旋风新材
WHIRLWIND NEW MATERIALS

Whirlwind New Material

Fully Hydraulic Intelligent Tunnel Drilling Rig

Whirlwind New Material Exploration Technology and Services

Partner of Advanced Drilling Solutions

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Fully Hydraulic Intelligent Sensing
Tunnel Drilling Rig

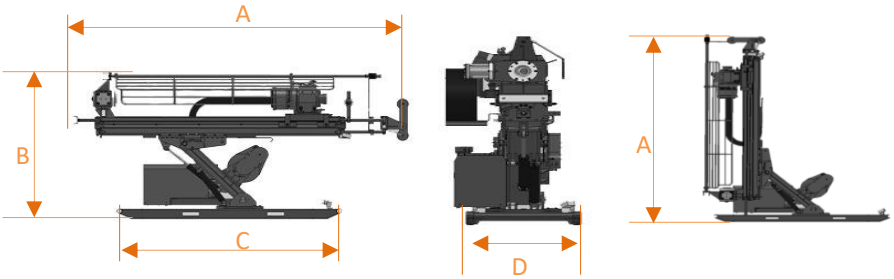
Overview:
Whirlwind New Material core drilling rigs are designed for all-terrain, multi-directional, and full-angle drilling operations. They are suitable for a wide range of applications including surface drilling, underground tunnel drilling, excavation in narrow spaces, and advanced geological forecasting.

The U-series drilling rig adopts internationally advanced intelligent sensing and control technology, enabling multiple functional extensions such as energy-efficient safety control and automated management. Depending on specific project requirements, it can be equipped with either electric or diesel power units, available in single-unit, switchable, or multi-unit configurations.

- ✓ Hydraulic auto-positioning system enables fast and precise adjustment of dri lling orientation, allowing effortless 360° directional drilling.
- ✓ Optimized design with a compact structure and refined layout maximizes adaptability to confined working spaces, ensuring convenient and efficient operation.
- ✓ Advanced manufacturing processes, superior craftsmanship, and outstanding performance.

Key Features:

- The power head adopts the classic Canadian Boyles design, featuring an inte grated through-hole chuck and rotary unit, ensuring excellent functionality a nd reliability of the drilling rig.
- The drill rod clamp is hydraulically opened and clamped by nitrogen gas spr ings, providing rapid response and ensuring operational safety.
- The logic control system enables synchronized operation between the power head chuck and the drill rod clamp, preventing accident risks while realizin g automated control of drill rod operations, thereby reducing operator workl oad.
- The worktable utilizes a hydraulic pilot control (PHC) system featuring a us er-friendly interface, smooth operation, precise control, high comfort, and re liable safety.



Technical Specifications	UX1000	UX800	UX600	UX300
Drilling Capacity	The actual drilling depth depends on the specific geological formation and operating methods.。			
BQ	1200 m	960 m	780 m	400 m
NQ	1000 m	800 m	580 m	300 m
HQ	620 m	520 m	380 m	150 m
Power System (Electric)				
Rated Power	90 KW	75 KW	55 KW	37 KW
Maximum Flow Rate of Main Pump	160 l/min	160 l/min	150 l/min	62 l/min
Maximum Pressure of Main Pump	300 Bar	280 Bar	250 Bar	220 Bar
Maximum Pressure of Auxiliary Pump	300 Bar	280 Bar	170 Bar	150 Bar
Weight	980 Kg	980 Kg	680 Kg	400 Kg
L x W x H	1845x790x1250 mm	1845x790x1250 mm	1600x720x1100 mm	1200x670x920 mm
Rotary Power Head	The power head mechanism includes a hydraulic motor, gearbox, hollow shaft, and hydraulics.			
Motor	160 cc	110 cc	80 /110 cc	55 cc
Maximum DrillingSpeed	1400 rpm	1400 rpm	1150 rpm	1100 rpm
Maximum Torque	2250 Nm	2000 Nm	1500 Nm	650 Nm
Spindle Inner Diameter	101 mm	101 mm	101 mm	82 mm
Feed Beam	Hydraulic Cylinder Feed.			
Feed Length	1800 mm	1800 mm	1800 mm	1100 mm
Feed Beam Length	2900 mm	2900 mm	2900 mm	1800 mm
Mast Extension Length	2000 mm	2000 mm	2000 mm	1300 mm
Feed Thrust	89 KN	75 KN	68 KN	20 KN
Feed Pulling Force	89 KN	75 KN	68 KN	38 KN
Drill Rod Clamp	The clamp opens hydraulically and closes pneumatically. When hydraulic pressure is lost, the clamp engages (closes).			
Maximum Drill Rod Size	89 mm	89 mm	89 mm	75 mm
Through Hole (Without Core Barrel)	102 mm	102 mm	102 mm	82 mm
Through Hole (Without Centralizer)	170 mm	170 mm	170 mm	100 mm
Clamping Force	90 KN	80 KN	70 KN	60 KN
Cable Winch				
Minimum Hoisting Force	3600 N (Full Drum)	3200 N (Full Drum)	2500 N (Full Drum)	1050 N (Full Drum)
Maximum Hoisting Force	9700 N (Empty Drum)	9200 N (Empty Drum)	7550 N (Empty Drum)	550 N (Empty Drum)
Maximum Hoisting Speed	4.8 m/s（Full Drum）	4.5 m/s（Full Drum）	4.0 m/s（Full Drum）	4.0 m/s（Full Drum）

Dimensions	Operating Condition	Transport Condition	Operating Condition	Transport Condition	Operating Condition	Transport Condition	Operating Condition	Transport Condition
A	3600 mm	2800 mm	3600 mm	2800 mm	3600 mm	2800 mm	3000 mm	1830 mm
B	2100 mm	2100 mm	2100 mm	2100 mm	2100 mm	2100 mm	1300 mm	1300 mm
C	2700 mm	2700 mm	2700 mm	2700 mm	2700 mm	2700 mm	1710 mm	1710 mm
D	1000 mm	1000 mm	1000 mm	1000 mm	1000 mm	1000 mm	550 mm	550 mm
Total Weight of the Drilling Rig	2200 Kg		2100 Kg		2050 Kg		1200 Kg	

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