PIPELINE TRENCHERS

Vermeer

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THE TRENCHER **ADVANTAGE**

Vermeer Corporation has a rich history in the trenching industry. In 1956, Vermeer introduced the self-propelled Pow-R-Ditcher trencher, designed to help farmers drain fields. Vermeer trenchers grew beyond the farm in the 1960s. To support suburban growth in the U.S., Vermeer introduced a full line of rubber-tire and track trenchers to efficiently place utilities like electricity, water and sewer underground using open-cut methods. Suburban sprawl was underway.

In the 1980s, Vermeer introduced bigger, tougher and more powerful trenchers to take on jobs in places and ground conditions no one thought possible. Builders could now efficiently construct an underground pipeline network connecting energy sources to markets around the world. The pipeline market took off with Vermeer trenchers leading the charge.

Today, Vermeer has expanded to become a market leader in the trenching industry, supporting customers all over the world. A complete range of machines gives operators the power to dig trenches up to 4 ft (1.2 m) wide, or to depths as deep as 18 ft (5.5 m) below ground. That's why the pipeline industry continues to count on Vermeer.

The singular power of Vermeer trenchers

Under most ground conditions, a single Vermeer trencher can perform the work of several excavators. Operators can trench fast and efficiently with minimized chain wear due to its low-speed, high-torque, splined headshaft motor and variable chain speed.

In soil conditions where excavators may dig inches per minute, a Vermeer trencher can cut several feet per minute. With a clean, level bottom, the trench needs little bedding. The trench will have straight walls (vertical walls when using a trencher equipped with Auto Level), thus removing only the amount of spoil needed. Unlike excavators, Vermeer trenchers cut their own spoils, providing their own backfill. The result? A clean, custom trench ready for installation with built-in backfill. Quickly and all in one shot.

The trencher advantage

- One trencher can do the work of multiple excavators.
- Trencher requires less labor, fuel and materials.
- Depending on requirements, the spoil can be used as backfill without crushing.
- The ditch bottom is clean.
- The ditch walls are cleaner and straighter compared to those created with an excavator.
- You can maximize your job performance and efficiency.

ROCK TRENCHING IN THE DESERT

The rippling current of the 2008 U.S. housing market collapse struck more than just new home construction in cities like Phoenix, Arizona. It halted planned infrastructure improvements, and the combination proved fatal to many companies whose livelihood depended on the two sectors.

A decade later, the Phoenix-area community of Goodyear is booming again. Contractors whose businesses survived the recession are now facing a different challenge: the wall of work that is leaving many scrambling to keep up.

Sellers & Sons Inc. was one of the general contractors that made it through those challenging years, though it took consolidation and restructuring to make it work for the family business with locations in Tucson and Phoenix, Arizona.

"Before the housing bubble, Sellers & Sons was primarily known as a local family-owned business that specialized in installing outdoor sports lighting and building HUD housing for American Indian tribes in Arizona," said Spencer Sellers, who was working in underground utility line installation prior to joining Sellers & Sons. Today, the company that once just handled construction has diversified into underground utility work.

Estrella water project

That diversification sent Sellers & Sons in new directions, including the installation of water lines for Goodyear's largest new planned community, Estrella. At just over 20,000 acres (80 km^2), Estrella is located in the foothills of the Sierra Estrella Mountains in the Sonoran Desert Valley. The affluent community currently has just over 14,000 residents but is forecasted to grow significantly in the coming years.

To prepare for that growth, Sellers & Sons is installing 3,900 ft (1,188 m) of 16-in (40.6-cm) diameter ductile iron water pipe alongside the major thoroughfare Estrella Parkway, which adjoins areas where residential subdivisions will be built. The new line is being installed at depths of up to 16 ft (4.9 m) deep. The crew is also running a shallower trench parallel to the water line ditch for a future electrical line.

Planning for rock

Projects like the Estrella Parkway come with unique challenges, namely frequent encounters with underground rock formations. It's so common in this area that underground contractors often include "rock clauses" in contracts that cover potential additional labor costs when facing unexpected granite and other rock formations while digging.

"We've done a lot of work in the area, usually with excavators, and knew we would be digging in a mixture of granite and dense blue granite," Sellers said. "In those conditions, a person's lucky if he or she can dig 200 ft (61 m) in two weeks with excavators and hammers. It's a real challenge and hard on equipment."

Sellers & Sons site foreman Baron Holly recognized this challenge and the limitations it would place on his crew's work and equipment. His first step toward a solution was to call Vermeer Sales Southwest Inc. to inquire about a rock trencher.

"We've rented trenchers from this Vermeer dealer in the past, but this project was going to be a lot more challenging because it was entirely in rock," Holly said. "The team at Vermeer Sales Southwest did more than rent a trencher to us; they pulled samples of the rock we would be digging in, sent it off to be analyzed, and then came back with an equipment recommendation to help maximize productivity."

Collaboration with testing

Sellers & Sons' Vermeer dealer sales representative, Justin Siler, sent the core samples from the Arizona jobsite to the Vermeer Corporation rock lab in Pella, Iowa, for extensive testing. Afterward, Siler supplied Sellers and Holly with a rock lab report that provided data on the rock's hardness, abrasiveness and how it may respond when workers and machines encountered it.

"With that information, we were able to help them calculate estimated production rates and operating costs," Siler said. "From there, we recommended the Vermeer T1155 Commander® 3 trencher with Kennametal RockRazor™ TS19C X cutting teeth to perform in the rocky ground conditions."

Impressive results

Sellers & Sons quickly saw results. Using the recommended equipment, they were able to trench between 600 feet and 800 feet (182.9 m and 243.8 m) per day. With a 540 horsepower (403 kW) engine, the Vermeer trencher worked through both granite and blue granite formations at an aggressive pace.

Alongside the 16-ft (4.9-m) deep, 34-in (86.3-cm) wide trench, the crew dug an offset trench for the electrical conduit. Initially, Sellers & Sons thought they would have to change out the boom for the shallow area, but rock toward the surface was soft enough they could still productively trench at those depths with the longer boom.

"We wanted the boom on the trencher between 45° and 90° when trenching in hard rock like this," explained Sellers. "If we tried to run too flat then the boom could have bounced a bit. However, since the top three feet to five feet (.9 m to 1.5 m) were softer, we didn't have to change the boom out."

Sellers & Sons completed trenching on the Goodyear, Arizona, project in just over two weeks — a time frame that impressed the customer, crew and other contractors working nearby.

"A few years ago, we did a project in the area similar to this one, but we weren't dealing with as much rock," Sellers said. "It took us two weeks to get those 200 feet (61 m) with an excavator and hammer; the same amount of time we spent trenching on the whole Estrella job!"

Growing demand

One of the people to notice how quickly the Sellers & Sons crew wrapped up the Estrella Parkway job was a contractor and friend of Sellers and Holly dealing with his own rocky nightmare on a nearby project.

"Our friend's crew was working right next door at the Rosewood Golf Villas community," mentioned Sellers. "In the time it took to complete our project, they were only able to dig around 200 feet (61 m) with an excavator. They weren't happy, and the customer was getting concerned about the growing costs involved with installing this new waterline."

Their friend asked if Sellers and Holly could bring the Vermeer T1155III trencher over to their job when they were done. This job has similar ground conditions, trench depths and the need for a parallel trench. The only difference was the size of the waterline, as it was smaller.

"We are just starting this job, but we expect similar productivity," said Sellers. "The Vermeer trencher and our crew will be able to efficiently complete the project, and that's a big deal for everyone."

Looking ahead, Sellers said he sees the T1155III trencher as a means through which his company can reach a new area of work that it couldn't before. And not only is the machine opening new doors, it's doing so efficiently.

"We have two more jobs in the works once we're done with this. We rented the T1155III trencher for one job, and now I'm not sure how long we will continue to rent it," Sellers said. "I think the whole area is growing and the area developers want to make sure they have the necessary infrastructure in place to keep up."

THE RIGHT TRENCHER **FOR ANY INDUSTRY**

Vermeer has the right trencher for a wide range of trenching jobs, including pipeline distribution, power, water, sewer, gas, power and underdrain installations, and other heavy-duty trenching tasks.

Pipeline installation

In natural gas and oil pipeline installation, the trench must be deep enough to accommodate the pipeline, plus the required distance from the pipeline to the ground surface. Certain areas, such as waterways and road crossings, require a greater minimum depth to meet the regulations for natural gas pipelines.

Electric transmission lines

Most commonly, trenches for electric transmission lines are at least 6 ft-8 ft (1.8 m-2.4 m) deep to keep cables below the frost line. The trench dimensions will be greater in places where vaults are located. The dimensions of the trench might need to be deeper and wider to avoid underground obstacles. When trenches are deeper than anticipated, the width of the trench must be widened for purposes of stability.

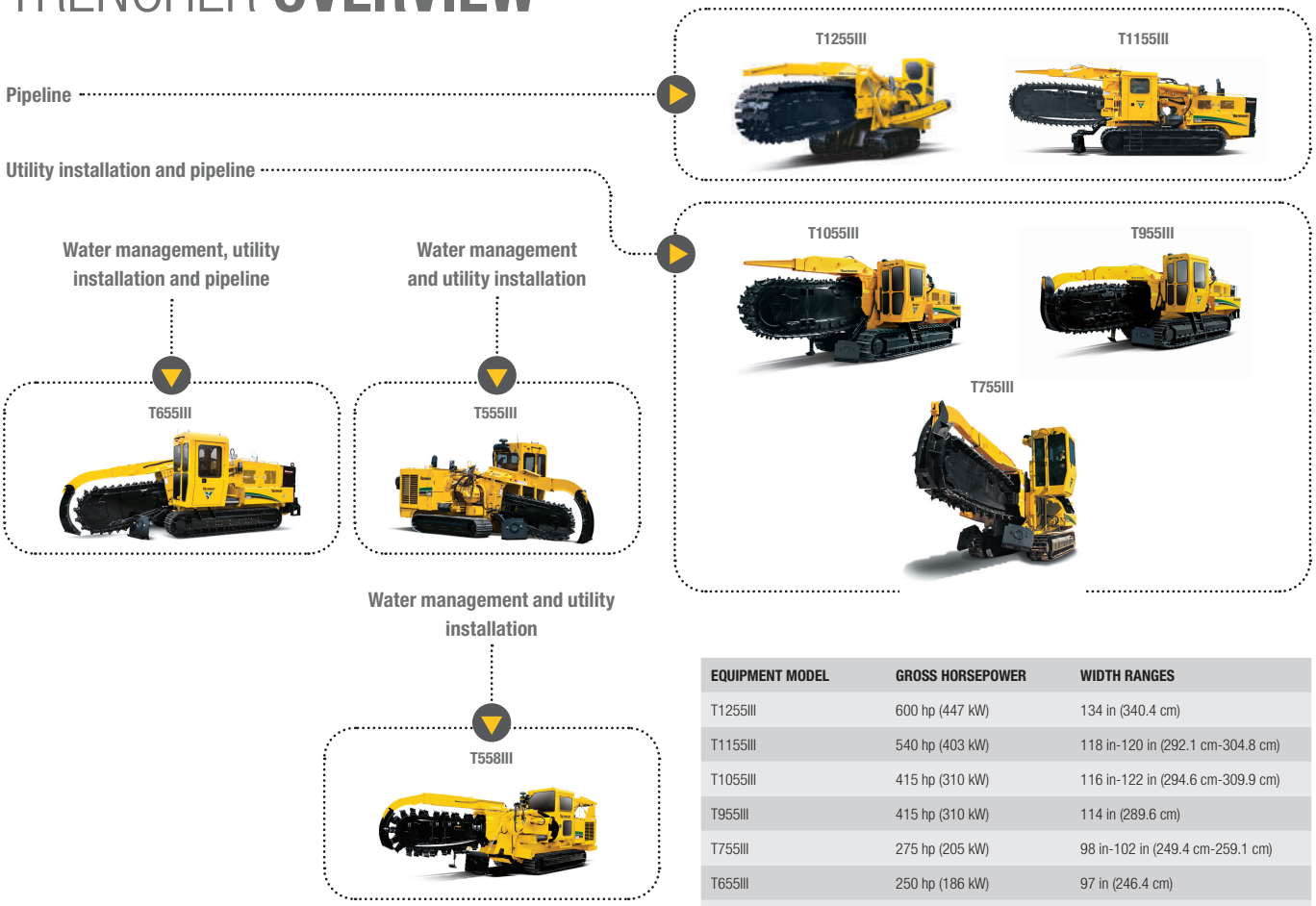
Water and sewer installation

When a new urban subdivision is in developmental stages, there are many pieces of infrastructure that need to be installed. Vermeer trenchers can play a role in opening up the ditch for the water and sewer installation, especially when the ground conditions are rocky.

Water management

Controlling water flow after heavy rainfall is important in many situations, like farm tiling and highway drainage. There are many benefits for tiling a farm field, such as soil erosion prevention, better root systems for the crops, reduced yield variation and more. In the highway sector, maintaining a firm subbase to the roadways is critical to keeping the traveled surface of the road in good shape over its designed life, and managing the drainage runoff from the roadway is a critical piece to keeping the subbase at a uniform compaction for this to work as designed. Vermeer trenchers are used in many places, opening the ditch and placing corrugated tile that is used to create a flow path for the water to get it to a place where it can be managed.

TRENCHER **OVERVIEW**



EQUIPMENT MODEL	GROSS HORSEPOWER	WIDTH RANGES
T1255III	600 hp (447 kW)	134 in (340.4 cm)
T1155III	540 hp (403 kW)	118 in-120 in (292.1 cm-304.8 cm)
T1055III	415 hp (310 kW)	116 in-122 in (294.6 cm-309.9 cm)
T955III	415 hp (310 kW)	114 in (289.6 cm)
T755III	275 hp (205 kW)	98 in-102 in (249.4 cm-259.1 cm)
T655III	250 hp (186 kW)	97 in (246.4 cm)
T558III	185 hp (138 kW)	100.3 in-102.3 in (254.8 cm-259.8 cm)
T555III	185 hp (138 kW)	97 in-102 in (246.4 cm-259.1 cm)

VERMEER ATTACHMENTS

Rockwheels: Cut through rock, concrete and other tough surfaces with a Vermeer rockwheel. Designed to take on challenging ground conditions, these rockwheels will give you clean, straight-sided trenches for a variety of concrete-cutting projects, including patch and joint placement on interstates, streets and highways, or on decorative stones.

Bucket wheel: Trenching in soft soils can be tricky. The bucket wheel is designed to maximize productivity in soft soils. Instead of the typical chain configuration, which positions the carbide trencher teeth in a specific formation or pattern, the wheel features a series of buckets, which rotate in a circular motion, helping move more dirt from the trench.

Loading conveyer: The loading conveyor is used when you are in a narrow right of way and don't have room to pile spoil and still drive next to the trench. Also other situations require that the cut material is hauled offsite so you can directly load to the truck.

Tile layer: Optimize water management by installing field drainage tile with the tile layer attachment (available on T555III and T655III only).

TEC® Plus computer-aided control system with SmartTEC

All Vermeer trenchers come equipped with SmartTEC performance software, a control platform that helps optimize productivity according to real-time machine control prompts. The platform is convenient to learn and operate with user-friendly screens showing operators what adjustments can be made to help increase production and optimize performance as ground conditions change.

The TEC Plus system and SmartTEC performance screens use CAN bus technology to continuously monitor machine performance data — providing proactive machine maintenance and operator performance analysis.

TRENCHER **COMMON FEATURES**

1) Trencher cleaner arch
2) Teeth
3) Boom top rollers
4) Bridge
5) Boomhead
6) Cab
7) Cross conveyor
8) Tracks
9) Dirt drags
10) Trencher boom
11) End idler
12) Trench cleaner shoe

THE VERMEER FAMILY **OF TRENCHERS**

Time- and contractor-tested Vermeer trenchers have cut through some of the world's toughest landscapes. Built hard-nosed to power through soft soils to abrasive rock, the Vermeer family of trenchers has been an asset on the pipeline for 50 years. Whether you're cutting through hard rock or installing a cross-country pipeline, Vermeer has a trenching solution to meet your needs.

FEATURES AND BENEFITS

Common trencher features

- Tough trench digging (including solid rock) is effective with minimized wear due to low-speed, high-torque, splined headshaft motors. Due to the high torque rise engine, when you encounter tough trench digging conditions, the engine speed drops, increasing the torque for more power to pull through.
- A hydrostatic transmission provides maximum power, high torque and is backed by a 1-year, 1000-hour extended care package.
- Help extend boom life with features such as high-alloy bottom trencher boom wear strips and optional boom-top rollers.
- An elevating cab provides the operator with a clear view of the boom, trench and conveyor. (Not available on fixed cab models: T555III, T558III and T655III.)
- Choose from a variety of boom lengths to match jobsite requirements.
- The Vermeer TEC Plus system communicates with multiple machine control modules for real-time performance data and advanced troubleshooting capabilities.
- Minimize turf damage and help machine stability with self-leveling tracks that distribute weight evenly. On select models, an oscillating track frame allows the trencher to follow the ground's contour for a vertical trench on slopes up to 10°.
- An optional wireless remote control provides full operation functionality and is designed for conditions such as working near a high wall or unloading/loading onto a trailer.
- Help decrease trencher teeth inspection and replacement maintenance time through a remote attachment control that can start or stop the engine, raise or lower the trencher boom and rotate chain at a slow speed.
- Trench up against guardrails, buildings, walls and other obstacles with offset trencher models.

Optional features

- Optional drags are available on all models and are used to clean the surface of the trench and pull spoil into the ditch.
- A split cab design reduces the need for over-width trucking permits. The cab swings open and the cab locking bar is then bolted in to secure the cab.
- Standard cutter setups provide for a wide range of cutting conditions along with custom design options to meet customer needs.

The Vermeer advantage

- Vermeer Vantage Track Extended Care Service Program offers an optional 3-year/3000-hour or 5-year/5000-hour heavy equipment extended care on the components of the closed-loop hydrostatic system.
- Vermeer dealers offer comprehensive service and genuine Vermeer replacement parts.
- Add the Vermeer Confidence Plus® asset protection program to give your operation a major advantage — providing the ongoing service you need to help protect the productivity and value of your Vermeer equipment.

T1255 COMMANDER® 3 TRENCHER

The heavy-duty T1255III from Vermeer provides the trench-digging power needed to cut through rock for large-diameter applications, as well as major pipeline projects with high-volume spoil removal through an extra-wide 36-in (91.4-cm) dirt conveyor opening.

Trencher | Terrain Leveler® surface excavation machine (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 12.2 ft (3.7 m)

Max length: 53.8 ft (16.4 m)

Weight range: 150,000 lb-205,000 lb (68,038.9 kg-92,986.4 kg)

Width range: 11.2 ft (3.4 m)

Engine make and model: Caterpillar C18 ACERT

Engine horsepower: 600 hp (447 kW)

T1155 COMMANDER® 3 TRENCHER

The T1155III is the ideal trenching machine to penetrate rock, combining electronics, versatility, a wide boom attachment and 540 horsepower (403 kW) of muscle.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 12.2 ft (3.7 m)

Max length: 45.3 ft (13.8 m)

Weight range: 120,000 lb-170,000 lb (54,431.1 kg-77,110.7 kg)

Width ranges: 9.8 ft-10 ft (2.9 m-3 m)

Engine make and model: Caterpillar C15 ACERT

Engine horsepower: 540 hp (403 kW)

T1055 COMMANDER® 3 TRENCHER

For pipeline and utility installation projects requiring high horsepower and deep digging depths, Vermeer offers the T1055III.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 11.3 ft (3.4 m)

Max length: 41 ft (12.5 m)

Weight range: 87,000 lb-124,000 lb (39,463.5 kg-56,245.5 kg)

Width ranges: 9.7 ft-10.2 ft (3 m-3.1 m)

Engine make and model: Caterpillar C13 ACERT

Engine horsepower: 415 hp (310 kW)

T955 COMMANDER® 3 TRENCHER

Cut through tough trench-digging conditions on pipeline and utility installation projects with the Vermeer T955III, which features an extra wide 30-in (76.2-cm) dirt conveyor opening for high-volume spoil removal.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 11.1 ft (3.4 m)

Max length: 39.7 ft (12.1 m)

Weight range: 78,000 lb-109,000 lb (35,380.2 kg-49,441.6 kg)

Width range: 9.5 ft (2.9 m)

Engine make and model: Caterpillar C13 ACERT

Engine horsepower: 415 hp (310 kW)

T755 COMMANDER® 3 TRENCHER

When you're digging in tough trenching conditions, the T755III will stand firm with up to 60,000 lb (27,215.5 kg) of tractive force on the ground.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 10 ft (3 m)

Max length: 33.6 ft (10.2 m)

Weight range: 49,000 lb-75,000 lb (22,226 kg-34,019.4 kg)

Width ranges: 8.2 ft-8.5 ft (2.5 m-2.6 m)

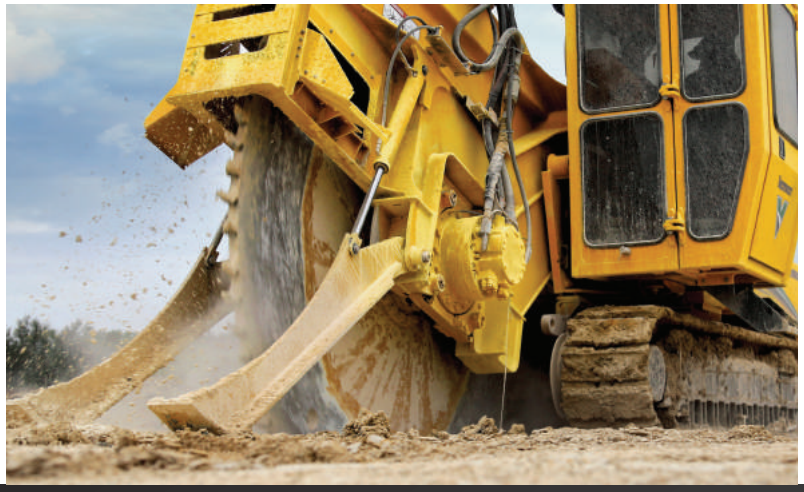
Engine make and model: Option one: Caterpillar C9 ACERT Tier 3
Option two: John Deere 6090HFC09 Tier 4 Final

Engine horsepower: 275 hp (205 kW)

Photo acquired using unattended camera.

T655 COMMANDER® 3 TRENCHER

Equip the T655III with optional attachments to tackle a myriad of trenching jobs. The bucket wheel attachment is designed for the installation of small-diameter cross-country pipelines and maximizes productivity in soft soils. The rockwheel attachment is designed for highway lighting, fiber installation and rock applications.



Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 9.9 ft (3 m)

Max length: 30.1 ft (9.2 m)

Weight range: 40,000 lb-59,500 lb (18,143.7 kg-26,988.7 kg)

Width range: 8.1 ft (2.5 m)

Engine make and model: John Deere 6090HF

Engine horsepower: 250 hp (186 kW)

T558 COMMANDER® 3 TRENCHER

Dig alongside roads, curbs, buildings and walls with the fully hydrostatic sliding offset T558III. An optional stowable loading conveyor stores conveniently, and unlike many competitive models, does not require removal for transportation.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 9.9 ft (3 m)

Max length: 30.1 ft (9.2 m)

Weight range: 40,000 lb-59,500 lb (18,143.7 kg-26,988.7 kg)

Width range: 8.1 ft (2.5 m)

Engine make and model: John Deere 6068H Tier 3

Engine horsepower: 250 hp (186 kW)

T555 COMMANDER® 3 TRENCHER

Equipped for tough trenching jobs around the world, the T555III is available with a 4-in, 5-in, 6-in or 8-in (1.2-m, 1.5-m, 1.8-m or 2.4-m) trencher boom capable of trenching widths up to 24 in (61 cm). An optional hydrostatic rockwheel attachment cuts depths up to 36 in (91.4 cm) in some of the toughest rock conditions.

Trencher | Terrain Leveler® (SEM) | Rockwheel | Bucket wheel

PRODUCT SPECIFICATIONS

Height range: 9.8 ft (3 m)

Max length: 25 ft (7.6 m)

Weight range: 28,000 lb-36,500 lb (12,700.6 kg-16,329.3 kg)

Width ranges: 8.1 ft-8.5 ft (2.5 m-2.6 m)

Engine make and model: John Deere 6068H

Engine horsepower: 185 hp (138 kW)

A ROCK LAB **BUILT TO TEST THE LIMITS**

The biggest question about trenchers: "How will it perform in my conditions?"

Environmental conditions can lead to vast differences between, and within, rock types. This ultimately impacts the performance of a trencher and the resulting ditch. Therefore, it's important to know the compressive strength, or hardness, of the rock, as well as its density, abrasivity and tensile strength to help determine the appropriate machine for the job.

Back in 2000, Vermeer made a significant investment to enhance its rock testing capabilities by building a cutting-edge rock test laboratory following international and domestic geological society standards.

*Calculator costs and operating expenses are based on estimates considering customer-provided data and assuming proper use, maintenance and operation. Actual operating costs and return on investment will vary based on conditions, price fluctuations, polymer use and other external factors. This is a tool for estimating only and is not a guarantee of actual results.

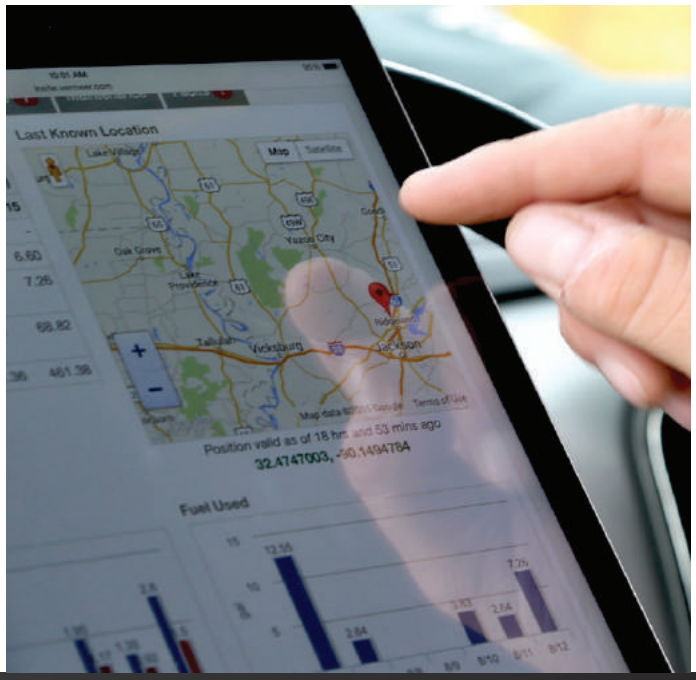
To date, our rock lab has tested thousands of rock samples from across the world. While we sample and test rock, we also go out into the field and estimate how our machines will perform in that rock.

The following tests are performed at the Vermeer Rock Lab:

- Unconfined compressive strength (UCS)
- Cerchar abrasivity index
- Indirect tension
- Vermeer energy index
- Estimated maintenance costs*
- Estimated operating costs*
- Estimated cost per ton or cost per volume*

MANAGE TRENCHER PERFORMANCE **EFFICIENTLY**

Are you limiting the productivity of your equipment without even realizing it? Vermeer Fleet and Vermeer Fleet +Edge help increase machine productivity by managing and analyzing operational data captured in near real time. Operations and fleet managers can review machine information at any point in time during or after a trenching operation to help improve the performance of the equipment and crews.



Vermeer Fleet

Vermeer Fleet keeps you in the know of your machines. This user-friendly online productivity and jobsite management tool lets you remotely view key telematics, monitor productivity and help optimize your machine and operator performance on your Vermeer Fleet-enabled equipment. Conveniently monitor key telematics like machine idle times and estimated fuel consumption to help manage operating costs.

Vermeer Fleet +Edge

Everything offered in Vermeer Fleet — plus even more. Vermeer Fleet +Edge includes advanced productivity tools such as SmartTEC to monitor actionable machine information like productivity tracking and performance measurements for operations and fleet managers.

- Machine usage
- Ground drive speed*
- Neglected prompts*
- Attachment knob*
- Propel command*
- Percent engine load*
- Machine totals
- Attachment pressure*
- Load knob*
- Ground drive switch*

*Data is only stored when the machine is in work mode.

SERVICE AND SUPPORT

You deserve an equipment partner who understands the stresses and risks inherent to the pipeline frontier, while offering the expertise and support necessary to keep you running — an ally like Vermeer.

Vermeer has more than 50 years of experience in the trenching business, and we're committed to offering our partners in progress the solutions that help move your business and the world forward.

With a global presence from local dealers, pipeline trailblazers can rest assured Vermeer has an expert nearby, ready to support a variety of projects.

WARRANTY AND EXTENDED COVERAGE

Vermeer stands behind its products to help give customers peace of mind. Vermeer trenchers feature a 1-year/1000-hour standard limited warranty and offer optional extended care coverage for either 3 years/3000 hours or 5 years/5000 hours on select components.

FOLLOW US ON:

DIMENSIONS	T555III	T558III	T655III
Approach angle	17°	25°	16°
Height range	9.8 ft (3 m)	9.9 ft (3 m)	9.9 ft (3 m)
Length with 20-in (50.8-cm) end idler and 2-ft (.6-m) boom	NA	28.2 ft (8.6 m)	NA
Length with 20-in (50.8-cm) end idler and 4-ft (1.2-m) boom	21 ft (6.4 m)	30.4 ft (9.3 m)	25.6 ft (7.8 m)
Length with 20-in (50.8-cm) end idler and 5-ft (1.5-m) boom	NA	NA	NA
Length with 20-in (50.8-cm) end idler and 6-ft (1.8-m) boom	23 ft (7 m)	32.7 ft (10 m)	27.8 ft (8.5 m)
Length with 20-in (50.8-cm) end idler and 8-ft (2.4-m) boom	25 ft (7.6 m)	NA	30.1 ft (9.2 m)
Length with 20-in (50.8-cm) end idler and 10-ft (3.1-m) boom	NA	NA	NA
Length with 30-in (76.2-cm) end idler and 4-ft (1.2-m) boom	NA	29.4 ft (9 m)	NA
Length with 30-in (76.2-cm) end idler and 5-ft (1.5-m) boom	NA	30.8 ft (9.4 m)	NA
Length with 30-in (76.2-cm) end idler and 6-ft (1.8-m) boom	NA	32.1 ft (9.8 m)	NA
Length with 40-in (101.6-cm) end idler and 4-ft (1.2-m) boom	21 ft (6.4 m)	NA	23.6 ft (7.2 m)
Length with 40-in (101.6-cm) end idler and 5-ft (1.5-m) boom	22 ft (6.7 m)	NA	25.3 ft (7.7 m)
Length with 40-in (101.6-cm) end idler and 6-ft (1.8-m) boom	23 ft (7 m)	NA	26.3 ft (8 m)
Length with 40-in (101.6-cm) end idler and 8-ft (2.4-m) boom	NA	NA	28.5 ft (8.7 m)
Length with 40-in (101.6-cm) end idler and 10-ft (3.1-m) boom	NA	NA	NA
Length with 40-in (101.6-cm) end idler and 12-ft (3.7-m) boom	NA	NA	NA
Length with 40-in (101.6-cm) end idler and 14-ft (4.3-m) boom (with restraint bar)	NA	NA	NA
Length with 50-in (127-cm) end idler and 8-ft (2.4-m) boom	NA	NA	NA
Length with 50-in (127-cm) end idler and 10-ft (3.1-m) boom	NA	NA	NA
Length with 50-in (127-cm) end idler and 12-ft (3.7-m) boom	NA	NA	NA
Length with 50-in (127-cm) end idler and 14-ft (4.3-m) boom (with restraint bar)	NA	NA	NA
Length with 50-in (127-cm) end idler and 16-ft (4.9-m) boom (with restraint bar)	NA	NA	NA
Length with 50-in (127-cm) end idler and 18-ft (5.5-m) boom (with restraint bar)	NA	NA	NA
Weight range	28,000 lb-36,500 lb (12,700.6 kg-16,329.3 kg)	39,000 lb-52,000 lb (17,690.1 kg-23,586.8 kg)	40,000 lb-59,500 lb (18,143.7 kg-26988.7 kg)
Width range	8.1 ft-8.5 ft (2.5 m-2.6 m)	8.1 ft (2.5 m)	8.1 ft (2.5 m)
ENGINE OPTION ONE			
Make and model	John Deere 6068H Tier 3	John Deere 6068H Tier 3	John Deere 6090HF Tier 3
Gross horsepower	185 hp (138 kW)	185 hp (138 kW)	250 hp (186 kW)
Rated engine rpm	2400	2400	2200
Number of cylinders	6	6	6
Fuel tank capacity	110 gal (416.4 L)	100 gal (378.5 L)	135 gal (511 L)
Operating range	11.8 hr	9.8 hr	11 hr
Fuel consumption at full load	9.3 gph (35.2 L/hr)	10.2 gph (38.6 L/hr)	12.3 gph (46.6 L/hr)
Maximum engine operating angle*	25°	25°	30°
Air cleaner	Dry-type with precleaner	Dry-type exhaust aspirated	Dry-type with precleaner
Aspiration	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled
Cooling medium	Liquid	Liquid	Liquid
Electrical system	24-volt DC	12-volt DC	24-volt DC
Oil filter	Full flow	Full flow	Full flow
ENGINE OPTION TWO			
Make and model	John Deere 6068HFC08 Tier 4 Final	NA	John Deere 6090HFC09 Tier 4 Final
Gross horsepower	185 hp (138 kW)	NA	250 hp (186 kW)
Rated engine rpm	2400	NA	2200
Number of cylinders	6	NA	6
Fuel tank capacity	110 gal (416.4 L)	NA	135 gal (511 L)
Operating range	11.8 hr	NA	11 hr
Fuel consumption at full load	9.3 gph (35.2 L/hr)	NA	12.1 gph (45.8 L/hr)
Maximum engine operating angle*	25°	NA	30°
Air cleaner	Dry-type with precleaner	NA	Dry-type with precleaner
Aspiration	Turbocharged and air-to-air aftercooled	NA	Turbocharged and air-to-air aftercooled
Cooling medium	Liquid	NA	Liquid
Electrical system	24-volt DC	NA	24-volt DC
Oil filter	Full flow	NA	Full flow

*Operating angles do not indicate safe machine operating angles.

T755III	T955III	T1055III	T1155III	T1255III
22°	16°	16°	16°	15°
10 ft (3 m)	11.3 ft (3.4 m)	11.3 ft (3.4 m)	12.2 ft (3.7 m)	12.2 ft (3.7 m)
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
28 ft (8.5 m)	NA	NA	NA	NA
29.1 ft (8.9 m)	32.2 ft (9.8 m)	32.2 ft (9.8 m)	NA	NA
31.3 ft (9.5 m)	34.7 ft (10.6 m)	34.7 ft (10.6 m)	NA	NA
33.6 ft (10.2 m)	37.2 ft (11.3 m)	37.2 ft (11.3 m)	NA	NA
NA	39.7 ft (12.1 m)	39.7 ft (12.1 m)	NA	NA
NA	NA	41 ft (12.5 m)	NA	NA
NA	NA	35.8 ft (10.9 m)	37.3 ft (11.4 m)	43 ft (13.1 m)
NA	NA	38.3 ft (11.7 m)	39.8 ft (12.1 m)	45.5 ft (13.9 m)
NA	NA	40.8 ft (12.4 m)	42.3 ft (12.9 m)	48 ft (14.6 m)
NA	NA	NA	43 ft (13.1 m)	48.8 ft (14.9 m)
NA	NA	NA	45.3 ft (13.8 m)	51.3 ft (15.6 m)
NA	NA	NA	NA	53.8 ft (16.4 m)
49,000 lb-75,000 lb (22,226 kg-34,019.4 kg)	78,000 lb-109,000 lb (35,380.2 kg-49,441.6 kg)	87,000 lb-124,000 lb (39,463.5 kg-56,245.5 kg)	120,000 lb-170,000 lb (54,431.1 kg-77,110.7 kg)	150,000 lb-205,000 lb (68,038.9 kg-92,986.4 kg)
8.2 ft-8.5 ft (2.5 m-2.6 m)	9.5 ft (2.9 m)	9.7 ft-10.2 ft (3 m-3.1 m)	9.8 ft-10 ft (2.9 m-3 m)	11.2 ft (3.4 m)
Caterpillar C9 ACERT Tier 3	Caterpillar C13 ACERT Tier 3	Caterpillar C13 ACERT Tier 3	Caterpillar C15 ACERT Tier 3	Caterpillar C18 ACERT Tier 3
275 hp (205 kW)	415 hp (310 kW)	415 hp (310 kW)	540 hp (403 kW)	600 hp (447 kW)
2200	2100	2100	2100	2100
6	6	6	6	6
145 gal (548.9 L)	184 gal (696.5 L)	184 gal (696.5 L)	270 gal (1022.1 L)	370 gal (1400.6 L)
9.9 hr	8.8 hr	8.8 hr	9.4 hr	11.6 hr
14.7 gph (55.6 L/hr)	20.9 gph (79.1 L/hr)	20.9 gph (79.1 L/hr)	28.9 gph (109.4 L/hr)	31.8 gph (120.4 L/hr)
40°	35°	35°	35°	35°
Dry-type exhaust aspirated	Dry-type exhaust aspirated	Dry-type exhaust aspirated	Dry-type with precleaner	Dry-type with precleaner
Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled
Liquid	Liquid	Liquid	Liquid	Liquid
24-volt DC	24-volt DC	24-volt DC	24-volt DC	24-volt DC
Full flow	Full flow	Full flow	Full flow	Full flow
John Deere 6090HFC09 Tier 4 Final	Caterpillar C13 ACERT Tier 4 Final	Caterpillar C13 ACERT Tier 4 Final	Caterpillar C15 ACERT Tier 4 Final	Caterpillar C18 ACERT Tier 4 Final
275 hp (205 kW)	415 hp (310 kW)	415 hp (310 kW)	540 hp (402 kW)	600 hp (447 kW)
2200	2100	2100	2100	2000
6	6	6	6	6
145 gal (548.9 L)	184 gal (696.5 L)	184 gal (696.5 L)	270 gal (1022.1 L)	370 gal (1400.6 L)
11 hr	8.6 hr	8.6 hr	9.6 hr	12.1 hr
13.2 gph (50 L/hr)	21.3 gph (80.6 L/hr)	21.3 gph (80.6 L/hr)	28.1 gph (106.4 L/hr)	30.5 gph (115.5 L/hr)
30°	35°	35°	35°	35°
Dry-type with precleaner	Dry-type with precleaner	Dry-type with precleaner	Dry-type with precleaner	Dry-type with precleaner
Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled	Turbocharged and air-to-air aftercooled
Liquid	Liquid	Liquid	Liquid	Liquid
24-volt DC	24-volt DC	24-volt DC	24-volt DC	24-volt DC
Full flow	Full flow	Full flow	Full flow	Full flow

TRACKS	T555III	T558III	T655III
Auto self-level	Yes	Yes	Yes
Ground pressure minimum	5.4 psi (37.2 kPa)	8.5 psi (58.6 kPa)	7.8 psi (53.8 kPa)
Ground pressure maximum	8.4 psi (57.9 kPa)	10.3 psi (71 kPa)	9.7 psi (66.9 kPa)
Tilt track available	Yes	Yes	Yes
Tilt track max angle	10°	10.7°	10.5°
Track drive type	Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission
Track length	8.8 ft (2.7 m)	9.9 ft (3.5 m)	11.4 ft (3.5 m)
Track pad type	Single, triple or rubber grouser	Single, double, triple or polyurethane grouser	Single, double or triple grouser
Track pad width	1.3 ft, 1.7 ft or 2 ft (.4 m, .5 m or .6 m)	1.7 ft or 2 ft (.5 m or .6 m)	1.7 ft (.5 m)
Track size	FL6	D4	D4
Maximum ground speed — low	194 fpm (59.1 m/min)	105.8 fpm (32.2 m/min)	114 fpm (34.7 m/min)
Maximum ground speed — high	248 fpm (75.6 m/min)	212 fpm (64.6 m/min)	227 fpm (69.2 m/min)
Parking and emergency brake	Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake
Service brakes	Hydrostatic	Hydrostatic	Hydrostatic
CONVEYOR			
Belt width	24 in (61 cm)	24 in (61 cm)	24 in (61 cm)
Conveyor belt speed	823 fpm (250.9 m/min)	0-988 fpm (0-301.1 m/min)	0-758 fpm (231 m/min)
Conveyor belt style	Cleated with sidewall	Cleated	Cleated
Conveyor length	94 in or 140 in (238.8 cm or 355.6 cm)	72 in (182.9)	96 in and 144 in (243.8 cm and 365.8 cm)
Conveyor shift available	Yes	Yes	Yes
Conveyor shift distance	27 in (68.6 cm)	27 in (68.6 cm)	12 in and 48 in (30.5 cm and 121.9 cm)
Conveyor style	Flat	Flat	Flat or curved
Discharge direction	Right or left	Right or left	Right or left
Discharge height	43.5 in or 45.5 in (110.5 cm or 115.6 cm)	53.5 in (135.9 cm)	48 in and 56 in (121.9 and 142.2 cm)
ATTACHMENTS			
Trencher	Yes	Yes	Yes
Terrain Leveler SEM	No	Yes	No
Rockwheel	Yes	No	Yes
Bucket wheel	No	No	Yes
CAB			
Cab	Yes	Yes	Yes
Control system	TEC® Plus system with SmartTEC	TEC® computer-aided control system	TEC Plus system with SmartTEC
Air conditioner/heater	Yes	Yes	Yes
Air suspension seat	No	No	No
AM/FM stereo with weather band	Yes	Optional	Yes
Elevating	No	Horizontal sliding	No
Pressurized/Filtered air	Yes	Yes	Yes
Rollover protective module or rollover protective structure (ROPM/ROPS)	No	Yes	No
HYDRAULIC SYSTEM			
Oil tank capacity	80 gal (302.8 L)	80 gal (302.8 L)	85 gal (321.8 L)
Oil type	Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100
Pressure setting	2500 psi (172.4 bar)	2500 psi (172.4 bar)	2500 psi (172.4 bar)
Pump flow at maximum rpm	27.2 gpm (103 L/min)	27.2 gpm (103 L/min)	25 gpm (94.6 L/min)
Pump type	Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)

T755III	T955III	T1055III	T1155III	T1255III
Yes	No	No	No	No
8.9 psi (61.4 kPa)	11.7 psi (80.7 kPa)	9.4 psi (64.8 kPa)	13 psi (89.6 kPa)	15.5 psi (106.9 kPa)
12.5 psi (86.2 kPa)	13.3 psi (91.7 kPa)	13.9 psi (95.8 kPa)	17.3 psi (119.3 kPa)	21.1 psi (145.5 kPa)
Yes	No	No	No	No
12°	0	0	NA	NA
Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission	Dual-path hydrostatic with planetary transmission
11.8 ft (3.6 m)	13.4 ft (4.1 m)	14.7 ft (4.5 m)	14.8 ft (4.5 m)	15.1 ft (4.6 m)
Single, double, triple and polyurethane grouser	Single, double or triple grouser	Single or double grouser	Single, double or triple grouser	Double grouser
1.7 ft or 2 ft (.5 m or .6 m)	2 ft (.6 m)	2 ft or 2.5 ft (.6 m or .8 m)	2.2 ft, 2.3 ft or 2.5 ft (.6 m, .7 m or .8 m)	2.5 ft (.8 m)
D5	D6	D7G	Caterpillar 350 excavator	Caterpillar 375 excavator
85.2 fpm (26 m/min)	68 fpm (20.7 m/min)	57.1 fpm (17.4 m/min)	50 fpm (15.2 m/min)	44.2 fpm (13.5 m/min)
170 fpm (51.8 m/min)	136 fpm (41.5 m/min)	114 fpm (34.7 m/min)	133 fpm (40.5 m/min)	118 fpm (36 m/min)
Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake	Spring-applied, hydraulic release, wet disc brake
Hydrostatic	Hydrostatic	Hydrostatic	Hydrostatic	Hydrostatic
24 in (61 cm)	30 in (76.2 cm)	30 in (76.2 cm)	30 in (76.2 cm)	36 in (91.4 cm)
0-1118 fpm (0-340.8 m/min)	0-1070 fpm (0-326 m/min)	0-1070 fpm (0-326 m/min)	0-1070 fpm (0-326 m/min)	0-814 fpm (0-248 m/min)
Cleated or finger type	Cleat or finger type	Cleat or finger type	Cleated or finger type	Finger type
96 in or 144 in (243.8 cm or 365.8 cm)	108 in or 168 in (274.3 cm or 426.7 cm)	108 in or 168 in (274.3 cm or 426.7 cm)	168 in or 228 in (426.7 cm or 579.1 cm)	180 in or 240 in (457.2 cm or 609.6 cm)
Yes	Yes	Yes	Yes	Standard
14 in and 66 in (35.6 cm and 167.6 cm)	5 in or 65 in (12.7 cm or 165.1 cm)	5 in and 65 in (12.7 and 165.1 cm)	65 in and 125 in (165.1 cm and 317.5 cm)	60 in or 125 in (152.4 cm or 317.5 cm)
Curved	Curved	Curved	Curved	Curved
Right or left	Right or left	Right or left	Right or left	Right or left
55 in and 68 in (139.7 cm and 172.7 cm)	62 in-76 in (157.5 cm-193 cm)	64 in-78 in (162.6 cm-198.1 cm)	72 in-86 in (1882.9 cm-218.4 cm)	74 in-103 in (188 cm-261.6 cm)
Yes	Yes	Yes	Yes	Yes
No	No	Yes	Yes	Yes
No	No	No	No	No
No	No	No	No	No
Yes	Yes	Yes	Yes	Yes
TEC Plus system with SmartTEC	TEC Plus system with SmartTEC	TEC Plus system with SmartTEC	TEC Plus system with SmartTEC	TEC Plus system
Yes	Yes	Yes	Yes	Yes
No	No	No	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
114 gal (431.5 L)	152 gal (575.4 L)	152 gal (575.4 L)	152 gal (575.4 L)	210 gal (794.9 L)
Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100	Vermeer HyPower 68 or Vermeer HyPower 100
2500 psi (172.4 bar)	2500 psi (172.4 bar)	2500 psi (172.4 bar)	2500 psi (172.4 bar)	2500 psi (172.4 bar)
25.1 gpm (95 L/min)	27.9 gpm (105.6 L/min)	27.9 gpm (105.6 L/min)	27.9 gpm (105.6 L/min)	27.9 gpm (105.6 L/min)
Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)	Pressure- and flow-compensated (load-sensing)

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