Lightweight Flexible Stainless Steel Coupling Style 475

17.14

1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 – 4" and DN25 – DN100, DN125 and 165.1 mm

Maximum Working Pressure

- Accommodates pressures from vacuum services from 10 in Hg/254 mm Hg up to 500 psi/3447 kPa/34 bar using standard gaskets. FlushSeal gaskets are required for vacuum services up to a full vacuum (29.9 in Hg/760 mm Hg).
- Working pressure dependent on material, wall thickness and size of pipe

Operating Temperature

- Dependent on gasket selection from section 3.0

Function

- Joins roll or cut grooved pipe, grooved fittings, valves and accessories
- Provides a flexible pipe joint designed to accommodate a limited amount of linear and/or angular movement

Pipe Material

- 300 Series Stainless Steel

2.0 CERTIFICATION/LISTINGS

FM

Style 475 Flexible Couplings are FM approved for use on fire protection services up to an operating pressure of 300 psi/2070 kPa for diameters ranging from 2 to 4" for ANSI sizes and 76.1 to 165.1 mm for ISO sizes when installed on Schedule 40 stainless steel and 2" and 76.1 mm for Schedule 20 stainless steel pipe.

Product designed and manufactured under the Victaulic Quality Management System, as certified by LPCB in accordance with ISO 9001:2015.

NOTE

- See Victaulic publication 02.06 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.
- ☐ Optional: Type 304 stainless steel, conforming to ASTM A351, A743 and A744, Grade CF8. (Regional availability only. Please contact Victaulic for more details.)

Gasket: (specify choice[1])

- ☐ **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 USE WITH PETROLEUM SERVICES OR STEAM SERVICES.
- ☐ **Grade "EF" EPDM[2]**
  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 -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 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.
- ☐ **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.

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.

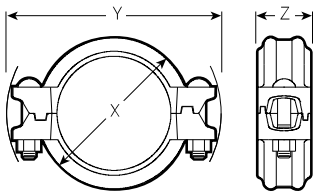
2 Available exclusively in Europe

Bolts/Nuts:

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

4.0 DIMENSIONS

Style 475



Typical for all sizes

Size		Pipe End Separation[3]	Deflect. From CL[3]		Bolt/Nut[4]		Dimensions			Weight
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Per Cplg. Deg.	Pipe In./Ft. mm/m	Qty.	Size inches mm	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
1 DN25	1.315 33.7	0 – 0.06 0 – 1.6	2° – 43′	0.57 48	2	⅜ x 2	2.13 54	3.98 101	1.63 41	1.3 0.6
1 ¼ DN32	1.660 42.4	0 – 0.06 0 – 1.6	2° – 10′	0.45 38	2	⅜ x 2	2.46 63	4.45 113	1.72 44	1.4 0.6
1 ½ DN40	1.900 48.3	0 – 0.06 0 – 1.6	1° – 56′	0.40 33	2	⅜ x 2	2.72 69	4.52 115	1.72 44	1.5 0.7
2 DN50	2.375 60.3	0 – 0.06 0 – 1.6	1° – 30′	0.32 26	2	⅜ x 2	3.30 84	5.03 128	1.80 46	1.7 0.8
2 ½	2.875 73.0	0 – 0.06 0 – 1.6	1° – 15′	0.26 22	2	⅜ x 2	3.88 99	5.59 142	1.80 46	1.9 0.9
DN65	3.000 76.1	0 – 0.06 0 – 1.6	1° – 12′	0.25 21	2	⅜ x 2	4.00 102	5.73 146	1.80 46	1.9 0.9
3 DN80	3.500 88.9	0 – 0.06 0 – 1.6	1° – 1′	0.21 18	2	½ x 2 ¾	4.50 114	6.67 169	1.80 46	2.9 1.3
4 DN100	4.500 114.3	0 – 0.13 0 – 3.2	1° – 35′	0.33 28	2	½ x 2 ¾	5.75 146	7.96 202	2.00 51	4.2 1.9
DN125	5.500 139.7	0 – 0.13 0 – 3.2	1° – 18′	0.27 23	2	½ x 2 ¾	6.81 173	8.97 228	2.00 51	4.9 2.2
	6.500 165.1	0 – 0.13 0 – 3.2	1° – 6′	0.23 19	2	⅝ x 3 ½	7.87 200	10.53 268	2.00 51	6.8 3.1

[3] 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 – 3 ½"/DN20 – DN90; 25% for 4"/DN100 and larger.

[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

Nominal Size inches DN	Actual Outside Diameter inches mm	Pipe Wall Thickness		Roll Set Type	Maximum	
		inches mm	ANSI Schedule Number		Working Pressure psi kPa	End Load lb N
1 DN25	1.315 33.7	0.179 4.9	80S	C	500 3447	679 3021
		0.133 3.6	40S	Std/C	500 3447	679 3021
		0.109 2.8	10S	RX	350 2413	475 2114
		0.065 1.7	5S	RX	225 1551	306 1359
1 1/4 DN32	1.660 42.4	0.191 4.9	80S	C	500 3447	1082 4813
		0.140 3.6	40S	Std/C	500 3447	1082 4813
		0.109 2.8	10S	RX	350 2413	757 3369
		0.065 1.7	5S	RX	225 1551	487 2166
1 1/2 DN40	1.900 48.3	0.200 5.1	80S	C	500 3447	1418 6306
		0.145 3.7	40S	Std/C	500 3447	1418 6306
		0.109 2.8	10S	RX	350 2413	992 4414
		0.065 1.7	5S	RX	225 1551	638 2837
2 DN50	2.375 60.3	0.218 5.5	80S	C	500 3447	2215 9853
		0.154 3.9	40S	Std/C	500 3447	2215 9853
		0.109 2.8	10S	RX	350 2413	1550 6897
		0.065 1.7	5S	RX	225 1551	997 4433

- 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

NOTES

- For pressure ratings on wall thickness not mentioned please contact Victaulic
- 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. “RX” rolls must be used for Schedules 5S, 10S and 10. Standard rolls should be used for Schedule 40S and Standard Weight pipe.
- Contact Victaulic for performance on other pipe.
- See publication 24.01: Pipe Preparation Tool Specifications for more information pertaining to tools.
- 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.

5.1 PERFORMANCE

Performance on ISO wall thicknesses

Nominal Size inches DN	Actual Outside Diameter inches mm	Pipe Wall Thickness inches mm	Roll Set Type	Maximum	
				Working Pressure kPa psi	End Load N lb
1 DN25	1.315 33.7	0.177 4.5	C	3447 500	3021 679
		0.126 3.2	Std	2930 425	3021 679
		0.102 2.6	RX	2241 325	1963 441
		0.091 2.3	RX	2068 300	1812 407
		0.079 2.0	RX	1724 250	1510 340
		0.063 1.6	RX	1551 225	1359 306
1¼ DN32	1.660 42.4	0.197 5.0	C	3447 500	4813 1082
		0.142 3.6	Std/C	3447 500	4813 1082
		0.126 3.2	Std	2930 425	4091 920
		0.102 2.6	RX	2241 325	3129 703
		0.079 2.0	RX	1724 250	2407 541
		0.063 1.6	RX	1551 225	2166 487

- 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

NOTES

- For pressure ratings on wall thickness not mentioned please contact Victaulic
- 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. “RX” rolls must be used for Schedules 5S, 10S and 10. Standard rolls should be used for Schedule 40S and Standard Weight pipe.
- Contact Victaulic for performance on other pipe.
- See publication 24.01: Pipe Preparation Tool Specifications for more information pertaining to tools.
- 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.

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.**

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

05.01: Victaulic Gasket Selection Guide
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 of Sale
I-100: Victaulic Field Installation Handbook
I-ENDCAP: Victaulic End Cap Installation Instructions

