

# Stainless Steel Flexible Coupling

## Style 77S



17.03



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 8 – 18"/DN200 – DN450

#### Maximum Working Pressure

- Up to 300 psi/2068 kPa
- Working pressure dependent on material, wall thickness and size of pipe

#### Application

- Joins OGS roll grooved and cut grooved pipe, as well as OGS grooved fittings, valves and accessories.

#### Pipe Materials

- Stainless steel pipe

#### NOTE

- For sizes ¾ – 6"/DN20 – DN150 duplex and/or stainless steel flexible couplings, please see [publication 17.20](#) for the Style 77DX Duplex Stainless Steel Flexible Coupling.

### 2.0 CERTIFICATION/LISTINGS

#### NOTE

- 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.

**Housing Coating:** None

**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 "EF" EPDM<sup>2</sup>**

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. 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 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.**

Note: Grade "EW" gaskets are available 8 – 12"/DN200 – DN300 sizes only.

**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, 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. 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 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.

<sup>2</sup> Available exclusively in Europe.

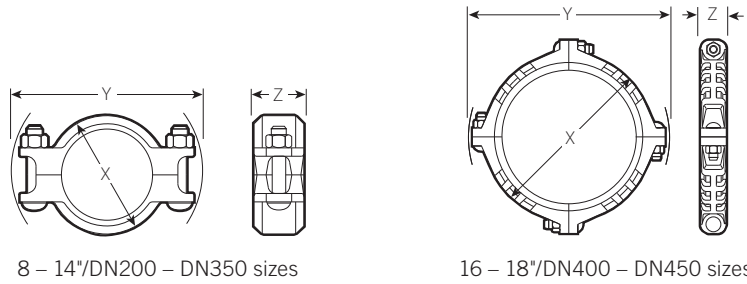
**Bolts/Nuts:<sup>3</sup>**

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.

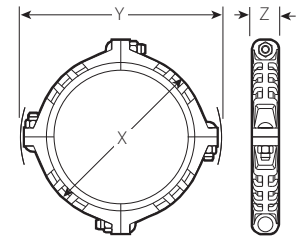
<sup>3</sup> Bolts/nuts are available in imperial size only.

## 4.0 DIMENSIONS

### Style 77S



8 – 14"/DN200 – DN350 sizes



16 – 18"/DN400 – DN450 sizes

Size		Pipe End Separation <sup>4</sup>	Deflection from Centerline		Bolt/Nut		Dimensions			Weight	
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Per Coupling Degrees	pipe In/Ft. mm/m	Qty.	Size inches	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg	
¾ – 6 DN20 – DN150		For ¾ – 6"/DN20 – DN150 sizes Victaulic offers duplex and/or super duplex stainless steel couplings. See <a href="#">publication 17.20</a> for the Style 77DX Duplex Stainless Steel Flexible Coupling.									
8 DN200	8.625 219.1	0 – 0.13 0 – 3.2	0° – 50'	0.18 14	2	7/8 x 5	11.38 229	14.74 374	2.44 62	23.5 10.7	
10 DN250	10.750 273.0	0 – 0.13 0 – 3.2	0° – 40'	0.14 12	2	1 x 6	13.50 343	17.33 440	2.63 67	33.0 15.0	
12 DN300	12.750 323.9	0 – 0.13 0 – 3.2	0° – 34'	0.12 9	2	1 x 6½	15.50 394	19.15 486	2.56 65	35.0 15.9	
14 DN350	14.000 355.6	0 – 0.13 0 – 3.2	0° – 31'	0.11 9	2	1 x 6½	16.56 421	20.44 519	2.81 71	37.0 16.8	
16 DN400	16.000 406.4	0 – 0.13 0 – 3.2	0° – 27'	0.10 9	4	1 x 5½	18.94 481	22.52 572	2.94 75	53.0 24.0	
18 DN450	18.000 457.0	0 – 0.13 0 – 3.2	0° – 24'	0.08 7	4	1 x 5½	21.25 540	24.62 625	3.06 78	62.0 25.0	

<sup>4</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 ¾ – 3½"/DN20 – DN90; 25% for 4"/DN100 and larger.

## 5.0 PERFORMANCE

### Performance on ANSI Wall Thicknesses:

Nominal Size inches DN	Actual Outside Diameter inches mm	Pipe Wall Thickness		Groove Type	Maximum	
		inches mm	ANSI Schedule Number		Working Pressure <sup>5</sup> psi kPa	End Load <sup>5</sup> lb N
8 DN200	8.625 219.1	0.323 8.2	40S	Std/C	300 2068	17524 77,951
		0.150 3.8	10S	RX	125 862	7305 32,492
		0.110 2.8	5S	RX	75 517	4381 19,488
10 DN250	10.750 273.0	0.366 9.3	40S	Std/C	300 2068	27223 121,094
		1.165 4.2	10S	RX	125 862	11347 50,475
		0.134 3.4	5S	RX	75 517	6806 30,274
12 DN300	12.750 323.9	0.375 9.5	40S	Std/C	300 2068	38295 170,344
		0.181 4.6	10S	RX	125 862	15962 71,004
		0.156 4.0	5S	RX	75 517	9574 42,586
14 DN350	14.000 355.6	0.375 9.5	40S	C	200 1379	30800 137,060
		0.188 4.8	10S	RX	100 689	15400 68,530
		0.156 4.0	5S	RX	65 448	10000 44,500
16 DN400	16.000 406.4	0.375 9.5	40S	C	125 862	25130 111,829
		0.188 4.8	10S	RX	45 276	9050 40,273
		0.165 4.2	5S	RX	35 241	7040 31,328
18 DN450	18.000 457.0	0.375 9.5	40S	C	100 689	25450 113,253
		0.188 4.8	10S	RX	40 345	10180 45,301
		0.165 4.2	5S	RX	30 207	7635 33,976

<sup>5</sup> Working Pressure and End Load are total, from all internal and external loads, based on Types 304/304L and 316/316L stainless steel pipe, grooved in accordance with Victaulic specifications.

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

- WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.
- Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- For pressure ratings on wall thicknesses not mentioned, please contact Victaulic.

## 5.1 PERFORMANCE

### Performance on ISO Wall Thicknesses:

Nominal Size mm DN	Actual Outside Diameter mm inches	Pipe Wall Thickness mm inches	Groove Type	Maximum	
				Working Pressure <sup>6</sup> kPa psi	End Load <sup>6</sup> N lb
DN200 8	219.1 8.625	12.5 0.492	C	2068 300	77,951 17524
		8.0 0.315	Std/C	2068 300	77,968 17528
		6.5 0.256	Std/C	1600 232	60,295 13555
		6.3 0.248	Std/C	1600 232	60,311 13558
		5.0 0.197	Std	1207 175	45,481 10225
		4.0 0.157	Std	862 125	32,486 7303
		3.6 0.142	RX	689 100	25,989 5843
		3.2 0.126	RX	689 100	25,989 5843
		3.0 0.118	RX	517 75	19,492 4382
DN250 10	273.0 10.750	14.2 0.559	C	2068 300	121,094 27223
		12.5 0.492	C	2068 300	121,094 27223
		10.0 0.394	C	2068 300	121,094 27223
		6.3 0.248	Std/C	1379 200	80,746 18153
		4.0 0.157	RX	689 100	40,373 9076
		3.6 0.142	RX	517 75	30,280 6807
DN300 12	323.9 12.750	12.5 0.492	C	2068 300	170,344 38295
		10.0 0.394	C	2068 300	170,344 38295
		7.1 0.280	Std/C	862 125	113,586 25535
		5.0 0.197	RX	517 75	70,991 15960
		4.5 0.177	RX	517 75	70,991 15960
		4.0 0.157	RX	517 75	42,586 9574

<sup>6</sup> Working Pressure and End Load are total, from all internal and external loads, based on Types 304/304L and 316/316L stainless steel pipe, grooved in accordance with Victaulic specifications.

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

- WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.
- Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- For pressure ratings on wall thicknesses 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.

## 7.0 REFERENCE MATERIALS

[02.06: Victaulic® Potable Water Approvals ANSI/NSF](#)

[05.01: Victaulic® Seal Selection Guide](#)

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

[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.

### 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](http://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.