

Vermeer®



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HDD TOOLING AND ACCESSORIES WAREHOUSE

VOL. 11

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A LEGACY OF INNOVATION

Vermeer lost a longtime and dedicated member of the team on Dec. 20, 2024. Randy Runquist devoted nearly 20 years of his life to Vermeer, where his dedication and drive for innovation significantly contributed to the field of horizontal directional drilling (HDD). Throughout his career, Randy held many roles and earned multiple patents that revolutionized HDD at Vermeer. Alongside other members of the Vermeer team, Randy contributed his innovation to over 17 patents, nine Cutting Edge designs and countless substantial developments. Some of his notable patents include the drill bit hardfacing orientation and dual rod drilling fluid flow capacity.

His innovative designs, such as the low profile hex quick connect system, have set new standards in drilling technology. The industry is left engrained with Randy's influence, showcasing his exceptional engineering expertise and creativity.

Beyond his technical achievements, Randy was known for his friendly and respectful nature. He mentored 14 team members during his tenure at Vermeer, imparting his extensive knowledge and fostering a culture of continuous learning. His colleagues and vendors, both within and outside of North America, admired his ability to connect with others and his unwavering dedication to his work. Randy's impact on those around him extended far beyond his professional accomplishments; he was a source of inspiration and support to many, leaving a legacy of kindness and support.

Randy's influence on HDD cannot be overstated. His work on HDD and supporting technologies has propelled the industry forward. Randy's innovative spirit and dedication to excellence have paved the way for future advancements in drilling technology. His contributions have not only enhanced the capabilities of Vermeer but have also set a benchmark for the HDD industry. Randy Runquist's legacy will continue to inspire and drive innovation in HDD for years to come.



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.

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TO SUPPORT
YOUR HDD
OPERATION.



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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)
296624434	Premium housing 2.75-in (7-cm) OD x 2-4 ACME (B) with Bit Boss™ Fe (Vermeer 6-bolt pattern)
296600595	Direct connect housing 2.5-in (6.35-cm) OD x FST #200 (B) (Vermeer 5-bolt pattern)
296624347	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)
296624434	Premium housing 2.75-in (6.99-cm) OD x 2-4 ACME (B) with Bit Boss™ Feature (Vermeer 6-bolt pattern)
296600595	Direct connect housing 2.5-in (6.35-cm) OD x FST #200 (B) (Vermeer 5-bolt pattern)
296624347	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 | D20x22III
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	
296624432	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) with Bit Boss™ Feature (Vermeer 6-bolt pattern)
296594878	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	
296624432	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) (Vermeer 6-bolt pattern with Bit Boss™ Feature)
296594878	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 | D24
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)
296574100	FST 2.375-in #600 (D24)
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 (D24, 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-D24)
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-D24)
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	
296624432	Premium housing 3-in (7.62-cm) OD x 2.375-in API Reg (B) with Bit Boss™ feature (Vermeer 6-bolt pattern)
296624430	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) with Bit Boss™ feature (Vermeer 6-bolt pattern)
296594878	Ultra X3 325 drilling system housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
296609836	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
296526845	Vise jaw (D24)
230831001	Vise jaw (D24x40A-D24x40 S3)
ROD WIPER OPTIONS	
235924001	Rod wiper (D24, D24x40)
296294602	Rod wiper — split (D23x30 S3, D24)



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	
296572263	RH9 drill head 8" (20.32cm) sonde Firestick #650 direct connect 2.875" API Reg bit box
296600665	RH9 drill head 15" sonde Firestick #650 direct connect 2.875" API Reg bit box
296600579	RH9 50 hour rebuild kit
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	
296624430	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) with Bit Boss™ feature (Vermeer 6-bolt pattern)
296351765	Universal housing 3.5-in (8.89-cm) OD x 2.375-in API Reg (BxB) 61.3 gpm (232.1 L/min)
296609836	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 Quick Fire® HD connection system (P) x 2.625-in FST #700(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	
296624430	Premium housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B) with Bit Boss feature (Vermeer 6-bolt pattern)
296351765	Universal housing 3.5-in (8.89-cm) OD x 2.375-in API Reg (BxB) 61.3 gpm (232.1 L/min)
296609836	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
296548200	Inner rod coupler
296548199	Inner rod flow ring
296456627	Roll pin (2 required)
DRILL HEAD	
296600637	RH10 drill head 15" sonde direct connect 3.5" API reg bit box
296548200	Coupler
296548199	Wear ring
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
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



*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
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 3.5-IN #1000 1

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® COMPATIBLE TOOLING

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.



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

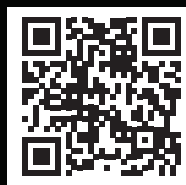
Vermeer



VERMEER DEALERS GIVE YOU **CONFIDENCE** IN THE FIELD



*Keep customers running and productive, that's our mission.
That's what we do.*



Find a dealer
near you



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.

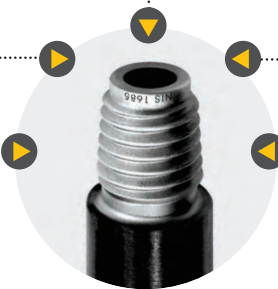
What degree of difficulty are your bores?

- 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

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.



Shop the Quickfire HD connection system online

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

Roll pin collar retention

Eight-sided collar: Developed for ease of flat alignment

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

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



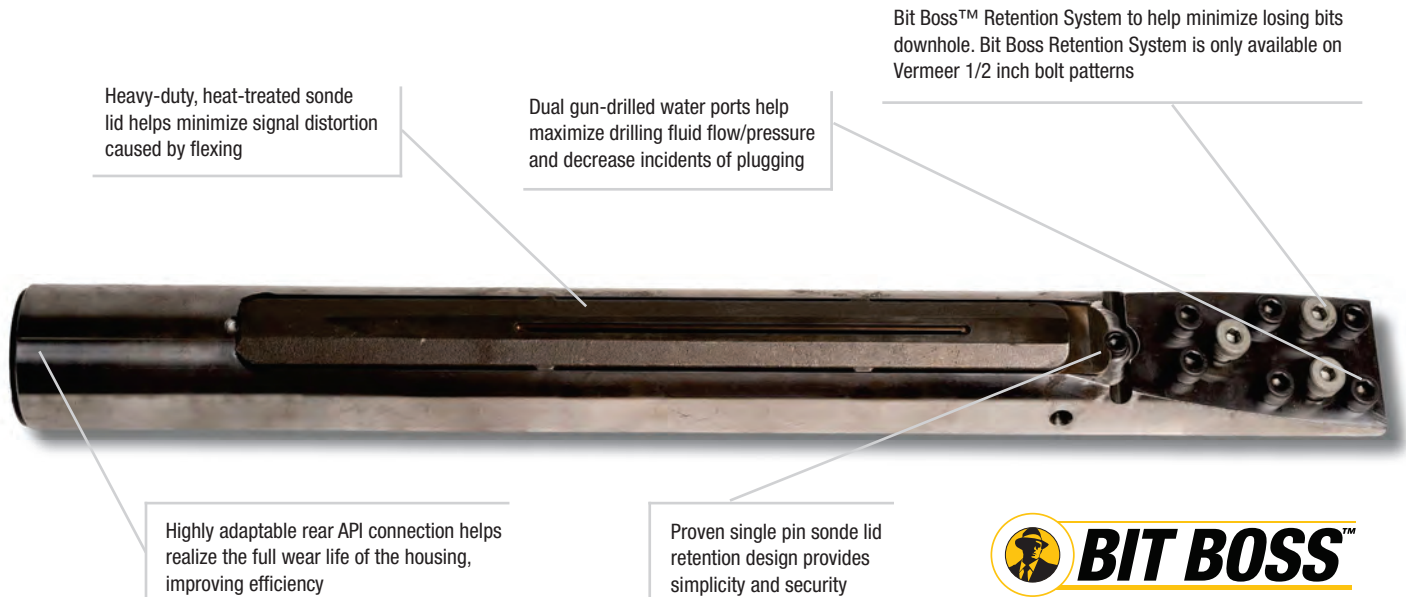
QUICKFIRE® HD CONNECTION SYSTEM

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)
296560759	Starter rod QuickFire® HD connection system 460 (P) x 2.625-in FST#700 (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)



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

Bit Boss™ Retention System to help minimize losing bits downhole. Bit Boss Retention System is only available on Vermeer 1/2 inch bolt patterns

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

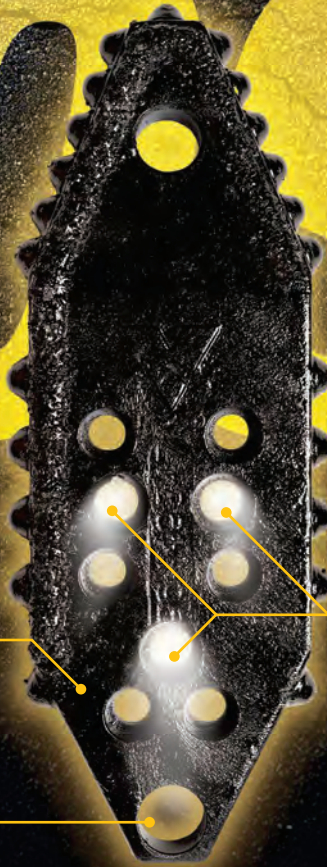
Proven single pin sonde lid retention design provides simplicity and security



PART NO.	OUTSIDE DIAMETER	SONDE	MODEL COMPATIBILITY	CONNECTION	BIT BOLT PATTERN
296624434	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 with Bit Boss™
296624450	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 with Bit Boss™
296624448	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 with Bit Boss™
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
296624432	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 with Bit Boss™
296624440	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 with Bit Boss™
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
296624430	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 with Bit Boss™
296624442	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 with Bit Boss™
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



HOLDS ON LIKE A BOSS



Engineered to maximize
HDD drill string reliability

Additional fasteners help
absorb shear force for drill
string performance without
weakening the bit

Minimize the risk of losing drill bits
downhole and gain peace of mind

SECURELY RETAINS HDD DRILL BITS EVEN IN THE MOST DEMANDING SOIL CONDITIONS

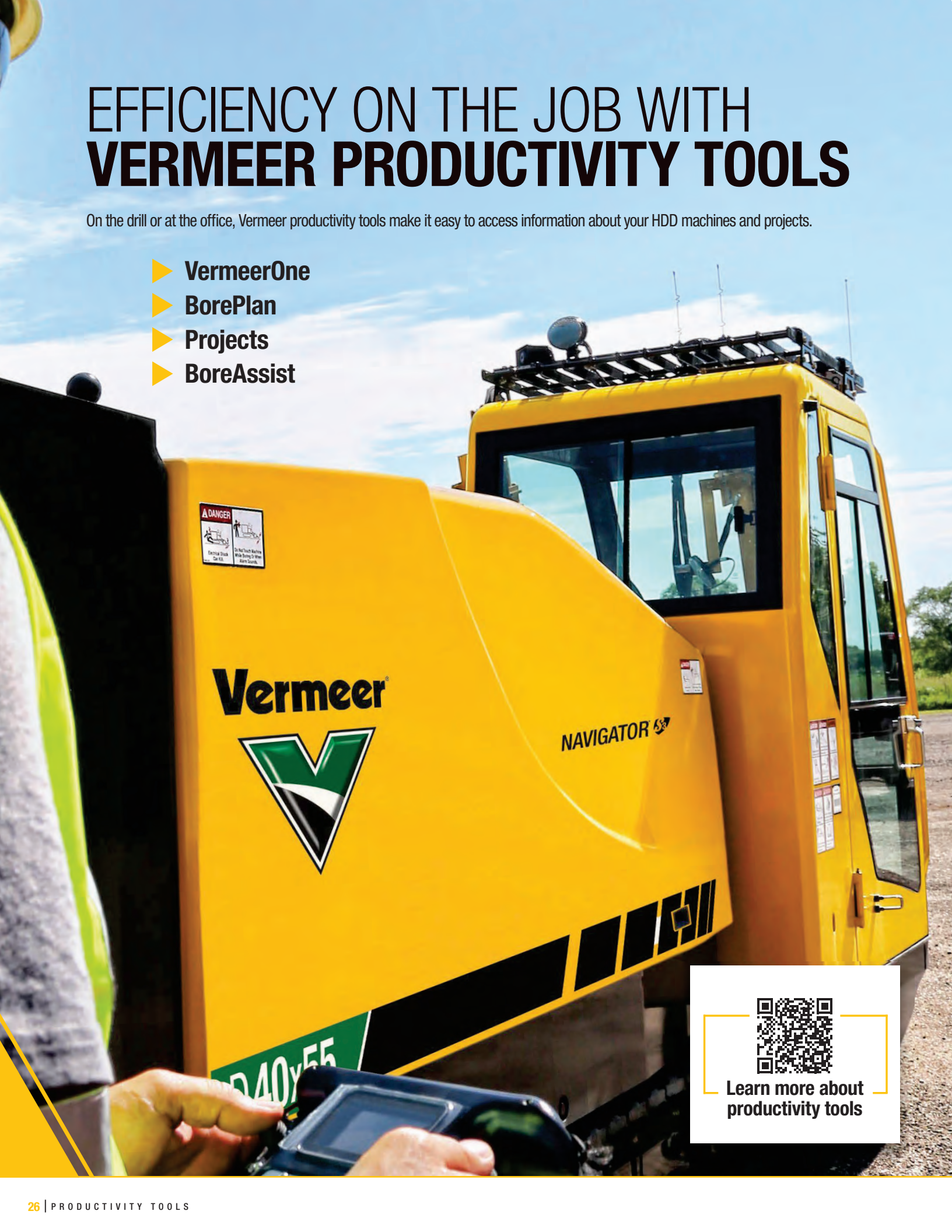
Cobble, coral, rock and other difficult soil conditions create rotational force spikes that may cause drill bit bolts to back out or shear off. BIT BOSS™ stands up to demanding applications, holding the drill bit in place. Additional shoulder bolts resist shearing when encountering high-stress loads and the enhanced retention helps prevent costly drill bit loss downhole.



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.

- ▶ VermeerOne
- ▶ BorePlan
- ▶ Projects
- ▶ BoreAssist



Learn more about productivity tools

THE NEXT LEVEL OF EXPERIENCE FROM VERMEER HAS ARRIVED.

VermeerOne[™] is your access to more.



THAT MEANS

MORE

**CERTAINTY, CONNECTION, CONFIDENCE,
TIME FOR THE BIG THINGS.**

**YOUR ACCESS TO
MORE STARTS HERE.**

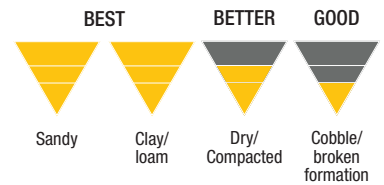


PLATE BITS

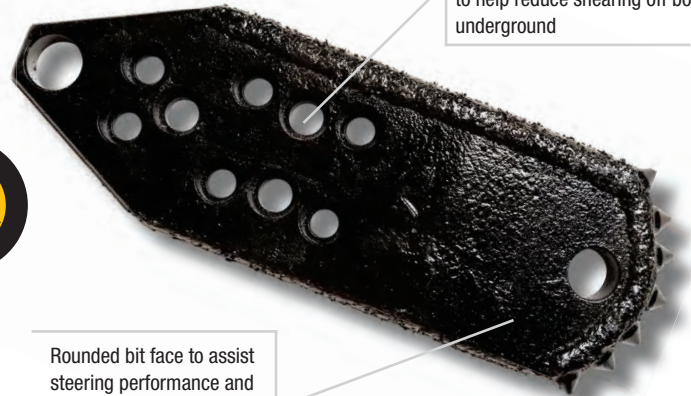
Vermeer drill bits are, in a word, tough. They start with Vermeer-specific high-alloy, heat-treated steel for durability and wear resistance. Each bit is designed to meet the exacting tolerances for Vermeer HDDs to help maintain peak performance.

Standard Ace bit

PART NO.	BOLT PATTERN	WIDTH
296624468	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296624484	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296624471	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)



Bit Boss™ Retention System features three shoulder screws to help reduce shearing off bolts underground

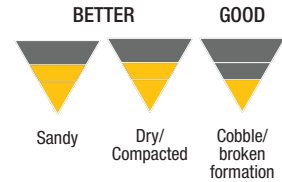


Rounded bit face to assist steering performance and offer durability, longevity and wearability

Bit Boss™ features are not available on Ditch Witch™ compatible bits

Pro Ace bit

PART NO.	BOLT PATTERN	WIDTH
296449348	VM 5-hole — 3/8-in bolt	3 in (7.62 cm)
296624474	VM 6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296624460	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296624477	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296624464	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)



Two times the carbide teeth along the full edge of the bit to help extend wear life

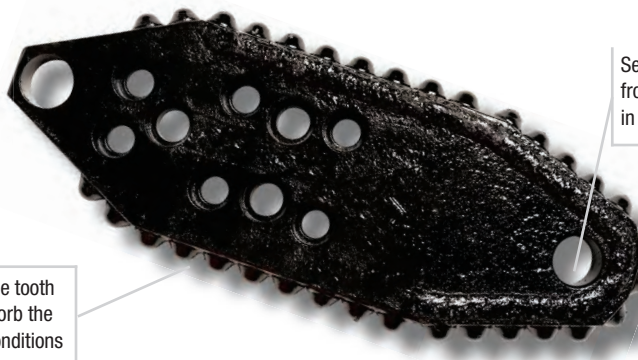
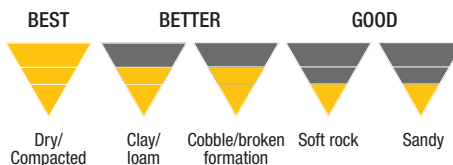


Stop losing bits downhole with the help of Bit Boss™

Sharing the same profile as the pro ace bit to balance steerability and penetration

Ace Pro Extreme bit

PART NO.	BOLT PATTERN	WIDTH
296537785	VM 5-hole — 3/8-in bolt	3 in (7.62 cm)
296630009	VM 6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296630006	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296630003	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296624500	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)

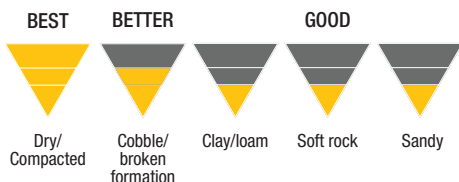


Domed button-style tooth is designed to absorb the shock of harder conditions

Semi-aggressive tapered front design for penetration in harder ground conditions

Premium Ace bit

PART NO.	BOLT PATTERN	WIDTH
296624490	VM 6-hole — 1/2-in bolt	4 in (10.16 cm)
296624481	VM 6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296624487	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)



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

Tapered bit front to help penetration rates and offers superior durability, longevity and wearability



Bit Bolts

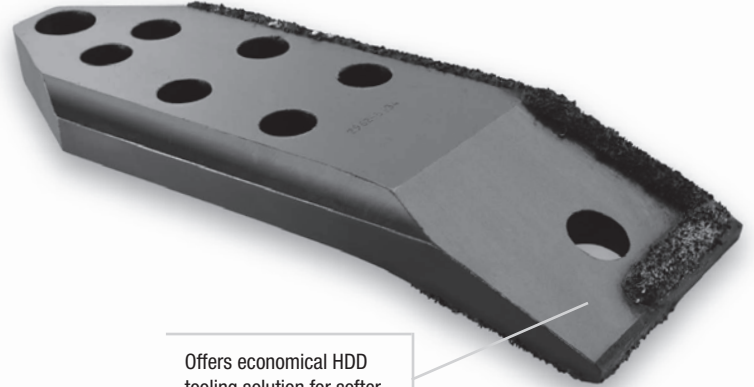
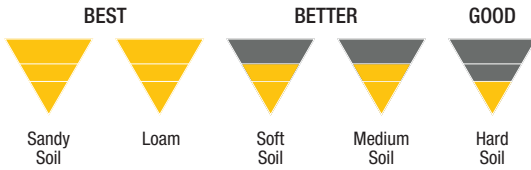
PART NO.	DESCRIPTION	HOUSING COMPATIBILITY
512006	3/8-in bolt	2-in (5.08-cm) — 2.25-in (5.72-cm) OD
129667010	1/2-in bolt	2.75-in (6.99-cm) — 3.25-in (8.26-cm) OD
296260026	5/8-in bolt	3.5-in (8.89-cm) OD
85627055	3/4-in bolt	4.5-in (11.43-cm) OD
180038613	1/2-inch shoulder bolt for Bit Boss™	



Standard hardfaced drill bit

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)

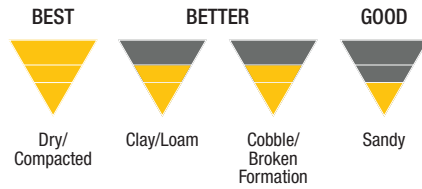
*Does not include quickshot hole.



Offers economical HDD tooling solution for softer ground conditions

Gladiator Saber bit

PART NO.	BOLT PATTERN	WIDTH
296621292	6-hole — 1/2-in bolt	4 in (10.16 cm)
296621294	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296621296	6-hole — 1/2-in bolt	5 in (12.70 cm)



Carbide buttons to help extend wear life

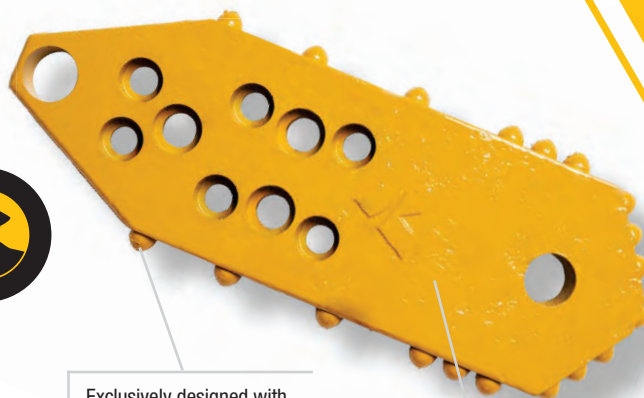
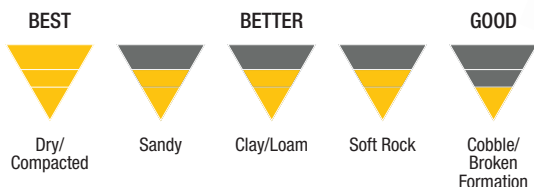
Features an aggressive tapered design for penetrating hard-packed soil conditions



Check out the bit application guides

Gladiator Spear bit

PART NO.	BOLT PATTERN	WIDTH
296621308	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296621276	6-hole — 1/2-in bolt	4 in (10.16 cm)
296621282	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296621290	6-hole — 1/2-in bolt	5 in (12.70 cm)
296621306	6-hole — 1/2-in bolt	6 in (15.24 cm)

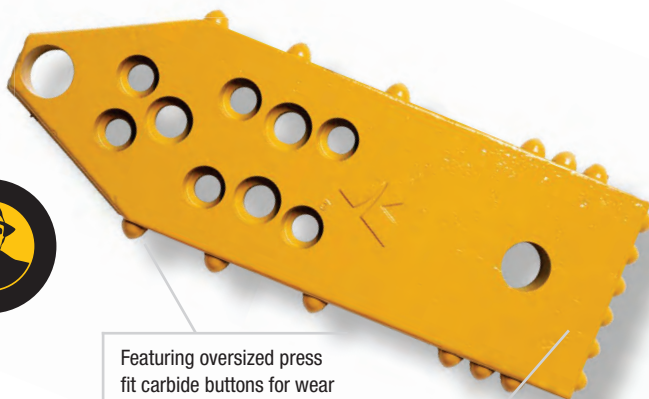
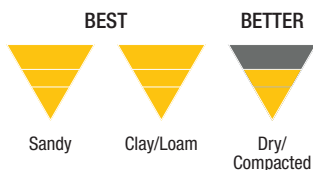


Exclusively designed with press fit oversized carbide buttons to help with wear

All Gladiator bits are manufactured out of drop forging for added strength and toughness

Gladiator Mallet bit

PART NO.	BOLT PATTERN	WIDTH
296621298	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296621284	6-hole — 1/2-in bolt	4 in (10.16 cm)
296621280	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296621288	6-hole — 1/2-in bolt	5 in (12.70 cm)

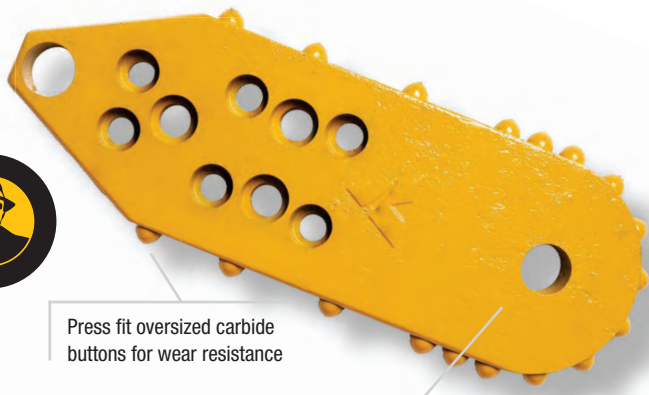
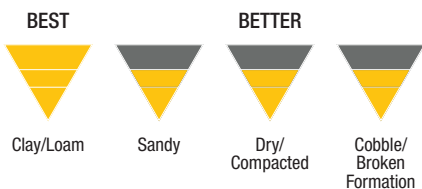


Featuring oversized press fit carbide buttons for wear resistance

Flat face helps maximize steering control underground

Gladiator Club bit

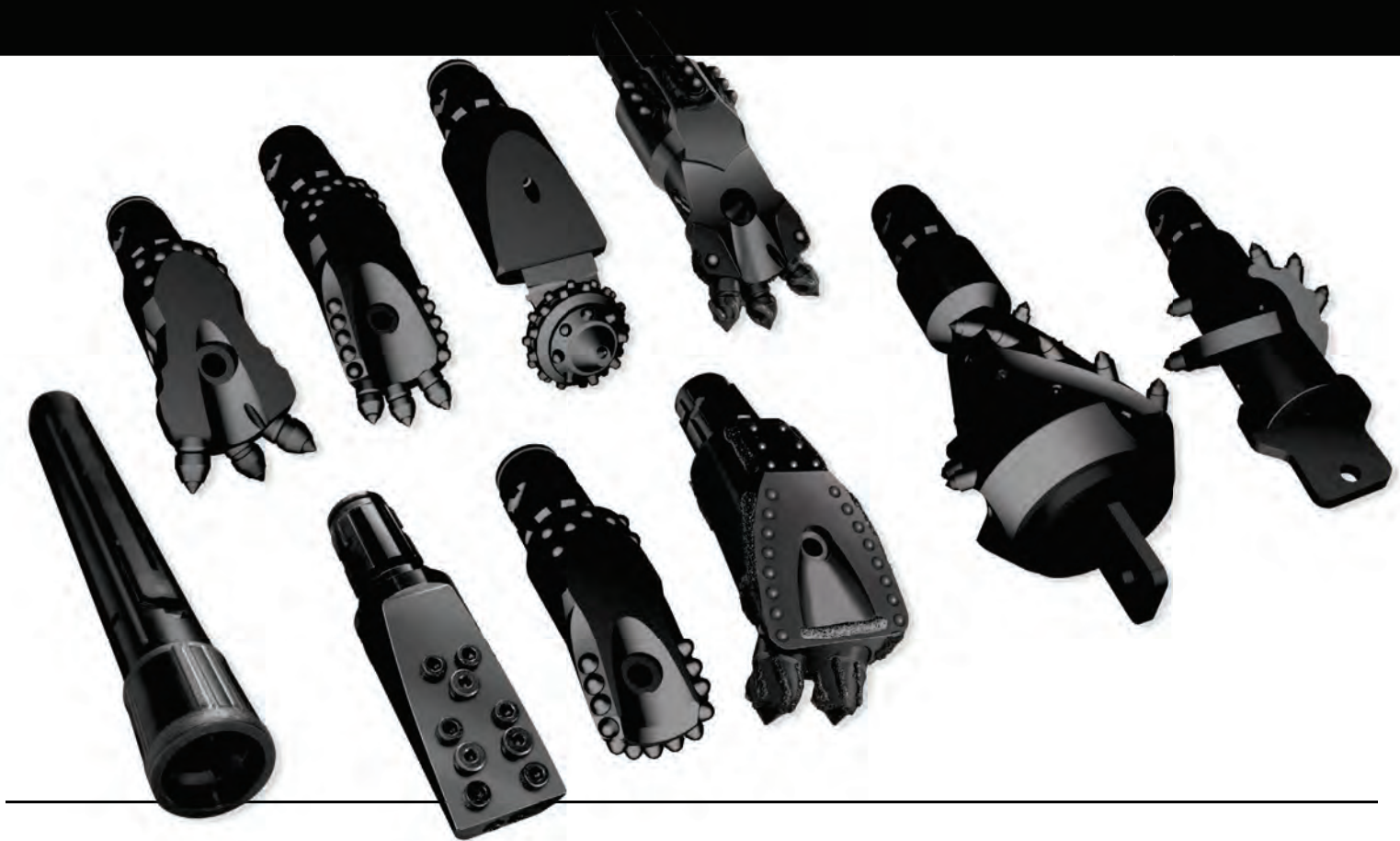
PART NO.	BOLT PATTERN	WIDTH
296621300	6-hole — 1/2-in bolt	3.5 in (8.89 cm)
296621273	6-hole — 1/2-in bolt	4 in (10.16 cm)
296621278	6-hole — 1/2-in bolt	4.5 in (11.43 cm)
296621286	6-hole — 1/2-in bolt	5 in (12.70 cm)
296621304	6-hole — 1/2-in bolt	6 in (15.24 cm)



Press fit oversized carbide buttons for wear resistance

Versatile series makes this ideal for cobble and highly abrasive ground conditions

THE **ULTRA X3**



- 1 NO BREAKOUT TONGS NEEDED**

Since the Vermeer Ultra X3 drilling system 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 (30.48-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.

ULTRA

FACTORS

X3

THE VERMEER ULTRA X3 DRILLING SYSTEM IS AVAILABLE IN THREE DIFFERENT SIZES COVERING HDD MODELS RATED UP TO THE 40,000-LB (177.9-kN) DRILL RANGE.



Ultra X3 375
3.75-in OD x 2.875-in
API Reg (9.53-cm OD
x 7.3-cm API Reg)
296609836



Ultra X3 325
3.25-in OD x 2.375-in
API Reg (8.26-cm OD
x 6.03-cm API Reg)
296594878

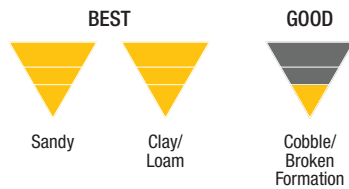


Ultra X3 275
2.75-in OD x 2-in
API IF (6.99-cm OD
x 5.08-cm API IF)
296624347

**ASK YOUR VERMEER DEALER HOW YOU
COULD BOOST PRODUCTIVITY WITH ULTRA X3.**

ULTRA X3 BIT FAMILY

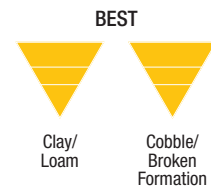
Ultra X3 plate bit



PART NO.	DESCRIPTION
296566772	Ultra X3 275 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern
296544190	Ultra X3 325 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern
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

*Bit Boss features only on Vermeer 1/2" bolt pattern

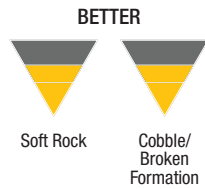
Ultra X3 Lance Pro bit



PART NO.	DESCRIPTION
296600588	Ultra X3 275 drilling system Lance Pro bit — 3.5-in (8.89-cm) with pull back feature
296600592	Ultra X3 325 drilling system Lance Pro bit — 4.25 (10.8-cm) with pull back feature
296600589	Ultra X3 375 drilling system Lance Pro bit — 5-in (12.70-cm) with pull back feature

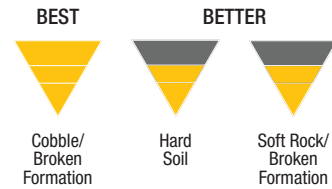


Ultra X3 Lance Trident bit



PART NO.	DESCRIPTION
29660587	Ultra X3 275 drilling system Lance trident bit — 3.5-in (8.89-cm) with pull back feature
296600594	Ultra X3 325 drilling system Lance trident bit — 4.25-in (10.8-cm) with pull back feature
296600591	Ultra X3 375 drilling system Lance trident bit — 5-in (12.70-cm) with pull back feature
296566852	Ultra X3 375 drilling system plate bit sub — Vermeer .625-in 6-bolt pattern

Triple Threat



PART NO.	DESCRIPTION
296633685	Ultra X3 275 drilling system Triple Threat bit - 3.5" (8.89-cm) cut with pull back feature
296624281	Ultra X3 325 drilling system Triple Threat bit - 4.25" (10.8-cm) cut with pull back feature
296633689	Ultra X3 375 drilling system Triple Threat bit - 5.5" (13.97-cm) cut with pullback feature

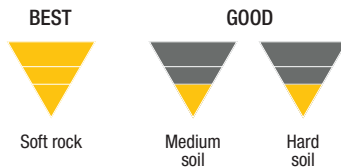


Shop Ultra X3 online

ULTRA X3 BIT FAMILY

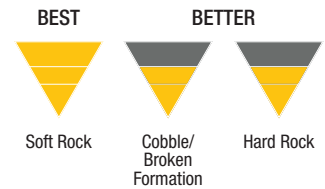
X3

Ultra X3 Gauntlet bit

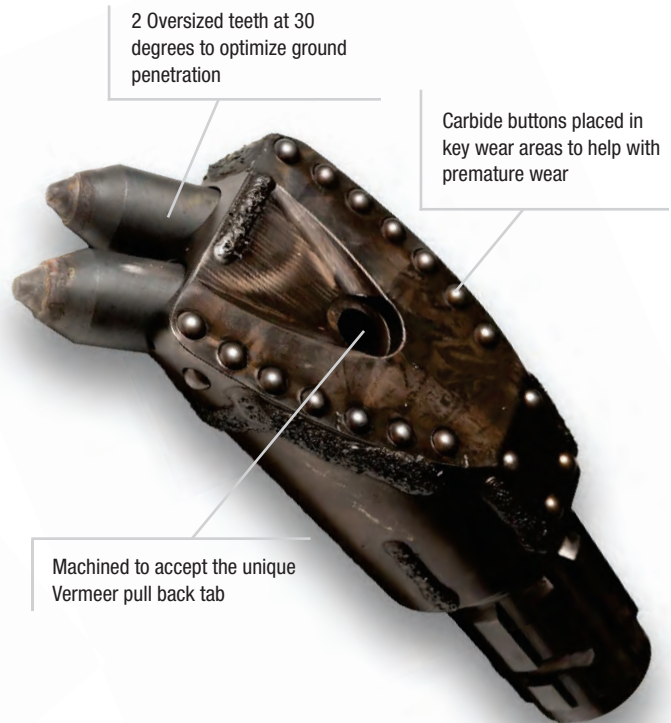


PART NO.	DESCRIPTION
296600586	Ultra X3 275 drilling system Gauntlet bit — 3.5-in (8.89-cm) with pull back feature
296600593	Ultra X3 325 drilling system Gauntlet bit — 4.25-in (10.8-cm) with pull back feature
296600590	Ultra X3 375 drilling system Gauntlet bit — 5.5-in (13.97-cm) with pull back feature

Ultra X3 2Thirty



PART NO.	DESCRIPTION
296602294	Ultra X3 325 2Thirty Bit — 4.375-in (11.11-cm) cut
206602301	Ultra X3 375 2Thirty Bit — 5.5-in (13.97-cm) cut
296602297	Ultra X3 375 2Thirty Bit — 6.5-in (16.51-cm) cut



Ultra X3 Single Roller cone bit

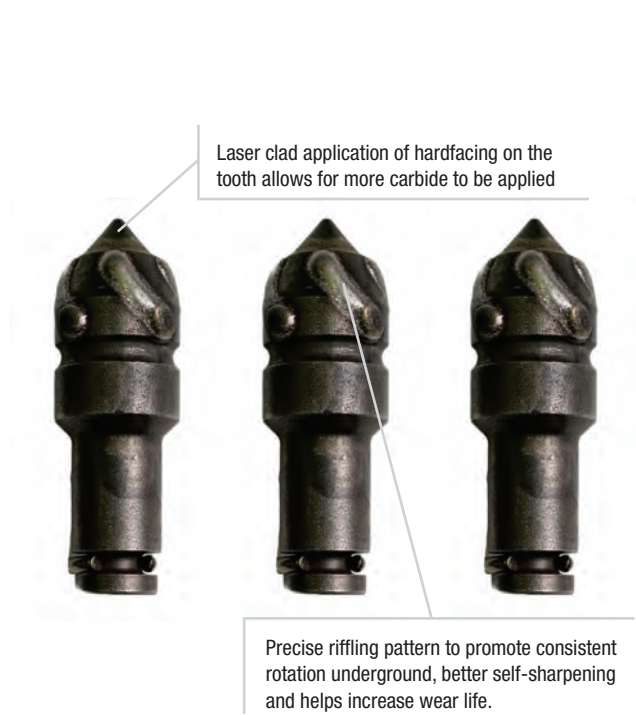


PART NO.	DESCRIPTION
296569556	Ultra X3 275 drilling system single roller cone bit — 3.5-in (8.89-cm) cut
296566930	Ultra X3 325 drilling system single roller cone bit — 4.25-in (10.8-cm) cut
296569561	Ultra X3 375 drilling system single roller cone bit — 5.5-in (13.97-cm) cut



Laser Clad Conical Teeth

PART NO.	DESCRIPTION
296612242	Tooth .719 diameter shaft laser clad
296624320	Tooth .831 diameter shaft laser clad



Learn about
laser cladding

ULTRA X3



HOUSINGS, REAMERS AND ACCESSORIES

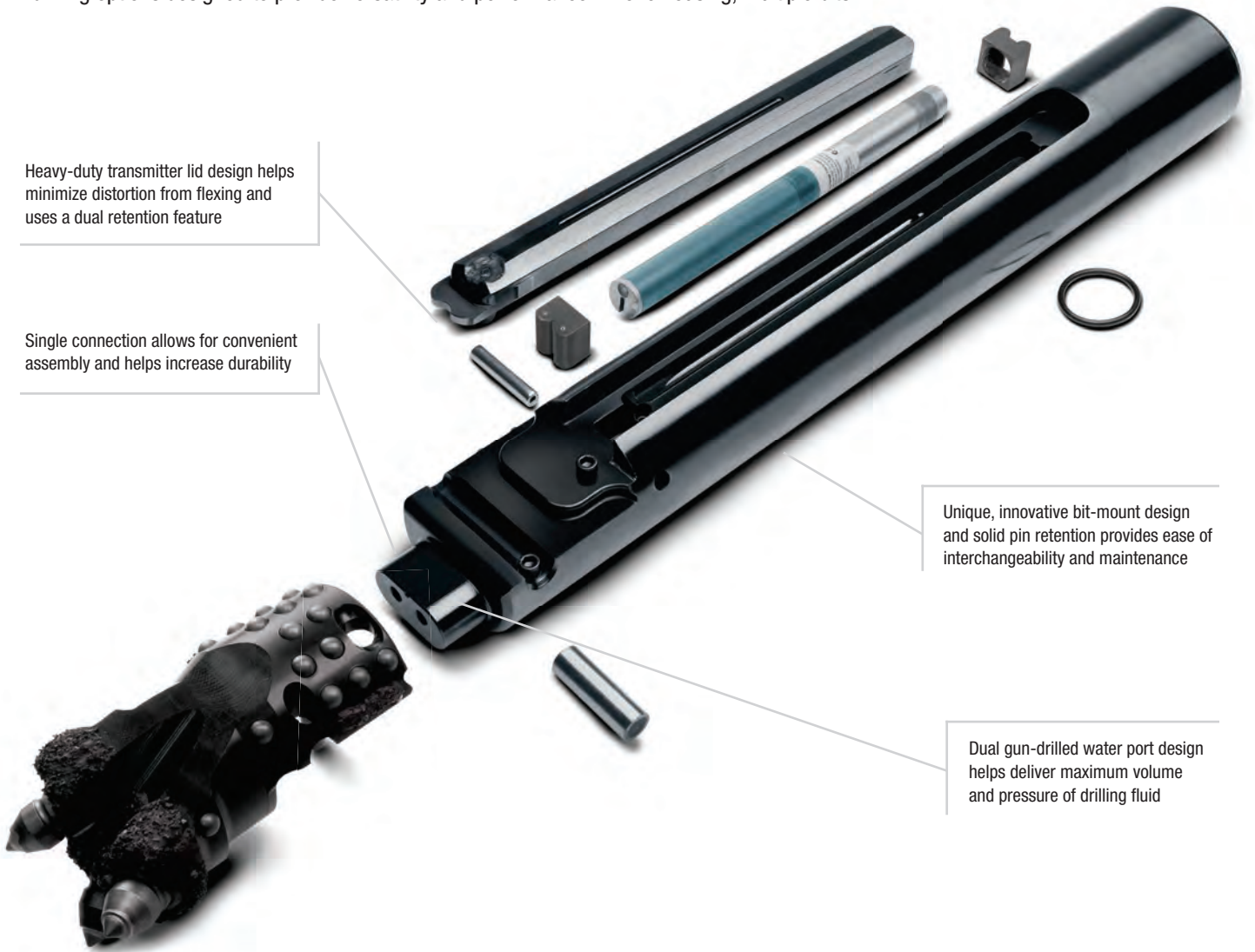
The Vermeer Ultra X3 offers interchangeable pilot and pullback tooling without torqued or threaded components, as well as the ability to ream directly off the transmitter housing. And (for certain applications), it can eliminate the expense of starter rods and adapters. The Ultra X3 has a strong spline 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)	
296624347	Ultra X3 275 drilling system laser clad 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) with pull back feature
296633685	Ultra X3 275 drilling system Triple Threat bit 3.5(8.89cm) with pull back feature
296600587	Ultra X3 275 drilling system Lance trident bit — 3.5-in (8.89-cm) with pull back feature
296600586	Ultra X3 275 drilling system Gauntlet bit — 3.5-in (8.89-cm) with pull back feature
296569556	Ultra X3 275 drilling system single roller cone bit — 3.5-in (8.89-cm) cut
296624402	Ultra X3 275 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern with Bit Boss™ feature
296569603	Ultra X3 275 drilling system weld-on reamer adapter
296569745	Ultra X3 275 drilling system 4.5-in (11-cm) fluted reamer x swivel
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
ULTRA X3 325 DRILLING SYSTEM (INTENDED FOR MODELS LIKE THE VERMEER D24X40 S3 HDD OR THE DITCH WITCH JT24)	
296594878	Ultra X3 325 drilling system laser clad housing 3.25-in (8.26-cm) OD x 2.375-in API Reg (B)
296633685	Ultra X3 drilling system Triple threat bit — 4.25"(10.8cm) with pull back feature
296600594	Ultra X3 325 drilling system Lance trident bit — 4.25-in (10.8-cm) with pull back feature
296600592	Ultra X3 325 drilling system Lance Pro bit — 4.25-in (10.8-cm) with pull back feature
296600593	Ultra X3 325 drilling system Gauntlet bit — 4.25-in (10.8-cm) with pull back feature
296602294	Ultra X3 drilling system 2Thirty bit 4.375"(10.8cm) with pull back feature

PART NO.	PRODUCT
296566930	Ultra X3 325 drilling system single roller cone bit — 4.25-in (10.8-cm) cut
296624411	Ultra X3 325 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern with Bit Boss™ feature
296566927	Ultra X3 325 drilling system weld-on reamer adapter
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
296555372	Ultra X3 325 drilling system 10-in (25.4 cm) fluted reamer x swivel
ULTRA X3 375 DRILLING SYSTEM (INTENDED FOR MODELS LIKE THE VERMEER D40X55 S3 HDD OR THE DITCH WITCH JT40)	
296609836	Ultra X3 375 drilling system laser clad housing 3.75-in (9.53-cm) OD x 2.875-in API Reg (B)
296602297	Ultra X3 drilling system 2Thirty bit 6.5"(15.54cm) with pull back feature
296633689	Ultra X3 drilling system Triple threat bit — 5.5"(12.7cm) with pull back feature
296600589	Ultra X3 375 drilling system Lance Pro bit — 5-in (12.70-cm) with pull back feature
296600591	Ultra X3 375 drilling system Lance trident bit — 5-in (12.70-cm) cut with pullback hook
296602301	Ultra X3 drilling system 2Thirty bit 5.5" (13.97cm) with pull back feature
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
296624408	Ultra X3 375 drilling system plate bit sub — Vermeer .5-in 6-bolt pattern with Bit Boss™ feature
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
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
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
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

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.

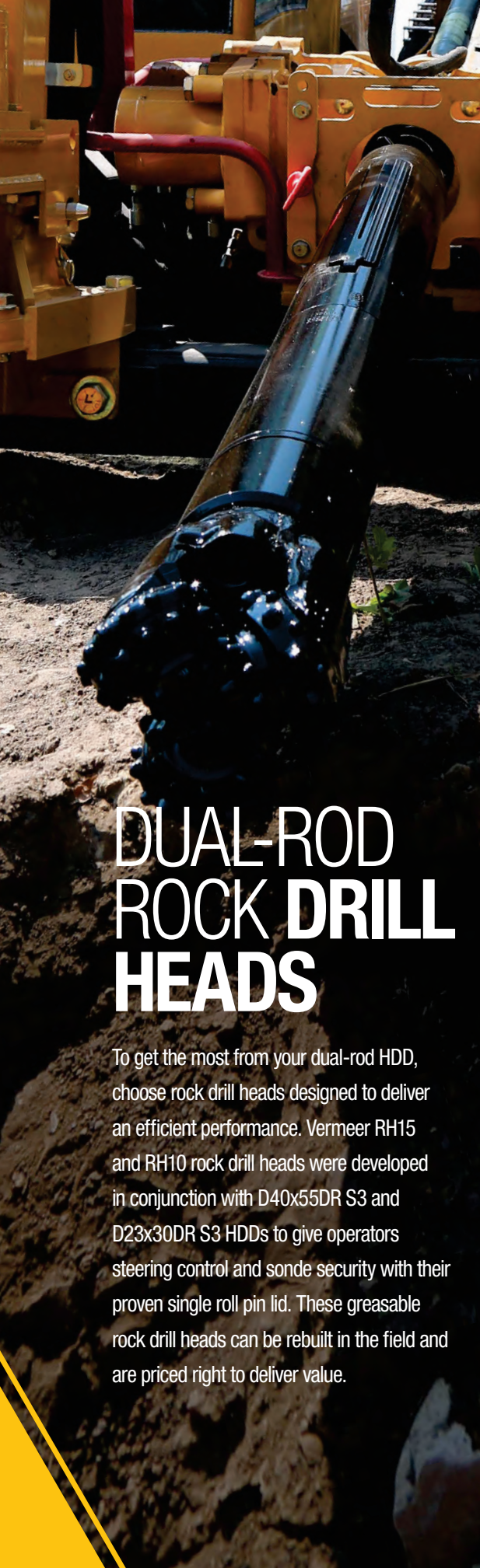
PART NO.	DESCRIPTION	MODEL COMPATIBILITY
296520797	Armor Direct universal housing 2.375-in API Reg BxB, 15-in (38.10-cm) or 19-in (48.26-cm) DCI	D16x20 — D24x40 S3
296520790	4.25-in (10.80-cm) Lance Pro bit x 2.375-in API Reg	D16x20 — D24x40 S3
296488122	4.25-in (10.80-cm) Armor Gauntlet bit x 2.375-in 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

TEAM MEMBERS DEDICATED TO HDD TOOLING.

CONTACT YOUR LOCAL
DEALER TO MEET YOUR
TOOLING SPECIALIST.



Find a dealer
near you



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.

ROCK BITS

RIGHT TURN SUPPLY IS THE PREFERRED
ROCK BIT SUPPLIER FOR VERMEER



PDC Rock Bit



Mill Tooth Tri-Cone Bit



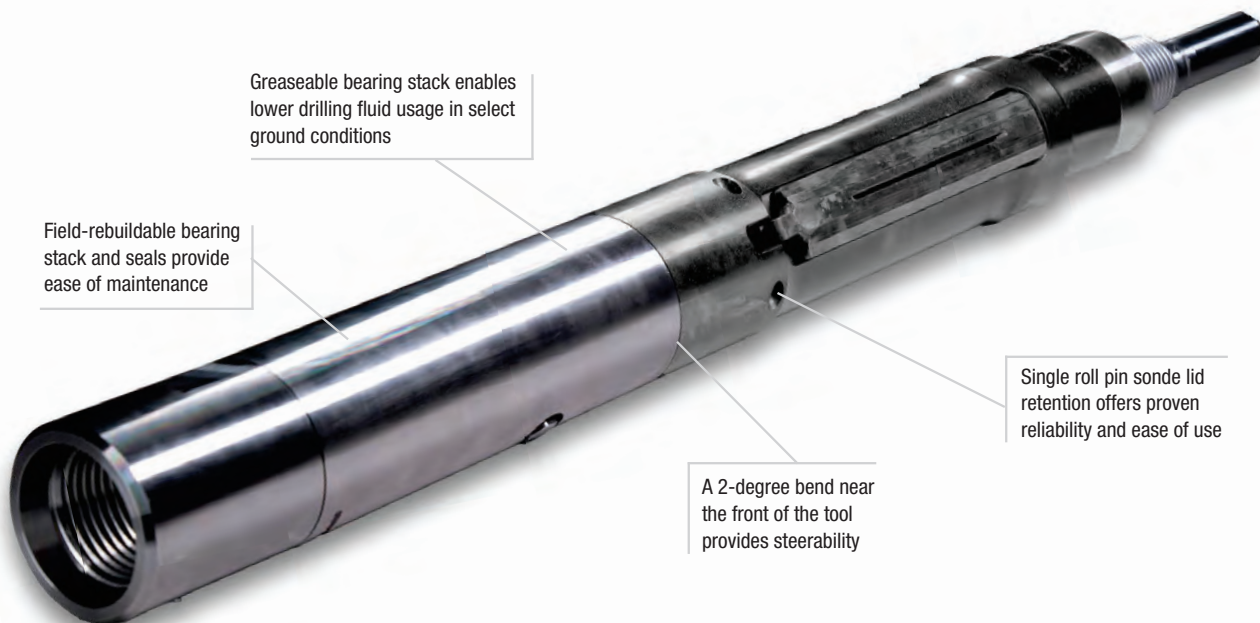
TCl Tricone Bit



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

PG5/PG6 pullback grapples





PART NO.	DESCRIPTION	MODEL COMPATIBILITY
296572263	RH9 drill head 8" sonde Firestick 625 direct connect 2.875" API reg bit box	D23x30DR S3
296600582	RH9 drill head 8" sonde Firestick 750 direct connect 2.875" API reg bit box	D40x55DR S3
296600665	RH9 drill head 15" sonde Firestick 625 direct connect 2.875" API reg bit box	D23x30DR S3
296600637	RH9 drill head 15" sonde Firestick 750 direct connect 2.875" API reg bit box	D40x55DR S3
296650534	RH9 drill head 15" sonde starter rod 2.875" API reg bit box	D23x30DR S3, D40x55DR S3
296624399	RH10 drill head 15" sonde Firestick 750 direct connect 2.875" API reg bit box	D40x55DR S3
296490378	RH10 drill head 15" (38.10-cm) sonde, 2.875" API Reg bit box, 5.5" (13.97-cm) diameter min bit	D23x30DR S3
296529337	RH10 drill head 15" (38.10-cm) sonde, 2.875" API Reg bit box, 5.5" (13.97-cm) diameter min bit*	JT3020 AT, JT30 AT
296537909	RH10 50-hour rebuild kit	
296514826	RH10 drill head rebuild tool kit	
296521054	PG5 quick pullback grapple for 5.5" (14-cm) tricone bits	
296479686	RH15 drill head 15" (38.1-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	D36x50DR Series II
296490300	RH15 drill head 19" (48.3-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	D36x50DR Series II
296479658	RH15 drill head 15" (38.1-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	D40x55DR S3
296490296	RH15 drill head 19" (48.3-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	D40x55DR S3
296565946	RH15 drill head 24" (61-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	D40x55DR S3
296490302	RH15 50 hour rebuild kit	
296490303	RH15 200 hour rebuild kit — 15" (38.1-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	
296490305	RH15 200 hour rebuild kit — 19" (48.26-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	
296565946	RH15 200 hour rebuild kit — 24" (61-cm) sonde, 3.5-in API bit box, 6.25" (15.88-cm) diameter min bit	
296479732	RH15 drill head rebuild tool kit	
296514927	PG6 quick pullback grapple for 6.25" (15.88-cm) tricone bits	
101562004	Vermeer polyurea grease (10-pack)	

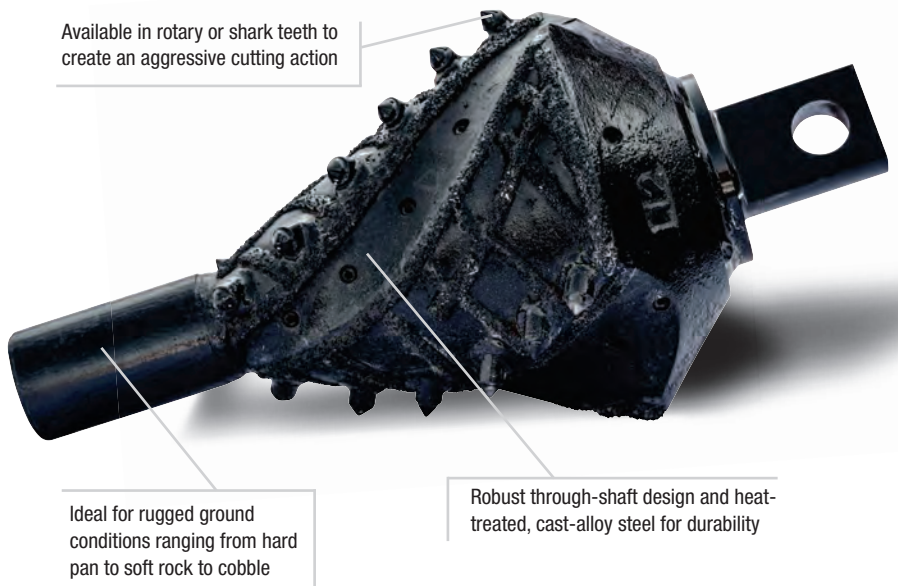
* Does not include hex coupler



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



Fluted with eye — Shark teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	CUTTING SIZE	PULL EYE/ PULL EYE CAPACITY
296341430	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341431	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341432	D6x6 — D10x15 S3	1.625-in hex pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341433	D16x20 — D24x40 S3	2.125-in hex pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341434	D7x11 — D24x40 S3	2.375-in API Reg box	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296341435	D7x11 — D24x40 S3	2.375-in API Reg box	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296341436	D7x11 — D24x40 S3	2.375-in API Reg box	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296341437	D7x11 — D24x40 S3	2.375-in API Reg box	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296341438	D7x11 — D24x40 S3	2.375-in API Reg box	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296341439	D7x11 — D24x40 S3	2.375-in API Reg box	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	CUTTING SIZE	PULL EYE/ PULL EYE CAPACITY
296341440	D6x6 — D10x15 S3	QuickFire® connection system 300 pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341441	D16x20 — D24x40 S3	QuickFire® connection system 400 pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341442	D6x6 — D10x15 S3	1.625-in hex pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341443	D16x20 — D24x40 S3	2.125-in hex pin	4.5 in (11.43 cm)	24,000 lb (10,886.2 kg)
296341444	D7x11 — D24x40 S3	2.375-in API box	6 in (15.24 cm)	24,000 lb (10,886.2 kg)
296341445	D7x11 — D24x40 S3	2.375-in API box	8 in (20.32 cm)	24,000 lb (10,886.2 kg)
296341446	D7x11 — D24x40 S3	2.375-in API box	10 in (25.40 cm)	24,000 lb (10,886.2 kg)
296341447	D7x11 — D24x40 S3	2.375-in API box	12 in (30.48 cm)	24,000 lb (10,886.2 kg)
296341448	D7x11 — D24x40 S3	2.375-in API box	14 in (35.56 cm)	24,000 lb (10,886.2 kg)
296341449	D7x11 — D24x40 S3	2.375-in API box	16 in (40.64 cm)	24,000 lb (10,886.2 kg)
227684001	Replacement rotary teeth — standard weld-on			

Robotically applied carbide-mesh-grit hardfacing for longevity

Standard threaded ports offer versatility in adjusting drilling fluid flow



Available in multiple configurations to suit your needs including build-in swivels, box-by-pin or pull eye

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			



Fluted with swivel – Rotary teeth

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE	SWIVEL/SWIVEL 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				
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				
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				

Featuring dual-tapered, open-bodied design to maintain mixing action, helping to reduce pullback and rotational forces required from the drill rig

Front- and rear-facing shark teeth to help ease needed pushback and can handle your job coming and going



Diamond Wing Cutter reamer

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)

T-REX REAMER



Optional built-in swivel or through-shaft designs are available

Ruggedly constructed with work-hardened, high-alloy steel, this reamer incorporates a unique, steep, rear-tapered design for ease of pushback when needed

Shark teeth tooling delivers an aggressive yet smooth cutting action

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

Ideal for cobble, chunk rock and soft rock

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).

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

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

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

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

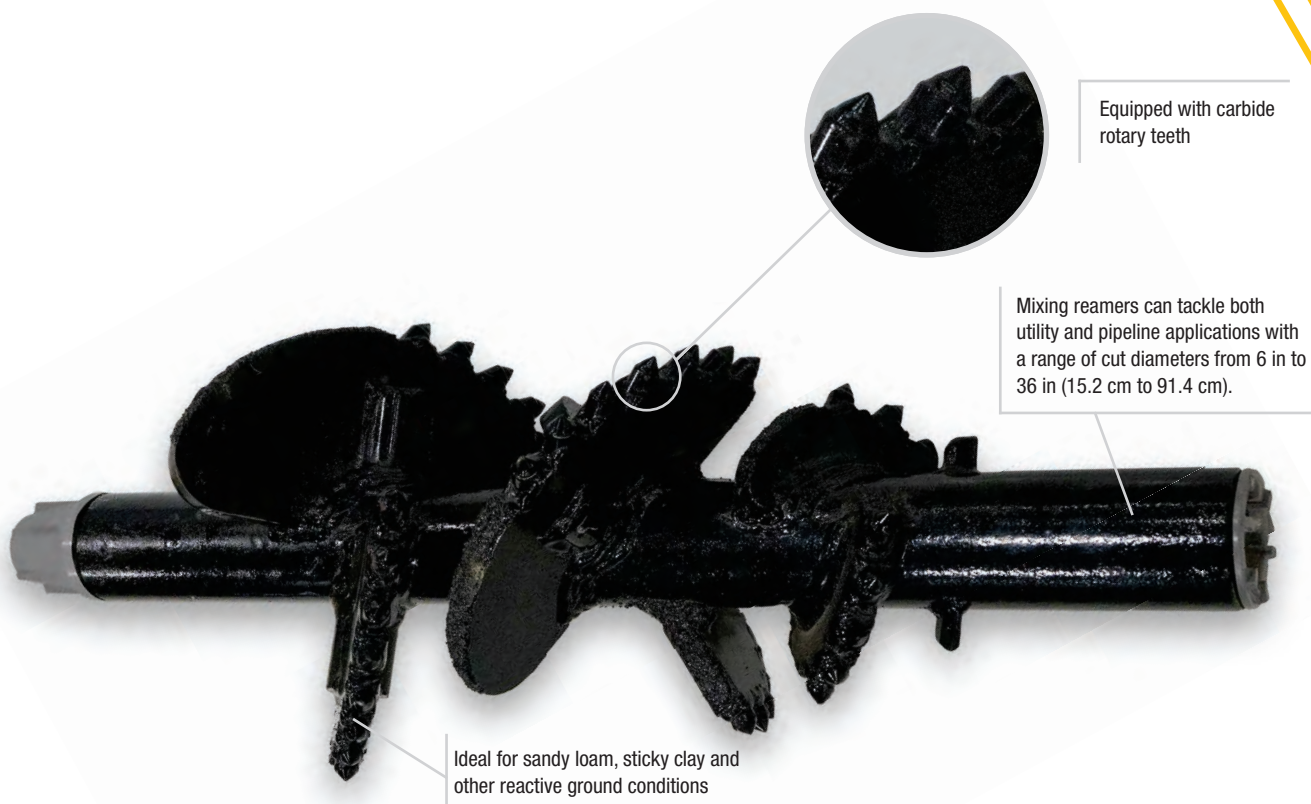
Small rotary teeth minimize overcut to maintain bore wall integrity

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 intentional spray pattern design hydrates cuttings taken off the bore wall to create an ideal slurry mix and help with cutting management. Fluid ports close to the cutting structure minimize risk of outrunning mud

*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





Mix Master™ HD reamer

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.

Front- and rear-facing oversized carbide shark teeth tooling for aggressive cutting action



Exceptional mixing action made possible by its open-bodied design and ruggedly large paddles

Supreamer™ reamer

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296413242	D10X15-D24	2.375-in API Reg box	2.375-in API Reg pin	8"
296417612	D10X15-D24	2.375-in API Reg box	2.375-in API Reg pin	10"
296413229	D10X15-D24	2.375-in API Reg box	2.375-in API Reg pin	12"
296417628	D10X15-D24	2.375-in API Reg box	2.375-in API Reg pin	14"
296417532	D10X15-D24	2.375-in API Reg box	2.375-in API Reg pin	16"
296417650	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	12"
296412832	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	14"
296412833	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	16"
296412834	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	18"
296419372	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	20"
296417665	D24-D60X90	2.875-in API Reg box	2.875-in API Reg pin	24"
296419344	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	12"
296419330	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	14"
296419112	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	16"
296419322	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	18"
296419126	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	20"
296413084	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	24"
296412839	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	28"
296412840	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	30"
296419168	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	36"



Barrel reamer

PART NO.	MODEL COMPATIBILITY	FRONT CONNECTION	REAR CONNECTION	CUTTING SIZE
296341205	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	18"
296341206	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	20"
296341207	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	22"
296341208	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	24"
296341209	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	26"
296341210	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	28"
296341211	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	30"
296341212	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	32"
296341213	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	34"
296341214	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	36"
296341215	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	38"
296341216	D36X50-D100X140	3.5-in API Reg box	3.5-in API Reg pin	40"

NEED A REAMER FOR A SPECIFIC JOB?



**Contact your dealer to learn
about custom-built reamer options.**

RIGFITTER IS A BETTER WAY TO BUILD A DRILL STRING.

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.**



**Scan to learn
more**



LO T RQUE HIGH PERFORMANCE



**Cantilevered Design for
Less Drag Reducing Wear**

**Field Interchangeable
Cutters**

**Single Body for Multiple
Hole Sizes**

**Modular Design
with Multiple Cutter
Configurations**

Improved Jetting Design

SharewellHDD

TOOLING CREATED WITH YOUR JOB IN MIND.



CUT THROUGH ANYTHING. START WITH THE RIGHT BIT.

When precision matters, your tools should be built for the job. Right Turn Supply offers rock tooling engineered for performance in soft rock, hard rock and everything in between.

Our tooling is field-tested, contractor-approved and designed to pair with our full lineup of drilling fluids maximum efficiency on every bore.

Turn smarter. Drill stronger. Perform better when you partner with Right Turn Supply for fluids, tooling and expertise.

- PDC Bits
- PDC Reamers 6- to 54-in diameter (15.24 to 137.16 cm)
- Tricone Bits
- Hole Openers 8- to 56-inch diameter (20.32 to 142.24 cm)
- Pipe Rollers
- Pipeline Rig Up Items

SHORTY HOLE OPENERS

- 12- to 24-inch (30.48 to 60.96 cm) tools
- Multiple centralizers for each tool
- Provides flexibility to follow multiple prior pass sizes
- Durable design to ensure optimal performance and tool life in harsh conditions
- Available in Mill Tooth, 500 and 600 series cutters with sealed journal bearings
- API Regular Connections
- Optimal fit for D23x30DR & D40x55DR size rigs



12" Shorty Hole Opener + Centralizer Subs

PILOT BITS

- Designed to maximize wear life and performance in soft to hard rock conditions
- Available in PDC, Mill Tooth, 500, and 600 series cutters with sealed journal bearings
- Wide range of sizes available
- Compatible with dual rod machines and mud motors



5-1/2" 537 TCI

SIMPLE SOLUTIONS KEEP YOU TURNING TO THE RIGHT.

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)



Find a Quickshot Swivel
Assembly that works 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)



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 (.348-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, the expanded tapered puller is 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.

Vermeer breakout device kits include forged alloy wrenches and two sets of dies. Vermeer also offers specialty bit breakout arms for use with PDC and tricone rock bits for hydraulic breakout devices.

Manual PBD21500MP portable breakout device

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

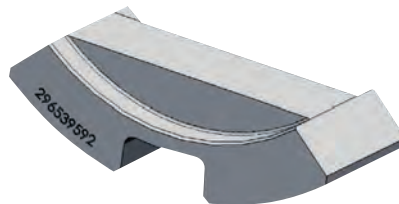
PBD11500 breakout tongs kit

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

TRICONE BIT BREAKER



PDC BIT BREAKER



PART NO.	Description
PBD11500	11,500-ft-lb (29,150-Nm) portable breakout device
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



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 Pro™ lube	1 gal (3.8 L)
235983002	Vermeer Thread Pro™ lube — winter	1 gal (3.8 L)
296408629	Vermeer Thread Pro™ lube — winter	5 gal (18.9 L)
905508003	Vermeer Thread Pro™ lube — summer	2 gal (7.6 L)
296426101	Vermeer Thread Pro™ 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™	

Thread lube

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



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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