



TECHNICAL PASSPORT OF THE PRODUCT

PP-R fittings

1. Purpose and scope

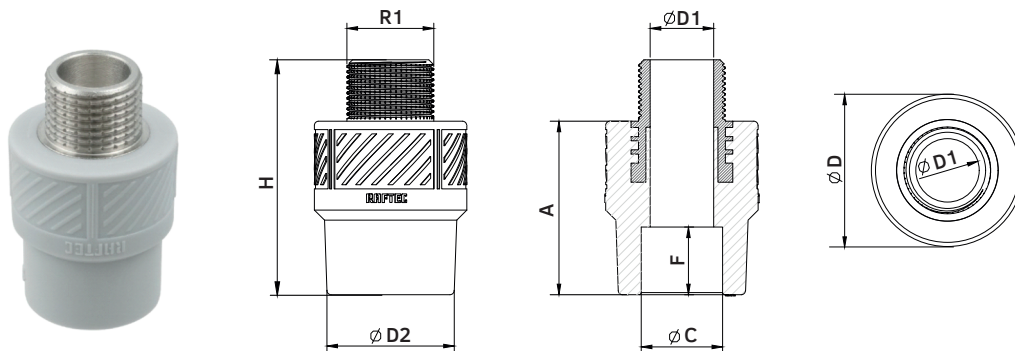
Raftec fittings - are used in drinking and domestic drinking water systems, hot water supply, as well as as technological pipelines that transport liquids and gases that are not aggressive to the materials of the pipe and **Raftec** fittings.

2. Technical specifications

№	Characteristic	Value					
		Dimensions (diameter), mm.					
		20	25	32	40	50	63
1	Fitting material	Polypropylene PPR 100					
2	Maximum operating temperature coolant, ° C	90					
3	Working pressure, bar	10					
4	Average full service life, years	50					

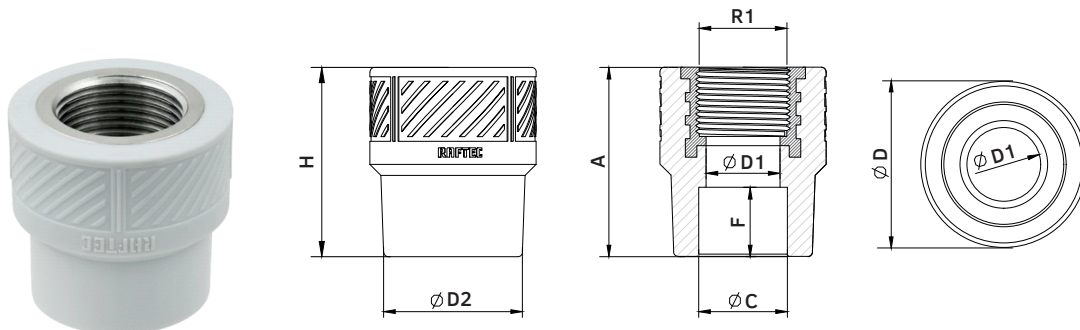
2. Nomenclature and overall dimensions

2.1 Male Coupling M



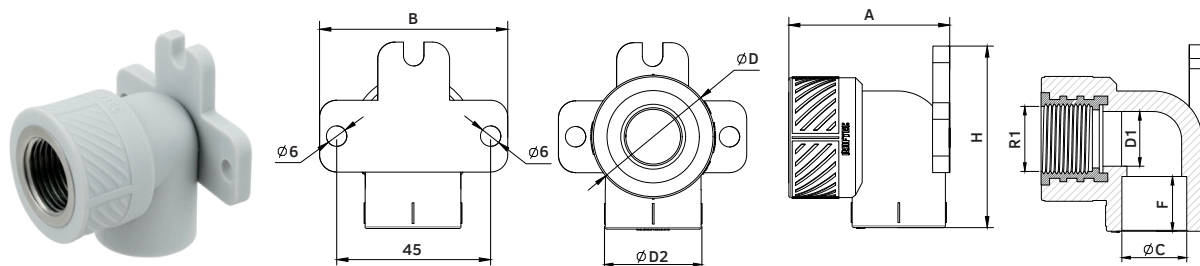
Nº	Artikl	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RMC2001	1/2"x20	1/2"	36	16	30	56	41	19	16	55	40
2	RMC2002	3/4"x20	3/4"	44	20	30	56	41	19	16	88	25
3	RMC2501	1/2"x25	1/2"	44	16	36	56	41	24	17	55	25
4	RMC2502	3/4"x25	3/4"	44	20	36	56	41	24	17	88	20
5	RMC3203	1"x32	1"	56	26	46	65	48	31	19	153	10
6	RMC3202	3/4"x32	3/4"	56	20	46	62	48	31	19	120	20

2.2 Female Coupling



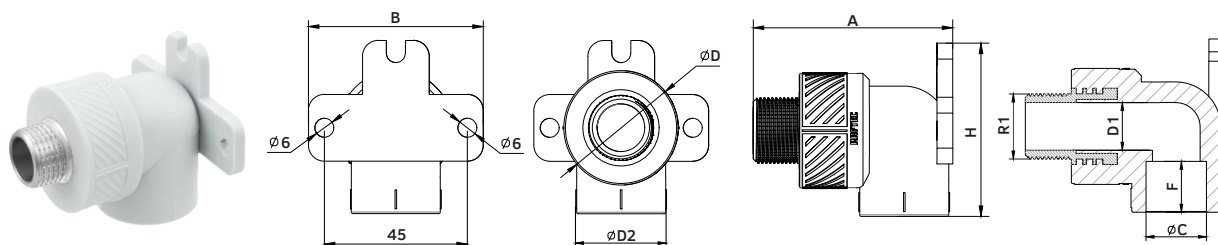
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RFC2001	1/2"x20	1/2"	36	16	30	41	41	19	16	44	50
2	RFC2002	3/4"x20	3/4"	44	19	30	41	41	19	16	60	25
3	RFC2501	1/2"x25	1/2"	44	16	36	41	41	24	17	55	25
4	RFC2502	3/4"x25	3/4"	44	19	36	41	41	24	17	63	25
5	RFC3202	3/4"x32	3/4"	56	26	46	48	48	31	19	95	20
6	RFC3203	1"x32	1"	56	26	46	48	48	31	19	121	10

2.3 Female Elbow Wallplate



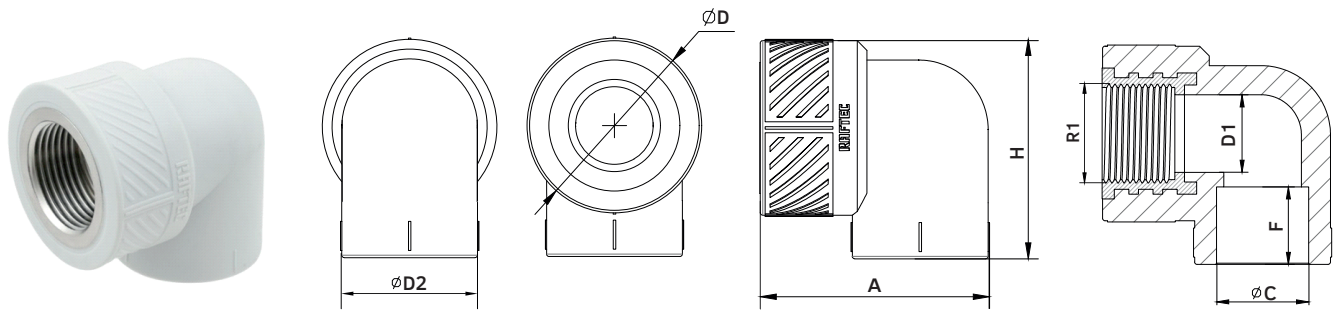
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	B, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RFW2001	1/2"x20	1/2"	36	16	28	54	47	55	19	16	52	20
2	RFW2501	1/2"x25	1/2"	44	16	36	59	56	55	24	17	71	20

2.4 Male Elbow Wallplate



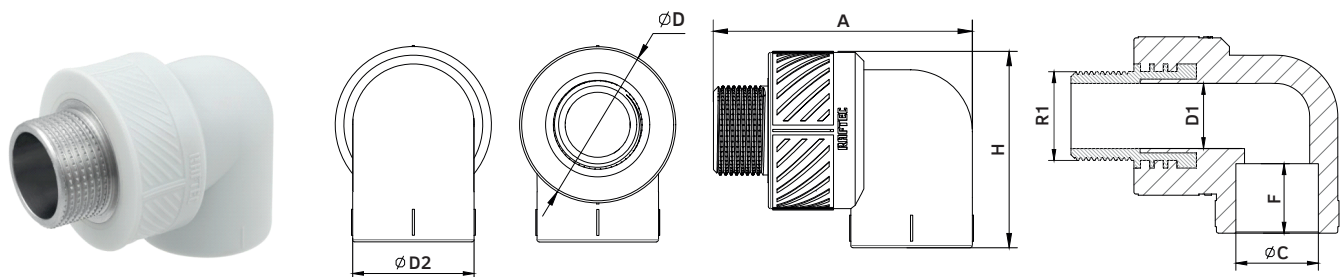
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	B, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RMW2001	1/2"x20	1/2"	36	16	28	54	62	55	19	16	63	20

2.5 Female Elbow



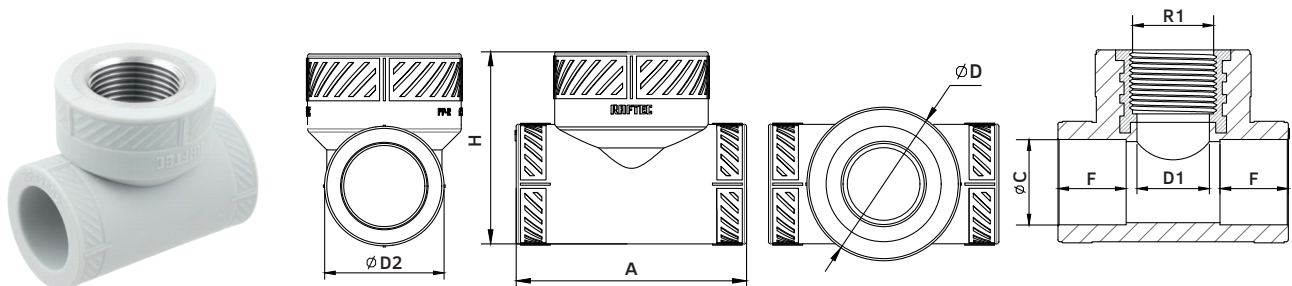
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RFU2001	1/2"x20	1/2"	36	16	28	47	45	19	16	47	25
2	RFU2501	1/2"x25	1/2"	44	16	36	52	55	24	17	76	25
3	RFU2502	3/4"x25	3/4"	44	16	36	52	55	24	17	66	20
4	RFU3203	1"x32	1"	56	26	43	63	66	31	19	138	10

2.6 Male Elbow



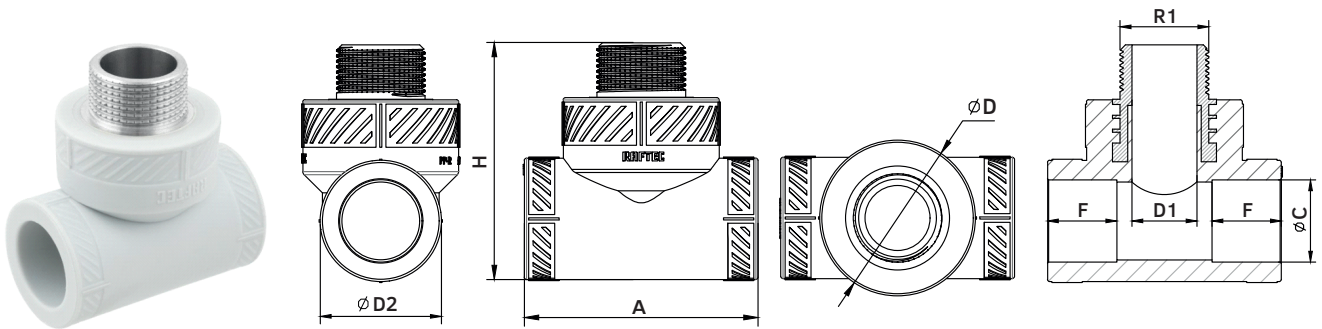
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RMU2001	1/2"x20	1/2"	36	16	28	45	60	19	16	47	25
2	RMU2501	1/2"x25	1/2"	44	16	36	52	68	24	17	66	20
3	RMU2502	3/4"x25	3/4"	44	20	36	52	70	24	17	76	20
4	RMU3203	1"x32	1"	56	26	43	63	83	31	19	138	10

2.7 Female Tee F



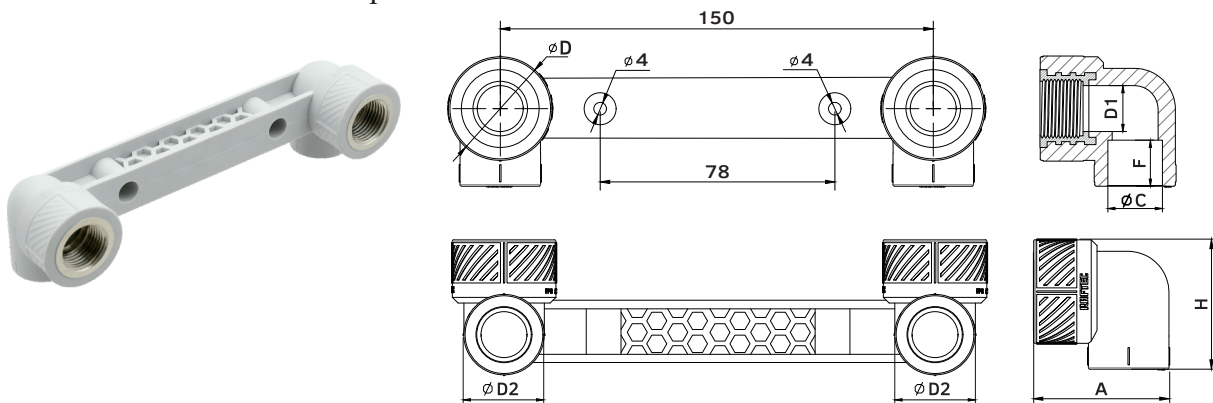
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RFT2001	1/2"x20	1/2"	36	16	28	44	58	19	16	50	25
2	RFT2501	1/2"x25	1/2"	44	16	36	52	62	24	17	73	20
3	RFT2502	3/4"x25	3/4"	44	20	36	52	62	24	17	80	20
4	RFT3203	1"x32	1"	56	26	43	65	80	31	19	149	10

2.8 Male Tee



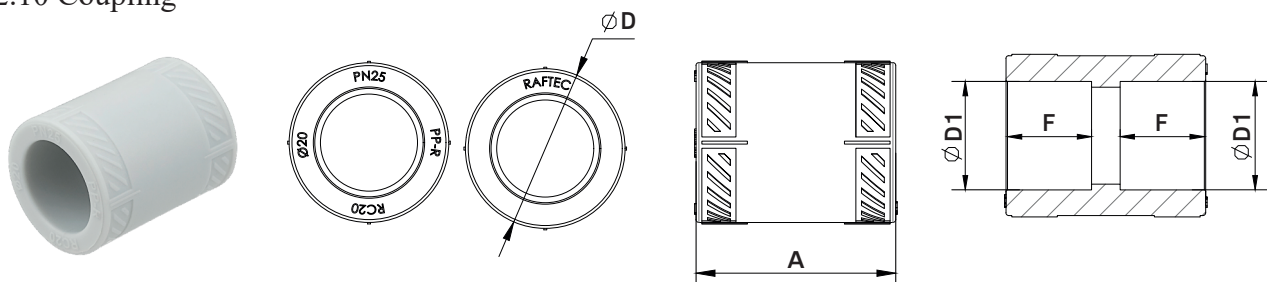
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RMT2001	1/2"x20	1/2"	36	16	28	55	58	19	16	60	20
2	RMT2501	1/2"x25	1/2"	44	16	36	65	62	24	17	84	20
3	RMT2502	3/4"x25	3/4"	44	20	36	66	62	24	17	107	20
4	RMT3203	1"x32	1"	56	26	43	82	80	31	19	180	10

2.9 Duple female elbow with tap connector



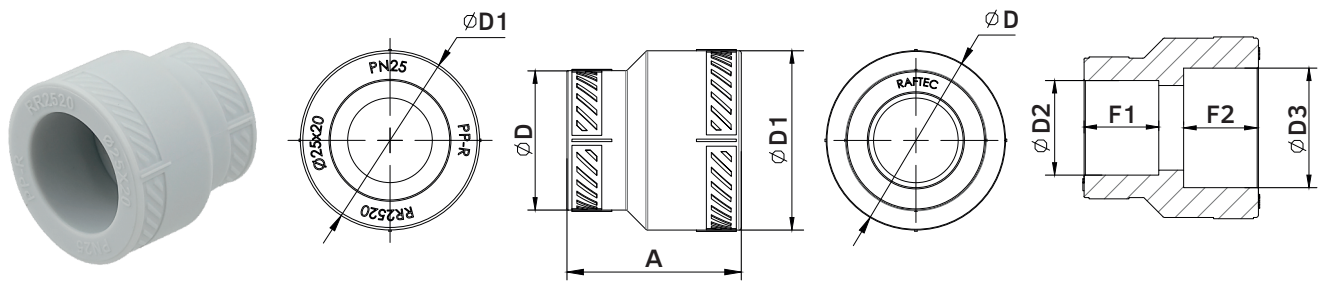
Nº	Code	Diameter	R1	D, mm	D1, mm	D2, mm	H, mm	A, mm	C, mm	F, mm	Weight, g	Package, pcs.
1	RDFE2001	1/2"x20	1/2"	36	16	28	47	45	19	16	114	5

2.10 Coupling



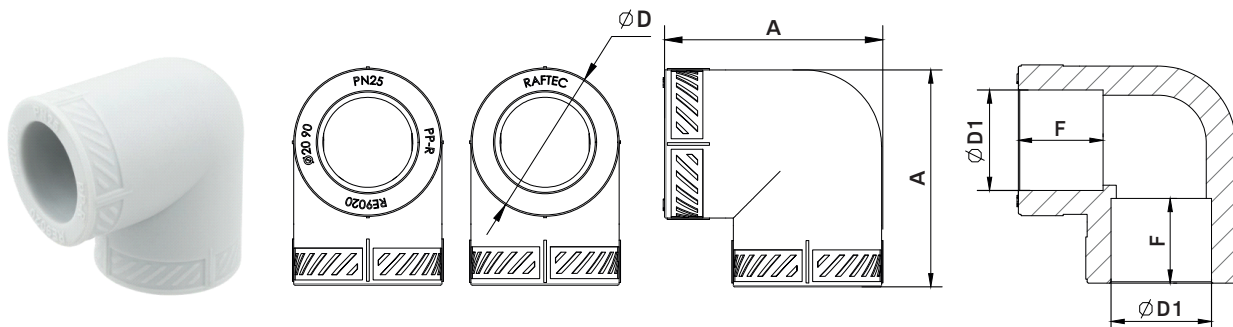
Nº	Code	Diameter	D, mm	D1, mm	A, mm	F, mm	Weight, g	Package, pcs.
1	RC20	20	28	19	36	16	11	100
2	RC25	25	35	24	40	17	20	50
3	RC32	32	43	31	43	19	26	25
4	RC40	40	52	39	47	21	41	10
5	RC50	50	66	49	56	25	79	5
6	RC63	63	82	62	65	29	132	4

2.11 Reduced Coupling



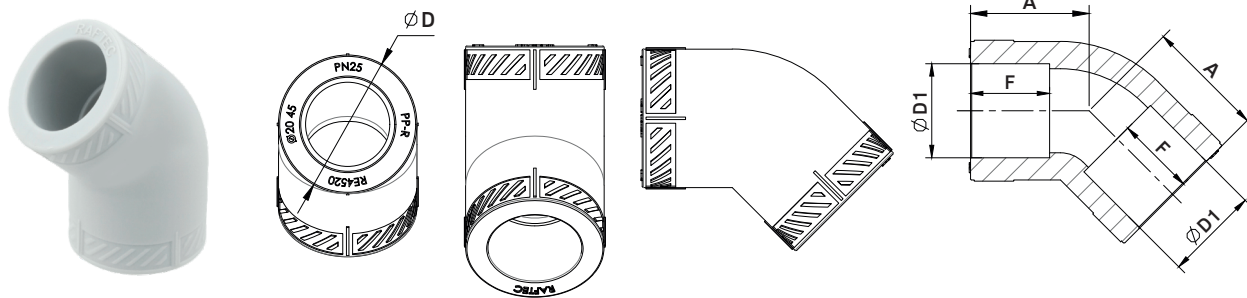
Nº	Code	Diameter	D, mm	D1, mm	D2, mm	D3, mm	A, mm	F1, mm	F2, mm	Weight, g	Package, pcs.
1	RR2520	25x20	28	35	35	24	35	16	17	16	50
2	RR3220	32x20	28	43	43	31	40	16	19	20	25
3	RR3225	32x25	35	43	43	31	40	16	19	23	25
4	RR4020	40x20	28	53	53	39	45	16	21	33	20
5	RR4025	40x25	35	53	53	39	45	16	21	35	20
6	RR4032	40x32	44	53	53	39	45	19	21	36	20
7	RR5020	50x20	28	67	67	48	48	17	25	56	10
8	RR5025	50x25	35	67	67	48	48	17	25	59	10
9	RR5032	50x32	44	67	67	48	50	19	25	63	10
10	RR5040	50x40	53	67	67	48	52	21	25	68	10
11	RR6320	63x20	28	83	83	62	54	16	28	98	10
12	RR6325	63x25	35	83	83	62	54	16	28	100	10
13	RR6332	63x32	44	83	83	62	56	19	28	102	10
14	RR6340	63x40	53	83	83	62	58	21	28	104	10
15	RR6350	63x50	67	83	83	62	62	25	28	119	5

2.12 Elbow 90°



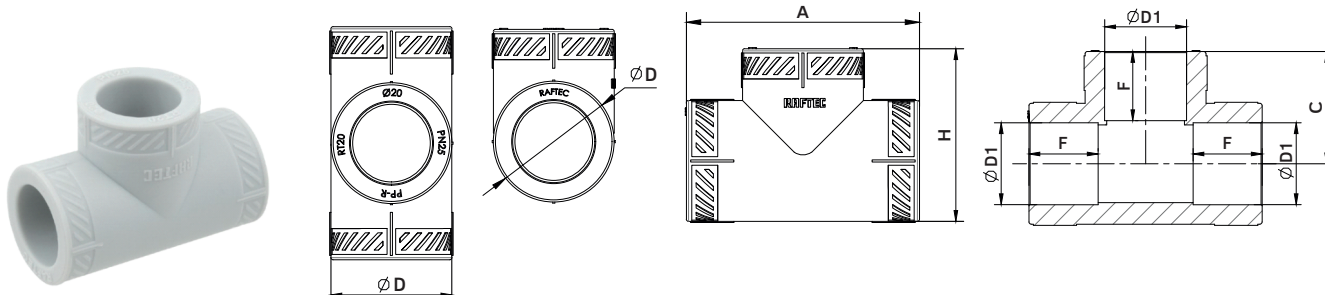
Nº	Code	Diameter	D, mm	D1, mm	A, mm	F, mm	Weight, g	Package, pcs.
1	RE9020	20	28	19	41	16	17	50
2	RE9025	25	36	24	48	16	33	50
3	RE9032	32	43	31	58	19	49	20
4	RE9040	40	53	39	72	21	85	5
5	RE9050	50	67	48	84	25	140	5
6	RE9063	63	83	62	105	28	265	2

2.13 Elbow 45°



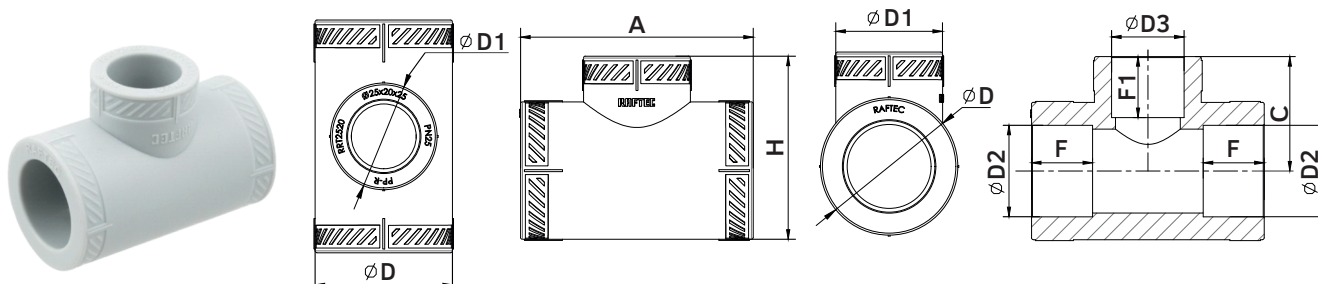
Nº	Code	Diameter	D, mm	D1, mm	A, mm	F, mm	Weight, g	Package, pcs.
1	RE4520	20	28	19	24	16	14	50
2	RE4525	25	36	24	25	16	25	50
3	RE4532	32	43	31	36	19	45	20
4	RE4540	40	53	39	36	21	65	10
5	RE4550	50	67	48	44	25	126	5
6	Re4563	63	83	62	53	28	221	2

2.14 Tee



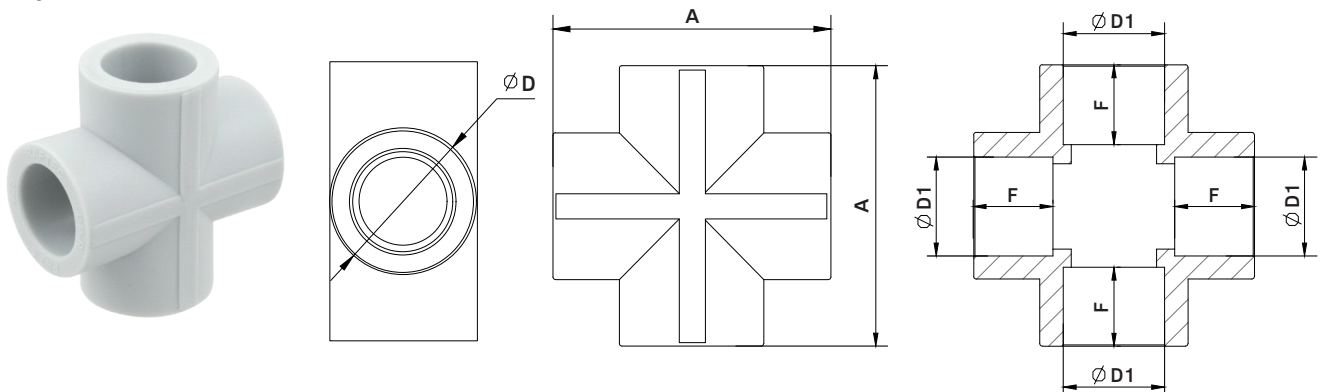
Nº	Code	Diameter	D, mm	D1, mm	A, mm	F, mm	H, mm	C, mm	Weight, g	Package, pcs.
1	RT20	20	28	19	54	16	40	26	21	50
2	RT25	25	35	24	62	17	51	33	42	25
3	RT32	32	43	31	75	19	59	38	55	10
4	RT40	40	52	39	85	21	69	42	89	5
5	RT50	50	66	49	100	25	84	50	163	4
6	Rt63	63	82	62	125	29	104	62	294	2

2.15 Reduced Tee



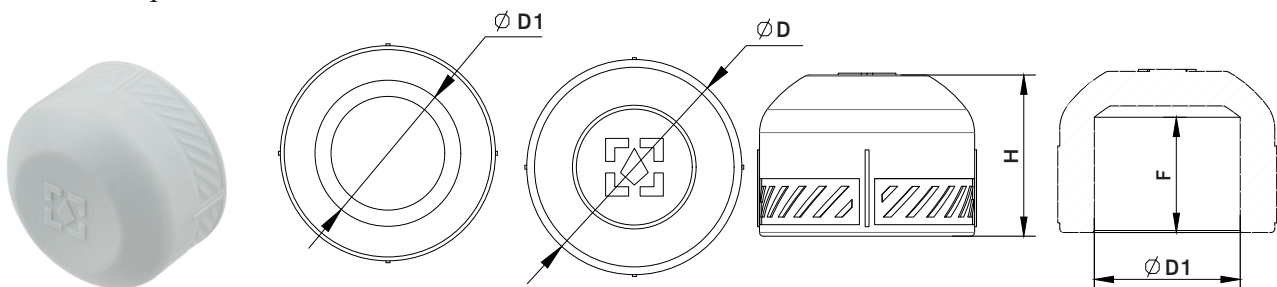
Nº	Code	Diameter	A, mm	D, mm	D1, mm	D2, mm	D3, mm	F, mm	F1, mm	H, mm	C, mm	Weight, g	Package, pcs.
1	RRT2520	25x20x25	61	35	28	24	19	17	16	48	30	34	25
2	RRT3220	32x20x32	65	43	28	31	19	19	16	56	34	20	20
3	RRT3225	32x25x32	70	43	35	31	24	19	17	57	37	50	20
4	RRT4020	40x20x40	68	52	28	39	19	21	16	71	44	66	10
5	RRT4025	40x25x40	72	52	35	39	24	21	17	71	44	73	10
6	RRT4032	40x32x40	80	52	43	39	31	21	19	71	44	82	10
7	RRT5020	50x20x50	75	66	28	49	19	25	16	84	50	113	5
8	RRT5025	50x25x50	80	66	35	49	24	25	17	84	50	122	5
9	RRT5032	50x32x50	87	66	43	49	31	25	19	84	50	143	5
10	RRT5040	50x40x50	95	66	52	49	39	25	21	84	50	160	5
11	RRT6320	63x20x63	85	82	28	62	19	29	16	98	56	180	4
12	RRT6325	63x25x63	86	82	35	62	24	29	17	100	58	186	4
13	RRT6332	63x32x63	92	82	43	62	31	29	19	100	58	199	4
14	RRT6340	63x40x63	100	82	52	62	39	29	21	100	58	251	4
15	RRT6350	63x50x63	100	82	66	62	49	29	25	100	58	260	2

2.16 Cross



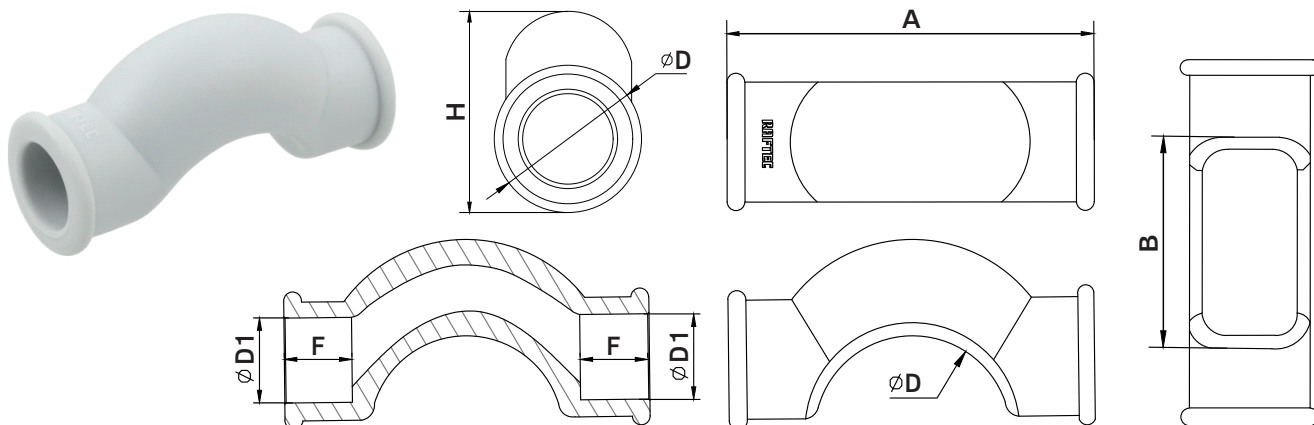
Nº	Code	Diameter	D, mm	D1, mm	A, mm	F, mm	Weight, g	Package, pcs.
1	RCS20	20x20x20x20	28	19	53	16	24	25
2	RCS25	25x25x25x25	35	24	64	17	43	20

2.17 End Cap



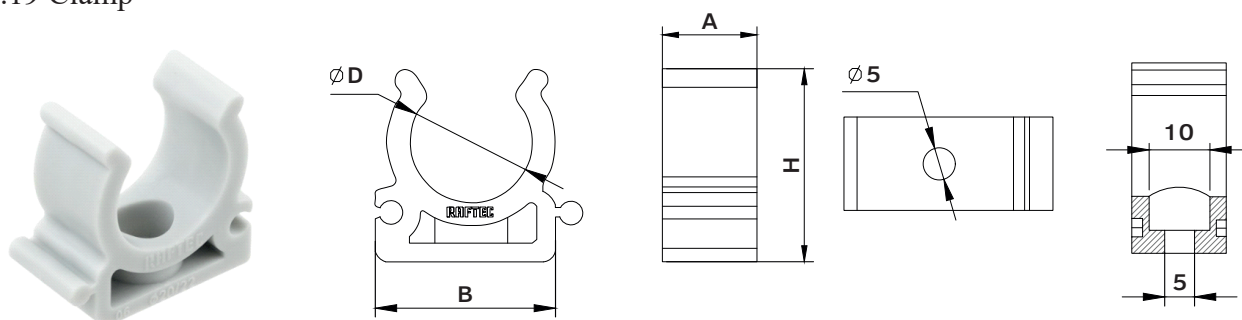
Nº	Code	Diameter	D, mm	D1, mm	H, mm	F, mm	Weight, g	Package, pcs.
1	REC20	20	28	19	21	16	6	100
2	REC25	25	35	24	22	17	11	100
3	REC32	32	43	31	28	19	19	50

2.18 Shot bypass



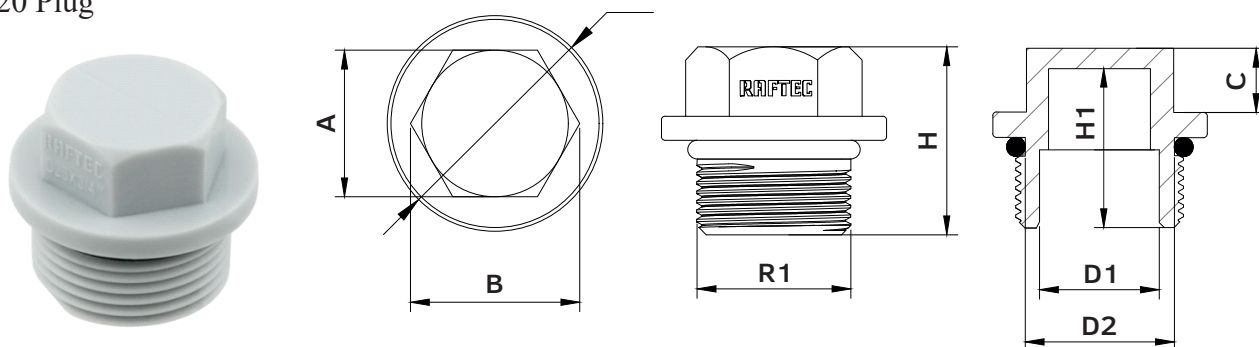
Nº	Code	Diameter	A, mm	H, mm	B, mm	D, mm	D1, mm	D2, mm	F, mm	Weight, g	Package, pcs.
1	RSB20	20	84	43	44	32	19	44	16	31	25
2	RSB25	25	95	49	47	39	24	48	18	42	20
3	RSB32	32	107	59	58	46	31	58	21	66	10

2.19 Clamp



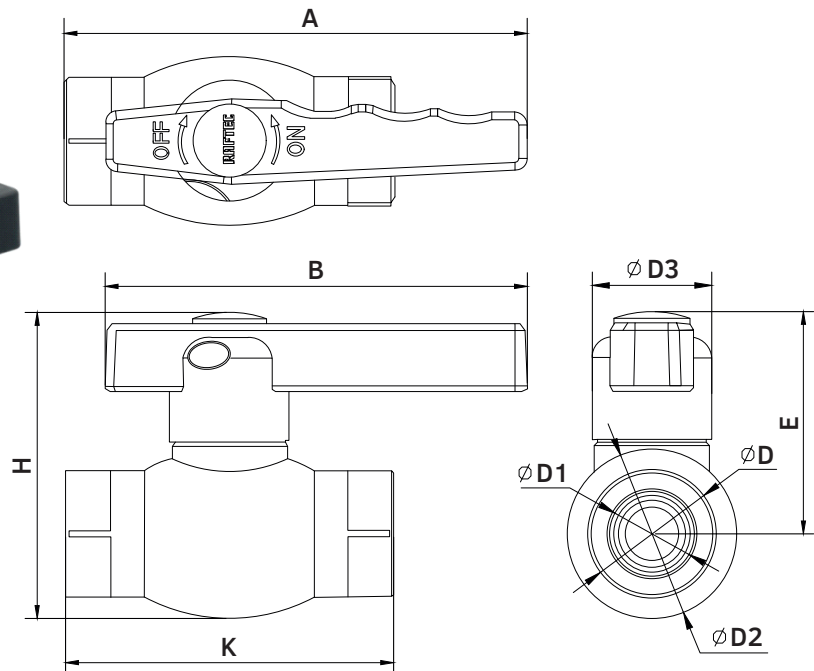
Nº	Code	Diameter	A, mm	B, mm	H, mm	D, mm	Weight, g	Package, pcs.
1	RCL20	20	15	30	31	20	5	100
2	RCL25	25	15	36	36	25	6	100
3	RCL32	32	15	44	44	32	8	50

2.20 Plug



Nº	Code	Diameter	R1, mm	A, mm	B, mm	H, mm	H1, mm	C, mm	D, mm	D1, mm	Weight, g	Package, pcs.
1	RP01	1/2"	1/2"	19,5	22,5	23	20	8	26	13	5	200
2	RP02	3/4"	3/4"	21,5	25	27	22	9	32	18	8	100
3	RP03	1"	1"	27	27	31	22	9	36	25	10	100

2.21 Ball Valve



Nº	Code	Diameter	A, mm	H, mm	B, mm	K, mm	E, mm	D, mm	D1, mm	D2, mm	D3, mm	Weight, g	Package, pcs.
1	RB20	20	105	69	95	74	47	28	19	39	27	86	10
2	RB25	25	107	73	95	77	48	35	24	43	27	116	10
3	RB32	32	136	79	125	81	51	43	31	51	32	165	5
4	RB40	40	157	96	144	105	64	52	39	66	40	288	4
5	RB50	50	168	112	153	123	74	66	49	78	45	454	2
6	RB63	63	219	136	204	144	89	82	62	95	55	914	1

3. Class of operation

Class of operation	Description of the class of operation	Working pressure, bar
1	hot water distribution systems 60°C, service life 50 years	14 bar
2	hot water distribution systems 70°C, service life 50 years	11 bar
4	underfloor heating, low-temperature radiators, service life of 50 years, and it is assumed that (within 50 years) the system will operate for 2.5 years at a temperature of 20°C, 20 years at a temperature of 40°C, 25 years at a temperature of 60°C and 2.5 years at a temperature of 70°C	13 bar
Cold water supply	transportation of cold water at maximum temperature 20 °C	20 bar

4. Installation and operating instructions

1. Installation of polypropylene pipes must be carried out at an ambient temperature of at least +5°C.
2. Connections must be made by thermal polyfusion-coupling welding using a special welding machine. The set operating temperature is 260°C.
3. It is recommended to use the same manufacturer of connecting parts for socket welding as the pipes. In this case, simultaneous heating to the working depth of the pipe and fitting is guaranteed.
4. The heating time when making connections must comply with that set out in the technical specifications.
5. Pipes that have been stored or transported at temperatures below 0 °C must be maintained for 2 years at a temperature not lower than +5 °C before installation.
6. Installation of polypropylene pipe systems should be carried out in accordance with the requirements of current regulatory documents.
7. Pipes must be operated under the conditions specified in the technical characteristics table and under modes corresponding to the accepted operating class.
8. Polypropylene pipes are not allowed to be used:
 - at a working medium temperature above 70°C ;
 - at operating pressure exceeding the permissible value for this class of operation;
 - in premises of categories "A, B, C" according to fire hazard (clause 2.8. SP 40-101-96);
 - in rooms with sources of heat radiation whose surface temperature exceeds 130°C;
 - for expansion, safety, overflow and signal pipelines ;
 - for separate fire water supply systems (clause 1.2. SP40-101-96).

5. Storage and transportation

1. During rail and road transportation, coils (packages) of pipes are allowed to be transported only in covered rolling stock.
2. To avoid damage to the pipes, they should be laid on a flat surface, without sharp protrusions and irregularities. Dropping pipes from vehicles is not allowed..
3. Pipes must be stored in accordance with conditions 5 (OZH4), section 10 of GOST 15150 in ventilated sheds or rooms.
4. Pipe coils may be stored in stacks no higher than 3 m. When stored, pipes must be protected from direct sunlight.

5. The pipe must be stored in the manufacturer's packaging under storage conditions 3 according to GOST 15150-69.

6. Pipe transportation must be carried out in accordance with requirements 5 of GOST 15150-69.

6. 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.

7. 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 covers all defects caused by the manufacturer's fault.
3. The warranty does not cover defects that occur in the following cases:
 - violation of passport regimes for transportation, storage, installation, operation and maintenance of the product;
 - improper transportation and loading and unloading operations;
 - the presence of traces of exposure to substances that are aggressive to the product materials;
 - the presence of damage caused by fire, natural disasters, force majeure circumstances;
 - the presence of damage caused by incorrect actions of the consumer;
 - the 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.

8. 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.
-

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.

For warranty repair, complaints and claims regarding the quality of products, please contact the service center at the address: 08132, Kyiv region, Vyshneve, Kyivska st., building 6b.

Tel.: + 38(050)-315-16-33

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: _____
