

C10, BRA Experienced Brazier Assessment PED SEP & CAT I Joints

This assessment is for **experienced brazers**. We assess candidates to the British Refrigeration Association's Brazer approval scheme. This is a practical skills test coupled with a multiple-choice assessment to check knowledge about the safety aspects and application of brazing. Numbers on the session are usually limited to eight. Trainees are provided with high quality course notes.

The BRA Brazer Assessment scheme is written in accordance with EN14276-1:2020 Annex B (Specification and approval of brazing procedures) as a suitable procedure to assess and approve individuals carrying out the jointing of copper pipework in accordance with SEP & Cat I of the Pressure Equipment Directive (2014/68/EU / Pressure Equipment Regulations 1999 (SI 1999/2001).



The brazer approval covers materials K65 copper, standard copper and copper to steel or copper to brass joints for systems using A1, A2L and A3 refrigerants. This includes joints in systems using R744 (CO₂ - carbon dioxide) and flammable refrigerants.

For PED categories 2, 3 or 4, brazer approval from a notified body (i.e. a third party) is required. Very few joints fall into these categories, but if necessary Cool Concerns Ltd can facilitate this qualification.

Cost

Each course is £395 Excl VAT per person. The cost includes course notes, the test pieces and BRA/CCL certification.

Location

The assessments are carried out at our training centre a few minutes from junction 8 of the M5 – GL20 6BY. We provide joining information with directions, start time and a list of local hotels. For a group of six or more brazers the assessments can be carried out at your premises using your equipment. There is an additional charge to cover our travel costs.

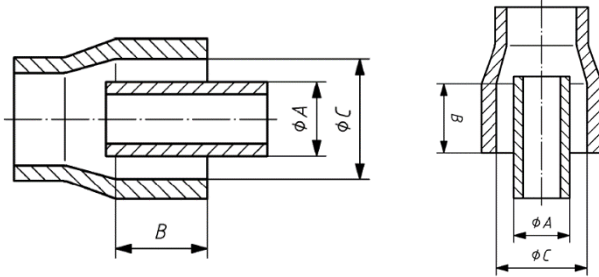
The Assessment

For the practical part of the test the candidate brazes a maximum of 4 copper to copper and 4 copper to steel horizontal and vertical lap joints. The test pieces are visually examined and cut open to check for correct penetration.

Range of approval:

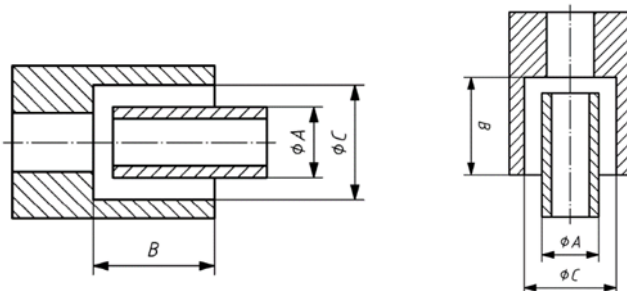
¼"	22-15 SWG Cu / n/a (SC/LC)
3/8" - 7/8"	22-15 SWG Cu / Steel thickness 1.0mm to 4.0mm (SC/LC)
1-1/8" - 4-1/8"	20-9 SWG Cu / Steel thickness 1.0mm to 4.5mm (LC)

Test Pieces 1, 2, 5 & 6, copper to copper lap joint (straight coupler or elbow) - 2 x Horizontal flow & 2 x Vertical up flow joints



	Test pieces 1 & 2 Horizontal & Vertical Up	Test pieces 5 & 6 Horizontal & Vertical up
	Small Commercial (1/4" to 7/8")	Large Commercial (1-1/8" to 4-1/8")
Size	1/2" 20 SWG	1-1/8" K65 120 Barg
Minimum fitting depth (l)	5mm	8mm
Clearance (C-A)	0.02mm to 0.20mm	0.02mm to 0.24mm
Total length of test piece	400mm (2 x 200mm)	400mm (2 x 200mm)

Test Pieces 3, 4, 7 & 8, copper to Schedule 40 Steel lap joint - 2 x Horizontal flow & 2 x Vertical up flow joints



	Test pieces 3 & 4 Horizontal & Vertical Up	Test pieces 7 & 8 Horizontal & Vertical Up
	Small Commercial (1/4" to 7/8")	Large Commercial (1-1/8" to 4-1/8")
Size	1/2" 20 SWG (copper) 1/2" (Schedule 40 steel machined)	1-1/8" K65 120 Barg (Copper) 1-1/8" (Schedule 40 steel machined)
Minimum fitting depth (l)	10mm	15mm
Clearance (C-A)	0.02mm to 0.20mm	0.02mm to 0.24mm
Total length of test piece	400mm (2 x 200mm)	400mm (2 x 200mm)

Copper EN 12735-1:2020

Steel ASTM A 106 Grade B Schedule 40 steel (machined to suit)

For more information or to book contact:

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