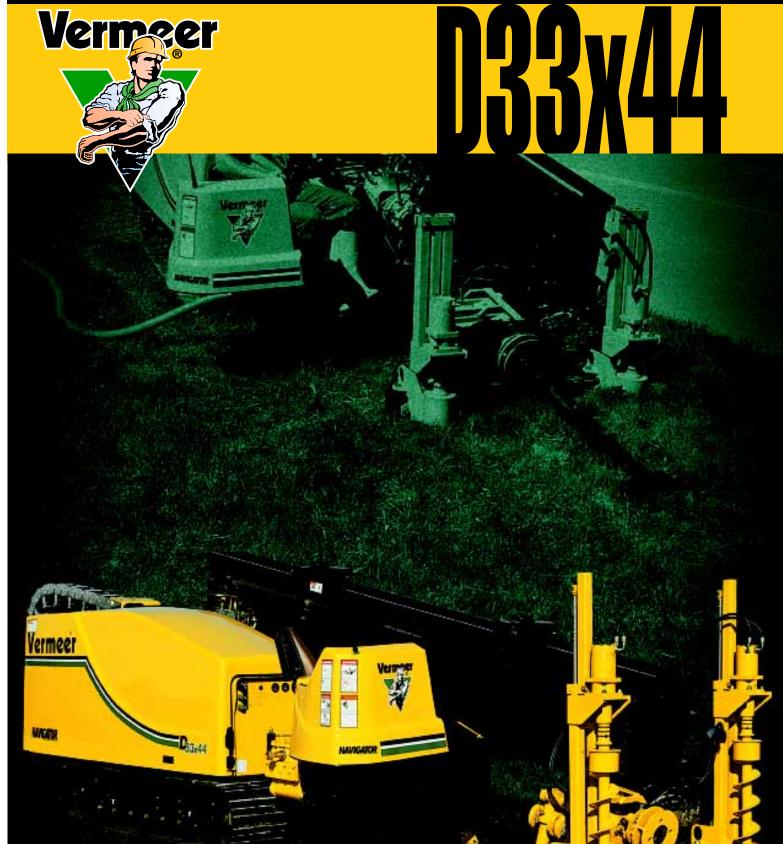
HORIZONTAL DIRECTIONAL DRILLING SYSTEM







<u>Designed to Do</u> the Job.

The Vermeer[®] D33x44 NAVIGATOR[®] horizontal directional drilling machine is a compact HDD designed for a wide range of medium-diameter, mid- to long-distance applications such as easement work and road, river and creek crossings.

The D33x44 features your choice of a 10' (3.0 m) or a 15' (4.6 m) drill stem rack, 4400 ft-lb (5957 Nm) of rotational torque, a 50 gpm (189 L/min) onboard drilling fluid pump and 33,000 lb (14,969 kg) of pullback. The unit utilizes a unique rack-and-pinion drive system and offers three-speed rotational operation for varying ground conditions and backreamers. The operator's station offers electricover-hydraulic thrust and rotation controls that incorporate the breakout system, fluid pump, throttle and other machine functions. A pivoting one-piece fiberglass hood provides excellent access to the engine and hydraulic components.



The operator's station provides the user with thrust and rotation electronic displacement controls for fingertip operation. Dual-integrated joystick controls combine the breakout system, throttle and mud-flow operations.



The D33x44 rack-and-pinion carriage drive is simple and provides smooth operation. The unique, narrow design of this system helps the unit maintain a small footprint — enhancing access and maneuverability in congested areas.

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NAVIGATOR

A productivity-enhancing design

makes the D33x44 an efficient machine for multiple applications. The unit features a patented automated rod loader, a stationary stakedown system, a two-speed carriage, a floating-head design, the Power Vise breakout system, three-speed rotational operation and standard drilling lights.



FIRESTICK[®] drill stem

provides the optimal range of strength and flexibility. It features precision-machined threads to withstand the rigors of horizontal directional drilling.



The standard RockFire® Ready feature provides a reverse rotation pressurelimiter, mud-pump bypass and thrust limiter. The RockFire Ready system can provide advantages in conventional drilling applications and allows the D33x44 to be used with the RockFire pneumatic rock-drilling system.



The one-piece pivoting fiberglass hood is

lightweight and provides convenient access to the machine's engine bay and hydraulic systems for increased maintenance efficiency and easier serviceability.

Worldwide coverage with a local touch.

Your independent, authorized Vermeer dealer knows your local conditions and is ready to provide expert sales, support, service and parts wherever your job site.



D33x44 Specifications

Drill Unit

Length: 212" (538 cm) w/ 10' (3.0 m) rack; 272" (691 cm) w/ 15' (4.6 m) rack Width: 82" (208 cm) Height: 83" (211 cm) Weight: 19,800 lb (8981 kg) w/ 10' (3.0 m) rack; 21,000 lb (9526 kg) w/ 15' (4.6 m) rack Hydraulic pipe vise: Yes Transport speed: 1.4 mph (2.3 km/h) Automated rod loader: Yes Stakedown system: Yes (stationary) Drilling lights: Yes

Operational

Maximum spindle torque: 4400 ft-lb (5957 Nm) @ 117 RPM; 3300 ft-lb (4468 Nm) @ 156 RPM; 1400 ft-lb (1895 Nm) @ 234 RPM Actual pullback: 33,000 lb (14,969 kg) Maximum spindle speed: 234 RPM Electrical system: 12-volt

Water System

Max. flow: 50 gpm (189 L/min) Max. pressure: 1300 psi (90 bar)

Power Source

Engine: Cummins diesel Gross hp: 125 hp (93 kw) Max. governed speed: 2200 RPM

Drill Stem

Type: FIRESTICK II One-piece forged design: Yes Length: 10' (3.0 m) or 15' (4.6 m) Pipe diameter: 2.375" (6.0 cm) Minimum bend radius: 108.2' (33.0 m) Weight: 10' (3.0 m) stem — 81 lb (38 kg); 15' (4.6 m) stem — 120 lb (54 kg) FIRESTICK stem capacity: 520' (158.5 m) w/ 10' (3.0 m) rack; 600' (182.9 m) w/ 15' (4.6 m) rack

Bore

Minimum bore diameter: 3.5" (8.9 cm) Drill head will accept most locator systems

Fluid Capacities

Hydraulic reservoir: 60 gal (227 L) Engine oil, including filter: 11.5 qt (10.9 L) Fuel tank: 45 gal (170 L) w/ 10' (3.0 m) rack; 29 gal (110 L) w/ 15' (4.6 m) rack

Vermeer offers everything from specialty tooling to training and technology.

At any given time, more than half of all horizontal directional drilling units in the world are Vermeer NAVIGATOR machines. To help ensure smooth-running operations, Vermeer offers everything you need — from one-day training seminars to computer software — for more efficient bore planning and performance.



Vermeer drilling fluid systems provide the horizontal directional drill with quality mud mixing in a minimum amount of time. Smaller systems are self-contained on a mounting skid. Larger systems are available preassembled on mounting platforms to provide drilling operations with greater versatility.



Wetting agents, polymers and bentonites — you need the right mix to get through the tough bores. Vermeer offers specially formulated nontoxic polymer and bentonite drilling fluids to get the job done.



The Vermeer Cutting Edge Group provides some of the world's most popular drill heads, cutting bits and backreamers. Specialty tooling is available for applications like rock and sewer. The Vermeer Cutting Edge Group offers customized work, providing specialized tooling for your environment.



Locating systems are developed by working closely with the world's premier locating companies. Vermeer helps keep you on the leading edge of technology by offering a variety of options designed to meet the needs of varying applications.



Vermeer features a global team of NAVIGATOR HDD specialists that provide localized training and operation expertise designed for the conditions in your area.



The Vermeer Remote Lockout System is a two-way communication and control tool that allows workers to lockout the drill anywhere along the bore path or at the exit site. This patent-pending system is easy to use and is factory-installed in all new NAVIGATOR HDDs; it is available as a kit for installation into HDD machines already in the field.



The efficient, economical way to plan a bore. Vermeer ATLAS BORE PLANNER[®] software heightens professionalism by aiding the operator in preplanning the bore and comparing the planned bore path with the actual bore path. The Vermeer FieldCalc[™] system combines software and a handheld computer to provide job site calculations, including setback distance, pullback time and point-to-point calculations.



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