



DITCH WITCH JT8020 MACH 1, JT4020 MACH 1, JT2720 MACH 1

DIRECTIONAL DRILLS



Ditch Witch
GROUNDBREAKING™

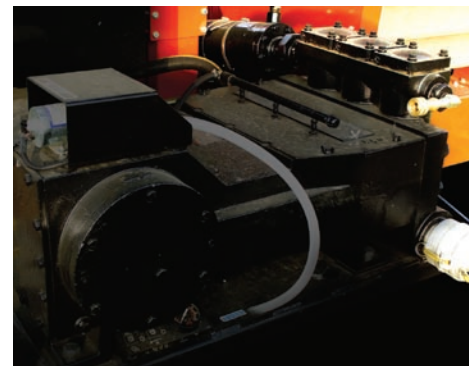
DRILL LIKE YOU MEAN IT. **DITCH WITCH.**





DITCH WITCH JT8020 MACH 1

Bring in the heavy artillery. The JT8020 Mach 1 features a six-cylinder diesel engine generating 261 hp (195 kW), giving you all the power and torque necessary to provide maximum fluid flow and downhole productivity. But every experienced operator knows that drilling is not only about power, which is why the JT8020 Mach 1 also includes an advanced electronic system to provide cruise control, automatic pipe loading, and on-board diagnostics to simplify overall operation.



DETAILS

Integrated electronic system with tracker control enables the tracker operator to disable power to the drilling unit's thrust and rotation.

Single lever thrust and rotation control with integrated cruise control for high performance drilling and backreaming.

Processor controlled hydraulic pipeloader and pipe thread lubricating system help improve efficiency and reduce pipe wear.

Optional enclosed climate-controlled cab for year-round operator comfort.

Optional anchor system allows the operator to anchor the unit and use full machine power in tough soil conditions.

Rubber tracks for high floatation and working on paved surfaces.

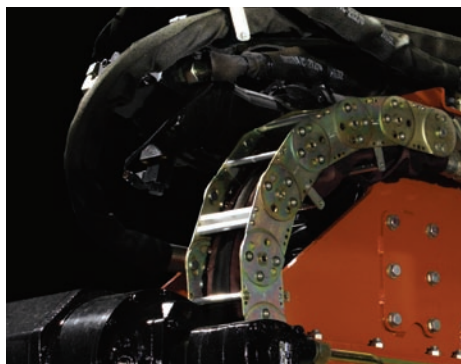
KEY FEATURES

Optional on-board crane rotates 360 degrees, and can be used for anchoring the drilling unit, changing pipe boxes, lifting and moving downhole tools, and other routine lifting needs without requiring additional equipment on jobsite.

Expanded-capacity 200+ gpm (757 L/min) drilling fluid pump, drilling fluid lines and swivel are designed to enhance downhole performance.

DITCH WITCH JT4020 MACH 1

Equal part brains and brawn, the compact JT4020 Mach 1 can't wait to tackle the big drilling jobs. Utilizing specialized, 15-ft (4.5 m) Ditch Witch® drill pipe, the rubber-tracked JT4020 Mach 1 has the power and stability to pull multiple conduits up to 1000 feet (305 m) in a single pass—assisted by an exclusive cruise control feature that maintains thrust and rotation settings. You expect more from Ditch Witch equipment—more innovation, more power—and the JT4020 Mach 1 delivers.



KEY FEATURES

Enough engine horsepower to drive all functions simultaneously.

Hydraulic, four-point anchor system enables the unit to be firmly secured in all types of ground conditions.

DETAILS

Touch-sensitive, variable-speed, electric-over-hydraulic controls minimize operator effort; thrust/pullback and rotation are controlled by a single lever.

Groundbreaking™ pipeloader system features hydraulic pipe grippers, single pipe loading, shuttle stops, and automated thread lubrication.

Two-speed carriage allows faster travel during makeup and breakout; exceptional low-speed drilling control plus higher speeds for rapidly adding or removing drill pipe.

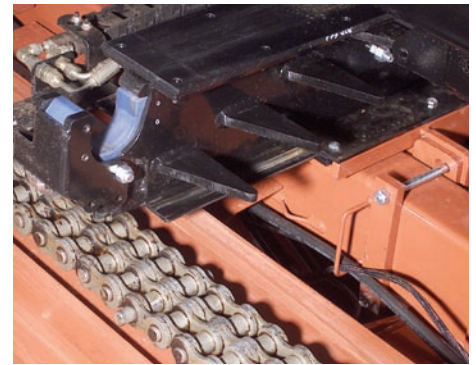
Cruise control increases overall productivity by providing a hands-free way to maintain thrust and rotation settings.

Rubber tracks minimize damage to pavement, curbs, lawns, and landscaping.

Fluid Miser® drill pipe uses less drilling fluid overall which means less jobsite mess.

DITCH WITCH JT2720 MACH 1

Advanced electronic technology, automated pipeloading system, enhanced power—string these together and you have the JT2720 Mach 1, an outstanding HDD system that lets you consistently drill and backream with extraordinary precision. Mach 1 technology, as the term implies, keeps the job moving along at a rapid clip, controlling the ground drive, pipeloader and all drilling functions, monitoring and troubleshooting the system—and getting you to the next jobsite at warp speed.



DETAILS

Logically placed instrumentation, allowing operator to devote more attention to drilling.

Heavy-duty vise breakout system gives the operator a clear view of the drill pipe during makeup and breakout; radius cut wrench jaws provide a full, secure grip on the pipe.

Electronic tracker control is integrated into the JT2720 Mach 1, enabling the tracker operator to easily disable power to the drilling unit's thrust and rotation.

Hydraulic, four-point anchor system secures the unit in hard or loose soil, uneven terrain, and all types of ground conditions.

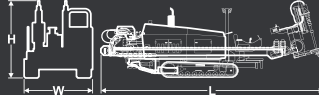
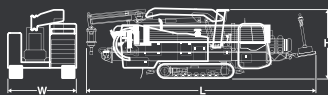
Disturbance to pavement, curbs, lawns, and landscaping is minimized by the unit's turf-friendly rubber tracks.

Dual thrust drive motors provide exceptional low-speed drilling control and higher speeds necessary for rapid changing of drill pipe.

KEY FEATURES

Industry-leading pipeloader system with hydraulic pipe grippers, single pipe loading, shuttle stops, and automated thread lubrication.

Tethered ground drive control gives the operator excellent visibility when positioning the unit for drilling; when loading or unloading, operator can change positions for maximum visibility.



SPECIFICATIONS

JT8020

JT4020

JT2720

DIMENSIONS

OVERALL MACHINE LENGTH*
OVERALL MACHINE WIDTH*
OVERALL MACHINE HEIGHT*
DRILLING UNIT OPERATING MASS*
ENTRY ANGLE*
ANGLE OF APPROACH
ANGLE OF DEPARTURE

U.S.	METRIC
348 IN	8.84 M
101 IN	2.57 M
110 IN	2.79 M
43,900 LB	19 900 KG
10-15°	10-15°
13°	13°
17°	17°

U.S.	METRIC
313 IN	7.95 M
87 IN	2.21 M
96 IN	2.44 M
27,500 LB	12 500 KG
10-16°	10-16°
17°	17°
17°	17°

U.S.	METRIC
248 IN	6.30 M
81 IN	2.06 M
93 IN	2.36 M
20,900 LB	9480 KG
10-16°	10-16°
22°	22°
26°	26°

POWER PIPE

LENGTH OF DRILL PIPE* (NOMINAL)
DIAMETER OF DRILL PIPE TOOL JOINT END*
DIAMETER OF DRILL PIPE*
MIN. BEND RADIUS
WEIGHT OF DRILL PIPE*
WEIGHT OF DRILL PIPE & BOX
(JT8020 12 PIPE, JT4020 32 PIPE,
JT2720 50 PIPE)
WEIGHT OF DRILL PIPE & EXTRA BOX
(JT8020 12 PIPE, JT4020 16 PIPE,
JT2720 25 PIPE)

177 IN	4.50 M
4.00 IN	102 MM
3.62 IN	92 MM
230 FT	70 M
229 LB	104 KG
3760 LB	1710 KG
3760 LB	1710 KG

177 IN	4.50 M
3.50 IN	89 MM
2.81 IN	71 MM
190 FT	58 M
158 LB	72 KG
6000 LB	2720 KG
3100 LB	1410 KG

118 IN	3.00 M
3.00 IN	76 MM
2.38 IN	60 MM
175 FT	53 M
90 LB	41 KG
5000 LB	2270 KG
2500 LB	1130 KG

OPERATION

MAXIMUM SPINDLE SPEED*
MAXIMUM SPINDLE TORQUE*
CARRIAGE THRUST TRAVEL SPEED*
CARRIAGE PULLBACK TRAVEL SPEED*
THRUST FORCE*
PULLBACK FORCE*
BORE DIAMETER
BACKREAM DIAMETER
GROUND TRAVEL SPEED* (FORWARD)
GROUND TRAVEL SPEED* (REVERSE)

210 RPM	210 RPM
10,000 FT•LB	13 600 N•M
185 FPM	56 M/MIN
185 FPM	56 M/MIN
70,000 LB	311 KN
80,000 LB	356 KN
6 IN	152 MM
SOIL DEPENDENT	
3.6 MPH	5.8 KM/H
3.6 MPH	5.8 KM/H

240 RPM	240 RPM
5000 FT•LB	6800 N•M
120 FPM	37 M/MIN
120 FPM	37 M/MIN
36,000 LB	160 KN
40,000 LB	178 KN
5 IN	127 MIN
SOIL DEPENDENT	
2.5 MPH	4 KM/H
2.5 MPH	4 KM/H

225 RPM	225 RPM
3200 FT•LB	4300 N•M
120 FPM	37 M/MIN
120 FPM	37 M/MIN
24,800 LB	110 KN
27,000 LB	120 KN
4.5 IN	114 MM
SOIL DEPENDENT	
1.7 MPH	2.7 KM/H
1.7 MPH	2.7 KM/H

POWER

ENGINE
FUEL
COOLING MEDIUM
INJECTION
ASPIRATION
NUMBER OF CYLINDERS
DISPLACEMENT
BORE
STROKE
MANUFACTURER'S GROSS POWER RATING**
RATED SPEED

DEUTZ BF6M1013 ECP	
DIESEL	
LIQUID	
DIRECT	
TURBOCHARGED & CHARGE AIR COOLED	
6	
436 IN³	7.15 L
4.25 IN	108 MM
5.1 IN	130 MM
261 HP	195 KW
2300 RPM	2300 RPM

JOHN DEERE 6068TF250	
DIESEL	
LIQUID	
DIRECT	
TURBOCHARGED & CHARGE AIR COOLED	
6	
414 IN³	6.8 L
4.19 IN	106 MM
5.00 IN	127 MM
185 HP	138 KW
2400 RPM	2400 RPM

JOHN DEERE 4045TF250	
DIESEL	
LIQUID	
DIRECT	
TURBOCHARGED & CHARGE AIR COOLED	
4	
276 IN³	4.5 L
4.19 IN	106 MM
5.00 IN	127 MM
125 HP	93 KW
2400 RPM	2400 RPM

DRILLING FLUID SYSTEM (ONBOARD)

MAXIMUM DRILLING FLUID PRESSURE*
MAXIMUM DRILLING FLUID FLOW*

1000 PSI	69 BAR
230 GPM	870 L/MIN

1300 PSI	90 BAR
120 GPM	450 L/MIN

1500 PSI	103 BAR
47 GPM	178 L/MIN

FLUID CAPACITIES

HYDRAULIC RESERVOIR
FUEL TANK

47 GAL	180 L
97 GAL	370 L

36 GAL	136 L
55 GAL	208 L

36 GAL	136 L
40 GAL	151 L

BATTERY (2 USED)

SAE RESERVE CAPACITY RATING
SAE COLD CRANK RATING
@ 0° F (-18° C)

450 MIN
1400 AMPS

195 MIN
950 AMPS

195 MIN
950 AMPS

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. CONTAINS PATENTED FEATURES. *CALLED OUT ACCORDING TO SAE J2022, **CALLED OUT ACCORDING TO SAE J1995



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GROUNDBREAKING™ EQUIPMENT FROM THE COMPANY THAT LAUNCHED THE INDUSTRY

COMPACT UTILITY | TRENCHERS | HDD | ELECTRONICS

CERTIFIED QUALITY
MANAGEMENT SYSTEM
ISO 9001:2000

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