

# WATER-POWERED DRILLING

## INFORMATION SHEET: HIGH PRESSURE WATER PUMPS



The Water pumps that are offered by Wassara are designed and made for the purpose of driving water powered hammers. This means that the pump is suitable for providing the flow and pressure that the Wassara hammer needs to do the drilling as well as to handle the general work environment that is on and around a drill site.



The pump should be chosen with consideration to what hammers sizes it should drive. This is important both for having a pump that can be adjusted to match what is needed from a drilling point of view, but also to find an energy efficient solution

### Our two general versions

1. Diesel powered –most versatile as it can operate in most areas
2. Electric – quiet and very energy efficient but do require sufficient electric power

### Features

Common features that are delivered in most pumps

- Canopy with sound insulation, lifting eye, forklift tunnels in the base frame
- A robust base frame on to which all the components are mounted
- Main control panel with readings, settings, possible warnings and all controls for the pump
- E-stops
- Remote control, often by both wire as well as radio
- Booster pump for the cases where the inlet pressure is not sufficient
- Police filter 50 µm, to protect the pump
- All components can easily be drained (important in freezing conditions)
- Pressure regulating mechanism, often pneumatic (hence also a compressor)
- Safety valve that will protect the pump

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The pumps are designed to be practical and easy to operate, however the operator needs to understand the principles of a water pump to be able to handle the pump efficient.

The experience of designing pumps for many years has resulted in pumps that require a minimum of service and can be expected to produce day in and day out. Some maintenance is, however, needed; such as changing seals, valve seats, parts in the regulation mechanism and sensors when needed.

### Suppliers

We cooperate with several suppliers to build the pumps that meet expectations. Our current two main suppliers are:

1. Kamat– Witten, Germany
2. Ripamonti – Ornavasso, Italy

### Special features

- If you have specific needs, we can provide pumps with features such as:
- Hydraulic motor that drives the pump head
- Frequency converter to control the speed of the pump motor (E)
- Pressure reading on the remote controls
- Toolbox, for keeping service tools and other auxiliary equipment
- Flush mode for enabling high water flows
- ATEX certified electronics for operations in hazardous zones
- Diesel engines that match the emission requirements at the drill site
- Various electrician versions for handling different electric grids (V, Hz)
- Electric heater for operation in cold climate

### General chart of common models:

Pump size:	Small	Medium	Large
Model	WASP 80	WASP 100	WASP 200
Capacity	~300 l/min @ 200bar	~450 l/min @ 200bar	~650 l/min @ 200bar
Alternative			815 l/min @ 150 bar
Hammer	W50-W80	W70-W100	W100-W200

### When defining a pump consider the following

- What range of flow and pressure that the pump will operate in
- How to power the pump; diesel or electric is the most common versions
- Specific features need

Based on the above specifications an offer can be provided.