

Victaulic® Vic-Flange Adapters

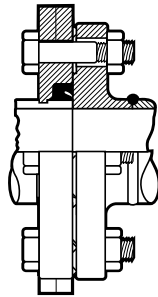
Styles 741 and 743



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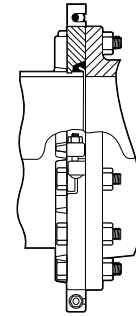
Style 741
2 – 12"/DN50 – DN300



Exaggerated for clarity



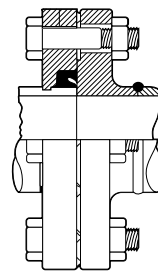
Style 741
14 – 24"/DN350 – DN600



Exaggerated for clarity



Style 743
2 – 12"/DN50 – DN300



Exaggerated for clarity

1.0 PRODUCT DESCRIPTION

Available Sizes

- **Style 741:** 2 – 24"/DN50 – DN600
- **Style 743:** 2 – 12"/DN50 – DN300

Pipe Material

- Carbon steel
- For use with stainless steel pipe, refer to Victaulic [publication 17.09](#) for pressure ratings and end loads.
- For use with PVC pipe, refer to Victaulic [publication 32.01](#) for pressure ratings.
- For use with aluminum pipe, refer to Victaulic [publication 21.04](#) for pressure ratings and end loads.
- For exceptions reference section 6.0 Notifications.

Maximum Working Pressure

- **Style 741:** Accommodates pressure ranging from full vacuum (29.9 in-Hg/760 mm-Hg) up to 300 psi/2068 kPa/21 bar
- **Style 743:** Accommodates pressure ranging from full vacuum (29.9 in-Hg/760 mm-Hg) up to 720 psi/4964 kPa/50 bar

Application

- Designed to transition from flanged to grooved piping systems

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.



2.0 CERTIFICATION/LISTINGS



NOTE

- See Victaulic [publication 02.06](#): Victaulic Potable Water Approvals ANSI/NSF for potable water approvals if applicable.

3.0 SPECIFICATIONS – MATERIAL

Housing: Ductile iron conforming to ASTM A536, Grade 65-45-12. Ductile iron conforming to ASTM A395, Grade 65-45-15, is available upon special request.

Housing Coating: (specify choice)

- ☐ Standard: Black enamel.
- ☐ Optional: Hot dipped galvanized per ASTM A123.
- ☐ Optional: Contact Victaulic with your requirements for other coatings.

Gasket: (specify choice¹)

☐ Victaulic Grade “E” EPDM

EPDM (Green stripe color code). Temperature range –30°F to +230°F/–34°C to +110°C. May be specified for 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 USE WITH PETROLEUM SERVICES OR STEAM SERVICES.

☐ Victaulic Grade “T” Nitrile

Nitrile (Orange stripe color code). Temperature range 20°F to +180°F/29°C to +82°C. May be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F/+82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F/+66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F/+60°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

☐ Others

For alternate gasket selection, reference [publication 05.01](#): Victaulic Seal Selection Guide.

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 Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

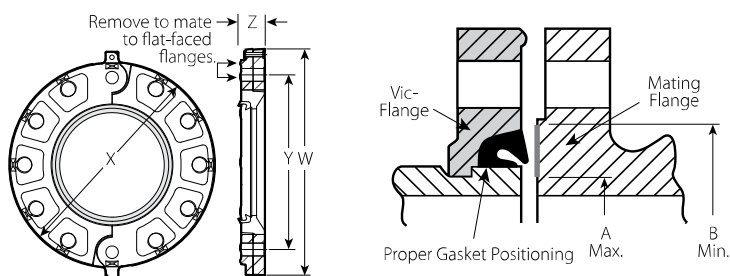
Draw Bolts/Nuts (14 – 24"/DN350 – DN600 only):

- ☐ Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (metric). Carbon steel hex flange nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex flange nuts are zinc electroplated per ASTM B633 FE/ZN5, finish Type III (imperial) or Type II (metric).

4.5 DIMENSIONS

Style 743 Vic-Flange Adapter

ANSI Class 250 and 300 Flanges



Exaggerated for clarity

Size		Assembly Bolt/Nut ²		Sealing Surface		Dimensions				Weight
Nominal inches DN	Actual Outside Diameter inches mm	Qty.	Size inches	"A" Max. inches mm	"B" Min. inches mm	W inches mm	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
2 DN50	2.375 60.3	8	5/8 x 3	2.38 60	3.41 87	7.75 197	6.50 165	5.00 127	1.00 25	4.8 2.2
2½	2.875 73.0	8	¾ x 3¼	2.88 73	3.91 99	8.63 219	7.50 191	5.88 149	1.13 29	7.4 3.4
3 DN80	3.500 88.9	8	¾ x 3½	3.50 89	4.53 115	9.50 241	8.25 210	6.63 168	1.25 32	9.1 4.1
4 DN100	4.500 114.3	8	¾ x 3¾	4.50 114	5.53 141	11.38 289	10.00 254	7.88 200	1.38 35	15.3 6.9
5	5.563 141.3	8	¾ x 4	5.56 141	6.72 171	12.38 314	11.00 279	9.25 235	1.50 38	17.7 8.0
6 DN150	6.625 168.3	12	¾ x 4½	6.63 168	7.78 198	13.88 352	12.50 318	10.63 270	1.50 38	23.4 10.6
8 DN200	8.625 219.1	12	7/8 x 4¾	8.63 219	9.94 252	16.75 425	15.00 381	13.00 330	1.75 44	34.3 15.6
10 DN250	10.750 273.0	16	1 x 5¼	10.75 273	12.31 313	19.25 489	17.50 445	15.25 387	2.00 51	48.3 21.9
12 DN300	12.750 323.9	16	1 1/8 x 5¾	12.75 324	14.31 363	22.25 565	20.50 521	17.75 451	2.13 54	70.5 32.0

² Total assembly bolts required to be supplied by installer.

5.4 PERFORMANCE

Style 741 Vic-Flange Adapter

14 – 24"/DN350 – DN600

ANSI Class 125 and 150 Flanges

Size		Maximum Working Pressure ⁹	Maximum End Load ⁹
Nominal inches DN	Actual Outside Diameter inches mm		
14 DN350	14.000 355.6	300 2068	46180 205500
16 DN400	16.000 406.4	300 2068	60300 268335
18 DN450	18.000 457.0	300 2068	76340 339700
20 DN500	20.000 508.0	300 2068	94250 419400
24 DN600	24.000 610.0	300 2068	135700 603865

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.

NOTE

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

5.5 PERFORMANCE

Style 743 Vic-Flange Adapter

ANSI Class 250 and 300 Flanges

Size		Maximum Working Pressure ⁹	Maximum End Load ⁹
Nominal inches DN	Actual Outside Diameter inches mm		
2 DN50	2.375 60.3	720 4964	3190 14200
2½	2.875 73.0	720 4964	4670 20780
3 DN80	3.500 88.9	720 4964	6925 30815
4 DN100	4.500 114.3	720 4964	11445 50930
5	5.563 141.3	720 4964	17500 77875
6 DN150	6.625 168.3	720 4964	24805 110380
8 DN200	8.625 219.1	720 4964	42045 187100
10 DN250	10.750 273.0	720 4964	65315 290650
12 DN300	12.750 323.9	720 4964	91880 408870

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.

NOTE

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

6.0 NOTIFICATIONS

- The Style 741 (2 – 12"/DN50 – DN300) 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"/DN50 – DN100 fitted with standard or latch-lock handles.
- *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.
- *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.
- Area A-B noted in the drawings in sections 4.0 through 4.5 must be free from gouges, undulations or deformities of any type for effective sealing.
- *Vic-Flange* adapter gaskets must always be assembled with the color coded lip on the pipe and the other lip facing the mating flange.
- *Vic-Flange* hinge points must be oriented approximately 90° to each other when mated.
- 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"/DN350 – DN600.
 - E. When mating to components (valves, strainers, etc.) where the component flange face has an insert: follow the same arrangement as in Application 1.
 - F. Additional information regarding the use of a Flange Washer can be found in the [I-100](#): Victaulic Field Installation Handbook.
- When ordering Flange Washers, always specify product style (Style 741 or Style 743) and size to assure proper Flange Washer is supplied.

NOTE

- Style 741 is compatible with ANSI CL 125 or CL150, PN10/16 and Australian Standard Table E bolt hole patterns.

6.0 NOTIFICATIONS (Continued)

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.

NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes NPS 2"/DN50 and smaller Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.

7.0 REFERENCE MATERIALS

[02.06: Victaulic Potable Water Approvals](#)

[05.01: Victaulic Seal Selection Guide](#)

[10.01: Victaulic Regulatory Approval Reference Guide](#)

[17.01: Victaulic Pipe Preparation for Use on Stainless Steel Pipe With Victaulic Products](#)

[17.09: Victaulic Pressure Ratings and End Loads for Victaulic Ductile Iron Grooved Couplings on Stainless Steel Pipe](#)

[29.01: Victaulic Terms and Conditions/Warranty](#)

[1-100: Victaulic Field Installation Handbook](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing 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.

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