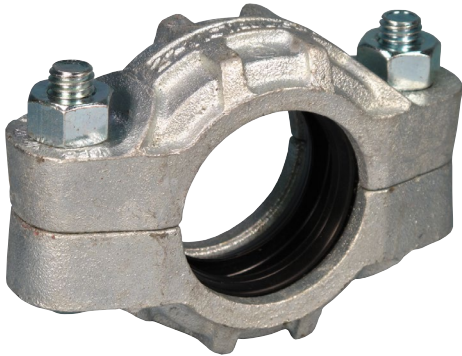


Victaulic® Aluminum Coupling

Style 77A



1.0 PRODUCT DESCRIPTION

Available Sizes:

- 1 – 12"/DN25 – DN300

Pipe Material:

- Aluminum

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760mm Hg) up to 500 psi / 3447kPa.

Operating Temperature:

- Dependent on gasket selection from section 3.0

Function:

- Provides a flexible pipe joint designed to accommodate a limited amount of linear and/or angular movement.

Pipe Preparation:

- Cut or roll grooved in accordance with [publication 25.01](#): Victaulic Standard Groove Specifications.

2.0 CERTIFICATION/LISTINGS

Product designed and manufactured under the Victaulic Quality Management System, as certified by LPCB in accordance with ISO-9001:2008.

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

3.0 SPECIFICATIONS – MATERIAL

Housing:

Aluminum, ASTM B-26, 356-T6 alloy

Housing Coating:

None (Unfinished)

Gasket: (specify choice¹)

Grade “E” EPDM

EPDM (Green 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 “T” Nitrile

Nitrile (Orange 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.

Others

For alternate gasket selection, reference [publication 05.01](#): Victaulic Seal Selection Guide – Elastometric Seal Construction.

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 Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

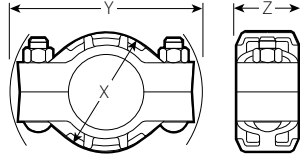
Bolts/Nuts: (specify choice)

Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial – heavy hex nuts) and ASTM A563M Class 9 (metric – hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (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.²

² Optional bolts/nuts are available in imperial size only.

4.0 DIMENSIONS



Size		Dimensions			Qty. ²	Bolt/Nut		Weight
Nominal inches DN	Actual Outside Diameter inches mm	X inches mm	Y inches mm	Z inches mm		Imperial Size inches	Metric Size ³ mm	Approx. (Each) lb kg
1 DN25	1.315 33.7	2.38 60	4.25 108	1.75 44	2	3/8 x 2	M10 x 51	0.6 0.3
1 1/4 DN32	1.660 42.4	2.70 69	5.04 128	1.77 45	2	1/2 x 2 1/2	M12 x 64	0.9 0.4
1 1/2 DN40	1.900 48.3	3.03 77	5.36 136	1.77 45	2	1/2 x 2 1/2	M12 x 64	1.1 0.5
2 DN50	2.375 60.3	3.88 99	5.90 150	1.88 48	2	1/2 x 2 1/2	M12 x 64	1.3 0.0
2 1/2	2.875 73.0	4.25 108	6.51 165	1.88 48	2	1/2 x 2 3/4	M12 x 70	1.5 0.7
3 DN80	3.500 88.9	5.00 127	7.79 198	1.88 48	2	1/2 x 2 3/4	M12 x 70	1.8 0.8
4 DN100	4.500 114.3	6.38 162	8.91 226	2.13 54	2	5/8 x 3 1/4	M16 x 83	3.0 1.4
5	5.563 141.3	7.66 195	10.60 269	2.13 54	2	3/4 x 4 1/4	M20 x 108	5.1 2.3
6 DN150	6.625 168.3	9.00 229	11.90 302	2.13 54	2	3/4 x 4 1/4	M20 x 108	6.0 2.7
8 DN200	8.625 219.1	10.88 276	14.86 377	2.50 64	2	7/8 x 5	M22 x 127	10.0 4.5
10 DN250	10.750 273.0	13.63 346	17.00 432	2.56 65	2	1 x 6	M24 x 152	15.6 7.1
12 DN300	12.750 323.9	15.50 394	19.28 490	2.56 65	2	1 x 6 1/2	M24 x 165	13.0 5.9

² Number of bolts required equals number of housing segments.

³ Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

5.0 PERFORMANCE

Size		Max. Working Pressure ⁴	Max. End Load ⁴	Allow. Pipe End Sep. ⁵	Deflection from Centerline ⁵ Per Coupling	Deflection from Centerline ⁵ Pipe
Nominal	Actual Outside Diameter					
inches DN	inches mm	psi kPa	Lbs. N	inches mm	Degrees	in/ft mm/m
1 DN25	1.315 33.7	500 3447	650 2891	0 – 1/16 0 – 1.6	2° – 43'	0.57 47
1 1/4 DN32	1.660 42.4	500 3447	1050 4670	0 – 1/16 0 – 1.6	2° – 10'	0.45 37
1 1/2 DN40	1.900 48.3	500 3447	1400 6227	0 – 1/16 0 – 1.6	1° – 56'	0.40 33
2 DN50	2.375 60.3	500 3447	2200 9786	0 – 1/16 0 – 1.6	1° – 31'	0.32 27
2 1/2	2.875 73.0	500 3447	3200 14234	0 – 1/16 0 – 1.6	1° – 15'	0.26 22
3 DN80	3.500 88.9	500 3447	4500 20016	0 – 1/16 0 – 1.6	1° – 2'	0.22 18
4 DN100	4.500 114.3	500 3447	8000 35584	0 – 1/8 0 – 3.2	1° – 36'	0.34 28
5	5.563 141.3	500 3447	12000 53376	0 – 1/8 0 – 3.2	1° – 18'	0.27 22
6 DN150	6.625 168.3	500 3447	17000 75616	0 – 1/8 0 – 3.2	1° – 12'	0.21 17
8 DN200	8.625 219.1	400 2758	23500 104528	0 – 1/8 0 – 3.2	0° – 50'	0.18 15
10 DN250	10.750 273.0	300 2068	27200 120986	0 – 1/8 0 – 3.2	0° – 40'	0.14 12
12 DN300	12.750 323.9	300 2068	38300 170358	0 – 1/8 0 – 3.2	0° – 34'	0.12 10

⁴ Many aluminum pipe manufacturers (extruders) roll groove alloys 6061-T6 and 6063-T6 at the point of manufacture. Roll grooving is done successfully prior to the final T6 tempering of the pipe. Often pipe in the T6 tempered state cracks when roll grooved, depending upon the pipe's mechanical properties, which vary from pipe to pipe. Victaulic has no control over these varying properties and cannot assure that the T6 tempered grades can be successfully roll grooved. Pressure Ratings and End Loads for cut grooved pipe are based upon tests on pipe prepared in accordance with Victaulic specifications. Pressure Ratings and End Loads for roll grooved pipe are based upon tests on pipe prepared in accordance with Victaulic specifications using Victaulic Vic-Easy® Roll Grooving Tools. Use of other equipment may adversely affect joint performance. Aluminum pipe ratings are based on: alloy 6061-T4/6063-T4 – Schedule 80 cut grooved, Schedule 40 roll or cut grooved, Schedule 30 – 8, 10 and 12" roll or cut grooved, Schedule 5, 10 and 20 roll grooved ONLY; or alloy 6061-T6/6063-T6 – Schedule 40/80 cut grooved ONLY, Schedule 30 – 8, 10 and 12" cut grooved ONLY, Schedule 5, 10 and 20 grooving is NOT RECOMMENDED.

⁵ 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 3/4 – 3 1/2"/DN20 – DN90; 25% for 4"/DN100 and larger.

NOTE:

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 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.
- 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.

WARNING

- Victaulic RP roll sets must be used when grooving aluminum pipe for use with Victaulic Couplings.

Failure to use Victaulic RP roll sets when grooving aluminum pipe may cause joint failure, resulting in serious personal injury and/or property damage.

NOTICE

- Victaulic RP grooving rolls must be ordered separately. They are identified by a gold color and the designation RP on the front of the roll sets.

7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection](#)

[21.03: Victaulic Aluminum Fittings](#)

[25.01: Victaulic Original Groove System \(OGS\) Groove Specifications](#)

[26.01: Victaulic Design Data](#)

[26.04: Victaulic Couplings Vibration Attenuation Characteristics](#)

[29.01: Victaulic Terms and Conditions of Sale](#)

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

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

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 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.

Warranty

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

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