



...helping you to prepare for a changing industry

Practical Refrigeration Training Centre

Course Details

## City & Guilds 6090-21 - Diploma in Refrigeration, Air-Conditioning and Heat Pump (RACHP) Systems for experienced engineers

### Introduction

For experienced RAC engineers who need a recognised level 2 qualification we are offering a 'Fast Track' City and Guilds 6090-21 in Refrigeration, Air Conditioning and Heat Pump (RACHP) Systems.

Held over a shorter period of 8 weeks, this is only suitable for experienced engineers who already hold an F Gas 2079-11 qualification as a minimum entry requirement.

This course is scheduled on demand so please contact us for further information.

### Objective

To achieve the skills and knowledge necessary to obtain the City and Guilds 6090-21 Level 2 Diploma in Refrigeration, Air Conditioning and Heat Pump (RACHP) Systems.

### Methodology

Divided into six modules with an online assessment and portfolio to evidence the practical assignments.

Teaching methods will include presentations, discussion and theoretical work will be assisted by the use of extensive study notes. Practical work will take place on real systems where appropriate and be supported by site based work.

To achieve the diploma candidates will need to successfully complete all the elements.

### Synopsis

The Level 2 Diploma comprises of the following compulsory units which are completed over 8 weeks in the Centre (generally timetabled over 8 months).

#### **Week 1 - Unit 201 Principles of welfare, health and safety in RACHP environments.**

Introduction and awareness of H&S regulations, including risk assessments and method statement write ups. (Ongoing unit).



**Week 2 - Unit 202 - Scientific principles in RACHP systems.**

Carry out mathematical calculations and measurements working in RACHP environments. Unit includes gas laws, thermodynamics, pressure-enthalpy diagrams and psychrometrics, properties of refrigerants, lubricants and materials used in RACHP industry

**Week 3 - Unit 203 - Vapour compression systems (single compressor/single evaporator) in RACHP.**

Understand the operation and function of a vapour compression systems. Covering components, characteristics of line and pipe systems, the environmental impact and conditions that affect system performance

**Week 4 - Unit 206 - Electrical systems (single phase) for RACHP**

Practical and Theory. Fundamental electrical practices & Standards BS7671. Use of test instruments and Safe Isolation. Understand how to test circuits and fault find.

**Week 5 - Unit 206 – (continued)**

Complete practical assignment to install, test and commission an electrical control system for RACHP

**Week 7 - Unit 204 - Service, maintenance and repair of RACHP systems.**

Practical and Theory. troubleshoot and repair RACHP systems using modern diagnostics technology. Perform distinct types of maintenances, apply sustainable practices and perform practical servicing and maintenance skills.

**Learners will need to retrofit energy efficient equipment, retro-fill new, low GWP replacement refrigerants.**

This unit will be an accumulation of skills recognition, including use of PH charts, refrigerant handling, brazing techniques, risk assessments and RACHP regulations.

**Week 8 - Completion of Level 2 6090-21**

**251 - practical assignment sign off.** Complete any outstanding assignment work. sign off all portfolio evidence.

**250 - On-demand E-volve online – end assessment covering theory from all prior unit topics.**

