



SUPPORT EQUIPMENT

GTD MUD PUMPS

PISTON & CENTRIFUGAL
MUD PUMP OPTIONS

SPEC SHEET

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GTD MUD PUMPS

Mud pumps are essential components of drilling rigs. GTD offer a range of both **Centrifugal** and **Piston** pumps. Choosing the right pump/s to match the needs of your operation is crucial, as there are benefits and considerations for each pump type.

Often a combination of two pumps is preferential when outfitting a rig to enhance the efficiency and flexibility of your drilling operations. **The GTD team is here to advise and help you make the right decision for your operation.**

WHY WE NEED MUD PUMPS

Mud pumps are indispensable in drilling shallow geothermal and water well boreholes. They circulate drilling mud that serves multiple critical functions: cooling and lubricating the drill bit, maintaining borehole stability, and carrying drill cuttings back to the surface. Mud pumps must deliver the necessary

pressure and flow rate to push the drilling mud from the mud tank or recycling system, through the drill string, and then back to the surface. As the drilling depth increases, a more powerful pump is required — this is also true when dealing with drilling mud of higher viscosity.

Reciprocating Piston Pumps: These pumps use pistons to create pressure and circulate the drilling mud. With the pistons reciprocating within a cylinder, they draw in and expel mud with each stroke. Due to their positive displacement nature, piston pumps possess high-pressure capabilities. They generate significant hydraulic pressures to overcome resistance during drilling and ensure efficient mud circulation. Piston pumps are typically reconditioned, rather than replaced, so over time their higher purchase price is offset. It is advisable to take this reconditioning time into account to mitigate any servicing downtime.

Centrifugal Pumps: For geothermal drilling operations requiring a balance of high flow rates and pressure, centrifugal pumps can be an excellent choice. These pumps work on the principles of centrifugal force. A rotating impeller with curved vanes spins within the casing. The impeller's rotation creates centrifugal force, pushing the drilling mud radially outward. While these pumps produce high flow rates, they typically operate at lower pressure ranges than piston pumps.

Outside of Europe, we advise our customers to outfit their rigs with both a reciprocating 'Piston Pump' and a Centrifugal Pump. The Piston Pump provides high pressure, excelling in overcoming drilling resistance and ensuring thorough mud circulation. Alternatively, the Centrifugal Pump can be utilised to deliver high flow rates at a lower pressure when necessary. This dual pump setup can handle a broad range of drilling conditions, enhancing the adaptability and productivity of the operations.

In Europe, it is more typical to have a dual pump setup comprising a Single Stage Centrifugal pump and a Multi Stage Centrifugal pump. The Single Stage pump delivers a high flow rate at lower pressure, or if necessary, the Multi Stage pump is invaluable in scenarios which require higher pressures.

Making the right choice. We have a wealth of real-world local knowledge of 'what works where' — so do reach out to determine what would be the most appropriate Mud Pump setup to outfit your rig with. There are different setups and common configurations depending on your region.



GTD MUD PUMP OPTIONS

**TALK TO US TO ESTABLISH WHAT'S BEST
SUITED FOR YOUR DRILLING OPERATION &
BUDGET**



SINGLE ACTION 4.5 × 5.5 TRIPLEX PISTON MUD PUMP

Model: MP1000PP

Flow 264 gpm (1,000 lpm)

Head 1,300' (400 m)

Pressure 580 psi (40 bar)

Core Benefits High Pressure & High Flow

Considerations Purchase price, down time when rebuilding

Feature Ceramic Liners



SINGLE ACTION 5 × 6 TRIPLEX PISTON MUD PUMP

Model: MP1200PP

Flow 317 gpm (1,200 lpm)

Head 1,300' (400 m)

Pressure 580 psi (40 bar)

Core Benefits High Pressure & High Flow

Considerations Purchase price, down time when rebuilding

Feature Ceramic Liners



SINGLE ACTION 6 × 6.5 TRIPLEX PISTON MUD PUMP

Model: MP2000PP

Flow 528 gpm (2,000 lpm)

Head 1,300' (400 m)

Pressure 580 psi (40 bar)

Core Benefits High Pressure & High Flow

Considerations Purchase price, down time when rebuilding

Feature Ceramic Liners



SINGLE STAGE 4 × 3 × 13 CENTRIFUGAL MUD PUMP

Model: MP-4x3x13CP-CrMo

Impeller 13"

Flow 317 gpm (1,200 lpm)

Head 558' (170 m)

Pressure 246 psi (17 bar)

RPM 2400

Material High Chrome Alloy SA05 impeller & body

Core Benefits High flow, long lasting

Considerations Lower pressure

The performance figures quoted are intended for guidance purposes only and should be interpreted as indicative, not definitive. These figures were produced during real-world testing on drill rigs, instead of being derived from theoretical calculations. Therefore, they are subject to potential margins of error due to variable test conditions & environmental factors.



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