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## HERRENKNECHT VERTICAL OFFSHORE TECHNOLOGY: DEEP DRILLING RIG TERRA INVADER 250CL.

- ▶ Semi-automatic pipe handling system (hands-off-technology)
- ▶ Ultra sensitive hydraulic cylinder hoist system with push and pull capability
- ▶ Less personnel required due to minimized manual interference
- ▶ Easy and safe tripping and casing operations even during heavy winds
- ▶ Easy drill pipe transport due to pipe rack box design
- ▶ Offshore safety standards
- ▶ Made in Germany



## DEEP DRILLING RIG TERRA INVADER 250CL. TECHNICAL SPECIFICATIONS.

### HOOK LOAD

Max. hook load: 325mt (360sht)

### MAST\*

Type: twin profile  
Height: 30m (98.5ft)

### SUBSTRUCTURE\*

The rig can be installed on cantilever for jackup platforms. The interface between rig and platform is engineered on customer order. Hydraulic installation and rails for iron roughneck are integrated in the substructure for eliminating trip hazards.

### CYLINDER HOISTING SYSTEM

Type: cylinder system  
Hoist power: 1,200kW (1,600hp)  
Brake: hydraulic lowering brake valves  
Stroke: 17.5m (57ft)

Ultra sensitive operation due to multi-valve hydraulic control.

### RIG POWER SUPPLY\*

Hydraulic power unit: 4x 500kW (4x 670hp)

### TOP DRIVE\*

Type: HVTD H 500-1000  
Max. static load: 450mt (500sht)  
Max. push load: 160mt (175sht)  
Max. rotary speed: 220rpm  
Max. continuous rotary torque: 38,000Nm (28,000ft-lbs)  
Max. intermittent rotary torque: 62,000Nm (45,500ft-lbs)  
Max. brake torque: 70,000Nm ( 51,600ft-lbs)  
Link tilt capacity: 4mt at 1.5m (8,820lbs at 4.92ft)  
Rated power: 800kW (1,000hp)

Including IBOP, pipe handler, integrated swivel with quill and dolly with torque pick-up.

### DRILLER'S CABIN\*

Controls: joystick, trackball and touch screen with camera control

### PIPE HANDLING SYSTEM\*

Drive: hydraulic  
Operating range: 73mm (2 7/8") to 620mm (24 1/2")  
Lifting capacity: 3mt (3.3sht)  
Max. tripping speed: 350m/h (1,145ft/h)

The complete pipe handling system is designed to handle drill pipe range 3 in singles, drill collars and casing. The controls are semi-automated and the system is operated by the pipe handling operator or the driller which ensures a safe operation.

### IRON ROUGHNECK

Type: TorkWrench 10-100 Weatherford  
Inserts for mud bucket: 2 7/8" / 3 1/2" / 5"  
Max. travelling position: 500mm  
Min. wrench height above rotary table: 565mm  
Max. wrench height above rotary table: 1,765mm  
Min. spinner height above rotary table: 1,600mm  
Max. spinner height above rotary table: 4,000mm

The frame of the iron roughneck is adapted to the 49 1/2" rotary table.

### ROTARY TABLE\*

Table opening: 1,257mm (49 1/2")  
Max. static load: 250mt (275sht)  
Max. torque: 50,000Nm (36,880ft-lbs)  
Max. working torque: 38,000Nm (28,030ft-lbs)  
Braking torque: 120,000Nm (88,500ft-lbs)  
Drive: hydraulic

Newly designed rotary table from Herrenknecht Vertical suited for conductor pipe hammering and high pressure riser installation. The nominal rotational speed is 30rpm and 10rpm with activated rotating seal for PS500 or equivalent.

### OPTIONAL EQUIPMENT

- ▶ Manual rotary tongs
- ▶ Powerslip / manual slips
- ▶ Elevators
- ▶ Auxiliary winch / man riding winch

\* Components manufactured by Herrenknecht Vertical

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