

HM 365.21

Screw pump



Description

- investigation of the pumping behaviour of a screw pump
- part of the GUNT FEMLine

Screw pumps are positive displacement pumps. They are able to provide continuous delivery of even viscous media without pulsation or turbulence. Their pump housing contains two or more rotors that rotate in opposite directions with an external screw thread profile. As the threads of the screws engage, the fluid is transported. Depending on the thread pitch, very high pressures can be achieved. Screw pumps run very smoothly, which is why they are often used in lifts and as fuel pumps in oil burners.

HM 365.21 is a screw pump that is delivered ready for installation, mounted on a plate. The pump is installed in the supply unit HM 365.20 with just a few simple steps and connected via hydraulic hoses. A safety valve protects the pump against positive pressure. If the pressure becomes too high, a bypass is opened and the pressure is released to the low pressure side. For power supply, the pump is connected to the drive unit HM 365 with a V-belt.

The pressure, temperature, and flow sensors are located in the closed oil circuit of supply unit HM 365.20. The measured values are read from digital displays on the supply unit and can be transmitted simultaneously via USB directly to a PC, where they can be analysed using the included software.

Learning objectives/experiments

- in combination with HM 365 and HM 365.20
 - ▶ recording of pump and system characteristics, operating point
 - ▶ power requirement, hydraulic power, pump efficiency

Specification

- [1] investigation of a screw pump
- [2] operation with HM 365.20 Oil pump supply unit
- [3] powered by HM 365 Universal drive and brake unit
- [4] Safety valve protects against over-pressure in the system
- [5] display of temperature, pressures and flow on the display unit of HM 365.20

Technical data

Screw pump

- flow rate per rotation: 3,1 cm³
- max. pressure: 40bar
- safety valve: 40bar
- permissible inlet pressure: -0,7...3bar
- max. speed: 3000min⁻¹

LxWxH: 380x250x330mm

Weight: approx. 12kg

Scope of delivery

- 1 screw pump

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Required accessories

070.36500	HM 365	Universal drive and brake unit
070.36520	HM 365.20	Oil pump supply unit