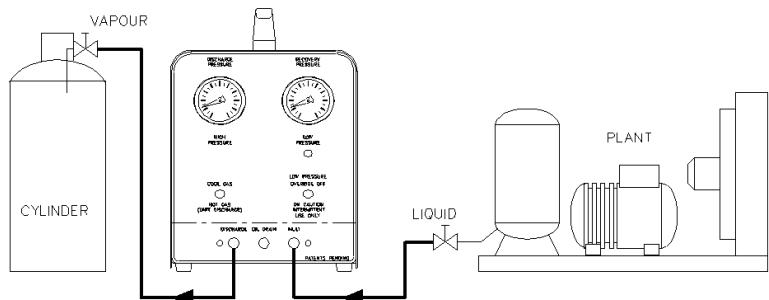


Refrigerant Recovery - Pass Through Method



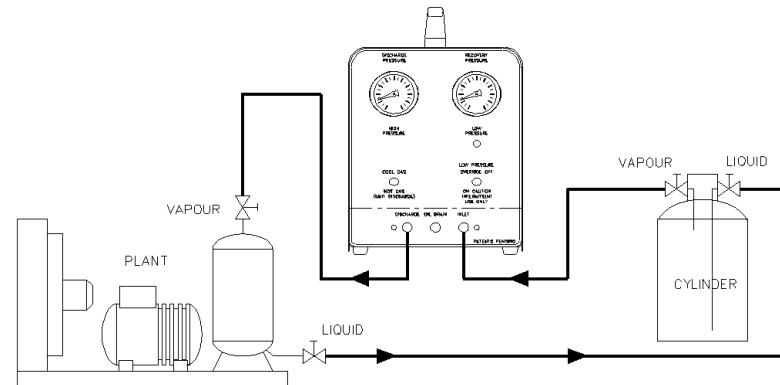
This method of recovery uses the unit to pull the refrigerant from the plant and discharge it direct to a suitable recovery cylinder. This method is best suited to applications where up to 3kg of refrigerant is to be recovered.

- Use a manifold gauge set to connect to both high and low sides of the plant. If possible connect to the plant on the high side at a point where the refrigerant will be in liquid form. Connect the centre hose to the unit inlet.
- Connect the discharge of the unit to a suitable recovery cylinder. Ensure that the recovery cylinder has sufficient free volume to accept the refrigerant you are going to recover and is monitored by a weigh scale. Zero (Tare) the scale
- Open the valves at the plant and cylinder.
- Set the selector switch to Coolgas.
- Switch the Unit ON at the mains socket.

The unit will start to recover refrigerant. You will hear the **HC-3** click as it recovers refrigerant. When the entire liquid refrigerant has been recovered the clicking will stop and the pressure on the unit gauge will begin to fall. When the inlet pressure reaches 0 bar the unit compressor will automatically stop.

- Close the inlet hose valve and operate the LP override ON and allow the unit to run for 1 minute maximum to complete the recovery.
- Switch the unit OFF at the mains socket and close all valves and disconnect hoses.
- Record the mass of refrigerant recovered.

Refrigerant Recovery - Push - Pull Method



This method of recovery uses the unit to pressurize the refrigerant in the plant so that it can be discharged directly to a suitable recovery cylinder. This method is best suited to applications where more than 3kg of refrigerant is to be recovered.

- Connect the inlet connection of the unit to the vapour port of a suitable twin ported recovery cylinder.
- Connect the discharge of the unit to a suitable point on the plant where the refrigerant will be in vapour form.
- Connect a hose from a liquid port on the plant to the liquid connection on the recovery cylinder. Ensure that the recovery cylinder has sufficient free volume to accept the refrigerant you are going to recover and is monitored by a weigh scale. Zero (Tare) the scale
- Open the valves at the plant and cylinder and switch the unit On at the mains socket.
- Set the selector switch to Hotgas.

The unit will start to recover refrigerant from the cylinder, which will reduce the pressure within the cylinder. At the same time the unit will discharge into the plant which will raise the pressure. The pressure difference between the plant and the cylinder will result in refrigerant transfer. You will hear the **HC-3** click as it recovers refrigerant.

When the bulk of the refrigerant has been recovered, reconfigure the set up to the Pass Through method to remove the remaining refrigerant vapour. When the inlet pressure reaches 0 bar the unit compressor will automatically stop.

- Close the inlet hose valve and operate the LP override ON and allow the unit to run for 1 minute maximum to complete the recovery. Switch the unit OFF at the mains socket.
- Close all valves, disconnect hoses and record the mass of refrigerant recovered.

Hints and Tips

To provide maximum protection to the unit it is recommended to fit a filter in the suction hose during operation. Using hoses with integral shut off valves will enable the unit to be disconnected from the cylinder without venting the contents of the hose to atmosphere.

It is recommended that the valve depressors are removed from hoses if not required.

* Vacuum certified valve core removal tools are available for connection to the plant.

Heat Exchanger/Oil Separator - The unit uses a combined heat exchanger/oil separator during the recovery process. **Oil from recovered liquid should periodically be drained, with the unit switched off, via the removable cap situated on the front of the unit.**

It will be necessary to discharge the residual refrigerant between jobs, to avoid any mixing.

Connect the discharge to a recovery cylinder and set the selector switch to Hotgas/Self discharge. Set the LP override switch ON and briefly run the unit.

Safety Notes

Every effort has been made to make the unit as easy and safe to operate as possible but operators should always follow these safety precautions.

- Always wear appropriate eye protection, clothing and gloves when handling refrigerant.
- Only a trained operator should handle refrigerants. Engineers working with HC refrigerants should be trained specifically to EN378-4:2016 +A1:2019 Annex E.
- Never overfill a cylinder. * Weigh the recovery cylinder and fill to only 60% of the volume with liquid to leave room for expansion.
- If a compressor burn-out is suspected on the appliance carry out a refrigerant test for acid. If recovery is still to be undertaken fit a burn out filter in the hose line during recovery.
- Make sure that the plant is switched off before attempting to recover refrigerant.
- Do not leave the unit unattended whilst recovery is in progress.
- When recovering HC refrigerants the area must be well ventilated. We recommend the *HC-AIR Fan module with ATEX motor. There must be no ignition source within 3m of the work and the area must be monitored with a hydrocarbon detector.

NB: Improper use of this equipment will invalidate the warranty

*Visit www.rda-eng.com for details of accessories

HC3 Instruction Manual

Iss. 2

Introduction

The HC3 Hydrocarbon Refrigerant Recovery Units are designed as compact, easy to use service tools. The units will remove hydrocarbon refrigerants in liquid or vapour state from the plant direct to a suitable recovery cylinder.

