HFF300

REFRIGERANT TRANSFER TRAINER WITH SEMI HERMETIC COMPRESSOR (AIR/AIR)

Experimental capabilities

- **Identification of the components of a refrigeration system**
- **Commissioning and adjustments (regulator, expansion valve) of a refrigeration system**
- **Refrigerant recovery and charging procedure (requires OUT134 additional tooling)**
- **Control component adjustment (KVP valve, LP pressure switch, HLP pressure switch)**
- **Maintenance operations on a refrigeration installation, replacement of the dehydrator, replacement of a piece of LP line, replacement of compressor oil etc ... (Requires OUT134 add-on tooling)**
- **Plot the refrigeration cycle on an enthalpy diagram to check the operation of the installation.**
- **Use of R513 or R134a fluid to be specified.**

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version : FT-HFF300-STD-A

HFF300

Operating principle

The HFF300 trainer is designed to train learners in the handling of refrigerants. The installation is based on a refrigeration cycle operating with R134a or R513. It includes the main components of a positive installation, a compressor, a condenser, a liquid tank, an oil separator, a control solenoid valve, an expansion valve, an evaporator and an accumulator. Schrader service valves and fittings allow learners to connect a manifold for loading, recovery and operation verification operations.

The cold room part is simulated by a cabinet. The cabinet door is equipped with an enthalpy diagram with erasable surface (A3 format). A thermostatic control box will control the operation of the solenoid valve (pump-down regulation). Two switches placed on the box are used to stop the operation of the solenoid valve and condenser (this facilitates the adjustment of the pressure switches) and a button allows to bypass the pressure switches to facilitate the removal of manifolds.

The rugged design of this equipment makes it perfectly suited for use in schools. Its anodized aluminum structure on wheels gives it great robustness and flexibility of integration into your premises. In the lower part, the bench has a storage area equipped with two doors with key closure (storage of tools).

The manufacture of this equipment complies with the European machinery directive. This equipment can be used alone or combined with other compatible equipment in our range (see last part of this document).

Illustrations

1. Semi-hermetic compressor with service valves
2. Safety valve on the HP line
3. Air condenser with forced ventilation
4. Pressostatic drive for condensation pressure regulation
5. KVR type pressure regulating valve
6. Steel liquid tank
7. Oil separator with compressor return line
8. HLP safety pressure switch
9. LP control switch for pump-down
10. Ball valve with Schrader fitting to isolate sections of piping and allow fluid recovery
11. Filter dryer
12. Fluid status indicator
13. Control solenoid valve
14. Internal equalization regulator
15. Forced convection evaporator power
16. Evaporation pressure regulating valve type KVP
17. Accumulator

Technical details

The trainer also includes:

-a power supply box with differential circuit breaker, punch stop, general disconnector and a 2P + T socket to connect accessories (pump, recovery station ...)

-a digital thermostatic controller with probe in the chamber. The box controls the solenoid valve (pump-down regulation).

-Two switches stop the operation of the condenser and solenoid valve (adjustment of pressure switches).

-a push button allows to pass the pressure switches to facilitate the removal of the manifold

-a cold room simulated by a cabinet. The cabinet door is equipped with an enthalpy diagram with erasable surface (A3 format)

-a storage area in the lower part of the chassis with access by two doors. A key lock secures the storage.

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Basic tool kit provided

- Large format wrench
- Small format wrench
- Flat screwdriver
- Phillips screwdriver
- Screwdriver tom thumb flat
- Tom Phillips thumb screwdriver
- Flat key of 10
- Flat key of 11
- Tape measure
- Refrigeration ratchet wrench

Spare parts kit provided

- Deshydrateur
- Liquid indicator
- Thermostatic expansion valve with internal pressure equalization and orifice
- Solenoid valve magnetic coil
- Maintenance cloths
- Cleaner
- Presto bubble leak detector
- A batch of nuts

Services required

- Electrical supply : 230 Vac – 50 Hz – 16 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 1670 x 700 x 1900
- weight (Kg): 160

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Fluidic diagram
- Enthalpic diagram
- Certificate of conformity CE

Options

- Specific tool kit for refrigerant
- Ref : OUT 134

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