

# HFF200



## REFRIGERANT TRANSFER TRAINER WITH SEMI HERMETIC COMPRESSOR (WATER/WATER)



### PEDAGOGICAL APPLICATIONS

- Identification of the components of a refrigeration system
- Commissioning and adjustments (regulator, regulator) of a refrigeration system
- Refrigerant recovery and charging procedure (requires OUT134 additional tooling)
- Control component adjustment (KVP valve, BP pressure switch, HBP pressure switch)
- Maintenance operations on a refrigeration installation, replacement of the dehydrator, replacement of a piece of BP 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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As part of the continuous improvement of our products, this technical description is subject to change without notice.

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## PRINCIPLE OF OPERATION

The HFF200 bench 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 water condenser, a liquid tank, an oil separator, a regulating solenoid valve, a regulator, a water evaporator and a liquid blow bottle. Schrader service valves and fittings allow learners to connect a manifold for loading, recovery and operation verification operations.

Energy dissipation is done by a closed-loop water circuit including a unit heater to dissipate calories and a buffer balloon. A thermostatic control box will control the operation of the solenoid valve (pump-down regulation). A button allows the pressure switches to be passed to force the operation of the compressor and 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 a door 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).

## Technical specifications

1. Semi-hermetic compressor with service valves
2. Safety valve on the HP line
3. Plate exchanger type water condenser
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. HBP safety pressure switch
9. BP 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. Plate exchanger type water evaporator
16. Evaporation pressure regulating valve type KVP
17. Anti-liquid blow bottle volume 1.5L

The bench also includes:

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

-a digital thermostatic controller with probe on the water circuit. The box controls the solenoid valve (pump down regulation).

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

-a closed-loop water network for calorie dissipation including a buffer bottle, expansion tank, circulator, unit heater, water flow meters and two flow control valves.

-The bench is pre-filled with a water/glycol mixture

-a storage area in the lower part of the frame with access by a door. A key lock secures the storage.

# HFF200



## 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

- Dehydrator
- 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

## Installation specifications

- Power supply: 230 Vac – 50 Hz – 16 A
- Power supply type: 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 1500 x 780 x 180015007801800
- Weight (kg) : 160160

Note: As part of an installation of the equipment by our services, all connections to the networks must be located within 2m of the machine

## Documentation

- Instructions
- Pedagogical manual
- Technical documentation
- Practical work
- Electrical diagram
- Fluidic diagram
- Enthalpy diagram
- EC certificate of conformity

## Options

- Specific tool kit for refrigerant
- Ref : OUT 134