Victaulic® Stainless Steel Rigid Coupling Style 489

17.25



1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 ½ – 12"/DN40 – DN300

Pipe Material

- Roll and cut groove austenitic stainless steel (Types 304/304L/316/316L) conforming to ASTM A312/A312M, or equivalent
- Roll grooved duplex stainless steel conforming to ASTM A790 Gr. 2205, or equivalent
- Roll grooved super duplex stainless steel conforming to ASTM A790 Gr. 2507, or equivalent

Maximum Working Pressure

- Up to 600 psi/4136 kPa/41 Bar on 304/316 and super duplex stainless steel
- Up to 525 psi/3620 kPa/36 Bar on duplex stainless steel
- 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.
- Provides a rigid pipe joint designed to restrict axial or angular movement. Contact Victaulic for information on torsional resistance.

NOTE

- For duplex and super duplex coupling options, reference publication 17.33 for the Style 489DX coupling.

2.0 CERTIFICATIONS/LISTINGS

FM APPROVED

c UL us LISTED

CE

EN 10311
CPR (EU)
No. 305/2011

NOTES

- Reference publication 02.06: Victaulic Potable Water Approvals ANSI/NSF for potable water approvals, if applicable.
- Reference 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.

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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. 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 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 NSF/ANSI/CAN 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and NSF/ANSI/CAN 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 SVGW and is French ACS approved for EN681-1 Type WA cold potable and Type WB hot potable water service. **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 NSF/ANSI/CAN 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and NSF/ANSI/CAN 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. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES.**

☐ **Grade "L" Silicone**
Silicone (Red gasket). Temperature range –30°F to +350°F/–34°C to +177°C. May be specified for dry heat, air without hydrocarbons to +350°F/+177°C and certain chemical services.

☐ **Others**
For alternative gasket selection, reference Victaulic publication 05.01: Victaulic Seal Selection Guide.

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.

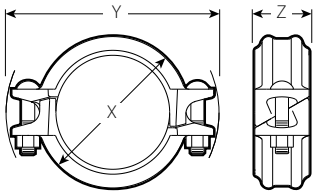
Bolt/Nuts:

☐ 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.

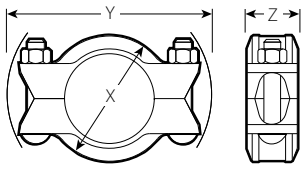
Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM A1082, UNS S32750 (super duplex stainless steel). Stainless steel heavy nuts meeting the mechanical property requirements of ASTM A1082, UNS S327500 (super duplex stainless steel), supplementary requirement S5, with galling reducing coating.

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4.0 DIMENSIONS



1½ – 4"/DN40 – DN100 sizes



5 – 12"/139.7 mm – DN300 sizes

Size		Pipe End Separation	Bolt/Nut		Metric Bolt/Nut Size	Dimensions				Nut Torque (Min)	Nut Torque (Max)
Nominal inches DN	Actual Outside Diameter inches mm	Allowable inches mm	Qty.	Size inches	mm	X inches mm	Y inches mm	Z inches mm	Approx. (Each) lb kg	ft-lbs N•m	ft-lbs N•m
1½ DN40	1.900 48.3	0.05 1.3	2	⅜ x 2 ½	M10 x 64	2.86 73	4.42 118	1.84 47	1.6 0.7	18 24	22 30
2 DN50	2.375 60.3	0.05 1.3	2	⅜ x 2 ½	M10 x 64	3.34 85	5.19 132	1.86 47	1.6 0.7	18 24	22 30
2 ½	2.875 73.0	0.05 1.3	2	⅜ x 2 ½	M10 x 64	3.92 100	5.62 143	1.86 47	1.9 0.9	18 24	22 30
DN65	3.000 76.1	0.05 1.3	2	⅜ x 2 ½	M10 x 64	4.02 102	5.72 145	1.86 47	2.0 0.9	18 24	22 30
3 DN80	3.500 88.9	0.05 1.3	2	½ x 2 ¾	M12 x 70	4.54 115	6.78 172	1.86 47	2.8 1.3	45 61	50 68
4 DN100	4.500 114.3	0.19 4.8	2	½ x 2 ¾	M12 x 70	5.77 147	7.90 201	2.07 53	4.0 1.8	45 61	50 68
DN125	5.500 139.7	0.25 6.4	2	¾ x 4 ¼	M20 x 108	7.07 180	11.13 283	2.38 60	12.0 5.5	75 102	100 136
5	5.563 141.3	0.25 6.4	2	¾ x 4 ¼	–	7.05 179	10.63 270	2.25 57	12.50 5.7	85 115	125 169
	6.500 165.1	0.25 6.4	2	⅞ x 5 ½	M22 x 140	8.16 207	12.68 321	2.50 64	15.5 7.0	125 169	200 271
6 DN150	6.625 168.3	0.25 6.4	2	⅞ x 5 ½	–	8.16 207	12.68 321	2.50 64	15.5 7.0	125 169	200 271
	8.515 216.3	0.25 6.4	2	1 x 5 ½	M24 x 140	10.63 270	15.00 381	2.75 70	24.0 10.9	200 271	300 407
8 DN200	8.625 219.1	0.25 6.4	2	1x 5 ½	–	10.63 270	15.00 381	2.75 70	24.0 10.9	200 271	300 407
	10.528 267.4	0.25 6.4	2	1x 6 ½	M24 x 165	13.09 332	17.25 438	3.00 76	33.0 15.0	200 271	300 407
10 DN250	10.750 273.0	0.25 6.4	2	1 x 6 ½	–	13.09 332	17.25 438	3.00 76	33.0 15.0	200 271	300 407
	12.539 318.5	0.25 6.4	2	1 x 6 ½	M24 x 165	15.13 384	19.13 486	3.13 80	40.0 18.1	200 271	300 407
12 DN300	12.750 323.9	0.25 6.4	2	1 x 6 ½	–	15.13 384	19.13 486	3.13 80	40.0 18.1	200 271	300 407

[3] The allowable pipe end separation dimension shown is for system layout purposes only. Style 489 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.

[4] Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.

NOTE

- The X, Y, and Z dimensions are intended to be used for layout and clearance purposes only.

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5.0 PERFORMANCE

Performance on ANSI wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness		Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**ANSI** Schedule Number	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** lbs N
1 ½ DN40	1.900 48.3	0.200 5.1	80S	C	600 4137	1701 7567
		0.145 3.7	40S	Std/C	600 4137	1701 7567
		0.109 2.8	10S	RX	300 2068	849 3784
		0.065 1.7	5S	RX	200 1379	567 2522
2 DN50	2.375 60.3	0.218 5.5	80S	C	600 4137	2658 11824
		0.154 3.9	40S	Std/C	600 4137	2658 11824
		0.109 2.8	10	RX	300 2068	1329 5912
		0.065 1.7	5S	RX	200 1379	886 3941
2 ½	2.875 73.0	0.276 7.0	80S	C	600 4137	3895 17326
		0.203 5.2	40S	Std/C	600 4137	3895 17326
		0.120 3.0	10S	RX	300 2068	1948 8663
		0.083 2.1	5S	RX	232 1600	1506 6699
3 DN80	3.500 88.9	0.300 7.6	80S	C	600 4137	5773 25678
		0.216 5.5	40S	Std/C	600 4137	5773 25678
		0.120 3.0	10S	RX	300 2068	2886 12839
		0.083 2.1	5S	RX	232 1600	2232 9929
4 DN100	4.500 114.3	0.337 8.6	80S	C	600 4137	9543 42488
		0.237 6.0	40S	Std/C	600 4137	9543 42448
		0.120 3.0	10S	RX	300 2068	4771 21224
		0.083 2.1	5S	RX	232 1600	3690 16413

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, 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 and 10S. Standard rolls should be used for Schedule 40S.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.0 PERFORMANCE (CONTINUED)

Performance on ANSI wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness		Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**ANSI** Schedule Number	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** lbs N
5	5.563 141.3	0.375 9.5	80S	C	600 4137	14583 64870
		0.258 6.6	40S	Std/C	600 4137	14583 64870
		0.134 3.4	10S	RX	375 2586	9115 40544
		0.109 2.8	5S	RX	275 1896	6684 29732
6 DN150	6.625 168.3	0.432 11.0	80S	C	600 4137	20683 92002
		0.280 7.1	40S	Std/C	600 4137	20683 92002
		0.134 3.4	10S	RX	300 2068	10341 46001
		0.109 2.8	5S	RX	250 1724	8618 38334
8 DN200	8.625 219.1	0.500 12.7	80S	C	600 4137	35056 155936
		0.322 8.2	40S	Std/C	600 4137	35056 155936
		0.148 3.8	10S	RX	300 2068	17528 77968
		0.109 2.8	5S	RX	200 1379	11685 51979
10 DN250	10.750 273.0	0.500 12.7	80S	C	600 4137	54458 242239
		0.365 9.3	40S	Std/C	600 4137	54458 242239
		0.165 4.2	10S	RX	300 2068	27229 121120
		0.134 3.4	5S	RX	250 1724	22691 100933
12 DN300	12.750 323.9	0.500 12.7	80S	C	600 4137	76606 340759
		0.375 9.5	40S	Std/C	600 4137	76606 340759
		0.180 4.6	10S	RX	300 2065	38303 170380
		0.156 4.0	5S	RX	200 1379	25535 113586

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NOTES

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- 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 and 10S. Standard rolls should be used for Schedule 40S.
- Contact Victaulic for performance on other pipe. Reference publication 24.01: Pipe Preparation Tool Specifications for more information pertaining to tools.
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5.1 PERFORMANCE

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
1 ½ DN40	1.900 48.3	0.197 5.0	C	600 4137	1701 7567
		0.142 3.6	Std/C	550 3792	1559 6937
		0.126 3.2	Std	425 2930	1205 5360
		0.102 2.6	RX	275 1896	780 3468
		0.079 2.0	RX	232 1600	658 2926
		0.063 1.6	RX	200 1379	567 2522
2 DN50	2.375 60.3	0.220 5.6	C	600 4137	2658 11824
		0.157 4.0	Std/C	600 4137	2658 11824
		0.142 3.6	Std	525 3620	2326 10346
		0.126 3.2	Std	525 3620	2326 10346
		0.114 2.9	Std	325 2241	1440 6405
		0.102 2.6	RX	275 1896	1218 5419
		0.091 2.3	RX	250 1724	1108 4927
		0.079 2.0	RX	232 1600	1028 4572
		0.063 1.6	RX	200 1379	886 3941

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, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.1 PERFORMANCE (CONTINUED)

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
DN65	3.000 76.1	0.280 7.1	C	600 4137	4241 18866
		0.252 6.4	C	600 4137	4241 18866
		0.197 5.0	Std/C	475 3275	3358 14935
		0.157 4.0	Std	375 2586	2651 11791
		0.142 3.6	Std	350 2413	2474 11005
		0.122 3.1	Std	300 2068	2121 9433
		0.114 2.9	RX	300 2068	2121 9433
		0.102 2.6	RX	275 1896	1944 8647
		0.091 2.3	RX	250 1724	1767 7861
		0.083 2.1	RX	232 1600	1640 7295
		0.079 2.0	RX	232 1600	1640 7295
3 DN80	3.500 88.9	0.315 8.0	C	600 4137	5773 25678
		0.220 5.6	Std/C	600 4137	5773 25678
		0.157 4.0	Std	400 2758	3848 17119
		0.142 3.6	Std	350 2413	3367 14979
		0.126 3.2	Std	300 2068	2886 12839
		0.114 2.9	RX	300 2068	2886 12839
		0.102 2.6	RX	275 1896	2646 11769
		0.091 2.3	RX	250 1724	2405 10699
		0.079 2.0	RX	232 1600	2232 9929

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NOTES

- For pressure ratings on wall thickness not mentioned, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.1 PERFORMANCE (CONTINUED)

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
4 DN100	4.500 114.3	0.346 8.8	C	600 4137	9543 42448
		0.248 6.3	C	600 4137	9543 42448
		0.177 4.5	Std	450 3103	7157 31836
		0.142 3.6	Std	300 2068	4771 21224
		0.114 2.9	RX	300 2068	2886 12839
		0.102 2.6	RX	275 1896	2646 11769
		0.079 2.0	RX	232 1600	2232 9929
DN125	5.500 139.7	0.394 10.0	C	600 4137	14255 63409
		0.280 7.1	C	600 4137	14255 63409
		0.260 6.6	Std/C	600 4137	14255 63409
		0.248 6.3	Std/C	575 3964	13661 60767
		0.220 5.6	Std/C	500 3447	11879 52841
		0.197 5.0	Std	450 3103	10691 47557
		0.157 4.0	Std	350 2413	8315 36989
		0.134 3.4	RX	300 2068	7127 31705
		0.126 3.2	RX	300 2068	7127 31705
		0.118 3.0	RX	275 1896	6534 29063
		0.110 2.8	RX	275 1896	6534 29063
		0.102 2.6	RX	250 1724	5940 26421
		0.079 2.0	RX	232 1600	5512 24518

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C = Cut groove

NOTES

- For pressure ratings on wall thickness not mentioned, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.1 PERFORMANCE (CONTINUED)

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
	6.500 165.1	0.432 11.0	C	600 4137	19910 88563
		0.280 7.1	Std/C	600 4137	19910 88563
		0.197 5.0	Std	500 3447	16592 73803
		0.134 3.4	Std	300 2068	9955 44282
		0.109 2.8	RX	250 1724	8296 36901
6 DN150	6.625 168.3	0.432 11.0	C	600 4137	20683 92002
		0.280 7.1	Std/C	600 4137	20683 92002
		0.197 5.0	Std	500 3447	17236 76669
		0.177 4.5	Std	450 3103	15512 69002
		0.157 4.0	Std	375 2586	12927 57502
		0.126 3.2	RX	275 1896	9480 42168
		0.118 3.0	RX	275 1896	9480 42168
		0.102 2.6	RX	232 1600	7997 35574
		0.079 2.0	RX	232 1600	7997 35574
	8.515 216.3	0.323 8.2	Std/C	600 4137	34167 151984
		0.256 6.5	Std	475 3275	27049 120320
		0.157 4.0	Std	325 2241	18507 82324
		0.109 2.8	RX	175 1207	9965 44329

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C = Cut groove

NOTES

- For pressure ratings on wall thickness not mentioned, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.1 PERFORMANCE (CONTINUED)

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
8 DN200	8.625 219.1	0.492 12.5	C	600 4137	35056 155936
		0.315 8.0	Std/C	600 4137	35056 155936
		0.256 6.5	Std/C	475 3275	27752 123449
		0.248 6.3	Std/C	475 3275	27752 123449
		0.197 5.0	Std	375 2586	21910 97460
		0.157 4.0	Std	325 2241	18989 84465
		0.142 3.6	RX	275 1896	16067 71471
		0.126 3.2	RX	232 1600	13555 60295
		0.118 3.0	RX	225 1551	13146 58476
		0.102 2.6	RX	175 1207	10225 45481
		0.079 2.0	RX	150 1034	8764 38984
	10.528 267.4	0.366 9.3	Std/C	600 4137	52232 232338
		0.256 6.5	Std/C	450 3103	39174 174253
		0.157 4.0	Std	300 2068	26116 116169
		0.135 3.4	RX	232 1600	20196 89837

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, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.1 PERFORMANCE (CONTINUED)

Performance on ISO wall thicknesses (Austenitic Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness	Grooving Method	Performance	
Nominal inches DN	**Actual Outside Diameter** inches mm	inches mm	**Std,C,RX**	**Maximum Working Pressure** psi kPa	**Maximum End Load** Lbs. N
10 DN250	10.750 273.0	0.559 14.2	C	600 4137	54458 242239
		0.492 12.5	C	600 4137	54458 242239
		0.394 10.0	C	600 4137	54458 242239
		0.248 6.3	Std/C	425 2930	38574 171586
		0.157 4.0	RX	300 2068	27229 121120
		0.142 3.6	RX	250 1724	22691 100933
		0.126 3.2	RX	232 1600	21057 93666
		0.118 3.0	RX	200 1379	18153 80746
		0.102 2.6	RX	150 1034	13614 60560
		0.079 2.0	RX	100 689	9076 40373
	12.539 318.5	0.405 10.3	C	600 4137	74091 329574
		0.256 6.5	Std/C	425 2930	52481 233448
		0.177 4.5	RX	300 2068	37046 164787
		0.157 4.0	RX	200 1379	24697 109858
12 DN300	12.750 323.9	0.492 12.5	C	600 4137	76606 340759
		0.394 10.0	C	600 4137	76606 340759
		0.280 7.1	Std/C	450 3103	57454 255570
		0.197 5.0	RX	325 2241	41495 184578
		0.177 4.5	RX	300 2068	27229 121120
		0.157 4.0	RX	200 1379	18153 80746

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, 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 pipe thicknesses indicated above. Standard rolls should be used for pipe thicknesses indicated above.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.2 PERFORMANCE

Performance on ANSI wall thickness (Duplex Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness		Groove Type	Maximum	
Nominal inches DN	Actual Outside Diameter inches mm	 inches mm	ANSI Schedule Number		Working Pressure psi kPa	End Load lb N
1 ½ DN40	1.900 48.3	0.109 2.8	10S	RX	420 2896	1191 5297
2 DN50	2.375 60.3	0.109 2.8	10S	RX	420 2896	1861 8277
2 ½	2.875 73.0	0.120 3.0	10S	RX	420 2896	2727 12128
3 DN80	3.500 88.9	0.120 3.0	10S	RX	420 2896	4041 17975
4 DN100	4.500 114.3	0.120 3.0	10S	RX	420 2896	6680 29713
5	5.563 141.3	0.134 3.4	10S	RX	525 3620	12760 56761
6 DN150	6.625 168.3	0.134 3.4	10S	RX	420 2896	14478 64402
8 DN200	8.625 219.1	0.148 3.8	10S	RX	420 2896	24539 109155
10 DN250	10.750 273.0	0.165 4.2	10S	RX	420 2896	38120 169567
12 DN300	12.750 323.9	0.180 4.6	10S	RX	420 2896	53624 238532

RX = Roll Set for light wall stainless steel pipe marked with the prefix "RX"

NOTES

- For pressure ratings on wall thickness not mentioned, 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 Schedule 10S.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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5.3 PERFORMANCE

Performance on ANSI wall thickness (Super Duplex Stainless Steel Pipe Materials)

Size		Pipe Wall Thickness		Groove Type	Maximum	
Nominal inches DN	Actual Outside Diameter inches mm	 inches mm	ANSI Schedule Number		Working Pressure psi kPa	End Load lb N
1 ½ DN40	1.900 48.3	0.109 2.8	10S	RX	480 3309	1361 6054
2 DN50	2.375 60.3	0.109 2.8	10S	RX	480 3309	2126 9459
2 ½	2.875 73.0	0.120 3.0	10S	RX	480 3309	3116 13861
3 DN80	3.500 88.9	0.120 3.0	10S	RX	480 3309	4618 20543
4 DN100	4.500 114.3	0.120 3.0	10S	RX	480 3309	7634 33958
5	5.563 141.3	0.134 3.4	10S	RX	600 4137	14583 64870
6 DN150	6.625 168.3	0.134 3.4	10S	RX	480 3309	16546 73602
8 DN200	8.625 219.1	0.148 3.8	10S	RX	480 3309	28045 124749
10 DN250	10.750 273.0	0.165 4.2	10S	RX	480 3309	43566 193791
12 DN300	12.750 323.9	0.180 4.6	10S	RX	480 3309	61285 272608

RX = Roll Set for light wall stainless steel pipe marked with the prefix "RX"

NOTES

- For pressure ratings on wall thickness not mentioned, 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 Schedule 10S.
- Contact Victaulic for performance on other pipe. Reference 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.
- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

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6.0 NOTIFICATIONS

⚠ WARNING



- **Read and understand all instructions before attempting to install any Victaulic 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.**
- **Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/ positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**
- **Always read and follow the I-ENDCAP, Victaulic End Cap Installation Safety Instructions, which can be downloaded at Victaulic.com.**
- **Wear safety glasses, hardhat, foot protection, and hearing protection.**
- **It is the system designer's responsibility to verify suitability of stainless steel components for use with the intended fluid media within the piping system and external environment.**
- **The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on stainless steel components to confirm system life will be acceptable for the intended service.**
- **Always reference Victaulic publication 17.01 for stainless steel pipe end preparation and grooving roll set requirements. Grooving roll sets for stainless steel pipe must be ordered separately.**

Failure to follow these instructions could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

⚠ 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.**

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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
17.33: Victaulic® Duplex Stainless Steel Rigid Coupling Style 489DX
24.01: Victaulic® Pipe Preparation Tool Specifications
25.01: Victaulic® Original Groove System (OGS) Specifications
26.01: Victaulic® Design Data
29.01: Victaulic® Terms and Conditions/Warranty
I-100: Victaulic® Field Installation Handbook
I-ENDCAP: Victaulic® End Cap Installation Safety Instructions
I-IMPACT: Impact Tool Usage Guidelines

User Responsibility for Product Selection and Suitability
Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation 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, warranty, installation instructions, or this disclaimer.

Installation
Always refer to and follow the Victaulic Installation Handbook or installation instructions for 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 victaulic.com.

Warranty
Refer to the Warranty section of the current Price List or contact Victaulic for details.

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