

# PAT-Drill 501 4x4

## Truck Mounted Drilling Rig

PAT-Drill 501 4x4 Iveco truck mounted drill rig for Sedimentary rock mud drilling 150-300 mm (6"-12") diameter using the onboard mounted 8x12 duplexpiston mud pump to depths of 300 m



For Down-the-hole-hammer and mud rotary drilling up to 300 m depth 150-245 mm (6"-10") diameter – according to tool selection.

Hard rock air drilling with auxiliary compressor unit with 6" DTH hammers.



PAT-Drill 501 4x4 mounted on IVECO 4x4 off-road truck 15,000 GVW. (Available left or right steering)

Drilling functions powered by a deck mounted engine - with a 2nd engine added to power the optional high pressure mud pump.

Mast 6.50 m operates with 3 m drill pipes. moving 4.65 m drill stroke, Mast raised to vertical from storage position.

Two hydraulic motor provide high torque.

Rig table 350 mm diameter opening. Flush drill pipe 76/90 mm diameter larger diameter best for efficient deep mud drilling.

# TECHNICAL DATA & SPECIFICATION

## RECOMMENDED HOLE RANGE (Depths to 300 m)

Medium & Hard rock, DTH-Hammer drilling :  
(Needs a seperated air compressor)

5" - 6" DTH-Hammer with capacity to drill  
6" - 9 5/8" (150-245 mm) diameter.

Soft formations, rotary 'Mud' drilling:

(Need mud pump option or seperate mud pump)

Drag bit or PDC drill bit 6" - 12" (150-305 mm) diameter

## TOP ROTATION HEAD

Double reduction gearbox, 2 hydraulic motors driven, and variable rotation speed. Enable to swing-a-side for easy casing installation. 50 mm (2") Air/Water pipe work & flanged drill pipe adaptor inside diameter, sub joint 2 3/8 API Reg Mod

Gear box ratio	4.75 : 1
Speed	0 – 65 rpm
Max. torque	5,230 Nm

## MAST

All steelwork, 6.50 metres high, break-out table to open 350 mm. diameter. Mast raised to vertical from storage position by a hydraulic cylinder. The machine is also equipped with 2 LED flood lights for night time operation.

## FEED SYSTEM

Rotation head is raised and lowered by a hydraulic cylinder and heavy-duty transmission chain. Head travelling stroke: 4.65 metres

Pull up - Capacity	6,540 kg
Max. speed	32 metres/min

## OPERATION CONTROL PANEL

5 levers: controlling rotation head, pull and feed  
2 regulators for rotation speed and pull/feed weight  
5 system pressure gauges

## HYDRAULIC POWER PACK

Engine: 69 hp (50.7 Kw) at 2800 rpm, 4 cylinders, YANMAR 4TNV98-NSA turbocharged diesel engine, water-cooled, electric start.

Hydraulic system: Triple gear pump type, system pressure 250 bar max, 400-litres tank capacity.

Fuel tank: Separated from truck fuel tank 75 litres



## MUD PUMP (Option)

High pressure Mud pump. Duplex 8x12 Piston Mud pump, mounted on board of Rig platform.

capacity, Flow:	800 litre/min
Pressure:	25 bar

complete with Hoses, Strainer, Mixer and mud pump tools, spares. Mud pump power by deck mounted Yanmar engine 45 hp.

## WATER/FOAM INJECTION PUMP

Triple piston pump driven by a hydraulic motor.

Motor speed	450 rpm
Max. displacement	10 litres/min
Max.working pressure	30 bar

## STABLISING JACK

4 hydraulic Jacks, with extention support.

## AIR LUBRICATION SYSTEM

Fitted lubricator of Venturi-type for drip lubrication-fully adjustable flow control-for DTH-Hummer

Max pressure	40 bar
Oil tank capacity	7 litres

## PIPE RACK

Each side containing: (for 3 metre)	25 pcs. 90 mm pipes
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## DRILL PIPE

Drill pipe length:	3 metres
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## Additional buit in features

1000 Kg mast head winch  
Water Tank - under chasis for foam pump  
Toolboxes - hinged & lockable  
Washdown hose & reel  
Manual 'rig down pump' Emergency use when deck engine fails

## TRUCK

IVECO ML 150E24W 4x4 Truck. 15,000 GVW Euro3 176 Kw Turbocharged diesel 6 forward gear both high & low ratio Parabolic sprung axles. On/Off-road Tyres 11R 22.5 (Available left or right steering).

## DIMENSIONS

Overall length :	7.0 m
Overall width :	2.56 m
Overall height :	3.90 m
Weight (with mud pump option, without drill pipes)	12,300 Kg

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