is intended as a guide only.
- The use of lubricant on bolts will adversely affect clamp performance. Do not lubricate nuts and bolts.



2 GRIP



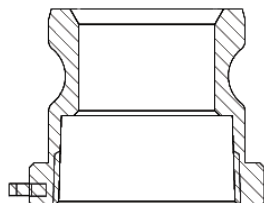
4 GRIP



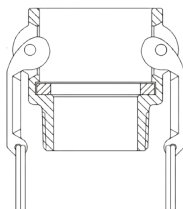
CAM LOCK FITTINGS

Hole Products offers cam lock fittings in a broad range of sizes and styles. Cam lock fittings are an excellent choice for applications in low pressure fluid handling. These couplings mate quickly and conveniently by inserting the grooved coupling into the cam coupling and simply closing the cam arms. Safety pins prevent the cam arms from accidental disconnection during use.

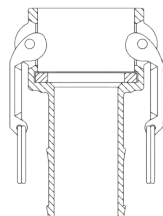
TYPE A



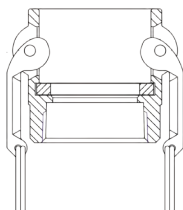
TYPE B



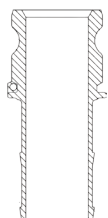
TYPE C



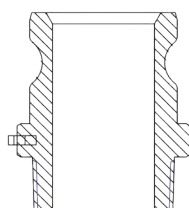
TYPE D



TYPE E



TYPE F



TYPE A - (ADAPTER X FEMALE NPT THREAD)*

PART #	SIZE
4300010	1" ADAPTER X 1" FEMALE NPT THREAD
4300005	2" ADAPTER X 2" FEMALE NPT THREAD
4300110	3" ADAPTER X 3" FEMALE NPT THREAD
4300053	4" ADAPTER X 4" FEMALE NPT THREAD
4300062	5" ADAPTER X 5" FEMALE NPT THREAD
4300115	6" ADAPTER X 6" FEMALE NPT THREAD

TYPE B - (COUPLER X MALE NPT THREAD)*

4300018	1" COUPLER X 1" MALE NPT THREAD
4300011	2" COUPLER X 2" MALE NPT THREAD
4300099	3" COUPLER X 3" MALE NPT THREAD
4300120	4" COUPLER X 4" MALE NPT THREAD
4300126	5" COUPLER X 5" MALE NPT THREAD
4300130	6" COUPLER X 6" MALE NPT THREAD

TYPE C MALE - (COUPLER X HOSE SHANK)*

4300016	1" COUPLER X 1" HOSE SHANK
4300006	2" COUPLER X 2" HOSE SHANK
4300047	3" COUPLER X 3" HOSE SHANK
4300054	4" COUPLER X 4" HOSE SHANK
4300140	5" COUPLER X 5" HOSE SHANK
4300145	6" COUPLER X 6" HOSE SHANK

TYPE D - (COUPLER X FEMALE NPT THREAD)*

4300015	1" COUPLER X 1" FEMALE NPT THREAD
4300040	2" COUPLER X 2" FEMALE NPT THREAD
4300050	3" COUPLER X 3" FEMALE NPT THREAD
4300052	4" COUPLER X 4" FEMALE NPT THREAD
4300160	5" COUPLER X 5" FEMALE NPT THREAD
4300165	6" COUPLER X 6" FEMALE NPT THREAD

TYPE E - (ADAPTER X HOSE SHANK)*

4300017	1" ADAPTER X 1" HOSE SHANK
4300007	2" ADAPTER X 2" HOSE SHANK
4300170	3" ADAPTER X 3" HOSE SHANK
4300058	4" ADAPTER X 4" HOSE SHANK
4300175	5" ADAPTER X 5" HOSE SHANK
4300056	6" ADAPTER X 6" HOSE SHANK

TYPE F - (ADAPTER X MALE NPT THREAD)*

4300019	1" ADAPTER X 1" MALE NPT THREAD
4300014	2" ADAPTER X 2" MALE NPT THREAD
4300001	3" ADAPTER X 3" MALE NPT THREAD
4300190	4" ADAPTER X 4" MALE NPT THREAD
4300195	5" ADAPTER X 5" MALE NPT THREAD
4300200	6" ADAPTER X 6" MALE NPT THREAD

*Aluminium fittings listed. Call for brass or polypropylene fittings.

PIPE HANDLING AND HOISTING

ROD SPINNERS

Increase the speed and efficiency of your drilling operations by adding a Rod Spinner to your drill string connections. Designed to keep hands off the drill pipe, this tool enhances operator safety while delivering faster, more precise rod alignment with a hard stop connection. Rod Spinners are available for a wide range of drill pipe sizes—from 2 3/8" to 4 1/2", with larger sizes available upon request. Contact your local Hole Products representative today to learn more!



ROD SPINNER

PART #	DESCRIPTION
5300196	For 2 7/8" to 4 1/2" O.D. drill pipe

MOTOR SPECIFICATIONS

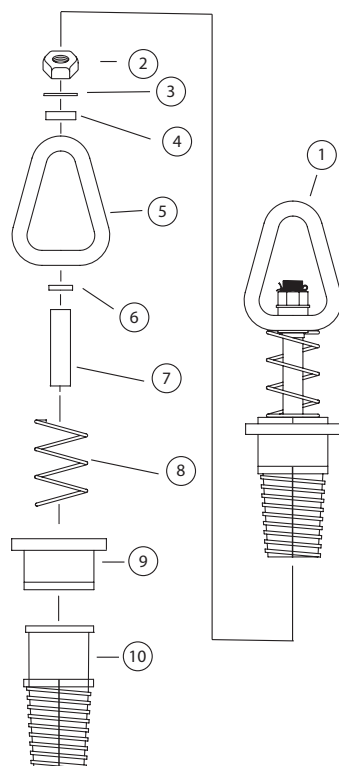
Displacement (CM3/REV):	100
Maximum Speed:	582 REV/MIN
Maximum Oil Flow:	(Continuous): 12 gpm; (Intermittent): 15 gpm
Maximum Supply Pressure:	200 BAR (2900 PSID)
Maximum Torque	(Continuous): 1682 LB IN; (Intermittent): 2337 LB IN
Maximum Side Load At Key:	1500 lb

AIR CYLINDER SPECIFICATIONS

Bore:	4-1/2"
Stroke:	3-1/4"
Spring Force At "0" Stroke (lbs):	40 lbs
Maximum Supply Pressure:	120 PSI
Maximum Clamp Force (lbf):	1900 lbf

HOISTING PLUGS

MURPHY FAST PLUG



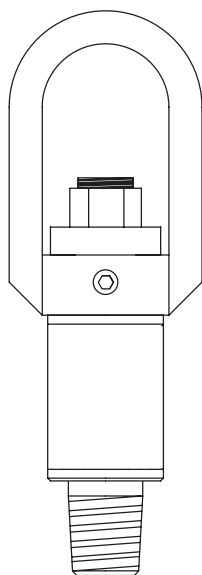
MURPHY FAST PLUGS

DESCRIPTION	LIFTING CAPACITY
2 3/8" BAIL	32,000 lbs.

MURPHY FAST PLUG

ITEM	PART #	DESCRIPTION
1	Call for options	COMPLETE ASSEMBLY*
2	5050125	CASTELLATED NUT
3	5050130	WASHER BEARING
4	5050135	THRUST BEARING
5	5050140	BAIL
6	5050145	SHOULDER WASHER
7	5050150	SHANK
8	5050155	SAFETY SPRING **
9	5050160	PLUG
10	Call for options	SLEEVE

HOISTING PLUGS



HOISTING PLUGS

THREADS	SWIVELING	SWIVELING & HINGED	SPEED PLUG
2 3/8" API REG	5050021		
2 3/8" IF	5050131	5050158	5050013
2 3/8" MJR	5050045	5051145	5050044
2 7/8" IF	5050211	5050233	5050006
3 1/2" API REG	5050180	5050250	5050244
3 1/2" IF	5050038	5050010	

Additional thread patterns are available.

PIPE ELEVATORS

Hole Products offers standard (SD) and heavy duty (HD) pipe elevators in a multiple sizes to fit a variety of project requirements. Additional sizes are available on request.

HOOK JAW PIPE ELEVATORS		
PART #	PIPE SIZE	RATING
5000005	1"	6,000 lbs.
5000010	1 1/4"	6,000 lbs.
5000015	1 1/2"	6,000 lbs.
5000020	2"	6,000 lbs.



PIPE/CASING ELEVATORS

HINGE TYPE CASING & PIPE ELEVATORS										
										
	PVC		PVC HD		STEEL BAIL		CABLE BAIL		SHURGRIP	
PIPE SIZE	PART #	RATING (LB)	PART #	RATING (LB)	PART #	RATING (LB)	PART #	RATING (LB)	PART #	RATING (LB)
1"	5000069	2,000			5000014	36,000				
1 1/4"	5000066	2,000			5000011	33,000				
1 1/2"	5000067	2,000			5000012	41,000				
2"	5000070	2,000			5000013	38,000	5000034	35,000		
3"	5000073	2,000			5000024	67,000				
4"	5000075	2,000	5000140	3,000	5000074	48,000	5000086	36,000		
5"	5000076	2,000	5000150	3,000	5000223	70,000	5000199	36,000		
6"	5000078	2,000	5000006	3,000	5000134	78,000	5000196	39,000	5650619	5,500 (6.9")
8"	5000080	3,000			5000222	111,000	5000083	41,000	5650617	8,500
10"	5000085	3,000	5000319	*10,000	5000221	100,000	5000105	42,250	5650615	13,500
12"	5000081	3,000	5000320	*10,000	5000050	83,000	5000256	43,500	5650616	19,000
14"	5000094	3,000	5000321	*10,000	5000097	68,000	5000257	43,500	5650631	22,500
16"	5000084	3,000	5000322	*10,000	5000259	68,000	5000225	43,500	5650111	32,000

* Sold without cable or chain bails

CASING LIFTERS

Hole Products offers casing lifters and replacement parts to fit 6" and 8" casing. Additional sizes are available on request. Casing lifters allow users to quickly elevate casing and simplify alignment during welding or coupling.

CASING LIFTERS	
PART #	DESCRIPTION
5000025	6" COMPLETE
5000026	8" COMPLETE
5000035	6" OR 8" SET SCREW
5000027	6" OR 8" ARM W/ SET SCREW
5000030	6" BASE
5000110	8" BASE



PIPE TONGS

Pipe tongs are designed to grip pipe for hoisting and permit an automatic release of the pipe when the lift line is slacked off. All pipe tongs come equipped with field replaceable grip pads that provide safe and positive engagement of the pipe.

PIPE TONGS			
PART #	DESCRIPTION	PIPE USE	CAPACITY
5000107	3" TONGS	3.500" OD PIPE	2,000 lbs.
5000102	6" TONGS	5.875" OD PIPE	3,000 lbs.
5000101	7" TONGS	7.500" OD PIPE	3,000 lbs.
5000100	8" TONGS	8.625" OD PIPE	3,500 lbs.
5000103	10" TONGS	10.750" OD PIPE	4,000 lbs.



GUNNEBO HOOKS

GUNNEBO HOOKS			
PART #	DESCRIPTION	CABLE SIZE	LOAD LIMIT (LBS.)
5160001	BKL-6-10	7/32"	2,700
5160000	BKL-7/8-10	9/32"	4,300
5160005	BKL-10-10	3/8"	8,800
5160030	BKL-13-10	1/2"	15,000
5160010	BKL-16-10	5/8"	22,000
5160003	BKL-18/20-10	3/4"	35,000



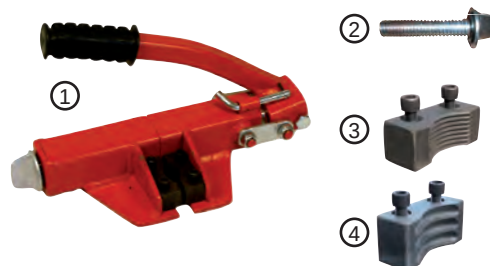
PE /FJ CASING HANDLING ACCESSORIES

PE /FJ CASING HANDLING ACCESSORIES CLAMPS, ELEVATORS							
							
KWIK KLAMP		PVC CLAMP		ALIGNMENT CLAMP		PE /FJ ELEVATOR	
PIPE SIZE/ O.D.	PART #	RATING (LB)	PART #	RATING (LB)	PART #	PART #	RATING (LB)
1" /	4950005	3,500					
1.25" /	4950005	3,500					
1.5" /	4950005	3,500					
2" / 2.375"	4950005	3,500					
3" / 3.5"	4950010	7,000	5700318	2,000			
4" / 4.5"	4950010	7,000	5700057	2,000	4955000	5000514	10,000
5" / 5.5"	4950006 / 0001	7,000	5700322	2,000	4950009	5000512	10,000
6" / 6.6"	4950006	7,000	5700088	3,000	4950199	5000658	10,000
8" / 8.6"			5000088	3,000	4950220	5000858	10,000
10" / 10.75"			5700089	3,000	4950024	5000515	10,000
12" / 12.75"			5700238	3,000	4950222	5000812	10,000
14" / 14"			5000315	3,000	4950200	5000516	10,000
16" / 16"			5000316	3,000	4955001	5000517	10,000

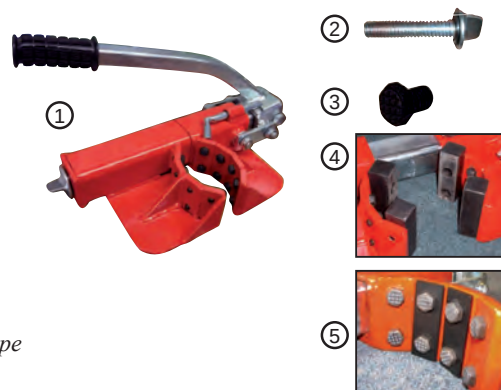
KWIK KLAMPS™

Kwik Klamps™ are a time saving and safe tool designed for clamping and holding pipe. They are lightweight, easy to use, and provide excellent holding capability. The adjustable jaws allow for use with multiple pipe sizes and most have a safety pin to prevent accidental unclamping.

KWIK KLAMP 1		
ITEM	PART #	DESCRIPTION
1	4950005	COMPLETE CLAMP - 1" TO 2" PIPE SIZE
2	4950041	ADJUSTABLE SCREW W/ NYLON WASHER
3	4950012	JAW SET
4	4950017	SUPER JAW SET

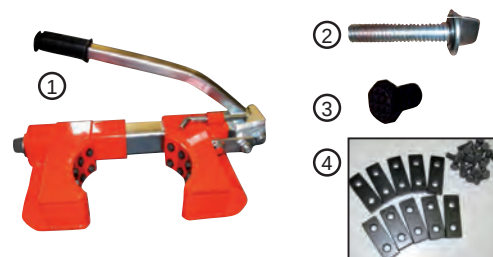


KWIK KLAMP 2		
ITEM	PART #	DESCRIPTION
1	4950010	COMPLETE CLAMP - 2 1/2" TO 4" PIPE SIZE
2	4950045	ADJUSTABLE SCREW W/ NYLON WASHER
3	4950011	CARBIDE TIP GRIPPER - 3/8" - 16" x 1/2"
4	4950019	JAW SET W/BOLTS (Specially designed for holding 2" and 2 1/2" pipe)*
5	4950050	SPACER



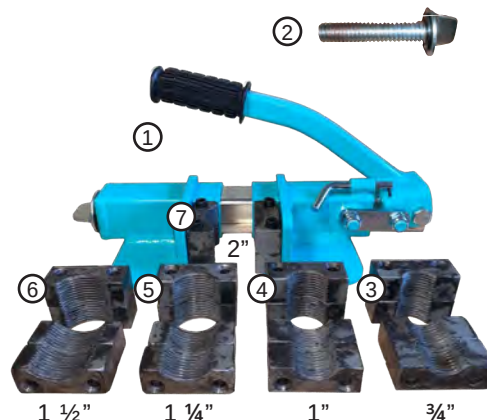
*Kwik Klamp 2 can also hold 2" pipe with an additional jaw set and 4 1/2" pipe with a set of spacers. (See fig. 4 & 5)

KWIK KLAMP 3		
ITEM	PART #	DESCRIPTION
1	4950006	COMPLETE CLAMP - 6" PVC PIPE ONLY*
2	4950070	ADJUSTABLE SCREW W/ NYLON WASHER
3	4950075	CARBIDE TIP GRIPPER - 3/8" - 16" x 1"
4	4950001	CONVERSION KIT FOR 5" PIPE (10 Jaw pads & 20 Carbide Tipped Gripper Bolts)



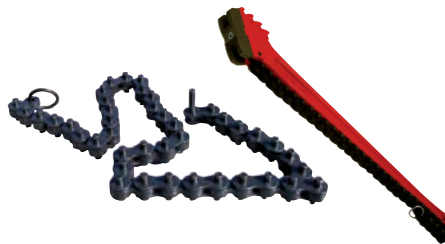
*Kwik Klamp 3 can also hold 5" pipe with additional jaw set (conversion kit) (See fig. 4).

KWIK KLAMP 4		
ITEM	PART #	DESCRIPTION
1	4950047	COMPLETE CLAMP - 3/4" TO 2" PIPE SIZE
2	4950041	ADJUSTABLE SCREW W. NYLON WASHER
3	4950052	3/4" JAW SET
4	4950053	1" JAW SET
5	4950054	1 1/4" JAW SET
6	4950055	1 1/2" JAW SET
7	4950062	2" JAW SET



CHAIN WRENCHES

Hole Products offers steel RIDGID® chain wrenches and replacement chains in all standard sizes.



CHAIN WRENCHES						
PART #	MODEL #	RATED PIPE CAP.	ACTUAL O.D. CAP	CHAIN LENGTH	WEIGHT (lb)	REPLACEMENT CHAIN PART #
5150043	C-12	2"	4"	15 3/4"	1 3/4	5150142
5150050	C-14	2"	5"	18 1/2"	2 3/4	5150143
5150034	C-18	2 1/2"	5"	20 1/4"	6	5150056
5150055	C-24	5"	5"	20 1/4"	8 1/4	5150056
5150060	C-36	4 1/2"	7 1/2"	29"	15 3/4	5150061

Features

- A double fast jaw gives fast, ratchet-like action in either direction.
- The heavy-duty model has replaceable alloy steel jaws.
- The light-duty model has a one-piece forged alloy steel handle and jaw.
- Ideal for use in close quarters.

PETOL TOOLS®

Hole Products is an authorized dealer of Petol Tools®. We offer a complete range of Petol wrenches and equipment for use in various areas of the drilling industry. Additional Petol tools are available on request. Please contact your Hole Products representative for complete details.



PETOL CHAIN TONGS						
PART #	MODEL #	O.D.	GRIPPING WIDTH	HANDLE LENGTH	WEIGHT	WORKING LOAD (ft lbs.)
5150146	CPA13	1 3/4" - 6"	2.62"	30"	18 lbs.	1,600 - 1,700
5150149	CPA14	2 7/8" - 10"	3.13"	44"	35 lbs.	2,800 - 3,000
PETOL DRILL PIPE TONGS						
5151136	DA1344	1" - 6"	4.00"	8"	12 lbs.	5,000
5151143	DA2344-C12	2 1/8" - 5"	4.44"	12"	27 lbs.	12,400 - 13,800
5151144	DA2344-L21	2 1/8" - 5"	4.44"	21"	31 lbs.	11,400 - 12,000
5150998	DA4174-L08	3" - 8 1/4"	5.00"	8"	40 lbs.	16,900 - 17,500
5150997	DA4174-C12	3" - 8 1/4"	5.00"	12"	43 lbs.	18,700 - 23,300
5151037	DA4174-L21	3" - 8 1/4"	5.00"	21"	45 lbs.	9,400 - 13,200
5151069	DA6184-C10	4 1/4" - 10 3/4"	4.88"	10"	49 lbs.	26,500 - 37,300
5151061	DA6184-L36	4 1/4" - 10 3/4"	4.88"	36"	76 lbs.	23,700 - 25,400
5151097	DA8184-C09	4" - 14"	7.25"	9"	91 lbs.	49,000 - 95,000
5151126	DA8184-C18	4" - 14"	7.25"	18"	100 lbs.	45,800 - 70,900
5151145	DA8184-L23	4" - 14"	7.25"	23"	120 lbs.	44,800 - 65,000
5151146	DA8184-L28	4" - 14"	7.25"	28"	129 lbs.	44,000 - 61,900
5150314	DA8184-L36	4" - 14"	7.25"	36"	134 lbs.	43,500 - 58,400

STRAIGHT PIPE WRENCHES

Hole Products offers RIDGID® pipe wrenches and replacement parts in all standard sizes.



Features

- Professional strength in lightweight aluminium.
- Offers the same durability and ease-of-use found in all RIDGID® heavy-duty wrenches.

ALUMINUM STRAIGHT PIPE WRENCHES

PART #	NOMINAL SIZE	PIPE CAPACITY	WEIGHT (LB)
5150004	10"	1 1/2"	1
5150005	12"	2"	2 1/2
5150010	14"	2"	2 1/2
5150015	18"	2 1/2"	3 3/4
5150025	24"	3"	6
5150020	36"	5"	11
5150036	48"	6"	18 1/2



Features

- Sturdy, cast-iron housing and I-beam handle with full floating forged hook jaw, featuring self-cleaning threads with replaceable hook and heel jaws.
- Heavy-duty pipe wrenches comply with federal specifications GGG-W65IE, Type II, Class A.

STEEL STRAIGHT PIPE WRENCHES

PART #	NOMINAL SIZE	PIPE CAPACITY	WEIGHT (LB)
5150003	10"	1 1/2"	1 3/4
5150042	12"	2"	2 3/4
5150240	14"	2"	3 1/2
5150016	18"	2 1/2"	5 3/4
5150045	24"	3"	9 3/4
5150040	36"	5"	19
5150035	48"	6"	34 1/4
5150030	60"	8"	51 1/4

PIPE WRENCH REPLACEMENT PARTS

PIPE WRENCH REPLACEMENT PARTS					
					
NOMINAL SIZE	HEEL JAW AND PIN	JAW HOOK	JAW PIN	NUT	COIL & FLAT SPRING ASSEMBLY
10"	5150062	5150088	5150063	5150119	5150270
12"	5150064	5150089	5150245	5150122	5150275
14"	5150064	5150090	5150250	5150121	5150280
18"	5150065	5150095	5150255	5150126	5150058
24"	5150070	5150100	5150260	5150120	5150285
36"	5150075	5150105	5150265	5150124	5150290
48"	5150080	5150110	5150082	5150125	5150076
60"	5150085	5150115	5150086	5150130	5150001

SCREEN, CASING, FITTINGS & ACCESSORIES

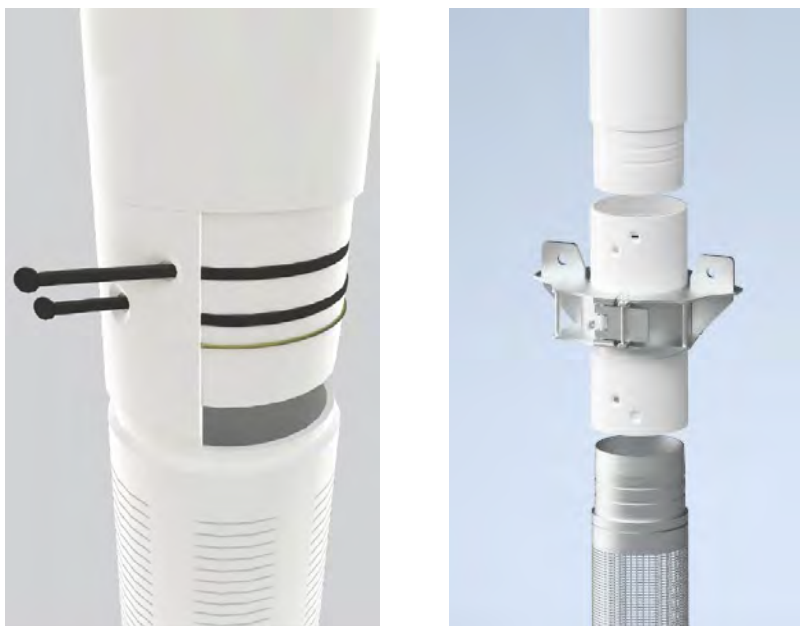
SHUR-A-LOK PVC CASING



DIMENSIONS AND PERFORMANCE DATA											
Nominal Pipe Size (in.)	Pipe Class Schedule/SDR	Outside Dia. (in.)	Min. Wall Thickness (in.)	Average Inside Dia. (in.)	wt / ft. (lbs.)	Recomm. Working Tensile Strength (lbs.)	Max. Tested Tensile Strength (lbs.)	Resistance to Hydraulic Collapse* (psi.)	Recomm. working Burst (psi.)	Max. Burst Pressure* (psi.)	ft. / Pallet
4	40	4.50	0.24	4.00	2.05	5,400	10,800	152	110	220	580
4.5	40/21	4.95	0.25	4.44	2.40	6,600	13,200	130	100	200	520
4.5	17	4.95	0.29	4.34	2.75	7,350	14,700	215	125	250	520
5	40/21	5.56	0.27	5.01	2.95	7,350	14,700	111	100	200	460
5	17	5.56	0.33	4.87	3.60	8,550	17,100	215	125	250	460
6	21	6.63	0.32	5.96	4.12	8,200	16,400	111	100	200	520
6	17	6.63	0.39	5.80	4.96	9,100	18,200	215	125	250	520

SLOTTED SCREEN AVAILABILITY																
Size (in.)	Pipe Class	Rows	Spacing (in.)	Available Slot Sizes- Net open Area (square inches per foot)												
				0.010	0.012	0.015	0.020	0.025	0.030	0.032	0.040	0.050	0.060	0.080	0.100	0.125
4	40	6	0.25	3.12	3.71	4.58										
		4	0.25				7.11	8.73	10.29	10.89	13.24	16.00	18.58	23.27	27.43	32.00
4.5	40/SDR21	6	0.25	3.46	4.12	5.09										
		4	0.25				7.78	9.54	11.25	11.91	14.48	17.50	20.32	25.45	29.99	35.00
4.5	SDR17	6	0.25	3.12	3.71	4.58										
		4	0.25				7.34	9.00	10.61	11.24	13.66	16.50	19.17	24.01	28.29	33.01
5	40/SDR21	6	0.25	3.29	3.92	4.84	7.00	8.59	10.13	10.73	13.04	15.76	18.30	22.92	27.01	
		4	0.25													38.00
5	SDR17	6	0.25	0.25	3.46	4.12	5.09	6.67	8.18	9.64	10.21	12.41	15.00	17.42	21.82	
		4	0.25													35.00
6	SDR21	6	0.25			8.15	10.67	13.09	15.43	16.34	19.86	24.00	27.87	34.91	41.14	43.51
	SDR17	6	0.25				9.33	11.45	13.50	14.30	17.38	21.00	24.39	30.55	36.00	36.00

SHUR-GRIP PVC CASING



DIMENSIONS AND PERFORMANCE DATA									
Nominal Pipe Size (in.)	Pipe Class Sched-ule/SDR	Outside Dia. (in.)	Min. Wall Thick-ness (in.)	Average Inside Dia. (in.)	wt /ft. (lbs.)	Recommended Working Ten-sile Strength (lbs.)	Max. Tested Tensile Strength (lbs.)	Resistance to Hydraulic Collapse* (psi.)	ft. / Pallet
6.9	SDR17	6.90	0.41	6.02	5.22	8,130	16,260	200	400
8	SDR17	8.63	0.51	7.57	8.40	13,050	26,100	215	180
10	SDR17	10.75	0.63	9.38	13.27	13,770	27,540	215	140
12	SDR17	12.75	0.75	11.13	18.89	26,130	52,260	215	80
14	SDR17	14.00	0.83	12.21	22.55	27,700	55,400	215	60
16	SDR17	16.00	0.94	13.95	31.66	29,000	58,000	215	60
16	SDR21	16.00	0.76	14.388	23.76	16,660	33,320	111	60
17.4	SDR17	17.40	1.02	15.25	35.46	44,500	89,000	215	60/40

SLOTTED SCREEN AVAILABILITY													
Size (in.)	Pipe Class	Rows	Spacing (in.)	Available Slot Sizes- Net open Area (square inches per foot)									
				0.020	0.025	0.030	0.032	0.040	0.050	0.060	0.080	0.100	0.125
6.9	SDR17	6	0.250	9.67	11.87	13.99	14.81	18.00	12.76	25.27	31.65	37.30	
		6	0.375										30.38
8	SDR17	8	0.250	9.33	11.45	13.50	14.30	17.38	21.00	24.39	30.55	36.00	
		6	0.375										42.75
10	SDR17	8	0.375			10.67	11.32	13.88	16.94	19.86	25.32	30.32	36.00
12	SDR17	8	0.375					20.24	24.70	28.96	36.91	44.20	52.49
14	SDR17	8	0.375					23.72	28.95	33.94	42.26	51.80	61.51
16	SDR17	10	0.375						29.12	34.15	43.53	52.12	61.89
	SDR21	10	0.375					26.02	31.76	37.24	47.47	56.84	67.50
17.4	SDR17	10	0.375						31.76	37.24	47.47	56.84	67.50

STAINLESS STEEL



Hole Products offers a complete line of stainless steel (SS) well screens, casings, and fittings in a wide range of sizes, lengths, and styles for use in water and environmental wells where performance and longevity are of the utmost importance. Screens, casings, and fittings are available in 304, 304L, 316, and 316L stainless steel. Low carbon steel screens for non-water well applications are available on request. For environmental applications screens and casings are available cleaned and bagged at an additional charge.

Screens: Stainless and low carbon steel screens are available in lengths to 40', slot sizes from 0.006" – 0.250", for setting in any depth, and in sizes from 1/2" – 36" in pipe (PS) and telescope (T) sizes. Telescope size screens install through the casing and commonly have a K-packer as the top fitting. Pipe size screens usually have weld rings at each end and attach directly to the casing. See below for end fitting options.

Casings: Stainless steel casing and low carbon steel casings are available in sizes from 1" PS – 12" PS, lengths to 20', and schedules 5, 10, and 40. See below for end fitting options.

End Fittings:

- Flush Threads (Sch 40 and Sch 80)
- NPT Thread
- Weld Ring
- Plate Bottom
- Threaded Point
- Threaded Caps & Plugs
- Beveled Ends

Other Fittings:

- K-Packers
- Shale Traps
- Centralizers
- Adapters
- Couplings
- Wash Down Valves
- Back Pressure Valves

LOW CARBON STEEL



LOW CARBON STEEL PIPE CHART

Nom. Size	O.D. Inches	Schedule 10		Schedule 20		Schedule 30		Schedule 40		STD		Schedule 60		Schedule 80		XH		Schedule 100		Schedule 120		Schedule 140	
		Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft
1"	1.315	0.109	1.40					0.133	1.68	0.133	1.68			0.179	2.17	0.179	2.17						
1 1/4"	1.660	0.109	1.81					0.140	2.27	0.140	2.27			0.190	3.00	0.190	3.00						
1 1/2"	1.990	0.109	2.09					0.145	2.72	0.145	2.72			0.200	3.63	0.200	3.63						
2"	2.375	0.109	2.64					0.154	3.66	0.154	3.66			0.218	5.03	0.218	5.03						
2 1/2"	2.875	0.120	3.53					0.203	5.80	0.203	5.80			0.276	7.67	0.276	7.67						
3"	3.500	0.120	4.34					0.216	7.58	0.216	7.58			0.300	10.26	0.300	10.26						
3 1/2"	4.000	0.120	4.98					0.226	9.12	0.226	9.12			0.318	12.52	0.318	12.52						
4"	4.500	0.120	5.62					0.237	10.80	0.237	10.80			0.337	15.00	0.337	15.00			0.438	19.02		
4 1/2"	5.000									0.247	12.55					0.375	17.63						
5"	5.563	0.134	7.78	0.188	10.80			0.258	14.63	0.258	14.63			0.375	20.80	0.375	20.80			0.500	27.06		
6"	6.625	0.134	9.30	0.188	12.94	0.250	17.04	0.280	18.99	0.280	18.99			0.432	28.60	0.432	28.60			0.562	36.43		
7"	7.625									0.301	23.57			0.500	38.08								
8"	8.625	0.148	13.41	0.250	22.38	0.277	24.72	0.322	28.58	0.322	28.58	0.406	35.67	0.500	43.43	0.500	43.43	0.594	51.00	0.719	60.77	0.812	67.82
9"	9.625									0.342	33.94					0.500	48.77						
10"	10.750	0.165	18.67	0.250	28.06	0.307	34.27	0.365	40.52	0.365	40.52	0.500	54.79	0.594	64.49	0.500	54.79	0.719	77.10	0.844	89.38	1.000	104.23
11"	11.750									0.375	45.60					0.500	60.13						
12"	12.750	0.180	24.19	0.250	33.41	0.330	43.81	0.406	53.57	0.375	49.61	0.562	73.22	0.688	88.71	0.500	65.48	0.844	107.42	1.000	125.61	1.125	139.81
14"	14.000	0.250	36.75	0.312	45.65	0.375	54.62	0.438	63.50	0.375	54.62	0.594	85.13	0.750	106.23	0.500	72.16	0.938	130.98	1.094	150.93	1.250	170.37
16"	16.000	0.250	42.09	0.312	52.32	0.375	62.64	0.500	82.85	0.375	62.64	0.656	107.60	0.844	136.74	0.500	82.85	1.031	164.98	1.219	192.61	1.468	228.05
18"	18.000	0.250	47.44	0.312	58.99	0.438	82.23	0.562	104.76	0.375	70.65	0.750	138.30	0.938	171.08	0.500	93.54	1.156	208.15	1.375	244.37	1.562	274.48
20"	20.000	0.250	52.78	0.375	78.67	0.500	104.23	0.594	123.23	0.375	78.67	0.812	166.56	1.031	209.06	0.500	104.23	1.281	256.34	1.500	296.65	1.750	341.41
22"	22.000	0.250	58.13	0.375	86.69	0.500	114.92			0.375	86.69	0.875	197.60	1.125	251.05	0.500	114.92	1.375	303.16	1.625	353.94	1.875	403.38
24"	24.000	0.250	63.47	0.375	94.71	0.562	140.81	0.688	171.45	0.375	94.71	0.969	238.57	1.219	296.86	0.500	125.61	1.531	367.74	1.812	429.79	2.062	483.57
26"	26.000	0.312	85.68	0.500	136.30					0.375	102.72					0.500	136.30						
28"	28.000	0.312	92.35	0.500	146.99	0.625	182.90			0.375	110.74					0.500	146.99						
30"	30.000	0.312	99.02	0.500	157.68	0.625	196.26			0.375	118.76					0.500	157.68						
32"	32.000	0.312	105.69	0.500	168.37	0.625	209.62	0.688	230.29	0.375	126.78					0.500	168.37						
34"	34.000	0.344	123.77	0.500	179.06	0.625	222.99	0.688	245.00	0.375	134.79					0.500	179.06						
36"	36.000	0.312	119.13	0.500	189.75	0.625	236.35	0.75	282.62	0.375	142.81					0.500	189.75						
38"	38.000									0.375	150.83					0.500	200.44						

WATER LEVEL INDICATORS

SOLINST WATER LEVEL METER

Solinst 101 P2 Water Level Meters use 3/8" wide non-stretch polyethylene flat tap, with heat embossed markings each 1/100 ft or mm. The probe is .55" in diameter and shielded in design to eliminate false readings. Designed for measuring accurate water levels in wells and boreholes, the rugged free-standing reel is well balanced and ideal for use in the field. The P2 Water Level Meter is available with tape lengths to 1000 ft (300m).



SOLINST 101 P2 WATER LEVEL METER			
PART #	LENGTH	REEL SIZE	OPTIONAL CASE PART #
4200086	100'	Small	4200097
4200027	200'	Small	4200097
4200021	300'	Small	4200097
4201000	500'	Medium	
4201002	750'	Medium	
4201001	1000'	Medium	

TAG LINES

TAG LINES		
PART #	LENGTH	DESCRIPTION
4200209	100'	Measuring Tape, DTH100 FCR
400158	200'	Measuring Tape, DTH200 FCR
4200117	300'	Measuring Tape, DTH300 FCR
4200314	300'	Measuring Tape, DTH300 FCR (Engineer Rule)
4200331	1000'	Laser-Marked C/W Tape Guide



SAFETY EQUIPMENT



Hole Products offers a complete line of safety equipment to keep job sites free from injury.

From gloves and safety glasses to hard hats and hearing protection, we have the safety equipment drilling contractors need to stay in compliance, and make sure all employees go home safely.

Please contact your Hole Products representative for product specific information and the availability of additional safety equipment needed for your next drilling project.

hole **PRODUCTS** *Drill with us.*

OUR PRODUCTS



Auger Tools



Direct Push Tools



Drill Rods & Subs



DTH Hammers
& Bits



Geothermal
Products



Grouting Equipment
& Accessories



Hoses & Fittings



Overburden Drilling Systems



Pumps & Spares



Reverse Circulation Drilling Tools



Sampling & Monitoring



Sonic Drilling Tools



Water Swivels & Spares



Diamond Core Tools



Drill Bits



Drilling Fluid Additives & Grouts



Fishing Tools



Ground Cover Protection



HDD Tools



Low Carbon Steel Casing
& Accessories



Pipe Handling & Hoisting



PVC Well Screen, Casing
& Accessories



Safety Equipment



Sand, Cement & Asphalt



Stainless Steel Well Screen,
Casing & Accessories



Well Completion & Protection



hole
PRODUCTS
Drill with us.

OUR COMPANY

Hole Products is a leading manufacturer and supplier of high performance drilling supplies, tooling, and equipment to the Construction, Direct Push - Probe, Environmental, Geotechnical, Geothermal, HDD, Mineral Exploration, Rotary, Sonic, and Water Well drilling industries.

We combine hundreds of years of manufacturing, drilling supply and service experience, a vast inventory, multiple stocking locations, and a worldwide distribution network. Our drilling tools are preceded by extensive R&D, field tested, and backed by our unmatched commitment to service and support.

In addition, our diverse team offers industry leading inventory management, sourcing, logistics, troubleshooting, engineering, and product innovation solutions.

Call now, to discover the Hole Products advantage!

1.888.465.1569



www.holePRODUCTS.com