

 **DITCH WITCH**
ELECTRONIC GUIDANCE EQUIPMENT



GUESSWORK IS OFFICIALLY DEAD. **DITCH WITCH.**





DITCH WITCH 752 TRACKER, 752 DISPLAY

Location, depth, roll angle, pitch, beacon temperature, battery status—the Ditch Witch® Electronics 752 Tracker and 752 Display see all and tell all. Lightweight and exceptionally durable, the 752 system works with Ditch Witch directional drilling beacons to provide the vital information you need for a successful HDD system installation.





KEY FEATURES

The 752 Tracker provides comprehensive guidance data for shallow bores, deep bores, or a combination of the two, using walkover beacon tracking, remote guidance and line locating capabilities.

The 752 Display can receive data up to 2000 feet (610 m), store up to ten jobs of 254 pipes each, and provide downloads to the TMS Plus system.

DETAILS

The 752 Tracker tracks bore depths of nine inches to 70 feet (229 mm to 21 m).

The water- and shock-resistant 752 Tracker is made with high-impact Xenoy® plastic.

The 752 Display provides left/right arrow indicators as well as a distance estimate from the tracker to the beacon to make tracking easier.

Improved beacon temperature alert; 752 Display shows beacon temperature in degrees and alerts the operator to help prevent overheating.

Downloaded jobs can be merged with bore plans for comparison.

The 752 remote display provides an accurate report of the status of the beacon.

The 752 Tracker's 12-segment clock face indicates the roll angle of the tool face; pitch angle is displayed using both up/down arrows and numerical percentages.

DITCH WITCH 88B, 86BH, 86BG, 86B BEACONS

Ditch Witch® beacons are as durable as they are dependable in providing HDD bore-path data. Rubber end caps, secure hardware battery contacts, and double springs on battery fittings provide better protection from shock and vibration, and enhance overall performance. Our most rugged tracking beacon, the 88B, is reinforced with a shock-resistant composite housing, larger antenna, and stiffer battery springs to minimize intermittent signals. Trust Ditch Witch beacons to always look out for your best interest.





KEY FEATURES

Self-contained electronic pitch sensors eliminate the need for mechanical/electrical parts, resulting in improved reliability and more stable operation for smooth pitch readings.

The 86BG measures and displays pitch in 0.1% increments.

Beacons are repairable.

DETAILS

Innovative design isolates beacons from high-pressure drilling fluids.

Electronic trackers present beacon data in a clear, easy-to-understand LCD readout.

When used with the 752 Tracker, the 86B can transmit from depths of 0.3 to 50 feet (0.1 to 15.2 m); for deeper boring, the 86BH provides readings to 70 feet (21.3 m) or more.*

All Ditch Witch directional beacons transmit roll angle, beacon temperature, beacon battery status, and pitch information as part of the HDD guidance system.

The Ditch Witch organization supports all of its products with superior-quality parts, service and training, all available from a worldwide network of Ditch Witch dealers.

*Units are calibrated to these tolerances under test field conditions. Actual field conditions may cause signal distortions or may contain noise sources which result in depth estimates that vary from these figures.

KEY FEATURES

Intuitive menus and online user guide make the software easy to use.

Can create multiple bore plans for the same job based on different units or paths.

DETAILS

Works with Ditch Witch guidance equipment to create a record of the installed bore path.

Left/right planning feature offers bore planning in directions other than a straight line.

Records the drill head position each time a new drill pipe is placed in the ground.

Compiles pipe information such as pipe number, depth estimate, drill head roll angle, pitch, directional beacon temperature and battery level, date and time.

Provides quick-reference information on bend radius for more efficient use of drill pipe and installed product.

Records the position of the actual product during backreaming.

Supports five languages—English, German, French, Spanish and Italian—and adapts to different international settings.

SOFTWARE KIT

One program CD with the following:

Installation/removal program

TMS Plus program

Online TMS Plus user's guide

SYSTEM REQUIREMENTS

TMS Plus should be loaded on a computer equipped with the following:

An Intel Pentium processor or equivalent, 200 MHz or faster running Microsoft Windows 98 or later, Windows ME, or Windows XP

16 megabytes or more of RAM

CD ROM drive

Pointing device (mouse or touchpad)

DITCH WITCH SYSTEMS APPROACH

Knowing where to drill, and where not to, is as important as using the right drill pipe or fluid mixture. That's why Ditch Witch® electronic guidance systems are integrated with every Ditch Witch horizontal directional drilling (HDD) unit. Always have been. Always will be. The system consists of a directional beacon that transmits a signal to the tracker, which then goes to the unit's operator's station, enabling the operator to track the location of the drill head and efficiently control the drilling unit's thrust and rotation.



KEY FEATURES

Components designed to work together efficiently.

Convenience of getting everything you need in one place.

Every piece of equipment manufactured to rigorous standards of quality and reliability.

DETAILS

Ditch Witch electronic guidance equipment is a key component of our total systems approach to horizontal directional drilling.

The Ditch Witch trenchless family also includes Subsite® locating tools, fluid management and vacuum excavation systems, pneumatic piercing tools and rod pushers, along with the entire Ditch Witch line of HDD equipment.

This system includes everything that the jobsite demands, from planning to cleanup and everything in between.

752 Tracker

DIMENSIONS	U.S.	METRIC
DEPTH	12.8 IN	325 MM
HEIGHT	31.5 IN	800 MM
WIDTH	6 IN	150 MM
OPERATING WEIGHT	5.5 LB	2.5 KG
OPERATING TEMPERATURE RANGE	-4° F TO 122° F	-20° C TO 50° C
ANTENNA CONFIGURATION	PEAK	
OPERATING MODES	29 K BEACON, 60 HZ POWER, 50 HZ POWER, 8 KHZ LINE	

MAXIMUM LOCATING RANGE*

BEACON LINE	U.S.	METRIC
BEACON	9.6 IN - 100 FT	20 MM - 30 M
LINE	0-10 FT	0-3 M

BEACON DEPTH ESTIMATE TOLERANCES*

	U.S.	METRIC
± 4 IN/10 CM @	10 FT	3 M
± 5% @	10-20 FT	3-6.1 M
± 10% @	BEYOND 20 FT	BEYOND 6.1 M

LINE LOCATION DEPTH ESTIMATE TOLERANCES*

ACTIVE MODE	U.S.	METRIC
± 3% @	10 FT	3 M
PASSIVE MODE		
± 5% @	6 FT	1.8 M
± 10% @	10 FT	3 M

BATTERY

NUMBER/TYPE	6 C-CELL ALKALINE	
BATTERY LIFE**	APPROXIMATELY 20 HOURS	
BATTERY SAVER	UNIT SHUTS OFF AFTER 5 MINUTES IF NO KEY IS PRESSED	

RADIO

TYPE	9-CHANNEL, DUAL-CONVERSION, NARROW-BAND FM	
FREQUENCY RANGE	420-470 MHZ	
SENSITIVITY	110 DBM FOR 12 DB SINAD (TYPICAL)	

752 Display

DIMENSIONS	U.S.	METRIC
MODULE ONLY		
OPERATING WEIGHT	2.5 LB	1.1 KG
POWER INPUT	6.5V D.C. - 16V D.C. AT APPROXIMATELY 150MA	
INTERFACE CONNECTORS	DB-15P (D-SERIES SUBMINIATURE MALE)	
MODULE WITH CASE		
OPERATING WEIGHT	6.5 LB	3.0 KG
BATTERY	6 C-CELL ALKALINE	
INTERFACE	MS5015 (7 PIN)	
ANTENNA	TNC FEMALE	

88B/88B-AT Beacons

DIMENSIONS	U.S.	METRIC
LENGTH	11.5 IN	292 MM
DIAMETER	0.8 IN	19 MM
WORKING DIAMETER	0.9 IN	22 MM
WEIGHT	6.6 OZ	187 G

OPERATION

OPERATING FREQUENCY	29 KHZ	
TRANSMISSION DATA	LOCATION, DEPTH, ROLL ANGLE, PITCH, BEACON BATTERY STATUS, BEACON TEMPERATURE	

VERTICAL TRANSMISSION RANGE*

USING 750/752 TRACKER	0.3-30 FT	0.09-9.14 M
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POWER SOURCE

BATTERY TYPE	1 AA-CELL ALKALINE	
AVERAGE BATTERY LIFE	18 HOURS (88B), 22 HOURS (88B-AT)	
AUTO SLEEP FEATURE	SLEEPS AFTER 20 MINUTES OF INACTIVITY; ROLLING THE BEACON REACTIVATES IT	

OPERATING ENVIRONMENT

TEMPERATURE, MAX.	176° F	80° C
FLUID PRESSURE, MAX.	60 PSI	4 BAR

86BH Beacon

DIMENSIONS	U.S.	METRIC
LENGTH	26.5 IN	673 MM
DIAMETER	2.1 IN	54 MM
WEIGHT (WITH BATTERIES)	6.1 LB	2.8 KG

OPERATION

OPERATING FREQUENCY	29 KHZ	
TRANSMISSION DATA	LOCATION, DEPTH, ROLL ANGLE, PITCH, BEACON BATTERY STATUS, BEACON TEMPERATURE	

VERTICAL TRANSMISSION RANGE*

USING 750/752 TRACKER	0.3-70+ FT	0.09-21.3+ M
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POWER SOURCE

BATTERY TYPE	4 D-CELL ALKALINE (CUSTOM PACK)	
AVERAGE BATTERY LIFE	60 HOURS	
AUTO SLEEP FEATURE	SLEEPS AFTER 20 MINUTES OF INACTIVITY; ROLLING THE BEACON REACTIVATES IT	

OPERATING ENVIRONMENT

TEMPERATURE, MAX.	176° F	80° C
FLUID PRESSURE, MAX.	60 PSI	4 BAR

86B/86BH Beacon

DIMENSIONS	U.S.	METRIC
LENGTH	17.8 IN	452 MM
DIAMETER	1.5 IN	38 MM
WEIGHT	2.2 LB	1.0 KG

OPERATION

OPERATING FREQUENCY	29 KHZ	
TRANSMISSION DATA	LOCATION, DEPTH, ROLL ANGLE, PITCH, BEACON BATTERY STATUS, BEACON TEMPERATURE	

VERTICAL TRANSMISSION RANGE*

USING 750/752 TRACKER (86B)	0.3-50 FT	0.09-15.24 M
USING 750/752 TRACKER (86BH)	0.3-70 FT	0.09-21.3 M

POWER SOURCE

BATTERY TYPE	2 C-CELL ALKALINE (POWER STIX-BRAND BATTERIES ARE STRONGLY RECOMMENDED)	
AVERAGE BATTERY LIFE	60 HOURS (86B), 16 HOURS (86BH)	
AUTO SLEEP FEATURE	SLEEPS AFTER 20 MINUTES OF INACTIVITY; ROLLING THE BEACON REACTIVATES IT	

OPERATING ENVIRONMENT

TEMPERATURE, MAX.	176° F	80° C
FLUID PRESSURE, MAX.	60 PSI	4 BAR

86BG Beacon

DIMENSIONS	U.S.	METRIC
LENGTH	17.8 IN	452 MM
DIAMETER	1.5 IN	38 MM
WEIGHT	2.2 LB	1.0 KG

OPERATION

OPERATING FREQUENCY	29 KHZ	
TRANSMISSION DATA	LOCATION, DEPTH, ROLL ANGLE, PITCH, BEACON BATTERY STATUS, BEACON TEMPERATURE	
PITCH TRANSMISSION	PITCH SENT IN 0.1% INCREMENTS UP TO 45% AND IN 1% INCREMENTS FROM 45% TO 100%	

VERTICAL TRANSMISSION RANGE*

USING 750/752 TRACKER	0.3-50 FT	0.09-15.24 M
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POWER SOURCE

BATTERY TYPE AND LIFE	2 C-CELL ALKALINE, 16 HOURS 3.6V LITHIUM C-PACK, 70 HOURS	
AUTO SLEEP FEATURE	SLEEPS AFTER 20 MINUTES OF INACTIVITY; ROLLING THE BEACON REACTIVATES IT	

OPERATING ENVIRONMENT

TEMPERATURE, MAX.	176° F	80° C
FLUID PRESSURE, MAX.	60 PSI	4 BAR

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. *UNITS ARE CALIBRATED TO THESE TOLERANCES UNDER TEST FIELD CONDITIONS. ACTUAL FIELD CONDITIONS MAY CAUSE SIGNAL DISTORTIONS OR MAY CONTAIN NOISE SOURCES WHICH RESULT IN DEPTH ESTIMATES THAT VARY FROM THESE FIGURES. **CONTINUOUS USE AT 70° F (21° C).



THE CHARLES MACHINE WORKS, INC. DITCH WITCH WORLDWIDE HEADQUARTERS PERRY, OK 73077-0066 U.S.A.

TOLL FREE 800 654 6481 PHONE 580 336 4402 FAX 580 336 3458 INTERNATIONAL FAX 580 572 3561

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