

Non-Restrained Flexible Coupling

Style 229S



1.0 PRODUCT DESCRIPTION

Available Sizes

- 6 – 54"/150 – 1350 mm

Pipe Material

- FRP Pipe

Maximum Working Pressure

- 25 psi/172 kPa

Operating Temperature

- -30°F to +230°F/-34°C to +110°C

Function

- Specifically designed for FRP odor control piping systems
- Supplied as a Single or Two Segmented "Non-Restrained" Coupling. Couplings are available in two (or more) segments to allow for installation of the coupling over an existing pipe joint or to facilitate ease of handling for larger size couplings.
- Non-restrained joint
- Built in pipe stop to maintain coupling position on pipe

Application

- Odor control systems
- AWWA C227 compliant

Body Type

Cross-Section



Type 1 coupling is the basic split-sleeve coupling that provides for a flexible, non-restrained pipe joint and is used for low pressure applications.

NOTE

- Body type is not optional and will be determined by system requirements.

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

2.0 CERTIFICATIONS/LISTINGS

Not applicable – contact Victaulic with any questions.

3.0 SPECIFICATIONS – MATERIAL

Body: Stainless Steel conforming to ASTM A240 316/316L

Pipe Stops: Stainless Steel, 316/316L

Closure Plates: Stainless Steel, 316/316L

Sealing Plate:

Stainless Steel conforming to ASTM A240 316L

O-rings Gaskets: (specify choice)

EPDM

-30°F to +230°F/-34°C to +110°C Cold and hot water within allowable temperature range; dilute acids; resistant to the deteriorative effects of ozone, oxygen, heat and most chemicals not involving hydrocarbons. NOT COMPATIBLE FOR USE WITH PETROLEUM OR STEAM SERVICES. Refer to a chemical elastomer guide for specific applications and suitability of gasket material for services that are not listed.

Isoprene

-40 to +160°F/-40°C to +71°C Water; saltwater; sewage; resistant to oxygen and dilute acids. Services listed are general service recommendations only. Refer to a chemical elastomer guide for specific applications and suitability of gasket material for services that are not listed.

Permanent Fasteners:

Studs: Stainless Steel conforming to ASTM A193 Grade B8M Class 2, (316SS)

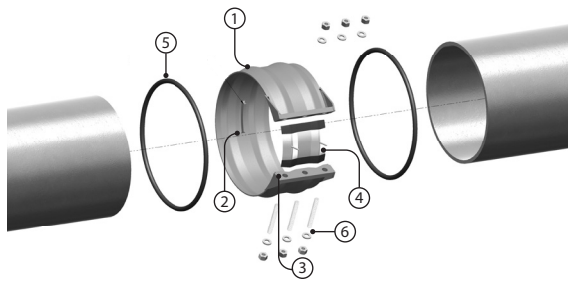
Nuts: Heavy hex nuts, Stainless Steel conforming to ASTM A194 Grade 8M, (316SS)

Washers: Stainless Steel Type 316 SAE pattern, Flat washer sized to ASTM F436, 316/316L Stainless

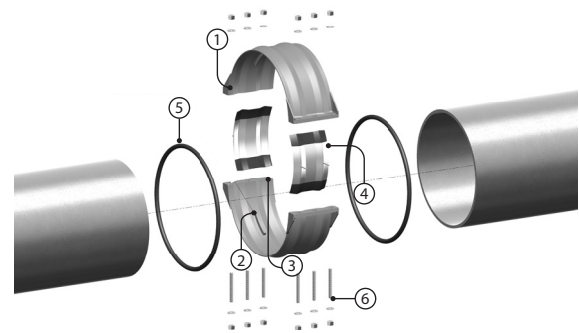
3.0 SPECIFICATIONS – MATERIAL (Continued)

Coupling Components

1. **Body:** Dual arch cross-section used on Type 1.
2. **Center Stop:** Built in pipe stop assists in keeping the coupling centered over the pipe ends.
3. **Closure Plates:** Low profile bolt pads for installation and tightening of coupling; gap between plates of installed coupling allows for field flexibility.
4. **Sealing Plate:** Provides axial seal across the coupling body and pipe joint.
5. **O-ring Gaskets:** Provide circumferential seal.
6. **Fasteners:**
 - Studs:** High Strength Threaded Rod
 - Nuts:** Heavy Hex Nuts
 - Washers:** SAE small pattern flat washers



One Segment Housing



Two Segment Housing

3.1 SPECIFICATIONS – ASSEMBLY TOOL

Closure Tools:



Manual Tools

- CTM-01: for use on 5" and 8" body widths
- CTM-02: for use on 10" body widths



Hydraulic Tool

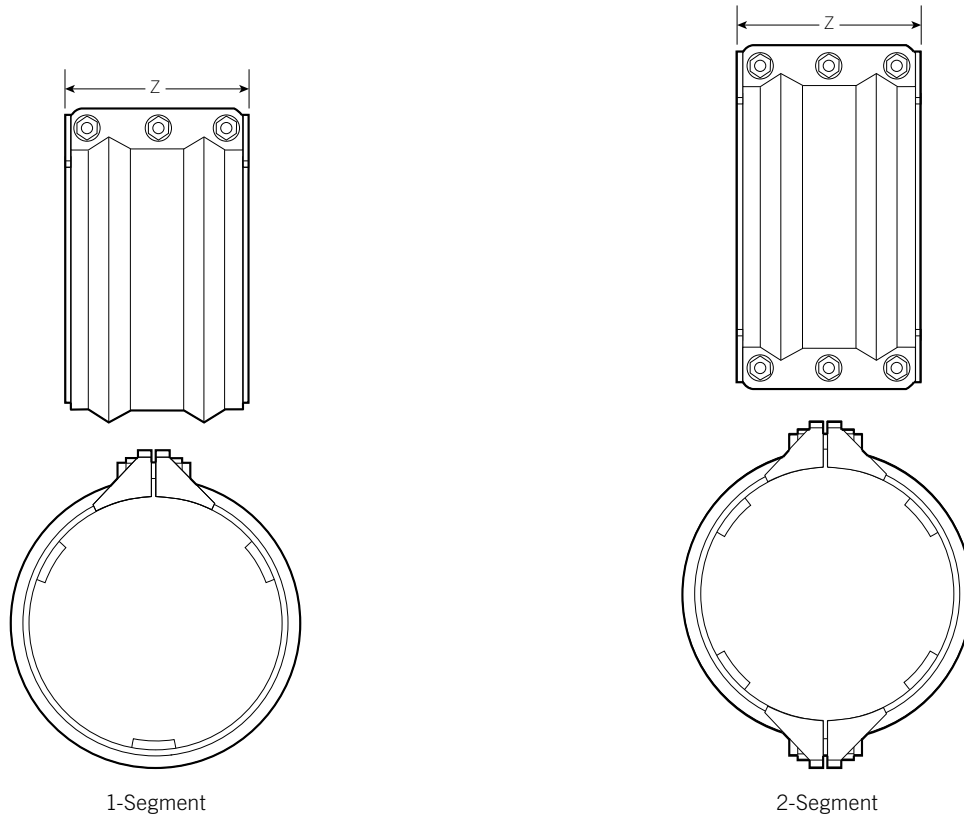
- Hydraulic tool package comes standard with:
 - one (1) tool head
 - one (1) hydraulic cylinder
 - one (1) hydraulic hose
 - one (1) hand pump

¹ A CTH-01 hydraulic closure tool can be used in applications where the CTM-02 manual closure tool is recommended.

NOTE:

- The closure tools listed above are designed specifically for Victaulic Style 229S, 230, 231, 232 and 233 couplings. If ordering custom product, contact Victaulic for appropriate tool selection.

4.0 DIMENSIONS



Size		Pressure	Dimensions		Coupling Segments	Fastener			Weight	Body Type	Tool Type ⁵
Nominal Pipe inches mm	Actual Pipe O.D. Range ² inches mm	Maximum Working ³ psi kPa	Body Thickness gallons	Width (Z) inches mm	Min. ⁴ No.	Qty.	Dimensions Dia. x Length inches		Approx. (Each) ⁴ lb kg		
6 150	5.00 - 6.88 127.0 - 174.8	25 172	12 ga	8 203.2	1	3	1/2	x 3 1/4	12.0 5.4	1	A
8 200	7.00 - 8.88 177.8 - 225.6	25 172	11 ga	10 254.0	1	3	5/8	x 5	20.0 9.1	1	B,C
10 250	9.00 - 10.88 228.6 - 276.4	25 172	11 ga	10 254.0	1	3	5/8	x 5	22.0 10.0	1	B,C
12 300	11.00 - 12.88 279.4 - 327.2	25 172	11 ga	10 254.0	1	3	5/8	x 5	25.0 11.3	1	B,C
14 350	13.00 - 14.88 330.2 - 378.0	25 172	11 ga	10 254.0	1	3	5/8	x 5	28.0 12.7	1	B,C
16 400	15.00 - 16.88 381.0 - 428.8	25 172	10 ga	10 254.0	1	3	5/8	x 5	32.0 14.5	1	B,C
18 450	17.00 - 18.88 431.8 - 479.6	25 172	10 ga	10 254.0	1	3	5/8	x 5	36.0 16.3	1	B,C
20 500	19.00 - 20.88 482.6 - 555.8	25 172	10 ga	10 254.0	1	3	5/8	x 5	38.0 17.2	1	B,C

² Actual pipe O.D. required at time of order. For actual pipe O.D. round down to the nearest 1/8" to determine proper coupling size required.

³ For allowable test or transient pressure, the maximum working pressure may be increased to 1 1/2 times the values shown.

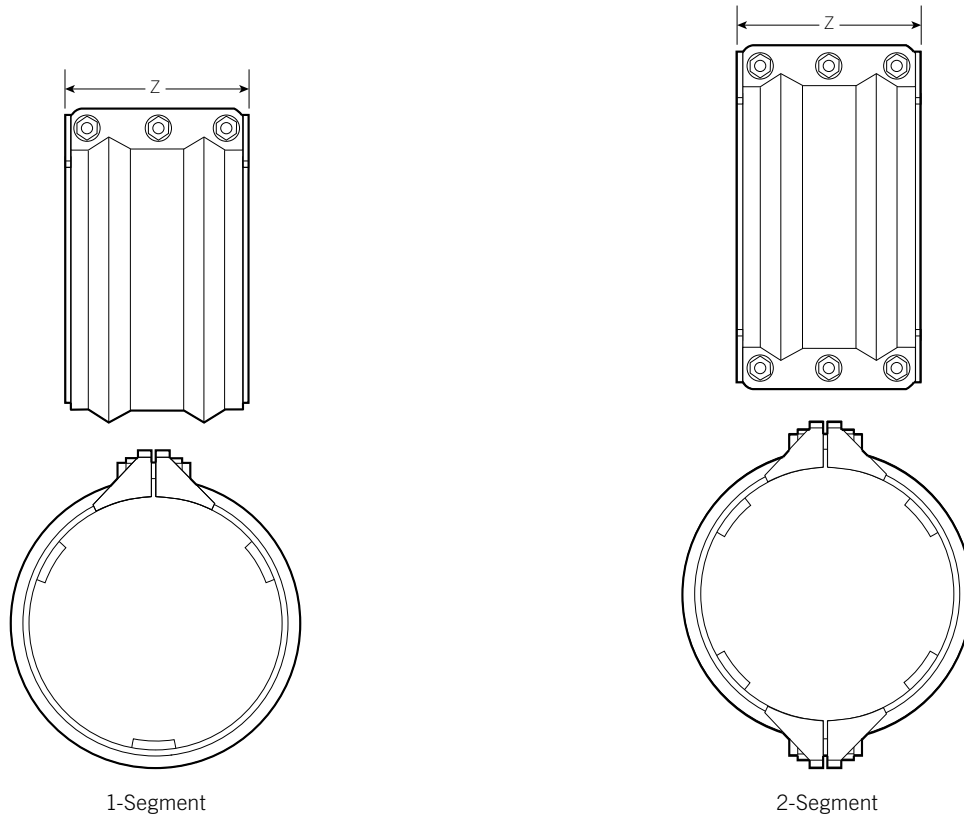
⁴ Coupling weights are based on nominal pipe diameter and include all accessories. Weight may vary based on actual size of pipe.

⁵ Closure Tool Recommendations:
 A= CTM-01 Small Manual Closure Tool
 B= CTM-02 Large Manual Closure Tool
 C= CTH-01 10-Ton Hydraulic Closure Tool
 (For more details on closure tools refer to section 3.1)

NOTE:

- The data in this table only applies when stainless steel couplings are being used on FRP pipe.

4.0 DIMENSIONS (Continued)



Size		Pressure Maximum Working ³ psi kPa	Dimensions		Coupling Segments		Fastener			Weight Approx. (Each) ⁴ lb kg	Body Type	Tool Type ⁵
Nominal Pipe inches mm	Actual Pipe O.D. Range ² inches mm		Body Thickness gallons	Width (Z) inches mm	Min. No.	Qty.	Dimensions Dia. x Length inches					
24 600	22.00 - 26.88 558.8 - 682.8	25 172	10 ga	10 254.0	1	3	5/8	x	5	46.0 20.9	1	B, C
30 750	27.00 - 32.88 685.8 - 835.2	25 172	10 ga	10 254.0	1	3	5/8	x	5	55.0 24.9	1	B, C
36 900	33.00 - 38.88 838.2 - 987.6	25 172	10 ga	10 254.0	2	3	5/8	x	5	74.0 33.6	1	B, C
42 1050	39.00 - 44.88 990.6 - 1140.0	25 172	10 ga	10 254.0	2	3	5/8	x	5	82.0 37.2	1	B, C
48 1200	45.00 - 50.88 1143.0 - 1292.4	25 172	3/16"	10 254.0	2	6	3/4	x	6	127.0 57.6	1	B, C
54 1350	51.00 - 56.88 1295.4 - 1444.8	25 172	3/16"	10 254.0	2	6	3/4	x	6	139.0 63.0	1	B, C

² Actual pipe O.D. required at time of order. For actual pipe O.D. round down to the nearest 1/8" to determine proper coupling size required.

³ For allowable test or transient pressure, the maximum working pressure may be increased to 1 1/2 times the values shown.

⁴ Coupling weights are based on nominal pipe diameter and include all accessories. Weight may vary based on actual size of pipe.

⁵ Closure Tool Recommendations:
 A= CTM-01 Small Manual Closure Tool
 B= CTM-02 Large Manual Closure Tool
 C= CTH-01 10-Ton Hydraulic Closure Tool
 (For more details on closure tools refer to section 3.1)

NOTE:

- The data in this table only applies when stainless steel couplings are being used on FRP pipe.

5.0 PERFORMANCE

Size	Pressure ⁶	Body Type	Pipe End Separation ⁷	Deflection ⁸
Nominal Pipe inches mm	Maximum Working psi/kPa FRP		Min - Max inches mm	Max. Allow. Static Degrees
6 150	25 172	1	0.188 - 1.25 4.8 - 31.8	4° 22'
8 200	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
10 250	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
12 300	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
14 350	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
16 400	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
18 450	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
20 500	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
24 600	25 172	1	0.188 - 1.50 4.8 - 38.1	3° 30'
30 750	25 172	1	0.188 - 1.50 4.8 - 38.1	2° 49'
36 900	25 172	1	0.188 - 1.50 4.8 - 38.1	2° 4'
42 1050	25 172	1	0.188 - 1.50 4.8 - 38.1	1° 45'
48 1200	25 172	1	0.188 - 1.50 4.8 - 38.1	1° 33'
54 1350	25 172	1	0.188 - 1.50 4.8 - 38.1	1° 22'

⁶ For allowable test or transient pressure, the maximum working pressure may be increased to 1 ½ times the values shown.

⁷ Style 229S couplings provide ½"/15 mm of axial movement within the published pipe end separation range and are not designed for use as an expansion coupling.

⁸ Published deflection values are intended for installation only. Allowable in-service or dynamic deflection is limited by the maximum allowable axial movement at the joint. Contact Victaulic for details.

6.0 NOTIFICATIONS

Engineered Products Options

For non-standard products the Victaulic Engineered Products group can assist with specialty joints designed to meet the specific size, pressure and temperature requirements of your system. The Engineered Products group will also provide pricing and availability for options such as insulating sleeves.

Testing

Victaulic Style 229S couplings are designed to allow for a 50 percent increase over the published maximum working pressure for test and/or transient pressures. Due to the very large volume of air that can be involved in jobsite air testing and the nature of air or gas that is pressurized, jobsite air testing should be limited to 25 psi/175 kPa or less.

7.0 REFERENCE MATERIALS

Product Guide

Product Style Guide			
Submittal Number	Style Number	Coupling/Body Material	Application
60.01	230	Carbon Steel	Non-Restrained Coupling
60.02	230S	Stainless Steel	Non-Restrained Coupling
60.03	231	Carbon Steel	Expansion Coupling
60.04	231S	Stainless Steel	Expansion Coupling
60.05	232	Carbon Steel	Restrained Coupling
60.06	232S	Stainless Steel	Restrained Coupling
60.07	233	Carbon Steel	Restrained Coupling For Dynamic Joint Deflection
60.08	233S	Stainless Steel	Restrained Coupling For Dynamic Joint Deflection
60.09	234	Carbon Steel	Restrained Single-Gasket Coupling
60.10	234S	Stainless Steel	Restrained Single-Gasket Coupling
I-230.S1 Application Guide	229S	Stainless Steel	Non-Restrained Coupling (One Segment) ⁹
I-230.S2 Application Guide	229S	Stainless Steel	Non-Restrained Coupling (Two Segment) ⁹

⁹ For specific pipe diameter tolerances, pipe ovality (roundness) requirements and minimum/maximum pipe diameter allowance, refer to the tables included in the Installation Manuals (above) and Victaulic submittal publication [26.20](#).

Product Configurator

C 0229 0024 50 X 2 B E 0 X 01

Class	Style	Actual Pipe O.D. *		Body Type	Segments	PSI/kPa Rating	Rubber Compound	Paint	Hardware	Options
		Inches [^]	Fraction							
C	0229	0006 through 0054	00 - 0 13 - 1/8 25 - 1/4 38 - 3/8 50 - 1/2 63 - 5/8 75 - 3/4 88 - 7/8	X - Stainless	1 - One 2 - Two	B - 50/345	E - EPDM I - Isoprene	0 - None	X - Stainless	01 - Pipe Stops

[^] Couplings are available in a range of nominal sizes from 6 - 54".

* For actual pipe O.D. round down to the nearest 1/8" to determine proper coupling size required.

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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