IPE-COMP EM, R744 (CO2)

Application

- Reproducible thermodynamic conditioning of mechanical and electrical refrigerant compressors
- The test bench consists of a temperature chamber (Heaterbox) and a thermodynamic load unit (Load-Unit)
- The modular design allows different application areas
  - Fatigue and endurance measurements (Load-Unit is a gas circuit)
  - Precise development measurements (Load-Unit is a complete refrigerant cycle)
  - Basic acoustic investigations (NVH-measurements)

Heaterbox Load-Unit

Features

The construction of the Load-Unit is designed for an intrinsically safe operation.
Due to the modular design, the load units can be selected as required.

The Load-Unit is automatically controlled via a PC integrated in the heaterbox and the IPEmotion software. Automated test sequences are possible.
Precise control of low and high refrigerant mass flows are possible.

The high reproducibility of the measurement results is the basic requirement for successful component development.
The highly accurate measurement of oil circulation rate and mass flow provide a reliable picture of the test specimen.

Facts

High pressure	bar,abs	60 ... 135	Superheat	K	5 ... 50
Low pressure	bar,abs	15 ... 60	Massflow	kg/h	30 ... 400
Oil measurement	m-%	0 ... 10	Air temperature	°C	-40 ... 150
Compressor drive		Heaterbox has options to drive mechanical or electrical compressors.			
Dimensions	m	L 3.9 x B 1.4 x H 2.7			
Vapor content	%	85 – 100			

On-site requirements

- Coolant[1]: 6°C +/- 0,5 K, 7.800 l/h, Δp ≥ 0,8 bar, 1,5 bar,g
- Electrical connection[2]: 400 V, 50/60Hz, Fuse: 63 A + 32 A
- Ambient: 20 to 30°C, max. 70 %

[1] Coolant must be 30 % ethylene glycol, rest water [2] Electrical consumption depends on operation point

More information needed?
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