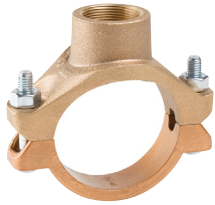


Copper Mechanical-T® Bolted Branch Outlets & Cross Assemblies

Style 622



Style 622



Style 622 Cross

Approvals/Listings:



UL Listed for wet and dry Fire Protection services to 175 psi/1207 kPa on ASTM B-88 Hard Drawn Type K, L and M copper tube.

UPC Listed for plumbing systems on ASTM B-88 Hard Drawn Type K, L and M copper tube.

[See Victaulic Publication 10.01 for more details.](#)

The Style 622 is UL Classified in accordance with ANSI/NSF 61 for cold+73°F/+23°C potable water service and ANSI/NSF 372 when product is made with Bronze Alloy C89836 only.

See Victaulic Publication 02.06 for more details.

Product Description:

Victaulic Copper Mechanical-T® Outlets provide a direct branch connection at any location a hole can be cut in the tubing. A locating collar secures the outlet in position and prevents rotation of the mechanical tee. A pressure responsive gasket seals on the tube O.D.

Cross-type connections can be achieved by utilizing two upper housings of the same style and run size, with the same or differing branch size connections.

Style 622 Mechanical-T outlets are supplied with a female threaded NPT outlet and supplied with zinc electroplated hardware.

Victaulic Copper Mechanical-T® Outlets provide a 90° angle connection between the run and branch outlet when properly installed.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

Material Specifications:

Upper Housing:

Cast Bronze conforming to ASTM B584 UNS C89836

Lower Housing/Coating:

Ductile iron conforming to ASTM A-536, Grade 65-45-12, with copper colored alkyd enamel coating.

Gasket: (specify choice¹)

NOTE: Additional gasket materials are available. Contact Victaulic for details.

Grade "E" EPDM

EPDM (Green 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. The Grade "E" EPDM gasket material is 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. See Victaulic Publication 02.06 for more details. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES.

NOTE: This is a general gasket material description. Always reference the "Approvals/Listings" section of the actual product's submittal.

Grade "T" nitrile

Nitrile (Orange 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; except hot, dry air over +140°F/+60°C and water over +150°F/+66°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES.

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:

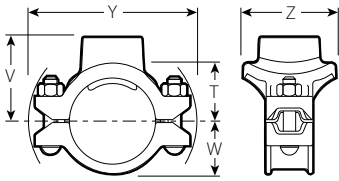
Carbon steel oval neck track bolts meeting the physical and chemical requirements of ASTM A-449.

Carbon steel heavy hex nuts meeting the physical and chemical requirements of ASTM A-563 Grade B.

Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) of II (metric).

Dimensions:

Style 622



Run x Branch Nominal Size inches mm	Dimensions							Bolt/ Nut inches mm	Approx. Weight Each Lbs. kg
	Hole Diameter +0.13 -0.00	T ²	V ³ Thd.	W	Y	Z			
	inches mm								
2 1/2 65 x 3/4 20	1.50 38	2.05 52	2.61 66	1.73 44	5.90 150	2.75 70	1/2 x 3 15 x 80	3.1 1.4	
	1.50 38	1.93 49	2.61 66	1.73 44	5.90 150	2.75 70	1/2 x 3 15 x 80	3.2 1.5	
	2.00 51	2.15 55	2.87 73	1.73 44	6.06 154	3.38 86	1/2 x 3 15 x 80	4.1 1.9	
3 80 x 3/4 20	1.50 38	2.30 58	2.86 73	2.09 53	6.30 160	2.75 70	1/2 x 3 15 x 80	3.4 1.5	
	1.50 38	2.19 56	2.87 73	2.09 53	6.30 160	2.75 70	1/2 x 3 15 x 80	3.6 1.6	
	2.00 51	2.59 66	3.31 84	2.09 53	6.30 160	3.38 86	1/2 x 3 15 x 80	4.5 2.0	
4 100 x 3/4 20	1.50 38	2.81 71	3.37 86	2.50 64	7.25 184	2.75 70	1/2 x 3 15 x 80	3.3 1.7	
	1.50 38	2.69 68	3.37 86	2.50 64	7.25 184	2.75 70	1/2 x 3 15 x 80	4.0 1.8	
	2.00 51	3.09 79	3.81 97	2.50 64	7.25 184	3.38 86	1/2 x 3 15 x 80	5.0 2.3	

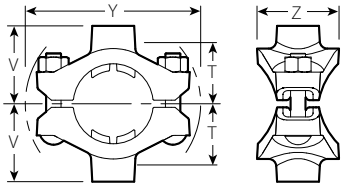
2 Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

3 Center of run to end of fitting.

Dimensions:

Style 622 Cross

The following combinations of Mechanical-T cross assemblies can be achieved with the use of two Style 622 of the same run size and the same or differing outlet size.



Run x Branch Nominal Size inches mm	Dimensions						Bolt/ Nut inches mm	Approx. Weight Each Lbs. kg
	Hole Diameter +0.13 -0.00	T ²	V ³ Thd.	Y	Z			
	inches mm							
2 1/2 65 x 3/4 20	1.50 38	2.05 52	2.61 66	5.90 150	2.75 70	1/2 x 3 15 x 80	4.2 1.9	
	1.50 38	1.93 49	2.61 66	5.90 150	2.75 70	1/2 x 3 15 x 80	4.4 2.0	
	2.00 51	2.15 55	2.87 73	6.06 154	3.38 86	1/2 x 3 15 x 80	6.2 2.8	
3 80 x 3/4 20	1.50 38	2.30 58	2.86 73	6.30 160	2.75 70	1/2 x 3 15 x 80	4.4 2.0	
	1.50 38	2.19 56	2.87 73	6.30 160	2.75 70	1/2 x 3 15 x 80	4.8 2.2	
	2.00 51	2.59 66	3.31 84	6.30 160	3.38 86	1/2 x 3 15 x 80	6.6 3.0	
4 100 x 3/4 20	1.50 38	2.81 71	3.37 86	7.25 184	2.75 70	1/2 x 3 15 x 80	4.5 2.0	
	1.50 38	2.69 68	3.37 86	7.25 184	2.75 70	1/2 x 3 15 x 80	5.4 2.5	
	2.00 51	3.09 79	3.81 97	7.25 184	3.38 86	1/2 x 3 15 x 80	7.4 3.4	

2 Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

3 Center of run to end of fitting.

Performance:

Tubing	Type "K" – ASTM B-88				Type "L" – ASTM B-88				Type "M" – ASTM B-88			
	Nominal Actual Size	Wall Thick.	Wall Thick. Tolerances	Max. ⁴ Joint Wk. Press.	Max. ⁴ Permis. End Load	Wall Thick.	Wall Thick. Tolerances	Max. ⁴ Joint Wk. Press.	Max. ⁴ Permis. End Load	Wall Thick.	Wall Thick. Tolerances	Max. ⁴ Joint Wk. Press.
inches mm	inches mm	inches mm	psi kPa	lbs. N	inches mm	inches mm	psi kPa	lbs. N	inches mm	inches mm	psi kPa	lbs. N
2 ½ 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	0.065 1.7	± 0.006 ± 0.15	250 1725	1,350 6010
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	0.072 1.8	± 0.007 ± 0.187	250 1725	1,415 6300
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	0.095 2.4	± 0.010 ± 0.25	250 1725	3,340 14865

4 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.

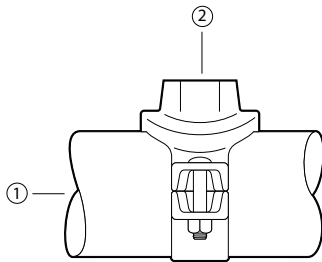
WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.

Flow Data:

Head loss values per UL 213, Section 16 "Pipe Outlet Flow Characteristics Test" are shown in the table below.

The head loss values are expressed in equivalent length of outlet pipe and represent the total head loss between points 1 and 2.



Exaggerated for clarity

Run Size	Outlet Size		
	¾" Type K Copper Tube	1" Type K Copper Tube	1 ½" Type K
2 ½	1.1'	1.8'	4.5'
3	0.8'	2.0'	3.4'
4	0.9'	1.2'	3.6'

Installation

Reference should always be made to the I-600 [Victaulic Field Installation Handbook](#) for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

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.

Trademarks

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