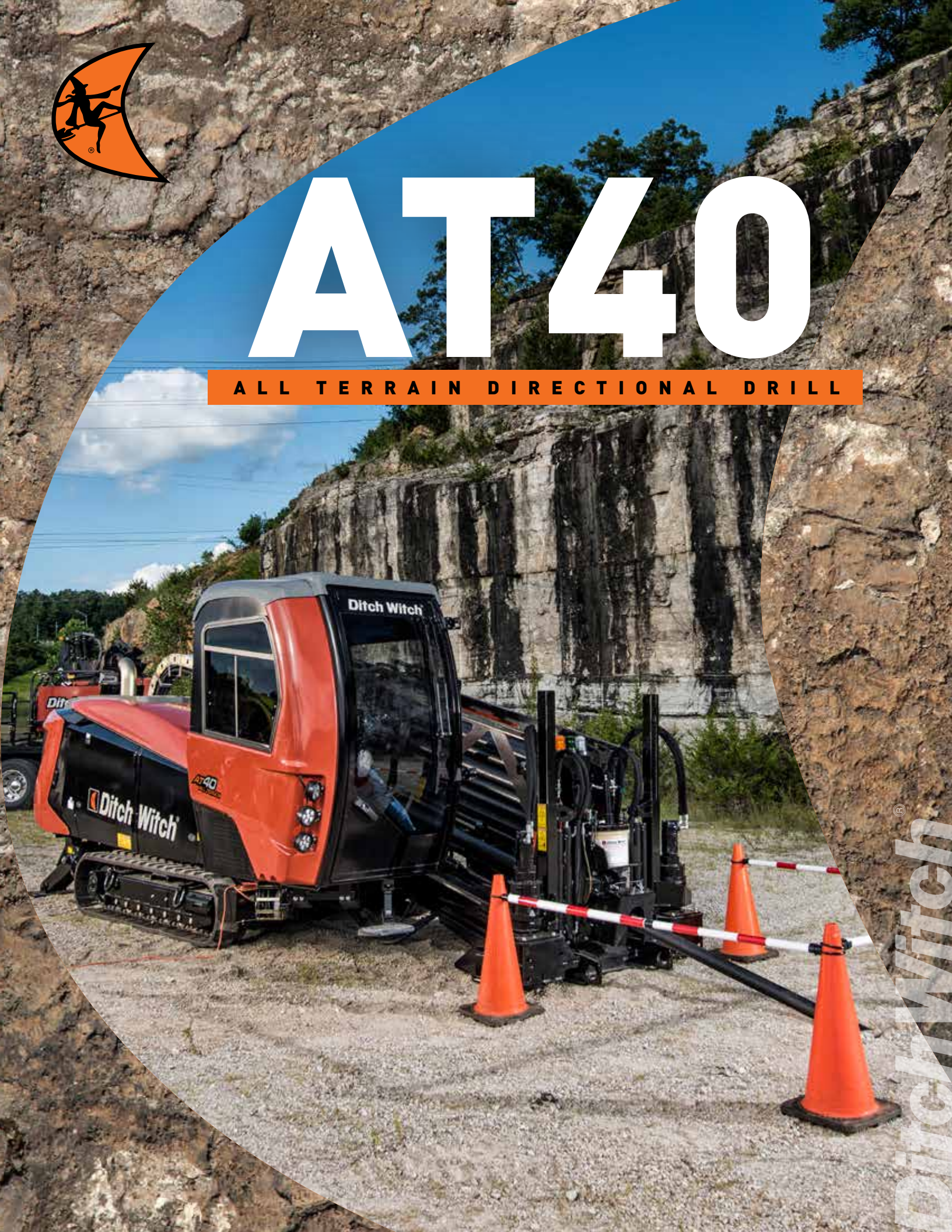
# AT40

## ALL TERRAIN DIRECTIONAL DRILL




Ditch Witch®

# 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.

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

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.

5 165-gross-hp (123 kW), Tier 4, EU Stage V Cummins® diesel engine provides 18 percent more horsepower than competitive models in its class.

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

# 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.

The AT40 All Terrain's Radial Operator Control (ROC) is a multifunctional device that delivers improved operator efficiency. 2

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 complaince | 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, mobiling | 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, mobiling | 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-excavation 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.

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LFDWPROD1092201