

RBR400VF

# POWERFUL SHAFT BORING



## Raise Boring Rig RBR400VF

- › For long raises and large reaming diameters
- › Robust and powerful design
- › Mechanized wrench system and rod handling for improved work safety
- › Highly efficient variable frequency drive

**PIONEERING  
UNDERGROUND  
TECHNOLOGIES**



# Raise Boring Rig RBR400VF

## Technical specifications

The **Raise Boring Rig (RBR)** developed by Herrenknecht is designed for the construction of shafts in rock down to 2,000 meters in depth. Thanks to its compact design, it offers high flexibility even under space constraints and is therefore suitable for various applications in the mining industry. It has proven its worth with its modular design and its efficient center-free drive. Connection shafts for mining or penstocks for pump storage power plants can be constructed quickly and safely.



Transport system



Pipe handling



Control cabin

### RBR400VF

- › Reaming torque: 452 kNm (333,000 lbf.ft)
- › Max. static torque: 600 kNm (442,000 lbf.ft)
- › Thrust force: 9,200 kN (2,068,000 lbf)
- › Inclination (from vertical): 0°–45°

### Dimensions

- › Height (extended/retracted): 6.97 m/5.21 m (22.87 ft/17.09 ft)
- › Width: 2.26 m (7.41 ft)
- › Depth: 2.44 m (8 ft)

### Weight

- › Rig: 41 t (90,389 lb)

### Hoist unit

- › Stroke: 2.4 m (7.87 ft)

Modular design for high degree of flexibility.

### PIPE HANDLER

- › Load: 1,000 kg (2,205 lb)
- › Handling system: mechanized
- › Optional: axial drill rod adjustment

### WRENCH SYSTEM

- › Handling system: fully hydraulically operated

Mechanized drill rod handling and wrench system for safe and easy handling.

### MAIN DRIVE

- › Drive: electric (VF)
- › Number of motors: 2
- › Installed power: 360 kW (483 hp)
- › Rotational speed (pilot drilling): 0 rpm–50 rpm
- › Rotational speed (reaming): 0 rpm–13 rpm
- › Hydraulic drive system: on request

The powerful electric drive is ideal for long raises and large reaming diameters.

Variable speed and torque limiting control.

### DRIVEHEAD

- › Float: 90 mm (3.54 inch)
- › Swivel: ±1°
- › Optional: active float system

Drivehead with swivel and float function saves drill rod threads.

Active float to reduce weight on threads while make up and break out operation.

### DRILL ROD

- › Diameter: 12 7/8 inch
- › Optional diameter: 11 1/4 inch
- › Length, s/s: 1.524 m (60 inch)
- › Other sizes: on request

### HYDRAULIC POWER PACK

- › Power: 110 kW (148 hp)
- › Cooling: water-cooled

### ELECTRIC POWER PACK

- › Input voltage: 690 V
- › Frequency: 50 Hz/60 Hz

### CONTROL CABIN

- › Controls: touch screen and control panel

### OPTIONAL EQUIPMENT

#### Tools

- › Digital Drilling Report
- › High pressure flushing pump
- › Transformer
- › Pipe Feeder
- › Transport frame
- › Control Cabinet
- › Chiller system
- › Flow meters
- › Drilling tools
- › Other tools on request

#### Crawler

- › Drive: diesel-powered hydraulic drive
- › Power: 55 kW (74 hp)
- › Grade: max. +25%
- › Optional: forklift equipment

Crawler for quick and easy movement and erection of the rig.

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