



# HDD PRODUCTS

## **Vol 10** *Catalog*

800-654-3484  
[straightlinehdd.com](http://straightlinehdd.com)

**STRAIGHTLINE**  
PROFESSIONAL DRILLING SOLUTIONS



StraightLine specializes in designing, developing, and manufacturing equipment for the Horizontal Directional Drilling Industry. Regardless of the drill's brand, size, or ground conditions, we are committed to making your HDD operation the best it can be.

This commitment starts with experience, 30 years to be exact. StraightLine produced its first directional drill in 1989. Since then, StraightLine has manufactured nearly one thousand drills and accumulated thousands of hours of hands-on drilling experience.

Our product specialists have drilled in every ground condition that creation could throw at us across North America, Australia, Europe, and Asia.

As the HDD industry has continued to grow and mature, so has the StraightLine brand. As a result, we now manufacture the industry's most extensive range of HDD products. These products include a wide range of "in-stock" items and an unlimited combination of custom-built products.

Our stock inventory items primarily target American Augers®, Astec®, Case®, Ditch Witch®, Robbins®, StraightLine® and Vermeer® brand equipment. We can cut 78+ thread types common to the HDD industry, from Ditch Witch® JT520 to 6 5/8" FH, with new connections added as the industry expands.



## READY-TO-WORK

StraightLine HDD brings together a team with decades of collective HDD expertise and specialized knowledge—all working together to ensure you get the Ready-To-Work solutions you need.

## DITCH WITCH® COMPATIBLE

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## 1-PIECE SUB-SAVERS

Subjected to thousands of torque transfer cycles, thrust pull-back and breakout, the sub-saver is the foundation of the down-hole operation. Precision machined using 4145 heat-treated materials, StraightLine HDD® drive chucks and sub-savers are designed to keep performing long after others have failed.

SKU	DESCRIPTION	WEIGHT	PRICE
1703-301-01	JT520 old style	2.4 lbs.	\$309
1703-301-02	JT520 new style	2.5 lbs.	\$309
1703-301-03	JT5	2.5 lbs.	\$359
1703-302-01	JT920 - JT920L	5.6 lbs.	\$349
1703-317-01	JT922 Fine	11.7 lbs.	\$349
1703-317-02	JT922, JT9, JT10 Coarse	2.6 lbs.	\$349
1703-314-01	JT1220M1	11.7 lbs.	\$489
1703-303-01	JT1720 - JT1720M1	7.2 lbs.	\$489
1703-311-01	JT2020M1	16 lbs.	\$489
1703-304-01	JT2720	12.1 lbs.	\$599
1703-305-01	JT4020	19.3 lbs.	\$799



## 2-PIECE DRIVE CHUCKS & SUB-SAVERS

Ditch Witch® operators who deploy StraightLine HDD's unique 2-piece drive chuck/sub-savers see an immediate savings in operating costs. It's simple math: when the threads of the sub-saver requires replacement, instead of replacing the entire part, a 2-piece system requires only the sub-saver to be replaced—at less than one-third the cost of a 1-piece design.

### DITCH WITCH® 2-PIECE DRIVE CHUCKS

PART #	DESCRIPTION	WEIGHT	PRICE
1703-315-01	JT2720M1 - Small Flange	18.05 lbs.	\$709
1703-318-01	JT2720M1/JT2720AT - Large Flange	23.5 lbs.	\$709
1703-316-01	JT3020M1/JT3020AT	20.8 lbs.	\$739
1703-319-01	JT4020M1 - Small Flange	18.75 lbs.	\$739
1703-320-01	JT4020AT/JT4020M1 - Large Flange	19 lbs.	\$849
65312	JT7020/JT8020/JT100 - 2 7/8" IF Pin	27 lbs.	\$799



### DITCH WITCH® 2-PIECE SUB SAVERS

PART #	DESCRIPTION	WEIGHT	PRICE
1703-315-02	JT2720M1	19.7 lbs.	\$309
1703-315-03	JT2720AT	22.3 lbs.	\$389
1703-316-02	JT3020M1	35.1 lbs.	\$279
1703-316-03	JT3020AT	39.9 lbs.	\$389
1703-319-02	JT4020M1	33.8 lbs.	\$399
1703-320-02	JT4020AT	33 lbs.	\$569
1703-320-03	JT4020M1 w/ All-Terrain Drive Chuck	24.85 lbs.	\$695
CALL	JT8020/JT7020/JT60	CALL	CALL





## TRANSITION RODS

Using StraightLine HDD® transition rods give Ditch Witch® drill operators a non-torqued connection between the transition rod and the down-hole tool for safe and convenient tool installation. By design, our transition rods' length and condensed mid-body diameter reduce stress loads exerted on the drill pipe.

PART#	DESCRIPTION	WEIGHT	PRICE
1704-355-01	JT5 Coarse Pin x 1.32" EZ2 Pin	8 lbs.	\$349
1704-310-01	JT520 Pin x 1.32" EZ2, JT520	8 lbs.	\$349
1704-314-01	JT920 Pin x 1.63" EZ2, Fits JT920, JT920L, JT921, JT922	12 lbs.	\$439
1704-349-01	JT922/JT9 Pin x 1.63" EZ2, JT922, JT9, JT10	3.35 lbs.	\$439
1704-319-01	JT1220M1 Pin x 1.87" EZ3, JT1220M1	22.8 lbs.	\$549
1704-312-01	JT1720 Pin x 2.00" EZ2, JT1720	29 lbs.	\$599
1704-318-01	JT2020 Pin x 2.00" EZ2, JT2020M1, JT20	31 lbs.	\$539
1704-313-01	JT2720 Pin x 2.00" EZ2, JT2720	39 lbs.	\$549
1704-332-01	JT2720M1 Pin x 2.00" EZ2, JT2720M1	35.25 lbs.	\$649
1704-325-01	JT2720M1 Pin x 2.25" EZ2, JT2720M1, JT25, JT28	35.25 lbs.	\$629
1704-323-01	JT3020M1 Pin x 2.25" EZ3, JT3020M1, JT25, JT28	37.45 lbs.	\$629
1704-344-01	JT3020AT Pin x 2.00" EZ2 Pin, JT2720AT, JT3020AT	41 lbs.	\$689
1704-324-01	JT3020AT Pin x 2.25" EZ3, JT2720AT, JT3020AT	41 lbs.	\$699
1704-321-01	JT4020 Pin x 2.63" EZ2, JT4020	55.45 lbs.	\$799
1704-322-01	JT4020M1 Pin x 2.63" EZ2, JT4020M1	60.45 lbs.	\$799
1704-350-01	JT40 Pin x 2.63" EZ2, JT40	10.11 lbs.	\$899
1704-351-01	JT60 Pin x 2.85" EZ2, JT60	14 lbs.	\$899

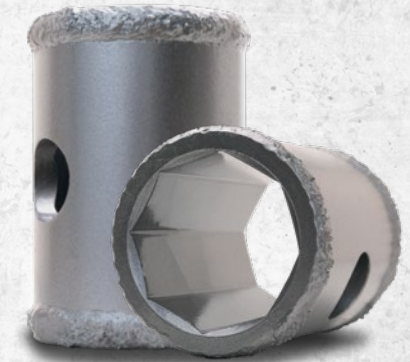
### DITCH WITCH® DIRECT CONNECT STARTER RODS

PART#	DESCRIPTION	WEIGHT	PRICE
1704-329-01	JT2720M1 Pin x 4020M1 Pin, Fits JT2720M1, JT3020M1, JT25, JT28	69.5 lbs.	\$529
1704-328-01	JT3020AT Pin x 4020M1 Pin, Fits JT2720AT, JT3020AT	44.1 lbs.	\$629
1704-327-01	JT4020M1 Pin x JT4020M1 Pin, Fits JT4020M1	62.3 lbs.	\$689
1704-335-01	JT7020 Pin x JT7020 Pin, 48" Shoulder to Shoulder, Fits JT7020, JT8020 JT100	71 lbs.	\$1,049

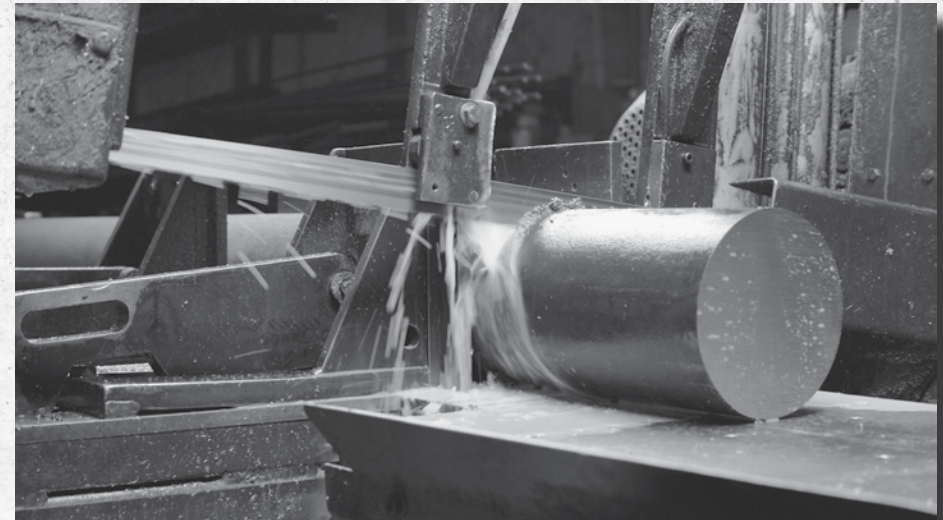


## OCTAGON COLLARS

When the collar is installed over the flats on transition rods, StraightLine HDD® hard-faced collars prevent thread over-torquing, while maximizing durability and wear resistance.



PART #	DESCRIPTION	WEIGHT	PRICE
1704-315-01	JT520, 1.325" EZ2	1.2 lbs.	\$129.99
1704-337-01	JT920 - JT10, 1.625" EZ2 (Hard-Faced)	2.6 lbs.	\$159.99
1704-337-02	JT920 - JT10, 1.625" EZ2 (Hard-Faced w/ Teeth)	2.6 lbs.	\$159.00
1704-338-01	JT1220M1, 1.875" EZ3 (Hard-Faced)	4.05 lbs.	\$159.99
1704-339-01	JT1720/JT2020M1/JT2720, 2.00" EZ2 (Hard-Faced)	4.95 lbs.	\$159.99
1704-340-01	JT2720M1, 2.25" EZ2 (Hard-Faced)	8.35 lbs.	\$249.99
1704-341-01	JT25 - JT3020M1 2.25" EZ3 (Hard-Faced)	9.8 lbs.	\$249.99
1704-342-01	JT4020/JT4020M1, 2.625" EZ2 (Hard-Faced)	9.9 lbs.	\$249.99





## TRANSMITTER HOUSINGS

Consisting of a housing body, jet and optional tail piece, our Ditch Witch® compatible housings offer enhanced service life over OEM and other aftermarket housings. Available in 2-, 2 3/4-, 3-, 3 1/4- & 3 7/8-inch OD to match your drill and drilling conditions, all housings are designed to accept Subsite® Beacons. StraightLine HDD Ditch Witch® compatible transmitter housings are available for all drills from the JT520 to JT100M1.



PART #	DESCRIPTION	WEIGHT	PRICE
1201-101-06	2", 3-Bolt Pattern (Complete assembly, including nose piece & canoe), Box x DW, SBRP/DS	13.26 lbs.	\$939
1201-101-14	2 3/4", 86B, 5-Bolt Pattern, 2.00" IF Box	38 lbs.	\$999
1201-101-15	3", 86B, 5-Bolt Pattern, 2.00" IF Box	41 lbs.	\$1,099
1201-101-16	3 1/4", 86B, 6-Bolt Pattern, 2.375" REG Box	57 lbs.	\$1,189
1201-101-13	3 7/8", 86B, 6-Bolt Pattern, 2.375" REG Box	88 lbs.	\$1,859

## HOUSING JETS

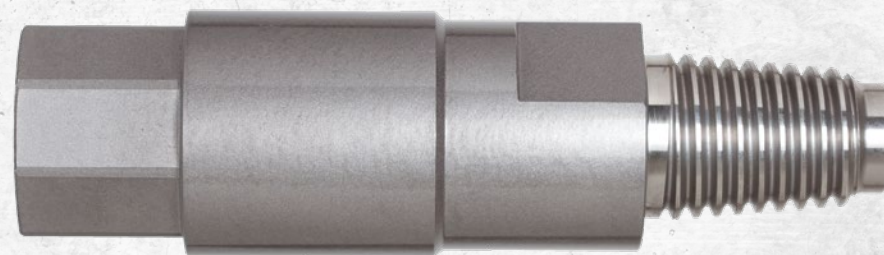
PART #	DESCRIPTION	WEIGHT	PRICE
1201-202-10	1/8" hole (fits 2 3/4" - 3 1/4" Housings)	1.1 lbs.	\$39
1201-202-11	3/16" hole (fits 2 3/4" - 3 1/4" Housings)	1.1 lbs.	\$39
1201-202-12	3/8" hole (fits 3 7/8" - 4 3/4" Housing)	1.1 lbs.	\$69



## HOUSING SAVERS

All of our high quality housing savers are precision milled from tough 4145 heat-treated materials for maximum strength and service life. Available in a wide assortment of threads and connection types, our housing savers represent the latest generation of tools designed to lower operational costs, while boosting efficiencies.

PART #	DESCRIPTION	WEIGHT	PRICE
AD520P520P	520 Pin x 520 Pin	2.8 lbs.	\$199
AD520P132EZ2B	520 Pin x 520 Pin EZ Connect II Box	1.35 lbs.	\$209
AD200IFP920P	2.00 IF Pin x JT920 Pin	7 lbs.	\$209
AD200IFP922CP	2.00 IF Pin x JT9 Pin	6 lbs.	\$295
AD200IFP1220P	2.00 IF Pin x 1220 Pin	7 lbs.	\$239
AD200IFP1720P	2.00 IF Pin x 1720 Pin	8 lbs.	\$209
AD200IFP2720P	2.00 IF Pin x 2720 Pin	7.29 lbs.	\$209
AD200IFP162EZ2B	2.00 IF Pin x 1.62 EZ II Box	8.2 lbs.	\$249
AD200IFP187EZ3B	2.00 IF Pin x 1.87 EZ III Box	5.5 lbs.	\$229
AD200IFP200EZ2B	2.00 IF Pin x 2720M1 EZ Connect II Box	7 lbs.	\$249
AD237REGP3020M1P	2.375 REG Pin x 3020 M1 Pin	11 lbs.	\$309
AD237REGP4020P	2.375 REG Pin x 4020 Pin	12.50 lbs.	\$309
AD237REGP4020M1P	2.375 REG Pin x 4020 M1 Pin	13.8 lbs.	\$309
AD237REGP4020M1B	2.375 REG Pin x 4020 M1 Box	13.8 lbs.	\$309
AD237REGP200EZ2B	2.375 REG Pin x 2720 EZ Connect II Box	9 lbs.	\$219
AD237REGP225EZ2B	2.375 REG Pin x 2.25" EZ Connect II	9.25 lbs.	\$309
AD237REGP225EZ3B	2.375 REG Pin x 2.25" EZ Connect III	13.8 lbs.	\$309
AD237REGP263EZ2B	2.375 REG Pin x 2.5" EZ Connect II Box	14.65 lbs.	\$309



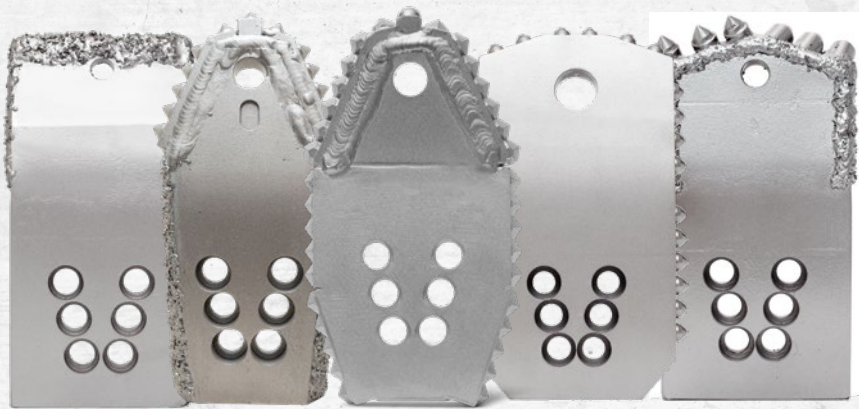


# BITS

Every StraightLine HDD® bit is designed to deliver outstanding service life and excellent penetration over multiple bores. Available in many styles and sizes, our bits bolt directly on all Ditch Witch® compatible transmitter housings.

## All of our Ditch Witch® Compatible bits feature:

- Carbide hard-facing protects the entire bit perimeter.
- 4140 heat-treated steel plate insures long service life.
- Low-cost/long-life delivers an extremely favorable cost per-foot operation.



## HARD-FACED BITS

Hard-Faced bits feature generous carbide hard-facing that's extremely resistant to abrasive conditions. **Hard-Faced bits perform well in: alluvial, clay, sands, small aggregates and gravel.**

### HARD-FACED, 5-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-134-01	Hard-Faced, 3"	5.8 lbs.	\$129
1301-134-02	Hard-Faced, 3 1/2"	6.45 lbs.	\$139
1301-134-03	Hard-Faced, 4"	7.32 lbs.	\$159
1301-134-04	Hard-Faced, 4 1/2"	8.61 lbs.	\$179

### HARD-FACED, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-146-01	Hard-Faced, 5"	10.42 lbs.	\$229
1301-146-02	Hard-Faced, 5 1/2"	14.39 lbs.	\$239
1301-146-03	Hard-Faced, 6"	15.21 lbs.	\$249



## BARRACUDA BITS

The Sabre was developed as a result of customer requests for a bit with aggressive carbide cutting edges located to insure maximum cutting within the body of the bit. The result is a bit that engages hard pan soil, while maximizing steering in cobble. **Sabre bits perform well in: hardpan or cobble.**

### BARRACUDA, 5-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-153-01	Barracuda, 4 1/2"	6 lbs.	\$529

### BARRACUDA, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-154-01	Barracuda, 5 1/2"	10.10 lbs.	\$609



## STEEP TAPER SABRE BITS

StraightLine's Steep Tapered bits feature steep tapered carbide cutters which enables the bit to gain penetration into hard compact soils/cobble in order to begin a quick steering maneuver; the entire perimeter of the bit is protected with carbide impregnated hardsurfacing for long service life.

### STEEP TAPER SABRE, 5-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-441-03	Steep Taper, Sabre, 4"	9 lbs.	\$379

### STEEP TAPER SABRE, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-441-01	Steep Taper, Sabre, 4"	7.75 lbs.	\$359
1301-441-02	Steep Taper, Sabre, 5"	9.8 lbs.	\$409



## RAPTOR BITS

The Raptor is an aggressive design featuring carbide buttons lining the entire perimeter. The bit's angled face eliminates the tendency to "snag" in rock outcroppings and improves cutting action in tough conditions. **Raptor bits perform well in: tough aggregate conditions.**

### RAPTOR, 5-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-138-02	Raptor, 3 1/2"	6.9 lbs.	\$339
1301-138-03	Raptor, 4"	7.9 lbs.	\$349
1301-138-04	Raptor, 4 1/2"	8.95 lbs.	\$359

### RAPTOR, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-151-01	Raptor, 5"	15.35 lbs.	\$399
1301-151-03	Raptor, 6"	18.45 lbs.	\$429



## STEEP TAPER DOME BITS

StraightLine's Steep Tapered bits feature dome carbides which enables the bit to gain penetration into hard compact soils/cobble in order to begin a quick steering maneuver; the entire perimeter of the bit is protected with carbide impregnated hardsurfacing for long service life.

### STEEP TAPER DOME, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-152-02	Steep Taper, Dome, 5"	10 lbs.	\$399



## THRASHER BITS

An aggressive design, the Thrasher features a series of aggressive conical tungsten carbide cutters. The result is an aggressive, long-lasting bit that delivers good results in tough conditions. **Thrasher bits perform well in: hardpan, shale, caliche and sandstone formations.**

### THRASHER, 5-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-133-00	Thrasher, 3"	6.47 lbs.	\$219
1301-133-01	Thrasher, 3 1/2"	7.62 lbs.	\$229
1301-133-02	Thrasher, 4"	8.26 lbs.	\$239

### THRASHER, 6-BOLT

PART #	DESCRIPTION	WEIGHT	PRICE
1301-145-01	Thrasher, 5"	12.55 lbs.	\$259
1301-145-03	Thrasher, 6"	16.01 lbs.	\$299



# Ditch Witch® COMPATIBLE PIPE RACKS

Looking to add a spare pipe rack or replace altogether? StraightLine HDD® manufactures a complete line of durable Ditch Witch® pipe racks.



## DITCH WITCH® COMPATIBLE PIPE RACKS

PART #	DESCRIPTION	WEIGHT	PRICE
1901-101-07	Holds 55 pieces (fits 25)	9.65 lbs.	\$3,995
1901-101-03	Holds 52 pieces (fits 2720)	535 lbs.	\$2,995
1901-101-17	Holds 50 pieces (fits 3020M1)	980 lbs.	\$4,895
1901-101-10	Holds 50 pieces (fits JT30AT)	1,077 lbs.	\$4,895
1901-101-08	Holds 40 pieces (fits JT40)	1,448 lbs.	\$5,495
1901-101-09	Holds 24 pieces (fits AT40)	1,120 lbs.	\$5,495
1901-101-04	Holds 16 pieces (fits JT4020)	675 lbs.	\$3,995
1901-102-18	Holds 32 pieces (fits JT4020M1)	943 lbs.	\$5,495
1901-101-05	Holds 9 pieces (fits 4020AT/JT60AT)	918 lbs.	\$5,495
1901-101-06	Holds 12 pieces (fits JT7020/JT8020/JT100)	850 lbs.	\$5,495
1901-101-12	Holds 9 pieces (fits JT120/AT120)		\$7,999

# Ditch Witch® COMPATIBLE DRILL PIPE

## DITCH WITCH® COMPATIBLE DRILL PIPE

PART #	DESCRIPTION	WEIGHT	PRICE
1103-021	Ditch Witch®-Compatible Drill Pipe, 1.125" x 5 ft., JT520	16 lbs.	CALL
1103-023	Ditch Witch®-Compatible Drill Pipe, 1.125" x 5', JT5 (Coarse)	16 lbs.	CALL
1103-024	Ditch Witch®-Compatible Drill Pipe, 1.58" x 6', JT9 (Coarse)	50 lbs.	CALL
1103-025	Ditch Witch®-Compatible Drill Pipe, 1.82" x 10', JT10	59 lbs.	CALL
1103-026	Ditch Witch®-Compatible Drill Pipe, 2.125" x 10', JT1720	60 lbs.	CALL
1103-027	Ditch Witch®-Compatible Drill Pipe, 2.125" x 10', JT2020M1	69 lbs.	CALL
1103-028	Ditch Witch®-Compatible Drill Pipe, 2.375" x 10', JT25	77 lbs.	CALL
1103-029	Ditch Witch®-Compatible Drill Pipe, 2.375" x 10', JT2720	77 lbs.	CALL
1103-030	Ditch Witch®-Compatible Drill Pipe, 2.375" x 10', JT2720M1/JT3020M1	90 lbs.	CALL
1103-031	Ditch Witch®-Compatible Drill Pipe, 2.875" x 15', JT4020	165 lbs.	CALL
1103-032	Ditch Witch®-Compatible Drill Pipe, 2.875" x 15', JT4020M1	176 lbs.	CALL
1103-034	Ditch Witch®-Compatible Drill Pipe, 2.81" x 15', JT40	150 lbs.	CALL
1103-040	Ditch Witch®-Compatible Drill Pipe, 3.06" x 15', JT60	184 lbs.	CALL
1103-033	Ditch Witch®-Compatible Drill Pipe, 3.50" x 15', JT7020/JT8020/JT100	225 lbs.	CALL





# CONVERSION SOLUTIONS



Convert your Ditch Witch® rig to run 1-piece forged drill pipe. StraightLine HDD® conversion solutions will extend the life of your drill pipe and lower your operating costs.

## DITCH WITCH® TO VERMEER® 2-PIECE SUB SAVERS

PART #	DESCRIPTION	WEIGHT	PRICE
1703-322-06	Sub Saver, Crossover (JT2720M1/JT2720AT w/2.375" FS1 Box) <sup>†</sup>	23.8 lbs.	\$459.00
1703-315-04	Sub Saver, Crossover (JT2720M1/JT2720AT x 2.375" FS1 Pin) <sup>†</sup>	24.2 lbs.	\$365.00
1703-322-04	Sub Saver (JT3020M1/JT3020AT w/2.375" FS1 Box) <sup>†</sup>	35 lbs.	\$365.00
1703-325-02	Sub Saver (JT3020M1/JT3020AT w/2.375" FS1 Pin) <sup>†</sup>	35 lbs.	\$365.00
1703-312-02	Sub Saver (JT4020M1/JT4020AT w/2.875" FS1 Pin) <sup>†</sup>	8 lbs.	\$699.00
1703-320-04	Sub Saver (JT4020M1/JT4020AT w/3.50" FS1 Pin) <sup>†</sup>	35 lbs.	\$695.00



## DITCH WITCH® TO VERMEER® 1-PIECE SUB SAVERS

PART #	DESCRIPTION	WEIGHT	PRICE
1703-322-01	Sub Saver (JT922 w/1.66" FS1 Box)	9.2 lbs.	\$479.00
1703-322-05	Sub Saver (JT1220 w/1.90" FS1 Box)	11.8 lbs.	\$569.00
1703-322-02	Sub Saver (JT1220 w/2.06" FS1 Box)	10.8 lbs.	\$569.00
1703-322-07	Sub Saver (JT1220 w/2.06" FS1 Pin)	10.8 lbs.	\$569.00
1703-303-02	Sub Saver (JT1720 w/2.06" FS1 Box)	8 lbs.	\$569.00
1703-322-03	Sub Saver (JT2020 w/2.375" FS1 Box)	15.8 lbs.	\$569.00

<sup>†</sup>Requires the 2-piece Ditch Witch® compatible Drive Chuck.

## DITCH WITCH® TO VERMEER® DRIVE CHUCKS

PART #	DESCRIPTION	WEIGHT	PRICE
1703-326-01	Drive Chuck, Crossover (JT920 w/1.66" FS1 Pin) <sup>*</sup>	12.5 lbs.	\$699.00
1703-323-01	Drive Chuck, Crossover (JT922 w/1.66" FS1 Pin) <sup>*</sup>	13 lbs.	\$479.00
1703-311-02	Drive Chuck, Crossover (JT2020M1 w/2.375" FS1 Pin) <sup>*</sup>	17 lbs.	\$569.00

<sup>\*</sup>Requires the Vermeer® compatible Sub Saver (1703-601-02).

<sup>\*\*</sup>Requires the Vermeer® compatible Sub Saver (1703-604-03).

Add flexibility to your rig with Ditch Witch® compatible starter rods. StraightLine HDD® starter rods provide a safe and convenient non-torqued crossover connection from Ditch Witch® drill pipe to Vermeer® down-hole tools and DCI transmitters.



## DITCH WITCH® PIN TO VERMEER LP

PART #	DESCRIPTION	WEIGHT	PRICE
1704-305-01	Starter Rod, JT520 Pin x 1 5/8 LP Box	11.75 lbs.	\$309.00
1704-301-01	JT920 Pin x Vermeer 1 5/8 Quick Connect		\$309.00
1704-352-01	Crossover Rod, JT9 Coarse Pin x 1 5/8" LP QC Box		\$495.00
1704-345-01	JT1220M1 Pin x Vermeer 2 1/8 Quick Connect Box		\$419.00
1704-302-01	JT1720 Pin x Vermeer 2 1/8 Quick Connect	13.15 lbs.	\$419.00
1704-309-01	JT2020M1 Pin x Vermeer 2 1/8 Quick Connect	19.85 lbs.	\$419.00
1704-303-01	JT2720 Pin x Vermeer 2 1/8 Quick Connect	8.75 lbs.	\$439.00
1704-307-01	Starter Rod, JT2720M1 x 2 1/8 LP Box	25 lbs.	\$419.00
1704-326-01	JT2720AT Pin x Vermeer 2 1/8 Quick Connect		\$599.00
1704-308-01	Starter Rod, 4020 Pin x 2 1/8 LP Box		\$479.00
1704-803-01	Crossover, Starter Rod, DW4020M1 Pin X 2.125 LP Box		\$629.00

StraightLine HDD® crossover rods give Ditch Witch® drill operators a non-torqued, Vermeer® to Ditch Witch® crossover connection.

## DITCH WITCH® PIN TO QUICKFIRE®

PART #	DESCRIPTION	WEIGHT	PRICE
1704-330-12	Ditch Witch Crossover Rod, 2720M1 Pin x QuickFire® 460 Box		\$689.00
1704-330-14	Crossover Rod, 2020M1 Pin x QuickFire® 400 Box		\$689.00
1704-330-17	Crossover Rod, 2720M1 Pin x QuickFire® 400 Box	34.95 lbs.	\$689.00
1704-358-01	Ditch Witch Transition Rod, JT40 AT Pin x 460 QuickFire® Box		\$1,499.00



# CONVERSION SOLUTIONS



## VERMEER® PIN TO DITCH WITCH® EZ

PART #	DESCRIPTION	WEIGHT	PRICE
1704-330-03	Ditch Witch Crossover Rod, 1.66" FS1 Pin x 1.63" EZ2 Connect	13.20 lbs.	\$549.00
1704-330-02	Ditch Witch Crossover Rod, 1.90" FS1 Pin x 1.88" EZ3 Pin		\$579.00
1704-330-06	Ditch Witch Crossover Rod, 1.90" FS1 Pin x 2.00" EZ2 Pin		\$579.00
1704-346-01	Ditch Witch Crossover Rod, 2.06" FS1 Pin x 1.87" EZ3 Pin	22.25 lbs.	\$579.00
1704-330-07	Ditch Witch Crossover Rod, 2.06" FS1 Pin x 2.00" EZ2 Pin		\$579.00
1704-330-10	Ditch Witch Crossover Rod, 2 3/8" FS1 Box x 2.00" EZ2 Pin		\$629.00
1704-330-01	Ditch Witch Crossover Rod, 2 3/8" FS1 Pin x 2.00" EZ2 Pin	30.25 lbs.	\$629.00
1704-330-04	Ditch Witch Crossover Rod, 2 3/8" FS1 Pin x 2.25" EZ2 Pin	32.70 lbs.	\$629.00
1704-330-05	Ditch Witch Crossover Rod, 2 3/8" FS1 Pin x 2.25" EZ3 Pin	33.70 lbs.	\$689.00
1704-801-01	Transition Rod, 2 7/8" FS1 Pin x 2.63 EZ Connect II Pin		\$689.00



## VERMEER® PIN TO VERMEER® LP

PART #	DESCRIPTION	WEIGHT	PRICE
1704-804-02	Transition Rod, Crossover, JT922, 1.66 FS1 PIN x 1.625 LP Box		\$579.00
1704-348-01	Ditch Witch Crossover Rod, 1.90" FS1 Pin x 2.125" LP Box		\$579.00
1704-347-01	Ditch Witch Crossover Rod, 2.06" FS1 Pin x 2.125" LP Box		\$579.00
1704-616-01	Crossover Rod, 2.375" FS1 PIN x 2 1/8" LP QC Box	29.10 lbs.	\$629.00



## VERMEER® PIN TO QUICKFIRE®

PART #	DESCRIPTION	WEIGHT	PRICE
1704-330-19	Crossover Rod, 1.66" FS1 Pin x QuickFire® 300 Box		\$469.00
1704-330-11	Ditch Witch Crossover Rod, 2 3/8" FS1 Pin x QuickFire® 400 Box		\$595.00
1704-330-16	Ditch Witch Crossover Rod, 2 3/8" FS1 Pin x QuickFire® 460 Box		\$595.00



## VERMEER® BOX TO DITCH WITCH® EZ

PART #	DESCRIPTION	WEIGHT	PRICE
1704-805-01	Transition Rod, Crossover, JT922, 1.66 FS1 BOX x 1.625 EZ2 P	17.15 lbs.	\$529.00
1704-334-01	Crossover Rod, 1.90" FS1 Box x 1.87" EZ Connect 3 Pin, 27" L	16.75 lbs.	\$579.00
1704-330-08	Ditch Witch Crossover Rod, 2.06" FS1 Box x 2.00" EZ2 Pin	22.15 lbs.	\$579.00
1704-330-13	Ditch Witch Crossover Rod, 2 3/8" FS1 Box x 2.25" EZ3 Pin		\$689.00
1704-330-18	Ditch Witch Crossover Rod, 2 3/8" FS650 Box x 2.00" EZ2 Pin		\$689.00
1704-330-20	Crossover Rod, 2 5/8" FS700 Box x 2.25" EZ2 Pin		\$849.00
1704-330-15	Ditch Witch Crossover Rod, 2 5/8" FS700 Box x 2.25" EZ3 Pin		\$849.00
1704-330-09	Ditch Witch Crossover Rod, 2 5/8" FS700 Box x 2.63" EZ2 Pin		\$899.00



# DRILL PIPE

StraightLine HDD drill pipe is produced with the same quality and Ready-To-Work standards that go into every tool and rig we offer. This pipe is engineered to be the longest-lasting, toughest pipe on the market today. Our manufacturing technologies and inventory depth allow this product to be offered at industry leading prices.

# DRILL PIPE – HUNTING®



SKU	STRAIGHTLINE VERMEER®-COMPATIBLE DRILL PIPE	WEIGHT	PRICE
1101-042	Vermeer®-Compatible Drill Pipe, 1.66" FS1 x 6 ft., 7x11/9x13	26 lbs.	CALL
1101-043	Vermeer®-Compatible Drill Pipe, 1.90" FS1 x 10 ft., 16x20/18x22	55 lbs.	CALL
1101-044	Vermeer®-Compatible Drill Pipe, 2.06" FS1 x 10 ft., 20x22/24x26	62 lbs.	CALL
1101-017	Vermeer Compatible Drill Pipe, 2.06 FS2 x 10', 24x33	63 lbs.	CALL
1101-028	Vermeer®-Compatible Drill Pipe, 2.375" FS1 x 10 ft., 24x40	73 lbs.	CALL
1101-012	Vermeer Compatible Drill Pipe, 2.375" FS2 x 10', 33x44/36x50	83 lbs.	CALL
1101-014	Vermeer Compatible Drill Pipe, 2.375" FS2 x 15' Flush, 33x44/36X50	160 lbs.	CALL
1101-010	Vermeer Compatible Drill Pipe, 2.375" FS2 x 15', 33x44/36X50	115 lbs.	CALL
1101-045	Vermeer®-Compatible Drill Pipe, 2.375" FS650 x 10 ft., 36x50	83 lbs.	CALL
1101-046	Vermeer®-Compatible Drill Pipe, 2.375" FS650 x 15 ft., 36x50	117 lbs.	CALL
1101-047	Vermeer®-Compatible Drill Pipe, 2.625" FS700 x 10 ft., 36x50	121 lbs.	CALL
1101-048	Vermeer®-Compatible Drill Pipe, 2.625" FS700 x 15 ft., 36x50	171 lbs.	CALL
1101-049	Vermeer®-Compatible Drill Pipe, 2.875" FS1 x 15 ft., 50x100/60x90	342 lbs.	CALL
1101-050	Vermeer®-Compatible Drill Pipe, 3.50" FS1 x 15 ft., 50x100/80x100	210 lbs.	CALL
1101-013	Vermeer Compatible Drill Pipe, 2.875" FS2 x 15', 55x100	198 lbs.	CALL
1101-016	Vermeer Compatible Drill Pipe, 3.50" FS2 x 20', 80x120/100x120	327 lbs.	CALL
1101-051	Vermeer®-Compatible Drill Pipe, 3.50" FS1000 x 20 ft., 100x120	342 lbs.	CALL

SKU	HUNTING® DRILL PIPE	WEIGHT	PRICE
1101-020	Forged, 1.315" HIWS1 x 6', D6x6 Compatible	18 lbs.	CALL
1101-002	1.66" HIWS1 x 10', D10x14/10x15 Compatible	38 lbs.	CALL
1101-006	Forged, 2.375" HIWS1 x 15', D40x40 Compatible	112 lbs.	CALL
1101-008	Forged, 3.50" HIWS1 x 15', D50x100/80x100 Compatible	250 lbs.	CALL
1101-007	Forged, 2.875" HIWS1 x 15', D50x100/D60x90 Compatible	180 lbs.	CALL
1101-027	Forged, 2.375" HIWS1-650 x 10', D33x44/D36x50 Compatible	81 lbs.	CALL
1101-023	Forged, 2.625" HIWS1-700 x 15', D33x44/D36x50 Compatible	115 lbs.	CALL
1101-017	Forged, 2.063" HIWS2 x 10', D24x33 Compatible	63 lbs.	CALL
1101-012	Forged, 2.375" HIWS2 x 10', D33x44 Compatible	81 lbs.	CALL
1101-010	Forged, 2.375" HIWS2 x 15', D33x44 Compatible	115 lbs.	CALL
1101-014	Forged, 2.625" HIWS2 x 15', D36x50 Compatible	160 lbs.	CALL
1101-013	Forged, 2.875" HIWS2 x 15', D55x100 Compatible	198 lbs.	CALL
1101-016	Forged, 3.50" HIWS2 x 20', D100x120 Compatible	327 lbs.	CALL
1101-029	Forged, 2.375" HIWS1-650 x 15', D33x44/D36x50 Compatible	115 lbs.	CALL
1101-024	Forged, 3.5" HIWS1-1000 x 20', D100x120/D100x140 Compatible	351 lbs.	CALL
1105-019	Forged, 2.625" HIWS1 x 10', D33x44/D36x50 Compatible	117 lbs.	CALL





# DRIVE CHUCKS

StraightLine HDD® drive chucks are precision machined using 4145 heat-treated materials for Vermeer® drills. Available in Firestick® 1, 2 and 650/700/1000 connections for Vermeer® drills from D6x6 through D100x140.

SKU	VERMEER® COMPATIBLE DRIVE CHUCKS	WEIGHT	PRICE
1703-601-01	7x11 - 1.66" FS1	5.58 lbs.	\$395
1703-602-01	10x15 - 1.66" FS1	6.55 lbs.	\$395
1703-614-01	10x14 - 1.66" FS1	7.25 lbs.	\$395
1703-603-01	16x20 - 1.90" FS	7.9 lbs.	\$395
1703-609-01	18x22 - 1.90" FS1	9.9 lbs.	\$395
1703-610-01	20x22 - 2.06" FS1	7.21 lbs.	\$395
1703-618-01	24x33 - 2.06" FS2	12 lbs.	CALL
1703-608-01	24x26 - 2.06" FS1	16.3 lbs.	\$395
1703-604-01	24x40 - 40x40 - 2.375" FS1	15.33 lbs.	\$495
1703-615-01	33x44 - 36x50 - FS650	14.5 lbs.	\$549
1703-619-01	33x44 - 36x50 - 2.375" FS2	14.5 lbs.	\$595
1703-616-01	33x44 - 36x50 - 2.625" FS700	15 lbs.	\$549
1703-606-01	50x100 - 2.875" FS1	34.73 lbs.	\$1,199
1703-607-01	50x100 - 80x100 - 3.5" FS1	35.4 lbs.	\$1,199
1703-621-01	100x120 - 3.5" FS2	45 lbs.	\$1,599
1703-617-01	100x120 - 100x140 - 3.5" FS2	50 lbs.	\$1,499



Precision machined from 4145 heat-treated material, our sub-savers are incredibly durable. Available in Firestick® 1, 2 and 650/700/1000 connections for Vermeer® drills from D6x6 through D100x140.

SKU	VERMEER® COMPATIBLE SUB SAVERS	WEIGHT	PRICE
1703-613-02	6x6 - 1.66" FS200, 8" STS Length	6 lbs.	\$139
1703-601-02	7x11 - 7x11a - 10x15 - 1.66" FS200, 6" STS Length	3.88 lbs.	\$139
1703-601-03	7x11 Series II - 9x13 Series II/S3 - 1.66" FS200, 8" STS Length	5.77 lbs.	\$139
1703-614-02	10x14 - 1.66" FS200, 4" STS Length	3.0 lbs.	\$139
1703-603-02	16x20/16x20a - 1.90" FS250, 5.5" STS Length	4.69 lbs.	\$149
1703-603-03	16x20 Series II - D20x22 Series 3 - 1.90" FS250, 10.151" STS Length	10.10 lbs.	\$199
1703-609-02	18x22 - 20x22 - 1.90" FS250, 3.95" STS Length	3.34 lbs.	\$199
1703-610-02	20x22 - 24x26 - 2.06" FS400, 10.14" STS Length	6.38 lbs.	\$159
1703-610-03	20x22 Series II/S3 - 2.06" FS400, 10.17" STS Length	12.23 lbs.	\$199
1703-622-02	23x30 S3 - 2.375" FS600, 10.188" STS Length	14.22 lbs.	\$199
1703-608-02	24x26 - 2.06" FS400, 8" STS Length	7.71 lbs.	\$199
1703-604-02	24x40 - 2.375" FS600, 5.5" STS Length	7.3 lbs.	\$179
1703-604-03	24x40A - 2.375" FS600, 7" STS Length	9.39 lbs.	\$179
1703-623-02	24x40 Series 3 - 2.375" FS600, 10" STS Length	13.83 lbs.	\$189
1703-611-02	24x40 Series II - 24x40 Series 3 - 2.375" FS600, 9.5" STS Length	16 lbs.	\$189
1703-615-03	33x44 - 36x50 Series II, 2.375" FS650, 8" STS Length	14 lbs.	\$239
1703-616-03	33x44 - 36x50, 2.625" FS700, 8" STS Length	9.5 lbs.	\$259
1703-619-02	33x44 - 36x50 Series II, 2.625" FS2, 5.375" STS Length	13 lbs.	\$289
1703-625-02	40x55 Series 3 - 2.625" FS700, 9" STS Length	16.62 lbs.	\$259
1703-606-02	50x100 - 60x90 - 2.875" FS900, 8" STS Length	16.67 lbs.	\$349
1703-607-02	50x100 - D80x100 - 3.5" FS800, 8" STS length	19.43 lbs.	\$349
1703-626-02	60x90 - 60x90 Series 3 - 2.875" FS900, 8.7" STS Length	18 lbs.	\$349
1703-626-03	60x90 - 3.5" FS800, 8.7" STS Length	21.73 lbs.	\$369
1703-607-03	80x100 Series II - 3.5" FS800, 8.7" STS Length	19.43 lbs.	\$369
1703-621-02	100x120 - 3.5" FS2, 7" STS Length	19.10 lbs.	\$469
1703-617-02	100x120 - 100x140 - 3.5" FS1000, 7" STS Length	16 lbs.	\$399



**Tip:** The sub-saver is subjected to tremendous stress. Protect your bore from costly down-time by inspecting and replacing your sub-saver at the first sign of wear.



## STARTER ROD

With starter rods being subjected to increasing stress, you need the strength and durability of StraightLine HDD® starter rods. Precision machined from tough 4145 heat-treated alloy steel, our Vermeer® compatible starter rods are available in Firestick® 1 & 2 connections for Vermeer® drills from D6x6 through D36x50 Series II.



SKU	VERMEER® COMPATIBLE STARTER RODS	WEIGHT	PRICE
1704-601-01	Fits 7x11 - 10x15 (1.66") (FS200 x 1.625 LP)	12 lbs.	\$299
1704-602-01	Fits 16x20 - 18x22 (1.90") (FS250 x 2.125 LP)	17.1 lbs.	\$299
1704-608-01	Fits 20x22 - 24x26 (2.06") (FS400 x 2.125 LP)	22 lbs.	\$299
1704-603-02	Fits 24x40 - 40x40 (2.375") (FS600 x 2.125)	23.3 lbs.	\$299
1704-614-01	Fits D36x50 (FS650 x 2.125)	24 lbs.	\$369
1704-615-01	Fits D36x50 (FS700 x 2.125)	22.45 lbs.	\$369
1704-609-01	Fits 33x44/36x50 (FS602 x 2.125)	24 lbs.	\$459

## NEW QUICKFIRE® STARTER RODS



SKU	VERMEER® QUICKFIRE® STARTER RODS	WEIGHT	PRICE
1704-618-01	Fits D7x11/D9x13/D10x15, 1.66" FS200 Box x QuickFire® 300 Box	12 lbs.	\$329
1704-619-01	Fits D16x20/D18x22, 1.90" FS250 Box x QuickFire® 400 Box	20.45 lbs.	\$359
1704-620-01	Fits D18x22/D20x22, 2.06" FS400 Box x QuickFire® 400 Box	22.28 lbs.	\$359
1704-621-01	Fits D23x30/D24x40, 2.375" FS600 Box x QuickFire® 400 Box	26.45 lbs.	\$359
1704-622-01	Fits D23x30/D24x40, 2.375" FS600 Box x QuickFire® 460 Box	28 lbs.	\$549
1704-623-01	Fits D36x50, 2.375" FS650 Box x QuickFire® 460 Box	38 lbs.	\$549
1704-624-01	Fits D36x50, 2.375" FS700 Box x QuickFire® 460 Box	39.25 lbs.	\$549

## HEX COLLARS

When installed over the flats on starter rods, StraightLine HDD® hard-faced collars prevent thread over-torquing, while maximizing durability and wear resistance.

SKU	VERMEER® COMPATIBLE HEX COLLARS	WEIGHT	PRICE
1704-604-01	Fits 7x11 - 10x15 (1.625 LP)	3.7 lbs.	\$89
1704-605-01	Fits 7x11 - 10x15 Hard Faced (1.625 LP)	3.45 lbs.	\$99
1704-605-03	Fits 7x11 - 10x15 Hard Faced & Teeth (1.625 LP)	3.9 lbs.	\$149
1704-606-01	Fits 16x20 - 24x40 - 33x44 - 40x40 (2.125 LP)	7.1 lbs.	\$139
1704-607-01	Fits 16x20 - 24x40 - 33x44 - 40x40 Hard Faced (2.125 LP)	7.5 lbs.	\$159
1704-607-02	Fits D16x20 - D24x40 - D36x50 (Carbide stud) (2.125 LP)	8.4 lbs.	\$199
1704-607-03	2.5" D16x20 - D24x40 (Hard-Faced & Teeth) (2.125 LP)	8 lbs.	\$189

## NEW QUICKFIRE® HEX COLLARS

SKU	VERMEER® QUICKFIRE® HEX COLLARS	WEIGHT	PRICE
1704-625-01	QuickFire® 300, Hard Faced	2.5 lbs.	\$149
1704-625-02	QuickFire® 400, Hard Faced	7.8 lbs.	\$159
1704-625-03	QuickFire® 460, Hard Faced	8.1 lbs.	\$189
1704-626-01	QuickFire® 300, Carbide Teeth & Hard Faced	2.75 lbs.	\$189
1704-626-02	QuickFire® 400, Carbide Teeth & Hard Faced	8.2 lbs.	\$199
1704-626-03	QuickFire® 460, Carbide Teeth & Hard Faced	9 lbs.	\$229





## TRANSMITTER HOUSINGS

Consisting of a housing body, jet and optional tail piece, our Vermeer® compatible housings offer enhanced service life over OEM and other aftermarket housings. Available in 2 3/4-, 3-, 3 1/4-, 3 5/8- & 4 1/8-inch OD, all StraightLine HDD® housings will accept 2-cell DCI transmitters. The 4 1/8-4 3/4 inch housing is designed to accept either the 2- or 4-cell transmitter. Available for all drills, from D6x6 to D100x140. (Requires Nose Piece of choice)



SKU	VERMEER® COMPATIBLE TRANSMITTER HOUSINGS	WEIGHT	PRICE
1201-201-17	2-3/4" OD, 1/2" Bolt Pattern (2.00" IF Box)	32 lbs.	\$909
1201-201-10	3", 1/2" Bolt Pattern (2.375 FS600 Box)	43 lbs.	\$999
1201-201-09	3-1/4", 1/2" Bolt Pattern (2.375 API REG Box)	54 lbs.	\$1,199
1201-201-13	3-5/8", 5/8" Bolt Pattern (2.875 FS900 Box)	71 lbs.	\$1,599
1201-201-12	3-5/8", 5/8" Bolt Pattern (3.5 FS800 Box)	68 lbs.	\$1,509



## NEW VERMEER® DELUXE RP (ROLL PIN) HOUSINGS

SKU	VERMEER® COMPATIBLE TRANSMITTER HOUSINGS	WEIGHT	PRICE
1201-201-19	2-3/4" OD, Deluxe RP, 2.00" IF Box, 1/2" Bolt	999 lbs.	\$1,099
1201-201-20	3" OD, Deluxe RP, 2-3/8" FS1 Box, 1/2" Bolt	1,099 lbs.	\$1,199
1201-201-21	3-1/4" OD, Deluxe RP, 2-3/8" REG Box, 1/2" Bolt	1,299 lbs.	\$1,399
1201-201-22	3-5/8" OD, Deluxe RP, 2-7/8" FS1 Box, 5/8" Bolt	1,699 lbs.	\$1,799
1201-201-23	3-5/8" OD, Deluxe RP, 3-1/2" FS1 Box, 5/8" Bolt	1,609 lbs.	\$1,709
1201-201-18	4-1/2" OD, Deluxe RP, 2-7/8" IF Box, 3/4" Bolt, 2-4 Cell	2,399 lbs.	\$2,399

## HOUSING SAVERS (TAIL PIECES)

PART #	DESCRIPTION	WEIGHT	PRICE
AD200IFP166VB	2.00" IF Pin x 1.66" FS1 Box		\$209
AD200IFP162LP	2.00" IF Pin x 1.625" LP QC Pin		\$249
AD200IFP212LP	2.00" IF Pin x 2.125" LP QC Pin		\$249
AD200IFP300QFP	2.00" IF Pin x QuickFire® 300 Pin		\$249
AD200IFP400QFP	2.00" IF Pin x QuickFire® 400 Pin		\$295
AD237VP190VB	2.375" FS1 Pin x 1.90" FS1 Box		\$209
AD237VP206VB	2.375" FS1 Pin x 2.06" FS1 Box		\$209
AD237VP162LP	2.375" FS1 Pin x 1.625" Vermeer LP Pin		\$249
AD237VP212LP	2.375" FS1 Pin x 2.125" Vermeer LP Pin		\$249
AD237VP400QFP	2.375" FS1 Pin x QuickFire® 400 Pin		\$289
AD237REGP237FS650B	2.375" REG Pin x 2.375" FS1 650 Box		\$229
AD237REGP237FS700B	2.375" REG Pin x 2.625" FS700 Box		\$229
AD237REGP400QFP	2.375" REG Pin x QuickFire® 400 Pin		\$289
AD237REGP460QFP	2.375" REG Pin x QuickFire® 460 Pin		\$349
AD350VP287VB	3.50" FS1 Pin x 2.875" FS1 Box		\$319
AD287IFP350FS1000B	2.875" IF Pin x 3.50" FS1000 Box		\$319



## HOUSING JETS

SKU	VERMEER® COMPATIBLE TRANSMITTER HOUSING FLUID JETS	WEIGHT	PRICE
1201-202-10	1/8" Hole, fits 2 3/4" - 3 1/4" Housing		\$39
1201-202-11	Fits 2 3/4" - 3 1/4" Housing		\$39
1201-202-12	3/8" Hole, fits 3 5/8" - 4 3/4" Housing		\$69





Every StraightLine HDD® bit is designed to deliver outstanding service life and excellent penetration over multiple bores. Available in many styles and sizes, our bits bolt directly on all Vermeer® compatible transmitter housings.



## STEEP TAPER SABRE BITS

StraightLine's Steep Tapered bits feature steep tapered carbide cutters which enables the bit to gain penetration into hard compact soils/cobble in order to begin a quick steering maneuver; the entire perimeter of the bit is protected with carbide impregnated hardsurfacing for long service life.



## STEEP TAPER DOME BITS

StraightLine's Steep Tapered bits feature steep tapered carbide cutters which enables the bit to gain penetration into hard compact soils/cobble in order to begin a quick steering maneuver; the entire perimeter of the bit is protected with carbide impregnated hardsurfacing for long service life.



## BARRACUDA BITS

Barracuda bits are designed where easy penetration, dependable steering, long life, and pullback efficiency.

**Barracuda bits perform well in: shale, sandstone, caliche, and even cobble**



### STEEP TAPER SABRE, SMALL BOLT PATTERN

SKU	DESCRIPTION	WEIGHT	PRICE
1301-440-01	Steep Taper, Sabre, Small, 4"	9.3 lbs.	\$359
1301-440-02	Steep Taper, Sabre, Small, 5"	10.4 lbs.	\$409

### STEEP TAPER DOME, SMALL BOLT PATTERN

SKU	DESCRIPTION	WEIGHT	PRICE
1301-442-02	Steep Taper, Dome, Small, 5"	12 lbs.	\$399

### BARRACUDA, SMALL BOLT PATTERN

SKU	DESCRIPTION	WEIGHT	PRICE
1301-443-01	Barracuda, 4 1/2", Small	7.4 lbs.	\$579
1301-443-02	Barracuda, 5 1/2", Small	9.7 lbs.	\$629



## HARD-FACED BITS

Hard-Faced bits feature generous carbide hard-facing that's extremely resistant to abrasive conditions.

**Hard-Faced bits perform well in: alluvial, clay, sands, small aggregates and gravel**



## THRASHER BITS

An aggressive design, the Thrasher features a series of aggressive conical tungsten carbide cutters. The result is an aggressive, long lasting bit that delivers good results in tough conditions.

**Thrasher bits perform well in: hardpan, shale, caliche and sandstone formations**

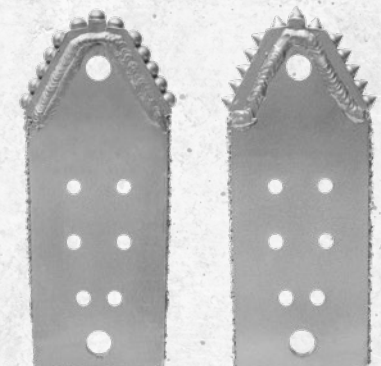


## RAPTOR BITS

The Raptor is an aggressive design featuring carbide buttons lining the entire perimeter.

The bit's angled face eliminates the tendency to "snag" rock outcroppings and improves cutting action in tough conditions.

**Raptor bits perform well in: tough aggregate conditions.**



### HARD-FACED, SMALL BOLT PATTERN

PART #	DESCRIPTION	WEIGHT	PRICE
1301-423-02	Hard-Faced, 3 1/2"	6.44 lbs.	\$139
1301-423-03	Hard-Faced, 4"	7.44 lbs.	\$159
1301-423-04	Hard-Faced, 4 1/2"	8.5 lbs.	\$179
1301-423-05	Hard-Faced, 5"	9.49 lbs.	\$189

### THRASHER, SMALL BOLT PATTERN

SKU	DESCRIPTION	WEIGHT	PRICE
1301-425-01	Thrasher, 3 1/2"	7.15 lbs.	\$229
1301-425-02	Thrasher, 4"	8.06 lbs.	\$239
1301-425-03	Thrasher, 4 1/2"	9.1 lbs.	\$249

### RAPTOR, SMALL BOLT PATTERN

PART #	DESCRIPTION	WEIGHT	PRICE
1301-430-02	Raptor, 3 1/2"	8.3 lbs.	\$359
1301-430-03	Raptor, 4"	9.55 lbs.	\$369
1301-430-04	Raptor, 4 1/2"	10.9 lbs.	\$389
1301-430-05	Raptor, 5"	12.05 lbs.	\$409

### HARD-FACED, LARGE BOLT PATTERN

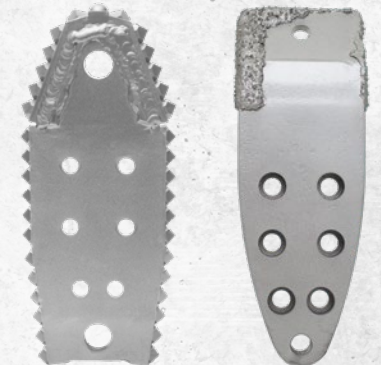
PART #	DESCRIPTION	WEIGHT	PRICE
1301-434-02	Hard-Faced, 5"	14.8 lbs.	\$229.00
1301-434-04	Hard-Faced, 6"	17.25 lbs.	\$249.00

### THRASHER, LARGE BOLT PATTERN

SKU	DESCRIPTION	WEIGHT	PRICE
1301-433-01	Thrasher, 4.5"	15.25 lbs.	\$259
1301-433-02	Thrasher, 5 1/2"	16.95 lbs.	\$259
1301-433-03	Thrasher, 6"	19 lbs.	\$299

### RAPTOR, LARGE BOLT PATTERN

PART #	DESCRIPTION	WEIGHT	PRICE
1301-438-01	Raptor, 5"	19.25 lbs.	\$399
1301-438-03	Raptor, 6"	23.25 lbs.	\$429



**Tip:** As a rule of thumb, larger bits perform better in softer soils (sands, loams, sticky clays), while smaller bits perform better in hard soils (i.e. hardpan, shales, caliche, etc).



# PIPE RACKS

StraightLine HDD® manufactures a complete line of pipe racks for all Vermeer® drills. Each rack is engineered to exacting standards and is the perfect solution for anyone looking to add a spare or replace a damaged pipe rack.



PART #	DESCRIPTION	WEIGHT	PRICE
1901-102-22	Holds 40 pieces (fits 20X22 SII) (fits 2.06" FS1)	490 lbs.	\$3,995
1901-102-15	Holds 50 pieces (fits 24x40 S3)	515 lbs.	\$4,995
1901-102-16	Holds 40 pieces (fits 36x50 SII, 15') (fits FS700)	700 lbs.	\$5,495
1901-102-19	Holds 40 pieces (fits 36x50 SII, 15') (fits FS2)	1,030 lbs.	\$5,495
1901-102-20	Holds 40 pieces (fits 36x50 DR, 10') (fits FS700)	1,047 lbs.	\$5,995
1901-102-24	Holds 40 pieces (fits 36x50 Series II, 10') (fits FS700)	1,074 lbs.	\$5,995
1901-102-25	Holds 40 pieces (fits 40x55 Series II, 15') (fits FS700)	982 lbs.	\$5,995
1901-102-27	Holds 40 pieces (fits 40x55 Series II, 10') (fits FS700)	984 lbs.	\$5,995
1901-102-23	Holds 30 pieces (fits 60x90) (fits FS900)	938 lbs.	\$5,495
1901-102-28	Holds 16 pieces (fits 60x90) (fits 3 1/2" FS800)	679 lbs.	\$5,995
1901-102-07	Holds 9 pieces (fits 50x100 - 80x100 Half Rack)	535 lbs.	\$4,995
1901-102-06	Holds 21 2-7/8" or 18 3-1/2" pieces (fits 50x100 - 80x100 Full Rack)	585 lbs.	\$4,995
1901-102-11	Holds 24 pieces (80x100 Series II)	845 lbs.	\$4,995
1901-102-12	Holds 9 pieces (100x120 Half Rack) (Fits FS2)	645 lbs.	\$4,995
1901-102-13	Holds 15 pieces (100x120 Full Rack)(Fits FS2)	690 lbs.	\$4,995
1901-102-26	Holds 15 pieces (100x120) (fits FS1000)	857 lbs.	\$5,995
1901-102-21	Holds 9 pieces (100x140) (fits FS1000)	937 lbs.	\$5,495





# SWIVELS

StraightLine swivels, first introduced to the HDD market in 1991, have established an unequalled standard for reliable performance and longevity. In the process of developing industry specific swivels, StraightLine engineers led the way in the development of bearing and sealing systems that have proved to thrive in harsh underground environments. Over the years it has become evident that our original designs have stood the test of time and continue to deliver rugged reliability.

### How do you deliver rugged reliability

- Start with angular contact bearings, which are designed to handle both thrust AND radial loads.
- The appropriate size and quantity of angular contact bearings are then assembled in a stack that provides safe performance at the rated load.
- Within the bearing stack each swivel must have two bearings that are positioned in the thrust (pushback) direction in the event that the product needs to be pushed backwards.
- And finally the sealing system must consist of 1 shaft seal and 2 lip seals with steel reinforcing rings to prevent soil and drilling fluid intrusion.

PART #	DESCRIPTION	WEIGHT	PRICE
1501-700-04	Clevis x Clevis, 2" OD, 10.5-ton	5.55 lbs.	\$833.90
1501-700-05	Clevis x Clevis, 2 3/8" OD, 15-ton	10.3 lbs.	\$979.86

PART #	DESCRIPTION	WEIGHT	PRICE
1501-300-05	Clevis x Clevis, 2 1/4" OD, 5-ton	7.5 lbs.	\$495.00
1501-300-16	Clevis x Clevis, 3 3/4" OD, 10-ton	28 lbs.	\$1,299.00
1501-300-01	Clevis x Clevis, 4 1/2" OD, 15-ton	43 lbs.	\$1,899.00
1501-300-06	Clevis x Clevis, 5 3/4" OD, 20-ton	68 lbs.	\$2,499.00
1501-300-07	Clevis x Clevis, 6" OD, 30-ton	90 lbs.	\$2,799.00
1501-300-02	Clevis x Clevis, 7 1/2" OD, 45-ton	185 lbs.	\$4,799.00
1501-300-03	2 7/8" IF BOX x Clevis, 7 1/2" OD, 45-ton	189 lbs.	\$4,999.00
1501-300-04	3 1/2" IF BOX x Clevis, 7 3/4" OD, 45-ton	194 lbs.	\$4,999.00
1501-300-17	Clevis x Clevis, 10" OD, 60-ton	345 lbs.	\$7,999.00
1501-300-09	4.50" IF BOX x Clevis, 10" OD, 60-ton	365 lbs.	\$8,799.00

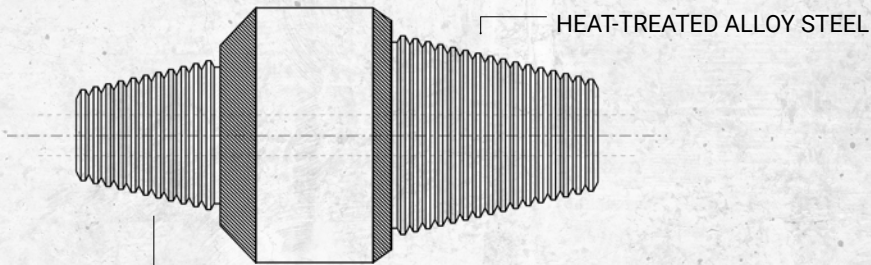


# ADAPTERS

### ADAPTING FROM TOOL-TO-TOOL MADE SIMPLE.

At StraightLine HDD, we have the ability to cut over 50,000 custom adapters. Most adapters are in stock and ready to ship within 24-hours. And if it's something we don't stock, we'll cut a custom adapter and get you back to work in record time.

From DW520 to 6 5/8-inches full hole, StraightLine HDD has an adapter solution to fit your needs.



PRECISION MACHINED  
Over 74 thread choices.





## TRANSMITTER HOUSINGS

**NEW**

### BOX X BOX DELUXE RP ROLL PIN TRANSMITTER HOUSINGS

StraightLine HDD Box x Box transmitter housings are precision machined from 4145 heat-treated material for durability and are specifically designed to accommodate a wide range of screw-on bit styles, shown below.

#### BOX X BOX DELUXE RP ROLL PIN HOUSINGS

PART #	DESCRIPTION	WEIGHT	PRICE
1201-601-01	2.75", 2.00" IF Box x 2.00" IF Box, Subsite		\$1,449.00
1201-601-02	2.75", 2.00" IF Box x 2.00" IF Box, Subsite		\$1,449.00
1201-601-05	3.25", 2 3/8" REG Box x 2 3/8" REG Box, DCI		\$1,449.00
1201-601-06	3.25", 2 3/8" REG Box x 2 3/8" REG Box, Subsite		\$1,559.00
1201-601-07	3.50", 2 3/8" REG Box x 2 3/8" REG Box, DCI		\$2,399.00
1201-601-08	3.50", 2 3/8" REG Box x 2 3/8" REG Box, Subsite		\$2,399.00
1201-601-09	4.25", 2 7/8" IF Box x 2 7/8" REG Box, DCI		\$2,999.00
1201-601-10	4.25", 2 7/8" IF Box x 2 7/8" REG Box, Subsite		\$2,999.00



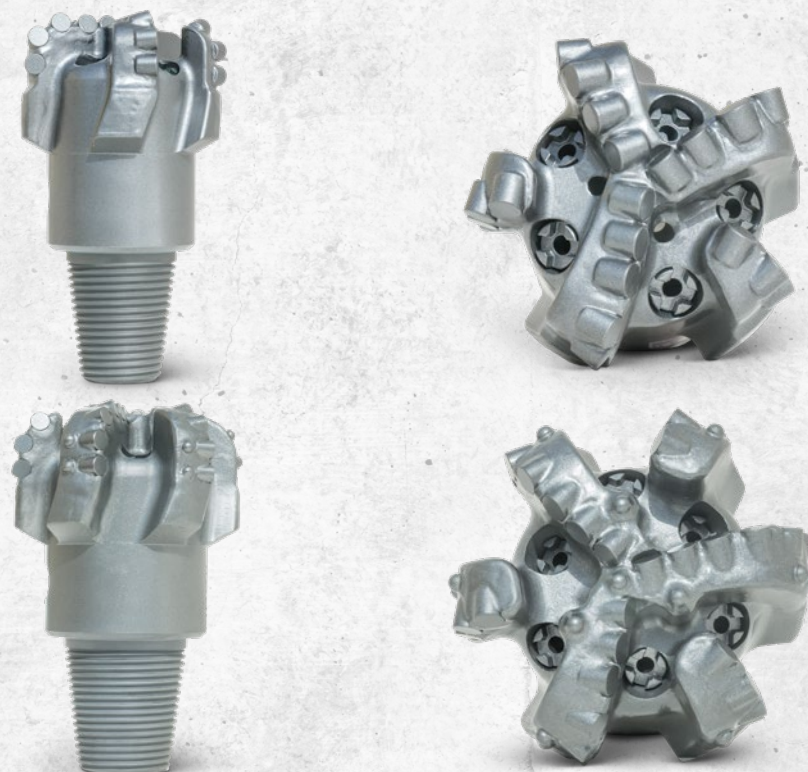
## PDC BITS

**NEW**

### SL Y-SERIES PDC BITS

Unlike generic PDC bits, the SL Y-series PDC bit is engineered specifically for HDD. The unique cutter layout focuses on improved steerability and increased rates of penetration. You will immediately notice our PDC pilot bits have 5x or 6x blades with 3 of the blades coming to the center, more fluid holes, and a higher PDC count. Although these features come with a cost, you will quickly realize the return on your investment was a wise decision as the SL Y-series PDC bits will increase your profits effortlessly.

PART #	DESCRIPTION	WEIGHT	PRICE
PDC-550-287REG-5	Bit, PDC, 5 1/2", 2 7/8" Reg Pin, 5-Blade, Round Cutters	22.65 lbs.	\$2,799.00
PDC-550-287REG-6	Bit, PDC, 5 1/2", 2 7/8" Reg Pin, 6-Blade, Round Cutters	22.60 lbs.	\$3,299.00
PDC-650-350REG-5	Bit, PDC, 6 1/2", 2 7/8" Reg Pin, 5-Blade, Round Cutters	31.80 lbs.	\$3,699.00
PDC-650-350REG-6	Bit, PDC, 6 1/2", 2 7/8" Reg Pin, 6-Blade, Round Cutters	33.45 lbs.	\$4,099.00





# ROCKEYE HAMMER SYSTEM



# ROCKEYE HAMMER SYSTEM



## THE MOST VERSATILE ROCK TOOL YOU CAN OWN.

The RockEye Hammer System has proven to be the most versatile boring tool in the industry, delivering incredible success in a wide variety of ground conditions. The StraightLine RockEye Hammer System easily negotiates its way through any soil condition, including the hardest rock Mother Nature has to offer.

## MINIMIZE YOUR ENVIRONMENTAL FOOTPRINT WHILE MAXIMIZING YOUR PROFITABILITY.

Unlike many drilling methods that require a significant amount of drilling fluid, the RockEye Hammer System typically uses between 0.5 and 3 gallons of water per minute, resulting in less environmental impact and dramatically cleaner job sites.

## HOW DOES THE ROCKEYE STEER?

The convex side of the bent sub, working in conjunction with the attached bit, creates a precision two-point steering system. To steer the hammer it is rotated between two clock positions, as the assembly advances it reacts off of the front and rear steering points.

## CAN I STEER IN NON-ROCK CONDITIONS?

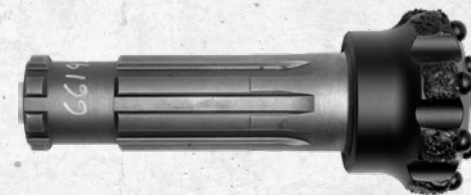
Yes. The procedure to steer in a compactible soil is exactly the same as steering in rock.

## CAN I USE A HAMMER ON ANY DRILL RIG?

Yes. The RockEye will turn any drill into a rock drill. It is as simple as connecting the air on the high pressure side of the mud pump to provide a path for the air supply to be directed into the drill rig's drilling fluid course. The initial installation of the system takes approximately 30-minutes.

## CAN MY TRANSMITTER SURVIVE THE POUNDING ACTION?

The transmitter/beacon is placed in a sleeve-within-a-sleeve system. StraightLine has perfected a dampening system that virtually removes all shock from the transmitter.





# ROCKEYE HAMMER SYSTEM

## ROCKEYE DOWN-HOLE ASSEMBLY

The RockEye down-hole assembly includes the bit, hammer body, bent sub, side load transmitter housing with shock dampening system and the tail piece. The RockEye's precision steering is accomplished by our two-point steering system. The bent sub and the toe of the bit are the essential pieces in the steering system. The hammer is rotated between two clock positions, the steering takes place by reacting off of the front and rear steering points. The RockEye bent sub is protected by carbide, this protection insures long service life and allows us to offer the only wear guarantee in the industry.



BENT SUB



## ROCKEYE SUPPORT PACK

The RockEye support pack is central to the operation of the hammer system. The support pack provides the required lubrication and fluid to the down-hole hammer. This is accomplished with a positive displacement piston pump. The oil pump is adjustable so the operator can control the amount of lubrication being provided to the hammer. The fluid that is needed for the drilling operation is provided by a 5 GPM on board water pump. This system is controlled with a wireless remote or can also be controlled from the console of the support pack.



## ROCKEYE 250-GALLON TANK

Due to the minimal amount of drilling fluids that are needed in hammer operations, the 250-gallon tank is the optimum size. This tank allows for small batches of foam or polymers to be mixed for a full day's worth of drilling.

## WITH FOUR MODELS, THERE'S A ROCKEYE HAMMER THAT FITS YOUR NEEDS

IT'S VERSATILE. With four models ranging from 3- to 6-inches, the RockEye turns any rig—even those with as little as 10,000 pounds of thrust—into a rock hammering machine.

DESCRIPTION	AH3.0	AH4.0	AH5.0
Hammer Body Diameter	3.1"	3.625"	4.6"
Piston Weight	11.7 lbs.	20 lbs.	30 lbs.
Standard Bit	4.25"	4.75"	5.75"
Optional Bit	n/a	5.125"	6"
Minimum Recommended Compressor Supply	375-cfm/150-psi	400-cfm/200-psi	700-cfm/300-psi
Maximum Recommended Tool Joint Diameter	2.75"	3.25"	4.5"
Typical Drill Rig Thrust/Pull	10,000-30,000 lbs.	10,000-50,000 lbs.	24,000-120,000 lbs.



**Tip:** The RockEye Hammer, depending on size, can be effective paired with compressors that can be rented for as low as \$200 per day.

## HERE'S WHAT YOU HAD TO SAY ABOUT THE ROCKEYE HAMMER SYSTEM

"Our contracts don't typically pay higher rates for extreme rock bores, so efficiency is a huge factor. We've only found one solution that makes sense in our rock bores: the RockEye hammer."

*Ryan Sullivan, Lineal Contracting - Bedford, Indiana*

"The RockEye Hammer System annihilated rock up here. It's one of my better purchases in a long time. It really exceeded my expectations."

*Glen Everson, Target Directional Drilling - Lee's Summit, Missouri*

"The StraightLine hammer hits extremely hard, exhibits unbelievable wear resistance and steers perfectly in any condition."

*Robert Mendoza, RPM Construction - Hobbs, New Mexico*

[straightlinehdd.com](http://straightlinehdd.com)

Product Catalog - Volume 9 StraightLine HDD 36



# REAMERS

## THE RIGHT REAMER

### *Available for Every Drill*

StraightLine HDD reamers are available in diameters from 4- to 96-inches, on eight shaft sizes, ranging from 2- to 9 5/8-inches. Choose from 74 common HDD thread types, with new connections added as needed.

## ALL OF OUR REAMERS SHARE THE FOLLOWING FEATURES:

- Unique geometries which, by design, result in the lowest possible resistance and smooth cutting action.
- Precision placement of carbide teeth maximizes cutting performance and extends cutter life.
- Extensive use of replaceable fluid ports, constructed from hardened steel or carbide (depending on reamer style and shaft size), lowers torque by delivering superior fluid placement to the tool's perimeter.
- Extensive use of carbide-impregnated hard-surfacing on all exposed edges provide superior wear characteristics.

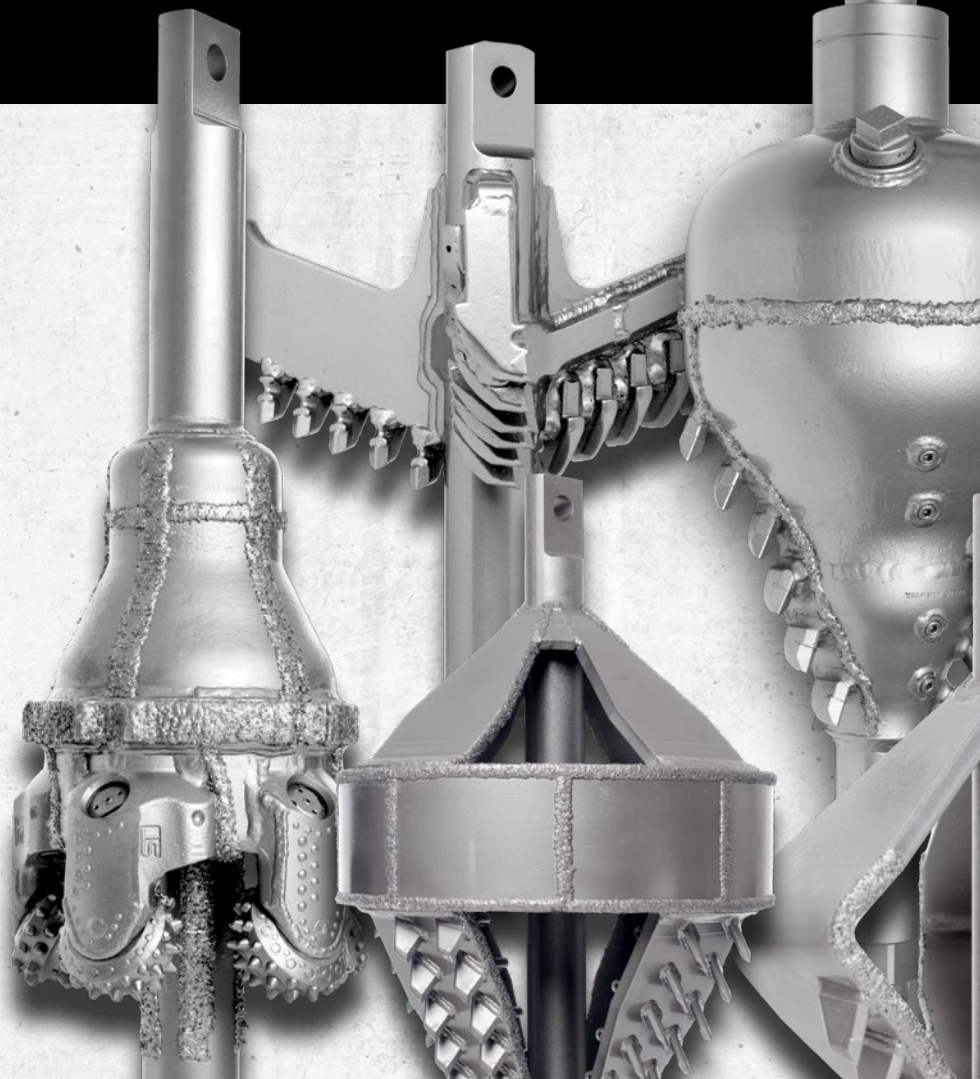
## PROFITABLE SOLUTIONS IN ALL GROUND CONDITIONS

It's simple: successful HDD operators know reamer selection is often the difference between making—orlosing—money. That's where StraightLine HDD offers a clear advantage.

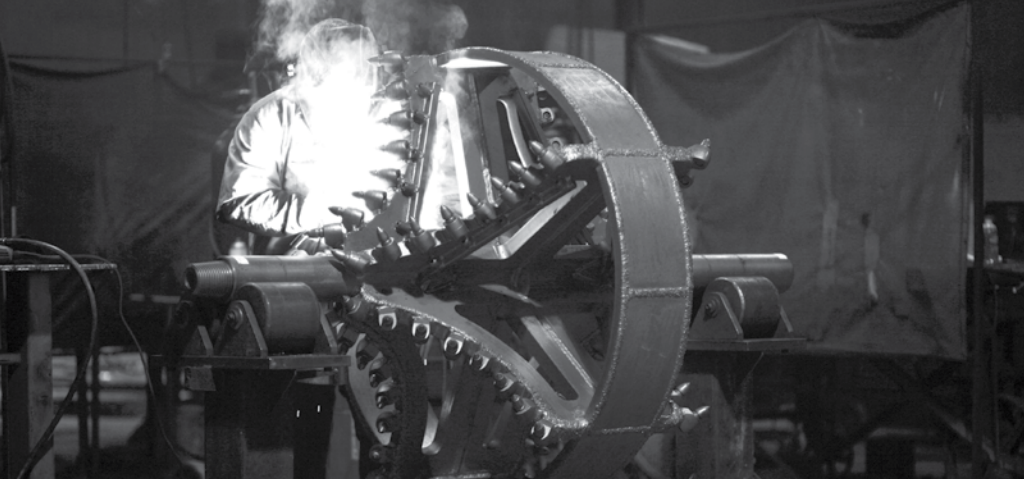
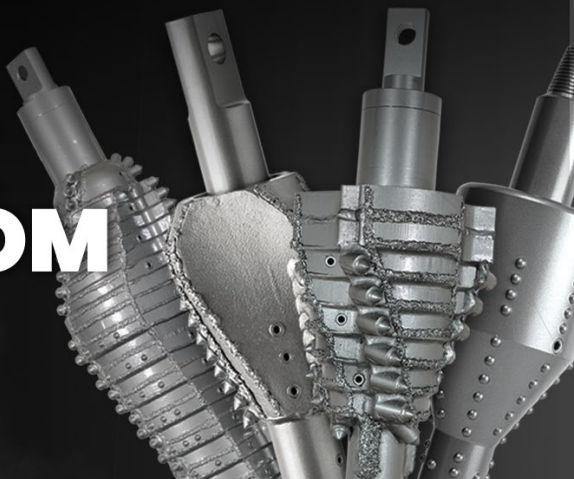
- **Open-Body design:** For non-compactable conditions including sands and gravels up to medium rock formations.
- **Closed-Body design:** For compactible conditions including light aggregates.
- **Fluted-Body design:** For compactible conditions including heavy aggregates and intermittent solid conditions.
- **Hole-Opener / PDC designs:** For solid formations from sandstone and coral to quartz and granite.

## STRAIGHTLINE HDD CUSTOM REAMERS: Our Experience Enhances Your Profits

If you face a unique challenge, StraightLine HDD maintains an experienced team of reamer design and fabrication experts, capable of responding to requests for custom reamer and hole-opener designs. Whatever the drill type or size, whatever the soil condition, the StraightLine HDD team can deliver a custom reamer solution to your job site in as little as two days.



# IN STOCK OR CUSTOM OPTIONS





# REAMERS

## RADIAL FLOW

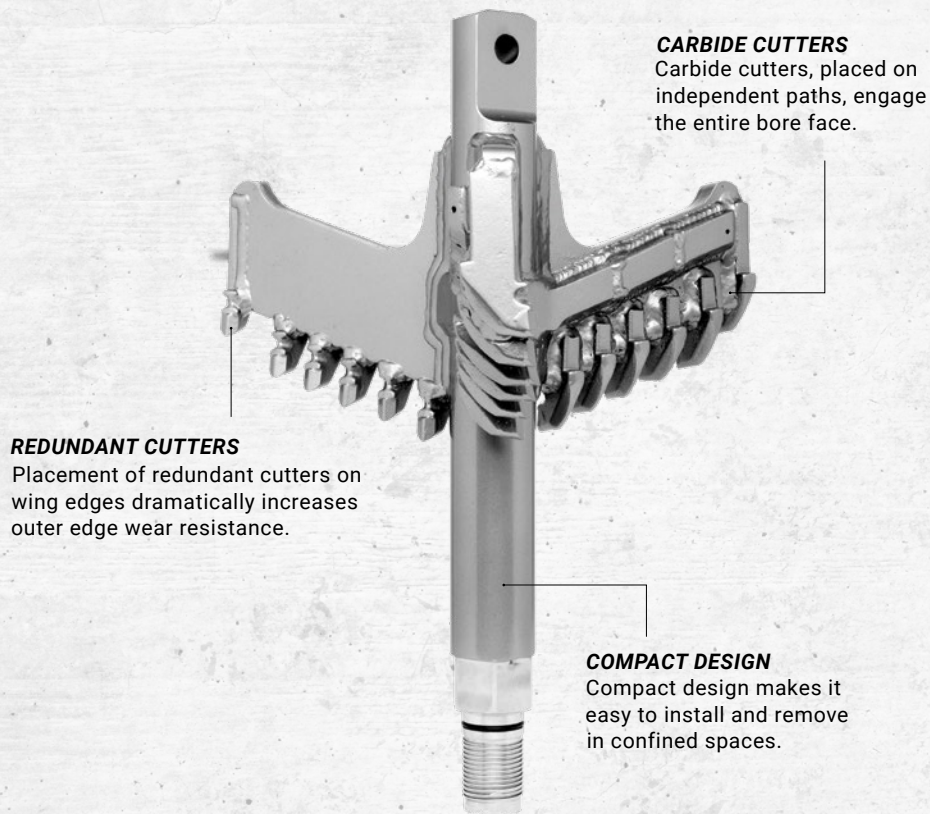
### A COMPACT, LOW-TORQUE DESIGN THAT'S AN EFFECTIVE CHOICE FOR ALL SIZES OF RIGS.

This compact reamer design combines precise carbide placement and efficient fluid delivery to effectively reduce torque on the drill string, increase productivity and reduce wear. Key features include independent path carbide cutters coupled with redundant carbide cutters on wing edges, presoaking fluid jets, compact body for confined spaces and low torque design for effective use with all drill sizes.

**Ground Conditions:** Sand, loam, light aggregates and sandstone.

**Shaft Size:** 2" - 4 1/4"

**Size Range:** 6" - 12"



## WINGED REAMER

### AVAILABLE IN 3, 4, 5 & 6-WING DESIGNS (*Depending on the diameter of the reamer.*)

With large carbide cutters and carbide hard surfacing on the edges, the StraightLine® Winged Reamer features double slope wings with a low-mass, open body design that delivers exceptional toughness and unmatched efficiency in cutting and mixing. The result is more work with less wear and tear on your drill and drill string. In addition, fluid ports along the rear perimeter of each wing, aid in presoaking the path of the oncoming cutters.

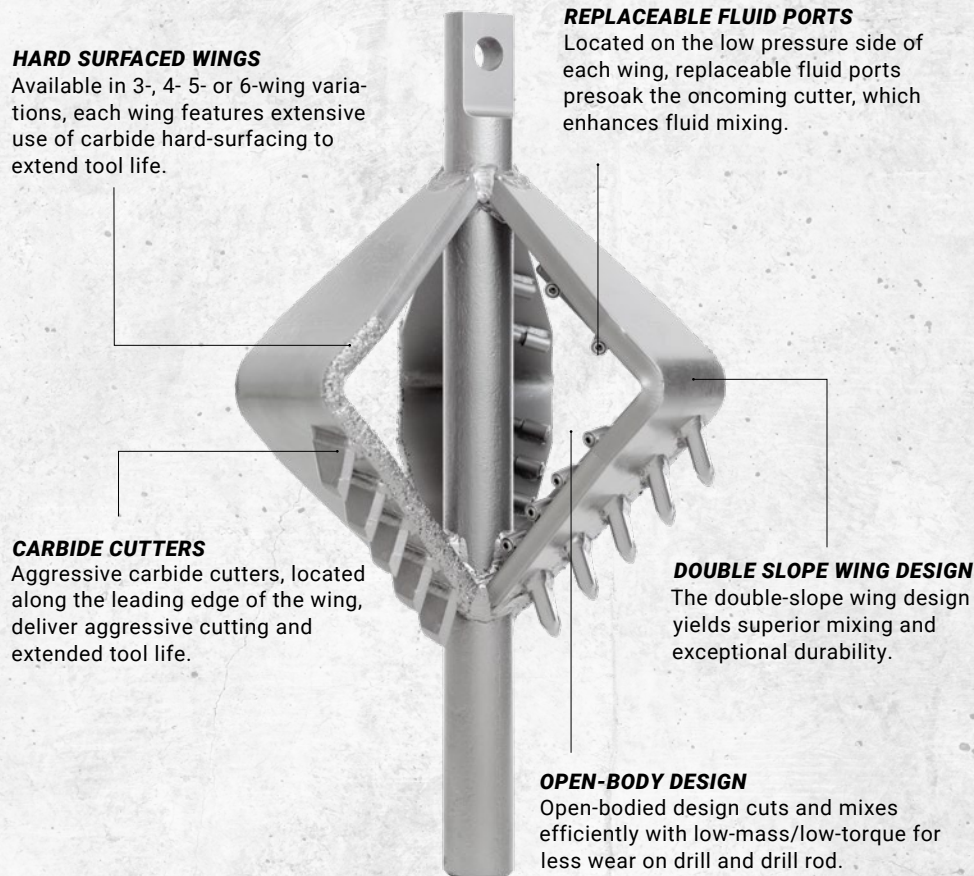
#### **GROUND CONDITIONS:**

Non-compactible conditions including Sands, Aggregates, Shale and Limestone.

**Shaft Size:** 3" - 8 1/2"

**Size Range:** 10" - 60"

**Connection:** 65/8" FH DS Connections





# REAMERS

## STEEP-TAPER FLY CUTTER

### A LOW-MASS/LOW-TORQUE SOLUTION WITH TWO ROWS OF AGGRESSIVE CUTTERS AND STEEPLY-TAPERED WINGS

This open-bodied reamer features steep tapered wings with two rows of large carbide cutters and a heavy-duty centralizing ring for added toughness in hard ground and with larger rigs.

The Heavy duty centralizing ring supports two rows of large carbide cutters positioned along the length of each wing. Hard surfacing is applied to the leading edge of the wings and replaceable fluid ports are found along the rear of each wing to presoak the path of the oncoming cutters, resulting in highly efficient mixing and smooth cutting action.

**Ground Conditions:** Loam, light aggregates, shale and limestone.

**Shaft Size:** 3 1/4" & 4 1/4"

**Size Range:** 12" - 40"

#### OPEN-BODY DESIGN

Open-bodied design combines steep wing angles to make it a low-mass/low-torque tool that cuts smoothly and mixes efficiently.

#### HARD SURFACE WINGS

Available in 3-, 4- or 5-wing variations, each features extensive use of carbide hard-surfacing to extend tool life.

#### CENTRALIZING RING

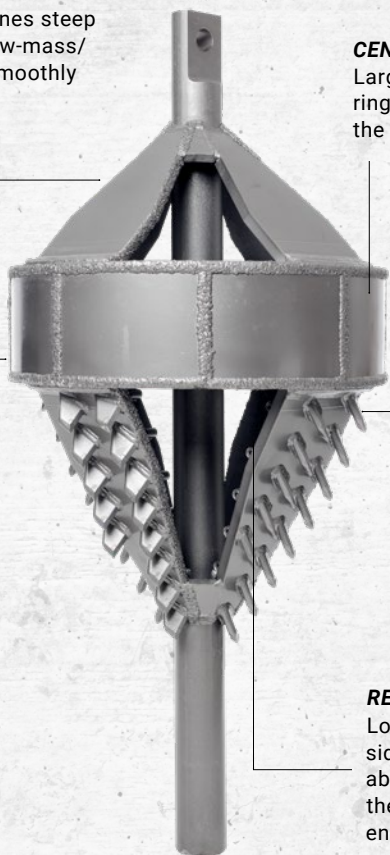
Large, hard-surfaced centralized ring insures the tool runs true in the bore.

#### CARBIDE CUTTERS

Located along the entire leading edge of each wing. Delivers aggressive cutting and extends service life.

#### REPLACEABLE FLUID PORTS

Located on the low pressure side of each wing, replaceable fluid ports presoak the oncoming cutter, which enhances fluid mixing.



## REVERSE RADIAL FLOW REAMER

### THE TOUGHEST, OPEN BODY, BI-DIRECTIONAL DESIGN AVAILABLE ANYWHERE.

The open body design delivers exceptional mixing while the extra heavy wing segments gain incredible footage through some of the toughest ground conditions. The compact design allows for ease of installation and extraction in confined spaces. Precise carbide placement coupled with perimeter drilling fluid displacement provides the operator with unmatched versatility, making the StraightLine® Reverse Radial Flow Reamer one of the most popular large diameter tools in the industry.

**Ground Conditions:** Loams, moderate aggregates, clay, shale and light rock formations.

**Shaft Size:** 4" - 9 5/8"

**Size Range:** 16" - 72"

#### OPEN BODY DESIGN

Open-bodied design yields smooth-cutting and excellent mixing in a low-mass/low-torque design.

#### CENTRALIZED WING

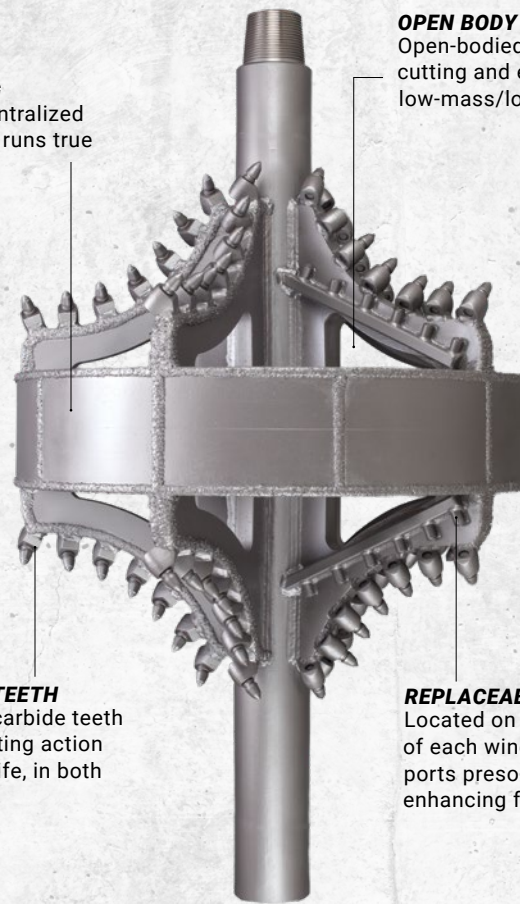
Large hard-faced centralized ring insures the tool runs true in the bore.

#### CONICAL CARBIDE TEETH

Aggressive conical carbide teeth deliver excellent cutting action and extend service life, in both pull and push-back.

#### REPLACEABLE FLUID PORTS

Located on the low pressure side of each wing, replaceable fluid ports presoak the oncoming cutter, enhancing fluid mixing.





# REAMERS

## RHINO REAMER

### A VERSATILE ALL-IN-ONE TOOL THAT CUTS, MIXES, AND PACKS IN ONE EASY STEP.

The Rhino features large carbide cutters, positioned over the length of the body, to over cut and allow drilling fluid to pass by the reamer. All leading edges are protected with hard surfacing and the strategically placed fluid ports are completely replaceable.

#### GROUND CONDITIONS:

Loams, Clays, Hardpan and Small Aggregates.

**Shaft Size:** 3 1/4"

**Size Range:** 4" - 12"

#### PACKING BELL

The unique geometry of the packing bell efficiently packs cuttings and facilitates utility installation.

#### OPTIONAL BUILT-IN SWIVEL

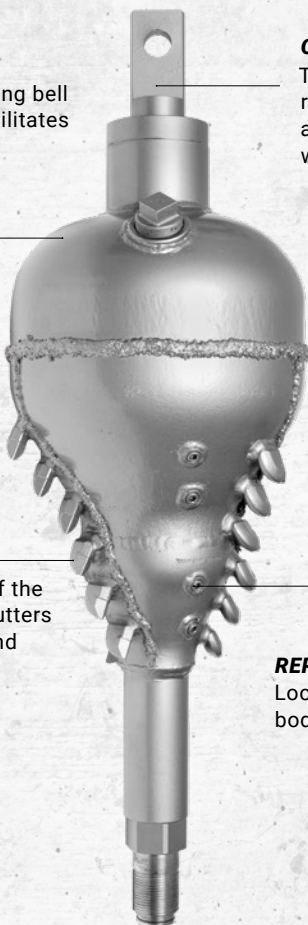
The optional built-in swivel reduces the tool's overall length and keeps the tool in place when pushing backwards.

#### CARBIDE CUTTERS

Located on the tapered portion of the body, three rows of aggressive cutters deliver excellent cutting action and long tool life.

#### REPLACEABLE FLUID PORTS

Located on the taper portion of the body ensures efficient fluid mixing.



## HURRICANE REAMER

### A VERSATILE ALL-IN-ONE TOOL THAT CUTS, MIXES AND PACKS.

**Ground Conditions:** Sand, loam and clay.

**Shaft Size:** 3 1/4"

**Size Range:** 6" - 14"

#### PACKING BELL

The unique geometry of the packing bell efficiently packs cuttings and facilitates utility installation.

#### OPTIONAL BUILT-IN SWIVEL

The optional built-in swivel reduces the tool's overall length and keeps the tool in place when pushing backwards.

#### HARD SURFACING

All leading edges are protected by carbide hard surfacing for maximum service life.

#### MIXING PADDLES

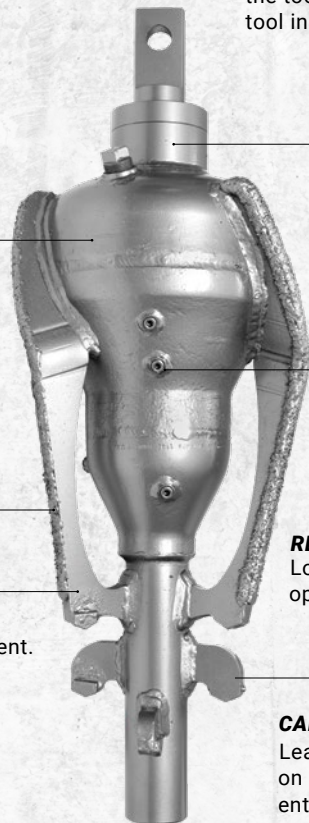
The mixing paddles overcut the body, and facilitate fluid movement.

#### REPLACEABLE FLUID PORTS

Located on the face of the reamer optimizes fluid placement.

#### CARBIDE CUTTERS

Lead-in carbide cutters, placed on independent paths, engage the entire bore face.





# REAMERS

## CRUSHER REAMER

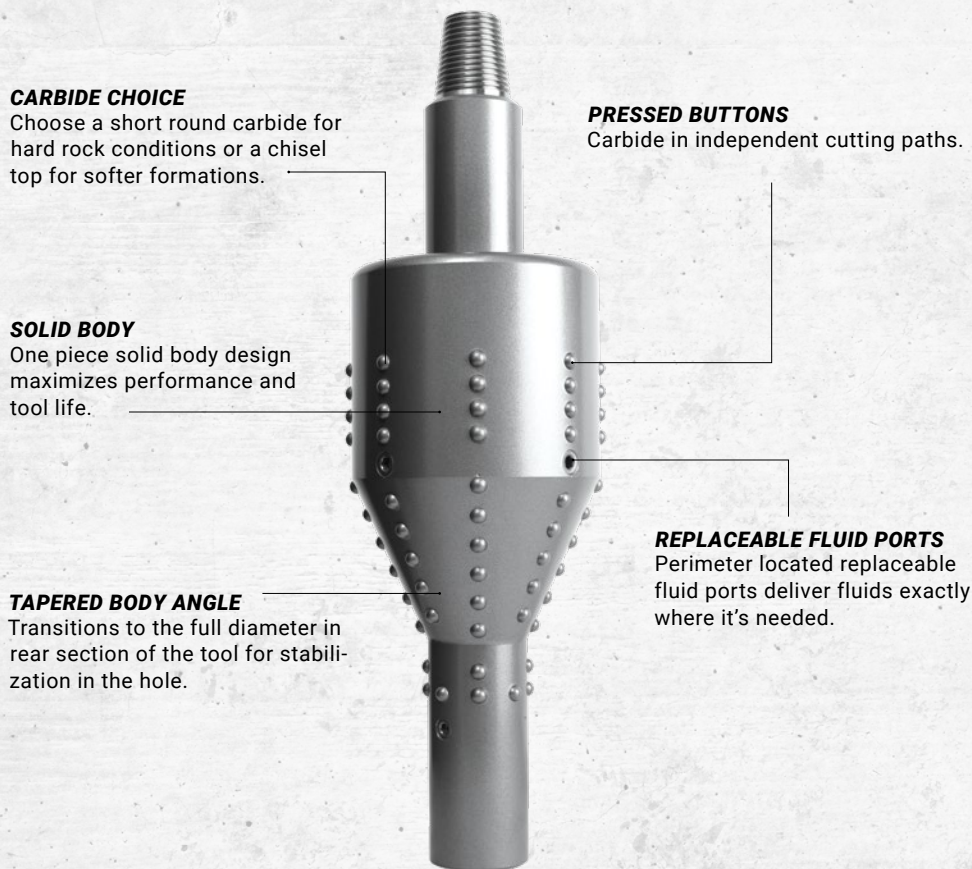
**THE SOLID BODY DESIGN AND CARBIDE PLACEMENT HAS PROVEN TO BE A PERFECT MATCH FOR DIAMETERS THAT ARE TOO SMALL FOR A HOLE OPENER.**

The Crusher's tapered solid-body transitions into full diameter in the back of the tool. The full diameter at the rear promotes tool stabilization in the hole and promotes good cuttings control. The tool's one-piece body and shaft design provides maximum strength and extended service life.

**Ground Conditions:** Hardpan, cobble and rock formations to 25,000 PSI.

**Shaft Size:** 3" - 4 3/4"

**Size Range:** 4" - 10"



## TRI-ACTION REAMER

**THIS LONG, TAPERED BODY, CUTS, PULVERIZES AND PACKS CUTTINGS IN A VARIETY OF CONDITIONS.**

The long tapered compaction style body with three relief flutes allow cuttings, small aggregates and drilling fluid to pass through the reamer. The leading edge of each flute is hard surfaced and the replaceable jets and carbide cutters maximize performance and tool life.

**Ground Conditions:** Loam, clay, hardpan, aggregates and rock formations up to 15,000 PSI.

**Shaft Size:** 3" - 4 1/4"

**Size Range:** 6", 8" & 10"

### TANG, PIN OR OPTIONAL BUILT-IN SWIVEL

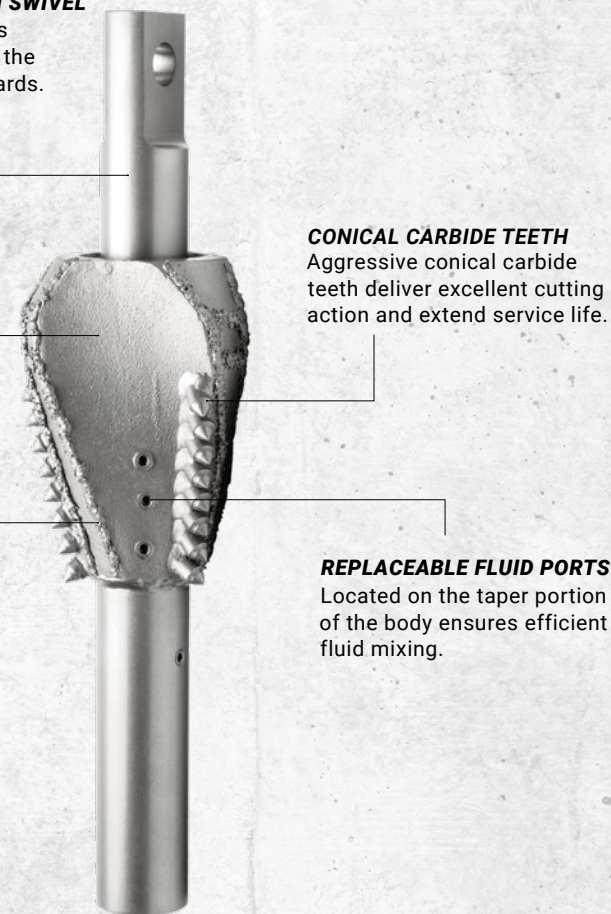
The optional built-in swivel reduces the tool's overall length and keeps the tool in place when pushing backwards.

### TAPERED SPIRAL BODY

The long, tapered relief flutes allow easy passage of cuttings, small aggregates and fluids.

### HARD SURFACING

All leading edges are protected by carbide hard surfacing for maximum service life.





# REAMERS

## ALL-TERRAIN REAMER

### VALUED FOR ITS AGGRESSIVE ABILITY TO CUT, MIX AND PACK IN ONE EASY PASS.

This tool cuts, pulverizes and forces the remaining pieces into the formation wall. Constructed from steel plate and fully welded, the StraightLine® All-Terrain Reamer features aggressive spiraling flutes which allow cuttings, small aggregates and drilling fluids to pass by the body. Replaceable jets facilitate precise mud flow and placement, while extra heavy duty carbide cutters and extensive hard surfacing on all wear surfaces provide maximum performance and tool life.

**Ground Conditions:** Clay, aggregate and rock formations up to 20,000+ PSI.

**Shaft Size:** 3 1/4" - 9 5/8"

**Size Range:** 8" - 48"

#### OPTIONAL BUILT-IN SWIVEL

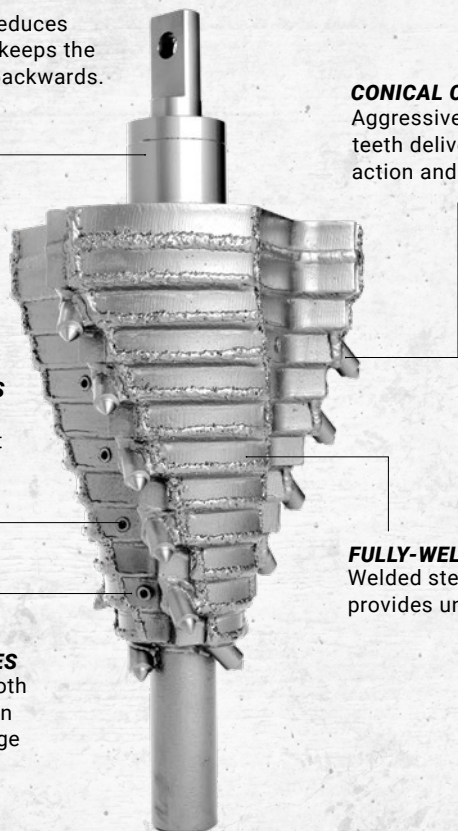
The optional built-in swivel reduces the tool's overall length and keeps the tool in place when pushing backwards.

#### REPLACEABLE FLUID PORTS

Located on the taper portion of the body ensures efficient fluid mixing.

#### AGGRESSIVE SPIRAL FLUTES

Spiraling flutes deliver smooth cutting action and provide an excellent channel for passage of cuttings and fluids.



#### CONICAL CARBIDE TEETH

Aggressive conical carbide teeth deliver excellent cutting action and extended service life.

#### FULLY-WELDED BODY

Welded steel plate construction provides unequalled service life.

## ALL-TERRAIN PBC REAMER

### THE ALL TERRAIN PBC (PUSH BACK CONE) ADDS A PUSH BACK CAP WITH CONICAL ROCK TEETH AND FLUID JETS.

In addition to the outstanding features of our standard All Terrain reamer, the All Terrain PBC (Push Back Cone) adds a push back cap with conical rock teeth and fluid jets. This gives the driller the versatility of pushing the reamer back with ease. The heavy construction of the All-Terrain PBC reamer makes it simply the toughest, most durable flute available on the market today. This tool cuts and pulverizes, forcing the remaining pieces into the formation wall. Key features include: constructed from heavy steel plate; product is fully welded; aggressive spiraling flutes allow cuttings, small aggregates and drilling fluids to pass by the body; replaceable jets facilitate precise mud flow and placement; extra heavy carbide cutters provide maximum performance and tool life; carbide hard facing on all wear surfaces; pushback cone with teeth and fluid jets.

**Ground Conditions:** Clay, aggregate and rock formations up to 20,000+ PSI.

**Shaft Size:** 3 1/4" - 6 5/8"

**Size Range:** 8" - 48"

#### PUSH BACK CONE

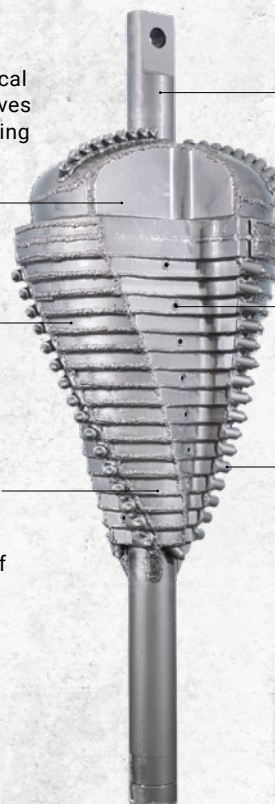
Adds a push back cap with conical rock teeth and fluid jets. This gives the driller the versatility of pushing the reamer back with ease.

#### FULLY-WELDED BODY

Welded steel plate construction provides unequalled service life.

#### AGGRESSIVE SPIRAL FLUTES

Spiraling flutes deliver smooth cutting action and provide an excellent channel for passage of cuttings and fluids.



#### OPTIONAL BUILT-IN SWIVEL

The optional built-in swivel reduces the tool's overall length and keeps the tool in place when pushing backwards.

#### REPLACEABLE FLUID PORTS

Located on the taper portion of the body ensures efficient fluid mixing.

#### CONICAL CARBIDE TEETH

Aggressive conical carbide teeth deliver excellent cutting action and extended service life.



# REAMERS

## FLUTED REAMERS (SHARK TEETH)

**FLUTED REAMERS ARE RENOWNED FOR THEIR ABILITY TO EXCEL IN CHALLENGING DRILLING ENVIRONMENTS.**

Our Fluted reamers are specifically designed to enhance drilling efficiency by effectively removing cuttings, reducing friction, and maintaining bore integrity. Experience the future of HDD with the \*NEW\* cast fluted reamer by StraightLine HDD. Explore its exceptional features, superior durability, and optimized performance to enhance your HDD projects like never before.

**Shaft Size:** 3 1/4" - 4 1/4"  
**Size Range:** 6" - 24"

### FLUID PORTS

The fluid ports have precise positioning to allow for the most efficient mixing and lubrication scenarios.

### SHARK ROTARY TEETH

Direct slurry flow past the reamer and out of the hole faster. It minimizes friction and maximizes energy transfer, resulting in faster drilling and improved accuracy.

### HARD SURFACING

All leading edges are protected by carbide hard surfacing for maximum service life.



## BUTTON FLUTED REAMER

**FLUTED REAMERS ARE RENOWNED FOR THEIR ABILITY TO EXCEL IN CHALLENGING DRILLING ENVIRONMENTS.**

Our Fluted reamers are specifically designed to enhance drilling efficiency by effectively removing cuttings, reducing friction, and maintaining bore integrity. Experience the future of HDD with the \*NEW\* cast fluted reamer by StraightLine HDD. Explore its exceptional features, superior durability, and optimized performance to enhance your HDD projects like never before.

**Shaft Size:** 3 1/4" - 4 1/2"  
**Size Range:** 6" - 24"

### FLUID PORTS

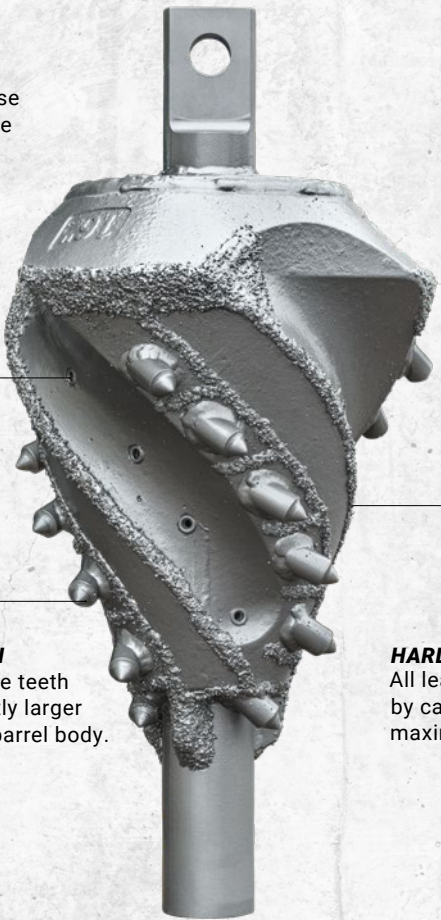
The fluid ports have precise positioning to allow for the most efficient mixing and lubrication scenarios.

### CONICAL CARBIDE TEETH

Aggressive conical carbide teeth placed to cut a hole slightly larger than the diameter of the barrel body.

### HARD SURFACING

All leading edges are protected by carbide hard surfacing for maximum service life.





# REAMERS

## BARREL REAMER

### STABILIZE THE TUNNEL AND EASES UTILITY INSTALLATION.

A versatile tool, featuring a relatively flat face lined with rows of carbide cutters, the StraightLine® Barrel Reamer cuts and opens the hole at a slightly larger diameter, than that of its solid body. Commonly used in soft formations, the tool is also often utilized as a stabilizer when pulling larger reamers, fly cutters or hole openers and is regularly down hole when installing final product.

**Ground Conditions:** Loams, moderate aggregates, clay, shale and light rock formations.

**Shaft Size:** 3 1/4 - 4 1/4"

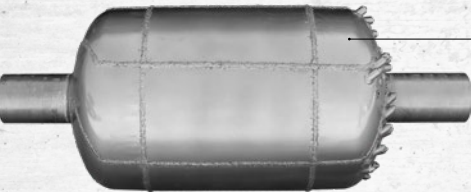
**Size Range:** 8" – 52"

#### CONICAL CARBIDE TEETH

Carbide teeth, placed on independent paths, engage the entire bore face.

#### REPLACEABLE FLUID PORTS

Located on the face of the barrel optimizes mud flow and fluid placement.



#### LONG FULL DIAMETER BODY

The long, full diameter body stabilizes and centers the reamer and utility in the hole during pullback.

## MAXI BARREL REAMER

### STABILIZE THE TUNNEL AND EASES UTILITY INSTALLATION.

All the versatility of the Barrel Reamer, with heavier weight construction; Maxi Barrel Reamers are constructed from material up to 50% greater than a standard barrel. StraightLine engineers had longevity in mind, with the incorporation of replaceable conical carbide cutters and replaceable carbide jets in the added value design. This tool is effective in sealing formation walls and stabilizing large reamers, fly cutters and hole-openers. The Maxi Barrel is regularly used for pulling back large final product, utilizing its design to open the hole with its long, solid body.

**Ground Conditions:** Loams, moderate aggregates, clay, shale and light rock formations.

**Shaft Size:** 4 1/2 - 9 1/2"

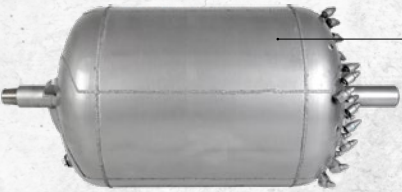
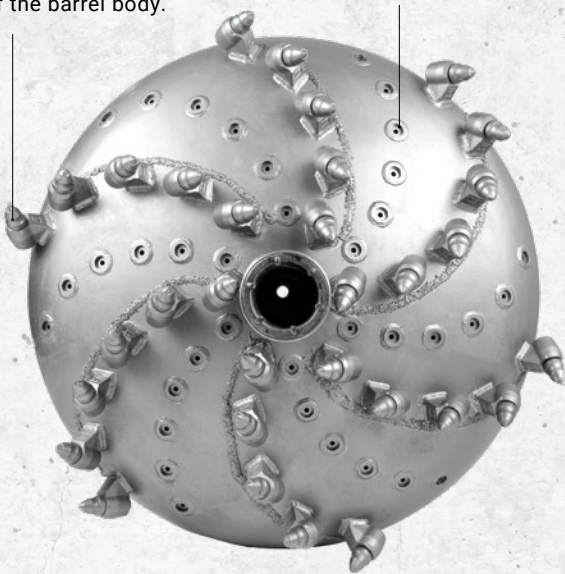
**Size Range:** 24" – 96"

#### CONICAL CARBIDE TEETH

Aggressive conical carbide teeth placed to cut a hole slightly larger than the diameter of the barrel body.

#### REPLACEABLE FLUID PORTS

Located on the face of the barrel optimizes mud flow and fluid placement.



#### LONG FULL DIAMETER BODY

The long, full diameter body stabilizes and centers the reamer and utility in the hole during pullback.



## HOLE OPENERS

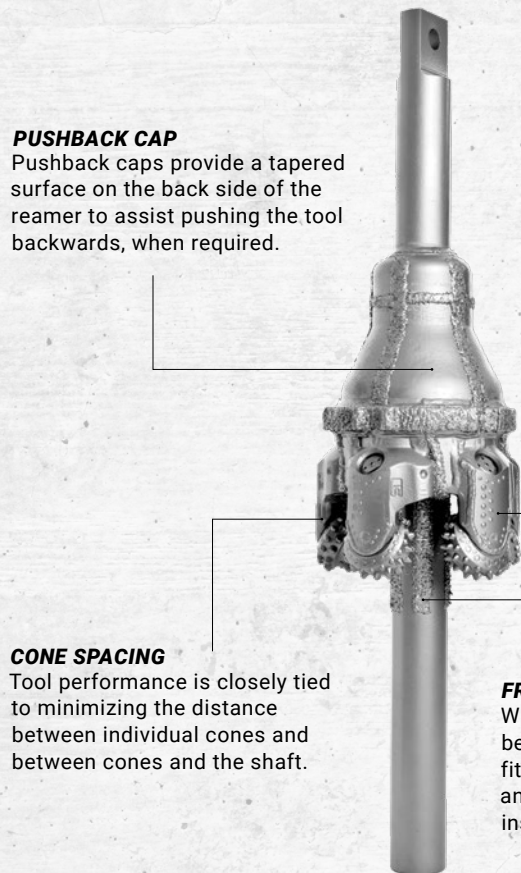
### DELIVERS SMOOTH CUTTING IN SOLID FORMATIONS—FROM SHALE TO GRANITE.

Designing the proper Hole Opener for a given situation takes expertise and experience - StraightLine® has both. Hole Openers are classified as a custom product - designed and built on a job by job basis. With variables such as cutter selections, Mill Tooth or Tungsten Carbide Insert (TCI) cutters, new or premium re-run condition cutters, size and quantity of cones, front and/or rear stabilizers, StraightLine's® knowledgeable staff will help guide you through the process of specifying the best tool for the job.

**Ground Conditions:** Loams, moderate aggregates, clay, shale and light rock formations.

**Shaft Size:** 3" - 4 1/8"

**Size Range:** 10" - 36"



#### PUSHBACK CAP

Pushback caps provide a tapered surface on the back side of the reamer to assist pushing the tool backwards, when required.

#### CONE SELECTION

Proper cone type and size are also key considerations. The cone's cutting structure is selected based on the specific rock formation. Cone size is also dependent on tool diameter.

#### CONE SPACING

Tool performance is closely tied to minimizing the distance between individual cones and between cones and the shaft.

#### FRONT STABILIZER

When a gap greater than 2-inches exists between the cone and the shaft, all tools are fitted with a centralizer to help center the tool and force rock to the outside. A front stabilizer insures smoother cutting and longer tool life.

## PDC HOLE OPENERS

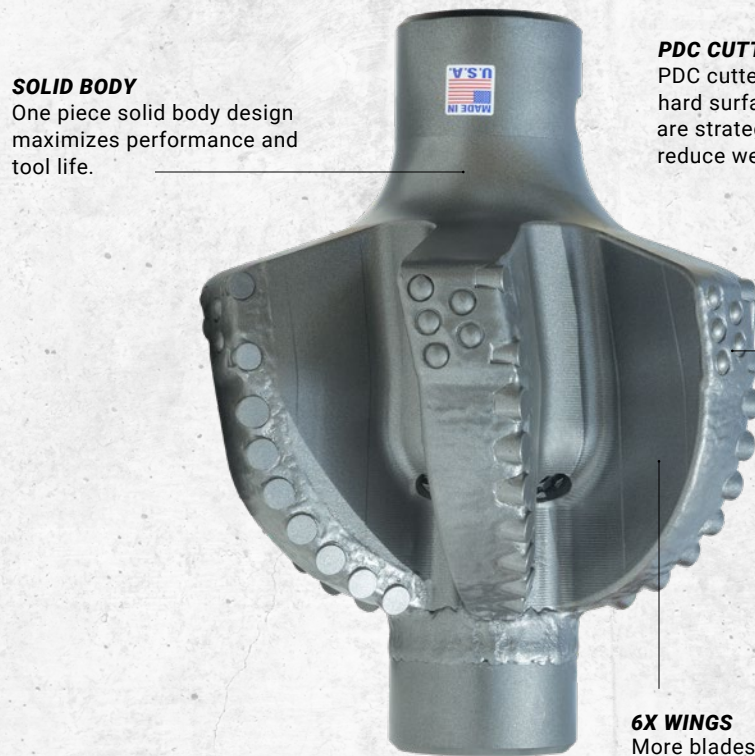
### DESIGNED WITH A DUAL FOCUS ON BEING FAST AND TOUGH TO MAKE SURE YOUR JOB GETS DONE QUICKLY

We are proud to offer these ultra-durable line of PDC hole openers. Our PDC hole openers have 6x blades and a higher PDC cutter count which helps to optimize a balanced cutter that evenly distributes the cutting load. With the dual focus on being fast and tough, these hole openers will stay in top condition ensuring profitability.

**Ground Conditions:** Solid non-compactable formation from Caliche to Granite.

**Blade count:** 6

**Size Range:** 12" - 16"



#### SOLID BODY

One piece solid body design maximizes performance and tool life.

#### PDC CUTTERS, TCI INSERTS

PDC cutters, TCI inserts and hard surface gauge protection are strategically placed to reduce wear and tear.

#### 6X WINGS

More blades and a higher PDC cutter count optimizes a balanced cutter that evenly distributes the cutting load.



# MUD MIXERS | SYSTEM TANKS

## STRAIGHTLINE HDD MUD MIXING SYSTEMS

Performix® mud mixers and specialty tanks deliver fully yielded fluids faster than anything on the market. At the heart of the system is a precision-engineered Venturi jet that shears, mixes and yields bentonite platelets with incredible efficiency. All Performix models feature:

- High capacity pumps designed to turn the fluid tankover in as little as two minutes.
- Reliable power from Kohler® gas or diesel engines.
- Large hopper with pivoting lid doubles as a bag rest.
- Compact design adapts to any truck or trailer.
- High capacity fuel tanks keep you mixing longer.



### PM170 MIXER

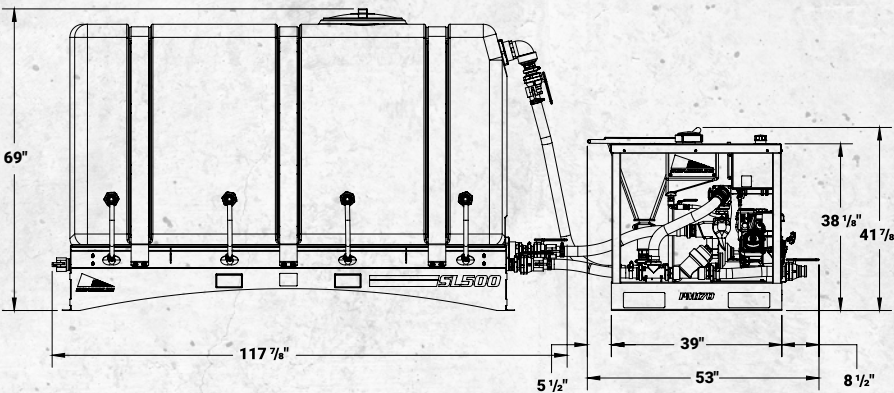
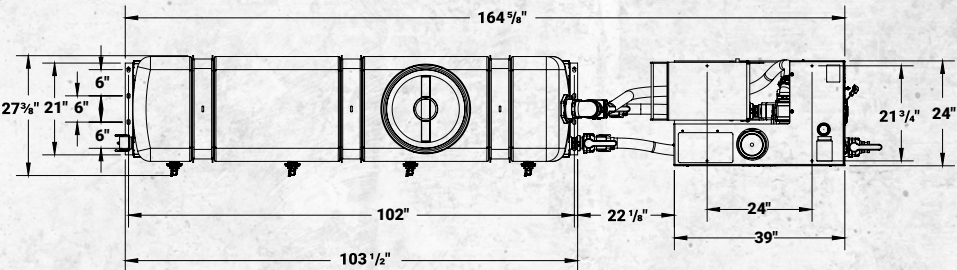
StraightLine HDD's Performix PM170 Mud Mixers provides Industry-leading performance in a compact footprint. In doing this, Straightline hdd has created the most complete bentonite mud mixer in it's class. First and foremost, our StraightLine HDD Performix PM170 mud mixing system features a 170-GPM, 7 HP Kohler engine. Additionally, our field-proven high-speed jet and venturi produce sheared and yielded mud in a matter of minutes. Finally, pair StraightLine HDD's Performix PM170 mixing system with our SL500-gallon mix system tank for max performance!



### SL500 MIX SYSTEM TANK

StraightLine HDD's Performix SL500 system tank is engineered to yield unmatched mixing characteristics. First, our Performix mixing tanks offer a radius bottom, with four powerful tank jets, front to back slope, and a center sump area. With this, the Performix system tanks eliminate fluid settlement issues that are common in mixing. Also, when mounted to our heavy-duty skid, the entire package measures just 24 inches wide. With this, our mixing systems boast a compact footprint for easy installation on your HDD trailer! Lastly, pair our Performix SL500 mixing system tanks with the Performix PM170 Mixer.

*PM170 MIXER & SL500 TANK ARE DESIGNED TO SIT 24" APART.*



PART #	DESCRIPTION	WEIGHT	PRICE
PM170	PM170 Mix System	347 lbs.	\$5,495.00

PART #	DESCRIPTION	WEIGHT	PRICE
SL500	SL500 System Tank	659 lbs.	\$5,495.00



# MUD MIXERS | SYSTEM TANKS

## STRAIGHTLINE HDD MUD MIXING SYSTEMS

Our in-house engineered and manufactured mud mixers yield better and faster bentonite solutions for all of your onsite needs. The centrifugal pump powers the process, turning a 1,000-gallon tank in approximately two minutes. Our jet and venturi is designed to get you to sheared, yielded and ready drilling fluids in a matter of minutes.



### PM365 MIXER

StraightLine HDD's Performix PM365 Mud Mixer provides Industry-leading performance in a compact footprint. In doing this, StraightLine HDD has created the most complete bentonite mud mixer in it's class. First and foremost, our StraightLine HDD Performix PM365 mud mixing system features a 365-GPM, 14 HP Kohler engine. Additionally, our field-proven high-speed jet and venturi produce sheared and yielded mud in a matter of minutes. Finally, pair StraightLine HDD's Performix PM365 mixing system with our NEW SL1000-gallon mix system tank for maximum performance!

PART #	DESCRIPTION	WEIGHT	PRICE
PM365	PM3654 Mix System	504 lbs.	\$7,869



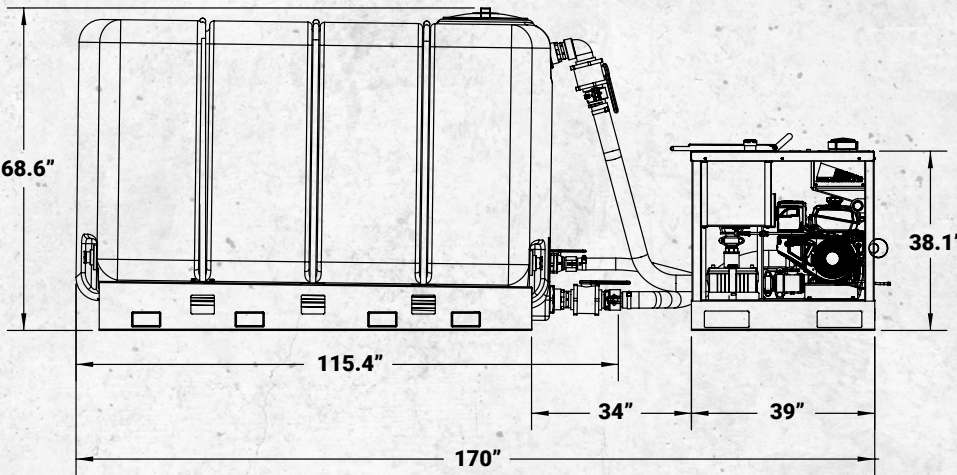
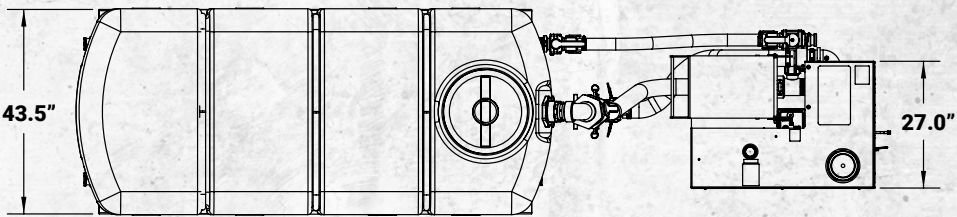
### SL1000 MIX SYSTEM TANK

The main features for our mix and storage tanks are:

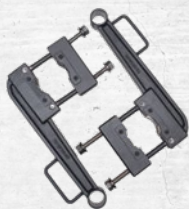
- Urethane paint on steel components.3" (7.6 cm) full port bungs
- Shut-off valves on the suction and discharge ports
- 1,000-gallon (3,785 L) tanks have a mix circuit with four tank guns to deliver a fast and thorough yield

PART #	DESCRIPTION	WEIGHT	PRICE
SL1000	SL1000 System Tank	940 lbs.	\$6,999

PM365 MIXER & SL1000 TANK ARE DESIGNED TO SIT 34" APART.







BREAKOUT WRENCH KIT

StraightLine HDD's portable breakout wrench kit provides a value-priced tool for safe and reliable breaking of torqued joints. Its compact design and light weight make it easy to handle in tight spaces. This kit is designed for use with tool outer diameters of 3" through 5 1/4".

PART #	DESCRIPTION	WEIGHT	PRICE
80789	Wrench Kit, 2 5/8" - 5 3/4"	95 lbs.	\$1,649.00



WIRE MESH PULLERS

Manufactured of hi-fatigue plastic coated aircraft strand steel cable, with a patented, stress-relieving pulling eye, these wire mesh pullers are recommended whenever high strength and small size are required.

PART #	DESCRIPTION	WEIGHT	PRICE
1603-100-01	3/4" - 1 1/4" Double Weave, 24" L	1.1 lbs.	\$45.36
1603-100-03	1 1/2" - 2" Triple Weave, 26" L	1.3 lbs.	\$72.75
1603-100-04	2" - 2 3/4" Triple Weave, 32" L	1.8 lbs.	\$83.17
1603-100-05	2 3/4" - 3 1/2" Triple Weave, 38" L	2.1 lbs.	\$122.30
1603-100-07	3 1/2" - 4 1/4" Triple Weave, 52" L	3.1 lbs.	\$137.94
1603-100-08	4 1/4" - 4 7/8" Triple Weave, 58" L	4.1 lbs.	\$154.90
1603-100-09	4 7/8" - 5 1/2" Triple Weave, 64" L	5.0 lbs.	\$283.76



STANDARD EXPANDING PULLERS

StraightLine HDD® offers two types of pullers, designed to grip the inside of polyethylene ducting. Our standard expanding pullers feature expanding jaws that spread the pulling load around the inside wall of the duct. This allows the max load to be applied without damaging the duct.

PART #	DESCRIPTION	WEIGHT	PRICE
1604-100-01	1" (fits 0.925" - 1.160" ID)	0.95 lbs.	\$139
1604-100-02	1 1/4" (fits 1.2" - 1.5" ID)	1.15 lbs.	\$149
1604-100-03	1 1/2" (fits 1.45" - 1.75" ID)	1.55 lbs.	\$174
1604-100-04	2" (fits 1.7" - 2.15" ID)	2.90 lbs.	\$224
1604-100-05	2 1/2" (fits 2.2" - 2.6" ID)	4.95 lbs.	\$305
1604-100-06	3" (fits 2.55" - 3.2" ID)	8.40 lbs.	\$356
1604-100-07	4" (fits 3.275" - 4.1" ID)	13.74 lbs.	\$435
1604-100-08	5" (fits 4.17" - 5.125" ID)	21.20 lbs.	\$647
1604-100-09	6" (fits 5.13" - 6.08" ID)	24.75 lbs.	\$810
1604-100-10	8" (fits 6.45" - 7.95" ID)	28.30 lbs.	\$1,003



INNER DUCT PULLERS

Designed to grip polyethylene ducting, its expanding jaws grip the inside wall of the duct. This causes the pulling load to be spread and allows a maximum load to be applied without damaging the duct.

PART #	DESCRIPTION	WEIGHT	PRICE
1602-100-01	3/4" (fits 0.72" - 0.93" ID)	0.54 lbs.	\$49.99
1602-100-02	1" (fits 0.94" - 1.15" ID)	0.79 lbs.	\$53.99
1602-100-03	1 1/4" (fits 1.26" - 1.44" ID)	1.39 lbs.	\$57.99
1602-100-04	1 1/2" (fits 1.48" - 1.66" ID)	2.00 lbs.	\$67.99
1602-100-05	2" (fits 1.91" - 2.08" ID)	3.2 lbs.	\$86.99





NOTES

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