

End-Point Assessment Declaration Form

This form must be completed by centres / EPA customers who wish to complete the EPA at their centre/site

Centre / EPA customer name		Centre number	1234567
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Please indicate which EPA you are intending on running:		✓

I confirm that our centre/EPA customer meet both the venue & equipment requirements to support end-point assessment for the above occupations

Name	Name		
Job role	Job role		
Signature	Signature	Date	DD/MM/YY

If any parts of or all of the assessment is taking place at a different location(s)/venue(s) to your centre/epa customer address please list the details below

Venue 1	
Name	Name
Address	Assessment location

Venue 2	
Name	Name
Address	Assessment location

Remote Assessment

The following assessment can be conducted remotely

- Professional interview

I can confirm that as a centre/EPA customer we have all the required equipment to offer the following assessment methods remotely in line with the guidance outlined in the Manual for the End-point Assessment Service

Assessment method	Tick to confirm remote assessment
Professional interview	

End assessments

The focus of the end-point assessment is for the apprentice to fully demonstrate the values, knowledge, skills and behaviours set out in the apprenticeship standard and to be able to demonstrate this level of professional competence in authentic workplace contexts.

End-point assessments are formal summative assessments that conclude an apprenticeship programme. Each apprenticeship will be assessed in a number of ways to provide a clear indication of the apprentice's knowledge and skills. For this apprenticeship the following assessment methods need to be achieved:

- knowledge and understanding tasks
- practical tasks
- oral assessments - professional discussions / vivas / interviews.

End-point Assessment Resources list

Resources required: Online test and Interview/Professional discussion	
Online test	Suitable IT systems for evolve as outlined in the manual for end-point assessment services
	An invigilator
	A quiet room with adequate lighting, space and privacy. It must be away from the pressures of work activities, in a controlled environment. This may be on or off the employers' premises
Interview / Professional discussion	A suitable room for the professional discussion/interview to take place, large enough to accommodate all those involved including panel member where applicable
	Seating area or room for any other apprentices to wait
	Access to water and cups
	Where applicable, internet access and suitable equipment for remote assessment as outlined in the manual for end-point assessment services

Resources required: Practical Test

Refrigerants

At the beginning of the retrofit task, the venue must ensure that the system contains an existing high GWP refrigerant that will be recovered by the apprentice. A list of examples are given in the table below.

Refrigerant Categories	Example Refrigerant	GWP	Classification
Existing High GWP	R407F	1825	A1
	R407A	2107	A1
	R452A	2140	A1 Blend

EPA venues must provide **four** alternative refrigerants for apprentices to select from. There must be **four** refrigerants available from a number of classifications/categories given below. It is expected that venues will provide four refrigerants that range from **at least three** different classifications.

This is not a definitive list and venues may identify suitable alternatives provided they are comparable to the examples listed and thus classified and categorised in the same way.

Refrigerant Categories	Example Refrigerant	GWP	Classification
Hydrocarbon (HC)	R600a	3	A3
Hydrofluorocarbon (HFC)	R32	675	A2L
	R454A	246	A2L
Hydrofluorocarbon and HFO (HFC/HFO Blend)	R513A	631	A1
	R448A	1387	A1
	R449A	1397	A1
Hydrofluoro-olefin (HFO)	R1234yf	4	A2L

EPA venues **must** also provide the Manufacturer's Information for the refrigerants available including the Ph charts and thermodynamic data.

For the Fault Finding task, a centre technician must be available to implement the required faults as directed by the Independent End-Point Assessor.

Space

The assessment area must be secured such that only the candidates under assessment have access during the EPA activity. Training cannot take place in the same area whilst the EPA is being carried out.

The assessment rig includes a two-chamber cold room that allows different temperature requirements to be set in each room.

Each chamber must have the minimum dimensions of 6m³

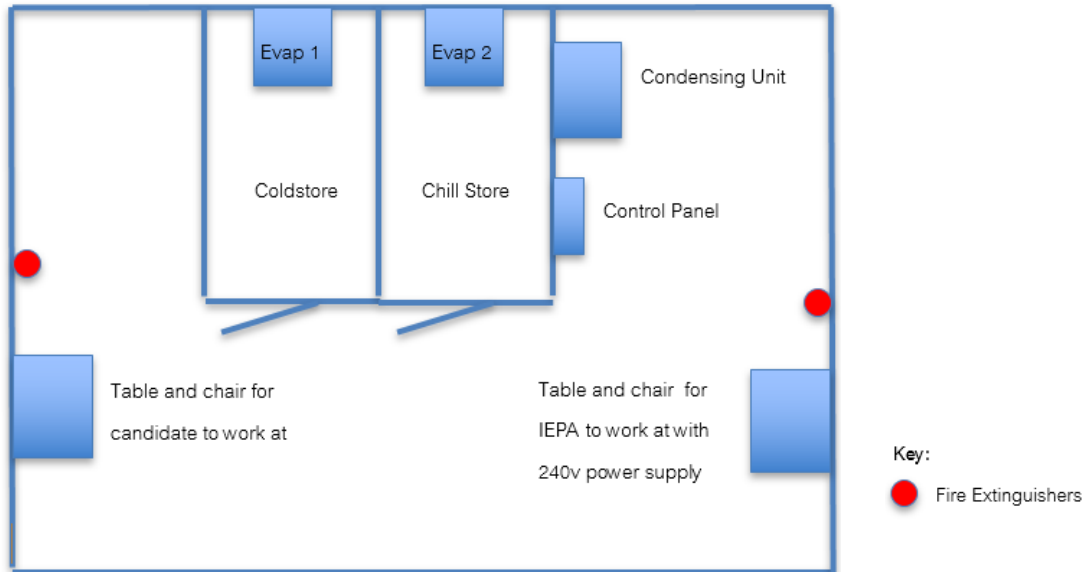
The cold-room must be of a size that allows for the IEPA to directly observe the apprentice at work comfortably (i.e. able to stand within the cold room without being intrusive). This sizing is recommended to ensure the assessment replicates a real working environment and allows the system to work at full capacity.

One chamber should be set to -18°C and the other +4°C.

Note: The EPA will include a brazing activity. If, for safety reasons, this has to be carried out away from the system, the exact orientation and position must be replicated as per the original drier installation on the rig. Any obstructions or difficulties must be replicated. No extra time will be allowed for this process.

Example bay layout

See below for an example of a bay set up – the actual arrangement may vary, but all components required for the assessment must be available in the same bay.



System Requirements

The system must contain as a minimum:

- 1 low back pressure condensing unit
- evaporators (one with electric defrost, one needs an electronic expansion valve the other needs a thermostatic expansion valve)
- evaporator pressure regulator
- single semi hermetic compressor with crank case heater
- oil separator
- control panel (including electronic thermostat/temperature control PLC for each room)
- suction line accumulator
- mechanical safety (HP/LP switch) set to allow standard operation i.e. -10K on suction and +15K on discharge.
- 2 liquid line solenoid valves (if stepper expansion valve is selected)
- brazed liquid line drier and sight glasses
- oxyacetylene
- Suitably sized artificial load to allow unit to run during assessment.
- All equipment and valves should be sized to allow the system to run in a balanced and efficient manner.

Permitted Materials

Apprentices must have access to the following documentation during the assessment:

- electrical diagrams
- F Gas Log books
- equipment manuals (if relevant)
- manufacturer's information for the refrigerants available including; the Pressure Enthalpy (P-H) charts and thermodynamic data.
- templates given within the Venue EPA Recording Forms Pack.
- An 'as installed' wiring diagram must be supplied by the venue to the apprentice for the electrical fault finding exercise.

Apprentices are permitted access to the following during the assessment:

- commercial software for selecting the replacement refrigerant during Task 1 (Retrofit)

Equipment

- suitable PPE
- hand tools
- bucket with water and cloths
- access equipment if required
- spare batteries
- recovery machine and hoses
- suitable recovery cylinder(s)
- appropriate gauge manifold set
- air temperature probe
- refrigerant comparator
- electronic leak detector
- scales
- surface temperature probe
- high pressure gauge and pressure test set
- leak detection fluid
- appropriate regulator (nitrogen)
- vacuum pump
- vacuum gauge (to record less than 2 Torr, 2000 microns/2.7 mb/270 Pa)
- oxygen free nitrogen cylinder and trolley
- voltage tester (GS38 compliant) for dead testing
- multi-meter (GS38 compliant)
- electrical insulation tester (GS38 compliant)
- capacitor tester
- electrical lock off kit – padlock, signage etc.
- ratchet Key
- thermometer
- torque wrench
- solenoid magnet (minimum of 2)
- clamp ammeter

Appendix 1 Version Control Table

Version	Detail of Change
V3 February 2019	Minimum size of cold rooms reduced from 8m ³ to 6m ³ . Additional guidance added.
V3.1 October 2020	Additional guidance added. List of refrigerants updated. Example bay layout added.
V3.2 March 2021	'Clamp ammeter' added to equipment list. Order of list amended to match EPA pack.
