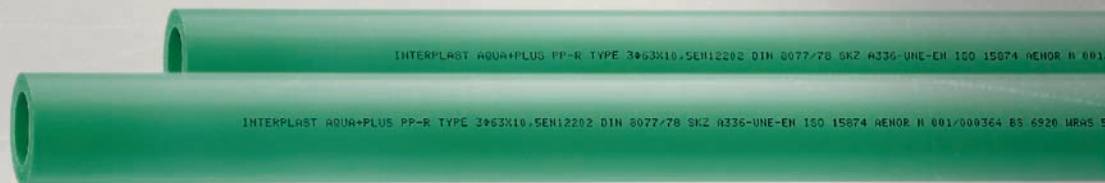


Aqua^{plus}



www.interplast.gr/en



WRAS
5240/06/025 19



WRAS
5260/06/025 17

MPA NRW



SERPOKIMBUD
PROEKT
74 12



SERPOKIMBUD
PROEKT
39 17



WRAS
5240/06/025 18

Aqua - Plus Pipes

(Polypropylene PPR)



SDR 6 - PPR 80 PIPES

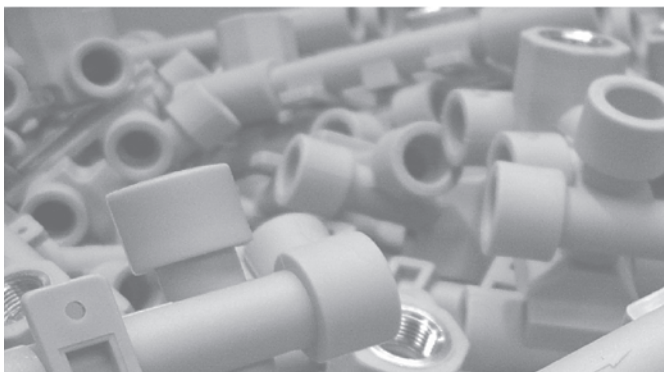
Interplast manufactures PP Random type 3 pipes and fittings with dimension from 20 mm to 160 mm with applications in plumbing-heating-cooling installations, in industry (transfer of liquids and compressed air) and in networks that run the risk of electrochemical corrosion.

Aqua plus pipes are manufactured in green colour in aligned segments 4 meters each. They can be manufactured in black stabilized color for UV protection. It is also available in rolls 100m each in 20mm dimension.

The pipes bear a printing per meter, indicating the trade name, outer diameter, wall thickness, operating pressure at ambient temperature, manufacturing specifications, (EN, DIN, UNE), certifying institutes (EVETAM, SKZ, AENOR, DVGW, WRAS) and a code number stating the time and date of production.

The structure of the material and the smooth surface texture ensure low friction losses resulting in low resistance and low pressure drop in the piping. In addition the material used significantly reduces the noise generated and limits its transmission through the pipes. This can help produce pipes with thinner walls and bigger water flow.

As a result installations with Aqua Plus Pipes, it is possible to transfer bigger water/fluid flows using smaller pipes dimension.

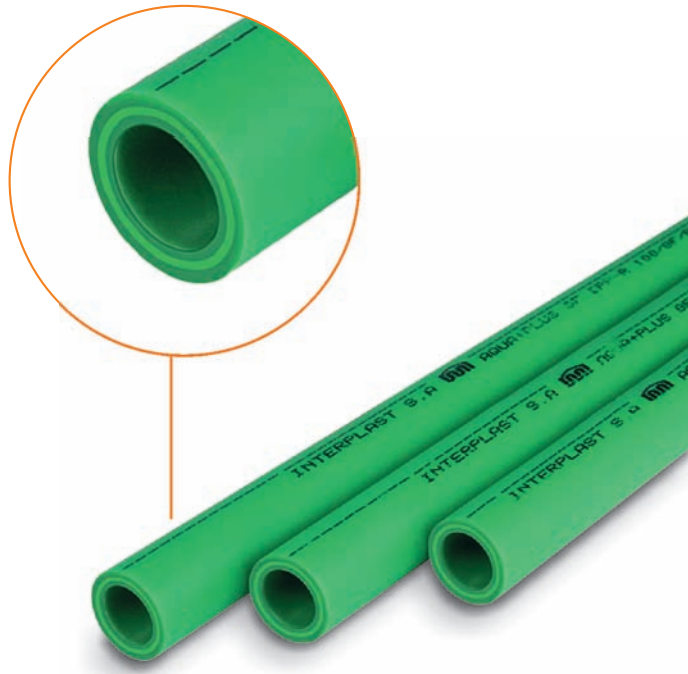


PRODUCED DIMENSIONS OF AQUA PLUS PPR 80 PN 20 SDR 6

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kgr/m)	PACKAGING (m)
20	3,4	13,2	0,137	0,172	100
25	4,2	16,6	0,216	0,267	80
32	5,4	21,2	0,353	0,435	60
40	6,7	26,6	0,556	0,671	40
50	8,4	33,2	0,866	1,050	16
63	10,5	42,0	1,385	1,650	12
75	12,5	50,0	1,963	2,340	8
90	15,0	60,0	2,827	3,400	4
110	18,4	73,2	4,208	5,040	4

Advantages

- High resistance of the pipes and the fittings on hydraulic shock **(at pressures greater than 130 bar at ambient temperature).**
- **Lifespan of more than 50 years for temperatures of 20°C to 90°C and operating pressure 6-26 bar.**
- Temperature Peaks of 110°C at 4 bar operating pressure do not affect the Aqua-Plus system.
- Excellent corrosion resistance. Very good performance even in areas with very hard water.



Aqua-Plus Pipes reinforced with fiberglass made by PPR 112

Interplast, apart from the one layer polypropylene Random pipes manufactures polypropylene three-layer pipes PP-R MRS 11.2 MPa (new generation of PPR) with fiberglass and wall thickness that corresponds to SDR 7,4 and SDR 11.

The polypropylene used for the multi-layered pipes Aqua-Plus-Fiberglass (with mechanical support in the middle layer) is characterized as polypropylene random with high mechanical

endurance and long lifespan, in contrast to the single layer PP-R in the category MRS 8.0 MPa (PP-R 80). **Press endurance of pipes PP-R 112 with SDR 7,4 at 20°C is 20% greater in relation to the pipes PPR 80.**

The Aqua-Plus-GF pipes are designed, manufactured and tested for their quality according to the International Standards that are valid for the simple layer polypropylene pipes (EN ISO 15874 & DIN 8077/78) and in accordance with the specific directive HR 3.28 of the German Institute SKZ.

The advantages of this new type are:

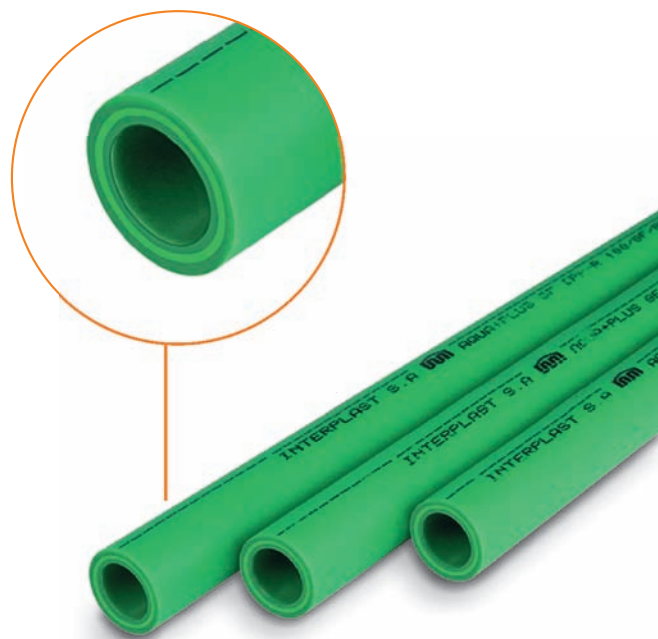
- Reduction of the thermal linear expansion by 50% in relation to the simple polypropylene pipes
- Increase of the mechanical endurance of the pipe in the inner hydrolic pressures per 20% (for the SDR 7,4).
- Increase in the chemical endurance of the pipe against to corrosion
- High stiffness of the pipes
- Greater quantity of conveyed water
- Increase in the life of service
- The thermal welding of the new pipes with the polypropylene fittings are carried out in the same easy way as in the single layer PPR pipes

PRODUCED DIMENSIONS OF AQUA PLUS GF PPR 112 PN20 SDR 7,4

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kgr/m)	PACKAGING (m)
20	2,8	14,4	0,163	0,158	100
25	3,5	18,0	0,254	0,246	80
32	4,4	23,2	0,423	0,394	60
40	5,5	29,0	0,660	0,613	40
50	6,9	36,2	1,029	0,955	16
63	8,6	45,8	1,647	1,500	12
75	10,3	54,4	2,323	2,135	8
90	12,3	65,4	3,358	3,058	4
110	15,1	79,8	4,999	4,576	4
125	17,1	90,8	6,472	5,891	4
160	21,9	116,2	10,599	9,538	4
200	27,4	145,2	16,550	17,900	4

PRODUCED DIMENSIONS OF AQUA PLUS GF PPR 112 PN 12,5 SDR 11

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kgr/m)	PACKAGING (m)
32	2,9	26,2	0,539	0,261	60
40	3,7	32,6	0,834	0,412	40
50	4,6	40,8	1,307	0,638	16
63	5,8	51,4	2,074	1,010	12
75	6,8	61,4	2,959	1,410	8
90	8,2	73,6	4,252	2,030	4
110	10,0	90,0	6,359	3,010	4
125	11,4	102,2	8,199	3,910	4
160	14,6	130,8	13,430	6,380	4
200	18,2	163,6	21,010	9,950	4
225	20,5	184,0	26,577	12,600	4
250	22,7	204,6	32,861	15,500	4
315	28,6	257,8	52,172	24,600	4



Aqua Plus reinforced with fiberglass made by PP-RCT 125

The Aqua-Plus-GF PP-RCT 125 pipes are designed, manufactured and tested for their quality according to the E.U. standards that are valid for the conventional polypropylene pipes (EN ISO 15874 & DIN 8077/78) and in accordance with the specific directive HR 3.28 of the German Institute SKZ.

The Aqua-Plus pipes PPRCT 125 are manufactured with wall thicknesses that corresponds to SDR 9, with possibility of continuous operation under pressure of 20 bar at 20°C(PN 20) for time period more than 50 years and to SDR with possibility of continuous operation under pressure of 10 bar at 20°C(PN 10) for the same period of time.

PPRCT 125 is one of the latest advancement in polypropylene material, having a more complex crystalline structure (Polypropylene Random Crystallinity Temperature).

PP-RCT 125 main advantages:

-Higher mechanical strength conventional PPR, according to EN 15874 and DIN 8077, especially in high temperatures.

For example, standard PPR, at 80°C with SDR 7.4 for 25 years will have max operating pressure 5.1 bar while the PPRCT 125, at 80°C with SDR 9 for 25 years, will have max operating pressure at 7.2 bar.

Using PP-RCT be able to produce pipes with thinner wall: thickness and increasing the quality of the piping network.

-Excellent aging resistance

Above advantages make it suitable for higher temperature applications such as district heating and in extremely demanding cooling installations, even when temperature reaches 100°C.

PRODUCED DIMENSIONS OF AQUA PLUS GF PPRCT 125 PN 20 SDR 9

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kgr/m)	PACKAGING (m)
32	3,6	24,8	0,483	0,313	60
40	4,5	31,0	0,754	0,487	40
50	5,6	38,8	1,182	0,755	16
63	7,1	48,8	1,869	1,200	12
75	8,4	58,2	2,659	1,690	8
90	10,1	69,8	3,825	2,440	4
110	12,3	85,4	5,725	3,620	4
125	14,0	97,0	7,386	4,660	4
160	17,9	124,2	12,109	7,620	4
200	22,4	155,2	18,908	11,900	4

PRODUCED DIMENSIONS OF AQUA PLUS GF PPRCT 125 PN 10 SDR 17

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kgr/m)	PACKAGING (m)
160	9,5	141,0	15,614	4,330	4
200	11,9	176,2	24,383	6,750	4
250	14,8	220,4	38,151	10,500	4
315	18,7	277,6	60,493	16,700	4



Aqua Plus with Aluminium layer

The Aqua-Plus pipes with aluminium layer are designed, manufactured and tested for their quality according to the standards that are valid for the standard polypropylene pipes. Aqua-Plus-AL pipes are manufactured from PPR 112 and wall thicknesses that corresponds to SDR 7,4, with possibility of continuous operation under pressure of 20 bar at 20°C(PN 20) for a time period more than 50 years.

ADVANTAGES

- Reduced of thermal linear expansion by 60% compared to single layer polypropylene pipes.
- Increased impact resistance.
- Increased mechanical strength against internal hydraulic pressure by 15%.

The thermal-welding of the Aqua Plus - AL pipes with the polypropylene fittings is as easy as in simple pipes, after their ends being processed with a scraper.

EXTERNAL DIAMETER (mm)	WALL THICKNESS (mm)	INTERNAL DIAMETER (mm)	WATER CAPACITY (l/m)	PIPE WEIGHT (kg/m)	PACKAGING (m)
20	2,8	14,4	0,163	0,158	100
25	3,5	18,0	0,254	0,246	80
32	4,4	23,2	0,423	0,394	60
40	5,5	29,0	0,660	0,613	40
50	6,9	36,2	1,029	0,955	16
63	8,6	45,8	1,647	1,500	12
75	10,3	54,4	2,323	2,135	8
90	12,3	65,4	3,358	3,058	4
110	15,1	79,8	4,999	4,576	4

*External diameter calculated in table after aluminum layer and outside PPR layer be scraped

Table of service life

The EN and DIN standards are exceeded due to raw material quality and highly quality characteristics of the additives.

Due to the high level laboratory equipment of the company (thermal cyclingtester) is possible to check the mechanical strength of the raw materials and **to derive the corresponding hydraulic resistance diagrams and to determine the strength of our pipes in relation to temperature and service live duration.**

TABLE OF SERVICE LIFE						
Temperature (o C)	Service life in years	Operating pressure PPR 80 SDR 6 (bar)	Operating pressure PPR 112 SDR 7,4(bar)	Operating pressure PPRCT 125 SDR 9(bar)	Operating pressure PPR 112 SDR 11(bar)	Operating pressure PPRCT 125 SDR 17(bar)
10	1	35,2	36,2	35,6	22,8	17,8
	5	33,1	35,1	34,5	22,1	17,3
	10	32,3	34,7	34,1	21,9	17,0
	25	31,2	34,1	33,5	21,5	16,6
	50	30,4	33,6	33	21,2	16,5
	100	29,6	33,2	32,6	20,9	16,2
20	1	29,9	31,5	31,3	19,9	15,7
	5	28,3	30,5	30,3	19,3	15,2
	10	27,5	30,1	29,9	19,0	15,1
	25	26,7	29,6	29,4	18,6	14,7
	50	25,9	29,2	29	18,4	14,6
	100	25,1	28,8	28,6	18,1	14,4
30	1	25,6	27,3	27,3	17,2	13,6
	5	24,0	26,4	26,4	16,6	13,2
	10	23,2	26,0	26,0	16,4	13,0
	25	22,4	25,5	25,5	16,1	12,7
	50	21,9	25,1	25,1	15,8	12,3
40	1	21,6	23,5	23,6	14,8	11,7
	5	20,3	22,6	22,7	14,3	11,3
	10	19,7	22,3	22,4	14,1	11,1
	25	18,9	21,8	21,9	13,8	11,0
	50	18,4	21,5	21,6	13,6	10,7

TABLE OF SERVICE LIFE

Celsius Degrees (o C)	Service life in years	Operating pressure PPR 80 SDR 6 (bar)	Operating pressure PPR 112 SDR 7,4(bar)	Operating pressure PPRCT 125 SDR 9(bar)	Operating pressure PPR 112 SDR 11(bar)	Operating pressure PPRCT 125 SDR 17(bar)
50	1	18,3	20,1	20,5	12,6	10,4
	5	17,1	19,3	19,7	12,2	10,2
	10	16,5	19,0	19,4	12,0	10,0
	25	16,0	18,6	19,0	11,7	9,9
	50	15,5	18,3	18,7	11,5	9,7
60	1	15,5	17,0	17,7	10,7	8,4
	5	14,4	16,3	17,0	10,3	8,2
	10	13,9	16,0	16,7	10,1	8,1
	25	13,3	15,7	16,4	9,9	7,9
	50	12,9	15,4	16,1	9,7	7,8
70	1	13,1	14,3	15,4		
	5	12,0	13,7	14,8		
	10	11,6	13,5	14,6		
	25	9,9	13,1	14,2		
	50	8,5	12,9	14,0		
80	1	10,9	11,9	13,4		
	5	9,6	11,4	12,9		
	10	8,0	11,2	12,7		
	25	6,4	10,9	12,4		



Aqua Plus Prins

Aqua Plus Prins are factory made pre-insulated PPR pipes, are insulated externally with uniform insulation of closed cell polyurethane rigid foam. Polyurethane foam substantially overlaps, the quality characteristics defined by the standard EN 253. The outside layer is made by PVC in accordance with standard EN 1329 and free of Pb.

The advantages of Aqua Plus Prins compared to the traditional insulation systems are:

- Ideal system for visible and non-visible district heating and cooling piping networks.
- Reducing of energy losses up to 57%**
- Zero maintenance costs for 50 years.**
- Sparse and simple bracketing due to the low thermal and the low bending of pre insulated pipes.
- Lower linear thermal expansion compared to copper pipes.
- Reduced installation cost by minimizing expansions loops and quantity of required supports.
- Increased mechanical strength.
- Zero condensations .**

DIAMETER OF PPR CARRIER PIPE (mm)	EXTERNAL DIAMETER OF PVC SLEEVE PIPE (mm)
32	63
40	75
50	90
63	100
75	125
90	140
110	160
125	200
160	225
200	250
250	315
315	400



Upon request Interplast SA can produce pipes with polyethylene outer layer, as well as the production of pipes with a bigger outer cross-section. Pre-insulated pipes are accompanied by a full range of fittings.

POLYURETHANE DATA

Technical Data (mm)	FIXED FOAM POLYURETHANE (mm)
Density	> 60 kg / m ³
Closed cell content	> 88 %
Water absorption	< 10 % (Vol)
Compressive strength deformation 10%	> 0.3 N/mm ²
Shearing resistance	> 0.12 N/mm ²
Tangent shearing resistance	> 0.20 N/mm ²
Thermal conductivity coefficient in 20° C	< 0.021 W/mK

Application Area

- Visible-non visible heating cooling networks and DHW piping networks
- Visible-non visible district heating systems
- Underground networks for distribution of hot and cold water
- Industrial cooling networks





Certified Fittings Aqua plus PN 25

The fittings are manufactured in accordance with DIN 16962 from Polypropylene Random (Type 3) and available in **dimensions from 20 mm to 315 mm**. For their production the company uses raw material with a low melt flow index, identical to that of its pipes so that the mechanical strength of the pipe does not differ from that of the fittings. They are produced with a wall thickness equivalent to 25 bar.

Reinforced pressure tests (80 bar compared to 64 bar for the PN20 series).

The PP-R overlaps the male brass inserts on the inside.

The brass parts are reinforced, heavy-duty and low hardness (105 Brinell) thus eliminating the possibility of cracking, which is particularly common in fittings with female threading.

REFERENCE LIST



Interplast is placed in the first place of plastic pipes for building installations of water supply and heating networks in Greek market due to constant increasing course. At the same time the increased export activity are showing off with plenty of projects in all manufacturing sectors in Europe and in USA, in Africa and in Middle East. In Greece, the first place is proved by our participation in hotel and airports constructions, commercial shops, hospitals and residences.

Pre-insulated PPr system has been widely accepted despite the short time it is placed in the Greek and international market. It was presented on Climatherm Energy 2016. Low linear expansion, constant thermal insulation properties and long-term resistance in solar radiation make the product innovative in the pre-insulation of hydraulic networks, convincing the technical world to trust it in the most demanding applications.

reference list

Stead growth of Interplast, has secured a leading position in the Greek market and worldwically in the plastic pipe sales for water supply and HVAC systems. At the same time, the increasing export activity is proven through the large number of projects in all construction sectors in Europe and the Middle East. This is evident from our participation in a large number of construction projects for hotels, hospitals, shops and housing.

I. Olympic Projects

- Olympic Village, Athens
- Athens International Airport El. Venizelos, Spata
- Attiko metro, Athens
- Olympic Rowing and Canoeing Centre, Schinias
- Olympic Weight-lifting Centre, Nikaia
- Olympic Press Centre, Maroussi
- Olympic Beach Volley Centre, S.E.F.N. Faliro
- Olympic Indoor Gymnasium and Table Tennis Hall, Galatsi
- Peace and Friendship Stadium, N. Faliro
- Press Village, Pallini, Athens
- Press Village, Zografou, Athens
- Press Village, Maroussi, Athens
- Basket Ball and Fencing facilities, Helliniko
- Baseball, Softball and Hockey facilities, Helliniko
- Building installations for the starting point of the Marathon route, Marathon



II. Offices - Shops

- Arwa Tower, Doha, Qatar
- "The Mall", Shopping and Leisure Centre, Neratziotissa, Maroussi
- "Mediterranean Cosmos", Shopping and Leisure Centre, Thessaloniki
- Central Offices of the Agricultural Bank of Greece, Sygrou Ave.
- National Insurance Offices building, Sygrou Ave.
- Hondos Center department store, Thessaloniki
- Greek Embassy, Austria
- Rex Bank, Vienna
- Attiki Bank, Thessaloniki
- Thalassokosmos" Aquarium, Heraklion, Crete
- Saida Mall - Tyre, Lebanon
- Ministry of Housing , Bahrain



III. Hotels

- St. Regis Hotel & Residential Towers, Doha, Qatar, Luxury Hotels
- Grande Bretagne, Athens, Luxury Hotels
- Domes of Elounda, Elounda, Luxury Hotels
- Murex Hotel, 5★, Lebanon
- Holiday Inn, 5★, Attiki Odos motorway, Athens
- President, 5★, Athens
- Lydra Marriott, 5★(Thalassotherapy Section), Nicosia, Cyprus
- Aphrodite Intercontinental, 5★, Cyprus
- Electra Palace, 5★, Thessaloniki
- Palirroia, 5★, Halkida
- Grecotel Olympia Riviera, 5★, Killyni
- Aldemar Royal Olympian, 5★, Pyrgos, Ilia
- Meliton-Porto Karras, 5★, Halkidiki
- Ilion Mare, 5★, Thassos
- Aldemar Knossos Royal, 5★, Crete
- Aldemar Royal Mare, 5★, Crete
- Olympian Village, 5★, Ilia
- Grand Serrai, 5★, Ioannina
- Apollonia, 5★, Heraklion
- Zorbas, 5★, Tigaki - Kos
- Gaia Palace, 5★, Mastihari - Kos
- Blue Lagoon, 5★, Kos
- Iberostar Astir Odysseus, 5★, Tigaki - Kos
- Lindosbay, 5★, Lindos - Rhodes
- Grecotel Imperial, 5★, Karaikaiki Sq., Athens
- Paradise, 5★, Kallithea - Rhodes
- Ixian Grand, 5★, Ialysos - Rhodes



reference list



IV. Residences

- Bab Al Rayyan 400 - Village Villas, Doha, Qatar
- Alia Apartments , Bucharest, Romania
- Garden View, Sin El Fil, Lebanon.
- Jawad & Jaffer Villa, Bahrain
- Green Lake Residences, Bucharest, Romania
- West Park, Bucharest, Romania
- Monaco Towers, Bucharest , Romania
- Vile Curtea Domneasca, Bucharest , Romania
- Raoucheh residence Verdun, Lebanon
- Chalet Ziad Mohsen Dalloul - Faqra, Lebanon
- Villa Karageuzian - Faqra, Lebanon
- Villa Badro - Faqra, Lebanon
- Riyadh Villa, Bahrain
- Alawi Villa, Bahrain
- Students' halls of residence, Zografou
- Housing for earthquake victims, Ano Liossia, Athens
- Council housing, Thessaloniki
- Council housing, Komotini
- Council housing, Tavros, Athens
- Housing units, Ministry for the Environment and Public Works, Thessaloniki
- Council housing, Ag. I. Rendi, Athens

V. Hospitals

- Kavala General Hospital
- Igoumenitsa General Hospital
- 424 Military Hospital, Thessaloniki
- Genesis Maternity clinic, Thessaloniki
- Hospital Al Salam, Tripoli, Lebanon
- Al Arcoub Hospital - Tyre, Lebanon
- Dialysis Center, Doha, Qatar

VI. Educational Institutions

- University installations (Laboratories), Nikosia, Cyprus
- Aley Technical School, Lebanon
- Bioclimatic schools of Ialysos, Afantou and Kremasti, Rhodes
- School Al Salam Akkar / Akroum, Tripoli, Lebanon.
- Children village, Tripoli, Lebanon.
- Qatar State Mosque, Doha, Qatar.



The new product has been widely accepted despite the short time it is placed in the Greek and international market. It was presented on Climatherm Energy 2016. Low linear expansion, constant thermal insulation properties and long-term resistance in solar radiation make the product innovative in the pre-insulation of hydraulic networks, convincing the technical world to trust it in the most demanding applications.

I. Hotels

- Amathus Beach, Rhodes 5★
- Rodos Palace, Rhodes 5★
- Palladium, Rhodes 5★
- Olympic Palace, Rhodes 5★
- Atlantica Imperial Resort, Rhodes 5★
- Atlantica Sensatori Resort, Rhodes 5★
- Mayia Exclusive Resort, Rhodes 5★
- Lindian Village, Rhodes 5★
- Sun Beach Resort, Rhodes 4★
- Blue Lagoon City Hotel, Kos 5★
- Καράβια, Kos 5★
- Atlantica Porto Bello Beach, Kos 4★
- Robinson Club Daidalos, Kos 4★
- Porto Carras Resort, Chalkidiki 5★
- Eagle Palace, Chalkidiki 5★
- Sani Club, Chalkidiki 5★
- Sani Dunes, Chalkidiki 5★
- Ikos Oceania Resorts, Chalkidiki 5★
- Anthemus Sea Beach, Chalkidiki 4★
- Hotel Stanley, Athens 4★
- Santo Maris, Ia Sandorine 5★
- Kassadra Bay, Skiathos 5★
- Hotel Xenia, Skiathos 5★
- Punda Beach Resort, Paros 5★
- HapiMag Resort, Porto Cheli 4★
- Lyttos Beach, Hersonissos Crete 4★
- Nana Imperial Hotel, Hersonissos Crete 5★
- Atlantica Mare Village, Agia Napa, Cyprus 5★
- Adams Beach, Agia Napa, Cyprus 5★
- Le Meridien, Lemesos, Cyprus 5★
- Radisson Blu, Larnaka, Cyprus 5★
- Epirus Palace, Ioannina 5★
- MarBella Corfu, Corfu 5★
- Ikos Dassia, Corfu 5★
- Hotel Butrinti, Agioi Saranta, Abania 5★
- Iveagh Gardens, Dublin, Ireland 4★
- Domes of Elounda, Luxury Hotel, Elounda, Crete

II. Prefabricated buildings

- Hot Spot προσφύγων, Thiva



III. Winery & Brewery

- G. Boutaris Winery, Naousa, Imathia
- Winery of Ampeloes, Kavala
- Domaine Vivlia Chora, Kavala
- Domaine Zafiraki, Tyrnavos, Larissa
- Domaine Charalambaki, Heraklion, Crete
- Domaine Kostas Lazaridis, Drama
- Macedonian Brewery, Drama
- Domaine Vourvoukeli, Avdira Xanthi

IV. Packaging - Raw Materials

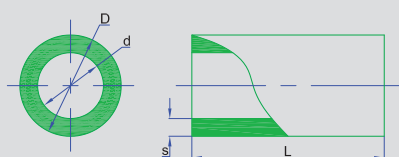
- PAPADAKIS, Cooling chambers
banana ripening, Crete
- ALKYON, Fruit Packer, Kavala Industrial Area
- ANATOLI, Fruit Pack, Imathia
- BOURAKIS, maintenance chambers,
Anchialos of Thessaloniki
- Wonderplant, Hydroponics Greenhouse
Tomato, Petroussa, Drama
- Escarcom, Processing of Frozen Fruit
and Vegetables, Skydra, Pella

V. Industries

- Coca Cola, Cyprus
- Greek Fertilizers, Kavala
- KOLIOS SA Milk Industry, Kilkis
- TORRE COOPERLAT, Industry
Ice cream, Kilkis
- Esti Foods, Food Industry, New
Jersey, USA
- Genepharm, Medicine Industry,
Pallini Attica

VI. Public and private buildings

- Luxury 2.500m² villa in Lefkada,
Ionian Islands, Ionian Islands
- Condominium, Uppsala, Sweden
- Pafos Courts, Cyprus
- M-MARITIME, Marine Offices
Company, Athens
- Rhodes National Airport
- Skiathos Airport
- Theodoropoulos School, Korakies, Chania
- Papanikolaou Hospital Thessaloniki
- OTE TV, Kifissia Athens

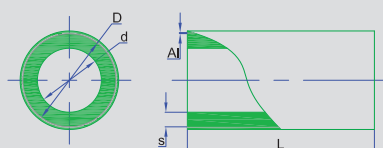


D=External diameter
d=Internal diameter
s=Wall thickness
L=Pipe length
SDR=D/s



SDR 6 Pipe

External diameter (mm)	Wall thickness (mm)	Internal diameter (mm)	Water capacity l/m	Pipe weight kgr/m	Package m
20	3,4	13,2	0,137	0,172	100
25	4,2	16,6	0,216	0,267	80
32	5,4	21,2	0,353	0,435	60
40	6,7	26,6	0,556	0,671	40
50	8,4	33,2	0,866	1,050	16
63	10,5	42	1,385	1,650	12
75	12,5	50	1,963	2,340	8
90	15	60	2,827	3,400	4
110	18,4	73,2	4,208	5,040	4
125	17,1	90,8	6,472	5,530	4
160	21,9	116,2	10,599	9,040	4

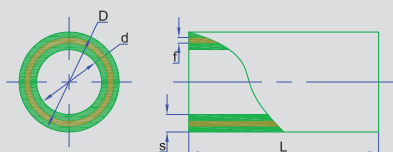


D=External diameter
d=Internal diameter
s=Wall thickness
Al=Aluminum layer
L=Pipe length
SDR=D/s

Aqua Plus Aluminum Pipe

External diameter (mm)	Wall thickness (mm)	Internal diameter (mm)	Water capacity l/m	Pipe weight kgr/m	Package m
20	3,4	13,2	0,137	0,194	100
25	4,2	16,6	0,216	0,290	80
32	5,4	21,2	0,353	0,463	60
40	6,7	26,6	0,556	0,695	40
50	8,4	33,2	0,866	1,109	16
63	10,5	42	1,385	1,778	12
75	12,5	50	1,963	2,416	8
90	15	60	2,827	3,542	4
110	18,4	73,2	4,208	5,171	4

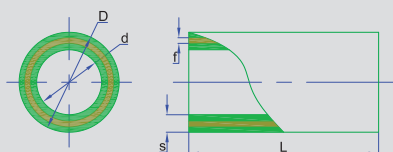
*In the outlet diameter the aluminum layer and the outside PP-R layer are not included.



D=External diameter
d=Internal diameter
s=Wall thickness
f=fiberglass layer
L=Pipe length
 $SDR=D/s$

Aqua Plus SDR 7.4 Pipe

External diameter (mm)	Wall thickness (mm)	Internal diameter (mm)	Water capacity l/m	Pipe weight kgr/m	Package m
20	2.8	14.4	0.163	0.158	100
25	3.5	18.0	0.254	0.246	80
32	4.4	23.2	0.423	0.394	60
40	5.5	29.0	0.660	0.613	40
50	6.9	36.2	1.029	0.955	16
63	8.6	45.8	1.647	1.500	12
75	10.3	54.4	2.323	2.135	8
90	12.3	65.4	3.358	3.058	4
110	15.1	79.8	4.999	4.576	4
125	17.1	90.8	6.472	5.891	4
160	21.9	116.2	10.599	9.538	4

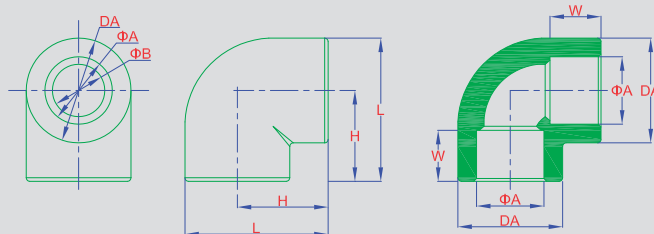


D=External diameter
d=Internal diameter
s=Wall thickness
f=fiberglass layer
L=Pipe length
 $SDR=D/s$

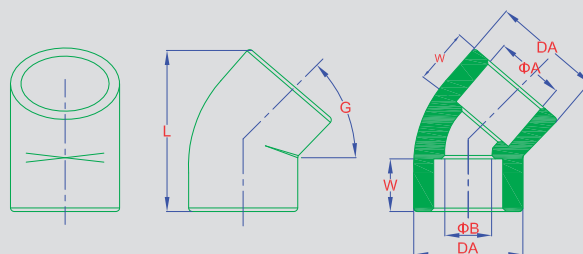


Aqua-Plus SDR 11 Pipe

External diameter (mm)	Wall thickness (mm)	Internal diameter (mm)	Water capacity l/m	Pipe weight kgr/m	Package m
20	1.9	16.2	0.206	0.107	100
25	2.3	20.4	0.327	0.164	80
32	2.9	26.2	0.539	0.261	60
40	3.7	32.6	0.834	0.412	40
50	4.6	40.8	1.307	0.638	16
63	5.8	51.4	2.074	1.010	12
75	6.8	61.4	2.959	1.410	8
90	8.2	73.6	4.252	2.030	4
110	10.0	90.0	6.359	3.010	4
125	11.4	102.2	8.199	3.910	4
160	14.6	130.8	13.430	6.380	4

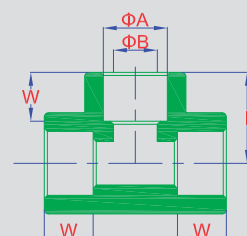
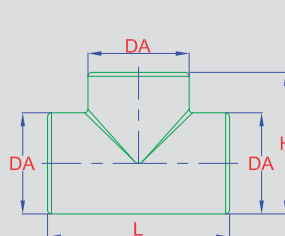
Elbow 90° - PN25

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	H	W	L
790030020	20	140	20	0,019	30	19	13,5	26	14,5	41
790030025	25	80	10	0,030	36	24	17	30	16	48
790030032	32	50	10	0,050	44	31	21	34	19	57
790030040	40	50	10	0,110	57	39	30	43	22,5	71
790030050	50	30	10	0,170	66,5	49	41	53	25	86
790030063	63	15	5	0,315	84	62	52	64	29	106
790030075	75	10	2	0,524	98	74	62	73	33,5	44
790030090	90	5	1	0,892	118	89	74	89	38	148
790030110	110	2	1	1,452	140	108,5	91	100	43	170
790030125	125	2	1	1,596	166	124	116	110	43,5	195
790030160	160	1	1	3,959	160	159	155	212	130	292

Elbow 45° - PN25

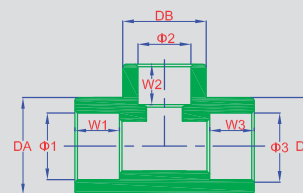
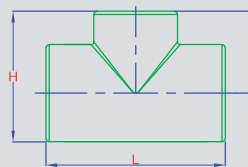
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	W	G	L
790040020	20	140	20	0,016	30	19	13,5	14,5	45	44,5
790040025	25	80	10	0,025	36	24	17	16	45	53
790040032	32	50	10	0,036	44	31	21	18,5	45	63
790040040	40	50	10	0,078	56,5	39	30	21,5	45	78
790040050	50	30	10	0,140	66	49	41	25	45	95
790040063	63	15	5	0,260	83	61,7	52	29	45	123
790040075	75	10	2	0,426	98	73,5	62	33	45	143
790040045	90	6	1	0,758	116,5	88,5	74	38	45	170
790040110	110	4	1	1,187	137	108,5	91	43	45	205
7900400125	125	2	1	1,603	165	123,5	116	44	45	220
7900400160	160	1	1	3,153	158	114	114	-	45	340

Tee - PN25



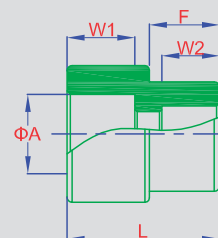
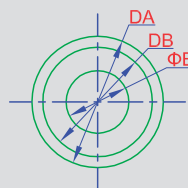
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	H	W	L	I
790070020	20-20-20	100	10	0,027	30	19	13	42	14,5	54	27
790070025	25-25-25	60	10	0,042	36	24	17	49	16	62	31
790070032	32-32-32	30	6	0,070	44	31	21	60	20	75	38
790070040	40-40-40	40	10	0,124	57	39	30	71	21	85	42,5
790070050	50-50-50	24	8	0,210	66	49	41	87	25	106	54
790070063	63-63-63	12	4	0,404	83	62	52	108	29	130	66
790070075	75-75-75	9	3	0,672	98	74	62	129	33	153	80
790070090	90-90-90	2	1	1,118	116	89	74	151	37,5	180	93
790070110	110-110-110	2	1	2,072	137	108,5	91	180	43,5	210	111
790070125	125-125-125	1	1	2,500	165	124	115	200	44	242	117
790070160	160-160-160	1	1	5,400	161	116	116	302	111	433	218

Reducing Tee - PN 25

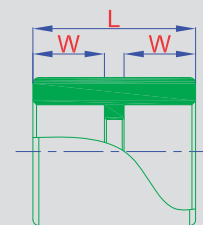
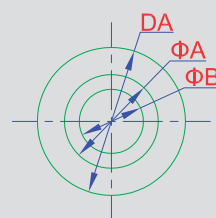


Code	Dimensions	Package item/carton	Package item/bag	kg/r/tem	DA	DB	Φ1	Φ2	Φ3	W1	W2	W3	L	H	I
790060001	25x20x25	60	10	0,039	36	30	24	19	24	16	14,5	16	62	48	30
790060017	25x20x20	50	10	0,048	36	36	24	13	19	16	14,5	14,5	62	49	31
790060018	25x25x20	50	10	0,044	36	36	24	24	19	16	16	14,5	62	49	31
790060003	32x25x32	30	6	0,063	44	36	31	24	31	20	16	20	75	55	33
790060024	32x32x20	30	6	0,070	44	30	31	19	31	20	14,5	20	76	55	33
790060019	32x25x25	30	6	0,066	44	36	31	24	24	20	16	16	76	56	35
790060025	32x20x20	30	6	0,066	44	30	31	19	19	20	14,5	14,5	76	55	35
790060022	32x25x20	30	6	0,066	44	36	31	24	19	20	16	14,5	76	56	35
790060023	32x20x25	30	6	0,066	44	30	31	19	24	20	14,5	16	76	55	35
790060021	32x32x25	30	6	0,072	44	44	31	31	24	20	20	16	76	60	38
790060002	32x20x32	30	6	0,062	44	30	31	19	31	20	14,5	20	76	55	33
790060016	40x25x40	20	4	0,114	57	36	39	24	39	21	16	21	85	66	37
790060004	40x32x40	20	4	0,116	57	44	39	31	39	21	18	21	85	68	40
790060007	50x32x50	10	2	0,214	66	53	49	31	49	25	20	25	106	88	53
790060005	50x40x50	10	2	0,204	66	54	49	39	49	25	19	25	106	88	54
790060010	63x25x63	14	2	0,400	84	67	62	24	62	29	16	29	130	109	65
790060015	63x32x63	14	2	0,412	84	67	62	31	62	29	19	29	130	109	65
790060020	63x40x63	14	2	0,406	84	67	62	39	62	29	21	29	130	109	65
790060006	63x50x63	14	2	0,386	84	67	62	49	62	29	25	29	130	109	65
790060011	75x50x75	10	1	0,682	98	83	74	49	74	33	25	33	153	128	76
790060012	75x63x75	10	1	0,662	98	84	74	62	74	33	22	33	153	128	76
790060028	90x63x90	6	1	1,130	117	120	89	62	89	38	29	38	180	151	90
790060008	90x75x90	6	1	1,154	117	116	89	74	89	38	32	38	180	151	90
790060013	110x63x110	3	1	1,801	137	137	108	62	109	43	28	43	215	180	107
790060027	110x75x110	3	1	1,827	144	141	109	74	109	44	33	44	213	180	107
790060026	110x90x110	3	1	1,985	144	120	109	89	109	45	39	45	213	180	107
790060030	125x75x125	2	1	2,77	164	164	124	74	124	44	33	44	240	205	107
790060031	125x90x125	2	1	2,77	164	164	124	89	124	44	38	44	240	205	128
790060032	125x110x125	2	1	2,82	164	166	124	109	124	44	44	44	245	205	123
790060040	160x90x160	1	1	4,65	161	91	115	64	115	111	86	111	429	276	196
790060041	160x110x160	1	1	4,85	161	166	115	77	115	111	93	111	429	287	203

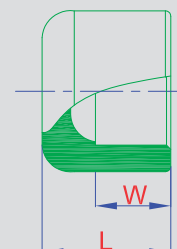
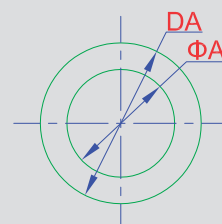
Reducing bush - PN25



Code	kgr/item	Dimensions	Package item/carton	Package item/bag	DA	DB	ΦA	ΦB	F	w1	w2	L
790082520	0,012	25x20	200	20	36	25	19	13,5	16	14,5	13.5	35
790083220	0,022	32x20	160	20	44	32	19	13,5	20	14,5	13.5	40
790083225	0,024	32x25	90	10	44	32	24	21	20	16	14.5	40
790084020	0,027	40x20	80	10	57	40	19	19	18	16	13.5	45
790084025	0,028	40x25	80	10	57	40	24	20	23	17	14.5	45
790084032	0,030	40x32	80	10	57	40	31	27	22	17	16	45
790085025	0,054	50x25	40	8	66	50	24	24	24	20	14.5	62
790085020	0,052	50x20	40	8	66	50	19	19	20	20	13.5	61
790085032	0,052	50x32	40	8	66	50	31	23	31	20	16	60
790085040	0,060	50x40	40	8	66	50	39	36	23	20	17	61
790086320	0,113	63x20	20	5	83	63	19	19	39	21	14.5	70
790086325	0,104	63x25	20	5	83	63	24	16	40	21	16	70
790086332	0,106	63x32	20	5	83	63	31	23	40	19	16	70
790086340	0,106	63x40	20	5	83	63	39	36	40	22	16	70
790086350	0,106	63x50	20	5	83	63	49	45	35	21	20	71
790087550	0,164	75x50	16	2	89	75	49	41	50	25	20	85
790087563	0,188	75x63	12	2	89	75	62	52	44	25	21	84
790089063	0,282	90x63	12	2	116	90	62	53	46	29	21	100
790089075	0,322	90x75	6	2	116	90	74	64	47	29	25	100
790081075	0,500	110x75	5	1	137	110	74	62	60	33	25	120
790081090	0,552	110x90	5	1	137	110	89	77	60	37	29	119
790081290	0,592	125x90	6	1	165	125	89	79	30	39	29	100
790081211	0,913	125x110	4	1	165	125	108	80	50	45	33	123
790081611		160x110	1	1	171	110	114	79	122	103	85	226
790081612		160x125	1	1	171	125	114	89	112	99	98	220

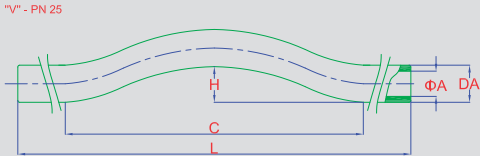
Coupling - PN25

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	W	L
790020020	20	180	20	0,013	30	19	13	14,5	33
790020025	25	130	10	0,020	36	24	17	16	36
790020032	32	70	10	0,030	44	31	20	20	44
790020040	40	40	10	0,058	57	39	30	21,5	50
790020050	50	25	5	0,094	66	49	41	25	56
790020063	63	20	2	0,174	82	62	52	28,5	69
790020075	75	20	2	0,312	94	74	62	34	83
790020090	90	12	2	0,516	117	89	74	39	100
790020110	110	6	1	0,758	138	108,5	91	44	122
790020125	125	6	1	0,784	166	124	116	38	90

End cap - PN25

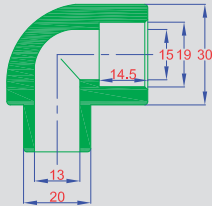
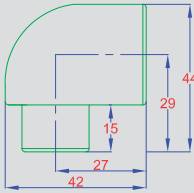
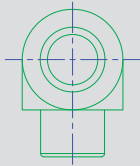
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	W	L
790090020	20	200	20	0,010	30	19	16	24
790090025	25	200	20	0,014	36	24	17	26
790090032	32	100	10	0,020	44	31	19	28
790090040	40	50	8	0,056	57	39	23	41
790090050	50	40	10	0,068	66	49	24	44
790090063	63	40	5	0,148	83	62	29	50
790090075	75	11	1	0,247	94	74	29	56
790090090	90	12	3	0,400	117	89	38	60
790090110	110	10	2	0,714	138	108,5	43	66
790090125	125	10	1	0,739	166	124	41	78
790090160	160	1	1	1,266	161	114	97	143

V - PN25

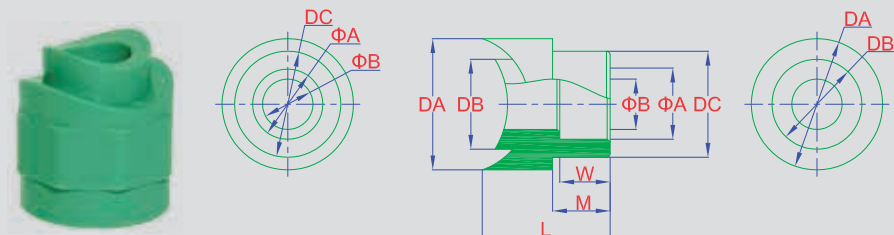


Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	C	H	L
790050020	20	80	20	0,069	20	13	16	22	40
790050025	25	60	10	0,097	25	16	18	26	40
790050032	32	32	8	0,157	32	22	25	20	40

Elbow I/O 90° - PN25

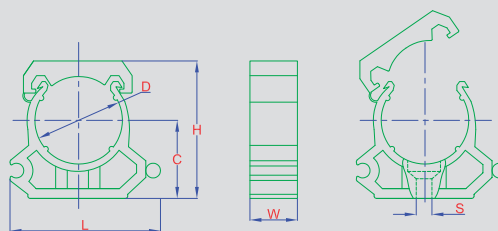


Code	Dimensions	Package item/carton	Package item/bag	kgr/item
700190020	20	140	20	0,022
700190025	25	80	20	0,030

CONVEX Socket - PN25

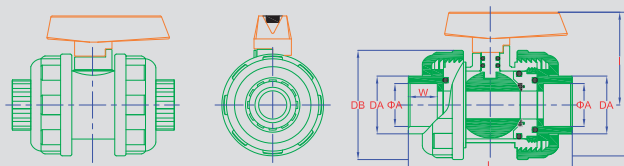
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	DB	DC	ΦA	ΦB	W	M	L
790404020	40-20	100	10	0.015	37	20	30	19	13,5	14,5	15,5	35
790404025	40-25	100	10	0.0155	36	25	36	24	17	16	-	35
790405020	50-20	100	10	0.0152	37	20	30	19	13,5	14,5	15	34
790405025	50-25	100	10	0.0156	35	25	36	24	17	16	-	35
790406320	63-20	100	10	0.0157	37	20	30	19	13,5	14,5	15,5	36
790406325	63-25	100	10	0.0162	36	25	36	24	17	16	-	37
790406332	63-32	100	10	0.0257	42	32	42	31	21	20	-	44
790407520	75-20	100	10	0.0162	37	20	30	19	13,5	14,5	15,5	37
790407525	75-25	100	10	0.0163	35,5	25	35,5	24	17	16	-	39
790407532	75-32	50	10	0.0272	43	32	43	31	21	20	-	46
790409020	90-20	100	10	0.016	37	20	30	19	13,5	14,5	15,5	36
790409025	90-25	100	10	0.016	36	25	36	24	17	16	-	37
790409032	90-32	50	10	0.0285	43	32	43	31	21	20	-	48
790409040	90-40	40	10	0.049	57	40	57	39	30	21	-	50
790401120	110-20	100	10	0.016	37	20	30	19	13,5	14,5	15,5	36
790401125	110-25	100	10	0.016	35,5	25	35,5	24	17	16	-	37
790401132	110-32	50	10	0.0306	43	32	43	31	21	20	-	52
790401140	110-40	40	10	0.0514	57	40	57	39	30	21	-	54
790401220	125-20	140	20	0.0101	29,5	20	30	19	13,5	15	-	36
790401225	125-25	100	10	0.0158	35,5	25	35,5	24	17	16	-	38
790401232	125-32	100	10	0.0234		32	43	31	20	20		
790401240	125-40	50	5	0.0442	57	40	57	39	30	21	-	46

Pipe holder



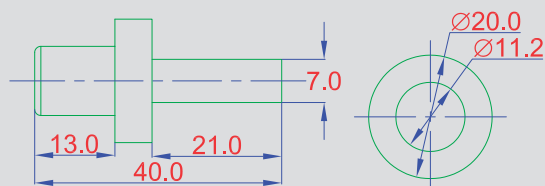
Code	Dimensions (Ø)	Package item/carton	Package item/bag	kgr/item	D	H	C	W	S	L
790200020	20	100	30	0,008	20	36	21	15	5	40
790200025	25	100	30	0,009	25	42	23	15	5	45
790200032	32	50	20	0,010	32	49	26,5	15	5	52
790200040	40	50	10	0,026	40	57	32,5	15	5	64
790200050	50	50	10	0,032	50	75	46,5	25	6,5	69
790200063	63	50	10	0,048	63	92	56,5	25	8,5	83

Ball valve

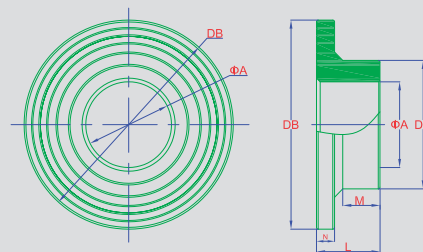


Code	Dimensions (Ø)	Package item/carton	Package item/bag	kgr/item	DA	DB	ΦA	H	I	W	L
700390020	20	20	20	0.103	27	54	19	75	48	15,5	85
700390025	25	12	12	0.144	33	60	24	88	58	18	95
700390032	32	8	8	0.203	41	68	31	98	64	21	104
700390040	40	13	13	0.323	50	83	39	115	73	25	122
700390050	50	10	10	0.493	61	97	49	135	87	30	143
700390063	63	7	7	0.828	75,5	116	62	158	100	37	164
700390075	75	2	2	1.326	89	142	74	182	111	43	196
700390090	90	2	2	2.519	106	178	89	233	144	50	240
7003900110	110	2	2	3.573	130	200	109	265	165	58	277

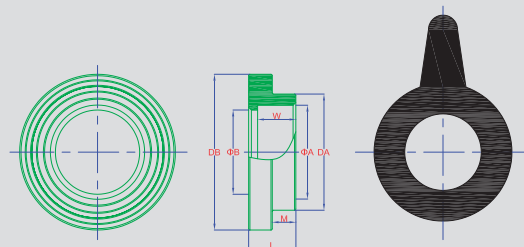
Hole repairing plug



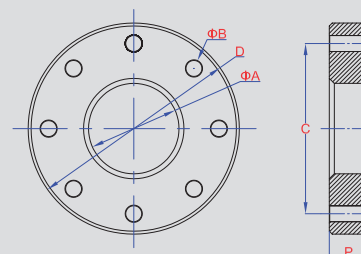
Code	Dimensions	Package item/carton	Package item/bag	kgr/item
700220711	7/11	500	100	0,0045

Male neck

Code	Dimensions (Ø)	Package item/carton	kgr/item	DA	DB	ΦA	M	N	L
700210075	75	I	2,716	75		50	60	10,5	76
700210090	90	I	3,552	90		60	72	12,5	91
700210110	110	I	4,198	110		73	87	14	110

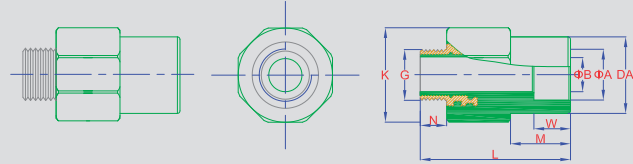
Female neck

Code	Dimensions (Ø)	Package item/carton	kgr/item	DA	DB	ΦA	ΦB	W	M	L
790350075	75	10	0.210	91	121	74	66	30	20	38
790350090	90	8	0.294	110	136	89	71	31	21	42
7903500110	110	12	0.369	130	158	109	91	36	26	47
7903500125	125	10	0.532	148	180	124	95	40	25	50
7903500160	160	2	2.261	160	213	115	115	165	168	191

Metal gasket

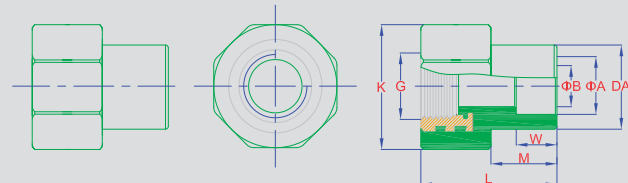
Code	Dimensions (Ø)	Package item/carton	kgr/item	D	ΦA	ΦB	C	P
700070075	75	I	0,244	185	86	18	145	18
700070090	90	I	0,372	200	98	18	158	19
700070110	110	I	0,616	220	128	18	179	22
700070125	125	I	2,775	240	148	18	198	16

Coupling male - PN25

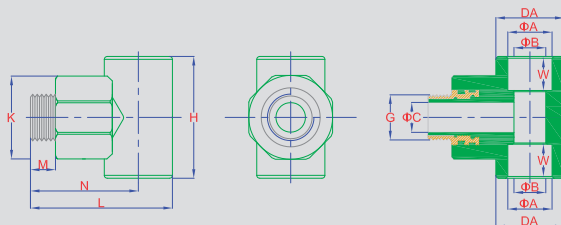


Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	K	G	W	M	N	L
790112012	20x1/2"	90	10	0,087	30	19	12,5	37	1/2"	14,5	23	15	63
790112034	20x3/4"	60	10	0,141	36	19	16,5	45	3/4"	14,5	23	16	64
790112512	25x1/2"	60	10	0,100	36	24	13	44	1/2"	15,5	23	15	64
790112534	25x3/4"	60	10	0,139	36	24	16,5	44	3/4"	15	23	16	64
790113234	32x3/4"	30	6	0,161	44	31	16,5	56	3/4"	21	19	16	62
790113201	32x1"	30	6	0,316	44	31	22,3	56,5	1"	21	20	17	74
790114001	40x1"	16	4	0,368	54	39	20,5	68	1"	21	21	17	82
790114014	40x1 1/4"	16	4	0,488	54	39	27,5	68	1 1/4"	21	21	21	90
790115014	50x1 1/4"	12	2	0,545	70	49	28	79	1 1/4"	25	24	21	93
790115012	50x1 1/2"	12	2	0,6410	70	49	34,5	79	1 1/2"	25	24	18	89
790116312	63x1 1/2"	10	2	0,6850	83	62	35	88	1 1/2"	28	30	20	93
790116302	63x2"	10	2	0,8930	83	62	45	88	2"	28	30	24	104
790117502	75x2"	2	1	1,0283	98	74	45,5	111	2"	34	30	24	113
790117512	75x2 1/2"	2	1	1,6990	98	74	61	112	2 1/2"	34	30	26	117
790119003	90x3"	2	1	1,600	117	89	70	138	3"	39	42	30	129
790111104	110x4"	1	1	0,780	137	109	86	163	4"	45	49	39	152
790111255	125x5"	1	1		167	124	103	198	5"	40	40	43	165

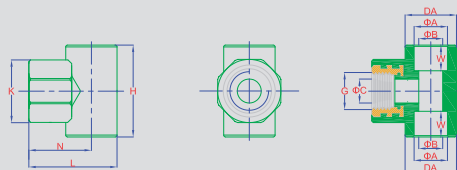
Female coupling - PN25



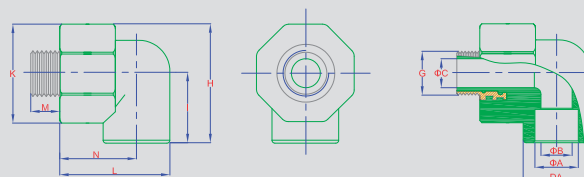
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	K	G	W	M	L
790122012	20x1/2"	100	10	0,075	30	19	12,5	37	1/2"	14,5	23	48
790122034	20x3/4"	70	10	0,116	36	19	16,5	44	3/4"	14,5	23	48
790122512	25x1/2"	70	10	0,089	36	24	13	44	1/2"	15,5	23	48
790122534	25x3/4"	70	10	0,095	36	24	16,5	44	3/4"	15	23	48
790123234	32x3/4"	30	6	0,1170	44	31	16,5	56	3/4"	21	20	47
790123201	32x1"	30	6	0,23	44	31	22,3	56,5	1"	21	20	57
790124001	40x1"	16	4	0,273	54	39	20,5	68	1"	21	22	63
790124014	40x1 1/4"	16	4	0,376	54	39	27,5	68	1 1/4"	21	21	68
790125014	50x1 1/4"	12	2	0,428	70	49	28	79	1 1/4"	25	24	71
790125012	50x1 1/2"	12	2	0,5560	70	49	34,5	79	1 1/2"	25	24	71
790126312	63x1 1/2"	10	2	0,6070	83	62	35	88	1 1/2"	28	30	75
790126302	63x2"	10	2	0,6900	83	62	45	88	2"	28	30	80
790127502	75x2"	2	1	0,8431	98	74	45,5	111	2"	34	30	88
790127512	75x2 1/2"	2	1	1,2353	98	74	61	112	2 1/2"	34	30	88
790129003	90x3"	4	1	1,469	117	89	70	138	3"	39	42	99
790121104	110x4"	2	1	3,071	137	109	86	163	4"	45	49	117
790121255	125x5"	1	1		167	124	103	198	5"	40	40	124

Male tee - PN25

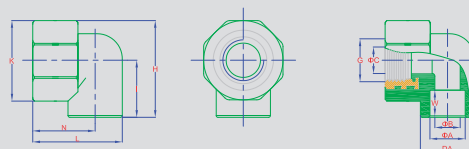
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	ΦC	K	G	W	M	N	H	L
790152012	20x1/2"x20	60	10	0,100	30	19	13	13	37	1/2"	15	15	50	54	65
700152512	25x1/2"x25	36	6	0,123	36	24	13	13	44	1/2"	16	15	55	62	73
790152534	25x3/4"x25	36	6	0,159	36	24	16,5	16,5	44	3/4"	16	16	55	62	73
790153201	32x1"x32	20	4	0,356	45	31	24	21,5	57	1"	21	53	69	76	92

Female tee - PN25

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	ΦC	K	G	W	M	N	H	L
790162012	20x1/2"x20	70	10	0,085	30	19	13	13	37	1/2"	15	15	34	54	49
700162512	25x1/2"x25	40	6	0,112	36	24	13	13	44	1/2"	16	15	42	62	60
790162534	25x3/4"x25	40	6	0,116	36	24	16,5	16,5	44	3/4"	16	16	42	62	60
790163201	32x1"x32	18	4	0,267	45	31	24	21,5	39	1"	20	53	52,5	76	75

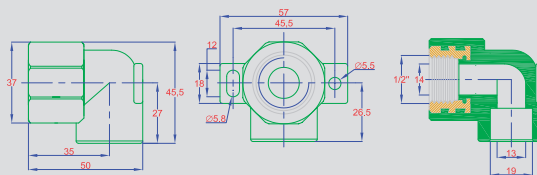
Male elbow - PN25

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	ΦC	K	G	W	M	N	H	I	L
790132012	20x1/2"	70	10	0,093	30	19	13	13	37	1/2"	14,5	15	50	45	26,5	65
700132512	25x1/2"	40	8	0,117	36	24	13	13	44	1/2"	16	15	56	53	31	74
790132534	25x3/4"	40	8	0,151	36	24	16,5	16,5	44	3/4"	16	16	57	53	31	75
790133201	32x1"	24	4	0,346	45	31	24	21,5	39	1"	20	17	68,5	66	38	91

Female elbow - PN25

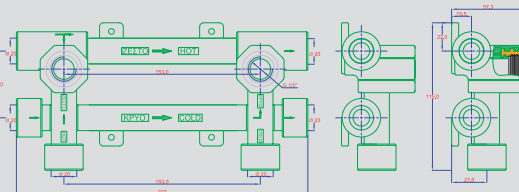
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	ΦC	K	G	W	N	H	I	L
790142012	20x1/2"	80	10	0,080	30	19	13	13	37	1/2"	14,5	34	45	26,5	49
700142512	25x1/2"	40	8	0,104	36	24	13	13	44	1/2"	16	41	53	31	59
790142534	25x3/4"	40	8	0,109	36	24	16,5	16,5	44	3/4"	16	41	53	31	59
790143201	32x1"	24	4	0,253	45	31	24	21,5	39	1"	20	51,5	66	38	74

Wall plate elbow - PN25



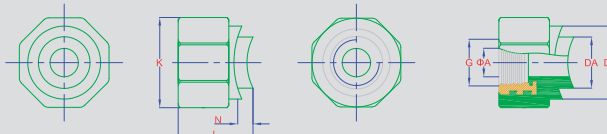
Code	Dimensions	Package item/carton	Package item/bag	kgr/item
790172012	20 x 1/2"	70	10	0,085

Aligning water intake template - PN25

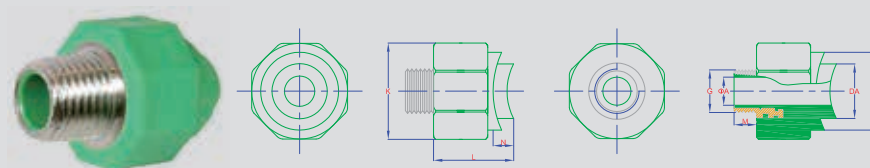


Code	Dimensions	Package item/carton	Package item/bag	kgr/item
790210000	20 x 1/2"	16	1	0,336

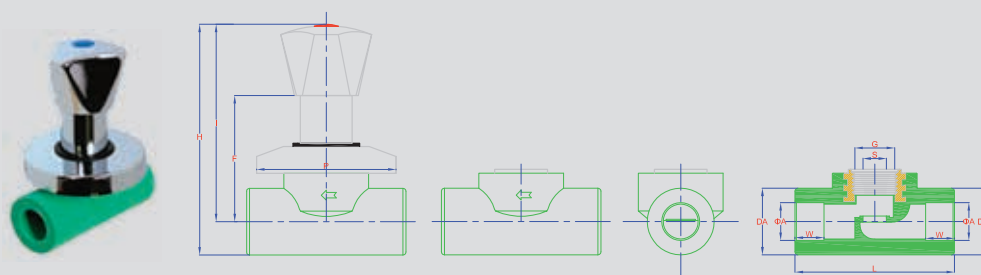
Supply saddle female - PN25



Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	DB	ΦA	K	G	N	L
790224012	40x1/2"x25	100	10	0.0830	25	36	14,5	44	1/2"	7	42
790224034	40x3/4"x25	80	10	0.0890	25	36	16,5	44	3/4"	7	38
790224011	40x1"x25	30	6	0.230	25	37	16,5	57	1"	6,5	55,5
790225012	50x1/2"x25	100	10	0.0830	25	36	14,5	44	1/2"	8,5	39
790225034	50x3/4"x25	80	10	0.0840	25	36	16,5	44	3/4"	8,5	39
790225011	50x1"x32	30	6	0.230	32	43	16,5	57	1"	8,5	55
790226312	63x1/2"x25	100	10	0.072	25	36,5	15	38	1/2"	8,5	40,5
790226334	63x3/4"x25	90	10	0.089	25	36,5	16,5	44	3/4"	8,5	40,5
790226301	63x1"x32	30	6	0.231	32	43	22	57	1"	10,5	61
790226314	63x1 1/4"x40	16	4	0.384	40	57	32	74	1 1/4"	10,5	71
790227512	75x1/2"x25	100	10	0.072	25	36	14	38	1/2"	9,5	41
790227534	75x3/4"x25	90	10	0.089	25	43	16,5	44	3/4"	10	41
790227501	75x1"x32	30	6	0.227	32	43	22,5	57	1"	12,5	61,5
790227514	75x1 1/4"x40	16	4	0.362	40	57	32	74	1 1/4"	12,5	70
790229012	90x1/2"x25	100	10	0.080	25	36	13,5	44	1/2"	?	37
790229034	90x3/4"x25	80	10	0.087	25	36	16,5	44	3/4"	13	43
790229001	90x1"x32	30	6	0.230	32	42	21	57	1"	13	61
790221112	110x1/2"x25	100	10	0.081	25	36	14	44	1/2"	12,5	42
790221134	110x3/4"x25	80	10	0.086	25	36	16,5	44	3/4"	12,5	42
790221101	110x1"x32	30	6	0.0228	32	43	21	57	1"	12,5	60

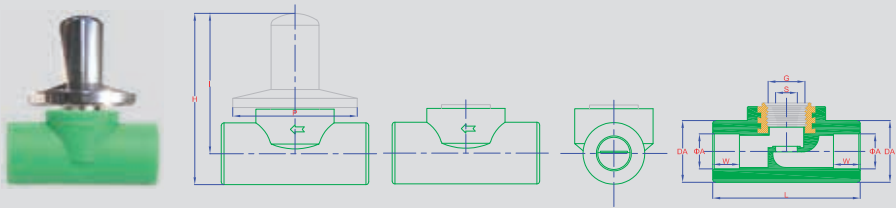
Supply saddle male - PN25

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	DB	ΦA	K	G	M	N	L
790394012	40x1/2"x25	80	10	0.093	25	36	13	44	1/2"	15	8,5	57
790394034	40x3/4"x25	80	10	0.132	25	36	16,5	44	3/4"	16	7	54
790394011	40x1"x25	30	6	0.322	25	37	21,5	57	1"	17	6,5	73
790395012	50x1/2"x25	80	10	0.093	25	36	14,5	44	1/2"	15	8,5	54
790395034	50x3/4"x25	80	10	0.132	25	36	16,5	44	3/4"	16	8,5	55
790395011	50x1"x25	30	6	0.319	25	43	21,5	57	1"	17	8,5	72
790399011	90x1/2"x25	80	10	0.091	25	36	13	44	1/2"	15	6	53
790399034	90x3/4"x25	80	10	0.132	25	36	16,5	44	3/4"	16	13	58
790399001	90x1"x32	30	6	0.327	32	42	21,5	57	1"	17	13	78
790391112	110x1/2"x25	80	10	0.094	25	36	13	44	1/2"	15	12,5	57
790391134	110x3/4"x25	80	10	0.131	25	36	16,5	44	3/4"	16	12,5	58
790391101	110x1"x32	30	6	0.325	32	43	21,5	57	1"	17	12,5	77

Stop cock

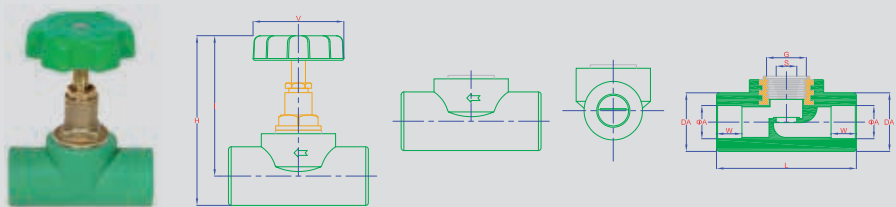
Code	Dimensions (Ø)	Package item/carton	Package item/bag	kgr/item	DA	ΦA	G	S	H	I	F	W	P	L
790100020	20	16	1	0,361	34	19	1/2"	10	112	95	60	14,5	70	80
700100025	25	16	1	0,367	36	24	1/2"	10	124	106	42	16	68	85
700100032	32	12	1	0,516	44	31	1"	19	140	118	45	20	69	90

Stop cock with short neck- PN25



Code	Dimensions (Ø)	Package item/carton	Package item/bag	kgr/item	DA	ΦA	G	S	H	I	W	P	L
790300020	20x1/2"	16	I	0.254	34	19	1/2"	10	86	69	14,5	70	80
790300025	25x1/2"	16	I	0.265	36	24	1/2"	10	87	69	16	70	85
790300032	32x1"	16	I	0.455	43,5	31	1"	19	90	69	20	70	90

Rotative valve - PN25

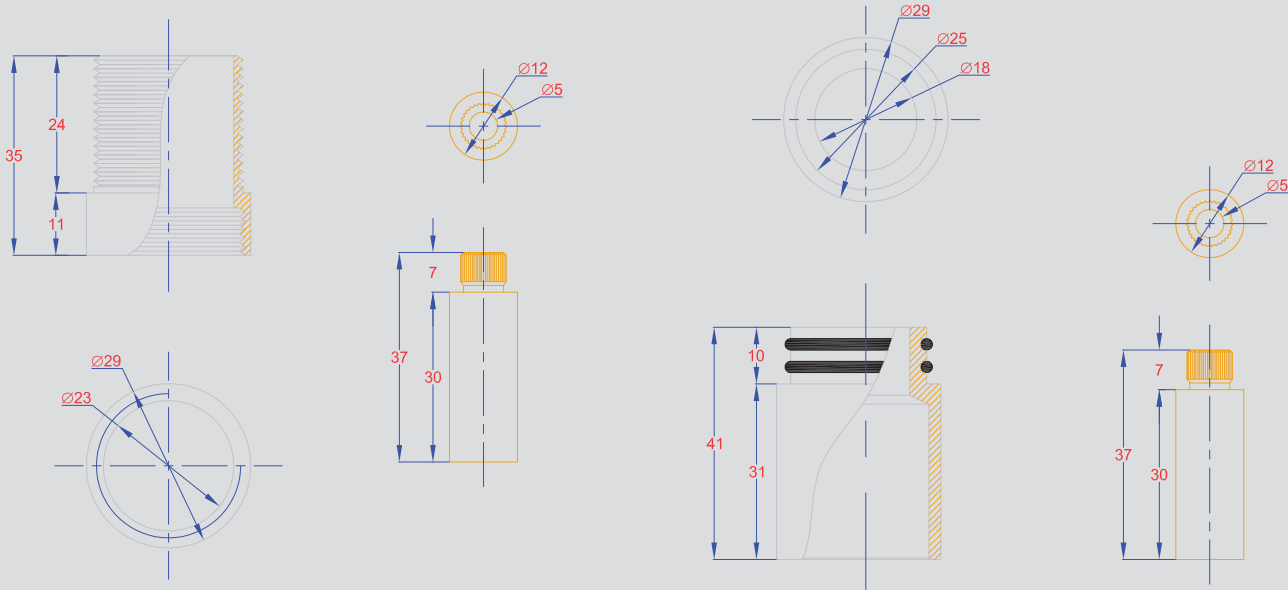


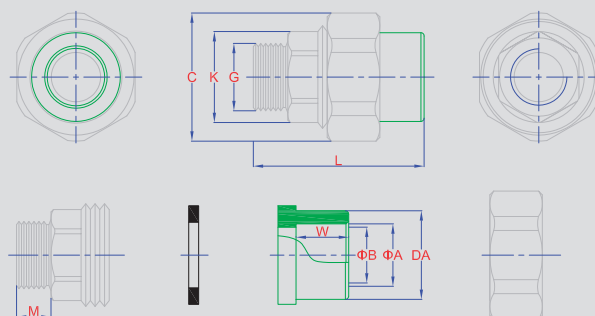
Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	G	S	H	I	W	V	L
790100120	Ø20x1/2"	16	I	0.180	34	19	1/2"	10	102	87	14,5	52	80
790100125	Ø25x1/2"	16	I	0.186	36	24	1/2"	10	105	87	16	52	86
790100132	Ø32x1"	16	I	0.349	43,5	31	1"	19	118	97	20	58	90

Extension for stop cock

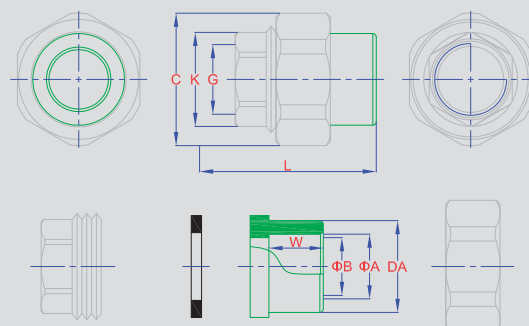


Code	Package item/carton	Package item/bag	kgr/item
54224000000I	10	I	0,074

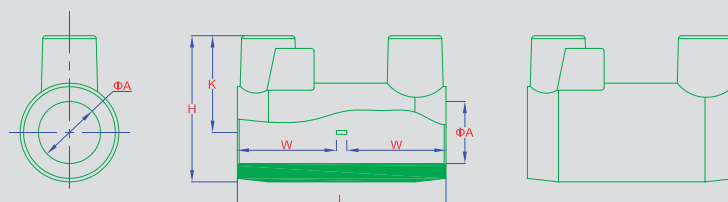


Brass coupling male

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	C	K	G	M	W	L
700422012	20x1/2"	80	10	0.106	27	19	17	36	27	1/2"	12	16	55
700422534	25x3/4"	50	10	0.150	35	24	21	46	32	3/4"	12	17	55
700423201	32x1"	30	6	0.231	40	31	29	52	37	1"	14	19	63
700424014	40x1 1/4"	16	4	0.428	51	39	37	65	46	1 1/4"	16	21	66

Brass coupling female

Code	Dimensions	Package item/carton	Package item/bag	kgr/item	DA	ΦA	ΦB	C	K	G	W	L
700412012	20x1/2"	80	10	0.085	27	19	17	36	27	1/2"	16	41
700412534	25x3/4"	60	10	0.152	35	24	21	45	32	3/4"	17	45
700413201	32x1"	30	6	0.180	40	31	29	52	37	1"	19	48
700414014	40x1 1/4"	16	4	0.328	51	39	37	65	46	1 1/4"	21	53

Electrosocket

Code	Dimensions (Ø)	Package item/carton	kgr/item	ΦA	H	K	W	L
790100020	20	20	0,038	20,5	51	34	34	71
700100025	25	15	0,052	25,5	56	37	34	71
700100032	32	10	0,088	32,5	65	42	38	81
700100040	40	6	0,172	40,5	73	47	45	94
700100050	50	3	0,252	50,5	84	50		101
700100063	63	2	0,428	63,5	101	58		107