



TECHNICAL DATA SHEET OF THE PRODUCT

Compression fittings for metal-polymer pipes Compress

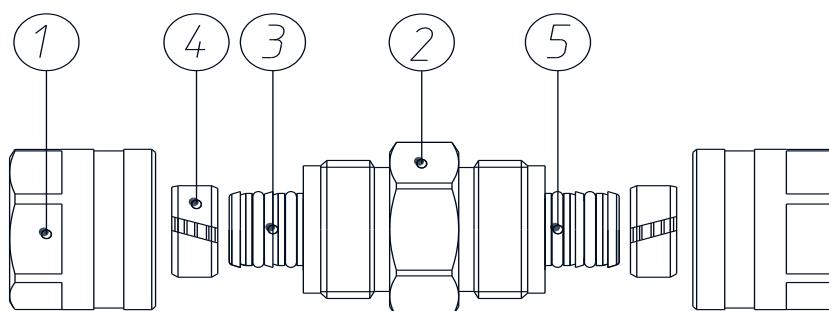
1. Purpose and scope of application

Raftec compression fittings are designed to create detachable compression connections of pipelines made of metal-polymer pipes PEX-AL-PEX, PE-AL-PE, PEX-AL-PE, PERT-AL-PE, etc. In drinking and domestic water supply systems, hot water supply, heating, as well as on process pipelines transporting liquids, they are not aggressive to pipe materials and connectors. Connectors are compatible with metal-polymer pipes with a wall thickness of 2 mm. - 16x2.0, 20x2.0.

2. Technical specifications

№	Characteristic	Designation	
		16	20
	Dimensions (diameter), mm.	16	20
1	Nominal pressure, bar	10	
2	Maximum operating temperature of the coolant, °C	90	
3	Working pressure, bar	10	
4	Thread type on transition connectors, class	B	
5	Average full service life, years	50	

3. Construction and material

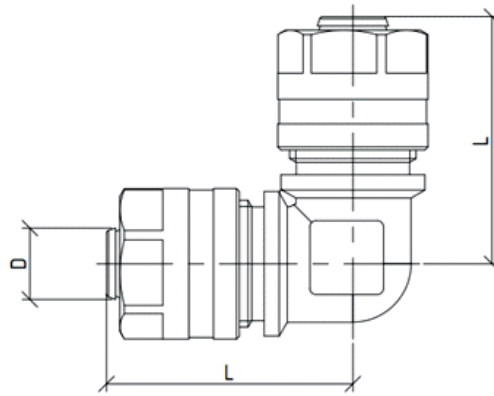


The connection is made of 4 elements: clamping nut 1, fitting 2, nipple 3, clamping ring 4. In the grooves of the nipple 3 body there are two sealing rings 5. A dielectric washer which is placed in the groove of the nipple 3 and prevents the occurrence of a galvanic pair between the aluminum of the metal-polymer pipe and brass, and also makes the pipeline as a whole non-conductive. The pipe is put on the nipple 3 and fixed on the split brass ring 4 connected with a clamp, which compresses the pipe when the conical surfaces of the nut 1 interact. Twisting the fitting is carried out using a wrench. The nipple of the connector with recessed rings 3 after crimping creates a hermetic connection.

№	Name of element	Material	Material grade according to standards
1	Nut	Hot pressed brass	CW614N
2	Fitting	Hot pressed brass	CW614N
3	Union	Hot pressed brass	CW614N
4	Clamping ring	Hot pressed brass	CW614N
5	Sealing ring	Ethylene-propylene-diene monomer	EPDM

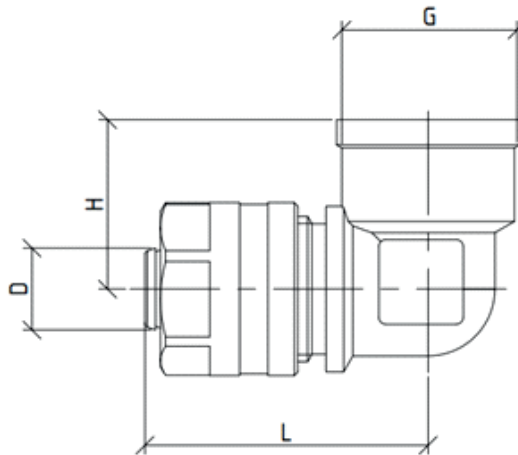
4. Nomenclature and overall dimensions

4.1 Elbow



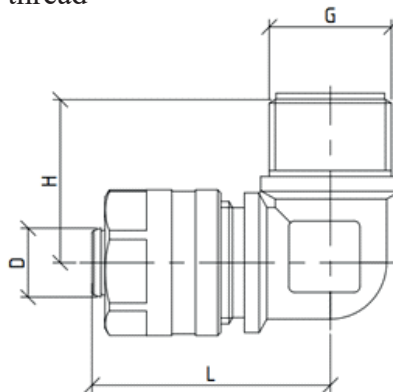
Elbow				
Size	Article	D, mm	L, mm.	Weight, gr.
16x16	UR-1616	16	40	146
20x20	UR-2020	20	40	190

4.2 Elbow adapter with female thread



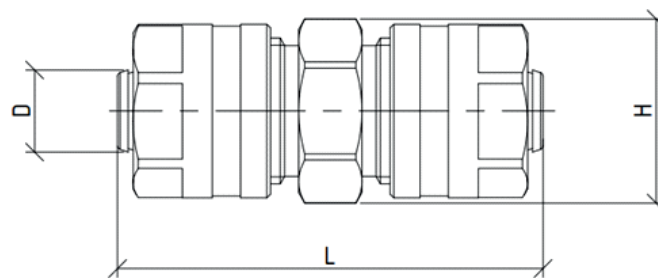
Elbow adapter with female thread						
Size	Article	G	D, mm	L, mm.	H, mm	Weight, gr.
16x1/2"	UV-1601	1/2"	16	40	24	113
20x1/2"	UV-2001	1/2"	20	40	24	131
20x3/4"	UV-2002	3/4"	20	44	25	133

4.3 Elbow adapter with male thread



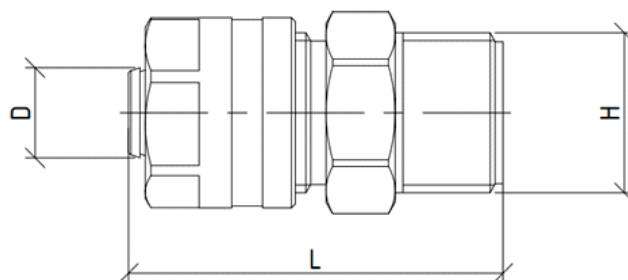
Elbow adapter with male thread						
Size	Article	G	D, mm	L, mm.	H, mm	Weight, gr.
16x1/2"	UN-1601	1/2"	16	40	28	112
20x1/2"	UN-2001	1/2"	20	42	28	130
20x3/4"	UN-2002	3/4"	20	44	29	142

4.4 Coupling



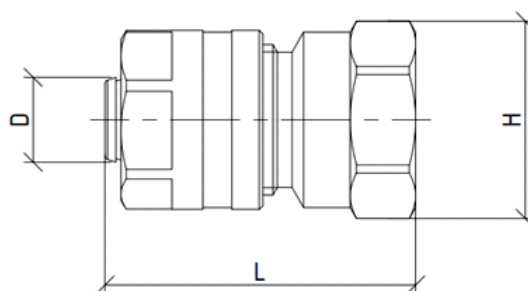
Coupling				
Size	Article	D, mm	L, mm.	Weight, gr.
16x16	MR-1616	16	60.5	131
20x20	MR-2020	16	55.5	170

4.5 Adapter with male thread



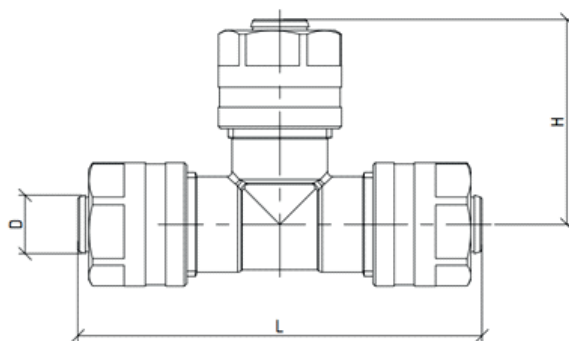
Adapter with male thread					
Size	Article	G	D, mm	L, mm.	Weight, gr.
16x1/2"	MN-1601	1/2"	16	48.5	82
20x1/2"	MN-2001	1/2"	20	49.5	114
20x3/4"	MN-2002	3/4"	20	50.5	109

4.6 Adapter with female thread



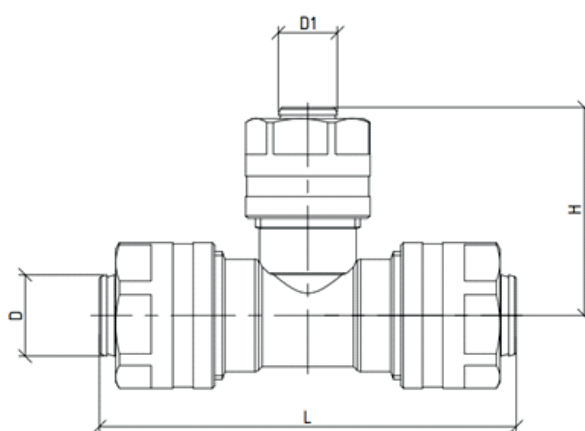
Adapter with female thread					
Size	Article	G	D, mm	L, mm.	Weight, gr.
16x1/2"	MV-1601	1/2"	16	42.5	85
20x1/2"	MV-2001	1/2"	20	44.5	103
20x3/4"	MV-2002	3/4"	20	46	121

4.7 Tee



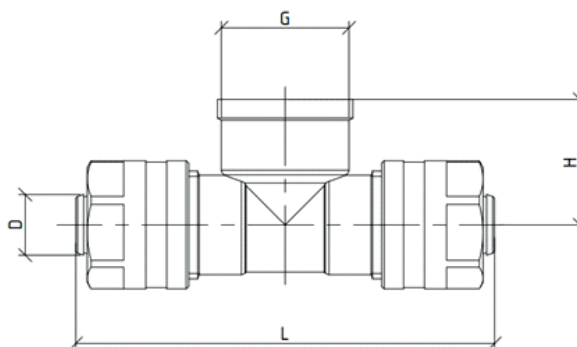
Tee					
Size	Article	L, mm.	D, mm	H, mm.	Weight, gr.
16x16x16	TR-161616	80.5	16	40	202
20x20x20	TR-202020	82	20	41.5	243

4.8 Tee reducing



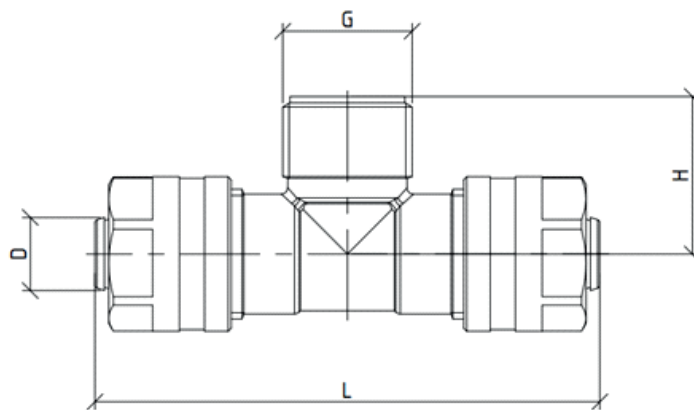
Tee reducing						
Size	Article	L, mm.	D, mm	D1,mm	H, mm.	Weight, gr.
20x16x20	TP-201620	82	20	16	40.5	241

4.9 Tee with internal thread



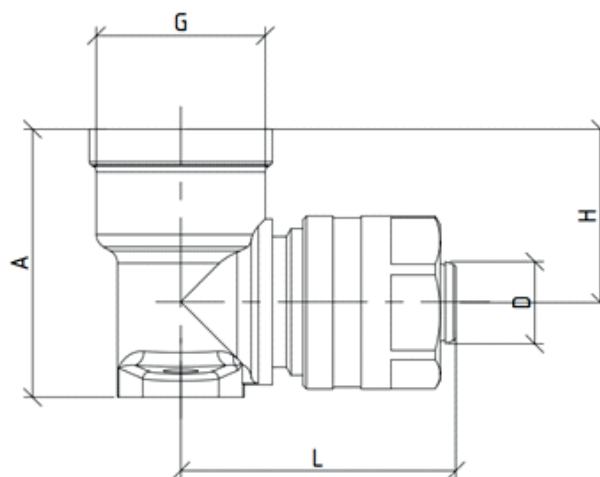
Tee with internal thread					
Size	Article	L, mm.	D, mm	H, mm.	Weight, gr.
16x1/2x16	TV-160116	80.5	16	24	156
20x1/2x20	TV-200120	82	20	24	231

4.10 Tee with external thread



Tee with external thread						
Size	Article	G	D ,mm	L, mm.	H, mm.	Weight, gr.
16×1/2"x16	TN-160116	1/2"	16	80.5	25	164
20×1/2"x20	TN-200120	3/4"	20	82	26	222

4.11 Wall-mounted elbow, female thread



Wall-mounted elbow, female thread							
Size	Article	G	D ,mm	L, mm.	A, mm.	H, mm	Weight, gr.
16x1/2"	UVL-1601	1/2"	16	39	38	25	134

5. Installation instructions

1. The temperature during installation of the Raftec system must be above -15°C , the recommended temperature range during installation is from 5°C to 25°C .
 2. We recommend using a specialized tool for installation.
 3. The fitting must be installed in accordance with the following regulations:
 - cut the pipe strictly perpendicular to its longitudinal axis;
 - prepare the end of the pipe for installation (calibrate and remove the internal chamfer);
 - put a compression nut on the pipe;
 - put a compression split ring (cracker) on the pipe;
 - put the pipe on the connector nipple without damaging the sealing rings;
 - screw the nut onto the connector by hand;
 - holding the connector with one open-end wrench, use the second open-end wrench to tighten the union nut by 1 turn for diameters of 16-20 mm.
 4. Since compression joints are detachable, their monolithic installation in building structures is not permitted.
 5. When connecting fittings with a transition to a pipe thread to a steel pipeline, the thread length on the steel pipe should not be less than 20 mm. Otherwise, damage to the body of the brass connector may occur due to wedging when the thread on the pipe runs off.
 6. The metal-polymer pipeline system must be installed so that the fittings do not experience longitudinal and bending loads. For this purpose, the project must indicate the installation locations of moving and fixed supports, as well as compensators.
 7. Fittings with a transition to a pipe thread may be connected to elements of the pipeline system by sealing the thread with FUM tape or sanitary polyamide thread.
 8. It is not permitted to operate connectors without dielectric gaskets and sealing rings.
 9. When using connectors on pipelines transporting liquid hydrocarbons, EPDM O-rings should be replaced with NBR, HNBR or FPM (Viton) rings.
 10. After hydraulic testing of the pipeline system with compression connectors, as well as after the first five hours of operation of systems with a temperature of the transported medium above 50°C , it is necessary to check whether the tightening of the union nuts has been weakened. If necessary, the union nuts must be tightened.
 11. The tightening of fittings must be checked in the following cases: - on all systems – at least once a year; - on heating systems – before the start of the heating season; - on hot water supply systems – after the summer shutdown of hot water supply;
 - in cases of emergency exceeding of maximum permissible characteristics of the system (pressure, temperature); – in cases of unforeseen mechanical impacts on the metal-polymer pipeline.
 12. After completing the installation of the system, perform a pressure test of the system.
 13. Prevent ice from forming inside the pipe to avoid damage.
 14. Installation must be performed by qualified and competent personnel.
 15. Fittings must be used under the conditions specified in the tables given in Section No. 2 “Technical Specifications”.
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6. Storage and transportation

1. Fittings must be stored in the manufacturer's packaging according to storage conditions 3 according to GOST 15150-69.
2. Fittings must be transported in accordance with requirements 5 according to GOST 15150-69.

7. Utilization

Disposal of the product (melting, burial, resale) in accordance with the procedure established by the Law of Ukraine of 1992 No. 50, Art. 678, (as amended by No. 2556 - III (2556-14) of 21.06.2001, No. 48, Art. 252 "On Atmospheric Air Protection" (as amended by 14.07.2016), of 1998 No. 36-37, 242 "On Waste" (as amended by 09.04.2015), of 1991 No. 41, Art. 546 "On Environmental Protection" (as amended by 04.10.2016), as well as other norms, acts, rules, orders, etc.

8. Warranty obligations

1. The manufacturer guarantees that the products comply with safety requirements, provided that the consumer complies with the rules of use, transportation, storage, installation and operation.
2. The warranty applies to all defects that have arisen due to the fault of the manufacturer.
3. The warranty does not apply to defects that have arisen in cases of:
 - violation of the passport regimes of transportation, storage, installation, operation and maintenance of the product;
 - improper transportation and loading and unloading operations;
 - presence of traces of exposure to substances aggressive to the materials of the product;
 - presence of damage caused by fire, natural disasters, force majeure circumstances;
 - presence of damage caused by incorrect actions of the consumer;
 - presence of traces of third-party interference in the design of the product.
4. The manufacturer reserves the right to make changes to the product design that do not affect the declared technical characteristics.

9. Warranty terms and conditions

1. Claims for the quality of the goods may be made during the warranty period.
 2. Defective products during the warranty period are repaired or exchanged for new ones free of charge. The decision to replace or repair the product is made by the service center. The replaced product or its part obtained as a result of the repair becomes the property of the service center.
 3. The costs associated with dismantling, installation and transportation of the defective product during the warranty period are not reimbursed to the Buyer.
 4. In cases where the claim is unfounded, the costs of diagnostics and examination are paid by the Buyer.
 5. Products are accepted for warranty repair (as well as when returned) fully equipped.
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WARRANTY CARD № _____

Product name _____
Brand, article, size _____
Quantity _____
Name and address of the trading organization _____
Date of sale _____ Seller's signature _____

Stamp or seal
of the trading organization

I AGREE with the conditions:
BUYER _____
(signature)

The warranty period is seven years (eighty-four months) from the date of sale to the end consumer.

When making claims regarding the quality of the goods, the buyer shall provide the following documents:

1. A statement in any form, indicating:
 - name of the organization, full name of the buyer, actual address and contact phone number;
 - name and address of the organization that performed the installation;
 - main system parameters;
 - short description of the defect;
2. Document proving the purchase of the product;
3. Hydraulic test certificate of the system in which the product was installed;
4. A completed warranty card issued on the manufacturer's website «raftec.eu».

Return or exchange mark: _____

Date _____ y. Signature: _____