

# Coupling

## STYLE 31



SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

Style 31 couplings are designed to provide a strong component for ductile iron pipe systems of AWWA dimensions. The Style 31 coupling is designed for use on radius cut grooved pipe with minimum wall thickness of ANSI/AWWA C151/A21.51, Class 53. The Style 31 FlushSeal® gasket is specifically designed for ductile pipe surfaces and provides an efficient triple seal. Rigid radius grooved ductile iron systems with Style 31 couplings are comparable with flanged ductile iron systems.

The outside surface of pipe between the groove and pipe end must be smooth and free from deep pits or swells to provide a leak-tight seal for the Victaulic gasket. All rust, loose scale, oil, grease and dirt shall be removed. Peened surfaces may require corrective action in order to provide a leak-tight gasket seal.

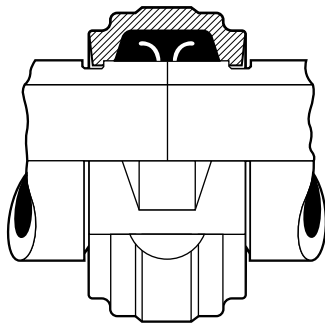
Sizes 3 – 12"/80 – 300mm are two-piece housings, with 14 – 20"/350 – 500mm sizes cast in four identical segments and 24 – 36"/650 – 900mm in six segments, to assure concentricity and easy handling.

All sizes are supplied painted, with plated nuts and bolts.



PATENTED

### MATERIAL SPECIFICATIONS



Exaggerated for Clarity

**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:** Couplings are alkyd-phenolic primer (2.5 mil)

**Optional:**

- Orange enamel
- Coal tar epoxy coating (3 mils)
- Organic zinc primer (3 mils)
- Bituminous coating
- Others available, contact Victaulic

**Gasket** (specify choice\*):

**Grade "M" FlushSeal**

Halogenated Butyl (Brown color code). Temperature range -20°F to +200°F / -29°C to +93°C. Specially 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" FlushSeal**

Nitrile (Red color code). Temperature range -20°F to +180°F / -29°C to +82°C. Specifically 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 air over +140°F/+60°C and water over +150°F/+66°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**

\* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

**Optional:** ~~Type 316 Stainless Steel, Grade B 8M, Class 2~~

**JOB/OWNER**

System No. \_\_\_\_\_  
Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
Date \_\_\_\_\_

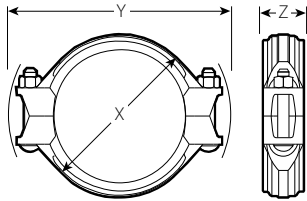
**ENGINEER**

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
Approved \_\_\_\_\_  
Date \_\_\_\_\_

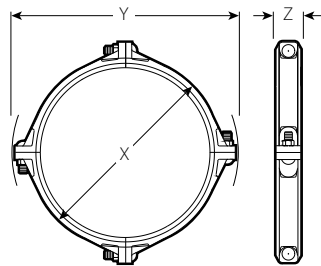
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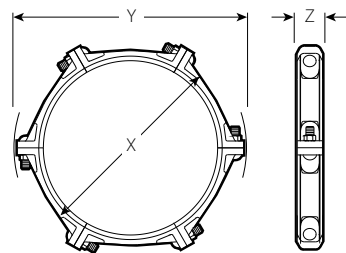
### DIMENSIONS



3 – 12" Sizes



14 – 20" Sizes



24 – 36" Sizes

Pipe Size		Max. Work Pres. PSI/kPa	Max. End Load Lbs./N	Allow. Pipe End Sep. In./mm	Deflect Fr. C <sub>L</sub> *†		Bolt/Nut No. Size Inches @	Coupling Dimensions Inches/mm			Aprx. Wgt. Each Lbs./kg
Nominal Dia. In./mm	Actual Out. Dia. In./mm				Per Cplg. Degree	Pipe In./Ft. mm/m		X	Y	Z	
3 80	3.960 100.6	500 3450	6200 27590	0 - 0.09 0 - 2.4	1° - 21'	0.28 23	2 - ½ x 2¾	5.50 140	7.63 194	2.13 54	4.8 2.2
4 100	4.800 121.9	500 3450	9000 40050	0 - 0.09 0 - 2.4	1° - 8'	0.21 17	2 - ⅝ x 3¼	6.25 159	9.20 234	2.09 53	7.5 3.4
6 150	6.900 175.3	400 2750	14950 66528	0 - 0.09 0 - 2.4	0° - 47'	0.14 12	2 - ⅝ x 3¼	8.28 284	11.19 284	2.22 56	9.4 4.3
8 200	9.050 229.9	400 2750	25600 113920	0 - 0.09 0 - 2.4	0° - 36'	0.11 9	2 - ¾ x 5	10.74 273	14.33 364	2.59 66	16.5 7.5
10 250	11.100 281.9	350 2410	33850 150632	0 - 0.16 0 - 4.0	0° - 48'	0.15 13	2 - ¾ x 5	12.84 418	16.44 418	2.75 70	22.5 10.2
12 300	13.200 335.3	350 2410	47.900 21150	0 - 0.16 0 - 4.0	0° - 41'	0.13 11	2 - ⅝ x 5	15.27 388	19.16 487	2.75 70	30.0 14.0
14 350	15.300 388.6	250 1725	45950 204470	0 - 0.16 0 - 4.0	0° - 35'	0.11 9	4 - 1 x 3½	17.21 437	21.96 558	2.75 70	40.8 18.5
16 400	17.400 442.0	250 1725	59400 264330	0 - 0.25 0 - 6.4	0° - 49'	0.16 13	4 - 1 x 3½	19.90 505	23.96 609	3.50 89	61.3 27.8
18 ‡ 450	19.500 495.3	250 1725	74650 332190	0 - 0.25 0 - 6.4	0° - 44'	0.14 12	4 - 1 x 3½	22.03 560	26.33 669	3.50 89	80.0 36.3
20 500	21.600 548.6	150 1035	54900 244305	0 - 0.25 0 - 6.4	0° - 40'	0.12 10	4 - 1 ⅝ x 4	24.13 613	28.69 729	3.50 89	76.0 34.5
24 600	25.800 655.3	150 1035	78.400 34880	0 - 0.25 0 - 6.4	0° - 33'	0.11 9	6 - 1 ⅝ x 4	28.31 719	33.06 840	3.50 89	104.0 47.2
30 750	32.000 812.8	150 1035	120570 536530	0 - 0.47 0 - 11.9	0° - 51'	0.17 14	6 - 1 ⅝ x 4	35.02 890	39.39 1001	4.38 111	162.0 73.5
36 900	38.300 972.8	150 1035	172815 769030	0 - 0.47 0 - 11.9	0° - 47'	0.15 13	6 - 1 ⅝ x 4	41.56 1056	46.04 1169	4.44 113	200.0 90.7

‡ For class 53 pipe rating is 150 psi (1035 kPa). For larger couplings contact Victaulic.

\* Working Pressure and End Load are total, from all internal and external loads, based on AWWA class 53 (except where noted) ductile iron pipe radius cut grooved in accordance with ANSI/AWWA C-606 specifications. Contact Victaulic for performance on other pipe. WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for pipe prepared to flexible radius cut grooved specifications. Pipe cut grooved to rigid specifications is essentially rigid and does not permit expansion and contraction.

@ Number of bolts required equals number of housing segments. Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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**WARRANTY**

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

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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.

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**INSTALLATION**

Reference should always be made to the I-300 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](http://www.victaulic.com).

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

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