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 GWW. (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.
RECOMMENDED HOLE RANGE (Depths to 300 m)
Medium & Hard rock, DTH-Hammer drilling:

*Needs a separated 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 separate 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/feeder 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.

- Max pressure: 40 bar
- Oil tank capacity: 7 litres

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

DRILL PIPE
Drill pipe length: 3 metres

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

STABILISING JACK
4 hydraulic Jacks, with extension support.

AIR LUBRICATION SYSTEM
Fitted lubricator of Venturi-type for drip lubrication-fully adjustable flow control for DTH-Hammer

- Max pressure: 40 bar
- Oil tank capacity: 7 litres

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DIMENSIONS
Overall length: 7.0 m
Overall width: 2.56m
Overall height: 3.90m
Weight (with mud pump option, without drill pipes): 11,960 Kg