

# Victaulic® StrengThin™ 100 System

## Style E497 Rigid Coupling for Stainless Steel Pipe



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### 1.0 PRODUCT DESCRIPTION

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#### 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 or per KSD 3595.

#### 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

- Provides a rigid pipe joint.
- Joins EN 10217-7 stainless steel pipe and Victaulic StrengThin™ 100 fittings, valves and accessories.
- If system flexibility is required, refer to [submittal 31.08](#): Victaulic Accommodating Pipe Line Thermal Growth for StrengThin™ 100 Piping Systems for Thin Wall Stainless Steel Pipe.

#### Pipe Preparation

- Exclusively for use with fittings, valves, accessories and pipe which feature ends formed with the Victaulic StrengThin™ 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.

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### 2.0 CERTIFICATION/LISTINGS

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

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

### 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 conforming to ASTM A153.

Optional: Orange enamel.

Optional: Sherardized diffused zinc coating conforming to ISO 17668.

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

**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: (specify choice)**

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). 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).

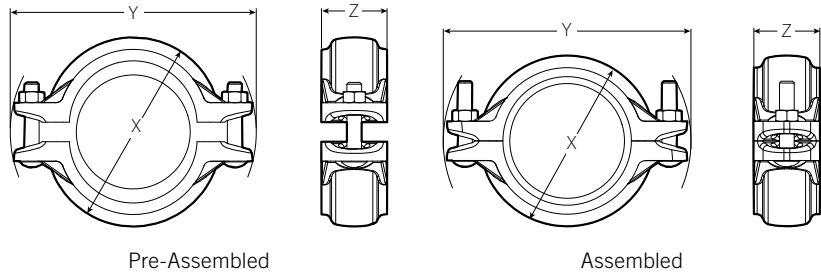
Optional: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW. Bolts and nuts include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

**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 Sherardized Diffused Zinc coated couplings.

## 4.0 DIMENSIONS

### Style E497 Rigid Coupling for Stainless Steel Pipe



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 × 64	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 × 64	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 × 64	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 × 64	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 × 83	7.75 197	9.25 235	2.28 58	7.13 181	9.13 232	2.28 58	6.0 2.7
150A <sup>3</sup>	165.2	0.25 6.4	2	M12 × 83	8.21 209	10.66 271	2.28 58	8.00 203	10.58 269	2.28 58	7.0 3.2
6 DN150	6.625 168.3	0.25 6.4	2	M12 × 83	8.75 222	10.36 263	2.28 58	8.25 210	10.25 260	2.28 58	7.1 3.2
200A <sup>3</sup>	216.3	0.36 9.1	2	M16 × 108	10.93 278	13.66 347	2.92 74	10.30 262	13.52 343	2.92 74	12.0 5.5
8 DN200	8.625 219.1	0.36 9.1	2	M16 × 108	13.50 343	15.00 381	2.92 74	10.22 260	13.26 337	2.92 74	12.1 5.5
10 DN250	10.750 273.0	0.36 9.1	2	M22 × 165	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 × 165	19.88 505	20.60 523	2.88 73	15.00 381	18.75 476	2.88 73	27.6 12.5

<sup>3</sup> Japanese Industrial Standard (JIS) size

#### NOTES

- The allowable pipe end separation dimension shown is for system layout purposes only. Style E497 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.

## 5.0 PERFORMANCE

### Style E497 Rigid Coupling for Stainless Steel Pipe

Nominal Size inches DN	Actual Outside Diameter inches mm	Maximum Joint Working Pressure					
		10 Bar/145 psi			16 Bar/232 psi		
		Pipe Wall Thickness		Maximum Permissible End Load lb N	Pipe Wall Thickness		Maximum Permissible End Load lb N
		Max inches mm	Min inches mm		Max inches mm	Min inches mm	
2 DN50	2.375 60.3	–	–	–	0.106 2.7	0.063 1.6	1025 4570
DN65	3.000 76.1	–	–	–	0.106 2.7	0.063 1.6	1640 7295
3 DN80	3.500 88.9	–	–	–	0.106 2.7	0.063 1.6	2230 9925
4 DN100	4.500 114.3	–	–	–	0.106 2.7	0.063 1.6	3690 16410
DN125	5.500 139.7	–	–	–	0.106 2.7	0.063 1.6	5510 24515
150A <sup>3</sup>	165.2	–	–	–	0.106 2.7	0.063 1.6	7695 34255
6 DN150	6.625 168.3	–	–	–	0.106 2.7	0.063 1.6	7995 35570
200A <sup>3</sup>	216.3	0.114 2.9	0.079 2.0	8255 36735	0.177 4.5	0.118 3.0	13210 58790
8 DN200	8.625 219.1	0.114 2.9	0.079 2.0	8470 37680	0.177 4.5	0.118 3.0	12800 56935
10 DN250	10.750 273.0	0.114 2.9	0.079 2.0	13160 58540	0.177 4.5	0.118 3.0	20140 89595
12 DN300	12.750 323.9	0.114 2.9	0.079 2.0	18510 82350	0.177 4.5	0.118 3.0	28530 126925






<sup>3</sup> Japanese Industrial Standard (JIS) size

#### 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 StrengThin™ 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](#): Victaulic StrengThin™ 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

**⚠ WARNING**

- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

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

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## 7.0 REFERENCE MATERIALS

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[05.01: Victaulic Gasket/Seal Selection Guide](#)

[17.01: Victaulic Pipe Preparation for 304/316 Stainless Steel Pipe](#)

[25.13: Victaulic StrengThin™ 100 Groove Specifications](#)

[31.04: Victaulic StrengThin™ 100 Fittings for Stainless Steel Pipe](#)

[31.07: Victaulic StrengThin™ 100 System - Style E155 Expansion Joint](#)

[31.08: Victaulic Accommodating Pipe Line Thermal Growth for StrengThin™ 100 Piping Systems for Thin Wall Stainless Steel Pipe](#)

[I-E497: Victaulic Style E497 Field Installation Instructions](#)

[GSG-100: Victaulic Gasket Chemical Services Guide - Long Report](#)

[I-ENDCAP: Victaulic End Cap Installation Safety Instructions](#)

[I-IMPACT: Victaulic Impact Tool Usage Guidelines](#)

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### 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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