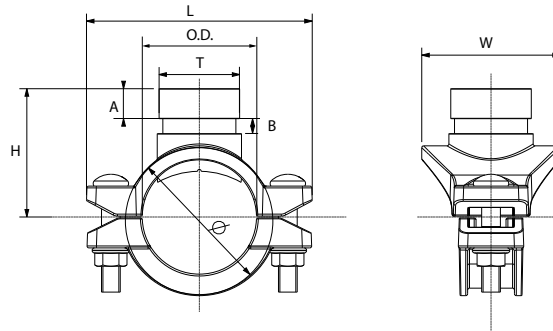


Size range: 2-1" - 10-4"
GROOVED MECHANICAL TEE



Mechanical tees with grooved outlet can be used for any tee connection where a grooved outlet is needed. They may be converted into a cross when necessary.



Reference		Nominal size Run - reducing outlet		Pipe Ø O.D. - T	Grooved mechanical tee dimensions						Working pressure	Hole cut*	Bolt size	Bolt torque	Weight	Marking	Approvals	
Red	Galva	NPS inch	DN mm	mm	Ø mm	L mm	H mm	W mm	A mm	B mm	psi	mm	d1xL	Nm	kg		UL	FM
GMGR	GMGG	2 - 1	50 - 25	60,3 - 33,7	76	118	66	73	15,9	7,9	300	38	M10x50	40 - 60	0,65	GMGX		FM
GMGR	GMGG	2 - 1¼	50 - 32	60,3 - 42,4	76	118	66	73	15,9	7,9	300	46	M10x50	40 - 60	0,70	GMGX	UL	FM
GMGR	GMGG	2 - 1½	50 - 40	60,3 - 48,3	76	118	66	73	15,9	7,9	300	46	M10x50	40 - 60	0,72	GMGX	UL	FM
GMGR	GMGG	2½ - 1	65 - 25	76,1 - 33,7	96	136	76	72	15,9	7,9	300	38	M10x60	40 - 60	0,77	GMGX		FM
GMGR	GMGG	2½ - 1¼	65 - 32	73,0 - 42,4	93	136	77	82	15,9	7,9	300	46	M10x60	40 - 60	0,86	GMGX	UL	FM
GMGR	GMGG	2½ - 1½	65 - 40	73,0 - 48,3	93	136	77	84	15,9	7,9	300	53	M10x60	40 - 60	0,92	GMGX	UL	FM
GMGR	GMGG	2½ - 1¾	65 - 32	76,1 - 42,4	96	136	77	82	15,9	7,9	300	46	M10x60	40 - 60	0,84	GMGX	UL	FM
GMGR	GMGG	2½ - 1½	65 - 40	76,1 - 48,3	96	136	77	84	15,9	7,9	300	53	M10x60	40 - 60	0,87	GMGX	UL	FM
GMGR	GMGG	2½ - 2	65 - 50	76,1 - 60,3	96	136	77	84	15,9	7,9	300	53	M10x60	40 - 60	0,92	GMGX	UL	FM
GMGR	GMGG	3 - 1	80 - 25	88,9 - 33,7	110	144	83	72	15,9	7,9	300	38	M10x60	40 - 60	0,86	GMGX		FM
GMGR	GMGG	3 - 1¼	80 - 32	88,9 - 42,4	110	144	85	83	15,9	7,9	300	46	M10x60	40 - 60	0,95	GMGX	UL	FM
GMGR	GMGG	3 - 1½	80 - 40	88,9 - 48,3	110	144	85	85	15,9	7,9	300	53	M10x60	40 - 60	0,92	GMGX	UL	FM
GMGR	GMGG	3 - 2	80 - 50	88,9 - 60,3	110	144	85	98	15,9	7,9	300	64	M10x60	40 - 60	1,01	GMGX	UL	FM
GMGR	GMGG	4 - 2	100 - 50	108 - 60,3	130	178	85	98	15,9	7,9	300	64	M12x65	110 - 130	1,28	GMGX	UL	FM
GMGR	GMGG	4 - 1	100 - 25	114,3 - 33,7	138	178	98	72	15,9	7,9	300	38	M12x65	110 - 130	1,20	GMGX	UL	FM
GMGR	GMGG	4 - 1¼	100 - 32	114,3 - 42,4	138	178	98	83	15,9	7,9	300	46	M12x65	110 - 130	1,26	GMGX	UL	FM
GMGR	GMGG	4 - 1½	100 - 40	114,3 - 48,3	138	178	98	85	15,9	7,9	300	53	M12x65	110 - 130	1,27	GMGX	UL	FM
GMGR	GMGG	4 - 2	100 - 50	114,3 - 60,3	138	178	98	95	15,9	7,9	300	64	M12x65	110 - 130	1,37	GMGX	UL	FM
GMGR	GMGG	4 - 2½	100 - 65	114,3 - 73,0	138	178	98	114	15,9	7,9	300	79	M12x65	110 - 130	1,60	GMGX	UL	FM
GMGR	GMGG	4 - 2½	100 - 65	114,3 - 76,1	138	178	98	114	15,9	7,9	300	79	M12x65	110 - 130	1,60	GMGX	UL	FM
GMGR	GMGG	4 - 3	100 - 80	114,3 - 88,9	138	178	98	126	15,9	7,9	232	92	M12x65	110 - 130	1,79	GMGX	UL	FM

Reference		Nominal size Run - reducing outlet		Pipe Ø O.D. - T	Grooved mechanical tee dimensions						Working pressure	Hole cut*	Bolt size	Bolt torque	Weight	Marking	Approvals	
Red	Galva	NPS inch	DN mm	mm	Ø mm	L mm	H mm	W mm	A mm	B mm	psi	mm	d1xL	Nm	kg		UL	FM
GMGR	GMGG	5 - 1½	125 - 40	139,7 - 48,3	162	206	109	85	15,9	7,9	300	53	M12x70	110 - 130	2,02	GMGX	UL	FM
GMGR	GMGG	5 - 2	125 - 50	139,7 - 60,3	162	206	109	95	15,9	7,9	300	64	M12x70	110 - 130	1,64	GMGX	UL	FM
GMGR	GMGG	5 - 2½	125 - 65	139,7 - 73,0	162	206	109	114	15,9	7,9	300	79	M12x70	110 - 130	1,78	GMGX	UL	FM
GMGR	GMGG	5 - 2½	125 - 65	139,7 - 76,1	162	206	109	114	15,9	7,9	300	79	M12x70	110 - 130	1,78	GMGX	UL	FM
GMGR	GMGG	5 - 3	125 - 80	139,7 - 88,9	162	206	109	126	15,9	7,9	300	92	M12x70	110 - 130	2,02	GMGX	UL	FM
GMGR	GMGG	5 - 1½	125 - 40	141,3 - 48,3	165	206	109	85	15,9	7,9	300	53	M12x70	110 - 130	2,02	GMGX	UL	FM
GMGR	GMGG	5 - 2	125 - 50	141,3 - 60,3	165	206	109	95	15,9	7,9	300	64	M12x70	110 - 130	1,64	GMGX	UL	FM
GMGR	GMGG	5 - 2½	125 - 65	141,3 - 73,0	165	206	109	115	15,9	7,9	300	79	M12x70	110 - 130	1,78	GMGX	UL	FM
GMGR	GMGG	5 - 2½	125 - 65	141,3 - 76,1	165	206	109	115	15,9	7,9	300	79	M12x70	110 - 130	1,78	GMGX	UL	FM
GMGR	GMGG	5 - 3	125 - 80	141,3 - 88,9	165	206	109	128	15,9	7,9	300	92	M12x70	110 - 130	2,02	GMGX	UL	FM
GMGR	GMGG	6 - 2	150 - 50	159,0 - 60,3	182	228	108	95	15,9	7,9	300	64	M14x75	120 - 140	1,81	GMGX	UL	FM
GMGR	GMGG	6 - 2	150 - 50	165,1 - 60,3	186	242	121	95	15,9	7,9	300	64	M14x75	120 - 140	1,96	GMGX	UL	FM
GMGR	GMGG	6 - 2½	150 - 65	165,1 - 76,1	186	242	123	115	15,9	7,9	300	79	M14x75	120 - 140	2,14	GMGX	UL	FM
GMGR	GMGG	6 - 3	150 - 80	165,1 - 88,9	186	242	124	128	15,9	7,9	300	92	M14x75	120 - 140	2,33	GMGX	UL	FM
GMGR	GMGG	6 - 4	150 - 100	165,1 - 114,3	186	242	121	158	15,9	9,5	232	114	M14x75	120 - 140	2,78	GMGX	UL	FM
GMGR	GMGG	6 - 1¼	150 - 32	168,3 - 42,4	192	248	124	85	15,9	7,9	300	46	M14x75	120 - 140	1,94	GMGX	UL	FM
GMGR	GMGG	6 - 1½	150 - 40	168,3 - 48,3	192	248	124	95	15,9	7,9	300	53	M14x75	120 - 140	1,99	GMGX	UL	FM
GMGR	GMGG	6 - 2	150 - 50	168,3 - 60,3	192	248	124	95	15,9	7,9	300	64	M14x75	120 - 140	2,08	GMGX	UL	FM
GMGR	GMGG	6 - 2½	150 - 65	168,3 - 73,0	192	248	124	115	15,9	7,9	300	79	M14x75	120 - 140	2,22	GMGX	UL	FM
GMGR	GMGG	6 - 2½	150 - 65	168,3 - 76,1	192	248	124	115	15,9	7,9	300	79	M14x75	120 - 140	2,25	GMGX	UL	FM
GMGR	GMGG	6 - 3	150 - 80	168,3 - 88,9	192	248	124	128	15,9	7,9	300	92	M14x75	120 - 140	2,40	GMGX	UL	FM
GMGR	GMGG	6 - 4	150 - 100	168,3 - 114,3	192	248	124	158	15,9	9,5	300	114	M14x75	120 - 140	2,90	GMGX	UL	FM
GMGR	GMGG	8 - 2	200 - 50	219,1 - 60,3	244	298	152	95	15,9	7,9	300	64	M16x90	130 - 170	2,75	GMGX	UL	FM
GMGR	GMGG	8 - 2½	200 - 65	219,1 - 73,0	244	298	152	115	15,9	7,9	300	79	M16x90	130 - 170	2,93	GMGX	UL	FM
GMGR	GMGG	8 - 2½	200 - 65	219,1 - 76,1	244	298	152	115	15,9	7,9	300	79	M16x90	130 - 170	2,94	GMGX	UL	FM
GMGR	GMGG	8 - 3	200 - 80	219,1 - 88,9	244	298	152	128	15,9	7,9	300	92	M16x90	130 - 170	3,30	GMGX	UL	FM
GMGR	GMGG	8 - 4	200 - 100	219,1 - 114,3	244	298	152	158	15,9	9,5	300	114	M16x90	130 - 170	3,59	GMGX	UL	FM
GMGR	GMGG	10 - 2	250 - 50	273,0 - 60,3	300	372	180	100	15,9	7,9	300	64	M20x110	180 - 220	4,77	GMGX	UL	FM
GMGR	GMGG	10 - 2½	250 - 65	273,0 - 76,1	300	372	180	115	15,9	7,9	300	79	M20x110	180 - 220	4,93	GMGX	UL	FM
GMGR	GMGG	10 - 3	250 - 80	273,0 - 88,9	300	372	180	128	15,9	7,9	300	92	M20x110	180 - 220	5,22	GMGX	UL	FM
GMGR	GMGG	10 - 4	250 - 100	273,0 - 114,3	300	372	182	160	15,9	9,5	300	114	M20x110	180 - 220	6,34	GMGX	UL	FM

Material specifications

Housing: ductile iron conform to ASTM A536 Grade 65-45-12 (EN-GJS-450-10).

Coating:

- Hot dip galvanised.
- Red paint coating RAL 3000, epoxy powder coating (any other colour on request).

Bolts and nuts:

- Medium carbon steel, zinc electroplated, quenched and tempered (ASTM A183/ISO 898).

For additional details we refer to our separate bolts & nuts datasheet.

Rubber gasket: standard delivered with EPDM Grade E gasket, manufactured from compounds meeting applicable ASTM D2000 requirements. NBR can be ordered separately.

GASKET COMPOUND GRADE	REFERENCE CATALOGUE ITEM	TEMPERATURE RANGE (°C)	MEDIUM					
			Cold Water	Hot water	Air (oil-free)	Nitrogen	Glycol/ water mixtures	Air (with oil vapor)
EPDM	GMG, GST, GMD, GSTFC	-40°C / +110°C	✓	✓	✓	✓	✓	
NBR-TL	GKS, GKF, GKA, GMG, GSTFC	-29°C / +83°C				✓		✓
NBR-TL	GKS, GKF, GKA, GMG, GSTFC	-29°C / +63°C	✓	✓	✓			
NBR-TL	GKS, GKF, GKA, GMG, GSTFC	-29°C / +20°C					✓	

Applications

• Fire protection systems (water-based):

Wet, dry, deluge and pre-action sprinkler systems in accordance with FM / UL approvals and applicable standards.

• HVAC and building services:

Heating, cooling, and glycol-based systems.

• Industrial applications:

Compressed air, exhaust, drainage and other piping systems.

Working pressure

• Sprinkler applications (water-based fire protection systems):

Maximum working pressure 2,07 MPa / 20,7 bar / 300 psi, in accordance with applicable product certifications (e.g. FM, UL) and system standards (e.g. NFPA 13, EN 12845, APSAD).

• Other media and non-sprinkler applications:

The allowable working pressure depends on the fluid group and application and shall be determined in accordance with Directive 2014/68/EU (PED) and applicable technical documentation (available on Profit website CSTB certifications).

These products are typically classified under Article 4(3) (Sound Engineering Practice - SEP) and are not CE-marked.

The applicable PED category depends on system parameters and must be verified by the system designer.

These products are not intended for use with gases classified in Group 1 (hazardous media according to PED).

Such applications fall outside the scope of this datasheet.

• Vacuum resistance (all media except gas group 1):

Suitable for vacuum applications. Tested down to -0,85 bar(g) in according to FM1920.

For design purposes, a conservative limit of -0,55 bar(g) is recommended.

Approvals

- Sprinkler-specific:



- Other qualifications:



- KOMO® (KIWA):**

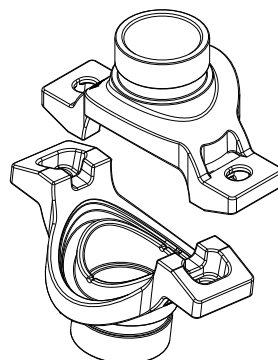
A quality mark that guarantees the quality, integrity and compliance with building regulations of products, processes, and services within the construction and infrastructure sectors for cold & hot non-drinking water applications up to 110°C. The certification is based on BRL 2013 and EN 681-1 standards.

Threads

- Standard: BSPT thread (ISO 7-1 / EN10226).
- Available with NPT thread on request (ANSI / ASME B1.20.1).

LABEL EXAMPLE

Mechanical tee	
GMG (Grooved)	
4-2½	5-2½
6-2½	8-2½
Hole cut dimension 79mm	



* Please note that the **correct hole cut dimension** is mentioned:

- on the label which is attached to the product itself
- on the document called 'Hole cut dimensions', which is added to each delivery from our warehouse Piping Logistics, Belgium. This document is attached to the outside of the first box in a plastic pouch with reference 'Documents enclosed'

Mechanical cross** conversion				
	Main pipe diameter		Maximum outlet mechanical cross	
Inch	DN	OD	DN	OD
2½	65	76,1	32	42,4
3	80	88,9	40	48,3
4	100	114,3	50	60,3
5	125	139,7	65	76,1
6	150	168,3	80	88,9
8	200	219,1	100	114,3
10	250	273,0	100	114,3

**Mechanical cross not FM and UL certified.

GENERAL INFO

- Installers should be trained or experienced to install and understand the product.
- Before installation, carefully check the product on any damage during shipment or handling.
- Read and understand all technical datasheets and installation instructions before attempting to install, remove or adjust any Profit products.
- Check if the pressure rating of the product is compatible with the service conditions.
- Depressurise and drain the sprinkler installation system before attempting to install, remove or adjust any Profit products.
- Never work on piping systems that are pressurised and / or filled with water or pressurised air.
- Piping Logistics reserves the right to change specifications, designs and / or standard equipment without notice and without incurring in any obligations.
- Use the necessary Personal Protection Equipment (PPE) to avoid personal injury (helmet, safety shoes, goggles and gloves).



- Profit paint coated products are intended for piping with category C1 and C2 environment (indoor). For installations in category C3 we advise the use of our hot dip galvanised couplings and fittings. For application in corrosivity category C4 (higher salinity climate) or higher, please contact info@pipinglogistics.eu. (Classification according to ISO 9223)
- Pressure ratings listed for fire sprinkler applications are CWP (cold working pressure) or MWP (maximum working pressure) at a maximum service temperature of 66°C. This rating may occasionally differ from maximum working pressure listed and / or approved by UL and / or FM, as testing conditions and test pipes can differ. For more information, please contact info@pipinglogistics.eu.
- Maximum working pressure listed is the total of internal and external pressures based on standard weight (ANSI) steel pipe and standard roll or cut groove in accordance with Profit specifications. For more information, please contact info@pipinglogistics.eu.
- For more information on allowed pressures and temperatures related to HVAC applications please contact info@pipinglogistics.eu.
- For a onetime commissioning test only, the maximum joint working pressure may be increased to 150% of the working pressure.
- Independent technical datasheet for bolts & nuts and rubber gaskets.

Failure to follow these instructions could result in property damage, serious injury or death.

Our product must always be stored in closed and dry environments. Once installed on an above ground sprinkler system, they require no specific maintenance.

REVISION TABLE

Date	△	Notes
28/09/2026		New design.