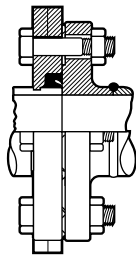


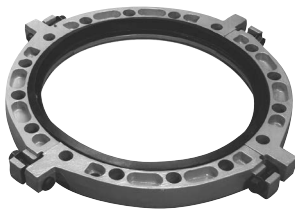
Victaulic® Vic-Flange® Adapters Styles 741 and 743



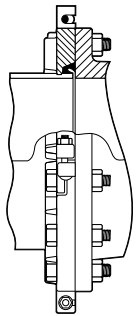
Style 741
2 – 12” sizes/50 – 300 mm



Exaggerated for clarity



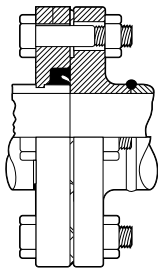
Style 741
14 – 24” sizes/350 – 600 mm



Exaggerated for clarity



Style 743



Exaggerated for clarity

Approvals/Listings



See Victaulic [publication 10.01](#) for details

See Victaulic [publication 02.06](#) for portable water approvals if applicable.

Product Description

Style 741

Style 741 Vic-Flange® adapter is designed for directly incorporating flanged components with ANSI CL. 125 or CL. 150/PN10 and PN16 or Australian Standard Table E bolt hole patterns into a grooved pipe system. Sizes 2 – 12”/50 – 300 mm are hinged for easy handling with integral end tabs which facilitate assembly. Sizes 14 – 24”/350 – 600 mm are cast in four (4) identical segments which are interconnected as assembly is completed.

The design incorporates small teeth inside the key shoulder I.D. to prevent rotation (excluding 159 mm size). These teeth should be removed when Vic-Flange adapter is utilized with a Victaulic Series 700 grooved end butterfly valve, Schedule 5 pipe or plastic pipe.

Vic-Flange adapter Style 741 is not recommended for use with Victaulic Series 709 butterfly valves (contact Victaulic for recommendations). They may only be used on one side of Victaulic Series 700 butterfly valve, sizes 2 – 4”/50 – 100 mm fitted with standard or lever-lock handles. Vic-Flange adapter must be assembled so it does not interfere with handle operation.

Style 743

Vic-Flange Style 743 flange-to-groove adapter permits direct connection of ANSI Class 300 flanged components into a grooved system. The two-piece, hinged housing engages into the pipe groove and bolts directly to any standard flanged component. The conventional bolt hole pattern allows for easy, fast assembly. Style 743 rotates 360° for proper alignment of bolt holes before tightening. Vic-Flange gaskets utilize the Victaulic pressure-responsive design, sealing on the pipe end and directly to the opposing flange face. No standard flange gasket is required.

Style 743 is designed to mate with raised-face flanges, but can be used with flat-face flanges by removing the raised projections on the outside face of the flange.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

Performance data presented in this document is based on use with standard wall, carbon steel pipe. For use with stainless steel pipe, please reference [publication 17.09](#) for pressure ratings and end loads. When used on light wall stainless steel pipe, the Victaulic RX roll set must be used to roll groove the pipe. For further information regarding roll grooving stainless steel, refer to [publication 17.01](#).

Vic-Flange Notes

Because of the outside flange dimension, Vic-Flange should not be used within 90° of one another on a standard fitting. When wafer or lug-type valves are used adjoining a Victaulic fitting, check disc dimensions to assure proper clearance.

Vic-Flange adapters should not be used as anchor points for tie-rods across non-restrained joints. Mating rubber faced flanges, valves, etc., requires the use of a Vic-Flange washer.

Vic-Flange gaskets must always be assembled with the color coded lip on the pipe and the other lip facing the mating flange.



WARNING

- **Victaulic RX roll sets must be used when grooving light-wall/thin-wall stainless steel pipe for use with Victaulic Couplings.**
Failure to use Victaulic RX roll sets when grooving light-wall/thin-wall stainless steel pipe may cause joint failure, resulting in serious personal injury and/or property damage.

NOTICE

- **Victaulic RX grooving rolls must be ordered separately. They are identified by a silver color and the designation RX on the front of the roll sets.**

Material Specifications

Housing:

Ductile iron conforming to ASTM A-536, Grade 65-45-12. Ductile iron conforming to ASTM A-395, Grade 65-45-15, is available upon special request.

Housing Coating: (specify choice)

Standard: Black enamel.

Optional: Hot dipped galvanized and others.

Gasket: (specify choice¹)

NOTE: Additional gasket styles are available. Contact Victaulic for details.

Grade “E” EPDM

EPDM (Green stripe color code). Temperature range -30°F to +230°F/-34°C to +110°C. May be specified for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR PETROLEUM SERVICES.

Grade “T” Nitrile

Nitrile (Orange stripe color code). Temperature range 20°F to +180°F/29°C to +82°C. May be specified for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

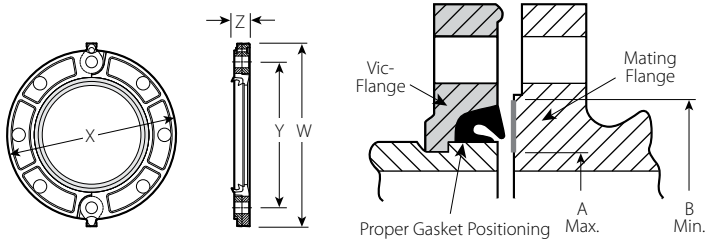
Draw Bolts:

14 – 24”/350 – 600 mm only: Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

Dimensions

Style 741

Sizes 2 – 12"/50 – 300 mm
ANSI Class 125 and 150 Flanges



Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Exaggerated for clarity

Nom. Size inches mm	Actual Outside Dia. inches mm	Max. Working Pressure ² psi kPa	Max. End Load ² lbs. N	No. Bolts ³ Req.	Bolt Size ³ inches	Sealing Surface		Dimensions				Approx. Weight Each lbs kg
						A Max. inches mm	B Min. inches mm	W inches mm	X inches mm	Y inches mm	Z inches mm	
2 50	2.375 60.3	300 2065	1330 5920	4	5/8 x 2 3/4	2.38 60	3.41 87	6.75 172	6.00 152	4.75 121	0.75 19	3.1 1.4
2 1/2 65	2.875 73.0	300 2065	1950 8680	4	5/8 x 3	2.88 73	3.91 99	7.87 200	7.00 178	5.50 140	0.88 22	4.8 2.1
3 80	3.500 88.9	300 2065	2885 12840	4	5/8 x 3	3.50 89	4.53 115	8.29 211	7.50 191	6.00 152	0.94 24	5.3 2.4
4 100	4.500 114.3	300 2065	4770 21225	8	5/8 x 3	4.50 114	5.53 141	9.87 251	9.00 229	7.50 191	0.94 24	7.4 3.4
5 125	5.563 141.3	300 2065	7290 32440	8	3/4 x 3 1/2	5.56 141	6.71 171	10.90 277	10.00 254	8.50 216	1.00 25	8.6 3.9
6 150	6.625 168.3	300 2065	10350 46060	8	3/4 x 3 1/2	6.63 168	7.78 198	11.90 302	11.00 279	9.50 241	1.00 25	9.9 4.5
8 200	8.625 219.1	300 2065	17500 77875	8	3/4 x 3 1/2	8.63 219	9.94 252	14.50 368	13.50 343	11.75 298	1.13 29	16.6 7.5
10 250	10.750 273.0	300 2065	27215 121110	12	7/8 x 4	10.75 273	12.31 313	17.24 438	16.00 406	14.25 362	1.19 30	24.2 11.0
12 300	12.750 323.9	300 2065	38285 170270	12	7/8 x 4	12.75 324	14.31 364	20.25 514	19.00 483	17.00 432	1.25 32	46.8 21.2

2 Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

3 Total bolts required to be supplied by installer, may be ordered from Victaulic.

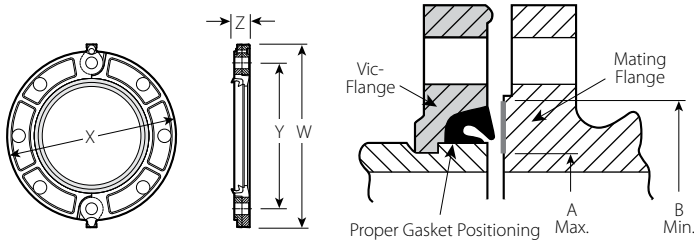
General Notes

IMPORTANT NOTE: Style 741 Vic-Flange adapters provide rigid joints when used on pipe with standard cut or roll groove dimensions and consequently allow no linear or angular movement at the joint. When used with Victaulic Series 700 butterfly valves, plastic pipe or light wall metallic pipe, small teeth in I.D. of key section should be removed and may be used on one side of the valve. Contact Victaulic for information on ISO 2084 (PN10); DIN 2532 (PN10) and JIS B-2210 (10K) flanges.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown.

Style 741

Sizes 50 – 300 mm/ 2 – 12”
PN10 and PN16 Flanges



Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Exaggerated for clarity

Nom. Size mm inches	Actual Outside Dia. mm inches	PN 10 Flanges				PN 16 Flanges				Sealing Surface		Dimensions				Approx. Weight Each kg lbs.
		Max. Working Press. ⁴ Bars ³ psi	Max. End Load ⁴ N lbs.	Bolts ⁵		Max. Working Press. ⁴ Bars ³ psi	Max. End Load ⁴ N lbs.	Bolts ⁵		"A" Max. mm inches	"B" Min. mm inches	W mm inches	X mm inches	Y mm inches	Z mm inches	
50 2	60.3 2.375	10 145	2850 640	4	16	16.0 230	4561 1025	4	16	60 2.38	87 3.41	177 6.97	165 6.50	125 4.92	20 0.79	1.4 3.1
76.1 mm	76.1 3.000	10 145	4540 1020	4	16	16.0 230	7275 1635	4	16	76 3.00	103 4.05	208 8.19	185 7.28	145 5.71	20 0.79	2.1 4.7
80 3	88.9 3.500	10 145	6210 1395	8	16	16.0 230	9925 2230	8	16	89 3.50	115 4.53	218 8.58	200 7.87	160 6.30	22 0.87	2.4 5.4
100 4	114.3 4.500	10 145	10260 2305	8	16	16.0 230	16420 3690	8	16	114 4.50	141 5.55	251 9.88	229 9.00	180 7.09	24 0.94	3.5 7.7
139.7 mm	139.7 5.500	10 145	15330 3446	8	16	16.0 230	24520 5512	8	16	141 5.55	171 6.73	274 10.79	250 9.84	210 8.27	24 0.94	4.2 9.3
159.0 mm	159.0 6.250	10 145	19800 4450	8	20	16.0 230	31400 7056	8	20	159 6.25	187 7.36	307 12.09	285 11.00	240 9.45	26 1.02	4.5 10.0
150 6	168.3 6.625	10 145	22250 5000	8	20	16.0 230	35600 8000	8	20	168 6.63	198 7.78	302 11.89	279 10.98	240 9.45	25 1.00	4.5 10.0
200 8	219.1 8.625	10 145	37690 8470	8	20	16.0 230	60320 13555	12	20	219 8.63	252 9.94	368 ⁶ 14.49	342 ⁶ 13.46	295 ⁶ 11.65	29 ⁶ 1.14	7.5 16.6
250 10	273.0 10.750	10 145	58560 13160	12	20	16.0 230	93695 21055	12	24	273 10.75	313 12.31	437 ⁷ 17.20	395 ⁷ 15.55	350 ⁷ 13.78	27 ⁷ 1.06	11.0 24.2
300 12	323.9 12.750	10 145	82370 18510	12	20	16.0 230	131810 29620	12	24	324 12.75	365 14.31	478 ⁸ 18.82	460 ⁸ 18.11	400 ⁸ 15.75	32 ⁸ 1.26	17.4 38.4

4 Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

5 Total bolts required to be supplied by installer, may be ordered from Victaulic.

6 PN16 dimensions (mm/inches): W = 360/14.17; X = 340/13.39; Y = 295/11.61; Z = 30/1.18.

7 PN16 dimensions (mm/inches): W = 438/17.24; X = 406/15.98; Y = 355/14.00; Z = 30/1.18.

8 PN 16 dimensions (mm/inches): W = 478/18.82; X = 444/18.11; Y = 410/16.14; Z = 32/1.26.

General Notes

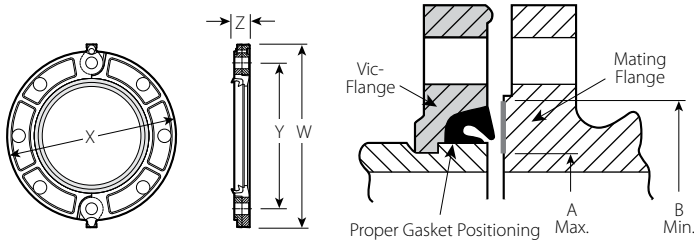
Longer bolts required when flange utilized with wafer-type valves.

IMPORTANT NOTE: Style 741 Vic-Flange adapters provide rigid joints when used on pipe with standard cut or roll groove dimensions and consequently allow no linear or angular movement at the joint. When used with Victaulic Series 700 butterfly valves, plastic pipe or light wall metallic pipe, small teeth in I.D. of key section should be removed and may be used on one side of the valve. Contact Victaulic for information on ISO 2084 (PN10); DIN 2532 (PN10) and JIS B-2210 (10K) flanges.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

Style 741

Sizes 2 – 8”/50 – 200 mm
 Australian Standard Table “E” Flanges



Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Exaggerated for clarity

Nom. Size mm inches	Actual Outside Dia. mm inches	Maximum Working Press. ⁹ kPa psi	Max. End Load ⁹ N lbs.	No. Bolts ¹⁰ Req.	Bolt Size ¹⁰ inches	Sealing Surface		Dimensions				Approx. Weight Each kg lbs
						“A” Max. mm inches	“B” Min. mm inches	W mm inches	X mm inches	Y mm inches	Z mm inches	
50 2	60.3 2.375	1400 203	4005 900	4	5/8 x 2 3/4	60 2.38	84 3.31	165 6.50	152 6.00	114 4.50	19 0.75	1.9 4.1
80 3	88.9 3.500	1400 203	8700 1955	4	5/8 x 3	89 3.50	113 4.44	200 7.87	191 7.50	146 5.75	24 0.94	2.4 5.4
100 4	114.3 4.500	1400 203	14374 3220	8	5/8 x 3	114 4.50	131 5.16	251 9.87	229 9.00	178 7.00	24 0.94	3.3 7.2
150 6	168.3 6.625	1400 203	31150 7000	8	3/4 x 3 1/2	168 6.63	192 7.56	286 11.25	279 11.00	235 9.25	25 1.00	4.5 9.9
200 8	219.1 8.625	1400 203	52777 11860	8	3/4 x 3 1/2	219 8.63	247 9.72	368 14.50	343 13.50	292 11.50	29 1.12	5.7 12.5

9 Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

10 Total bolts required to be supplied by installer, may be ordered from Victaulic.

General Notes

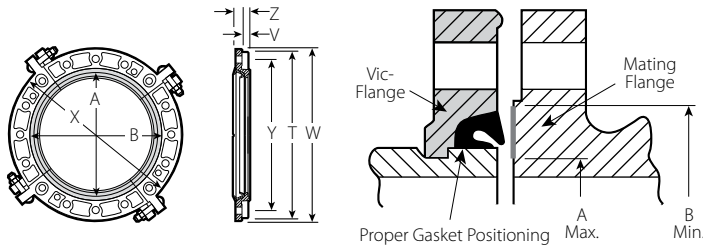
IMPORTANT NOTE: Style 741 Vic-Flange adapters provide rigid joints when used on pipe with standard cut or roll groove dimensions and consequently allow no linear or angular movement at the joint. When used with Victaulic Series 700 butterfly valves, plastic pipe or light wall metallic pipe, small teeth in I.D. of key section should be removed and may be used on one side of the valve. Contact Victaulic for information on ISO 2084 (PN10); DIN 2532 (PN10) and JIS B-2210 (10K) flanges.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

Style 741

Sizes 14 – 24"/350 – 600 mm ¹³

ANSI Class 125 and 150 Flanges



Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Exaggerated for clarity

Nom. Size	Actual Outside Dia.	Max. Working Press. ¹²	Max. End Load ¹²	Assembly Bolts ¹³		Draw Bolts ¹⁴		Sealing Surface		Dimensions					Approx. Weight Each
				No. Bolts	Bolt Size	No. Bolts	Bolt Size	A Max.	B Min.	T	V	W	X	Y	
inches mm	inches mm	psi kPa	lbs. N	Req.	inches	Req.	inches	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lbs. kg
14 350	14.000 355.6	300 2065	46,180 205500	12	1 x 4 1/2	4	5/8 x 3 1/2	14.00 356	16.39 416	19.38 492	0.94 24	24.50 622	21.00 533	18.75 476	62.0 28.1
16 400	16.000 406.4	300 2065	60,300 268335	16	1 x 4 1/2	4	5/8 x 3 1/2	16.00 406	18.39 467	21.50 546	0.94 24	27.12 689	23.50 597	21.25 540	79.0 35.8
18 450	18.000 457.0	300 2065	76,340 339700	16	1 1/8 x 4 3/4	4	3/4 x 4 1/4	18.00 457	20.00 508	22.25 565	1.00 25	29.00 737	25.00 637	22.75 578	82.3 37.3
20 500	20.000 508.0	300 2065	94,250 419400	20	1 1/8 x 5 1/4	4	3/4 x 4 1/4	20.00 508	22.50 572	25.00 635	1.00 25	31.50 800	27.50 699	25.00 635	103.3 46.9
24 600	24.000 610.0	300 2065	13,5700 603865	20	1 1/4 x 5 3/4	4	3/4 x 4 1/4	24.00 610	27.75 705	29.00 737	1.00 25	36.00 914	32.00 813	29.50 749	142.0 64.4

¹¹ For cut groove systems only. For 14 – 24"/350 – 600 mm roll groove systems, AGS (Advanced Groove System) products are used. Style 741 is not compatible with the AGS system.

¹² Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

¹³ Total bolts required to be supplied by installer, may be ordered from Victaulic.

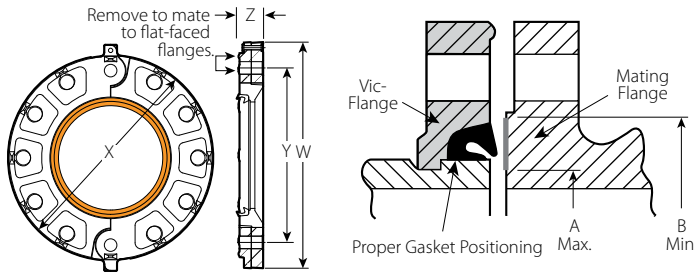
¹⁴ Draw bolts supplied with 14 – 24"/350 – 600 mm Vic-Flange adapters.

General Notes

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown.

Style 743

Grooved pipe adapter to ANSI Class 300 flanges



Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Exaggerated for clarity

Nom. Size inches mm	Actual Outside Dia. inches mm	Max. Working Pressure ¹⁵ psi kPa	Max. End Load ¹⁵ lbs. N	No. Bolts ¹⁶ Req.	Bolt Size ¹⁶ inches	Sealing Surface		Dimensions				Approx. Weight Each lbs. kg
						A Max. inches mm	B Min. inches mm	W inches mm	X inches mm	Y inches mm	Z inches mm	
2 50	2.375 60.3	720 4960	3,190 14200	8	5/8 x 3	2.38 60	3.41 87	7.70 196	6.50 165	5.00 127	0.93 24	4.8 2.2
2½ 65	2.875 73.0	720 4960	4,670 20780	8	¾ x 3 ¼	2.88 73	3.91 99	8.61 219	73.50 191	5.88 149	1.06 27	7.4 3.4
3 80	3.500 88.9	720 4960	6,925 30815	8	¾ x 3 ½	3.50 89	4.53 115	9.48 241	8.25 210	6.63 168	1.18 30	9.1 4.1
4 100	4.500 114.3	720 4960	11,445 50930	8	¾ x 3 ¾	4.50 114	5.53 141	11.35 288	10.00 254	7.87 200	1.31 33	15.3 6.9
5 125	5.563 141.3	720 4960	17,500 77875	8	¾ x 4	5.56 141	6.72 171	12.31 313	11.00 279	9.25 235	1.43 36	17.7 8.0
6 150	6.625 168.3	720 4960	24,805 110380	12	¾ x 4 ½	6.63 168	7.78 198	13.77 350	12.50 318	10.63 270	1.50 38	23.4 10.6
8 200	8.625 219.1	720 4960	42,045 187100	12	7/8 x 4 ¾	8.63 219	9.94 252	16.68 424	15.00 381	13.00 330	1.68 43	34.3 15.6
10 250	10.750 273.0	720 4960	65,315 290650	16	1 x 5 ¼	10.75 273	12.31 313	19.25 489	17.50 445	15.25 387	1.93 49	48.3 21.9
12 300	12.750 323.9	720 4960	91,880 408870	16	1 1/8 x 5 ¾	12.75 324	14.31 363	22.25 565	20.50 521	17.75 451	2.06 52	70.5 32.0

¹⁵ Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

¹⁶ Total bolts required to be supplied by installer, may be ordered from Victaulic.

General Notes

Style 743 Vic-Flange must be ordered as a factory assembly when connected to a Victaulic fitting or valve. Contact Victaulic for details.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

Vic-Flange Adapter Notes

1. The Style 741 (2 – 12”/50 – 300 mm) design incorporates small teeth inside the key shoulder I.D. to prevent rotation. These teeth should be removed when Vic-Flange adapter is utilized with a Victaulic Series 700 grooved end butterfly valve, Schedule 5 pipe or plastic pipe. Vic-Flange adapter Style 741 may only be used on one side of Victaulic Series 700 butterfly valve, sizes 2 – 4”/50 – 100 mm fitted with standard or latch-lock handles.
2. Vic-Flange adapter must be assembled so it does not interfere with handle operation. Because of the outside flange dimension, Vic-Flange adapter should not be used within 90° of one another on a standard fitting. When wafer or lug-type valves are used adjoining a Victaulic fitting, check disc dimensions to assure proper clearance.
3. Vic-Flange adapters should not be used as anchor points for tie-rods across nonrestrained joints. Mating rubber faced flanges, valves, etc. requires the use of a Vic-Flange washer.
4. Area A-B noted in the above drawing must be free from gouges, undulations or deformities of any type for effective sealing.
5. Vic-Flange adapter gaskets must always be assembled with the color coded lip on the pipe and the other lip facing the mating flange.
6. Vic-Flange hinge points must be oriented approximately 90° to each other when mated.
7. Flange Washers: Vic-Flange adapters require a smooth hard surface at the mating flange face for effective sealing. Some applications for which the Vic-Flange adapter is otherwise well suited do not provide an adequate mating surface. In such cases, it is recommended that a metal (Type F phenolic for Style 641 with copper systems) Flange Washer be inserted between the Vic-Flange adapter and the mating flange to provide the necessary sealing surface.

Typical applications where a Flange Washer should be used are:

- A. When mating to a serrated flange: a flange gasket should be used adjacent to the serrated flange and then the Flange Washer is inserted between the Vic-Flange adapter and the flange gasket.
- B. When mating to a wafer valve: where typical valves are rubber lined and partially rubber faced (smooth or not), the Flange Washer is placed between the valve and the Vic-Flange adapter.
- C. When mating a rubber faced flange: the Flange Washer is placed between the Vic-flanges and the rubber faced flange.
- D. When mating AWWA cast flanges to IPS flanges: the Flange Washer or Transition Ring is placed between two Vic-Flange adapters with the hinge points oriented 90° to each other. If one flange is not a Vic-Flange adapter (e.g., flanged valve), then a flange gasket must be placed adjacent to that flange and the Flange Washer inserted between the flange gasket and the Vic-Flange adapter. Transition rings rather than Flange Washers must be used when mating Style 741 to Style 341 Flange Adapters in sizes 14 – 24”/350 – 600 mm.
- E. When mating to components (valves, strainers, etc.) where the component flange face has an insert: follow the same arrangement as in Application 1.

When ordering Flange Washers, always specify product style (Style 741, 743, 341, 641, 994) and size to assure proper Flange Washer is supplied.

Installation

Reference should always be made to the [I-100 Victaulic Field Installation Handbook](#) for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Trademarks

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