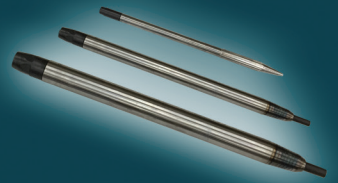


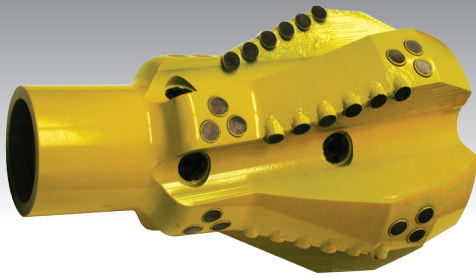
A large, dramatic image of a welder in a blue protective suit working on a large pipe. A massive burst of bright orange and yellow sparks erupts from the welding point, creating a powerful visual effect.

**COMPLETE
UNDERGROUND TECHNOLOGY
HDD PRODUCTS**

FOR THE PROFESSIONAL UNDERGROUND CONSTRUCTION INDUSTRY



WHAT'S NEW AT TRIPLE D



PDC Reamers - Pg. 20



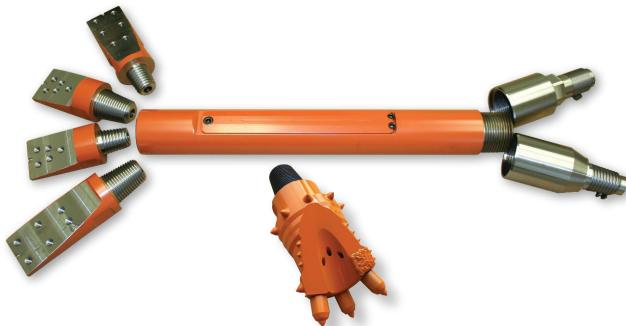
Cobble Reamers - Pg. 22



Terra-Cut Rock Bit- Pg. 7



Piercing Tools - Pg. 8



Side Load Rock Housings - Pg. 4



Air Hammers - Pg. 2

WARRANTY

For Products In This Catalog Only

Triple D Enterprises, Inc. manufactured products, except as noted, are guaranteed against any defect in material or workmanship for a period of thirty (30) days from the date of purchase when owned by original purchaser or first user, and maintained and operated under normal conditions. Any products not manufactured by Triple D Enterprises, Inc. are warranted only to the extent of the original manufacturer's warranty. Parts found to be defective in material or workmanship under this guaranty shall be repaired or replaced without charge, at the sole discretion of Triple D Enterprises, Inc.; F.O.B. original point of shipment, provided prompt written notice of the defect is given and compliance with the terms of the guaranty is established. THE FORGOING SHALL BE PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DEFECTS. This warranty shall be void if repairs or alterations are made. No person, agent, representative, salesman, dealer or distributor has any authority to change or extend the warranty expressed herein nor to obligate Triple D Enterprises, Inc. by any terms, stipulations or conditions not herein expressed. THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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www.triplednj.com



Air Hammers

Triple D Hammers



Triple D Hammer Systems

Hammer, Housing, Bits, Support Pack

- Manufactured in the USA, Triple D Hammers incorporate the latest innovations in rock drilling.

High Frequency Lube Style hammers.

- 5" or 6"

High Frequency Non-Lube Hammers

- 5" (6" coming soon)

Axial Flow Separator

- Increase the hammer production by reducing fluids introduced to the hammer.
- Complete longer bores due to the reduced fluid interference.

High Strength Housings

- Thickest wall housing available. Extended housing life.
- Simple ratcheting clocking mechanism. No special tools required.

Locking Pin Connection

- Virtually eliminates down-hole hammer loss due to backing off during steering corrections.

Hammer Bits

- Slant face
- Flat face
- Convex face
- Innovative carbide size and placement reduces cutting size.

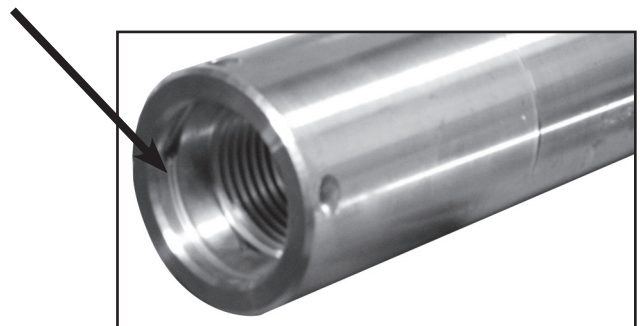
To create the hardest hitting high frequency hammer available today, Triple D Hammers have been engineered to deliver unparalleled efficiency and production in HDD hammers.

Our bent subs come standard with carbide wear buttons strategically placed to extend the life of not only the sub, but the housing and hammer as well.

The Triple D Hammer Housing is designed specifically for use with our hammer.

The TB thread and locking connection insures the hammer will not come loose while drilling causing hammer loss.

TB thread connection shown with standard locking connection.



Air Hammers

4-1/4" Hammer Package	
Part No.	Description
300104000	HDD4000 Hammer Package - Hammer, Housing, Standard Bent Sub & 2 Bits
Component Parts	
300035238	3.625" Dia. Hi-Flow Air Hammer Housing; 2-3/8" TDX x 2-3/8" I.F.
300104004	TBHDD4000 Complete Hammer
300104362	Standard 2° Bent Sub
300104415	4-1/4" Bit Slant Face
300104425	4-1/4" Bit Convex Face
300106625	6-1/4" Bit Flat Face
300106635	6-1/4" Bit Concave Face (3/4 guage)
300105535	5-1/4" Bit Concave Face (3/4 guage)

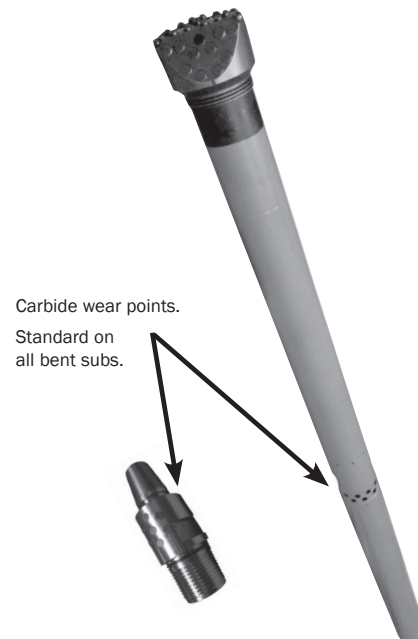
5-1/4" Hammer Package	
Part No.	Description
300105000	HDD5000 Hammer Package - Hammer, Housing, Standard Bent sub and 2 bits
Component Parts	
300042278	4.25" Dia. Hi-Flow Air Hammer Housing; 2-7/8" TDX x 2-7/8" I.F.
300105005	TBHDD5000 Complete Hammer
300105425	Standard Bent Sub
300105450	AFS Bent Sub (Axial Flow Separator)
300105450X	AFS Bent Sub (Axial Flow Separator) EXCHANGE
300105515	5-1/4" Bit Slant Face
300105525	5-1/4" Bit Flat Face
300105535	5-1/4" Bit Concave Face (3/4 guage)

6-1/4 Hammer Package	
Part No.	Description
300106000	HDD6000 Hammer Package - Hammer, Housing, Standard Bent sub and 2 bits
Component Parts	
300048350	4.88" Dia. Hi-Flow Air Hammer Housing 3-1/2" TDX x 3-1/2" IF
300106006	TBHDD6000 Complete Hammer
300106488	Standard Bent Sub
300106500	AFS Bent Sub (Axial Flow Separator)
300106615	6-1/4" Bit Slant Face
300106625	6-1/4" Bit Flat Face
300106635	6-1/4" Bit Concave Face (3/4 guage)
300105535	5-1/4" Bit Concave Face (3/4 guage)

7-1/4 Hammer Package	
Part No.	Description
300107000	HDD6000 Hammer Package - Hammer, Housing, Standard Bent sub and 2 bits
Component Parts	
300048350	4.88" Dia. Hi-Flow Air Hammer Housing 3-1/2" TDX x 3-1/2" IF
300107007	TBHDD7000 Complete Hammer
300107488	Standard Bent Sub
300107500	AFS Bent Sub (Axial Flow Separator)
300107715	7-1/4" Bit Slant Face
300107725	7-1/4" Bit Flat Face
300107735	7-1/4" Bit Concave Face (3/4 guage)
300105535	5-1/4" Bit Concave Face (3/4 guage)

Triple D Hammer Support Pack	
Part No.	Description
300010100	Complete Support Pack for use with all Triple D Hammers

Rock Drill Oil	
Part No.	Description
300201000	1 Gallon Container Rock Drill Oil - #100
300201005	5 Gallon Container Rock Drill Oil - #100



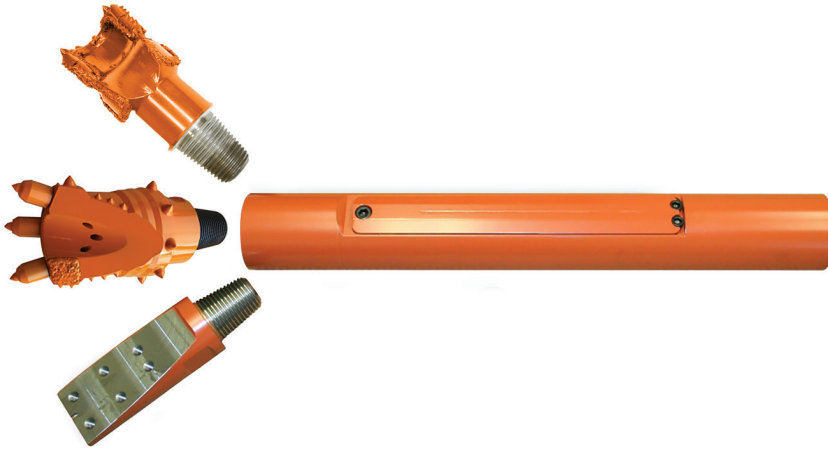
ROCK DRILLING TOOLS

High Flow Side Load Rock Housings

Introducing the **Triple D high-flow side-load rock housings** – **convenience, strength and versatility** all rolled into one housing. Manufactured, totally in-house, from a single bar of heat treated nickel steel alloy, Triple D rock housings are designed for drilling rock. Triple D rock housings are designed to work with steering shoes, rock bits, and roller cone bits, and also **feature a sonde cavity that will accept Digitrac and Subsite transmitters in either 15" or 19" length as well as wire-line systems.**

The clocking mechanism not only isolates the sonde in the desired position, it also helps to keep the transmitter in the housing should the door come off. But with Triple D Rock Housings, you won't need to worry too much about the door- it is **one of the thickest doors available today** and is held in place with 3 bolts.

Put all of this together with the **high flow design "as standard"** from Triple D and you have a housing that will stand up to whatever the ground throws at it.



Vermeer® Compatible (15" & 19" Digitrak) Transmitter Housings

Part No.	Description
500-325	325 Series High-Flow Rock Housing - 2" IF Box x #325 TD Pin
500-350	350 Series High-Flow Rock Housing - 2-3/8" Reg Box x #350 TD Pin
500-450	450 Series High-Flow Rock Housing - 2-7/8" Reg Box x 2-7/8" IF Box
500-500	500 Series High-Flow Rock Housing - 3-1/2" Reg Box x 3-1/2" IF Box
500-650	650 Series High-Flow Rock Housing - 4-1/2" Reg Box x 4-1/2" IF Box

Ditch Witch® Compatible (Subsite - 86 Series) Transmitter Housings

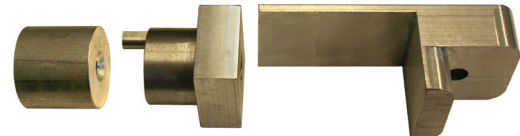
Part No.	Description
600-325	325 Series High-Flow Rock Housing - 2" IF Box x #325 TD Pin
600-350	350 Series High-Flow Rock Housing - 2-3/8" Reg Box x #350 TD Pin
600-450	450 Series High-Flow Rock Housing - 2-7/8" Reg Box x 2-7/8" IF Box
600-500	500 Series High-Flow Rock Housing - 3-1/2" Reg Box x 3-1/2" IF Box
600-650	650 Series High-Flow Rock Housing - 4-1/2" Reg Box x 4-1/2" IF Box



520-415

520-410

520-400



620-415

620-410

520-400

Vermeer Clocking Assemblies

Part No.	Description
520-400	Sonde Retainer
520-410	Sonde Clocking Assembly - D.C.I. - Vermeer
520-415	Sonde Spacer Block - D.C.I.

Ditch Witch Clocking Assemblies

Part No.	Description
520-400	Sonde Retainer
620-410	Sonde Clocking Assembly - Ditch Witch
620-415	Sonde Spacer Block - Ditch Witch

ROCK DRILLING TOOLS

High Flow Side Load Rock Housings

Vermeer® Dirt Subs (Blade Adapters)

Part No.	Description
501-200	Vermeer 6 bolt (1/2" - 13 blade adapter w/2" IF Pin, 3-1/4" dia.
501-210	Vermeer 6 bolt (1/2" - 13 blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
501-220	Vermeer 6 bolt (5/8" - 11 blade adapter w/2-7/8" Reg Pin, 4" dia.
501-230	Vermeer 6 bolt (5/8" - 11 blade adapter w/3-1/2" Reg Pin, 4-1/2" dia.
501-240	Vermeer 6 bolt (5/8" - 11 blade adapter w/4-1/2" Reg Pin, 5-1/2" dia.

Ditch Witch® Dirt Subs (Blade Adapters)

Part No.	Description
602-200	Ditch Witch 5 bolt (12MM) blade adapter w/2" IF Pin, 3-1/4" dia.
602-210	Ditch Witch 5 bolt (12MM) blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
602-220	Ditch Witch 6 bolt (16MM) blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
602-230	Ditch Witch 6 bolt (16MM) blade adapter w/2-7/8" Reg Pin, 4" dia.
602-240	Ditch Witch 6 bolt (16MM) blade adapter w/3-1/2" Reg Pin, 4-1/2" dia.

Terra-Cut Rock Bits*

Part No.	Description
502-400	Terra-Cut 4.0" hole x 2.0" IF Pin - Std. Cut
502-450	Terra-Cut 4-1/2" hole x 2.0" IF Pin - Std. Cut
502-550	Terra-Cut 5-1/2" hole x 2-3/8" API REG Pin - Std. Cut
502-650	Terra-Cut 6-1/2" hole x 2-7/8" API REG Pin - Std. Cut
502-750	Terra-Cut 7-1/2" hole x 3-1/2" API REG Pin - Std. Cut
502-850	Terra-Cut 8-1/2" hole x 4-1/2" API REG Pin - Std. Cut
502-1250	Terra-Cut 12-1/2" hole x 4-1/2" API REG Pin - Std. Cut
505-400	Terra-Cut 4.0" hole x 2.0" IF Pin - Aggressive Cut
505-450	Terra-Cut 4-1/2" hole x 2.0" IF Pin - Aggressive Cut
505-550	Terra-Cut 5-1/2" hole x 2-3/8" API REG Pin - Aggressive Cut
505-650	Terra-Cut 6-1/2" hole x 2-7/8" API REG Pin - Aggressive Cut
505-750	Terra-Cut 7-1/2" hole x 3-1/2" API REG Pin - Aggressive Cut
505-850	Terra-Cut 8-1/2" hole x 4-1/2" API REG Pin - Aggressive Cut

* Fits both Side-Load and End-Load Rock Housings.

Triple D Rock Housing Adapters (Tail Pieces) 325 Series Connection

Part No.	Description
325-100	#325 TD Box x 2.125" LP Pin
325-105	#325 TD Box x #250 FS1 Box
325-110	#325 TD Box x #400 FS1 Box
325-120	#325 TD Box x #600 FS1 Box
325-130	#325 TD Box x #650 FS1 Box
325-140	#325 TD Box x #700 FS1 Box
325-150	#325 TD Box x QF #400 Pin
325-160	#325 TD Box x 1.47-4 Pipe Pin (1220M1)
325-170	#325 TD Box x 1.88-6 EZ3 Box (1220M1)
325-180	#325 TD Box x 1.94-4 Pipe Pin (2020M1)
325-190	#325 TD Box x 2.00-6 EZ2 Box (1720M1, 2720, 2020M1)
325-200	#325 TD Box x 2.25-6 EZ3 Box (3020M1)

Triple D Rock Housing Adapters (Tail Pieces) 350 Series Connection

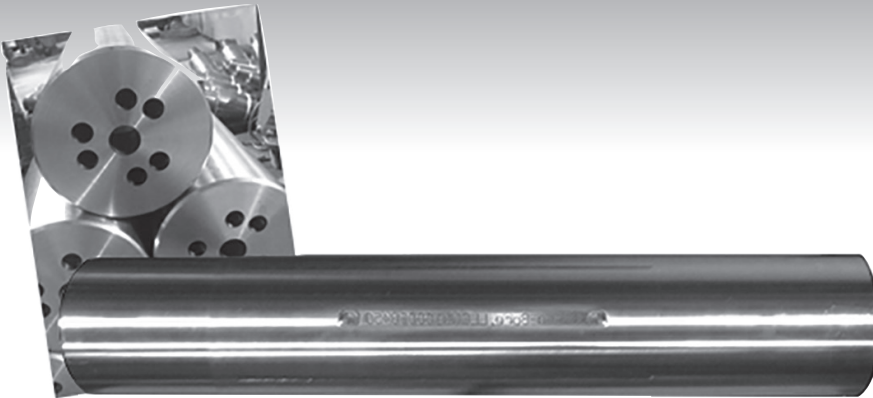
Part No.	Description
350-100	#350 TD Box x 2.125" LP Pin
350-110	#350 TD Box x #600 FS1 Box
350-120	#350 TD Box x #650 FS1 Box
350-130	#350 TD Box x #700 FS1 Box
350-140	#350 TD Box x #800 FS1 Box
350-150	#350 TD Box x #900 FS1 Box
350-160	#350 TD Box x QF #400 Pin
350-170	#350 TD Box x 1.94-4Pipe Pin (2020M1, 2720)
350-180	#350 TD Box x 2.00-6 EZ2 Box (1720M1, 2720, 2020M1)
350-190	#350 TD Box x 2.11-4 Pipe Pin (2720M1, 3020M1)
350-200	#350 TD Box x 2.25-6 EZ2 Box (2720M1)
350-210	#350 TD Box x 2.25-6 EZ3 Box (3020M1)
350-220	#350 TD Box x 2.40-4 Pipe Pin (4020)
350-230	#350 TD Box x 2.59-4 Pipe Pin (4020M1)
350-240	#350 TD Box x 2.63-6 EZ2 Box (4020, 4020M1)
350-250	#350 TD Box x 2.77-4 Pipe Pin (2720AAT, 3020AT)

Replacement Teeth for Terra-Cut Rock Bits

Part No.	Description
503-100	Small- 3/4" shank, fits 4-1/2" and 5-1/2" Rock Bits
503-200	Large - 1-1/8" shank, fits 6-1/2" thru 8-1/2" Rock Bits
503-250	X-Large - 1-1/2" shank, fits 12-1/2" Rock Bit

ROCK DRILLING TOOLS

High Flow End Load Rock Housings



Clocking Mechanism

Manufactured, **TOTALLY IN-HOUSE**, from a single bar of heat treated nickel steel alloy, Triple D housings offer the strength and versatility required by the professional contractor. Triple D housings are designed to work with steering shoes, mud motors, tri-cone bits and hammers. The multiple gun drill fluid holes insure high-flow capabilities required to accomplish even the most strenuous of bores.

The Triple D 6-1/2" housing features a side wall thickness, around the fluid holes, of 1-1/2" for exceptional strength and durability.

All five sizes are in stock and ready for immediate delivery.

Sizes from 3-5/8" Dia. up to 7.0" Dia., Triple D manufactures housings for some of the largest drills working today.

8" diameter housing coming soon.

Triple D Hi-Flow Housings (15" & 19" Digitrak) Transmitter Housings

Part No.	Description
100032238	3.250" Dia. Hi-Flow, End Load Housing - 2-3/8" API REG x 2-3/8" API REG
100035236	3.625" Dia. Hi-Flow, End Load Housing - 2-3/8" API REG x 2-3/8" API REG
100035238	3.625" Dia. Hi-Flow, End Load Housing - 2-3/8" API REG x 2-3/8" IF
100042278	4.250" Dia. Hi-Flow, End Load Housing - 2-7/8" API REG x 2-7/8" IF
100048350	4.88" Dia. Hi-Flow, End Load Housing - 3-1/2" API REG x 3-1/2" IF
100063450	6.38" Dia. Hi-Flow, End Load Housing - 4-1/2" API REG x 4-1/2" IF
100070550	7.00" Dia. Hi-Flow, End Load Housing - 4-1/2" API REG x 5-1/2" DSFH
100083660	8.25" Dia. Hi-Flow, End Load Housing - 6-5/8" API REG x 6-5/8" DSFH

Ditch Witch® Dirt Subs (Blade Adapters)

Part No.	Description
602-210	Ditch Witch 5 bolt (12MM) blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
602-220	Ditch Witch 6 bolt (16MM) blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
602-230	Ditch Witch 6 bolt (16MM) blade adapter w/2-7/8" Reg Pin, 4" dia.
602-240	Ditch Witch 6 bolt (16MM) blade adapter w/3-1/2" Reg Pin, 4-1/2" dia.

Clocking Mechanism for Triple D Hi-Flow Transmitter Housings

Part No.	Description
100010010	CLOCKING ASSEMBLY
100010015	CLOCKING ASSEMBLY "O" RING SET (2)
100010020	CLOCKING ASSEMBLY WRENCH
100010025	4" SPACER FOR 15" DIGITRAK
100010030	ZERO SPACER FOR 19" DIGITRAK
100010035	SPACER RETAINING SCREW
100010040	TRANSMITTER RETAINING CAP
100010045	TRANSMITTER RETAINING CAP PLUG
100010050	TRANSMITTER RETAINING CAP ELASTOMER
100010055	TRANSMITTER RETAINING CAP "O" RING SET (2)
100010100	Sonde Battery Cap
100010150	Sonde Removal Tool

Vermeer® Dirt Subs (Blade Adapters)

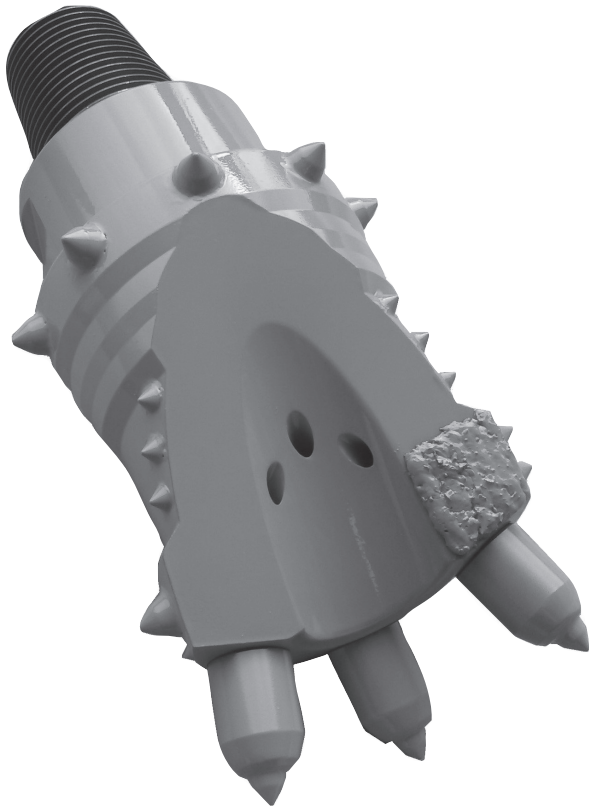
Part No.	Description
501-210	Vermeer 6 bolt (1/2" - 13 blade adapter w/2-3/8" Reg Pin, 3-1/4" dia.
501-220	Vermeer 6 bolt (5/8" - 11 blade adapter w/2-7/8" Reg Pin, 4" dia.
501-230	Vermeer 6 bolt (5/8" - 11 blade adapter w/3-1/2" Reg Pin, 4-1/2" dia.
501-240	Vermeer 6 bolt (5/8" - 11 blade adapter w/4-1/2" Reg Pin, 5-1/2" dia.

ROCK DRILLING TOOLS

Triple D Rock Heads

Triple D Rock Bits are designed for use in a variety of soils, from sand to medium rock. The large face aids in steering corrections. The rock bit incorporates carbide rubble and hard metal in critical wear locations to ensure the longest life tools available.

Available in soft rock or medium rock options.
Fits both Side-Load and End-Load Rock Housings



Terra-Cut Rock Bits*	
Part No.	Description
502-400	Terra-Cut 4.0" hole x 2.0" IF Pin - Std. Cut
502-450	Terra-Cut 4-1/2" hole x 2.0" IF Pin - Std. Cut
502-550	Terra-Cut 5-1/2" hole x 2-3/8" API REG Pin - Std. Cut
502-650	Terra-Cut 6-1/2" hole x 2-7/8" API REG Pin - Std. Cut
502-750	Terra-Cut 7-1/2" hole x 3-1/2" API REG Pin - Std. Cut
502-850	Terra-Cut 8-1/2" hole x 4-1/2" API REG Pin - Std. Cut
502-1250	Terra-Cut 12-1/2" hole x 4-1/2" API REG Pin - Std. Cut
505-400	Terra-Cut 4.0" hole x 2.0" IF Pin - Aggressive Cut
505-450	Terra-Cut 4-1/2" hole x 2.0" IF Pin - Aggressive Cut
505-550	Terra-Cut 5-1/2" hole x 2-3/8" API REG Pin - Aggressive Cut
505-650	Terra-Cut 6-1/2" hole x 2-7/8" API REG Pin - Aggressive Cut
505-750	Terra-Cut 7-1/2" hole x 3-1/2" API REG Pin - Aggressive Cut
505-850	Terra-Cut 8-1/2" hole x 4-1/2" API REG Pin - Aggressive Cut

* Fits both Side-Load and End-Load Rock Housings.

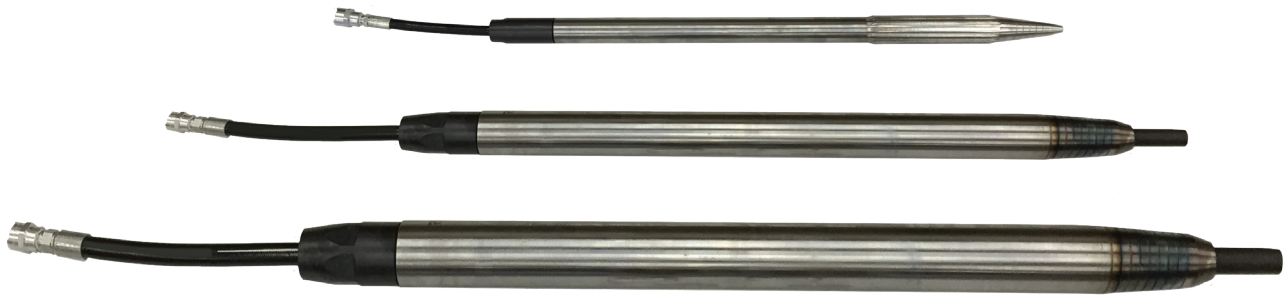
Replacement teeth for Terra-Cut Rock Bits	
Part No.	Description
100070100	Replacement tooth - Medium Rock
100070125	Replacement tooth - Soft Rock

ROCK DRILLING TOOLS

Terra-Mole Pneumatic Piercing Tools

Terra-Mole Pneumatic Piercing Tools are the most efficient and least expensive method for boring under streets and roads while traffic flows uninterrupted. They are designed for creating clean, compact holes for most underground installations of pipe, cable, conduit and wiring with minimal disruptions. They have exceptional power to penetrate tough soils and move quickly. Contractors who install cable, pipe, and wire underground, use Terra-Mole tools because of their performance, reliability, and low cost. With over thirty years of experience, Terra-Mole technology is responsible for producing the highest quality tools, parts and accessories.

All Terra-Mole piercing tool barrels and strikers (pistons) are CNC machined from **solid nickel chromoly steel billets**, then heat treated and precision ground for high strength and long-life. Strikers are of one-piece design (no replaceable wear rings) for durability and low user maintenance cost.



Pneumatic Piercing Tools (Piercing Tool Only)	
Part No.	Description
TM200ST	2" Dia. X 42" long, wt. 28 lbs., Screw Type Reverse, 525 bpm
TM200QT	2" Dia. X 42" long, wt. 28 lbs., 1/4 Turn Type Reverse, 525 bpm
TM300ST	3" Dia. X 53" long, wt. 78 lbs., Screw Type Reverse, 400 bpm
TM300QT	3" Dia. X 53" long, wt. 78 lbs., 1/4 Turn Type Reverse, 400 bpm
TM400ST	4" Dia. X 59" long, wt. 136 lbs., Screw Type Reverse, 400 bpm
TM400QT	4" Dia. X 59" long, wt. 136 lbs., 1/4 Turn Type Reverse, 400 bpm

Pneumatic Piercing Tools Accessories	
Part No.	Description
TM200H	Air Hose - 1/2" x 50 ft.
TM300H	Air Hose - 3/4" x 50 ft.
TM400H	Air Hose - 1" x 50 ft.
TM100LB	Lubricator Assembly (all models)
TM150QT	Lubricant, one quart
TM400QT	4" Dia. X 59" long, wt. 136 lbs., 1/4 Turn Type Reverse, 400 bpm

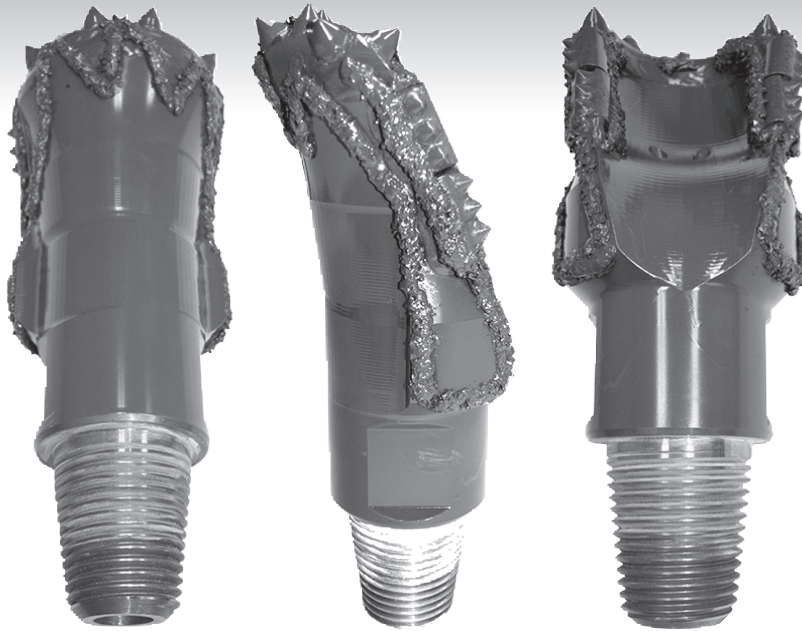
Pneumatic Piercing Tools Piercing Tool Package*	
Part No.	Description
TM200STP	TM200ST Tool plus Tool Package - 1/2" hose
TM200QTP	TM200QT Tool plus Tool Package - 1/2" hose
TM300STP	TM300ST Tool plus Tool Package - 3/4" hose
TM300QTP	TM300QT Tool plus Tool Package - 3/4" hose
TM400STP	TM400ST Tool plus Tool Package - 1" hose
TM400QTP	TM400QT Tool plus Tool Package - 1" hose

* Piercing Tool Package (includes):

- Piercing Tool
- 50 ft. air supply hose
- Lubricator, in-line
- 1 qt. lubricant
- Operator & Parts Manual

ROCK DRILLING TOOLS

Cobble Boss



Shown: Cobble Boss With Aggressive Cutters, 5" cut with 2-3/8" API Reg Pin - 510-500-A

Cobble Boss With Aggressive Cutters*	
Part No.	Description
510-500-A	5" cut with 2-3/8" API Reg Pin

Cobble Boss With Dome Cutters*	
Part No.	Description
510-500-D	5" cut with 2-3/8" API Reg Pin

Cobble Boss Replacement Cutters	
Part No.	Description
510-50AC	Aggressive Carbide Cutter Set - Left & Right Bars
510-50DC	Dome Carbide Cutter Set - Left & Right Bars

* Fits both Side-Load and End-Load Housings

LEAD RODS

Vermeer® Compatible Starter Rods

All Vermeer compatible Triple D Lead Rods are built from heat treated Alloy Steel which gives a significantly stronger lead rod for use under the stresses of Horizontal Directional Drilling projects. Choose from either Nickel-Chrome-Moly or Chrome-Moly steels.

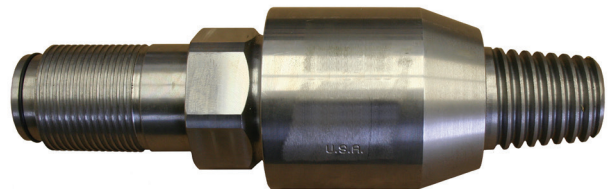
(Standard) Vermeer Starter Rods (CHROME-MOLY STEEL – 152,000 psi tensile strength)	
Part No.	Description
260030200	Fits Vermeer 36x50, 36x50 Series II, FST 1 #650 x 2.125" LP
260030210	Fits Vermeer 36x50, 36x50 Series II, FST 1 #700 x 2.125" LP
260010300	Fits Vermeer 24x40, 40x40 - FST 1 #600 x QF #400***
260010310	Fits Vermeer 20x22, 20x22 Series II - FST 1 #400 x QF #400***
260010320	Fits Vermeer 16x20, 16x20 Series II - FST 1 #250 x QF #400***
260030001	Fits Vermeer 24x40, 24x40 Series II, 40x40 - FST 1 #600 x 2.125" LP
260030006	Fits Vermeer 16x20, 18x22, 20x22 - FST 1 #400 x 2.125" LP
260030005	Fits Vermeer 16x20, 18x22, 20x22 - FST 1 #250 x 2.125" LP
260030010	Fits Vermeer 7x11, 10x15 - FST 1 #200 x 1.625" LP
260010220	#350-API H90S 24x40, 40x40 - FST 1, 2.375" - 1/2" X 13 X 3/4" Bolt **
260010230	#350-API H90S 16x20, 18x22, 20x22 - FST 1, 2.06" - 1/2" X 13 X 3/4" Bolt**
260010310	Fits Vermeer 20x22, 20x22 Series II - FST 1 #400 x QF #400 • • •
260010320	Fits Vermeer 16x20, 16x20 Series II - FST 1 #250 x QF #400 ...

** #350-API H90S thread is compatible with Vermeer #350 HAWKEYE thread.

*** QF #400 is compatible with Vermeer Compatible Quickfire #400 thread.



Vermeer Starter Rod Drawbars	
(Chrome-Moly Steel – 153,000 Psi Tensile Strength)	
Item No.	Description
260010500	2.125" LPT/HEX PIN X DRAWBAR W/fluid holes
260010505	1.625" LPT/HEX PIN x DRAWBAR W/fluid holes



TAIL PIECES - extend the life and versatility of your Sonde Housing. Triple D's tail pieces are CNC machined from heat treated chrome-moly alloy steel for durability and value.

TAIL PIECES for above Housings	
Part No.	Description
250055100	Tail Piece, 1.625" LP Hex (P) x 2.00" API IF (P) Fits Drill Rig Models 7x11, 10x15
250055200	Tail Piece, 2.125" LP Hex (P) x 2.00" API IF (P) Fits Drill Rig Models 16x20, 24x26
250055205	Tail Piece, 2.06" FST 1 (B) x 2.00" API IF (P) Fits Drill Rig Models 18x22, 20x22, 24x26, 24x33
250055210	Tail Piece, 2.06" FST 1 (B) x 2.375" API REG (P) Fits Drill Rig Models 18x22, 20x22, 24x26, 24x33
250050005	Tail Piece, 2.125" LP Hex (P) x 2.375" API REG (P) Fits Drill Rig Models 24x40, 40x40
250050050	Tail Piece, #350-API H90S** (P) x 2.375" API REG (P) Fits Drill Rig Models 24x40, 40x40
250050055	Tail Piece, #350-API H90S** (P) x 2.00" API IF (P) Fits Drill Rig Models 16x20, 24x26
250050070	Tail Piece, QF 400 (P) x 2.00" API IF (P) Fits Drill Rig Models 16x20, 24x26
250050073	Tail Piece, QF 400 (P) x 2.375" API REG (P) Fits Drill Rig Models 24x40, 40x40

LEAD RODS

Ditch Witch® Transition Rods and “O” Rings

All Ditch Witch type Triple D Lead Rods are built with heat treated 4140 chrome-moly steel for strength and durability.

Tail Pieces (Housing Savers) DW Housings

Part No.	Description
220320200	DW 920, 920L, 921, 922 EZ-2 (B) X 2.0" IF (P)
220324200	DW 920, 920L, 921, 922 – 1.41-6 (P) X 2.0" IF (P)
220320300	DW 1220M1 EZ-3 (B) X 2.0" IF (P)
220320400	DW 1720, 1720M1, 2020M1, 2720 EZ-2 (B) X 2.0" IF (P)
220420400	DW 2720 EZ-2 (B) X 2.375" API REG (P)
220420500	DW 2720M1 EZ-2 (B) X 2.375" API REG (P)
220420600	DW 3020M1 EZ-3 (B) X 2.375" API REG (P)
220420700	DW 4020M1 EZ-2 (B) X 2.375" API REG (P)

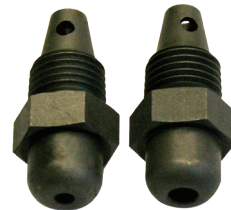
Ditch Witch Compatible Transition Rods & “O” Rings (Chrome-Moly Steel – 152,000 psi tensile strength)

Part No.	Description
260010015	Fits JT 520
260010030	Fits JT920 - 3/8" x 16 x 3/4" Bolt - EZ 2
260010027	Fits JT1220M1 - 3/8" x 16 x 3/4" Bolt - EZ 3
260010025	Fits JT1720 - 1/2" x 13 x 3/4" Bolt - EZ 2
260010037	Fits JT2020M1 - 1/2" x 13 x 3/4" Bolt - EZ 2
260010020	Fits JT2720 - 1/2" x 13 x 3/4" Bolt - EZ 2
260010040	Fits JT2720M1 - 1/2" x 13 x 3/4" Bolt - EZ 2
260010047	Fits JT3020M1 - 12MM x 1.75 x 20MM Bolt - EZ 3
260010057	Fits JT4020M1 - 5/8" x 11 x 3/4" Bolt - EZ 2
260036010	“O” Ring for 260010030, JT 920
260036020	“O” Ring for 260010027, JT 1220 M1
260036030	“O” Ring for 260010037, JT 2020 M1, 1720, 2720
260036040	“O” Ring for 260010047, JT 3020 M1
260036050	“O” Ring for 260010057, JT 4020 M1



Water Nozzles for Triple D Slant Face Housings

Part No.	Description
260027000	1/8" Nozzle, Fits all Triple D Sonde Housings
260027005	3/16" Nozzle, Fits all Triple D Sonde Housings



Drive Collar Bolts - Ditch Witch

Part No.	Description
260025100	1/2" X 13 X 3/4" Socket Head Cap Screw (each)
260025110	3/8" X 16 X 3/4" Socket Head Cap Screw (each)
260025115	5/8" X 11 X 3/4" Socket Head Cap Screw (each)
260025120	12MM X 1.75 X 20MM Socket Head Cap Screw (each)

TRANSMITTER HOUSINGS

Side Load High Flow Rock Housings

Introducing the Terra-Bore high-flow side-load rock housings – Convenience, strength and versatility all rolled into one housing. Manufactured, totally in-house, from a single bar of heat treated nickel steel alloy, Terra-Bore rock housings are designed for drilling rock. Terra-Bore rock housings are designed to work with steering shoes, rock bits, and roller cone bits, and also feature a sonde cavity that will accept Digitrac and Subsite transmitters in either 15" or 19" length as well as wire-line systems.

The clocking mechanism not only isolates the sonde in the desired position, it also helps to keep the transmitter in the housing should the door come off. But with Terra-Bore Rock Housings, you won't need to worry too much about the door- it is **one of the thickest doors available today** and is held in place with 3 bolts.

Put all of this together with the high flow design "as standard" from Terra-Bore and you have a housing that will stand up to whatever the ground throws at it.



Ditch Witch Side Load High Flow Rock Housings	
Part No.	Description
500-325	325 Series High-Flow Rock Housing - 2" IF Box x #325 TD Pin
500-350	350 Series High-Flow Rock Housing - 2-3/8" Reg Box x #350 TD Pin
500-450	450 Series High-Flow Rock Housing - 2-7/8" Reg Box x #450 TD Pin
500-500	500 Series High-Flow Rock Housing - 3-1/2" Reg Box x #500 TD Pin
500-650	650 Series High-Flow Rock Housing - 4-1/2" Reg Box x #650 TD Pin

Vermeer Side Load High Flow Rock Housings	
Part No.	Description
600-325	325 Series High-Flow Rock Housing - 2" IF Box x #325 TD Pin
600-350	350 Series High-Flow Rock Housing - 2-3/8" Reg Box x #350 TD Pin
600-450	450 Series High-Flow Rock Housing - 2-7/8" Reg Box x #450 TD Pin
600-500	500 Series High-Flow Rock Housing - 3-1/2" Reg Box x #500 TD Pin
600-650	650 Series High-Flow Rock Housing - 4-1/2" Reg Box x #650 TD Pin

TRANSMITTER HOUSINGS

Side Load, Slant Face, Transmitter Housings for Ditch Witch Subsite® Beacon

Triple D's side load sonde housings are manufactured from 153,000 psi chrome-moly steel for superior strength and durability. The side load feature provides quick and easy field installation and removal of transmitter sonde and batteries.

All sizes feature:

- 1) Replaceable tailpieces for long life,
- 2) Screw-in, heat treated replaceable nozzles for maximum durability and steering, and
- 3) Accepts all styles of OEM type bolt-on pilot bits (paddle bits).



Ditch Witch® Compatible Transmitter Housings	
Part No.	Description
260035002	4.250" Dia. Side Load, 6-Hole Ditch Witch, 2-7/8" API IF Box, 86B Fits Drill Rig Models JT4020M1, JT7020M1, JT8020M1
260035005	3.250" Dia. Side Load, 6-Hole Ditch Witch, 2.375" API REG Box, 86B Fits Drill Rig Models JT2720, JT2720M1, JT3020M1, JT4020M1
260035010	Replacement Cover
260035015	3.250" Dia. Side Load, 5-Hole Ditch Witch, 2.375" API REG Box, 86B Fits Drill Rig Models JT2720, JT2720M1, JT3020M1, JT4020M1
260035020	Replacement Cover
260035025	2.750" Dia. Side Load, 5-Hole Ditch Witch, 2.00" IF Box, 86B Fits Drill Rig Models JT920, JT920L, JT921, JT1220, JT2020, JT1720, JT1720M1
260035030	Replacement Cover
260037010	Ditch Witch Side Load Transmitter Housing-3.25" DIA. 2.375" REG (BxB)

Batteries for above Housings	
Part No.	Description
261080000	Extended Life Lithium battery for Digitrak & Subsite

Bolts for above Housings	
Part No.	Description
260025100	Bolt (large) for above Housing Covers - 1/2"-13 x 3/4" (3 req'd.)
260025110	Bolt (small) for above Housing Covers - 3/8"-16 x 3/4" (1 req'd.)

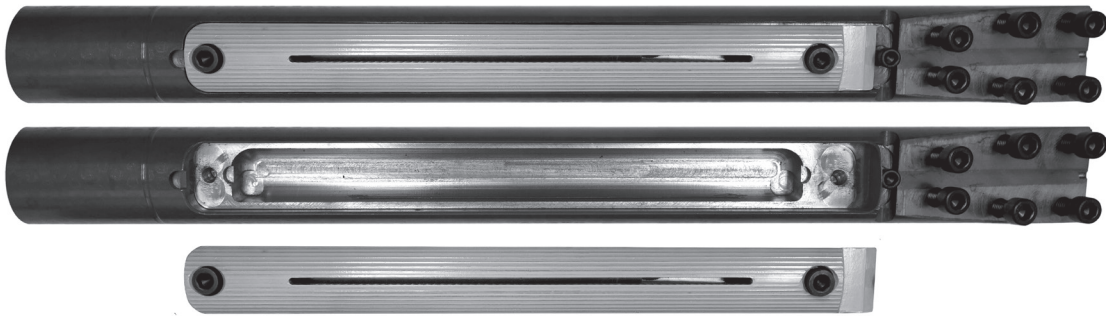
TRANSMITTER HOUSINGS

Side Load, Slant Face, Transmitter Housings for Digitrak Transmitters

Triple D's side load sonde housings are manufactured from 153,000 psi chrome-moly steel for superior strength and durability. The side load feature provides quick and easy field installation and removal of transmitter sonde and batteries.

All sizes feature:

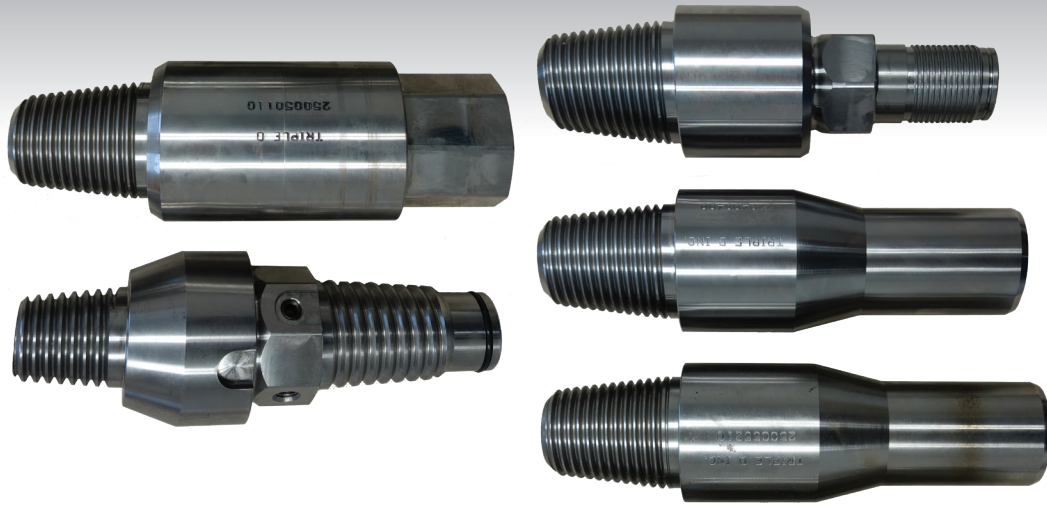
- 1) Replaceable tailpieces for long life,
- 2) Screw-in, heat treated replaceable nozzles for maximum durability and steering, and
- 3) Accepts all styles of OEM type bolt-on pilot bits (paddle bits).



Vermeer® Compatible (Slant Face) Transmitter Housings	
Part No.	Description
260040100	4.250" Dia. Side Load, 6-Hole (5/8" -11 bolts) Veermeer, 2-7/8" API IF (B) Fits Drill Rig Models 36x50, 50x100, 80x100, 100x120.
260025000	3.250" Dia. Side Load, 6-Hole, Veermeer, 2.375" API REG (B) Fits Drill Rig Models 24x40, 36x50, 40x40
260025001	3.50" Dia. Side Load, 6-Hole (5/8" -11 bolts) Veermeer, 2.375" API REG (B) Fits Drill Rig Models 24x40, 40x40, 36x50, 50x100 -Severe Duty Model
260025005	Replacement Cover
260025020	2.750" Dia. Side Load, 6-Hole, Veermeer, 2.00" API IF (B) Fits Drill Rig Models 16x20, 24x26
260025025	Replacement Cover
260025030	2.625" Dia. Side Load, 6-Hole, Veermeer, 2.00" API IF (B) Fits Drill Rig Models 7x11, 10x15
260025035	Replacement Cover
260025100	Bolt for above Housing Covers - 1/2"-13 x 3/4" (2 req'd.)
260025110	Safety Bolt for above Housing Covers - 3/8"-16 x 3/4" (1 req'd.)
260025400	3.250" Dia. Side Load, 6-Hole, Veermeer, #600 (B) Fits Drill Rig Models 24x40, 40x40
260025040	2.750" Dia. Side Load, 6-Hole, Veermeer, #400 (B) Fits Drill Rig Models 16x20, 24x26
260038010S	Vermeer Side-Load Transmitter Housing; 3.250" Dia, 2.375" REG (B) x (B), Single Fluid Hole
260038010	Vermeer Side-Load Transmitter Housing; 3.25" DIA., 2.375" REG (BxB)

BATTERIES for above Housings	
Part No.	Description
261080000	Extended Life Lithium battery for Digitrak & Subsite

CROSSOVERS



(Chrome-Moly Steel -- 153,000 Psi Tensile Strength)

Vermeer Crossovers**

Item No.	Description
250050010	2.125" LPT/Hex (P) X 2.875" API REG (P)
250050011	2.125" LPT/Hex (B) X 2.375" API REG (B)
250050025	2.875" FST 1 #900 (B) X 2.875" API REG (P)
250050030	3.500" FST 1 #800 (B) X 2.875" API REG (P)
250050032	3.500" FST 1 (#800) (B) X 3.500" FST (#800) (B)
250050035	3.500" FST 1 #800 (B) X 3.500" API REG (P)
250050045	2.375" FST 1 #600 (P) X 2.375" FST 1 (P)
250050050	#350-API H90S** (P) X 2.375" API REG (P)***
250050060	#350-API H90S** (P) X 2.875" API REG (P)***
325-150	#325 TD Box x QF #400 Pin - 325-150
325-160	#350 TD Box x QF #400 Pin - 350-160
250050070	Tail Piece, QF 400 (P) x 2.00" API IF (P)
250050073	Tail Piece, QF 400 (P) x 2.375" API REG (P)

Ditch Witch Crossovers**

Item No.	Description
250050100	DW 920, 920L, 921, 922 EZ-2 (B) X 2.375" API REG (P)
250050103	DW 1220M1 EZ-3 (B) X 2.375" API REG (P)
250050105	DW 1720, 1720M1, 2020M1, 2720 EZ-2 (B) X 2.375" API REG (P)
250050110	DW 1720, 1720M1, 2020M1, 2720 EZ-2 (B) X 2.875" API REG (P)
250050115	DW 3020M1 EZ-3 (B) X 2.375" API REG (P)
250050120	DW 3020M1 EZ-3 (B) X 2.875" API REG (P)
250050125	DW 4020M1 EZ-2 (B) X 2.375" API REG (P)
250050130	DW 4020M1 EZ-2 (B) X 2.875" API REG (P)

API Crossovers**

Item No.	Description
250050200	3.500" API REG (B) X 2.875" API REG (P)

** Other Crossovers/Adapters available.

*** #350-API H90S thread is compatible with Vermeer #350 HAWKEYE thread.

REPLACEMENT DRIVE COLLARS

For Vermeer Rigs		
Item No.	Id Size	Description
260060105	2.00"	Hardfaced Hex Collar for 7x11, 10x15
260060106	2.00"	Hardfaced Hex Collar With Shark Teeth for 7x11
260060107	2.00"	Carbide Button Hex Collar for 7x11, 10x15
260060109	2.00"	Shark Teeth Hex Collar for 7x11, 10x15
260060155	2.50"	Hardfaced Hex Collar for 16x20, 24x26, 24x40, 40x40, 18x22
260060157	2.50"	Carbide Button Hex Collar for 16x20, 24x26, 24x40, 40x40, 18x22
260060159	2.50"	Shark Teeth Hex Collar for 16x20, 24x26, 24x40, 40x40, 18x22
260060160	2.625"	Octagon Collar for #350-API H90S tool joint.**
260060165	2.625"	Hardfaced Octagon Collar for #350-API H90S tool joint.**
260060275		QF Compatible Hardfaced Collar for #400
260060285		QF Compatible Hardfaced Collar With Sharks Teeth for #400



Drive Collar Bolts - Ditch Witch and Vermeer	
Item No.	Description
260025100	1/2" X 13 X 3/4" Socket Head Cap Screw
260025110	3/8" X 16 X 3/4" Socket Head Cap Screw
260025115	5/8" X 11 X 3/4" Socket Head Cap Screw
260025120	D.W, Drive Collar Bolt 12mm x 1.75 x 20mm Socket Head Cap Screw

For Ditch Witch Rigs		
Item No.	Id Size	Description
260060200	1.56"	Octagon Collar for EZ-2 - JT520
260060205	1.56"	Hardfaced Octagon Collar for EZ-2 - JT520
260060210	2.00"	Octagon Collar for EZ-2 - JT920, JT920L, JT921, JT922
260060215	2.00"	Hardfaced Octagon Collar for EZ-2 - JT920, JT920L, JT921, JT922
260060220	2.25"	Octagon Collar for EZ-3 - JT1220M1
260060225	2.25"	Hardfaced Octagon Collar for EZ-3 - JT1220M1
260060227	2.25"	Carbide Button Octagon Collar for EZ-3 - JT1220 M1
260060230	2.50"	Octagon Collar for EZ-2 - JT1720M1, JT2020M1, JT2720
260060235	2.50"	Hardfaced Octagon Collar for EZ-2 - JT1720M1, JT2020M1, JT2720
260060236	2.50"	Hardfaced Octagon Collar with Shark Teeth for EZ-2, JT1720M1, JT2020M1, JT2720
260060237	2.50"	Carbide Button Octagon Collar for EZ-2 - JT1720M1, JT2020M1, JT2720
260060240	2.75"	Octagon Collar for EZ-2 - JT2720M1
260060245	2.75"	Hardfaced Octagon Collar for EZ-2 - JT2720M1
260060260	2.75"	Octagon Collar for EZ-3 - JT2720 AT, JT3020 AT, JT3020M1
260060265	2.75"	Hardfaced Octagon Collar for EZ-3 - JT2720 AT, JT3020 AT, JT3020M1
260060250	3.15"	Octagon Collar for EZ-2 - JT4020 M1, JT2720 AT, JT3020AT
260060255	3.15"	Hardfaced Octagon Collar for EZ-2 - JT4020 M1, JT2720AT, JT3020AT

Note: All Drive Collars are manufactured from heat treated chrome-moly steel for durability.

** Compatible with Vermeer #350 HAWKEYE tool joint.

SUB SAVERS

For Vermeer® Rigs

Protect your drive chuck and drill rod investment with one of Triple D's direct replacement Sub Savers. Now you can protect your drive chuck by simply unscrewing and replacing your worn out Sub Saver with a new heat treated, chrome steel unit from Triple D.



Vermeer Sub-Savers (Chrome-Moly Steel – 153,000 Psi Tensile Strength)	
Item No.	Description
420002500	Fits 7x11, 7x11A, 10x14, 10x15 - 1.66 pipe #200
420002505	Fits 7x11 Series II - 1.66 pipe #200
420002520	Fits 16x20, 18x22, 20x22 - 1.90 pipe #250
420002525	Fits 16x20, 18x22, 20x22 - 2.06 pipe #400
420002530	Fits 20x22 Series II, #400 (P) x #600 (B),
420002540	Fits 24x40 - S/N 383 & below - 7.5" OAL - 2.375 pipe #600
420002545	Fits 24x40 - S/N 384 & above - 9.5" OAL - 2.375 pipe #600
420002546	Fits 24x40 Series II- 12.0" OAL - 2.375 pipe #600
420002547	Fits 33x44, 36x50 - 2.375" #650
420002548	Fits 36x50 - 2.625" #700
420002550	Fits 50x100, 80x100 - 2.875 pipe #900
420002555	Fits 50x100, 80x100 - 3.500 pipe #800
420002560	Fits 100x120 - 3.50" #1000

DRIVE CHUCKS, PE & PVC EXPANDING JAW PULLING EYES

For Ditch Witch/Vermeer

ONE PIECE CONSTRUCTION - NOT WELDED

All Triple D Drive Chucks are machined from a solid billet of heat treated chrome-moly steel for maximum strength and performance.



for VERMEER RIGS	
Item No.	Description
420001500	Fits 7x11, 7x11A - 1.66 pipe #200
420001505	Fits 10x14, 10x15 - 1.66 pipe #200
420001510	Fits 16x20, 18x22, 20x22 - 1.9 pipe #250
420001525	Fits 16x20, 18x22, 20x22 - 2.06 pipe #400
420001540	Fits 24x40, 40x40 - 2.375 pipe #600
420001550	Fits 50x100, 80x100 - 2.875 pipe #900
420001555	Fits 50x100, 80x100 - 3.500 pipe #800

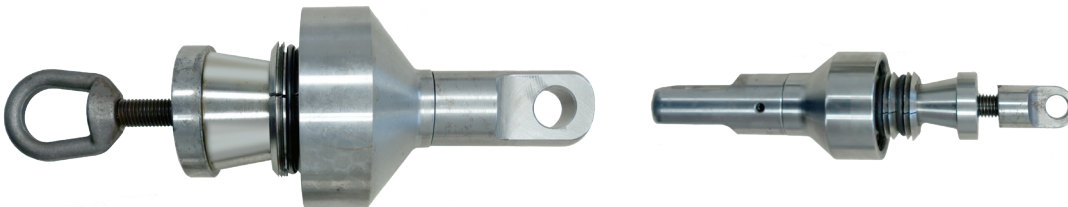
For Ditch Witch Rigs	
Item No.	Description
420001605	JT1220M1
420001615	JT2020M1
420001600	Fits JT2720
420001610	Fits JT1720, JT1720M1
420001620	Fits JT920, JT920L



Pe & Pvc Expanding Jaw Pulling Eyes

Both the sleeved and non-sleeved models of Expanding Pulling Eyes are designed to grip PE & PVC ducting by using hardened alloy steel jaws to grip the inside wall of the duct. The segmented alloy jaws along with the cone shaped steel expander, equally distribute gripping force and pulling load to the inside wall circumference of the duct for maximum holding.

All sleeved pulling eyes use a solid one-piece steel nose cone and sleeve design for water tightness and to prevent the ducting from over expanding and rupturing.



Hardened Alloy Steel Jaws, Cone & Rod	
Item No.	Description
60002000	2" Non-Sleeved Pulling Eye, SDR 11 thru 21, SIDR 7 thru 15, SCH 40 & 80
60002100	2" Sleeved Pulling Eye, SDR 11 thru 21, SCH 40 & 80
60004000	4" Non-Sleeved Pulling Eye, SDR 11 thru 21, SIDR 7 thru 15 & SCH 40 & 80
60004100	4" Sleeved Pulling Eye, SDR 11 thru 21, SCH 40 & 80

HDD DRILL RODS

Drill Pipes/HDD Drill Rods



Drill Pipes/HDD Drill Rods						
Sku Number	Pipe/Machine	Pipe Od	Wall Thickness	Drill Pipe Length	Bend Radius	Weight
DITCH WITCH/JET-TRAC COMPATIBLE						
300020100	JT 820 /920 /921	1.660"	0.240"	78.75"	98.1'	30
300020150	JT 920 L	1.660"	0.240"	118.00"	98.1'	40
300020200	JT 922	1.660"	0.240"	78.75"	98.1'	30
300020250	JT 922 Coarse Thread	1.660"	0.240"	78.75"	98.1'	40
300020300	JT 1220	1.900"	0.240"	118.00"	112.3'	60
300020350	JT 1720	2.063"	0.270"	118.00"	121.9'	79
300020400	JT 2020	2.063"	0.270"	118.00"	121.9'	65
300020450	JT 2720	2.375"	0.280"	118.00"	140.4'	75
300020500	JT 2720MI /JT3020	2.375"	0.280"	118.00"	140.4'	82
300020550	JT 4020	2.875"	0.362"	177.20"	170.0'	194
300020600	JT 4020MI	2.875"	0.362"	177.20"	170.0'	185
300020650	JT 7020/JT100/JT8020	3.50"	0.368"	177.20"	207.0'	235
VERMEER COMPATIBLE						
310030100	D7 X 11	1.660"	0.240"	72.00"	98.1'	26
310030150	D10 X 15	1.660"	0.240"	120.00"	98.1'	39
310030200	D16 X 20/D18x22	1.90"	0.240"	120.00"	112.3'	49
310030250	D24 x 26/D20x24	2.063"	0.240"	120.00"	121.9'	62
310030300	D24 X 40	2.375"	0.280"	120.00"	140.4'	80
310030350	D40 X 40	2.375"	0.280"	180.00"	140.4'	116
	D36x50 FS#700	2.65"	0.400"	120.00"	145.5'	
	D36x50 FS#700	2.625"	0.400"	180.00"	145.5'	
310030450	D50 X 100	2.875"	0.362"	180.00"	170.0'	240
310030400	D80 X 100	3.50"	0.368"	180.00"	206.9'	190
310030500	D100 X 120 W/0531	3.50"	0.368"	240.00"	206.9'	305
AMERICAN AUGER						
320040100	DD 4 -DS			120.00"		100
320040150	DD-6 (2 7/8" NC31)			180.00"		266
320040200	DD-3238			120.00"		80
CASE/TORO						
320040250	CASE 6010	2.063"	0.270"	120.00"	121.9'	66
320040300	CASE 6030	2.375"	0.280"	120.00"	140.4'	80

BACKREAMERS

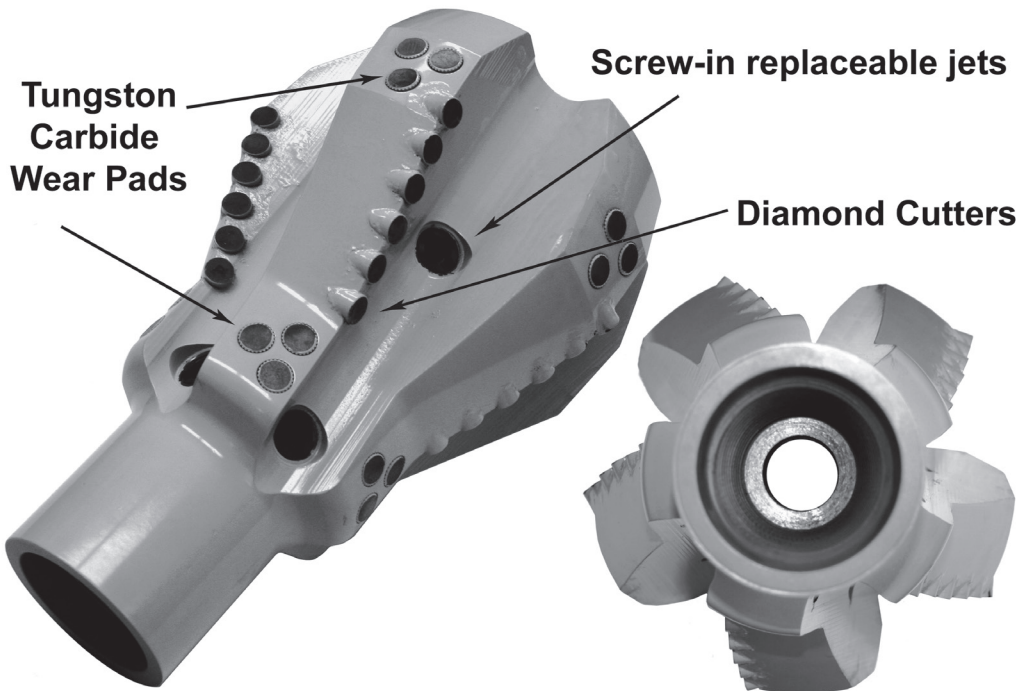
PDC Solid Body Spiral Fluted Reamers

Triple D is proud to announce the expansion of our back-reamer product line with the introduction of Triple D PDC back-reamers.

Available in standard sizes from 6" to 36", with or without pilot stabilizers and with multiple wing configurations.

The 6" to 12" PDC reamers are machined from solid heat treated bar stock for strength and durability. The larger reamers are built with a one piece center shaft, Armor Plate wings and bodies, complete with replaceable jets. All sizes are rebuildable to reduce long term costs.

All sizes are built with standard box by box configurations to allow ease of connection for any drill.



PDC Solid Body Spiral Fluted Reamers

"Hole Openers"

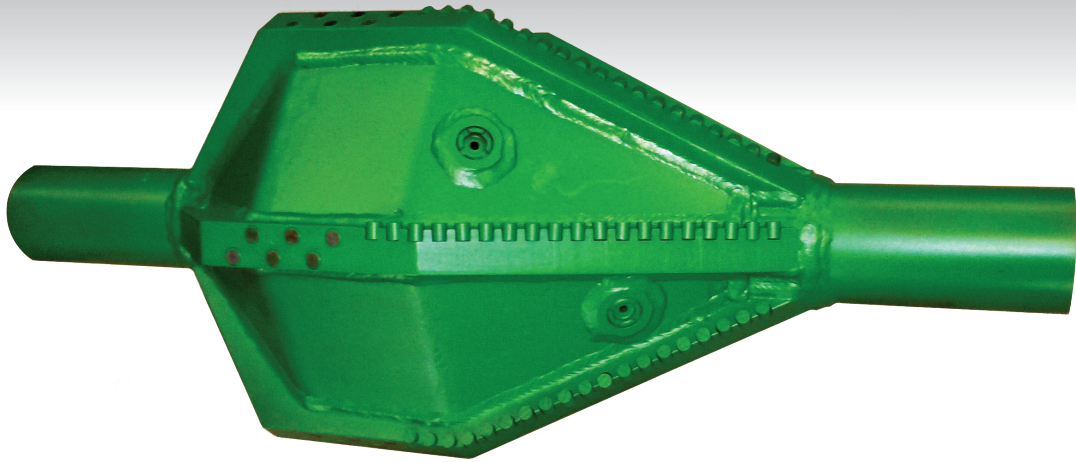
Item No.	Nominal Cut Diameter	No. of Wings	Description
305006000	6" x 3"	4	2"IF (Box x Box) w/Screw-in Jets. No pilot.
305007400	7" x 4"	4	2-3/8" REG (Box x Box) w/Screw-in Jets & 4" Pilot
305008000	8" x 5"	5	2-3/8" REG (Box x Box) w/Screw-in Jets & 5" Pilot
305001000	10" x 5"	5	2-3/8" REG (Box x Box) w/Screw-in Jets & 5" Pilot
305001200	12" x 5"	5	2-3/8" REG (Box x Box) w/Screw-in Jets & 5" Pilot

* Other configurations, shaft diameters and pilots are available upon request.

NOTE: All above Hole Openers will cut to the shaft and can be fitted with a built-in swivel or with a built-in swivel or pull back lug (refer to Reamer Coupling Selection Chart).

BACKREAMERS

PDC Large Body Fluted Reamers



PDC Large Body Fluted Reamers* "Hole Openers"			
Item No.	Nominal Cut Diameter	No. of Wings	Description
305001405	14" x 4"	5	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001406	14" x 4"	6	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001407	14" x 4"	7	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001605	16" x 4"	5	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001606	16" x 4"	6	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001607	16" x 4"	7	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001805	18" x 4"	5	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001806	18" x 4"	6	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305001807	18" x 4"	7	2-7/8" IF (Box x Box) w/Screw-in Jets. No pilot.
305002005	20" x 5"	5	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002006	20" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002007	20" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002008	20" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002205	22" x 5"	5	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002206	22" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002207	22" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002208	22" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002406	24" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002407	24" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002408	24" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002606	26" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002607	26" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002608	26" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002806	28" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002807	28" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305002808	28" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305003006	30" x 5"	6	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305003007	30" x 5"	7	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.
305003008	30" x 5"	8	3-1/2" IF (Box x Box) w/Screw-in Jets. No pilot.

BACKREAMERS

Spiral Fluted Cobble Reamer

Our "Spiral Fluted Cobble Reamer" is designed for handling cobble and chunk rock. Its ten degree tapered screw and body design effectively displaces cobble and chunk rock. Reamers have API box fronts and rears, and will accommodate any of our optional built-in swivels, drawbars and crossovers.

All Cobble Reamers are equipped with conical carbide teeth on the front of the torque tube and rear of the body; while the entire front and top of the spiral is hard-faced for long service life.

Additionally, our Cobble Reamers are available with conical teeth, spaced every six inches, along the full length of the spiral for extended service life - add 10% to the MSRP.

Size Range: 8" - 48"

Shaft Diameters: 3.25" - 7"

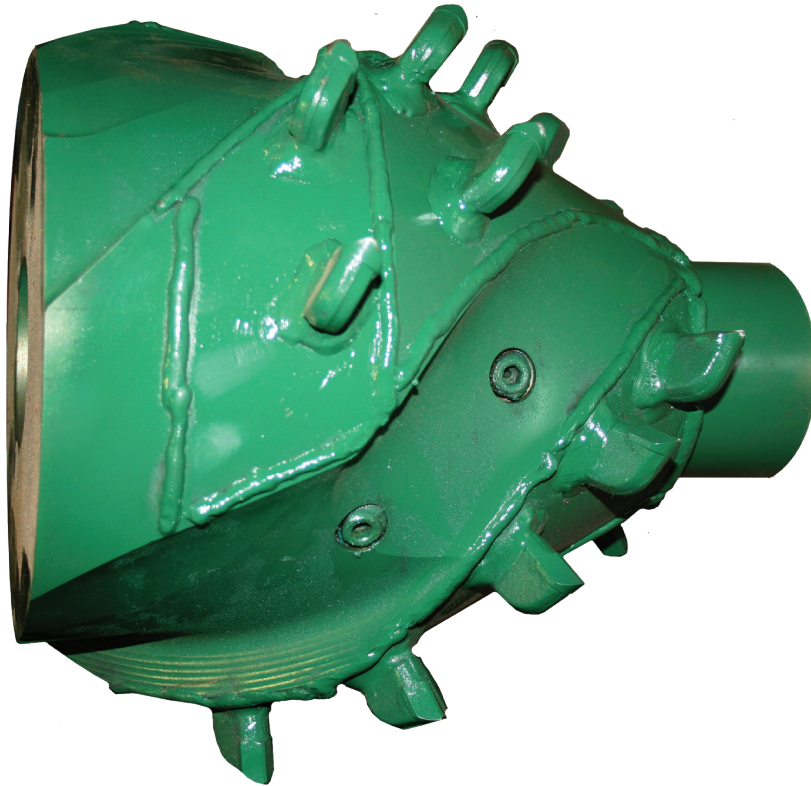


Spiral Fluted Cobble Reamer			
Item No.	Pack Diameter	Shaft Diameter	Description
295002008	8"	3.25"	2-3/8" REG (BOX X BOX)
295002010	10"	3.25"	2-3/8" REG (BOX X BOX)
295002012	12"	3.25"	2-3/8" REG (BOX X BOX)
295002014	14"	3.25"	2-3/8" REG (BOX X BOX)
295003014	14"	4.25"	2-7/8" IF (BOX X BOX)
295002016	16"	3.25"	2-3/8" REG (BOX X BOX)
295003016	16"	4.25"	2-7/8" IF (BOX X BOX)
295002018	18"	3.25"	2-3/8" REG (BOX X BOX)
295003018	18"	4.25"	2-7/8" IF (BOX X BOX)
295003020	20"	4.25"	2-7/8" IF (BOX X BOX)
295004020	20"	4.75"	3-1/2" IF (BOX XBOX)
295003022	22"	4.25"	2-7/8" IF (BOX X BOX)
295004022	22"	4.75"	3-1/2" IF (BOX XBOX)
295003024	24"	4.25"	2-7/8" IF (BOX X BOX)
295004024	24"	4.75"	3-1/2" IF (BOX XBOX)
295003026	26"	4.25"	2-7/8" IF (BOX X BOX)
295004026	26"	4.75"	3-1/2" IF (BOX XBOX)
295003030	30"	4.25"	2-7/8" IF (BOX X BOX)
295004030	30"	4.75"	3-1/2" IF (BOX XBOX)

BACKREAMERS

Solid Body Spiral Fluted Backreamers (Replaceable Fluid Jets in 12" and 14" Models)

Machined from tool steel and heat treated for strength and durability. These reamers are available with an API Reg box on the front and several options on the back. These options include a built in 20K, 30K, 45K HDD swivel or draw bar. Now available with a pin back to allow for trailing rods or use as a centering wheel with the flow through capabilities to attach a second reamer in tandem. The API box front will accept any API pin crossover to your thread. Made with shark teeth or conical carbide teeth.



Item No.	Nominal Cut Diameter	Nominal Pack Diameter	Description
250002045	4.5"	4.0"	2" IF (Box x Box) w/ Conical Teeth
250002006	6"	4.5"	2" IF (Box x Box) w/ Shark Teeth
250002106	6"	4.5"	2" IF (Box x Box) w/ Rotary Teeth
250002008	8"	6.0"	2-3/8" REG (Box x Box) w/ Shark Teeth
250002108	8"	6.0"	2-3/8" REG (Box x Box) w/ Rotary Teeth
250002010	10"	8.0"	2-3/8" REG (Box x Box) w/ Shark Teeth
250002110	10"	8.0"	2-3/8" REG (Box x Box) w/ Rotary Teeth
250002012	12"	10.0"	2-3/8" REG (Box x Box) w/ Shark Teeth
250002112	12"	10.0"	2-3/8" REG (Box x Box) w/ Rotary Teeth

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

Clay Backreamer*

Fabricated from heat treated alloy steel for strength and durability, these Clay Reamers are available with a built-in 20K, 30K or 45K swivel or drawbar, pin or rear connection. The API REG box fronts will accept any API pin crossover needed to attach to your drill. For aggressive cutting, mixing and pumping in sticky clay. Also, an excellent choice for shale and sandstone.



Size Range: 6" - 60" Dia.		Shaft Diameters: 2.75" - 6.75"	
Clay Reamer with Conical Teeth-- API (Box x Box)			
Item No.	Nominal Cut Diameter	Shaft Diameter	Description
270001006	6"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270001008	8"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270001010	10"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270002010	10"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270001012	12"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270002012	12"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270001014	14"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270002014	14"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270001016	16"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270002016	16"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270001018	18"	2.75"	2" IF (Box x Box) w/ Conical Teeth
270002018	18"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270002020	20"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003020	20"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270002022	22"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003022	22"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270002024	24"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003024	24"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270002026	26"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003026	26"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270002028	28"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003028	28"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270002030	30"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
270003030	30"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270003032	32"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270004032	32"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth
270003034	34"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270004034	34"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth
270003036	36"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
270004036	36"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth

* Additional sizes are available upon request.

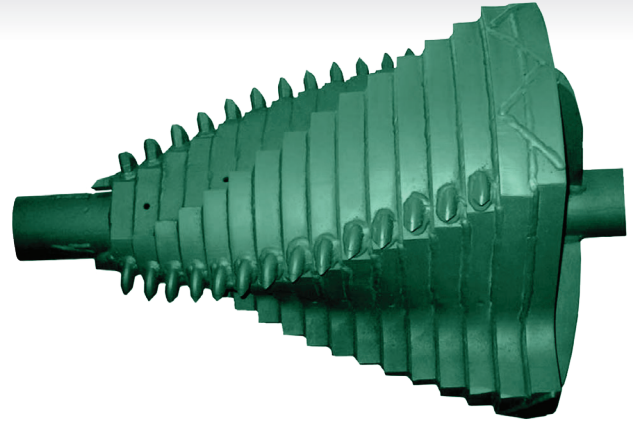
Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

Stacked Plate Spiral Fluted Backreamers*

These stacked plate backreamers feature a slow taper design and deep spiral fluting for smooth cutting and maximum mixing action. They are available with a built-in 30K or 45K swivel, drawbar, pin or box rear connection. The API box fronts will accept any API pin crossover to your drill thread.

For cobble, sandstones, shales, soft limestone, caliche and gravel.



Size Range: 10" - 54" Dia.			Shaft Diameters: 3.25" - 6.125"	
Stacked Plate Reamer with Shark Teeth--API (Box x Box)				
Item No.	Nominal Cut Diameter	Nominal Pacx Diameter	Shaft Diameter	Description
290002010	10"	8"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290002012	12"	10"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003012	12"	10"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002014	14"	12"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003014	14"	12"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002016	16"	14"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003016	16"	14"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002018	18"	16"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003018	18"	16"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002020	20"	18"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003020	20"	18"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002022	22"	20"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003022	22"	20"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290002024	24"	22"	3.25"	2-3/8" REG (Box x Box) w/ Shark Teeth
290003024	24"	22"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290003026	26"	24"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290003028	28"	26"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290003030	30"	28"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290004030	30"	28"	4.75"	3-1/2" IF (Box x Box) w/ Shark Teeth
290003032	32"	30"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290004032	32"	30"	4.75"	3-1/2" IF (Box x Box) w/ Shark Teeth
290003034	34"	32"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290004034	34"	32"	4.75"	3-1/2" IF (Box x Box) w/ Shark Teeth
290003036	36"	34"	4.25"	2-7/8" IF (Box x Box) w/ Shark Teeth
290004036	36"	34"	4.75"	3-1/2" IF (Box x Box) w/ Shark Teeth

* Additional sizes and configurations (extra cutting teeth, bi-directional design, etc.) are available upon request.

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

Barrel Reamers with Conical Teeth

API REG. Box Front

Our Barrel Reamer design features rows of fixed conical carbide cutters on the reamer's face that permit the reamer to cut slightly larger than it's outside diameter to allow slurry to flow past the tool. Other features include:

- 1) Full diameter compaction
- 2) Carbide hardfacing on critical wear areas (including the front of cutters) for long life
- 3) Replaceable fluid jets
- 4) Clean-out plug

Used in soft formation types to stabilize larger reamers or hole openers and when installing final product/utility.



Size Range: 12.8" - 48.0" Dia.			Shaft Diameters: 2.75" - 6.75"	
Item No.	Nominal Cut Diameter	Nominal Pack Diameter	Shaft Diameter	Description
280001012	13.5"	12.8"	2.75"	2" IF (Box x Box) w/ Conical Teeth
280002012	13.5"	12.8"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280001014	14.5"	14.0"	2.75"	2" IF (Box x Box) w/ Conical Teeth
280002014	14.5"	14.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280001016	16.5"	16.0"	2.75"	2" IF (Box x Box) w/ Conical Teeth
280002016	16.5"	16.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280001018	18.5"	18.0"	2.75"	2" IF (Box x Box) w/ Conical Teeth
280002018	18.5"	18.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280002020	20.5"	20.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280003020	20.5"	20.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280002024	24.5"	24.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280003024	24.5"	24.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280002030	30.5"	30.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Teeth
280003030	30.5"	30.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280003036	36.5"	36.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280004036	36.5"	36.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth
280003042	42.5"	42.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280004042	42.5"	42.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth
280003048	48.5"	48.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Teeth
280004048	48.5"	48.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Teeth

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

Tapered Barrel Backreamer

Tapered barrel reamers feature shark teeth carbide cutters in a spiral pattern, and a “packer” barrel rear for stability. Reamers have API REG box fronts and are available with built-in swivel, drawbar, pin or box rear connection. The API REG box fronts will accept any API pin crossover needed to attach to your drill.

For cobbles, shales, river rock and hardpan.



Size Range: 6” - 28” Dia.			Shaft Diameters: 2.75” - 4.25”	
Tapered Barrel Reamer with Shark Teeth – API (Box x Box)				
Item No.	Nominal Cut Diameter	Nominal Pack Diameter	Shaft Diameter	Description
280051006	6.0”	4.5”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280051008	8.0”	6.6”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280051010	10.0”	8.6”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280052010	10.0”	8.6”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280051012	12.0”	10.8”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280052012	12.0”	10.8”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280051014	14.0”	12.8”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280052014	14.0”	12.8”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280051016	16.0”	14.0”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280052016	16.0”	14.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280051018	18.0”	16.0”	2.75”	2” IF (Box x Box) w/ Shark Teeth
280052018	18.0”	16.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280053018	18.0”	16.0”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
280052020	20.0”	18.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280053020	20.0”	18.0”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
280052024	24.0”	22.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280053024	24.0”	22.0”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
280052028	28.0”	26.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280053028	28.0”	26.0”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
280052032	32.0”	30.0”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
280053032	32.0”	30.0”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

Replacement Carbide Cutters	
Item No.	Description
250070100	#1 ST, Small Shark Tooth - 1.250" ht.
250070200	#2 ST, Medium Shark Tooth - 1.50" ht.
250090100	#1 C, Small Conical Tooth - 0.840" ht.
250090200	#2 C, Medium Conical Tooth - 1.26" ht.



Shark Tooth

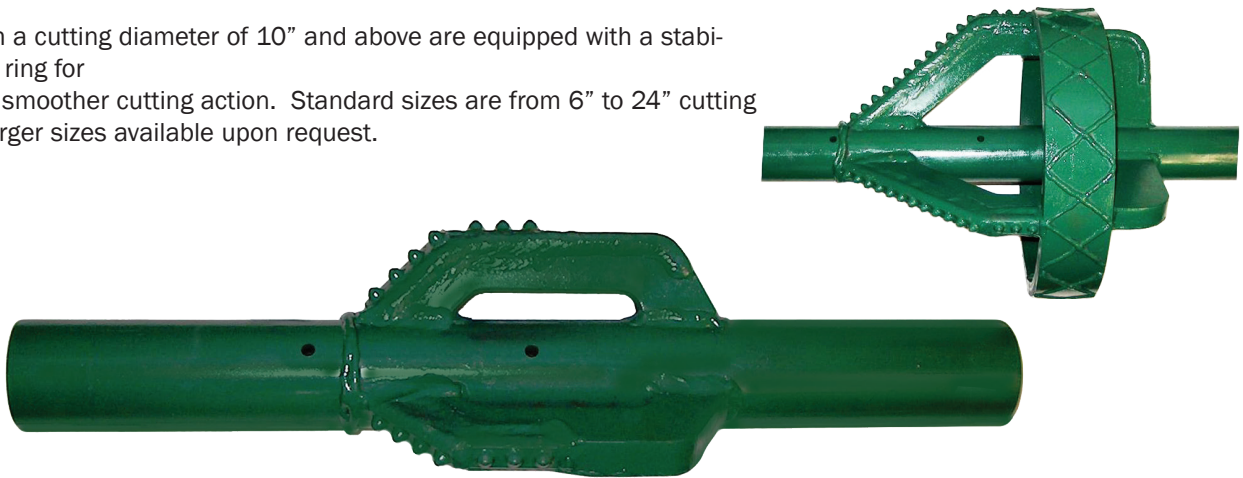
BACKREAMERS

Ground Hawk Reamers

An economical, aggressive cutting, compact reamer for use in a broad range of soil conditions - a good choice for hardpan, shale and sandstone.

The Ground Hawk features a dense array of conical carbide teeth (only 3/16" between carbides) brazed into our own machined alloy steel mounting blocks for durability and economical factory rebuilding when necessary. For aggressive cutting action and reduced torque requirements, the carbide teeth are set at a 20 degree positive lead angle on the 40 degree tapered blades to provide the ideal cutting geometry. For greater cutting action and durability, additional tapered cutting blades can be added as an option. Curved backup blades for easier pushbacks and quality hardfacing are standard features.

Reamers with a cutting diameter of 10" and above are equipped with a stabilizer/packing ring for strength and smoother cutting action. Standard sizes are from 6" to 24" cutting diameter. Larger sizes available upon request.



Ground Hawk Reamers

Size Range: 6" - 30" Dia.

Shaft Diameters: 2.75" - 4.75"

Ground Hawk Reamer – API (Box X Box)

Item No.	Nominal Cut Diameter	Nominal Pack Diameter	Shaft Diameter	Description
350001006	6"	N/A	2.75"	2" IF (Box X Box) w/ Conical Teeth
350001008	8"	N/A	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002008	8"	N/A	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350001010	10.5"	10"	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002010	10.5"	10"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350001012	12.5"	12"	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002012	12.5"	12"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350001014	14.5"	14"	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002014	14.5"	14"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350001016	16.5"	16"	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002016	16.5"	16"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350001018	18.5"	18"	2.75"	2" IF (Box X Box) w/ Conical Teeth
350002018	18.5"	18"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350002020	20.5"	20"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350003020	20.5"	20"	4.25"	2-7/8" IF (Box X Box) w/ Conical Teeth
350002024	24.5"	24"	3.25"	2-3/8" Reg (Box X Box) w/ Conical Teeth
350003024	24.5"	24"	4.25"	2-7/8" IF (Box X Box) w/ Conical Teeth

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

Winged Backreamer

Fabricated from heat treated alloy steel for strength and durability, these Wing Reamers are available with a built-in 20K, 30K or 45K swivel, drawbar, pin or box rear connection. The API REG box fronts will accept any API pin crossover needed to attach to your drill.



For sand with cobbles, sandstone and hardpan.

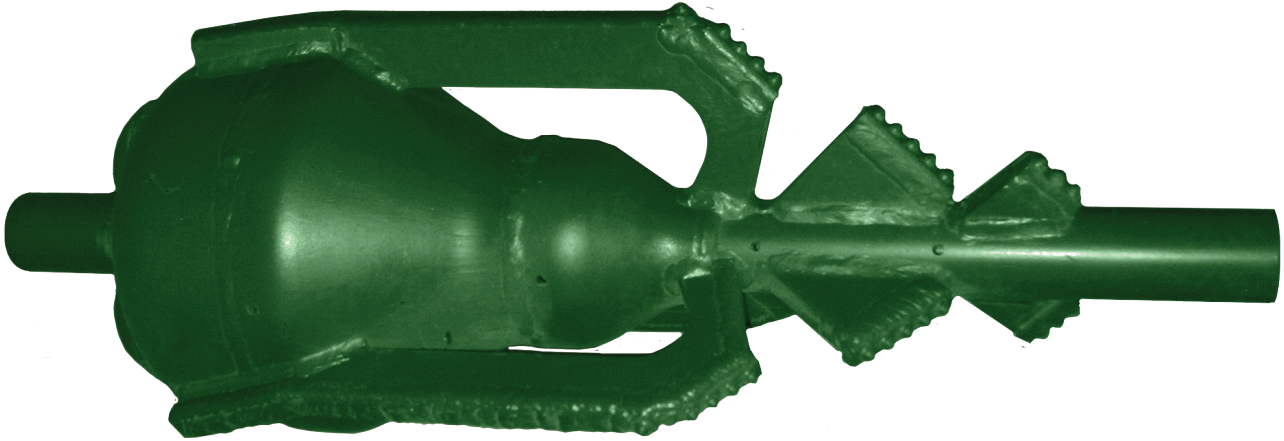
Size Range: 8” - 72” Dia.			Shaft Diameters: 3” - 6.750”	
3-Winged Reamer (Fly-Cutter) – API (Box x Box)				
Item No.	Nominal Cut Dia.	Nominal Pack Dia.	Shaft Dia.	Description
260001008	8”	N/A	2.75”	2” IF (Box x Box) w/ Shark Teeth
260001010	10”	N/A	2.75”	2” IF (Box x Box) w/ Shark Teeth
260001012	12”	N/A	2.75”	2” IF (Box x Box) w/ Shark Teeth
260002012	12”	N/A	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260001014	14”	N/A	2.75”	2” IF (Box x Box) w/ Shark Teeth
260002014	14”	N/A	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260001016	16”	N/A	2.75”	2” IF (Box x Box) w/ Shark Teeth
260002016	16”	N/A	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260001018	18”	16.5”	2.75”	2” IF (Box x Box) w/ Shark Teeth
260002018	18”	16.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260002020	20”	18.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003020	20”	18.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260002022	22”	20.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003022	22”	20.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260002024	24”	22.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003024	24”	22.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260002026	26”	24.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003026	26”	24.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260002028	28”	26.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003028	28”	26.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260002030	30”	28.5”	3.25”	2-3/8” REG (Box x Box) w/ Shark Teeth
260003030	30”	28.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260003032	32”	30.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260004032	32”	30.5”	4.75”	3-1/2” IF (Box x Box) w/ Shark Teeth
260003034	34”	32.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260004034	34”	32.5”	4.75”	3-1/2” IF (Box x Box) w/ Shark Teeth
260003036	36”	34.5”	4.25”	2-7/8” IF (Box x Box) w/ Shark Teeth
260004036	36”	34.5”	4.75”	3-1/2” IF (Box x Box) w/ Shark Teeth

Notes:

1. A "Spider" center support and stabilizer ring are standard on 18" and larger reamers
2. Additional sizes and configurations (extra wings, cutters, wide stabilizer rings, etc.) are available upon request.
3. Choose **Front and Rear Couplings** (adapters/Crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

BACKREAMERS

"Sand Shark" Backreamer



Size Range: 6" - 36" Dia.

Shaft Diameters: 2.75" - 4.75"

Reamer with a Dense Array of Conical Teeth -- API (Box x Box)

Item No.	Nominal Cut Diameter	Nominal Pack Diameter	Shaft Diameter	Description
280071006	6.0"	4.5"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280071008	8.0"	6.6"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280071010	10.0"	8.6"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280072010	10.0"	8.6"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280071012	12.0"	10.8"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280072012	12.0"	10.8"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280071014	14.0"	12.8"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280072014	14.0"	12.8"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280071016	16.0"	14.0"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280072016	16.0"	14.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280071018	18.0"	16.0"	2.75"	2" IF (Box x Box) w/ Conical Carbide Blocks
280072018	18.0"	16.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280073018	18.0"	16.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280072020	20.0"	18.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280073020	20.0"	18.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280072024	24.0"	20.0"	3.25"	2-3/8" REG (Box x Box) w/ Conical Carbide Blocks
280073024	24.0"	20.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280074024	24.0"	22.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Carbide Blocks
280073028	28.0"	24.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280074028	28.0"	24.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Carbide Blocks
280073032	32.0"	28.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280074032	32.0"	28.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Carbide Blocks
280073036	36.0"	32.0"	4.25"	2-7/8" IF (Box x Box) w/ Conical Carbide Blocks
280074036	36.0"	32.0"	4.75"	3-1/2" IF (Box x Box) w/ Conical Carbide Blocks

Note: Choose **Front and Rear Reamer Couplings** (adapters/crossovers, drawbars, direct connect swivels) from **Reamer Coupling Charts**.

SOLID BODY BACKREAMERS

Solid Body Reamer With Drawbar For Vermeer Starter Rods

Machined from solid alloy steel bars, these high quality one-piece backreamers are designed for convenience and value. Each backreamer features a built-in LPT/Hex Pin front and drawbar rear for fast hook-up. Available with carbide shark or conical teeth.



Solid Body Reamer -- Lpt/Hex (Pin) W/ Drawbar

With Shark Teeth

Item No.	Nominal Cut Dia.	Pack Dia.	Description
250006000	6.0"	3.5"	2.125" LPT/Hex Pin W/ SHARK TEETH
250006010	6.0"	3.5"	1.625" LPT/Hex Pin W/ SHARK TEETH

Solid Body Reamer -- Lpt/Hex (Pin) W/ Drawbar

With Rotary Teeth

Item No.	Nominal Cut Dia.	Pack Dia.	Description
250006015	6.0"	3.5"	2.125" LPT/Hex Pin W/ ROTARY TEETH
250006020	6.0"	3.5"	1.625" LPT/Hex Pin W/ ROTARY TEETH

Replacement Reamer Jets (Steel)

Item No.	Description
250001500	1/8" NPT THD, X 1/8" HOLE (12 Pack)
250001505	1/8" NPT THD, X 3/16" HOLE (12 Pack)
250001510	1/4" NPT THD, X 3/16" HOLE (12 Pack)
250001515	1/4" NPT THD, X 1/4" HOLE (12 Pack)
250001520	3/8" NPT THD, X 1/4" HOLE (12 Pack)
250001525	3/8" NPT THD, X 5/16" HOLE (12 Pack)

Replacement Carbide Cutters

Item No.	Description
250070100	#1 ST, Small Shark Tooth - 1.250" ht.
250070200	#2 ST, Medium Shark Tooth - 1.50" ht.
250090100	#1 C, Small Conical Tooth - 0.840" ht.
250090200	#2 C, Medium Conical Tooth - 1.26" ht.

REAMER COUPLING SELECTION CHART*

Select the reamer style you need. Then, using the following Coupling Selection Chart, select the front and rear couplings that fit.

Vermeer Threads				
Thread Couplings	2.75" Reamer Shaft 2" IF (Box x Box)	3.25" Reamer Shaft 2-3/8" REG (Box x Box)	4.25" Reamer Shaft 2-7/8" IF (Box x Box)	4.75" Reamer Shaft 3-1/2" IF (Box x Box)
	Part No.	Part No.	Part No.	Part No.
1.625" LP (P) x (P) for D6x6 thru D10x15	220301625	220401625	—	—
2.125" LP (P) x (P) for D16x20 thru D33x44	220302125	220402125	—	—
1.66" FST 1 #200 (B) x (P) for D6x6 thru D10x15	220300200	220400200	—	—
1.90" FST 1 #250 (B) x (P) for D16x20 thru D20x22	220300250	220400250	—	—
2.06" FST 1 #400 (B) x (P) for D18x22 thru D24x26	220300400	220400400	—	—
2.375" FST 1 #600 (B) x (P) for D24x40 thru D24x40 II	220300600	220400600	220500600	—
2.375" FST 1 #650 (B) x (P) for D33x44 thru D40x40	220300650	220400650	220500650	—
2.625" FST 1 #700 (B) x (P) for D36x50 II	220300700	220400700	220500700	—
2.875" FST 1 #900 (B) x (P) for D50x100, D50x100A	—	220400900	220500900	—
3.50" FST 1 #800 (B) x (P) for D50x100A thru D80x100 II	—	220400800	220500800	220600800
3.50" FST 1 #1000 (B) x (P) for D100x120 II	—	—	220501000	220601000

Ditch Witch Threads				
Thread Couplings	2.75" Reamer Shaft 2" IF (Box x Box)	3.25" Reamer Shaft 2-3/8" REG (Box x Box)	4.25" Reamer Shaft 2-7/8" IF (Box x Box)	4.75" Reamer Shaft 3-1/2" IF (Box x Box)
	Part No.	Part No.	Part No.	Part No.
JT 520, EZ 2 (B) x (P)	—	—	—	—
JT 920/920L, EZ 2 (B) x (P)	220320200	220420200	—	—
JT 1220 M1, EZ 3 (B) x (P)	220320300	220420300	—	—
JT 1720, JT 1720 M1, JT 2020 M1, JT 2720, EZ 2 (B) x (P)	220320400	220420400	220520400	—
JT 2720 M1, EZ 2 (B) x (P)	220320500	220420500	220520500	—
JT 3020 M1, EZ 3 (B) x (P)	220320600	220420600	220520600	—
JT 2720 AT, JT 3020 AT, EZ 3 (B) x (P)	—	—	—	—
JT 4020 M1, EZ 2 (B) x (P)	—	220420700	220520700	—
JT 520 DRILL PIPE THD (P) x (P)	—	—	—	—
JT 820, 920/1/2 DRILL PIPE THD (P) x (P)	220324200	—	—	—
JT 1220 M1, DRILL PIPE THD (P) x (P)	220324300	—	—	—
JT 1720, JT 1720 M1, DRILL PIPE THD (P) x (P)	220324400	220421400	—	—
JT 2720, JT 2020 M1, DRILL PIPE THD (P) x (P)	220324500	220421500	—	—
JT 2720 M1, JT 3020 M1, DRILL PIPE THD (P) x (P)	220324600	220421600	220521600	—
JT 2720 AT, JT 3020 AT, DRILL PIPE THD (P) x (P)	—	—	—	—
JT 4020, DRILL PIPE THD (P) x (P)	—	220421700	220521700	—
JT 4020 M1, DRILL PIPE THD (P) x (P)	—	220421800	220521800	—
JT 4020 AT, DRILL PIPE THD (P) x (P)	—	—	—	—
JT 7020, JT 8020 M1, DRILL PIPE THD (P) x (P)	—	—	—	—

* Call for other sizes

REAMER COUPLING SELECTION CHART

Pulling Eye Couplings - Triple D Threads

	2.75" Reamer Shaft 2" IF (Box x Box)	3.25" Reamer Shaft 2-3/8" REG (Box x Box)	4.25" Reamer Shaft 2-7/8" IF (Box x Box)	4.75" Reamer Shaft 3-1/2" IF (Box x Box)
Description	Part No.	Part No.	Part No.	Part No.
Pulling Eye for Triple D DB1500, DB1800 - 5 Ton	220360100	—	—	—
Pulling Eye for Triple D DB2000, DB2250 - 8 Ton	220360200	—	—	—
Pulling Eye for Triple D DB2500 - 12 Ton	220360300	220460300	—	—
Pulling Eye for Triple D DB3000, DB3500 - 25 Ton	220360400	220460400	—	—
Pulling Eye for Triple D #200060000 - 30 Ton	—	220460500	220560500	220660500
Pulling Eye for Triple D #200090000 - 45 Ton	—	220460600	220560600	220660600
Pulling Eye for Triple D #200120000 - 60 Ton	—	220460700	220560700	220660700

API Threads

	2.75" Reamer Shaft 2" IF (Box x Box)	3.25" Reamer Shaft 2-3/8" REG (Box x Box)	4.25" Reamer Shaft 2-7/8" IF (Box x Box)	4.75" Reamer Shaft 3-1/2" IF (Box x Box)
Thread Couplings	Part No.	Part No.	Part No.	Part No.
2.375 API REG. Box x Pin	220340100	—	—	—
2.375 API REG. Pin x Pin	220340150	—	—	—
2.875 API REG. Box x Pin	—	220442200	—	—
2.875 API REG. Pin x Pin	—	220442250	—	—
3.500 API REG. Box x Pin	—	220442300	—	—
3.500 API REG. Pin x Pin	—	220442350	—	—
2.375 API IF Box x Pin	—	220442400	220542400	220642400
2.375 API IF Pin x Pin	—	220442450	220542450	220642450
2.875 API IF Box x Pin	—	220442500	220542500	220642500
2.875 API IF Pin x Pin	—	220442550	220542550	220642550
3.500 API IF Box x Pin	—	—	220542600	220642600
3.500 API IF Pin x Pin	—	—	220542650	220642650

Direct Connect Reamer Swivels

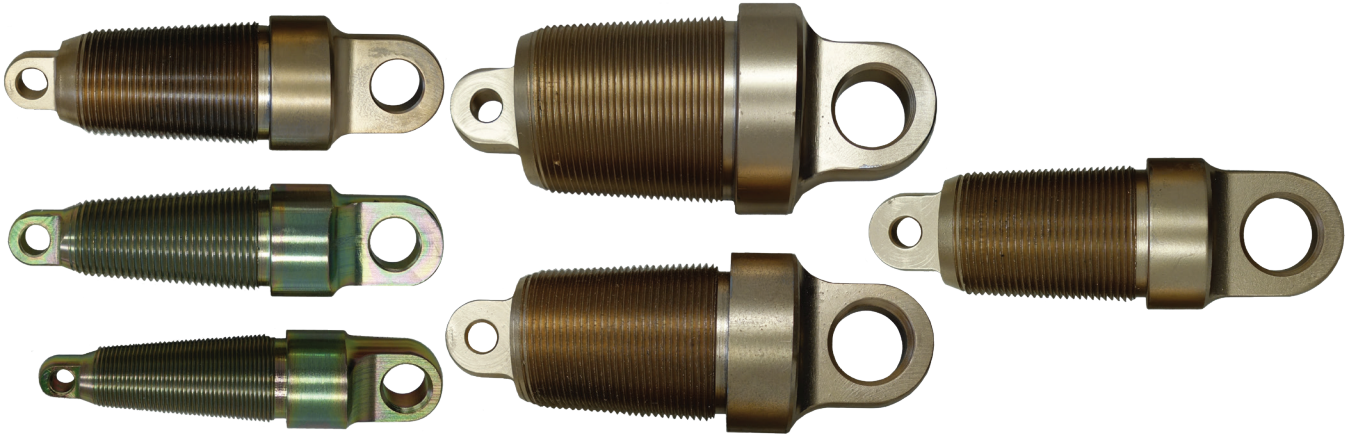
	2.75" Reamer Shaft 2" IF (Box x Box)	3.25" Reamer Shaft 2-3/8" REG (Box x Box)	4.25" Reamer Shaft 2-7/8" IF (Box x Box)	4.75" Reamer Shaft 3-1/2" IF (Box x Box)
Description	Part No.	Part No.	Part No.	Part No.
12,000 lb. Swivel, Pin x Lug	200050110	—	—	—
22,000 lb. Swivel, Pin x Lug	200050130	200050140	—	—
32,000 lb. Swivel, Pin x Lug	200050155	200050160	—	—
44,000 lb. Swivel, Pin x Lug	200050165	200050170	—	—
60,000 lb. Swivel, Pin x Lug	—	—	200050185	200050190
90,000 lb. Swivel, Pin x Lug	—	—	200050195	200050200
120,000 lb. Swivel, Pin x Lug	—	—	—	200050210

Accessories

Description	Part No.
Jet Lok II - Handy Pak; Thread-Locking Two-Part Epoxy Pouch	200050110

DUCT PULLERS AND SWIVEL LINKS

Duct Pullers, manufactured in house by Triple D are machined with a tapered buttress thread to grip the inside wall of polyethylene pipe and inner duct by simply screwing them into the opening. When properly installed, the gripping power of the puller is stronger than the tensile strength of the pipe or inner duct. Pullers are installed quickly and easily with a screwdriver shaft or metal rod.



Swivel-Link	
Part No.	Description
SL-9000	Complete Assembly
SL-9000A	Heat Treated Body
SL-9000B	Heat Treated Locking Pin
SL-9000C	Heat Treated Steel Bushing
SL-9000D	Heat Treated Deflector
SL-9000E	Heat Treated Bolt

Duct And Pipe Pullers - Lug Style	
Part No.	Description
DP-075L	Grip Range 0.72" - 0.93" With Rear Lug
DP-100L	Grip Range 0.94" - 1.15" With Rear Lug
DP-100AL	Grip Range 1" Irrigation Pipe - Sdr21 With Rear Lug
DP-125L	Grip Range 1.26" - 1.44" With Rear Lug
DP-150L	Grip Range 1.48" - 1.66" With Rear Lug
DP-175L	Grip Range 1.65" - 1.85" With Rear Lug
DP-200L	Grip Range 1.91" - 2.08" With Rear Lug
DP-300L	Grip Range 2.70" - 3.20" With Rear Lug

Duct And Pipe Pullers - Clevis Style	
Part No.	Description
DPC-100L	Grip Range 0.94" - 1.15" With Rear Lug
DPC-125L	Grip Range 1.26" - 1.44" With Rear Lug
DPC-150L	Grip Range 1.48" - 1.66" With Rear Lug
DPC-200L	Grip Range 1.91" - 2.08" With Rear Lug

"GOLD SERIES" HDD PULLBACK SWIVELS

The unique design of Triple D Swivels makes them one of the strongest on the market today. Four bearings and a larger shaft built with tool steel construction makes for a swivel that will not fold over like others. The smooth outside ensures a no-snag pull back. The full diameter shouldered pins and protected grease fitting completes the Triple D Swivel.



Part no.	Description
DB-1500	Pullback Swivel – 8,500 Lb. WI
DB-1500R	Bolt-On Pullback Swivel – 8,500 Lb. WI
DB-1800	Pullback Swivel – 10,000 Lb. WI
DB-2000	Pullback Swivel – 12,000 Lb. WI
DB-2250	Pullback Swivel – 16,000 Lb. WI
DB-2500	Pullback Swivel – 22,000 Lb. WI
DB-3000	Pullback Swivel – 32,000 Lb. WI
DB-3500	Pullback Swivel – 44,000 Lb. WI
200060000	Pullback Swivel – 60,000 Lb. WI
200090035	Pullback Swivel – 90,000 Lb. WI, Clevis X 3.5" Api If
200090000	Pullback Swivel – 90,000 Lb. WI, Clevis X Clevis
200120000	Pullback Swivel – 120,000 Lb. WI, Clevis X Clevis
GR-1000	Premium Grease For Underground Pullback Swivels - 14 Oz. Cartridge
DB-1500P	Replacement Pin For Db-1500
DB-1800P	Replacement Pin For Db-1800
DB-2000P	Replacement Pin For Db-2000
DB-2250P	Replacement Pin For Db-2250
DB-2500P	Replacement Pin For Db-2500
DB-3000P	Replacement Pin For Db-3000
DB-3500P	Replacement Pin For Db-3500
DB-60KP	Replacement Pin For 200060000
DB-90KP	Replacement Pin For 200090000
DB-120KP	Replacement Pin For 200120000

“GOLD SERIES” HDD PULLBACK SWIVELS

Operating Instructions Safety & Operation

Triple D's directional Boring Swivels are designed to operate within specified load ratings. Exceeding established working loads will reduce the swivel's service life and void the product warranty. **Always select a swivel with a work load rating that is double the pullback rating of your machine so that the swivel can better tolerate unexpected spikes.**

Important: Always wash out the split line between rotating bodies after every use!

Always lubricate (flush) swivel before and after each use with a calcium based grease containing extreme pressure additives – we recommend and use our GR-1000. Do not mix greases, it will shorten bearing life. This procedure will purge contaminants that enter the swivel body. **“Flushing” requires pumping grease into the swivel until clean grease emerges from the split line between rotating bodies.**

Replace worn or damaged clevis pins with Triple D parts only. They are specifically designed for each size swivel and manufactured from heat treated chrome-moly steel for strength and durability. Use of any other replacement product will not only void the product warranty, but may result in property damage, severe bodily harm or death to workers or bystanders.

Do not disassemble or modify the swivels. Such action will void the product warranty. Should it become necessary to replace the bearings and seals, you may return the swivel to Triple D through an authorized distributor. A cost estimate will be provided prior to any repairs. Use the following procedure to attach the swivel to a back reamer. It will insure maximum safety to all personnel and avoid damaging side loads on the swivel.

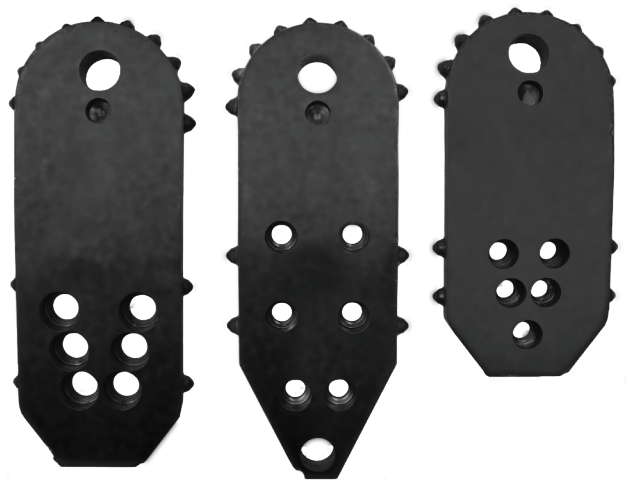
1. Pre-ream the boring to a minimum of one drill rod length.
2. Push reamer back to surface and attach the swivel and duct puller to reamer.
3. Without rotation, pullback the drill string for the length of the pre-reamed hole.
4. Start rotation slowly and continue pullback.

PADDLE BITS

Triple D's HDD Pilot Bits are manufactured from domestically produced Ballistic Armor Plate on "in-house" state-of-the-art CNC machines. We do not use low cost imported castings or inexpensive high carbon steels. Our carefully selected Armor Plate has greater abrasion resistant characteristics than standard AR rated steels. The conical bits, teeth and carbide buttons used on our HDD bits are quality manufactured in the USA for long service life. For the ultimate in abrasion resistance, Triple D uses the Tungsten Carbide Embedding Hardfacing Process. The result of the process is a tool steel weld deposit filled with Tungsten Carbide particles. This process offers a 2 to 8 times better wear life than typical hardfacing alloys.

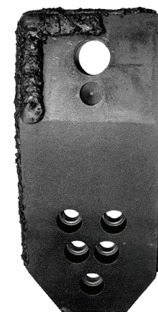
Radius Button Bit

Radius Button Bit (Pull Back Hole Std.) For Rocky & Abrasive Soil			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-RB	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-RB	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-RB	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-RB	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-RB	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-RB	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-RB	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-RB	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P7-35-RB	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-RB	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-RB	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-RB	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-RB	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"
DH-08-P6-50-RB	6-Hole Ditch Witch – 16 MM	5.0"	1.0"
DH-08-P6-60-RB	6-Hole Ditch Witch – 16 MM	6.0"	1.0"
DH-08-P7-50-RB	7-Hole Vermeer – 1/2" x 13	5.0"	1.0"
DH-08-P7-60-RB	7-Hole Vermeer – 1/2" x 13	6.0"	1.0"
DH-08-P8-50-RB	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-08-P8-60-RB	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"



"Roughneck" Steep Taper Ripper Bit

Hardfaced Taper Chisel Bit** For Sand & Sandy Loam			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-40-TCH	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-50-TCH	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-50-TCH	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-TCH	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P7-40-TCH	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-50-TCH	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-TCH	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"



PADDLE BITS

Angled Conical Claw Bit

**Angled Conical Claw Bit
(Pull Back Hole Std.) **
For Rocky & Abrasive Soil**

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-ACC	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-ACC	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-50-ACC	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-ACC	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-50-ACC	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-ACC	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P7-35-ACC	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-ACC	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-ACC	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-ACC	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-ACC	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"
DH-08-P6-40-ACC	6-Hole Ditch Witch – 16 MM	4.0"	1.0"
DH-08-P6-50-ACC	6-Hole Ditch Witch – 16 MM	5.0"	1.0"
DH-08-P6A-50-ACC	6-Hole Ditch Witch – 20 MM	5.0"	1.0"
DH-08-P6A-60-ACC	6-Hole Ditch Witch – 20 MM	6.0"	1.0"
DH-08-P7-40-ACC	7-Hole Vermeer – 1/2" x 13	4.0"	1.0"
DH-08-P7-45-ACC	7-Hole Vermeer – 1/2" x 13	4.5"	1.0"
DH-08-P7-50-ACC	7-Hole Vermeer – 1/2" x 13	5.0"	1.0"
DH-08-P7-60-ACC	7-Hole Vermeer – 1/2" x 13	6.0"	1.0"
DH-08-P8-50-ACC	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-08-P8-60-ACC	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"
DH-08-P8-80-ACC	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"



** Includes Tungsten Carbide Embedded Hardfacing

Steep Taper Angled Conical Claw Bit

**(Pull Back Hole Std.) **
For Rocky & Abrasive Soil**

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-40-ACS	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-50-ACS	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P7-35-ACS	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-ACS	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-ACS	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-ACS	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-55-ACS	7-Hole Vermeer – 1/2" x 13	5.5"	3/4"
DH-06-P6-40-ACS	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-50-ACS	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-ACS	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-08-P8-50-ACS	7-Hole Vermeer – 5/8" x 11	5.0"	1"
DH-08-P8-60-ACS	7-Hole Vermeer – 5/8" x 11	6.0"	1"
DH-08-P6-50-ACS	6-Hole Ditch Witch – 16 MM	5.0"	1"
DH-08-P6-60-ACS	6-Hole Ditch Witch – 16 MM	6.0"	1"



** Includes Tungsten Carbide Embedded Hardfacing

PADDLE BITS

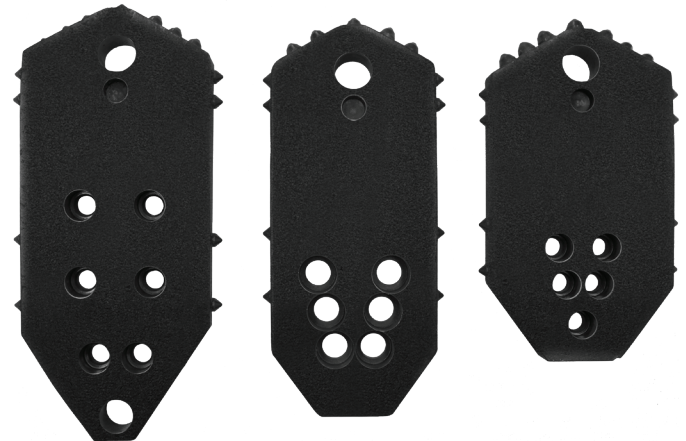
Button Chisel Bit

Button Chisel Bit (Pull Back Hole Std.) For Hard, Rocky Soil			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-CB	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-CB	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-CB	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-CB	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-CB	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-CB	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-CB	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P7-35-CB	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-CB	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-CB	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-CB	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-08-P7-50-CB	7-Hole Vermeer – 5/8" x 11	5.0"	1"



Button Taper Bit

Button Taper Bit (Pull Back Hole Std.) For Hard, Rocky Soil			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-TB	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-TB	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-TB	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-TB	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-TB	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-TB	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-TB	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-TB	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P7-35-TB	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-TB	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-TB	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-TB	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-08-P8-60-TB	7-Hole Vermeer – 5/8" x 11	6.0"	1"
DH-08-P8-70-TB	7-Hole Vermeer – 5/8" x 11	7.0"	1"

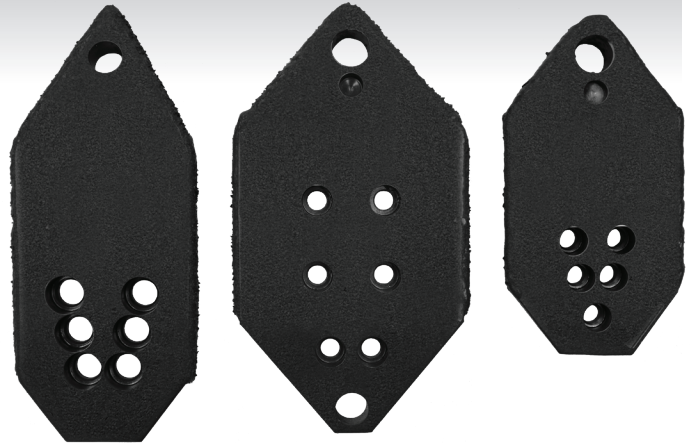


PADDLE BITS

Hardfaced Steep Taper Bit

**Hardfaced Steep Taper Bit
(Pull Back Hole Std.) **
For Sand, Wet Clay w/Cobble**

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-STH	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-STH	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-STH	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-STH	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-STH	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-STH	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-STH	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-STH	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P6A-50-STH	6-Hole Ditch Witch – 20 MM	5.0"	1.0"
DH-06-P6A-60-STH	6-Hole Ditch Witch – 20 MM	6.0"	1.0"
DH-06-P6A-80-STH	6-Hole Ditch Witch – 20 MM	8.0	1.0"
DH-06-P7-35-STH	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-STH	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-STH	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-STH	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-STH	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"
DH-06-P8-50-STH	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-06-P8-60-STH	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"



Economy Chisel Bit

**Economy Chisel Bit
(Pull Back Hole Std.)
For Normal Soil Conditions**

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-CE	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-CE	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-CE	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-CE	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-CE	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-CE	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-CE	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-08-P6-60-CE	6-Hole Ditch Witch – 20 MM	6.0"	1.0"
DH-08-P6A-60-CE	6-Hole Ditch Witch – 20 MM	6.0"	1.0"
DH-06-P7-35-CE	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-CE	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-CE	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-CE	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-08-P7-40-CE	7-Hole Vermeer – 1/2" x 13	4.0"	1.0"
DH-08-P7-45-CE	7-Hole Vermeer – 1/2" x 13	4.5"	1.0"
DH-08-P7-50-CE	7-Hole Vermeer – 1/2" x 13	5.0"	1.0"



** Includes Tungsten Carbide Embedded Hardfacing

PADDLE BITS

Hardfaced Chisel Bit

Hardfaced Chisel Bit (Pull Back Hole Std.) ** For Sand & Sandy Loam			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-CH	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-CH	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-CH	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-CH	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-CH	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-45-CH	6-Hole Ditch Witch – 16 MM	4.5"	3/4"
DH-06-P6-50-CH	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-CH	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-08-P6A-50-CH	6-Hole Ditch Witch – 20 MM	5.0"	1.0"
DH-08-P6A-60-CH	6-Hole Ditch Witch – 20 MM	6.0"	1.0"
DH-06-P7-35-CH	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-CH	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-CH	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-CH	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-CH	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"
DH-08-P7-40-CH	7-Hole Vermeer – 1/2" x 13	4.0"	1.0"
DH-08-P7-45-CH	7-Hole Vermeer – 1/2" x 13	4.5"	1.0"
DH-08-P7-50-CH	7-Hole Vermeer – 1/2" x 13	5.0"	1.0"
DH-08-P7-60-CH	7-Hole Vermeer – 1/2" x 13	6.0"	1.0"
DH-08-P8-50-CH	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-08-P8-60-CH	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"



** Includes Tungsten Carbide Embedded Hardfacing

Steep Taper Clay Bit

Steep Taper Clay Bit (Pull Back Hole Std.) ** For Hardpan, Dry Clay & Compacted Soil			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-ARS	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-ARS	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-ARS	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P7-35-ARS	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-ARS	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-ARS	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-ARS	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"

** Includes Tungsten Carbide Embedded Hardfacing



PADDLE BITS

“Roughneck” Ripper Bit

“Roughneck” Ripper Bit **
For Sedimentary Rock, Hardpan,
Dry Clay & Compacted Soil

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-40-SR	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-50-SR	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-SR	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-50-SR	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P7-35-SR	7-Hole Vermeer – 1/2" x 13	3.5"	3/4"
DH-06-P7-40-SR	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-50-SR	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-08-P7-40-SR	7-Hole Vermeer – 1/2" x 13	4.0"	1.0"
DH-08-P7-50-SR	7-Hole Vermeer – 1/2" x 13	5.0"	1.0"
DH-08-P7-60-SR	7-Hole Vermeer – 1/2" x 13	6.0"	1.0"
DH-08-P8-40-SR	7-Hole Vermeer – 5/8" x 11	4.0"	1.0"
DH-08-P8-45-SR	7-Hole Vermeer – 5/8" x 11	4.5"	1.0"
DH-08-P8-50-SR	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-08-P8-60-SR	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"
DH-08-P6A-50-SR	6-Hole Ditch Witch – 20 MM	5.0"	1.0"
DH-08-P6A-60-SR	6-Hole Ditch Witch – 20 MM	6.0"	1.0"

** Includes Tungsten Carbide Embedded Hardfacing



“Roughneck” Steep Taper Ripper Bit

“Roughneck” Steep Taper Ripper Bit **
For Sedimentary Rock, Hardpan, Dry Clay & Com-
pacted Soil

Item No.	Hole Pattern	Width	Thk.
DH-06-P5-35-XR	5-Hole Ditch Witch – 12 MM	3.5"	3/4"
DH-06-P5-40-XR	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-45-XR	5-Hole Ditch Witch – 12 MM	4.5"	3/4"
DH-06-P5-50-XR	5-Hole Ditch Witch – 12 MM	5.0"	3/4"
DH-06-P6-40-XR	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-50-XR	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P7-40-XR	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-45-XR	7-Hole Vermeer – 1/2" x 13	4.5"	3/4"
DH-06-P7-50-XR	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-XR	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"
DH-08-P8-40-XR	7-Hole Vermeer – 5/8" x 11	4.0"	1.0"
DH-08-P8-45-XR	7-Hole Vermeer – 5/8" x 11	4.5"	1.0"
DH-08-P8-50-XR	7-Hole Vermeer – 5/8" x 11	5.0"	1.0"
DH-08-P8-60-XR	7-Hole Vermeer – 5/8" x 11	6.0"	1.0"
DH-08-P6A-50-XR	6-Hole Ditch Witch – 20 MM	5.0"	1.0"
DH-08-P6A-60-XR	6-Hole Ditch Witch – 20 MM	6.0"	1.0"

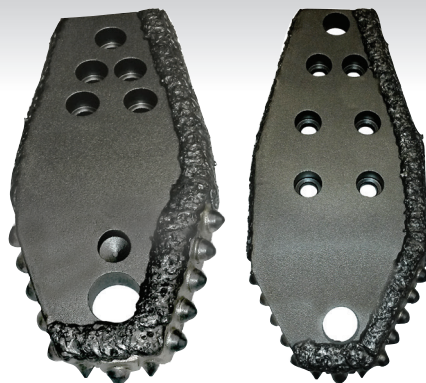
** Includes Tungsten Carbide Embedded Hardfacing



PADDLE BITS

Helicat "S" Bit

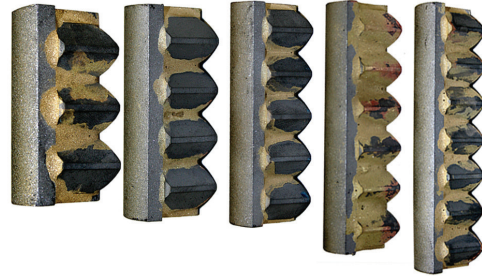
Helicat "S" Bit			
Item No.	Hole Pattern	Width	Thk.
DH-06-P5-40-HCS	5-Hole Ditch Witch – 12 MM	4.0"	3/4"
DH-06-P5-50-HCS	5-Hole Ditch Witch – 12 MM,	5.0"	3/4"
DH-06-P6-40-HCS	6-Hole Ditch Witch – 16 MM	4.0"	3/4"
DH-06-P6-50-HCS	6-Hole Ditch Witch – 16 MM	5.0"	3/4"
DH-06-P6-60-HCS	6-Hole Ditch Witch – 16 MM	6.0"	3/4"
DH-06-P7-40-HCS	7-Hole Vermeer – 1/2" x 13	4.0"	3/4"
DH-06-P7-50-HCS	7-Hole Vermeer – 1/2" x 13	5.0"	3/4"
DH-06-P7-60-HCS	7-Hole Vermeer – 1/2" x 13	6.0"	3/4"



CARBIDE INSERTS, BOLTS AND HEX KEYS

“Roughneck” Carbide Cutting Segments

“Roughneck” Carbide Cutting Segments	
Item No.	Description
340001010	3 - Carbide Insert Segment
340001015	4 - Carbide Insert Segment
340001020	5 - Carbide Insert Segment
340001025	6 - Carbide Insert Segment
340001030	7 - Carbide Insert Segment



“Roughneck” Conical Carbide Cutting Segments	
Item No.	Description
340001010	3 - Carbide Insert Segment
340001015	4 - Carbide Insert Segment
340001020	5 - Carbide Insert Segment
340001025	6 - Carbide Insert Segment
340001030	7 - Carbide Insert Segment



Pilot Bit (Paddle Bit) Bolts

Pilot Bit (Paddle Bit) Bolts	
Item No.	Description
260026005	1/2" x 1" x 13 thd. - Vermeer (6 pack)
260026006	1/2" x 1" x 13 thd. - Vermeer (Nylon Locking Patch) (6 pack)
260026010	5/8" x 1" x 11 thd. - Vermeer (6 pack)
260026015	12MM x 20 X 1.75 - Ditch Witch (5 pack)
260026016	12MM x 20 X 1.75 - Ditch Witch (Nylon Locking Patch) (5 pack)
260026020	16MM x 35MM x 2.00MM - Ditch Witch (6 pack)
260026022	20MM x 40MM x 2.50MM - Ditch Witch (6 pack)



Hex L-Keys For Pilot Bits (Paddle Bits)

Hex L-Keys For Pilot Bits (Paddle Bits)	
Item No.	Description
260026001	3/8" Long Arm Hex Key fits 1/2" Bolts
260026106	1/2" Long Arm Hex Key fits 5/8" Bolts
260026011	10MM Long Arm Hex Key fits 12MM Bolts
260026116	14MM Long Arm Hex Key fits 16MM Bolts



STEEL TAMPERS, PROBES, ANCHOR AND LONG REACH PULLBACK SHACKLES,

Constructed of solid steel, providing the weight and strength required for easier prolonged use.

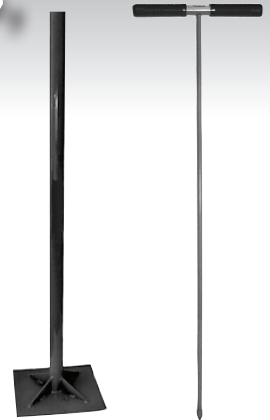
H.D. Steel Tampers	
Item No.	Description
T-88-48	8" X 8" TAMP PLATE with 48" HANDLE
T-88-60	8" X 8" TAMP PLATE with 60" HANDLE
T-1010-48	10" X 10" TAMP PLATE with 48" HANDLE
T-1010-60	10" X 10" TAMP PLATE with 60" HANDLE
T-410-60	4" X 10" TAMP PLATE with 60" HANDLE (TRENCH TAMP)

Made with solid steel replaceable handle and shaft. Optional conical or round interchangeable tips make this a user favorite.

Soil Probes Non-Insulated		
Item No.	Description	Lgth
SP-36	Complete Unit w/ Solid Handle, Shaft & Conical Tip.	36"
SP-42	Complete Unit w/ Solid Handle, Shaft & Conical Tip.	42"
SP-48	Complete Unit w/ Solid Handle, Shaft & Conical Tip.	48"
SP-54	Complete Unit w/ Solid Handle, Shaft & Conical Tip.	54"



Anchor Shackles, Screw Pin	
Item No.	Description
AS-312	BODY SIZE - 5/16", WLL 1,500 LBS.
AS-375	BODY SIZE - 3/8", WLL 2,000 LBS.
AS-438	BODY SIZE - 7/16", WLL 3,000 LBS.
AS-500	BODY SIZE - 1/2", WLL 4,000 LBS.
AS-625	BODY SIZE - 5/8", WLL 6,500 LBS.
AS-750	BODY SIZE - 3/4", WLL 9,500 LBS.
AS-875	BODY SIZE - 7/8", WLL 13,000 LBS.
AS-100	BODY SIZE - 1.0", WLL 17,000 LBS.
AS-1125	BODY SIZE - 1.125", WLL 17,000 LBS.
AS-1250	BODY SIZE - 1.250", WLL 17,000 LBS.
AS-1375	BODY SIZE - 1.375", WLL 17,000 LBS.
AS-1500	BODY SIZE - 1.500", WLL 17,000 LBS.



Soil Probes Insulated		
Item No.	Description	Lgth
ISP-36	Complete w/Solid Steel Handle, Insulator, Alloy Steel Shaft & Alloy Steel Tip.	36"
ISP-42	Complete w/Solid Steel Handle, Insulator, Alloy Steel Shaft & Alloy Steel Tip.	42"
ISP-48	Complete w/Solid Steel Handle, Insulator, Alloy Steel Shaft & Alloy Steel Tip.	48"
ISP-54	Complete w/Solid Steel Handle, Insulator, Alloy Steel Shaft & Alloy Steel Tip.	54"

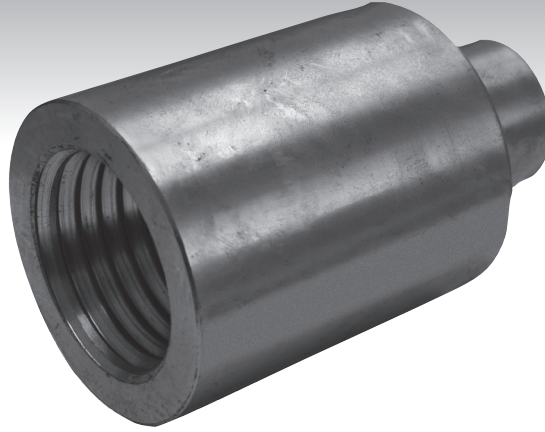


Ideal for All Style Taper Paddle Bits

- Ideal For All Style Paddle Bits
- One-Piece Construction--Bodies are Manufactured From Armor Plate
- Pins are Manufactured From Alloy Steel
- Wider and Deeper I.D. Clearances for Use in HDD--2.5" Wide x 5" Deep
- Available in Screw Pin Only
- Not Rated for Overhead Lifting

Long Reach Pullback Shackle	
Item No.	Description
260034625	1.625" I.D. x 5" Deep
260032625	2.50" I.D. x 5" Deep
260034626	3/4" x 3" Pin
260032626	3/4" x 4" Pin

HDD THREADED WELD-ON SPUDS



(Chrome-Moly Steel -- 153,000 Psi Tensile Strength)	
Item No.	Description
400010300	3.500" API REG (Box)
400010400	2.375" API REG (Pin)
400010500	2.875" API REG (Pin)
400020075	2.06" FS 1 (Box) -- Vermeer
400020100	2.375" FS 1 (Box) -- Vermeer
400020200	2.875" FS 1 (Box) -- Vermeer
400020300	3.500" FS 1 (Box) -- Vermeer
400020400	2.375" FS 1 (Pin) -- Vermeer
400020600	3.500" FS 1 (Pin) -- Vermeer

WIRE ROPE PULLING SLINGS

Standard Duty Wire Rope

Pulling Slings, manufactured in house by Triple D, allow multiple pulls of cable, pipe or duct at one time by using staggered attachment. The staggered arrangement insures that individual connections do not interfere with each other.

These high quality pulling slings are manufactured from extra flexible, 7x19, galvanized aircraft cable for strength and durability. Individual Legs are replaceable. Working Leg Loads and Total Work Loads are based on equal horizontal loads on all cables and a safety factor of 3:1. **Not For Overhead Use!**

Standard Duty Wire Rope Pulling Harnesses with Steel D-Ring Pulling Eye**						
Item No.	Cable Dia.	No. of Legs	Working Load/ Leg	Total Work Load***	D-Ring Size	D-Ring Width
WRH-2002	1/4"	2	2300 lb.	2,200 lb.	3/8"	2-1/4"
WRH-2003	1/4"	3	2300 lb.	2,200 lb.	3/8"	2-1/4"
WRH-2004	1/4"	4	2300 lb.	2,200 lb.	3/8"	2-1/4"
WRH-2012	1/4"	2	2300 lb.	4,000 lb.	1/2"	3.0"
WRH-2013	1/4"	3	2300 lb.	4,000 lb.	1/2"	3.0"
WRH-2014	1/4"	4	2300 lb.	4,000 lb.	1/2"	3.0"
WRH-2015	1/4"	5	2300 lb.	4,000 lb.	1/2"	3.0"
WRH-2016	1/4"	6	2300 lb.	4,000 lb.	1/2"	3.0"
WRH-3002	3/8"	2	4,800 lb.	6,100 lb.	5/8"	3-1/4"
WRH-3003	3/8"	3	4,800 lb.	6,100 lb.	5/8"	3-1/4"
WRH-3004	3/8"	4	4,800 lb.	6,100 lb.	5/8"	3-1/4"
WRH-3005	3/8"	5	4,800 lb.	6,100 lb.	5/8"	3-1/4"
WRH-3006	3/8"	6	4,800 lb.	6,100 lb.	5/8"	3-1/4"
WRH-3012	3/8"	2	4,800 lb.	9,100 lb.	3/4"	3-1/2"
WRH-3013	3/8"	3	4,800 lb.	9,100 lb.	3/4"	3-1/2"
WRH-3014	3/8"	4	4,800 lb.	9,100 lb.	3/4"	3-1/2"
WRH-3015	3/8"	5	4,800 lb.	9,100 lb.	3/4"	3-1/2"
WRH-3016	3/8"	6	4,800 lb.	9,100 lb.	3/4"	3-1/2"
WRH-4002	1/2"	2	7,000 lb.	9,100 lb.	3/4"	3-1/2"
WRH-4003	1/2"	3	7,000 lb.	9,100 lb.	3/4"	3-1/2"
WRH-4004	1/2"	4	7,000 lb.	9,100 lb.	3/4"	3-1/2"
WRH-4012	1/2"	2	7,000 lb.	12,200 lb.	7/8"	4.0"
WRH-4013	1/2"	3	7,000 lb.	12,200 lb.	7/8"	4.0"
WRH-4014	1/2"	4	7,000 lb.	12,200 lb.	7/8"	4.0"
WRH-4022	1/2"	2	7,000 lb.	16,200 lb.	1.0"	4-1/2"
WRH-4023	1/2"	3	7,000 lb.	16,200 lb.	1.0"	4-1/2"
WRH-4024	1/2"	4	7,000 lb.	16,200 lb.	1.0"	4-1/2"



WIRE ROPE PULLING SLINGS

H.D. Wire Rope with Load Rated Forged Shackle*

H.D. Wire Rope Pulling Harnesses with Load Rated Forged Shackle*	
Item No.	Description
WRS-202	1/4" DIA. CABLE, 2 LEGS, TOTAL WORK LD. 4,000 LBS.
WRS-203	1/4" DIA. CABLE, 3 LEGS, TOTAL WORK LD. 6,500 LBS.
WRS-204	1/4" DIA. CABLE, 4 LEGS, TOTAL WORK LD. 6,500 LBS.
WRS-205	1/4" DIA. CABLE, 5 LEGS, TOTAL WORK LD. 6,500 LBS.
WRS-206	1/4" DIA. CABLE, 6 LEGS, TOTAL WORK LD. 6,500 LBS.
WRS-302	3/8" DIA. CABLE, 2 LEGS, TOTAL WORK LD. 9,500 LBS.
WRS-303	3/8" DIA. CABLE, 3 LEGS, TOTAL WORK LD. 9,500 LBS.
WRS-304	3/8" DIA. CABLE, 4 LEGS, TOTAL WORK LD. 13,000 LBS.
WRS-305	3/8" DIA. CABLE, 5 LEGS, TOTAL WORK LD. 13,000 LBS.
WRS-306	3/8" DIA. CABLE, 6 LEGS, TOTAL WORK LD. 13,000 LBS.
WRS-402	1/2" DIA. CABLE, 2 LEGS, TOTAL WORK LD. 13,000 LBS.
WRS-403	1/2" DIA. CABLE, 3 LEGS, TOTAL WORK LD. 13,000 LBS.
WRS-404	1/2" DIA. CABLE, 4 LEGS, TOTAL WORK LD. 17,000 LBS.
WRS-405	1/2" DIA. CABLE, 5 LEGS, TOTAL WORK LD. 17,000 LBS.
WRS-406	1/2" DIA. CABLE, 6 LEGS, TOTAL WORK LD. 17,000 LBS.
DS-500	SLING SHACKLE - 1/2". 4,000 LB. W/L
DS-625	SLING SHACKLE - 5/8". 6,500 LB. W/L
DS-750	SLING SHACKLE - 3/4". 9,500 LB. W/L
DS-875	SLING SHACKLE - 7/8". 11,000 LB. W/L
DS-100	SLING SHACKLE - 1.0". 17,000 LB. W/L



Replacement Legs For Above Slings	
Item No.	Description
RL-214	1/4" X 14" Replacement Leg
RL-224	1/4" x 24" Replacement Leg
RL-234	1/4" x 14" & 34" Replacement Legs
RL-244	1/4" x 24" & 44" Replacement Legs
RL-254	1/4" x 54" Replacement Leg
RL-264	1/4" x 54" & 64" Replacement Legs
RL-317	3/8" X 17" Replacement Leg
RL-327	3/8" x 27" Replacement Leg
RL-337	3/8" x 17" & 37" Replacement Legs
RL-347	3/8" x 27" & 47" Replacement Legs
RL-357	3/8" x 57" Replacement Leg
RL-367	3/8" x 57" & 67" Replacement Legs
RL-420	1/2" X 20" Replacement Leg
RL-430	1/2" x 30" Replacement Leg
RL-440	1/2" x 20" & 40" Replacement Legs
RL-450	1/2" x 30" & 50" Replacement Legs
RL-460	1/2" x 60" Replacement Leg
RL-470	1/2" x 60" & 70" Replacement Legs

TERMS AND CONDITIONS OF SALE

TERMS OF PAYMENT

Unless otherwise stated in writing, terms of payment are **Net 30 days from date of invoice**. Credit and delivery of products shall be subject to the approval of the Seller to whom all bills are payable and who reserves the right to alter the terms and set a limit of credit. If the Buyer fails to fulfill the terms of payment, the Seller at its option may defer shipments until payment is received. In case of multiple shipments, billings will be made as shipments progress. **No cash discount will be allowed on freight items or other net sales.**

TERMS AND CONDITIONS

If terms and conditions contained in Buyer's purchase order are inconsistent in the terms and conditions of Seller, the Seller's terms and conditions shall govern.

LATE PENALTY

All unpaid items will be charged at 1 1/2% per month late penalty beginning the second month following shipment, such charge not to exceed the maximum permitted by law.

FREIGHT POLICY

All merchandise orders are shipped F.O.B. Southampton, NJ (Buyer pays all freight charges).

TITLE

Unless otherwise stated in writing, title and all risks of loss and damages shall pass to Buyer upon delivery of the products to the common carrier, even where freight may be prepaid or allowed to destination. **Buyer** must file claim with carrier when loss or damage occurs.

SHORTAGE CLAIMS

Shortages or discrepancies must be reported **within ten (10) days** after receipt of shipment.

DELIVERY

Triple D will make every reasonable effort to meet shipping dates promised. However, Triple D is not liable for claims of damage due to failure, for any reason, to meet such scheduled dates.

RETURNS

Any item (**except** special order, design or chute blades) may be returned with authorization only, for credit or ex-change within 15 days. **Shipping and handling charges are not refundable.** All such returns must be in unused and resalable condition. **Before returning any items, contact us for authorization.** Returns that are not the result of our error are subject to a 10% handling and restocking charge. Return shipments must be sent Freight Prepaid. DO NOT return merchandise C.O.D. or Collect. If the return is the result of our error, we will repay you for the shipping charges.

PRICES

Prices and shipping and handling rates are subject to change without notice. We reserve the right to correct pricing errors.

WAIVER

Waiver by Seller or Buyer of any breach of these provisions shall not be construed as a waiver of any other breach.

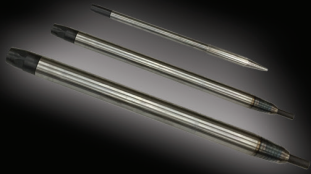
SEVERABILITY

The invalidity or unenforceability of any provision or term hereof shall not affect in any way the remainder of these provisions or terms.

IMPORTANT NOTICE

Triple D Enterprises, Inc. reserves the right to make changes in engineering, design, materials and specifications, add improvements, or discontinue manufacture at any time without notice and without incurring any obligation related to such changes.

NOTE: All manufacturers' names, symbols and descriptions are used for reference purposes only, and none of the products listed are the products of these manufacturers.



COMPLETE UNDERGROUND TECHNOLOGY HDD PRODUCTS

FOR THE PROFESSIONAL UNDERGROUND CONSTRUCTION INDUSTRY

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