

Blind Shaft Boring Rigs



L-range series

MHWirth has been supplying L-range drill rigs since 1976. Our L-range rigs are an economical solution for the straightforward and efficient drilling of blind shafts, which can be up to 8 m in diameter and up to 1 000 m in depth.

Our high quality L-range drill rigs are driven hydraulically and the cuttings are flushed out using the efficient and environmentally-friendly reverse circulation drilling (RCD) technology, also known as airlift drilling.

Main Applications

- Drilling of ventilation and production shafts
- Drilling of mine development shafts
- Creation of large vertical water wells and groundwater lowering wells
- Drilling of ventilation shafts in traffic tunnels
- Water power stations, energy storage
- Industrial waste, construction of subterranean depots for waste material

Benefits

- Blind shaft drilling is safer than conventional methods (no explosives or access at the shaft's bottom)
- Just five people per shift to run the machine
- Simple and robust airlift technology without mechanical wear significantly reduces operational costs (OPEX)
 - For drilling, only cutters are required
 - For cuttings discharge, only compressors and water are required
 - Low spare part consumption rate
- Flexible diameters with one machine only



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Technical Specifications

	L 25	L 35 M	L 45 P
Drive motor Engine power	481 hp (433 kW)	2 x 366 hp (2 x 273 kW)	2 x 481 hp (2 x 433 kW)
Mast	A-mast	A-mast	Portal mast
Drill-pipe length Hook load	14.8/28.5 ft (4 500/9 000 mm) 562 000 lb (2 500 kN)	19.7/39.4 ft (6 000/12 000 mm) 748 600 lb (3 330 kN)	19.7/39.4 ft (6 000/12 000 mm) 989 200 lb (4 400 kN)
Rotary table	Hydrostatic	Hydrostatic	Hydrostatic
Rotary table I.D. Torque at the turntable Speed, min./max. Axial static carrying capacity	6.9 ft (2 110 mm) 184 400 ft·lb (250 kNm) 0 – 36 min ⁻¹ 562 000 lb (2 500 kN)	5.1 ft (1 540 mm) 331 900 ft·lb (450 kNm) 0 – 25 min ⁻¹ 2 000 800 lb (8 900 kN)	5.1 ft (1 540 mm) 331 900 ft·lb (450 kNm) 0 – 25 min ⁻¹ 2 000 800 lb (8 900 kN)
Main winch			
Line pull, 3rd layer Line speed 3rd layer, 1st speed	57 300 lb (255 kN) 3.3 ft/s (1 m/s)	85 700 lb (381 kN) 2.5 ft/s (0.75 m/s)	85 700 lb (381 kN) 2.5 ft/s (0.75 m/s)
Auxiliary winch			
Line pull, 1st layer Line speed 1st layer, 1st speed	22 500 lb (100 kN) 2.1 ft/s (0.65 m/s)	22 500 lb (100 kN) 2.1 ft/s (0.65 m/s)	22 500 lb (100 kN) 2.1 ft/s (0.65 m/s)
Compressor			
Capacity Operating pressure	14 ft ³ /s (24 m ³ /min) 290 psi (20 bar)	3 x 14 ft ³ /s (3 x 24 m ³ /min) 290 psi (20 bar)	4 x 14 ft ³ /s (4 x 24 m ³ /min) 348 psi (24 bar)

Data is subject to confirmation by the manufacturer.

References

Country	Machine Type
China	L 40 – 400
China	L 40 – 800
USSR	L 35
USSR	L 35
Germany	L 25
USA	L 35 (main components)