

# Victaulic® StrenghThin™ 100 System

## Style E497 Rigid Coupling for Stainless Steel Pipe



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 2 – 12"/DN50 – DN300

#### Pipe Material

- Designed exclusively for use on 1.4301/1.4307 (304/304L) or 1.4401/1.4404 (316/316L) stainless steel pipe per EN 10217-7.

#### Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 232 psi/1600 kPa/16 bar.
- Working pressure dependent on wall thickness and size of pipe (see section 5.0 for Performance).

#### Operating Temperature Range

- Dependent on gasket selection from section 3.0.

#### Function

- Rigid coupling featuring patented Victaulic Installation-Ready™ technology.
- Joins EN 10217-7 stainless steel pipe and Victaulic StrenghThin™ 100 fittings, valves and accessories.
- Does not accommodate expansion, contraction, rotation or angular deflection.
- If system flexibility is required, it can be obtained via two (2) E494G Adapter Nipples connected with one (1) Victaulic flexible OGS coupling.

#### Pipe Preparation

- Exclusively for use with fittings, valves, accessories and pipe which feature ends formed with the Victaulic StrenghThin™ 100 groove profile (see section 7.0 for Reference Materials).

#### NOTE

- Coatings applied to the interior surfaces, including bolt pad mating surfaces, of Victaulic grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm.

### 2.0 CERTIFICATION/LISTINGS

Product designed and manufactured under Victaulic's Quality Management System, as certified by LPCB in accordance with ISO-9001:2008. Refer to section 3.0 for potable water certifications of specific gasket materials.

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; EN 1563, Grade EN-GJS-450-10; and ISO 1083, Grade JS/450-10/S.

**Housing Coating: (specify choice)**

Standard: Hot dipped galvanized.

Optional: Orange enamel.

Optional: Blue thermoplastic. Contact Victaulic for more details.

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

**Grade “EHP” EPDM**

EHP (Red and Green stripe color code). Temperature range -30°F to +250°F/-34°C to +120°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 PETROLEUM SERVICES OR STEAM SERVICES.

**Grade “EF” EPDM**

EPDM (Green “X” color code). Temperature range -30°F to +230°F/-34°C to +110°C. 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. WRAS approved material to BS 6920 for cold and hot potable water service up to +149°F/+65°C. DVGW approved material per DVGW W 270, KTW 1.3.13, and EN 681-1 Type WA cold potable and Type WB hot potable water service. 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, and vegetable and mineral oils within the specified temperature range; Not compliant 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.

<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:**

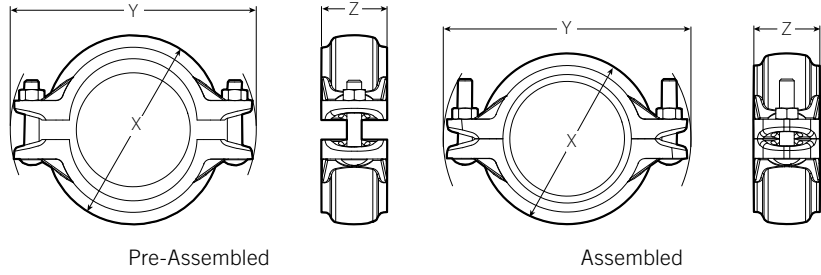
Carbon steel oval neck track bolts meeting the mechanical property requirements of ISO 898-1 Class 9.8 (metric). Carbon steel heavy hex nuts meeting the mechanical property requirements of ASTM A563M Class 9 (metric - hex nuts). Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (metric).

**Washers:**

Hardened steel washers meeting ISO 7089/DIN 125.<sup>2</sup>

<sup>2</sup> Only available on 6 – 12”/DN150 – DN300 galvanized or orange enamel coated couplings and 2 – 12”/DN50 – DN300 blue thermoplastic coated couplings.

## 4.0 DIMENSIONS



Size		Pipe End Separation	Bolt/Nut		Dimensions						Weight
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Qty.	Size mm	Pre-Assembled Condition (Installation-Ready™)			Assembled Condition			Approximate (Each) lb kg
					X inches mm	Y inches mm	Z inches mm	X inches mm	Y inches mm	Z inches mm	
2 DN50	2.375 60.3	0.25 6.4	2	M10 × 2 1/2	4.00 102	5.13 130	2.25 57	3.63 92	5.00 127	2.25 57	2.6 1.2
DN65	3.000 76.1	0.25 6.4	2	M10 × 2 1/2	4.63 118	6.25 159	2.25 57	4.25 108	6.13 156	2.25 57	2.9 1.3
3 DN80	3.500 88.9	0.25 6.4	2	M10 × 2 1/2	5.25 133	6.63 168	2.25 57	4.75 121	6.50 165	2.25 57	3.1 1.4
4 DN100	4.500 114.3	0.25 6.4	2	M10 × 2 1/2	6.50 165	8.13 207	2.25 57	6.00 152	8.00 203	2.25 57	4.3 2.0
DN125	5.500 139.7	0.25 6.4	2	M12 × 3 1/4	7.75 197	9.25 235	2.25 57	7.13 181	9.13 232	2.25 57	6.0 2.7
6 DN150	6.625 168.3	0.25 6.4	2	M12 × 3 1/4	8.75 222	10.36 263	2.25 57	8.25 210	10.25 260	2.25 57	7.1 3.2
8 DN200	8.625 219.1	0.36 9.1	2	M16 × 4	13.50 343	15.00 381	2.88 73	10.22 260	13.26 337	2.88 73	12.1 5.5
10 DN250	10.750 273.3	0.36 9.1	2	M22 × 6 1/2	17.88 454	19.00 483	2.88 73	12.50 318	17.00 432	2.88 73	22.0 10.0
12 DN300	12.750 323.9	0.36 9.1	2	M22 × 6 1/2	19.88 505	20.60 523	2.88 73	15.00 381	18.75 476	2.88 73	27.6 12.5

### NOTES

- For field installation only. The Style E497 is essentially a rigid coupling and does not permit expansion, contraction or rotation.
- Dimensions shown have been rounded up to next nearest 1/8"/3.175 mm.
- WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.

## 5.0 PERFORMANCE

Nominal Size inches DN	Actual Outside Diameter inches mm	Maximum Joint Working Pressure					
		10 Bar/145 psi			Maximum Permissible End Load lb N	16 Bar/232 psi	
		Nominal Pipe Wall Thickness		Nominal Pipe Wall Thickness		Maximum Permissible End Load	
		Max inches mm	Min inches mm				Max inches mm
2 DN50	2.375 60.3	–	–	642 2857	0.106 2.7	0.063 1.6	1028 4573
DN65	3.000 76.1	–	–	1025 4559	0.106 2.7	0.063 1.6	1640 7295
3 DN80	3.500 88.9	–	–	1395 6206	0.106 2.7	0.063 1.6	2232 9928
4 DN100	4.500 114.3	–	–	2306 10258	0.106 2.7	0.063 1.6	3690 16414
DN125	5.500 139.7	–	–	3445 15234	0.118 3.0	0.079 2.0	5512 24519
6 DN150	6.625 168.3	–	–	4998 22234	0.118 3.0	0.079 2.0	7997 35572
8 DN200	8.625 219.1	0.114 2.9	0.079 2.0	8472 37684	0.146 3.7	0.118 3.0	12800 56937
10 DN250	10.750 273.3	0.114 2.9	0.079 2.0	13161 58541	0.165 4.2	0.118 3.0	20142 89596
12 DN300	12.750 323.9	0.114 2.9	0.079 2.0	18513 82350	0.177 4.5	0.118 3.0	28534 126928

### NOTES

- Working Pressure and End Load are total, from all internal and external loads, based on stainless steel pipe, roll grooved with Victaulic rolls in accordance with Victaulic specifications. Roll sets for grooving the Victaulic patented StrenghThin™ 100 groove profile must be used. Contact Victaulic for performance on other pipe and for more information pertaining to tools. See [Submittal 17.01: Victaulic Pipe Preparation for Use on Stainless Steel Pipe With Victaulic Products](#) for more information on preparing stainless steel pipe for use with Victaulic products. See [Submittal 25.13: StrenghThin™ 100 Roll Groove Specifications](#).
- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

## 6.0 NOTIFICATIONS

Not applicable – contact Victaulic with any questions.

## 7.0 REFERENCE MATERIALS

- [05.01: Victaulic Gasket/Seal Selection Guide](#)
- [17.01: Victaulic Pipe Preparation for 304/316 Stainless Steel Pipe](#)
- [25.13: Victaulic StrenghThin™ 100 Groove Specifications](#)
- [31.04: Victaulic StrenghThin™ 100 Fittings for Stainless Steel Pipe](#)
- [I-E497: Victaulic Style E497 Field Installation Instructions](#)
- [GSG-100: Victaulic Gasket Chemical Services Guide - Long Report](#)

### 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 [I-100 Victaulic Field Installation Handbook](#) or the 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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