

Coupling for Copper Tubing



SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

STYLE 606

The Victaulic copper connection system is a concept for joining large diameter copper tubing based upon the Victaulic grooved system for steel pipe, introduced in 1925. The grooved piping concept is now available to join hard drawn copper tubing (CTS) in 2 – 8"/54.0 – 206.4 mm sizes.

The system uses a proven pressure-responsive synthetic rubber gasket to seal on the outside diameter of the tubing. This means no heat is required and no lead is used. The coupling housing surrounds the gasket gripping into grooves rolled into the tubing. The housing is isolated from the fluid but provides the gripping strength for pressure ratings up to 300 psi/2065 kPa, depending on the wall thickness and diameter of copper tubing.

Compatible copper fittings in 90°, 45° elbow, tee, and reducing configurations are supplied grooved ready for installation.

Victaulic Vic-Easy® roll grooving tools VE272SFS, VE270FSD, VE268, VE416FSD, and VE414MC can be used to roll groove Types K, L, M and DWV copper tubing from 2 – 8"/54.0 – 206.4 mm. The Vic-Easy VE226C can be used for 2 – 6"/54.0 – 155.6 mm copper tubing. The VE26C allows in-place manual grooving of 2 – 6"/54.0 – 155.6 mm copper tubing. Tools must be equipped only with Victaulic rolls designed specifically for grooving copper tube (color coded copper).



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CAUTION

- **DO NOT use rolls intended for steel, stainless steel, aluminum or PVC pipe.**

The Victaulic copper connection system is available in Australian Standard (Request 22.10), British Standard (Request 22.08) and DIN Standard (Request 22.09).

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

Housing Coating: Copper colored alkyd enamel.

- **Grade "E" FlushSeal® EPDM**
EPDM (Copper color code). Temperature range –30°F to +230°F/–34°C to +110°C. Recommended 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 +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

- **Optional: Grade "T" FlushSeal® nitrile**
Nitrile gaskets available for oil services. Contact Victaulic for details.

* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

Bolts/Nuts: Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

JOB OWNER	CONTRACTOR	ENGINEER
System No. _____	Submitted By _____	Spec Sect _____ Para _____
Location _____	Date _____	Approved _____
		Date _____



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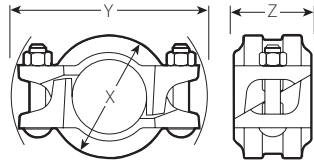


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DIMENSIONS



TYPICAL FOR ALL SIZES

TUBING	Allow Pipe End Sep. #	Bolt/Nut No. – Size		Dimensions – Inches/mm			Approx. Weight Ea.	
				X	Y	Z		
2 54.0	0.06 1.5	2 – 3/8	X	2	3.17 81	4.86 123	1.75 45	1.5 0.7
2½ 66.7	0.06 1.5	2 – 3/8	X	2	3.67 93	5.34 136	1.75 45	2.0 0.9
3 79.4	0.06 1.5	2 – ½	X	2¾	4.17 106	6.50 165	1.75 45	2.2 1.0
4 104.8	0.06 1.5	2 – 5/8	X	2¾	5.17 131	7.34 186	1.75 45	3.2 1.5
5 130.2	0.06 1.5	2 – 5/8	X	3¼	6.23 158	9.21 234	1.75 45	4.9 2.2
6 155.6	0.06 1.5	2 – 5/8	X	3¼	7.20 183	10.13 257	1.75 45	5.7 2.6
8 206.4	0.06 1.5	2 – 5/8	X	4¼	9.40 239	12.42 315	1.88 48	7.2 3.3

Refer to notes on page 4.

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PERFORMANCE

The Victaulic copper connection system has been thoroughly tested on Types K, L, M and DWV hard drawn copper tubing. Performance ratings apply to Victaulic Style 606 coupling, Series 608 butterfly valve, Style 641 Vic-Flange® adapter, and roll grooved copper fittings connected to the indicated Types of tubing.

TUBING Nominal Inches Actual mm	Type "K" – ASTM B-88				Type "L" – ASTM B-88			
	Wall Thick. Inches mm	Wall Thick. Tolerances Inches mm	Max. * Joint Wk. Press. psi/kPa	Max. * Permis. End Load Lbs./N	Wall Thick. Inches mm	Wall Thick. Tolerances Inches mm	Max. * Joint Wk. Press. psi/kPa	Max. * Permis. End Load Lbs./N
2 54.0	0.083 2.1	± 0.008 ± 0.20	300 2065	1.065 4740	0.070 1.8	± 0.007 ± 0.18	300 2065	1.065 4740
2½ 66.7	0.095 2.4	± 0.010 ± 0.25	300 2065	1.625 7230	0.080 2.0	± 0.008 ± 0.20	300 2065	1.625 7230
3 79.4	0.109 2.8	± 0.011 ± 0.28	300 2065	2.300 10235	0.090 2.3	± 0.009 ± 0.23	300 2065	2.300 10235
4 104.8	0.134 2.8	± 0.013 ± 0.33	300 2065	4.005 17825	0.110 2.8	± 0.011 ± 0.28	300 2065	4.005 17825
5 130.2	0.160 4.1	± 0.016 ± 0.41	300 2065	6.190 27550	0.125 3.2	± 0.012 ± 0.30	300 2065	6.190 27550
6 155.6	0.192 4.9	± 0.019 ± 0.48	300 2065	8.840 39340	0.140 3.6	± 0.014 ± 0.36	300 2065	8.840 39340
8 206.4	0.271 6.9	± 0.027 ± 0.69	300 2065	15.550 69200	0.200 5.1	± 0.020 ± 0.51	300 2065	15.550 69200

Refer to notes on page 4.

TUBING Nominal Inches Actual mm	Type "M" – ASTM B-88				DWV – ASTM B-306			
	Wall Thick. Inches mm	Wall Thick. Tolerances Inches mm	Max. * Joint Wk. Press. psi/kPa	Max. * Permis. End Load Lbs./N	Wall Thick. Inches mm	Wall Thick. Tolerances Inches mm	Max. * Joint Wk. Press. psi/kPa	Max. * Permis. End Load Lbs./N
2 54.0	0.058 1.5	± 0.006 ± 0.15	250 1725	890 3960	—	—	—	—
2½ 66.7	0.065 1.7	± 0.006 ± 0.15	250 1725	1.350 6010	—	—	—	—
3 79.4	0.072 1.8	± 0.007 ± 0.187	250 1725	1.415 6300	0.045 1.1	± 0.004 ± 0.10	100 690	765 3405
4 104.8	0.095 2.4	± 0.010 ± 0.25	250 1725	3.340 14865	0.058 1.5	± 0.007 ± 0.18	100 690	1.335 5940
5 130.2	0.109 2.8	± 0.011 ± 0.28	200 1375	4.125 18360	0.072 1.8	± 0.008 ± 0.20	100 690	2.060 9170
6 155.6	0.122 3.2	± 0.012 ± 0.30	200 1375	5.890 26210	0.083 2.1	± 0.008 ± 0.20	100 690	2.945 13105
8 206.4	0.170 4.3	± 0.017 ± 0.43	200 1375	10.370 46100	0.109 2.8	± 0.011 ± 0.28	100 690	5.180 23000

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GENERAL NOTES

- * **Working Pressure** and **End Load** are total, from all internal and external loads, based on hard drawn copper tubing of the weight indicated, roll grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.
 WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.
 - # For field installation only. Style 606 is essentially rigid and does not permit expansion/contraction.
 - @ Number of bolts required equals number of housing segments.
- Metric thread size bolts are available (color coded gold) 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

WARRANTY

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

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.

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