



Copper & Stainless Steel Flexible Tube Connections.



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Allpex Copper & Stainless Steel Flexible Tube Connections.

Scope & Application:

Flexible tubes are widely used in plumbing applications where the quality, visual appearance and durability are main considerations. They may be used in both hot and cold water services. Flexibility of bending by hand allows easy connections in difficult to access areas. They can be used with a variety of connection types, to include threaded, compression, capillary (solder ring and endfeed), pushfit or pressfit type joint connections. Most common applications include, sanitary plumbing connections from normal to awkward positions, mechanical tube joints requiring occasional disconnecting or expansion joints.

Standards & Specifications:

Copper Tubes:

Copper tubes are manufactured to BS EN 1057 (BS 2871 Part 1) from DHP grade copper to BS EN 12164:1998 (BS 2874:1986), C106 and supplied in natural, chrome plated, powder coated epoxy or pvc coated finish (white).

Brass Nuts:

The Brass nuts where used are manufactured to BS EN 1254 Part 2 from brass to BS EN 12164:1998 (BS 2874:1986), CZ 121/122 and stress relieved. They are supplied in natural brass or chrome plated finish.

Stainless Steel Tubes:

Stainless steel tubes are manufactured to EN 10312:2002. , in grades 304 & 316 in polished natural finish.

Product Features:

1. Easy to connect.
2. Available in variety of lengths to suit the application.
3. Available in different type of end connections, allowing connecting tubes of plastic, copper etc.
4. Plain tube ends are supplied reinforced with hard liners to protect the tube ends from deformation.
5. The flexible tubes may be used as expansion joints by bending in "Omega" shape. (Please refer to application section below)
6. Flexible tubes are available in 4 basic finishes:
 - Natural metal.
 - Chrome plated.
 - Plastic coated.
 - Powder coated epoxy.
7. All tube fitting ends (Ftg) are minimum 40 mm long and reinforced internally with hard liners. All swivel ends have minimum 40 mm non flexible (plain) end portion. Plain section may be used for clamping to pipeclips or supports.
8. Working pressures tested are for tubes in straight condition at 30 deg C, they should be reduced proportionately if subject to external stress, bending or higher water temperatures. Test pressures are 1.5 times the rated working pressures. (e.g. PN 25 rated tubes are tested to 40 bar hydraulic pressure.)

Application & Installation:

Bending causes stresses and work hardening in metal, following recommendation will help in minimising any problems.

Bending care:

- We recommend use of appropriate internal bending springs for bending tube.
- Avoid kinks & twists as this will weaken the tube, reduce flow and increase pressure. This may also cause plating finish (if used) to peel.
- Avoid tight bends ($R > 5 \times OD$), do not try to straighten tube once it is bent, as this will cause fatigue at the stress point.
- Avoid airlocks by minimising the extra length of tube used & keep the tube level above the lower connection end.
- Avoid water stagnation in loops by keeping the tube above the lower connection and eliminate sagging below connection level.
- Always first bend the tube to approximate shape before connecting either end.
- If used to make expansion joints by bending in omega shape, install with the bend in upright position to prevent airlocks or use a mid position airvent. We recommend use of PN 25 rated products for expansion joints.
- In case of connections subject to end loads such as valves, appliances, fittings etc the plain portion of that end of the tube must be secured using supports such as pipe clamps.
- Keep plastic coating (where used) cool by covering with wet cloth during hot soldering on plain ends (if used). (max temp. 105°C) Plastic coating may also be cut back to expose more tube if necessary.
- All pipe assemblies should be tested for at least 1 hour under 1.5 times the working pressure required for the system before commissioning.

Allpex also offers bespoke or made to order flexible tubes, for details contact our sales office.

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Code	Length (mm)	End Size	Wall thickness (mm)	Tube O.D. (mm)	Surface finish	Bag Qty	Internal Bending Spring	Code	Length (mm)	End Size	Wall thickness (mm)	Tube O.D. (mm)	Surface finish	Bag Qty	Internal Bending Spring
Copper Flexible tube, Both ends flat flanged with swivel nuts, Fi (swivel) x Fi (swivel) + 2 washers-PN 10															
TFCX66L-DD30	300	1/2" x 1/2"	0.4	13	Chr. Pltd.	10	TA21-10I	TFCX66L-EE30	300	3/4" x 3/4"	0.5	18	Chr. Pltd.	10	TA21-15I
TFCX66L-DD45	450	1/2" x 1/2"	0.4	13	Chr. Pltd.	10	TA21-10I	TFCX66L-EE45	450	3/4" x 3/4"	0.5	18	Chr. Pltd.	10	TA21-15I
TFCX66L-DD60	600	1/2" x 1/2"	0.4	13	Chr. Pltd.	5	TA21-10I	TFCX66L-EE60	600	3/4" x 3/4"	0.5	18	Chr. Pltd.	5	TA21-15I
Copper Flexible tube, Both ends flat flanged with swivel nuts, Fi (swivel) x Fi (swivel) + 2 washers-PN 16															
TFC66M-CC30	300	3/8" x 3/8"	0.5	11	Copper	10	TA21-8I	TFCX66M-CC60	600	3/8" x 3/8"	0.5	11	Chr. Pltd.	5	TA21-8I
TFC66M-CC45	450	3/8" x 3/8"	0.5	11	Copper	10	TA21-8I	TFCX66M-CC90	900	3/8" x 3/8"	0.5	11	Chr. Pltd.	5	TA21-8I
TFC66M-CC60	600	3/8" x 3/8"	0.5	11	Copper	5	TA21-8I	TFCX66M-DC30	300	1/2" x 3/8"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DC30	300	1/2" x 3/8"	0.5	14	Copper	10	TA21-12I	TFCX66M-DC45	450	1/2" x 3/8"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DC45	450	1/2" x 3/8"	0.5	14	Copper	10	TA21-12I	TFCX66M-DC60	600	1/2" x 3/8"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DC60	600	1/2" x 3/8"	0.5	14	Copper	5	TA21-12I	TFCX66M-DD30	300	1/2" x 1/2"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DD30	300	1/2" x 1/2"	0.5	14	Copper	10	TA21-12I	TFCX66M-DD45	450	1/2" x 1/2"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DD45	450	1/2" x 1/2"	0.5	14	Copper	10	TA21-12I	TFCX66M-DD60	600	1/2" x 1/2"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DD60	600	1/2" x 1/2"	0.5	14	Copper	5	TA21-12I	TFCX66M-DD90	900	1/2" x 1/2"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-DD90	900	1/2" x 1/2"	0.5	14	Copper	5	TA21-12I	TFCX66M-DD120	1200	1/2" x 1/2"	0.5	14	Chr. Pltd.	5	TA21-12I
TFC66M-ED30	300	3/4" x 1/2"	0.6	19	Copper	10	TA21-15I	TFCX66M-ED30	300	3/4" x 1/2"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-ED45	450	3/4" x 1/2"	0.6	19	Copper	10	TA21-15I	TFCX66M-ED45	450	3/4" x 1/2"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-EE30	300	3/4" x 3/4"	0.6	19	Copper	10	TA21-15I	TFCX66M-EE30	300	3/4" x 3/4"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-EE45	450	3/4" x 3/4"	0.6	19	Copper	10	TA21-15I	TFCX66M-EE45	450	3/4" x 3/4"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-EE60	600	3/4" x 3/4"	0.6	19	Copper	5	TA21-15I	TFCX66M-EE60	600	3/4" x 3/4"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-FF45	450	1" x 1"	0.6	24	Copper	10	N/A	TFCX66M-EE90	900	3/4" x 3/4"	0.6	19	Chr. Pltd.	5	TA21-15I
TFC66M-FF60	600	1" x 1"	0.6	24	Copper	5	N/A	TFCX66M-FF45	450	1" x 1"	0.6	24	Chr. Pltd.	5	N/A
TFCX66M-CC30	300	3/8" x 3/8"	0.5	11	Chr. Pltd.	10	TA21-8I	TFCX66M-FF60	600	1" x 1"	0.6	24	Chr. Pltd.	5	N/A
TFCX66M-CC45	450	3/8" x 3/8"	0.5	11	Chr. Pltd.	10	TA21-8I								

Note : For Flexible tube sizes 1/2" x 3/8" and 1/2" x 1/2", either TA21-10I or TA21-12I bending springs can be used.

Stainless Steel Flexible tube, Both ends flat flanged with swivel nuts, Fi (swivel) x Fi (swivel) + 2 washers-PN 20															
TFS66-DD30	300	1/2" x 1/2"	0.35	14	S.S.	10	N/A	TFS66-EE60	600	3/4" x 3/4"	0.4	19	S.S.	5	N/A
TFS66-DD45	450	1/2" x 1/2"	0.35	14	S.S.	10	N/A	TFS66-EE90	900	3/4" x 3/4"	0.4	19	S.S.	5	N/A
TFS66-DD60	600	1/2" x 1/2"	0.35	14	S.S.	5	N/A	TFS66-FF30	300	1" x 1"	0.4	25	S.S.	5	N/A
TFS66-DD90	900	1/2" x 1/2"	0.35	14	S.S.	5	N/A	TFS66-FF45	450	1" x 1"	0.4	25	S.S.	5	N/A
TFS66-EE30	300	3/4" x 3/4"	0.4	19	S.S.	5	N/A	TFS66-FF60	600	1" x 1"	0.4	25	S.S.	5	N/A
TFS66-EE45	450	3/4" x 3/4"	0.4	19	S.S.	5	N/A								

Copper Flexible tube, Both ends flat flanged with swivel nuts, Fi (swivel) x Fi (swivel) + 2 washers-PN 25															
BS EN 1057(BS 2871.1, Table X)															
TFC66-CC30	300	3/8" x 3/8"	0.6	12	Copper	10	TA21-10I	TFCX66-CC30	300	3/8" x 3/8"	0.6	12	Chr. Pltd.	10	TA21-10I
TFC66-CC45	450	3/8" x 3/8"	0.6	12	Copper	10	TA21-10I	TFCX66-CC45	450	3/8" x 3/8"	0.6	12	Chr. Pltd.	10	TA21-10I
TFC66-DC30	300	1/2" x 3/8"	0.7	15	Copper	10	TA21-12I	TFCX66-DC30	300	1/2" x 3/8"	0.7	15	Chr. Pltd.	10	TA21-12I
TFC66-DD30	300	1/2" x 1/2"	0.7	15	Copper	10	TA21-12I	TFCX66-DD30	300	1/2" x 1/2"	0.7	15	Chr. Pltd.	10	TA21-12I
TFC66-DD45	450	1/2" x 1/2"	0.7	15	Copper	10	TA21-12I	TFCX66-DD45	450	1/2" x 1/2"	0.7	15	Chr. Pltd.	10	TA21-12I
TFC66-DD60	600	1/2" x 1/2"	0.7	15	Copper	5	TA21-12I	TFCX66-DD60	600	1/2" x 1/2"	0.7	15	Chr. Pltd.	5	TA21-12I
TFC66-DD90	900	1/2" x 1/2"	0.7	15	Copper	5	TA21-12I	TFCX66-ED30	300	3/4" x 1/2"	0.9	20	Chr. Pltd.	5	N/A
TFC66-ED30	300	3/4" x 1/2"	0.9	20	Copper	5	N/A	TFCX66-EE30	300	3/4" x 3/4"	0.9	20	Chr. Pltd.	5	N/A
TFC66-EE30	300	3/4" x 3/4"	0.9	20	Copper	5	N/A	TFCX66-EE45	450	3/4" x 3/4"	0.9	20	Chr. Pltd.	5	N/A
TFC66-EE45	450	3/4" x 3/4"	0.9	20	Copper	5	N/A	TFCX66-EE60	600	3/4" x 3/4"	0.9	20	Chr. Pltd.	5	N/A
TFC66-EE60	600	3/4" x 3/4"	0.9	20	Copper	5	N/A	TFCX66-FF45	450	1" x 1"	0.9	25	Chr. Pltd.	5	N/A
TFC66-FF45	450	1" x 1"	0.9	25	Copper	5	N/A	TFCX66-FF60	600	1" x 1"	0.9	25	Chr. Pltd.	5	N/A
TFC66-FF60	600	1" x 1"	0.9	25	Copper	5	N/A								

* TFC66 is also available in NPT threads 1/2" x 3/4"

* Flexible tubes are available in powder coated epoxy paint & plastic coated finishes (normally in white colour). Other colours are available as special order.

Code	Length (mm)	End Size	Wall thickn ess (mm)	Tube O.D. (mm)	Surface finish	Bag Qty	Internal Bending Spring	Code	Length (mm)	End Size	Wall thickn ess (mm)	Tube O.D. (mm)	Surface finish	Bag Qty	Internal Bending Spring
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Copper flexible tube, One end tube OD with internal liner, other

end swivel nut (BS EN 1254.1 spigot), Ftg x Fi (swivel) + washer-PN 25

Tubes to BS EN 1057 (BS 2871.1 Table X)



TFC16-15D30	300	15 x 1/2"	0.7	15	Copper	10	TA21-12I	TFCX16-15D30	300	15 x 1/2"	0.7	15	Chr. Pltd.	10	TA21-12I
TFC16-15D45	450	15 x 1/2"	0.7	15	Copper	10	TA21-12I	TFCX16-15D45	450	15 x 1/2"	0.7	15	Chr. Pltd.	10	TA21-12I
TFC16-22E30	300	22 x 3/4"	0.9	22	Copper	5	N/A	TFCX16-22E30	300	22 x 3/4"	0.9	22	Chr. Pltd.	5	N/A
TFC16-22E45	450	22 x 3/4"	0.9	22	Copper	5	N/A	TFCX16-22E45	450	22 x 3/4"	0.9	22	Chr. Pltd.	5	N/A

Copper flexible tube, both ends tube OD with internal liners

Ftg x Ftg-PN 25

Tubes to BS EN 1057 (BS 2871.1 Table X)

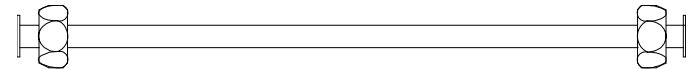


TFC10-1015	150	10 x 10	0.6	10	Copper	10	TA21-8I	TFCX10-1015	150	10 x 10	0.6	10	Chr. Pltd.	10	TA21-8I
TFC10-1030	300	10 x 10	0.6	10	Copper	10	TA21-8I	TFCX10-1030	300	10 x 10	0.6	10	Chr. Pltd.	10	TA21-8I
TFC10-1045	450	10 x 10	0.6	10	Copper	10	TA21-8I	TFCX10-1045	450	10 x 10	0.6	10	Chr. Pltd.	10	TA21-8I
TFC10-1515	150	15 x 15	0.7	15	Copper	10	TA21-8I	TFCX10-1515	150	15 x 15	0.7	15	Chr. Pltd.	10	TA21-8I
TFC10-1530	300	15 x 15	0.7	15	Copper	10	TA21-12I	TFCX10-1530	300	15 x 15	0.7	15	Chr. Pltd.	10	TA21-12I
TFC10-1545	450	15 x 15	0.7	15	Copper	10	TA21-12I	TFCX10-1545	450	15 x 15	0.7	15	Chr. Pltd.	10	TA21-12I
TFC10-1560	600	15 x 15	0.7	15	Copper	5	TA21-12I	TFCX10-1560	600	15 x 15	0.7	15	Chr. Pltd.	5	TA21-12I
TFC10-1590	900	15 x 15	0.7	15	Copper	5	TA21-12I	TFCX10-2230	300	22 x 22	0.9	22	Chr. Pltd.	5	N/A
TFC10-2230	300	22 x 22	0.9	22	Copper	5	N/A	TFCX10-2245	450	22 x 22	0.9	22	Chr. Pltd.	5	N/A
TFC10-2245	450	22 x 22	0.9	22	Copper	5	N/A	TFCX10-2260	600	22 x 22	0.9	22	Chr. Pltd.	5	N/A
TFC10-2260	600	22 x 22	0.9	22	Copper	5	N/A	TFCX10-2845	450	28 x 28	0.9	28	Chr. Pltd.	5	N/A
TFC10-2845	450	28 x 28	0.9	28	Copper	5	N/A	TFCX10-2860	600	28 x 28	0.9	28	Chr. Pltd.	5	N/A
TFC10-2860	600	28 x 28	0.9	28	Copper	5	N/A								

Copper tube connector (soft annealed, plain surface), both ends flat

flanged with swivel nuts, Fi (swivel) x Fi (swivel)

Tubes to BS EN 1057 (BS 2871.1 Table W)-PN 25

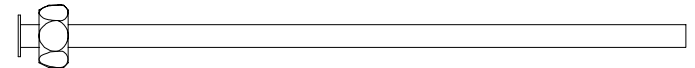


TFCXG66-CC30	300	3/8" x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG66-CD60	600	3/8" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG66-CC45	450	3/8" x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG66-DD30	300	1/2" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG66-CC60	600	3/8" x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG66-DD45	450	1/2" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG66-CD30	300	3/8" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG66-DD60	600	1/2" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG66-CD45	450	3/8" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG66-DD90	900	1/2" x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I

Copper tube connector (soft annealed, plain surface), one end tube

OD, other end flanged with swivel nut, Ftg x Fi (swivel)

Tubes to BS EN 1057 (BS 2871.1 Table W)-PN 25



TFCXG16-10C30	300	10 x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG16-10D30	300	10 x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG16-10C45	450	10 x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG16-10D45	450	10 x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I
TFCXG16-10C60	600	10 x 3/8"	0.7	10	Chr. Pltd.	2	TA21-10I	TFCXG16-10D60	600	10 x 1/2"	0.7	10	Chr. Pltd.	2	TA21-10I

Gas Restrictor Tubes

Copper tube connector (half hard), one end tube OD, other end with

taper threaded brass male adaptor, C x Mi

Tubes to BS EN 1057 (BS 2871.1 Table X)



TFCXR-8B100	1000	8 x 1/4"	0.6	8	Chr. Pltd.	2	TA21-8I	TFCBR-8B100	1000	8 x 1/4"	0.6	8	Bronze	2	TA21-8I
TFCXR-8B125	1250	8 x 1/4"	0.6	8	Chr. Pltd.	2	TA21-8I	TFCBR-8B125	1250	8 x 1/4"	0.6	8	Bronze	2	TA21-8I
TFCXR-12B100	1000	12 x 1/4"	0.6	12	Chr. Pltd.	2	TA21-10I	TFCBR-12B100	1000	12 x 1/4"	0.6	12	Bronze	2	TA21-10I
TFCXR-12B125	1250	12 x 1/4"	0.6	12	Chr. Pltd.	2	TA21-10I	TFCBR-12B125	1250	12 x 1/4"	0.6	12	Bronze	2	TA21-10I

Internal Bending Spring



TA21-8I	600
TA21-10I	600
TA21-12I	600
TA21-15I	600