

Vermeer



HDD TOOLING SPECIALIST

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BORESTORE

Fire HD
EXTINGUISHING SYSTEM

Ultra
MILLING

SPECIALIST

BORESTORE®

HDD TOOLING AND ACCESSORIES WAREHOUSE

VOL. 10	BORESTORE.COM
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WHEN YOU NEED IT, WHERE YOU NEED IT.

The Vermeer BORESTORE® HDD tooling and accessories warehouse is your complete source for horizontal directional drill (HDD) tooling and accessories. It's easier than ever to get what you need to get the job done.



Conveniently shop online 24/7 at **BORESTORE.COM**.
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Call **866-VERMEER**, Monday - Friday, 6 a.m. - 7 p.m. Central Time.



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HDD tooling to get the job done

Jobs change. The unexpected occurs. You need tooling now. The Vermeer BORESTORE accepts orders for overnight shipping up to 7 p.m. Central Time.

HAVE TOOLING, WILL TRAVEL.

When we say we have unmatched HDD customer support, it's because we do. Speak with a Vermeer HDD tooling specialist at your local dealership about what's going on with your machine (no matter the color), your ground conditions, your mud mix or the tooling you need for the next job.

With expanding locations around the globe, Vermeer HDD specialists have an acute focus on tooling and will work with you to select the best tooling for ground conditions, drill sizes and types, and other considerations.

Contact your local dealer for more information.



10 VOLUMES IN AND OUR MISSION REMAINS THE SAME.

From the very first volume of the BORESTORE tooling catalog in 2012, Vermeer has endeavored to provide you with the most robust inventory of HDD tooling and accessories. It's all found here — in our best volume yet.



75 YEARS OF YELLOW IRON

Vermeer built a 75-plus-year legacy of customer support excellence with a worldwide network of dealers. And with the opening of a new Global Parts Distribution Center — we are just getting started.

Contact your local dealer to learn more.

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**QUICK RIG
GUIDE.
VERMEER
RIGFITTER.
MORE
RESOURCES
TO SUPPORT
YOUR HDD
OPERATION.**



**SCAN TO
LEARN
MORE**



D6x6 | D7x11 | D7x11A | D8x12 1.32-IN (3.35-CM) #200 6-FT (1.8-M) LONG ROD

PART NO.	PRODUCT
SUB SAVER	
296276507	FST 1.66-in (4.22-cm) #200 thread, 8-in (20.32-cm) long
DRILL ROD OPTION	
222394001	Firestick® drill rod 1.32-in (3.35-cm) #200 thread, 6-ft (1.8-m) long
QUICKFIRE® CONNECTION SYSTEM	
296364003	Starter rod QuickFire® connection system 300 (B) x FST #200 (B)
296364002	Collar QuickFire® connection system 300 (hardfaced)
296364044	Collar QuickFire® connection system 300 (hardfaced with teeth)
296364040	Adapter QuickFire® connection system 300 (P) x 2-4 ACME (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296555466	Starter rod QuickFire® HD connection system 300 (P) x 1.66-in (4.22-cm) FST #200 (B)
296560815	Collar QuickFire® HD connection system 300 (hardfaced)
296555458	Collar QuickFire® HD connection system 300 (hardfaced with teeth)
296560794	Adapter QuickFire® HD connection system 300 (B) X 2-in API IF (P)
296555470	Adapter QuickFire® HD connection system 300(B) X 2-4 ACME (P)
HOUSING OPTIONS	
296600596	End load housing 2-in (5.1-cm) OD x FST #200 (B) 8-in (20.32-cm) DCI® mini (Vermeer 5-bolt pattern)
296600597	End load housing 2.25-in (5.7-cm) OD x FST #200 (B) 15-in (38.10-cm) DCI® (Vermeer 5-bolt pattern)
296408265	Premium housing 2.75-in (7-cm) OD x 2-4 ACME (B) (Vermeer 6-bolt pattern)
296448877	Direct connect housing 2.5-in (6.35-cm) OD x FST #200 (B) (Vermeer 5-bolt pattern)
296466246	Premium housing direct connect kit 2.75-in (7-cm) OD x FST #200 (B) (Vermeer 6-bolt pattern)
296600601	Ultra X3 275 drilling system housing 2.75-in (7-cm) OD x 2-in API IF (B)
WISE JAW	
296271432	Vise jaw
ROD WIPER OPTIONS	
235920001	Rod wiper
296385050	Rod wiper — split (D8x12)



D7x11 | D7x11A | D7x11A SERIES II | D8x12 | D9x13 SERIES II D9x13 S3 | D10x15 S3 1.66-IN #200 6-FT (1.8-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296255361	FST 1.66-in #200 thread, 10-in (25.40-cm) long (D7x11A)
SUB SAVER	
296255351	FST 1.66-in #200 thread, 5.83-in (14.81-cm) long (D7x11A)
296276507	FST 1.66-in #200 thread, 8-in (20.32-cm) long (D7x11A Series II, D8x12, D9x13 Series II, D9x13 S3, D10x15 S3)
DRILL ROD OPTIONS	
216492001	Firestick® drill rod 1.66-in #200 thread, 6-ft (1.8-m) long
296441778	Silver Series drill rod 1.66-in #200 thread, 6-ft (1.8-m) long
QUICKFIRE® CONNECTION SYSTEM	
296364003	Starter rod QuickFire® connection system 300 (B) x FST #200 (B)
296364002	Collar QuickFire® connection system 300 (hardfaced)
296364044	Collar QuickFire® connection system 300 (hardfaced with teeth)
296364040	Adapter QuickFire® connection system 300 (P) x 2-4 ACME (P)
296449118	Adapter QuickFire® connection system 300 (P) x 2-in API IF (P)
296364041	Adapter QuickFire® connection system 300 (P) x 2.375-in API Reg (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296555466	Starter rod QuickFire® HD connection system 300 (P) x 1.66-in FST #200 (B)
296560815	Collar QuickFire® HD connection system 300 (hardfaced)
296555458	Collar QuickFire® HD connection system 300 (hardfaced with teeth)
296560794	Adapter QuickFire® HD connection system 300 (B) X 2-in API IF (P)
296555470	Adapter QuickFire® HD connection system 300(B) X 2-4 ACME (P)
HOUSING OPTIONS	
296600596	End load housing 2-in (5.08-cm) OD x FST #200 (B) 8-in DCI® Mini (Vermeer 5-bolt pattern)
296600597	End load housing 2.25-in (5.72-cm) OD x FST #200 (B) 15-in DCI® (Vermeer 5-bolt pattern)
296408265	Premium housing 2.75-in (6.99-cm) OD x 2-4 ACME (B) (Vermeer 6-bolt pattern)
296448877	Direct connect housing 2.5-in (6.35-cm) OD x FST #200 (B) (Vermeer 5-bolt pattern)
296466246	Premium housing direct connect kit 2.75-in (6.99-cm) OD x FST #200 (B) (Vermeer 6-bolt pattern)
296600601	Ultra X3 275 drilling system housing 2.75-in (6.99-cm) OD x 2-in API IF (B)
WISE JAW	
296550266	Vise jaw stationary side
296550265	Vise jaw cylinder side
ROD WIPER OPTIONS	
235921001	Rod wiper
296294590	Rod wiper — split



D16x20 | D16x20A | D16x20 Series II | D18x22 | D20x22 | D20x22 S3 1.9-IN #250 10-FT (3-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296255364	FST 1.9-in #250 thread, 11-in (27.9-cm) long
SUB SAVER	
296255352	FST 1.9-in #250 thread, 4-in (10.2-cm) long (D16x20, D16x20A, D18x22, D20x22)
296291966	FST 1.9-in #250 thread, 10.14-in (25.8-cm) long (D16x20 Series II, D20x22 S3)
DRILL ROD OPTIONS	
230993001	Firestick® drill rod 1.9-in #250 thread, 10-ft (3.1-m) long
296441777	Silver Series drill rod 1.9-in #250 thread, 10-ft (3.1-m) long
QUICKFIRE® CONNECTION SYSTEM	
296331952	Starter rod QuickFire® connection system 400 (B) x FST #250 (B)
296331995	Collar QuickFire® connection system 400 (hardfaced)
296364043	Collar QuickFire® connection system 400 (hardfaced with teeth)
296364037	Adapter QuickFire® connection system 400 (P) x 2.375-in API Reg (P)
296383294	Adapter QuickFire® connection system 400 (P) x 8-UNC (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296555446	Starter rod QuickFire® HD connection system 400 (P) x 1.90-in FST #250 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
HOUSING OPTIONS	
296408264	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296466151	Small Armor drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
296555441	Ultra X3 325 drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
WISE JAW	
236111001	Vise jaw stationary side
236112001	Vise jaw cylinder side
250272001	Vise jaw cylinder side with centering plate
ROD WIPER OPTIONS	
235922001	Rod wiper
296294594	Rod wiper — split



D18x22 | D20x22 | D20x22 Series II | D20x22 S3 | D23x30 S3 2.06-IN #400 10-FT (3-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296279709	FST 2.06-in #400 thread, 11-in (27.94-cm) long (D18x22, D20x22)
SUB SAVER	
296279708	FST 2.06-in #400 thread, 6.5-in (16.51-cm) long (D18x22, D20x22)
296281195	FST 2.06-in #400 thread, 10.14-in (25.76-cm) long (D20x22 Series II, D20x22 S3, D23x30 S3)
DRILL ROD OPTIONS	
221628001	Firestick® drill rod 2.06-in #400 thread, 10-ft (3.1-m) long
296441776	Silver Series drill rod 2.06-in #400 thread, 10-ft (3.1-m) long
QUICKFIRE® CONNECTION SYSTEM	
296331926	Starter rod QuickFire® connection system 400 (B) x FST #400 (B)
296331995	Collar QuickFire® connection system 400 (hardfaced)
296364043	Collar QuickFire® connection system 400 (hardfaced with teeth)
296364037	Adapter QuickFire® connection system 400 (P) x 2.375-in API Reg (P)
296383294	Adapter QuickFire® connection system 400 (P) x 8-UNC (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296555448	Starter rod QuickFire® HD connection system 400 (P) x 2.06-in FST #400 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
HOUSING OPTIONS	
296408264	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296466151	Small Armor drilling system housing 3.25-in (8.26-cm) OD x 2.325-in API Reg (B)
296555441	Ultra X3 325 drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
WISE JAW	
296279701	Vise jaw stationary side
296279704	Vise jaw cylinder side
ROD WIPER OPTIONS	
235923001	Rod wiper
296294598	Rod wiper — split



D23x30 S3 | D24x40 | D24x40A | D24x40 Series II | D24x40 S3 2.375-IN #600 10-FT (3-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
230980001	FST 2.375-in #600 thread, 12-in (30.48-cm) long (D24x40A SN 001-382)
249169001	FST 2.375-in #600 thread, 13.5-in (34.29-cm) long (D24x40A SN 383-Above)
296273550	FST 2.375-in #600 thread, 16-in (40.64-cm) long (D24x40 Series II)
296443778	FST 2.375-in #600 thread, 16.5-in (41.91-cm) long (D24x40 S3)
SUB SAVER	
296443760	FST 2.375-in #600 thread, 10.14-in (25.76-cm) long (D23x30 S3)
230945001	FST 2.375-in #600 thread, 5.5-in (13.97-cm) long (D24x40A SN 001-382)
249166001	FST 2.375-in #600 thread, 7-in (17.78-cm) long (D24x40A SN 383-Above)
276323001	FST 2.375-in #600 thread, 9.5-in (24.13-cm) long (D24x40 Series II)
296443760	FST 2.375-in #600 thread, 10-in (25.40-cm) long (D24x40 S3)
DRILL ROD OPTIONS	
222276001	Firestick® drill rod 2.375-in #600 thread, 10-ft (3.1-m) long (D23x30 S3-D24x40 S3)
222455001	Firestick® drill rod 2.375-in #600 thread, 15-ft (4.6-m) long (D40x40)
296441775	Silver Series drill rod 2.375-in #600 thread, 10-ft (3.1-m) long (D23x30 S3-D24x40 S3)
QUICKFIRE® CONNECTION SYSTEM	
296331924	Starter rod QuickFire® connection system 400 (B) x FST #600 (B)
296364069	Starter rod QuickFire® connection system 460 (B) x FST #600 (B)
296331995	Collar QuickFire® connection system 400 (hardfaced)
296364043	Collar QuickFire® connection system 400 (hardfaced with teeth)
296331990	Collar QuickFire® connection system 460 (hardfaced)
296364042	Collar QuickFire® connection system 460 (hardfaced with teeth)
296364037	Adapter QuickFire® connection system 400 (P) x 2.375-in API Reg (P)
296364038	Adapter QuickFire® connection system 400 (P) x 2.875-in API Reg (P)
296383294	Adapter QuickFire® connection system 400 (P) x 8-UNC (P)
296364013	Adapter QuickFire® connection system 460 (P) x 2.375-in API Reg (P)
296364014	Adapter QuickFire® connection system 460 (P) x 2.875-in API Reg (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296555430	Starter rod QuickFire® HD connection system 400 (P) x 2.375-in FST #600 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555453	Adapter QuickFire® HD connection system 400 (B) x 2.875-in API Reg (P)
296560755	Starter rod QuickFire® HD connection system 460 (P) x 2.375-in FST #600 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
HOUSING OPTIONS	
296408264	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296406540	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296466243	Premium housing direct connect kit 3-in (7.62-cm) OD x FST #600 (B) (Vermeer 6-bolt pattern)
296466151	Small Armor system housing 3.25-in (8.26-cm) OD x 2.325-in API Reg (B)
296466152	Medium Armor system housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
296555441	Ultra X3 325 drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
296566842	Ultra X3 375 drilling system housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
WISE JAW	
296400226	Vise jaw (D23x30 S3) stationary side
296400230	Vise jaw (D23x30 S3) cylinder side
230831001	Vise jaw (D24x40A-D24x40 S3)
ROD WIPER OPTIONS	
235924001	Rod wiper (D24x40)
296294602	Rod wiper — split (D23x30 S3)



D23x30DR S3

2.375-IN #625 10-FT (3.1-M) LONG ROD

PART NO.	PRODUCT
SUB SAVER	
296522920	Outer sub saver
296487423	Threaded inner sub saver
296522905	Inner sub saver slide coupler
296487425	Inner sub saver hex
296522817	Roll pin (2 required)
296522818	Spring
DRILL ROD	
296522826	Outer rod — Firestick® drill rod 2.375-in #625 10-ft (3.1-m) long
296522825	Inner hex rod
296522884	Inner rod hex coupler
296544123	Retention pin dowel (2 required)
DRILL HEAD	
296490378	RH10 drill head 15-in (38.1-cm) Sonde, 2.875-in API Reg bit box
296537909	RH10 50 hour rebuild kit
296537911	RH10 200 hour rebuild kit
296514826	RH10 drill head rebuild tool kit
296521054	PG5 quick pullback grapple for tricone bits
101562004	Vermeer polyurea grease (10-pack)
ADAPTERS	
296539674	2.375-in FST #625 (P) x 24k pull eye with fluid ports
296522913	2.375-in FST #625 (P) x 24k pull eye with fluid ports and teeth
296522850	2.375-in FST #625 (P) x 2.375-in API Reg (P)
296522848	2.375-in FST #625 (P) x 2.875-in API Reg (P)
296522852	2.375-in FST #625 (P) x 3.5-in API Reg (P)
296539673	2.375-in FST #625 (P) x 2.375-in FST #600 (P)
296539678	2.375-in FST #625 (P) x QuickFire® connection system 400 (B) starter rod
296560796	2.375-in FST #625 (P) x QuickFire® HD connection system 400 (P) starter rod
WISE JAW	
296486847	Vise jaw
ROD WIPER	
296294602	Rod wiper — split



*Historical drill depicted

D36x50 | D36x50 Series II | D40x55 S3 2.375-IN #650 10-FT (3-M) OR 15-FT (4.6-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296309648	FST 2.375-in #650 thread, 14.42-in (36.63-cm) long (D36x50, D36x50 Series II)
296443819	FST 2.375-in #650 thread, 15.42-in (39.17-cm) long (D40x55 S3)
SUB SAVER	
296309650	FST 2.375-in #650 thread, 7.92-in (20.10-cm) long (D36x50, D36x50 Series II)
296443818	FST 2.375-in #650 thread, 8.92-in (22.70-cm) long (D40x55 S3)
DRILL ROD OPTIONS	
296309599	Firestick® drill rod 2.375-in #650 thread, 10-ft (3.1-m) long (D36x50, D36x50 Series II, D40x55 S3)
296312531	Firestick® drill rod 2.375-in #650 thread, 15-ft (4.6-m) long (D36x50, D36x50 Series II)
QUICKFIRE® CONNECTION SYSTEM	
296331978	Starter rod QuickFire® connection system 460 (B) x FST #650 (B)
296415321	Starter rod QuickFire® connection system 460 (B) x FST #650 (B) with check valve
296331990	Collar QuickFire® connection system 460 (hardfaced)
296364042	Collar QuickFire® connection system 460 (hardfaced with teeth)
296364013	Adapter QuickFire® connection system 460 (P) x 2.375-in API Reg (P)
296364014	Adapter QuickFire® connection system 460 (P) x 2.875-in API Reg (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296560757	Starter rod QuickFire® HD connection system 460 (P) x 2.375-in (6.03-cm) FST #650 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
HOUSING OPTIONS	
296406540	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296466238	Premium housing direct connect kit 3.25-in (8.26-cm) OD x FST #650 (B) (Vermeer 6-bolt pattern)
296466152	Medium Armor system housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
296351765	Universal housing 3.5-in (8.89-cm) OD x 2.375-in API Reg (BxB) 61.3 gpm (232.1 L/min)
296566842	Ultra X3 375 drilling system housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
WISE JAW	
276415001	Vise jaw 2.375-in (6.03-cm)
ROD WIPER OPTIONS	
235924001	Rod wiper
296294602	Rod wiper — split



D36x50 | D36x50 Series II | D40x55 S3
2.625-IN #700 10-FT (3-M) OR 15-FT (4.6-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296309505	FST 2.625-in #700 thread, 15.5-in (39.37-cm) long (D36x50, D36x50 Series II)
296443822	FST 2.625-in #700 thread, 14.5-in (36.83-cm) long (D40x55 S3)
SUB SAVER	
296309507	FST 2.625-in #700 thread, 8.5-in (21.59-cm) long (D36x50, D36x50 Series II)
296443821	FST 2.625-in #700 thread, 9.5-in (24.13-cm) long (D40x55 S3)
DRILL ROD OPTIONS	
296309521	Firestick® drill rod 2.625-in #700 thread, 10-ft (3.1-m) long
296309522	Firestick® drill rod 2.625-in #700 thread, 15-ft (4.6-m) long
QUICKFIRE® CONNECTION SYSTEM	
296331962	Starter rod QuickFire® connection system 460 (B) x FST #700 (B)
296331990	Collar QuickFire® connection system 460 (hardfaced)
296364042	Collar QuickFire® connection system 460 (hardfaced with teeth)
296364013	Adapter QuickFire® connection system 460 (P) x 2.375-in API Reg (P)
296364014	Adapter QuickFire® connection system 460 (P) x 2.875-in API Reg (P)
QUICKFIRE® HD CONNECTION SYSTEM	
296560759	Starter rod QuickFire® HD connection system 460 (P) x 2.625-in FST #750 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
HOUSING OPTIONS	
296406540	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern)
296466239	Premium housing direct connect kit 3.25-in (8.26-cm) OD x FST #700 (B) (Vermeer 6-bolt pattern)
296466152	Medium Armor system housing 3.75-in (9.50-cm) OD x 2.875-in API Reg (B)
296566842	Ultra X3 375 drilling system housing 3.75-in (9.50-cm) OD x 2.875-in API Reg (B)
WISE JAW	
296310768	Vise jaw
ROD WIPER OPTIONS	
296294606	Rod wiper — split



D40x55DR S3

2.625-IN #750 10-FT (3.1-M) LONG ROD

PART NO.	PRODUCT
SUB SAVER	
296472053	Outer sub saver
296456692	Threaded inner sub saver
296456600	Inner sub saver slide coupler
296456601	Inner sub saver hex
296456618	Spring
296456627	Roll pin (4 required)
DRILL ROD	
296456678	Outer rod — Firestick® drill rod 2.625-in #750 10-ft (3.1-m) long
296456677	Inner hex rod
296487375	Rod coupler
296456627	Roll pin (2 required)
DRILL HEAD	
296479658	RH15 drill head 15-in (38.10-cm) Sonde, 3.5-in API bit box
296490296	RH15 drill head 19-in (48.26-cm) Sonde, 3.5-in API bit box
296490302	RH15 50 hour rebuild kit
296490303	RH15 200 hour rebuild kit — 15-in (38.10-cm) sonde (for 296479658)
296490305	RH15 200 hour rebuild kit — 19-in (48.26-cm) sonde (for 296490296)
296479732	RH15 drill head rebuild tool kit
296514927	PG6 quick pullback grapple for tricone bits
101562004	Vermeer polyurea grease (10-pack)
ADAPTERS	
296482803	2.625-in FST #750 (P) x 24k pull eye with fluid ports
296482840	2.625-in FST #750 (P) x 24k pull eye with fluid ports and teeth
296487452	2.625-in FST #750 (P) x 50k pull eye
296487461	2.625-in FST #750 (P) x 50k pull eye with teeth
296487454	2.625-in FST #750 (P) x 2.375-in API Reg (P)
296487456	2.625-in FST #750 (P) x 2.875-in API Reg (P)
296487458	2.625-in FST #750 (P) x 3.5-in API Reg (P)
296487472	2.625-in FST #750 (P) x 2.625-in FST #750 (P)
296456621	2.625-in FST #750 (P) x QuickFire® connection system 460 (B) starter rod
296560813	2.625-in FST #750 (P) x QuickFire® connection system 460 (P) starter rod
WISE JAW	
296486831	Vise jaw
ROD WIPER	
296294606	Rod wiper — split



D60x90 | D60x90 S3 2.875-IN #900 15-FT (4.6-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296357202	FST 2.875-in #900 thread, 19.7-in (50.04-cm) long (D60x90, D60x90 S3)
296357222	FST 2.875-in #900 thread, 19.7-in (50.04-cm) long (wireline) (D60x90, D60x90 S3)
SUB SAVER	
296344115	FST 2.875-in #900 thread, 8.7-in (22.10-cm) (for drive chucks 296357202, 296257222)
DRILL ROD OPTION	
222452001	Firestick® drill rod 2.875-in #900 thread, 15-ft (4.6-m) long
ADAPTERS	
296337363	Adapter 2.875-in API Reg (P) x 2.875-in FST #900 (B)
296341593	Adapter 2.875-in API IF (P) x 2.875-in FST #900 (B)
HOUSING OPTIONS	
296408266	Premium housing 3.5-in (8.89-cm) OD x 2.875-in API Reg (B) Vermeer 6-bolt pattern 5/8-in Bolts
296466153	Large Armor system housing 4.25-in (10.80-cm) OD x 2.875-in API IF (B)
296351766	Universal housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (BxB) 95.7 gpm (362.3 L/min)
WISE JAW	
296443024	Vise block insert cylinder side (D60x90, D60x90 S3)
296350898	Vise block insert stationary side (D60x90, D60x90 S3)
ROD WIPER OPTIONS	
235925001	Rod wiper
296294610	Rod wiper — split

For drill bit options, talk to your local Vermeer dealer to find the best fit for your next project or see pages 28-41.



Vermeer HDD tooling specialists have extensive jobsite knowledge and experience to answer your toughest jobsite and tooling questions.



*Historical drill depicted

D60x90 | D60x90 S3 | D80x100 | D80x100 Series II 3.5-IN #800 15-FT (4.6-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296255475	FST 3.5-in #800 thread, 16.46-in (41.81-cm) long (D60x90, D60x90 S3, D80x100 Series II)
222431001	FST 3.5-in #800 thread, 13-in (33.02-cm) long (D80x100)
296268953	FST 3.5-in #800 thread, 16.49-in (41.89-cm) long (wireline) (D80x100 Series II)
SUB SAVER	
296255477	FST 3.5-in #800 thread, 7.02-in (17.80-cm) long (D60x90, D60x90 S3, D80x100, D80x100 Series II)
DRILL ROD OPTION	
222454001	Firestick® drill rod 3.5-in #800 thread, 15-ft (4.6-m) long
ADAPTERS	
296257929	Adapter 2.875-in API Reg (P) x 3.5-in FST #800 (B)
296312650	Adapter 2.875-in API IF (P) x 2.875-in FST #800 (B)
HOUSING OPTIONS	
296408266	Premium housing 3.5-in (8.89-cm) OD x 2.875-in API Reg (B) Vermeer 6-bolt pattern 5/8-in (1.6-cm) bolts
296466153	Large Armor system housing 4.25-in (10.80-cm) OD x 2.875-in API IF (B)
296351766	Universal housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (BxB) 95.7 gpm (362.3 L/min)
WISE JAW	
296443140	Vise block cylinder side (D60x90, D60x90 S3)
296369679	Vise block stationary side (D60x90, D60x90 S3)
296285731	Vise block D80x100 Series II (SN 101-436)
296303056	Vise block D80x100 Series II (SN 437)
296303218	Vise insert — diamond pattern (for part No. 296303056)
249880001	Vise jaw (D80x100)
285754001	Vise block with insert (DD80x100)
278121001	Vise insert (for part No. 285754001 and 296285731) (D80x100)
ROD WIPER OPTIONS	
235926001	Rod wiper
296294614	Rod wiper — split



D100x120 Series II | D100x140 | D100x140 S3 3.5-IN #1000 15-FT (4.6-M) OR 20-FT (6.1-M) LONG ROD

PART NO.	PRODUCT
DRIVE CHUCK	
296309516	FST 3.5-in #1000 thread, 16.24-in (41.25-cm) long
296309602	FST 3.5-in #1000 thread, 16.24-in (41.25-cm) long (wireline)
SUB SAVER	
296309515	FST 3.5-in #1000 thread, 7.02-in (17.80-cm) long
DRILL ROD OPTIONS	
296337977	Firestick® drill rod 3.5-in #1000 thread, 15-ft (4.6-m) long (D100x140, D100x140 S3)
296309520	Firestick® drill rod 3.5-in #1000 thread, 20-ft (6.1-m) long
ADAPTERS	
296312588	Adapter 3.5-in API Reg (P) x 3.5-in FST #1000 (B)
296312616	Adapter 2.875-in API IF (P) x 2.875-in FST #1000 (B)
HOUSING OPTIONS	
296408267	Premium housing 4.5-in (11.46-cm) OD x 3.5-in API Reg (B) Vermeer 6-bolt pattern 3/4-in bolts
296466153	Large Armor system housing 4.25-in (10.80-cm) OD x 2.875-in API IF (B)
296351767	Universal housing 4.5-in (11.46-cm) OD x 3.5-in API Reg (BxB) 187.6 gpm (710.1 L/min)
WISE JAW	
296303056	Vise block 3.5-in (8.89-cm) (D100x120 Series II, D100x140, D100x140 S3)
296303218	Vise insert - diamond pattern 3.5-in (8.89-cm) (for part No. 296303056) (D100x120 Series II, D100x140, D100x140 S3)
ROD WIPER OPTIONS	
235926001	Rod wiper
296294614	Rod wiper — split

DITCH WITCH® COMPATIBILITY

BORESTORE warehouse makes it easy to use our most popular tooling technologies on your Ditch Witch HDD.



Connections

Running a Ditch Witch drill rod? The BORESTORE tooling warehouse can cut non-proprietary thread profiles, so we can convert you to the QuickFire® connection system.

Housings

Running Subsite® Electronics? Our Premium and Armor system housings are available in Subsite-Electronics-compatible versions.

Let your local Vermeer dealer know the drill model you're running, and they can show you a variety of options to help meet your needs.



Bits

Have some life left on your current Ditch Witch housing? We offer our high-end Ace™ and Gladiator bit families in Ditch Witch 5-bolt and 6-bolt configurations, offering compatibility with your current housing.

Own some Ditch Witch pattern bits? Select Premium housings feature both Vermeer 6-bolt and Ditch Witch 6-bolt configurations on a single housing, helping you maximize usage of your bit fleet.





VERMEER QUICKLOCK™ THREAD-LOCKING COMPOUND

Stabilize threaded connections between the drive chuck and the sub saver of your HDD.

With its extended shelf life and quick cure time, Vermeer QuickLock™ two-part epoxy thread-locking compound helps you maintain the sub saver and maximize HDD rod life. It's an efficient and durable option for threaded tooling connections that require a strong permanent bond.

TRADITIONAL CURING TIME LIMITS OPTIONS

When it's time to switch out the sub saver, thread lock must be applied to the threads between the sub saver and drive chuck. The 24-hour standard cure time for traditional compounds can bring HDD operations to a halt. Your crew has few options. They may wait to change the sub saver at the end of the day or put it off even longer. They may attempt to speed the curing process by applying heat.

Shortcuts taken to get around the cure time required of traditional thread lock compounds can have measurable impacts on component life. Delaying the sub saver switch until the end of the day can accelerate wear on threaded connections and excessive heat can damage the chuck on which the sub saver is mounted.

LOCK IT OVER LUNCH

Vermeer QuickLock compound provides an alternative to 24-hour cure times. It cures in as little as one hour! Now it is possible for your crews to replace the sub saver, go to lunch and get back to drilling. Timely replacement of sub savers can help protect drill rod threads, therefore helping extend the life of your drill rod.

Learn more at borestore.com/quicklock

PERSONALIZED TRAINING OPPORTUNITIES TAILORED FOR YOUR CREW

Whatever the experience level of your crew, Vermeer offers training opportunities that can bolster their confidence and performance on the jobsite.

HDD Circuit® training program



Certified in-class and hands-on training programs for trenchless installation careers that are hosted in Pella, Iowa, in a small-group setting

HDD Fundamentals program



Instructor-led classroom training that teaches the fundamentals of HDD and is hosted by your local Vermeer dealership team

Vermeer HDD Simulator 2.0



A virtual reality-based training interaction that gets you on a drill before you step on a jobsite

REGISTER TODAY

vermeer.com/HDDTRAINING





FIRESTICK®

THE SUPERIOR DRILL ROD

High standards. High expectations. Proven results.

When Vermeer developed the Firestick® drill rod, it invigorated the industry. The Firestick drill rod meets high standards of quality, durability and reliability.

Quality steel. Reliable construction. Precise tolerances. These are the qualities that describe the industry-leading Vermeer Firestick drill rod. Each rod carries a batch number for traceability. It's designed with a coarse and tapered thread profile for quick makeup.

The durability and performance of your drill rod is vital to your operation. See why this Vermeer original sets the industry standard.



SILVER SERIES

SECOND TO ONLY ONE

When straightforward, less-aggressive projects require a budget-conscious option, there's the Silver Series drill rod. Comprised of one-piece forged, S135 grade steel, and threaded in the same U.S. state-of-the-art facility as Firestick drill rod, it is designed for moderate steering applications.

The durability and performance of your drill rod is vital to your operation. Together, Firestick and Silver Series drill rods provide trusted options for your project.



LOCK IT OVER LUNCH!

Vermeer QuickLock™ provides the cure to 24-hour cure times. The thread lock cures in as little as one hour! Now it is possible for your crews to replace the sub saver, go to lunch and get back to drilling. Timely replacement of sub savers can help protect drill rod threads, therefore extending life.

VERMEER DRILL ROD

USAGE GUIDE: FIRESTICK OR SILVER SERIES DRILL ROD?

Which Vermeer HDD do you operate?



The Silver Series drill rod is comprised of S135 steel with a yield stress of 135,000 psi (930,792 kPa). That makes the recommended average steer 8% per rod compared to 10% per rod with the Firestick drill rod.

What level of steerability do you require with your bores?

- AGGRESSIVE
- MODERATE
- LOW

Experienced operators know that over-steering can leave you with permanently bent or broken rods.

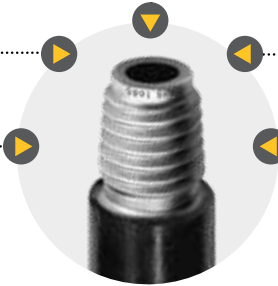
What degree of difficulty are your bores?

- HIGH
- AVERAGE
- LOW

Is short-term cost minimization more important than longer-term performance?

- NO
- YES

Contact your local Vermeer dealer for market competitive pricing.*



Firestick drill rod

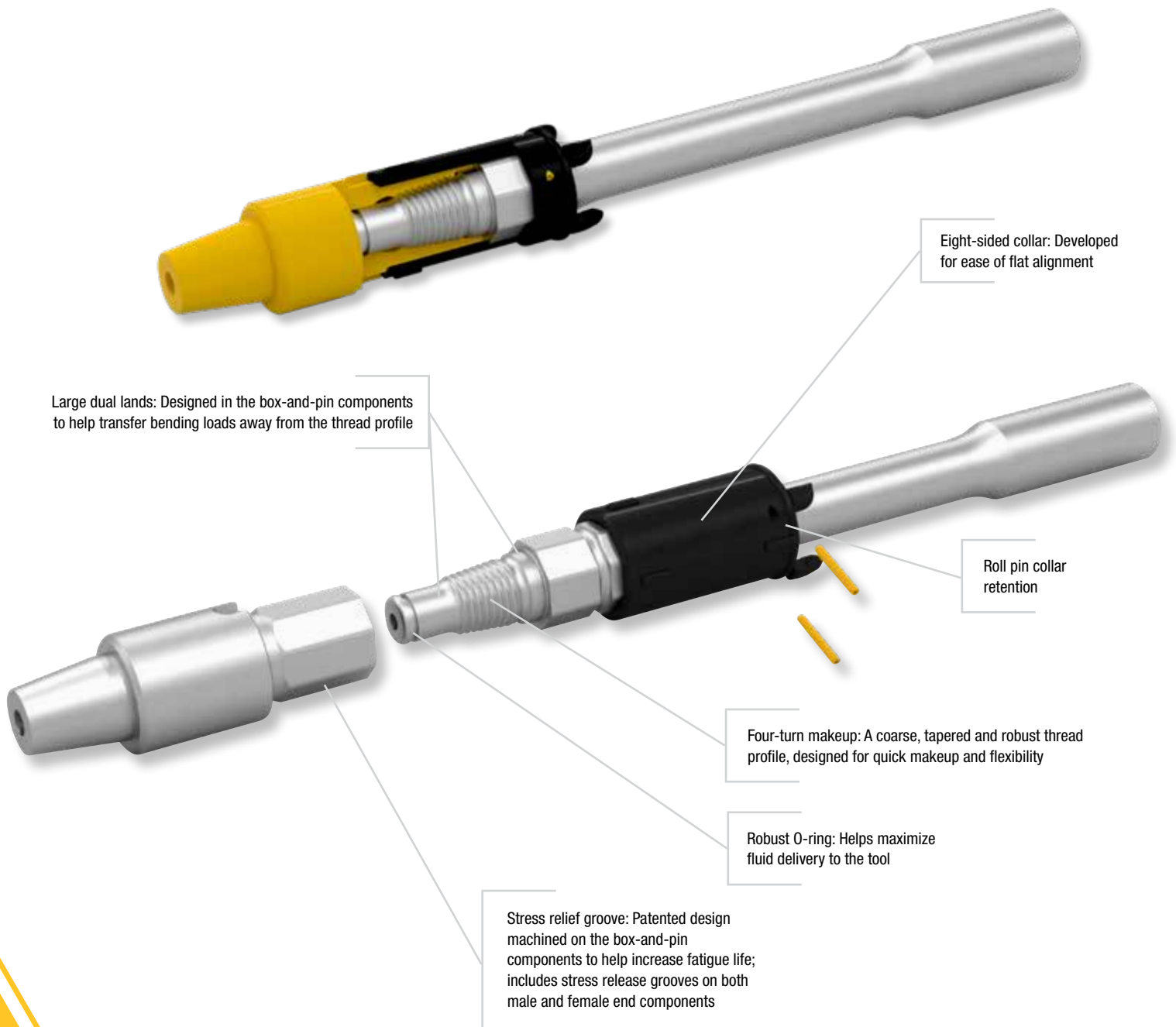


Silver Series drill rod

*Pricing may vary. Available at participating North American Vermeer dealers only.

QUICKFIRE® HD CONNECTION SYSTEM

Each part includes a manufactured date and part number for convenient identification and traceability.



Large dual lands: Designed in the box-and-pin components to help transfer bending loads away from the thread profile

Eight-sided collar: Developed for ease of flat alignment

Roll pin collar retention

Four-turn makeup: A coarse, tapered and robust thread profile, designed for quick makeup and flexibility

Robust O-ring: Helps maximize fluid delivery to the tool

Stress relief groove: Patented design machined on the box-and-pin components to help increase fatigue life; includes stress release grooves on both male and female end components



QUICKFIRE® HD CONNECTION SYSTEM

The QuickFire HD system offers ease of use and reliability-minded features, including dual heavy-duty collar retention roll pins. The collar can be assembled at any orientation — eliminating the need to rotate the collar for alignment with the retention bolt hole. While the QuickFire HD system shares the same thread profile as the original system, the patented pin design helps transfer bending loads away from the thread profile to help extend wear life. It is available in three sizes for drilling rigs rated up to 5,500 ft-lb (7,457 Nm) of torque.

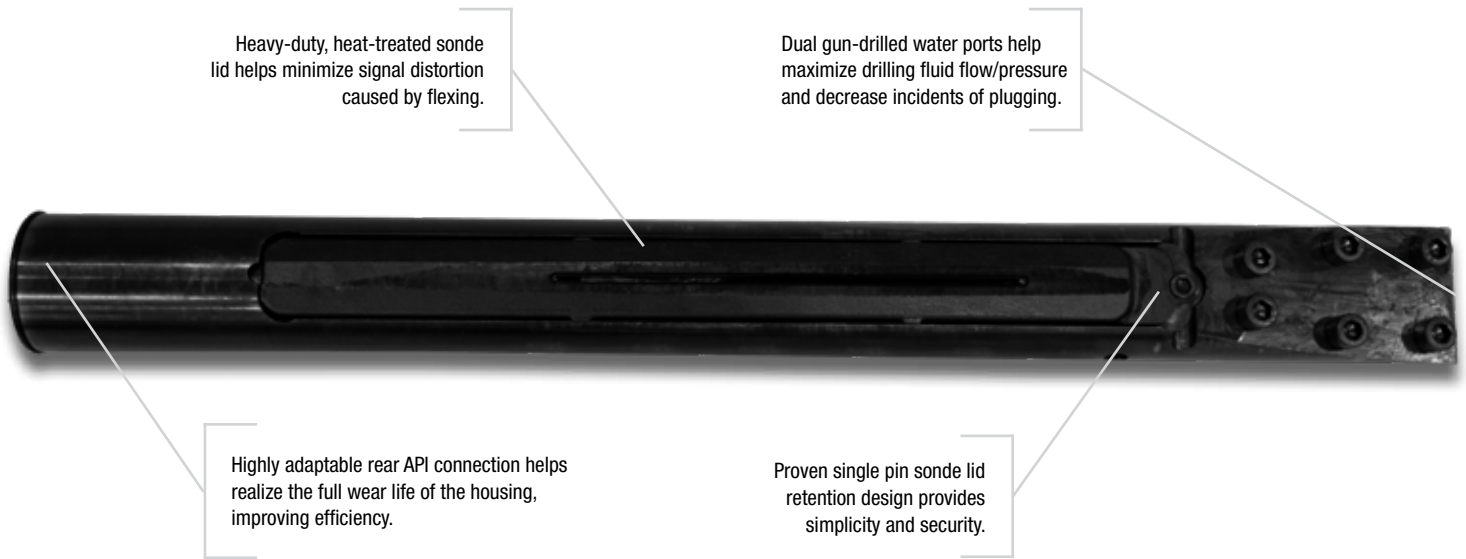
PART NO.	PRODUCT
QuickFire® HD connection system 300 Intended for models like the Vermeer D10x15 S3 HDD or the Ditch Witch JT10	
296555466	Starter rod QuickFire® HD connection system 300 (P) x 1.66-in (4.22-cm) FST #200 (B)
296560815	Collar QuickFire® HD connection system 300 (hardfaced)
296555458	Collar QuickFire® HD connection system 300 (hardfaced with teeth)
296560794	Adapter QuickFire® HD connection system 300 (B) X 2-in API IF (P)
296555470	Adapter QuickFire® HD connection system 300(B) X 2-4 ACME (P)
QuickFire® HD connection system 400 Intended for models like the Vermeer D23x30 S3 HDD or the Ditch Witch JT30	
296555446	Starter rod QuickFire® HD connection system 400 (P) x 1.90-in (4.83-cm) FST #250 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555448	Starter rod QuickFire® HD connection system 400 (P) x 2.06-in (5.23-cm) FST #400 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555430	Starter rod QuickFire® HD connection system 400 (P) x 2.375-in (6.03-cm) FST #600 (B)
296560814	Collar QuickFire® HD connection system 400 (hardfaced)
296555283	Collar QuickFire® HD connection system 400 (hardfaced with teeth)
296555451	Adapter QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555453	Adapter QuickFire® HD connection system 400 (B) x 2.875-in API Reg (P)
QuickFire® HD connection system 460 Intended for models like the Vermeer D40x55 S3 HDD or the Ditch Witch JT40	
296560755	Starter rod QuickFire® HD connection system 460 (P) x 2.375-in (6.03-cm) FST #600 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
296560796	Starter rod QuickFire® HD connection system 460 (P) x 2.375-in (6.03-cm) FST #625 (P)
296560757	Starter rod QuickFire® HD connection system 460 (P) x 2.375-in (6.03-cm) FST #650 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
296560813	Starter rod QuickFire® HD connection system 460 (P) 2.625-in (6.67-cm) FST #750 (P)
296560811	Starter rod QuickFire® HD connection system 460 (P) x 2.625-in (6.67-cm) FST #750 (B)
296560816	Collar QuickFire® HD connection system 460 (hardfaced)
296555475	Collar QuickFire® HD connection system 460 (hardfaced with teeth)
296560761	Adapter QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	Adapter QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)



See how the quick, four-turn thread of the QuickFire HD system brings efficiency for this Midwest HDD crew.

PREMIUM HOUSING

Premium housings from Vermeer integrate many of the robust and proven design characteristics of the rock-focused Armor drilling system into a versatile tool for soft-to-intermediate ground conditions.



Heavy-duty, heat-treated sonde lid helps minimize signal distortion caused by flexing.

Dual gun-drilled water ports help maximize drilling fluid flow/pressure and decrease incidents of plugging.

Highly adaptable rear API connection helps realize the full wear life of the housing, improving efficiency.

Proven single pin sonde lid retention design provides simplicity and security.

PART NO.	OUTSIDE DIAMETER	SONDE	MODEL COMPATIBILITY	CONNECTION	BIT BOLT PATTERN
296408265	2.75 in (6.99 cm)	DCI 15 in (38.1 cm)	D6x6 — D10x15 S3	2-4 ACME box	Vermeer 6-hole — 1/2-in bolt
296448831	2.75 in (6.99 cm)	DCI 15 in (38.1 cm)	D6x6 — D10x15 S3	2-in API IF box	Vermeer 6-hole — 1/2-in bolt
296428729	2.75 in (6.99 cm)	DCI 19 in (48.26 cm)	D6x6 — D10x15 S3	2-4 ACME box	Vermeer 6-hole — 1/2-in bolt
296459727	2.75 in (6.99 cm)	SubSite 17T	JT5 — JT10	2-in API IF box	Vermeer 6-hole + Ditch Witch 6-hole — 1/2-in bolt
296408264	3 in (7.62 cm)	DCI 15 in (38.10 cm)	D16x20 — D24x40 S3	2.375-in API Reg box	Vermeer 6-hole — 1/2-in bolt
296428717	3 in (7.62 cm)	DCI 19 in (48.26 cm)	D16x20 — D24x40 S3	2.375-in API Reg box	Vermeer 6-hole — 1/2-in bolt
296428796	3 in (7.62 cm)	SubSite 17T	JT20 — JT25	2.375-in API Reg box	Vermeer 6-hole + Ditch Witch 6-hole — 1/2-in bolt
296406540	3.25 in (8.26 cm)	DCI 15 in (38.10 cm)	D24x40 S3 — D40x55 S3	2.375-in API Reg box	Vermeer 6-hole — 1/2-in bolt
296428722	3.25 in (8.26 cm)	DCI 19 in (48.26 cm)	D24x40 S3 — D40x55 S3	2.375-in API Reg box	Vermeer 6-hole — 1/2-in bolt
296459729	3.25 in (8.26 cm)	SubSite 17T	JT25 — JT40	2.375-in API Reg box	Vermeer 6-hole + Ditch Witch 6-hole — 1/2-in bolt
296408266	3.5 in (8.89 cm)	DCI 15 in (38.10 cm)	D60x90 — D80x100 Series II	2.875-in API Reg box	Vermeer 6-hole — 5/8-in bolt
296428725	3.5 in (8.89 cm)	DCI 19 in (48.26 cm)	D60x90 — D80x100 Series II	2.875-in API Reg box	Vermeer 6-hole — 5/8-in bolt
296459731	3.5 in (8.89 cm)	SubSite 17T	JT60	2.875-in API Reg box	Vermeer 6-hole — 5/8-in bolt
296408267	4.5 in (11.43 cm)	DCI 15 in (38.10 cm)	D100x120 — D100x140 S3	3.5-in API Reg box	Vermeer 6-hole — 3/4-in bolt
296428727	4.5 in (11.43 cm)	DCI 19 in (48.26 cm)	D100x120 — D100x140 S3	3.5-in API Reg box	Vermeer 6-hole — 3/4-in bolt
296456939	4.5 in (11.43 cm)	DCI 19 in (48.26 cm)	D100x120 — D100x140 S3	3.5-in API IF box	Vermeer 6-hole — 3/4-in bolt
296459733	4.5 in (11.43 cm)	SubSite 17T	JT100	3.5-in API Reg box	Vermeer 6-hole — 3/4-in bolt

EFFICIENCY ON THE JOB WITH VERMEER PRODUCTIVITY TOOLS

On the drill or at the office, Vermeer productivity tools make it easy to access information about your HDD machines and projects.

Find your jobsite solution by visiting store.vermeer.com.

Talk to your local Vermeer dealer to learn more.





VERMEER ACE™ BIT FAMILY

Vermeer Ace™ bits provide durability and wearability. The plug-style tooth design of the Ace bit allows teeth to be positioned closer to each other.

Standard Ace bit

Standard Ace bit features a rounded bit face to assist steering performance and offers durability, longevity and wearability for **softer ground conditions that are more abrasive, medium-packed soils and light gravel.**

PART NO.	BOLT PATTERN	WIDTH
296415439	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296415498	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296415445	VM 6-hole — 1/2-in bolt	5 in (12.70 cm)
296415454	DW 5-hole — 12-mm bolt	4 in (10.16 cm)
296415451	DW 6-hole — 16-mm bolt	4 in (10.16 cm)
296415462	DW 5-hole — 12-mm bolt	5 in (12.70 cm)
296415459	DW 6-hole — 16-mm bolt	5 in (12.70 cm)



Pro Ace bit

A step up from our Standard Ace bit, it features a semi-aggressive tapered front design for penetration in harder ground conditions — offering even greater durability, longevity and wearability to tackle **loam to moderately aggressive cobble, sand and hard pan.**

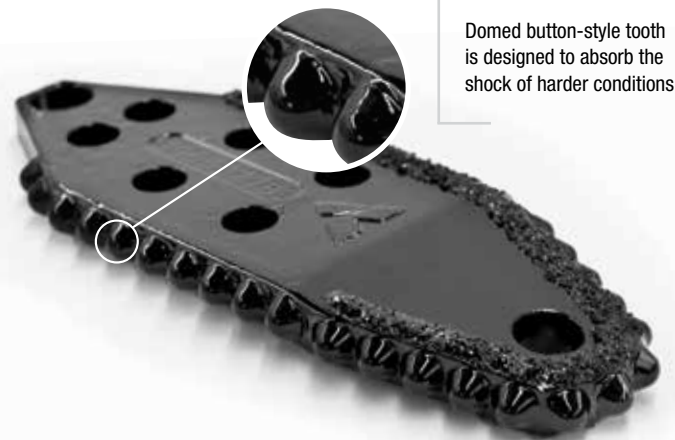
PART NO.	BOLT PATTERN	WIDTH
296449348	VM 5-hole — 3/8-in bolt	3 in (7.62 cm)
296415473	VM 6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296415374	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296415492	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296415394	VM 6-hole — 1/2-in bolt	5 in (12.70 cm)
296449499	DW 3-hole — 12-mm bolt	3 in (7.62 cm)
296415417	DW 5-hole — 12-mm bolt	4 in (10.16 cm)
296415420	DW 6-hole — 16-mm bolt	4 in (10.16 cm)
296415448	DW 5-hole — 12-mm bolt	5 in (12.70 cm)
296415426	DW 6-hole — 16-mm bolt	5 in (12.7 cm)



Ace Pro Extreme bit

Sharing the same profile as the Pro Ace bit, the Ace Pro Extreme bit balances steerability and penetration. It features two times the carbide teeth along the full edge of the bit to help extend wear life in **cobble, hard pan and light rock.**

PART NO.	BOLT PATTERN	WIDTH
296537785	VM 5-hole — 3/8-in bolt	3 in (7.62 cm)
296537784	VM 6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296537783	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296537782	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296537781	VM 6-hole — 1/2-in bolt	5 in (12.70 cm)
296537900	DW 6-hole — 16-mm bolt	4 in (10.16 cm)
296537903	DW 6-hole — 16-mm bolt	5 in (12.70 cm)



Domed button-style tooth is designed to absorb the shock of harder conditions.

Premium Ace bit

The Premium Ace bit features an aggressive tapered bit front to help penetration rates and offers superior durability, longevity and wearability for high-risk, aggressive ground conditions, such as **heavy cemented cobble, hard-packed soils and softer shale.**

PART NO.	BOLT PATTERN	WIDTH
296449347	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296449341	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296449344	VM 6-hole — 1/2-in bolt	5 in (12.70 cm)
296449345	DW 5-hole — 12-mm bolt	4 in (10.16 cm)
296449346	DW 6-hole — 16-mm bolt	4 in (10.16 cm)
296449342	DW 5-hole — 12-mm bolt	5 in (12.70 cm)
296449343	DW 6-hole — 16-mm bolt	5 in (12.70 cm)



Bit bolts

High-quality HDD bit bolts meet factory specifications for durability in demanding applications.

PART NO.	DESCRIPTION	HOUSING COMPATIBILITY
	3/8-in bolt	2-in (5.08-cm) — 2.25-in (5.72-cm) OD
129667010	1/2-in bolt	2.75-in (6.99-cm) — 3.25-in (8.26-cm) OD
296260026	5/8-in bolt	3.5-in (8.89-cm) OD
85627055	3/4-in bolt	4.5-in (11.43-cm) OD

Don't see what you're looking for? Talk to your local Vermeer dealer for more information and options for competitor compatibilities.

DRILL BITS

Vermeer drill bits are, in a word, tough. They start with Vermeer-specified high-alloy, heat-treated steel for durability and wear resistance. Each bit is designed to meet the exacting tolerances for Vermeer HDDs to help maintain peak performance.

Standard hardfaced drill bit

The standard hardfaced drill bit offers an economical HDD tooling solution for softer ground conditions such as **loam, black dirt and sandy loam.**

PART NO.	BOLT PATTERN	WIDTH
272446001	VM 5-hole — 3/8-in bolt	2.25 in (5.72 cm)
296274213	VM 5-hole — 3/8-in bolt	2.5 in (6.35 cm)
296274214	VM 5-hole — 3/8-in bolt	3 in (7.62 cm)
296274215	VM 5-hole — 3/8-in bolt	3.5 in (8.89 cm)
246798001	VM 6-hole — 1/2-in bolt	3 in (7.62 cm)
246799001	VM 6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296255334	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296255335	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296255336	VM 6-hole — 1/2-in bolt	5 in (12.70 cm)
296255340*	VM 6-hole — 5/8-in bolt	5 in (12.70 cm)
296255341*	VM 6-hole — 5/8-in bolt	6 in (15.24 cm)
296449302	DW 5-hole — 12-mm bolt	4 in (10.16 cm)
296449295	DW 6-hole — 16-mm bolt	4 in (10.16 cm)
296449300	DW 5-hole — 12-mm bolt	5 in (12.70 cm)
296449296	DW 6-hole — 16-mm bolt	5 in (12.70 cm)

*Does not include quickshot hole.



Gladiator Saber bit

The Gladiator Saber bit features an aggressive tapered design for penetrating hard-packed soil conditions. It includes the Gladiator bit standard of carbide buttons to help extend wear life, making it ready for **highly abrasive ground conditions.**

PART NO.	BOLT PATTERN	WIDTH
296341835	6-hole — 1/2-in bolt	4 in (10.16 cm)
296341836	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296341837	6-hole — 1/2-in bolt	5 in (12.70 cm)

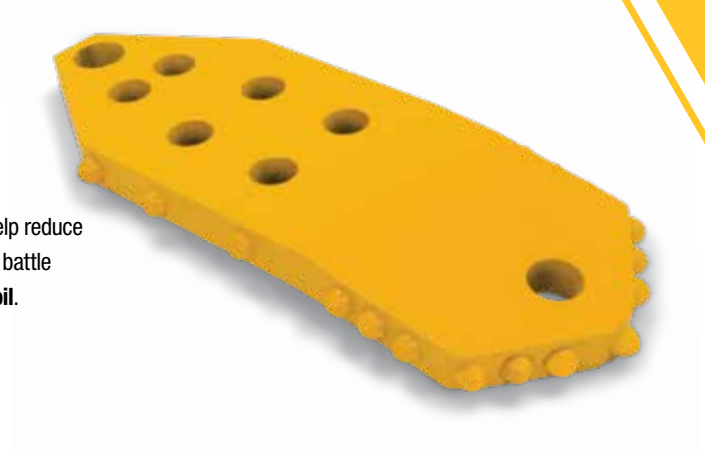


Don't see what you're looking for? Talk to your local Vermeer dealer for more information and options for competitor compatibilities.

Gladiator Spear bit

The Gladiator Spear bit is exclusively designed with oversized carbide buttons to help reduce premature wear — with a rugged, pointed design. The Gladiator Spear bit lets you battle compatible ground conditions from **loam to cobble and other highly abrasive soil**.

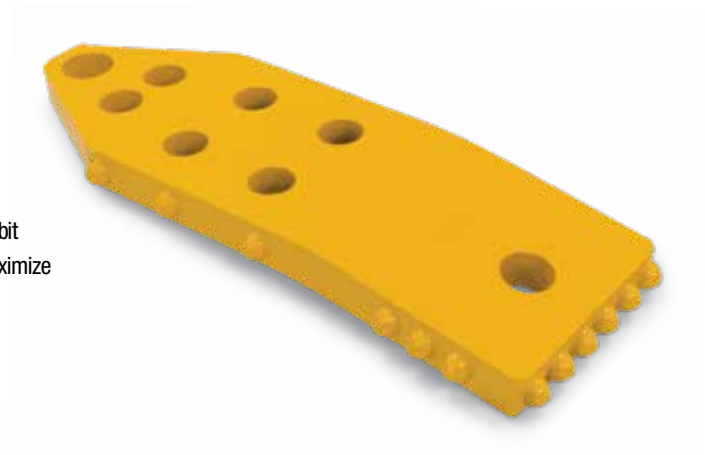
PART NO.	BOLT PATTERN	WIDTH
296334309	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296334328	6-hole — 1/2-in bolt	4 in (10.16 cm)
296334306	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296334359	6-hole — 1/2-in bolt	5 in (12.70 cm)
296419299	6-hole — 1/2-in bolt	6 in (15.24 cm)



Gladiator Mallet bit

Steer into the clear with the Gladiator Mallet bit. It features the Gladiator-exclusive bit design with oversized carbide buttons for wear resistance as its flat face helps maximize steering control. It's ideal for **cobble and highly abrasive ground conditions**.

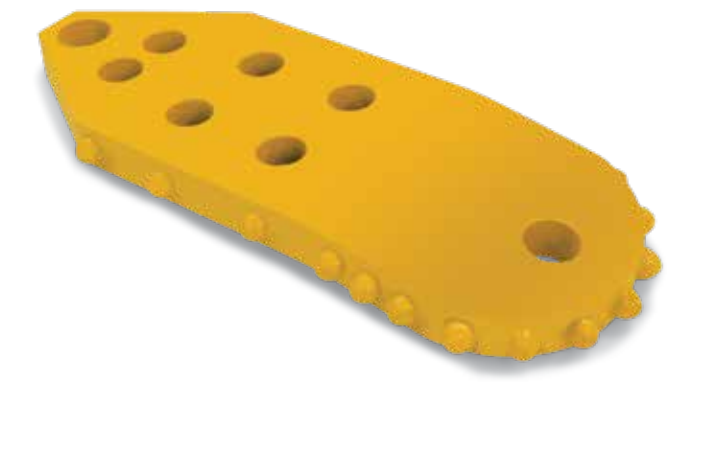
PART NO.	BOLT PATTERN	WIDTH
296334312	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296334324	6-hole — 1/2-in bolt	4 in (10.16 cm)
296334303	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296334356	6-hole — 1/2-in bolt	5 in (12.70 cm)



Gladiator Club bit

The Vermeer Gladiator Club bit brings you the power of our exclusively designed oversized carbide buttons for wear resistance. This versatile series is ideal for **cobble and highly abrasive ground conditions**.

PART NO.	BOLT PATTERN	WIDTH
296334350	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296334326	6-hole — 1/2-in bolt	4 in (10.16 cm)
296334300	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296334353	6-hole — 1/2-in bolt	5 in (12.70 cm)
296419303	6-hole — 1/2-in bolt	6 in (15.24 cm)



ULTRA X3



ULTRA X3 DRILLING SYSTEM

The Vermeer Ultra X3 offers interchangeable pilot and pullback tooling without torqued or threaded components, as well as the ability to ream directly off the transmitter housing. And (for certain applications), it can eliminate the expense of starter rods and adapters. The Ultra X3 has a strong spline connection capable of handling the torque of reaming diameters up to 10 in (25 cm) directly off the transmitter housing in most conditions. This housing comes in three sizes, and is available for rigs up to 40,000 lb (18,143.6 kg). The Ultra X3 housing unit is versatile and worth its weight.

PART NO.	PRODUCT
ULTRA X3 275 DRILLING SYSTEM (INTENDED FOR MODELS LIKE THE VERMEER D10X15 S3 HDD OR THE DITCH WITCH JT10)	
296600601	Ultra X3 275 drilling system housing 2.75-in (6.99-cm) OD x 2-in API IF (B)
296600588	Ultra X3 275 drilling system Lance Pro bit — 3.5-in (8.89-cm) cut with pullback hook
296600587	Ultra X3 275 drilling system Lance trident bit — 3.5-in (8.89-cm) cut with pullback hook
296600586	Ultra X3 275 drilling system Gauntlet bit — 3.5-in (8.89-cm) cut with pullback hook
296569556	Ultra X3 275 drilling system single roller cone bit — 3.5-in (8.89-cm) cut
296566772	Ultra X3 275 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern
296569603	Ultra X3 275 drilling system weld-on reamer adapter
296569553	Ultra X3 275 drilling system pull eye (for use with swivels 296572437 or 296572438)
296569632	Ultra X3 275 drilling system 4.5-in (11-cm) fluted reamer x pull eye (for use with swivel 296572437)
296569745	Ultra X3 275 drilling system 4.5-in (11-cm) fluted reamer x swivel
296569570	Ultra X3 275 drilling system 6-in (15.24-cm) fluted reamer x pull eye (for use with swivel 296572437 or 296572438)
296569747	Ultra X3 325 drilling system 6-in (15.24-cm) fluted reamer x swivel
296569749	Ultra X3 325 drilling system 8-in (20.32-cm) fluted reamer x swivel
296569572	Ultra X3 275 drilling system 8-in (20.32-cm) fluted reamer x pull eye (for use with swivel 296572437 or 296572438)
296569566	Ultra X3 275 drilling system 6-in (15.24-cm) mix reamer x pull eye (for use with swivel 296572437 or 296572438)
296569574	Ultra X3 275 drilling system 8-in (20.32-cm) mix reamer x pull eye (for use with swivel 296572437 or 296572438)
ULTRA X3 325 DRILLING SYSTEM (INTENDED FOR MODELS LIKE THE VERMEER D24X40 S3 HDD OR THE DITCH WITCH JT24)	
296555441	Ultra X3 325 drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
296600594	Ultra X3 325 drilling system Lance trident bit — 4.25-in (10.8-cm) cut with pullback hook
296600592	Ultra X3 325 drilling system Lance Pro bit — 4.25-in (10.8-cm) cut with pullback hook
296600593	Ultra X3 325 drilling system Gauntlet bit — 4.25-in (10.8-cm) cut with pullback hook
296566930	Ultra X3 325 drilling system single roller cone bit — 4.25-in (10.8-cm) cut
296544190	Ultra X3 325 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern
296566927	Ultra X3 325 drilling system weld-on reamer adapter
296566935	Ultra X3 325 drilling system pull eye (for use with swivel 296572438)



Get an in-depth look at how the Ultra X3 275 drilling system helped Joink improve efficiency on their jobsites.

PART NO.	PRODUCT
296566929	Ultra X3 325 drilling system 6-in (15.24-cm) fluted reamer x pull eye (for use with swivel 296572438)
296566940	Ultra X3 325 drilling system 8-in (20.32-cm) fluted reamer x pull eye (for use with swivel 296572438)
296566938	Ultra X3 325 drilling system 10-in (25.4-cm) fluted reamer x pull eye (for use with swivel 296572438)
296566931	Ultra X3 325 drilling system 6-in (15.24-cm) mix reamer x pull eye (for use with swivel 296572438)
296544140	Ultra X3 325 drilling system 6-in (15.24-cm) fluted reamer x swivel
296560872	Ultra X3 325 drilling system 8-in (20.32) fluted reamer x swivel
296566941	Ultra X3 325 drilling system 8-in (20.32-cm) mix reamer x pull eye (for use with swivel 296572438)
296555372	Ultra X3 325 drilling system 10-in (25.4 cm) fluted reamer x swivel
296566942	Ultra X3 325 10-in (25.4-cm) mix reamer x pull eye (for use with swivel 296572438)
ULTRA X3 375 DRILLING SYSTEM (INTENDED FOR MODELS LIKE THE VERMEER D40X55 S3 HDD OR THE DITCH WITCH JT40)	
296566842	Ultra X3 375 drilling system housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
296600589	Ultra X3 375 drilling system Lance Pro bit — 5-in (12.70-cm) cut with pullback hook
296600591	Ultra X3 375 drilling system Lance trident bit — 5-in (12.70-cm) cut with pullback hook
296600590	Ultra X3 375 drilling system Gauntlet bit — 5.5-in (13.97-cm) cut with pullback hook
296569561	Ultra X3 375 drilling system single roller cone bit — 5.5-in (13.97-cm) cut
296566858	Ultra X3 375 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern
296566852	Ultra X3 375 drilling system plate bit sub — Vermeer .625-in 6-bolt pattern
296569604	Ultra X3 375 drilling system weld-on reamer adapter
296569563	Ultra X3 375 drilling system pull eye (for use with swivel 296572439)
296569592	Ultra X3 375 drilling system 8-in (20.32-cm) fluted reamer x pull eye (for use with swivel 296572439)
296569594	Ultra X3 375 drilling system 10-in (25.4-cm) fluted reamer x pull eye (for use with swivel 296572439)
296569602	Ultra X3 375 drilling system 12-in (30.48-cm) fluted reamer x pull eye (for use with swivel 296572439)
296580564	Ultra X3 375 drilling system 8-in (20.32-cm) fluted reamer x swivel
296580562	Ultra X3 375 drilling system 10-in (25.4-cm) fluted reamer x swivel
296580545	Ultra X3 375 drilling system 12-in (30.48-cm) fluted reamer x swivel
296569597	Ultra X3 375 drilling system 8-in (20.32-cm) mix reamer x pull eye (for use with swivel 296572439)
296569595	Ultra X3 375 drilling system 10-in (25.4-cm) mix reamer x pull eye (for use with swivel 296572439)
296569596	Ultra X3 375 drilling system 12-in (30.48-cm) mix reamer x pull eye (for use with swivel 296572439)
ULTRA X3 LEAD ROD ASSEMBLIES	
296569624	1.66 FST #200(B) x 2.0 API IF(P) — 20-in (50-cm) lead rod - compatible with Ultra X3 275 drilling system
296569731	2.06 FST #400(B) x 2.0 API IF(P) — 20-in (50-cm) lead rod - compatible with Ultra X3 275 drilling system
296403552	2.375 API REG (P) x 2.06 FST #400(B) — 21.21-in (53.87-cm) lead rod - compatible with Ultra X3 325 drilling system
296403656	2.375 FST #600(B) x 2.375 API REG(P) — 20-in (50-cm) lead rod - compatible with Ultra X3 325 drilling system
296436142	2.375 FST #650 (B) x 2.875 API REG(P) — 25.5-in (64.80-cm) lead rod - compatible with Ultra X3 375 drilling system
296436080	2.625 FST #700(B) x 2.875 API REG(P) — 30-in (80-cm) lead rod - compatible with Ultra X3 375 drilling system
ULTRA X3 ACCESSORIES AND REPLACEMENT PARTS	
296566775	Solid dowel pin for Ultra X3 275 bits
296569605	Heavy coiled roll pin for Ultra X3 275 bits
296566773	Replacement O-Ring for Ultra X3 275 pin end (bits and reamers)
296566921	Solid dowel pin for Ultra X3 325 bits
296566923	Heavy coiled roll pin for Ultra X3 325 bits
296566922	Replacement O-Ring for Ultra X3 325 pin end (bits and reamers)
296566853	Solid dowel pin for Ultra X3 375 bits
296404554	Heavy coiled roll pin for Ultra X3 375 bits
296580554	Replacement O-Ring for Ultra X3 375 pin end (bits and reamers)
296404554	Heavy coiled roll pin for Ultra X3 275 / 325 / 375 sonde lids
296344377	Sonde isolator replacement kit for Ultra X3 275 / 325 / 375 (2-piece kit)
296412949	.5-in punch multi-tool for Ultra X3 275 / 325 solid and roll pins
296351818	.375-in punch multi-tool for Ultra X3 375 solid and roll pins
296412939	Steel timing key for Ultra X3 275 / 325 / 375



THE ULTRA X3 FACTORS

1 NO BREAKOUT TONGS NEEDED

Since the Vermeer Ultra X3 uses a robust spline connection system, tooling doesn't have to be threaded on, eliminating the need for breakout tongs to make and break torqued tooling connections. Operators just need to align the spline on the tooling with the spline on the housing, then secure tooling by tapping in dowel pins.

2 REAMING FROM THE TRANSMITTER HOUSING

The system is capable of handling the torque of reaming diameters up to 12 in (30.5 cm) in most conditions from the transmitter housing. Also, it's set up to use a full offering of plate bits and rock tooling like the Vermeer Gauntlet, Lance and single roller cone bits. Two reaming options — fluted and mixing — let you choose from pull eye or swivel options.

3 ADVANTAGES OF QUICK-CONNECT

The Ultra X3 housing uses a standard API rear connection and also works with quick-connect systems like the Vermeer QuickFire® HD connection system. However, contractors may find value in skipping the expense of starter rods and collars because there is a quick-connect on the bit side of the housing.

BONUS X3 FACTOR

The Ultra X3 Drilling System minimizes the size of the exit pit required, thus the time required to dig an exit pit — optimizing jobsite efficiency. Since the Ultra X3 doesn't require the housing be removed for most pullbacks, HDD crews can change over from pilot to pullback in a smaller space with less repetitive lifting. Smaller pit requirements can also help reduce restoration work.

The Vermeer Ultra X3 is available in three different sizes covering all HDD models rated up to the 40,000-lb (177.9-kN) drill range.



Ultra X3 375 8 in, 10 in and 12 in (20.3 cm, 25.4 cm and 30.5 cm)

HDDs in the 40,000-lb (177.9-kN) drill range —
Vermeer D40x55 S3 HDD or Ditch Witch JT40 HDD



Ultra X3 325 6 in, 8 in and 10 in (15.2 cm, 20.3 cm and 25.4 cm)

HDDs in the 24,000-lb (106.8-kN) drill range —
Vermeer D23x30 S3 HDD, D24x40 S3 HDD or Ditch Witch JT30 HDD



Ultra X3 275 6 in and 8 in (15.2 cm and 20.3 cm)

HDDs in the 10,000-lb (44.5-kN) drill range —
Vermeer D10x15 S3 HDD or Ditch Witch JT10 HDD

“With the Ultra X3, contractors can sub out conventional quick-connect components for a transition adapter rod, increasing operational efficiency.”

— Chris Fontana, Vermeer Cutting Edge & Borestore Sales Manager



Ultra X3 plate bit

The Ultra X3 plate bit sub allows you to use the Ultra X3 housing to run dirt tooling options. You can efficiently use your time by not reworking your entire drill string to fit a new bit. The Ultra X3 plate bit sub also makes your drill and operation more versatile on your jobsites. A non-torqued spline connection system optimizes the time it takes to perform tooling switches (without the need for special tools or breakout devices) and offers compatibility with a wide range of pilot bit and pullback configurations.



Ultra X3 Gauntlet bit

The Ultra X3 Gauntlet bit was designed for use in soft to medium rock, shale and caliche ground conditions up to 10,000 psi (70 MPa) with exceptional steering capabilities. Carbide buttons and hardfacing are strategically placed on the bit to optimize wear and performance characteristics. A replaceable three-tooth design delivers a consistent cutting structure for steering corrections to help maximize drilling performance. The pullback hook equips you to pull back product without changing out the tooling.



Ultra X3 Lance Trident bit

The Ultra X3 Lance Trident bit offers the traditional shape of the Lance Pro bit but with the addition of a replaceable three-tooth design. Carbide buttons help protect the bit mount section from wear so it can be rebuilt. With a tendency to cut on-center, the Lance Trident bit helps you execute your bore as planned. Intended use in hard-packed soils, highly abrasive cobble, cemented cobble, soft rock, shale and caliche. The bit also maneuvers smoothly through dirt before it reaches the rocky area. The pullback hook equips you to pull back product without changing out the tooling.



Ultra X3 Lance Pro bit

Featuring domed, plug-style teeth, the Ultra X3 Lance Pro bit offers continuous carbide coverage across the front of the bit to help extend wear life. Carbide buttons help protect the bit-mount section from wear so it can be rebuilt. With a tendency to cut on-center, the Lance Pro bit helps you execute your bore as planned. The bit also maneuvers smoothly through dirt before it reaches the loose rock area. The pullback hook equips you to pull back product without changing out the tooling.



Ultra X3 Single Roller Cone bit

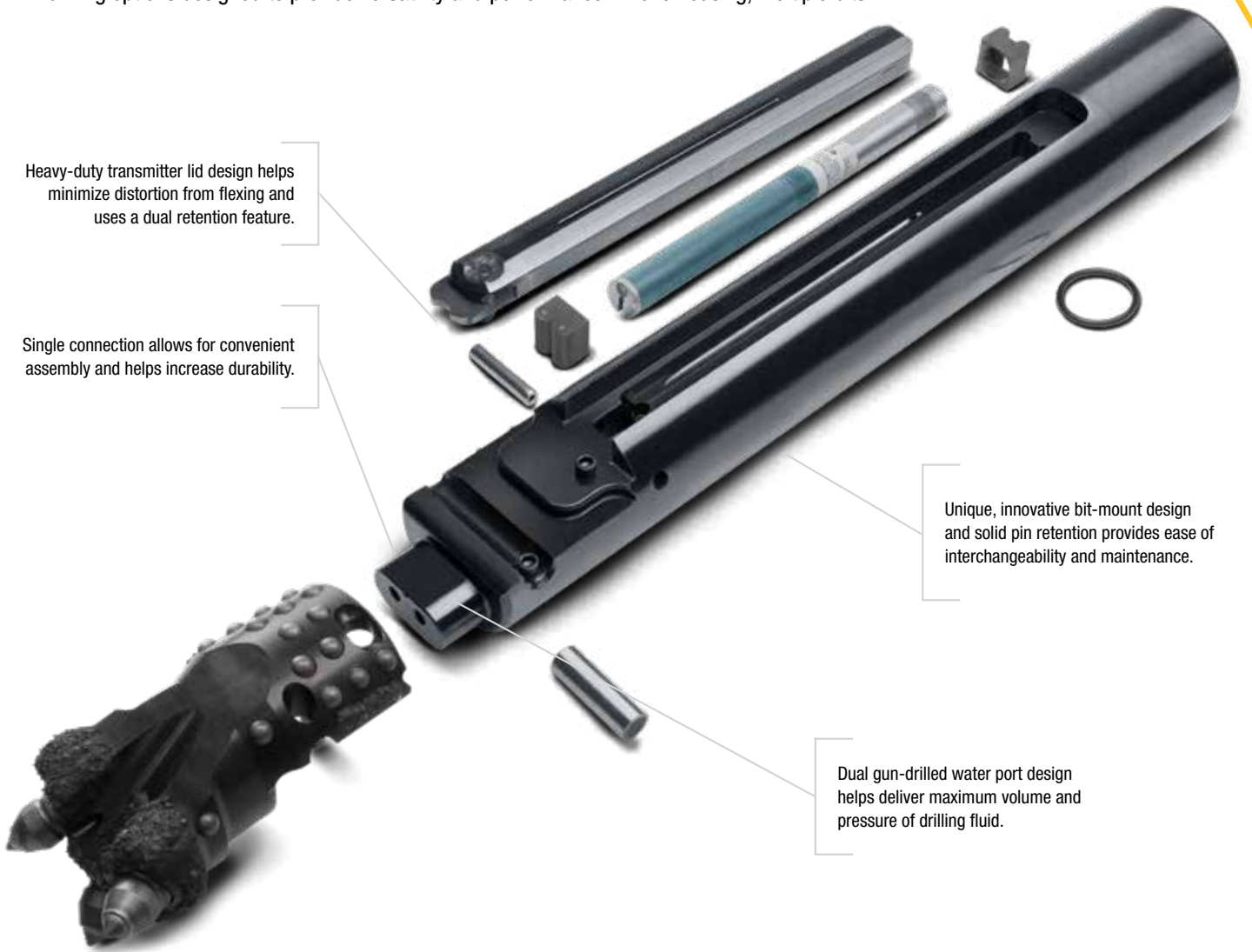
The Ultra X3 single roller cone bit is used for specialty drilling applications. Designed to deliver versatility in cobble and broken formations, the cone rotation helps smooth out the entire drill string, minimizing torque spikes. The bit is used for extreme cobbles and soft to medium rock.



Bits designed to be compatible with multiple drilling systems.

ARMOR DRILLING SYSTEM

Prepare to win the tough jobs with the Armor drilling system from Vermeer. It's a single HDD tooling system with multiple drilling options designed to provide versatility and performance — one housing, multiple bits.



Heavy-duty transmitter lid design helps minimize distortion from flexing and uses a dual retention feature.

Single connection allows for convenient assembly and helps increase durability.

Unique, innovative bit-mount design and solid pin retention provides ease of interchangeability and maintenance.

Dual gun-drilled water port design helps deliver maximum volume and pressure of drilling fluid.

BRING YOUR BIT **BACK TO LIFE.**

Every operator understands the value of the bits they use on the jobsite. Now, help extend the usable life of your bits with the Armor drilling system rebuild program. Send in your worn-down bits for rebuild by the manufacturer: Vermeer. Depending on the type of wear exhibited, Armor bits can be rebuilt multiple times. Before the rebuild process begins, every Armor bit is reviewed by the Vermeer team of HDD tooling engineers and undergoes a comprehensive analysis by staff metallurgists.

Contact your local Vermeer dealer for more information on the Armor drilling system rebuild program.

Small Armor 2.375-in API REG (D16x20-D24x40 S3)

PART NO.	DESCRIPTION
296466151	Armor housing system 3.25-in (8.26-cm) OD, 2.375-in API Reg Box
296344406	Armor sonde lid kit (lid, roll pins)
296428974	Armor bit hardware kit (solid pin, O-rings, capscrews)
296466222	Armor Gauntlet bit — 4.25-in (10.80-cm) with pullback
296496183	Armor Gauntlet bit small pullback hook
296371274	Armor Gauntlet bit tooth — medium rock
296386883	Armor Gauntlet bit tooth — soft rock
296456950	Armor Lance Pro bit — 4.25-in (10.80-cm) with pullback
296540851	Lance (Pro or Original) bit small pullback hook
296456809	Armor Lance Original bit — 4.25-in (10.80-cm) with pullback
296428590	Pullback mount assembly
296428584	Armor single roller cone bit — 4.25-in (10.80-cm)
296428588	Armor bent sub adapter — 2.375-in API Reg
296428587	Armor pullback swivel — 24,000-lb (10,866.2-kg) rated
296479206	6-in (15.24-cm) Armor fluted reamer, rotary teeth, 24k pull eye
296496040	6-in (15.24-cm) Armor fluted reamer, rotary teeth, 24k swivel
296530680	8-in (20.32-cm) Armor fluted reamer, rotary teeth, 24k swivel

Medium Armor 2.875-in API REG (D24x40-D40x55DR)

PART NO.	DESCRIPTION
296466152	Armor side load housing system — 3.75-in (9.53-cm) OD, 2.875-in API
296344404	Armor sonde lid kit (lid, roll pins)
296428973	Armor bit hardware kit
296456837	Armor Gauntlet bit — 5.5-in (13.97-cm) with pullback
296540854	Armor Gauntlet bit medium pullback hook
296352129	Armor Gauntlet bit tooth — medium rock
296352180	Armor Gauntlet bit tooth — soft rock
296456953	Armor Lance Pro bit 5-in (12.70-cm) with pullback
296540853	Armor Lance (Pro or Original) bit medium pullback hook
296456845	Armor Lance Original bit — 5-in (12.70-cm) with pullback
296428636	Pullback mount assembly
296428619	Armor single roller cone bit — 4.25-in (10.80-cm)
296428612	Armor bent sub adapter — 2.875-in API Reg
296428610	Armor swivel — 24,000-lb (10,866.2-kg) rated
296479204	6-in (15.24-cm) Armor fluted reamer, rotary teeth, 24k pull eye
296488188	6-in (15.24-cm) Armor fluted reamer, rotary teeth, 24k swivel
296493470	6-in (15.24-cm) Armor fluted reamer, rotary teeth, 24k swivel
296530678	8-in (20.32-cm) Armor fluted reamer, rotary teeth, 24k swivel

Large Armor 2.875-in API IF (D50x100-D100x43 S3)

PART NO.	DESCRIPTION
296466153	Armor housing system 4.25-in (10.80-cm) OD, 2.875-in API IF
296344404	Armor sonde lid kit
296428972	Armor bit hardware kit (solid pin, O-rings, capscrews)
296488183	Armor Gauntlet bit — 6.5-in (16.51-cm)
296341728	Armor Gauntlet bit tooth — medium rock
296392367	Armor Gauntlet bit tooth — soft rock
296484008	Armor Lance Pro bit — 6.25-in (15.88-cm)
296484086	Armor Lance Pro bit — 7.25-in (18.42-cm)
296341742	Armor Lance Original bit — 6.5-in (16.51-cm)
296341747	Armor Lance Original bit — 7.25-in (18.42-cm)
296396008	Armor single roller cone bit — 6.5-in (16.51-cm)
296396011	Armor bent sub adapter — 3.5-in API Reg

Armor Accessories

PART NO.	DESCRIPTION
296344264	Armor multi-tool small and medium
296392362	Armor multi-tool large
296344402	Armor sonde isolator and timing kit
296412939	Armor timing key — steel

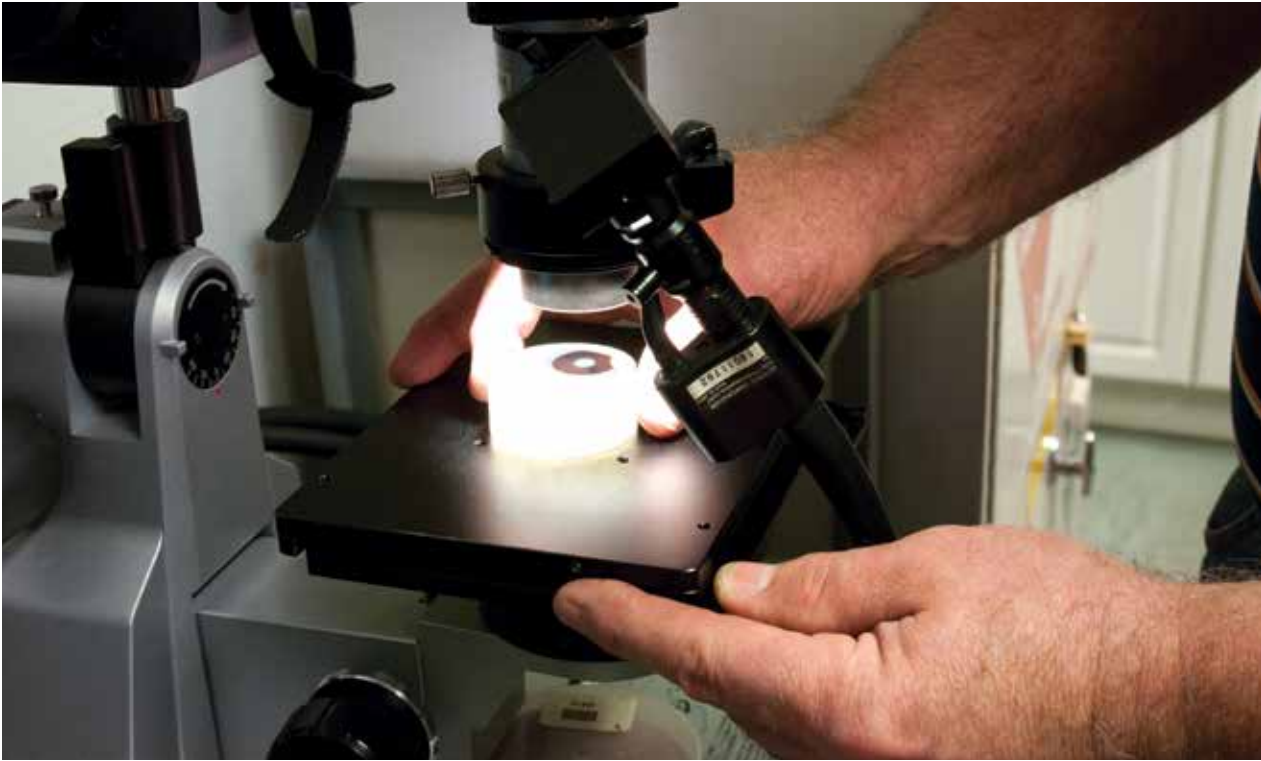
ARMOR DIRECT SYSTEM



DIRECT WITH API THREAD PLATFORM SOLUTION

The Vermeer Armor Direct system allows drilling crews to use bits from the Armor system on an API thread platform. Designed to be an economical rock drilling solution, Armor Direct system offerings include a new universal housing with single pin sonde lid retention; the Lance Pro bit for hard-packed gravel and cobble; the Gauntlet bit for soft rock, medium rock, shale and caliche up to 10,000 psi (68.9 MPa); and the Vermeer single roller cone bit for cobble and broken formations.

PART NO.	DESCRIPTION	MODEL COMPATIBILITY
296520797	Armor Direct universal housing 2.375-in API Reg BxB, 15-in (38.10-cm) or 19-in (48.26-cm) DCI	D16x20 — D24x40 S3
296520790	4.25-in (10.80-cm) Lance Pro bit x 2.375-in API Reg	D16x20 — D24x40 S3
296488122	4.25-in (10.80-cm) Armor Gauntlet bit x 2.375-in API Reg	D16x20 — D24x40 S3
296520804	4.25-in (10.80-cm) Armor single roller cone x 2.375-in API Reg bit	D16x20 — D24x40 S3
296257756	Dirt bit sub - Vermeer .5-in 6-bolt bit x 2.375-in API Reg	D16x20 — D24x40 S3
296517138	Armor Direct universal housing 2.875-in API Reg BxB, 15-in or 19-in DCI	D24x40 — D40x55 S3
296517122	5-in (12.70-cm) Lance Pro bit x 2.875-in API Reg	D24x40 — D40x55 S3
296484199	5.5-in (13.97-cm) Armor Gauntlet bit x 2.875-in API Reg	D24x40 — D40x55 S3
296517142	5.5-in (13.97-cm) Armor single roller cone x 2.875-in API Reg bit	D24x40 — D40x55 S3
296268770	Dirt bit sub - Vermeer .63-in 6-bolt bit x 2.875-in API Reg bit	D24x40 — D40x55 S3
296517018	Armor Direct universal housing 3.5-in API Reg BxB, 15-in or 19-in DCI	D60x90 — D100x140 S3
296517046	7.25-in (18.42-cm) Lance Pro bit x 3.5-in API Reg	D60x90 — D100x140 S3
296488132	6.5-in (16.51-cm) Armor Gauntlet bit x 3.5-in API Reg	D60x90 — D100x140 S3
296517042	6.5-in (16.51-cm) Armor single roller cone x 3.5-in API Reg bit	D60x90 — D100x140 S3
296259972	Dirt bit sub - Vermeer .63-in 6-bolt bit x 3.5-in API Reg bit	D60x90 — D100x140 S3



HDD TOOLING SCIENCE — **VERMEER METALLURGY LAB TEST**

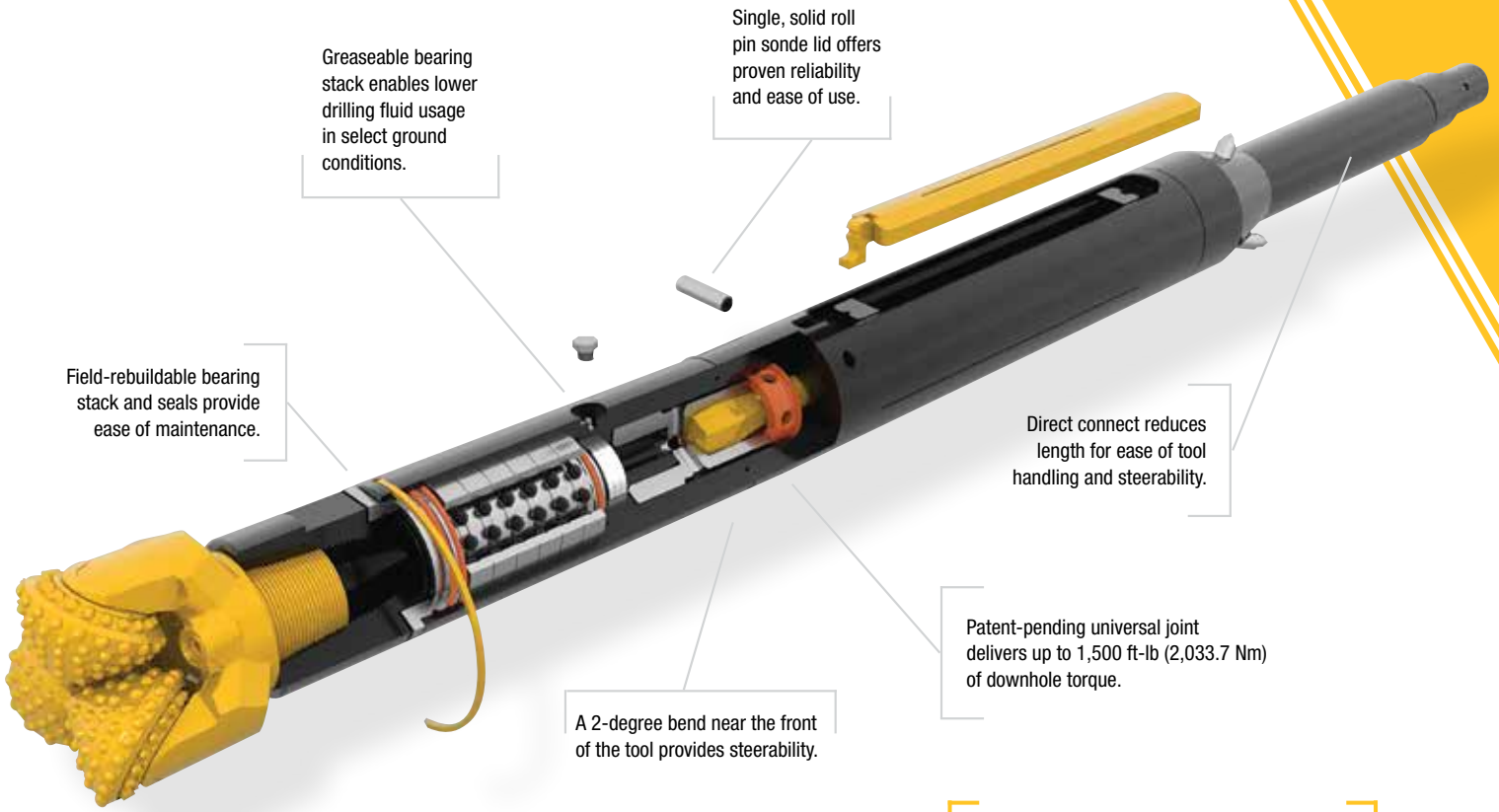
Just because one brand of tooling may look like another doesn't mean it's constructed the same. From drive chucks, drill rods and transmitter housings to drill bits, reamers and adaptors, the quality of the metal used and how it was heat treated can have a major impact on how it will perform and how long it can last in harsh working conditions. To make sure the parts and pieces of HDD tooling produced meet high standards, Vermeer is one of the only manufacturers in the industry to invest in building its own metallurgy lab and staffing it with experienced, degreed metallurgists.

Since 1992, the Vermeer Metallurgy Lab has been testing the chemical composition, tensile strength, hardness and impact toughness of Vermeer HDD tooling, parts and components. Using scientific methods, the Vermeer Metallurgy Lab examines the raw material used for manufacturing to determine quality, and to help the productivity and longevity of the tooling.

**Talk to your local Vermeer
dealer to learn more.**

DUAL-ROD ROCK DRILL HEADS

To get the most from your dual-rod HDD, choose rock drill heads designed to deliver an efficient performance. Vermeer RH15 and RH10 rock drill heads were developed in conjunction with D40x55DR S3 and D23x30DR S3 HDDs to give operators steering control and sonde security with their proven single roll pin lid. These greasable rock drill heads can be rebuilt in the field and are priced right to deliver value.



Greaseable bearing stack enables lower drilling fluid usage in select ground conditions.

Single, solid roll pin sonde lid offers proven reliability and ease of use.

Field-rebuildable bearing stack and seals provide ease of maintenance.

Direct connect reduces length for ease of tool handling and steerability.

Patent-pending universal joint delivers up to 1,500 ft-lb (2,033.7 Nm) of downhole torque.

A 2-degree bend near the front of the tool provides steerability.

Talk to your local dealer for tricone and PDC bit options.

PART NO.	DESCRIPTION	MODEL COMPATIBILITY
296490378	RH10 drill head 15-in (38.10-cm) sonde, 2.875-in API Reg bit box, 5.5-in (13.97-cm) diameter min bit	D23x30DR S3
296529337	RH10 drill head 15-in (38.10-cm) sonde, 2.875-in API Reg bit box, 5.5-in (13.97-cm) diameter min bit*	JT3020 AT, JT30 AT
296537909	RH10 50-hour rebuild kit	
296537911	RH10 200-hour rebuild kit	
296514826	RH10 drill head rebuild tool kit	
296521054	PG5 quick pullback grapple for 5.5-in (14-cm) tricone bits	
296479686	RH15 drill head 15-in (38.1-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	D36x50DR Series II
296490300	RH15 drill head 19-in (48.3-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	D36x50DR Series II
296479658	RH15 drill head 15-in (38.1-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	D40x55DR S3
296490296	RH15 drill head 19-in (48.3-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	D40x55DR S3
296565946	RH15 drill head 24-in (61-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	D40x55DR S3
296490302	RH15 50 hour rebuild kit	
296490303	RH15 200 hour rebuild kit — 15-in (38.1-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	
296490305	RH15 200 hour rebuild kit — 19-in (48.26-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	
296565946	RH15 200 hour rebuild kit — 24-in (61-cm) sonde, 3.5-in API bit box, 6.25-in (15.88-cm) diameter min bit	
296479732	RH15 drill head rebuild tool kit	
296514927	PG6 quick pullback grapple for 6.25-in (15.88-cm) tricone bits	
101562004	Vermeer polyurea grease (10-pack)	

* Does not include hex coupler

PG5/PG6 pullback grapples



See what it takes to rebuild the RH15 rock drill head.

MIX MASTER™ HD REAMER

Vermeer Mix Master™ HD (MXHD) reamers are the ideal tooling for sandy loam, sticky clay and other reactive ground conditions. These mixing reamers can tackle both utility and pipeline applications with a range of cut diameters from 6 in to 36 in (15.2 cm to 91.4 cm).

The intentional spray pattern design hydrates cuttings taken off the bore wall to create an ideal slurry mix and help with cutting management.

Updated reamer geometry helps minimize wandering to cut an accurate bore path.

Small rotary teeth minimize overcut to maintain bore wall integrity.

Fluid ports close to the cutting structure minimize risk of outrunning mud.



The intentional angle of the plates combined with the carefully engineered open spaces moves slurry through the plates while the plates efficiently move cuttings backwards.

Reinforcing gussets add durability to the angled plates on mid-size and larger reamers.*

Progressive plate design steps the hole up to full diameter in an initial 2-in step and then 4-in (5.1-cm and 10.2-cm) increments.

The number of fluid distribution ports scales with the plate size. Larger plates feature more fluid ports for greater fluid distribution.

Purposely sized openings in the plates balance slurry pass through and add durability.*

*Feature available on the following sizes:

3.25" OD spud - gussets at 18" cut - plate openings at 14" cut
 3.75" OD spud - gussets at 20" cut - plate openings at 16" cut
 4.50" OD spud - gussets at 22" cut - plate openings at 18" cut
 6.50" OD spud - gussets at 26" cut - plate openings at 18" cut
 8.00" OD spud - gussets at 28" cut - plate openings at 20" cut

Strategic spiral tooth pattern helps produce smooth pullback and a clean cut.

REAMERS

Vermeer puts its full range of reamer solutions to work for you. From the tried-and-true to pioneering designs, our lineup is ready to handle the wide variety of ground conditions you run into. As always with Vermeer, you can expect a world-class product offering to help meet your needs. Plus, when you come across the unexpected, you can rely on us for customized tooling options to meet specific applications, ground conditions and, of course, your personal preferences.



Fluted reamer

Our fluted reamers get the job done with a robust through-shaft design and heat-treated, cast-alloy steel for durability. Reamers are available in multiple configurations to suit your needs including built-in swivels, box-by-pin or pull eye. Vermeer fluted reamers include robotically applied carbide-mesh-grit hardfacing for longevity. And they're available with rotary or shark teeth to create an aggressive cutting action. They're ideal for rugged ground conditions ranging from **hard pan and soft rock to cobble**.



Standard threaded ports offer versatility in adjusting drilling fluid flow.

Fluted with eye — Shark teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	PULL EYE/PULL EYE CAPACITY
296341430	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341431	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341432	D6x6 — D10x15 S3	1.625-in hex pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341433	D16x20 — D24x40 S3	2.125-in hex pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341434	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296341435	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296341436	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296341437	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296341438	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296341439	D7x11 — D24x40 S3	2.375-in API Reg box	Pull eye	16 in (40.64 cm)	24,000 lb (10,886.2 kg)
235095001	Replacement shark teeth — 1.25-in (3.18-cm) weld-on				

Fluted with eye — Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	PULL EYE/PULL EYE CAPACITY
296341440	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341441	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341442	D6x6 — D10x15 S3	1.625-in hex pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341443	D16x20 — D24x40 S3	2.125-in hex pin	Pull eye	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341444	D7x11 — D24x40 S3	2.375-in API box	Pull eye	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296341445	D7x11 — D24x40 S3	2.375-in API box	Pull eye	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296341446	D7x11 — D24x40 S3	2.375-in API box	Pull eye	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296341447	D7x11 — D24x40 S3	2.375-in API box	Pull eye	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296341448	D7x11 — D24x40 S3	2.375-in API box	Pull eye	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296341449	D7x11 — D24x40 S3	2.375-in API box	Pull eye	16 in (40.64 cm)	24,000 lb (10,886.2 kg)
227684001	Replacement rotary teeth — standard weld-on				



Fluted with swivel – Shark teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	PULL EYE/PULL EYE CAPACITY
296341426	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341427	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
235058001	D7x11 — D24x40 S3	1.625-in hex pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
235063001	D7x11 — D24x40 S3	2.125-in hex pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296258154	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296258156	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296260059	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296260061	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296260063	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296260065	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	16 in (40.64 cm)	24,000 lb (10,886.2 kg)
235095001	Replacement shark teeth – 1.25-in (3.2-cm) weld-on				



Fluted with swivel – Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	PULL EYE/PULL EYE CAPACITY
296341450	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	10 in (25.40 cm)	50,000 lb (22,679.6 kg)
296341451	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	12 in (30.48 cm)	50,000 lb (22,679.6 kg)
296341452	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	14 in (35.56 cm)	50,000 lb (22,679.6 kg)
296341453	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	16 in (40.64 cm)	50,000 lb (22,679.6 kg)
296341454	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	18 in (45.72 cm)	50,000 lb (22,679.6 kg)
296341455	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	20 in (50.80 cm)	50,000 lb (22,679.6 kg)
296341456	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	22 in (55.88 cm)	50,000 lb (22,679.6 kg)
296341457	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	24 in (60.96 cm)	50,000 lb (22,679.6 kg)
296341458	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	26 in (66.04 cm)	50,000 lb (22,679.6 kg)
296341459	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	28 in (71.12 cm)	50,000 lb (22,679.6 kg)
296341460	D36x50 — D60x90 S3	2.875-in API Reg box	Swivel	30 in (76.20 cm)	50,000 lb (22,679.6 kg)
296264865	Replacement rotary teeth – heavy-duty weld-on				



Fluted with swivel – Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	PULL EYE/PULL EYE CAPACITY
296341428	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341429	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
235013001	D6x6 — D10x15 S3	1.625-in hex pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
232555001	D7x11 — D24x40 S3	2.125-in hex pin	Swivel	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296258153	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296258155	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296260058	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296260060	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296260062	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296260064	D7x11 — D24x40 S3	2.375-in API Reg box	Swivel	16 in (40.64 cm)	24,000 lb (10,886.2 kg)
227684001	Replacement rotary teeth – standard weld-on				



Fluted with swivel – Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	SWIVEL/SWIVEL CAPACITY
296341461	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	10 in (25.40 cm)	100,000 lb (45,359.2 kg)
296341462	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	12 in (30.48 cm)	100,000 lb (45,359.2 kg)
296341463	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	14 in (35.56 cm)	100,000 lb (45,359.2 kg)
296341464	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	16 in (40.64 cm)	100,000 lb (45,359.2 kg)
296341465	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	18 in (45.72 cm)	100,000 lb (45,359.2 kg)
296341466	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	20 in (50.80 cm)	100,000 lb (45,359.2 kg)
296341467	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	22 in (55.89 cm)	100,000 lb (45,359.2 kg)
296341468	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	24 in (60.96 cm)	100,000 lb (45,359.2 kg)
296341469	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	26 in (66.04 cm)	100,000 lb (45,359.2 kg)
296341470	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	28 in (71.12 cm)	100,000 lb (45,359.2 kg)
296341471	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	30 in (76.20 cm)	100,000 lb (45,359.2 kg)
296341472	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	32 in (81.28 cm)	100,000 lb (45,359.2 kg)
296341473	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	34 in (86.36 cm)	100,000 lb (45,359.2 kg)
296341474	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	36 in (91.44 cm)	100,000 lb (45,359.2 kg)
296341475	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	38 in (96.52 cm)	100,000 lb (45,359.2 kg)
296341476	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	40 in (101.60 cm)	100,000 lb (45,359.2 kg)
296264865	Replacement rotary teeth – heavy-duty weld-on				



Fluted box x pin – Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296341477	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	10 in (25.40 cm)
296341478	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	12 in (30.48 cm)
296341479	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	14 in (35.56 cm)
296341480	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	16 in (40.64 cm)
296341481	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	18 in (45.72 cm)
296341482	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	20 in (50.80 cm)
296341483	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	22 in (55.88 cm)
296341484	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	24 in (60.96 cm)
296341485	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	26 in (66.04 cm)
296341486	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	28 in (71.12 cm)
296341487	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	30 in (76.20 cm)
296341488	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	32 in (81.28 cm)
296341489	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	34 in (86.36 cm)
296341490	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	36 in (91.44 cm)
296341491	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	38 in (96.52 cm)
296341492	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	40 in (101.60 cm)
296264865	Replacement rotary teeth – heavy-duty weld-on			



What considerations should you be thinking about when selecting HDD tooling for your jobsite?

BUILD. BUY. BORE.

Vermeer RigFitter is a powerful digital tool that helps you select the right HDD tooling.

Now, Vermeer sets a new industry standard in HDD tooling configurators with RigFitter — a powerful and user-friendly digital tool that helps you select the ideal HDD tooling for your rig. When building a drill string, it's the next best thing to your Vermeer HDD tooling specialist.

**Build with convenience.
Buy with confidence.
Bore with the best.**

RIGFITTER IS A BETTER WAY TO BUILD A DRILL STRING.

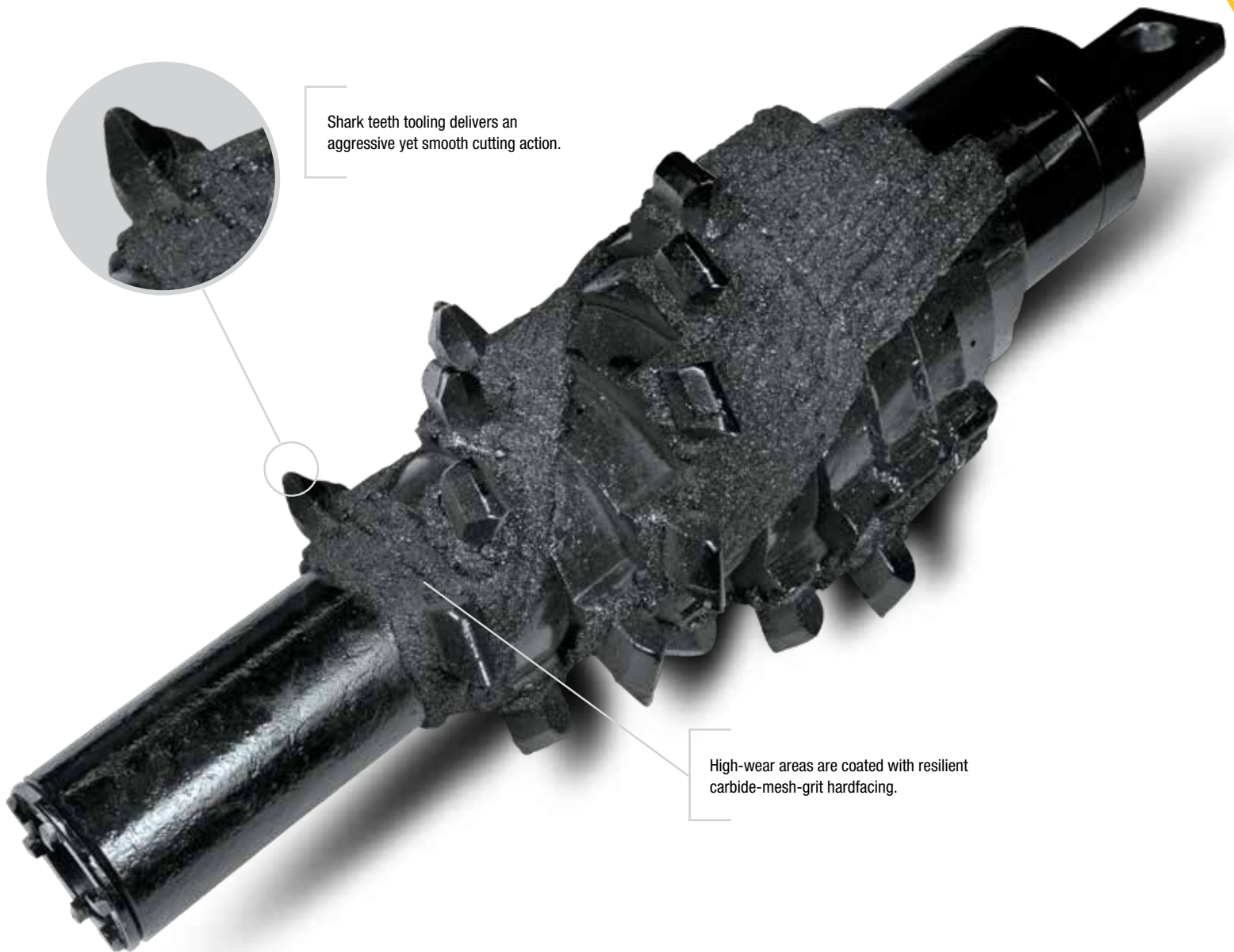
borestore.com

Vermeer



T-Rex reamer

Take a bite out of tough conditions. Ruggedly constructed with work-hardened, high-alloy steel, this reamer incorporates a unique, steep, rear-tapered design for ease of pushback when needed. Optional built-in swivel or through-shaft designs are available. High-wear areas are made with a resilient carbide mesh grit hardfacing. Equipped with oversized shark teeth tooling for aggressive yet smooth cutting action, the T-Rex reamer is ready for **cobble, chunk rock and soft rock**.



Shark teeth tooling delivers an aggressive yet smooth cutting action.

High-wear areas are coated with resilient carbide-mesh-grit hardfacing.

T-Rex with swivel

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	SWIVEL/SWIVEL CAPACITY
296309260	D36x50 — D60x90 S3	2.875-in API box	Swivel	8 in (20.32 cm)	50,000 lb (22,679.6 kg)
296309261	D36x50 — D60x90 S3	2.875-in API box	Swivel	10 in (25.40 cm)	50,000 lb (22,679.6 kg)
296309262	D36x50 — D60x90 S3	2.875-in API box	Swivel	12 in (30.48 cm)	50,000 lb (22,679.6 kg)
296309263	D36x50 — D60x90 S3	2.875-in API box	Swivel	14 in (35.56 cm)	50,000 lb (22,679.6 kg)
296309264	D36x50 — D60x90 S3	2.875-in API box	Swivel	16 in (40.64 cm)	50,000 lb (22,679.6 kg)
296309265	D36x50 — D60x90 S3	2.875-in API box	Swivel	18 in (45.72 cm)	50,000 lb (22,679.6 kg)
296309266	D36x50 — D60x90 S3	2.875-in API box	Swivel	20 in (50.80 cm)	50,000 lb (22,679.6 kg)
296309267	D36x50 — D60x90 S3	2.875-in API box	Swivel	22 in (55.88 cm)	50,000 lb (22,679.6 kg)
296309268	D36x50 — D60x90 S3	2.875-in API box	Swivel	24 in (60.96 cm)	50,000 lb (22,679.6 kg)
296320016	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	12 in (30.48 cm)	100,000 lb (45,359.2 kg)
296320018	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	14 in (35.56 cm)	100,000 lb (45,359.2 kg)
296309286	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	16 in (40.64 cm)	100,000 lb (45,359.2 kg)
296309287	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	18 in (45.72 cm)	100,000 lb (45,359.2 kg)
296309288	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	20 in (50.80 cm)	100,000 lb (45,359.2 kg)
296309289	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	22 in (55.88 cm)	100,000 lb (45,359.2 kg)
296309290	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	24 in (60.96 cm)	100,000 lb (45,359.2 kg)
296309291	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	26 in (66.04 cm)	100,000 lb (45,359.2 kg)
296309292	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	28 in (71.12 cm)	100,000 lb (45,359.2 kg)
296309293	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	30 in (76.20 cm)	100,000 lb (45,359.2 kg)
296309294	D36x50 — D100x140 S3	3.5-in API Reg box	Swivel	32 in (81.28 cm)	100,000 lb (45,359.2 kg)
296294440	Replacement shark teeth – 1.75-in (4.45-cm) weld-on				

T-Rex box x pin

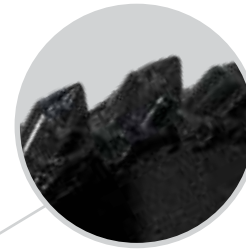
PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296309251	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	8 in (20.32 cm)
296309252	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	10 in (25.40 cm)
296309253	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	12 in (30.48 cm)
296309254	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	14 in (35.56 cm)
296309255	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	16 in (40.64 cm)
296309256	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	18 in (45.72 cm)
296309257	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	20 in (50.80 cm)
296309258	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	22 in (55.88 cm)
296309259	D16x20 — D60x90 S3	2.875-in API box	2.875-in API pin	24 in (60.96 cm)
296320012	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	12 in (30.48 cm)
296320014	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	14 in (35.56 cm)
296309269	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	16 in (40.64 cm)
296309270	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	18 in (45.72 cm)
296309271	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	20 in (50.80 cm)
296309272	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	22 in (55.88 cm)
296309273	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	24 in (60.96 cm)
296309274	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	26 in (66.04 cm)
296309275	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	28 in (71.12 cm)
296309276	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	30 in (76.20 cm)
296309277	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	32 in (81.28 cm)
296294440	Replacement shark teeth – 1.75-in (4.45-cm) weld-on			

Reamer carriers

PART NO.	MAX REAMER DIAMETER	MAX SHAFT LENGTH	MAX WEIGHT
296255490	24 in (60.96 cm)	40 in (101.60 cm)	1,000 lb (453.6 kg)
296260037	48 in (121.92 cm)	108 in (274.32 cm)	2,400 lb (1,088.6 kg)

Mix Master™ HD reamer

Vermeer Mix Master™ HD (MXHD) reamers are the ideal tooling for sandy loam, sticky clay and other reactive ground conditions. These mixing reamers can tackle both utility and pipeline applications with a range of cut diameters from 6 in to 36 in (15.2 cm to 91.4 cm).



Equipped with carbide rotary teeth

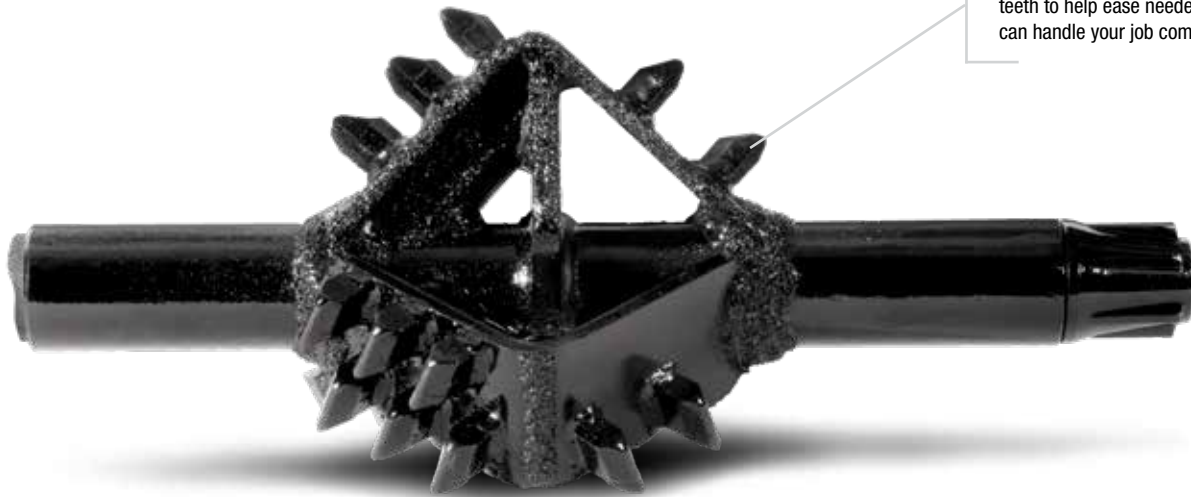


PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296594215	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	6 in (15.24 cm)
296564873	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	8 in (20.32 cm)
296564879	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	10 in (25.40 cm)
296557016	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	12 in (30.48 cm)
296564876	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	14 in (35.56 cm)
296559908	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	16 in (40.64 cm)
296564889	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	8 in (20.32 cm)
296564892	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	10 in (25.40 cm)
296559919	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	12 in (30.48 cm)
296581597	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	14 in (35.56 cm)
296559927	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	16 in (40.64 cm)
296569875	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	18 in (45.72 cm)
296594218	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	20 in (50.80 cm)
296557030	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	24 in (60.96 cm)
296594248	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin with 18-in (46-cm) stabilizer	30 in (80 cm)
296564898	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	10 in (25.40 cm)
296559938	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	12 in (30.48 cm)
296564901	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	14 in (35.56 cm)
296559952	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	16 in (40.64 cm)
296564904	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	18 in (45.72 cm)
296564907	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	20 in (50.80 cm)
296579401	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	24 in (60.96 cm)

*Additional sizes and styles are available through your Vermeer dealer.

Diamond wing cutter reamer

Efficient and effective, the Diamond Wing Cutter features a dual-tapered, open-bodied design to maintain mixing action, which helps allow reduced pullback and rotational forces required from the drill rig.

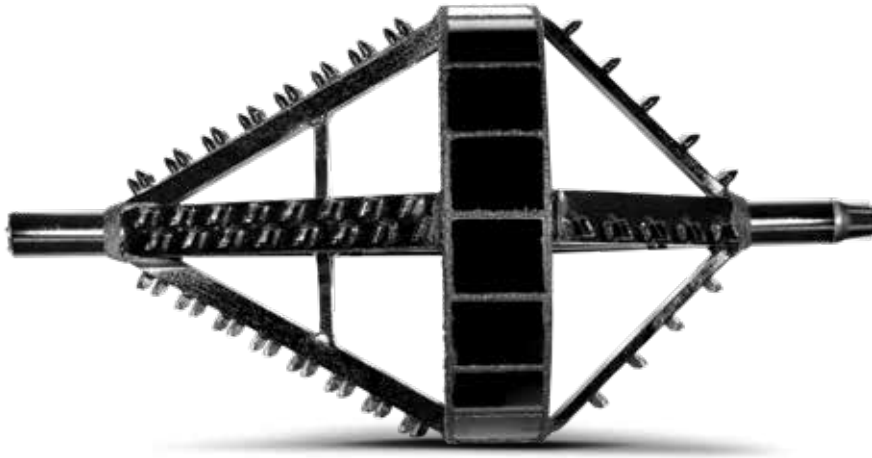


PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296417717	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	10 in (25.40 cm)
296417708	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	12 in (30.48 cm)
296417699	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	14 in (35.56 cm)
296417690	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	16 in (40.64 cm)
296417726	D7x11 — D24x40 S3	2.375-in API Reg box	2.375-in API Reg pin	18 in (45.72 cm)
296412817	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	12 in (30.48 cm)
296412818	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	14 in (35.56 cm)
296412819	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	16 in (40.64 cm)
296412820	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	18 in (45.72 cm)
296412821	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	20 in (50.80 cm)
296412822	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	22 in (55.88 cm)
296412823	D16x20 — D60x90 S3	2.875-in API Reg box	2.875-in API Reg pin	24 in (60.96 cm)
296412826	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	14 in (35.56 cm)
296412827	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	16 in (40.64 cm)
296412828	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	18 in (45.72 cm)
296412829	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	20 in (50.80 cm)
296412830	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	22 in (55.88 cm)
296412831	D36x50 — D100x140 S3	3.5-in API Reg box	3.5-in API Reg pin	24 in (60.96 cm)



Fly cutter reamer

This robust flat-face reamer is designed for higher-powered HDD rigs. You can also count on the Vermeer fly cutter in a variety of ground conditions, including **sandy soil loam and soft, medium and hard soil**, with its changeable carbide fluid nozzles that help optimize flow (including front and rear fluid nozzles to help increase spoil displacement). It's also designed with C20 pockets and replaceable C21HD rotary teeth to supply you with durable cutting performance.



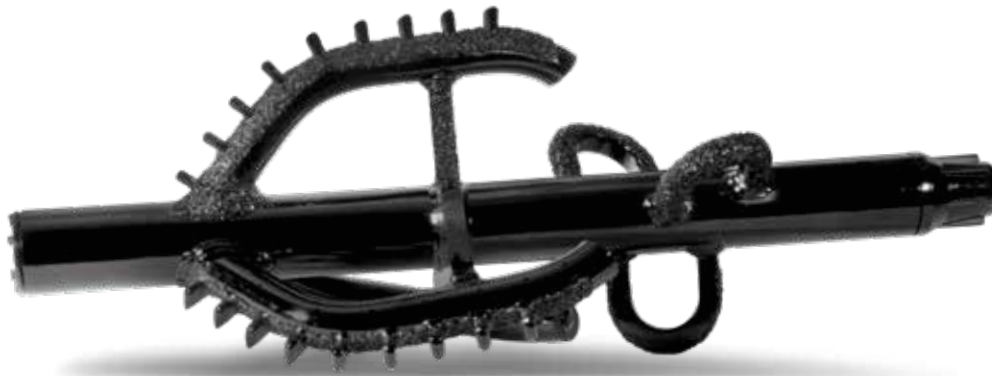
Supreamer™ reamer

Take on big jobs with the Supreamer™ reamer's exceptional mixing action — made possible by its open-bodied design and ruggedly large paddles. It includes front- and rear-facing oversized carbide shark teeth tooling for aggressive cutting action and ease of pushback when needed.



Barrel reamer

Vermeer Barrel reamers give you steady bore-hole stabilization in **sandy soil loam, soft soil and medium soil**. They also include front and rear fluid nozzles to help increase spoil displacement. And they're designed with C20 pockets and replaceable C21HD rotary teeth to dish out durable cutting performance. Plus, you'll get heavy performance without hefty weight. In fact, they're designed with a unique internal baffle system that limits the amount of drilling fluid mass — decreasing overall tool weight to help protect structural integrity.



Helical plus reamer

This Vermeer-original design helps you tame **sandy loam and clay**. The secret to its success is a helical bar design with shark teeth tooling and rear-facing paddles. It all adds up for efficient cutting and mixing action.

Don't see what you need here?

Reamers are one of the most productive and popular options for HDD contractors. That's why Vermeer provides custom reamers for the full drill and maxi rig lineups. Looking for something you don't see here? Talk to your local Vermeer dealer to learn about our custom reamer build options or get additional product information at boresstore.com.

ROLLER CONE HOLE OPENER

Performance meets durability with Vermeer roller cone hole openers. This lineup is manufactured using new (never reused) cutters to help operators navigate in hard conditions. And, Vermeer engineers maximized cone size on the tool for increased weight on the bit for optimum surface penetration. The precision manufacturing process also helps create optimized concentricity of the tool for even wear. Plus, all cutters feature metal-faced seals rather than the conventional rubber seals to help maximize wear life in gritty conditions. If you want quality tooling, go with Vermeer.



DETAILS
CUTTER
Available with IADC 617 (hard rock) and IADC 537 (medium rock) cutters
NOZZLE
.625-in (16-mm) #20 carbide nozzles
Other options upon request
PUSH CUTTERS
Gussets with welded rotary teeth
Customization upon request

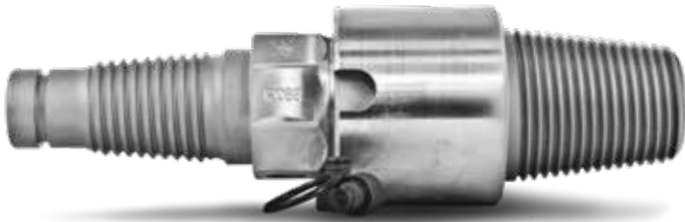
SPECIFICATIONS		
REAMER DIAMETER	STABILIZER DIAMETER (BAR STYLE WITH HARDFACING)	THREAD CONNECTION
8 in (20.32 cm)	4.5 in - 5.5 in (12 cm - 14 cm) Also offered with no stabilizer	2.375 in API Reg 2.875 in API Reg
10 in (25.40 cm)	5.5 in - 7 in (14 cm - 18 cm) Also offered with no stabilizer	
12 in (30.48 cm)	5.5 in - 9 in (14 cm - 23 cm)	2.875 in API Reg
14 in (35.56 cm)	6.25 in - 11 in (15.9 cm - 28 cm)	
16 in (40.64 cm)	8 in - 13 in (20 cm - 33 cm)	
18 in (45.72 cm)	8 in - 15 in (20 cm - 38 cm)	3.5 in API Reg
20 in (50.80 cm)	10 in - 17 in (25 cm - 43 cm)	
22 in (55.88 cm)	12 in - 19 in (30 cm - 48 cm)	3.5 in API IF
24 in (60.96 cm)	14 in - 20 in (36 cm - 50 cm)	
	Custom ring, spiral or bar with carbide options upon request	Custom shaft length and thread type upon request



See how Vermeer roller cone hole openers work in some of the hardest ground conditions.

ADAPTERS AND PULLING EYES

Vermeer provides standard sub and adapter products to meet your immediate needs with proven Vermeer-specified heat-treated alloy steel that's finished off with a 100% thread inspection process. A full line of adapters and pulling eyes are available for small drills up to maxi drill rigs.



QuickFire system x API

The parts listed represent a small percentage — Vermeer can meet virtually all of your connectivity needs, including other manufacturers' nonproprietary thread profiles.



Pulling Eyes

PART NO.	CONNECTION	RATING
289443001	2.375-in API Reg box	10,000 lb (4,535.9 kg)
289442001	2.375-in API Reg pin	10,000 lb (4,535.9 kg)
289445001	2.375-in API Reg box	24,000 lb (10,886.2 kg)
296312688	2.375-in API Reg pin	24,000 lb (10,886.2 kg)
289447001	2.875-in API Reg box	24,000 lb (10,886.2 kg)
296312689	2.875-in API Reg pin	24,000 lb (10,886.2 kg)
289449001	2.875-in API Reg box	50,000 lb (22,679.6 kg)
296312692	2.875-in API Reg pin	50,000 lb (22,679.6 kg)
289451001	3.5-in API Reg box	50,000 lb (22,679.6 kg)
289450001	3.5-in API Reg pin	50,000 lb (22,679.6 kg)
296328327	2.875-in API Reg box	90,000 lb (40,823.3 kg)
289452001	2.875-in API Reg pin	90,000 lb (40,823.3 kg)
289455001	3.5-in API Reg box	90,000 lb (40,823.3 kg)
289454001	3.5-in API Reg pin	90,000 lb (40,823.3 kg)

Adapters

PART NO.	DESCRIPTION
262392001	1.625-in LPT (P) x 2-4 ACME (P)
289400001	1.625-in LPT (P) x 2.375-in API Reg (P)
280086001	1.625-in LPT (P) x 2.125-in LPT (B)
227743001	1.625-in LPT (P) x weld-on
296364040	QuickFire® connection system 300 (P) x 2-4 ACME (P)
296364041	QuickFire® connection system 300 (P) x 2.375-in API Reg (P)
296364054	QuickFire® connection system 300 (P) x weld-on
296364075	QuickFire® connection system 300 (P) x weld-on spud
296364053	QuickFire® connection system 300 (P) x 1.625-in LPT (P) weldover
296364055	QuickFire® connection system 300 (P) x 2.125-in LPT (P) weldover
296279067	2.125-in LPT (P) x 2.375-in API Reg (P), 3-in (7.62-cm) OD
296258005	2.125-in LPT (P) x 2.375-in API Reg (P), 3.25-in (8.26-cm) OD
289403001	2.125-in LPT (P) x 2.375-in API Reg (P), 3.5-in (8.89-cm) OD
289406001	2.125-in LPT (P) x 2.875-in API Reg (P)
296312604	2.125-in LPT (P) x 3.5-in API Reg (P)
227676001	2.125-in LPT (P) x weld-on
296344203	2.125-in LPT (P) x 2.125-in LPT (P) weldover
296364095	QuickFire® connection system 400 (P) x 2.125-in LPT (B)
296364037	QuickFire® connection system 400 (P) x 2.375-in API Reg (P)
296364038	QuickFire® connection system 400 (P) x 2.875-in API Reg (P)
296364050	QuickFire® connection system 400 (P) x weld-on, 3-in (7.62-cm) long
296364073	QuickFire® connection system 400 (P) x weld-on, 3.75-in (9.53-cm) long
296364072	QuickFire® connection system 400 (P) x 1.625-in LPT (P) weldover
296364052	QuickFire® connection system 400 (P) x 2.125-in LPT (P) weldover
296364077	QuickFire® connection system 460 (P) x 2.125-in LPT Hex (B)
296364013	QuickFire® connection system 460 (P) x 2.375-in API Reg (P)
296364014	QuickFire® connection system 460 (P) x 2.875-in API Reg (P)
296364017	QuickFire® connection system 460 (P) x 3.5-in API Reg (P)
296364016	QuickFire® connection system 460 (P) x weld-on, 5.5-in (13.97-cm) long
296364074	QuickFire® connection system 460 (P) x weld-on, 6.75-in (17.15-cm) long
296364015	QuickFire® connection system 460 (P) x 2.125-in LPT (P) weldover
296560794	QuickFire® HD connection system 300 (B) X 2-in API IF (P)
296555470	QuickFire® HD connection system 300(B) X 2-4 ACME (P)
296555451	QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555451	QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555451	QuickFire® HD connection system 400 (B) x 2.375-in API Reg (P)
296555453	QuickFire® HD connection system 400 (B) x 2.875-in API Reg (P)
296560761	QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
296560761	QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
296560761	QuickFire® HD connection system 460 (B) x 2.375-in API Reg (P)
296560763	QuickFire® HD connection system 460 (B) x 2.875-in API Reg (P)
296337363	2.875-in FST #900 (B) x 2.875-in API Reg (P)
289435001	2.875-in FST #900 (B) x 3.5-in API Reg (P)
296257929	3.5-in FST #800 (B) x 2.875-in API Reg (P)
296312589	3.5-in FST #800 (B) x 3.5-in API Reg (P)
296312587	3.5-in FST #1000 (B) x 2.875-in API Reg (P)
296312588	3.5-in FST #1000 (B) x 3.5-in API Reg (P)
296312585	3.5-in FST #1000 (B) x 4.5-in API IF (P)

VERMEER QUICKSHOT SWIVEL ASSEMBLY TOOLS

New Quickshot swivel tools give HDD crews dependable pullback performance on small-diameter bores. Quickshot swivel assembly tools are designed to work in conjunction with most quickshot drill bits and are available in four sizes with ratings ranging from 9,000 lb to 30,000 lb (4082.3 kg to 13,607.8 kg). For optimized in-line pullback and to help prevent binding, Vermeer also offers a quick pullback swivel attachment plate.



Pullback plates

QUICKSHOT SWIVEL SELECTED	PART NO.	DESCRIPTION
9,000 lb (4,082.3 kg)	296569527	Pullback plate for Vermeer 5-bolt bits and Ultra X3 275 bits
9,000 lb (4,082.3 kg) / 12,000 lb (5,443.1 kg)	296569529	Pullback plate for all Vermeer 6-bolt pattern bits, Ultra X3 325/375 and Armor bits
21,000 lb (9,525.4 kg)	296569530	Pullback plate for all Vermeer 6-bolt pattern bits, Ultra X3 325/375 and Armor bits
30,000 lb (13,607.7 kg)	296569531	Pullback plate for all Vermeer 6-bolt pattern bits, Ultra X3 325/375 and Armor bits



Quickshot Swivel Assembly (now includes a pullback plate and bolt)

PART NO.	3:1 SAFE WORKING LOAD	ULTIMATE LOAD
296572437	9,000 lb (4,082.3 kg)	27,000 lb (12,247 kg)
296572438	12,000 lb (5,443.1 kg)	36,000 lb (16,329.3 kg)
296572439	21,000 lb (9,525.4 kg)	63,000 lb (28,576.3 kg)
296572440	30,000 lb (13,607.7 kg)	90,000 lb (40,823.3 kg)

Contact your dealer

with questions about how the Quickshot Swivel Assembly could work for you.

SWIVELS

Vermeer swivels give you important job flexibility that goes beyond the "nice to have." Choose from a full line of options, fitting small to large rigs. Available connections include a hex collar, QuickFire connection system and API for ease of compatibility with a wide range of reamers and other tooling. Plus, count on our angular contact bearing design to handle thrust and radial load.



QuickFire® connection system

Designed for ease of use with the Vermeer QuickFire connection system

PART NO.	MODEL COMPATIBILITY	CONNECTION TYPE	CAPACITY
PULLBACK SWIVEL – QUICKFIRE® CONNECTION SYSTEM			
296364127	D7x11A — D10x15 S3	QuickFire® connection system 300 pin	10,000 lb (4,535.9 kg)
296364110	D7x11A — D10x15 S3	QuickFire® connection system 300 pin	24,000 lb (10,886.2 kg)
296364108	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	24,000 lb (10,886.2 kg)
296364109	D16x20 — D24x40 S3	QuickFire® connection system 460 pin	24,000 lb (10,886.2 kg)
296364150	D36x50, D36x50 Series II, D40x55 S3	QuickFire® connection system 460 pin	40,000 lb (18,143.7 kg)



Hex

Designed for use with the low-profile hex connection system

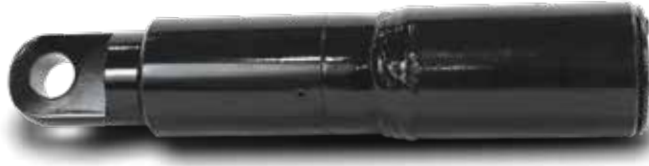
PART NO.	MODEL COMPATIBILITY	CONNECTION TYPE	CAPACITY
PULLBACK SWIVEL – HEX			
235086001	D7x11A — D10x15 S3	1.625-in (4.13-cm) hex pin	7,000 lb (3,175.2 kg)
235039001	D16x20 — D24x40 S3	2.125-in (5.40-cm) hex pin	24,000 lb (10,886.2 kg)
280486001	D24x40 — D40x55 S3	2.125-in (5.40-cm) hex pin	40,000 lb (18,143.7 kg)



Double eye

Designed for use with any reamer that doesn't include a built-in swivel

PART NO.	MODEL COMPATIBILITY	CONNECTION TYPE	CAPACITY
PULLBACK SWIVEL – DOUBLE EYE			
296448894	D7x11A — D10x15 S3	Recessed bolt	7,000 lb (3,175.5 kg)
296448874	D16x20 — D20x22 S3	Recessed bolt	10,000 lb (4,535.9 kg)
296448829	D16x20 — D24x40 S3	Recessed bolt	24,000 lb (10,886.2 kg)
296258123	D36x50, D36x50 Series II, D40x55 S3	Eye x clevis	50,000 lb (22,679.6 kg)
296258124	D50x100 — D100x140 S3	Eye x clevis	90,000 lb (40,823.3 kg)
296268977	D50x100 — D100x140 S3	Eye x clevis	100,000 lb (45,359.2 kg)



API

Designed for use with API thread reamers

PART NO.	MODEL COMPATIBILITY	CONNECTION TYPE	CAPACITY
PULLBACK SWIVEL – API			
296364178	D7x11A — D10x15 S3	2.375-in API box	7,000 lb (3,175.5 kg)
296364177	D16x20 — D24x40 S3	2.375-in API box	24,000 lb (10,886.2 kg)
296364234	D24x40, D24x40 S3	2.875-in API box	24,000 lb (10,886.2 kg)
296364179	D36x50, D36x50 Series II, D40x55 S3	2.875-in API box	50,000 lb (22,679.6 kg)
296260235	D50x100 — D100x140 S3	3.5-in API box	100,000 lb (45,359.2 kg)



Plate bit swivel

Designed to be a quick and convenient solution — pulls on center and greases with replaceable bearing stack

PART NO.	MODEL COMPATIBILITY	CONNECTION TYPE	CAPACITY
PLATE BIT SWIVEL			
296406701	D7x11A — D10x15 S3	Cross bolt	7,000 lb (3,175.2 kg)



Shackles

Designed to attach end product to swivel

PART NO.	DESCRIPTION	RATED CAPACITY
SHACKLES		
296415190	3/8-in (.375-in, 10-mm) threaded (P)	2,000 lb (907.2 kg)
296415191	7/16-in (.438-in, 11-mm) threaded (P)	3,000 lb (1,360.8 kg)
296415192	1/2-in (.5-in, 13-mm) threaded (P)	4,000 lb (1,814.4 kg)
296415193	5/8-in (.625-in, 16-mm) threaded (P)	6,500 lb (2,948.4 kg)
296415161	.88-in (22-mm) threaded (P)	13,000 lb (5896.7 kg)
296415390	1-in (25-mm) threaded (P)	17,000 lb (7711.1 kg)

PULLERS

Whether you're working with high-density polyethylene (HDPE), PVC or PE, you'll find a full range of puller options to help meet your product pipe type and size.



Duct

You can get a grip on the job with our duct puller that features high thread engagement. It's durable, too, with heat-treated, high-alloy steel construction.

PART NO.	DESCRIPTION	SIZE
231802001	Duct puller	.5 in - 1 in (1.27 cm - 2.54 cm)
296255297	Duct puller	1 in (2.54 cm)
289295001	Duct puller	1 in - 1.25 in (2.54 cm - 3.18 cm)
296255533	Duct puller	1.25 in (3.18 cm)
231805001	Duct puller	1.25 in - 1.5 in (3.18 cm - 3.81 cm)
296255298	Duct puller	1.5 in (3.81 cm)
231807001	Duct puller	2 in (5.08 cm)
296448883	Duct puller	2.5 in (6.35 cm)



Sleeved

With Vermeer sleeved pullers, a protective sleeve guards the leading edge of the installation product, reducing the possibility of contamination and helping to prevent accidental release from the puller.

PART NO.	DESCRIPTION	SIZE
296401388	Sleeved puller	1 in (2.54 cm)
296401386	Sleeved puller	1.25 in (3.18 cm)
296401384	Sleeved puller	1.5 in (3.81 cm)
296401366	Sleeved puller	2 in (5.08 cm)
296401367	Sleeved puller	2.5 in (6.35 cm)
296341810	Sleeved puller	3 in (7.62 cm)
296341812	Sleeved puller	4 in (10.16 cm)
296404503	Sleeved puller	6 in (15.24 cm)
296448980	Sleeved puller	8 in (20.32 cm)
296449000	Sleeved puller	10 in (25.40 cm)



Expanded tapered

As the leading edge of the installation product makes its way, it's guarded by a protective sleeve that minimizes the possibility of contamination and helps prevent accidental release from the puller. An advanced taperlock design helps prevent accidental unscrewing of the puller during installation or removal of pipe.

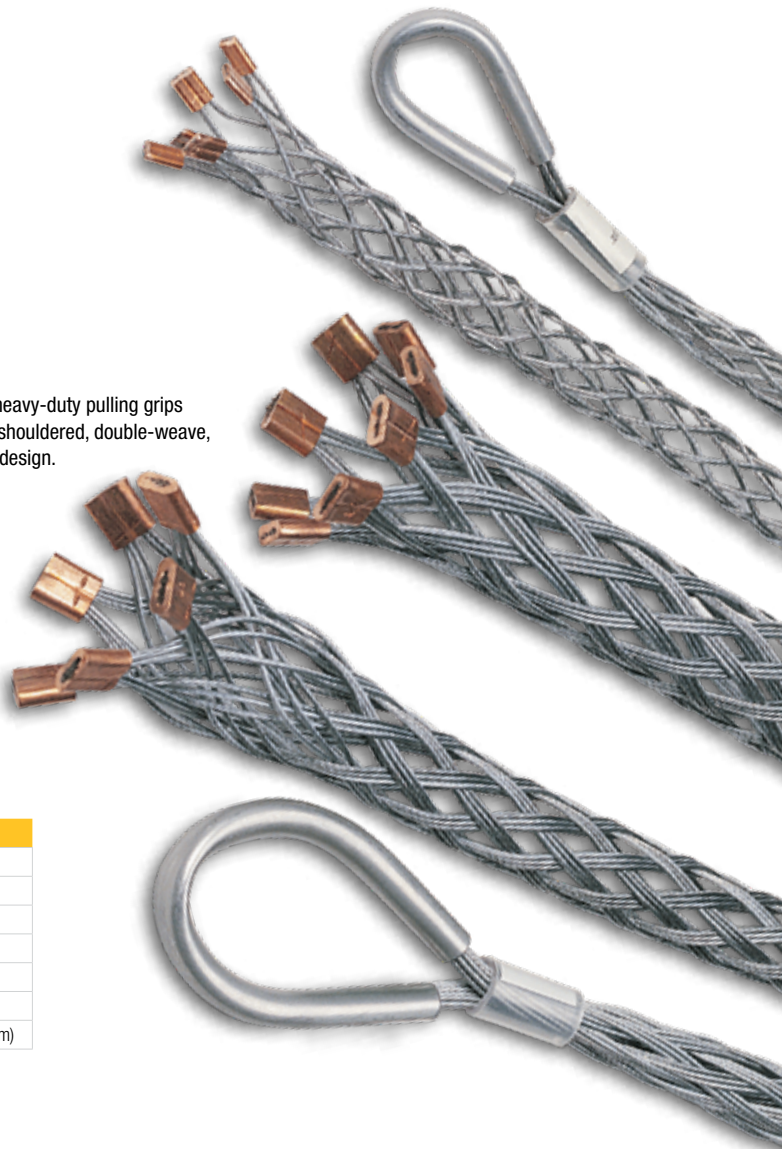
PART NO.	DESCRIPTION	SIZE
296401387	Expanding taper puller	1 in (2.54 cm)
296401385	Expanding taper puller	1.25 in (3.18 cm)
296401383	Expanding taper puller	1.5 in (3.81 cm)
296401368	Expanding taper puller	2 in (5.08 cm)
296401369	Expanding taper puller	2.5 in (6.35 cm)
296341809	Expanding taper puller	3 in (7.62 cm)
296341811	Expanding taper puller	4 in (10.16 cm)
296404501	Expanding taper puller	5 in (12.70 cm)
296404502	Expanding taper puller	6 in (15.24 cm)
296404516	Expanding taper puller	8 in (20.32 cm)
296404517	Expanding taper puller	10 in (25.40 cm)
296404518	Expanding taper puller	12 in (30.48 cm)

Vermeer heavy-duty pulling grips feature a shouldered, double-weave, no-crimp design.

Pulling grips

Available in double- and triple-galvanized wire weave, these pulling grips help meet your job's need.

PART NO.	DESCRIPTION	SIZE
204965001	Pulling grips	.75 in - 1.25 in (1.91 cm - 3.18 cm)
296278316	Pulling grips	.75 in - 1.25 in (1.91 cm - 3.18 cm)
204966001	Pulling grips	1.25 in - 2 in (3.18 cm - 5.08 cm)
204967001	Pulling grips	2 in - 2.75 in (5.08 cm - 6.99 cm)
204968001	Pulling grips	2.75 in - 3.5 in (6.99 cm - 8.89 cm)
204969001	Pulling grips	3.5 in - 4.25 in (8.89 cm - 10.80 cm)
223750001	Pulling grips	4.25 in - 4.875 in (10.80 cm - 12.32 cm)



BREAKOUT TONGS

Vermeer breakout devices provide an efficient solution for torqued direct tooling connections.



Choose from Vermeer PBD11500 breakout tongs for smaller utility directional drilling applications and tooling ranging from 1.66 in to 3.5 in (4.22 cm to 8.89 cm) in diameter or one of two powerful hydraulic breakout device tools ranging from 2.5 in to 5.75 in (6.35 cm to 14.61 cm) in diameter.

The Vermeer PBD21500MP is operated using a manual hydraulic hand pump, while the premium Vermeer PBD21500 kit is operated using a 28-volt hydraulic power unit with one Milwaukee lithium battery to help minimize the labor involved with making and breaking tooling connections.

Vermeer breakout device kits include forged alloy wrenches, two sets of dies and a power source (hydraulic models only). Vermeer also offers specialty bit breakout arms for use with PDC and tricone rock bits for hydraulic breakout devices.



TRICONE BIT BREAKER



PDC BIT BREAKER

PART NO.	Description
PBD11500	11,500-ft-lb (29,150-Nm) portable breakout device
PBD21500	21,500-ft-lb (29,150-Nm) portable breakout device (115 V charger intended for US/Canada)
PBD215001	21,500-ft-lb (29,150-Nm) portable breakout device (115 V charger intended for Lat Am/So Am/Japan)
PBD215002	21,500-ft-lb (29,150-Nm) portable breakout device (230 V charger intended for Aus/NZ)
PBD215003	21,500-ft-lb (29,150-Nm) portable breakout device (230 V charger intended for Eur/ME/Afr/Asia)
PBD21500MP	21,500-ft-lb (29,150-Nm) portable breakout device with manual hand pump
ACCESSORIES	
296522914	2.5-in - 3.75-in (6.36-cm - 9.53-cm) die set (8 required)
296539594	2.875-in API Reg PDC bit breaker (4 required)
296539592	3.5-in API Reg PDC bit breaker (4 required)
296522949	5-in - 5.75-in (12.70-cm - 14.61-cm) diameter tricone bit breaker
296522909	5.75-in - 6.5-in (14.61-cm - 16.51-cm) diameter tricone bit breaker
296539505	6.5-in - 7.25-in (16.51-cm - 18.42-cm) diameter tricone bit breaker

Premium PBD21500 portable breakout device kit

- Forged alloy wrenches
- Two die sets
- Hydraulic cylinder
- Hydraulic hoses
- 28-volt hydraulic power unit
- One Milwaukee lithium battery
- Battery charger
- Hard-cover case

Manual PBD21500MP portable breakout device

- Forged alloy wrenches
- Two die sets
- Hydraulic cylinder
- Hydraulic hoses
- Manual hand pump

PBD11500 breakout tongs kit

- Forged alloy wrenches
- Three sizes of vise jaws
- Tension rod
- Connector pins
- Two die sets
- Laser-cut wrench
- Hard-cover case



Thread lube

Find thread lubes specially designed for seasonal applications and various HDD models, including environmentally friendly Bio-Stick grease.

PART NO.	DESCRIPTION	VOLUME
296337339	Bio-Stick grease	1 gal (3.8 L)
296337340	Bio-Stick grease	2 gal (7.6 L)
296426100	Bio-Stick grease	5 gal (18.9 L)
296337372	Bio-Stick grease	30-pk cartridge
235983001	Vermeer thread lube	1 gal (3.8 L)
235983002	Vermeer thread lube — winter	1 gal (3.8 L)
296408629	Vermeer thread lube — winter	5 gal (18.9 L)
905508003	Vermeer thread lube — summer	2 gal (7.6 L)
296426101	Vermeer thread lube — summer	5 gal (18.9 L)
296264990	Thread lube brush — tapered	
296264991	Thread lube brush — beveled	
296274856	Thread lube brush — long tapered	
296441872	QuickLock™	

**CURES
FASTER.
LASTS
LONGER.***

Part No. 296441872

*As compared to previously sold epoxy product.



One pack will
coat one 13-3/8 in
(339.7 mm) connection
with minimal waste.



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