



...helping you to prepare for a changing industry

Practical Refrigeration Training Centre

Course Details

City and Guilds 2079 Category 1 or 2 Assessment Only

Introduction

For very experienced engineers who require an Assessment Only - no extra training will be given.

PRTC is approved by City and Guilds to assess candidates for the City and Guilds 2079 category 1 (for systems with more than 3 kg of refrigerant in them) or category 2 (for systems with less than 3 kg of refrigerant in them). The dates and costs are identical for either category but please let us know which you would prefer at the time of booking.

Holding a valid 'F Gas' qualification is mandatory for anyone handling refrigerants after July 2011.

Objective

To achieve the skills and knowledge necessary to obtain the City and Guilds 2079 (F Gas) refrigerant handling qualification in the category specified.

Methodology

The assessment comprises a practical test demonstrating the skills listed below and an 'on-line' multiple-choice theory paper.

Synopsis

Theory - you will need to have an understanding of the following:

- Units of temperature, pressure, mass, density and enthalpy, including different states of refrigerant
- The basic theory of the vapour cycle and the use of p-h diagrams
- The function of the major components, their performance and indications of leakage
- The operating conditions and efficiency of a system
- Azeotropic and non azeotropic refrigerants
- The GWP (global warming potential) of refrigerants
- Energy efficiency and ozone depletion, including the Montreal and Kyoto Protocols
- Identification of leakage points and the associated risks





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Theory - Continued

- The legal requirements regarding the storage and transportation of refrigerants, oils and controlled wastes
- The documentation and records which need to be made and kept and how to complete them
- The hazards involved in handling refrigerants, oils and waste products
- The hazards involved in nitrogen pressure testing and flame brazing

Practical - you will need to demonstrate the following practical skills:

- Be able to braze and flare pipe
- Carry out and complete nitrogen pressure test
- Carry out and complete leak test direct and indirect
- Vacuum out system using vacuum gauge
- Prove system structure is sound and leak tight
- Charge system with non azeotropic refrigerants (over 3 kg for category 1)
- Prove system efficiency
- Produce commissioning document
- Complete a system log
- Recover refrigerant
- Drain oil from a compressor
- Produce waste documentation
- Ensure refrigerant traceability

