Flexible and fast installation also in remote areas

- Slingshot substructure and self-erecting telescopic mast allow easy and safe rig-up
- Push and pull capability
- Semi-automatic pipe handling system (hands-off-technology)
- Easy and safe casing operations
- Sophisticated noise-protection concept
- Effective pad drilling through XY stepping system (optional)
- Made in Germany
Self-erecting slingshot rigs for flexible and fast rig-up

The Herrenknecht Vertical slingshot rig, a self-erecting, telescopic cylinder rig for drilling in remote areas for oil and gas as well as geothermal. The rig is equipped with a slingshot substructure and a telescopic mast for fast rig-ups without heavy cranes. It is designed for doubles range 2 and has a standard hook load of 350 or 450 metric tons (385 or 500 short tons). Upon request, the slingshot rigs can also be designed with up to 750 metric tons (825 short tons) of hook load for drilling to about 8,000 meters (26,250 feet).

The slingshot rigs feature a precise and sensitive hydraulic cylinder hoisting and rotary system, which allows for push and pull operations and gives direct feedback of the hole conditions to the driller. The hoisting system improves WOB control, enhances feedback of the hole conditions to the driller. The whole pipe handling process is controlled from the driller’s cabin via a PLC control system with integrated anti-collision system.

The slingshot rigs offer different optional features:
- Adaptable levels of horizontal pipe racking automation can be combined with the horizontal-vertical pipe handler: starting from a horizontal catwalk with manual tubular racking on the ground up to a highly automated horizontal racking system with pipe boxes, gantry crane and horizontal make-up and break-out unit suited individual project requirements.
- For pad drilling, the rig can be equipped with a hydraulic XY stepping system to drill multiple wells from one location without rig moves between the wells. Additionally, the telescopic catwalk allows you to keep the pipe rack and backyard in place when skidding the rig, as it transfers the tubulars to the handover position of the pipe handler over a distance of up to 10 meters (30 feet).
- The rig can be operated with:
  a. power from the generator sets
  b. power from the grid
  c. generator supported grid power
  b. and c. require an additional medium voltage switchgear unit.

Based on a comprehensive safety concept, the rig has an integrated horizontal-vertical pipe handler that can handle a broad range of tubulars including casings up to 4.5 metric tons (5.0 short tons). Together with further automated equipment such as iron roughneck, hydraulic elevator and power slip or slip lifter, tubular handling can be realized hands-off.

The complete pipe handling system is designed to handle drill pipe in doubles range 2, drill collars and casing. The controls are semi-automated and the system is operated by the pipe handling operator or the driller. An integrated anti-collision system ensures a safe pipe handling process during all operations.

### Technical specifications

**HOOK LOAD**
- Max. hook load: 350 mt / 450 mt (385 sht / 500 sht) at saver sub

Upon request, the slingshot rig can also be designed with up to 750 mt (825 sht) hook load.

**MAST**
- Type: telescopic twin profile
- Height (erected): 45 m (150 ft)

**SUBSTRUCTURE**
- Type: slingshot
- Rig floor dimensions: 9 m × 10 m (30 ft × 33 ft)
- BOP handling: 2 × 25 mt (2 × 27.5 sht)

**HOISTING SYSTEM**
- Type: double cylinder system
- Hoisting power: 1,600 kW (2,200 hp)
- Brake: hydraulic lowering brake valves

**ROTOR TABLE**
- Type: automated horizontal pipe racking system with pipe boxes and pipe feeder (gantry crane)
- Pipe feeder max. load: 4.5 mt (5 sht)
- Max. tubular length: doubles range 2

**DRILLER’S CABIN**
- Controls: joystick, trackball and touch screen with camera control

**TOP DRIVE**
- Type: HV TD H 500-1000
- Max. static load: 450 mt (500 sht)
- Max. push load: 160 mt (175 sht)
- Max. rotary speed: 220 rpm at 27,500 rpm
- Max. continuous rotary torque: 62,000 Nm (45,700 ft-lbs)
- Drive: hydraulic

**PIECE HANDLING SYSTEM**
- Type: automated horizontal pipe racking system with pipe boxes and pipe feeder (gantry crane)
- Pipe feeder max. load: 4.5 mt (5 sht)
- Max. tubular length: doubles range 2

**POWER SLIPS**
- Type: BOP / BOP closing unit
- Medium voltage switchgear unit / generators
- Mud tank system / mud pump units
- BOP / BOP closing unit

**COMPONENTS MANUFACTURED BY**
- Herrenknecht Vertical

Modern driller’s cabin to control rig and pipe handling operations

Hydraulic cylinder hoisting system and rotary top drive

XY stepping system hydraulic foot