

Victaulic® Stainless Steel Rigid Coupling

Style 489



1.0 PRODUCT DESCRIPTION

Available Sizes:

- 1½ – 12"/DN40 – DN300

Pipe Material:

- Stainless steel

Maximum Working Pressure:

- Accommodates pressures up to 600 psi/4136 kPa
- Working pressure dependent on material, wall thickness and size of pipe

Application:

- Provides a rigid pipe joint designed to restrict axial or angular movement

Pipe Preparation:

- Exclusively for use with fittings, valves, accessories and pipe which feature ends formed with the Victaulic OGS groove profile (see Section 7.0 for Reference Materials)

NOTE

- For duplex and super duplex options, please see [publication 17.33](#) for the Style 489DX coupling.

2.0 CERTIFICATION/LISTINGS



This system is certified to ISO 9001:2008 by the LPCB under certificate No. 104

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

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

Housing: Type 316 stainless steel, conforming to ASTM A351, A743 and A744, Grade CF8M.

Gasket: (specify choice¹)

Grade “E” EPDM

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

Grade “EF” EPDM²

EPDM (Green “X” color code). May be specified for hot and cold water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Also meets hot and cold potable water requirements per DVGW W270, UBA Elastomer Guideline, ÖVGW, SVGW, and French ACS approved for EN681-1 Type WA cold potable, and Type WB hot potable water service. WRAS approved material to BS 6920:2014 for cold and hot potable water service up to +149°F/+65°C. **NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES OR STEAM SERVICES.**

Grade “EW” EPDM

EPDM (Green W 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. WRAS approved material to BS 6920 for cold and hot potable water service up to +149°F/+65°C. 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.**

Grade “T” Nitrile

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

Grade “O” Fluoroelastomer

Fluoroelastomer (Blue stripe color code). Temperature range +20°F to + 300°F/-7°C to +149°C. May be specified for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.**

Grade “A” White Nitrile

White nitrile (White gasket). Temperature range +20°F to +180°F/-7°C to +82 °C. No carbon black content. Meets FDA requirements. Conforms to CFR Title 21 Part 177.2600. Not compatible for hot water services over +150°F/+66°C or for hot, dry air over+140°F/+60°C. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES.**

Others

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

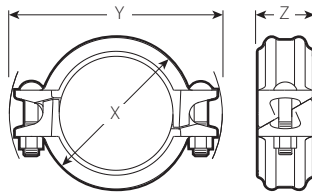
¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

² Available exclusively in Europe.

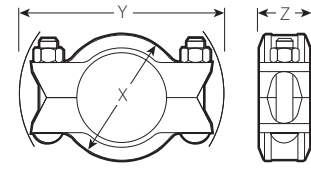
Bolt/Nuts:

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, with galling reducing coating.

4.0 DIMENSIONS



1 1/2 – 4"/DN40 – DN100 sizes



5 – 12"/141.3 mm – DN300 sizes

Size		Pipe End Separation ³	Bolt/Nut ⁴			Dimensions				Weight
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Qty.	Size inches		Nut Torque ft-lbs N·m	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
1 1/2 DN40	1.900 48.3	0.05 1.3	2	3/8	x 2 1/2	18 - 22 25 - 30	2.86 73	4.42 118	1.84 47	1.6 0.7
2 DN50	2.375 60.3	0.05 1.3	2	3/8	x 2 1/2	18 - 22 25 - 30	3.34 85	5.19 132	1.86 47	1.6 0.7
2 1/2	2.875 73.0	0.05 1.3	2	3/8	x 2 1/2	18 - 22 25 - 30	3.92 100	5.62 143	1.86 47	1.9 0.9
DN65	3.000 76.1	0.05 1.3	2	3/8	x 2 1/2	18 - 22 25 - 30	4.02 102	5.72 145	1.86 47	2.0 0.9
3 DN80	3.500 88.9	0.05 1.3	2	1/2	x 2 3/4	45 - 50 60 - 68	4.54 115	6.78 172	1.86 47	2.8 1.3
4 DN100	4.500 114.3	0.19 4.8	2	1/2	x 2 3/4	45 - 50 60 - 68	5.77 147	7.90 201	2.07 53	4.0 1.8
5	5.563 141.3	0.25 6.4	2	3/4	x 4 1/4	85 - 125 115 - 170	7.05 179	10.63 270	2.25 57	12.50 5.7
DN125	5.500 139.7	0.25 6.4	2	3/4	x 4 1/4	75 - 100 100 - 135	7.07 180	11.13 283	2.38 60	12.0 5.5
	6.500 165.1	0.25 6.4	2	7/8	x 5 1/2	125 - 200 170 - 275	8.16 207	12.68 321	2.50 64	15.5 7.0
6 DN150	6.625 168.3	0.25 6.4	2	7/8	x 5 1/2	125 - 200 170 - 275	8.16 207	12.68 321	2.50 64	15.5 7.0
	8.515 216.3	0.25 6.4	2	1	x 5 1/2	200 - 300 275 - 400	10.63 270	15.00 381	2.75 70	24.0 10.9
8 DN200	8.625 219.1	0.25 6.4	2	1	x 5 1/2	200 - 300 275 - 400	10.63 270	15.00 381	2.75 70	24.0 10.9
	10.528 267.4	0.25 6.4	2	1	x 6 1/2	200 - 300 275 - 400	13.09 332	17.25 438	3.00 76	33.0 15.0
10 DN250	10.750 273.0	0.25 6.4	2	1	x 6 1/2	200 - 300 275 - 400	13.09 332	17.25 438	3.00 76	33.0 15.0
	12.539 318.5	0.25 6.4	2	1	x 6 1/2	200 - 300 275 - 400	15.13 384	19.13 486	3.13 80	40.0 18.1
12 DN300	12.750 323.9	0.25 6.4	2	1	x 6 1/2	200 - 300 275 - 400	15.13 384	19.13 486	3.13 80	40.0 18.1

³ The allowable pipe end separation dimension shown is for system layout purposes only. Style 489 rigid couplings are considered rigid connections and will not accommodate expansion/contraction or angular movement of the piping system. Contact Victaulic for torsional resistance information.

⁴ Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.

5.0 PERFORMANCE

Performance on ANSI wall thicknesses

Pipe Diameter		Style 489				
Nominal inches DN	Actual Outside Diameter inches mm	Pipe Wall Thickness		Groove Type	Maximum	
		inches mm	ANSI Schedule Number		Working Pressure psi kPa	End Load lb N
1 ½ DN40	1.900 48.3	0.200 5.1	80S	C	600 4136	1701 7,566
		0.145 3.7	40S	Std/C	600 4136	1701 7,566
		0.109 2.8	10S	RX	300 2065	849 3,777
		0.065 1.7	5S	RX	200 1379	567 2,522
2 DN50	2.375 60.3	0.218 5.5	80S	C	600 4136	2658 11,821
		0.154 3.9	40S	Std/C	600 4136	2658 11,821
		0.109 2.8	10	RX	300 2065	1327 5,902
		0.065 1.7	5S	RX	200 1379	886 3,941
2 ½	2.875 73.0	0.276 7.0	80S	C	600 4136	3894 17,323
		0.203 5.2	40S	Std/C	600 4136	3894 17,323
		0.120 3.1	10S	RX	300 2065	1944 8,649
		0.083 2.1	5S	RX	232 1600	1506 6,699
3 DN80	3.500 88.9	0.300 7.6	80S	C	600 4136	5771 25,673
		0.216 5.5	40S	Std/C	600 4136	5771 25,673
		0.120 3.1	10S	RX	300 2065	2882 12,818
		0.083 2.1	5S	RX	232 1600	2232 9,929
4 DN100	4.500 114.3	0.337 8.6	80S	C	600 4136	9541 42,439
		0.237 6.0	40S	Std/C	600 4136	9541 42,439
		0.120 3.1	10S	RX	300 2065	4763 21,189
		0.083 2.1	5S	RX	232 1600	3690 16,413
5	5.563 141.3	0.375 6.6	80S	C	600 4136	14580 64,857
		0.258 6.6	40S	Std/C	600 4136	14580 64,857
		0.134 3.4	10S	RX	375 2586	9115 40,544
		0.109 2.8	5S	RX	275 1896	6684 29,732

RX = Roll Set for light wall stainless steel pipe marked with the prefix "RX"

Std = Standard roll set marked with the prefix "R"

C = Cut groove

NOTE

- For pressure ratings on wall thickness not mentioned please contact Victaulic

6.0 NOTIFICATIONS

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.

WARNING



- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.

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

7.0 REFERENCE MATERIALS

[17.01: Victaulic® Stainless Steel Pipe End Preparation](#)

[17.09: Victaulic® Ductile Iron Grooved Couplings Performance Data for Stainless Steel Pipe](#)

[24.01: Victaulic® Pipe Preparation Tool Specifications](#)

[26.01: Victaulic® Design Data](#)

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

[I-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, 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.

Intellectual Property Rights

No statement contained herein concerning a possible or suggested 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 subsidiaries or affiliates covering such use or design, 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.

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.

Trademarks

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.