Triflow Solder Ring
Delcop End Feed
Delbraze

Capillary fittings and accessories







Conex | Bänninger

Contents

Page

Delcop™ End Feed Capillary Fittings

Technical Specifications 4
Installation Dimensions 10
Product Range -
End Feed Capillary Fittings 17
6mm-54mm Copper
15mm-54mm Red Brass
End Feed Capillary Waste Fittings 34
35mm-54mm Copper and Red Brass

Triflow™ Integral Solder Ring Fittings

Technical Specifications 38
Installation Dimensions 44
Product Range -
Integral Solder Ring Fittings 53
6mm-67mm

Delbraze® Brazing Fittings - Short Cup

Technical Specifications 66
Installation Dimensions 75
Product Range -
Brazing Fittings - Short Cup 77
67mm-219mm Copper
15mm-219mm Red Brass
Brazing Flanges 84
15mm-219mm

Clyde Brazing Fittings - Long Cup

Technical Specifications 86
Installation Dimensions 90
Product Range -
Brazing Fittings - Long Cup 92
67mm-159mm Copper

Coas®

Accessories 96

Technical Specifications

General Information

Delcop end feed capillary fittings are manufactured in accordance with EN 1254-1 (formerly BS 864: Part 2).

The materials used in manufacture (copper, DZR brass and gunmetal) make them resistant or immune to dezincification.

Delcop fittings are primarily designed for soft solder applications but, with the exception of Union fittings with copper tails, may also be brazed.

As there are no relevant standards for waste fittings these are manufactured to our own exacting in-house specification.

A range of accessories is also offered such as mats and cleaning brushes. All products enable the installer to meet the stringent conditions imposed by the Water Regulations.

Applications and Uses

Delcop fittings are used in a wide variety of domestic and commercial applications such as plumbing, heating, gas and refrigeration, fluid distribution, air pressure lines and air conditioning.



The fitting's simplicity, versatility and speed of installation makes it a popular choice with installers.

Size Availability

6mm–54mm, suitable for connecting copper tubes in accordance with EN 1057 (formerly BS 2871: Part 1) and many other standards including ISO 274.

For sizes above 54mm please ask for details about our Delbraze and Clyde ranges of brazing fittings and flanges up to 219mm in diameter.

Material Availability

Most fittings in the range are manufactured from Copper or Gunmetal thereby being immune to dezincification.

Some items are produced in dezincification resistant (DZR) Brass.

Table A

Material	Specification
Copper	EN 12165 CW24A
Brass (Forging)	EN 12164/5 617N
Brass (Turning)	EN 12164/5 614N
DZR Brass (Stamping)	EN 12164/5 602N
DZR Brass (Turning)	EN 12164/5 602N
Gunmetal (Red Brass)	BS 1400 LG2

Dezincification of ordinary Duplex brass fittings may occur under certain water supply conditions but fittings made from DZR brass can be safely used in these circumstances.

The DZR alloy, a joint development of manufacturers and British Non-Ferrous Metal Technology Centre, contains a highly effective corrosion inhibitor. It's an outstanding material, ideally suited to the high quality standards maintained by IBP, and can be used where dezincification could cause problems.

DZR fittings are marked with the **CR** symbol, recognised and accepted by the Water Industry, British Plumbing Fittings Manufacturers' Association, and specified in British Standards as a mark denoting material of assessed capability of resistance.

Where DZR brass is used, it complies with the requirements of EN 12164 CW602N and EN 12165 CW602N.

Table A provides a list of materials and the relevant European Norme that governs its performance.

Health and Safety

It is the responsibility of the end user to ensure that all adequate protection is available where required and the necessary information regarding Health and Safety Regulations is adhered to.

Copper and copper alloy fittings are considered non-hazardous under normal circumstances.

Before using solders, fluxes and mats, you are advised to read the relevant COSHH Regulations. Copies are available on request. All per COSHH 4 REG 1988.

Quality Assurance

The Company is a B.S.I. Registered Firm of assessed capability, Registration Number FM 11836, manufacturing in accordance with EN ISO 9001:2000.

Delcop fittings are manufactured in accordance with EN 1254-1 and 4 (formerly BS 864: Part 2).

Most fittings in the range are covered by the B.S.I. Kitemark under Licence No. KM 07283 (detailed list available upon request). Listings can also be found in the WRAS Water Fittings and Materials Directory under 'Kitemarked and Quality Assured Fittings'.

Certificate No. FM 11836

(EN1254)

In addition to audits carried out by the British Standards Inspectorate, an internal audit system is also in operation to further enhance quality control.

Design

Delcop fittings use the principle of capillary attraction to ensure that, when correctly jointed to copper tube, a sufficient layer of solder is present between tube and fitting to form a mechanically strong, leak-proof joint.

To effect a successful joint there must be a controlled gap between the mating parts.

This precise dimension is engineered by sizing the sockets to close tolerances and using tube to EN 1057 (formerly BS 2871: Part 1).

Fittings are designed to comply with the relevant standards, to maximise flow rate and to blend with the connecting pipework.

For potable systems, lead-free solder in accordance with EN 29453 and ISO 9453 must be used.

Connecting Threads

Taper male threads are in accordance with EN 1254-4 (ISO 7).

Parallel threads are in accordance with EN 1254-4 (ISO 228/ISO 7). Generally, female fittings are manufactured with parallel threads whilst male fittings are produced with taper threads.

Assembly of Coned Joints and Screwed Fittings

Coned Joints

Coned face connectors to EN 1254-4 rely on a metal x metal seal and care must be taken to avoid damage prior to assembly. Should difficulty be experienced, the use of a WRAS listed sealant is permitted. **Do not overtighten.**

Male/Female Threaded Joints

The use of a WRAS listed sealant or tape (e.g. PTFE) is recommended for making joints on fittings with taper male threads. For making joints with parallel connector threads, a good quality washer made from a WRAS listed material should be used. Suitable washers are supplied with Delcop tap connector fittings and these should be used.

NB: To avoid heat degradation of sealing materials the solder joint should be made first and allowed to cool.

Performance

Hydraulic working temperatures and pressures shown in Table B are based on EN 1254-1.

Table B

Maximum Temperatures and Pressures

Filler Metal	Temp °C	Max. Pressure (Bar) 6mm-28mm	Max. Pressure (Bar) 35mm-54mm
Tin/Silver 95/5%	30	25	25
Tin/Copper 97/3% max	65	25	16
99.6/0.4% min	110	16	10

Our Technical Department can provide data for other requirements

Making a Joint 6mm-54mm

1. Ensure that the copper tube and fitting sizes are compatible. Cut the tube end square making sure the tube retains its shape. The tube will then make even contact with the tube stop in the body of the fitting. The use of a tube cutter is recommended where practicable.

2. Remove any burrs from in and outside of the tube.

3. Clean the socket of the fitting with a brush and the exterior of the tube with fine steel wool, fine glass paper or a cleaning pad.

4. If using fully annealed tube in accordance with EN 1057 R220 it may be necessary to re-round the tube with a re-rounding tool.

5. Apply a film of flux to both the socket and the outside of the tube.

All fluxes are, to some degree, corrosive. Those recommended by IBP are chosen to minimise this corrosion and to give a long term reliable joint, providing the correct jointing procedure is adhered to.







6. Insert tube fully into the fitting. (In the case of slip fittings, ensure tube enters the socket to the appropriate distance). Rotate the tube or fitting and remove excess flux where possible.

7. Apply heat to the tube and fitting, checking at intervals with the heat source removed until the solder melts when it is touched on the tube. Remove the heat source and add only sufficient solder to fill the capillary gap. When correctly made, a ring of solder will be observed around the joint.

8. Allow joint to cool, ensuring that no movement occurs.

9. Wipe the joint with a damp cloth to remove flux residues.

10. Flush all residues out of the system as soon as practicable and thoroughly clean joint.

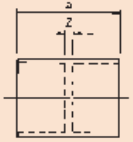






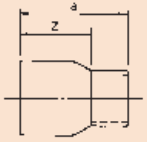
Installation Dimensions

DC601
STRAIGHT COUPLING
Copper x Copper



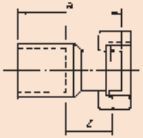
Size	a (mm)	Z (mm)
6	16	2
8	17	2
10	17	2
12	19	2
15	23	2
22	33	2
28	39	2
35	48	2
42	56	2
54	68	2

DC601-2
FITTING REDUCER
Male Copper x Copper



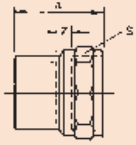
Size	a (mm)	Z (mm)
8 x 6	17	11
10 x 6	17.5	11.5
10 x 8	16.5	9.5
12 x 8	21	14
15 x 8	25	18
15 x 10	25	17
15 x 12	24	15
22 x 15	33	22
28 x 15	40	29
28 x 22	40	24
35 x 15	50	39
35 x 22	52	36
35 x 28	49	30
42 x 15	64	51
42 x 22	60	44
42 x 28	58	39
42 x 35	59	36
54 x 15	66	55
54 x 22	67	51
54 x 28	70	51
54 x 35	72	49
54 x 42	73	46

DC601-TC
STRAIGHT TAP CONNECTOR
Copper x Swivel Female Thread



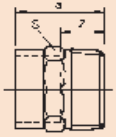
Size	a (mm)	Z (mm)
15 x 1/2	28	12
15 x 3/4	35	24
22 x 3/4	40	24

DC603
FEMALE STRAIGHT CONNECTOR
Copper x Female Thread (Parallel)



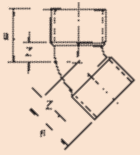
Size	a (mm)	S (mm)	Z (mm)
15 x 1/2	32	25	9
15 x 3/4	35	30	7
22 x 1/2	30	25	3
22 x 3/4	36	31	6
28 x 1	43	38	8

DC604
MALE STRAIGHT CONNECTOR
Copper x Male Thread (Taper)



Size	a (mm)	S (mm)	Z (mm)
15 x 1/2	28	22	17
15 x 3/4	42	28	31
22 x 1/2	29	25	13
22 x 3/4	36	28	20
28 x 1	40	34	21

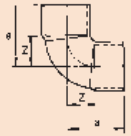
DC606
OBTUSE ELBOW 45°
Copper x Copper



Size	a (mm)	Z (mm)
15	17	6
22	25	9
28	29	10
35	37	14
42	42	15
54	52	20

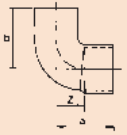
Installation Dimensions

DC607
ELBOW
Copper x Copper



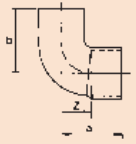
Size	a (mm)	Z (mm)
6	15	9
8	17	10
10	20	12
12	19	10
15	20	10
22	30	14
28	35	16
35	48	24
42	55	28
54	71	39

DC607-2
STREET ELBOW
Male Copper x Copper



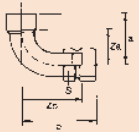
Size	a (mm)	b (mm)	Z (mm)
10	20	22	12
12	20	21	11
15	22	24	11
22	31	32	16
28	35	36	17
35	49	52	26
42	57	57	30
54	72	74	40

DC607-2-LT
STREET BEND
Male Copper x Copper



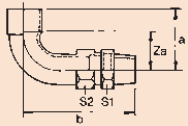
Size	a (mm)	b (mm)	Z (mm)
15	29	31	18
22	42	44	26
28	52	54	34

DC607-6-3 FEMALE BENT
UNION CONNECTOR
(COPPER TAIL)
Copper x Female Thread (Parallel)



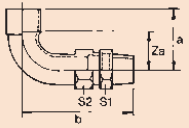
Size	a (mm)	b (mm)	S (mm)	Za (mm)	Zb (mm)
22 x 3/4	40	60	30	29	29
22 x 1	50	78	37	34	58
28 x 1	60	80	45	39	60

DC607-6-4 MALE BENT
UNION CONNECTOR (COPPER TAIL)
Copper x Male Thread (Taper)



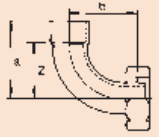
Size	a (mm)	b (mm)	S_1 (mm)	S_2 (mm)	Za (mm)
22 x 3/4	48	88	33	36	32
22 x 1	47	86	38	36	32
28 x 1	56	98	38	45	36

DC607-6-UA
BENT CYLINDER UNION (CONE)
Copper x Swivel Female Thread



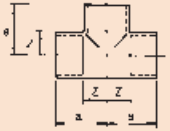
Size	a (mm)	b (mm)	S (mm)	Za (mm)
22 x 1	41	46	37	29
28 x 1 1/4	60	64	45	34

DC607-TC
BENT TAP CONNECTOR
Copper x Swivel Female Thread



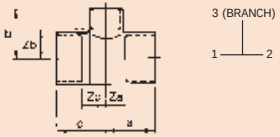
Size	a (mm)	b (mm)	Z (mm)
15 x 1/2	32	27	21
15 x 3/4	46	41	34
22 x 3/4	45	42	29

DC611
TEE-EQUAL
Copper All Ends



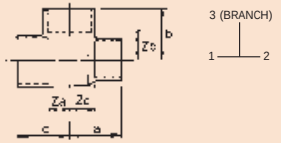
Size	a (mm)	Z (mm)
6	11	5
8	12	5
10	15	7
12	16	7
15	19	8
22	28	12
28	34	15
35	44	21
42	52	24
54	62	30

DC611-RB
TEE-REDUCED BRANCH
Copper All Ends



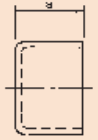
Size	a (mm)	b (mm)	c (mm)	Za (mm)	Zb (mm)	Zc (mm)
15 x 15 x 8	19	18	19	8	9	8
15 x 15 x 10	19	18	19	8	9	8
15 x 15 x 12	18	18	18	7	9	7
22 x 22 x 10	24	22	24	7	13	7
22 x 22 x 12	23	21	23	7	12	7
22 x 22 x 15	28	28	25	12	12	14
28 x 28 x 15	36	34	34	17	15	23
28 x 28 x 22	35	35	35	16	16	19
35 x 35 x 15	36	31	31	13	20	13
35 x 35 x 22	37	37	37	13	21	13
35 x 35 x 28	40	41	40	17	22	17
42 x 42 x 15	37	33	37	10	22	10
42 x 42 x 22	43	45	43	16	29	16
42 x 42 x 28	48	49	48	20	30	20
42 x 42 x 35	48	49	48	21	26	21
54 x 54 x 15	49	44	49	17	33	17
54 x 54 x 22	50	48	50	18	32	18
54 x 54 x 28	52	51	52	20	32	20
54 x 54 x 35	53	53	53	21	30	21
54 x 54 x 42	63	62	63	31	35	31

DC611-RE
TEE-REDUCED END
Copper All Ends



Size	a (mm)	b (mm)	c (mm)	Za (mm)	Zb (mm)	Zc (mm)
22 x 15 x 22	28	28	25	12	12	14
28 x 15 x 28	36	34	34	17	15	23
28 x 22 x 28	35	35	35	16	16	19
35 x 28 x 35	45	43	47	22	19	28
42 x 28 x 42	55	55	55	27	27	36

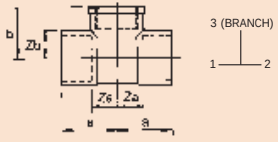
DC617
STOP END
Copper



Size	a (mm)
8	Upon request
10	8
12	9
15	11
22	16
28	19
35	25
42	33
54	39

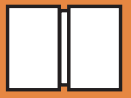
Installation Dimensions

DC712 TEE WITH FEMALE BRANCH
Copper x Copper x Female Thread (Parallel)

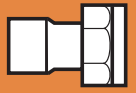


Size	a (mm)	b (mm)	Za (mm)	Zb (mm)
15 x 15 x 1/2	23	21	12	10
22 x 22 x 1/2	28	24	12	13
22 x 22 x 3/4	31	26	15	13
28 x 28 x 1/2	31	28	12	17
28 x 28 x 3/4	34	30	15	17
28 x 28 x 1	38	32	19	17
35 x 35 x 1/2	35	31	12	20

Product Range

Part No.	Description	Size
DC600 	**Slip Coupler** Copper x Copper	15 22 28 35 42 54
DC601 	**Straight Coupler** Copper x Copper	6 8 10 12 15 22 28 35 42 54
DC601R 	**Reduced Straight Coupler** Copper x Copper	8 x 6 10 x 8 15 x 8 15 x 10 15 x 12 22 x 15 28 x 15 28 x 22 35 x 15 35 x 22 35 x 28 42 x 22 42 x 25 42 x 35 54 x 15 54 x 22 54 x 28 54 x 35 54 x 42

Part No.	Description	Size
DC6012 	**Fitting Reducer** Male Copper x Copper	8 x 6 10 x 6 10 x 8 12 x 8 15 x 8 15 x 10 15 x 12 22 x 15 28 x 15 28 x 22 35 x 15 35 x 22 35 x 28 42 x 15 42 x 22 42 x 28 42 x 35 54 x 15 54 x 22 54 x 28 54 x 35 54 x 42
DC6012L 	**Fitting Reducer (Long)** Male Copper x Copper	15 x 8 15 x 10
DC601IM 	**Imperial to Metric Straight Coupler** Copper (Metric) x Copper (Imperial)	15 x 1/2 22 x 3/4 28 x 1

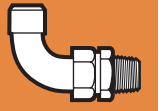
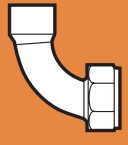
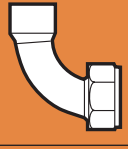
Part No.	Description	Size
DC6012IM 	**Imperial to Metric Adaptor** Male Copper (Metric) x Copper (Imperial)	15 x 1/2 22 x 3/4 28 x 1 35 x 1 1/4
DC601TC 	**Straight Tap Connector** Copper x Swivel Female Thread (Supplied with a Sealing Washer)	15 x 1/2 15 x 3/4 22 x 3/4
DC603 	**Female Straight Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1
DC604 	**Male Straight Connector** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 28 x 1
DC606 	**Obtuse Elbow** Copper x Copper	15 22 28 35 42 54

END FEED CAPILLARY FITTINGS
Copper 6mm-54mm

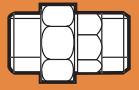
Part No.	Description	Size
DC606-2 	**Obtuse Street Elbow** Male Copper x Copper	15 22 28 35 42 54
DC607 	**Elbow** Copper x Copper	6 8 10 12 15 22 28 35 42 54
DC607R 	**Reduced Elbow** Copper x Copper	22 x 15 28 x 22
DC607LT 	**Slow Elbow** Copper x Copper	10 12 15 22 28 35 42 54

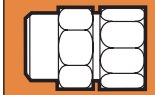
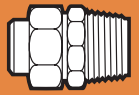
Part No.	Description	Size
DC6072 	**Street Elbow** Male Copper x Copper	10 12 15 22 28 35 42 54
DC6072LT 	**Street Bend** Male Copper x Copper	15 22 28
DC607TC 	**Bent Tap Connector** Copper x Swivel Female Thread (Supplied with a Sealing Washer)	15 x 1/2 15 x 3/4 22 x 3/4
DC60763 	**Female Bent Union Connector** **(Copper Tail)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 22 x 1 28 x 1

END FEED CAPILLARY FITTINGS
Copper 6mm-54mm

Part No.	Description	Size
DC60764 	**Male Bent Union Connector (Copper Tail)** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 22 x 1 28 x 1 35 x 1 1/4
DC6076AB 	**Female Bent Union Connector (Spigot)** Copper x Swivel Female Thread	22 x 1
DC6076UA 	**Bent Cylinder Union (Cone)** Copper x Swivel Female Thread (Designed for soft soldering only)	22 x 1 28 x 1 1/4
DC609 	**Female Gas Elbow - Side Entry with Wall Plate** Copper x Female Thread (Taper ISO 7)	15 x 1/2

Part No.	Description	Size
DC611 	**Tee - Equal** Copper All Ends	6 8 10 12 15 22 28 35 42 54
DC611RB 	**Tee – Reduced Branch** Copper All Ends	15 x 15 x 8 15 x 15 x 10 15 x 15 x 12 22 x 22 x 10 22 x 22 x 12 22 x 22 x 15 28 x 28 x 15 28 x 28 x 22 35 x 35 x 15 35 x 35 x 22 35 x 35 x 28 42 x 42 x 15 42 x 42 x 22 42 x 42 x 28 42 x 42 x 35 54 x 54 x 15 54 x 54 x 22 54 x 54 x 28 54 x 54 x 35 54 x 54 x 42
DC611RE 	**Tee – Reduced End** Copper All Ends	22 x 15 x 22 28 x 15 x 28 28 x 22 x 28 35 x 28 x 35 42 x 28 x 42

Part No.	Description	Size
DC611REB 	**Tee – Reduced End and Branch** Copper All Ends	15 x 10 x 10 22 x 15 x 15 28 x 15 x 15 28 x 15 x 22 28 x 22 x 15 28 x 22 x 22 35 x 22 x 22 35 x 28 x 22 35 x 28 x 28 42 x 35 x 35
DC611REE 	**Tee – Reduced Both Ends** Copper All Ends	15 x 15 x 22 22 x 22 x 28 28 x 28 x 35
DC617 	**Stop End** Copper	8 10 12 15 22 28 35 42 54
DC633 	**Straight Union Coupler (Copper Tail)** Copper x Copper (Designed for soft soldering only)	15 22 28 35 42

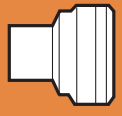
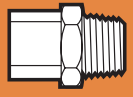
Part No.	Description	Size
DC6333 	**Female Straight Union Connector (Copper Tail)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1
DC6334 	**Male Straight Union Connector (Copper Tail)** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 22 x 1 28 x 1 35 x 1 1/4 42 x 1 1/2
DC633AB 	**Female Straight Union Connector (Spigot)** Copper x Swivel Female Thread	22 x 1
DC633UA 	**Female Straight Union Connector (Cone)** Copper x Swivel Female Thread	15 x 3/4 22 x 3/4 22 x 1 28 x 1 28 x 1 1/4
DC636 	**Cross Over** Copper x Copper	15 22

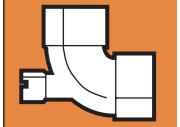
Part No.	Description	Size
DC636A 	**Part Cross Over** Male Copper x Copper	15 22
DC639 	**Return Bend** Copper x Copper	15 22
DC640 	**Extended Street Elbow** Male Copper x Copper	22
DC690MU 	**Straight Gas Meter Union to BS746** Copper x Swivel Female Thread	22 x 3/4 22 x 1 28 x 1
DC695MU 	**Bent Gas Meter Union to BS746** Copper x Swivel Female Thread (Supplied with a Rubber Washer)	22 x 3/4

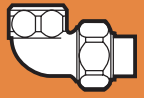
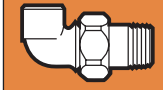
END FEED CAPILLARY FITTINGS
Copper 6mm-54mm

Part No.	Description	Size
DC701D 	**Straight Coupler with Air Vent** Copper x Copper	15 22 28
DC702 	**Eccentric Coupler** Copper x Copper	22 x 15
DC703 	**Female Straight Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/4 15 x 1/2 15 x 3/4 22 x 3/4 22 x 1 28 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
DC703T 	**Female Straight Connector** Copper x Female Thread (Parallel ISO 228) (Turned)	15 x 1/2 22 x 3/4

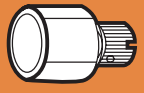
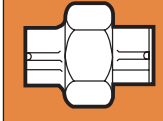
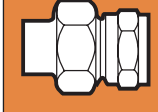
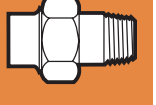
END FEED CAPILLARY FITTINGS
Red Brass 15mm-54mm

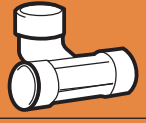
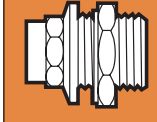
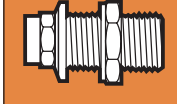
Part No.	Description	Size
DC7032 	**Female Straight Connector** Male Copper x Female Thread (Parallel ISO 228)	22 x 3/4
DC704 	**Male Straight Connector** Copper x Male Thread (Taper ISO 7)	15 x 1/4 15 x 3/8 15 x 1/2 15 x 3/4 22 x 3/4 22 x 1 28 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
DC7042 	**Male Straight Connector** Male Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 28 x 1

Part No.	Description	Size
DC705D 	**Elbow with Air Vent** Copper x Copper	15 22
DC7073 	**Female Elbow** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1
DC70725 	**Female Wall Plate Elbow (2 Hole)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4
DC70735 	**Female Wall Plate Elbow (3 Hole)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4

Part No.	Description	Size
DC7074 	**Male Elbow** Copper x Male Thread (Taper ISO 7)	15 x 1/4 15 x 1/2 22 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
DC70763 	**Female Bent Union Connector (Red Brass Tail)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 22 x 1 28 x 1 35 x 1 1/4
DC70764 	**Male Bent Union Connector (Red Brass Tail with Internal Lugs)** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 22 x 1 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
DC708 	**Female Wall Plate Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/2
DC711 	**Tee - Reduced End** Copper All Ends	35 x 15 x 35 54 x 35 x 54

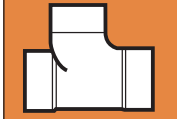
Part No.	Description	Size
DC711P 	**Sweep Tee - Equal** Copper All Ends	15 22 28 35 42 54
DC712 	**Tee with Female Branch** Copper x Copper x Female Thread (Parallel ISO 228)	15 x 15 x 1/2 22 x 22 x 1/2 22 x 22 x 3/4 28 x 28 x 1/2 28 x 28 x 3/4 28 x 28 x 1 35 x 35 x 1/2
DC714 	**Tee with Female End** Copper x Female Thread (Parallel ISO 228) x Copper	15 x 1/2 x 15 22 x 1/2 x 22 28 x 1/2 x 28
DC716D 	**Air Vent** Male Fit	15

Part No.	Description	Size
DC717D 	**Stop End with Air Vent** Copper	15 22
DC733 	**Straight Union Coupler** **(Red Brass Tail)** Copper x Copper	15 22 28 35 42 54
DC7333 	**Female Straight Union Connector** **(Red Brass Tail)** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
DC7334 	**Male Straight Union Connector** **(Red Brass Tail with Internal Lugs)** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 22 x 1 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2

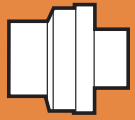
Part No.	Description	Size
DC737 	**Offset Tee** Copper All Ends	15 22
DC750A 	**Tank Connector** Copper x Male Thread	15 x 1/2 22 x 3/4 28 x 1
DC750B 	**Tank Connector (Long)** Copper x Male Thread (Turned)	15 x 1/2 22 x 3/4 28 x 1
DC750B 	**Tank Connector (Long)** Copper x Male Thread (Cast)	35 x 1 1/4 42 x 1 1/2 54 x 2
DC397 	**Sealing Washer** For use with Tap Connectors	1/2 3/4

Part No.	Description	Size
DC901 	**Straight Coupler** Copper x Copper	35 42 54
DC906 	**Obtuse Bend** Copper x Copper	35 42 54
DC9062 	**Obtuse Street Bend** Male Copper x Copper	35 42 54
DC907 	**Bend 91 1/2°** Copper x Copper	35 42 54

END FEED CAPILLARY WASTE FITTINGS
Copper 35mm-54mm

Part No.	Description	Size
DC9072 	**Street Bend 91 1/2°** Male Copper x Copper	35 42 54
DC911 	**Pitcher Tee** Copper All Ends	35 42 x 42 x 35 42 54 x 42 x 42 54 x 54 x 35 54 x 54 x 42 54

END FEED CAPILLARY WASTE FITTINGS
Copper 35mm-54mm

Part No.	Description	Size
DC8012 	**Fitting Reducer** Male Copper x Copper	42 x 35 54 x 35 54 x 42
DC80716LH 	**Bend with Cleaning Eye** Copper x Copper	35 42 54
DC816 	**Cleanout Fitting and Plug** Male Copper x Plug	35 54
DC816S 	**Cleanout Fitting and Plug Flush Fitting** Male Copper x Plug	35 x $^{3}/_{4}$ 42 x 1 54 x $1^{1}/_{2}$

END FEED CAPILLARY WASTE FITTINGS
Red Brass 35mm-54mm

Technical Specifications



General Information

Triflow integral solder ring fittings are manufactured in accordance with EN 1254-1 and 4.

The TP symbol on Triflow products indicates the use of lead-free solder.

All products meet the most stringent conditions imposed by the Water Regulations against the effect of materials on water quality as leaded solder is not used. Only lead-free solder complying with EN 29453 and ISO 9453 (S-Sn99Cu1 Tin-Copper) is used in the construction of the joint: this is factory applied to the solder groove.

Size Availability

6mm–66.7mm suitable for connecting copper tubes in accordance with EN 1057 and other standards including ISO 274.

Imperial copper tube to BS 659 in sizes $^{3}/_{8}$", $^{1}/_{2}$", 2" and $2^{1}/_{2}$" can be readily joined using 12mm, 15mm, 54mm and 66.7mm fittings respectively.

Material Availability

To counteract the dezincification problem, products are manufactured from high grade copper, gunmetal or dezincification resistant (DZR) brass. Where dezincification resistant brass is used, this complies with EN 12164/5 and fittings are marked with **CR** symbol.

Table A

Material	Specification
Copper	EN 12165 CW24A
Brass (Forging)	EN 12164/5 617N
Brass (Turning)	EN 12164/5 614N
DZR Brass (Stamping)	EN 12164/5 602N
DZR Brass (Turning)	EN 12164/5 602N
Gunmetal (Red Brass)	BS 1400 LG2

Health and Safety

It is the responsibility of the end user to ensure that adequate protection is available where required and the necessary information regarding possible health and safety regulations is adhered to.

Copper and copper alloy fittings are considered non-hazardous under normal circumstances.
All per COSHH 4 REG 1988.

Quality Assurance

The Company is a B.S.I. Registered Firm of assessed capability, Registration Number FM 11836, manufacturing in accordance with EN ISO 9001:2000.

Triflow fittings are manufactured in accordance with EN 1254-1 and 4 (formerly BS 864: Part 2).

Most fittings in the range are covered by the B.S.I. Kitemark under Licence No. KM 07283 (detailed list available upon request). Listings can also be found in the WRAS Water Fittings and Materials Directory under 'Kitemarked and Quality Assured Fittings'.

In addition to audits carried out by the British Standards Inspectorate, an internal audit system is also in operation to further enhance quality control.

Design

Triflow potable products use the principle of capillary attraction to ensure that, when correctly jointed to copper tube, a sufficient layer of lead-free solder is present between tube and fitting to form a mechanically strong, leakproof joint without the need for external solder application.

Fittings are designed to comply with the relevant standards and to maximise flow rate.

Connecting Threads

Taper male threads are in accordance with EN 1254-4 (ISO 7).

Parallel threads are in accordance with EN 1254-4 (ISO 228).

Generally, our female fittings are manufactured with parallel threads whilst male fittings are produced with taper threads.

Assembly of Coned Joints and Screwed Fittings

Coned Joints

Coned face connectors to EN 1254-1 rely on a metal x metal seal and care should be taken to avoid damage prior to assembly. Should difficulty be experienced, the use of a WRAS approved sealant is permitted. Do not overtighten.

Male/Female Threaded Joints

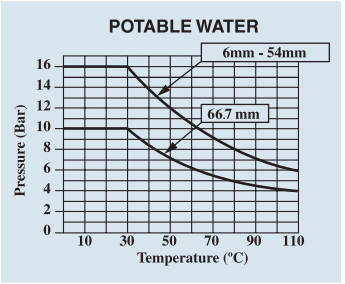
The use of a WRAS approved sealant or tape (e.g. PTFE) is recommended for making joints on fittings with taper male threads. For making joints with parallel connector threads, a good quality washer made from a WRAS listed material should be used. Suitable washers are supplied with Triflow tap connector fittings and these should be used.

NB: To avoid heat degradation of any sealing materials applied to screw threads, the solder joint should be made first.

Performance

Hydraulic working temperatures and pressures are based on EN 1254-1. Table B, prepared from the stated values, enables direct reading of intermediate values.

Table B



Fittings up to and including 28mm can be used at higher pressures than those shown in Table B provided that the installation does not impart additional tensile loads on the joints. Please contact our Technical Department for further data. They may also be used with light mineral oils, natural gases, LPG or compressed air, in accordance with Table C, when assembled with copper tube to EN 1057 R250 and R290.

Table C

For use with	Tube Sizes	Temps Not Exceeding	Max Working Pressures
	mm	°C	Bar
Potable Water or Light Mineral Oils	6 to 54	30	16
		65	10
		95	7
		110	6
	66.7	30	10
		65	6
		110	4
LPG,Natural Gases	8 to 28	30	1
Compressed Air	8 to 28	30	7

Making a Joint 6mm-54mm

1. Ensure that the copper tube and fitting sizes are compatible.
   Cut the tube end square but ensure tube retains its shape.
   The tube will then make even contact with the tube stop in the body of the fitting.
   The use of a tube cutter is recommended where practicable.

2. Remove any burrs from the tube, both inside and out.

3. Clean the socket of the fitting with a brush and the exterior of the tube with fine steel wool, fine glass paper or a cleaning pad.

4. If using fully annealed tube in accordance with EN 1057 R220 it may be necessary to re-round the tube with a re-rounding tool.

5. Apply a film of flux to both the socket and the outside of the tube.

   All fluxes are, to some degree, corrosive. Those recommended by IBP are chosen to minimise this corrosion and to give a long term reliable joint, providing the correct jointing procedure is adhered to.







   If it is necessary to make the joint at one end only, this can be done by inserting a short length of uncleaned tube into the end(s) to be left unjointed and keeping it cool with a wet rag whilst the remaining joint(s) is made.

6. Insert tube fully into the fitting. (In the case of slip fittings, ensure tube enters the socket to the appropriate distance). Rotate the tube or fitting and remove excess flux where possible.

7. Apply heat with a low temperature torch, evenly heating both tube and socket until a complete ring of solder appears at the mouth of the fitting. Do not apply excessive heat or additional solder.

8. Allow joint to cool, ensuring no movement occurs.

9. Wipe joint with a damp cloth to remove flux residues.

10. Flush all residues out of the system as soon as practicable and thoroughly clean joint.

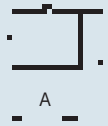
Important note
67mm products must be installed by a professionally qualified plumber.





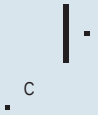
Installation Dimensions

SOLDER RING END TUBE STOP DIMENSION
Standard for all Components



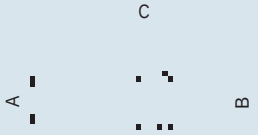
Size	A (mm)
15	14.2
22	19.0
28	22.9
35	27.5

MALE COPPER END TUBE STOP DIMENSION
Standard for all Components



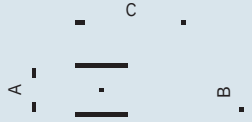
Size	A (mm)
15	15.0
22	20.0
28	24.0
35	27.5

TP1 STRAIGHT COUPLER
Copper x Copper



Size	A (mm)	B (mm)	C (mm)
8	8	8	21.0
10	10	10	23.5
12	12	12	26.0
15	15	15	28.5
22	22	22	39.5
28	28	28	47.5
35	35	35	58.0
42	42	42	65.0
54	54	54	78.0
67	67	67	79.0

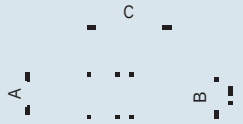
TP1 IM IMPERIAL TO METRIC STRAIGHT COUPLER
Copper (Metric) x Copper (Imperial)



Size	A (mm)	B (ins.)	C (mm)
15 x 1/2	15	1/2	31.0
22 x 3/4	22	3/4	42.0
28 x 1	28	1	49.0
35 x 1 1/4	35	1 1/4	58.0
42 x 1 1/2	42	1 1/2	67.0

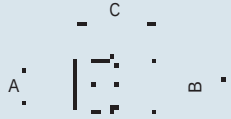
Installation Dimensions

TP2 FEMALE STRAIGHT CONNECTOR
Copper x Female Thread (Parallel)



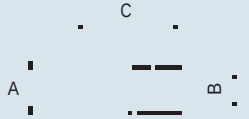
Size	A (mm)	B (BSP)	C (mm)
15 x 1/2	15	1/2	31.5
22 x 3/4	22	3/4	38.0
28 x 1	28	1	44.0
35 x 1 1/4	35	1 1/4	53.0
42 x 1 1/2	42	1 1/2	60.0
54 x 2	54	2	67.0

TP3 MALE STRAIGHT CONNECTOR
Copper x Male Thread (Taper)



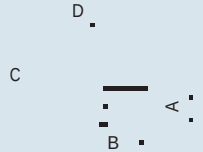
Size	A (mm)	B (BSP)	C (mm)
15 x 1 1/2	15	1/2	28.5
22 x 3/4	22	3/4	38.3
28 x 1	28	1	42.5
35 x 1 1/4	35	1 1/4	46.0
42 x 1 1/2	42	1 1/2	54.0
54 x 2	54	2	62.0
67 x 2 1/2	67	2 1/2	75.0

TP6 FITTING REDUCER
Male Copper x Copper



Size	A (mm)	B (mm)	C (mm)
10 x 8	10	8	22.0
15 x 8	15	8	32.5
15 x 10	15	10	31.0
22 x 15	22	15	42.0
28 x 15	28	15	56.0
28 x 22	28	22	46.0
35 x 15	35	15	59.0
35 x 22	35	22	54.0
35 x 28	35	28	55.0
42 x 15	42	15	60.0
42 x 22	42	22	66.0
42 x 28	42	28	70.0
42 x 35	42	35	69.0
54 x 15	54	15	73.5
54 x 22	54	22	75.5
54 x 28	54	28	76.0
54 x 35	54	35	78.0
54 x 42	54	42	78.0
67 x 28	67	28	90.0
67 x 35	67	35	90.0
67 x 42	67	42	92.0
67 x 54	67	54	91.0

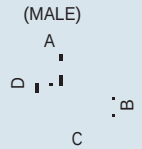
TP12 ELBOW
Copper x Copper



Size	A (mm)	B (mm)	C (mm)	D (mm)
8	8	21	21	8
10	10	24	24	10
15	15	25	25	15
22	22	35	35	22
28	28	38	38	28
35	35	52	52	35
42	42	63	63	42
54	54	75	75	54
67	67	90	90	67

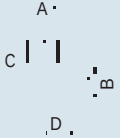
Installation Dimensions

TP12S STREET ELBOW
Male Copper x Copper



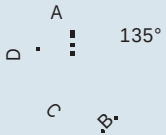
Size	A (mm)	B (mm)	C (mm)	D (mm)
15	15	15	29.5	32.5
22	22	22	34.0	37.5
28	28	28	40.0	41.0

TP14 FEMALE ELBOW
Copper x Female Thread (Parallel)



Size	A (mm)	B	C (mm)	D (mm)
15 x 1/2	15	1/2	26.6	20.0
22 x 3/4	22	3/4	39.0	25.0
28 x 1	28	1	43.0	32.0

TP21 OBTUSE BEND
Copper x Copper



Size	A (mm)	B (mm)	C (mm)	D (mm)
15	15	15	21.5	21.5
22	22	22	34.0	34.0
28	28	28	34.0	34.0
35	35	35	37.7	37.7
42	42	42	47.5	47.5
54	54	54	75	75
67	67	67	58	58

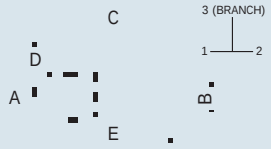
TP24 TEE-EQUAL
Copper all Ends



Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
8	8	8	8	15	30
10	10	10	10	17	34
12	12	12	12	19	38
15	15	15	15	23.3	46.6
22	22	22	22	32.5	63.2
28	28	28	28	38.5	76.9
35	35	35	35	48	102
42	42	42	42	56	121
54	54	54	54	70	140
67	67	67	67	75	150

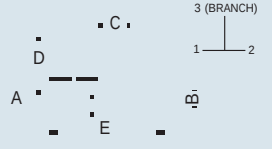
Installation Dimensions

TP25 TEE-REDUCED BRANCH
Copper all Ends



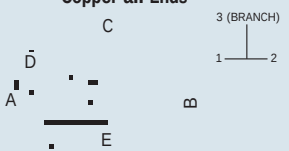
Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
15 x 15 x 8	15	15	8	19	39.5
15 x 15 x 10	15	15	10	19	40.5
22 x 22 x 10	22	22	10	28	56
22 x 22 x 15	22	22	15	26.8	54.5
28 x 28 x 15	28	28	15	32.0	70.0
28 x 28 x 22	28	28	22	34.0	69.8
35 x 35 x 15	35	35	15	44	94
35 x 35 x 22	35	35	22	40	80
35 x 35 x 28	35	35	28	45	94
42 x 42 x 15	42	42	15	45	100
42 x 42 x 22	42	42	22	43	99
42 x 42 x 28	42	42	28	45	94
42 x 42 x 35	42	42	35	52	104
54 x 54 x 15	54	54	15	65	120
54 x 54 x 22	54	54	22	61	115
54 x 54 x 28	54	54	28	56	112
54 x 54 x 35	54	54	35	57	114
54 x 54 x 42	54	54	42	60	118
67 x 67 x 28	67	67	28	62	117

TP26 TEE-REDUCED END
Copper all Ends



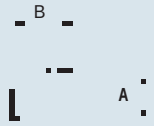
Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
22 x 15 x 22	22	15	22	31.6	65
28 x 15 x 28	28	15	28	37.8	66.7
28 x 22 x 28	28	22	28	42	80
35 x 15 x 35	35	15	35	47	106
42 x 28 x 42	42	28	42	57	122
42 x 35 x 42	42	35	42	57	124

TP27 TEE-REDUCED END AND BRANCH
Copper all Ends



Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
22 x 15 x 15	22	15	15	26.8	57
28 x 15 x 15	28	15	15	31	78
28 x 22 x 15	28	22	15	30	70
28 x 22 x 22	28	22	22	34.6	65.7

TP61 STOP END
Copper



Size	A (mm)	B (mm)
8	8	13
10	10	13.5
15	15	14.9
22	22	19.5
28	28	25.0
35	35	28.5
42	42	33

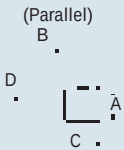
TP62 STRAIGHT TAP CONNECTOR
Swivel Female Copper x Thread



Size	A (mm)	B (BSP)	C (mm)
15 x 1/2	15	1/2	36
15 x 3/4	15	3/4	32
22 x 3/4	22	3/4	42

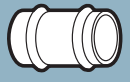
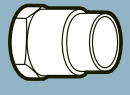
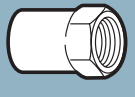
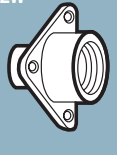
Supplied with a sealing washer.

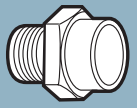
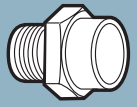
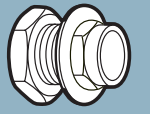
TP63 BENT TAP CONNECTOR
Swivel Female Copper x Thread

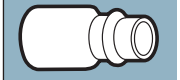
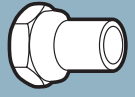


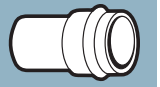
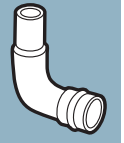
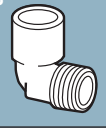
Size	A (mm)	B (BSP)	C (mm)	D (mm)
15 x 1/2	15	1/2	33	29
22 x 3/4	22	3/4	41	45

Supplied with a sealing washer.

Part No.	Description	Size
TP1S 	**Slip Coupler** Copper x Copper	15 22 28
TP2 	**Female Straight Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2
TP2LC 	**Female Reduced Straight Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/4 15 x 3/8
TP2W 	**Female Wall Plate Connector** Copper x Female Thread (Parallel ISO 228)	15 x 1/2

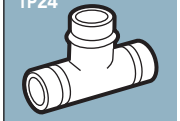
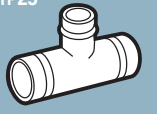
Part No.	Description	Size
TP3 	**Male Straight Connector** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4 28 x 1 35 x 1 1/4 42 x 1 1/2 54 x 2 67 x 2 1/2
TP3LC 	**Male Reduced Straight Connector** Copper x Male Thread (Taper ISO 7)	15 x 1/4 15 x 3/8 22 x 1/2
TP5 	**Tank Connector** Copper x Male Thread	15 x 1/2 22 x 3/4

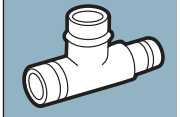
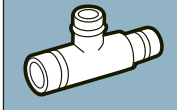
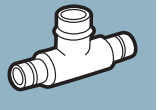
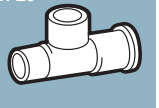
Part No.	Description	Size
TP6 	**Fitting Reducer** Male Copper x Copper	10 x 8 15 x 8 15 x 10 15 x 12 22 x 15 28 x 15 28 x 22 35 x 15 35 x 22 35 x 28 42 x 15 42 x 22 42 x 28 42 x 35 54 x 15 54 x 22 54 x 28 54 x 35 54 x 42 67 x 28 67 x 35 67 x 42 67 x 54
TP7 	**Female Adaptor** Male Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4

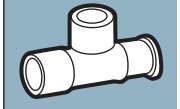
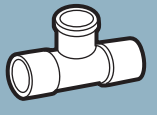
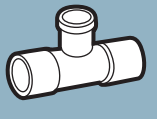
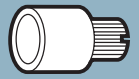
Part No.	Description	Size
TP9 	**Imperial to Metric Adaptor** Male Copper (Metric) x Copper (Imperial)	15 x 1/2 22 x 3/4 28 x 1
TP12 	**Elbow** Copper x Copper	8 10 12 15 22 28 35 42 54 67
TP12S 	**Street Elbow** Male Copper x Copper	15 22 28
TP13 	**Male Elbow** Copper x Male Thread (Taper ISO 7)	15 x 1/2 22 x 3/4

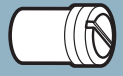
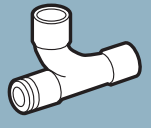
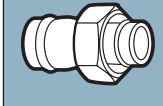
SOLDER RING FITTINGS
6mm-67mm

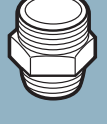
Part No.	Description	Size
TP13LC 	**Male Reduced Elbow** Copper x Male Thread (Taper ISO 7)	15 x 1/4
TP14 	**Female Elbow** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4 28 x 1
TP15 	**Female Wall Plate Elbow** Copper x Female Thread (Parallel ISO 228)	15 x 1/2 22 x 3/4
TP18 	**Slow Bend** Copper x Copper	15 22

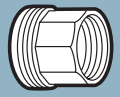
Part No.	Description	Size
TP21 	**Obtuse Bend** Copper x Copper	15 22 28 35 42 54 67
TP24 	**Tee – Equal** Copper All Ends	8 10 12 15 22 28 35 42 54 67
TP25 	**Tee – Reduced Branch** Copper All Ends	15 x 15 x 8 15 x 15 x 10 22 x 22 x 15 28 x 28 x 15 28 x 28 x 22 35 x 35 x 15 35 x 35 x 22 35 x 35 x 28 42 x 42 x 15 42 x 42 x 22 42 x 42 x 28 42 x 42 x 35 54 x 54 x 15 54 x 54 x 22 54 x 54 x 28 54 x 54 x 35 54 x 54 x 42 67 x 67 x 28

Part No.	Description	Size
TP26 	**Tee – Reduced End** Copper All Ends	22 x 15 x 22 28 x 15 x 28 28 x 22 x 28 35 x 15 x 35 35 x 22 x 35 35 x 28 x 35 42 x 28 x 42 42 x 35 x 42 54 x 42 x 54
TP27 	**Tee – Reduced End and Branch** Copper All Ends	22 x 15 x 15 28 x 15 x 15 28 x 15 x 22 28 x 22 x 15 28 x 22 x 22
TP28 	**Tee – Reduced Both Ends** Copper All Ends	15 x 15 x 22 22 x 22 x 28 42 x 42 x 54
TP29 	**Tee with Female End** Copper x Female Thread (Parallel ISO 228) x Copper	15 x 1/2 x 15 22 x 3/4 x 22

Part No.	Description	Size
TP29R 	**Tee with Female Reduced End** Copper x Female Thread (Parallel ISO 228) x Copper	22 x 1/2 x 22
TP30 	**Tee with Female Branch** Copper x Copper x Female Thread (Parallel ISO 228)	22 x 22 x 3/4
TP30R 	**Tee with Female Reduced Branch** Copper x Copper x Female Thread (Parallel ISO 228)	22 x 22 x 1/2 28 x 28 x 1/2
TAV35 	**Air Vent** Copper	15

Part No.	Description	Size
TRV35 	**Air Vent**	15
TP37 	**Sweep Tee – Equal** Copper all Ends	15
TP61 	**Stop End** Copper	8 10 15 22 28 35 42 54
TP62 	**Straight Tap Connector** Copper x Swivel Female Thread	15 x 1/2 15 x 3/4 22 x 3/4

Part No.	Description	Size
TP63 	**Bent Tap Connector** Copper x Swivel Female Thread (Supplied with a Sealing Washer)	15 x 1/2 22 x 3/4
TP64 	**Bent Cylinder Union (Coned)** Copper x Swivel Female Thread	15 x 3/4 22 x 1 28 x 1 1/4
TP68 	**Straight Cylinder Union (Coned)** Copper x Swivel Female Thread	15 x 3/4 22 x 1 28 x 1 1/4 35 x 1 1/2
TP70 	**Male Nipple** (Taper)	3/4 x 1/2 1 x 3/4 1 1/4 x 1 1 1/2 x 1 1/4

Part No.	Description	Size
TP72 	**Female Nipple** (Parallel ISO 228)	1 x 3/4 1 1/4 x 1 1 1/2 x 1 1/4
TP472 	**Hexagonal Swivel Nut** (Parallel ISO 228) For use with Union Connectors	1/2 3/4 1
TP97 	**Sealing Washer** For use with Tap Connectors	1/2 3/4

Technical Specifications



General Information

Delbraze brazing fittings are manufactured to the highest standards complying with EN1254-5.

The materials used in manufacture, Copper, DZR Brass and Gunmetal, make them resistant or immune to dezincification.

Fittings are designed for brazing applications only and are not suitable to be jointed using the soft soldering technique.

Our range of accessories includes brazing rods to EN 1044, brazing flux, mats and an extensive range of flanges.

All products enable the installer to meet the stringent conditions imposed by Water Regulations.

Applications and Uses

Delbraze fittings are used in a wide variety of industrial and commercial applications such as plumbing, heating, fluid distribution, air conditioning and refrigeration, air pressure lines, steam and condense lines.

The fitting's simplicity, and versatility of installation makes it a popular choice with installers.

Size Availability

66.7mm - 159mm, suitable for connecting copper tubes in accordance with EN1057 and other standards including ISO 274. Certain configurations are also available for joining 219mm diameter tubes.

For sizes below 66.7mm please refer to the section describing the Delcop range which, with the exception of Union fittings with copper tails, may also be brazed.

Material Availability

Most fittings in the range are manufactured from Copper or Gunmetal thereby being immune to dezincification.

Table A

Material	Specification
Copper	EN 12165 CWO24A
Gunmetal	BS 1400 LG2
Brass	BS1400 SCB6
Steel Plate	BS 4360

Health and Safety

It is the responsibility of the end user to ensure that adequate protection is available where required and the necessary information regarding possible health and safety regulations is adhered to.

Copper and copper alloy fittings are considered non-hazardous under normal circumstances.

Before using brazing rods, fluxes and mats, you are advised to read the relevant COSHH Regulations. Copies are available on request.

All per COSHH 4 REG 1988.

Quality Assurance

The Company is a B.S.I. Registered Firm of assessed capability, Registration Number FM 11836, manufacturing in accordance with EN ISO 9001:2000.

Delbraze fittings are manufactured in accordance with EN 1254-1 and 4 (formerly BS 864: Part 2).

Most fittings in the range are covered by the B.S.I. Kitemark under Licence No. KM 07283 (detailed list available upon request). Listings can also be found in the WRAS Water FIttings and materials Directory under 'Kitemarked and Quality Assured Fittings'.

In addition to audits carried out by the British Standards Inspectorate, an internal audit system is also in operation to further enhance quality control.

Design

Delbraze fittings are designed with a short cup thus economising on filler metals. These heavy duty products are manufactured from copper tube complying with EN1057 - R250.

Delbraze fittings use the principle of capillary attraction to ensure that, when correctly jointed to copper tube, a sufficient layer of filler metal is present between tube and fitting to form a mechanically strong, leak-proof joint. To ensure a successful joint there must be a controlled gap between the mating parts. This precise dimension is engineered by sizing the sockets to close tolerances and by the installer using tube manufactured to EN1057.

Fittings are designed to comply with all relevant standards, to maximise flow rate and to blend with the connecting pipework.

Connecting Threads

Generally, female fittings are manufactured with parallel threads whilst male fittings are produced with taper threads. Relevant thread standards EN1254-4, ISO 228, and ISO 7.

Assembly of Coned Joints and Screwed Fittings

Coned Joints

Coned face connectors rely on a metal x metal seal and care must be taken to avoid damage prior to assembly. Should difficulty be experienced, the use of a WRAS approved sealant is permitted. Do not overtighten.

Male/Female Threaded Joints

The use of a WRAS approved sealant or tape (e.g. PTFE) is recommended for making joints on fittings with taper male threads. For making joints with parallel connector threads, a good quality washer made from a WRAS approved sealant should be used.

N.B: To avoid heat degradation of sealing materials applied to screw threads, the brazed joint should be made first.

Performance

Hydraulic working temperatures and pressures shown in Table B are based on EN1254-1, EN1254-4 and EN1254-5.

Table B

TEMPERATURES AND PRESSURES FOR WATER AND LIGHT MINERAL OILS					
Filler Metal	Max temp °C	Max. working pressures (bar)			
		15-28mm	35-54mm	67-108mm	108-159mm
Silver Copper (Cadmium-free) 55-40% Ag	30	25	25	16	5
Silver with Cadmium 30-40% Ag	65	25	16	16	3
Copper/ Phosphorous/ 94/6% or Copper/ Phosphorous with 2% Silver 92/6/2%	110	16	10	10	2

Brazing (Capillary Joint) - Definition

Brazing is carried out with the principal aim of using a filler metal to penetrate capillary gaps between the metals being joined and thereby create a strong, leak - proof joint by the bonding of the filler metal to the parent surfaces over a comparatively large area. The formation of a fillet is secondary to this aim.

Low Temperature Brazing is that which takes place within the temperature range of 600˚C to 850˚C normally using filler metals based on silver and copper. This process can also be referred to as: Silver brazing, Silver alloy brazing, Silver soldering or Hard soldering.

Rods and Fluxes for Brazing

Rods recommended for this jointing technique are detailed within EN 1044 'Filler Metals for Brazing' and those more widely used are shown below.

Group AG

Silver Brazing Alloys

Type AG 14 with an approximate melting temperature of 610˚C to 620˚ C.

Group CP

Phosphorous Brazing Alloys

Type CP2 has an approximate temperature range of 645˚C to 740˚C with a high self - fluxing activity. This alloy has no zinc or cadmium content and is therefore useful in certain applications. Flux is not required when jointing copper to copper using CP2 rods.

BS1723 sets out general requirements for brazed joints.

All fluxes are, to some degree, corrosive. Those recommended by IBP are chosen to minimise this corrosion and to give a long term reliable joint, providing the correct jointing procedure is adhered to.

Note: For tubing 28mm and larger, it is difficult to bring the whole joint up to heat at one time when using propane or similar gases. It is recommended that oxy-acetylene flame be used and that a mild preheating of the whole fitting be carried out before heating proceeds in the steps detailed herein. If difficulty is encountered in getting the whole joint up to heat at one time, then the alloy is fed into the joint when the joint portion is nearly up to the desired temperature. The torch is then moved to an adjacent area and the operation carried on progressively all round the joint.

Making a Joint

1. Ensure that the copper tube and fitting sizes are compatible. Cut the tube end square and remove all burrs.



2. Clean end of tube with a cleaning pad or wire wool.



3. Clean fitting socket with wire wool



4. Immediately after cleaning, apply flux to the mating surfaces. Joints made with copper to copper do not require flux when using CP rods.





5. Insert the tube up against the stop of the fitting. A small twist will help spread the flux over the two surfaces. Remove any excess. The assembly should be firmly supported so that it will remain in alignment during the jointing operation.



6. Apply heat to the parts to be joined. The preferred method is by oxy-acetylene flame, adjusted to provide a neutral or very slightly oxidising flame. A large nozzle should be used to set a wide flame so that a large area is heated quickly rather than overheating one small area. We recommend that the "pepperpot" type of nozzle be used.



Heat the tube first, beginning at about 25mm from the edge of the fitting. Sweep the flame around the tube in short strokes up and down at right angles to the run of the tube. Then switch the flame to the fitting. Heat uniformly, sweeping the flame from fitting to tube. Avoid excessive heating of castings. Generally, the flux may be used as a guide as to how long to heat the joint.



Flux will pass through four stages:

a. At 100˚C the water boils off.
b. At 315˚C the flux becomes white and slightly puffy and starts to work.
c. At 430˚C it lays against the surface and has a milky appearance.
d. At 595˚C it is completely clear, active and has the appearance of water.



7. When the flux appears liquid and transparent, start sweeping the flame along the axis of the joint so maintaining heat on the parts to be joined, especially toward the base of the socket of the fitting. The flame must be kept moving to avoid burning the tube or the fitting.



8. Apply the brazing wire or rod at a point where the tube enters the socket of the fitting, the temperature of the joint being hot enough to melt the brazing alloy. Keep both fitting and tube heated by moving the flame back and forth from one to the other as the alloy is drawn into the joint. When the correct temperature is reached, the alloy will flow readily into the space between the tube outer wall and the fitting socket, drawn in by the natural force of capillary attraction. Maintain the temperature by sweeping the flame from tube to fitting. When the joint is filled, a continuous fillet of brazing alloy will be visible around the joint. Stop feeding as soon as the joint is filled.



9. After the brazing alloy has set, remove residual flux with hot water, detergent and a soft cloth. Unlike copper fittings it is advisable to allow cast fittings to cool naturally to some extent before applying a swab. All flux residues must be removed before inspection and pressure testing.



Horizontal Joints

When making horizontal joints, it is preferable to start applying the brazing alloy at the top, then two sides, and finally the bottom, making sure that the operations overlap.

Vertical Joints

It is immaterial where the start is made. If the opening of the socket is pointed downwards, care should be taken to avoid overheating the tube as this may cause the alloy to run down the tube. If this condition is encountered, take the heat away and allow the brazing alloy to set. Then, re-heat the solder cup of the fitting to draw up the alloy.

Trouble Spots

If the brazing alloy fails to flow or has a tendency to 'ball up', it indicates oxidisation on the metal surfaces or insufficient heat.

Oxidisation during heating indicates too little flux or it is of too thin a consistency. If the brazing alloy refuses to enter the joint, it indicates that one part is overheated, or the other is under heated or both.

Operations should be stopped and the joint disassembled, re-cleaned and fluxed.

Caution

i. Brazing alloy and flux manufacturers' recommendations should be adhered to.
ii. These notes are given as a guide only and IBP cannot accept responsibility for installation work or system performance.

Further Information - Publications

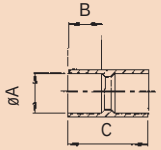
TR/3 Code of practice:

'Brazing and Bronze Welding of Copper Pipework and Sheet' produced by Heating and Ventilation Contractors Association, 34 Palace Court, London W2 4JG.

Joining of Copper and Copper Alloys, Publication number 98 is available from the Copper Development Association.

Installation Dimensions

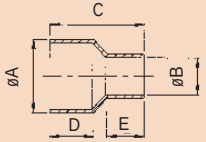
DB601 COUPLER
Copper x Copper



Size	A (mm)	B (mm)	C (mm)
67	66.7	13.0	33.0
*76	76.1	15.0	36.0
108	108	17.5	41.0
133	133	25.0	111.0
159	159	25.0	127.0
219	219	30	70

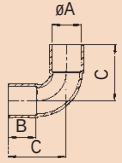
*These Dimensions are the same for DB 601-IM but one end suits 3" Imperial Tube.

DB601-2 FITTING REDUCER
Male Copper x Copper



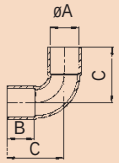
Size	A (mm)	B (mm)	C (mm)	D (mm)	E (m
67 x 28	66.7	28	55	16	9
67 x 35	66.7	35	55	16	14
67 x 42	66.7	42	50.0	15.0	11.1
67 x 54	66.7	54	43.0	15.0	12.7
76 x 35	76.1	35	55	20	14
76 x 42	76.1	42	55	20	14
76 x 54	76.1	54	51.0	17.0	12.7
76 x 67	76.1	66.7	43.0	17.0	13.0
108 x 54	108	54	70	23	16
108 x 67	108	66.7	65	23	16
108 x 76	108	76.1	52.0	19.5	15.0
133 x 67	133	66.7	100	30	16
133 x 76	133	76.1	90	30	20
133 x 108	133	108	85	30	23
159 x 76	159	76.1	107	30	20
159 x 108	159	108	90	30	23
159 x 133	159	133	78	30	30
219 x 108	219	108	110	30	23
219 x 219	219	219	75	30	30

DB607 ELBOW
Copper x Copper



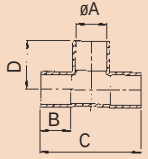
Size	A (mm)	B (mm)	C (mm)
67 x 67	66.7	13.0	70.0
76 x 76	76.1	15.0	71.0

DB607-LT SLOW BEND
Copper x Copper

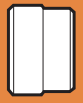
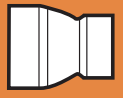


Size	A (mm)	B (mm)	C (mm)
67	67	11.0	118
76	76	12.0	138
108	108	17.5	190.0
133	133	25.0	241.0
159	159	25.0	279.0

DB611 TEE - EQUAL
Copper x Copper x Copper



Size	A (mm)	B (mm)	C (mm)	D (mm)
67	66.7	13.0	113.0	51.0
76	76.1	15.0	117.0	60.0
108	108	17.5	160.0	77.0
133	133	25.0	254.0	130.0
159	159	25.0	302.0	143.0

Part No.	Description	Size
DB601 	**Straight Coupler** Copper x Copper	67 76 108 *133 *159 **219
DB601-IM 	**Imperial to Metric** **Straight Coupler** Copper (Metric) x Copper (Imperial)	76 x 3 108 x 4 133 x 5
DB601-R 	**Reduced Straight Coupler** Copper x Copper The following sizes are manufactured to order	67 x 54 76 x 42 76 x 54 76 x 67 67 x 35 67 x 42 108 x 54 108 x 67 108 x 76 133 x 67 133 x 76 133 x 108 159 x 76 159 x 108 159 x 133 219 x 133 219 x 159

BRAZING FITTINGS (SHORT CUP)
Copper 67mm-219mm

Part No.	Description	Size
DB601-2 	**Fitting Reducer** Male Copper x Copper	67 x 28 67 x 35 67 x 42 67 x 54 76 x 35 76 x 42 76 x 54 76 x 67 *108 x 54 108 x 67 108 x 76 133 x 67 *133 x 76 *133 x 108 *159 x 76 *159 x 108 *159 x 133 **219 x 108 **219 x 159
DB606 	**Obtuse Elbow** Copper x Copper	67 76 108 133 159 **219

** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Copper 67mm-219mm

Part No.	Description	Size
DB606-2 	**Obtuse Street Elbow** Male Copper x Copper The following sizes are manufactured to order	67 76 108
DB607 	**Elbow** Copper x Copper	67 76
DB607-LT 	**Slow Bend** Copper x Copper	67 76 108 133 159
DB611 	**Tee – Equal** Copper all Ends	67 76 108 *133 *159 **219

** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Copper 67mm-219mm

Part No.	Description	Size
DB611-RB 	**Tee – Reduced Branch** Copper all Ends	*67 x 67 x 28 *67 x 67 x 35 *67 x 67 x 42 *67 x 67 x 54 *76 x 76 x 28 *76 x 76 x 35 *76 x 76 x 42 *76 x 76 x 54 *76 x 76 x 67 108 x 108 x 28 108 x 108 x 35 108 x 108 x 42 *108 x 108 x 54 *108 x 108 x 67 *108 x 108 x 76
	The following sizes are manufactured to order	133 x 133 x 28 133 x 133 x 35 133 x 133 x 42 133 x 133 x 54 133 x 133 x 67 133 x 133 x 76 133 x 133 x 108 159 x 159 x 35 159 x 159 x 42 159 x 159 x 54 159 x 159 x 67 159 x 159 x 76 159 x 159 x 108 159 x 159 x 133 219 x 219 x 108 219 x 219 x 133 219 x 219 x 159

** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Copper 67mm-219mm

Part No.	Description	Size
DB611-P 	**Sweep Tee - Equal Fabricated** Copper all Ends	67 76 108 133 159
DB617 	**Stop End** Copper	67 76 108 133 159

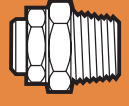
** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Copper 67mm-219mm

Part No.	Description	Size
DB701 	**Straight Coupler** Copper x Copper	67 76 108
DB703 	**Female Straight Connector** Copper x Female Thread (Parallel ISO 228)	67 x 2 1/2 76 x 3
DB704 	**Male Straight Connector** Copper x Male Thread (Taper ISO 7)	67 x 2 1/2 76 x 3 108 x 4

** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Red Brass 15mm-219mm

Part No.	Description	Size
DB707 	**Elbow** Copper x Copper	15 22 28 35 42 54 67 76 108 133 159 **219
DB733-4 	**Male Straight Union Connector** Copper x Male Thread (Taper ISO 7)	67 x 2 1/2
DB750-A 	**Tank Connector** Copper x Male Thread (Parallel ISO 228)	67 x 2 1/2 76 x 3 108 x 4

** 219mm fittings will be manufactured to order.
* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

BRAZING FITTINGS (SHORT CUP)
Red Brass 15mm-219mm

Part No.	Description	Size
DB-748-16 	**BS4504 PN16** **Bi-Metallic Brazing Flange** **to BS4504: Part 3-** **Section 3.3** (The Steel Outer has a protective paint finish)	15 22 28 35 42 54 67 76 108 133 159

BRAZING FLANGES
15mm-159mm

Technical Specifications



General Information

Clyde brazing fittings are manufactured to the highest standards complying with EN1254-1.

The fittings are generally manufactured from copper tube to EN1057-R250 making them immune to dezincification.

Fittings are designed for brazing applications only and are not suitable to be jointed using the soft soldering technique.

Our range of accessories includes brazing rods to BS1845, brazing flux, mats and an extensive range of Flanges.

All products enable the installer to meet the stringent conditions imposed by water regulations.

Applications and uses

Clyde fittings are the economical choice for low pressure systems and waste disposal in commercial and Industrial applications. The fitting's simplicity and versatility makes it a popular choice with installers.

Size Availability

66.7mm - 159mm, suitable for connecting copper tubes in accordance with EN1057 and other standards including ISO 274.
For sizes below 66.7mm please refer to the section describing the Delcop range which, with the exception of Unions with copper tails, may also be brazed.

Materials Availability

All fittings in the range are manufactured from Copper making them immune to dezincification.

Table A

Material	Specification
Copper	EN 12165 CWO2HA

Health and Safety

It is the responsibility of the user to ensure that all adequate protection is available where required and the necessary information regarding Health and Safety Regulations is adhered to. Copper and Copper alloy fittings are considered non-hazardous under normal circumstances. Before using brazing rods, fluxes and mats, you are advised to read the relevant COSHH Regulations. Copies are available on request.

All Per COSHH 4 Reg 1988.

Quality Assurance

The Company is a B.S.I. Registered Firm of assessed capability, Registration Number FM 11836, manufacturing in accordance with EN ISO 9001:2000.

Clyde fittings are manufactured in accordance with EN 1254-1 and 4 (formerly BS 864: Part 2).

Most fittings in the range are covered by the B.S.I. Kitemark under Licence No. KM 07283 (detailed list available upon request). Listings can also be found in the WRAS Water FIttings and Materials Directory under 'Kitemarked and Quality Assured Fittings'.

In addition to audits carried out by the British Standards Inspectorate, an internal audit system is also in operation to further enhance quality control.

Design

Clyde fittings are designed with a long cup ensuring a strong leak-proof joint when correctly installed. With economy in mind, these brazing fittings are manufactured from copper tube complying with EN1057 - R250.

Clyde brazing fittings use the principle of capillary attraction to ensure that, when correctly jointed to copper tube, a sufficient layer of filler metal is present between tube and fittings to form a mechanically strong, leak-proof joint. To ensure a successful joint there must be a controlled gap between the mating parts. This precise dimensions is engineered by sizing the sockets to close tolerances and by the installer using tube manufactured to EN1057.

Fittings are designed to comply with all relevant standards, to maximise flow rate and to blend with the connecting pipework.

Performance

Hydraulic working temperatures and pressures shown in Table B are based on EN 1254-1.

Table B

TEMPERATURES AND PRESSURES FOR WATER AND LIGHT MINERAL OILS

Filler Metal	Temp °C	Max. Pressure (bar) 67mm - 108mm	Max. Pressure (bar) 108mm - 159mm
Silver Copper (Cadmium Free)	30	16	5
55/40%Ag. or Copper/ Phosphorous 94/6%	65	16	3
or Copper/ Phosphorous/ Silver 92/6/2%	110	10	2

Note: Clyde fittings are designed for low pressure applications such as soil and waste stacks where pressures are not likely to exceed 2 bar.

Brazing (Capillary Joint) - Definition

Brazing is carried out with the principal aim of using a filler metal to penetrate capillary gaps between the metals being joined and thereby create a strong, leak - proof joint by the bonding of the metal to the parent surfaces over a comparatively large area. The formation of a fillet is secondary to this aim.

Low Temperature Brazing is that which takes place within the temperature range of 600˚C to 850˚C normally using filler metals based on silver and copper. This process can also be referred to as:

Silver brazing, Silver alloy brazing, Silver soldering or Hard soldering.

Rods and Fluxes for Brazing

Rods recommended for this jointing technique are detailed within BS 1845: 1984 ‘Filler Metals for Brazing’ and those more widely used are shown below.

Group AG

Silver Brazing Alloys

Type AG 14 with an approximate melting temperature of 610˚C to 620˚C.

Group CP

Phosphorous Brazing Alloys

Type CP2 has an approximate temperature range of 645˚C to 740˚C with a high self - fluxing activity. This alloy has no zinc or cadmium content and is therefore useful in certain applications. Flux is not required when jointing copper using CP2 rods.

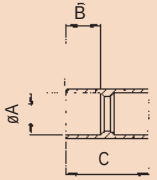
All fluxes are, to some degree, corrosive. Those recommended by IBP are chosen to minimise this corrosion and to give a long term reliable joint, providing the correct jointing procedure is adhered to.

Making a Joint

Please refer to Delbraze, as the jointing procedure is the same.

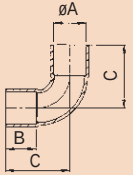
Installation Dimensions

C101 STRAIGHT COUPLER
Copper x Copper



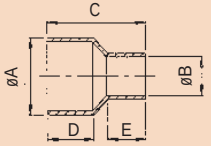
Size	A (mm)	B (mm)	C (mm)
67	66.7	25.0	58.0
76	76.1	25.0	58.0
108	108	30.0	68.0
133	133	35.0	111.0
159	159	35.0	128.0

C103 SLOW BEND
Copper x Copper



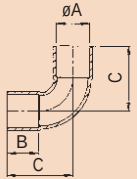
Size	A (mm)	B (mm)	C (mm)
67	67	33.5	118
76	76	33.5	138
108	108	30.0	190.0
133	133	35.0	241.0
159	159	35.0	279.0

C105-2 REDUCED STRAIGHT COUPLER
Male Copper x Copper



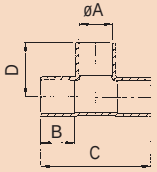
Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
67 x 22	66.7	22	85	38	17
67 x 28	66.7	28	85	38	20
67 x 35	66.7	35	85	38	25
67 x 42	66.7	42	64.0	25.0	20.0
67 x 54	66.7	54	66.7	25.0	25.0
76 x 22	76.1	22	85	38	17
76 x 28	76.1	28	85	38	20
76 x 35	76.1	35	85	38	25
76 x 42	76.1	42	85	38	29
76 x 54	76.1	54	65.0	25.0	25.0
76 x 67	76.1	66.7	63.0	25.0	25.0
108 x 42	108	42	120	50	29
108 x 54	108	54	120	50	34
108 x 67	108	66.7	115	50	36
108 x 76	108	76.1	77.0	30.0	25.0
133 x 76	133	76.1	120	50	36
133 x 108	133	108	130	50	50
159 x 76	159	76.1	142	50	36
159 x 108	159	108	132	50	50

C103-E ELBOW
Copper x Copper



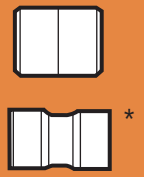
Size	A (mm)	B (mm)	C (mm)
67	66.7	25.0	80.0
76	76.1	25.0	81.0

C106 EQUAL TEE
Copper All Ends

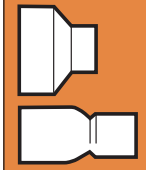
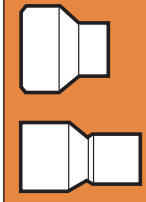


Size	A (mm)	B (mm)	C (mm)	D (mm)
67	66.7	35	144	71
76	76.1	35	150	77
108	108	50	215	108
133	133	50	265.0	140.0
159	159	50	302.0	156.0

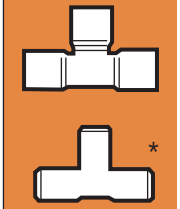
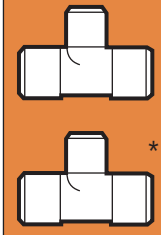
Product Range

Part No.	Description	Size
C101 	**Straight Coupler** Copper x Copper	67 76 108 *133 *159
C102 	**Obtuse Elbow** Copper x Copper	67 76 108 133 159
C103 	**Slow Bend** Copper x Copper	67 76 108 133 159
C103-E 	**Elbow** Copper x Copper	67 76

* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

Part No.	Description	Size
C105 	**Reduced Straight Coupler** Copper x Copper	67 x 54 76 x 42 76 x 54 76 x 67 *108 x 54 108 x 67 108 x 76 *159 x 108
C105-2 	**Fitting Reducer** Male Copper x Copper	*67 x 22 *67 x 28 67 x 35 67 x 42 67 x 54 *76 x 22 *76 x 28 76 x 35 76 x 42 76 x 54 76 x 67 *108 x 42 *108 x 54 108 x 67 108 x 76 *133 x 76 *133 x 108 *159 x 76 *159 x 108

* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

Part No.	Description	Size
C106 	**Tee – Equal** Copper All Ends	67 76 108 *133 *159
C107 	**Tee – Reduced Branch** Copper All Ends	67 x 67 x 15 67 x 67 x 22 *67 x 67 x 28 *67 x 67 x 35 *67 x 67 x 42 67 x 67 x 54 76 x 76 x 22 76 x 76 x 28 76 x 76 x 35 *76 x 76 x 42 *76 x 76 x 54 76 x 76 x 67 108 x 108 x 28 108 x 108 x 35 108 x 108 x 42 108 x 108 x 54 108 x 108 x 67 108 x 108 x 76

* Please note that the configuration of indicated fittings could vary due to the different production techniques used.

Part No.	Description	Size
C109 	The following sizes are manufactured to order **Sweep Tee -** **Equal Fabricated** Copper All Ends	67 76 108 133 159
C119 	**Stop End** Copper	67 76 108 133 159

BRAZING FITTINGS (LONG CUP)
Copper 67mm-159mm

Part No.	Description	Size
DC315 	Medium Steel Wool	1lb Pack
DC318 	Cleaning Pad	9" x 6"
DC321 	EQA Grade Mat	12" x 10"
DC330N 	Cup Cleaning Brush	10 15 22

Conex | Bänninger

Please see our website for the full Conex range at www.ibpconex.co.uk
or contact the sales team on: 0121 557 2831 or email: salesuk@ibpgroup.com
For technical information please email our technical department at: technical@ibpgroup.com

Conex Universal Limited: Whitehall Road, Tipton, West Midlands, DY4 7JU, UNITED KINGDOM. Tel: +44 (0)121 557 2831 Fax: +44 (0)121 520 8778
email: export@ibpgroup.com, salesuk@ibpgroup.co.uk, technical@ibpgroup.com, literature@ibpgroup.com, web: www.ibpgroup.com, www.ibpconex.co.uk

an IBP GROUP company.