

# FLUID MANAGEMENT SYSTEMS

 **Ditch Witch**<sup>®</sup>



**TRENCHLESS**

# FLUID MANAGEMENT SYSTEMS

1 Tank's sloping bottom ensures that all drilling fluid flows through the pump and is thoroughly mixed.

2 Depending on the model, mixing tanks range from 200-gallon (757-L) to 1000-gallon (3785-L) capacities, supporting the requirements of the largest to the smallest directional drills.

3 Most models are equipped with a built-in bag ripper to accelerate mixing cycles and increase productivity.

4 Venturi wet hopper has steeper sides that allow fast, thorough fluid mixing.

5 Simplicity of design and multiple configuration options accommodate a variety of setups.

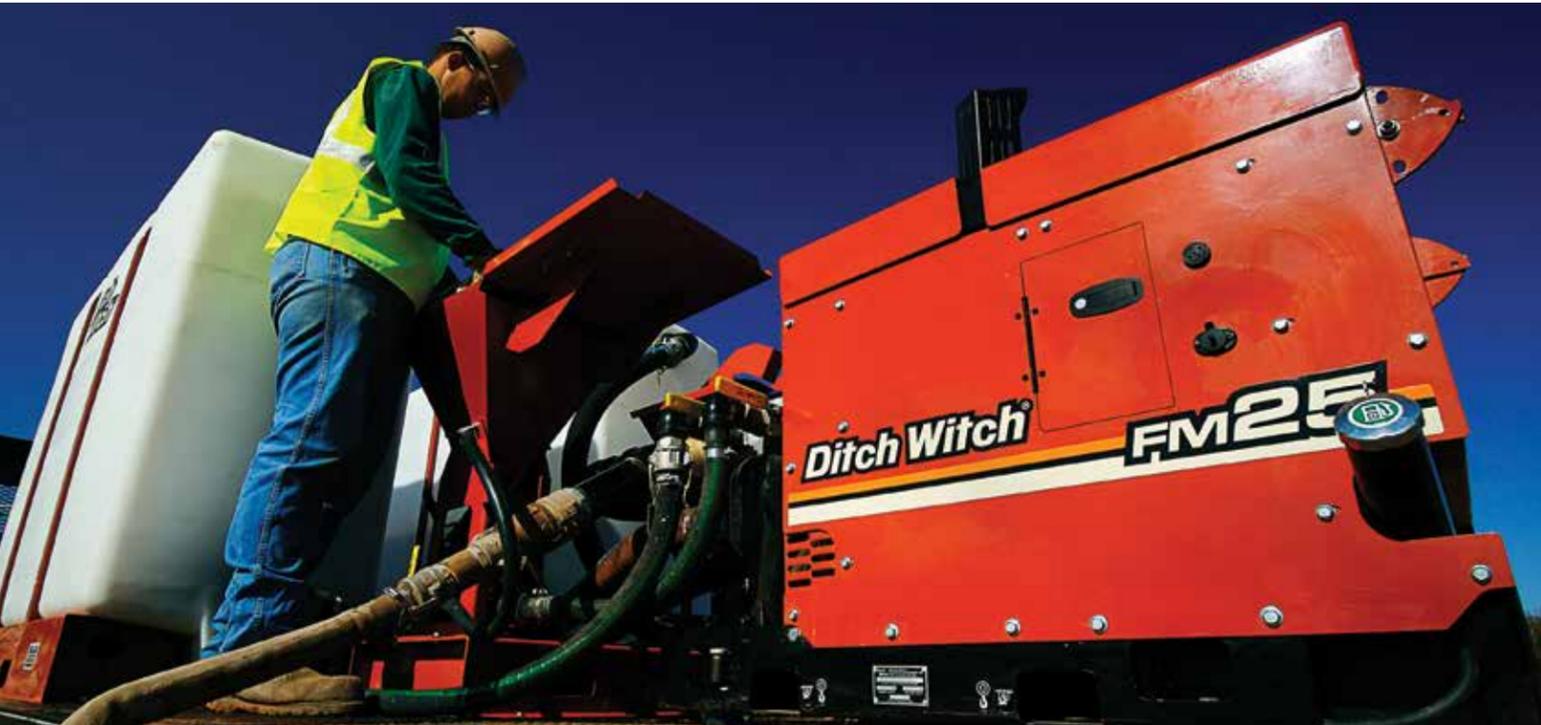


With our innovative line of **Fluid Management Systems**, the Ditch Witch® organization has set the standards for efficiency in the horizontal directional drilling industry. More important, they're designed to meet your standards of productivity through greater drilling fluid flow and faster yield times.

WE'RE IN THIS TOGETHER.



# FM25 FLUID MANAGEMENT SYSTEM



- Simple design and multiple configuration options accommodate a variety of setups and make transport easy.
- 25-hp (18.7-kW) Kubota® diesel engine provides the power to support even the largest Ditch Witch® directional drilling systems.
- Choice of one or two hoppers, either a 500-gallon (1893-L) or 1,000-gallon (3785-L) tank, and a fuel fill on both sides, allows flexible setup configurations on a trailer or truck.
- Optional accessories, including an anti-siphon tank fill and an umbrella kit, enhance the FM25's versatility.

	U.S.	METRIC
<b>DIMENSIONS</b>		
<b>MIXING SYSTEM W/TWO 500-GALLON TANKS</b>		
Length	175 in	4.45 m
Width	92 in	2.34 m
Height		
Tank assembly w/out fill pipe	68 in	1.73 m
Tank assembly w/fill pipe	75 in	1.91 m
Weight, empty	2,350 lb	1070 kg
Weight, full of water	10,650 lb	4830 kg
<b>MIXING SYSTEM W/TWO 1,000-GALLON (NOMINAL) TANKS</b>		
Length	205 in	5.21 m
Width	96 in	2.44 m
Height		
Tank assembly w/out fill pipe	72 in	1.83 m
Tank assembly w/fill pipe	80 in	2.03 m
Weight, empty	3,450 lb	1570 kg
Weight, full of water	19,850 lb	9000 kg

	U.S.	METRIC
<b>FLUID/MIXING SYSTEM</b>		
Centrifugal pumps	2	
Suction port diameter	3 in	76 mm
Discharge port diameter	3 in	76 mm
Fluid pressure, max	50 psi	3.4 bar
Pump discharge rate, max (each pump)	300 gpm	1100 l/min
Flow rate to boring unit	0-200 gpm	0-750 l/min
Drilling fluid tank capacity (nominal, each tank)	500/1,000 gal	1893/3785 L
Solids addition rate w/metering plate	30 lb/min	14 kg/m
Solids addition rate w/out metering plate	75 lb/min	34 kg/m
Mixing hopper capacity (each hopper)	1 ft³	28 L
Typical tank mixing time	7-10 min	
<b>POWER</b>		
Engine	Kubota® D1105	
Fuel	Diesel	
Cooling medium	Water	
Injection	Indirect	
Aspiration	Natural	
Number of cylinders	3	
Displacement	68.5 in³	1.12 L
Bore	3.07 in	78 mm
Stroke	3.09 in	78.4 mm
Manufacturer's gross power rating (per SAE J1995)	25 hp	18 kW
Rated speed	3,000 rpm	
<b>FLUID CAPACITIES</b>		
Fuel tank	9.2 gal	35 L
Engine lubrication oil, including filter	4.2 qt	4 L

Specifications are general and subject to change without notice. If exact measurements are required, equipment should be weighed and measured. Due to selected options, delivered equipment may not necessarily match that shown.

# FM13V FLUID MANAGEMENT SYSTEM



- Flowmax centrifugal pump flows 200 gpm (757 l/min) of 42-viscosity drilling fluid; supports directional drilling systems of all sizes.
- One-piece mixing jet yields 8 bags/1,000 gallons (3785 L) in fewer than 8 minutes.
- System is designed to increase productivity through greater drilling fluid flow and faster yield times.
- Self-lubricating seal minimizes pump maintenance.

	U.S.	METRIC
<b>DIMENSIONS</b>		
<b>MIXING SYSTEM W/500-GALLON TANK</b>		
Length	150 in	3810 mm
Width	31 in	787 mm
Height		
Tank assembly w/out fill pipe	68 in	1727 mm
Tank assembly w/fill pipe	75 in	1905 mm
Mixing unit	450 lb	205 kg
Weight, empty	550 lb	250 kg
Weight, full of water	5,160 lb	2345 kg
<b>MIXING SYSTEM W/1,000-GALLON TANK</b>		
Length	180 in	4572 mm
Width	42 in	1067 mm
Height		
Tank assembly w/out fill pipe	72 in	1829 mm
Tank assembly w/fill pipe	80 in	2032 mm
Mixing unit	450 lb	205 kg
Weight, empty	1,050 lb	477 kg
Weight, full of water	9,840 lb	4473 kg

	U.S.	METRIC
<b>FLUID/MIXING SYSTEM</b>		
Centrifugal pumps		
Suction port diameter	3 in	76 mm
Discharge port diameter	3 in	76 mm
Fluid pressure, max	50 psi	3.4 bar
Pump discharge rate, water, max	270 gpm	1020 l/min
Flow rate to boring unit, max	220 gpm	830 l/min
Drilling fluid tank capacity	500/1,000 gal	1893/3785 L
Solids addition rate, w/metering plate	30 lb/min	14 kg/m
Solids addition rate, w/out metering plate	75 lb/min	34 kg/m
Mixing hopper capacity (each hopper)	1 ft³	28 L
Typical tank mixing time	7-10 min	
<b>POWER</b>		
Engine	Honda® GX390	
Fuel	Gasoline	
Cooling medium	Air	
Number of cylinders	1	
Displacement	23.7 in³	0.39 L
Bore	3.46 in	88 mm
Stroke	2.52 in	64 mm
Manufacturer's gross power rating	11.7 hp	8.7 kW
Rated speed	3,600 rpm	
Emissions compliance	EPA Phase 2	EU Stage II
<b>FLUID CAPACITIES</b>		
Fuel tank	6 gal	23 L
Engine lubrication oil, including filter	1.2 qt	1.1 L

Specifications are general and subject to change without notice. If exact measurements are required, equipment should be weighed and measured. Due to selected options, delivered equipment may not necessarily match that shown.

## FM5 FLUID MANAGEMENT SYSTEM



- Venturi wet hopper allows excellent mixing of fluids, with steeper sides that speed up mixing cycles.
- Narrow tank can be positioned side-by-side with a drill unit on a trailer, making the equipment easy to transport to the jobsite.

- Tank's sloping bottom ensures that all drilling fluid flows through the pump and is thoroughly mixed.
- Flexible pump mounting offers a variety of setup configurations; pump delivers 160-gpm (606-l/min) flow.

	U.S.	METRIC
<b>DIMENSIONS</b>		
Length	123 in	3.1 m
Width	25.6 in	650 mm
Height	53 in	1.3 m
Weight, empty	660 lb	299 kg
Weight, full of water	3,164 lb	1435 kg
<b>FLUID/MIXING SYSTEM</b>		
Centrifugal pumps		
Suction port diameter	2 in	51 mm
Discharge port diameter	2 in	51 mm
Fluid pressure, max	40 psi	2.8 bar
Pump discharge rate, water, max	160 gpm	606 l/min
Drilling fluid tank capacity	300 gal	1136 L
Solids addition rate	50 lb/min	2345 kg/min
Mixing hopper capacity	1 ft <sup>3</sup>	28 L

	U.S.	METRIC
<b>POWER</b>		
Engine	Honda® GX160	
Fuel	Gasoline	
Cooling medium	Air	
Number of cylinders	1	
Displacement	9.9 in <sup>3</sup>	.16 L
Bore	2.7 in	69 mm
Stroke	1.8 in	46 mm
Manufacturer's net power rating	4.8 hp	3.6 kW
Rated speed	3,600 rpm	
Emissions compliance	EPA Phase 2	EU Stage II
<b>FLUID CAPACITIES</b>		
Fuel tank	0.95 gal	3.6 L
Engine lubrication oil, including filter	0.63 qt	0.6 L

Specifications are general and subject to change without notice. If exact measurements are required, equipment should be weighed and measured. Due to selected options, delivered equipment may not necessarily match that shown.

## FT5 FLUID MANAGEMENT SYSTEM



- Designed to support smaller HDD systems, the compact FT5 makes short work of the mixing process.
- Venturi wet hopper allows excellent mixing of fluids, with steeper sides that speed up mixing cycles.

- Narrow tank can be positioned side-by-side with a drill unit on a trailer, making the equipment easy to transport to the jobsite.
- 200-gallon (757-L) capacity is the right size for getting the job done and transporting on small truck or trailer configurations.

	U.S.	METRIC
<b>DIMENSIONS</b>		
Length	73 in	1.85 m
Length, w/hose and valve	84 in	2.13 m
Width	53.5 in	813 mm
Height	32 in	1.36 m
Weight, empty	402 lb	182 kg
Weight, full of water	2,071 lb	939 kg
<b>FLUID/MIXING SYSTEM</b>		
Drilling fluid/mixing tank capacity	200 gal	757 L
Flow rate to drilling unit, max	18 gpm	68 l/min

	U.S.	METRIC
<b>POWER</b>		
Engine	Honda® GX160	
Fuel	Gasoline	
Cooling medium	Air	
Number of cylinders	1	
Displacement	9.9 in <sup>3</sup>	.16 L
Bore	2.7 in	69 mm
Stroke	1.8 in	46 mm
Gross power @ 3,600 rpm	5.4 hp	4 kW
<b>FLUID CAPACITIES</b>		
Fuel tank	1 gal	3.6 L
Engine oil	0.6 qt	0.6 L

Specifications are general and subject to change without notice. If exact measurements are required, equipment should be weighed and measured. Due to selected options, delivered equipment may not necessarily match that shown.



## THE DITCH WITCH® FLUID MANAGEMENT SYSTEM INCLUDES:



### PARTS AND SERVICE

Your Ditch Witch dealer is your source for factory-trained service and the genuine Ditch Witch parts you need for your vacuum excavation system, including lawn sweepers, suction tools, extensions, filters, spray nozzles, and other accessories that enable you to complete a wide variety of tasks.



### ELECTRONICS

Before you dig, you must know what's below. After you call 811 to locate buried telephone, CATV, power, gas, or water lines, there's a Ditch Witch locating system to help you verify the locates. From our lightweight, hand-held units to the exceptionally versatile and accurate UtiliGuard™ locating system, Ditch Witch locating systems help improve your efficiency and, more importantly, your safety.



### DEALER SERVICE AND SUPPORT

Whether it's new or used equipment, parts, service, financing, or all of the above, your Ditch Witch dealer is prepared to offer you the best of everything. Ditch Witch dealers are chosen for their commitment to the underground construction profession, and they are thoroughly trained to represent the highest standards in the industry.

