



HDD-rig 330 tpd



Technical specification

Manufacturer	Prime Drilling
Model	PD 330/170-C RP
Type rig	Crawler
Year of manufacturing	2012
Pulling force	3300 kN
Pushing force	3300 kN
Max. torque	170 kNm
Drive type	Rack & Pinion
Dimensions (LxWxH)	17600 x 3000 x 3600 mm
Weight	44.6 ton
Entry angle	8° - 15°
Control unit	20 ft Steering Container
Engine supplier	2x CAT C18 Diesel Engine
Power pack	2x 470 kW / 630 HP
Drill rod size	6 5/8" FH 7 5/8" FH



Goerbzen@prime-drilling.de



PRIME DRILLING GmbH - Ludwig-Erhard-Str. 4 - 57482 Wenden

A. Hak Materieel B.V.
Attn. Mr. Lou Steenbergen
Attn. Mr. Ronald van Krieken
Steenoven 2-6

NL - 4196 HG Tricht

PRIME DRILLING GmbH
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D-57482 Wenden-Gerlingen
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<http://www.prime-drilling.de>
Mail: info@prime-drilling.de

Wenden, 16th Nov. 2011
WW/HB

Order confirmation 11114228

Dear Mr. Steenbergen.
Dear Mr. van Krieken.

We thank you for your order which we will carry out according to our „General Terms of Business“ (www.prime-drilling.de/abt) as follows:



Geschäftsführer:
Werner Wurm - Frank Auringer
Wolfgang Schmidt

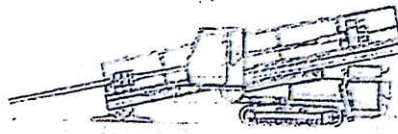
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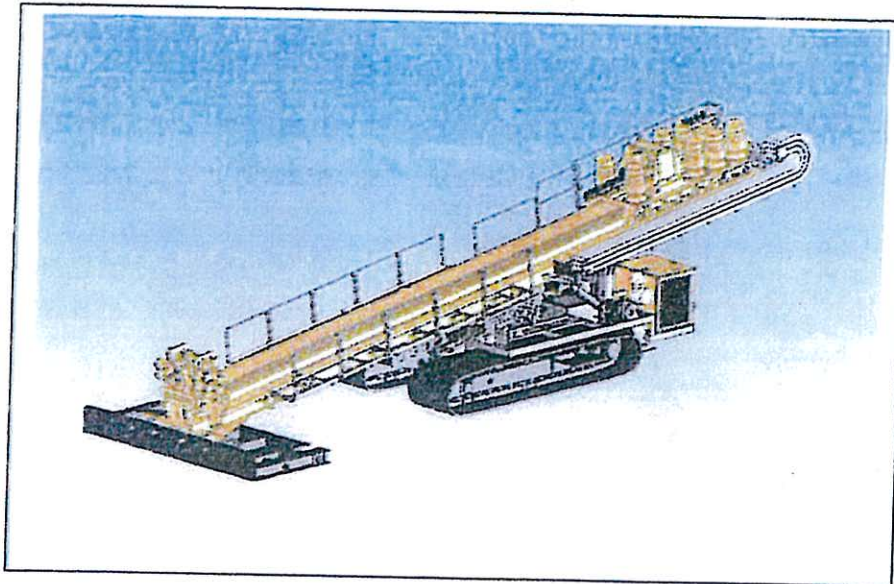


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FOR YOUR SUCCESS



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- 1) **PRIME DRILLING HDD rig PD 330/170 RP-C OVERVIEW**
- A) 1 pc. Crawler undercarriage type B2
 - B) 1 pc Drill mast (dividable)
Suitable for transport in 40ft. container
 - C) 1 pc Hydraulic power rotary head BK 8-170
 - D) 2 pc. Hydraulic Power Pack 2 x 400 kW (CAT diesel engines)
 - E) 1 pc. 20 ft. operating container with electro hydraulic operating panel
 - F) 1 pc Clamping and breaking unit (with two hydraulic motors)
The clamping and breaking unit is equipped with a monitoring camera
 - G) 1 pc. Data logging system
 - H) 1 pc. Measurement cable reel with swivel
 - I) 1 pc. Drill rod handling device incl. hydraulic manipulator and platform

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TECHNICAL DESCRIPTION

- A) *Crawler undercarriage type B2*
- a) *1pc. B2 crawler carriage*
 - b) *1pc. extension arm*
 - c) *1 pc. setting cylinder 8° - 15° with quick hitch to remove carriage*
 - d) *1 pc. diesel hydraulic device with CAT diesel motor 180 kW*
 - e) *1 pc. hydraulic pump 450 l/min for drive operation*
 - f) *1 pc. hydraulic valve to operate a percussion unit (130 l/min; p max = 140 bar)*
 - g) *1 pc. Bentonite supply (lateral mounted as on the PD 45/33 RP-C)*



B) *Drill mast (dividable)*

Feeding length 11.0 metres (suitable for Range 2 drill rods)
Push / pull force = 330 t (equipped with 8 pc. radial piston pump motors)
Drilling inclination: 8 - 15° with stable and comfortable support
Suitable for transport in 40ft. container
The drill mast is equipped with a bentonite collecting case (PD 45 / PD 100)
anchor plate to fix the drill rig

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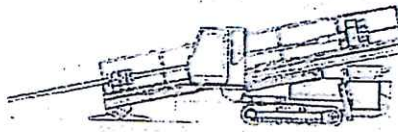
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1) 1 pc. **Drill rod handling device**

a) 1 pc. **Drill rod crane HIAB XS 099** (equipped with remote control box)

Lifting force	10,40 mt
Reach	14,30 m
Hydraulic telescopable	6- times
Loadmoment	bei 14.2 m = 450 kg

b) 1 pc. **Hydraulic manipulator type 3D**

Lifting force	1.000 kg
Slewing range	360 °
Add. Tilting angle	20 °
Clamping range	6.5/8" drill rods

c) 1 pc. **Platform for range 2 drill rods**

The platform is equipped with a joint, due to this the platform is hinged and therefore its suitable to storage in a 20ft container

d) 1 pc. **Hydraulic power pack**
with

- Electric motor
- Hydraulic oil tank
- Hydraulic pump
- Oil cooler

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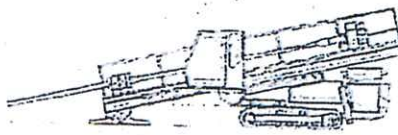
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Wolfgang Schmidt

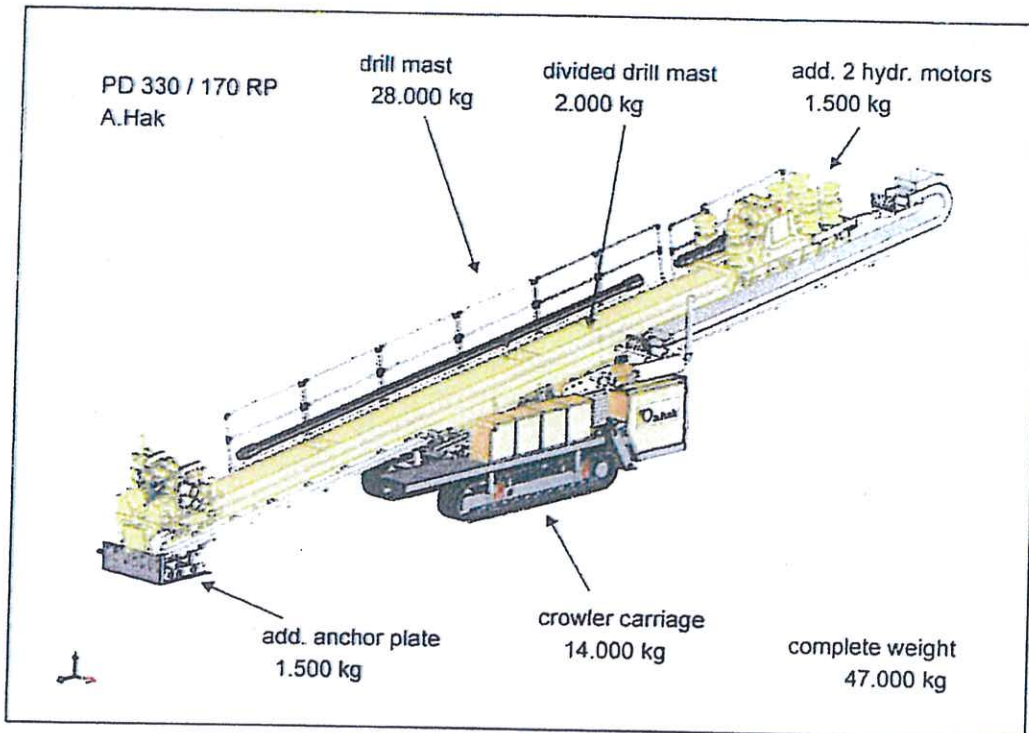
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Weights



Painting

RAL 1007 yellow
with a RAL 6001 green 15 cm wide stripe in the middle

Documentation

- Operating manual 3fold in English and Dutch
- CE-rules and TBG-Munich
- Spare part lists with spare part numbers
- Electric diagrams with spare part numbers 3fold
- Hydraulic diagram with spare part numbers 3fold

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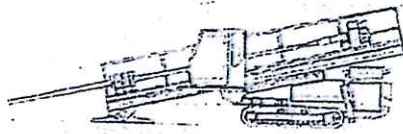
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C) **Power rotary head** **Type BK 8-170 ZG**
 Drive: gear box with 10 pc. hydraulic motors
 Torque: **120 to 170 kNm**

1 st gear	2 nd gear	3 rd gear
170 kNm	150 kNm	120 kNm
31 RPM	37 RPM	46 RPM

Speed: 31 to 46 RPM
 Spindle connection: 8.5/8" FH with flange or cardan shaft
 Flushing shaft: ID 110 mm
 Working pressure mud pump: 150 bar max.
 Floating drive shaft: 70 mm moveable
 Breaking torque: max. 180 kNm
 Gearshift: each gear is hydraulic shiftable from the cabin.

Following torques, speeds and pull forces
 can be done at the same time:

Power rotary head	Feeding
Torque (kNm) Rotation speed (RPM)	Torque (kN) Speed (m/min)
170 kNm at 31 RPM up to 120 kNm at 46 RPM	3.300 kN at 2,0 m/min up to 1.650 kN at 4,0 m/min



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D) 2 pc. **Hydraulic power pack**

equipped with a long and a short exhaust pipe (as on X-2000 2.0

A. Hak Drillcon pump)

High of container 2,938 mm

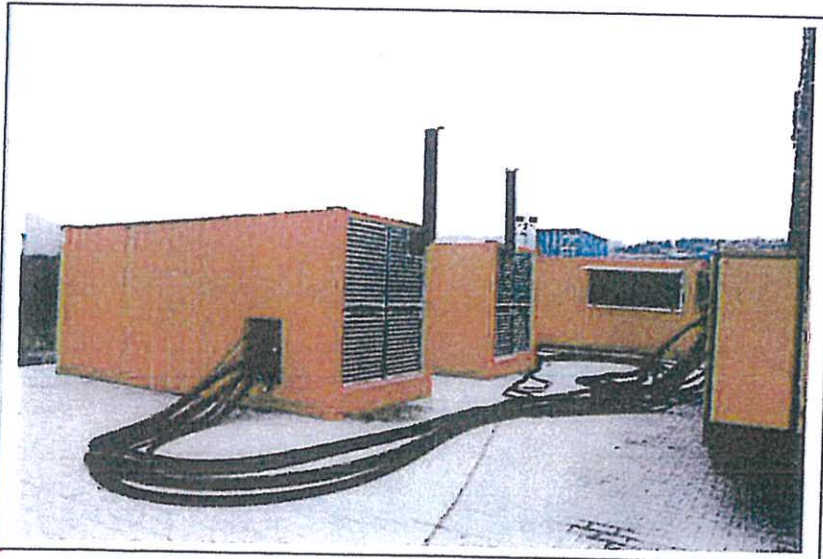
- Power pack is equipped with two hydraulic pumps and splits the power for drill head and feeding.
- Operating of the power pack will be done from the operating container.
- Power pack in operation **86 dB(A) at 7 m**
- Turbo-Diesel engines with **2 x 400 kW** power.
- Hydraulic tank **2 x 700 liter** hydraulic oil.
- Diesel tank **2 x 960 liter**.
- Load sensing adjusted axial piston pumps **2 x 960 l/min** High pressure range at **400 bar**
- Electro hydraulic pre-adjustment for all hydraulic valves
- Large dimensioned oil air cooler with temperature regulator and hydraulic drive

Drive motor is a CAT motor type C18

with a blocked ISO using bar IFN of **2 x 400 kW at 2000 RPM**

Stage 3A.

Motor is equipped with water cooler, motor meter warning unit, exhaust sound absorption and electronic regulator with speed poti, with steering.



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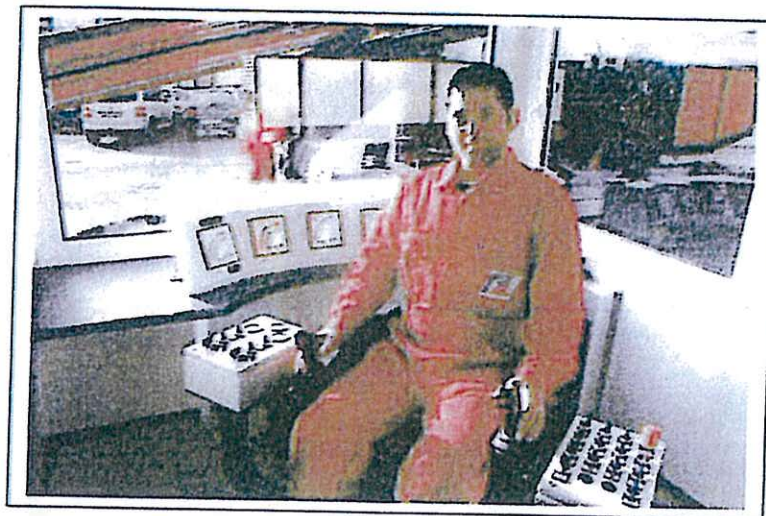
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E) Operating container

Operating panel

Operating panel is mounted in 20 ft. container

- Size cabin: 6.058 mm long, 2.438 mm high, 2.591 mm wide
- Steering type: electro-hydraulic steering
- Window: sun protected, non-breakable
- heating / air condition



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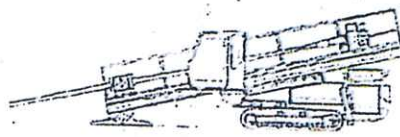
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**F) Drill rod clamping and breaking device
(equipped with monitoring camera)**

2 clamping jaw housings open on the top.
one connection clamping
and one connection breaking

Torque break rods:	220.000 Nm
Torque screwing rods:	220.000 Nm
Clamping range for gripping	127 – 410 mm
Clamping device	11,0 m slidable

Clamping and breaking unit is equipped with each
8 axial acting hydraulic cylinders.

Clamping inserts are rotating beared.
to suits optimal to the drill rods.

Clamping and breaking unit is fully applicable
even without brackets.



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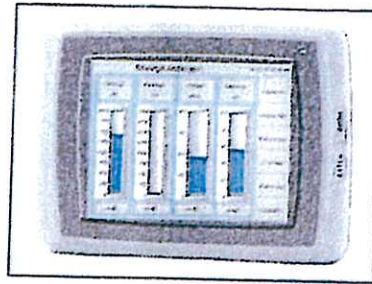




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G) Data logging system

- Torque
 - Speed
 - Push / pull force
 - Bentonite pressure
 - Bentonite quantity
 - Drill speed
- + installing same system on
PD 100 and PD 45

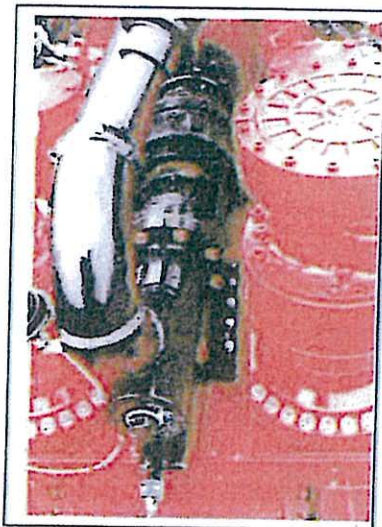


H) Measurement cable reel with swivel

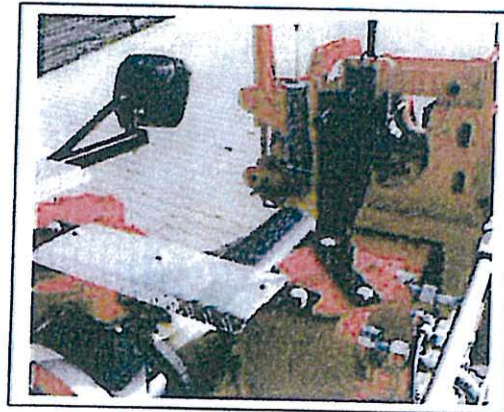
- hydraulic turnable
- Speed and power are adjustable
- Drilling without twisting of the cable
- Cable length each 100 m



Cable reel with friction ring



"Western" swivel



Bracket for cable

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