

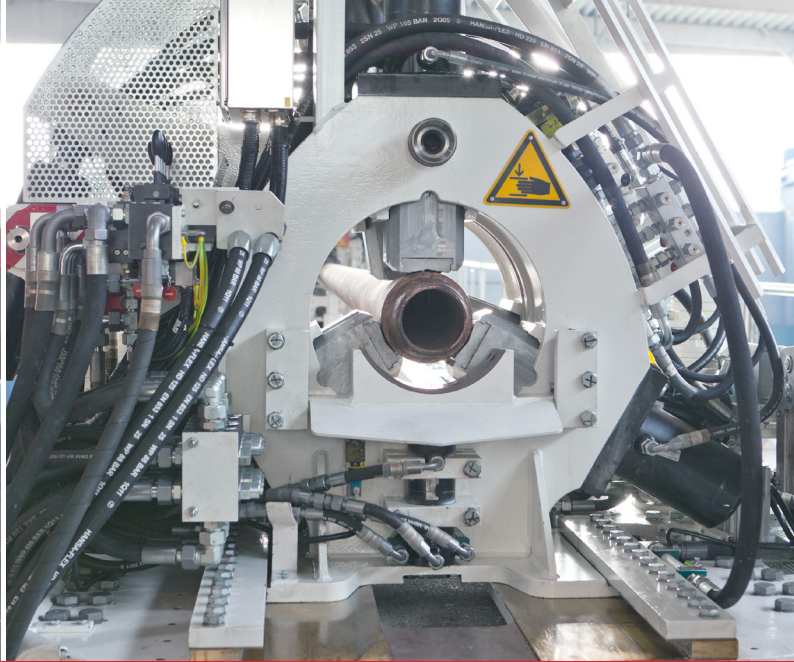
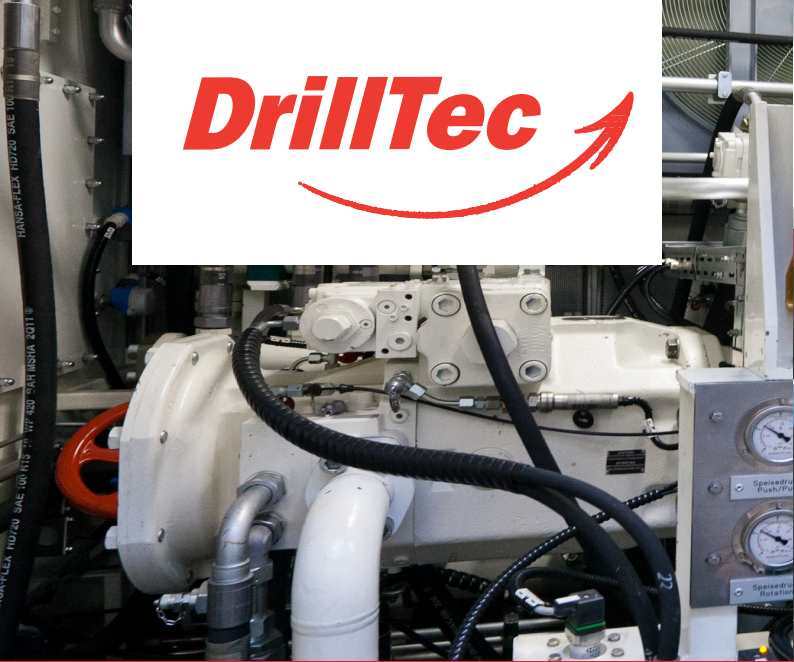
DrillTec 



HORIZONTAL DIRECTIONAL DRILLING

DRILLING UNIT HDD 350

211 SERIES: HDD 350.5, HDD 350.7



Drilling Unit HDD 350 (2011 Series: HDD 350.5, HDD 350.7)

The Drilling Unit, tailor-made for HDD applications, comprises three components: the HDD Rig, the Hydraulic Power Pack and the Steering Container. All single components were manufactured by MAX STREICHER GmbH & Co. KG aA; Year of Manufacture 2011. The upper section of the rig mainframe can be interchanged with a Pipe Thruster Unit that is available for separate purchase. The Pipe Thruster can be used for pulling or pushing pipe into a horizontally drilled borehole. Further details are available upon request.

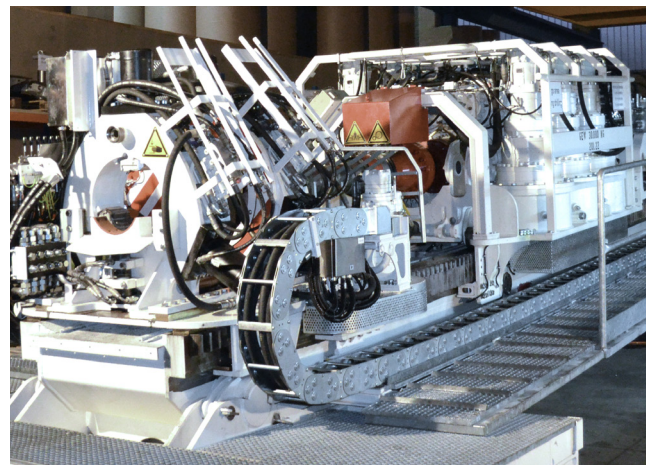
HDD Rig

Weights and Dimensions:

- Mainframe/Rack Length: 18 m
- Working Stroke Length: 13 m
- Mainframe Weight: 45,500 kg
Front section: 15,500 kg
Rear section: 30,000 kg

Technical Details:

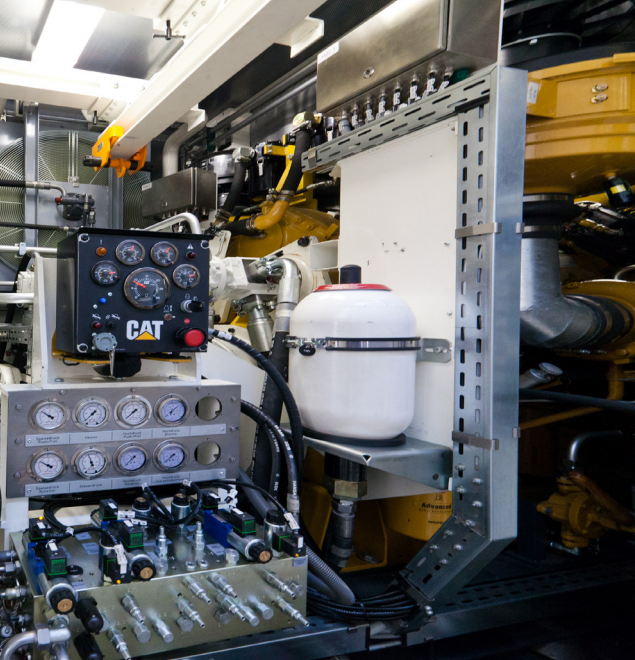
- Carriage Travel: Rack and pinion
- Max. Push/Pull Force: 3,500 kN
- Max. Push/Pull Travel: 30 m/min
- Max. Torque: 96,000 Nm
- Max. Rotation: 90 rpm
- Setup Angle: Variable between 5°-20°;
Rack stand is hydraulically driven
max. breakout torque 205,000 Nm
Opening 450 mm
Capable of travelling entire rack length
- Breakout Unit:
- Transport: Mainframe is separable with front and rear sections fitting into two 40' open-top containers
- 40' Container Weight: 29,000 kg front section with additional equipment packed
- 40' Container Weight: 34,200 kg rear section
- Carriage Calibration: Forces and torque readings can be inspected and configured



Topdrive with hydraulic breakout unit



Hydraulic rear outriggers



Hydraulic Power Pack PP350

Weights and Dimensions:

- Length: 6,058 mm
- Height: 2,896 mm
- Width: 2,438 mm
- Weight: 21,200 kg

Technical Details:

- Diesel engine Caterpillar, Type C 27, rated power 783 kW at 1,800 rpm
- Hydraulic pump for rotation:
max. pressure 350 bar, max. flow 900 l/min, closed loop
- Hydraulic pump for push/pull:
max. pressure 350 bar, max. flow 900 l/min, closed loop
- Hydraulic pump for break out/make up tong and auxiliary functions:
max. pressure 270 bar, max. flow 130 l/min, open loop
- Hydraulic feed pumps for rotation and push/pull:
max. pressure 20 bar, flow each 180 l/min
- Hydraulic pump for fan drive:
max. pressure 210 bar, flow 115 l/min
- Hydraulic filter system high pressure filters for open loops, feed filters, reverse-flow filters and air dryers; all filters with contamination indicator
- Hydraulic tank capacity 2,250 l with heating and leakage monitoring of the entire hydraulic system if required
- Diesel tank capacity: 1,300 l
- Cooling system automatically controlled
- 20' CSC shipping container with noise insulation on walls and roof, noise absorption installed on air inlets and outlets

Control Cabin

Weights and Dimensions:

- Length: 6,058 mm
- Height: 2,591 mm
- Width: 2,438 mm
- Weight: 8,000 kg

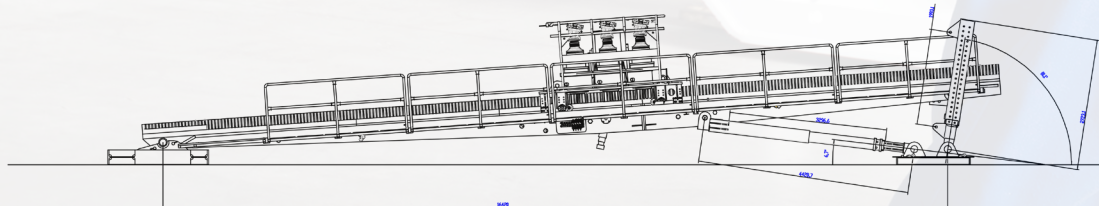
Technical Details:

- Interior layout: insulation, heater, air conditioner, vandal-proof
- Data acquisition/control: precise, sensitive control of all functions; limits for push/pull forces and torque can be set and adjusted separately for each direction
- Data-logger: records and stores all operational data and alarms/errors
- Drilling logs include the electronic recording of push/pull forces and torque
- Remote data transmission; auto driller
- Large windows for 180° all around view

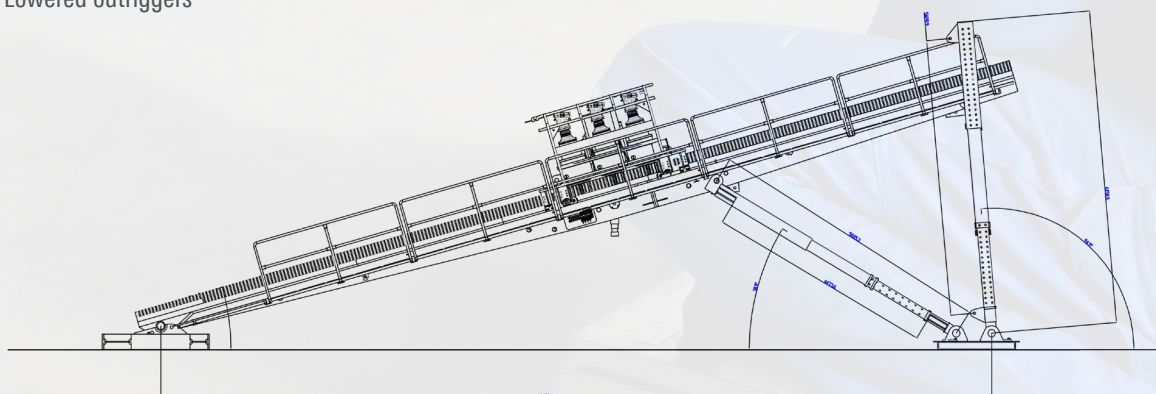




Hydraulic Rear Outriggers (side view)



Lowered outriggers



HDD Unit operational with ascended outriggers



Typical Rig Spread Major Equipment

Description	Packing / Specification	Quantity
350 Ton Drill Rig	40ft OT Container x 2	1
Drill Rig Control Cabin	20ft Container	1
Drill Rig Powerpack	20ft Container	1
HT400 Mud Pump 6"	20ft Container	3
Mixing unit	20ft Skid	1
Mud Storage Tank	20ft Skid rigside	1
Mud Storage Tank	20ft Skid pipeside	1
Mud Recycle System	20ft Container Tank and 2x 20ft Shaker Skids	2
Electrics Container	10ft Skid	1
Cranerack	40ft Skid	1
500 K.V.A Generators	20ft Container	2
Workshops/Spares Containers	20ft Container	3
Water Storage Tanks	40ft Tank rigside	1
Water Storage Tanks	20ft Tank pipeside	1
Break Out Unit and Power Pack		1
Diesel Welding Machine	500 Amp	1
Diesel Tower Lights	Mobile Tower	4
Electric Distribution Boxes		6
Flygt Pit Pumps	13.5 Kw	6
Bornemann Transfer Pump		1
Electric Water Pumps	2,3,4,6 Inch.	10
2 Inch Stainless Water Pump		4
Diesel Water Pumps	2 x 6 Inch, 1 x 8 Inch.	3
Charge Pumps	6x5x14 ,4x3x13 , 8x6x14	6
Pipe Rollers Cradles	80 ton capacity (PU)	5
Pipe Rollers	20 ton capacity (PU)	100
Chain Tongs		4
Sheet Piles	for rig anchor	
Steelwork	Beams, pipe for rig anchor	
Excavator	30t	2
Cranes	40-80t for rig up and rig down	2