

# HM 365.24

## Internal gear pump



### 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 an internal gear 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 rate on the display unit of HM 365.20

### Technical data

Internal gear pump

- flow rate per rotation: 1,7cm<sup>3</sup>
- max. pressure: 180bar
- safety valve: 110bar
- nominal speed: 600...3000min<sup>-1</sup>

LxWxH: 450x250x310mm  
Weight: approx. 15kg

### Scope of delivery

- 1 internal gear pump

### Description

- investigation of the pumping behaviour of an internal gear pump
- part of the GUNT FEMLine

Internal gear pumps, or crescent pumps, are characterised by their low pulsation, high efficiency, low level of noise, and high operating pressures. An internal gear drives an external toothed ring. Since the driving gear is mounted on an eccentric bearing, clearances result in the gaps between the gear and ring. These clearances form the delivery volume. A crescent-shaped seal between the gear and the ring forms the enclosed volume that is necessary to reach the required pressure.

HM 365.24 is an internal gear 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 is too high, an internal 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.

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Required accessories

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