Aliaxis

FIP

FITTINGS
PVC-U

The range of PVC-U products includes a complete series of solvent weld, threaded and adaptor fittings for pipes conveying fluids under pressure at maximum working temperatures not exceeding 60 °C.

CONTENTS

FITTINGS IN PVC-U

ORIGINE E QUALITÀ CONTROLLATA

PVC-U
GENERAL CHARACTERISTICS

Developed in 1930 in Germany, PVC-U (rigid polyvinyl chloride – unplasticized) is obtained through the polymerization of a vinyl chloride monomer.
The presence of chlorine in the PVC-U molecule results in a high performance resin, in terms of thermal stability and chemical and mechanical resistance, up to temperatures of 60° C.

The different formulations obtained by adding suitable additives and stabilizers render the PVC-U the most versatile of all plastic materials, allowing it to be adapted to many applications involving fluids under pressure.

PVC-U represents one of the more economic solutions in the field of thermoplastic and metal materials for resolving problems in the transport of corrosive chemical fluids, and in the distribution and treatment of water in general.

The mains reasons for this preference are the unique characteristics of the resin, which include:

- **Good chemical resistance:** PVC-U resins have excellent chemical resistance to most acids and alkalis, paraffin/aliphatic hydrocarbons and saline solutions. It is not recommended for the transport of polar organic compounds, including some types of chlorinated and aromatic solvents. PVC-U resins are also fully compatible with the transport of foodstuffs, demineralised water, potable water and unconditioned water, as provided for by current national and international standards.
- **Good thermal stability:** PVC-U resins have good thermal stability in the temperature range between 20°C and 50°C and are typically used in industrial and water supply applications, guaranteeing excellent mechanical strength, sufficient rigidity for the purpose, reduced thermal expansion coefficients and high factors of safety in service. PVC-U compounds are also resistant to combustion with a flash point of 399°C. The flame, in fact, only persists if the oxygen concentration is twice that of atmospheric or in the presence of a flame from an external source. Flash point: 399° C. Oxygen index: 45%. UL 94 class: V0. Thanks to the reduced coefficient of thermal conductivity (λ = 0.15 W/m °C according to ASTM C177) the use of PVC-U resin for transporting hot fluids reduces heat loss and virtually eliminates condensation problems.
- **Good mechanical strength:** PVC-U resins are characterised by their low permeability to oxygen and reduced water absorption (0.1% at 23°C according to ASTM D 570). The thermal stability of the material leads to good impact resistance and the capacity to support service pressures of 4 – 6 – 10 – 16 bar at 20°C.
- **Resistance to ageing:** PVC-U resins have a high circumferential breaking strength (Minimum Required Strength MRS ≥ 25.0 MPa at 20°C) and allow long installation lifetimes without showing any signs of significant physical-mechanical deterioration.

Density	
Test method	ISO 1183 - ASTM D792
Unit of measurement	g/cm^3
Value	1.38

Modulus of elasticity	
Test method	ISO 527
Unit of measurement	MPa = N/mm^2
Value	3200

IZOD notched impact strength at 23°C	
Test method	ASTM D256
Unit of measurement	J/m
Value	50

Ultimate elongation	
Test method	ISO 527
Unit of measurement	%
Value	50

Shore hardness	
Test method	ISO 868
Unit of measurement	Shore D
Value	80

Tensile strength	
Test method	ISO 527
Unit of measurement	MPa = N/mm^2
Value	50

VICAT softening point (B/50)	
Test method	ISO 306
Unit of measurement	°C
Value	76

Heat distortion temperature HDT (0.46 N/mm2)	
Test method	ASTM D648
Unit of measurement	°C
Value	86

Thermal conductivity at 23° C	
Test method	DIN 52612-1 - ASTM C177
Unit of measurement	W/(m °C)
Value	0.16

Coefficient of linear thermal expansion	
Test method	DIN 53752 - ASTM D696
Unit of measurement	m/(m °C)
Value	8 x 10-5

Limiting Oxygen Index	
Test method	ISO 4859-1 - ASTM D2863
Unit of measurement	%
Value	45

REFERENCE **STANDARDS**

The PVC-U production line operates to the highest quality standards, in full compliance with current legislation governing environmental issues and in accordance with standard **ISO 14001**. All products are manufactured in accordance with a quality assurance system complying with standard **ISO 9001**.

- **ASTM D 1785**
  Standard specification for pipes in PVC, Sch. 40-80-120
- **ASTM D 2464**
  Standard specification for threaded polyvinyl chloride (PVC) plastic pipe fittings
- **ASTM D 2467**
  Standard specification for polyvinyl chloride (PVC) plastic pipe fittings, sch. 80
- **BS 10**
  Specification for flanges and bolting for pipes, valves and fittings
- **BS 21**
  Specification for pipe threads for tubes and fittings
- **BS 3505**
  Specification for PVC-U pressure pipes for cold water supplies
- **BS 3506**
  Specification for PVC-U pipes for industrial use
- **BS 4346-1**
  Joints and fittings for use with solvent weld PVC pressure pipes
- **DIN 2501**
  Flange dimensions and drilling
- **DIN 2999**
  Whitworth pipe threads for threaded pipes and fittings
- **DIN 8062**
  PVC-U pipes - dimensions
- **DIN 8063**
  PVC-U pipe fittings - dimensions
- **DVS 2204 - DVS 2221**
  Adhesive bonding of thermoplastic PVC-U pipes and fittings
- **EN 1092-1**
  Flanges and their joints - Circular flanges for pipes, fittings, valves and accessories - Part 1: PN designated steel flanges
- **EN ISO 1452**
  PVC-U pipes and fittings for water supply systems
- **EN ISO 15493**
  Plastic piping systems (Pipes, Fittings and Valves) in ABS, PVC-U, PVC-C for industrial applications
- **ISO 7**
  PVC-U fittings with pressure-tight threaded joints
- **ISO 161-1**
  Dimensions of PVC-U pipes and fittings, metric series
- **ISO 228-1**
  PVC-U pipe fittings with threaded joints

- **ISO 727**
  PVC-U pipes and fittings Dimensions and tolerances, metric series
- **JIS K 6741**
  PVC-U pipes
- **JIS B 0203**
  Tapered pipe threads
- **JIS K 6743**
  PVC-U pipe fittings for water supply systems
- **UNI 11242**
  Solvent welding of PVC-U pipes, fittings and valves

APPROVALS AND **QUALITY MARKS**

- **ABS**
  The FIP PVC-U system is recognised as suitable for conveying and treating sanitary and conditioning water onboard ships and other units classified by the American Bureau of Shipping (ABS)

- **ACS France (Attestation de conformité Sanitaire)**
  Suitability of PVC-U for food and beverage applications

- **BSI (British Standards Institution UK)**
  PVC-U fittings to BS 4346-1

- **BUREAU VERITAS (France)**
  Suitability of PVC-U for conveying and treating sanitary and conditioning water in the maritime sector

- **CSTB**
  PVC-U fittings to standard NF T 54-028

- **IIP N. 122 Istituto Italiano dei Plastici (Italian Plastics Institute)**
  PVC-U fittings to standard UNI EN ISO 1452

- **KIWA (Keurings Institut Voor Waterleiding Artikelen Holland)**
  PVC-U fittings to standard KIWA BRL K17301

- **UKR-SEPRO**
  FIP PVC-U fittings are certified in accordance with Ukrainian Health, Safety, Hygiene and Quality standards

- **WRAS (Water regulations advisory scheme - UK)**
  Suitability of PVC-U for transporting potable water

SOLVENT WELDING **INSTRUCTIONS**

Solvent welding, or cement jointing, is the longitudinal joining system for connecting rigid PVC-U pipes and fittings.

The "cementing" is carried out using adhesives/cements obtained by dissolving PVC-U polymer in a solvent mixture. This solvent liquefies the walls of the pipe and/or fitting, allowing the constituent material to chemically combine and be subsequently welded. Chemical welding allows permanent joints be achieved possessing chemical and mechanical strength characteristics identical to those of the pipes and fittings joined. The adhesives/solvent cements must be selected according to the type of thermoplastic resin to weld, in that the nature of the solvents vary, as does the weld material contained in them. It must be remembered, therefore, that all the solvent cements designed for joining thermoplastic pipes and fittings must be used to join pipes, fittings and valves of the same material.

Before starting any solvent welding operations, the efficiency and condition of the equipment used and the pieces to be assembled must be verified, in particular the uniformity, fluidity and expiry date of the solvent cement.

1) Cut the pipe perpendicular to its axis to obtain a clean square section, preferably using a wheeled pipe cutter designed specifically for thermoplastic pipes (fig. 1).
2) Chamfer the outer edges of the pipe in order to ensure that it enters the socket of the fitting at an angle of 15°. The chamfering operation must be carried out at all costs, otherwise the lack of chamfer can lead to the solvent being scraped off the surface of the fitting, thus compromising the effectiveness of the joint. The chamfering must be carried out using the appropriate chamfering tool (fig. 2).
3) Measure the depth of the socket of the fitting to the internal shoulder and mark the corresponding distance on the end of the pipe (fig. 3 and 4). For more details, refer to the "Socket depth, cement and chamfer length" table.
4) Using an clean paper towel or applicator soaked in Cleaner-Primer, remove any traces of dirt or grease from the outer surface of the pipe for the entire cementing length. Repeat the same operation on the internal surface of the socket of the fitting: leaving the surfaces softened (fig. 5).

   Leave the surfaces to dry for a few minutes before applying the solvent cement. Remember that, in addition to cleaning the joint surfaces, the Cleaner-Primer also performs the important role of softening and preparing the surface to receive the solvent, an operation that enables a perfect joint to be obtained.
5) Apply the solvent cement in a uniform manner longitudinally over both parts to be assembled (outer surface of the pipe and internal coupling surface of the fitting) using an applicator or suitably sized coarse brush.

   For more detailed information, refer to the “Brush-applicator characteristics and dimensions” table.

Fig. 1

Fig. 2

Fig. 3

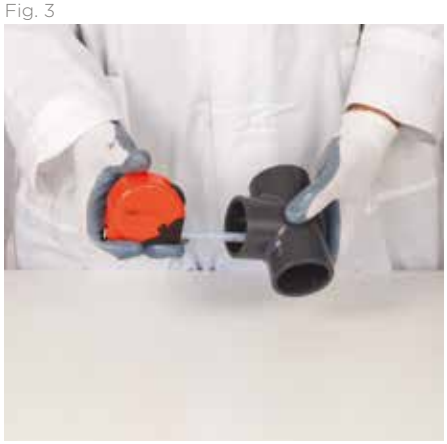


Fig. 4

Fig. 5

It is advisable to use an applicator/brush of dimension not less than half the diameter of the pipe. The solvent cement must be applied along the entire length of the joining surface of both the pipe and the fitting:

- for the entire joint length of the pipe previously marked on the outer surface (fig. 6)
- for the entire depth of the socket as far as the internal shoulder (fig.7)

6) Fully insert the pipe into the fitting immediately and without any rotation. Only after this operation will it be possible to slightly rotate both ends (max. 1/4 of a turn between pipe and fitting). This rotation movement will render the layer of applied solvent cement more uniform (fig. 8)

7) The pipe must be inserted in the fitting as soon and as quick as possible (after no more than 20-25 seconds is recommended). Depending on the external diameter of the pipe and, as a result, possible handling difficulties, the insertion of the pipe into the fitting must be carried out:

- manually by one person for external diameters < 90 mm.
- manually by two people for external diameters from d 90 to d < 160 mm.
- using mechanical pipe-pullers for external diameters > 160 mm.

8) Immediately after fully inserting the pipe in the fitting, apply pressure to the joined parts for a few seconds. Then use crepe paper or a clean cloth to remove any excess solvent cement from the outer surfaces, and from internal surfaces where possible (fig. 9).

9) Solvent cement drying: the joined parts must be left to stand in order to allow the solvent cement to set naturally without generating any unnecessary stress. The setting time depends on the amount of stress that the joint will be placed under.

In particular, the following minimum setting times must be respected according to the ambient temperature:

- before handling the joint:
  - from 5 to 10 minutes for ambient T. > 10°C
  - from 15 to 20 minutes for ambient T. < 10°C
- for repair joints on pipes of any size or pressure not subject to hydraulic testing:
  - 1 hour for each atm of applied pressure
- for joints in pipes and fittings of any diameter subject to pressure testing up to PN 16:
  - minimum 24 hours

The solvent cement setting times indicated are valid at ambient temperature (approx. 25°C.). For particular climatic conditions (humidity, temperature, etc...), we recommend you contact our technical services department and/or the solvent cement manufacturer for more information (fig. 10 and 11).

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

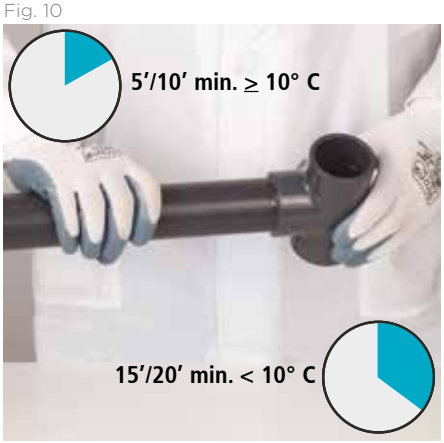
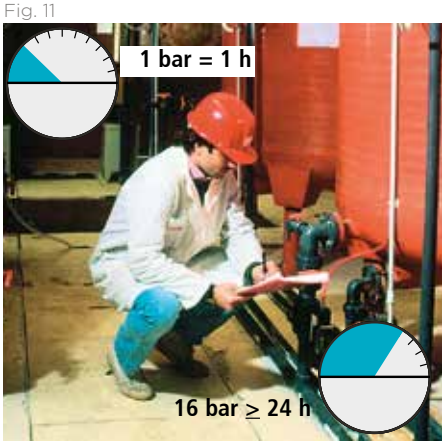
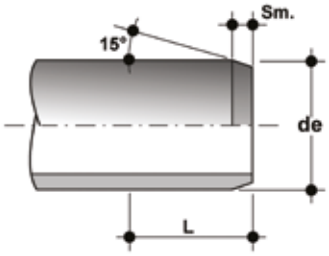


Fig. 11



SOCKET DEPTH, CEMENT AND CHAMFER LENGTH



External diameter de (mm)		Cementing length L (mm)		Chamfer Sm (mm)
Metric series de (mm)	BS series (inches)	Metric series	BS series	
16	3/8”	14	14.5	
20	1/2”	16	16.5	1.5
25	3/4”	18.5	19.5	3
32	1”	22	22.5	3
40	1” 1/4	26	27	3
50	1” 1/2	31	30	3
63	2”	37.5	36	5
75	2” 1/2	43.5	43.5	5
90	3”	51	50.5	5
110	4”	61	63	5
125	-	68.5	-	5
140	5”	76	76	5
160	6”	86	90	5
180	-	96	-	5÷6
200	-	106	-	5÷6
225	8”	118.5	115.5	5÷6
250	-	131	-	5÷6
280	10”	146	142.5	5÷6
315	12”	163.5	168	5/6

CHARACTERISTICS AND DIMENSIONS OF BRUSHES- APPLICATORS

External diameter		Type and dimensions of Brush or Applicator
de (mm)	(inches)	
16 - 25	3/8” - 3/4”	Round (8 - 10 mm)
32 - 63	1” - 2”	Round (20 - 25 mm)
75 - 160	2” 1/2 - 6”	Rectangular / round (45 - 50 mm)
>160	>6”	Rectangular / cylindrical (45 - 50 mm)
>160 - 315	>6” - 12”	Rectangular / cylindrical (60 - 65 mm)

⚠ WARNINGS

- In the case where the external diameter of the pipe and the internal diameter of the fitting are at opposite extremes of their tolerance values, the dry pipe cannot be inserted in the dry socket of the fitting. Insertion will only be possible after having applied the Cleaner and Solvent Cement to both parts to be joined.
- The solvent cement is manufactured from the same PVC resin used for the production of the pipes, fittings and valves. Unless otherwise specified, the solvent cement used on the surfaces to join must also be usable with the following tolerances:
  - maximum interference 0.2 mm.
  - maximum clearance 0.6 mm.
- When using the Cleaner and Solvent Cement, the following precautions should be adopted:

- Use gloves and safety glasses to protect hands and eyes.
- Use the Cleaner and Solvent Cement in a working environment with sufficient ventilation to avoid the formation of pockets of air containing concentrations of evaporated solvent, which can irritate the respiratory tract and eyes.
- Due to the volatile nature of the solvents in the cleaner and cement, the containers must be closed immediately after use.
- Solvents in the gaseous phase tend to form flammable mixtures. Therefore, remove any ignition sources such as welding operations, accumulation of electrostatic charges, etc. from the work area, and do not smoke. In all cases, it is advisable to adhere strictly to the solvent cement manufacturer's instructions written on the packaging.
- In order to prevent a deterioration in the performance of the cleaner and solvent cement, the joining operations should be carried out within an ambient temperature range of between + 5 and + 40° C.

- The amount of solvent cement used on the joints depends on a number of factors (environmental conditions, pipe size, cement viscosity, operator experience, etc.) which are often difficult to quantify. In this respect, Table “Rigid PVC-U pipes and fittings. Theoretical solvent cement consumption” reports the approximate quantities of cement normally used for joining various diameter pipes and fittings.
- After having completed all the joints and prior to putting the lines into service, make sure that the insides of the pipes and fittings are completely free of any solvent traces/vapours. This will prevent contamination of the fluids conveyed.
- Table “Most common defects” reports the most common types of defect found if the correct solvent welding procedure is not followed.

RIGID PVC-U PIPES AND FITTINGS THEORETICAL SOLVENT CEMENT CONSUMPTION

Pipe/Fitting diameter d (mm)	Pipe/Fitting diameter d (inches)	Number of joints per kg of solvent cement
16	3/8”	550
20	1/2”	500
25	3/4”	450
32	1”	400
40	1” 1/4	300
50	1” 1/2	200
63	2”	140
75	2” 1/2	90
90	3”	60
110	4”	40
125	-	30
140	5”	25
160	6”	15
180	-	12
200	-	10
225	8”	6
250	-	4
280	10”	2
315	12”	2

MOST COMMON DEFECTS

Solvent cement too fluid (incorrect diluent addition)	
Immediate effect	Cementing failure.
Consequence	Joint separation or leaks from between the pipe and fitting.

Excess solvent cement	
Immediate effect	Internal and external runs beyond the joint zone.
Consequence	Weakening of the outer surface of the joint area and formation of bubbles with micro-cracks/sources of fracture in the base material.

Excessively dense solvent cement due to evaporated solvent	
Immediate effect	Cementing failure.
Consequence	Joint separation or leaks from between the pipe and fitting. Possible surface cracks triggering cracks in the base material.

Insufficient and/or incorrect distribution of solvent cement	
Immediate effect	Cementing failure or local weakness.
Consequence	Joint separation or leaks from between the pipe and fitting.

Incorrect pipe insertion (incomplete, excessive, misaligned)	
Immediate effect	Imperfect joint.
Consequence	Transmission of mechanical stresses from the pipe to the fitting and/or leaks from the joint.

Impurities and/or humidity on the surfaces of the parts to join	
Immediate effect	Imperfect joint.
Consequence	Joint separation or leaks (fluid seepage) from between the pipe and fitting.

INSTALLATION INSTRUCTIONS **FOR THREADED JOINTS**

To guarantee the hydraulic seal of the joint on fittings and valves with a threaded female end, we recommend you perform the following operations:

1. Start winding some PTFE sealing tape on the outside of the threaded male end, taking care not to obstruct the through-hole on the pipe, fitting or valve (fig. 1);
2. Complete the first winding layer by winding the tape clockwise until you reach the root of the thread. Remember to keep the tape taut throughout the entire process (fig. 2);
3. Press on the tips of the thread to make sure the tape adheres fully to the support clip;
4. Increase the thickness of the PTFE layer by continuing to apply the taut tape and winding it clockwise until you achieve the optimal level (fig. 3);
5. Connect the previously sealed male end to the female end and proceed manually by screwing the two elements;
6. Make sure the layer of PTFE is not removed during screwing, as this would compromise the hydraulic seal of the joint;
7. Complete screwing the two ends exploiting the entire length of the thread with the aid of a strap wrench or similar tool;
8. Avoid tightening the elements too much, as this could damage the threads or cause stress to the elements themselves.

Fig. 1

Fig. 2

Fig. 3

RECOMMENDATIONS

For correct installation, we recommend you only use sealing tape in non-sintered PTFE. Under all circumstances avoid using materials such as hemp, lint or paints usually implemented for the hydraulic seal on metal threads.

⚠ WARNINGS

Avoid using threaded joints in the following cases:

- highly critical applications, such as for conveying chemically aggressive or toxic fluids;
- in the presence of medium or high pressures. In this case, we recommend the use of solvent welding joints, hot welding joints or flanged joints;
- systems subject to mechanical and/or thermal stresses such as water hammers, strong variations in temperature, bends, misalignments and cross tensions which could cause the threaded joint to break prematurely;
- coupling of elements with excessive distance from one another.

Aliaxis

FIP

ISO-UNI FITTINGS
PVC-U

Solvent weld fittings, metric series

FITTINGS
ISO-UNI

Series of fittings designed for conveying fluids under pressure with a cold chemical weld jointing system (solvent welding) using a suitable solvent cement and cleaner-primer.

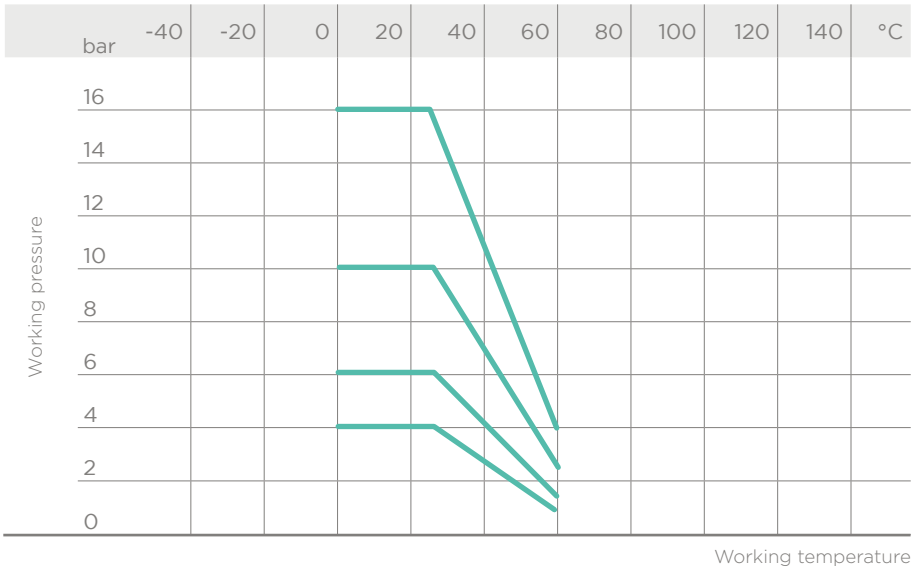
SOLVENT WELD FITTINGS, METRIC SERIES

Technical specifications	
Size range	d 12 ÷ d 500 (mm)
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 15493, DIN 8063, EN ISO 1452, ASTM D 2467, JIS K 6743, BS 4346-1. Can be coupled to pipes according to ISO 161-1, EN ISO 1452, EN ISO 15493, DIN 8062, ASTM D1785, JIS K6741, BS 3505-3506.
	Flanged couplings: DIN 2501, EN 1092-1
Reference standards	**Construction criteria:** EN ISO 1452, EN ISO 15493
	Test methods and requirements: EN ISO 1452, EN ISO 15493
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
Fitting material	PVC-U
Seal material	EPDM, FPM

TECHNICAL DATA

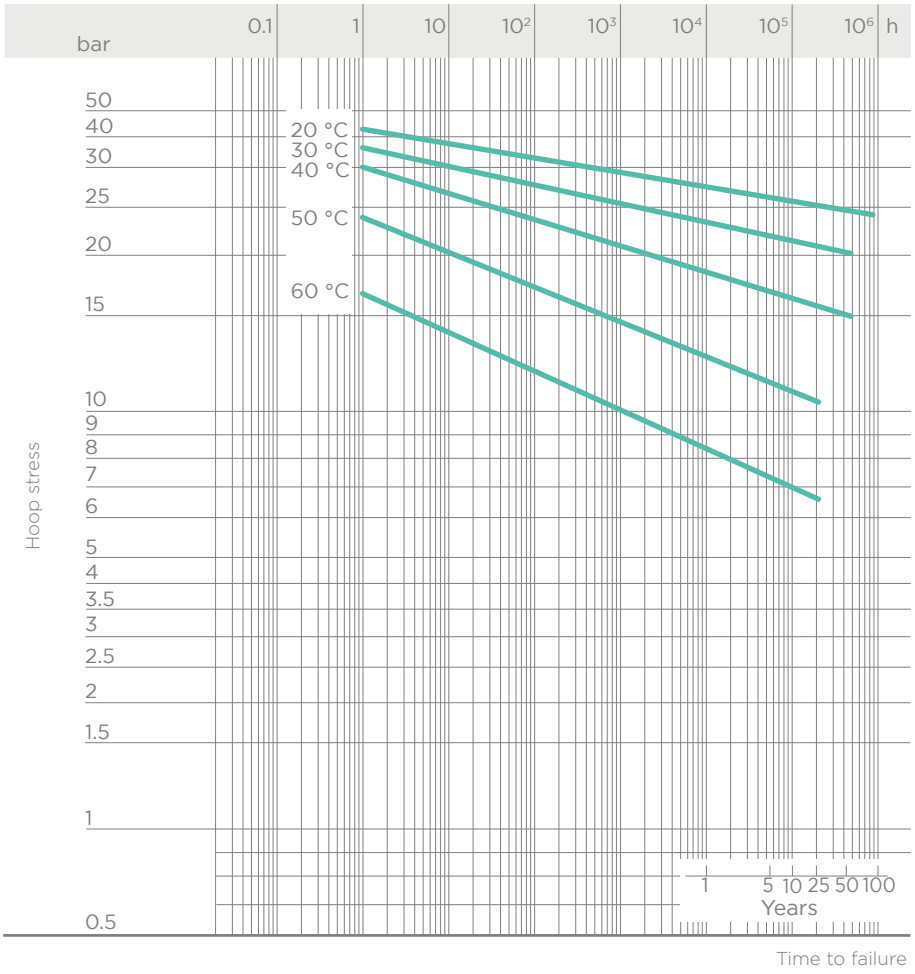
PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids for which the material is classified as CHEMICALLY RESISTANT (life expectancy 25 years). In other cases, a reduction of the nominal pressure PN is required.



REGRESSION CURVE FOR PVC-U FITTINGS

Regression coefficients according to EN ISO 1452 and EN ISO 15493 for MRS (minimum required strength) values = 25 N/mm² (MPa) (classification PVC-U 250).



SAFETY FACTORS

The table reports the safety factors for each pressure class as a function of time.

Nominal pressure PN must be understood as being the standard pressure used for calculating and selecting the required fittings. In order to be able to comply with the safety factors, the maximum continuous working pressure at 20° C when conveying water must be the same as the nominal pressure values. Unless otherwise specified, the nominal pressures are as follows:

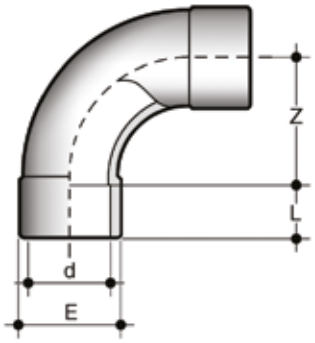
- solvent weld fittings
  from d 12 to d 225 PN 16
  from d 250 to d 315 PN 10
- adaptor fittings
  from d 16 to d 110 PN 16
- threaded fittings
  from R 3/8" to R 4" up to PN 16.

Some of the fittings in the series are sold as PN16 with a reduced safety factor compared to that specified by ISO standards.

Pe (bar)	1h	1000h	50 years	T
10	6.72	5.12	4	
16	4.2	3.2	2.5	
16*	3.3	2.5	2	

*with reduced safety factor

DIMENSIONS



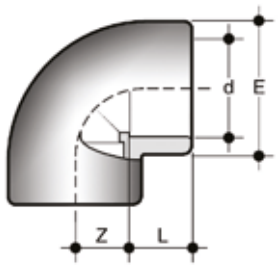
SIV

90° long radius bend (R=2d) with solvent weld sockets

	d	PN	E	L	Z	g	Code
IH	20	16	27	16	40.5	35	SIV020
IH	25	16	33	19	50	55	SIV025
IH	32	16	41	22	65.5	100	SIV032
IH	40	16	50	26	80.5	175	SIV040
IH	50	16	61	31	100.5	280	SIV050
IH	63	16	76	38	127	515	SIV063
I	75	16	94	44	150	1000	SIV075
I	90	16	113	51	180	1770	SIV090
I	110	16	137	61	220	2800	SIV110
I	*160	16	189	86	207	5020	SIV160

I: IIP 122 **H:** KIWA K5034 ND 10
*reduced safety factor (PN 10)

Fig. A



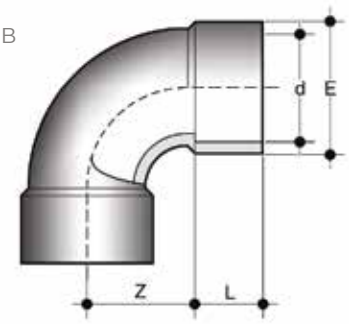
GIV

90° elbow with solvent weld sockets (fig. A)

	d	PN	E	L	Z	g	Code
	12	16	17	12	8	4	GIV012
IFH	16	16	22	14	9	11	GIV016
IFH	20	16	26	16	12	15	GIV020
IFH	25	16	32	19	15	30	GIV025
IFH	32	16	40	22	19	50	GIV032
IFH	40	16	50	26	22	90	GIV040
IFH	50	16	59	31	27.5	160	GIV050
IFH	63	16	76	38	33.5	290	GIV063
IF	75	16	91	44	41	450	GIV075
IF	90	16	108	51	47.5	680	GIV090
IF	110	16	130	61	61	1180	GIV110
IF	125	16	148	69	64	1650	GIV125
IF	140	16	163	76	77	2080	GIV140
IF	160	16	183	87	82	2820	GIV160
	*180	16	215	96	94	5200	GIV180
	*200	16	229	106	100	5360	GIV200

I: IIP 122 F: AFNOR NF04 H: KIWA K5034 ND 10
*reduced safety factor

Fig. B

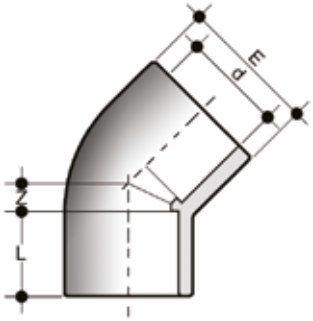


GIV

90° elbow with solvent weld sockets (fig. B)

d	PN	E	L	Z	g	Code
*225	16	258	119	171.5	8700	GIV225
250	10	287	131	188	12480	GIV250
280	10	325	147	210	17000	GIV280
315	10	359	164	236	23370	GIV315

*reduced safety factor

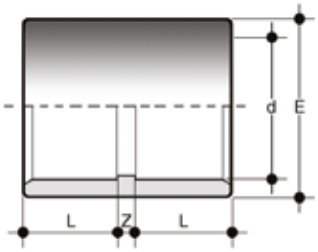


HIV

45° elbow with solvent weld sockets

	d	PN	E	L	Z	g	Code
	12	16	17	12	4	5	HIV012
	16	16	21	14	5	6	HIV016
IFH	20	16	28	16	5.5	20	HIV020
IFH	25	16	33	19	6	26	HIV025
IFH	32	16	41	22	7.5	45	HIV032
IFH	40	16	50	26	10.5	70	HIV040
IFH	50	16	61	31	11.5	120	HIV050
IFH	63	16	76	38	14	200	HIV063
IF	75	16	90	44	17	320	HIV075
IF	90	16	107	51	21.5	550	HIV090
IF	110	16	130	61	26	915	HIV110
IF	125	16	147	69	31	1315	HIV125
IF	140	16	163	76	34	1660	HIV140
IF	160	16	192	86	38	3060	HIV160
	**180	4	208	97	38	3500	HIV180
	200	10	230	108	48	4500	HIV200
	225	10	260	121	55	6400	HIV225
	250	10	286	131	58	7700	HIV250
	280	10	320	146	62	10460	HIV280
	315	10	359	164	66	15500	HIV315

I: IIP 122 **F:** AFNOR NF04 **H:** KIWA K5034 ND 10
**resale product

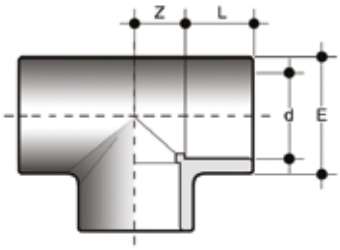


MIV

Solvent weld double socket

	d	PN	E	L	Z	g	Code
	12	16	17	12	3	3	MIV012
F	16	16	21	14	3	7	MIV016
HIF	20	16	26	16	3	11	MIV020
HIF	25	16	32	19	3	20	MIV025
HIF	32	16	40	22	3	30	MIV032
HIF	40	16	50	26	3	55	MIV040
HIF	50	16	61	31	3	90	MIV050
HIF	63	16	76	38	3	160	MIV063
IF	75	16	90	44	3	250	MIV075
IF	90	16	108	51	4	415	MIV090
IF	110	16	131	61	8	715	MIV110
IF	125	16	148	69	7	960	MIV125
IF	140	16	164	76	8	1240	MIV140
IF	160	16	186	86	9	1680	MIV160
	**180	4	209	96	8	2500	MIV180
	*200	16	232	106	11	3050	MIV200
	*225	16	260	119	11	4600	MIV225
	250	10	286	131	10	5760	MIV250
	280	10	320	146	10	7630	MIV280
	315	10	355	164	12	9780	MIV315

I: IIP 122 **F:** AFNOR NF04 **H:** KIWA K5034 ND 10
*reduced safety factor
**resale product

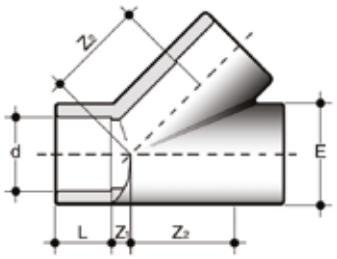


TIV

90° Tee with solvent weld sockets

	d	PN	E	L	Z	g	Code
	12	16	17	12	8	6	TIV012
FH	16	16	22	14	9	15	TIV016
IFH	20	16	27	16	11	25	TIV020
IFH	25	16	33	19	14	40	TIV025
IFH	32	16	40	22	18	65	TIV032
IFH	40	16	49	26	22	114	TIV040
IFH	50	16	61	31	27	185	TIV050
IFH	63	16	76	38	34	380	TIV063
IF	75	16	88	44	39	470	TIV075
IF	90	16	104	52	46	780	TIV090
IF	110	16	133	61	61	1760	TIV110
IF	125	16	151	69	64	2430	TIV125
IF	140	16	174	76	77	4150	TIV140
IF	160	16	183	87	82	3870	TIV160
	180	16	215	96	94	6180	TIV180
	*200	16	228	106	101	6810	TIV200
	*225	16	258	119	114	12680	TIV225
	250	10	286	131	128	13250	TIV250
	280	10	319	146	144	17840	TIV280
	315	10	360	164	162	25300	TIV315

I: IIP 122 **F:** AFNOR NF04 **H:** KIWA K5034 ND 10
*reduced safety factor

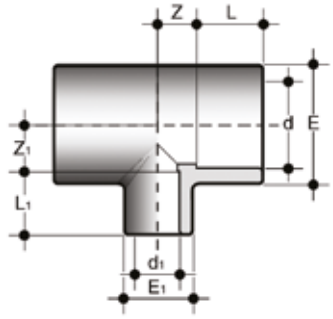


YIV

45° Tee with solvent weld sockets

d	PN	E	L	Z_1	Z_2	g	Code
20	16	27	16	7	30	39	YIV020
25	16	33	19	7	35	62	YIV025
32	16	41	22	9	44	110	YIV032
40	16	51	26	11	55	190	YIV040
50	16	63	31	12	68.5	335	YIV050
63	16	78	38	15	85	570	YIV063
**160	4	189	86	35	200	6500	YIV160

**resale product

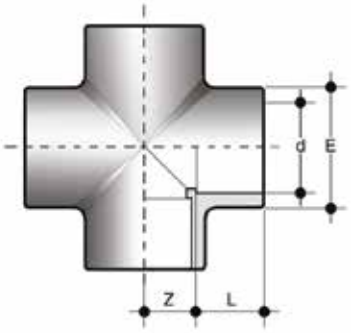


TRIV

90° reducing Tee with reduced branch and solvent weld sockets

d x d_1	PN	E	E_1	L	L_1	Z	Z_1	g	Code
25 x 20	16	33	28	19	16	14	14	37	TRIV025020
32 x 20	16	41	28	22	16	17.5	17.5	60	TRIV032020
32 x 25	16	41	34	22	19	17.5	17.5	65	TRIV032025
40 x 20	16	50	29	26	16	22	22	100	TRIV040020
40 x 25	16	50	34	26	19	22	22	100	TRIV040025
40 x 32	16	50	42	26	22	22	22	105	TRIV040032
50 x 20	16	61	30	31	16	27	27	160	TRIV050020
50 x 25	16	61	35	31	19	27	27	160	TRIV050025
50 x 32	16	61	42	31	22	27	27	165	TRIV050032
50 x 40	16	61	51	31	26	27	27	170	TRIV050040
63 x 25	16	76	36	38	19	33.5	33.5	290	TRIV063025
63 x 32	16	76	43	38	22	33.5	33.5	295	TRIV063032
63 x 40	16	76	52	38	26	33.5	33.5	300	TRIV063040
63 x 50	16	76	62	38	31	33.5	33.5	315	TRIV063050
75 x 32	16	91	41	44	22	40	40	530	TRIV075032
75 x 40	16	91	50	44	26	40	40	540	TRIV075040
75 x 50	16	91	61	44	31	40	40	550	TRIV075050
75 x 63	16	91	76	44	38	40	40	580	TRIV075063
90 x 40	16	109	50	51	26	48	48	870	TRIV090040
90 x 50	16	109	61	51	31	48	48	880	TRIV090050
90 x 63	16	109	76	51	38	48	48	900	TRIV090063
90 x 75	16	109	91	51	44	48	48	940	TRIV090075
110 x 50	16	133	61	61	31	61	61	1580	TRIV110050
110 x 63	16	133	76	61	38	61	61	1590	TRIV110063
110 x 75	16	133	91	61	44	61	61	1610	TRIV110075
110 x 90	16	133	109	61	51	61	61	1640	TRIV110090
**160 x 110	16	187	131	86	61	59	84	3450	TRIV160110
180 x 125	16	215	151	96	69	94	94	6760	TRIV180125
**250 x 110	4	285	134	129	63	61	128	8300	TRIV250110
**250 x 160	4	285	193	129	87	86	129	9900	TRIV250160
**250 x 200	4	285	228	129	106	133	132	12000	TRIV250200
**280 x 160	4	320	193	146	88	84	153	12500	TRIV280160
**280 x 225	4	320	258	146	117.5	117	150.5	14900	TRIV280225
**315 x 160	4	355	193	164	86	83	161	15000	TRIV315160
**315 x 200	4	355	228	164	106	102	179	17500	TRIV315200
**315 x 250	4	355	285	164	131	127	160	19200	TRIV315250

**resale product

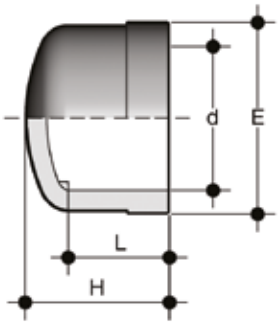


XIV

90° cross with solvent weld sockets

	d	PN	E	L	Z	g	Code
H	25	16	35	19	14	60	XIV025
H	32	16	43	22	18	105	XIV032
H	40	16	52	26	23	175	XIV040
H	50	16	64	31	27	265	XIV050
H	63	16	79	38	33.5	505	XIV063

H: KIWA K5034 ND 10

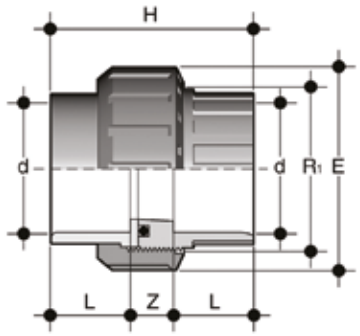


CIV

End cap with solvent weld socket

	d	PN	E	H	L	g	Code
	12	16	17	15	12	3	CIV012
F	16	16	21	17	15	4	CIV016
IF	20	16	28	23	16	9	CIV020
IF	25	16	34	27	19	15	CIV025
IF	32	16	41	31	22	25	CIV032
IF	40	16	51	36	26	40	CIV040
IF	50	16	62	43	31	60	CIV050
IF	63	16	77	51	38	110	CIV063
IF	75	16	91	59	44	190	CIV075
IF	90	16	110	69	51	330	CIV090
IF	110	16	133	85	61	575	CIV110
IF	125	16	147	99	69	900	CIV125
	140	16	164	108	76	1100	CIV140
	160	16	192	128	86	1900	CIV160
	225	10	260	163	119	3000	CIV225

I: IIP 122 **F:** AFNOR NF04

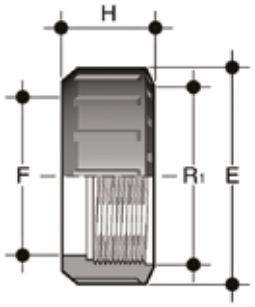


BIV

Union with solvent weld socket, O-Ring in EPDM or FPM

	d	R_1	PN	E	H	L	Z	g	Code
I	16	3/4"	16	33	41	14	13	20	BIV016E
I	20	1"	16	41	45	16	13	35	BIV020E
I	25	1" 1/4	16	50	51	19	13	60	BIV025E
I	32	1" 1/2	16	58	57	22	13	85	BIV032E
I	40	2"	16	72	67	26	15	150	BIV040E
I	50	2" 1/4	16	79	79	31	17	175	BIV050E
I	63	2" 3/4	16	98	98	38	22	320	BIV063E
	75	3" 1/2	10	120	116	44	21	590	BIV075E
	90	4"	10	135	125	51	23	770	BIV090E
	110	5"	10	163	145	61	23	1300	BIV110E

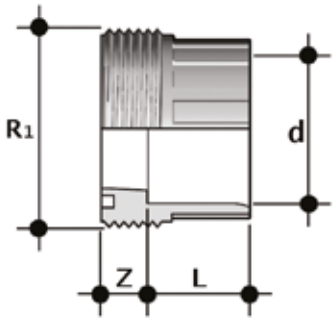
I: IIP 122



EFV

Union nut with BSP thread for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

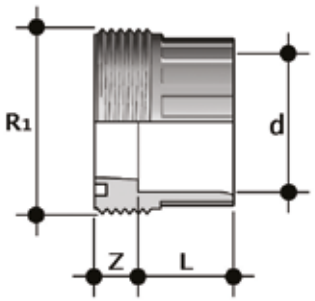
R_1	d BIV	PN	E	F	H	g	Code
3/8"	-	16	23	13	20	5	EFV038
1/2"	-	16	27	17	24	8	EFV012
3/4"	16	16	33	22	21	9	EFV034
1"	20	16	41	28	22	13	EFV100
1" 1/4	25	16	50	36	25	22	EFV114
1" 1/2	32	16	58	42	27	30	EFV112
2"	40	16	72	53	30	50	EFV200
2" 1/4	50	16	79	59	34	68	EFV214
2" 1/2	-	16	90	68	36	95	EFV212
2" 3/4	63	16	98	74	38	120	EFV234
3" 1/2	75	10	120	93	45	198	EFV312
4"	90	10	135	106	52	278	EFV400
5"	110	10	163	129	60	448	EFV500



F/BIV

Union bush for solvent welding, metric series

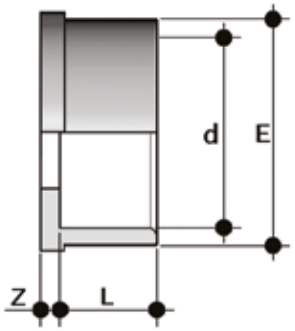
d	R_1	PN	L	Z	g	Code
16	3/4”	16	14	10	9	FBIV016
20	1”	16	16	10	13	FBIV020
25	1” 1/4	16	19	10	25	FBIV025
32	1” 1/2	16	22	10	31	FBIV032
40	2”	16	26	12	58	FBIV040
50	2” 1/4	16	31	14	63	FBIV050
63	2” 3/4	16	38	19	119	FBIV063
75	3” 1/2	10	44	18	230	FBIV075
90	4”	10	51	18	290	FBIV090
110	5”	10	61	18	500	FBIV110



F/BLV

Union bush for solvent welding, series BS

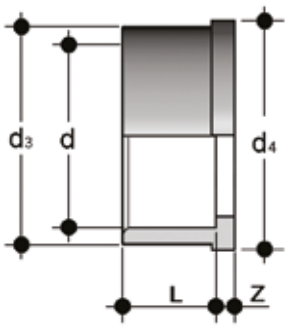
d	R_1	PN	L	Z	g	Code
1/2”	1”	16	16	10	12.5	FBLV012
3/4”	1” 1/4	16	19	10	22.5	FBLV034
1”	1” 1/2	16	22	10	30	FBLV100
1” 1/4	2”	16	26	12	52	FBLV114
1” 1/2	2” 1/2	16	31	14	69.5	FBLV112
2”	2” 3/4	16	38	19	133.5	FBLV200



Q/BIV

Union end for solvent welding, metric series

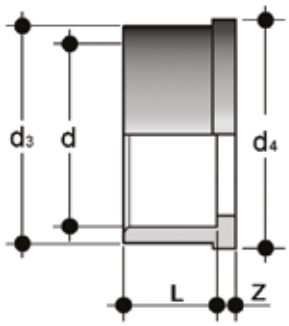
d	PN	E	L	Z	g	Code
16	16	22	14	3	5	QBIV016
20	16	28	16	3	8	QBIV020
25	16	36	19	3	15	QBIV025
32	16	42	22	3	24	QBIV032
40	16	53	26	3	37	QBIV040
50	16	59	31	3	42	QBIV050
63	16	74	38	3	77	QBIV063
75	10	93	44	3	150	QBIV075
90	10	105	51	5	192	QBIV090
110	10	129	61	5	335	QBIV110



Q/BLV

Union end for solvent welding, BS series

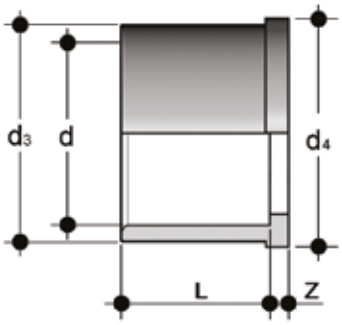
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	16	3	8	QBLV012
3/4”	16	36	38.8	19	3	13	QBLV034
1”	16	41.5	44.7	22	3	19	QBLV100
1” 1/4	16	53	56.5	26	3	32	QBLV114
1” 1/2	16	59	62.6	31	3	46	QBLV112
2”	16	74	78.4	38	3	86	QBLV200



Q/BAV

Union end for solvent welding, ASTM series

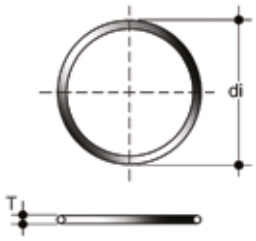
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	22.7	3.5	15.5	QBAV012
3/4”	16	36	38.8	25.9	3.7	22.5	QBAV034
1”	16	41.5	44.7	29.2	3	32.5	QBAV100
1” 1/4	16	53	56.5	32	5	57	QBAV114
1” 1/2	16	59	62.6	35	5	78	QBAV112
2”	16	74	78.4	38.5	5.5	130	QBAV200



Q/BJV

Union end for solvent welding, JIS series

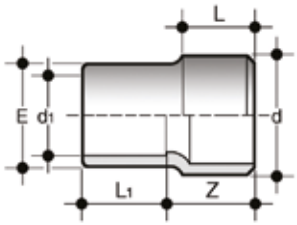
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	30	3	16	QBJV012
3/4”	16	36	38.8	35	3.5	21	QBJV034
1”	16	41.5	44.7	40	3	40	QBJV100
1” 1/4	16	53	56.5	44	3	68	QBJV114
1” 1/2	16	59	62.6	55	4.5	105	QBJV112
2”	16	74	78.4	62.9	5.5	175	QBJV200



O-Ring

O-Ring for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

Union d	C	di	T	EPDM code	FPM code
16	3062	15.54	2.62	OR3062E	OR3062F
20	4081	20.22	3.53	OR4081E	OR4081F
25	4112	28.17	3.53	OR4112E	OR4112F
32	4131	32.93	3.53	OR4131E	OR4131F
40	6162	40.65	5.34	OR6162E	OR6162F
50	6187	47	5.34	OR6187E	OR6187F
63	6237	59.69	5.34	OR6237E	OR6237F
75	6300	75.57	5.34	OR6300E	OR6300F
90	6362	91.45	5.34	OR6362E	OR6362F
110	6450	113.67	5.34	OR6450E	OR6450F

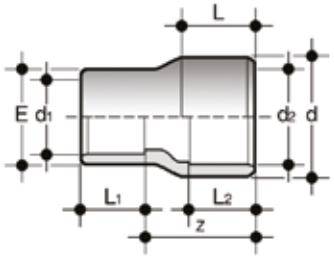


RIV

Reducer: solvent weld spigot (d), solvent weld socket (d_1 reduced)

	d x d_1	PN	E	L	L_1	Z	g	Code
I	16 x 12	16	19	14	12	18	7	RIV016012
IF	20 x 16	16	22	16	14	21	8	RIV020016
F	160 x 110	16	137	86	61	125	1270	RIV160110
	200 x 160	10	182	106	86	156	2540	RIV200160

I: IIP 122 **F:** AFNOR NF04
RIV: the quality marks refer to dimensions d and d_1

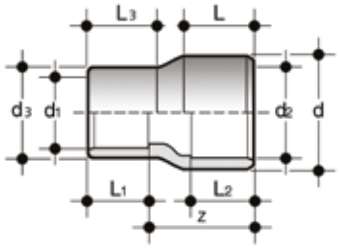


RIV

Reducer: solvent weld spigot (d) or solvent weld socket (d_2), solvent weld socket (d_1 reduced)

	d x d_2 x d_1	PN	E	L	L_1	L_2	Z	g	Code
IF	25 x 20 x 16	16	22	19	14	16	24.5	9	RIV025020016
IF	25 x 20 x 20	16	26	19	16	16	24.5	12	RIV025020020
IF	32 x 25 x 16	16	22	22	14	19	30	14	RIV032025016
IF	32 x 25 x 20	16	27	22	16	19	30	16	RIV032025020
IF	32 x 25 x 25	16	32	22	19	19	30	20	RIV032025025
IF	40 x 32 x 20	16	27	26	16	22	36	23	RIV040032020
IF	40 x 32 x 25	16	32	26	19	22	36	27	RIV040032025
IF	40 x 32 x 32	16	41	26	22	22	36	34	RIV040032032
I	50 x 40 x 20	16	27	31	16	26	44	36	RIV050040020
IF	50 x 40 x 25	16	32	31	19	26	44	40	RIV050040025
IF	50 x 40 x 32	16	40	31	22	26	44	48	RIV050040032
IF	50 x 40 x 40	16	48	31	26	26	44	55	RIV050040040
I	63 x 50 x 25	16	32	38	19	31	54	75	RIV063050025
IF	63 x 50 x 32	16	40	38	22	31	54	80	RIV063050032
IF	63 x 50 x 40	16	49	38	26	31	54	90	RIV063050040
IF	63 x 50 x 50	16	60	38	31	31	54	110	RIV063050050
IF	75 x 63 x 50	16	61	44	31	38	62	130	RIV075063050
IF	75 x 63 x 63	16	76	44	38	38	62	175	RIV075063063
I	110 x 90 x 50	16	61	61	31	51	88	260	RIV110090050
I	110 x 90 x 63	16	76	61	38	51	88	300	RIV110090063
I	110 x 90 x 75	16	89	61	44	51	88	345	RIV110090075
IF	110 x 90 x 90	16	104	61	51	51	88	400	RIV110090090

I: IIP 122 **F:** AFNOR NF04
RIV: the quality marks refer to dimensions d and d_1



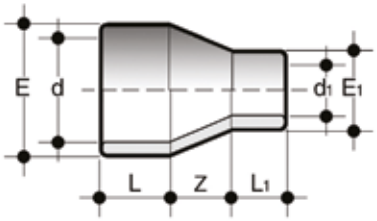
RIV

Reducer: solvent weld spigot (d) or solvent weld socket (d_2), solvent weld socket (d_1 reduced) or solvent weld spigot (d_3 reduced)

	d x d_2 x d_3 x d_1	PN	E	L	L_1	L_2	L_3	Z	g	Code
I	90 x 75 x 50 x 40	16	-	51	26	44	31	74	180	RIV090075050040
IF	90 x 75 x 63 x 50	16	-	51	31	44	38	74	200	RIV090075063050
IF	90 x 75 x 75 x 63	16	-	51	38	44	44	74	260	RIV090075075063
IF	90 x 75 x 90 x 75	16	-	51	44	44	51	74	325	RIV090075090075

I: IIP 122 **F:** AFNOR NF04
RIV: the quality marks refer to dimensions d and d_1

Fig. A



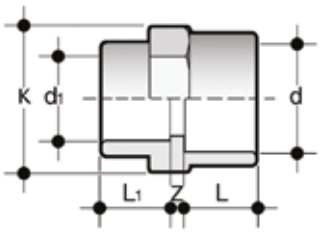
MRIV

Reducer: solvent weld double socket (fig. A)

d x d_1	PN	E	E_1	K	L	L_1	Z	g	Code
*180 x 125	4	214	154	-	95	68	48.8	2700	MRIV180125
*180 x 140	4	214	170	-	95	76	35	2700	MRIV180140
*180 x 160	4	214	190	-	95	86	17	2800	MRIV180160
*200 x 110	4	234	138	-	102	61	78	3100	MRIV200110
*200 x 125	4	234	154	-	102	68	65	3100	MRIV200125
*200 x 140	4	234	170	-	102	76	52	3200	MRIV200140
*200 x 160	4	234	190	-	102	86	35	3200	MRIV200160
*200 x 180	4	234	213	-	102	95	17	3300	MRIV200180
*225 x 110	4	258	138	-	103	62	100	4000	MRIV225110
*225 x 140	4	258	170	-	103	76	74	3800	MRIV225140
*225 x 160	4	258	190	-	103	86	57	4000	MRIV225160
*225 x 180	4	258	214	-	103	95	40	3500	MRIV225180
*225 x 200	4	258	234	-	103	102	22	3500	MRIV225200
*250 x 110	4	283	138	-	105	62	122	4500	MRIV250110
*250 x 125	4	283	154	-	105	68	108	4700	MRIV250125
*250 x 140	4	283	170	-	105	76	96	4600	MRIV250140
*250 x 160	4	283	190	-	105	86	78	4700	MRIV250160
*250 x 180	4	283	214	-	105	95	62	4600	MRIV250180
*250 x 200	4	283	234	-	105	102	44	4500	MRIV250200
*250 x 225	4	283	258	-	105	103	22	4900	MRIV250225
*280 x 110	4	317	138	-	101	62	150	5400	MRIV280110
*280 x 125	4	317	154	-	101	68	136	5400	MRIV280125
*280 x 140	4	317	170	-	101	76	123	5400	MRIV280140
*280 x 160	4	317	190	-	101	86	105	5700	MRIV280160
*280 x 180	4	317	214	-	101	95	87	5700	MRIV280180
*280 x 200	4	317	234	-	101	102	70	5800	MRIV280200
*280 x 225	4	317	258	-	101	103	47	5500	MRIV280225
*280 x 250	4	317	283	-	101	105	26	5400	MRIV280250
*315 x 160	4	355	190	-	105	86	135	6400	MRIV315160
*315 x 180	4	355	214	-	105	95	117	6600	MRIV315180
*315 x 200	4	355	234	-	105	102	100	6800	MRIV315200
*315 x 225	4	355	258	-	105	103	79	7200	MRIV315225
*315 x 250	4	355	283	-	105	105	57	6800	MRIV315250
*315 x 280	4	355	317	-	105	101	31	7100	MRIV315280
*355 x 315	4	394	355	-	105	105	35	7500	MRIV355315
*400 x 315	4	435	355	-	105	105	75	9500	MRIV400315
*400 x 355	4	435	394	-	105	105	40	9000	MRIV400355

*resale product

Fig. B



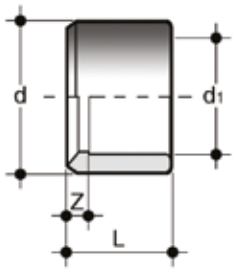
MRIV

Reducer: solvent weld double socket (fig. B)

d x d_1	PN	E	E_1	K	L	L_1	Z	g	Code
*110 x 90	16	-	-	130	61	51	4.5	555	MRIV110090

*reduced safety factor

Fig. A



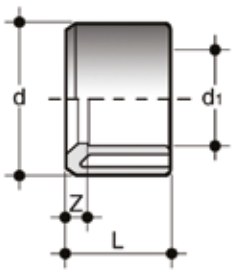
DIV

Reducing bush with solvent weld spigot (d) and solvent weld socket (d_1 reduced) (fig. A)

	d x d_1	PN	L	Z	g	Code
	16 X 12	16	14	2	1	DIV016012
IF	20 X 16	16	16	2	3	DIV020016
IF	25 X 20	16	19	3	5	DIV025020
I	32 X 20	16	22	6	15	DIV032020
IF	32 X 25	16	22	3.5	10	DIV032025
IF	40 X 32	16	26	4	17	DIV040032
IF	50 X 40	16	31	5	32	DIV050040
IF	63 X 50	16	38	7	65	DIV063050
IF	75 X 63	16	44	6	85	DIV075063
IF	90 X 75	16	51	7	150	DIV090075
IF	110 X 90	16	61	9	270	DIV110090
IF	125 X 110	16	69	8	285	DIV125110
I	140 X 110	16	76	17	645	DIV140110
IF	140 X 125	16	76	9.5	350	DIV140125
IF	160 X 140	16	86	10	565	DIV160140
	*225 X 200	16	119	13	1380	DIV225200
	250 X 200	10	132	25	3500	DIV250200
	250 X 225	10	132	12	2100	DIV250225
	**280 x 250	4	147	15	2500	DIV280250
	315 x 280	10	165	18	4590	DIV315280

I: IIP 122 **F:** AFNOR NF04
*reduced safety factor
**resale product

Fig. B

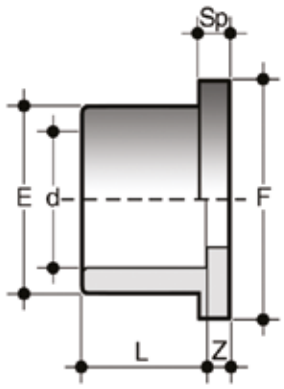


DIV

Reducing bush with solvent weld spigot (d) and solvent weld socket (d_1 reduced) (fig. B)

	d x d_1	PN	L	Z	g	Code
I	40 X 20	16	26	9	25	DIV040020
I	40 X 25	16	26	7	24	DIV040025
I	50 X 32	16	31	8.5	35	DIV050032
I	63 X 32	16	38	16	73	DIV063032
I	63 X 40	16	38	11.5	75	DIV063040
I	75 X 50	16	44	13	120	DIV075050
I	90 X 50	16	51	20	200	DIV090050
I	90 X 63	16	51	13	210	DIV090063
I	110 X 63	16	61	23	340	DIV110063
I	110 X 75	16	61	17	360	DIV110075
I	140 X 90	16	76	25	730	DIV140090
I	160 X 90	16	86	35	1040	DIV160090
I	160 X 110	16	86	24	945	DIV160110
	*180 X 160	4	96	10	710	DIV180160
	*200 X 160	16	106	20	1310	DIV200160
	*200 X 180	4	106	10	870	DIV200180
	225 X 160	16	119	33	1840	DIV225160
	250 X 160	10	132	45	3100	DIV250160
	*250 X 180	4	132	36	3100	DIV250180
	*280 X 200	4	146	40	4100	DIV280200
	280 x 225	10	147	27	4300	DIV280225
	315 x 200	10	165	58	8650	DIV315200
	315 x 225	10	165	45	8100	DIV315225
	315 x 250	10	165	33	5080	DIV315250

I: IIP 122
*resale product

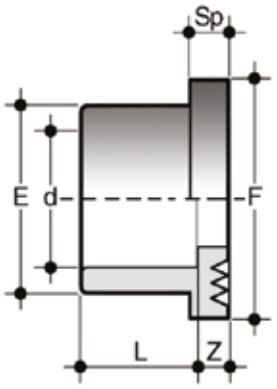


QPV

Flat face stub according to DIN 8063 PN 10/16 with solvent weld socket

	d	DN	PN	E	F	L	Sp	Z	g	Code
I	20	15	16	27	34	16	7	3.5	10	QPV020
I	25	20	16	33	41	19	7	3	16	QPV025
I	32	25	16	41	50	22	7	3	25	QPV032
I	40	32	16	50	61	26	8	3	40	QPV040
I	50	40	16	61	73	31	8	3	62	QPV050
I	63	50	16	76	90	38	9	3	105	QPV063
I	75	65	16	90	105	44	10	3	160	QPV075
I	90	80	16	108	125	51	10	5	275	QPV090
I	110	100	16	131	150	61	12	4	445	QPV110
I	125	125	16	147	168	69	13	5	750	QPV125
I	125	***125	16	165	188	69	13	11	760	QPV125FKE
I	140	125	16	165	188	76	14	5	790	QPV140
	160	150	16	188	212	86	16	4.5	1140	QPV160
	200	***200	16	248	273	106	30	24	2700	QPV200FKE
	200	*200	16	230	254	106	18	5.5	1840	QPV200
	355	**350	4	386	413	184	29	8	5400	QPV355
	400	**400	4	430	483	206	26	12	6500	QPV400
	450	**450	4	486	538	-	19	8	5200	QPV450
	500	**500	4	532	574	-	18	-	3000	QPV500

I: IIP 122
*reduced safety factor
**resale product
***special stubs for butterfly valves FK-FE

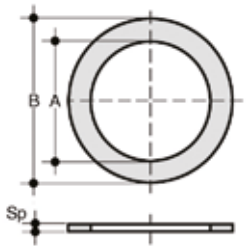


QRV

Serrated face stub according to DIN 8063 PN 10/16 with solvent weld socket, for use with stubs QPV/QRV and flat gasket (for gasket sizes, see QHV)

	d	DN	PN	E	F	L	Sp	Z	g	Code
I	40	32	16	50	61	26	8	3	40	QRV040
I	50	40	16	61	73	31	8	3	62	QRV050
I	63	50	16	76	90	38	9	3	105	QRV063
I	75	65	16	90	105	44	10	3	160	QRV075
I	90	80	16	108	125	51	10	5	275	QRV090
I	110	100	16	131	150	61	12	4	445	QRV110
I	125	125	16	147	168	69	13	5	750	QRV125
I	140	125	16	165	188	76	14	5	790	QRV140
I	160	150	16	188	212	86	16	4.5	1140	QRV160
	200	*200	16	230	254	106	18	5.5	1840	QRV200
	225	*200	16	245	273	119	25	5.5	1750	QRV225
	250	*250	16	270	306	131	20	8.5	2140	QRV250
	280	250	10	307	327	147	32	14.5	3650	QRV280
	315	300	10	346	377	165	32	16	4950	QRV315

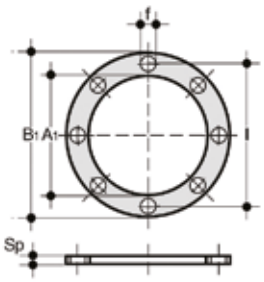
I: IIP 122
*reduced safety factor



QHV/X

Flat gasket in EPDM and FPM for flanges according to DIN 2501, EN1092

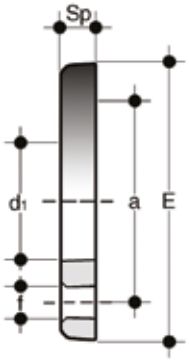
d	DN	A	B	Sp	EPDM code	FPM code
16	10	16	27	2	QHVX016E	QHVX016F
20 - 1/2”	15	20	32	2	QHVX020E	QHVX020F
25 - 3/4”	20	24	38.5	2	QHVX025E	QHVX025F
32 - 1”	25	32	48	2	QHVX032E	QHVX032F
40 - 1” 1/4	32	40	59	2	QHVX040E	QHVX040F
50 - 1” 1/2	40	50	71	2	QHVX050E	QHVX050F
63 - 2”	50	63	88	2	QHVX063E	QHVX063F
75 - 2” 1/2	65	75	104	2	QHVX075E	QHVX075F
90 - 3”	80	90	123	2	QHVX090E	QHVX090F
110 - 4”	100	110	148	3	QHVX110E	QHVX110F
125	125	125	166	3	QHVX125E	QHVX125F
140	125	140	186	3	QHVX140E	QHVX140F
160 - 6”	150	160	211	3	QHVX160E	QHVX160F
200	200	200	252	4	QHVX200E	-
225 - 8”	200	225	270	4	QHVX225E	-
250	250	250	305	4	QHVX250E	-



QHV/Y

Flat gasket in EPDM for flanges according to DIN2501, EN1092, self-centring for flanges drilled PN10/16 up to DN 150 and PN 10 from DN 200

d	DN	A_1	B_1	F	I	U	Sp	Code
16	10	-	-	-	-	-	-	-
20 - 1/2”	15	17	95	14	65	4	2	QHVY020E
25 - 3/4”	20	22	107	14	76.3	4	2	QHVY025E
32 - 1”	25	28	117	14	86.5	4	2	QHVY032E
40 - 1” 1/4	32	36	142.5	18	101	4	2	QHVY040E
50 - 1” 1/2	40	45	153.3	18	111	4	2	QHVY050E
63 - 2”	50	57	168	18	125.5	4	2	QHVY063E
75 - 2” 1/2	65	71	187.5	18	145.5	4	3	QHVY075E
90 - 3”	80	84	203	18	160	8	3	QHVY090E
110 - 4”	100	102	223	18	181	8	3	QHVY110E
125	125	132	250	18	210	8	3	QHVY125E
140	125	132	250	18	210	8	3	QHVY140E
160 - 6”	150	152	288.5	22	241.5	8	4	QHVY160E
200	200	192	340	22	295	8	4	QHVY200E
225 - 8”	200	215	340	22	295	8	4	QHVY225E
250	250	238	395	22	350	12	4	QHVY250E
280	250	265	395	22	350	12	4	QHVY280E
315	300	290	462	22	400	12	4	QHVY315E
355	350	337	500	22	460	16	2	QHVY355E
400	400	384	555	25	515	16	2	QHVY400E

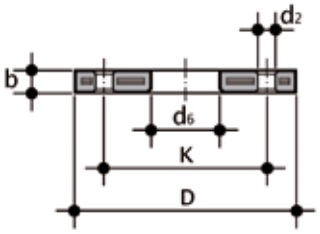


ODV

Backing ring for stubs QPV, QRV, QLV EN/ISO/DIN
Drilling: - PN 10/16 up to DN150 - PN 10 from DN200

	d	DN	*PMA (bar)	a	b	d_1	E	f	Sp	U	**(Nm)	g	Code
	20	15	10	65	M12 x 70	28	96	14	11	4	<10	60	ODV020
I	25	20	10	75	M12 x 70	34	107	14	12	4	<10	85	ODV025
I	32	25	10	85	M12 x 70	42	117	14	14	4	10	120	ODV032
I	40	32	10	100	M16 x 85	51	143	18	15	4	13	190	ODV040
I	50	40	10	110	M16 x 85	62	153	18	16	4	13	225	ODV050
I	63	50	10	125	M16 x 95	78	168	18	18	4	15	280	ODV063
I	75	65	10	145	M16 x 95	92	188	18	19	4	17	390	ODV075
I	90	80	10	160	M16 x 105	109	203	18	20	8	18	460	ODV090
I	110	100	10	180	M16 x 105	132	222	18	22	8	20	515	ODV110
I	125	125	10	210	M16 x 115	149	250	18	26	8	25	960	ODV125
I	140	125	10	210	M16 x 120	166	251	18	26	8	25	715	ODV140
I	160	150	10	240	M20 x 135	189	290	22	29	8	30	915	ODV160
I	200	200	10	295	M20 x 140	235	340	22	30	8	45	1210	ODV200
	225	200	10	295	M20 x 140	252	340	22	30	8	50	1090	ODV225
	250	250	10	350	M20 x 150	278	396	22	34	12	60	1790	ODV250
	280	250	10	350	M20 x 160	309	396	22	35	12	70	1880	ODV280
	315	300	10	400	M20 x 180	349	465	22	40	12	50	3050	ODV315
	355	***350	4	460	M20 x 180	386	505	22	32	16	70	3600	ODV355
	400	***400	4	515	M22 x 180	434	565	25	33	16	55	4500	ODV400
	450	***450	4	565	M22 x 160	489	615	25	32	20	65	4400	ODV450
	500	***500	4	600	M20 x 160	540	650	25	31	20	70	4200	ODV500

I: IIP 122
*PMA maximum admissible working pressure
** nominal tightening torque
***resale product

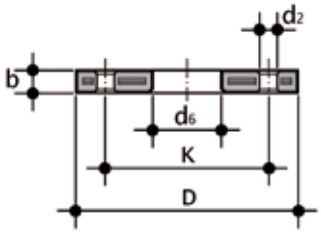


ODB

Steel core backing ring, PP/FRP coated, according to EN/ISO/DIN for stubs QRV, QPV.
Drilling: PN 10/16 up to DN 150; PN 10 from DN 200

d	DN	*PMA (bar)	b	d_2	d_6	D	k	M	n	**(Nm)	g	Code
20	15	16	12	14	28	95	65	M12	4	10	232	ODB020
25	20	16	14	14	34	105	75	M12	4	15	288	ODB025
32	25	16	14	14	42	115	85	M12	4	15	544	ODB032
40	32	16	16	18	51	140	100	M16	4	20	836	ODB040
50	40	16	16	18	62	150	110	M16	4	25	902	ODB050
63	50	16	19	18	78	165	125	M16	4	35	1074	ODB063
75	65	16	19	18	92	188	145	M16	4	40	1368	ODB075
90	80	16	21	18	109	204	160	M16	8	40	1516	ODB090
***125	100	16	22	18	135	224	180	M16	8	50	1938	ODB125
****180	150	16	27	22	191	285	240	M20	8	60	3298	ODB180
200	200	16	28	22	235	340	295	M20	8	75	5318	ODB200

*maximum pressure values to EN/ISO/DIN. Pay attention to maximum admissible pressure values when selecting gaskets
**nominal tightening torque
*** for use with stubs QPV110, QRV110
**** for use with stubs QPV160, QRV160

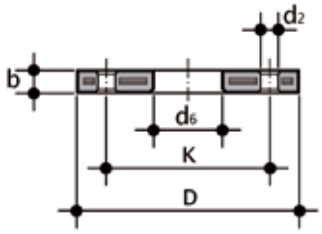


ODB-SW

Steel core backing ring, PP/FRP coated, according to EN/ISO/DIN for stubs QRV and QPV. Drilling: PN 10/16 up to DN 150; PN 10 from DN 200

d	DN	*PMA (bar)	b	d_2	d_6	D	k	M	n	**(Nm)	g	Code
140	125	16	24	18	166	252	210	M16	8	60	2965	SWODBD140DN125
225	200	16	27	22	247	340	295	M20	8	75	5060	SWODBD225DN200
280	250	16	30	22	309	395	350	M20	12	95	7112	SWODBD280DN250
315	300	16	34	22	349	445	400	M20	12	100	9468	SWODBD315DN300

*PMA maximum admissible working pressure
**nominal tightening torque

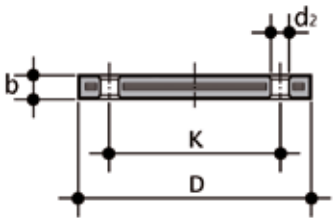


OAB

Steel core backing ring, PP/FRP coated, according to ANSI B16.5 cl.150 for stubs QRV, QPV

d mm	DN inches	*PMA (bar)	b	d_2 mm	d_2 inches	d_6	D	k mm	k inches	n	**(Nm)	g	Code
20	1/2”	16	12	16	5/8”	28	95	60.4	2” 3/8	4	15	200	OAB012
25	3/4”	16	12	16	5/8”	34	102	69.7	2” 3/4	4	15	240	OAB034
32	1”	16	16	16	5/8”	42	114	79.2	3” 1/8	4	15	490	OAB100
40	1” 1/4	16	16	16	5/8”	51	130	88.7	3” 1/2	4	25	670	OAB114
50	1” 1/2”	16	18	16	5/8”	62	133	98.3	3” 7/8	4	35	640	OAB112
63	2”	16	18	20	3/4”	78	162	120.0	4” 3/4	4	35	1000	OAB200
75	2” 1/2	16	18	20	3/4”	92	184	139.7	5” 1/2	4	40	1310	OAB212
90	3”	16	18	20	3/4”	111	194	152.4	6”	4	40	1250	OAB300
110	4”	16	18	20	3/4”	133	229	190.6	7” 1/2	8	40	1660	OAB400

*PMA maximum admissible working pressure
**nominal tightening torque

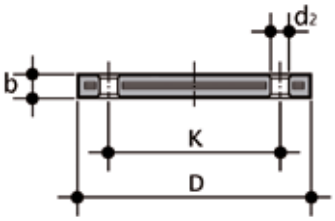


ODBC

Steel core blind ring, PP/FRP coated, according to EN/ISO/DIN for stubs QRV, QPV.
Drilling: PN 10/16 up to DN 150; PN 10 from DN 200

d	DN	*PMA (bar)	b	d_2	D	k	n	M	**(Nm)	g	Code
20	15	16	12	14	95	65	4	M12	15	290	ODBC020
25	20	16	12	14	105	75	4	M12	15	390	ODBC025
32	25	16	16	14	115	85	4	M12	15	520	ODBC032
40	32	16	16	18	140	100	4	M16	25	800	ODBC040
50	40	16	18	18	150	110	4	M16	35	940	ODBC050
63	50	16	18	18	165	125	4	M16	35	1150	ODBC063
75	65	16	18	18	185	145	4	M16	40	1640	ODBC075
90	80	16	18	18	200	160	8	M16	40	1960	ODBC090
110/125	100	16	18	18	220	180	8	M16	40	2720	ODBC110
140	125	16	24	18	250	210	8	M16	50	3920	ODBC140
160/180	150	16	24	22	285	240	8	M20	60	5060	ODBC160
200/225	200	16	24	22	340	295	8	M20	70	7800	ODBC200
250/280	250	10	30	22	400	350	12	M20	100	15400	ODBC250
315	300	10	34	22	463	400	12	M20	110	26000	ODBC315

*maximum pressure values according to EN/ISO/DIN. Pay attention to maximum admissible pressure values when selecting gaskets
**nominal tightening torque

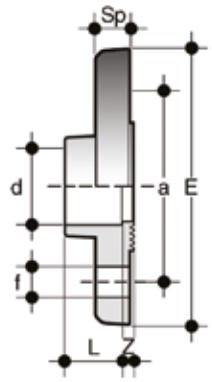


OABC

Steel core blind flange, PP/FRP coated, according to ANSI B16.5 cl.150

inches	DN	*PMA (bar)	b	d_2 mm	d_2 inches	D	k mm	k inches	n	**(Nm)	g	Code
1/2”	15	16	12	16	5/8”	95	60.45	2” 3/8	4	15	200	OABC012
3/4”	20	16	12	16	5/8”	102	69.85	2” 3/4	4	15	240	OABC034
1”	25	16	16	16	5/8”	114	79.25	3” 1/8	4	15	370	OABC100
1” 1/4	32	16	16	16	5/8”	130	88.90	3” 1/2	4	25	530	OABC114
1” 1/2	40	16	18	16	5/8”	133	98.55	3” 7/8	4	35	560	OABC112
2”	50	16	18	20	3/4”	162	120.65	4” 3/4	4	35	810	OABC200
2” 1/2	65	16	18	20	3/4”	184	139.70	5” 1/2	4	40	1070	OABC212
3”	80	16	18	20	3/4”	194	152.40	6”	4	40	1030	OABC300
4”	100	16	18	20	3/4”	229	190.50	7” 1/2	8	40	1570	OABC400

* PMA: maximum admissible working pressure
**nominal tightening torque

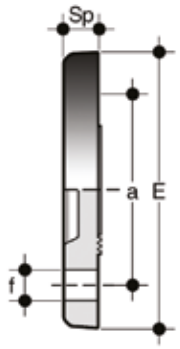


FDV

Fixed flange with solvent weld socket according to EN/ISO/DIN with serrated raised face for flat gaskets (for gasket sizes, see QHV).
Drilling: PN 10/16 up to DN 150; PN 10 from DN 200

d	DN	*PMA (bar)	a	E	f	L	Sp	Z	**(Nm)	g	Code
25	20	10	75	105	14	19	12	4.5	<10	105	FDV025
32	25	10	85	115	14	22	14	4.5	10	150	FDV032
40	32	10	100	140	18	26	15	4.5	13	230	FDV040
50	40	10	110	150	18	31	16	4.5	13	280	FDV050
63	50	10	125	163	18	38	18	4.5	15	390	FDV063
75	65	10	145	185	18	44	19	5	17	525	FDV075
90	80	10	160	200	18	51	20	7	18	710	FDV090
110	100	10	180	220	18	61	22	8	20	955	FDV110

* PMA: maximum admissible working pressure
**nominal tightening torque

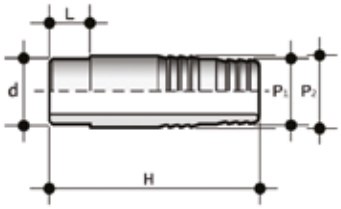


FCV

Blind flange drilled according to EN/ISO/DIN with serrated raised face for flat gaskets (for gasket sizes, see QHV).
Drilling: PN 10/16 up to DN 175; PN 10 from DN 200

d	DN	*PMA (bar)	a	E	f	Sp	U	***(Nm)	g	Code
25	20	10	75	105	14	12	4	<10	95	FCV025
32	25	10	85	115	14	14	4	10	135	FCV032
40	32	10	100	141	18	15	4	13	225	FCV040
50	40	10	110	150	18	16	4	13	270	FCV050
63	50	10	125	165	18	18	4	15	355	FCV063
75	65	10	145	186	18	19	4	17	510	FCV075
90	80	10	160	201	18	20	8	18	675	FCV090
110	100	10	180	221	18	22	8	20	915	FCV110
180	***175	4	270	315	22	30	8	45	3100	FCV180
200-225	***200	4	295	340	22	30	8	60	3800	FCV200

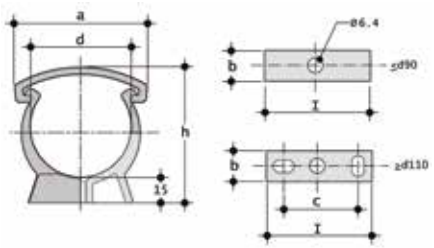
* PMA: maximum admissible working pressure
**nominal tightening torque
***resale product



AIV

Hose adaptor with solvent weld spigot

d x P_2 x P_1	PN	H	L	g	Code
12 x 14 x 12	16	56	12	6	AIV012014012
16 x 18 x 16	16	60	14	12	AIV016018016
20 x 22 x 20	16	67	16	17	AIV020022020
25 x 27 x 25	16	81	19	26	AIV025027025
32 x 32 x 30	16	97	22	40	AIV032032030
40 x 42 x 40	16	104	26	78	AIV040042040
50 x 52 x 50	16	111	31	113	AIV050052050
63 x 64 x 60	16	123	38	170	AIV063064060

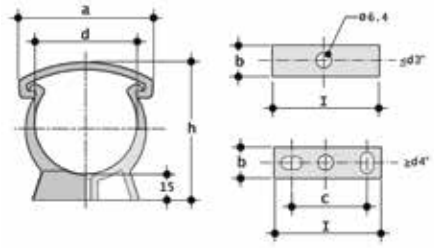


ZIKM

Pipe clip for ISO-DIN pipes in PP*

d	a	b	C	h	l	Code
**16	26	18	-	33	16	ZIKM016
**20	33	14	-	38	20	ZIKM020
**25	41	14	-	44	25	ZIKM025
**32	49	15	-	51	32	ZIKM032
**40	58	16	-	60	40	ZIKM040
**50	68	17	-	71	60	ZIKM050
**63	83	18	-	84	63	ZIKM063
**75	96	19	-	97	75	ZIKM075
**90	113	20	-	113	90	ZIKM090
**110	139	23	40	134	125	ZIKM110
**125	158	25	60	151	140	ZIKM125
**140	177	27	70	167	155	ZIKM140
**160	210	30	90	190	180	ZIKM160
**180	237	33	100	211	200	ZIKM180

*for pipe support systems, refer to guidelines DVS 2210-1 (Planning and execution - above-ground pipe systems)
**resale product

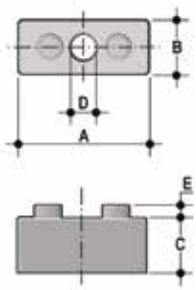


ZAKM

Pipe clip for ASTM pipes in PP*

d	a	b	C	h	l	Code
**3/8"	26	13	-	34	16	ZAKM038
**1/2"	33	14	-	39	20	ZAKM012
**3/4"	41	14	-	45	25	ZAKM034
**1"	49	15	-	52	32	ZAKM100
**1" 1/4	58	16	-	61	40	ZAKM114
**1" 1/2	68	17	-	67	50	ZAKM112
**2"	83	18	-	80	63	ZAKM200
**2" 1/2	96	19	-	96	75	ZAKM212
**3"	118	20	-	110	90	ZAKM300
**4"	140	25	60	135	140	ZAKM400
**6"	197	30	90	196	180	ZAKM600

*for pipe support systems, refer to guidelines DVS 2210-1 (Planning and execution - above-ground pipe systems)
**resale product



DSM

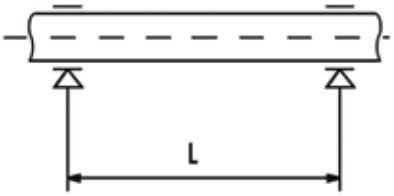
Distance plates in PP for ZIKM pipe clips*

d	A	B	C	D	E	Pack	Master	Code
**32	33	16	14	8	4	20	120	DSM032
**40	41	17	17	8	4	10	80	DSM040
**50	51	18	17	8	4	10	50	DSM050
**63	64	19	22.5	8	4	10	40	DSM063
**75	76	20	34.5	8	4	10	40	DSM075

*for pipe support systems, refer to guidelines DVS 2210-1 (Planning and execution - above-ground pipe systems)
**resale product

INSTALLATION

POSITIONING OF ZIKM AND ZAKM PIPE CLIPS



The installation of thermoplastic pipe systems requires the use of support clips to prevent flexing and the resulting mechanical stresses.
The distance between the clips depends on the pipe material, SDR, surface temperature and the density of the conveyed fluid.
Before installing the clips, check the distances reported in the table below, as provided for by guidelines DVS 2210-01 for water pipes.

Supporting PVC-U pipes conveying liquids of density 1 g/cm³ (water and other fluids of equal intensity).

For pipes of SDR 13.6 / S 6.3 / PN 16:

d mm	distance L in mm at different wall temperatures				
	≤ 20° C	30° C	40° C	50° C	60° C
16	950	900	850	750	600
20	1100	1050	1000	900	700

For pipes of SDR 21 / S 10 / PN 10:

d mm	distance L in mm at different wall temperatures				
	≤ 20° C	30° C	40° C	50° C	60° C
25	1200	1150	1050	950	750
32	1350	1300	1250	1100	900
40	1450	1400	1350	1250	1000
50	1600	1550	1500	1400	1150
63	1800	1750	1700	1550	1300
75	2000	1900	1850	1700	1450
90	2200	2100	2000	1850	1550
110	2400	2300	2250	2050	1750
125	2550	2450	2400	2200	1850
140	2700	2600	2500	2300	1950
160	2900	2800	2700	2500	2100
180	3100	2950	2850	2650	2200

For different SDR values, multiply the data in the table by the following factors:
1.08 for SDR 13.6 / S6.3 / PN16 size range d25 - d400
1.15 for SDR 11 / S5 / PN20 entire size range

Supporting PVC-U pipes conveying liquids of density other than 1 g/cm³.

If the liquid being conveyed has a density other than 1 g/cm³, the distance L in the table must be multiplied by the factors in the table below.

Fluid density in g/cm³	Support factor
1.25	0.96
1.50	0.92
< 0.01	1.42 for SDR 21 / S10 / PN10 1.30 for SDR 13.6 / S6.3 / PN16 1.20 for SDR 11 / S5 / PN20

Aliaxis

FIP

ISO-BSP FITTINGS
PVC-U

Adaptor fittings

FITTINGS
ISO-BSP

Series of fittings designed for conveying fluids under pressure with threaded and solvent weld cold chemical jointing systems (solvent welding) using suitable solvent cement and cleaner-primer.

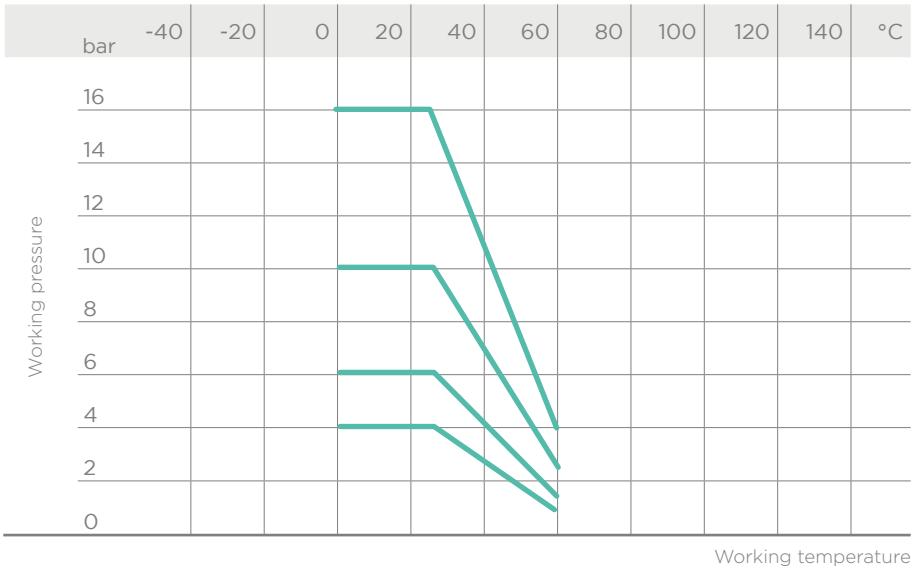
ADAPTOR FITTINGS

Technical specifications	
Size range	d 16 ÷ 125 (mm); R 3/8" ÷ 4"
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, UNI EN ISO 15493, DIN 8063, EN ISO 1452, ASTM D 2467, JIS K 6743, BS 4346-1. Can be coupled to pipes according to ISO 161-1, EN ISO 1452, EN ISO 15493, DIN 8062, ASTM D 1785, JIS K6741, BS 3505-3506
	Thread: UNI ISO 228-1, DIN 2999, BS 21, ISO 7, ASTM D 2464, JIS B 0203
Reference standards	**Construction criteria:** EN ISO 1452, EN ISO 15493
	Test methods and requirements: EN ISO 1452, EN ISO 15493
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
Valve material	PVC-U
Seal material	EPDM, FPM

TECHNICAL DATA

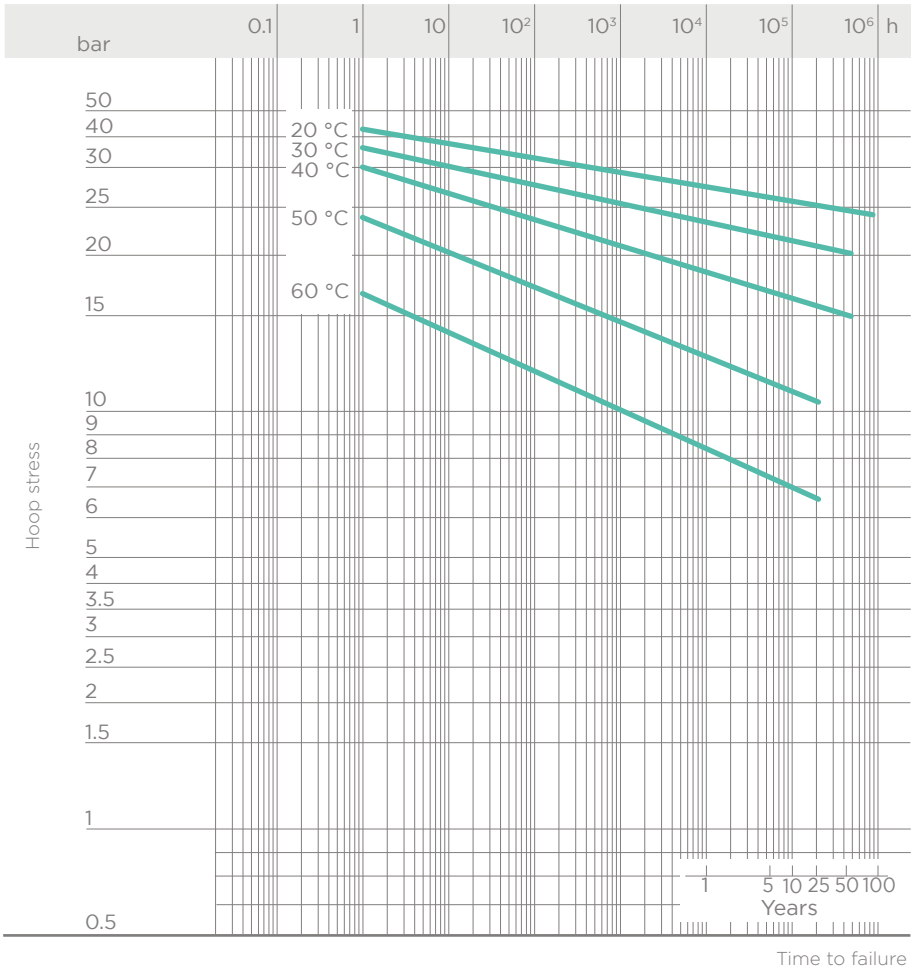
PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids for which the material is classified as CHEMICALLY RESISTANT (life expectancy 25 years). In other cases, a reduction of the nominal pressure PN is required.



REGRESSION CURVE FOR PVC-U FITTINGS

Regression coefficients according to EN ISO 1452 and EN ISO 15493 for MRS (minimum required strength) values = 25 N/mm² (MPa) (classification PVC-U 250)



SAFETY FACTORS

The table reports the safety factors for each pressure class as a function of time.

Nominal pressure PN must be understood as being the standard pressure used for calculating and selecting the required fittings. In order to be able to comply with the safety factors, the maximum continuous working pressure at 20° C when conveying water must be the same as the nominal pressure values. Unless otherwise specified, the nominal pressures are as follows:

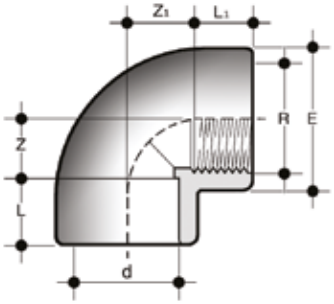
- solvent weld fittings
  from d 12 to d 225 PN 16
  from d 250 to d 315 PN 10
- adaptor fittings
  from d 16 to d 110 PN 16
- threaded fittings
  from R 3/8" to R 4" up to PN 16.

Some of the fittings in the series are sold as PN16 with a reduced safety factor compared to that specified by ISO standards.

Pe (bar)	1h	1000h	50 years	T
10	6.72	5.12	4	
16	4.2	3.2	2.5	
16*	3.3	2.5	2	

*with reduced safety factor

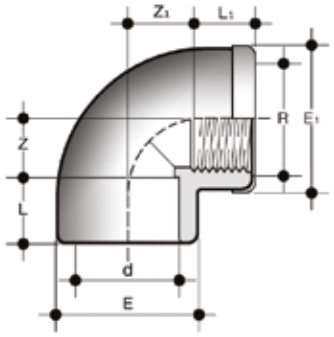
DIMENSIONS



GIFV

90° elbow with solvent weld socket and BSP threaded female end R

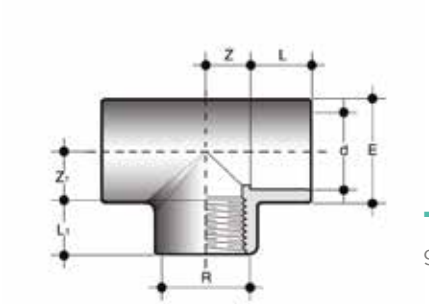
d x R	PN	E	L	L_1	Z	Z_1	g	Code
16 x 3/8"	16	23.5	14	11.4	10	13	16	GIFV016038
20 x 1/2"	16	28.5	16	15	12	13	24	GIFV020012
25 x 3/4"	16	35	19	16.3	14	17	40	GIFV025034
32 x 1"	16	43	22	19.1	18	20.5	72	GIFV032100
40 x 1" 1/4	16	54	26	21.4	22.5	27	125	GIFV040114
50 x 1" 1/2	16	61	31	21.4	27	37	175	GIFV050112
63 x 2"	16	76	38	25.7	33	46	320	GIFV063200
75 x 2" 1/2	16	91	44	30.2	40.5	55	465	GIFV075212
90 x 3"	16	108	51	33.3	48	65.5	795	GIFV090300
110 x 4"	16	131	61	39.3	60	80	1130	GIFV110400



GIMV

90° elbow with reinforced solvent weld socket d and BSP threaded female end R with stainless steel reinforcing ring

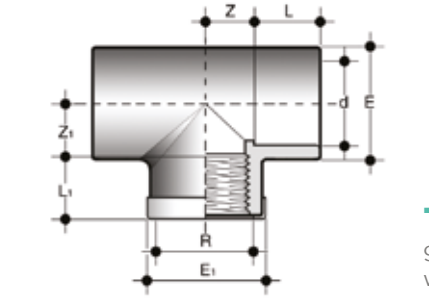
d x R	PN	E	E_1	L	L_1	Z	Z_1	g	Code
16 x 3/8"	16	23.5	24.5	14	11.4	10	13	20	GIMV016038
20 x 1/2"	16	28.5	29.5	16	15	12	13	30	GIMV020012
25 x 3/4"	16	35	36	19	16.3	14	17	48	GIMV025034
32 x 1"	16	43	44	22	19.1	18	20.5	85	GIMV032100
40 x 1" 1/4	16	54	55	26	21.4	22.5	27	130	GIMV040114
50 x 1" 1/2	16	61	62	31	21.4	27	37	185	GIMV050112
63 x 2"	16	76	77	38	25.7	33	46	345	GIMV063200



TIFV

90° Tee with solvent weld socket d and BSP threaded female end R

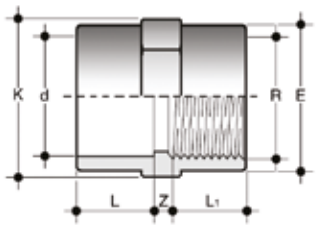
d x R	PN	E	L	L_1	Z	Z_1	g	Code
16 x 3/8"	16	23.5	14	11.4	9	11	20	TIFV016038
20 x 1/2"	16	28.5	16	15	12	13	32	TIFV020012
25 x 3/4"	16	35	19	16.3	15	17	52	TIFV025034
32 x 1/2"	16	41	22	15	17.5	18	92	TIFV032012
32 x 1"	16	43	22	19.1	18	21	71	TIFV032100
40 x 1" 1/4	16	50	26	21.4	21.5	27	110	TIFV040114
50 x 1/2"	16	61	31	15	27	27.5	160	TIFV050012
50 x 1" 1/2"	16	61	31	21.4	27	37	195	TIFV050112
63 x 1/2"	16	76	38	15	33.5	37.5	305	TIFV063012
63 x 2"	16	76	38	25.7	33.5	46	405	TIFV063200
75 x 2" 1/2	16	91	44	30.2	41	54.5	605	TIFV075212
90 x 3"	16	109	51	33.3	48.5	66	1070	TIFV090300
110 x 4"	16	133	61	39.3	61.5	83	1690	TIFV110400



TIMV

90° Tee with reinforced end: solvent weld socket d and BSP threaded female branch R with stainless steel reinforcing ring

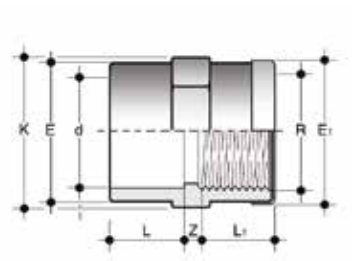
d x R	PN	E	E_1	L	L_1	Z	Z_1	g	Code
16 x 3/8"	16	23.5	24.5	14	11.4	9	11	24	TIMV016038
20 x 1/2"	16	28.5	29	16	15	12	13	38	TIMV020012
25 x 3/4"	16	35	36	19	16.3	15	17	60	TIMV025034
32 x 1"	16	43	44	22	19.1	18	21	105	TIMV032100
40 x 1" 1/4	16	50	51	26	21.4	21.5	27	125	TIMV040114
50 x 1" 1/2	16	61	62	31	21.4	27	37	210	TIMV050112
63 x 2"	16	76	77	38	25.7	33.5	46	415	TIMV063200



MIFV

Double socket with solvent weld socket d and BSP threaded female end R

d x R	PN	E	K	L	L_1	Z	g	Code
16 x 3/8"	16	23.5	24	14	11.4	5.5	12	MIFV016038
20 x 1/2"	16	28.5	29	16	15	4	20	MIFV020012
25 x 3/4"	16	35	35	19	16.3	5	30	MIFV025034
32 x 1"	16	43	43	22	19.1	6	48	MIFV032100
40 x 1" 1/4	16	50	50	26	21.4	5	56	MIFV040114
50 x 1" 1/2	16	61	61	31	21.4	8	102	MIFV050112
63 x 2"	16	76	76	38	25.7	7.5	181	MIFV063200

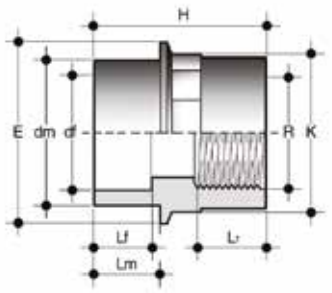


MIMV

Double socket with solvent weld socket d and BSP threaded female end R with stainless steel reinforcing ring

d x R	PN	E	E_1	K	L	L_1	Z	g	Code
16 x 3/8"	16	23.5	24.5	24	14	11.4	5.5	14	MIMV016038
20 x 1/2"	16	28.5	29.5	29	16	15	4	23	MIMV020012
25 x 3/4"	16	35	36	35	19	16.3	5	34	MIMV025034
32 x 1"	16	43	44	43	22	19.1	6	53	MIMV032100
40 x 1" 1/4	16	50	51	50	26	21.4	5	62	MIMV040114
50 x 1" 1/2	16	61	62	61	31	21.4	8	110	MIMV050112
63 x 2"	16	76	77	76	38	25.7	7.5	190	MIMV063200

Fig. A

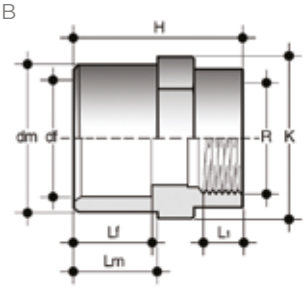


DIFV

Double adaptor with solvent weld socket df, solvent weld spigot dm and BSP threaded female end R (fig. A)

dm x df x R	PN	E	H	K	L_1	Lf	Lm	g	Code
20 x 16 x 3/8"	16	28	36	24	11.4	14	16	11	DIFV020016038
25 x 20 x 1/2"	16	34	42	29	15	16	19	17	DIFV025020012
32 x 25 x 3/4"	16	40	49	35	16.3	19	22	26	DIFV032025034
40 x 32 x 1"	16	52	57	44	19.1	22	26	49	DIFV040032100
50 x 40 x 1" 1/4	16	59	67	54	21.4	26	31	66	DIFV050040114
63 x 50 x 1" 1/2	16	70	77	64	21.4	31	38	129	DIFV063050112

Fig. B

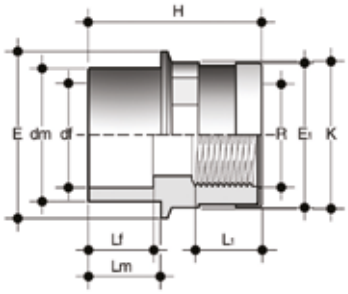


DIFV

Double adaptor with solvent weld socket df, solvent weld spigot dm and BSP threaded female end R (fig. B)

dm x df x R	PN	E	H	K	L_1	Lf	Lm	g	Code
20 x 16 x 1/2"	16	-	39	30	15	14	16	18	DIFV020016012
25 x 20 x 3/4"	16	-	45	36	16.3	16	19	28	DIFV025020034
32 x 25 x 1"	16	-	51	46	19.1	19	22	49	DIFV032025100
40 x 32 x 1" 1/4	16	-	62	54	21.4	22	26	74	DIFV040032114
50 x 40 x 1" 1/2	16	-	72	65	21.4	26	31	127	DIFV050040112
63 x 50 x 2"	16	-	86	80	25.7	31	38	190	DIFV063050200
75 x 63 x 2"	16	-	76	76	25.7	38	44	180	DIFV075063200
75 x 63 x 2" 1/2	16	-	99	95	30.2	38	44	280	DIFV075063212
90 x 75 x 2" 1/2	16	-	84	95	30.2	44	51	300	DIFV090075212
90 x 75 x 3"	16	-	114	110	33.3	44	51	470	DIFV090075300
110 x 90 x 3"	16	-	100	110	33.3	51	61	450	DIFV110090300
110 x 90 x 4"	16	-	134	130	39.3	51	61	670	DIFV110090400
125 x 110 x 4"	16	-	111	131	39.3	61	69	550	DIFV125110400

Fig. A

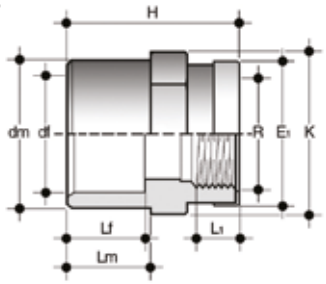


DIMV

Double adaptor with solvent weld socket df, solvent weld spigot dm and BSP threaded female end R with stainless steel reinforcing ring (fig. A)

dm x df x R	PN	E	E_1	H	K	L_1	Lf	Lm	g	Code
20 x 16 x 3/8"	16	28	24.5	37	24	11.4	14	16	13	DIMV020016038
25 x 20 x 1/2"	16	34	29.5	43	29	15	16	19	20	DIMV025020012
32 x 25 x 3/4"	16	40	36	50	35	16.3	19	22	32	DIMV032025034
40 x 32 x 1"	16	52	44	58	44	19.1	22	26	58	DIMV040032100
50 x 40 x 1" 1/4	16	59	55	68	54	21.4	26	31	77	DIMV050040114
63 x 50 x 1" 1/2	16	70	62	78	64	21.4	31	38	143	DIMV063050112

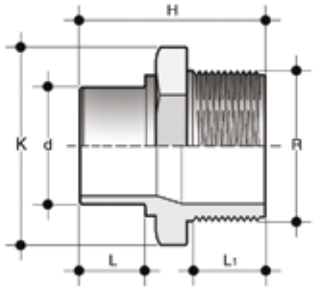
Fig. B



DIMV

Double adaptor with solvent weld socket df, solvent weld spigot dm and BSP threaded female end R with stainless steel reinforcing ring (fig. B)

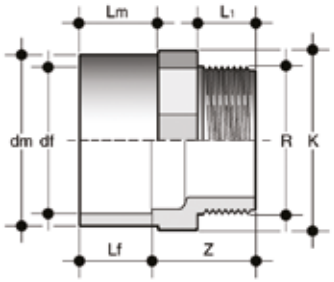
dm x df x R	PN	E	E_1	H	K	L_1	Lf	Lm	g	Code
20 x 16 x 1/2"	16	-	29.5	40	30	15	14	16	21	DIMV020016012
25 x 20 x 3/4"	16	-	36	46	36	16.3	16	19	34	DIMV025020034
32 x 25 x 1"	16	-	44	52	46	19.1	19	22	58	DIMV032025100
40 x 32 x 1" 1/4	16	-	55	63	54	21.4	22	26	85	DIMV040032114
50 x 40 x 1" 1/2	16	-	62	73	65	21.4	26	31	141	DIMV050040112
63 x 50 x 2"	16	-	77	87	80	25.7	31	38	212	DIMV063050200
75 x 63 x 2"	16	-	77	77	76	25.7	38	44	202	DIMV075063200



NRIV

Barrel nipple with reduced solvent weld spigot d and BSP threaded male end R

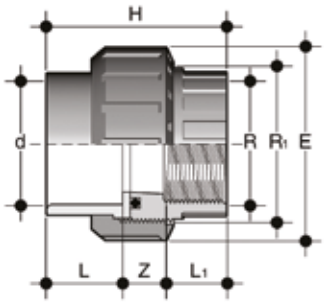
d x R	PN	E	H	K	L_1	g	Code
25 x 1”	16	53	60	46	26	43	NRIV025100
32 x 1” 1/4	16	63	66	55	28	70	NRIV032114



KIFV

Double adaptor with solvent weld socket df, solvent weld spigot dm and BSP threaded male end R

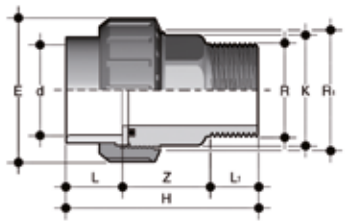
dm x df x R	PN	K	L_1	Lm	Lf	Z	g	Code
16 x 12 x 3/8”	16	19	11,4	14	12	20,5	10	KIFV016012038
20 x 16 x 3/8”	16	24	11,4	16	14	24	10	KIFV020016038
20 x 16 x 1/2”	16	24	15	16	14	27	15	KIFV020016012
25 x 20 x 1/2”	16	30	15	19	16	27	15	KIFV025020012
25 x 20 x 3/4”	16	30	16,3	19	16	28	20	KIFV025020034
32 x 25 x 1/2”	16	36	15	22	19	27	25	KIFV032025012
32 x 25 x 3/4”	16	36	16,3	22	19	28	25	KIFV032025034
32 x 25 x 1”	16	36	19,1	22	19	31	45	KIFV032025100
40 x 32 x 3/4”	16	46	16,3	26	22	28	40	KIFV040032034
40 x 32 x 1”	16	46	19,1	26	22	31	40	KIFV040032100
40 x 32 x 1” 1/4	16	46	21,4	26	22	34	55	KIFV040032114
50 x 40 x 1”	16	55	19,1	31	26	33	70	KIFV050040100
50 x 40 x 1” 1/4	16	55	21,4	31	26	36	70	KIFV050040114
50 x 40 x 1” 1/2	16	55	21,4	31	26	36	70	KIFV050040112
63 x 50 x 1” 1/4	16	65	21,4	38	31	36	70	KIFV063050114
63 x 50 x 1” 1/2	16	65	21,4	38	31	36	115	KIFV063050112
63 x 50 x 2”	16	65	25,7	38	31	40	125	KIFV063050200
75 x 63 x 1” 1/2	16	75	21,4	44	38	36	198	KIFV075063112
75 x 63 x 2”	16	75	25,7	44	38	40	160	KIFV075063200
75 x 63 x 2” 1/2	16	80	30,2	44	38	47	195	KIFV075063212
90 x 75 x 2”	16	95	25,7	51	44	49	275	KIFV090075200
90 x 75 x 2” 1/2	16	95	30,2	51	44	54	280	KIFV090075212
90 x 75 x 3”	16	95	33,5	51	44	56	300	KIFV090075300
110 x 90 x 2” 1/2	16	110	30,2	61	51	57	370	KIFV110090212
110 x 90 x 3”	16	110	33,5	61	51	62	390	KIFV110090300
110 x 90 x 4”	16	128	39,2	61	51	77	420	KIFV110090400
125 x 110 x 3”	16	128	33,5	69	61	59	450	KIFV125110300
125 x 110 x 4”	16	128	39,2	69	61	65	500	KIFV125110400



BIFV

Union with solvent weld socket d and BSP threaded female end R with O-Ring in EPDM

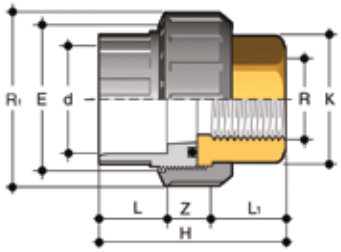
d x R	R_1	PN	E	H	L	L_1	Z	g	Code
16 x 3/8"	3/4"	16	33	41	14	11.4	15.6	22	BIFV016038E
20 x 1/2"	1"	16	41	45	16	15	14	35	BIFV020012E
25 x 3/4"	1" 1/4	16	50	51	19	16.3	15.7	62	BIFV025034E
32 x 1"	1" 1/2	16	58	57	22	19.1	15.9	85	BIFV032100E
40 x 1" 1/4	2"	16	72	67	26	21.4	19.6	145	BIFV040114E
50 x 1" 1/2	2" 1/4	16	79	72	31	21.4	19.6	180	BIFV050112E
63 x 2"	2" 3/4	16	98	88	38	25.7	24	315	BIFV063200E
75 x 2" 1/2	3" 1/2	10	120	116	44	30.2	34.8	630	BIFV075212E
90 x 3"	4"	10	135	125	51	33.3	40.7	810	BIFV090300E
110 x 4"	5"	10	163	145	61	39.3	44.7	1350	BIFV110400E



BIRV

Union with fixed BSP threaded male end and O-Ring in EPDM

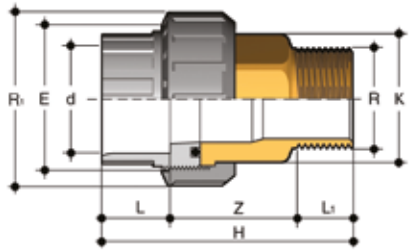
d x R	R_1	PN	E	H	K	L	L_1	Z	g	Code
50 x 1" 1/2	2" 1/4	16	79	98	53	31	21.4	45.6	200	BIRV050112E
50 x 2"	2" 1/4	16	79	102	53	31	25.7	45.3	220	BIRV050200E
63 x 2"	2" 3/4	16	98	116	67	38	25.7	52.3	380	BIRV063200E



BIFOV

Adaptor union in PVC-U/brass with solvent weld socket d and BSP threaded brass female end R with O-Ring in EPDM

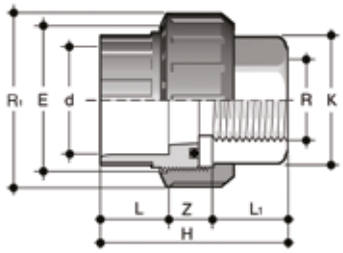
d x R	R_1	PN	E	H	K	L	L_1	Z	g	Code
16 x 3/8"	3/4"	16	33	45.5	20	14	13.5	18	53	BIFOV016038E
20 x 1/2"	1"	16	41	48.5	25	16	16.5	16	86	BIFOV020012E
25 x 3/4"	1" 1/4	16	50	54.5	32	19	18.5	17	161	BIFOV025034E
32 x 1"	1" 1/2	16	58	59.5	38	22	19.5	18	181	BIFOV032100E
40 x 1" 1/4	2"	16	72	68.5	48	26	21.5	21	373	BIFOV040114E
50 x 1" 1/2	2" 1/4	16	79	84.5	55	31	23	24.5	460	BIFOV050112E
63 x 2"	2" 3/4	16	98	94.5	69	38	27	29.5	824	BIFOV063200E



BIROV

Adaptor union in PVC-U/brass with solvent weld socket d and BSP threaded brass male end R with O-Ring in EPDM

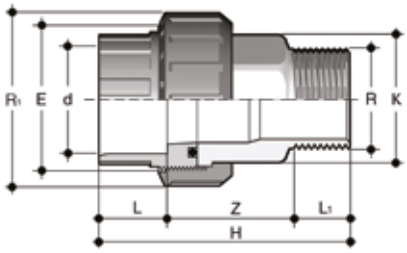
d x R	R_1	PN	E	H	K	L	L_1	Z	g	Code
16 x 3/8"	3/4"	16	33	58.5	20	14	10.5	34	79	BIROV016038E
20 x 1/2"	1"	16	41	65	25	16	13.5	35.5	131	BIROV020012E
25 x 3/4"	1" 1/4	16	50	72.5	32	19	15	38.5	229	BIROV025034E
32 x 1"	1" 1/2	16	58	80	38	22	17.5	40.5	288	BIROV032100E
40 x 1" 1/4	2"	16	72	91	48	26	19.5	45.5	550	BIROV040114E
50 x 1" 1/2	2" 1/4	16	79	101	55	31	19.5	50.5	681	BIROV050112E
63 x 2"	2" 3/4	16	98	122.5	69	38	24	60.5	1183	BIROV063200E



BIFXV

Adaptor union in PVC-U/stainless steel with solvent weld socket d and BSP threaded A316L stainless steel female end R with O-Ring in EPDM or FPM

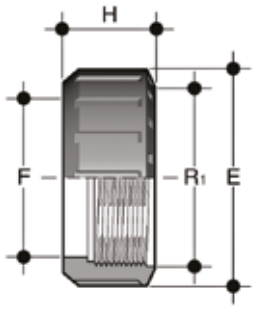
d x R	R_1	PN	E	H	K	L	L_1	Z	g	EPDM code	FPM code
16 x 3/8"	3/4"	16	33	45.5	20	14	13.5	18	50	BIFXV016038E	BIFXV016038F
20 x 1/2"	1"	16	41	48.5	25	16	16.5	16	81	BIFXV020012E	BIFXV020012F
25 x 3/4"	1" 1/4	16	50	54.5	32	19	18.5	17	152	BIFXV025034E	BIFXV025034F
32 x 1"	1" 1/2	16	58	59.5	38	22	19.5	18	170	BIFXV032100E	BIFXV032100F
40 x 1" 1/4	2"	16	72	68.5	48	26	21.5	21	353	BIFXV040114E	BIFXV040114F
50 x 1" 1/2	2" 1/4	16	79	84.5	55	31	23	30.5	435	BIFXV050112E	BIFXV050112F
63 x 2"	2" 3/4	16	98	94.5	69	38	27	29.5	779	BIFXV063200E	BIFXV063200F



BIRXV

Adaptor union in PVC-U/stainless steel with solvent weld socket d and BSP threaded A316L stainless steel male end R with O-Ring in EPDM or FPM

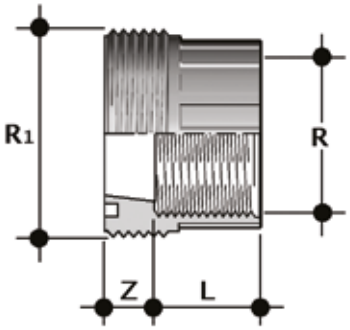
d x R	R_1	PN	E	H	K	L	L_1	Z	g	EPDM code	FPM code
16 x 3/8"	3/4"	16	33	58.5	20	14	10.5	34	74	BIRXV016038E	BIRXV016038F
20 x 1/2"	1"	16	41	65	25	16	13.5	35.5	123	BIRXV020012E	BIRXV020012F
25 x 3/4"	1" 1/4	16	50	72.5	32	19	15	38.5	215	BIRXV025034E	BIRXV025034F
32 x 1"	1" 1/2	16	58	80	38	22	17.5	40.5	269	BIRXV032100E	BIRXV032100F
40 x 1" 1/4	2"	16	72	91	48	26	19.5	45.5	516	BIRXV040114E	BIRXV040114F
50 x 1" 1/2	2" 1/4	16	79	101	55	31	19.5	50.5	639	BIRXV050112E	BIRXV050112F
63 x 2"	2" 3/4	16	98	122.5	69	38	24	60.5	1111	BIRXV063200E	BIRXV063200F



EFV

Union nut with BSP thread for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV.

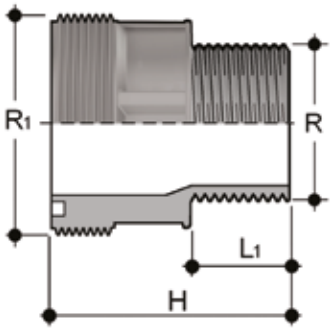
R_1	d BIV	PN	E	F	H	g	Code
3/8”	-	16	23	13	20	5	EFV038
1/2”	-	16	27	17	24	8	EFV012
3/4”	16	16	33	22	21	9	EFV034
1”	20	16	41	28	22	13	EFV100
1” 1/4	25	16	50	36	25	22	EFV114
1” 1/2	32	16	58	42	27	30	EFV112
2”	40	16	72	53	30	50	EFV200
2” 1/4	50	16	79	59	34	68	EFV214
2” 1/2	-	16	90	68	36	95	EFV212
2” 3/4	63	16	98	74	38	120	EFV234
3” 1/2	75	10	120	93	45	198	EFV312
4”	90	10	135	106	52	278	EFV400
5”	110	10	163	129	60	448	EFV500



F/BFV

Union bush with BSP threaded female end

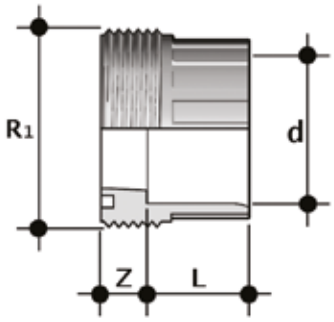
R	R_1	PN	L_1	Z	g	Code
3/8”	3/4”	16	11.4	12.6	8	FBFV038
1/2”	1”	16	15	11	13	FBFV012
3/4”	1” 1/4	16	16.3	12.7	22	FBFV034
1”	1” 1/2	16	19.1	12.9	32	FBFV100
1” 1/4	2”	16	21.4	16.6	57	FBFV114
1” 1/2	2” 1/4	16	21.4	16.5	64	FBFV112
2”	2” 3/4	16	25.7	20.5	122	FBFV200



F/BRV

Union bush with BSP threaded male end

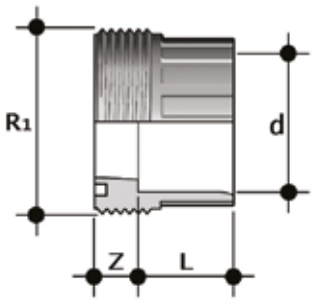
R	R_1	PN	L_1	g	Code
1" 1/2	2" 1/4	16	22.5	100	FBRV112214
2"	2" 1/4	16	27	120	FBRV200214
2"	2" 3/4	16	27	175	FBRV200234



F/BIV

Union bush for solvent welding, metric series

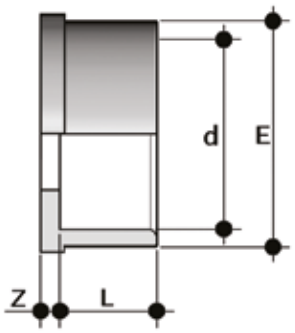
d	R_1	PN	L	Z	g	Code
16	3/4"	16	14	10	9	FBIV016
20	1"	16	16	10	13	FBIV020
25	1" 1/4	16	19	10	25	FBIV025
32	1" 1/2	16	22	10	31	FBIV032
40	2"	16	26	12	58	FBIV040
50	2" 1/4	16	31	14	63	FBIV050
63	2" 3/4	16	38	19	119	FBIV063
75	3" 1/2	10	44	18	230	FBIV075
90	4"	10	51	18	290	FBIV090
110	5"	10	61	18	500	FBIV110



F/BLV

Union bush for solvent welding, series BS

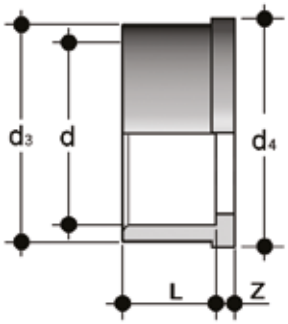
d	R_1	PN	L	Z	g	Code
1/2"	1"	16	16	10	12.5	FBLV012
3/4"	1" 1/4	16	19	10	22.5	FBLV034
1"	1" 1/2	16	22	10	30	FBLV100
1" 1/4	2"	16	26	12	52	FBLV114
1" 1/2	2" 1/2	16	31	14	69.5	FBLV112
2"	2" 3/4	16	38	19	133.5	FBLV200



Q/BIV

Union end for solvent welding, metric series

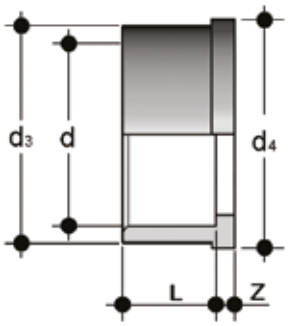
d	PN	E	L	Z	g	Code
16	16	22	14	3	5	QBIV016
20	16	28	16	3	8	QBIV020
25	16	36	19	3	15	QBIV025
32	16	42	22	3	24	QBIV032
40	16	53	26	3	37	QBIV040
50	16	59	31	3	42	QBIV050
63	16	74	38	3	77	QBIV063
75	10	93	44	3	150	QBIV075
90	10	105	51	5	192	QBIV090
110	10	129	61	5	335	QBIV110



Q/BLV

Union end for solvent welding, BS series

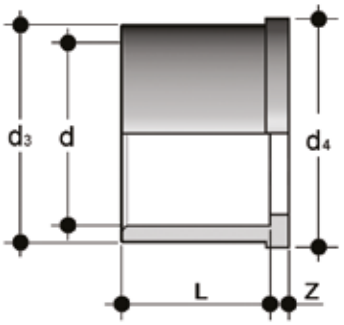
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	16	3	8	QBLV012
3/4”	16	36	38.8	19	3	13	QBLV034
1”	16	41.5	44.7	22	3	19	QBLV100
1” 1/4	16	53	56.5	26	3	32	QBLV114
1” 1/2	16	59	62.6	31	3	46	QBLV112
2”	16	74	78.4	38	3	86	QBLV200



Q/BAV

Union end for solvent welding, ASTM series

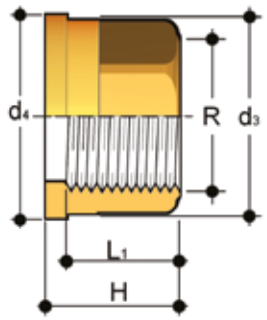
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	22.7	3.5	15.5	QBAV012
3/4”	16	36	38.8	25.9	3.7	22.5	QBAV034
1”	16	41.5	44.7	29.2	3	32.5	QBAV100
1” 1/4	16	53	56.5	32	5	57	QBAV114
1” 1/2	16	59	62.6	35	5	78	QBAV112
2”	16	74	78.4	38.5	5.5	130	QBAV200



Q/BJV

Union end for solvent welding, JIS series

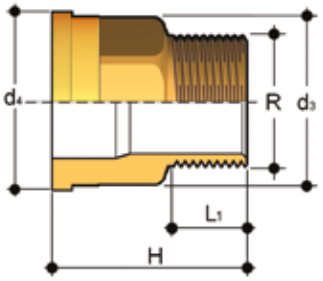
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	30	3	16	QBJV012
3/4”	16	36	38.8	35	3.5	21	QBJV034
1”	16	41.5	44.7	40	3	40	QBJV100
1” 1/4	16	53	56.5	44	3	68	QBJV114
1” 1/2	16	59	62.6	55	4.5	105	QBJV112
2”	16	74	78.4	62.9	5.5	175	QBJV200



Q/BFO

Union end in brass with female BSP thread

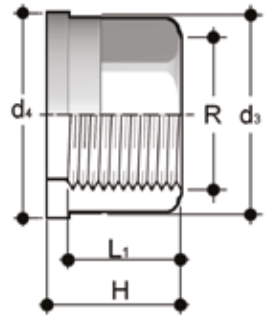
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	38	QBFO038
1/2”	27.5	30.1	22.5	16.5	60	QBFO012
3/4”	36	38.8	25.5	18.5	116	QBFO034
1”	41.5	44.7	27.5	19.5	144	QBFO100
1” 1/4	53	56.5	30.5	21.5	260	QBFO114
1” 1/2	59	62.6	33.5	23	325	QBFO112
2”	74	78.4	38.5	27	578	QBFO200



Q/BRO

Union end in brass with male BSP thread

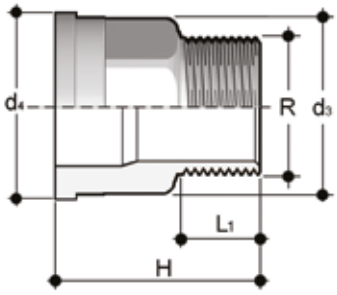
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	64	QBRO038
1/2”	27.5	30.1	39	13.5	105	QBRO012
3/4”	36	38.8	43.5	15	184	QBRO034
1”	41.5	44.7	48	17.5	251	QBRO100
1” 1/4	53	56.5	53	19.5	437	QBRO114
1” 1/2	59	62.6	56	19.5	545	QBRO112
2”	74	78.4	65.5	24	937	QBRO200



Q/BFX

Union end in A316L stainless steel with female BSP thread

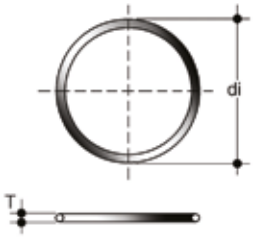
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	34	QBFX038
1/2”	27.5	30.1	22.5	16.5	54	QBFX012
3/4”	36	38.8	25.5	18.5	104	QBFX034
1”	41.5	44.7	27.5	19.5	130	QBFX100
1” 1/4	53	56.5	30.5	21.5	234	QBFX114
1” 1/2	59	62.6	33.5	23	293	QBFX112
2”	74	78.4	38.5	27	520	QBFX200



Q/BRX

Union end in A316L stainless steel with male BSP thread

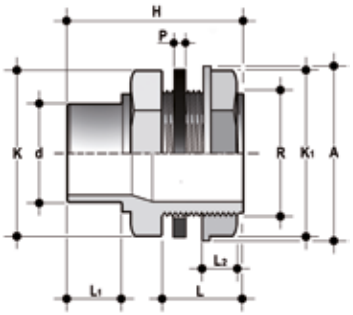
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	58	QBRX038
1/2”	27.5	30.1	39	13.5	95	QBRX012
3/4”	36	38.8	43.5	15	166	QBRX034
1”	41.5	44.7	48	17.5	226	QBRX100
1” 1/4	53	56.5	53	19.5	393	QBRX114
1” 1/2	59	62.6	56	19.5	491	QBRX112
2”	74	78.4	65.5	24	843	QBRX200



O-Ring

O-Ring for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

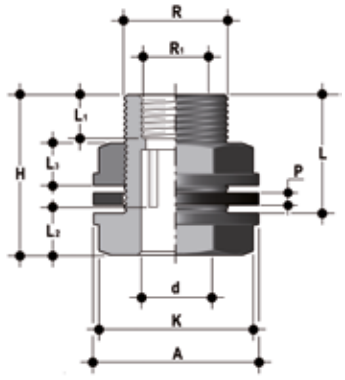
Union d	C	di	T	EPDM code	FPM code
16	3062	15.54	2.62	OR3062E	OR3062F
20	4081	20.22	3.53	OR4081E	OR4081F
25	4112	28.17	3.53	OR4112E	OR4112F
32	4131	32.93	3.53	OR4131E	OR4131F
40	6162	40.65	5.34	OR6162E	OR6162F
50	6187	47	5.34	OR6187E	OR6187F
63	6237	59.69	5.34	OR6237E	OR6237F
75	6300	75.57	5.34	OR6300E	OR6300F
90	6362	91.45	5.34	OR6362E	OR6362F
110	6450	113.67	5.34	OR6450E	OR6450F



LIV

Tank connector with solvent weld spigot d, threaded joint R with tightening nut and flat gasket in EPDM

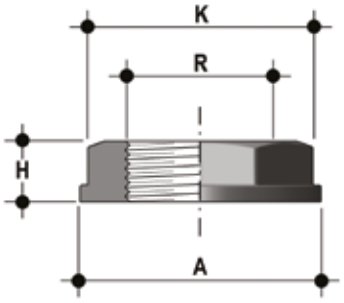
d x R	PN	A	H	K	K_1	L	L_1	L_2	P	g	Code
25 x 1”	16	58	60	46	46	26	19	16	2	58	LIV025100
32 x 1” 1/4	16	62	66	55	50	28	22	18	2	90	LIV032114



LIFV

Tank connector with solvent weld socket d, male threaded joint R and female threaded joint R_1 with tightening nut and flat gasket in EPDM or FPM

d x R x R_1	PN	A	H	K	L	L_1	L_2	L_3	P	g	EPDM code	FPM code
16 x 3/4" x 1/2"	16	44	60.5	33	47	15	14	13.5	3	53	LIFV016034012E	LIFV016034012F
20 x 1" x 3/4"	16	58	65	46	49	16.3	16	16	3	108	LIFV020100034E	LIFV020100034F
25x 1" 1/4 x 1"	16	62	70	50	52	19.1	19	18	3	142	LIFV025114100E	LIFV025114100F
32 x 1" 1/2 x 1"	16	76	73	60	54	19.1	22	19	3	192	LIFV032112100E	LIFV032112100F
40 x 2" x 1" 1/2	16	92	81	79	60	21.4	26	20.8	3	337	LIFV040200112E	LIFV040200112F



JFV

Back nut with BSP thread (used on LIV and LIFV)

R	PN	A	H	K	g	Code
1/2"	16	38	13	28	11	JFV012
3/4"	16	44	13.5	33	14	JFV034
1"	16	58	16	46	31	JFV100
1" 1/4	16	62	18	50	32	JFV114
1" 1/2	16	76	19	60	52	JFV112
2"	16	92	21	79	84	JFV200

Aliaxis

FIP

BSP FITTINGS
PVC-U

Threaded fittings

FITTINGS
BSP

Series of fittings for pipes conveying fluids under pressure with threaded joints.

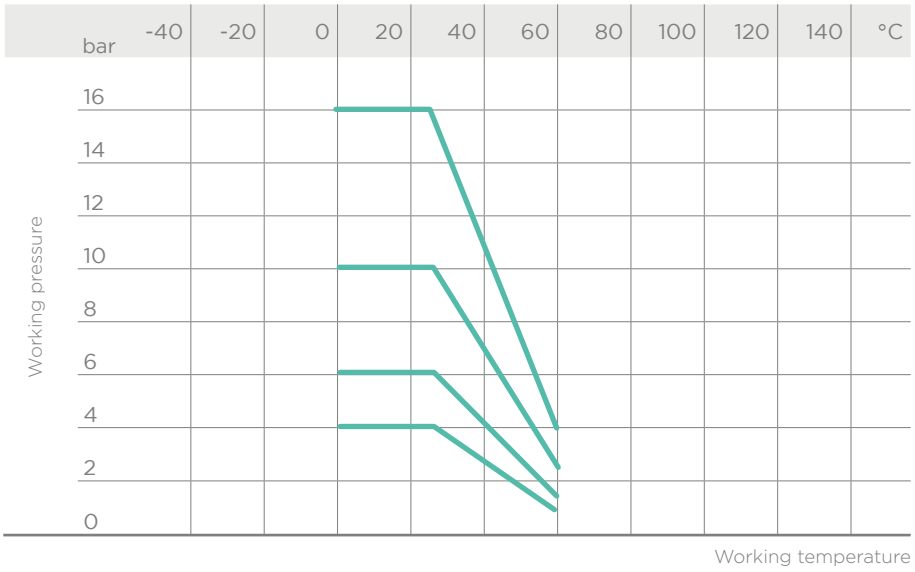
THREADED FITTINGS

Technical specifications	
Size range	R 3/8" ÷ 4"
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Thread:** ISO 228-1, DIN 2999, ISO 7, BS 21, ASTM D 2464, JIS B0203
	Flanged couplings: DIN 2501, EN 1092-1
Reference standards	**Construction criteria:** EN ISO 1452, EN ISO 15493
	Test methods and requirements: EN ISO 1452, EN ISO 15493
Valve material	PVC-U
Seal material	EPDM, FPM

TECHNICAL DATA

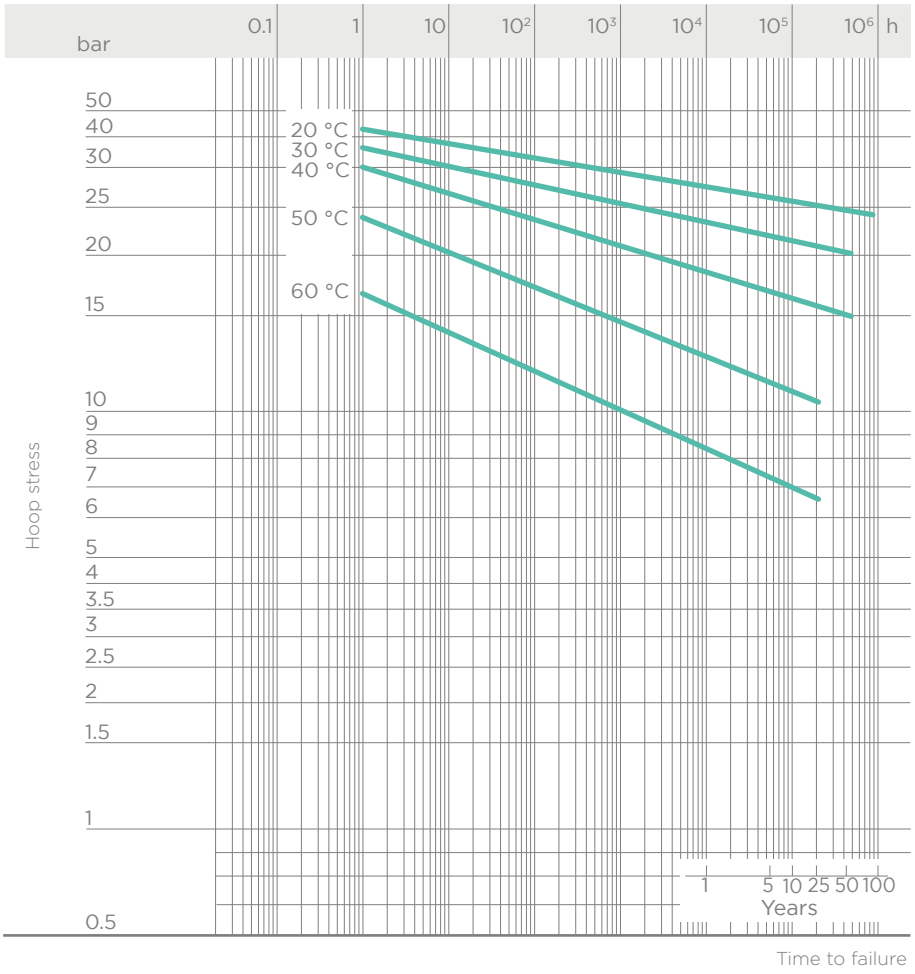
PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids for which the material is classified as CHEMICALLY RESISTANT (life expectancy 25 years). In other cases, a reduction of the nominal pressure PN is required.



REGRESSION CURVE FOR PVC-U FITTINGS

Regression coefficients according to EN ISO 1452 and EN ISO 15493 for MRS (minimum required strength) values = 25 N/mm² (MPa) (classification PVC-U 250)



SAFETY FACTORS

The table reports the safety factors for each pressure class as a function of time.

Nominal pressure PN must be understood as being the standard pressure used for calculating and selecting the required fittings. In order to be able to comply with the safety factors, the maximum continuous working pressure at 20° C when conveying water must be the same as the nominal pressure values. Unless otherwise specified, the nominal pressures are as follows:

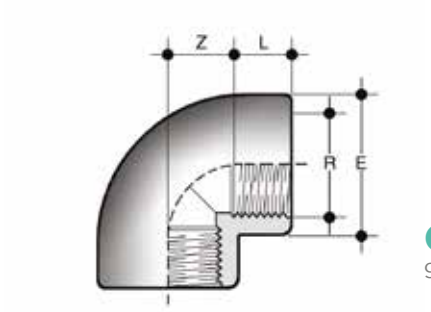
- solvent weld fittings
  from d 12 to d 225 PN 16
  from d 250 to d 315 PN 10
- adaptor fittings
  from d 16 to d 110 PN 16
- threaded fittings
  from R 3/8" to R 4" up to PN 16.

Some of the fittings in the series are sold as PN16 with a reduced safety factor compared to that specified by ISO standards.

Pe (bar)	1h	1000h	50 years	T
10	6.72	5.12	4	
16	4.2	3.2	2.5	
16*	3.3	2.5	2	

*with reduced safety factor

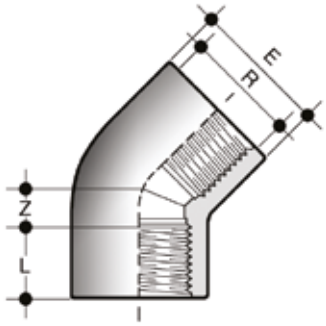
DIMENSIONS



GFV

90° elbow with BSP threaded female ends

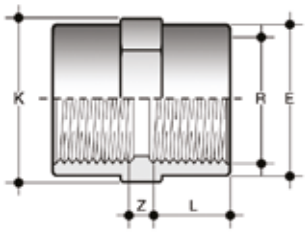
R	PN	E	L	Z	g	Code
3/8”	16	23.5	11.4	13	16	GFV038
1/2”	16	28.5	15	13	24	GFV012
3/4”	16	35	16.3	17	40	GFV034
1”	16	43	19.1	21	72	GFV100
1” 1/4	16	54	21.4	27	130	GFV114
1” 1/2	16	61	21.4	36	185	GFV112
2”	16	76	25.7	46	350	GFV200
2” 1/2	16	91	30.2	55	450	GFV212
3”	16	108	33.3	66	835	GFV300
4”	16	130	39.3	80	1135	GFV400



HFV

45° elbow with BSP threaded female ends

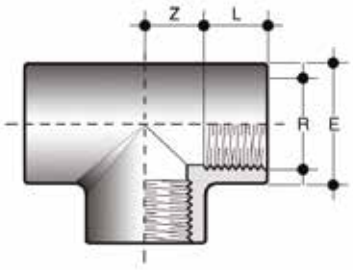
R	PN	E	L	Z	g	Code
1/2”	16	28	15	6.5	18	HFV012
3/4”	16	33	16.3	8	24	HFV034
1”	16	41	19.1	10.5	45	HFV100
1” 1/4	16	50	21.4	15	68	HFV114
1” 1/2	16	64	21.4	21	154	HFV112
2”	16	76	25.7	26	255	HFV200
2” 1/2	16	90	30.2	31	345	HFV212
3”	16	107	33.3	39	625	HFV300



MFV

Double socket with BSP threaded female ends

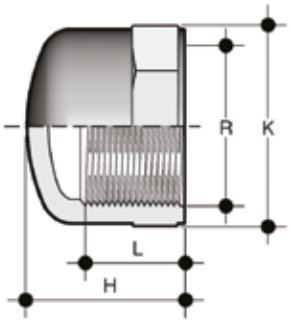
R	PN	E	K	L	Z	g	Code
3/8”	16	23.5	24	11.4	8	10	MFV038
1/2”	16	28.5	29	15	7	17	MFV012
3/4”	16	35	35	16.3	8.5	26	MFV034
1”	16	43	43	19.1	9	42	MFV100
1” 1/4	16	50	50	21.4	11	53	MFV114
1” 1/2	16	61	61	21.4	17.5	108	MFV112
2”	16	76	76	25.7	19.5	190	MFV200
2” 1/2	16	90	90	30.2	31	275	MFV212
3”	16	108	108	33.3	40.5	500	MFV300
4”	16	130	131	39.3	48.5	665	MFV400



TFV

90° Tee with BSP threaded female ends

R	PN	E	L	Z	g	Code
3/8”	16	23.5	11.4	13	20	TFV038
1/2”	16	28.5	15	13	32	TFV012
3/4”	16	35	16.3	17	52	TFV034
1”	16	43	19.1	21.5	92	TFV100
1” 1/4	16	50	21.4	27	117	TFV114
1” 1/2	16	61	21.4	37	260	TFV112
2”	16	76	25.7	46	465	TFV200
2” 1/2	16	91	30.2	55	640	TFV212
3”	16	109	33.3	66	1135	TFV300
4”	16	133	39.3	83	1710	TFV400

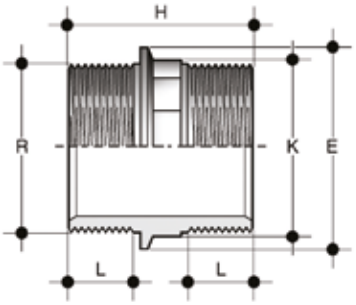


CFV

End cap with BSP female thread

R	PN	H	K	L	g	Code
3/8”	16	19	23	11.4	6	CFV038
1/2”	16	25	28	15	10	CFV012
3/4”	16	27	34	16.3	15	CFV034
1”	16	31	42	19.1	27	CFV100
1” 1/4	16	35	51	21.4	40	CFV114
1” 1/2	16	36	58	21.4	53	CFV112
2”	16	42	71	25.7	85	CFV200
3”	16	55	109	33.3	310	CFV300

Fig. A

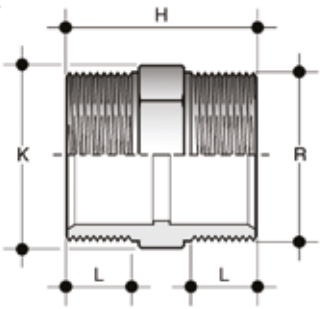


NFV

Barrel nipple with BSP threaded male ends (fig. A)

R	PN	H	K	L	g	Code
3/8”	16	33	19	11,4	5	NFV038
1/2”	16	42	24	15	10	NFV012
3/4”	16	44	30	16,3	20	NFV034
1”	16	50	36	19,1	30	NFV100
1” 1/4	16	58	46	21,4	45	NFV114
1” 1/2	16	58	50	21,4	63	NFV112
2”	16	66	65	25,7	105	NFV200

Fig. B

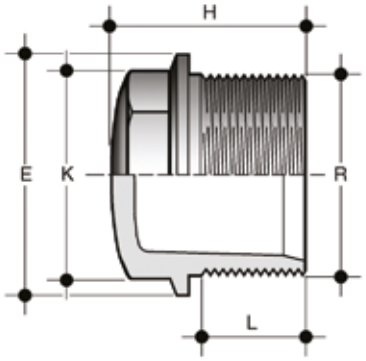


NFV

Barrel nipple with BSP threaded male ends (fig. B)

R	PN	H	K	L	g	Code
*2” 1/2	16	78	80	30,2	175	NFV212
*3”	16	85	95	33,3	245	NFV300
*4”	16	96	120	39,3	348	NFV400

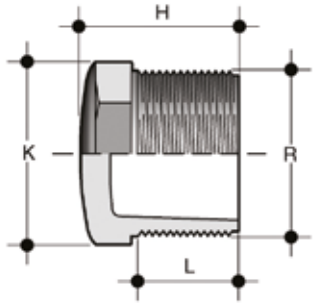
* Reduced safety factor



PFV

Plug with BSP male thread

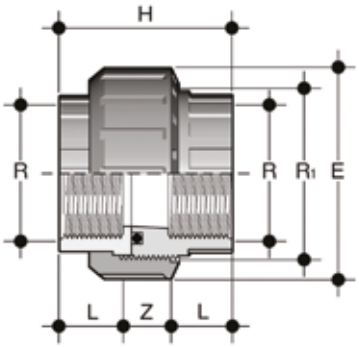
R	PN	E	H	K	L	g	Code
3/8”	16	22	22	18	11.4	4	PFV038
1/2”	16	28	26	23	15	8	PFV012
3/4”	16	34	30	28	16.3	11	PFV034
1”	16	40	34	35	19.1	21	PFV100
1” 1/4	16	52	38	44	21.4	30	PFV114
1” 1/2	16	58	40	51	21.4	46	PFV112
2”	16	70	47	64	25.7	74	PFV200



PFV

Plug with BSP male thread

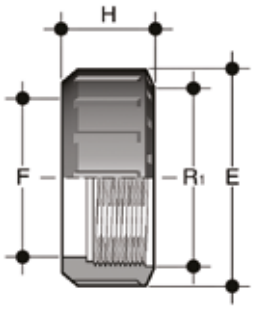
R	PN	E	H	K	L	g	Code
2” 1/2	16	-	61	80	30.2	180	PFV212
3”	16	-	71	93	33.3	245	PFV300
4”	16	-	87	118	39.3	550	PFV400



BFV

Union with BSP threaded female ends, O-Ring in EPDM or FPM

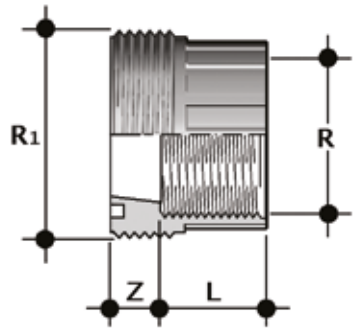
R	R_1	PN	E	H	L	Z	g	Code
3/8”	3/4”	16	33	40	11.4	17.2	22	BFV038E
1/2”	1”	16	41	46	15	16	35	BFV012E
3/4”	1” 1/4	16	50	51	16.3	18.4	65	BFV034E
1”	1” 1/2	16	58	57	19.1	18.8	85	BFV100E
1” 1/4	2”	16	72	65	21.4	22.2	145	BFV114E
1” 1/2	2” 1/4	16	79	65	21.4	22.2	180	BFV112E
2”	2” 3/4	16	98	78	25.7	26.6	325	BFV200E



EFV

Union nut with BSP thread for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV.

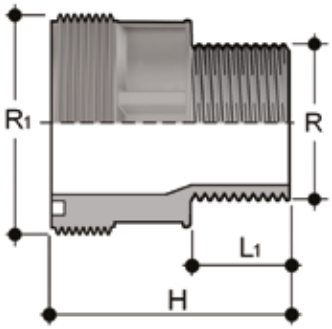
R_1	d BIV	PN	E	F	H	g	Code
3/8”	-	16	23	13	20	5	EFV038
1/2”	-	16	27	17	24	8	EFV012
3/4”	16	16	33	22	21	9	EFV034
1”	20	16	41	28	22	13	EFV100
1” 1/4	25	16	50	36	25	22	EFV114
1” 1/2	32	16	58	42	27	30	EFV112
2”	40	16	72	53	30	50	EFV200
2” 1/4	50	16	79	59	34	68	EFV214
2” 1/2	-	16	90	68	36	95	EFV212
2” 3/4	63	16	98	74	38	120	EFV234
3” 1/2	75	10	120	93	45	198	EFV312
4”	90	10	135	106	52	278	EFV400
5”	110	10	163	129	60	448	EFV500



F/BFV

Union bush with BSP threaded female end

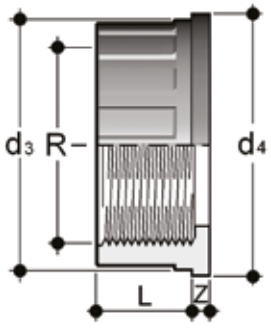
R	R_1	PN	L_1	Z	g	Code
3/8”	3/4”	16	11.4	12.6	8	FBFV038
1/2”	1”	16	15	11	13	FBFV012
3/4”	1” 1/4	16	16.3	12.7	22	FBFV034
1”	1” 1/2	16	19.1	12.9	32	FBFV100
1” 1/4	2”	16	21.4	16.6	57	FBFV114
1” 1/2	2” 1/4	16	21.4	16.5	64	FBFV112
2”	2” 3/4	16	25.7	20.5	122	FBFV200



F/BRV

Union bush with BSP threaded male end

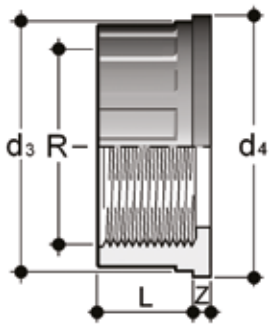
R	R_1	PN	L_1	g	Code
1” 1/2	2” 1/4	16	22.5	100	FBRV112214
2”	2” 1/4	16	27	120	FBRV200214
2”	2” 3/4	16	27	175	FBRV200234



Q/BFV

Union end with BSP female thread

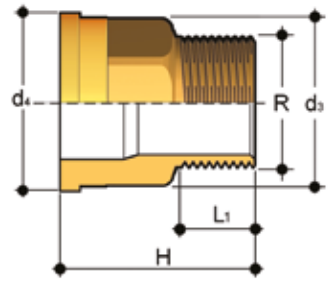
R	PN	d_3	d_4	L	Z	g	Code
3/8”	16	22	24	11.4	4.5	4.5	QBFV038
1/2”	16	27.5	30.1	15	5	8.5	QBFV012
3/4”	16	36	38.8	16.3	5	15.5	QBFV034
1”	16	41.5	44.7	19.1	5.5	21.0	QBFV100
1” 1/4	16	53	56.5	21.4	5.5	33.5	QBFV114
1” 1/2	16	59	62.6	21.4	5.5	40.0	QBFV112
2”	16	74	78.4	25.7	5.5	72.0	QBFV200



Q/BNV

Union end with NPT female thread

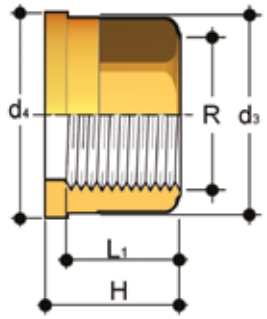
R	PN	d_3	d_4	L	Z	g	Code
3/8”	16	22	24	12.7	6.3	10	QBNV038
1/2”	16	27.5	30.1	17.8	5.2	15	QBNV012
3/4”	16	36	38.8	18	5.2	20	QBNV034
1”	16	41.5	44.7	22.6	5.7	30	QBNV100
1” 1/4	16	53	56.5	25.1	7.3	55	QBNV114
1” 1/2	16	59	62.6	24.7	7	70	QBNV112
2”	16	74	78.4	29.6	7.8	115	QBNV200



Q/BRO

Union end in brass with male BSP thread

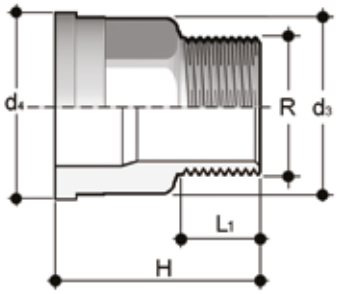
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	64	QBRO038
1/2”	27.5	30.1	39	13.5	105	QBRO012
3/4”	36	38.8	43.5	15	184	QBRO034
1”	41.5	44.7	48	17.5	251	QBRO100
1” 1/4	53	56.5	53	19.5	437	QBRO114
1” 1/2	59	62.6	56	19.5	545	QBRO112
2”	74	78.4	65.5	24	937	QBRO200



Q/BFO

Union end in brass with female BSP thread

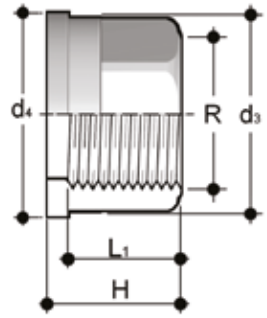
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	38	QBFO038
1/2”	27.5	30.1	22.5	16.5	60	QBFO012
3/4”	36	38.8	25.5	18.5	116	QBFO034
1”	41.5	44.7	27.5	19.5	144	QBFO100
1” 1/4	53	56.5	30.5	21.5	260	QBFO114
1” 1/2	59	62.6	33.5	23	325	QBFO112
2”	74	78.4	38.5	27	578	QBFO200



Q/BRX

Union end in A316L stainless steel with male BSP thread

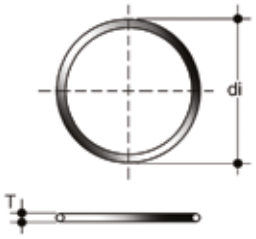
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	58	QBRX038
1/2”	27.5	30.1	39	13.5	95	QBRX012
3/4”	36	38.8	43.5	15	166	QBRX034
1”	41.5	44.7	48	17.5	226	QBRX100
1” 1/4	53	56.5	53	19.5	393	QBRX114
1” 1/2	59	62.6	56	19.5	491	QBRX112
2”	74	78.4	65.5	24	843	QBRX200



Q/BFX

Union end in A316L stainless steel with female BSP thread

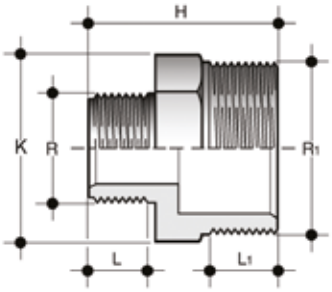
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	34	QBFX038
1/2”	27.5	30.1	22.5	16.5	54	QBFX012
3/4”	36	38.8	25.5	18.5	104	QBFX034
1”	41.5	44.7	27.5	19.5	130	QBFX100
1” 1/4	53	56.5	30.5	21.5	234	QBFX114
1” 1/2	59	62.6	33.5	23	293	QBFX112
2”	74	78.4	38.5	27	520	QBFX200



O-Ring

O-ring for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

Union d	C	di	T	EPDM code	FPM code
16	3062	15.54	2.62	OR3062E	OR3062F
20	4081	20.22	3.53	OR4081E	OR4081F
25	4112	28.17	3.53	OR4112E	OR4112F
32	4131	32.93	3.53	OR4131E	OR4131F
40	6162	40.65	5.34	OR6162E	OR6162F
50	6187	47	5.34	OR6187E	OR6187F
63	6237	59.69	5.34	OR6237E	OR6237F
75	6300	75.57	5.34	OR6300E	OR6300F
90	6362	91.45	5.34	OR6362E	OR6362F
110	6450	113.67	5.34	OR6450E	OR6450F

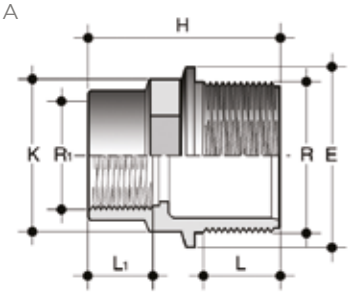


NRFV

Reducing barrel nipple with BSP threaded male ends

R_1 x R	PN	H	K	L	L_1	g	Code
3/4" x 1/2"	16	43	30	15	16.3	16	NRFV034012
1" x 3/4"	16	48	36	16.3	19.1	26	NRFV100034
1" 1/4 x 1"	16	54	46	19.1	21.4	46	NRFV114100
1" 1/2 x 1" 1/4	16	57	50	21.4	21.4	60	NRFV112114
2" x 1" 1/2	16	62	65	21.4	25.7	88	NRFV200112
2" 1/2 x 2"	16	73	80	25.7	30.2	140	NRFV212200
3" x 2" 1/2	16	82	95	30.2	33.3	220	NRFV300212
4" x 3"	16	90	120	33.3	39.3	350	NRFV400300

Fig. A

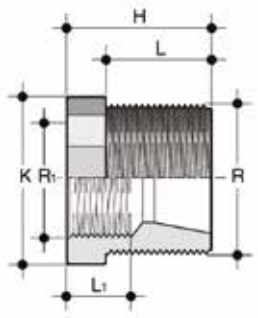


RFV

Reducer with BSP threaded male end (R) and BSP threaded female end (R_1 reduced) (fig. A)

R x R_1	PN	E	H	K	L	L_1	g	Code
1/2" x 3/8"	16	28	35	23	15	11.4	10	RFV012038
3/4" x 3/8"	16	34	36	28	16.3	11.4	12	RFV034038
3/4" x 1/2"	16	34	39	28	16.3	15	15	RFV034012
1" x 3/8"	16	40	41	35	19.1	11.4	20	RFV100038
1" x 1/2"	16	40	44	35	19.1	15	24	RFV100012
1" x 3/4"	16	40	46	35	19.1	16.3	25	RFV100034
1" 1/4 x 1/2"	16	52	48	44	21.4	15	37	RFV114012
1" 1/4 x 3/4"	16	52	49	44	21.4	16.3	37	RFV114034
1" 1/4 x 1"	16	52	52	44	21.4	19.1	40	RFV114100
1" 1/2 x 1/2"	16	58	52	51	21.4	15	46	RFV112012
1" 1/2 x 3/4"	16	58	50	51	21.4	16.3	47	RFV112034
1" 1/2 x 1"	16	58	55	51	21.4	19.1	52	RFV112100
1" 1/2 x 1" 1/4	16	58	57	51	21.4	21.4	54	RFV112114
2" x 3/4"	16	70	60	64	25.7	16.3	80	RFV200034
2" x 1"	16	70	63	64	25.7	19.1	80	RFV200100
2" x 1" 1/4	16	70	65	64	25.7	21.4	85	RFV200114
2" x 1" 1/2	16	70	65	64	25.7	21.4	102	RFV200112

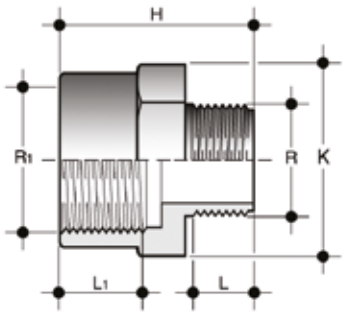
Fig. B



RFV

Reducer with BSP threaded male end (R) and BSP threaded female end (R_1 reduced) (fig. B)

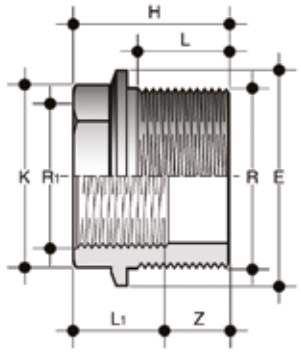
R x R_1	PN	E	H	K	L	L_1	g	Code
2" 1/2 x 2"	16	-	56	80	30.2	25.7	155	RFV212200
3" x 2"	16	-	66	93	33.3	25.7	185	RFV300200
3" x 2" 1/2	16	-	66	93	33.3	30.2	200	RFV300212
4" x 3"	16	-	79	118	39.3	33.3	500	RFV400300



IFFV

Reducer: BSP threaded female end (R_1), BSP threaded male end (R reduced)

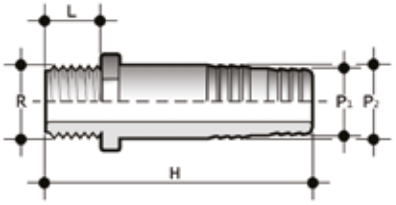
R_1 x R	PN	H	K	L	L_1	g	Code
3/4" x 1/2"	16	41	36	15	16.3	22	IFFV034012
1" x 1/2"	16	40.5	43	15	19.1	30	IFFV100012
1" x 3/4"	16	42	43	16.3	19.1	42	IFFV100034
1" 1/4 x 1"	16	55	55	19.1	21.4	55	IFFV114100
1" 1/2 x 1" 1/4	16	62	65	21.4	21.4	102	IFFV112114
2" x 1" 1/2	16	69	80	21.4	25.7	165	IFFV200112
2" 1/2 x 2"	16	81	95	25.7	30.2	210	IFFV212200
3" x 2" 1/2	16	93	110	30.2	33.3	360	IFFV300212
4" x 3"	16	106	130	33.3	39.3	500	IFFV400300



DFV

Reducing bush with BSP threaded male end (R) and BSP threaded female end (R_1 reduced)

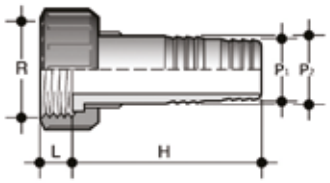
R x R_1	PN	E	H	K	L	L	Z	g	Code
1/2" x 3/8"	16	28	24	23	11.4	15	12.6	7	DFV012038
3/4" x 1/2"	16	34	26.5	28	15	16.3	11.5	9	DFV034012
1" x 3/4"	16	40	30.5	35	16.3	19.1	14.2	17	DFV100034
1" 1/4 x 1"	16	52	34	44	19.1	21.4	14.9	30	DFV114100
1" 1/2 x 1" 1/4	16	58	35	51	21.4	21.4	13.6	30	DFV112114
2" x 1" 1/2	16	70	40	64	21.4	25.7	18.6	72	DFV200112



AFV

Hose adaptor with BSP threaded male end

R x P_1 x P_2	PN	H	L	g	Code
1/4" x 12 x 14	16	56	11	7	AFV014012014
3/8" x 16 x 18	16	58	11.4	14	AFV038016018
1/2" x 20 x 22	16	66	15	19	AFV012020022
3/4" x 25 x 27	16	81	16.3	30	AFV034025027
1" x 30 x 32	16	97	19.1	45	AFV100030032
1 1/4" x 40 x 42	16	104	21.4	85	AFV114040042
1 1/2" x 50 x 52	16	111	21.4	120	AFV112050052
2" x 60 x 64	16	123	25.7	180	AFV200060064



ADV

Hose adaptor with BSP threaded female end (R) and EPDM flat gasket

R x P_1 x P_2	PN	H	L	g	Code
1/2" x 12 x 14	16	56	14	15	ADV012012014
3/4" x 16 x 18	16	60	11.5	24	ADV034016018
1" x 20 x 22	16	67	11	35	ADV100020022
1" 1/4 x 25 x 27	16	81	14	55	ADV114025027
1" 1/2 x 30 x 32	16	97	16	80	ADV112030032
2" x 40 x 42	16	104	18	140	ADV200040042
2" x 50 x 52	16	111	16	180	ADV200050052
2" 1/4 x 50 x 52	16	111	17.5	200	ADV214050052
2" 1/2 x 60 x 64	16	123	19	290	ADV212060064
2" 3/4 x 60 x 64	16	123	20	300	ADV234060064

Aliaxis

FIP

BS FITTINGS
PVC-U

Solvent weld and threaded fittings according to British Standard

FITTINGS
BS

Series of fittings for pipes conveying fluids under pressure with solvent weld and threaded joints according to British Standard.

SOLVENT WELD AND THREADED FITTINGS ACCORDING TO BRITISH STANDARD

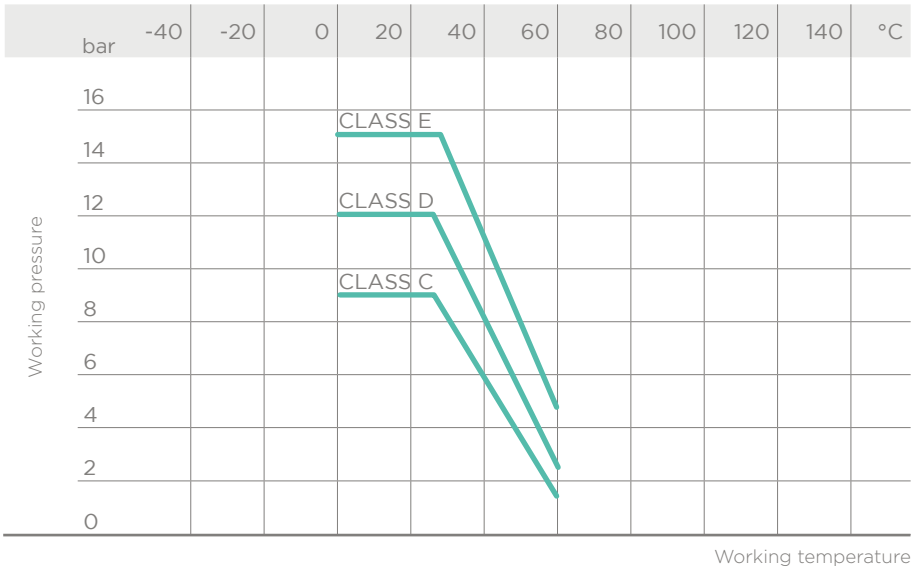
Technical specifications	
Size range	d 1/2" ÷ 8"
Nominal pressure	up to 15 bar with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** BS 4346-1, ASTM D 2467, JIS K 6743, ISO 727, EN ISO 15493, DIN 8063, EN ISO 1452 Can be coupled to pipes according to ISO 7, ASTM D 2464, JIS B 0203
	Thread: ISO 7, DIN 2999, EN ISO 1452, EN ISO 15493, DIN 8062, ASTM D 1785, JIS K6741, BS 21
	Flanged couplings: BS 10 Table E
Reference standards	**Construction criteria:** ISO 7, ASTM D 2464, JIS B 0203, EN ISO 1452, EN ISO 15493
	Test methods and requirements: BS 4346-1
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
Valve material	PVC-U
Seal material	EPDM

TECHNICAL DATA

PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids with regard to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal pressure PN is required
(25 years with safety factor).

- class E 15 bar
- class D 12 bar
- class C 9 bar



SAFETY FACTORS

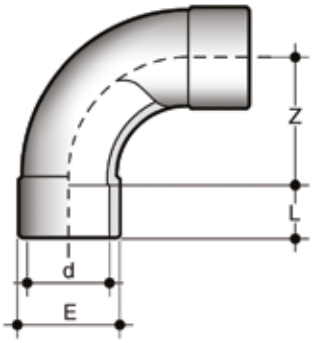
The table reports the safety factors for each pressure class as a function of time.

BS fittings are split into pressure classes according to usage. In order to be able to comply with the safety factors, the maximum continuous working pressure at 20° C when conveying water must be the same as the pressure class. Unless otherwise specified, the nominal pressures are as follows:

- solvent weld fittings
  from d 1/2" to d 4" class E
  from d 6" to d 8" class D
- adaptor fittings
  from d 1/2" to d 2" class E
  from d 2 1/2" to d 4" class D

Class	Pe (bar)	1h	50 years	T
E	15	3.60	2.10	
D	12	4.50	2.60	
C	9	6	3.50	

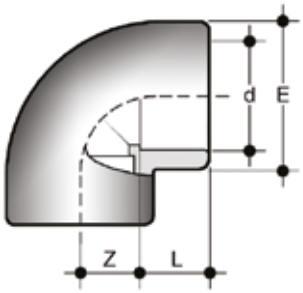
DIMENSIONS



SLV

90° long radius bend (R=2D) with solvent weld sockets

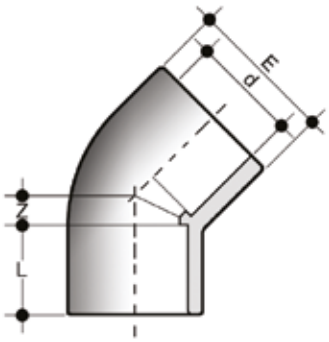
d	PN	E	L	Z	g	Code
1/2”	15	28	16	40	45	SLV012
3/4”	15	34	19	50	75	SLV034
1”	15	41	22	64	120	SLV100
1” 1/4	15	51	26	80	205	SLV114
1” 1/2	15	65	31	100	310	SLV112
2”	15	77	38	126	510	SLV200



GLV

90° elbow with solvent weld sockets

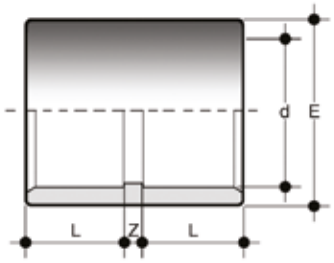
d	PN	E	L	Z	g	Code
1/2”	15	27	16.5	10.5	15	GLV012
3/4”	15	33	19.5	13.5	30	GLV034
1”	15	41	22.5	17	45	GLV100
1” 1/4	15	54	27	21.5	110	GLV114
1” 1/2	15	61	31	27	160	GLV112
2”	15	76	38	33.5	340	GLV200
2” 1/2	15	90	44	40.5	427	GIV075
3”	15	108	51	48	768	GLV300
4”	15	131	63	58	972	GLV400
6”	12	194.5	90	90	3480	GLV600
8”	12	257	115.5	169.5	8850	GLV800



HLV

45° elbow with solvent weld sockets

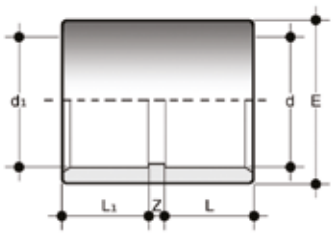
d	PN	E	L	Z	g	Code
1/2”	15	27	16.5	5	13	HLV012
3/4”	15	33	19.5	5.5	20	HLV034
1”	15	41	22.5	7	45	HLV100
1” 1/4	15	50	26	10.5	85	HLV114
1” 1/2	15	61	31	11.5	155	HLV112
2”	15	76	38	14	291	HLV200
2” 1/2	15	90	44	17	315	HIV075
3”	15	107.5	51	21.5	565	HLV300
4”	15	131	61	26	740	HLV400



MLV

Solvent weld double socket

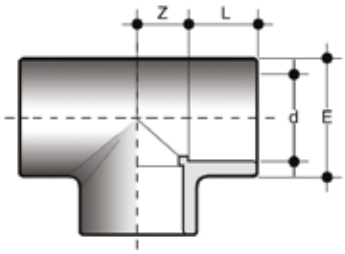
d	PN	E	L	Z	g	Code
1/2”	15	27	16.5	2	13	MLV012
3/4”	15	33	19.5	2	15	MLV034
1”	15	41	22.5	2	36	MLV100
1” 1/4	15	50	26	3	58	MLV114
1” 1/2	15	61	31	3	118	MLV112
2”	15	76	38	3	206	MLV200
2” 1/2	15	90	44	4	250	MIV075
3”	15	108	50.5	5.5	420	MLV300
4”	15	131	63	5	680	MLV400
6”	12	194.5	90	10	1800	MLV600
8”	12	257	115.5	12	4950	MLV800



MILV

mm/inch double socket union, one socket for solvent welding to metric pipes and one for solvent welding to imperial (inches) pipes

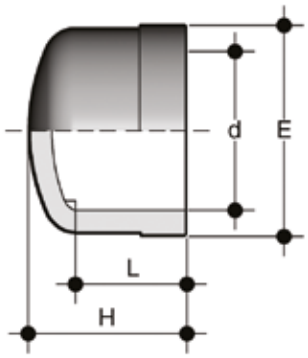
d x d_1	PN	E	L	L_1	Z	g	Code
20 x 1/2”	15	27	16	16.5	2.5	12	MILV020012
25 x 3/4”	15	33	19	19.5	2.5	22	MILV025034
32 x 1”	15	41	22	22.5	2.5	44	MILV032100
40 x 1” 1/4	15	50	26	27	2.0	65	MILV040114
50 x 1” 1/2	15	61	31	30	4.0	125	MILV050112
63 x 2”	15	76	38	36	5.0	210	MILV063200
75 x 2” 1/2	15	90	44	44	4.0	250	MILV075212
90 x 3”	15	108	51	50.5	5.5	438	MILV090300
110 x 4”	15	131	61	63	4.0	852	MILV110400



TLV

90° Tee with solvent weld sockets

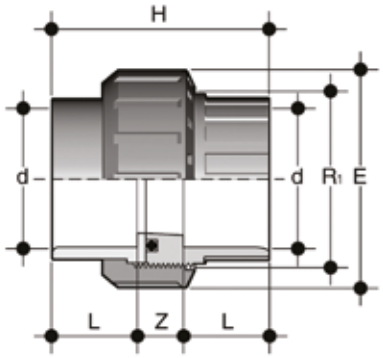
d	PN	E	L	Z	g	Code
1/2”	15	27	16.5	10.5	26	TLV012
3/4”	15	33	19.5	13.5	30	TLV034
1”	15	41	22.5	17	55	TLV100
1” 1/4	15	50	26	22	90	TLV114
1” 1/2	15	61	31	27	257	TLV112
2”	15	76	38	33.5	495	TLV200
2” 1/2	15	90	44	40.5	560	TIV075
3”	15	108	51	48	970	TLV300
4”	15	131	63	59	1260	TLV400
6”	12	194.5	90	90	4400	TLV600
8”	12	257	115.5	116	10500	TLV800



CLV

End cap with solvent weld socket

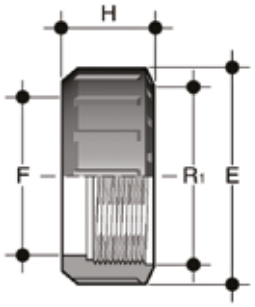
d	PN	E	L	Z	g	Code
1/2”	15	27	16.5	2	13	CLV012
3/4”	15	33	19.5	2	15	CLV034
1”	15	41	22.5	2	36	CLV100
1” 1/4	12	50	26	3	58	CLV114
1” 1/2	15	61	31	3	118	CLV112
2”	15	76	38	3	206	CLV200
2” 1/2	12	90	44	4	250	CIV075
3”	15	108	50.5	5.5	420	CLV300
4”	15	131	63	5	680	CLV400



BLV

Union with solvent weld sockets, O-Ring in EPDM

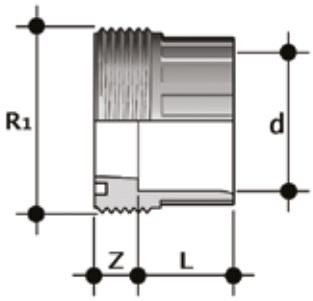
d	PN	R_1	E	H	L	Z	g	Code
1/2”	15	1”	40.5	45	16	13	39	BLV012E
3/4”	15	1” 1/4	50	51	19	13	65	BLV034E
1”	15	1” 1/2	57.5	57	22	13	94	BLV100E
1” 1/4	15	2”	71.5	67	26	15	150	BLV114E
1” 1/2	15	2” 1/4	79	79	31	17	190	BLV112E
2”	15	2” 3/4	98	98	38	21	400	BLV200E



EFV

Union nut with BSP thread for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

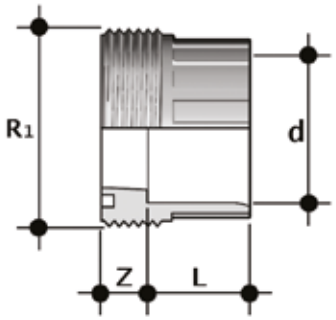
R_1	d BIV	PN	E	F	H	g	Code
3/8”	-	16	23	13	20	5	EFV038
1/2”	-	16	27	17	24	8	EFV012
3/4”	16	16	33	22	21	9	EFV034
1”	20	16	41	28	22	13	EFV100
1” 1/4	25	16	50	36	25	22	EFV114
1” 1/2	32	16	58	42	27	30	EFV112
2”	40	16	72	53	30	50	EFV200
2” 1/4	50	16	79	59	34	68	EFV214
2” 1/2	-	16	90	68	36	95	EFV212
2” 3/4	63	16	98	74	38	120	EFV234
3” 1/2	75	10	120	93	45	198	EFV312
4”	90	10	135	106	52	278	EFV400
5”	110	10	163	129	60	448	EFV500



F/BLV

Union bush for solvent welding, series BS

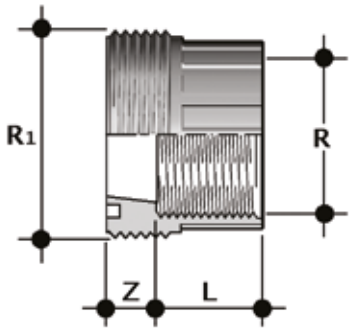
d	R_1	PN	L	Z	g	Code
1/2”	1”	15	16	10	12.5	FBLV012
3/4”	1” 1/4	15	19	10	22.5	FBLV034
1”	1” 1/2	15	22	10	30	FBLV100
1” 1/4	2”	15	26	12	52	FBLV114
1” 1/2	2” 1/2	15	31	14	69.5	FBLV112
2”	2” 3/4	15	38	19	133.5	FBLV200



F/BIV

Union bush for solvent welding, metric series

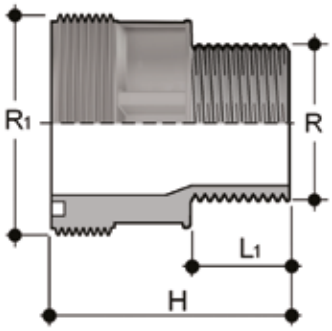
d	R_1	PN	L	Z	g	Code
16	3/4”	16	14	10	9	FBIV016
20	1”	16	16	10	13	FBIV020
25	1” 1/4	16	19	10	25	FBIV025
32	1” 1/2	16	22	10	31	FBIV032
40	2”	16	26	12	58	FBIV040
50	2” 1/4	16	31	14	63	FBIV050
63	2” 3/4	16	38	19	119	FBIV063
75	3” 1/2	10	44	18	230	FBIV075
90	4”	10	51	18	290	FBIV090
110	5”	10	61	18	500	FBIV110



F/BFV

Union bush with BSP threaded female end

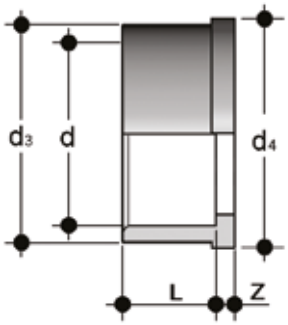
R	R_1	PN	L_1	Z	g	Code
3/8”	3/4”	16	11.4	12.6	8	FBFV038
1/2”	1”	16	15	11	13	FBFV012
3/4”	1” 1/4	16	16.3	12.7	22	FBFV034
1”	1” 1/2	16	19.1	12.9	32	FBFV100
1” 1/4	2”	16	21.4	16.6	57	FBFV114
1” 1/2	2” 1/4	16	21.4	16.5	64	FBFV112
2”	2” 3/4	16	25.7	20.5	122	FBFV200



F/BRV

Union bush with BSP threaded male end

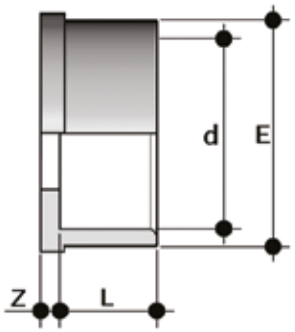
R	R_1	PN	L_1	g	Code
1" 1/2	2" 1/4	16	22.5	100	FBRV112214
2"	2" 1/4	16	27	120	FBRV200214
2"	2" 3/4	16	27	175	FBRV200234



Q/BLV

Union end for solvent welding, BS series

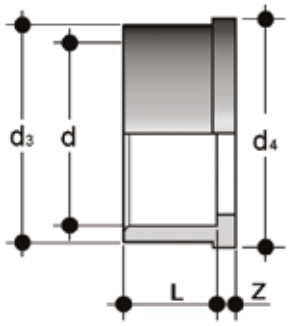
d	PN	d_3	d_4	L	Z	g	Code
1/2"	15	27.5	30.1	16	3	8	QBLV012
3/4"	15	36	38.8	19	3	13	QBLV034
1"	15	41.5	44.7	22	3	19	QBLV100
1" 1/4	15	53	56.5	26	3	32	QBLV114
1" 1/2	15	59	62.6	31	3	46	QBLV112
2"	15	74	78.4	38	3	86	QBLV200



Q/BIV

Union end for solvent welding, metric series

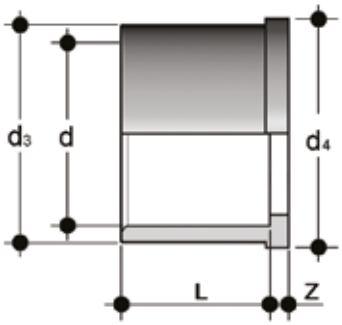
d	PN	E	L	Z	g	Code
16	16	22	14	3	5	QBIV016
20	16	28	16	3	8	QBIV020
25	16	36	19	3	15	QBIV025
32	16	42	22	3	24	QBIV032
40	16	53	26	3	37	QBIV040
50	16	59	31	3	42	QBIV050
63	16	74	38	3	77	QBIV063
75	10	93	44	3	150	QBIV075
90	10	105	51	5	192	QBIV090
110	10	129	61	5	335	QBIV110



Q/BAV

Union end for solvent welding, ASTM series

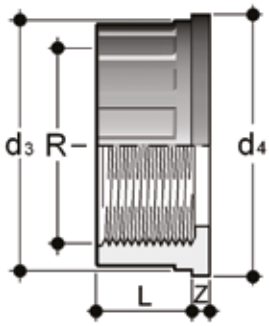
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	22.7	3.5	15.5	QBAV012
3/4”	16	36	38.8	25.9	3.7	22.5	QBAV034
1”	16	41.5	44.7	29.2	3	32.5	QBAV100
1” 1/4	16	53	56.5	32	5	57	QBAV114
1” 1/2	16	59	62.6	35	5	78	QBAV112
2”	16	74	78.4	38.5	5.5	130	QBAV200



Q/BJV

Union end for solvent welding, JIS series

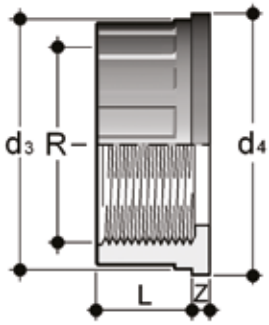
d	PN	d_3	d_4	L	Z	g	Code
1/2”	16	27.5	30.1	30	3	16	QBJV012
3/4”	16	36	38.8	35	3.5	21	QBJV034
1”	16	41.5	44.7	40	3	40	QBJV100
1” 1/4	16	53	56.5	44	3	68	QBJV114
1” 1/2	16	59	62.6	55	4.5	105	QBJV112
2”	16	74	78.4	62.9	5.5	175	QBJV200



Q/BFV

Union end with BSP female thread

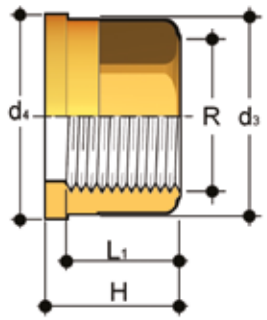
R	PN	d_3	d_4	L	Z	g	Code
3/8”	16	22	24	11.4	4.5	4.5	QBFV038
1/2”	16	27.5	30.1	15	5	8.5	QBFV012
3/4”	16	36	38.8	16.3	5	15.5	QBFV034
1”	16	41.5	44.7	19.1	5.5	21.0	QBFV100
1” 1/4	16	53	56.5	21.4	5.5	33.5	QBFV114
1” 1/2	16	59	62.6	21.4	5.5	40.0	QBFV112
2”	16	74	78.4	25.7	5.5	72.0	QBFV200



Q/BNV

Union end with NPT female thread

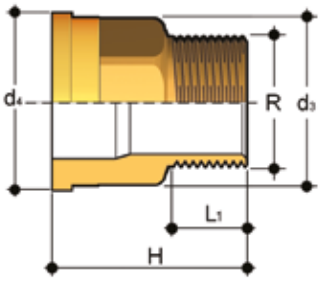
R	PN	d_3	d_4	L	Z	g	Code
3/8”	16	22	24	12.7	6.3	10	QBNV038
1/2”	16	27.5	30.1	17.8	5.2	15	QBNV012
3/4”	16	36	38.8	18	5.2	20	QBNV034
1”	16	41.5	44.7	22.6	5.7	30	QBNV100
1” 1/4	16	53	56.5	25.1	7.3	55	QBNV114
1” 1/2	16	59	62.6	24.7	7	70	QBNV112
2”	16	74	78.4	29.6	7.8	115	QBNV200



Q/BFO

Union end in brass with female BSP thread

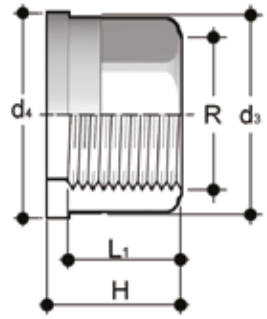
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	38	QBFO038
1/2”	27.5	30.1	22.5	16.5	60	QBFO012
3/4”	36	38.8	25.5	18.5	116	QBFO034
1”	41.5	44.7	27.5	19.5	144	QBFO100
1” 1/4	53	56.5	30.5	21.5	260	QBFO114
1” 1/2	59	62.6	33.5	23	325	QBFO112
2”	74	78.4	38.5	27	578	QBFO200



Q/BRO

Union end in brass with male BSP thread

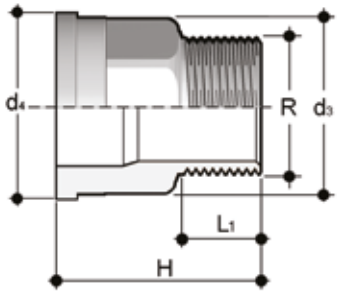
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	64	QBRO038
1/2”	27.5	30.1	39	13.5	105	QBRO012
3/4”	36	38.8	43.5	15	184	QBRO034
1”	41.5	44.7	48	17.5	251	QBRO100
1” 1/4	53	56.5	53	19.5	437	QBRO114
1” 1/2	59	62.6	56	19.5	545	QBRO112
2”	74	78.4	65.5	24	937	QBRO200



Q/BFX

Union end in A316L stainless steel with female BSP thread

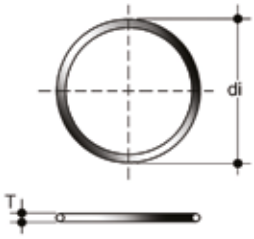
R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	21.5	13.5	34	QBFX038
1/2”	27.5	30.1	22.5	16.5	54	QBFX012
3/4”	36	38.8	25.5	18.5	104	QBFX034
1”	41.5	44.7	27.5	19.5	130	QBFX100
1” 1/4	53	56.5	30.5	21.5	234	QBFX114
1” 1/2	59	62.6	33.5	23	293	QBFX112
2”	74	78.4	38.5	27	520	QBFX200



Q/BRX

Union end in A316L stainless steel with male BSP thread

R	d_3	d_4	H	L_1	g	Code
3/8”	22	24	34.5	10.5	58	QBRX038
1/2”	27.5	30.1	39	13.5	95	QBRX012
3/4”	36	38.8	43.5	15	166	QBRX034
1”	41.5	44.7	48	17.5	226	QBRX100
1” 1/4	53	56.5	53	19.5	393	QBRX114
1” 1/2	59	62.6	56	19.5	491	QBRX112
2”	74	78.4	65.5	24	843	QBRX200

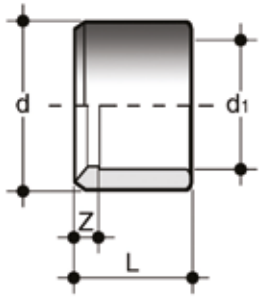


O-Ring

O-ring for union types BIV, BIFV, BFV, BLV, BIRV, BIFOV, BIROV, BIFXV, BIRXV

Union d	C	di	T	EPDM code	FPM code
16	3062	15.54	2.62	OR3062E	OR3062F
20	4081	20.22	3.53	OR4081E	OR4081F
25	4112	28.17	3.53	OR4112E	OR4112F
32	4131	32.93	3.53	OR4131E	OR4131F
40	6162	40.65	5.34	OR6162E	OR6162F
50	6187	47	5.34	OR6187E	OR6187F
63	6237	59.69	5.34	OR6237E	OR6237F
75	6300	75.57	5.34	OR6300E	OR6300F
90	6362	91.45	5.34	OR6362E	OR6362F
110	6450	113.67	5.34	OR6450E	OR6450F

Fig. A

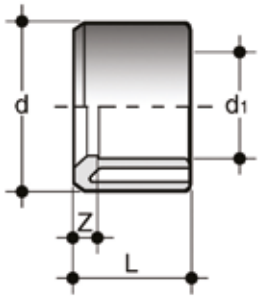


DLV

Reducing bush with solvent weld spigot (d) and solvent weld socket (d_1 reduced) (fig. A)

d x d_1	PN	L	Z	g	Code
1/2" x 3/8"	15	16.5	2	3	DLV012038
3/4" x 1/2"	15	19.5	3	5.5	DLV034012
1" x 1/2"	15	22.5	6.5	18	DLV100012
1" x 3/4"	15	22.5	3	10	DLV100034
1" 1/4 x 1"	15	27	4	19	DLV114100
1" 1/2 x 1"	15	30	7.5	42	DLV112100
1" 1/2 x 1" 1/4	15	31	4	20	DLV112114
2" 1/2 x 2"	15	43.5	7.5	100	DLV212200
3" x 2" 1/2	15	50.5	7	125	DLV300212
4" x 3"	15	63	12	331	DLV400300

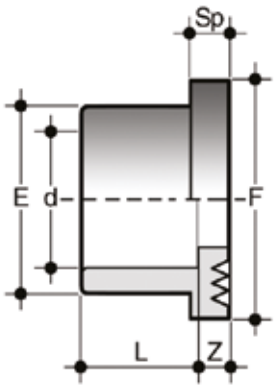
Fig. B



DLV

Reducing bush with solvent weld spigot (d) and solvent weld socket (d_1 reduced) (fig. B)

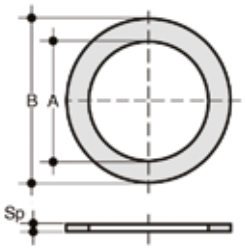
d x d_1	PN	L	Z	g	Code
1" 1/2 x 3/4"	15	30	10	40	DLV112034
2" x 3/4"	15	36	16.5	75	DLV200034
2" x 1"	15	36	7	50	DLV200100
2" x 1" 1/2	15	38	7	50	DLV200112
3" x 1" 1/2	15	50.5	20.5	200	DLV300112
3" x 2"	15	51	13	167	DLV300200
4" x 2"	15	63	27	370	DLV400200
6" x 4"	12	90	27	972	DLV600400
8" x 6"	12	115.5	25.5	1400	DLV800600



QLV

Serrated face stub with solvent weld socket, for use with stubs QLV and flat gaskets QHV/X and QHV/Y (QHV/Y only when coupling to ISO/DIN "ODV and ODB" flanges)

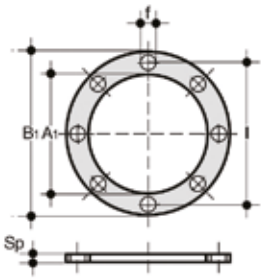
d	PN	E	F	L	Sp	Z	g	Code
2"	15	76	90	38	9	3	110	QLV200
2" 1/2	15	90	106	44	10	3	165	QPV075
3"	15	108	125	51	11	5	270	QLV300
4"	15	131	158	61	12	5	445	QLV400
6"	12	188	216	86	16	5	1250	QLV600
8"	12	250	270	115	20	8.5	2150	QLV800



QHV/X

Flat gasket in EPDM and FPM for flanges according to DIN 2501, EN 1092

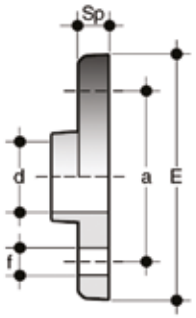
d	DN	A	B	Sp	EPDM code	FPM code
16	10	16	27	2	QHVX016E	QHVX016F
20 - 1/2”	15	20	32	2	QHVX020E	QHVX020F
25 - 3/4”	20	24	38.5	2	QHVX025E	QHVX025F
32 - 1”	25	32	48	2	QHVX032E	QHVX032F
40 - 1” 1/4	32	40	59	2	QHVX040E	QHVX040F
50 - 1” 1/2	40	50	71	2	QHVX050E	QHVX050F
63 - 2”	50	63	88	2	QHVX063E	QHVX063F
75 - 2” 1/2	65	75	104	2	QHVX075E	QHVX075F
90 - 3”	80	90	123	2	QHVX090E	QHVX090F
110 - 4”	100	110	148	3	QHVX110E	QHVX110F
125	125	125	166	3	QHVX125E	QHVX125F
140	125	140	186	3	QHVX140E	QHVX140F
160 - 6”	150	160	211	3	QHVX160E	QHVX160F
200	200	200	252	4	QHVX200E	-
225 - 8”	200	225	270	4	QHVX225E	-
250	250	250	305	4	QHVX250E	-



QHV/Y

Flat gasket in EPDM for flanges according to DIN 2501, EN 1092, self-centring for flanges drilled PN 10/16 up to DN 150 and PN 10 from DN 200

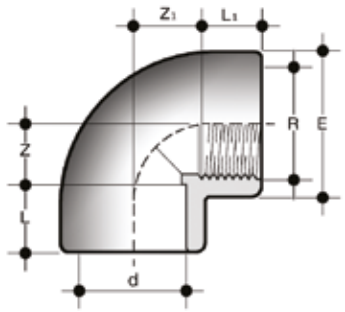
d	DN	A_1	B_1	F	I	U	Sp	Code
16	10	-	-	-	-	-	-	-
20 - 1/2”	15	17	95	14	65	4	2	QHVY020E
25 - 3/4”	20	22	107	14	76.3	4	2	QHVY025E
32 - 1”	25	28	117	14	86.5	4	2	QHVY032E
40 - 1” 1/4	32	36	142.5	18	101	4	2	QHVY040E
50 - 1” 1/2	40	45	153.3	18	111	4	2	QHVY050E
63 - 2”	50	57	168	18	125.5	4	2	QHVY063E
75 - 2” 1/2	65	71	187.5	18	145.5	4	3	QHVY075E
90 - 3”	80	84	203	18	160	8	3	QHVY090E
110 - 4”	100	102	223	18	181	8	3	QHVY110E
125	125	132	250	18	210	8	3	QHVY125E
140	125	132	250	18	210	8	3	QHVY140E
160 - 6”	150	152	288.5	22	241.5	8	4	QHVY160E
200	200	192	340	22	295	8	4	QHVY200E
225 - 8”	200	215	340	22	295	8	4	QHVY225E
250	250	238	395	22	350	12	4	QHVY250E
280	250	265	395	22	350	12	4	QHVY280E
315	300	290	462	22	400	12	4	QHVY315E
355	350	337	500	22	460	16	2	QHVY355E
400	400	384	555	25	515	16	2	QHVY400E



FLV

Flange to BS 10, table E, with solvent weld socket (for gasket sizes, see QHV/X)

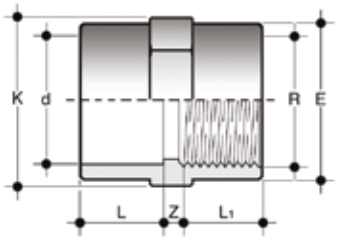
d	PN	a	E	f	L	Sp	U	Z	g	Code
1/2”	15	67	95	14	16.5	11	4	5	100	FLV012
3/4”	15	73	105	14	19.5	12	4	5	140	FLV034
1”	15	82.5	115	14	22.5	14	4	5	200	FLV100
1” 1/4	15	87.5	125	14	27	15	4	5	265	FLV114
1” 1/2	15	98.5	140	14	31	16	4	5	350	FLV112
2”	15	115	165	18	38	18	4	5	500	FLV200
2” 1/2	15	127	180	18	43.5	19	4	5	670	FLV212
3”	15	146	200	18	51	20.5	4	5.5	860	FLV300
4”	15	178	220	18	63	22.5	8	5.5	1100	FLV400



GLFV

90° elbow with solvent weld socket and BSP threaded female end R

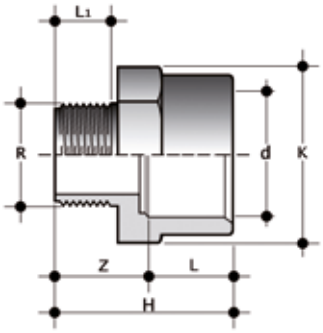
d x R	PN	E	L	L_1	Z	Z_1	g	Code
1/2" x 1/2"	15	27	16.5	15	10.5	12	13	GLFV012
3/4" x 3/4"	15	33	19.5	16.3	13.5	16.7	25	GLFV034
1" x 1"	15	41	22.5	19.1	17	20.4	55	GLFV100
1" 1/4 x 1" 1/4	15	54	27	21.5	21.5	27	120	GLFV114
1" 1/2 x 1" 1/2	15	61	31	21.4	27	36.6	170	GLFV112
2" x 2"	15	76	38	25.7	33.5	45.8	340	GLFV200
2" 1/2 x 2" 1/2	12	90	44	30.2	40.5	54.3	420	GIFV075212
3" x 3"	12	108	51	33.3	48	65.7	750	GLFV300
4" x 4"	12	131	63	39.3	58	81.7	1050	GLFV400



MLFV

Double socket with solvent weld socket d and BSP threaded female end R

d x R	PN	E	K	L	L_1	Z	g	Code
1/2" x 1/2"	15	27	24	16	15	4	15	MLFV012
3/4" x 3/4"	15	33	29	19.5	16.3	5.2	25	MLFV034
1" x 1"	15	41	35	22.5	19.1	4.5	45	MLFV100
1" 1/4 x 1" 1/4	15	50	43	27	21.4	4	65	MLFV114
1" 1/2 x 1" 1/2"	15	61	50	30	21.4	8	100	MLFV112
2" x 2"	15	76	61	36	25.7	9	160	MLFV200
2" 1/2 x 2" 1/2	12	90	76	44	30.2	17.8	260	DIFV090075212
3" x 3"	12	108	108	51	33.3	22.7	449	MLFV300



ILFV

Female/male adaptor with solvent weld socket d and BSP threaded male end R

d x R	PN	H	K	L	L_1	Z	g	Code
1/2" x 1/2"	15	46	30	16	15	30	15	ILFV012
3/4" x 3/4"	15	50	36	19	16.3	31	25	ILFV034
1" x 1"	15	57	46	22	19.1	35	40	ILFV100
1" 1/4 x 1" 1/4	15	67	55	26	21.4	41	70	ILFV114
1" 1/2 x 1" 1/2	15	74	65	31	21.4	43	115	ILFV112
2" x 2"	15	84	80	38	25.7	46	160	ILFV200

KEY TO **ABBREVIATIONS**

b bolts

c O-ring code

d nominal external diameter of the pipe in mm

DN nominal internal diameter of the pipe in mm

EPDM ethylene propylene rubber

FPM (FKM) fluoroelastomer

g weight in grams

HIPVC high impact PVC

K key

PN nominal pressure in bar (max. operating pressure in water at 20°C)

PVC-U unplasticized polyvinyl chloride

R nominal thread size in inches

s pipe wall thickness in mm

SDR standard dimension ratio = d/s

U number of holes

NOTES

NOTES

LERACCV Code 10/2018

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