Wirth Slurry Pump

Piston-diaphragm positive displacement pump

HMH positive displacement Wirth pumps are supporting customers for more than 60 years in different applications, transfering abrasive slurries with high solid concentration against high pressures.

Product description

The Wirth positive displacement pump is available as a triplex single acting design mostly, in which an electric motor driven crank mechanism is connected via connecting rods and crossheads to 3 pistons. At each forward stroke hydraulic oil is pumped into housings which are equipped with a flexible diaphragm. The diaphragm separates and protects the hydraulic oil and the moving parts behind it from the slurry which is in front of the diaphragm.

During the discharge stroke of the piston, hydraulic oil will move the flexible diaphragm forward, slurry which is present at the other side of the diaphragm is discharged through the discharge non-return valve. When the piston moves backward, the suction pressure on the other side of the diaphragm will push the diaphragm backwards, suction pressure will fill the diaphragm housing with slurry through the non-return suction valves.

Duplex Double-Acting design is also available in which two pistons are discharging in both directions over the piston forward and backward movement.

Benefits

- Limited operating cost (OPEX) and total cost of ownership, when compared with other transportation methods
- System availability above 97%
- Equipment efficiency above 90%
- Low CO² emissions
- Operational life time above 30 years
- Supporting the global mining effort on reducing water consumption for slurry transportation

Key features

- Rugged, heavy-duty design
- Minimized number of wear parts with long lifetime
- Equipped with internal lubrication and pressure relief system
- If required suitable for high temperature applications
- Fluid end can be supplied in stainless steel for corrosive slurries
- High pressure capability reduces the number of pumping stations in difficult terrain
- Up to 50 % less suction and discharge pulsation, compared to other piston diaphragm pumps in the market



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Product operating range





Technical specifications

Wirth heavy duty slurry pumps are available in two main different product lines. The exact specifications of a product depend on customer requirements, and consequently the highest quality and a tailor-made solution are guaranteed.

	ТРМ	DPM
Flowrate	900 m3/h	900 m3/h
Discharge Pressure	300 bar, 4351 Psi	300 bar, 4351 Psi
Max. Power (kW)	3000 kW, 4080 hp	2200 kW, 2992 hp
Cylinder	Triplex	Duplex
Acting	Single	Double

Data is subject to confirmation by the manufacturer.

