

Victaulic® Rigid Coupling for Fiberglass-Reinforced Plastic Pipe

Style 296A



90.01



1 – 6" sizes

8 – 12" sizes

1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 – 12"

Pipe Material

- Fiberglass-Reinforced Plastic (FRP/GRP)
- Vinyl Ester
- Epoxy Resin

Maximum Working Pressure

- FRP/GRP pipe of Pressure Class 150/PN10 or higher can be joined with Style 296A Couplings and operated at a maximum pressure of 150 psi.
- FRP/GRP pipe of Pressure Class lower than 150/PN10 can be joined with Style 296A Couplings and operated at pressures not exceeding the pressure rating of the pipe.

Operating Temperature

- Dependent on pipe manufacturer rating and gasket selection
- Reference [Section 3.0](#) for gasket performance options
- Consult pipe manufacturer for pipe material performance limitations

Function

- Joins FRP/GRP pipe with ends prepared in accordance with [Section 4.1](#)
- Provides a rigid pipe joint designed to restrict axial and angular movement

Pipe Preparation

- Style 296A Rigid Coupling is exclusively for use on FRP/GRP pipe and fittings that are prepared to the specifications outlined in [Section 4.1](#).

2.0 CERTIFICATIONS/LISTINGS

Not applicable – contact Victaulic with any questions.

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



3.0 SPECIFICATIONS - MATERIAL

Housing: Aluminum ASTM B-26, Grade 356-T6

Housing Coating:

- ☐ Standard: Bare
- ☐ Optional: Contact Victaulic with requirements for other coatings.

Gasket: (specify choice¹)

☐ **FlushSeal Grade “E” EPDM**

EPDM (Green Stripe) Temperature range -30°F to +230°F / -34°C to +110°C. Recommended 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 +86°F/+30°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

☐ **FlushSeal Grade “S” Nitrile**

Nitrile (Orange color code). Temperature range -20°F to +180°F / -29°C to +82°C. Recommended for petroleum products, hydrocarbons, air with oil vapors, vegetable and mineral oils within the specified temperature range; not recommended for hot dry air over +140°F/+60°C and water over +150°F/+66°C. NOT RECOMMENDED FOR HOT WATER SERVICES.

☐ **FlushSeal Grade “O” Fluoroelastomer**

Fluoroelastomer (Blue color code) Temperature range +20°F to +300°F / -7°C to +149°C. Recommended for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons to +300°F / +149°C. NOT RECOMMENDED FOR HOT WATER SERVICES.

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.

NOTE

- Victaulic reserves the right to substitute equivalent and/or higher grade elastomer products.

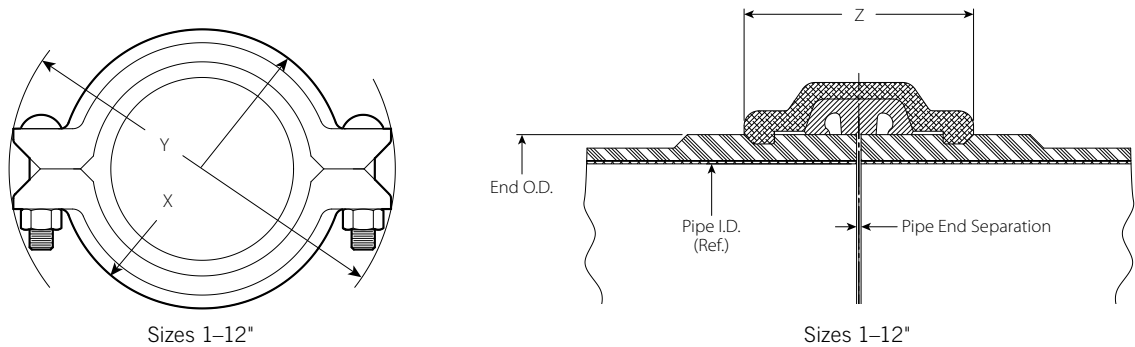
Bolts/Nuts: (specify choice)

- ☐ Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449. Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and hex nuts are zinc electroplated per ASTM B633 Fe/Zn5 finish Type III.
- ☐ Optional: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW. Bolts and nuts include galling reducing coating.

4.0 DIMENSIONS

Style 296A

Coupling for Fiberglass-Reinforced Plastic Pipe

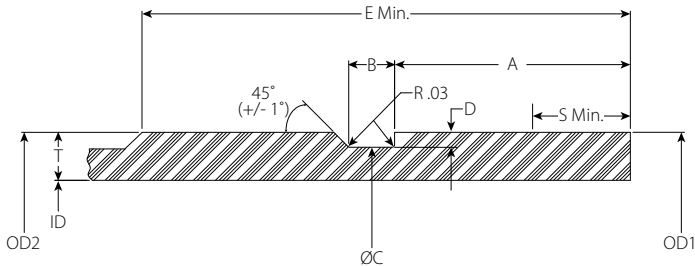


Size		Pipe End Separation ³	Bolt/Nut		Dimensions			Weight
Nominal Size (I.D.)	Actual Outside Diameter	Allowable	Quantity	Size	X	Y	Z	Approximate (Each)
inches	inches	inches		inches	inches	inches	inches	lb
mm	mm	mm		mm	mm	mm	mm	kg
1	1.66 42.2	0.06 1.52	2	3⁄8 x 2	2.25 57.2	4.51 114.5	2.04 51.8	0.8 0.4
2	2.75 68.7	0.06 1.52	2	3⁄8 x 2	3.96 100.6	6.62 168.1	2.13 54.1	1.8 0.8
3	3.94 100.0	0.06 1.52	2	1⁄2 x 3	5.18 131.6	7.75 196.1	2.43 61.7	2.5 1.1
4	4.87 123.7	0.06 1.52	2	1⁄2 x 3 1⁄4	6.18 157.0	8.13 206.5	2.81 71.4	3.5 1.6
6	7.00 177.8	0.06 1.52	2	5⁄8 x 3 1⁄2	8.38 212.9	10.88 276.4	3.87 98.3	6.3 2.9
8	9.17 232.9	0.06 1.52	4	5⁄8 x 5	10.62 269.7	13.25 336.6	4.75 120.7	10.7 4.9
10	11.31 287.2	0.06 1.52	4	3⁄4 x 5	12.73 323.2	15.88 403.4	5.75 146.1	14.4 6.5
12	13.34 338.8	0.06 1.52	4	3⁄4 x 5	14.83 376.7	18.00 457.2	6.50 165.1	20.0 9.1

³ The Allowable Pipe End Separation dimension shown is for system layout purposes only. Contact Victaulic for torsional resistance information.

4.1 DIMENSIONS

Groove Specifications for ID-Based Fiberglass-Reinforced Plastic Pipe



Size				Dimensions											
Nominal (ID)	Pipe End Outside Diameter (OD1)			OD2 +/- 0.04/ +/- 1.0	A			B		ØC		D	E	S	T
	Basic	Max.	Min.		Basic	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	Min.	Min.	Ref.
1	1.660	1.680	1.640	1.66	0.620	0.630	0.590	0.280	0.250	1.480	1.440	0.090	1.50	0.50	0.330
	42.2	42.7	41.7	42	15.7	16.0	15.0	7.1	6.4	37.6	36.6	2.3	38	13	8.4
2	2.750	2.770	2.730	2.75	0.620	0.630	0.590	0.280	0.250	2.570	2.530	0.090	1.50	0.50	0.375
	69.9	70.4	69.3	70	15.7	16.0	15.0	7.1	6.4	65.3	64.3	2.3	38	13	9.5
3	3.940	3.960	3.920	3.94	0.780	0.790	0.750	0.280	0.250	3.740	3.700	0.100	1.81	0.50	0.470
	100.1	100.6	99.6	100	19.8	20.1	19.1	7.1	6.4	95.0	94.0	2.5	46	13	11.9
4	4.865	4.885	4.845	4.86	0.970	0.980	0.940	0.280	0.250	4.645	4.605	0.110	2.25	0.50	0.433
	123.6	124.1	123.1	123	24.6	24.9	23.9	7.1	6.4	118.0	117.0	2.8	57	13	11.0
6	7.000	7.020	6.980	7.00	1.370	1.380	1.340	0.400	0.370	6.765	6.725	0.118	3.15	0.75	0.500
	177.8	178.3	177.3	178	34.8	35.1	34.0	10.2	9.4	171.8	170.8	3.0	80	19	12.7
8	9.170	9.190	9.150	9.17	1.780	1.790	1.750	0.400	0.370	8.885	8.845	0.143	4.00	0.75	0.585
	232.9	233.4	232.4	233	45.2	45.5	44.5	10.2	9.4	225.7	224.7	3.6	102	19	14.9
10	11.310	11.335	11.285	11.31	2.190	2.205	2.155	0.530	0.500	11.015	10.975	0.148	5.00	0.75	0.655
	287.3	287.9	286.6	287	55.6	56.0	54.7	13.5	12.7	279.8	278.8	3.8	127	19	16.6
12	13.340	13.365	13.315	13.34	2.560	2.575	2.525	0.530	0.500	13.015	12.975	0.163	5.69	0.75	0.670
	338.8	339.5	338.2	339	65.0	65.4	64.1	13.5	12.7	330.6	329.6	4.1	145	19	17.0

NOTES

- Prior to installation, the pipe ends must be inspected to ensure the outside surface, between the groove and the pipe end, is smooth and free from indentations and projections to ensure a leak-tight seal (refer to the “s” minimum dimension). All oil, grease, and, dirt must be removed. In addition, the groove and pipe dimensions must be verified to ensure they comply with the specifications listed in the table below. If any measurements do not comply with these specifications, the pipe must not be used.
- All dimensions are after resin coating is applied to exposed fibers, if applicable.

5.0 PERFORMANCE

Size		Maximum Working Pressure ⁴	Maximum Permissible End Load ^{5,6}
Nominal Size (I.D.) inches mm	Actual Outside Diameter inches mm		
1	1.66 42.2	150 1035	325 1446
2	2.75 68.7	150 1035	891 3963
3	3.94 100.0	150 1035	1829 8135
4	4.87 123.7	150 1035	2714 12072
6	7.00 177.8	150 1035	5609 24949
8	9.17 232.9	150 1035	9649 42919
10	11.31 287.2	150 1035	14515 64563
12	13.34 338.8	150 1035	20527 91304

NOTES

⁴ The lesser of 150 psi/1035 kPa or the pressure rating of the pipe

⁵ Total allowable end load from internal pressure and external loads

⁶ Maximum end loads listed are for both tensile and compression

6.0 NOTIFICATIONS

⚠️ WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Always read and follow the I-ENDCAP, Victaulic End Cap Installation Safety Instructions, which can be downloaded at Victaulic.com.
- Wear safety glasses, hardhat, foot protection, and hearing protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

- [05.01: Victaulic Seal Selection Guide](#)
- [I-296A: Style 296A Installation Instructions](#)
- [I-ENDCAP: Victaulic End Caps Installation Instructions](#)

User Responsibility for Product Selection and Suitability Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation 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, warranty, installation instructions, or this disclaimer. Installation Always refer to and follow the Victaulic Installation Handbook or installation instructions for 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 victaulic.com. Warranty Refer to the Warranty section of the current Price List or contact Victaulic for details.	Intellectual Property Rights No statement concerning the use of any material, product, service, or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Victaulic or any of its affiliates, or as a recommendation for the use of such material, product, service, or design in the infringement of any patent or other intellectual property right. The terms "Patented" or "Patent Pending" refer to design or utility patents or patent applications for articles and/or methods of use in the United States and/or other countries. Victaulic and all other Victaulic marks are the trademarks or registered trademarks of Victaulic Company, and/or its affiliated entities, in the U.S. and/or other countries. Note All products bearing a Victaulic trademark are manufactured by Victaulic or to Victaulic specifications. All products are to be installed only in accordance with the applicable Victaulic installation instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.
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