



Allpex[®]

**Copper Alloy & Bi-Metallic Flanges made to
BS EN 1092-3:2003 (BS 4504 Part 3.3)
& BS 4504 Part 2 for use with
Copper Tube to BS EN 1057.**



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Allpex Bimetallic & Solid Brazing Flanges- Product Information

Scope & Application:

Allpex composite and solid copper alloy flanges are used in water, gas and sanitary applications, for connecting copper tubes made to BS2871.1 and BS EN 1057. The flanges consist of either bronze (gunmetal) collar connecting to the copper tube, which is set in a recessed backing ferrous flange with bolt holes or a solid bronze flange connecting to copper tubes with bolt holes.

Standards & Specifications:

The flanges are made to BS EN 1092-3:2003 (BS 4504: Part 3.3:1989) and BS 4504: Part 2:1976 specifications. Solid and composite flanges with nominal working pressures of 16 and 25 in bar gauge (as per chart below) with sockets suitable for brazing joints to BS EN 1254 part 5.

Alternate jointing systems suitable to BS 864.2/EN 1254 part 1 for soft soldering up to 67mm OD pipe (DN65) is available. Other systems such as grooved ring, solder ring and press-fit are available made to special orders.

Pressure and temperature rating:

Nominal Pressure (bar)	Temperature Deg C						
	-10 to 120	150	180	200	220	250	260
	Maximum permissible working pressure bar gauge.						
16	16	16	16	13.5	11.3	8.0	7.0
25	25	25	25	21.2	17.5	12.2	10.5

Intermediate values may be obtained by linear interpolation.

Minimum operating temperature for composite type flanges is -10 deg C.

Hydraulic test pressure applied shall not exceed 1.5 times the nominal pressure rating.

Flange Materials:

Non-ferrous parts				Ferrous parts			
Forgings		Castings		Plates		Forgings	
BS/EN Standard	Alloy Designation	BS/EN Standard	Alloy Designation	BS/EN Standard	Alloy Designation	BS/EN Standard	Alloy Designation
BS 2872	CA104	BS 1400	LG2	BS 1501	151 Grade 23A	BS 1503- 221-430	430
		EN 1982	Symbol: CuSn5Pb5Zn5-C Number: CC491K	BS 4360	43A	BS 1503- 164-490	490
				EN 10028-2	P265GH	EN 10222-2	P245GHa
				EN 10028-2	P295GH		

Machining and Finishing:

Flange machining dimensions and tolerances are as per Table 10 of BS EN 1092-3:2003 (Clause 10 of Part 3.3) & Clause 6 of BS 4504 Part 2. Copper alloy parts are supplied machine finished. Steel Backing Flange is supplied with machine-finished surface coated with Green Epoxy paint cured at 120 deg C.

Product Marking:

Flange collars are marked on the rim, for BS 4504 Parts 2 & 3.3 showing : BS standard, Tube OD, Pressure rating (PN), Material of Manufacture and the Manufacturer's Identity mark / Brand.

For BS EN 1092-3:2003:- BS standard (e.g. EN 1092-3) – Flange or collar type number (e.g.02) – PN designation (e.g. PN 25) – DN (nominal size) (e.g. DN 50) – Material designation, the alloy designation number (e.g. CC491K) – Flange manufacturer's name or trademark (e.g. AL, ALLPEX)

Bolting Materials:

Bolting materials such as Hexagon bolts and nuts shall comply with the requirements of BS 3692, BS 4190 grade 4.6 & BS 4439 grade 4.8, BS 2874 grade CA 105 as appropriate. Washers where used, should comply with the dimensions of BS 4320 table 3. Standard black normal series washers to BS 4320 may be used for temperature range -30 to +260 deg C.

For flange types 05 & 14, where copper alloy bolting is used, the recommended bolting materials are EN 12420 Alloy Nos CW306G or CW307G for temperatures up to and including 120°C and for flange types 02, 05C & 07 steel bolting should be used and reference should be made to EN 1515

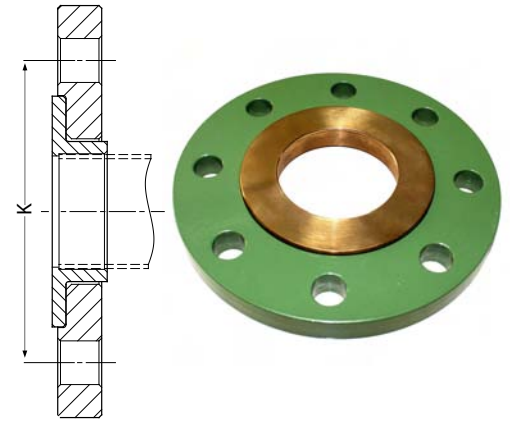
Application and Installation:

(The information given below is advisory only and not intended to be exhaustive.)

1. When using bolting materials other than of copper alloy, the installer should take into account the pressure, flange material and the related gasket so that the joint remains tight under the expected operating conditions.
2. Application of the pressure ratings to flanged joints (at either high or low temperature) should consider the effect of the risk of leakage due to forces and movement described in the connecting pipes.
3. Flanges may be required to be pressure tested after attachment of a pipe or other equipment or when forming an integral part of such equipment. The test pressure is then dependent on the requirements of the appropriate standard or code of practice in accordance with which the equipment has been fabricated or manufactured. Any test pressure should not exceed 1.5 times the allowable pressure at 20°C rounded up to the next higher whole bar increment.

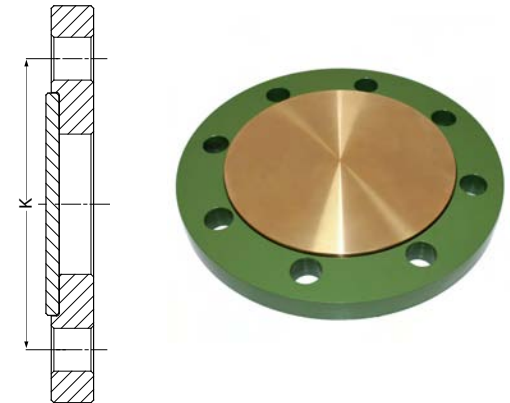
Bi-Metallic Brazing Flange, PN16, BS 4504 Part 2, Table 16/23

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details				Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm	
FLSG23/16-15	DN 15	15	4	14	M12	65	95
FLSG23/16-22	DN 20	22	4	14	M12	75	105
FLSG23/16-28	DN 25	28	4	14	M12	85	115
FLSG23/16-35	DN 32	35	4	18	M16	100	140
FLSG23/16-42	DN 40	42	4	18	M16	110	150
FLSG23/16-54	DN 50	54	4	18	M16	125	165
FLSG23/16-67	DN 65	66.7	4	18	M16	145	185
FLSG23/16-76	DN 80	76.1*	8	18	M16	160	200
FLSG23/16-108	DN 100	108	8	18	M16	180	220
FLSG23/16-133	DN 125	133	8	18	M16	210	250
FLSG23/16-159	DN 150	159	8	22	M20	240	285
FLSG23/16-219	DN 200	219	12	22	M20	295	340
FLSG23/16-267	DN 250	267	12	26	M24	355	405



Bi-Metallic (Blanking) Brazing Flange, PN16 BS 4504 Part 2

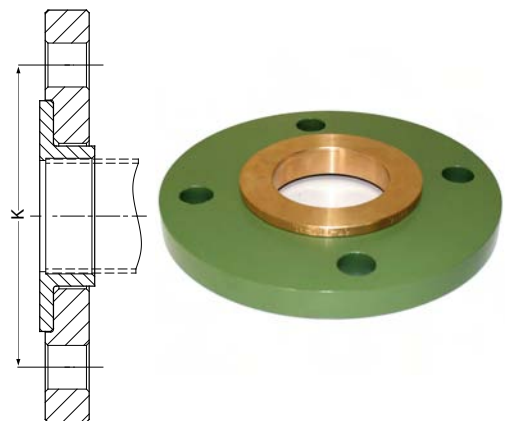
Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details				Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm	
FLSG23/16B-15	DN 15	15	4	14	M12	65	95
FLSG23/16B-22	DN 20	22	4	14	M12	75	105
FLSG23/16B-28	DN 25	28	4	14	M12	85	115
FLSG23/16B-35	DN 32	35	4	18	M16	100	140
FLSG23/16B-42	DN 40	42	4	18	M16	110	150
FLSG23/16B-54	DN 50	54	4	18	M16	125	165
FLSG23/16B-67	DN 65	66.7	4	18	M16	145	185
FLSG23/16B-76	DN 80	76.1*	8	18	M16	160	200
FLSG23/16B-108	DN 100	108	8	18	M16	180	220
FLSG23/16B-133	DN 125	133	8	18	M16	210	250
FLSG23/16B-159	DN 150	159	8	22	M20	240	285
FLSG23/16B-219	DN 200	219	12	22	M20	295	340
FLSG23/16B-267	DN 250	267	12	26	M24	355	405



* 76.1 mm changed to DN 80 instead of DN 65. For 76.1 mm - DN 65 use BS EN 1092-3:2003 (BS 4504 Part 3.3).

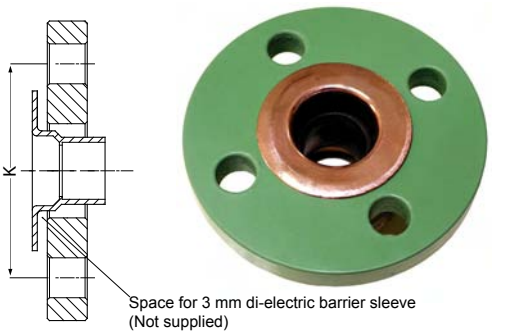
Bi-Metallic Brazing Flange, PN16, BS EN 1092-3:2003, Type 07 (BS 4504 Part 3.3, Fig 307)

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details				Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm	
FLSG07/16-15	DN 10	15	4	14	M12	60	90
FLSG07/16-22	DN 20	22	4	14	M12	75	105
FLSG07/16-28	DN 25	28	4	14	M12	85	115
FLSG07/16-35	DN 32	35	4	18	M16	100	140
FLSG07/16-42	DN 40	42	4	18	M16	110	150
FLSG07/16-54	DN 50	54	4	18	M16	125	165
FLSG07/16-67	DN 65	66.7	4	18	M16	145	185
FLSG07/16-76	DN 65	76.1	4	18	M16	145	185
FLSG07/16-108	DN 100	108	8	18	M16	180	220
FLSG07/16-133	DN 125	133	8	18	M16	210	250
FLSG07/16-159	DN 150	159	8	22	M20	240	285
FLSG07/16-219	DN 200	219	12	22	M20	295	340
FLSG07/16-267	DN 250	267	12	26	M24	355	405



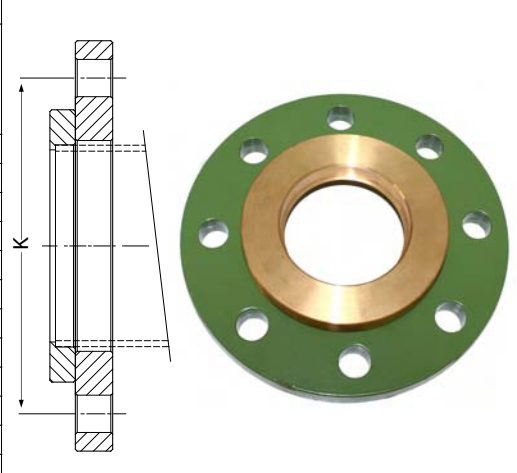
Bi-Metallic Soldering Flange (copper inner), generally conforms to BS EN 1092-3:2003 (BS 4504 Part 3.3) suitable for soldering or brazing.

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details				Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm	
FLSC07/16-15	DN 10	15	4	14	M12	60	90
FLSC07/16-22	DN 20	22	4	14	M12	75	105
FLSC07/16-28	DN 25	28	4	14	M12	85	115
FLSC07/16-35	DN 32	35	4	18	M16	100	140
FLSC07/16-42	DN 40	42	4	18	M16	110	150
FLSC07/16-54	DN 50	54	4	18	M16	125	165
FLSC07/16-67	DN 65	66.7	4	18	M16	145	185



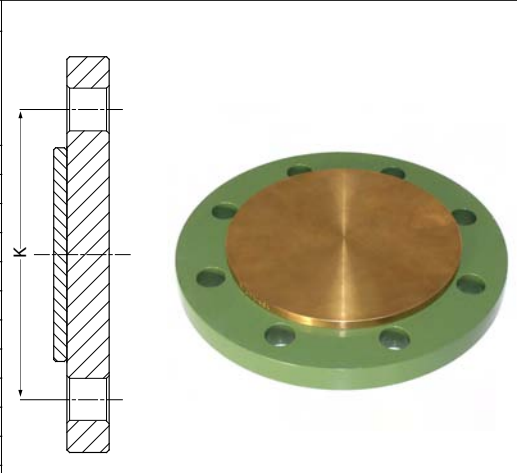
Bi-Metallic Flange, PN 25, BS EN 1092-3:2003, Type 02 (BS 4504 Part 3.3, Fig 302)

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details					Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm		
FLSG02/25-15	DN 10	15	4	14	M12	60	90	
FLSG02/25-22	DN 20	22	4	14	M12	75	105	
FLSG02/25-28	DN 25	28	4	14	M12	85	115	
FLSG02/25-35	DN 32	35	4	18	M16	100	140	
FLSG02/25-42	DN 40	42	4	18	M16	110	150	
FLSG02/25-54	DN 50	54	4	18	M16	125	165	
FLSG02/25-67	DN 65	66.7	8	18	M16	145	185	
FLSG02/25-76	DN 65	76.1	8	18	M16	145	185	
FLSG02/25-108	DN 100	108	8	22	M20	190	235	
FLSG02/25-133	DN 125	133	8	26	M24	220	270	
FLSG02/25-159	DN 150	159	8	26	M24	250	300	
FLSG02/25-219	DN 200	219	12	26	M24	310	360	



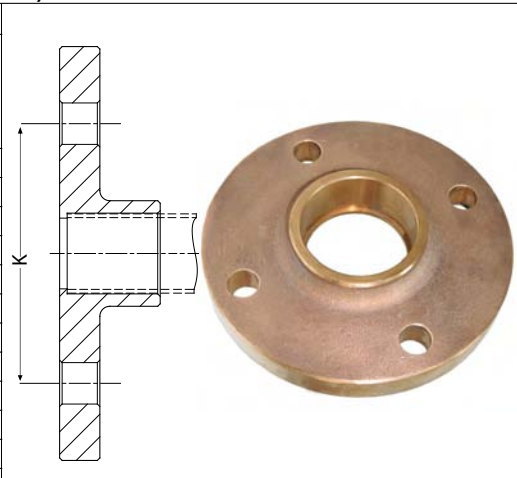
Bi-Metallic (Blanking) Brazing Flange, PN 25, BS EN 1092-3:2003, Type 05C (BS 4504 Part 3.3, Fig 305)

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details					Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm		
FLSG05C/25-15	DN 10	15	4	14	M12	60	90	
FLSG05C/25-22	DN 20	22	4	14	M12	75	105	
FLSG05C/25-28	DN 25	28	4	14	M12	85	115	
FLSG05C/25-35	DN 32	35	4	18	M16	100	140	
FLSG05C/25-42	DN 40	42	4	18	M16	110	150	
FLSG05C/25-54	DN 50	54	4	18	M16	125	165	
FLSG05C/25-67	DN 65	66.7	8	18	M16	145	185	
FLSG05C/25-76	DN 65	76.1	8	18	M16	145	185	
FLSG05C/25-108	DN 100	108	8	22	M20	190	235	
FLSG05C/25-133	DN 125	133	8	26	M24	220	270	
FLSG05C/25-159	DN 150	159	8	26	M24	250	300	
FLSG05C/25-219	DN 200	219	12	26	M24	310	360	



Solid Brazing Flange, PN25, BS EN 1092-3:2003, Type 14 (BS 4504 Part 3.3, Fig 314)

Product Code	Nominal Size (DN)	Tube OD to suit BS EN 1057	Backing Flange details					Flange OD in mm
			Number of holes	Bolt Hole Diameter in mm	Bolt Size	Diameter of circle of bolt hole centres K in mm		
FLG14/25-15	DN 10	15	4	14	M12	60	90	
FLG14/25-22	DN 20	22	4	14	M12	75	105	
FLG14/25-28	DN 25	28	4	14	M12	85	115	
FLG14/25-35	DN 32	35	4	18	M16	100	140	
FLG14/25-42	DN 40	42	4	18	M16	110	150	
FLG14/25-54	DN 50	54	4	18	M16	125	165	
FLG14/25-67	DN 65	66.7	8	18	M16	145	185	
FLG14/25-76	DN 65	76.1	8	18	M16	145	185	
FLG14/25-108	DN 100	108	8	22	M20	190	235	
FLG14/25-133	DN 125	133	8	26	M24	220	270	
FLG14/25-159	DN 150	159	8	26	M24	250	300	
FLG14/25-219	DN 200	219	12	26	M24	310	360	



Bolt, Nut & Washers Sets (1 Bolt + 1 Nut + 2 Washers)

(Galvanised Mild Steel, Stainless Steel and Bronze/Gunmetal Bolt, Nut & Washers)

Product Code	Bolt Size	Finish
FLSZ-M12	M12	Galvanised
FLSS-M12	M12	Stainless Steel
FLSZ-M16	M16	Galvanised
FLSS-M16	M16	Stainless Steel
FLSZ-M20	M20	Galvanised
FLSS-M20	M20	Stainless Steel
FLSZ-M24	M24	Galvanised
FLSS-M24	M24	Stainless Steel

Product Code	Bolt Size	Finish
FLBG-M12	M12	Bronze/Gunmetal
FLBG-M16	M16	Bronze/Gunmetal
FLBG-M20	M20	Bronze/Gunmetal
FLBG-M24	M24	Bronze/Gunmetal

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