



# HDD-Compact Drilling Rig with "on board" pump



#### HDD-Compact Drilling Rig with "on board" X-pump, 300 kN - 800 kN pull force (30 t - 80 t) 18 kNm - 45 kNm torque

**PRIME DRILLING®** operates worldwide and is specialised in Horizontal Drilling Technology. With our optimised products and 35 years of experience in the construction of HDD-rigs we have set standards in the international HDD-industry.

#### Quality and Reliability "Made in Germany"

Product quality is the highest priority at PRIME DRILLING®. That is why we keep development, manufacture and assembly entirely under one roof at our facility in Wenden, Germany. It enables short development phases and optimised manufacturing processes under compliance with the highest quality standards.

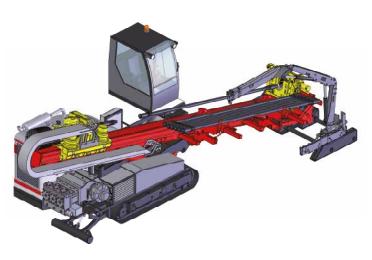
Our qualified and highly motivated employees ensure utmost quality, safety and delivery reliability. Our PRIME DRILLING® modular construction system enables the customer to have flexibility in choosing pull force and torque of the rig.

The first-class quality of design, manufacture and assembly is a guarantee for high technology products with maximum reliability and extra long service life.

Patented technology, robust construction, high torque and years of experience are only a few of the reasons that make PRIME DRILLING® the global market leader for HDD-technology.

Whether you are executing projects in the Arctic at -40°C or in the Sahara at +40°C - PRIME DRILLING® Horizontal Directional Drilling Rigs are known for their performances, reliability, low-maintenance designs and easy operation. Our designs and technical features ensure maximum comfort and increased overall productivity.

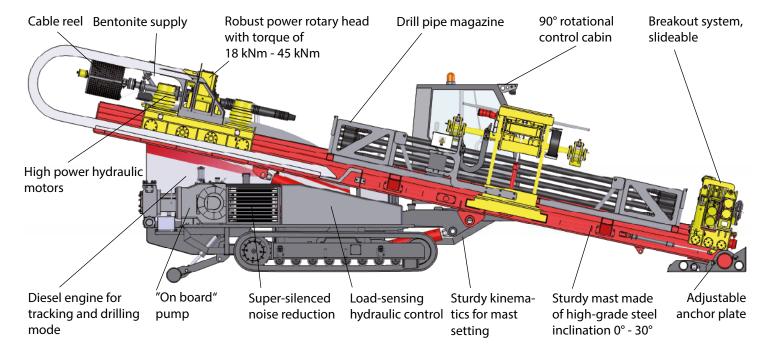




Pump capacity: 1,029 l/min at 30 bar







#### Crawler carriage with on-board mounted control cabin

Our HDD-Compact Rigs in the category of 300 to 800 kN pull force are powerful and technical fully developed devices. Due to their compact structure, time requirements for the setting up of the drill mast in both drilling and transport positions are reduced to a minimum.

All driving, setting and drilling functions are actuated by a water-cooled diesel engine. Feed as well as the pull-backfunction of the hydraulic power rotary head are carefully driven by a rack & pinion (RP) feed system. With our HDD-rigs of type 30 to 80 t, drilling lengths up to a max. of **1,000 m** and diameters up to a maximum **1,000 mm** are achievable.

Our Horizontal Directional Drilling Rigs can be equipped with a fully automatic drill pipe magazine with a capacity of maximum **72 m** of drill pipes or, alternatively, with a semi-automatic drill pipe supply with 30 m of drill pipes.

The optionally available control cabin is equipped with ergonomical seat, heating and radio. Further options like air conditioning, drill data log-in system etc. are available on request.

The special feature of our Compact Rig is the "on board" pump. This saves space during transport and also offers greater flexibility on site.

## **Options, compatibility and versions**

- ✓ Standard equipment
- Optional non standard equipment

	PD 30	PD 40	PD 50	PD 60	PD 80
On crawler	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
On board control cabin	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Drill pipe 5 or 6 m	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Power rating 224 kW	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Torque 18 kNm	<b>✓</b>	<b>✓</b>	•	•	•
Torque 22 kNm	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	•
Torque 30 kNm	•	•	<b>✓</b>	<b>✓</b>	<b>✓</b>
Torque 45kNm	•	•	•	•	<b>✓</b>
"On board" pump	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	<b>✓</b>

## Standard and optional equipment



Mud swivel on tapered roller bearing



Cable reel with hydraulic motor and electric swivel guide



Robust power rotary head with torque of 18 kNm - 45 kNm



Super-silenced noise reduction



Semi-automatic drill pipe supply for 5 m drill pipes



Sturdy kinematics for mast setting

Remote control for drive modes



Fully automatic drill pipe magazine for 4<sup>72</sup> m drill pipes





Drill data monitoring system records all drill data parameters



Automatic drill pipe lubrication system



Camera and lights for power rotary head and breakout system



90° rotational control cabin including heating and air conditioning



Bentonite supply, hydraulically lockable with by-pass



Drill pipe crane with remote control



"On board" pump



Pipe-site breakout system with adjustable exit angle 6° - 22°











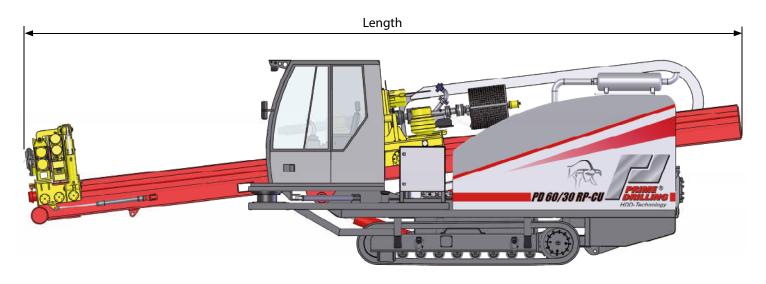






# PD 30 - 80 CU on crawler carriage

	PD 30	PD 40	PD 50	PD 60	PD 80
Pull force	30 t	40 t	50 t	60 t	80 t
Torque	18/22 kNm	18/22 kNm	22/30 kNm	22/30 kNm	30/45 kNm
Inclination angle	0° - 30°	0° - 30°	0° - 30°	0° - 30°	0° - 30°
Power rating/ motor	224 kW				
Noise volume max.	78 dB(A)				
Transportation length	8.5 m	8.5 m	9.5 m	9.5 m	9.5 m
Transportation width	2.5 m				
Transportation height	2.8 m				
Weight of basic rig	17,000 kg	17,700 kg	17,700 kg	19,500 kg	19,500 kg





## **Mud components**



## "On board" pump

	PD-X-1.000-C				
Power	87 kW	87 kW	87 kW	87 kW	87 kW
Speed	185 rpm	185 rpm	185 rpm	185 rpm	185 rpm
Diameter	6"	5,5"	5"	4,5"	4"
Volume rate	1,029 l/min	864 I/min	714 l/min	579 l/min	457 l/min
Output pressure	30 bar	36 bar	43 bar	53 bar	68 bar



## **Mud mixing units**

	PD M-1.000 0,8 E	PD M-1.000 1,1 E
Mixing pump	22 kW	22 kW
Transfer pump	22 kW	22 kW
Mixing volume	800 l/min	1,000 l/min
Container size, mixing cube	10 ft	10 ft
Container size per tank	20 ft	20 ft



## **Mud recycling systems**

	PD R-1.000 0,8 E	PD R-1.000 1,1 E
Loading pump	45 kW	45 kW
Transfer pump	15 kW	15 kW
Recycling power rate	800 l/min	1,100 l/min
Container size, platform	2 x 15 ft	2 x 15 ft
Container size tank	20 ft	20 ft



















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## **Directional drill pipes**

Size	Drill pipe length	Thread type Ø	Weight
3 ½ "	5,000 mm	2 %" IF	115 kg
3 ½ "	6,000 mm	2 1/8" IF	130 kg
3 ½ "	5,000 mm	3 ½" IF	125 kg
3 ½ "	6,000 mm	3 ½" IF	140 kg
5 "	5,000 mm	4 1/2" IF	190 kg
5 "	6,000 mm	4 1/2" IF	205 kg

## **Barrel reamer / Fly cutter**

Diameter	Thread type Ø pin x box	Thread type Ø pin x box	Thread type Ø pin x box
300 mm	2 %" IF	3 ½" IF	
400 mm			4 ½" IF
400 / 600 mm			4 1/2" IF
300 / 450 mm	2 %" IF	3 ½" IF	
450 / 600 mm	2 %" IF	3 1/2" IF	
600 / 750 mm	2 %" IF	3 ½" IF	
600 / 800 mm			4 ½" IF
750 / 900 mm	2 %" IF	3 ½" IF	
900 / 1,050 mm		3 1/2" IF	
800 / 1,000 mm			4 ½" IF

## Swivel spade-internal thread

Tensile load max.	Thread connection Ø	Weight
30 t	3 ½" IF	80 kg
40 t	3 ½" IF	82 kg
60 t	4 ½" IF	114 kg
80 t	4 ½" IF	177 kg

## **Our philosophy is SAFETY FIRST**

**PRIME DRILLING®** guarantees with its HDD-drill technical components utmost safety for trouble-free operation on site. PRIME DRILLING® supplies a wide range of accessories. You will find details in our catalogue.

# **Quality by high grade processing**





Welding works



Assembly works



Assembly works



Hydraulic assembly



Electronic assembly



Final inspection and testing of a drilling rig at PRIME DRILLING®



**PRIME DRILLING®** has been manufacturing high- quality Horizontal Directional Drilling Rigs and components on its 4,000 m² production area and 800 m² office area with more than 70 employees since the year 2000.

#### PRIME DRILLING GmbH

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