RIIFO

PPR PLUMBING SYSTEM

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ABOUT RIIFO

RIIFO is a leading multinational corporation, providing one-stop piping solutions applied in residential, commercial, agricultural, industrial, and infrastructural sectors. Relentless reinventing since 1996, with over 8,000 employees, 70 branches & subsidiaries, and 300,000 distributors, we have served customers in more than 100 countries and regions.

With an integrated value chain, from R&D to manufacturing and retail distribution, we strive to fulfill our mission of offering ideal piping products and services to everyone.

8,000
Employees

300,000
Distuibutors worldwide

70
Branches & subsidiaries

100+
Serving over 100 countries & regions

INNOVATION

Believing that innovation is the key to go beyond the ordinary, RIIFO has founded one world-class lab recognized and certified by CNAS. Over 600 innovation talents have spared no effort to challenge industrial boundaries, achieving 923 patents and 20 technology awards.

And this innovative passion has perfectly presented on high quality products and outstanding services,we strive to offer ideal piping solutions to everyone.

SCALE

We adopt highly automated production lines with the most rigorous and comprehensive production control, and management system to handle such a powerful production.

Facility

11
Global production bases

5,200+
Production staffs

200
Hectares area totally

4,000+
Automated production lines

Capacity

Production Capacity

- Pipe: **3.2 billion** m/yr
- Fitting: **1.3 billion** pcs/yr

Storage Capacity

- **1,735,000 m^3** ≈ 61,950 TEU (20 GP Containers)

RIIFO APPROVALS

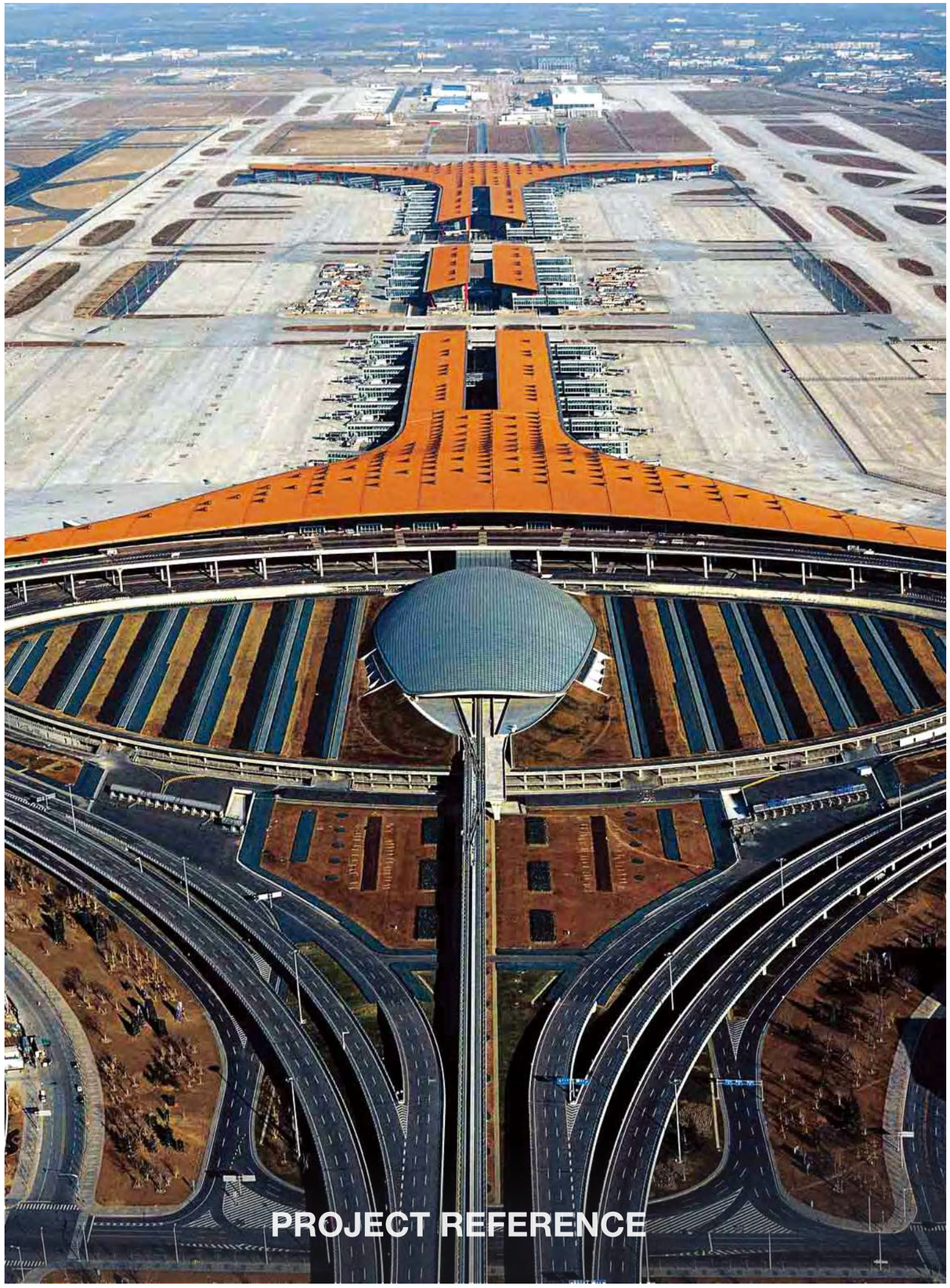
RIIFO adhere to the concept of quality priority,all RIIFO products are produced under rigorous quality control with excelsior manufacturing. Until now,RIIFO has gained over 50 certificates, such as NSF, DVGW, AENOR, WRAS Watermark, etc. These certificates worldwide underline our technical and quality know-how, and we can provide you with 25 years system warranty backed up by an international insurance company.

Group Honor

MANAGEMENT SYSTEM ISO 9001: 2015

Piping Systems

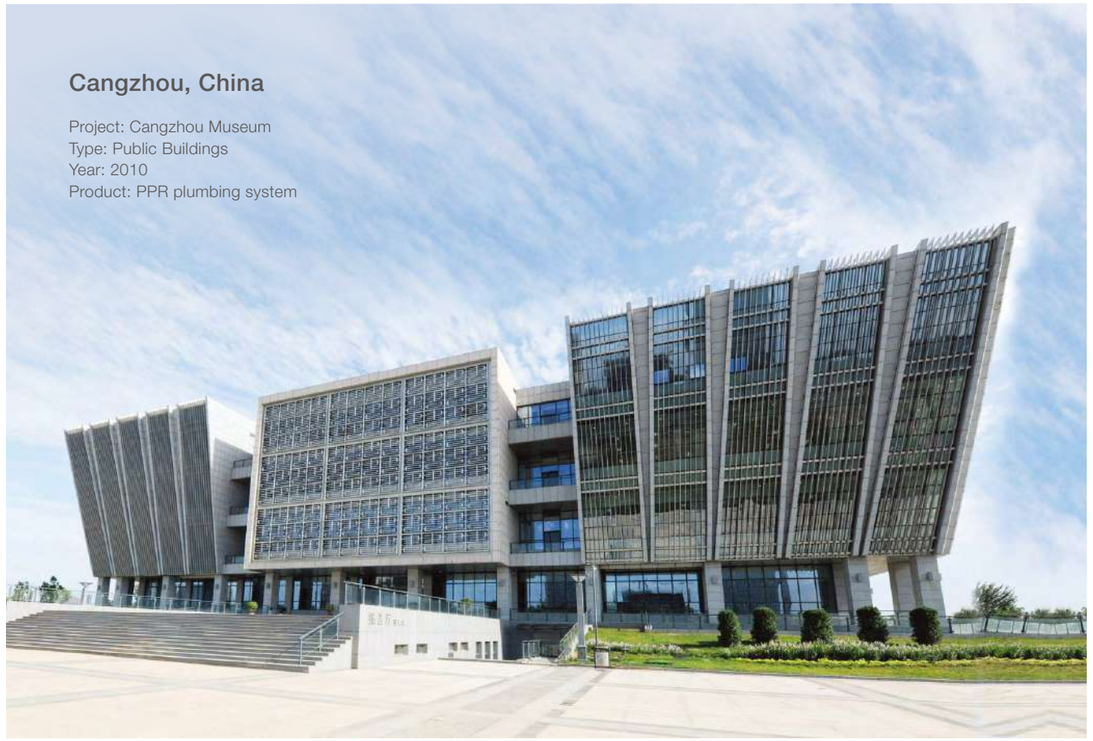
USA	GERMANY
FRANCE	FRANCE
SPAIN	UK
NETHERLAND	FINLAND
EU	AUSTRALIA
AUSTRALIA	AUSTRALIA



PROJECT REFERENCE

Beijing, China

Project: Capital International Airport (T3)
Type: Public Buildings
Year: 2008
Product: PPR plumbing system



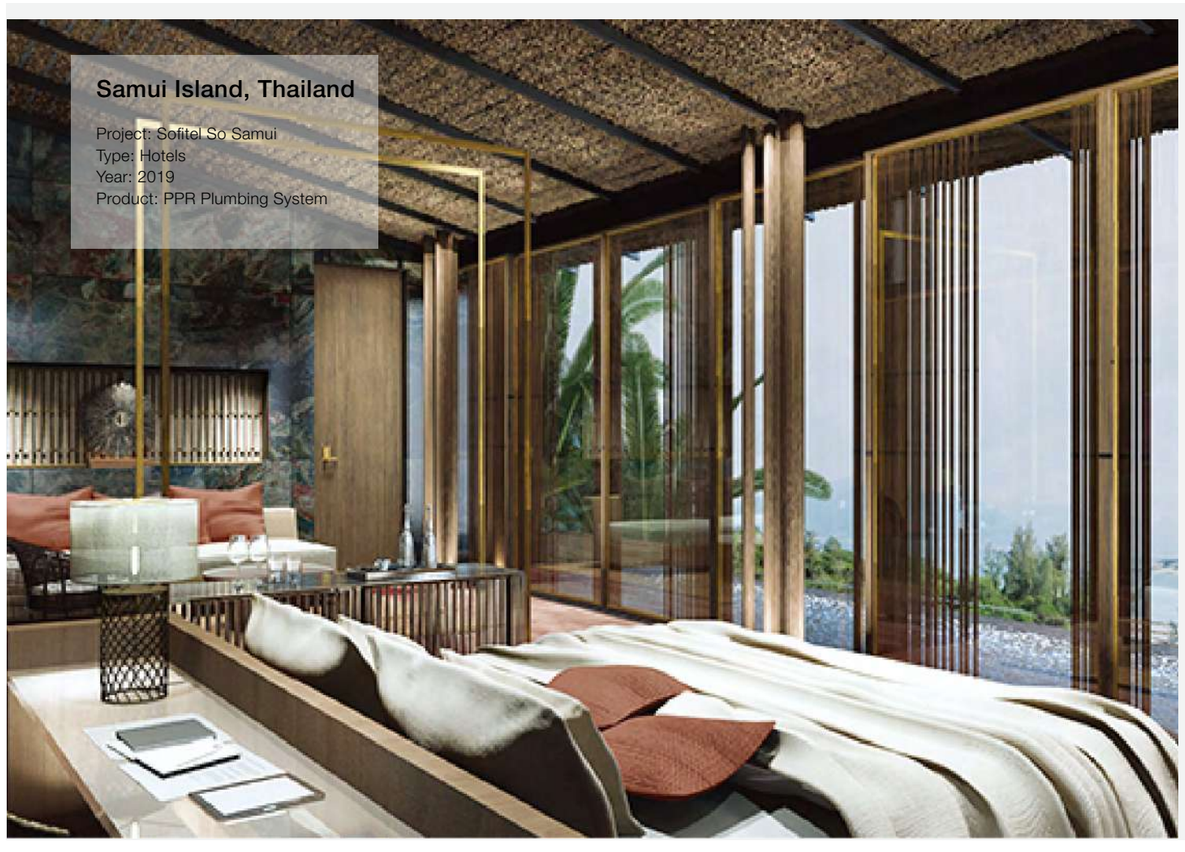
Cangzhou, China

Project: Cangzhou Museum
Type: Public Buildings
Year: 2010
Product: PPR plumbing system

PROJECT REFERENCE

Uthai Thani, Thailand

Project: Chantaram Temple
Type: Public Buildings
Year: 2019
Product: PPR Plumbing System



Samui Island, Thailand

Project: Sofitel So Samui
Type: Hotels
Year: 2019
Product: PPR Plumbing System

Bali, Indonesia

Project: FOX HARRIS Jimbaran Beach
Type: Hotels
Year: 2016
Product: PPR Plumbing System

Semarang, Indonesia

Project: Hotel Chanti
Type: Hotels
Year: 2017
Product: PPR Plumbing System

Chon Buri, Thailand

Project: The Hill Pattaya
Type: Hotels
Year: 2019
Product: PPR Plumbing System

PROJECT REFERENCE

Nakhonsawon, Thailand

Project: 42C Hotel
Type: Hotels
Year: 2019
Product: PPR Plumbing System

Bekasi, Indonesia

Project: PT. Sato Nagatomi
Type: Industry
Year: 2016
Product: PPR Plumbing System

Nanyang, China

Project: Wanxi Pharmaceutical
Type: Commercial
Year: 2017
Product: PPR Plumbing System

Bekasi, Indonesia

Project: Chadstone Sales Gallery Cikarang
Type: Residential
Year: 2018
Product: PPR Plumbing System

GORO, Ethiopia

Project: Sunrise Luxury Apartment
Type: Residential
Year: 2017
Product: PPR Plumbing System+PVC

PROJECT REFERENCE

Bandung, Indonesia

Project: Tamansari Tera
Type: Residential
Year: 2018
Product: PPR Plumbing System

Palembang, Indonesia

Project: Wyndham Opi Hotel
Type: Hotels
Year: 2017
Product: PPR Plumbing System
Multilayer Plumbing System

Tangerang, Indonesia

Project: Decathlon Alam Sutera
Type: Commercial
Year: 2017
Product: PPR Plumbing System

Bekasi, Indonesia

Project: JFE Steel Indonesia
Type: Industry
Year: 2016
Product: PPR Plumbing System

Bekasi, Indonesia

Project: PT. Sato Nagatomi
Type: Industry
Year: 2016
Product: PPR Plumbing System

SYSTEM INTRODUCTION

PP-R system introduction

RIIFO PP-R piping system, made from the latest scientific formula with high-quality polypropylene random copolymer, it's non-toxic, ensuring people safe drinking water, can be applied in both residential and commercial buildings.

For over 20 years, RIIFO has been committed to supplying various PP-R pipes and fittings that comply with the ISO15874, certificated by DVGW and NSF.

Moreover, RIIFO has launched its mass flow PP-R series, bringing a more hygienic and securer plumbing experience to customers worldwide.

Applications

Application ranges

- Distribution for cool and hot water
- Pipes to connect kinds of low temperature heating system
- Pipes for heating and cooling settings in solar energy system
- Chilled water piping for air conditioners

Application areas

- Residential apartments, condominiums, public housing
- Commercial shopping centers, office buildings
- Industrial plants dealing with chemicals, food processing
- Hospitals
- Schools, laboratories and chemical sewerage
- Hotels and resorts

Technical data

Working temperature: 3-95°C
Working pressure:
S5-12.9Bars, S4-16.2Bars
S3.2-20.2Bars, S2.5-25.9Bars
Lifetime: 50 years

Advantages

RIIFO PP-R pipes

- Corrosion-resistant
- Outstanding heat and sound insulation property
- Light in weight
- Smooth inner wall
- Hygienic and non-toxic
- Safe homogeneous connections
- A lifetime up to 50 years under normal conditions

RIIFO PP-R fittings

- Unique dovetail slot insert design
- Large radian bend design
- Pested surface polished with surface roughness Ra up to 0.4 microns small
- U-type pipe fittings, to ensure the linkage of the whole house living water

Standards

- DVGW W544
- ISO 15874
- NSF 61 372

Certificates

USA GERMANY EU SPAIN

SWALLOW-TAILED STRUCTURE

1 Common structure

The plastic section of the common PP-R fittings is likely to deform the temperature fluctuation so that leakage may occur.

2 Swallow-tailed structure

RIIFO PP-R fitting ensures zero leakage, excellent air-proof performance by its sepecial swallow-tailed structure

PP-R MASS FLOW SERIES

RIIFO mass flow series,made out of superior polypropylene random,is double the common fittings at present market in weight and size.

SWEEP JUNCTION

- Reducing 50% of the water resistance
- Reliable structure with a strengthening rib
- Easier assembly with the directional mark

LARGE ARC ELBOW

- Reducing 50% of the water resistance,with twice the arc,the water flow impact pressure wave is scattered and disappeared by the curved surface.Meanwhile it avoids striking the fitting directly and causing damages.

U-PROFILE TAP ELBOW

- New U-profile tap elbow perfectly fits into hygience oriented and water flow rate optimized installations using different loop installation methods.
- Improved profile design allowing better flow rate
- Simpler and more flexible installation

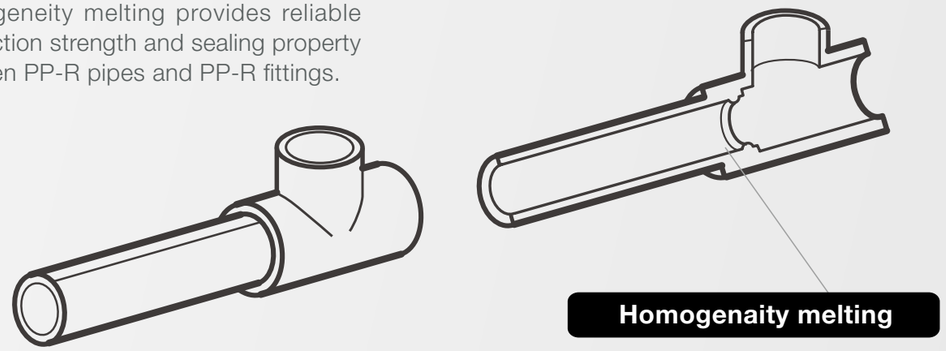
GATE VALVE

- Full diameter,water flow increases by 200%
- Three NBR seal rings to prevent leakage
- High-quality brass of the valve spool,which makes it more durable

CONNECTION

Reliable Homogeneous Connections

Homogeneity melting provides reliable connection strength and sealing property between PP-R pipes and PP-R fittings.

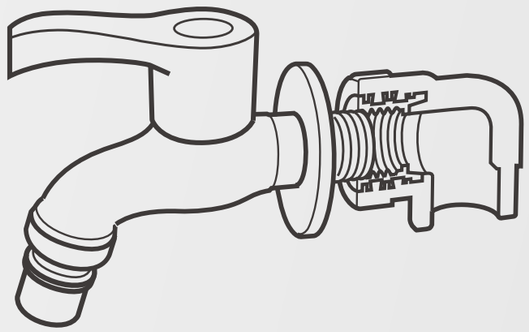


Metal thread connection

RIIFO also provides metal thread connection methods to achieve connection conversionbetween different scenarios.

RIIFO PP-R fittings have an unique structure - swallow tailed structure on the metal insert, whichcan eliminate the risk of leakage from gaps caused by different thermal conductivity performances of brass and plastic.

RIIFO holds the exclusive patent to manufacture these fittings.



SWALLOW TAILED NOTCH :

Avoid leakage risk caused by different thermal expansions.

36 BITING POINTS :

Anti-axial slip between metal insert and the plastic part.

BUTTON SAFETY RING :

Anti-over-twist when installing devices with threads.

SPECIFICATIONS

S2.5 MONOLAYER PIPE

Description	Package	Color
PPR-S2.5-20x3.4	160	Green
PPR-S2.5-25x4.2	128	Green
PPR-S2.5-32x5.4	64	Green
PPR-S2.5-40x6.7	48	Green
PPR-S2.5-50x8.3	28	Green
PPR-S2.5-63x10.5	20	Green
PPR-S2.5-75x12.5	16	Green
PPR-S2.5-90x15.0	12	Green
PPR-S2.5-110x18.3	8	Green
PPR-S2.5-160X26.6	4	Green

S3.2 MONOLAYER PIPE

Description	Package	Color
PPR-S3.2-20x2.8	160	Green
PPR-S3.2-25x3.5	128	Green
PPR-S3.2-32x4.4	64	Green
PPR-S3.2-40x5.5	48	Green
PPR-S3.2-50x6.9	28	Green
PPR-S3.2-63x8.6	20	Green
PPR-S3.2-75x10.3	16	Green
PPR-S3.2-90x12.3	12	Green
PPR-S3.2-110x15.1	8	Green
PPR-S3.2-160x21.9	4	Green

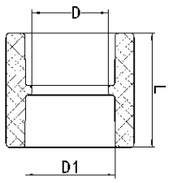
S4 MONOLAYER PIPE

Description	Package	Color
PPR-S4-20x2.3	160	Green
PPR-S4-25x2.8	128	Green
PPR-S4-32x3.6	64	Green
PPR-S4-40x4.5	48	Green
PPR-S4-50x5.6	28	Green
PPR-S4-63x7.1	20	Green
PPR-S4-75x8.4	16	Green
PPR-S4-90x10.1	12	Green
PPR-S4-110x12.3	8	Green

S5 MONOLAYER PIPE

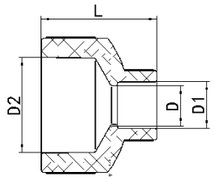
Description	Package	Color
PPR-S5-20x2.0	160	Green
PPR-S5-25x2.3	128	Green
PPR-S5-32x2.9	64	Green
PPR-S5-40x3.7	48	Green
PPR-S5-50x4.6	28	Green
PPR-S5-63x5.8	20	Green
PPR-S5-75x6.8	16	Green
PPR-S5-90x8.2	12	Green
PPR-S5-110x10.0	8	Green
PPR-S5-160x14.6	4	Green

EQUAL UNION



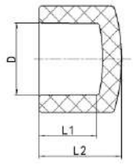
Description	pcs/ctn.	D	D1	L
EQUAL UNION F12-S20x20	1620	16	19.2	34.5
EQUAL UNION F12-S25x25	720	20	24.1	39
EQUAL UNION F12-S32x32	480	26	31.1	44
EQUAL UNION F12-S40x40	210	33	39	48
EQUAL UNION F12-S50x50	112	43	49	55
EQUAL UNION F12-S63x63	64	55	61.9	64
EQUAL UNION F12-S75x75	48	69.7	73.6	70
EQUAL UNION F12-S90x90	20	84.3	88.3	80
EQUAL UNION F12-S110x110	12	103.3	107.9	94

REDUCER



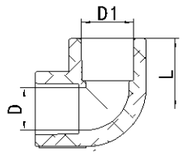
Description	pcs/ctn.	D	D1	D2	L
REDUCER F12-S25x20	1080	16	19.2	24.1	39
REDUCER F12-S32x20	720	16	19.2	31.1	43
REDUCER F12-S32x25	600	20	24.1	31.1	44
REDUCER F12-S40x20	300	16	19.2	39	47
REDUCER F12-S40x25	300	20	24.1	39	48
REDUCER F12-S40x32	200	26	31.1	39	49
REDUCER F12-S50x20	160	16	19.2	49	53.5
REDUCER F12-S50x25	160	20	24.1	49	55
REDUCER F12-S50x32	168	26	31.1	49	55.5
REDUCER F12-S50x40	112	33	39	49	56
REDUCER F12-S63x20	81	16	19.2	61.9	61
REDUCER F12-S63x25	96	20	24.1	61.9	62.5
REDUCER F12-S63x32	81	26	31.1	61.9	63
REDUCER F12-S63x40	98	33	39	61.9	63
REDUCER F12-S63x50	70	43	49	61.9	64
REDUCER F12-S75x63	36	58.8	61.9	73.6	86.5
REDUCER F12-S90x50	28	46	49	88.3	95
REDUCER F12-S90x63	20	58.8	61.9	88.3	100.5
REDUCER F12-S90x75	24	69.7	73.6	88.3	100
REDUCER F12-S110x50	18	46	49	107.9	105
REDUCER F12-S110x63	20	58.8	61.9	107.9	105.5
REDUCER F12-S110x75	20	69.7	73.6	107.9	109
REDUCER F12-S110x90	12	84.3	88.3	107.9	114

END CAP



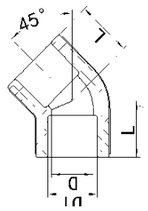
Description	pcs/ctn.	D	L1	L
END CAP F12-D20	2160	20	16	22
END CAP F12-D25	1800	25	18	25
END CAP F12-D32	840	32	20	28.5
END CAP F12-D40	325	40	22	32
END CAP F12-D50	176	50	25.5	37
END CAP F12-D63	90	63	29.5	44
END CAP F12-D75	72	75	32	46.2
END CAP F12-D90	34	90	36	52.8
END CAP F12-D110	24	110	42	63

EQUAL ELBOW 90°



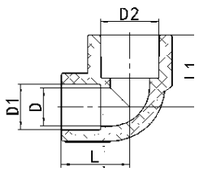
Description	pcs/ctn.	D	D1	L
EQUAL ELBOW 90° F12-L20x20	960	16	19.2	26.5
EQUAL ELBOW 90° F12-L25x25	600	20	24.1	31
EQUAL ELBOW 90° F12-L32x32	288	26.4	31.1	36.5
EQUAL ELBOW 90° F12-L40x40	120	33	39	42.5
EQUAL ELBOW 90° F12-L50x50	57	43	49	51
EQUAL ELBOW 90° F12-L63x63	24	55	61.9	61.5
EQUAL ELBOW 90° F12-L75x75	18	69.7	73.6	70.7
EQUAL ELBOW 90° F12-L90x90	12	84.3	88.3	82
EQUAL ELBOW 90° F12-L110x110	6	103.3	107.9	97.7

EQUAL ELBOW 45°



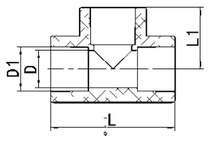
Description	pcs/ctn.	D	D1	L
EQUAL ELBOW 45° F12-L20x20	1080	16	19.2	21.5
EQUAL ELBOW 45° F12-L25x25	720	20	24.1	25
EQUAL ELBOW 45° F12-L32x32	360	26	31.1	29
EQUAL ELBOW 45° F12-L40x40	120	33	39	32.5
EQUAL ELBOW 45° F12-L50x50	60	43	49	38.5
EQUAL ELBOW 45° F12-L63x63	36	55	61.9	45
EQUAL ELBOW 45° F12-L75x75	24	69.7	73.6	51.2
EQUAL ELBOW 45° F12-L90x90	12	84.3	88.3	58.3
EQUAL ELBOW 45° F12-L110x110	8	103.3	107.9	68.3

REDUCING ELBOW



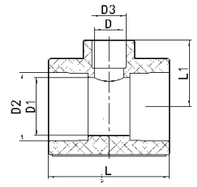
Description	pcs/ctn.	D	D1	D2	L	L1
REDUCING ELBOW F12-L25x20	600	16	19.2	24.1	28	30
REDUCING ELBOW F12-L32x20	384	16	19.2	31.1	32	32.5
REDUCING ELBOW F12-L32x25	288	20	24.1	31.1	34	35
REDUCING ELBOW F12-L40x32	120	26.4	31.1	39	40	41.5
REDUCING ELBOW F12-L50x32	100	26.4	31.1	49	44	48

EQUAL TEE



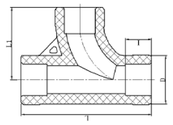
Description	pcs/ctn.	D	D1	L	L1
REDUCING ELBOW F12-L25x20	600	16	19.2	24.1	28
REDUCING ELBOW F12-L32x20	384	16	19.2	31.1	32
REDUCING ELBOW F12-L32x25	288	20	24.1	31.1	34
REDUCING ELBOW F12-L40x32	120	26.4	31.1	39	40
REDUCING ELBOW F12-L50x32	100	26.4	31.1	49	44

REDUCING TEE



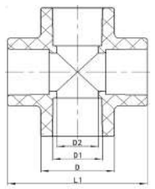
Description	pcs/ctn.	D	D1	D2	D3	L
REDUCING TEE F12-T25x20x20	600	16	16	24.1	19.2	55
REDUCING TEE F12-T25x20x25	480	16	20	24.1	19.2	57.5
REDUCING TEE F12-T32x20x32	240	16	26.5	31.1	19.2	63
REDUCING TEE F12-T32x25x32	240	20	26.5	31.1	24.1	67
REDUCING TEE F12-T40x20x40	120	16	33	39	19.2	67
REDUCING TEE F12-T40x25x40	120	20	33	39	24.1	71
REDUCING TEE F12-T40x32x40	112	26	33	39	31.1	77
REDUCING TEE F12-T50x20x50	88	16	43	49	19.2	75
REDUCING TEE F12-T50x25x50	80	20	43	49	24.1	79
REDUCING TEE F12-T50x32x50	60	26	43	49	31.1	85
REDUCING TEE F12-T50x40x50	60	33	43	49	39	92
REDUCING TEE F12-T63x20x63	45	16	55	61.9	19.2	84
REDUCING TEE F12-T63x25x63	45	20	55	61.9	24.1	88
REDUCING TEE F12-T63x32x63	36	26	55	61.9	31.1	94
REDUCING TEE F12-T63x40x63	36	33	55	61.9	39	101
REDUCING TEE F12-T63x50x63	27	43	55	61.9	49	111
REDUCING TEE F12-T75x25x75	33	22	69.7	73.6	24.1	93.1
REDUCING TEE F12-T75x32x75	30	29	69.7	73.6	31.1	100
REDUCING TEE F12-T75x40x75	24	36	69.7	73.6	39	107.9
REDUCING TEE F12-T75x50x75	20	46	69.7	73.6	49	117.8
REDUCING TEE F12-T75x63x75	18	59	69.7	73.6	61.9	130.7
REDUCING TEE F12-T90x32x90	14	26.5	84.3	88.3	31.1	108
REDUCING TEE F12-T90x40x90	12	36	84.3	88.3	39	115.9
REDUCING TEE F12-T90x50x90	12	46	84.3	88.3	49	125.8
REDUCING TEE F12-T90x63x90	12	59	84.3	88.3	61.9	138.7
REDUCING TEE F12-T90x75x90	12	69.7	84.3	88.3	73.6	149.3
REDUCING TEE F12-T110x25x110	12	20	103.3	107.9	24.1	115
REDUCING TEE F12-T110x40x110	12	33	103.3	107.9	39	128
REDUCING TEE F12-T110x50x110	10	46	103.3	107.9	49	137.8
REDUCING TEE F12-T110x63x110	8	59	103.3	107.9	61.9	150.7
REDUCING TEE F12-T110x75x110	6	69.7	103.3	107.9	73.6	161.3
REDUCING TEE F12-T110x90x110	4	84.3	103.3	107.9	88.3	175.9

SWEEP JUNCTION



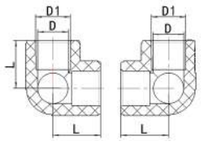
Description	pcs/ctn.	D	l	L	L1
SWEEP JUNCTION F12-T20x20x20	240	29.4	16	80	44
SWEEP JUNCTION F12-T25x25x25	180	36	18	95	52

CROSS



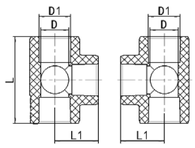
Description	pcs/ctn.	D	D1	D2	L1
CROSS F12-X20x20x20x20	360	28.4	20	16	54
CROSS F12-X25x25x25x25	180	34.5	25	20	64
CROSS F12-X32x32x32x32	120	26.5	32	43.7	75

CORNER TEE



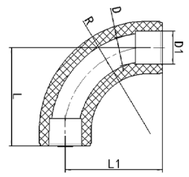
Description	pcs/ctn.	D	D1	L
CORNER TEE F12-K20x20x20	360	17	19.2	26.5
CORNER TEE F12-K25x25x25	360	21	24.1	31
CORNER TEE F12-K32x32x32	240	28	31.1	36.5

SIDE OUT LET



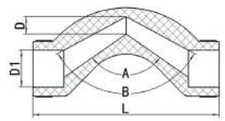
Description	pcs/ctn.	D	D1	L	L1
SIDE OUT LET F12-X20x20x20x20	360	17	19.2	53	26.5
SIDE OUT LET F12-X25x25x25x25	288	21	24.1	62	31
SIDE OUT LET F12-X32x32x32x32	144	28	31.1	73	36.5

LARGE ARC ELBOW



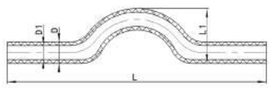
Description	pcs/ctn.	D	D1	R	L	L1
LARGE ARC ELBOW F12-L20x20	240	16.5	19.2	50.2	57	57
LARGE ARC ELBOW F12-L25x25	180	21	24.1	59.7	67	67
LARGE ARC ELBOW F12-L32x32	120	28	31.1	70.8	79	79

BRIDGE FITTING



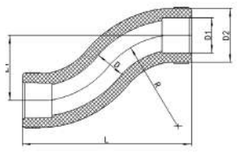
Description	pcs/ctn.	D	l	H	L
BRIDGE FITTING F12-W20x20	360	29.4	16	126	44
BRIDGE FITTING F12-W25x25	288	36	18	150	55
BRIDGE FITTING F12-W32x32	120	45	20	180	70

PIPE BRIDGE



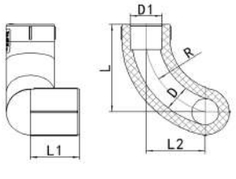
Description	pcs/ctn.	D	D1	L	L1
PIPE BRIDGE F12-W20x20 L S2.5	165	20	13.2	360	50
PIPE BRIDGE F12-W25x25 L S2.5	96	25	16.6	360	60
PIPE BRIDGE F12-W32x32 L S2.5	70	32	21.2	360	60

S TYPE UNION



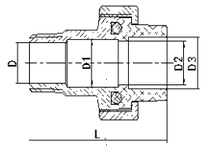
Description	pcs/ctn.	D	D1	D2	R	L	L1
S TYPE UNION F12-S20x20	480	16.5	19.2	29.4	50.2	92	35.5
S TYPE UNION F12-S25x25	300	21	24.1	36	59.7	104.6	38

L TYPE ELBOW



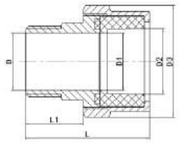
Description	pcs/ctn.	D	D1	R	L	L1	L2
L TYPE ELBOW F12-L20x20-RIGHT	180	16.5	19.2	50.2	55.6	30	36
L TYPE ELBOW F12-L20x20-LEFT	180	16.5	19.2	50.2	55.6	30	36

FLEXIBLE MALE UNION



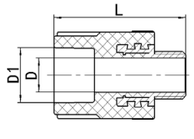
Description	pcs/ctn.	D	D1	D2	D3	L
FLEXIBLE MALE UNION F12-S20x1/2M H	150	15	21.4	16	19.2	52
FLEXIBLE MALE UNION F12-S25x1/2M H	120	15	27.4	20	24.1	55
FLEXIBLE MALE UNION F12-S25x3/4M H	150	20	21	20	24.1	55
FLEXIBLE MALE UNION F12-S25x1M H	120	26	23	20	24.1	57
FLEXIBLE MALE UNION F12-S32x3/4M H	90	20	22	26	31.1	59.5
FLEXIBLE MALE UNION F12-S32x1M H	72	26	28	26	31.1	59.5

FLEXIBLE MALE UNION



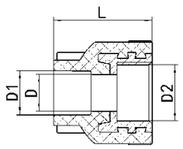
Description	pcs/ctn.	D	D1	D2	D3	L1	L
FLEXIBLE MALE UNION F12-S40x1 1/4M H	60	34	34	39	66	34	73
FLEXIBLE MALE UNION F12-S50x1 1/2M H	45	39	45	49	81	34	76.5
FLEXIBLE MALE UNION F12-S63x2M H	18	50.5	57	61.9	99	41	90.5

MALE UNION



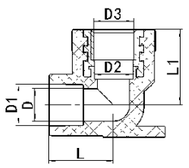
Description	pcs/ctn.	D	D1	L
MALE UNION F12-S20x1/2M	240	15	19.2	56
MALE UNION F12-S20x3/4M	180	16	19.2	57
MALE UNION F12-S25x1/2M	210	15	24.1	59
MALE UNION F12-S25x1M	90	20	24.1	73
MALE UNION F12-S25x3/4M	180	20	24.1	60
MALE UNION F12-S32x1/2M	180	14.8	31.1	62
MALE UNION F12-S32x1M	72	26	31.1	73
MALE UNION F12-S32x3/4M	144	20	31.1	62
MALE UNION F12-S40x1 1/4M	60	33.5	39	84
MALE UNION F12-S50x1 1/2M	45	38.5	49	89
MALE UNION F12-S63x2M	24	50	61.9	103

FEMALE UNION



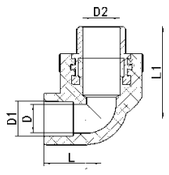
Description	pcs/ctn.	D	D1	D2	L
FEMALE UNION F12-S20x1/2F	360	16.4	19.2	19.05	42
FEMALE UNION F12-S20x3/4F	240	17	19.2	24.5	42
FEMALE UNION F12-S25x1/2F	300	16.4	24.1	19.05	45
FEMALE UNION F12-S25x1F	96	20	24.1	30.55	45
FEMALE UNION F12-S25x3/4F	180	22	24.1	24.5	45
FEMALE UNION F12-S32x1/2F	240	16.4	31.1	19.05	47
FEMALE UNION F12-S32x1F	96	26	31.1	30.55	56
FEMALE UNION F12-S32x3/4F	180	22	31.1	24.5	47
FEMALE UNION F12-S40x1 1/4F	80	33.5	39	38.95	65
FEMALE UNION F12-S50x1 1/2F	60	38.5	49	44.85	70
FEMALE UNION F12-S63x2F	36	50	61.9	56.66	81

FEMALE ELBOW Z



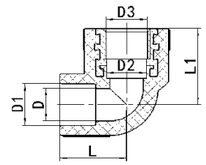
Description	pcs/ctn.	D	D1	L	L1
FEMALE ELBOW F12-L20x1/2F (Z)	210	15	19.2	30	49
FEMALE ELBOW F12-L25x1/2F (Z)	180	15	24.1	31.5	52

MALE ELBOW



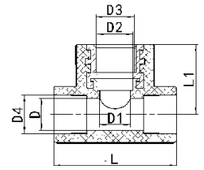
Description	pcs/ctn.	D	D1	D2	L	L1
MALE ELBOW F12-L20x1/2M	240	14.8	19.2	15.1	30	49
MALE ELBOW F12-L20x3/4M	150	16	19.2	19.5	31	51
MALE ELBOW F12-L25x1/2M	180	14.8	24.1	15.1	31.5	52
MALE ELBOW F12-L25x1M	72	20	24.1	26.3	40.5	70
MALE ELBOW F12-L25x3/4M	150	19.5	24.1	20	33	54
MALE ELBOW F12-L32x1/2M	114	14.8	31.1	15.1	36.5	56
MALE ELBOW F12-L32x1M	60	26.07	31.1	26.3	40.5	73
MALE ELBOW F12-L32x3/4M	120	19.5	31.1	20	37.5	58
MALE ELBOW F12-L40x1 1/4M	36	33.5	39	34	50	83.5
MALE ELBOW F12-L50x1 1/2M	30	38.5	49	39	57	94
MALE ELBOW F12-L63x2M	16	50	61.9	50.5	65	112

FEMALE ELBOW



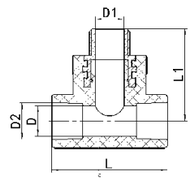
Description	pcs/ctn.	D	D1	D2	D3	L	L1
FEMALE ELBOW F12-L20x1/2F	240	16.4	19.2	16.4	19.05	30	35
FEMALE ELBOW F12-L20x3/4F	180	16	19.2	22	24.5	31	36
FEMALE ELBOW F12-L25x1/2F	210	16.4	24.1	16.4	19.05	31.5	38
FEMALE ELBOW F12-L25x1F	90	20	24.1	26	30.55	40.5	53
FEMALE ELBOW F12-L25x3/4F	180	22	24.1	22	24.5	33	39
FEMALE ELBOW F12-L32x1/2F	144	26.4	31.1	16.4	19.05	36.5	42
FEMALE ELBOW F12-L32x1F	72	26	31.1	26	30.55	40.5	56
FEMALE ELBOW F12-L32x3/4F	96	22	31.1	22	24.5	37.5	43
FEMALE ELBOW F12-L40x1 1/4F	48	33.5	39	33.5	38.95	50	64.5
FEMALE ELBOW F12-L50x1 1/2F	30	38.5	49	38.5	44.85	57	75
FEMALE ELBOW F12-L63x2F	18	50	61.9	50	56.66	65	90

FEMALE TEE



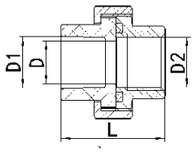
Description	pcs/ctn.	D	D1	D2	D3	D4	L	L1
FEMALE TEE F12-T20x1/2Fx20	216	16.4	16.4	19.05	19.05	19.2	60	35
FEMALE TEE F12-T25x1/2Fx25	180	20	16.4	16.4	19.05	24.1	63	38
FEMALE TEE F12-T25x1Fx25	72	20	20	26	30.55	24.1	81	53
FEMALE TEE F12-T25x3/4Fx25	150	20	22	22	24.5	24.1	66	39
FEMALE TEE F12-T32x1/2Fx32	108	26	16.4	16.4	19.05	31.1	68	43
FEMALE TEE F12-T32x1Fx32	60	26.5	26	26	30.55	31.1	81	56
FEMALE TEE F12-T32x3/4Fx32	72	26	22	22	24.5	31.1	75	43
FEMALE TEE F12-T40x1 1/4Fx40	36	33.5	33.5	33.5	38.95	39	100	64.5
FEMALE TEE F12-T50x1 1/2Fx50	20	43	38.5	38.5	44.85	49	114	75
FEMALE TEE F12-T63x2Fx63	18	55	50	50	56.66	61.9	130	90

MALE TEE



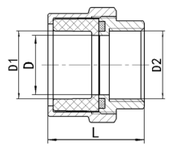
Description	pcs/ctn.	D	D1	D2	L	L1
MALE TEE F12-T20x1/2Mx20	180	16	15	19.2	60	49
MALE TEE F12-T25x1/2Mx25	144	20	15	24.1	63	52
MALE TEE F12-T25x3/4Mx25	120	20	20	24.1	66	54
MALE TEE F12-T32x1/2Mx32	90	26	15	31.1	68	57
MALE TEE F12-T32x3/4Mx32	90	26	20	31.1	75	58
MALE TEE F12-T32x1Mx32	60	26.5	26	31.1	81	73

FLEXIBLE FEMALE UNION I



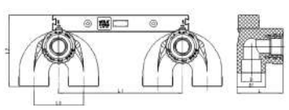
Description	pcs/ctn.	D	D1	D2	L
FLEXIBLE FEMALE UNION F12-S20x1/2F H	180	16	19.2	19.05	39
FLEXIBLE FEMALE UNION F12-S25x1/2F H	120	20	24.1	19.05	41
FLEXIBLE FEMALE UNION F12-S25x3/4F H	120	20	24.1	24.5	42
FLEXIBLE FEMALE UNION F12-S32x1F H	90	26	31.1	30.55	46

FLEXIBLE FEMALE UNION II



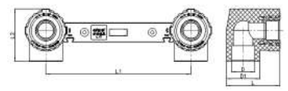
Description	pcs/ctn.	D	D1	D2	L
FLEXIBLE FEMALE UNION F12-S40x1 1/4F H	60	34	39	38.95	55
FLEXIBLE FEMALE UNION F12-S50x1 1/2F H	45	45	49	44.85	58
FLEXIBLE FEMALE UNION F12-S25x3/4F H	120	20	24.1	24.5	42
FLEXIBLE FEMALE UNION F12-S32x1F H	90	26	31.1	30.55	46

FEMALE U TEE + FEMALE U TEE



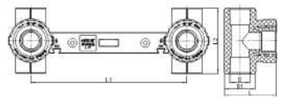
Description	pcs/ctn.	D	D1	L	L1	L2	L3
F12-L20x1/2F 150	36	20	29.4	52	150	78	60
F12-L25x1/2F 150	36	25	36	55	150	86	60

FEMALE ELBOW + FEMALE ELBOW



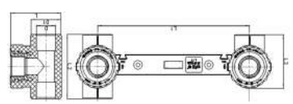
Description	pcs/ctn.	D	D1	L	L1	L2
F12-L20x1/2F 100	72	20	29.4	50	100	66
F12-L25x1/2F 100	72	25	36	55	100	69
F12-L20x1/2F 150	60	20	29.4	50	150	52
F12-L25x1/2F 150	48	25	36	55	150	69
F12-L20x1/2F 200	48	20	29.4	50	200	52
F12-L25x1/2F 200	48	25	36	55	200	69

FEMALE TEE + FEMALE TEE



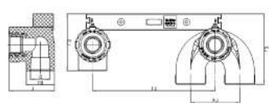
Description	pcs/ctn.	D	D1	L	L1	L2
F12-T20x1/2Fx20 150	48	20	29.4	50	150	63
F12-T25x1/2Fx25 150	48	25	36	56	150	63
F12-T20x1/2Fx20 200	36	20	29.4	50	200	63
F12-T25x1/2Fx25 200	36	25	36	56	200	63

FEMALE TEE + FEMALE ELBOW



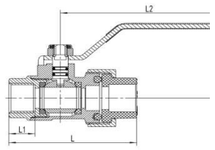
Description	pcs/ctn.	D	D1	L	L1	L2	L3
F12-20x1/2F 150	36	20	29.4	50	150	63	52
F12-25x1/2F 150	36	25	36	56	150	63	53
F12-20x1/2F 200	36	20	29.4	50	200	63	52
F12-25x1/2F 200	36	25	36	56	200	63	53

FEMALE U TEE + FEMALE ELBOW



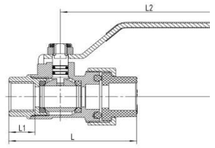
Description	pcs/ctn.	D	D1	L	L1	L2	L3	L4
F12-20x1/2F 150	36	20	29.4	50	150	78	66	60
F12-25x1/2F 150	36	25	36	55	150	86	69	60

BRASS BALL VALVE



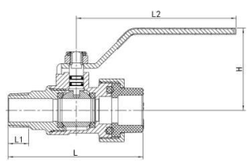
Description	pcs/ctn.	L1	L	H
BRASS BALL VALVE 201-F12-Q20x20	60	102	87.5	52
BRASS BALL VALVE 201-F12-Q25x25	48	102	92.5	56
BRASS BALL VALVE 201-F12-Q32x32	24	115	108	59
BRASS BALL VALVE 201-F12-Q40x40	12	164	129.5	81.5
BRASS BALL VALVE 201-F12-Q50x50	10	193	146	95
BRASS BALL VALVE 201-F12-Q63x63	6	253	171.5	102

DEMOUNTABLE FEMALE BRASS BALL VALVE



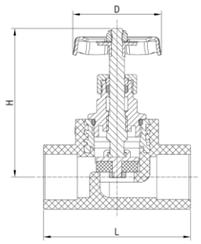
Description	pcs/ctn.	L1	L2	L	H
201-F12-Q20x1/2F	60	14	102	86.5	52
201-F12-Q25x3/4F	48	15	102	89	56
201-F12-Q32x1F	24	16	115	98.5	59

DEMOUNTABLE MALE BRASS BALL VALVE



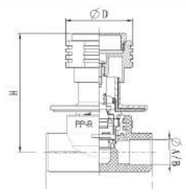
Description	pcs/ctn.	L1	L2	L	H
201-F12-Q20x1/2M	60	15	102	72.5	52
201-F12-Q25x3/4M	48	16	102	79	56
201-F12-Q32x1M	24	16	115	90.5	59

STOP VALVE



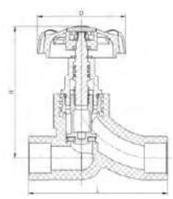
Description	pcs/ctn.	L	H	D
STOP VALVE 303-F12-J20x20	72	70	75	50.5
STOP VALVE 303-F12-J25x25	72	78	80	60
STOP VALVE 303-F12-J32x32	36	90	91	69
STOP VALVE 303-F12-J40x40	32	97	100.5	69
STOP VALVE 303-F12-J50x50	12	116	111.5	78
STOP VALVE 303-F12-J63x63	8	134	129.5	89

CONCEALED PORCELANE VALVE



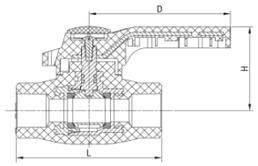
Description	pcs/ctn.	L	H	D
F12-L20x1/2F 100	72	20	29.4	50
F12-L25x1/2F 100	72	25	36	55
F12-L20x1/2F 150	60	20	29.4	50
F12-L25x1/2F 150	48	25	36	55
F12-L20x1/2F 200	48	20	29.4	50
F12-L25x1/2F 200	48	25	36	55

LARGE FLOW STOP VALVE



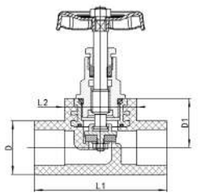
Description	pcs/ctn.	L	H	D
LARGE FLOW STOP VALVE 307-F12-J20x20	36	95	92	60
LARGE FLOW STOP VALVE 307-F12-J25x25	36	110	105	71.5
LARGE FLOW STOP VALVE 307-F12-J32x32	24	138	123	71.5

BALL VALVE



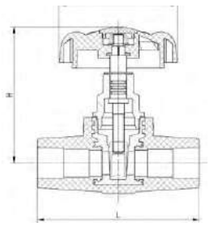
Description	pcs/ctn.	L	H	D
BALL VALVE 203-F12-J20x20	90	78	48.5	77
BALL VALVE 203-F12-J25x25	60	88	51	77
BALL VALVE 203-F12-J32x32	48	96	55	103
BALL VALVE 203-F12-J40x40	24	104	60	103
BALL VALVE 203-F12-J50x50	24	128	77	128
BALL VALVE 203-F12-J63x63	12	148	85	128

STOP VALVE III



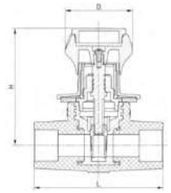
Description	pcs/ctn.	L	H	D
STOP VALVE 303-F12-J20x20 III	72	70	75	50.5
STOP VALVE 303-F12-J25x25 III	72	78	80	60
STOP VALVE 303-F12-J32x32 III	36	90	91	69
STOP VALVE 303-F12-J40x40 III	32	97	100.5	69
STOP VALVE 303-F12-J50x50 III	12	116	111.5	78
STOP VALVE 303-F12-J63x63 III	8	134	129.5	89
STOP VALVE 303-F12-J75x75 III	12	130	136.5	96.5
STOP VALVE 303-F12-J90x90 III	4	180	164	117
STOP VALVE 303-F12-J110x110	4	200	197	140.5

SURFACE GATE VALVE



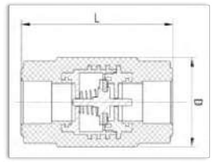
Description	pcs/ctn.	L	H	D
SURFACE GATE VALVE 102-F12-J20x20	24	98	82.5	71.5
SURFACE GATE VALVE 102-F12-J25x25	18	98	90.5	71.5
SURFACE GATE VALVE 102-F12-J32x32	18	108	90.5	71.5

CONCEALED GATE VALVE



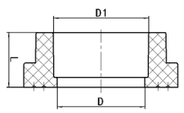
Description	pcs/ctn.	L	H	D
CONCEALED GATE VALVE 103-F12-J20x20	24	98	85	51
CONCEALED GATE VALVE 103-F12-J25x25	18	98	90	51
CONCEALED GATE VALVE 103-F12-J32x32	18	108	90	51

CHECK VALVE



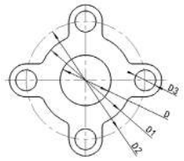
Description	pcs/ctn.	D	L
CHECK VALVE 422-F12-J20x20	120	78	44
CHECK VALVE 422-F12-J25x25	96	90	50
CHECK VALVE 422-F12-J32x32	48	100	60

FLANGE ADAPTOR



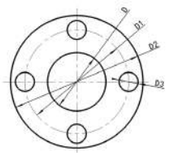
Description	pcs/ctn.	D	D1	L
FLANGE ADAPTOR F12-FC40	150	35	39	29
FLANGE ADAPTOR F12-FC50	108	45	49	32
FLANGE ADAPTOR F12-FC63	90	57	61.9	36
FLANGE ADAPTOR F12-FC75	58	69.5	73.6	38
FLANGE ADAPTOR F12-FC90	36	84	88.3	46
FLANGE ADAPTOR F12-FC110	30	103	107.9	53

FLANGE GASKET



Description	pcs/ctn.	D	D1	D2	D3
FLANGE GASKET F12-FD40	100	43	78	100	18
FLANGE GASKET F12-FD50	100	49	86	110	18
FLANGE GASKET F12-FD63	100	61	100	125	18
FLANGE GASKET F12-FD75	100	77	121	145	18
FLANGE GASKET F12-FD90	100	89	136	160	18
FLANGE GASKET F12-FD110	100	115	162	180	18

FLANGE RING

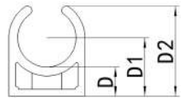


Description	pcs/ctn.	D	D1	D2	D3
FLANGE RING F12-D40	40	56	100	128	18
FLANGE RING F12-D50	40	65	110	138	18
FLANGE RING F12-D63	40	86	125	153	18
FLANGE RING F12-D75	15	96	145	173	18
FLANGE RING F12-D90	15	121	160	188	18
FLANGE RING F12-D110	15	146.5	180	208	18

SLIDING SOCKET

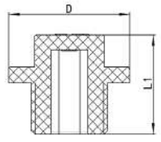
Description	pcs/ctn.
SLIDING SOCKET KH-20	100
SLIDING SOCKET KH-25	100
SLIDING SOCKET KH-32	100
SLIDING SOCKET KH-40	50
SLIDING SOCKET KH-50	50
SLIDING SOCKET KH-63	50
SLIDING SOCKET KH-75	50

PIPE CLAMP



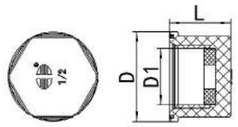
Description	pcs/ctn.	D	D1	D2
PIPE CLAMP KS1-20	2160	10	19.5	30
PIPE CLAMP KS1-25	1800	12	24	35
PIPE CLAMP KS1-32	1200	15	30	44
PIPE CLAMP KS2-20	1440	35	45	52
PIPE CLAMP KS2-25	1200	33	45	55
PIPE CLAMP KS2-32	960	30	45	54

MALE PLUG



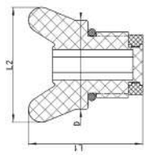
Description	pcs/ctn.	D	L1
MALE PLUG F12-D1/2M	2400	28	26.5

FEMALE PLUG



Description	pcs/ctn.	D	D1	L
FEMALE PLUG F12-D1/2F	2400	30	19	20.5

MALE PLUG WITH EARS



Description	pcs/ctn.	D	L1	L2
MALE PLUG WITH EARS F12-D1/2M-EARS	2400	28	31	36

CUTTER

Description	pcs/ctn.
CUTTER GJ-20-32	50

CUTTING TOOL

Description	pcs/ctn.
CUTTING TOOL QGQ-40-75	28

DEPTH MARKER

Description	pcs/ctn.
DEPTH MARKER	1280

WELD MACHINE

Description	pcs/ctn.
WELD MACHINE RRQ-20-32	6
WELD MACHINE RRQ-20-63	6
WELD MACHINE RRQ-75-110	4

INSTALLATION

Socket Welding

Step 1:

Cut the pipe vertically.

Step 2:

Remove the burr, clean the rough selvedge. Use a pencil and RIIFO marker to mark the according melting depth on the surface of pipe ends.

Step 3:

Push and insert the pipe and fitting simultaneously into the melding heads on the device. Push the fitting as far as possible; Push the pipe to the marked position. *If pushing over the marked position or heating over specified time, the pipe may be constricted or clogged. Specified time in right table.

Step 4:

When the heating time is passed, pull out the pipe and fitting from the adaptors quickly, then link the pipe and fitting together coaxially.

Step 5:

Then hold the pipe and fitting following the connecting time until the welding is completed.

Annex: Reference table for hot melting time

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Note:

This table is applicable to an ambient temperature of 20 , below the ambient temperature and extending the heating time;
If the ambient temperature is below 5 , the heating time should be extended by 50%.

Nominal outer diameter (mm)	Minimum socket depth (mm)	Heating Time (s)	Connect Time (s)	Cooling Time (min)
20	14.0	5	4	2
25	15.0	7	4	2
32	16.5	8	6	4
40	18.0	12	6	4
50	20.0	18	6	4
63	24.0	24	8	6
75	26.0	30	8	8
90	29.0	40	8	8
110	32.5	50	10	8

Allowable working pressure (bars)

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Temperature	Service life (Year)	PP-R Pipe			
		S5	S4	S3.2	S2.5
		SDR 11	SDR 9	SDR 7.4	SDR 6
		PN 10	PN 16	PN 20	PN 25
		Permissible working pressure (bar)			
		SF 1.5			
10°C	10	16.2	20.3	25.3	32.4
	25	15.7	19.6	24.5	31.3
	50	15.3	19.1	23.9	30.5
20°C	10	13.8	17.2	21.5	27.5
	25	13.3	16.6	20.8	26.6
	50	12.9	16.2	20.2	25.9
30°C	10	11.7	14.6	18.2	23.3
	25	11.3	14.1	17.6	22.5
	50	10.9	13.7	17.1	21.9
40°C	10	9.9	12.3	15.4	19.7
	25	9.5	11.9	14.8	19.0
	50	9.2	11.5	14.4	18.4
50°C	10	8.3	10.4	13.0	16.6
	25	8.0	10.0	12.5	16.0
	50	7.8	9.7	12.1	15.5
60°C	10	7.0	8.7	10.9	14.0
	25	6.7	8.4	10.5	13.4
	50	6.5	8.1	10.1	13.0
70°C	10	6.3	7.9	9.9	12.7
	25	5.1	6.3	7.9	10.1
	50	4.3	5.4	6.7	8.6
80°C	10	4.1	5.1	6.4	8.2
	25	3.3	4.1	5.1	6.5
	50	2.8	3.5	4.3	5.5
95°C	10	2.2	2.8	3.5	4.4
	25	1.8	2.2	2.8	3.5
	50	1.5	1.9	2.3	3.0

Protective measures

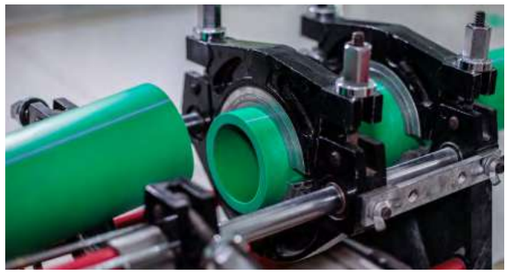
Note:

All synthetic materials are more or less attacked by solar rays (mainly ultraviolet radiation) with different sunshine duration and intensity. While working outdoors PP-R pipes must be equipped with corresponding sheath pipes to protect them from light radiation and extend their service life.

Butt-fusion Welding

Step 1:

Setup the butt fusion machine on flat,switchon the power, heat up the iron



Step 2:

Fix the pipes on clamps and leaving enough room for facer. Bring the pipe ends togetherto check the alignment, adjust if needed. Then open for next step.

Step 3:

Set themiler between thepipes. Bring the pipe ends together to shave. Proper shaving wil produce continuous and even strips.Then open the pipes, take off the miller.

Step 4:

Bring the pipe ends together again to check alignment. Adjust if needed. Open the pipes, set the heating iron between the pipes. Make the temperature of the iron is at 210 ±10°C. Close the pipe onto the heating iron with full pressure drag force + machine force).

Step 5:

When the head is built to required height, take off the heating iron. And bring the pipe ends together to complete the fusion according to required time.

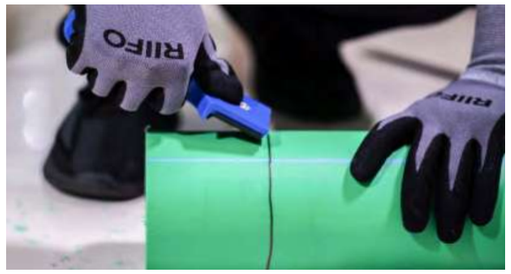
Electro Fusion Welding

Step 1:

Setup the electro fusionmachine. Ensure to meet the power requirement.

Step 2:

Cut square the pipe and remove the burrs and edges. Peel the outside of the pipes'ends.



Step 3:

Make sure thefitting and pipe ends free of dirty. Markdown a ine as half depth of thefting.

Step 4:

Insert the pipeinto the fittings. Check the depth mark to ensure no gap inside the fitting.

Step 5:

Remove the plug and connect theleads onto the fting. Scan the code and confim whether the information on the machine display matches with the label. Rescanor manual input if needed. Following the guide from the machine, begin heating. And when the heating finish, remove the leads and put the plug back on the connector.