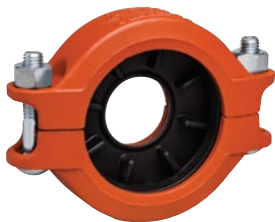


# Victaulic® Reducing Coupling

## Style 750



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 2 x 1" through 10 x 8"/DN50 x DN25 through DN250 x DN200

#### Pipe Material

- Carbon steel
- For exceptions reference section 6.0 Notifications

#### NOTE

- For other pipe materials, contact Victaulic.

#### Maximum Working Pressure

- 500 psi/3447 kPa
- Working pressure dependent on material, wall thickness and size of pipe

#### Application

- Joins Original Groove System (OGS) roll grooved and cut grooved pipe, as well as OGS grooved fittings, valves and accessories
- Permits direct reduction on piping run
- Optional steel washer prevents telescoping of the smaller pipe inside the larger pipe during vertical system assembly

#### Pipe Preparation

- Cut or roll grooved in accordance with [publication 25.01](#): Victaulic Standard Groove Specifications.

### 2.0 CERTIFICATION/LISTINGS



#### NOTE

- Download [publication 10.01](#) for Fire Protection Certifications/Listings Reference Guide.

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.

**Housing Coating: (specify choice)**

Standard: Orange enamel.

Optional: Hot dipped galvanized conforming to ASTM A153.

Optional: Contact Victaulic with your requirements.

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

**Grade “E” EPDM**

EPDM (Green 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. 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 oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F/+82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F/+66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F/+60°C. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.**

**Others**

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

<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 Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

**Bolts/Nuts (specify choice<sup>2</sup>):**

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial – heavy hex nuts) and ASTM A563M Class 9 (metric – hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

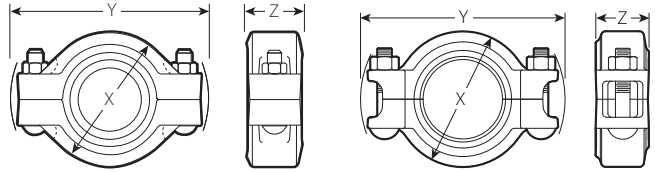
Optional: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW, with galling reducing coating.

**Assembly Washer (optional):** Galvanized carbon steel.

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

## 4.0 DIMENSIONS

### Style 750 Reducing Coupling



Size		Pipe End Separation <sup>3</sup>		Deflect. From CL <sup>3</sup>		Bolt/Nut		Dimensions			Weight	
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Per Cplg. Degrees	Pipe in/ft mm/m	Qty.	Size inches mm	X inches mm	Y inches mm	Z inches mm	Approximate (Each)		
										lb kg		
2 DN50	1 DN25	2.375 60.3	1.315 33.7	0 - 0.07 0 - 1.8	0° - 57'	0.20 17	2	3/8 x 2	3.38 85	5.28 134	1.88 48	2.7 1.2
	1 1/2 DN40		1.900 48.3	0 - 0.07 0 - 1.8	0° - 57'	0.20 17	2	3/8 x 2	3.38 85	5.28 134	1.88 48	2.0 1.0
2 1/2	2 DN50	2.875 73.0	2.375 60.3	0 - 0.07 0 - 1.8	0° - 47'	0.16 14	2	3/8 x 2	4.00 102	5.93 151	1.88 48	3.1 1.4
DN65	2 DN50	3.000 76.1	2.375 60.3	0 - 0.07 0 - 1.8	0° - 47'	0.16 14	2	1/2 x 2 3/4	4.38 111	6.63 168	1.88 48	4.6 2.1
3 DN80	2 DN50	3.500 88.9	2.375 60.3	0 - 0.07 0 - 1.8	0° - 39'	0.13 11	2	1/2 x 2 3/4	4.75 121	7.13 181	1.88 48	4.9 2.2
	2 1/2		2.875 73.0	0 - 0.07 0 - 1.8	0° - 39'	0.13 11	2	1/2 x 2 3/4	4.75 121	7.13 181	1.88 48	4.3 2.0
	DN65	3.000 76.1	0 - 0.07 0 - 1.8	0° - 39'	0.13 11	2	1/2 x 2 3/4	4.75 121	7.13 181	1.88 48	4.2 1.9	
4 DN100	2 DN50	4.500 114.3	2.375 60.3	0 - 0.13 0 - 3.2	1° - 19'	0.28 25	2	5/8 x 3 1/4	6.25 159	8.90 226	2.25 57	8.1 3.7
	2 1/2		2.875 73.0	0 - 0.13 0 - 3.2	1° - 19'	0.28 25	2	5/8 x 3 1/4	6.25 159	8.90 226	2.25 57	8.6 3.9
	DN65	3.000 76.1	0 - 0.13 0 - 3.2	1° - 19'	0.28 25	2	5/8 x 3 1/4	6.25 159	8.90 226	2.25 57	6.9 3.1	
	3 DN80	3.500 88.9	0 - 0.13 0 - 3.2	1° - 19'	0.28 25	2	5/8 x 3 1/4	6.00 152	8.90 226	2.25 57	6.7 3.0	
5	4 DN100	5.563 141.3	4.500 114.3	0 - 0.13 0 - 3.2	1° - 3'	0.22 19	2	3/4 x 4 1/4	7.18 182	10.70 272	2.13 54	11.2 5.1
165.1	4 DN100	6.500 165.1	4.500 114.3	0 - 0.13 0 - 3.2	0° - 55'	0.19 16	2	3/4 x 4 1/4	8.63 219	11.90 302	2.25 57	15.2 6.9
	6 DN150		4.500 114.3	0 - 0.13 0 - 3.2	0° - 52'	0.18 15	2	3/4 x 4 1/4	8.63 219	11.90 302	2.25 57	16.7 7.6
6 DN150	4 DN100	6.625 168.3	4.500 114.3	0 - 0.13 0 - 3.2	0° - 52'	0.18 15	2	3/4 x 4 1/4	8.31 211	11.90 302	2.25 57	12.9 5.9
	5		5.563 141.3	0 - 0.13 0 - 3.2	0° - 52'	0.18 15	2	3/4 x 4 1/4	8.31 211	11.90 302	2.25 57	12.9 5.9
8 DN200	165.1	8.625 219.1	6.500 165.1	0 - 0.13 0 - 3.2	0° - 38'	0.13 11	2	7/8 x 5	10.75 273	14.88 378	2.50 64	23.2 10.5
	6 DN150		6.625 168.3	0 - 0.13 0 - 3.2	0° - 38'	0.13 11	2	7/8 x 5	10.81 275	14.88 378	2.50 64	22.4 10.2
10 DN250	8 DN200	10.750 273.0	8.625 219.1	0 - 0.13 0 - 3.2	0° - 25'	0.90 8	2	1 x 5 1/2	13.12 333	17.26 438	2.62 67	31.4 14.2

<sup>3</sup> Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard roll grooved pipe. Figures for standard cut grooved pipe may be doubled. These figures are maximums; for design and installation purposes, these figures should be reduced by: 50% for 3/4 - 3 1/2"/DN20 - DN90; and 25% for 4"/DN100 and larger.

**NOTE**

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

## 5.0 PERFORMANCE

### Style 750 Reducing Coupling

Nominal inches DN		Size		Maximum Working Pressure <sup>4</sup> psi kPa	Maximum End Load <sup>4</sup> lb N		
		Actual Outside Diameter inches mm					
2 DN50	x	1 DN25	2.375 60.3	1.315 33.7	350 2413	500 2225	
		1 ½ DN40		1.900 48.3	350 2413	1000 4450	
		2 DN50	2.875 73.0	2.375 60.3	500 3447	2215 9850	
DN65	x	2 DN50	3.000 76.1	2.375 60.3	350 2413	1550 6900	
		3 DN80	3.500 88.9	2.375 60.3	350 2413	1550 6900	
DN80	x	2 ½		2.875 73.0	500 3447	3250 14460	
				3.00 76.1	350 2413	2475 11010	
	DN65	x	2	4.500 114.3	2.375 60.3	350 2413	1550 6900
					2 ½	2.875 73.0	350 2413
DN100	x	3	DN80	3.000 76.1	350 2413	2475 11014	
				3.500 88.9	500 3447	4810 21400	
5	x	4 DN100	5.563 141.3	4.500 114.3	350 2413	5565 24765	
165.1	x	4 114.3	6.500 165.1	4.500 114.3	350 2413	5565 24765	
6 DN150	x	4 DN100	5	6.625 168.3	4.500 114.3	350 2413	5565 24765
				5.563 141.3		350 2413	8500 37825
				8.625 219.1	6.500 165.1	350 2413	11610 51645
8 DN200	x	6 DN150		6.625 168.3	6.625 168.3	350 2413	12060 53645
				10.750 273.0	8.625 219.1	350 2413	20450 90970

<sup>4</sup> Working Pressure and End Load are total from all internal and external loads based on standard weight (ANSI) steel pipe standard roll or cut grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe and material. Maximum working pressure rating based on larger pipe size. Maximum end load rating based on smaller pipe size.

**NOTES**

- WARNING: FOR ONE-TIME FIELD USE ONLY the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.
- For joint pressure ratings on additional carbon steel wall thicknesses see [publication 06.15](#).

## 5.1 PERFORMANCE

### Flow Data - Head Loss

Equivalent lengths of standard weight steel pipe are shown in the tables. All data is based on water flowing at +60°F/+16°C.

#### Flow Reducing

Size		Equivalent Pipe Length	
Nominal		Small Diameter	
inches	DN	ft	m
2 DN50	x	1 DN25	5.9
		1 ½ DN40	1.8
2 ½	x	2 DN50	2.0
			0.6
DN65	x	2 DN50	1.9
			0.6
3 DN80	x	2 DN50	5.5
		2 ½	1.7
			3.8
			1.2
		DN65	3.8
			1.2
4 DN100	x	2 DN50	6.0
		2 ½	1.8
			6.0
			1.8
			6.0
		DN65	1.8
		3 DN80	6.0
			1.8
5	x	4 DN100	3.0
			0.9
165.1	x	4 DN100	6.0
			1.8
6 DN150	x	4 DN100	6.0
		5	1.8
			4.5
			1.4
8 DN200	x	165.1	7.3
		6 DN150	2.2
			7.3
		DN150	2.2
10 DN250	x	8 DN200	8.7
			2.7

#### Flow Expanding

Size		Equivalent Pipe Length	
Nominal		Small Diameter	
inches	DN	ft	m
1 DN25	x	2 DN50	2.7
			0.8
1 ½ DN40	x	2 DN50	1.9
			0.6
2 DN50	x	2 ½	1.0
			0.3
			1.0
		DN65	0.3
		3 DN80	3.5
		DN80	1.1
		4 DN100	3.0
			0.9
2 ½	x	3 DN80	2.5
			0.8
		4 DN100	3.0
			0.9
DN65	x	3 DN80	2.5
			0.8
		4 DN100	3.0
			0.9
3 DN80	x	4 DN100	2.5
			0.8
4 DN100	x	5	3.3
			1.0
		165.1	4.6
		6 DN150	1.4
			4.6
			1.4
5	x	6 DN150	2.3
			0.7
165.1	x	8 DN200	5.4
			1.7
6 DN150	x	8 DN200	6.0
			1.8
8 DN200	x	10 DN250	6.3
			1.9

## 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.

### 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.
- Only No. 61 bull plugs shall be used with Style 750 reducing couplings in systems where a vacuum may develop.

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

### NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes NPS 2"/DN50 and smaller Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.

## 7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection Guide](#)

[06.15: Victaulic Pressure Ratings and End Loads for Victaulic Couplings on Steel Pipe](#)

[10.01: Victaulic Products for Fire Protection Piping Systems - Regulatory Approval Reference Guide](#)

[25.01: Victaulic Original Groove System \(OGS\) Groove Specifications](#)

[26.01: Victaulic Design Data](#)

[29.01: Victaulic Terms and Conditions of Sale](#)

[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.

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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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