

COUPLINGS AND GASKETS



Couplings used in glass equipment plays vital role in the assembly as:

- They must ensure the effective seal of the joint
- They should not induce undue stress in the glass part
- They must be reliable in all service conditions

Couplings and gaskets section covered the range of couplings we offer to join glass components with other glass part as well as to other metal part.

PTFE bellows are also available for regular and vacuum applications, along with coupling flanges to connect them with glass or non-glass part

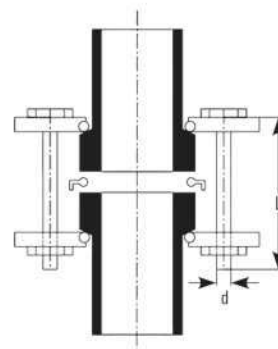
COUPLINGS AND GASKETS



COMPLETE COUPLINGS

A complete coupling is a set of two backing flanges with insert and nut-bolts. complete set of flanges require to make a joint & standard one and are available in Cast Iron. Also available in other MOC like Stainless Steel 304 & 316, Silumin, Bakelite.

Cat.Ref.	DN	Flanges		inserts		Nuts-Bolts		
		Cat.Ref.	Qty	Cat.Ref.	Qty	d	L	Qty
CT0.5	12	CF0.5	2nos	CN0.5	2nos	1/4"	50	3nos
CT0.7	15	CF0.7	2nos	CN0.7	2nos	1/4"	50	3nos
CT1	25	CF1	2nos	CN1	2nos	5/16"	65	3nos
CT1.5	40	CF1.5	2nos	CN1.5	2nos	5/16"	65	3nos
CT2	50	CF2	2nos	CN2	2nos	5/16"	75	3nos
CT3	80	CF3	2nos	CN3	2nos	5/16"	75	6nos
CT4	100	CF4	2nos	CN4	2nos	5/16"	100	6nos
CT6	150	CF6	2nos	CN6	2nos	5/16"	100	6nos
CT9	225	CF9	2nos	CN9	2nos	3/8"	125	8nos
CT12	300	CF12	2nos	CN12	2nos	3/8"	150	12nos
CT16	400	CF16	2nos			3/8"	150	12nos
CT18	450	CF18	2nos			1/2"	150	12nos
CT24	600	CF24	2nos			1/2"	150	12nos
CT32	800	CF32	2nos			1/2"	150	24nos

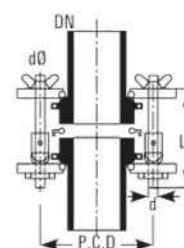


QUICK RELEASE COUPLINGS

For easy & fast opening or closing of couplings without using any tools, the Quick Release Coupling is an ideal solution. In case of solid charging material to reaction or addition vessels, we recommend using our Quick Release Coupling.

Quick Release couplings are offered in cast iron & stainless-steel material as per the requirement. Quick Release Coupling is available from DN 80 to DN 300 sizes.

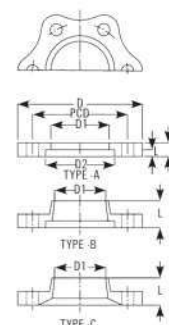
Cat.Ref.	DN	nxdØ
QCT3	80	6x9Ø
QCT4	100	6x9Ø
QCT6	150	6x9Ø
QCT9	225	8x11Ø
QCT12	300	12x11Ø



BACKING FLANGES

Backing flanges are used to couple a glass ends to a glass end or to a bellow. Backing flanges are made of cast iron and are used with Inserts.

Cat.Ref.	DN	D	D1	D2	PCD	n x dØ	L	L1	Type
CF0.5	12	50	25	28	38	3 x 7Ø	6	3	A
CF0.7	15	65	29	37	48	3 x 7Ø	6	3.5	A
CF1	25	92	43	51	70	3 x 9Ø	10	6	A
CF1.5	40	110	58	66	86	3 x 9Ø	10	6	A
CF2	50	120	70	81	98	3 x 9Ø	12	8	A
CF3	80	155	101	112	133	6 x 9Ø	12	8	A
CF4	100	200	134	148	178	6 x 9Ø	12	8	A
CF6	150	275	186	196	254	6 x 9Ø	15	8	A
CF9	225	350	260	282	310	8 x 11Ø	28	8	B
CF12	300	425	342	363	395	12 x 11Ø	34	8	B
CF16	400	525	467	476	495	12 x 12Ø	22	8	A
CF18	450	630	537	557	585	12 x 14Ø	37	8	B
CF24	600	755	643	690	710	12 x 14Ø	50	5	C
CF32	800	990	861	922	950	24 x 14Ø	67	5	C

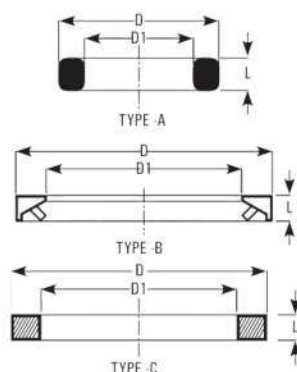


COUPLINGS AND GASKETS



INSERTS

Split ring type inserts are used with backing flanges. These are made of Cast iron. In addition, insert made of suitable composite rubber material for 25 DN to 150 DN size. PTFE inserts are available for 25DN to 300DN.



Cat.Ref.	DN	D	D1	L	Type
CN0.5	12	28	20	8	A
CN0.7	15	37	22	8	A
CN1	25	50	34	10	A
CN1.5	40	65	48	10	A
CN2	50	80	61	8	B
CN3	80	111	90	9	B
CN4	100	147	119	10	B
CN6	150	195	168	10	B
CN9	225	280	240	10	B
CN12	300	361	324	10	B
CN16	400	474	431	12	B
CN18	450	555	500	18	B
CN24	600	684	634	10	C

ADAPTOR BACKING FLANGES

Adaptor backing flanges are used to couple a glass end to the flange having different bolt configuration. These flanges are made of cast iron and are supplied with inserts. These are particularly used to fit a glass equipment on a non-glass equipment like Glass-lined Reactor etc.

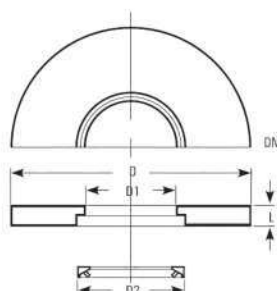
Adaptor backing flanges are generally supplied undrilled. However, if specified, these can be supplied drilled as per "Table E", "Table F" and "ASA150" standards.

Drilled to Table E

Cat.Ref.	PCD	n x dØ
CFA0.5/E	62	4 x 7Ø
CFA0.7/E	62	4 x 7Ø
CFA1/E	82	4 x 12Ø
CFA1.5/E	98	4 x 12Ø
CFA2/E	114	4 x 16Ø
CFA3/E	146	4 x 16Ø
CFA4/E	178	8 x 16Ø
CFA6/E	235	8 x 19Ø
CFA9/E	324	12 x 19Ø
CFA12/E	406	12 x 23Ø

Undrilled flanges

Cat.Ref.	DN	D	D1	D2	L
CFA0.5	12	80	25	28	6
CFA0.7	15	85	29	37	6
CFA1	25	115	43	51	10
CFA1.5	40	150	58	66	10
CFA2	50	165	70	81	12
CFA3	80	200	101	112	12
CFA4	100	220	134	148	12
CFA6	150	285	186	196	15
CFA9	225	395	260	282	15
CFA12	300	445	342	363	18



Drilled to ASA150

Cat.Ref.	PCD	n x dØ
CFA0.5/A	62	4 x 7Ø
CFA0.7/A	62	4 x 7Ø
CFA1/A	79	4 x 12Ø
CFA1.5/A	98	4 x 12Ø
CFA12/A	121	4 x 16Ø
CFA3/A	152	4 x 16Ø
CFA4/A	190	8 x 16Ø
CFA6/A	241	8 x 19Ø
CFA9/A	298	8 x 19Ø
CFA12/A	432	12 x 23Ø

Drilled to Table F

Cat.Ref.	PCD	n x dØ
CFA0.5/F	67	4 x 7Ø
CFA0.7/F	67	4 x 7Ø
CFA1/F	87	4 x 16Ø
CFA1.5/F	105	4 x 16Ø
CFA2/F	127	4 x 16Ø
CFA3/F	165	8 x 16Ø
CFA4/F	190	8 x 16Ø
CFA6/F	260	12 x 19Ø
CFA9/F	356	12 x 23Ø
CFA12/F	438	16 x 23Ø

COUPLINGS AND GASKETS



PTFE O' RING WITH LOCKING COLLAR

PTFE O' rings are specially made to use as gaskets in glass joints. These are provided with a collar which helps to fit it on the glass joints correctly.

Cat.Ref.	DN	D	D1	d	L
TR0.5	12	26	18	3	5
TR0.7	15	28	17	3	5
TR1	25	42	33	3	5
TR1.5	40	57	48	3	5
TR2	50	70	59	3	5
TR3	80	100	88	3	5
TR4	100	134	119	4	6
TR6	150	186	168	4	6
TR9	225	260	236	4	7
TR12	300	342	318	4	7
Above 12" TM are available and are advisable to use					
Cat. Ref.	ID	OD	Thickness		
TM16	400	463	5		
TM18	455	525	5		
TM20	500	585	5		
TM24	600	684	5		
TM28	709	780	5		
TM32	845	916	5		



GLASS TO GLASS

These expansion bellows are utilized in the installation of glass equipment for the following purposes:

- To enable safe branching of pipelines from the main glass system.
- To compensate for irregular angles and variations in pipeline length.

The bellows come with the necessary flanges and nut-bolts. Distance-locking bolts are included to prevent over-compression or over-expansion of the bellows. Gaskets are not required when using these bellows. For drilling specifications, please refer to the "Bellow Flanges" section.

Line Bellows:

These bellows can endure temperatures up to 200°C under standard atmospheric conditions.

Cat.Ref.	DN	D	D1	D2	L
FBN0.5	12	50	24	16	50
FBN0.7	15	64	28	17	55
FBN1*	25	95	41	31	65
FBN1.5*	40	105	56	43	65
FBN2*	50	120	69	55	65
FBN3*	80	155	98	82	65
FBN4*	100	200	132	111	65
FBN6*	150	275	184	162	65
FBN9*	225	350	258	230	65
FBN12	300	420	340	308	65

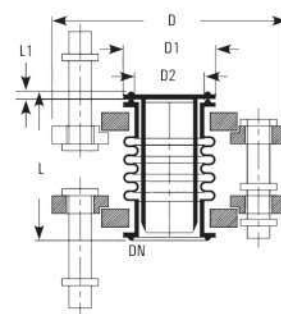
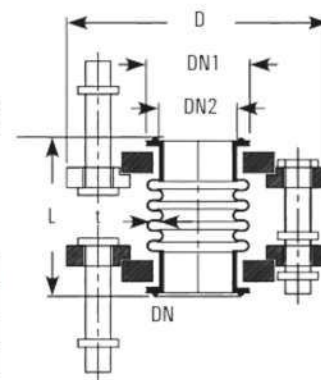
Vacuum bellows

For pipelines of 80DN and above operating under vacuum, bellows are provided with an internal sleeve which supports the convolutions without affecting the flexibility of the bellow. These bellows can withstand a temperature of 200°C under full vacuum.

For size up to 50DN, line bellows can be used for these applications.

Cat.Ref.	DN	D	D1	D2	L	L1	t
VB3	80	155	98	82	70	5	3.0
VB4	100	200	132	111	70	5	3.5
VB6	150	275	184	162	70	5	4.0
VB9	225	350	253	230	70	5	5.0
VB12	300	420	338	308	70	5	5.0

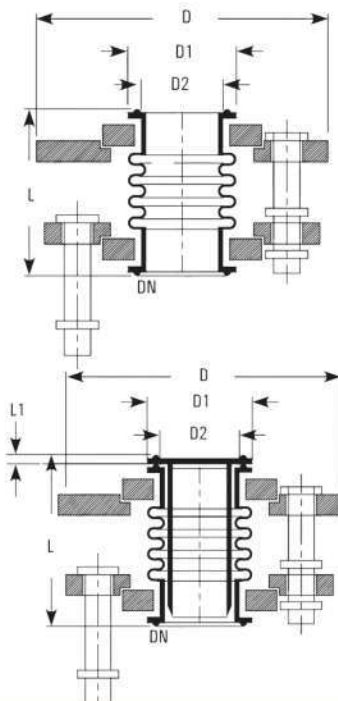
PTFE BELLOW



COUPLINGS AND GASKETS



GLASS TO METAL



These expansion bellows are used in the installation of glass equipment for the following purposes:

- To reduce the transmission of vibrations from rotating equipment connected to the glass assembly.
- To allow for thermal expansion of any metallic (non-glass) components attached to the glass pipeline.

These bellows are similar in design to glass-to-glass bellows but feature an adaptor flange at one end. Typically, the adaptor flange is provided undrilled so it can be customized to match the configuration of the mating flange. However, if specified, the adaptor flange can be supplied pre-drilled according to "Table E," "Table F," or "ASA 150" standards.

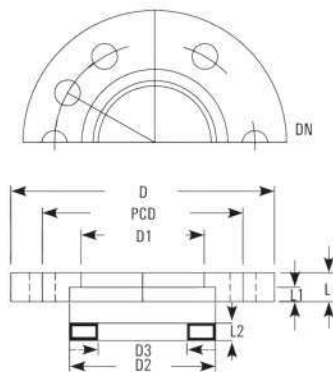
Line Bellows:

Cat.Ref. Undrilled	Cat. Ref. Table E	Cat. Ref. Table F	Cat. Ref. ASA 150	DN	D	L
FBF0.5	FBF0.5/E	FBF0.5/F	FBF0.5/A	12	80	50
FBF0.7	FBF0.7/E	FBF0.7/F	FBF0.7/A	15	85	55
FBF1	FBF1/E	FBF1/F	FBF1/A	25	115	60
FBF1.5	FBF1.5/E	FBF1.5/F	FBF1.5/A	40	150	65
FBF2	FBF2/E	FBF2/F	FBF2/A	50	165	65
FBF3	FBF3/E	FBF3/F	FBF3/A	80	200	65
FBF4	FBF4/E	FBF4/F	FBF4/A	100	220	65
FBF6	FBF6/E	FBF6/F	FBF6/A	150	285	65
FBF9	FBF9/E	FBF9/F	FBF9/A	225	395	65
FBF12	FBF12/E	FBF12/F	FBF12/A	300	445	65

Vacuum Bellows:

Cat.Ref. Undrilled	Cat. Ref. Table E	Cat. Ref. Table F	Cat. Ref. ASA 150	DN	D	L
VBV3	VBV3/E	VBV3/F	VBV3/A	80	200	70
VBV4	VBV4/E	VBV4/F	VBV4/A	100	220	70
VBV6	VBV6/E	VBV6/F	VBV6/A	150	285	70
VBV9	VBV9/E	VBV9/F	VBV9/A	225	395	70
VBV12	VBV12/E	VBV12/F	VBV12/A	300	445	70

BELLOW FLANGES



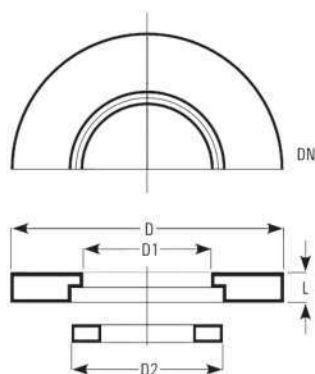
Bellow flanges are used to fit a bellow to a glass component. Standard Bellow are made Cast Iron. Cast Iron with Epoxy Coated, Cast Iron with PTFE coated, Aluminum, Silumin, Stainless Steel, 304 & 316 and are used in FBV, VB, FB type bellows. These are provided with two holes at 180° for Distance - locking bolts and are supplied with a split ring.

Cat.Ref.	DN	D	D1	D2	D3	L	L1	L2
BF0.5	12	50	25	28	20	6	3	6
BF0.7	15	65	29	37	22	6	3	6
BF1	25	95	43	51	33	7	3	6
BF1.5	40	110	58	66	45	7	3	6
BF2	50	120	70	81	57	7	3	6
BF3	80	155	101	112	84	7	3	6
BF4	100	200	134	148	113	8	3	6
BF6	150	275	186	196	164	8	3	6
BF9	225	350	260	282	234	8	3	6
BF12	300	425	342	363	310	10	5	8

Drilling Details

Cat.Ref.	PCD	n x dØ	n x d1Ø
BF0.5	38	3 x 9Ø	2 x 9Ø
BF0.7	48	3 x 9Ø	2 x 9Ø
BF1	70	3 x 9Ø	2 x 9Ø
BF1.5	86	3 x 9Ø	2 x 9Ø
BF2	98	3 x 9Ø	2 x 9Ø
BF3	133	6 x 9Ø	2 x 9Ø
BF4	178	6 x 9Ø	2 x 9Ø
BF6	254	6 x 9Ø	2 x 9Ø
BF9	310	8 x 11Ø	2 x 11Ø
BF12	395	12 x 11Ø	2 x 11Ø

ADAPTOR BELLOW FLANGES



Adaptor bellow flange is used to fit a bellow to a flange having different bolt configuration. These flanges are made of cast iron and are supplied with a split ring. These are particularly used to fit a bellow with a non-glass equipment like Glass-lined Reactor etc. These are used in FBF, VBF type PTFE bellows.

Adaptor bellow flanges are generally supplied undrilled. However, if specified, these can be supplied drilled as per "Table E," "Table F" and "ASA150" standards.

Undrilled Flanges

Cat.Ref.	DN	D	D1	D2	L
BFA0.5	12	80	25	28	6
BFA0.7	15	85	29	37	6
BFA1	25	115	43	51	7
BFA1.5	40	150	58	66	7
BFA2	50	165	70	81	7
BFA3	80	200	101	112	7
BFA4	100	220	134	148	8
BFA6	150	285	186	196	8
BFA9	225	395	260	282	8
BFA12	300	445	342	363	10

Drilled to Table E

Cat.Ref.	PCD	n x dØ
BFA0.5/E	62	4 x 7Ø
BFA0.7/E	62	4 x 7Ø
BFA1/E	82	4 x 12Ø
BFA1.5/E	98	4 x 12Ø
BFA2/E	114	4 x 16Ø
BFA3/E	146	4 x 16Ø
BFA4/E	178	8 x 16Ø
BFA6/E	235	8 x 19Ø
BFA9/E	324	12 x 19Ø
BFA12/E	406	12 x 23Ø

Drilled to Table F

Cat.Ref.	PCD	n x dØ
BFA0.5/F	67	4 x 7Ø
BFA0.7/F	67	4 x 7Ø
BFA1/F	87	4 x 16Ø
BFA1.5/F	105	4 x 16Ø
BFA2/F	127	4 x 16Ø
BFA3/F	165	8 x 16Ø
BFA4/F	190	8 x 16Ø
BFA6/F	260	12 x 19Ø
BFA9/F	356	12 x 23Ø
BFA12/F	438	12 x 23Ø

Drilled to Table F

Cat.Ref.	PCD	n x dØ
BFA0.5/A	62	4 x 7Ø
BFA0.7/A	62	4 x 7Ø
BFA1/A	79	4 x 16Ø
BFA1.5/A	98	4 x 16Ø
BFA2/A	121	4 x 19Ø
BFA3/A	152	4 x 19Ø
BFA4/A	190	8 x 19Ø
BFA6/A	241	8 x 19Ø
BFA9/A	298	8 x 19Ø
BFA12/A	432	12 x 23Ø