

# CORE DRILL RIGS

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Technical  
Catalogue  
2022



## HIDROPORT DRILLING // CORE DRILLING RIGS

As Hidroport Engineering, we set out to become a brand in core drilling rig production, with the experience we have gained as a result of a wide range of services we have provided to the hydraulic sector for many years. We know and implement the requirements of a reliable and long-lasting drilling rig with our experienced technical team, which knows best about the probable difficulties of drilling rigs in all types of drilling sites and has been carrying out machine revisions for many years. We offer the most advanced technology, high efficiency, with world-class safety features.







# HD 70 & 90 CORE DRILLING RIGS

HD70 is a surface core drill rig developed meticulously by Hidroport Engineering to run problem free in any drilling condition and formations for an extended period of time.

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Prime Mover

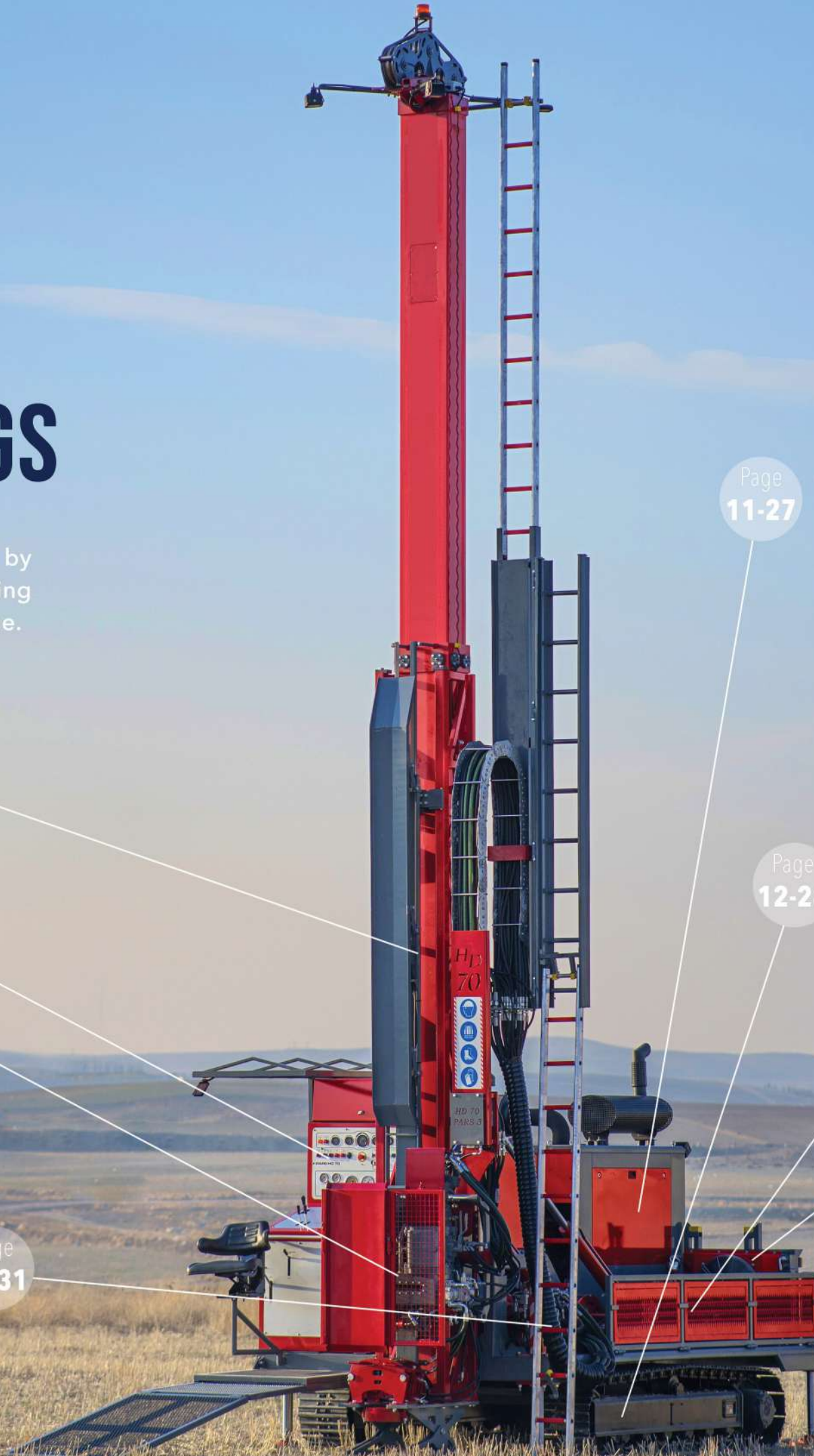
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Movement System

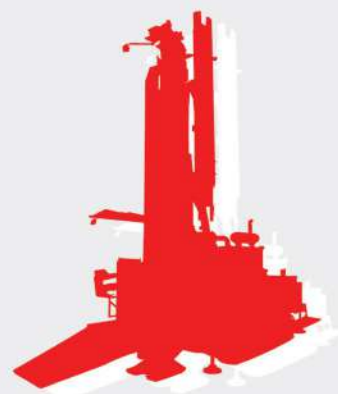
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Mud Pump

Cooler (AKG)







**HD 70**



**HD 90**



OUTER DIAMETER		DRILLING CAPACITY
PQ	114,00 MM	400 M
HQ	88,90 MM	750 M
NQ	69,90 MM	1000 M
BQ	55,60 MM	1500 M

OUTER DIAMETER		DRILLING CAPACITY
PQ	114,00 MM	900 M
HQ	88,90 MM	1500 M
NQ	69,90 MM	2000 M
BQ	55,60 MM	2500 M

*\* The figures in this table are estimates which have been calculated using the applicable pullback capacity of the drill. Actual drilling results may vary and will depend on in-hole tools, subsurface and other environmental conditions, drilling techniques and equipment used. Always verify manufacturers' rod depth ratings prior to use.*





# H D 9 0







## HD 90 >> DRILL HEAD

Rotation Engine	Rexroth 160 cc Axial Piston Variable Displacement Motor	
Transmission	4 Gears	
Jaw System	Spring or Nitrogen Piston	
Holding Capacity	20.000 kg	
Maximum Flow	1200 RPM	
Hydraulic Side Slip	30 cm	
Max. Coupling Diameter	117 mm	
Lubrication Tandem	Casappa (11 cc + 6 cc) 7,2 L / min. max. flow	
Ratios	1st	6.27:1
	2nd	3.12:1
	3rd	1.75:1
	4th	1.00:1

## HD 90 >> TORQUE AND RPM RATINGS

*\* Hydraulic motor at maximum / minimum displacement.*

	Speed (No Load)	Torque (Stall)	
	RPM	Nm	lbft
1st Gear	122 - 199	7955 - 5268	5,867 - 3,885
2nd Gear	246 - 400	3960 - 2422	2,921 - 1,786
3rd Gear	439 - 714	2220 - 1355	1,637 - 999
4th Gear	769 - 1,200	1268 - 775	935 - 571

## HD 90 >> DRILL MAST AND FEED SYSTEM

Feed Stroke	3,80 m
Pull Cap. @ 280 bar	31.500 kg
Thrust Cap. @ 280 bar	17.500 kg
Rod Pull Capacity	3 or 6
Drilling Angle	45° - 90°
Telescopic Mast Lenght	3.5 m.





### PRIMARY PUMP

**Type** Axial piston, variable displacement load sensing, pressure compensated with low pressure standby

**Max. Flow** 232 - 262 liter / min. (Diesel Engine 1600 - 1800 RPM)

**Max. Working Pressure** 280 - 350 bar

\* We are using Rexroth pump sets on our systems. According to customer demands and variable lead times, Kawasaki, Danfoss and Parker brand products can also be used.

### SECONDARY (2ND) PUMP

**Type** Axial piston, variable displacement load sensing, pressure compensated with low pressure standby

**Max. Flow** 96 - 108 liter / min. (Diesel Engine 1600 - 1800 RPM)

**Max. Working Pressure** 350 bar

\* We are using Rexroth pump sets on our systems. According to customer demands and variable lead times, Kawasaki, Danfoss and Parker brand products can also be used.

### THIRD (3RD) PUMP

**Type** Axial piston, pressure compensated

**Max. Flow** 45 - 50 liter / min.

**Max. Working Pressure** 280 bar

\* We are using Rexroth pump sets on our systems. According to customer demands and variable lead times, Kawasaki, Danfoss and Parker brand products can also be used.

### MIXER AND ROTATION LUBRICATION

**Type** Gear Pump

**Max. Flow** 35 liter / min.

**Max. Working Pressure** 280 bar

**Rotation Lubr. Pumps** Gear Pump

**Max. Flow** 15 liter / min.

**Max. Working Pressure** 280 bar







## HD 90 >> PRIME MOVER

**Brand** Ford, Cummins or Volvo brand motors will be used

**Maximum Power** 320 - 500 hp (238 - 374 kw)

**Maximum RPM** 0 - 2200 RPM

**Emission Class** Will vary according to the selected motor model

**Fuel Consumption** Euro-3, Euro-5, Euro-6

*\* Will vary according to the selected model*



*\* A mechanical engine is used as a visual representation for the Prime Mover. Electronic motor will be used in HD90 rigs.*





## HD 90 >> MOVEMENT SYSTEM

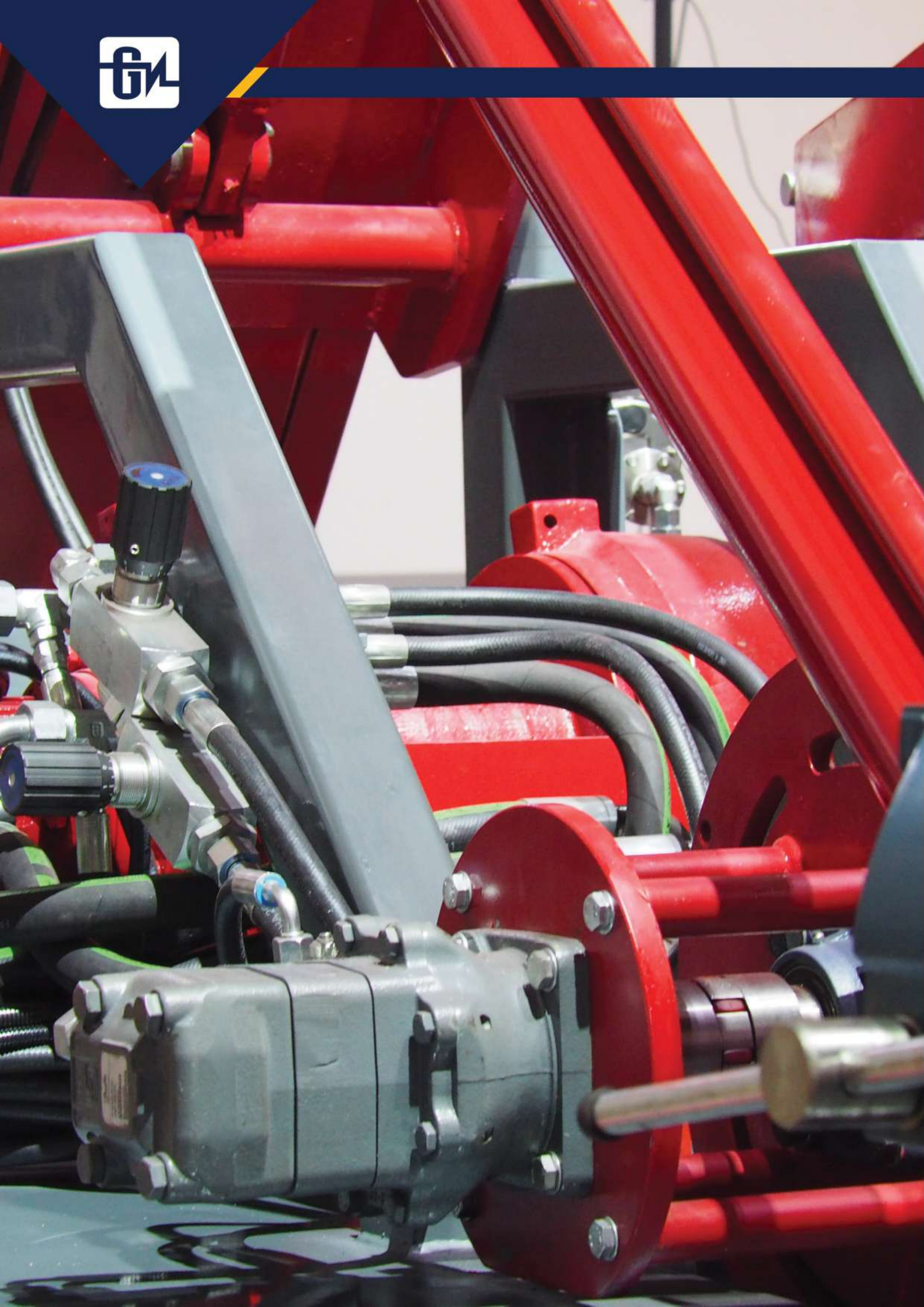
Undercarriage Model	IVA Johann Track (Germany)
Max. Dynamic Capacity	15 ton
Track Type	Double Speed
Control	Mechanical or Remote Control (Optional)
Speed	2,3 - 4,3 km / h
Gearbox Type	706CK - 18.000Nm
Gradeability	Max 30° - 225 Bar
Total Height	3073 mm
Total Length	600 mm
Total Width	400-500 mm

\* Hidroport Engineering is the official distributor for German undercarriage producer

**IVA** Johann GmbH  
Baumaschinentechnik







## HD 90 >> MAIN LINE HOIST

Main Winch	Braden or equal counterpart
Hydromotor	Rexroth Hydraulic Motor, Double Speed, Variable Displacement
Hook Load (Single Rope) Empty Drum	18.000 kg (18 ton)
Elevation Speed (Single Rope) Empty Drum	72 meter/min. and 40 meter/min.
Main Winch Steel Rope	18 mm (28 meter)
Minimum Rupture Strength	20.900 kg
Foot Brake Capacity	HWT

## HD 90 >> WIRELINE WINCH

Rotation Motor	Sauer/Danfoss OMT400 400 cc / Hydraulic Moor with Speed Brake
Pulling Force	
Empty Drum	1200 kg
Full Drum	350 kg
Pulling Speed	
Empty Drum	100 m/min.
Full Drum	250 m/min.
Drum Capacity 4.8 mm for (3/16") Rope	2.200 m
Minimum Rupture Strenght	2.250 kg

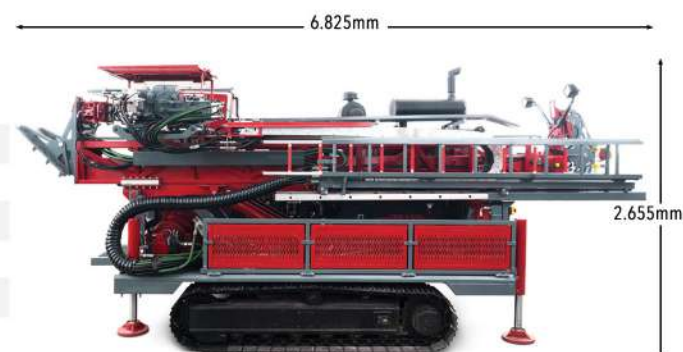




## HD 90 >> DIMENSIONS

### Transport Position

Width	2.300 mm
Lenght	6.825 mm
Height	2.655 mm



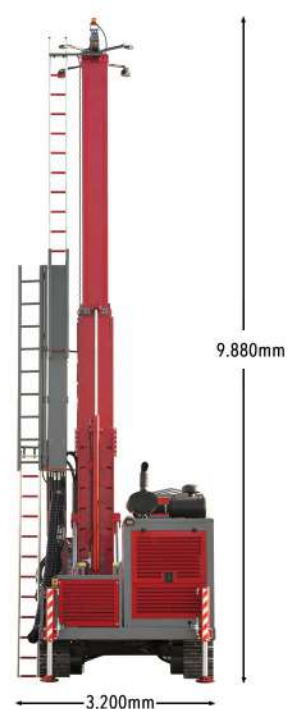
### 45° Inclined Mast (Wide Open)

Width	3.200 mm
Lenght	7.440 mm
Height	7.110 mm



### 90° Vertical Mast (Wide Open)

Width	3.200 mm
Lenght	7.030 mm
Height	9.880 mm







## HD 90 >> MUD PUMP

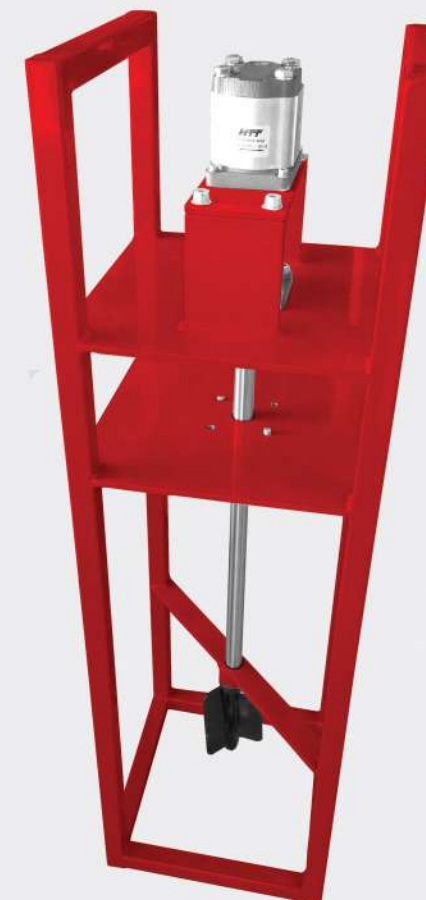
Maximum Flow	135 Liter / min.
Working Pressure	70 Bar
Maximum Pressure	100 Bar
Hydromotor	Eaton Vickers 130 cc, Hydraulic Motor



\* Mud Pump Flow Control

## HD 90 >> MUD MIXER

Maximum Flow	2300 rpm
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#### SAFETY SWITCH SYSTEM

It minimizes the operational faults and ensures the safety of the main winch against breakage or jamming by means of the rod, one end of which is attached to the rope.

#### LIGHTING & LADDER SYSTEM

Wide-angle, high-performance led lighting system enables a suitable environment for working by illuminating the field of view of the drilling point and its surroundings. With the foldable mast ladders, workers can climb up the ladder and do their work safely.

#### FOLDABLE FRONT and SIDE PLATFORMS

There are foldable platforms and parts placed on the sides and front of the machine to facilitate the work of the personnel working in the drilling operation.

#### DRILL HEAD SAFETY GUARD

In order to fully apply the occupational health and increase the safety measures, rotary drill head kept in this protective cage housing to prevent any kind of accidental contact of personnel.

#### EMERGENCY STOP BUTTON

Emergency stop buttons have been placed to the critical points of the machine to be reached easily in order to increase effective usage and emergency standards.



#### OPERATOR-FRIENDLY CONTROL PANEL

The design of the control panel is being carried out with the feedbacks obtained from the drilling areas. So the indicators, push-buttons and levers positioned at the key points to allow the operator to work most efficiently. Thereby, the operator can manage the whole process from the operator's cabin without being exposed to any distractions and thanks to the seat placed inside the cabin, the operator has the opportunity to work comfortably.



SAFETY SWITCH



LIGHTING & LADDER SYSTEM



FOLDABLE FRONT PLATFORM



DRILL HEAD SAFETY GUARD



FOLDABLE SIDE PLATFORM



OPERATOR SEAT





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