

ET 165 Compression refrigeration system with HM 365

Part of the GUNT-FEMLine

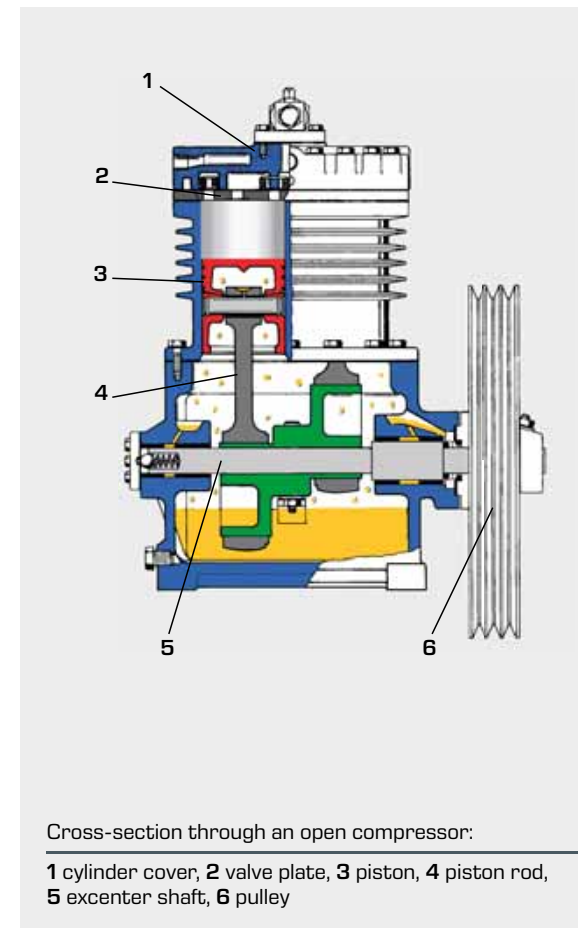
- principle of function of a compression refrigeration system
- open compressor with variable speed
- measuring the mechanical drive power
- determination of the compressor efficiency
- effect of the compressor flow rate on the refrigeration circuit
- drive via the universal drive and brake unit HM 365



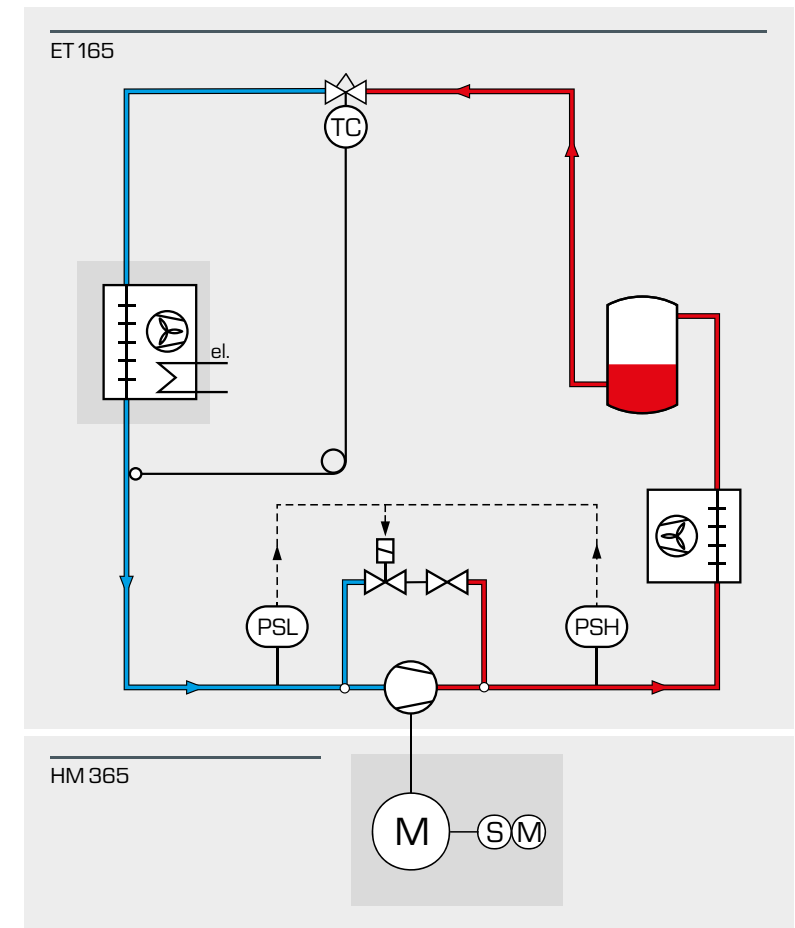
HM 365 Universal drive and brake unit



ET 165 Refrigeration system with open compressor

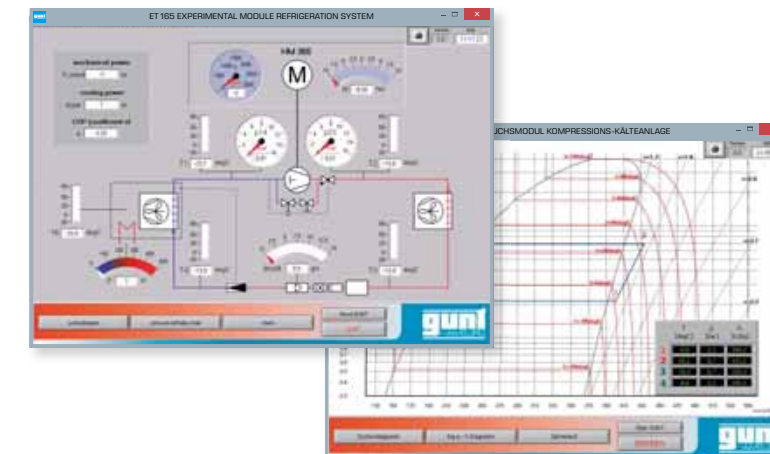


The open compressor of ET 165 is, unlike the hermetic compressor, driven via an external electric motor. Open compressors are used in commercial cooling for medium to high capacities. An advantage is that the flow rate can be easily adjusted via the drive speed. This is done via a speed-controlled electric motor or via different transmissions of the belt drive.



The refrigeration circuit of ET 165 consists of an open compressor, an air-cooled condenser, an expansion valve and an evaporator in a refrigeration chamber. To represent a cooling load, the refrigeration chamber can be heated electrically. Pressure switches protect the compressor against too high or too low pressures by opening a bypass to the compressor.

The drive speed of the compressor is adjustable. This examines the effect of different delivery capacities on the refrigeration system. By measuring the drive speed and drive torque the compressor can be thoroughly examined, e.g. determining the efficiency.



The software enables the clear representation of the measuring data on the PC. Time graphs can be recorded and stored. A very useful property is the display of the cyclic process in the log p-h diagram. Using a spreadsheet program (e.g. MS Excel) the stored data can be analysed. The measured data are transferred to the PC via a USB interface.