

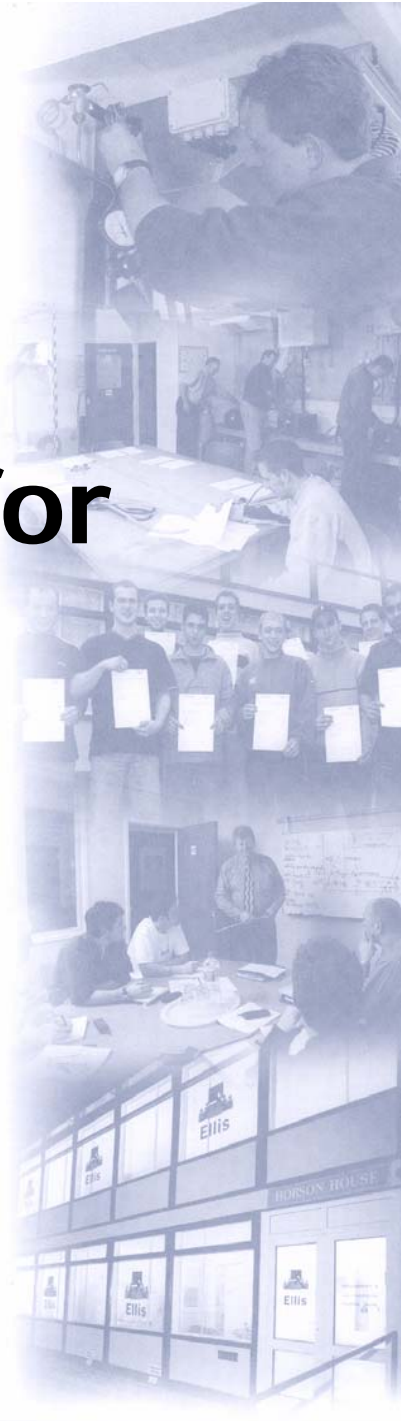
The F Gas Training & Accreditation Process for Individuals

Presented by John Ellis
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Ellis Training Works



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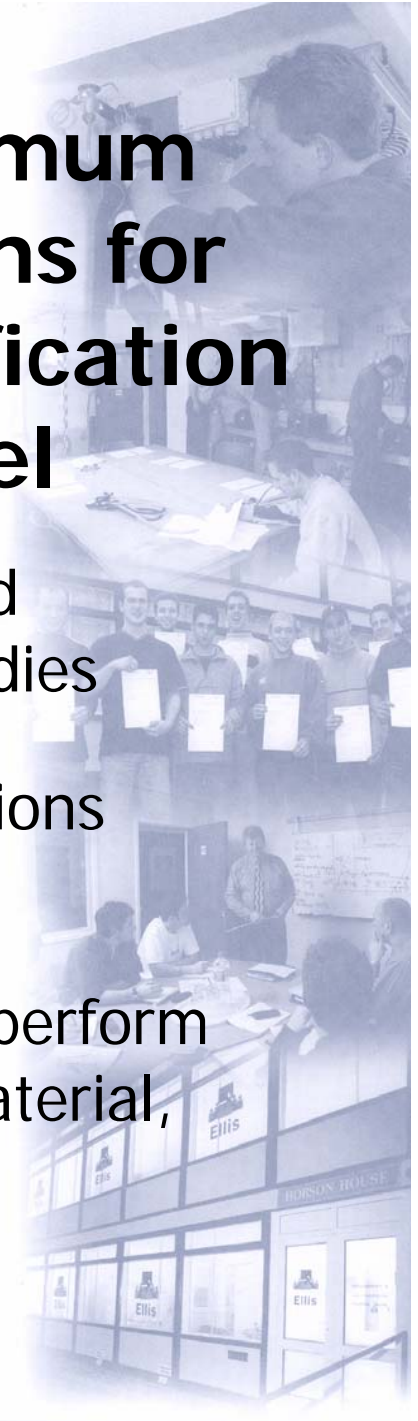
Regulation 303/2008 on minimum requirements and the conditions for mutual recognition for the certification of companies and personnel

- Sets minimum requirements as to the skills and knowledge to be covered by the evaluation bodies
 - **a theoretical test** with one or more questions testing that skill or knowledge
 - **a practical test** where the applicant shall perform the corresponding task with the relevant material, tools and equipment



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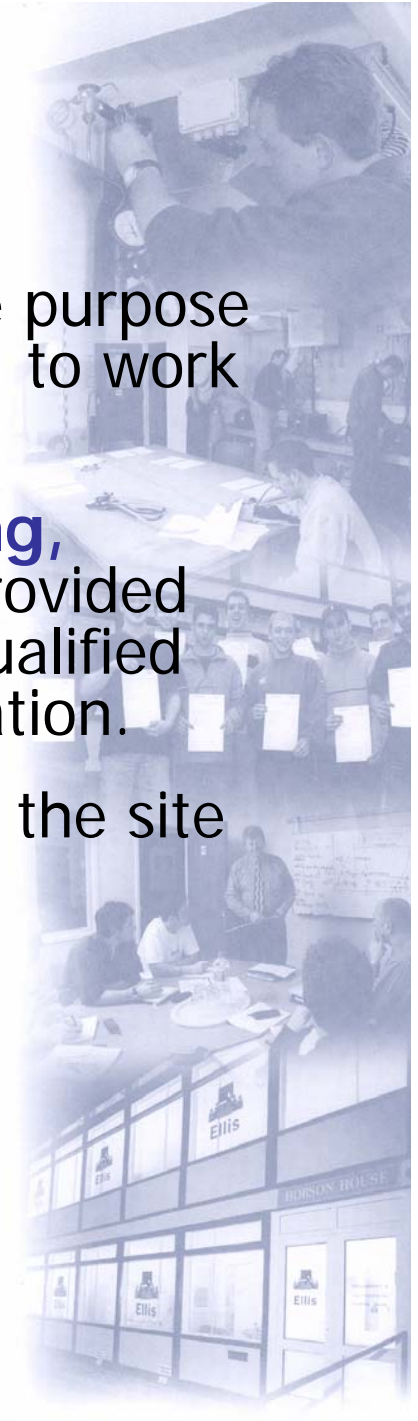
There are exemptions for:

- **Students** enrolled on a training course for the purpose of obtaining the qualification, who are allowed to work under supervision for a maximum of 2 years.
- **Individuals carrying out brazing, soldering, welding** in connection with RAC equipment provided they work under the supervision of an F gas qualified person and have a specific recognised qualification.
- **Those working in manufacture** or repair at the site of the manufacture of the equipment.



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Specifies four levels of qualification:

Category I certificate holders may carry out all the activities on all types of stationary RAC and heat pump equipment

Category II certificate holders may carry out the activities in equipment containing less than 3 kg, (6kg if hermetically sealed and labelled)

Category III recovery activity only

Category IV leakage checking of applications that does not entail breaking into the refrigeration circuit



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The Practical Assessment

Candidates MUST

- Fabricate and fit pipework
- Strength and leak test
- Find and fix leaks
- Charge systems (DX) with zeotropic blends
- Carry out direct & indirect leak tests to EC Reg 1516



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The Practical Assessment

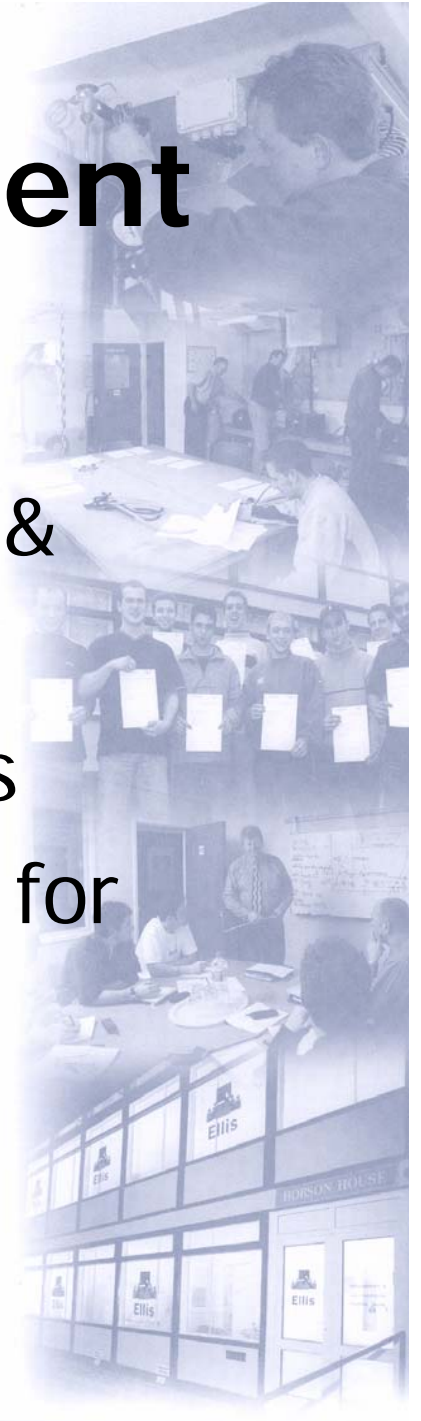
Indirect leak test includes

- Measuring superheat & subcooling & performance testing
- Connecting & disconnecting gauges
- Recovering refrigerant & preparing for disposal
- Complete F Gas Documentation



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The Theory Assessment

Theoretical

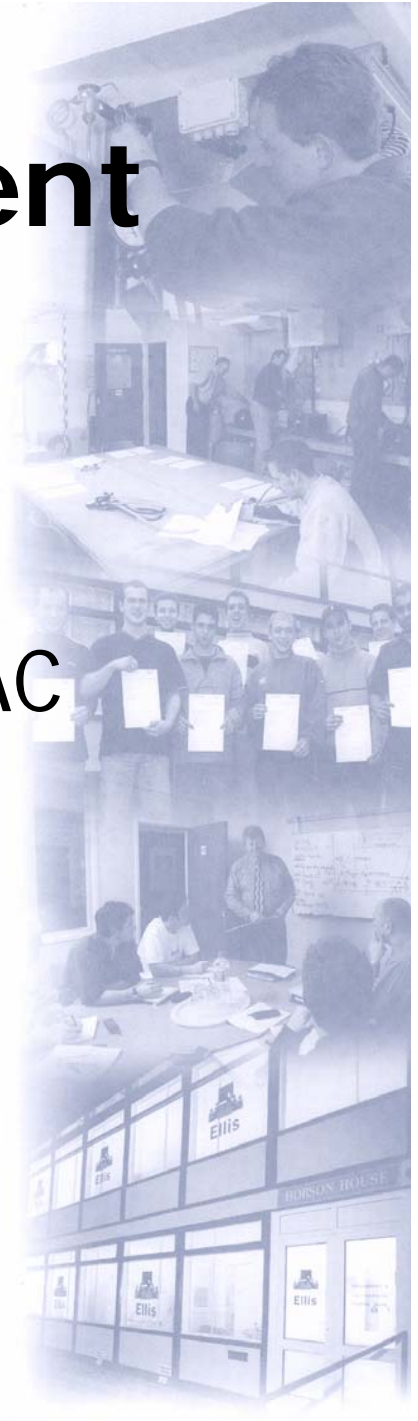
An examination which covers basic principles of thermodynamics of RAC systems (p-h charts, properties, refrigerant conditions, operating parameters, COP and EER etc)

Kyoto & Montreal Protocols



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The Assessment

Theoretical

Safety requirements for
Handling refrigerants, brazing and
nitrogen testing
F Gas Regulation requirements



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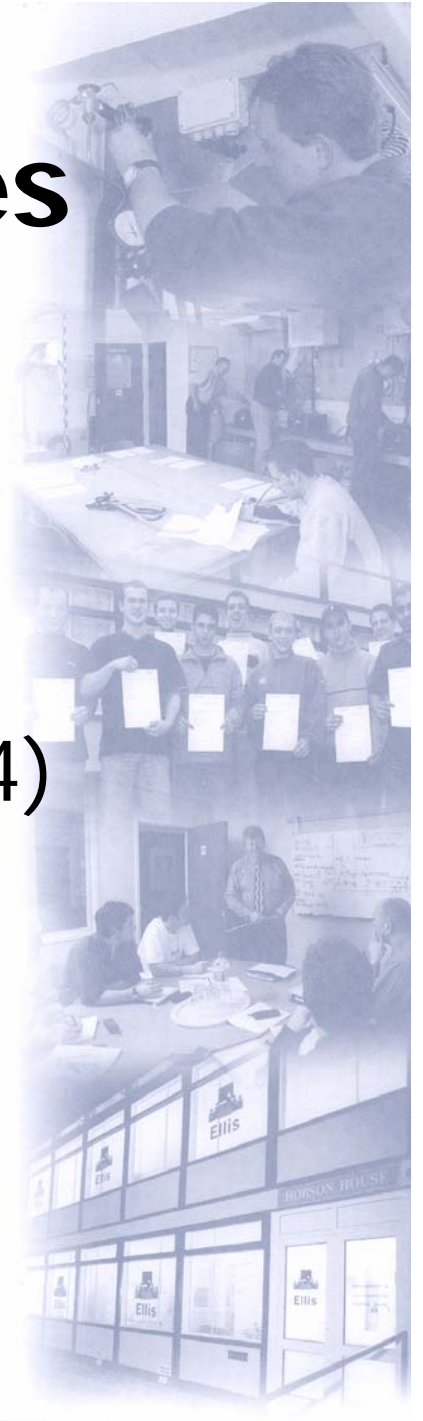
The Awarding Bodies

- City & Guilds (2079)
- Construction Skills (CITB) (J11 – 14)



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What's the difference?

City & Guilds (2079)

- 40 Question online exam (for Cat 1)
(1½ hours)
- Practical Assessment on Standard Rig
(4 hours)

No Renewal / Retesting Required
(No expiry date)



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What's the difference?

Construction Skills (CITB) J11

- 45 Question (Open Book) Exam taken in centre (1½ Hours)
- Practical Assessment on Centre Rig (3 hours 20 mins)
- Need to retest every 5 years



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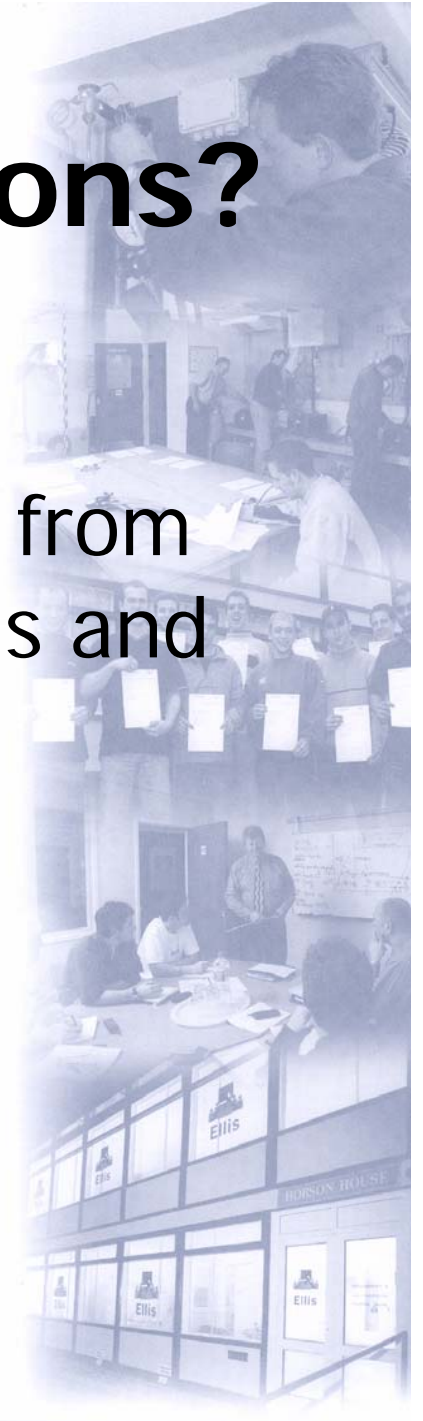
ODS v F Gas Qualifications?

How does F Gas qualification differ from previous safe handling qualifications and assessments?



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ODS v F Gas Qualifications?

The old safe handling qualifications were bought in to deal with:

- Refrigerant Recovery
- Hydrocarbon Handling
- Refrigerant Hazards



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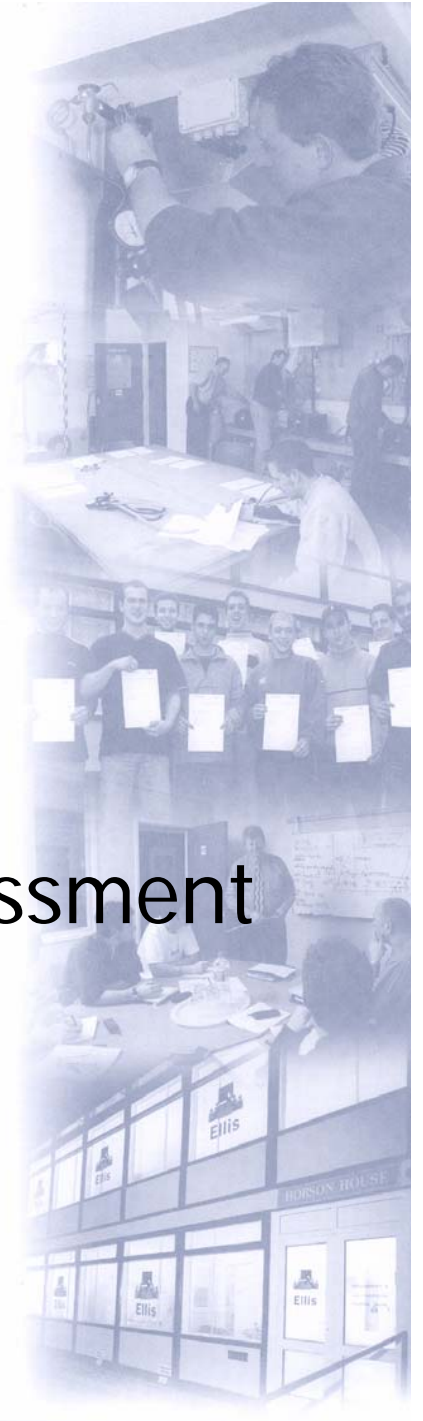
What is available?

- Open Learning
- Self Study and Revision
- 1-4 day Training Courses and Assessment



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Experienced Workers

Previous Qualification

+

Knowledge of Thermodynamics
(inc P-h diagrams)

+

Good Experience on TEV/DX Systems

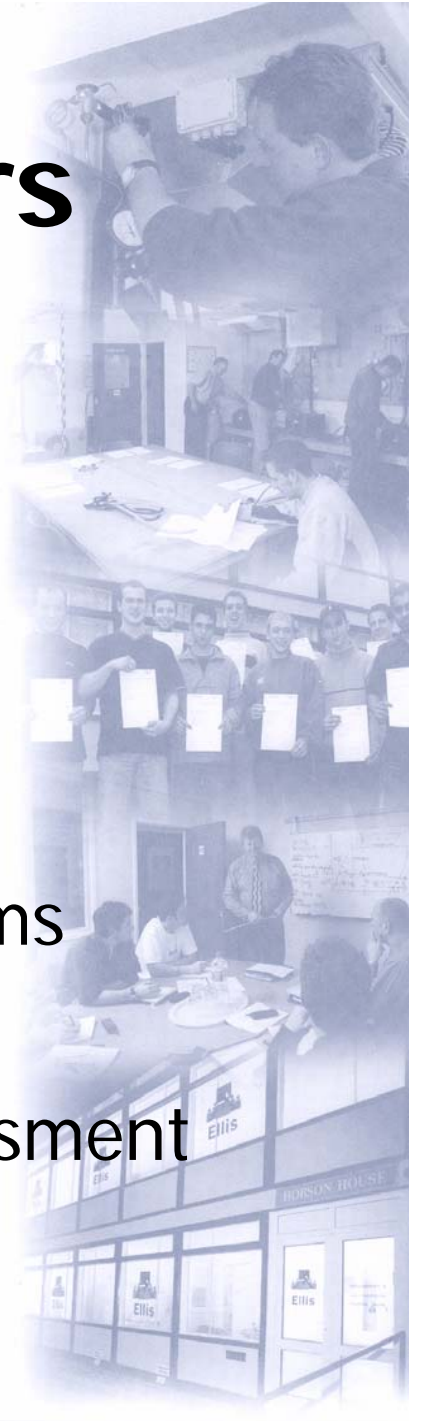
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Shorter Course / Revision before Assessment



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Novice / Less Experienced

No Formal Training / Qualification

=

Longer Course before Assessment

(Existing Safe Handling Qualification does not help much!!)



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Benefits?

- Less leakage
- More efficient operation of systems
- SRAC systems use approx 20% of electricity generated in UK



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Questions??



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