

HM 365.23

Vane pump



Description

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

Vane pumps are designed with either constant displacement volumes or adjustable displacement volumes. These pumps consist of a housing, in which an eccentrically installed cylinder rotates (rotor). Rotary vanes are spring-mounted to radial guides inside the rotor. During operation, the spring-force ensures that the rotary vanes run along the inner wall of the housing and an enclosed space is formed between them. The pumping medium is transported between the rotary vanes and the housing wall.

HM 365.23 is a vane pump with adjustable displacement volume 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 characteristics, system characteristics and operating point
 - ▶ power requirement, hydraulic power, pump efficiency

Specification

- [1] investigation of a vane 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 overpressure in the system
- [5] display of temperature, pressures and flow on the display unit of HM 365.20

Technical data

Gear pump

- max. displacement volume: 10cm³
- max. pressure: 100bar
- safety valve: 110bar
- nominal speed: 900...1500min⁻¹
- transmission ratio: 1:2

LxWxH: 450x300x420mm
Weight: approx. 15kg

Scope of delivery

- 1 vane pump

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Required accessories

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