

**Style: MT22**  
**Mechanical Tee Grooved**



The MT22 Mechanical Tee provides a fast and easy grooved outlet at any place where a hole can be cut along the piping. This hole is dimensioned to receive a collar that maintains the outlet permanently at the correct position. A sensitive to pressure gasket seals it to the pipe outside diameter, assuring a hermetic fitting. The Mechanical Tee should be installed in a manner that the main fitting and branches are at a 90° angle when fixed to the piping surface.

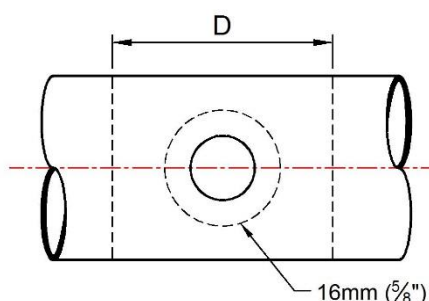
Mechanical Crosses can be achieved by using two upper segments of the same model and diameter with equal or different branch outlets. Refer to MX22 or MX23 *datasheets* for technical details.

**Hole Cutting:**

**Caution:**

Never use a torch to open the hole.

The hole must be cut by using a hole saw. After cutting it, all rough edges must be removed and the area of 16mm (5/8") around the hole must be inspected to ensure a clean and smooth surface, free from indentations or projections that could affect proper gasket sealing. The area within the "D" dimension in the drawing below should also be inspected and must be free of dirt, scales or any imperfections that could affect the proper seating or assembling of the fitting.



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**Segments:** the coupling segments are made of ductile cast iron in compliancy with ASTM A536 Grade 65-45-12 or similar.

**Bolts and Nuts:** 8.8 class oval head bolts and nuts made of carbon steel according to AISI 10B21 are used, available with ISO metric thread as well as UNC\* thread. The oval head bolts with partial thread fit into the holes of the segments sections allowing an easy tightening using just a ratchet wrench or an open-end wrench. The bolts and nuts are coated in an electrochemical bath. They can also be hot-dip galvanized on request. (\*Consult us at Alvenius for details).

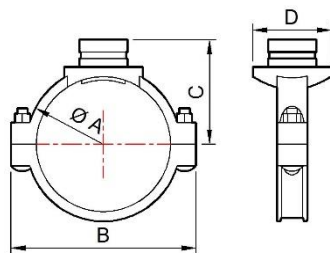
**Rubber Gasket:** Rubber gaskets are available in a variety of configurations and compounds to meet your specific requests. These gaskets have an excellent sealing capacity and are designed to provide a perfect tightness against leakages. Firstly, the gasket is installed onto the piping ends forming an initial seal. While the coupling segments are mounted, they fix and lightly compress the gasket while the bolts are being tightened, thus creating a hermetic seal.



Compound	Grade	Identification	General Recommendations and Services	Max. temperature range
EPDM	E	Green Strip	<p>Suitable for cold and hot water up to +230°F (+110°C). It is also suitable for services of water with acid, water with chlorine, deionized water, sea water and sewer water, diluted acids, oil-less air and other chemical products.</p> <p><b>Not recommended for petrol based oils, mineral oils, solvents and aromatic hydrocarbons.</b></p>	<p>-34°C (-30°F) +110°C (+230°F)</p>
Nitrile	T	Orange Strip	<p>Suitable for petrol based oils, mineral oils, vegetable oils, non-aromatic hydrocarbons, hydraulic and transmission fluids, several acids and water up to +150°F (+65°C).</p>	<p>-29°C (-20°F) +82°C (+180°F)</p>
Silicone	L	White Color	<p>Suitable for services of hot and dry air without hydrocarbons for temperatures up to +177°C (+350°F), and some applications for chemical products at high temperature. Also indicated for food and pharmaceutical products, since they do not modify the odor and taste/flower.</p> <p><b>Not recommended for usage with hot water or vapor.</b></p>	<p>-34°C (-30°F) +177°C (+350°F)</p>

\*For other gasket compounds, please consult us at Alvenius.





Nominal Pipe	Pipe OD	Working Pressure	Hole Cutting Dimensions	Dimensions				Bolts		Weight
				Ø A	B	C	D	Size mm	n°	
mm / in	mm / in	Bar / psi	mm / in	mm / in	mm / in	mm / in	mm / in	mm		kg / Lb
65 x 25 2½ x 1	73.0 x 33.7 2.875 x 1.327	20.7 300	38 1.496	93 3.661	144 5.669	70 2.756	77 3.031	M12 X 60	2	1 2.3
76.1mm x 25	76.1 x 33.7 3.000 x 1.327	20.7 300	38 1.496	93 3.661	144 5.669	70 2.756	77 3.031	M12 X 60	2	1 2.2
76.1mm x 32	76.1 x 42.2 3.000 x 1.669	20.7 300	46 1.811	93 3.661	144 5.669	70 2.756	77 3.031	M12 X 60	2	1.1 2.4
76.1mm x 40	76.1 x 48.3 3.000 x 1.900	20.7 300	51 2.008	93 3.661	144 5.669	70 2.756	77 3.031	M12 X 60	2	1.1 2.5
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	20.7 300	38 1.496	104 4.094	152 5.984	76 2.992	78 3.071	M12 X 65	2	1.2 2.6
100 x 25 4 x 1	114.3 x 33.7 4.500 x 1.327	20.7 300	38 1.496	133 5.236	188 7.402	93 3.661	77 3.031	M12 X 65	2	1.5 3.2
100 x 76.1mm	114.3 x 76.1 4.500 x 3.000	20.7 300	81 3.189	140 5.512	188 7.402	97 3.819	123 4.843	M12 X 65	2	1.9 4.2
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	20.7 300	86 3.386	140 5.512	188 7.402	97 3.819	125 4.921	M12 X 65	2	2.1 4.6
139.7mm <sup>a</sup> x 76.1mm	139.7 x 76.1 5.500 x 3.000	20.7 300	81 3.189	168 6.614	220 8.661	107 4.213	123 4.843	M16 X 75	2	2.7 5.9
139.7mm <sup>a</sup> x 80	139.7 x 88.9 5.500 x 3.500	20.7 300	86 3.386	168 6.614	220 8.661	107 4.213	136 5.354	M16 X 75	2	2.7 6
165.1mm x 50	165.1 x 60.3 6.500 x 2.375	20.7 300	61 2.402	194 7.638	247 9.724	123 4.842	97 3.819	M16 X 75	2	2.8 6.1
165.1mm x 76.1mm	165.1 x 76.1 6.500 x 3.000	20.7 300	81 3.189	194 7.638	247 9.724	125 4.921	123 4.843	M16 X 75	2	2.6 5.8
165.1mm x 80	165.1 x 88.9 6.500 x 3.500	20.7 300	86 3.386	194 7.638	247 9.724	125 4.921	136 5.354	M16 X 75	2	2.7 5.9
165.1mm x 100	165.1 x 114.3 6.500 x 4.500	20.7 300	114 4.488	194 7.638	247 9.724	125 4.921	136 5.354	M16 X 75	2	3.5 7.6
150 x 25 6 x 1	168.3 x 33.7 6.625 x 1.327	20.7 300	38 1.496	198 7.795	247 9.724	125 4.921	77 3.031	M16 X 85	2	2.5 5.5
150 x 76.1mm	168.3 x 76.1 6.625 x 3.000	20.7 300	81 3.189	198 7.795	247 9.724	128 5.039	123 4.843	M16 X 85	2	2.9 6.4
150 x 80 6 x 3	168.3 x 88.9 6.625 x 3.500	20.7 300	86 3.386	198 7.795	247 9.724	128 5.039	136 5.354	M16 X 85	2	3.3 7.3
150 x 100 6 x 4	168.3 x 114.3 6.625 x 4.500	20.7 300	114 4.488	198 7.795	247 9.724	128 5.039	157 6.181	M16 X 85	2	3.5 7.6
200 x 50 8 x 2	219.1 x 60.3 8.625 x 2.375	20.7 300	61 2.402	250 9.843	310 12.205	152 5.984	97 3.819	M16 x 100	2	3.4 7.5
200 x 76.1mm	219.1 x 76.1 8.625 x 3.000	20.7 300	81 3.189	250 9.843	310 12.205	152 5.984	130 5.118	M16 x 100	2	3.6 7.9
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	20.7 300	86 3.386	250 9.843	310 12.205	152 5.984	137 5.394	M16 x 100	2	3.8 8.3
200 x 100 8 x 4	219.1 x 114.3 8.625 x 4.500	20.7 300	114 4.488	250 9.843	310 12.205	152 5.984	162 6.378	M16 x 100	2	4.1 9.1
200 x 150 8 x 6	219.1 x 168.3 8.625 x 6.625	20.7 300	160 6.299	250 9.843	310 12.205	174 6.85	214 8.425	M16 x 100	2	6.1 13.5
250 x 65 10 x 2½	273.0 x 73.0 10.748 x 2.874	20.7 300	81 3.189	309 12.165	376 14.803	186 7.323	162 6.378	M22 x 130	2	8.1 17.9
250 x 100 10 x 4	273.0 x 114.3 10.748 x 4.500	20.7 300	114 4.488	309 12.165	376 14.803	186 7.323	162 6.378	M22 x 130	2	8.4 18.5
250 x 139.7mm <sup>a</sup>	273.0 x 139.7 10.748 x 5.500	20.7 300	135 5.315	309 12.165	376 14.803	186 7.323	186 7.323	M22 x 130	2	9 19.8

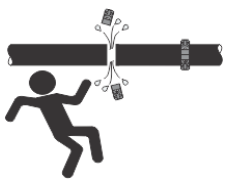
a) Compatible with 141.3mm diameter



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\*The working pressure is according to STD schedule carbon steel pipe (ASME B36.10). For performance of other types of pipes, please consult us at Alvenius.

**Important:** ONLY FOR FIELD TEST, the joint Maximum Working Pressure may be increased by 1.5 times the presented values.



**CAUTION:**

Depressurize and drain the piping systems before starting the disassembly, adjustment or removal of any piping component.

**Note:** Always refer to the field Installation Manual for the correct product handling and operation. Visit the site [www.alvenius.ind.br](http://www.alvenius.ind.br) and download the PDF or ask for Technical Assistance. Alvenius reserves the right to change the specifications, designs and equipment without previous notice and without incurring in any obligations. Consult our technical area for any further questions.

