



# AT40

ALL TERRAIN DIRECTIONAL DRILL



Ditch Witch®



The fully enclosed cab is rated best in the industry based on customer input, and designed specifically with an HDD operator in mind.

Swing-out, lift-off service doors provide easy access for machine maintenance and serviceability.

165-gross-hp (123 kW), Tier 4, EU Stage V Cummins® diesel engine provides 18 percent more horsepower than competitive models in its class.

1

6

5

AT40  
ALL TERRAIN

# AT40

Optimized for industry-leading performance and productivity in hard rock conditions, the Ditch Witch® AT40 All Terrain directional drill is designed with an advanced version of the proven Ditch Witch All Terrain drilling system. The updated, two-pipe system offers boosted power to the bit. Patented design enhancements increase cycle times, improve durability and allow for more adaptable steering.

The system also features a new housing enhanced to minimize maintenance, improve reliability and increase its useful life. The drill leverages the same next-generation features of the JT40 model for maximum drilling performance, operator comfort and control.

**2** The operator's platform is equipped with telescoping capability for optimal drilling view.

**3** Newly advanced Ditch Witch® All Terrain, two-pipe drilling system for industry-leading power to the bit. Enhanced system boosts power and productivity in hard rock conditions.

**4** The AT40 All Terrain delivers 40,000 pounds (178 kN) of thrust and pullback.

# AT40

1

Best-in-class visibility of drilling operations with a clear view to critical vision points, including ground entrance, wrenches, shuttle-retract location, and rear connection.

2

The AT40 All Terrain's Radial Operator Control (ROC) is a multifunctional device that delivers improved operator efficiency.

3

Industry-leading, telescoping cab places the operator at a precise angle, providing an enhanced view of drilling operations.

4

The ergonomic station features a heated seat with adjustable suspension and increased legroom to keep drillers comfortable during long hours on a job.

5

Fully enclosed cab offers premium operator comfort and complete climate control.

A real-time position indicator provides operators insight to the carriage location on every drill pipe installation.

6

Equipped with two seven-inch LCD screens for better visibility into all machine functions and diagnostics.

7



# AT40

Patented All Terrain connection provides a more reliable connection for optimized performance and steering.

1

Optimized system utilizes 15-ft (4.57 m) length drill pipe, allowing 360-ft (109.73 m) of drill pipe onboard for reduced cycle times.

2

Innovative two-speed, rotational drive system, produces 2,000 ft·lb (2710 N·m) of inner torque for greater efficiency and uptime.

3

4

Patented slide cartridge provides a backup for the carriage rollers if they reach the end of their useful life during a bore, allowing operators to complete a job without stopping to replace failed rollers, for increased uptime.

5

Unique add-a-pipe design allows operators to manually insert additional sticks of drill pipe when pipe runs out, improving productivity.



# AT40 ALL TERRAIN DIRECTIONAL DRILL SPECIFICATIONS

## OPERATION

	U.S.	METRIC
Spindle speed, max	225 rpm	
Spindle speed, max (AT inner spindle)	280 rpm	
Spindle torque, max	5,500 ft·lb	7460 N·m
Spindle torque, max (AT inner spindle)	2,000 ft·lb	2710 N·m
Carriage thrust travel speed	180 fpm	55 m/min
Carriage pullback travel speed	180 fpm	55 m/min
Thrust force	40,000 lb	178 kN
Pullback force	40,000 lb	178 kN
Backreamer diameter	Soil dependent	
Ground travel speed		
Forward/reverse	3 mph	4.8 km/h

## POWER

Engine	Cummins® QSB4.5	
Fuel	Diesel	
Manufacturer's gross power rating	165 hp	123 kW
Emissions compliance	EPA Tier 4	EU Stage V
Cooling medium	Liquid	
Injection	Direct	
Aspiration	Turbocharged & charge air cooled	
Number of cylinders	4	
Displacement	275 in³	4.5 L
Bore	4.21 in	107 mm
Stroke	4.88 in	124 mm
Rated speed	2,200 rpm	

## DIMENSIONS

Length, mobilizing	295 in	7.50 m
Length, trailering	290 in	7.37 m
Width, w/open station	89 in	2.26 m
Width, w/cab, extended max	108 in	2.74 m
Height, w/cab, mobilizing	114 in	2.90 m
Operating mass, no pipe	21,600 lb	9800 kg
Entry angle	20-29°	
Angle of approach	17°	
Angle of departure	17°	

## WEIGHT CONFIGURATION

Cab option	690 lb	310 kg
120 GPM fluid pump option	370 lb	168 kg

## DRILLING FLUID SYSTEM (70 GPM OPTION)

Pressure, max	1,000 psi	69 bar
Flow, max	70 gpm	265 l/min

## DRILLING FLUID SYSTEM (120 GPM OPTION)

Pressure, max	1,000 psi	69 bar
Flow, max	120 gpm	454 l/min

## FLUID CAPACITIES

	U.S.	METRIC
Hydraulic reservoir	17 gal	64 L
Fuel tank	56 gal	212 L

## ALL TERRAIN PIPE

Length of drill pipe, nominal	180 in	4.57 m
Diameter of drill pipe, tool joint end	3.75 in	95 mm
Diameter of drill pipe	3.07 in	78 mm
Bend radius, min	170 ft	52 m
Weight of drill pipe	231 lb	105 kg
Weight of drill pipe and large box (24 pipe)	6,350 lb	2880 kg
Weight of drill pipe and small box (12 pipe)	3,450 lb	1560 kg

## POWER PIPE® HD

Length of drill pipe, nominal	180 in	4.57 m
Diameter of drill pipe, tool joint end	3.13 in	80 mm
Diameter of drill pipe	2.81 in	71 mm
Bend radius, min	146 ft	45 m
Weight of drill pipe, lined	150 lb	68 kg
Weight of drill pipe and large box (40 pipe)	7,140 lb	3240 kg
Weight of drill pipe and small box (20 pipe)	3,797 lb	1720 kg

## BATTERY (2 USED)

SAE reserve capacity rating	195 min
SAE cold crank rating @ 0°F (-18°C)	950 amps

## POWER PIPE FORGED HD

Length	180 in	4.57 m
Diameter of tool joint	3.13 in	80 mm
Diameter of drill pipe	2.75 in	70 mm
Bend radius, min	143 ft	43.6 m
Weight of drill pipe	145 lb	66 kg
Weight of drill pipe and large box (40 pipe)	6,940 lb	3148 kg
Weight of drill pipe and small box (20 pipe)	3,697 lb	1677 kg

## POWER PIPE FORGED HDX

Length	180 in	4.57 m
Diameter of tool joint	3.13 in	80 mm
Diameter of drill pipe	2.75 in	70 mm
Bend radius, min	143 ft	43.6 m
Weight of drill pipe	145 lb	66 kg
Weight of drill pipe and large box (40 pipe)	6,940 lb	3148 kg
Weight of drill pipe and small box (20 pipe)	3,697 lb	1677 kg

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® HDD SYSTEM INCLUDES:



### HDD TOOLING

For your directional drill, we offer a complete line of genuine Ditch Witch HDD tooling, including drill bits, backreamers, drill pipe and beacon housings.



### MUD MIXERS

Ditch Witch fluid-management systems include the innovative FM13X, a fluid-mixing system that features a pump that lubricates itself during mixing and works so efficiently that it delivers 20 percent more fluid than other models.



### VACUUM EXCAVATORS

Ditch Witch vacuum excavators are designed for a tremendous range of soft-excitation and cleanup tasks, including all manner of non-hazardous spills in and around the directional drilling jobsite. They're the most powerful and most efficient vac systems on the market.

