



# AT120

ALL TERRAIN DIRECTIONAL DRILL



Ditch Witch®

At 80 DbA, the AT120 reduces jobsite noise for a more comfortable and productive worksite.

1

The new large displacement fluid pump with an increased fluid flow brings the GPMs needed to boost uptime.

2

The new engine compartment and compartment panel design free up more room around critical components, making maintenance easier and more efficient.

3

7

Integrated wireline platform gives the working hand greater access when connecting wire.

6

Independent stabilizers in the rear of the machine provide even more stability across uneven terrain.

**Ditch Witch**

274



# AT120

Loaded with 120,000 lbs (533.8 kN) of pullback/thrust and 15,500 ft·lbs (21015 N·m) of rotational torque, the AT120 not only opens you up to new types of jobs but moves through long bores and large diameter installs with eye-popping power. All Terrain technology and a 280-hp (209 kW) Stage V Cummins® engine reduce environmental impact without losing any power. 3,000 ft·lbs (4067 N·m) of inner rotational torque—a 50% increase over its predecessor—allows the AT120 additional power to drill through the toughest terrain around.

The 20-foot drill pipe helps your machine limit makeup/breakout and maximize drilling time.

4



I-Beam anchor plate design allows you to stake down in varying soils, increasing stability across demanding jobs and tough terrain.

5



Wireless Remote

Wireless remote allows you to operate critical machine functions from outside the cab. Traverse your drill while controlling the ground drive, hydraulic-powered stabilizers and more.



3

Virtually Assisted Makeup and Breakout (VAM) makes it easier for you to makeup and breakout tool joints without the need for floats and sensors.

4

Open top, angled front wrenches allow you greater visibility of machine functions during operation.

# AT120

## OPERATOR'S STATION

Best-in-class, fully-enclosed cab features premium climate-controlled heat and air, heated suspension seats, added legroom and two LED touchscreen displays.

Real-time carriage-position indicator provides you with the exact carriage position for increased productivity and intuitive operation.

1

Standard multimode joysticks give you the ability to select your preferred style of operating controls with the push of a button.

2



# ROCKMASTER<sup>®</sup>

## ALL TERRAIN HOUSING

Engineered to deliver the most impact in the toughest conditions, RockMaster Housing is the go-to component for jobsite challenges. The RockMaster is the only housing designed to provide superior performance with All Terrain technology and, as with all Ditch Witch equipment, it's manufactured with the quality you expect, so you can take on every job with confidence. And a whole lot of power.

1

Choose between RockMaster bits with 3.5" API or 4.5" API threads.

When maintenance is needed, the bearing pack can be removed and replaced in the field keeping downtime to a minimum.

2

5

The laser-clad bearing hub and patented bearing pack minimize maintenance requirements and allow for longer run times.



The image shows a close-up of a metal tailpiece, likely part of a drilling or mining tool. It features a single-pin lid retention system with five points of contact and optional screws. The tailpiece has integrated teeth and optional nozzles to aid in breaking and moving cuttings during pullback. The background is a dark, textured surface, possibly a rock or soil.

3

New single-pin lid retention system with 5 points of contact and optional screws offer proven protection of electronics.

4

The tailpiece features integrated teeth and optional nozzles to aid in breaking and moving cuttings during pullback, decreasing tailpiece wear from abrasive cuttings.

# AT120 ALL TERRAIN DIRECTIONAL DRILL

## OPERATION

|                                        | U.S.           | METRIC    |
|----------------------------------------|----------------|-----------|
| Spindle speed, max                     | 200 rpm        |           |
| Spindle speed (AT inner spindle), max  | 250 rpm        |           |
| Spindle torque, max                    | 15,500 ft-lb   | 21015 N-m |
| Spindle torque (AT inner spindle), max | 3,000 ft-lb    | 4067 N-m  |
| Carriage thrust travel speed           | 210 fpm        | 64 m/min  |
| Carriage pullback travel speed         | 210 fpm        | 64 m/min  |
| Thrust force                           | 120,000 lb     | 533.8 kN  |
| Pullback force                         | 120,000 lb     | 533.8 kN  |
| Bore diameter                          | 6.5 in         | 165 mm    |
| Backreamer diameter                    | Soil dependent |           |
| Ground travel speed                    |                |           |
| Forward/reverse                        | 2.8 mph        | 5 km/h    |

## POWER

|                                   |                                  |            |
|-----------------------------------|----------------------------------|------------|
| Engine                            | Cummins QSB6.7                   |            |
| Fuel                              | Diesel                           |            |
| Cooling medium                    | Liquid                           |            |
| Injection                         | Direct                           |            |
| Aspiration                        | Turbocharged & charge air cooled |            |
| Number of cylinders               | 6                                |            |
| Displacement                      | 409 in³                          | 6.7 L      |
| Bore                              | 4.21 in                          | 107 mm     |
| Stroke                            | 4.88 in                          | 124 mm     |
| Manufacturer's gross power rating | 280 hp                           | 209 kW     |
| Rated speed                       | 2,200 rpm                        |            |
| Emissions compliance              | EPA Tier 4F                      | EU Stage V |

## DIMENSIONS

|                                    |           |          |
|------------------------------------|-----------|----------|
| Length                             | 453 in    | 11.5 m   |
| Width                              | 100.4 in  | 2.55 m   |
| Height                             | 121.5 in  | 3.09 m   |
| Weight w/o pipe boxes or anchors   | 40,260 lb | 18262 kg |
| Weight w/ 1 pipe box and anchors   | 46,630 lb | 21151 kg |
| Weight w/ 2 pipe boxes and anchors | 50,940 lb | 23106 kg |
| Weight of hydraulic anchors        | 2,060 lb  | 934 kg   |
| Entry angle                        | 12-18°    |          |
| Angle of approach                  | 17°       |          |
| Angle of departure                 | 17°       |          |

## DRILLING FLUID SYSTEM

|               | U.S.      | METRIC     |
|---------------|-----------|------------|
| Pressure, max | 1,100 psi | 76 bar     |
| Flow, max     | 285 gpm   | 1079 L/min |

## FLUID CAPACITIES

|                                  |          |        |
|----------------------------------|----------|--------|
| DEF tank                         | 12.2 gal | 46.3 L |
| Hydraulic reservoir              | 39 gal   | 148 L  |
| Fuel tank                        | 120 gal  | 454 L  |
| Engine lubrication oil, w/filter | 18.5 qt  | 17.5 L |
| Antifreeze tank                  | 20 gal   | 76 L   |

## POWER PIPE® HD (3.36DS)

|                                             |          |          |
|---------------------------------------------|----------|----------|
| Length of drill pipe                        | 240 in   | 6.09 m   |
| Diameter of drill pipe, tool joint end      | 4.38 in  | 111.2 mm |
| Diameter of drill pipe                      | 3.95 in  | 100 mm   |
| Bend radius, min                            | 205 ft   | 62.5 m   |
| Weight of drill pipe, lined                 | 296 lb   | 134.2 kg |
| Weight of drill pipe and large box (9 pipe) | 3,445 lb | 4896 kg  |

## ALL TERRAIN PIPE (3.36DS)

|                                             |          |          |
|---------------------------------------------|----------|----------|
| Length of drill pipe                        | 240 in   | 6.09 m   |
| Diameter of drill pipe, tool joint end      | 4.38 in  | 111.2 mm |
| Diameter of drill pipe                      | 3.95 in  | 100 mm   |
| Bend radius, min                            | 205 ft   | 62.5 m   |
| Weight of drill pipe                        | 395 lb   | 179.1 kg |
| Weight of drill pipe and large box (9 pipe) | 4,310 lb | 1955 kg  |

## BATTERY (2 USED)

|                                     |          |
|-------------------------------------|----------|
| SAE reserve capacity rating         | 175 min  |
| SAE cold crank rating @ 0°F (-18°C) | 950 amps |

## NOISE LEVEL

|                                      |               |
|--------------------------------------|---------------|
| Operator sound pressure per ISO 6394 | < or = 80 dBA |
|--------------------------------------|---------------|

## VIBRATION LEVEL

Average vibration transmitted to the operator's hand and whole body during normal operation does not exceed 2.5 and 0.5 m/sec² respectively.

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.

