



## HERRENKNECHT MINING TECHNOLOGY: TAILOR-MADE HIGH PRODUCTIVITY SHAFT DRILLING JUMBO.

- Designed for mining and civil engineering applications.
- Suitable for blind shafts and shaft enlargement.
- Fast and accurate production.
- High working safety, only a few workers required in the shaft.
- 2 – 5 boom configuration.
- Indexing systems fully hydraulic or fully pneumatic.
- Hydro-electric and hydro-pneumatic configurations available.
- Appropriate for different rock formations.



Control platform with access ladder.



Transport configuration with handling frame.



Workshop acceptance in Schwanau.

## SHAFT DRILLING JUMBO. TECHNICAL SPECIFICATIONS.

Herrenknecht has developed a new Shaft Drilling Jumbo based on the Herrenknecht Drilling Equipment which is in use worldwide. The jumbo allows high production rates for deep and large-diameter shafts where other mechanized methods are not suitable. Customized for special project requirements, the jumbo allows many configurations and rock drilling patterns. For example, in shaft enlargement projects, where there is a pilot hole.

The working principle of the Shaft Drilling Jumbo is to bore the holes according to the drill pattern. In a first step, the jumbo goes into action drilling blast holes. Afterwards, the jumbo is retracted and lifted up to allow the blasting and mucking procedures to be done. The Shaft Drilling Jumbo allows high advance rates of 2 – 3m per shift (jumbo cycle < 4hrs) optimizing the entire process cycle. After blasting, a spider excavator generally carries out mucking into the pilot hole, down to the lower level. In addition, while the jumbo is operating, a working platform is usually lowered into the shaft for bolting and shotcreting tasks.

SHAFT DRILLING JUMBO	
Number of booms:	2 – 5
Main structure:	power unit, mast, hanging device, stabilizers and operator platform
Weight:	7 – 17t
Height:	8 – 10m
Parked diameter:	2,000 – 3,000mm
Shaft diameter:	4,000 – 12,000mm

The Shaft Drilling Jumbo consists of a main structure and several booms. A tripod on the bottom and three telescopic stabilizers on top provide the jumbo with support for the drilling operations.

All rights reserved. Any information contained herein is for informational purposes only. Subject to change without notice. We are not responsible for typographical errors. All dimensions and data refer to customizable basic product features.

DRILLING RIGS	
Series:	HDS-300
Carriage:	aluminum extrusion
Feed force:	up to 30kN
Retraction force:	up to 20kN
Drilling stroke:	2 – 5m
Length:	up to 7m
Weight:	450 – 750kg
Rock drill:	any type or brand

The Shaft Drilling Jumbo is CE certified.

PERFORMANCE EXAMPLE	
Number of booms:	3
Pilot hole diameter:	2,600mm
Shaft diameter:	9,000mm
Rock strength:	150MPa
Borehole diameter:	51mm
Drill depth:	3m
Number of holes:	100
Cycle time:	190min

The main operator first makes sure that the jumbo is stabilized. Each boom is then controlled independently by one operator. A supervisor takes care of coordination and logistics. Backup safety measures and emergency controls prevent hazards during operation.

**Herrenknecht AG**  
D-77963 Schwanau  
Phone +49 7824 302 0  
Fax +49 7824 34 03  
pr@herrenknecht.com  
www.herrenknecht.com

**Building the future together.** Herrenknecht AG is a technology and market leader in mechanized tunnelling. Herrenknecht is the only company in the world to supply high-tech boring machines for all ground conditions and in all diameters.

