

# Vic-Flange® Adapter

## Style 341



3 – 12" Sizes



14 – 24" Sizes

### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 3 – 24"/DN80 – DN600

#### Maximum Working Pressure

- Up to 250 psi/1725 kpa

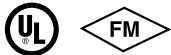
#### Application

- Designed for directly incorporating flanged components with ANSI B16.1 (CL. 125) bolt hole patterns into grooved piping systems.

#### Pipe Material

- Ductile iron, cast iron

### 2.0 CERTIFICATION/LISTINGS



#### NOTE

- Refer to Victaulic [submittal publication 10.01](#) for details.

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

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

### 3.0 SPECIFICATIONS – MATERIAL

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#### 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.

#### Flange Coating: (specify choice)

Standard: Alkyd-phenolic primer.

Optional: Orange enamel.

Optional: Coal tar epoxy coating (3 mils).

Optional: Organic zinc primer (3 mils).

Optional: Bituminous coating.

#### NOTE

- Others available, contact Victaulic.

#### Gasket: (specify choice<sup>1</sup>)

##### Grade “M” Halogenated Butyl

Halogenated Butyl (Brown color code). Temperature range –20°F to + 200°F/–29°C to +93°C. Specifically compounded to conform to ductile pipe surfaces. Recommended for 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 +86°F/+30°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

##### Grade “S” Nitrile

Nitrile (Red color code). Temperature range –20°F to +180°F/–29°C to +82°C. Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot dry air over + 140°F/+60°C) and water over +150°F/+66°C. NOT RECOMMENDED FOR HOT WATER SERVICES.

<sup>1</sup> 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.

#### Bolts/Nuts: (specify choice)

**Standard:** Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449.

Carbon steel heavy hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

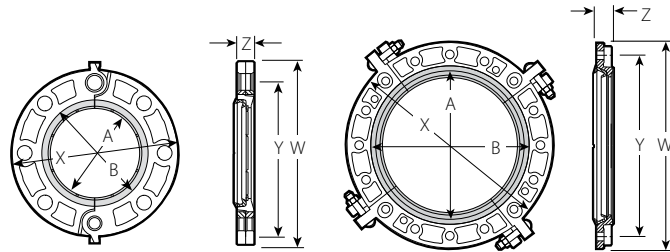
**Optional:** Bolts – Stainless steel, meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Nuts – Stainless Steel meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW, with galling reducing coating.<sup>2</sup>

<sup>2</sup> Optional bolts/nuts are available in imperial size only.

## 4.0 DIMENSIONS

### Style 341

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



3 – 12" Sizes

14 – 24" Sizes

Size		Assembly Bolts <sup>3</sup>		Draw Bolts <sup>4</sup>		Dimensions				Weight
Nominal inches DN	Actual Outside Diameter inches mm	Qty.	Size inches	Qty.	Size inches	W inches mm	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
3 80	3.96 100.6	4	5/8 x 3	–	–	8.44 214	7.50 191	6.00 152	0.94 24	5.4 2.4
4 100	4.80 121.9	8	5/8 x 3	–	–	9.94 252	9.00 229	7.50 191	0.94 24	8.2 3.7
6 150	6.90 175.3	8	3/4 x 3 1/2	–	–	12.00 305	11.00 279	9.50 241	1.00 25	12.0 5.4
8 200	9.05 229.9	8	3/4 x 3 1/2	–	–	14.63 372	13.50 343	11.75 298	1.13 29	17.4 7.9
10 250	11.10 281.9	12	7/8 x 4	–	–	17.13 435	16.00 406	14.25 362	1.19 30	24.6 11.2
12 300	13.20 335.5	12	7/8 x 4	–	–	20.13 511	19.00 483	17.00 432	1.25 32	34.4 15.6
14 350	15.30 388.6	12	1 x 4 1/4	4	5/8 x 3 1/2	24.63 626	21.00 533	18.75 476	1.50 38	55.0 25.0
16 400	17.40 442.0	16	1 x 4 3/4	4	5/8 x 3 1/2	27.25 693	23.50 597	21.25 540	1.88 48	80.0 36.3
18 450	19.50 495.3	16	1 1/8 x 5 1/2	4	3/4 x 4 1/4	29.13 740	25.00 635	22.75 578	2.25 57	95.0 43.1
20 500	21.60 548.6	20	1 1/8 x 5 3/4	4	3/4 x 4 1/4	31.63 803	27.50 699	25.00 635	2.38 61	115.0 52.2
24 600	25.80 655.3	20	1 1/4 x 6 1/4	4	3/4 x 5	36.13 918	32.00 813	29.50 749	2.50 64	150.0 68.0

<sup>3</sup> Total bolts required are to be supplied by the installer. Bolt sizes are for conventional flange-to-flange connections. Longer bolts are required when Vic-Flange Adapters are used with wafer-type valves.

<sup>4</sup> Supplied with Vic-Flange Adapter.

**NOTE**

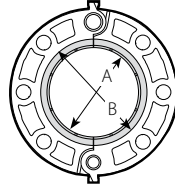
- Metric thread size draw bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

## 4.1 DIMENSIONS

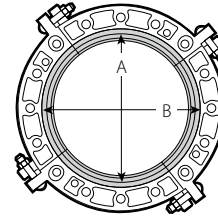
### Style 341

#### Required Sealing Surface

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



3 – 12" Sizes



14 – 24" Sizes

Sealing Surface			
Flange Size		A Maximum	B Minimum
Nominal Diameter inches DN	Actual Outside Diameter inches mm		
3	3.96	3.96	4.94
80	100.6	101	125
4	4.80	4.80	5.88
100	121.9	122	149
6	6.90	6.90	8.00
150	175.3	175	203
8	9.05	9.05	10.13
200	229.9	230	257
10	11.10	11.10	12.50
250	281.9	282	318
12	13.20	13.20	14.75
300	335.5	335	375
14	15.30	15.30	16.38
350	388.6	389	416
16	17.40	17.40	18.38
400	442.0	442	467
18	19.50	19.50	20.00
450	495.3	495	508
20	21.60	21.60	22.50
500	548.6	549	572
24	25.80	25.80	27.75
600	655.3	655	705

#### NOTE

- Vic-Flange gasket requires sufficient flat face area on the mating flange for proper gasket sealing. See chart for dimensions.

## 5.0 PERFORMANCE

### Style 341

Size		Maximum Working Pressure <sup>5</sup>	Maximum End Load <sup>5</sup>
Nominal inches DN	Actual Outside Diameter inches mm		
3	3.96	250	3100
80	100.6	1725	13795
4	4.80	250	4500
100	121.9	1725	20025
6	6.90	250	9300
150	175.3	1725	41385
8	9.05	250	16000
200	229.9	1725	71200
10	11.10	250	23700
250	281.9	1725	105465
12	13.20	250	34000
300	335.5	1725	151300
14	15.30	200	36700
350	388.6	1375	163315
16	17.40	150	35600
400	442.0	1035	158420
18	19.50	150	44700
450	495.3	1035	198915
20	21.60	150	54900
500	548.6	1035	244305
24	25.80	150	78400
600	655.3	1035	348880

<sup>5</sup> Working Pressure and End Load are total, from all internal and external loads, based on AWWA class 53 ductile iron pipe radius cut grooved in accordance with ANSI/AWWA C-606 and 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

### Important Installation Considerations

- The gasket seating surfaces on the pipe and on the face of the mating flange must be free from gouges, indentations and deformities of any type for proper sealing. Refer to the installation instructions for complete information.
- Vic-Flange Adapters must be assembled so there is no interference with mating components.
- When wafer or lug-type valves are used adjoining a Victaulic fitting, check disc dimensions to ensure proper clearance.
- Vic-Flange Adapters must not be used as anchor points for tie rods across non-restrained joints.
- Mating Vic-Flange Adapters to rubber faced flanges, valves, etc. requires the use of a Vic-Flange Washer. Refer to the "Vic-Flange Washer Notes" section below.
- The lettering on the outside of the gasket must face the gasket pocket of the Vic-Flange Adapter. When installed correctly, the lettering on the gasket will not be visible.
- When mating two Vic-Flange Adapters, the hinge points/ draw bolt locations must be staggered, and a flange washer (3" – 12") or transition ring (14" – 24") must be used between the two Vic-Flange Adapters.

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## 6.0 NOTIFICATIONS (Continued)

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Vic-Flange Adapters require a smooth, hard surface at the mating flange face for proper sealing. Some applications, for which the Vic-Flange Adapter is otherwise well suited, do not provide an adequate mating surface. In such cases, a metal Vic-Flange Washer is recommended for insertion between the Vic-Flange Adapter and the mating flange to provide the necessary sealing surface. To ensure the proper Vic-Flange Washer is supplied, always specify the product style and size when ordering.

- A.** When mating to a serrated flange – a flange gasket should be used against the serrated flange. The Vic-Flange Washer should then be inserted between the Vic-Flange Adapter and the flange gasket.
- B.** When mating to a wafer-type valve that is rubber lined and partially rubber-faced (smooth or not) – the Vic-Flange Washer should be placed between the valve and the Vic-Flange Adapter.
- C.** When mating to a rubber-faced flange, valve, etc. – the Vic-Flange Washer must be placed between the Vic-Flange Adapter and the rubber-faced flange.
- D.** When mating to components (valves, strainers, etc.) where the component flange face has an insert – follow the same arrangement as if the Vic-Flange Adapter was being mated to a serrated flange. Refer to application "A" above.
- E.** When mating AWWA cast flanges to IPS flanges – the Vic-Flange Transition Ring is placed between the two Vic-Flange Adapters with the draw bolt locations staggered. If one flange is not a Vic-Flange Adapter (i.e. flanged valve), a flange gasket must be placed against that flange. The Vic-Flange Washer must then be inserted between the flange gasket and the Vic-Flange gasket. NOTE: Transition rings, rather than Vic-Flange Washers, must be used when mating Style 741 Vic-Flange Adapters to Style 341 Vic-Flange Adapters in sizes 14 – 24" (DN350 – DN600).

### Torque Requirements

Vic-Flange adapters should be installed using the bolt torque listed below:

- 14 – 16" Sizes: 250 – 300 ft. lbs.  
(339 – 407 N•m)
- 18 – 20" Sizes: 300 – 350 ft. lbs.  
(407 – 475 N•m)
- 24" Size: 350 - 400 ft. lbs.  
(475 – 542 N•m)

Exceeding these values may create leakage. Additional levels of torque will not enhance gasket sealing.

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## 7.0 REFERENCE MATERIALS

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- [10.01: Regulatory Approval Reference Guide](#)
- [23.01: AWWA Ductile Iron Pipe - Grooved System](#)
- [23.05: AWWA \(Cast\) Fittings](#)
- [29.01: Terms and Conditions/Warranty](#)
- [I-300: Field Installation Handbook](#)

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### 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, and the applicable building codes and related regulations 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](http://www.victaulic.com).

### Warranty

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

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