



Introduction

The couplings designed for use with our glass process plant and pipeline components are of major importance from two main points of view.

- Ž They must ensure that the bolt load applied to the joint is sufficient to make an effective leakproof joint while not inducing under stress on glass.
- Ž They must be totally reliable in all service conditions.

This chapter of the catalogue covers not only the necessary couplings to join glass process plant and pipeline components together but also the couplings needed to join glass to other materials. For glass plants installed in relatively corrosive environments, the added advantage is the availability of couplings constructed from various materials including stainless steel and plastic.

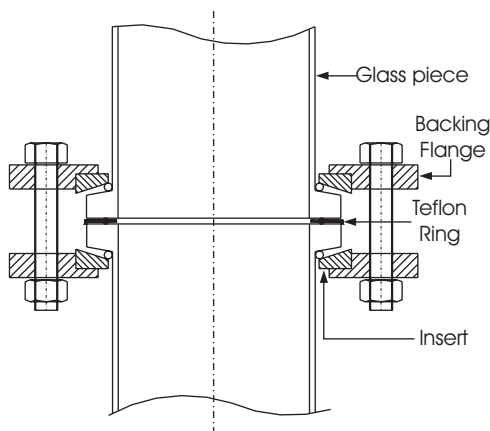
Complete Coupling

The Complete coupling consists of two flanges, two inserts and the appropriated number of nuts, bolts and PTFE 'O' Ring (SGTR).

The flanges are of cast iron and can be supplied with epoxy painting or powder coated in improve resistance to corrosio,

Complete Coupling

Flat Buttress Ends

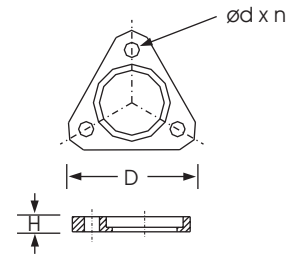


DN	Flanges	Inserts	PTFE 'O' Ring	Catalogue Reference
25	2 xSGCF 25	2 xSGCN 25	SGTR 25	SGCT 25
40	2 xSGCF 40	2 xSGCN 40	SGTR 40	SGCT 40
50	2 xSGCF 50	2 xSGCN 50	SGTR 50	SGCT 50
80	2 xSGCF 80	2 xSGCN 80	SGTR 80	SGCT 80
100	2 xSGCF 100	2 xSGCN 100	SGTR 100	SGCT 100
150	2 xSGCF 150	2 xSGCN 150	SGTR 150	SGCT 150
225	2 xSGCF 225	2 xSGCN 225	SGTR 225	SGCT 225
300	2 xSGCF 300	2 xSGCN 300	SGTR 300	SGCT 300
450	2 xSGCF 450	2 xSGCN 450	SGTR 450	SGCT 450
600	2 xSGCF 600	2 xSGCN 600	SGTR 600	SGCT 600

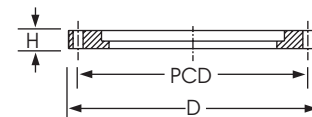
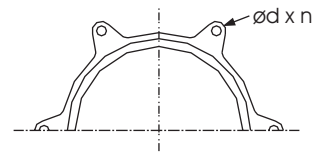
Backing Flanges

Backing flanges detailed in this chapter up to and including DN 450 are one piece units and for DN 600 it is available in two pieces. Backing flanges are used to couple to glass end or to a bellow. Backing flanges are made from cast iron and are used with inserts.

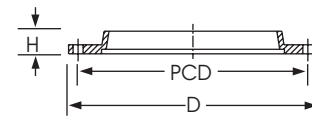
SS Flanges can be made available on request. Powder coated flanges can also be supplied on request.



TYPE A



TYPE B

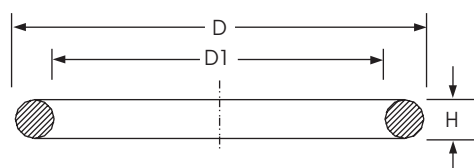


TYPE C

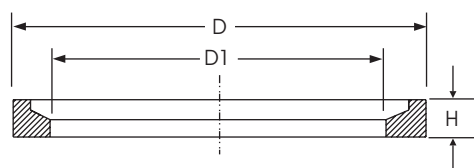
DN	D	PCD	H	ød x n	Type	Catalogue Reference
25	96	70	11	10x 3	A	SGCF 25
40	115	86	11	10x 3	A	SGCF 40
50	132	98	11	10x 3	A	SGCF 50
80	160	133	11	10x 6	B	SGCF 80
100	200	178	12	10x 6	B	SGCF 100
150	275	254	25	11x 6	C	SGCF 150
225	350	310	27	11x 8	C	SGCF 225
300	425	395	34	11x 12	C	SGCF 300
450	626	585	38	14x 12	C	SGCF 450
600	755	710	50	14x 12	C	SGCF 600

Inserts

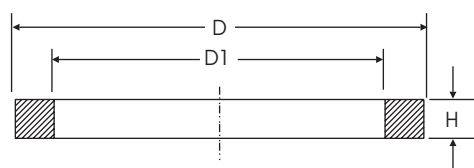
Split ring type insert are used with backing flanges. These are made of cast iron with PTFE impregnated rope. Insert from



TYPE A



TYPE B



TYPE C

DN	D	D1	H	Type	Catalogue Reference
25	50	37	8	A	SGCN 25
40	64	50	8	A	SGCN 40
50	80	62	8	A	SGCN 50
80	110	92	8	B	SGCN 80
100	146	119	8	B	SGCN 100
150	196	171	8	C	SGCN 150
225	278.5	240	10	C	SGCN 225
300	361	324	10	C	SGCN 300
450	550	500	18	C	SGCN 450
600	684	634	18	C	SGCN 600

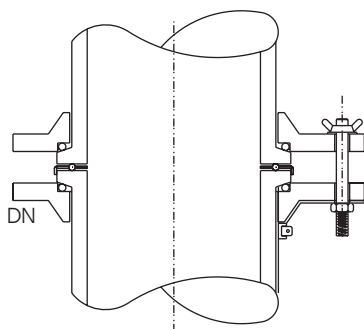
Quick Release Couplings

There are always application where there is need to open or close a coupling easily without the use of tools. Charging reaction vessel is prime example.

Quick release couplings provide this facility whilst securing the lower backing flange against falling down.

The flanges—one of which has slotted bolt holes—remain fixed on the glass and are separated by means of hinged quick release bolts and wing nuts.

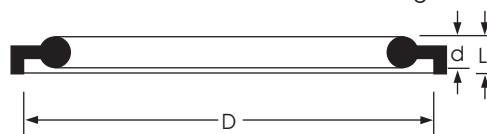
DN	Catalogue Reference
25	SGCVS 25
40	SGCVS 40
50	SGCVS 50
80	SGCVS 80
100	SGCVS 100
150	SGCVS 150
225	SGCVS 225
300	SGCVS 300



Gasket

PTFE 'O' Rings

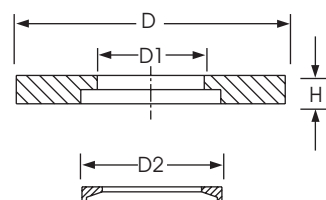
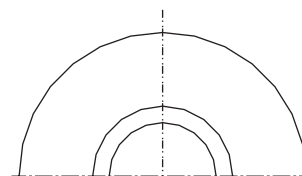
PTFE 'O' Rings are the most widely used gaskets. They are manufactured from pure, high quality PTFE and offer, like their counterparts on the following page, almost identical properties corrosion resistance to borosilicate glass.



DN	D	d	L	Catalogue Reference
25	43.5	3	5	SGTR 25
40	58.5	3	5	SGTR 40
50	71	3	5	SGTR 50
80	101	3	5	SGTR 80
100	135	4	6	SGTR 100
150	186	4	6	SGTR 150
225	260	4	6	SGTR 225
300	342	4	7	SGTR 300
450	537	6	7	SGTR 450
600	686	8	10	SGTR 600

Adaptor Backing Flanges (X-Strong Type)

These Flanges made of Cast Iron and supplied with a split ring. Aluminium flanges can be supplied on request.

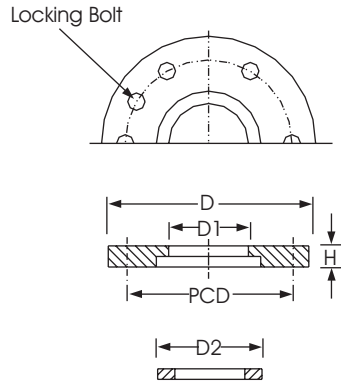


DN	D	D1	D2	H	Catalogue Reference
25	118	45	54	10	SGCFA 25
40	143	58	68	10	SGCFA 40
50	166	71	80	10	SGCFA 50
80	200	101	110	10	SGCFA 80
100	224	134	145	10	SGCFA 100
150	292	189	199	10	SGCFA 150
225	398	262	279	13	SGCFA 225
300	456	340	358	15	SGCFA 300

Bellow Flanges

These Flanges made of Aluminium and are supplied with a split ring. C.I. (cast iron) Flanges can be supplied on request.

Please mention Cat.Ref. SGABF for Aluminium flanges and SGCBF for C.I. (cast iron) flanges. Bellow flanges are used at both end of PTFE Bellow (SGFBN) for connecting glass to glass



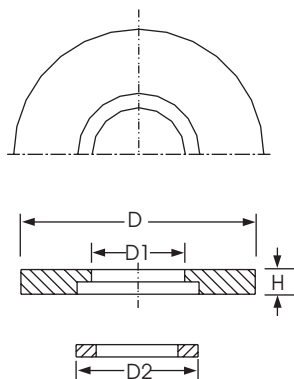
DN	D	D1	D2	PCD	H	Catalogue Reference
25	90	45	55	70	10	SGABF 25
40	110	58	69	86	10	SGABF 40
50	120	71	81	98	10	SGABF 50
80	154	101	111	133	10	SGABF 80
100	200	134	146	178	10	SGABF 100
150	276	189	200	254	10	SGABF 150
225	350	262	280	310	13	SGABF 225
300	422	340	360	395	15	SGABF 300

Adaptor Bellow Flanges

These flange are used to connect glass components to flanges on other equipments where different bolt configurations and/or PCDs are required.

The flanges can be supplied either undrilled or drilled to a particular specification. If required drilled, the number of holes together with the PCD should be specified.

These Flanges are made of Aluminium or cast iron and are supplied with a split ring. Please mention Cat.Ref. SGBFA for Aluminium and SGBFC for Cast Iron Flanges.



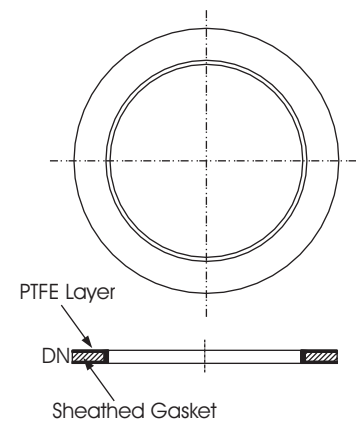
DN	D	D1	D2	H	Catalogue Reference
25	115	45	55	10	SGBFA 25
40	138	58	69	10	SGBFA 40
50	165	71	81	10	SGBFA 50
80	200	101	111	10	SGBFA 80
100	223	134	146	10	SGBFA 100
150	292	189	200	10	SGBFA 150
225	396	262	280	13	SGBFA 225
300	454	340	360	15	SGBFA 300

PTFE Sheathed Gaskets

These gaskets take form of a PTFE sheet fitted over compressed fibre carrier.

When using this type of gasket, a higher bolting force is required for DN 450 and above. Please consult our Technical

DN	Catalogue Reference
25	SGTMP 25
40	SGTMP 40
50	SGTMP 50
80	SGTMP 80
100	SGTMP 100
150	SGTMP 150
225	SGTMP 225
300	SGTMP 300
450	SGTMP 450
600	SGTMP 600

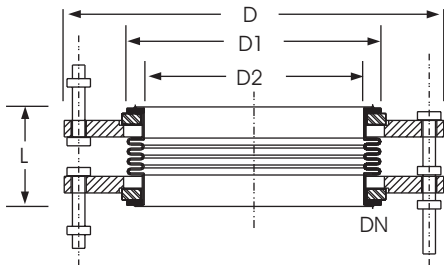


PTFE Bellows

PTFE bellows are an important aid in the construction of glass plant and pipeline. They can be used to compensate for different thermal movement between glass and associated equipment, absorb vibrations from associated equipment or Foundation. When bellows are used, the support and restraint of the glass should be such that the force resulting from pressure/vacuum in the pipeline and forces resulting from movement of the bellows do not result in undue stresses in the glass. If any doubt, please consult our Technical Department.

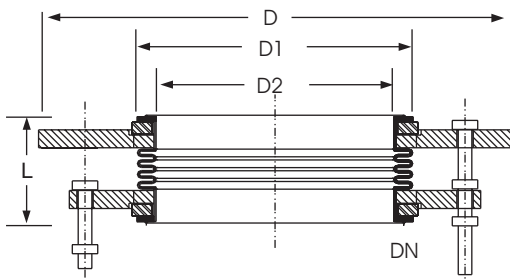
All bellows are delivered complete with an appropriate flange assembly as detailed in the diagram and tables, including limiting bolts which ensure that the maximum permissible movement will not be

PTFE Line Bellows for Connecting Glass to Glass PTFE Vacuum Bellows



DN	D	D1	D2	L	Catalogue Reference
25	90	43	28	60	SGFBN 25
40	110	57	38	65	SGFBN 40
50	120	69	52	65	SGFBN 50
80	154	98	79	65	SGFBN 80
100	200	132	107	65	SGFBN 100
150	276	185	163	65	SGFBN 150
225	350	258	222	70	SGFBN 225
300	422	340	299	70	SGFBN 300

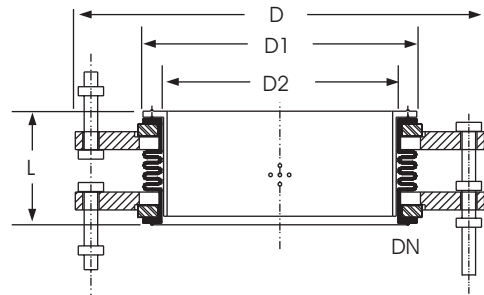
PTFE Line Bellows for Connecting Glass to Other Material



DN	D	D1	D2	L	Catalogue Reference
25	115	43	28	60	SGFBF 25
40	138	57	38	65	SGFBF 40
50	165	69	52	65	SGFBF 50
80	200	98	79	65	SGFBF 80
100	223	132	107	65	SGFBF 100
150	292	185	163	65	SGFBF 150
225	396	258	222	70	SGFBF 225
300	454	340	299	70	SGFBF 300

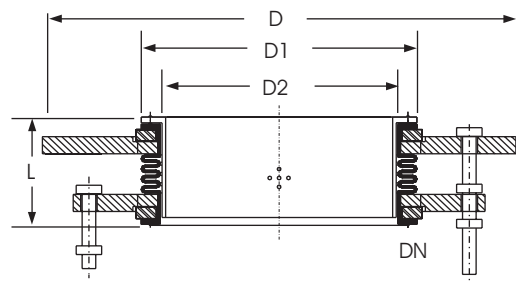
For pipeline DN80 and above operating under vacuum the following vacuum bellows must be use. The vacuum resistance is achieved without impairing the flexibility of the bellows. At maximum temperatures of 160° C these bellows can be used for vacuum up to 1 mbar absolute. These Bellow are provided with an internal sleeve which supports

PTFE Vacuum Bellows for Connecting Glass to Glass



DN	D	D1	D2	L	Catalogue Reference
50	120	69	52	70	SGVBN 50
80	154	98	79	70	SGVBN 80
100	200	132	107	70	SGVBN 100
150	276	185	163	70	SGVBN 150
225	350	258	222	75	SGVBN 225
300	422	340	299	75	SGVBN 300

PTFE Vacuum Bellows for Connecting Glass to Other Material



DN	D	D1	D2	L	Catalogue Reference
50	165	69	52	70	SGVBF 50
80	200	98	79	70	SGVBF 80
100	223	132	107	70	SGVBF 100
150	292	185	163	70	SGVBF 150
225	396	258	222	75	SGVBF 225
300	454	340	299	75	SGVBF 300

Metal / PTFE Spacers

These components are used as interface spacers when connecting glass flat buttress end components to other process plant and pipeline and glass-lined reaction vessels. A combination of steel, rubber and PTFE provide an ideal sealing surface with only PTFE coming into contact with the

DN	D1	D2	L	Catalogue Reference
225	182	330	25	SGEMP 225
300	264	432	25	SGEMP 300
450	375	610	25	SGEMP 450

