Technical catalogue

ASTORE

Manual valves in PVC-U

aliaxis

General characteristics
PVC-U

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/mm^2)	
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

PVC-U

Production of the ASTORE valves is carried out according to the highest quality standards and in full compliance with the environmental restrictions set by the applicable laws in force and in accordance with ISO 14001.
All products are made in accordance with the quality guarantee system in compliance with ISO 9001.

- **BS 4346-1**
  Joints and fittings for use with solvent weld PVC pressure pipes
- **EN 10226-1/2**
  Pipe threads where pressure tight joints are made on the threads.
  Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designation
- **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
- **EN 12201-3**
  Piping systems, plastic, for water distribution, drainage and pressure sewerage - Polyethylene (PE) - Part 3: Fittings
- **EN 12201-5**
  Piping systems, plastic, for water distribution, drainage and pressure sewerage - Polyethylene (PE) - Part 4: Valves
- **ISO 7**
  Fittings with pressure-tight threaded joints
- **ISO 228-1**
  Fittings with threaded connections
- **ISO 727**
  PVC-U pipes and fittings. Dimensions and tolerances - metric series
- **ISO 4427-3**
  Piping systems, plastic, for water distribution, drainage and pressure sewerage - Polyethylene (PE) - Part 3: Fittings
- **ISO 17885**
  Plastic Piping Systems - Mechanical Fittings for Pressure Piping Systems - Specifications

Approvals and quality marks

- **ACS France (Attestation de conformité Sanitaire)**
  Suitability of PVC-U and PVC-C for drinking water

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

- **OQC by NSF**
  ASTORE products are OQC certified, Certificate of Controlled Origin by NSF.
  NSF with the brand OQC (Origin and Quality controlled) also declare the suitability of the products for transporting potable water.
  For the detailed list of certified products please refer to OQC on the www.nsf.org site

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

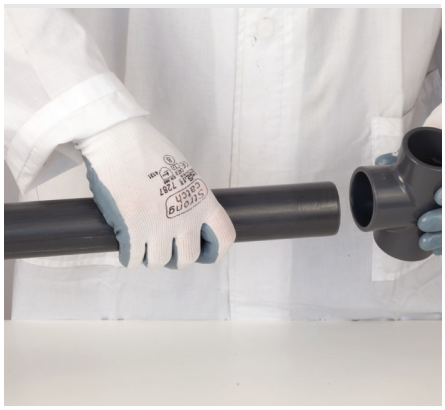


Fig.8

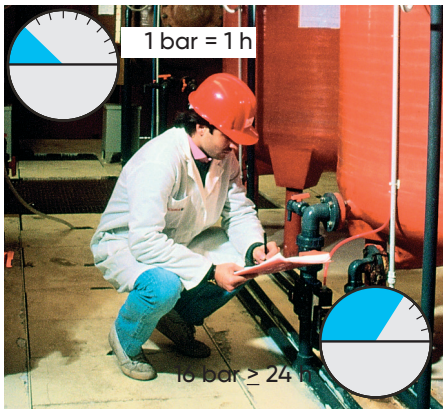


Fig.11

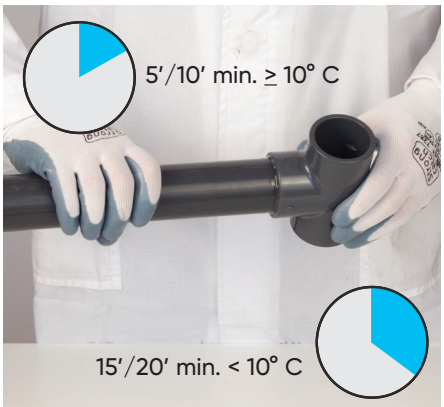
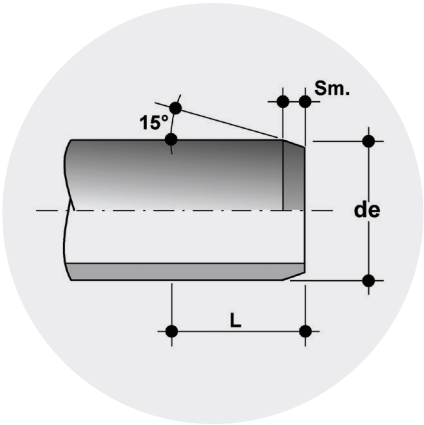


Fig.10


Fig.9



Socket depth, cement and chamfer length

External diameter		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)	(inch)	
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		Number of joints per kg of solvent cement
d (mm)	d (inches)	
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.

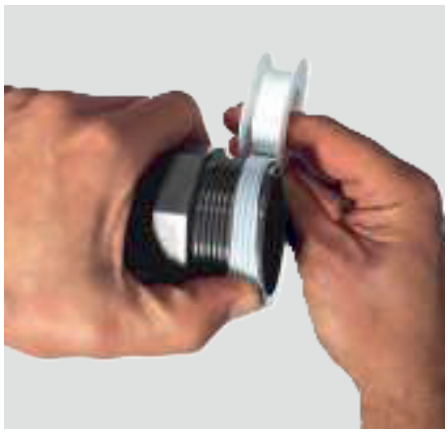


Fig. 1

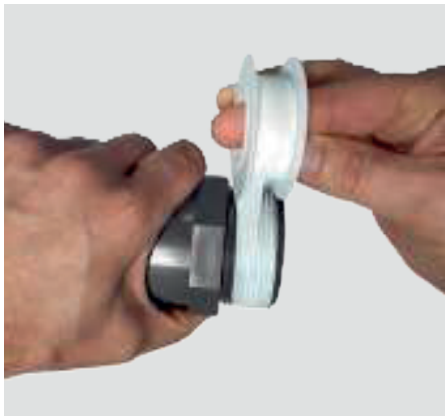


Fig.2

Fig.3

Recommendations

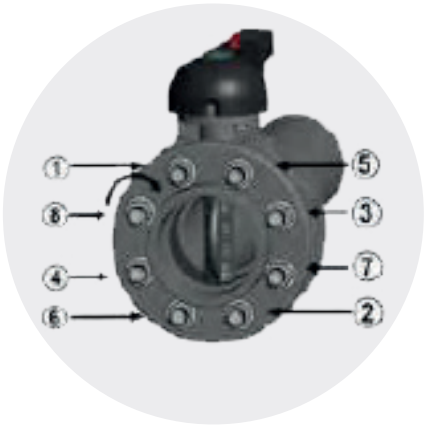
For correct installation, we recommend you only use sealing tape in non-sintered PTFE. Under all circumstances avoid using materials such as hemp, lint or paints usually implemented for the hydraulic seal on metal threads.

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.

Installation instructions for flanged Joints



To guarantee the correct installation of flanged elements, we recommend youperform the following operations:

1. insert the possible backing ring onto the pipe, before proceeding with theinstallation of the stub;

2. in the event of a fixed flange, check the drilling is correctly aligned with the counter flange;

3. check that the position of the counter flange takes into account the overall dimensions of the face to face distance of the components;

4. insert the flat gasket between the stubs (this step is not necessary for butterflyvalves), making sure the sealing surfaces of the flanges to be welded have not been separated by an excessive distance, since this would cause it to compress;

5. proceed with solvent welding or welding of the fixed flanges or stub (in the case of backing rings) following the welding or solvent welding instructions provided by FIP;

6. insert all the bolts, washers and nuts;

7. once the cooling time is up, proceed with tightening the bolts in a "cross-wise"order (fig.1);

8. complete the bolt tightening process using a torque wrench until the tightening torque values shown in the table are reached.

Tightening torque

Tightening torques for nuts and bolts to achieve the seal with flanges in PVC-U or PVC-C with gaskets in EPDM/FKM/NBR during the pressure test
(1.5 x NP and water at 20°C),

DN	40	50	65	80	100	125	150	200	250	300	350	400
Nm	9	12	15	18	20	35	40	55	70	70	75	75

Please note that:

- the use of flanges in coated metal or fibreglass may allow the application of higher tightening torques, provided these do not exceed the elastoplastic limit of the material,
- the use of different elastomeric seal materials from those listed in the previous table may require slightly higher tightening torques,
- FIP always recommends the use of suitably sized washers for any bolt used inthe coupling flange.

Minimum length of bolts

For flanged butterfly valves	
DN	**Lmin**
40	M 16x150
50	M 16x150
65	M 16x170
80	M 16x180
100	M 16x180
125	M 16x210
150	M 20x240
200	M 20x260
250	M 20x310
300	M 20x340
350	M 20x360
400	M 24x420

For flanged joints on pipes using backing rings		
d	**DN**	**L min**
20	15	M 12x70
25	20	M 12x70
32	25	M 12x70
40	32	M 16x85
50	40	M 16x85
63	50	M 16x95
75	65	M 16x95
90	80	M 16x105
110	100	M 16x105
125	125	M 16x115
140	125	M 16x120
160	150	M 20x135
200	200	M 20x140
225	200	M 20x140
250	250	M 20x150
280	250	M 20x160
315	300	M 20x180
355	350	M 20x180
400	400	M 22x180

Main properties

Properties of PVC-U		Benefits
Thermal resistance		• Service range 0-60 °C (see pressure/temperature regression curves)
Low surface roughness		• High flow coefficients (extremely smooth internal walls) • Pressure drop constant over time • Low risk of stoppages due to scaling • Reduced transfer of material to the transported fluid
Chemical resistance		• Good chemical resistance for conveying acids and alkalis, paraffin/aliphatic hydrocarbons and saline solutions.
Abrasion resistance		• Extremely low operating costs due to its long service life
Insulating		• Non-conductive (immune to galvanic corrosion) • No condensation problems • Minimum heat loss
Linear thermal expansion coefficients		• Reduced need for supports and expansion joints, resulting in considerable advantages in terms of plant design
Easy to join (solvent weld sockets)		• Reduced installation costs thanks to the "solvent weld" joint effected using a suitable solvent cement
Fire behaviour		• Good resistance to combustion also due to the presence of self-extinguishing chlorine
Good mechanical resistance		• PVC-U satisfies the need to provide adequate mechanical strength and complies with the requirements of industrial plant design

724

Astore 724 is a true union ball valve for industrial and water treatment applications, with fixed ball support and radial disassembly, which allow a simple and safe installation and a reliable service over time.

TRUE UNION BALL VALVE FOR INDUSTRIAL AND WATER TREATMENT APPLICATIONS

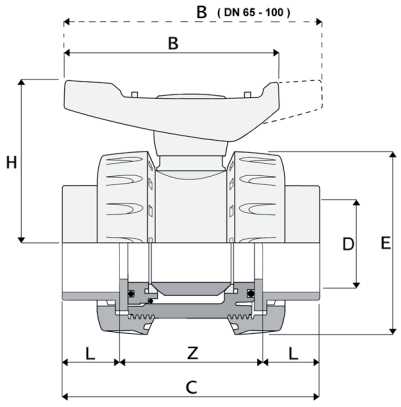
- Versions available: ISO metric (1V724) and BS standard (3V724) plain solvent weld socket, BSP female threaded socket (1V725).
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	True union grey PVC spheric ball valve, with fixed ball support and radial disassembly
Size range	DN 10 ÷ 100
Nominal pressure	DN 10÷50: PN16 with water at 20°C DN 65÷100: PN10 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4 (model 1V724); BS 4346-1 (model 3V724)
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4 (model 1V725)
Valve material	PVC-U
Seal material	EPDM, FKM (O-Ring); PTFE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DN 65 ÷ 100

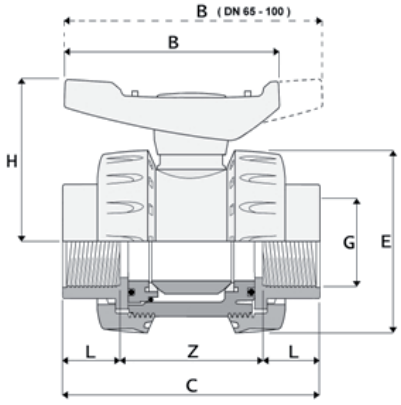
DIMENSIONS



1V724

True union grey PVC spheric ball valve, ISO metric plain solvent weld socket, with fixed ball support and radial disassembly.
EPDM or FKM seals.
PTFE ball seats.

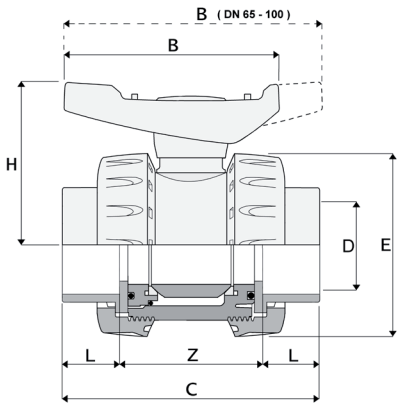
D	PN	DN	L	Z	C	E	H	B	g	EPDM code	FKM code
16	16	10	14	54	82	53	51	66	150	1V72401600	1V72401610
20	16	15	16	50	82	53	51	66	145	1V72402000	1V72402010
25	16	20	19	53	91	62	59	77	220	1V72402500	1V72402510
32	16	25	22	59	103	71	66	88	315	1V72403200	1V72403210
40	16	32	26	68	120	84	77	102	505	1V72404000	1V72404010
50	16	40	31	77	139	98	87	117	725	1V72405000	1V72405010
63	16	50	38	98	174	117	105	140	1245	1V72406300	1V72406310
75	10	65	44	142	230	168	138	225	3400	1V72407500	1V72407510
90	10	80	51	142	244	168	138	225	3500	1V72409000	1V72409010
110	10	100	61	162	284	210	171	280	5900	1V72411000	1V72411010



1V725

True union grey PVC spheric ball valve, BSP female threaded socket, with fixed ball support and radial disassembly.
EPDM or FKM seals.
PTFE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	EPDM code	FKM code
3/8"	16	10	13	56	82	53	51	66	150	1V72501600	1V72501610
1/2"	16	15	17	56	90	53	51	66	145	1V72502000	1V72502010
3/4"	16	20	19	55	93	62	59	77	225	1V72502500	1V72502510
1"	16	25	22	66	110	71	66	88	320	1V72503200	1V72503210
1"1/4	16	32	24	79	127	84	77	102	515	1V72504000	1V72504010
1"1/2	16	40	24	83	131	98	87	117	735	1V72505000	1V72505010
2"	16	50	29	103	161	117	105	140	1260	1V72506300	1V72506310
2"1/2	10	65	33	164	230	168	138	225	3400	1V72507500	1V72507510
3"	10	80	36	172	244	168	138	225	3500	1V72509000	1V72509010
4"	10	100	42	200	284	210	171	280	5900	1V72511000	1V72511010



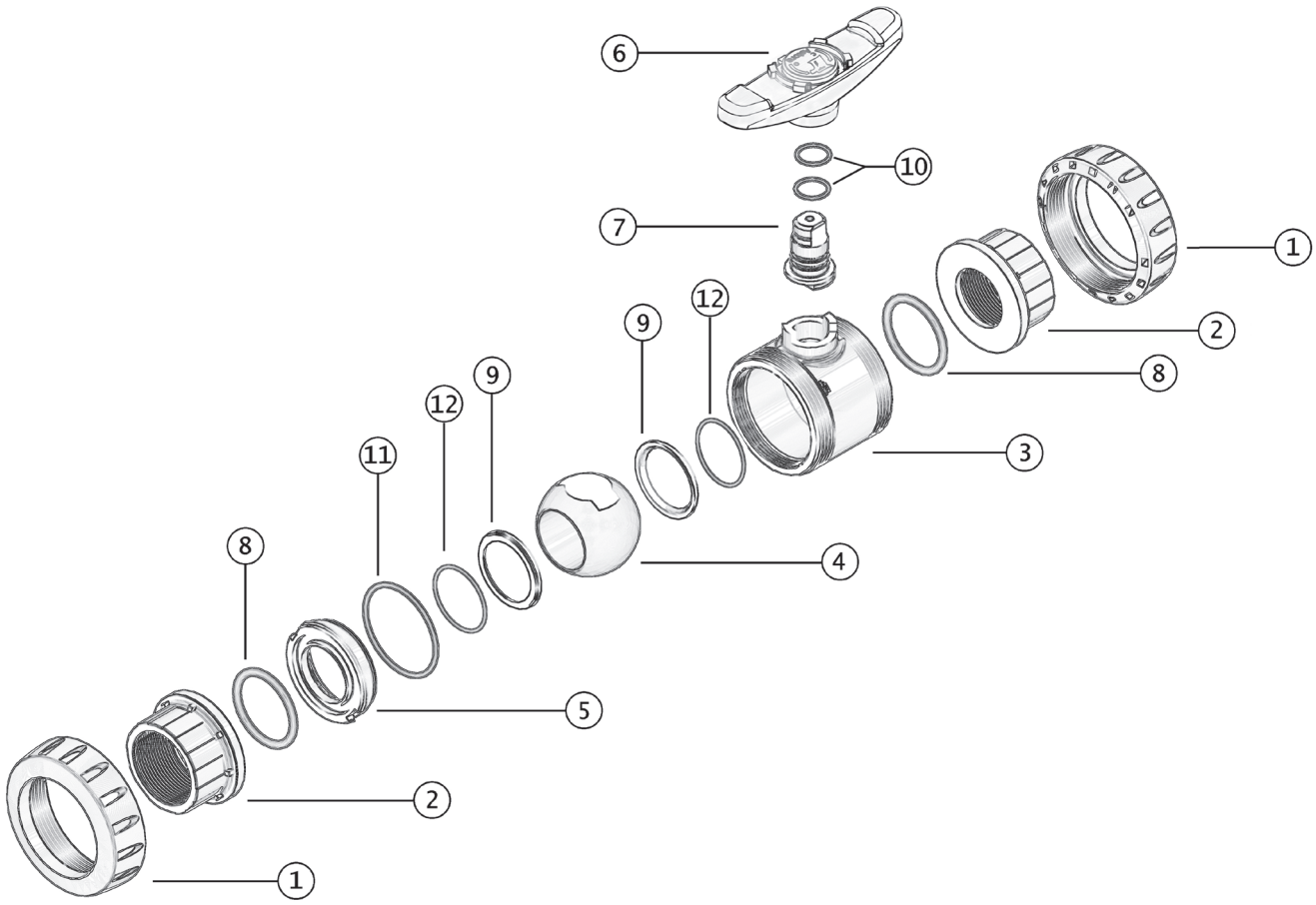
3V724

True union grey PVC spheric ball valve, BS Standard plain solvent weld socket, with fixed ball support and radial disassembly.
EPDM or FKM seals.
PTFE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	EPDM code	FKM code
3/8"	16	10	15	52	82	53	51	66	150	3V72401600	3V72401610
1/2"	16	15	17	48	82	53	51	66	145	3V72402000	3V72402010
3/4"	16	20	19	53	91	62	59	77	220	3V72402500	3V72402510
1"	16	25	22	59	103	71	66	88	315	3V72403200	3V72403210
1"1/4	16	32	26	68	120	84	77	102	505	3V72404000	3V72404010
1"1/2	16	40	31	77	139	98	87	117	725	3V72405000	3V72405010
2"	16	50	38	98	174	117	105	140	1245	3V72406300	3V72406310
2"1/2	10	65	44	142	230	168	138	225	3400	1V72407500	1V72407510
3"	10	80	51	142	244	168	138	225	3500	3V72409000	3V72409010
4"	10	100	61	162	284	210	171	280	5900	3V72411000	3V72411010

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 2)	**6**	Handle (PVC-U - 1)	**10***	Stem O-ring (EPDM/FKM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM/FKM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-Ring (EPDM/FKM - 2)	**12****	Ball seat O-ring (EPDM/FKM - 2)

*2 pcs for DN 65÷100
**Only for DN 65÷100
Inside brackets are indicated the material and the quantity supplied for each component.

420

Astore 420 is a true union ball valve for swimming pools and water supply systems, with fixed ball support and radial disassembly, which allow a simple and safe installation and a reliable service over time.

TRUE UNION BALL VALVE FOR SWIMMING POOLS AND WATER SUPPLY SYSTEMS

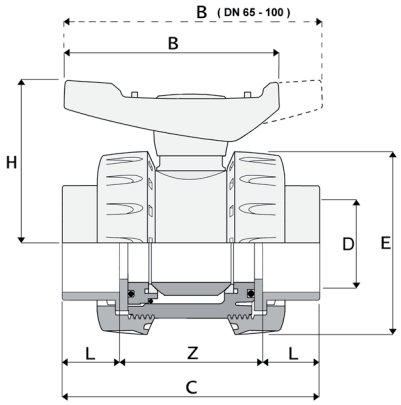
- Versions available: ISO metric (1V420) and BS standard (3V420) plain solvent weld socket, BSP female threaded socket (1V421).
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	True union grey PVC spheric ball valve, with fixed ball support and radial disassembly
Size range	DN 10 ÷ 100
Nominal pressure	DN 10 ÷ 50: PN16 with water at 20°C DN 65 ÷ 100: PN10 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4 (model 1V420); BS4346-1 (model 3V420)
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4 (model 1V421)
Valve material	PVC-U grey
Seal material	EPDM (O-Ring); PE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DN 65 ÷ 100

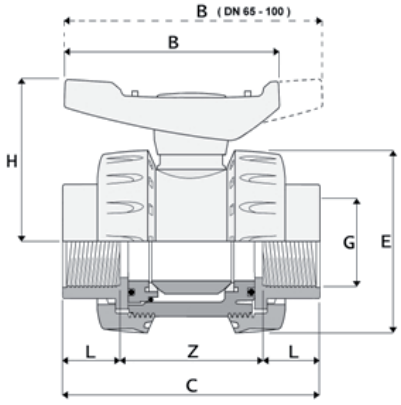
DIMENSIONS



1V420

True union grey PVC spheric ball valve, ISO metric plain solvent weld socket, with fixed ball support and radial disassembly.
EPDM seals.
PE ball seats.

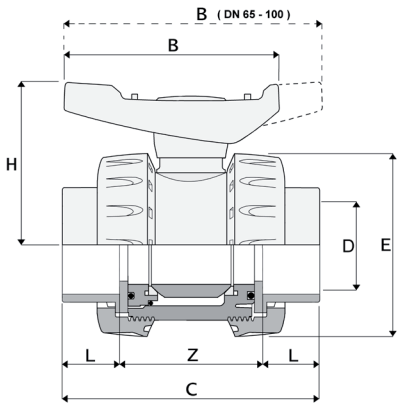
D	PN	DN	L	Z	C	E	H	B	g	Code
16	16	10	14	54	82	53	51	66	150	1V42001600
20	16	15	16	50	82	53	51	66	145	1V42002000
25	16	20	19	53	91	62	59	77	220	1V42002500
32	16	25	22	59	103	71	66	88	315	1V42003200
40	16	32	26	68	120	84	77	102	505	1V42004000
50	16	40	31	77	139	98	87	117	725	1V42005000
63	16	50	38	98	174	117	105	140	1245	1V42006300
75	10	65	44	142	230	168	138	225	3400	1V42007500
90	10	80	51	142	244	168	138	225	3500	1V42009000
110	10	100	61	162	284	210	171	280	5900	1V42011000



1V421

True union grey PVC spheric ball valve, BSP female threaded socket, with fixed ball support and radial disassembly.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	13	56	82	53	51	66	150	1V42101600
1/2"	16	15	17	56	90	53	51	66	145	1V42102000
3/4"	16	20	19	55	93	62	59	77	225	1V42102500
1"	16	25	22	66	110	71	66	88	320	1V42103200
1"1/4	16	32	24	79	127	84	77	102	515	1V42104000
1"1/2	16	40	24	83	131	98	87	117	735	1V42105000
2"	16	50	29	103	161	117	105	140	1260	1V42106300
2"1/2	10	65	33	164	230	168	138	225	3400	1V42107500
3"	10	80	36	172	244	168	138	225	3500	1V42109000
4"	10	100	42	200	284	210	171	280	5900	1V42111000



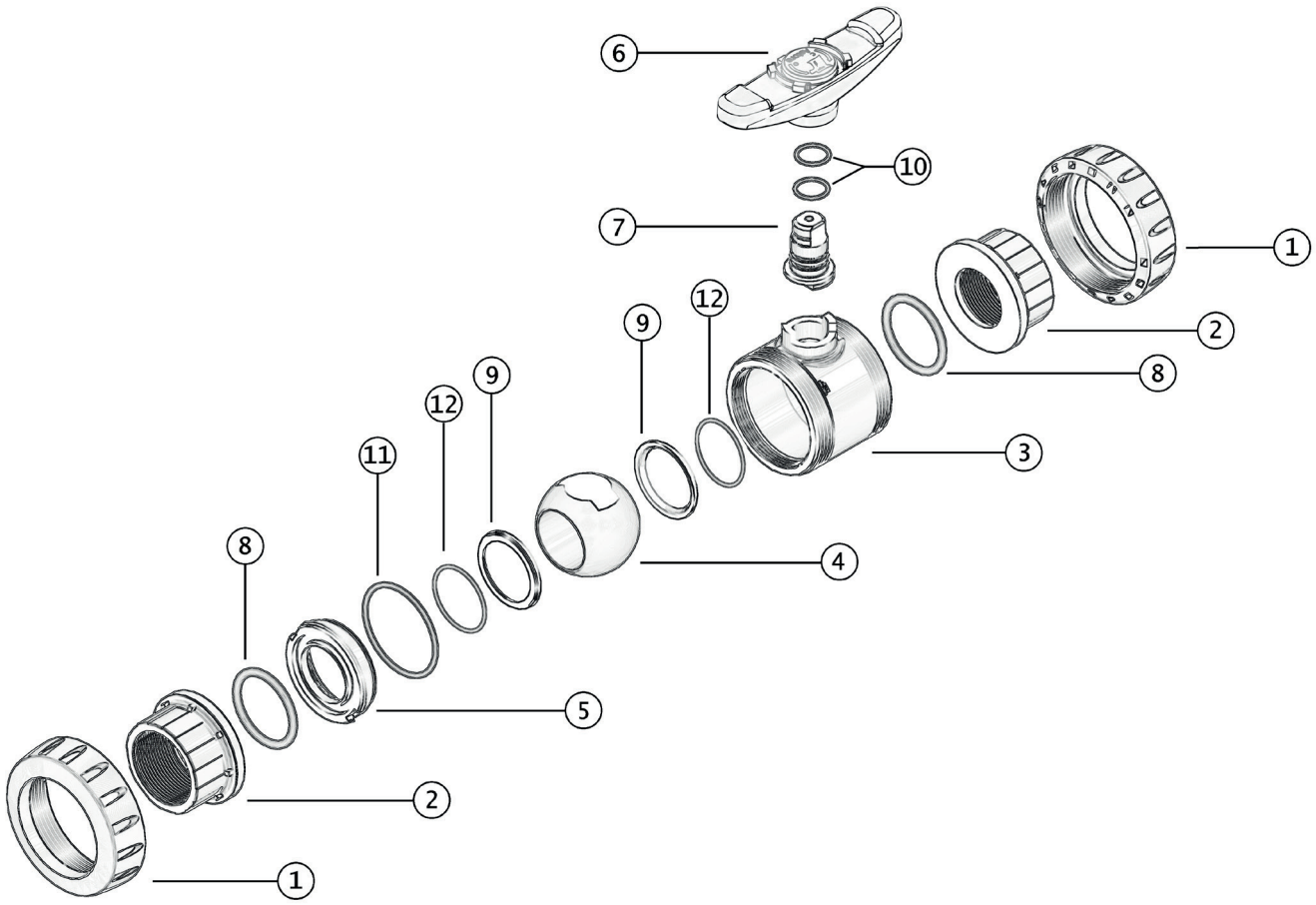
3V420

True union grey PVC spheric ball valve, BS Standard plain solvent weld socket, with fixed ball support and radial disassembly.
EPDM seals.
PE ball seats.

D	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	15	52	82	53	51	66	150	3V42001600
1/2"	16	15	17	48	82	53	51	66	145	3V42002000
3/4"	16	20	19	53	91	62	59	77	220	3V42002500
1"	16	25	22	59	103	71	66	88	315	3V42003200
1"1/4	16	32	26	68	120	84	77	102	505	3V42004000
1"1/2	16	40	31	77	139	98	87	117	725	3V42005000
2"	16	50	38	98	174	117	105	140	1245	3V42006300
2"1/2	10	65	44	142	230	168	138	225	3400	1V42007500
3"	10	80	51	142	244	168	138	225	3500	3V42009000
4"	10	100	61	162	284	210	171	280	5900	3V42011000

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 2)	**6**	Handle (PVC-U - 1)	**10***	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-Ring (EPDM - 2)	**12****	Ball seat O-ring (EPDM - 2)

*2 pcs for DN 65÷100
**Only for DN 65÷100
Inside brackets are indicated the material and the quantity supplied for each component.

426

Astore 426 is a true union ball valve with PE union ends for swimming pools and water supply systems, with fixed ball support and radial disassembly, that can be coupled to PE pipes by butt welding or electrofusion.

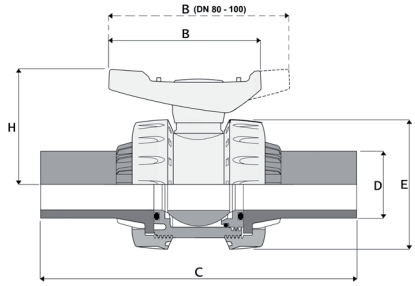
TRUE UNION BALL VALVE WITH PE UNION ENDS FOR SWIMMING POOLS AND WATER SUPPLY SYSTEMS

- Equipped with PE 100 SDR 11 shanks for butt welding and electrofusion.

Technical specifications	
Construction	True union grey PVC spheric ball valve with PE union ends, with fixed ball support and radial disassembly.
Size range	DN 15 ÷ 100
Nominal pressure	DN 15÷50: PN16 with water at 20°C DN 65÷100: PN10 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**PE union ends:** EN 12201-3 , EN 12201-4, ISO 4427-3
Valve material	PVC-U
Seal material	EPDM (O-ring); PE (ball seats)
Control options	Manual control

DN 15 ÷ 100

DIMENSIONS



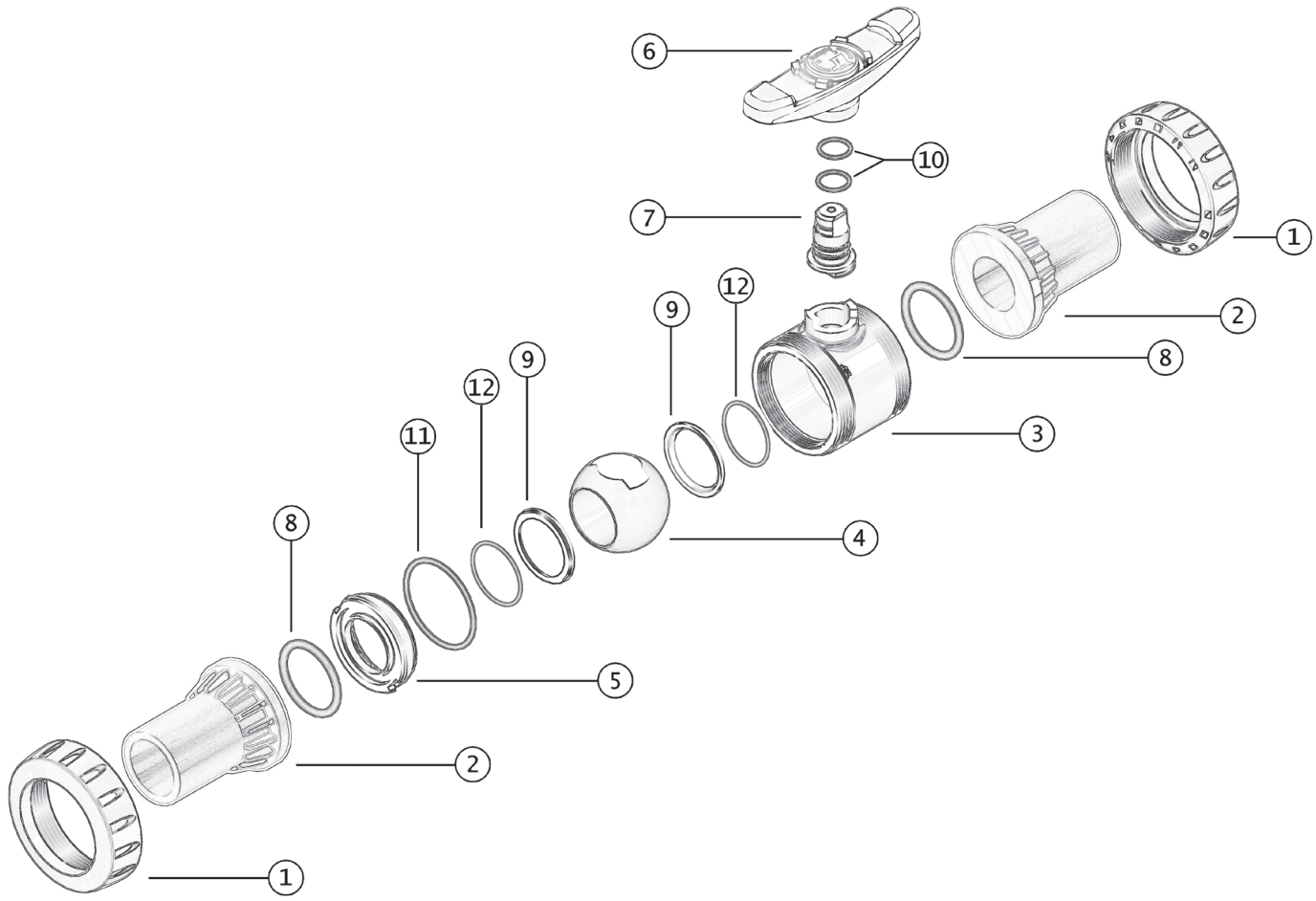
1V426

True union grey PVC spheric ball valve, provided with PE 100 SDR 11 union ends for butt welding and electrofusion, with fixed ball support and radial disassembly.
EPDM seals.
PE ball seats.

D	PN	DN	C	E	H	B	g	Code
20	16	15	154	53	51	66	155	1V42602000
25	16	20	186	62	59	77	230	1V42602500
32	16	25	199	71	66	88	330	1V42603200
40	16	32	217	84	77	102	530	1V42604000
50	16	40	236	98	87	117	780	1V42605000
63	16	50	268	117	105	140	1330	1V42606300
90	16	80	368	168	151	225	3750	1V42609000
110	16	100	404	210	178	280	6300	1V42611000

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PE 100 - 2)	**6**	Handle (PVC-U - 1)	**10***	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 2)	**12****	Ball seat O-ring (EPDM - 2)

*2 pcs for DN 80 ÷ DN 100
** Only for DN 80 ÷ DN 100
Inside brackets are indicated the material and the quantity supplied for each component.

334

Astore 334 is a true union ball valve with compression fittings for swimming pools and water supply systems, with fixed ball support and radial disassembly.

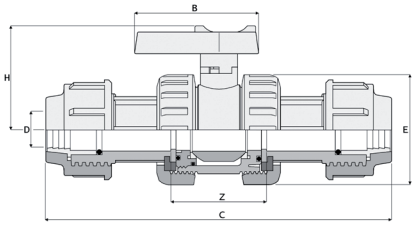
TRUE UNION BALL VALVE WITH COMPRESSION FITTINGS FOR SWIMMING POOLS AND WATER SUPPLY SYSTEMS

- Equipped with compression fittings for connection with PE pipes metric series on both sides.

Technical specifications	
Construction	True union grey PVC ball valve with compression fittings, with fixed ball support and radial disassembly
Size range	DN 15 ÷ 25
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Compression fittings:** ISO 17885
Valve material	PVC-U
Seal material	EPDM (O-ring) PE (ball seats)
Control options	Manual control

DN 15 ÷ 25

DIMENSIONS



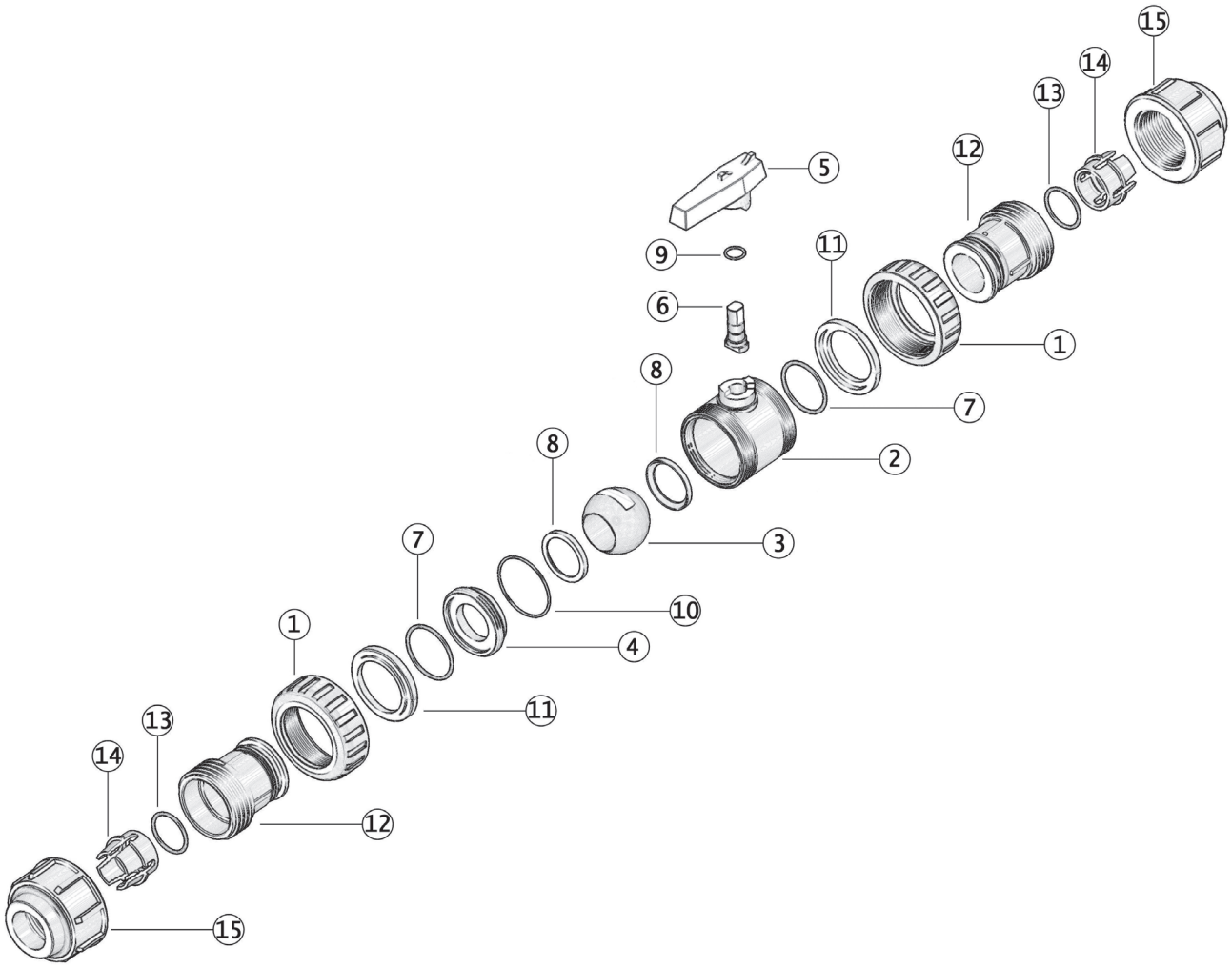
1V334

True union grey PVC ball valve, provided with compression fittings to connect PE ISO metric pipes to both sides, with fixed ball support and radial disassembly.
EPDM seals.
PE ball seats.

D	PN	DN	C	E	H	B	Z	g	Code
20	16	15	175	50	50	57	74	200	1V33420000W
25	16	20	195	59	55	66	85	300	1V33425000W
32	16	25	215	68	67	75	85	450	1V33432000W

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**6**	Stem (PVC-U - 1)	**11**	Split ring (PVC-U - 2)
2	Body (PVC-U - 1)	**7**	Socket O-ring (EPDM - 2)	**12**	Body compr. fitting (PVC-U - 2)
3	Body (PVC-U - 1)	**8**	Ball seat (PE - 2)	**13**	Compr. fitting O-ring (NBR - 2)
4	Support (PVC-U - 1)	**9**	Stem O-ring (EPDM - 1)	**14**	Clinching ring (POM - 2)
5	Handle (PVC-U - 1)	**10**	Radial O-ring (EPDM - 1)	**15**	Compr. fitting nut (PP - 2)

Inside brackets are indicated the material and the quantity supplied for each component.

322

Astore 322 is a true union ball valve for irrigation and water supply systems, with free ball support and radial disassembly, which ensure a quick and easy installation and a convenient maintenance.

TRUE UNION BALL VALVE FOR IRRIGATION AND WATER SUPPLY SYSTEMS

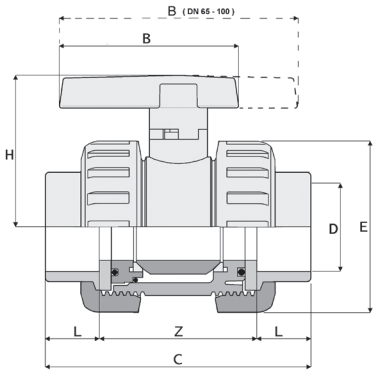
- Versions available: ISO metric (1V322) and BS standard (3V322) plain solvent weld socket, BSP female threaded socket (1V321).

Technical specifications	
Construction	True union grey PVC ball valve, with free ball support and radial disassembly
Size range	DN 10 ÷ 100
Nominal pressure	DN 10÷50: PN16 with water at 20°C DN 65÷80: PN10 with water at 20°C DN 100: PN6 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4 (model 1V322); BS4346-1 (model 3V322)
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4 (model 1V321)
	PVC-U
Seal material	EPDM (O-ring) PE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DN 65 ÷ 100

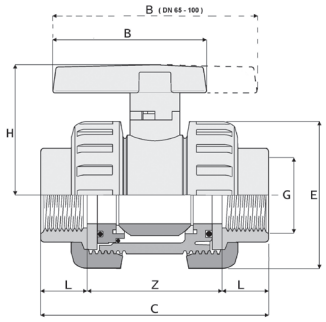
DIMENSIONS



1V322

True union grey PVC ball valve, ISO metric plain solvent weld socket, with free ball support and radial disassembly.
EPDM seals.
PE ball seats.

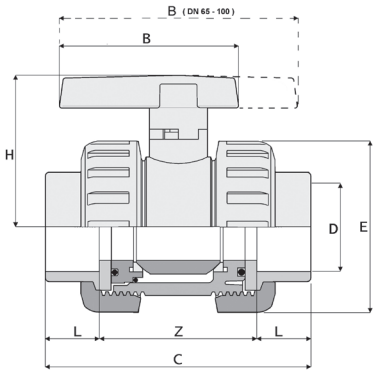
D	PN	DN	L	Z	C	E	H	B	g	Code
16	16	10	14	47	75	50	50	57	125	1V32216000H
20	16	15	16	48	80	50	50	57	130	1V32220000H
25	16	20	19	57	95	55	55	66	205	1V32225000H
32	16	25	22	64	108	63	63	75	300	1V32232000H
40	16	32	26	72	124	76	76	90	450	1V32240000H
50	16	40	31	84	146	88	88	103	710	1V32250000H
63	16	50	38	96	172	102	102	121	1150	1V32263000H
75	10	65	44	142	230	138	138	225	3400	1V32275000LW
90	10	80	51	142	244	138	138	225	3500	1V32290000LW
110	6	100	61	162	284	171	171	280	5900	1V32211000LW



1V321

True union grey PVC ball valve, BSP female threaded socket, with free ball support and radial disassembly.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	13	49	75	50	50	57	130	1V32116000H
1/2"	16	15	17	46	80	50	50	57	135	1V32120000H
3/4"	16	20	19	57	95	59	55	66	215	1V32125000H
1"	16	25	22	64	108	68	63	75	310	1V32132000H
1"1/4	16	32	24	76	124	80	76	90	460	1V32140000H
1"1/2	16	40	24	98	146	96	88	103	730	1V32150000H
2"	16	50	29	114	172	116	102	121	1200	1V32163000H
2"1/2	10	65	33	164	230	168	138	225	3400	1V32175000LW
3"	10	80	36	172	244	168	138	225	3550	1V32190000LW
4"	10	100	42	200	284	210	171	280	5900	1V32111000LW



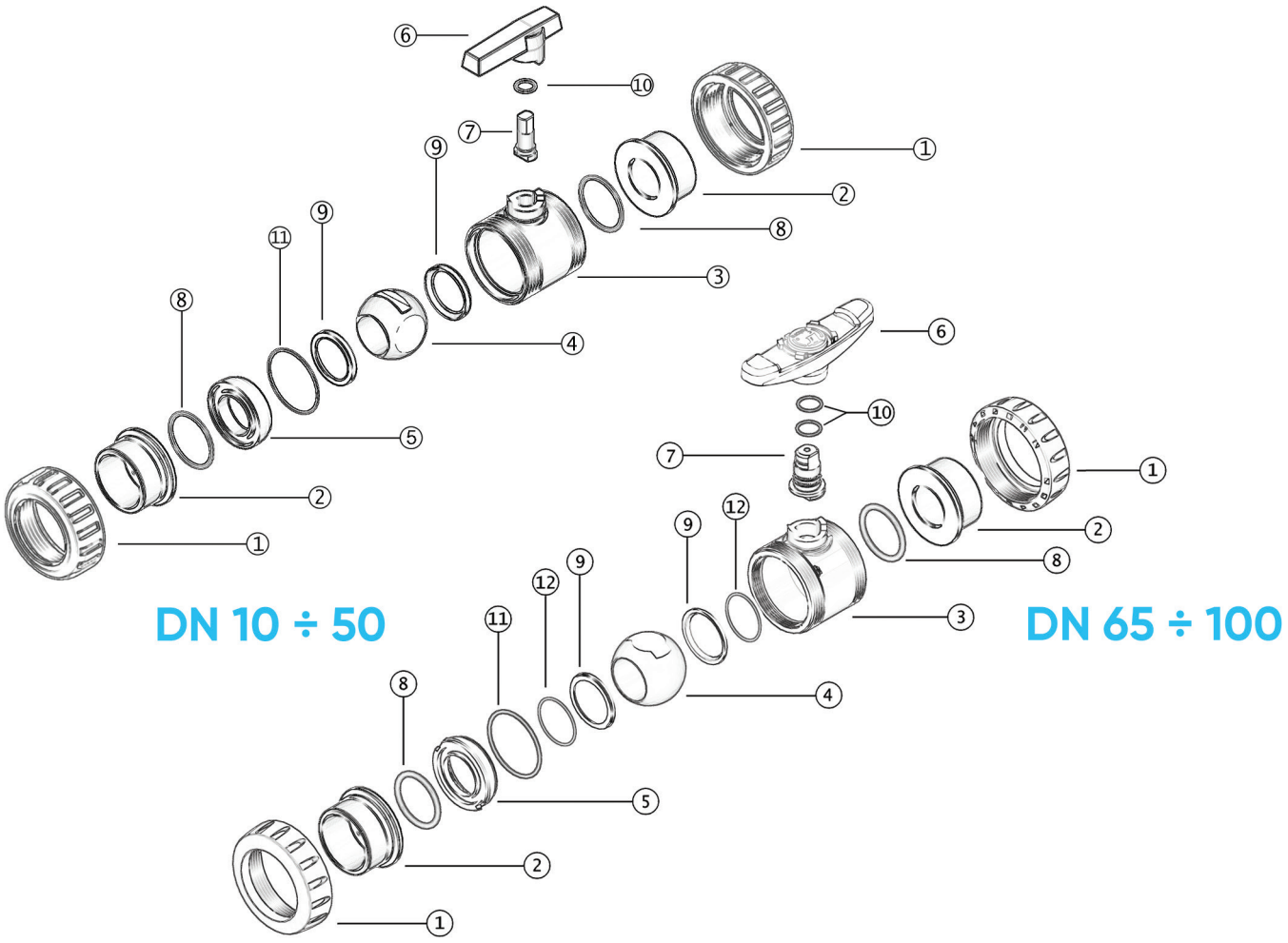
3V322

True union grey PVC ball valve, BS Standard plain solvent weld socket, with free ball support and radial disassembly.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	15	45	75	50	50	57	125	3V32216000H
1/2"	16	15	17	46	80	50	50	57	130	3V32220000H
3/4"	16	20	19	57	95	59	55	66	205	3V32225000H
1"	16	25	22	64	108	68	63	75	300	3V32232000H
1"1/4	16	32	26	72	124	80	76	90	450	3V32240000H
1"1/2	16	40	31	84	146	96	88	103	710	3V32250000H
2"	16	50	38	96	172	116	102	121	1150	3V32263000H
2"1/2	10	65	44	142	230	168	138	225	3400	1V32275000LW
3"	10	80	51	142	244	168	138	225	3500	3V32290000LW
4"	10	100	61	162	284	210	171	280	5900	3V32211000LW

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 2)	**6**	Handle (PVC-U - 1)	**10***	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 2)	**12****	Ball seat O-ring (EPDM - 2)

*2 pcs for DN 65÷100
**Only for DN 65÷100
Inside brackets are indicated the material and the quantity supplied for each component.

302

Astore 302 is a single union ball valve for irrigation and water supply systems, with free ball support, which ensures a quick and easy installation and a convenient maintenance.

SINGLE UNION BALL VALVE FOR IRRIGATION AND WATER SUPPLY SYSTEMS

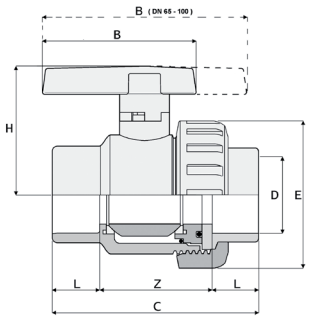
- Versions available: ISO metric (1V302) and BS standard (3V302) plain solvent weld socket, BSP female threaded socket (1V301).

Technical specifications	
Construction	Single union grey PVC ball valve, with free ball support
Size range	DN 10 ÷ 100
Nominal pressure	DN 10÷50: PN16 with water at 20°C DN 65÷80: PN10 with water at 20°C DN 100: PN6 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4 (model 1V302); BS4346-1 (model 3V302)
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4 (model 1V301)
Valve material	PVC-U
Seal material	EPDM (O-ring) PE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DN 65 ÷ 100

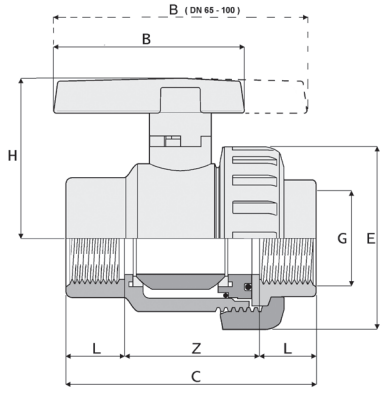
DIMENSIONS



1V302

Single union grey PVC ball valve, ISO metric plain solvent weld socket, with free ball support.
EPDM seals.
PE ball seats.

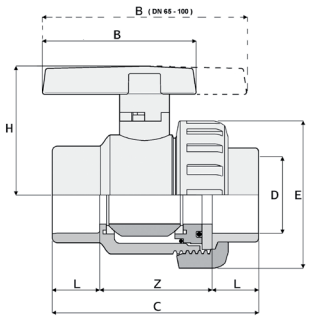
D	PN	DN	L	Z	C	E	H	B	g	Code
16	16	10	15	41	71	50	50	57	97	1V30216000H
20	16	15	16	42	74	50	50	57	100	1V30220000H
25	16	20	19	48	86	59	55	66	155	1V30225000H
32	16	25	22	56	100	68	63	75	240	1V30232000H
40	16	32	26	62	114	80	76	90	350	1V30240000H
50	16	40	31	74	136	96	88	103	550	1V30250000H
63	16	50	38	86	162	116	102	121	930	1V30263000H
75	10	65	44	122	210	168	138	225	2600	1V30275000LW
90	10	80	51	124	226	168	138	225	2700	1V30290000LW
110	6	100	61	150	272	210	171	280	4700	1V30211000LW



1V301

Single union grey PVC ball valve, BSP female threaded socket, with free ball support.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	13	45	71	50	50	57	96	1V30116000H
1/2"	16	15	17	40	74	50	50	57	105	1V30120000H
3/4"	16	20	19	48	86	59	55	66	160	1V30125000H
1"	16	25	22	56	100	68	63	75	240	1V30132000H
1"1/4	16	32	24	66	114	80	76	90	355	1V30140000H
1"1/2	16	40	24	88	136	96	88	103	575	1V30150000H
2"	16	50	29	104	162	116	102	121	960	1V30163000H
2"1/2	10	65	33	144	210	168	138	225	2700	1V30175000LW
3"	10	80	36	154	226	168	138	225	2800	1V30190000LW
4"	6	100	42	188	272	210	171	280	4700	1V30111000LW



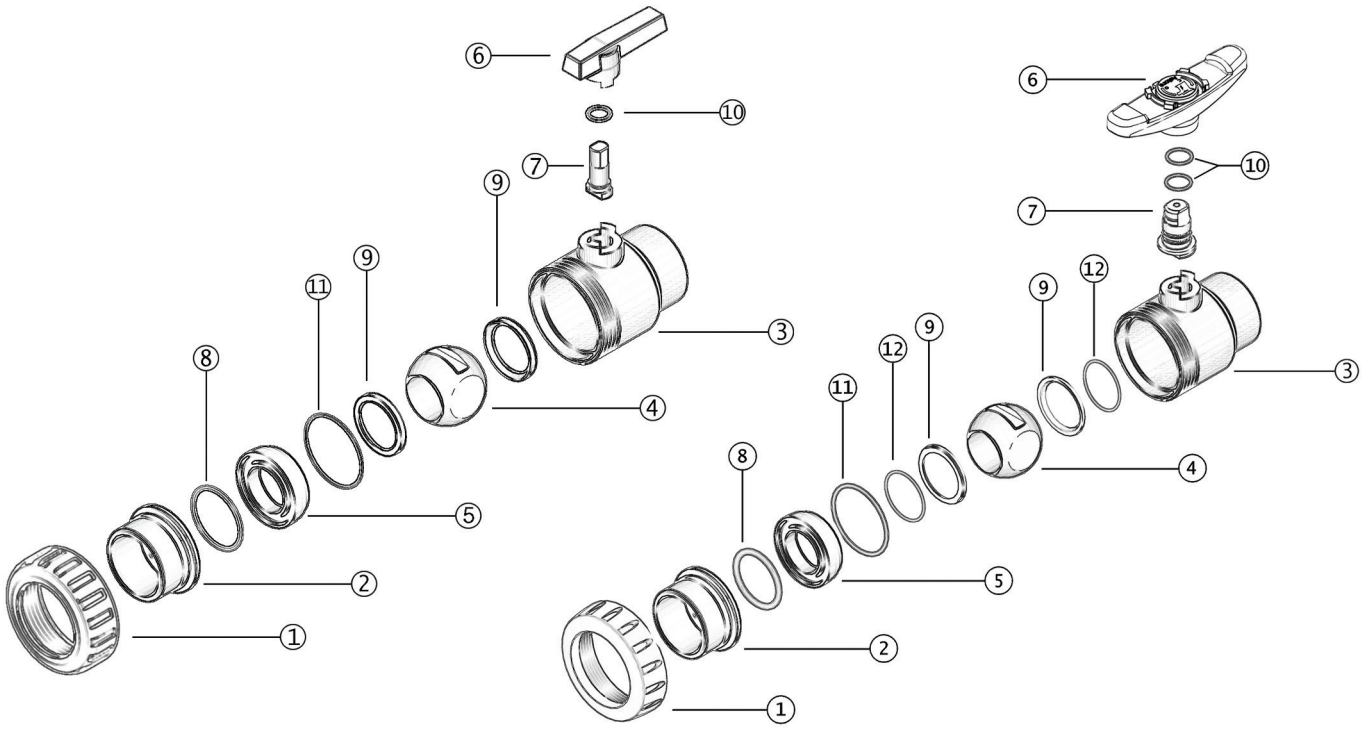
3V302

Single union grey PVC ball valve, BS Standard plain solvent weld socket, with free ball support.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
3/8"	16	10	15	41	71	50	50	57	96	3V30216000H
1/2"	16	15	17	40	74	50	50	57	100	3V30220000H
3/4"	16	20	19	48	86	59	55	66	155	3V30225000H
1"	16	25	22	56	100	68	63	75	240	3V30232000H
1"1/4	16	32	26	62	114	80	76	90	350	3V30240000H
1"1/2	16	40	31	74	136	96	88	103	550	3V30250000H
2"	16	50	38	86	162	116	102	121	930	3V30263000H
2"1/2	10	65	44	122	210	168	138	225	2600	1V30275000LW
3"	10	80	51	124	226	168	138	225	2700	3V30290000LW
4"	6	100	61	150	272	210	171	280	4700	3V30211000LW

COMPONENTS

EXPLODED VIEW



DN 10 ÷ 50 **DN 65 ÷ 100**

1	Nut (PVC-U - 1)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 1)	**6**	Handle (PVC-U - 1)	**10***	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 1)	**12****	Ball seat O-ring (EPDM - 2)

*2 pcs for DN 65÷100
**Only for DN 65÷100
Inside brackets are indicated the material and the quantity supplied for each component.

303

Astore 303 is a single union ball valve for irrigation and water supply systems, with free ball support, which ensures a quick and easy installation and a convenient maintenance.

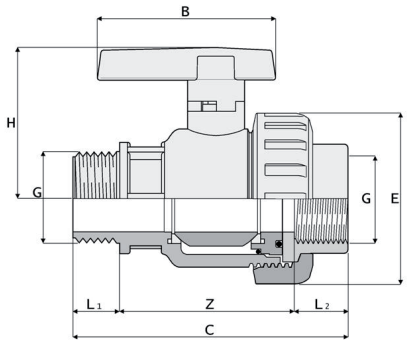
SINGLE UNION BALL VALVE FOR IRRIGATION AND WATER SUPPLY SYSTEMS

- Version available is BSP female threaded socket on nut side and BSP male threaded on valve body side.

Technical specifications	
Construction	Single union grey PVC ball valve, with free ball support
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4
Valve material	PVC-U
Seal material	EPDM (O-Ring); PE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DIMENSIONS



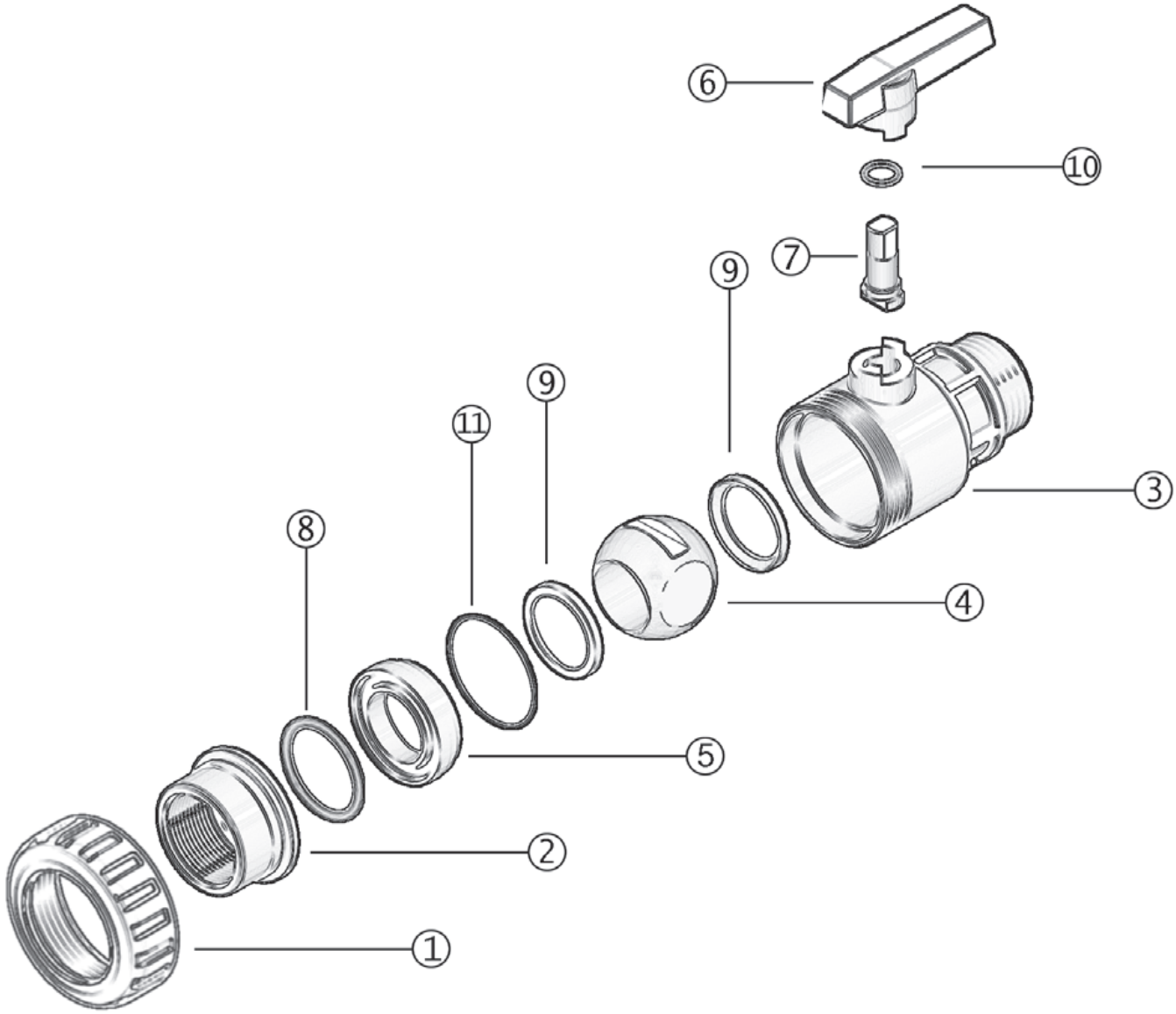
1V303

Single union grey PVC ball valve, BSP female threaded socket on nut side and BSP male threaded socket on valve body side, with free ball support.
EPDM seals.
PE ball seats.

G	PN	DN	L1	L2	Z	C	E	H	B	g	Code
3/8"	16	10	12	13	60	85	50	50	57	100	1V30316000H
1/2"	16	15	15	17	53	85	50	50	57	105	1V30320000H
3/4"	16	20	17	20	61	98	59	55	66	160	1V30325000H
1"	16	25	19	22	72	113	68	63	75	245	1V30332000H
1"1/4	16	32	22	24	84	130	80	76	90	360	1V30340000H
1"1/2	16	40	22	24	104	150	96	88	103	590	1V30350000H
2"	16	50	26	29	122	177	116	102	121	980	1V30363000H

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 1)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 1)	**6**	Handle (PVC-U - 1)	**10**	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 1)		

Inside brackets are indicated the material and the quantity supplied for each component.

304

Astore 304 is a single union ball valve for irrigation and water supply systems, with fixed ball support and radial disassembly, which ensures a quick and easy installation and a convenient maintenance.

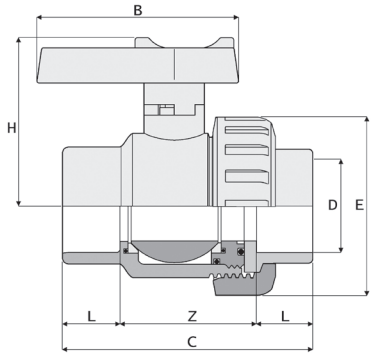
SINGLE UNION BALL VALVE FOR IRRIGATION AND WATER SUPPLY SYSTEMS

- Versions available: ISO metric (1V304) and BSP female threaded socket (1V309).

Technical specifications	
Construction	Single union grey PVC ball valve, with fixed ball support
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO 727, EN ISO 1452-4 (model 1V304)
	Thread: UNI ISO 228-1, ISO 7-1, UNI EN ISO 1452-4 (model 1V309)
Valve material	PVC-U
Seal material	EPDM (O-Ring); PE (ball seats)
Control options	Manual control

DN 15 ÷ 50

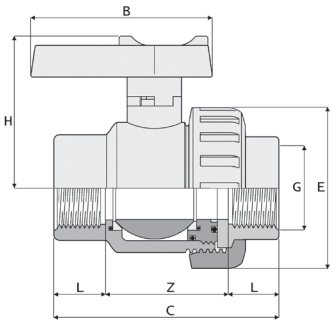
DIMENSIONS



1V304

Single union grey PVC ball valve, ISO metric plain solvent weld socket, with fixed ball support.
EPDM seals.
PE ball seats.

D	PN	DN	L	Z	C	E	H	B	g	Code
20	16	15	16	42	74	50	53	57	100	1V30420000
25	16	20	19	48	86	59	58	66	155	1V30425000
32	16	25	22	56	100	68	68	75	240	1V30432000
40	16	32	26	62	114	80	80	90	350	1V30440000
50	16	40	31	74	136	96	93	103	550	1V30450000
63	16	50	38	86	162	116	108	121	930	1V30463000



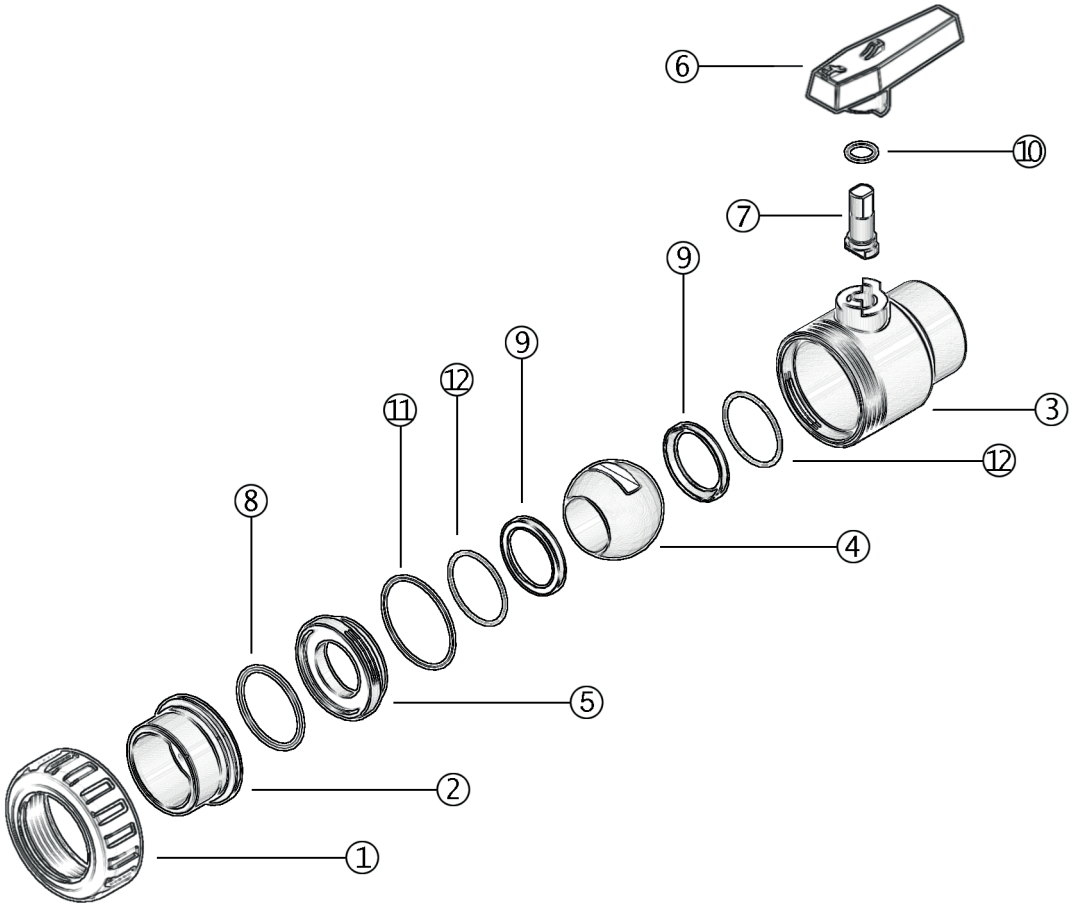
1V309

Single union grey PVC ball valve, BSP female threaded socket, with fixed ball support.
EPDM seals.
PE ball seats.

G	PN	DN	L	Z	C	E	H	B	g	Code
1/2"	16	15	17	40	74	50	53	57	105	1V30920000
3/4"	16	20	19	48	86	59	58	66	160	1V30925000
1"	16	25	22	56	100	68	68	75	240	1V30932000
1" 1/4	16	32	24	66	114	80	80	90	355	1V30940000
1"1/2	16	40	24	88	136	96	93	103	575	1V30950000
2"	16	50	29	104	162	116	108	121	960	1V30963000

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 1)	**5**	Support (PVC-U - 1)	**9**	Ball seat (PE - 2)
2	Union end (PVC-U - 1)	**6**	Handle (PVC-U - 1)	**10**	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 1)		

The component material and quantity supplied are indicated in the parentheses.

305

Astore 305 is a single union ball valve with compression fitting for irrigation and water supply systems, with free ball support.

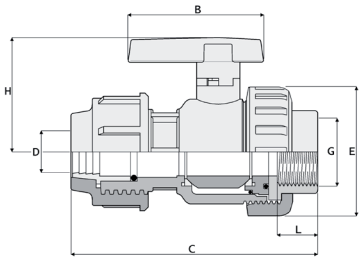
SINGLE UNION BALL VALVE WITH COMPRESSION FITTINGS FOR IRRIGATION AND WATER SUPPLY SYSTEMS

- Version available is BSP female threaded socket on nut side and compression fitting for connection with PE pipes on valve body side.

Technical specifications	
Construction	Single union grey PVC ball valve, with free ball support
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Thread:** UNI ISO 228-1, ISO 7-1
	Compression fittings: ISO 17885
Valve material	PVC-U
Seal material	EPDM (O-Ring); PE (ball seats)
Control options	Manual control

DN 10 ÷ 50

DIMENSIONS



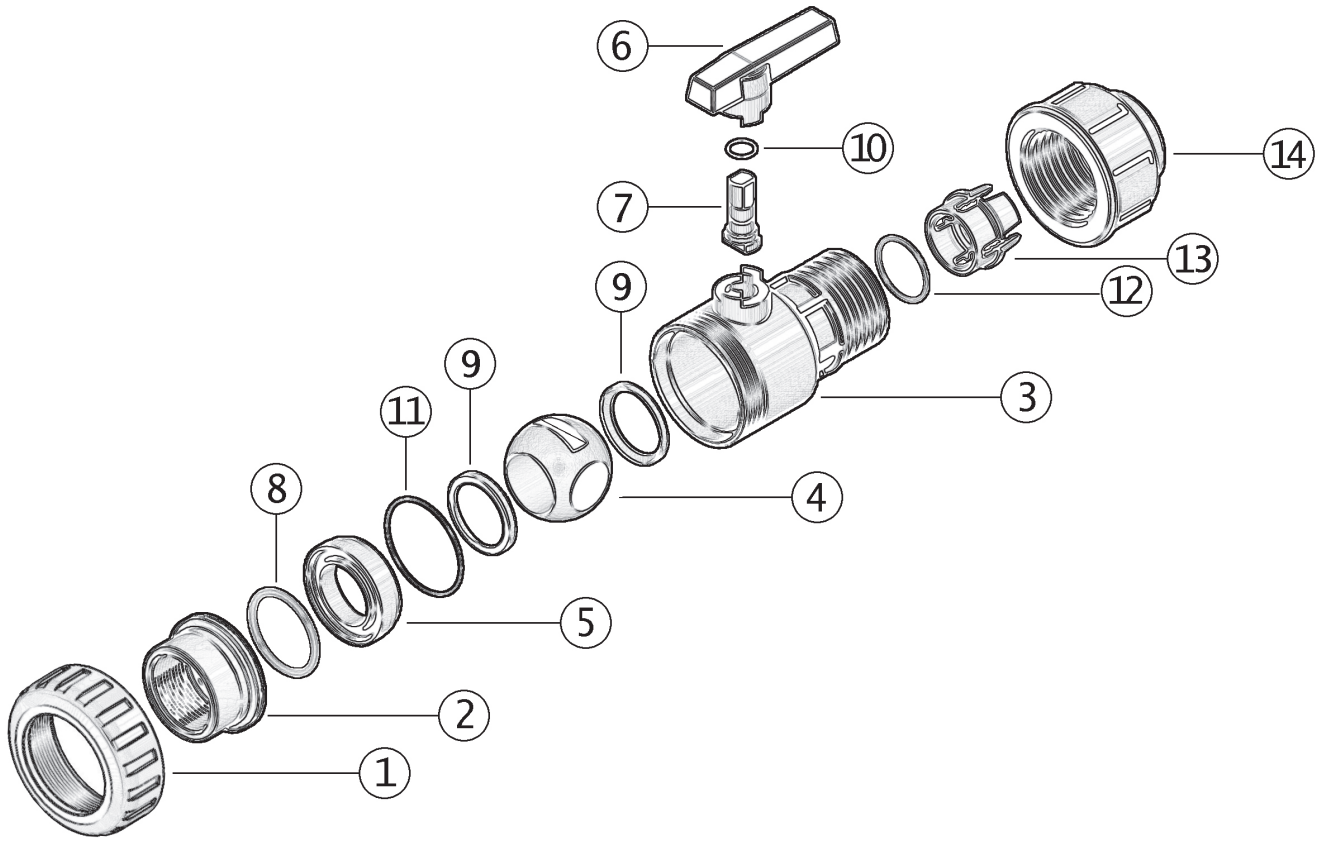
1V305

Single union grey PVC ball valve, BSP female threaded socket on nut side and compression fitting for connection with PE pipes on valve body side, with free ball support.
EPDM seals.
PE ball seats.

D x G	PN	DN	L	C	E	H	B	g	Code
16 x 3/8"	16	10	13	96	50	50	57	115	1V30516000L
20 x 1/2"	16	15	17	99	50	50	57	130	1V30520000L
25 x 3/4"	16	20	19	115	59	55	66	195	1V30525000L
32 x 1"	16	25	22	131	68	63	75	300	1V30532000L
40 x 1"1/4	16	32	24	158	80	76	90	455	1V30540000L
50 x 1"1/2	16	40	24	181	96	88	103	740	1V30550000L
63 x 2"	16	50	29	221	116	102	121	1200	1V30563000L

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 1)	**6**	Handle (PVC-U - 1)	**11**	Radial O-ring (EPDM - 1)
2	Union end (PVC-U - 2)	**7**	Stem (PVC-U - 1)	**12**	Body O-ring (NBR - 1)
3	Body (PVC-U - 1)	**8**	Socket O-ring (EPDM - 1)	**13**	Clinching ring (POM - 1)
4	Ball (PVC-U - 1)	**9**	Ball seat (PE - 2)	**14**	Nut (PP - 1)
5	Support (PVC-U - 1)	**10**	Stem O-ring (EPDM - 1)		

Inside brackets are indicated the material and the quantity supplied for each component.

335

Astore 335 is a single union ball valve with compression fittings for irrigation and water supply systems, with fixed ball support.

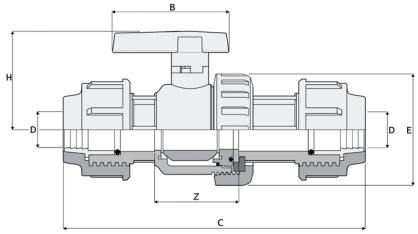
SINGLE UNION BALL VALVE WITH COMPRESSION FITTINGS FOR IRRIGATION AND WATER SUPPLY SYSTEMS

- Equipped with compression fittings for connection with PE pipes metric series on both sides.

Technical specifications	
Construction	Single union grey PVC ball valve with compression fittings, with free ball support
Size range	DN 15 ÷ 25
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Compression fittings:** ISO 17885.
Valve material	PVC-U
Seal material	EPDM (O-ring) PE (ball seats)
Control options	Manual control

DN 15 ÷ 25

DIMENSIONS



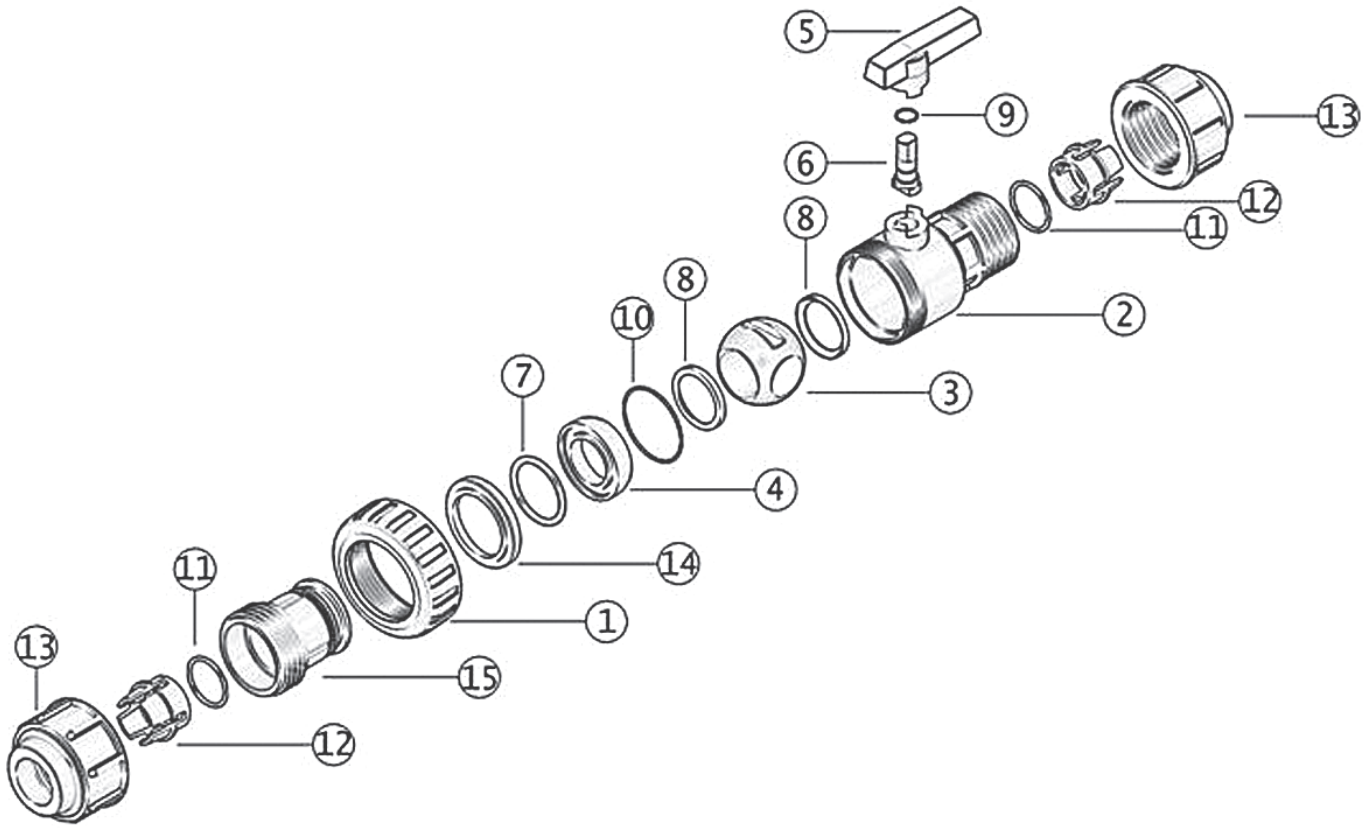
1V335

Single union grey PVC ball valve, provided with compression fittings to connect PE ISO metric pipes to both sides, with free ball support.
EPDM seals.
PE ball seats.

D	PN	DN	C	E	H	B	Z	g	Code
20	16	15	148	50	50	57	67	156	1V33520000W
25	16	20	165	59	55	66	77	235	1V33525000W
32	16	25	188	68	63	75	83	365	1V33532000W

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 1)	**6**	Stem (PVC-U - 1)	**11**	Compr. fitting O-ring (NBR - 2)
2	Body (PVC-U - 1)	**7**	Socket O-ring(EPDM - 1)	**12**	Clinching ring (POM - 2)
3	Body (PVC-U - 1)	**8**	Ball seat (PE - 2)	**13**	Compr. fitting nut (PP - 2)
4	Support (PVC-U - 1)	**9**	Stem O-ring (EPDM - 1)	**14**	Split ring (PVC-U - 1)
5	Handle (PVC-U - 1)	**10**	Radial O-ring(EPDM - 1)	**15**	Body compr. fitting (PVC-U - 1)

Inside brackets are indicated the material and the quantity supplied for each component.

930

Astore 930 is a three-way ball valve for mixing or diverting fluids, with free ball support and radial disassembly.

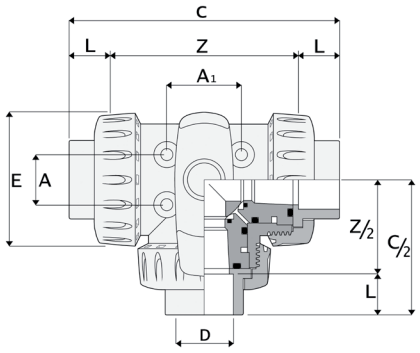
THREE-WAY BALL VALVE FOR MIXING OR DIVERTING FLUIDS

- Versions available: ISO metric (1V930) and BS standard (3V930) plain solvent weld socket, BSP female threaded socket (1V931).
- Radial disassembly of the valve on all three connections, T- bore ball.
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	Three-way grey PVC ball valve, with free ball support
Size range	DN 15 ÷ 50
Nominal pressure	PN 10 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO metric (model 1V930), BS standard (model 3V930)
	Thread: BSP standard female (model 1V931)
Valve material	PVC-U
Seal material	EPDM (O-ring) PTFE (ball seats)
Control options	Manual control

DN 15 ÷ 50

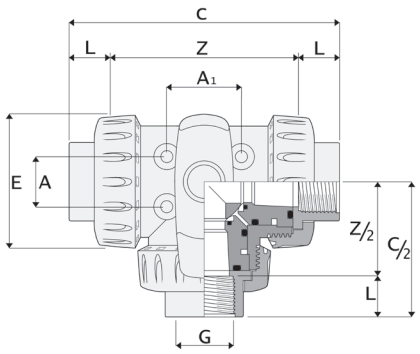
DIMENSIONS



1V930

Three-way grey PVC ball valve, ISO metric plain solvent weld socket, with free ball support and radial disassembly.
T bore ball.
EPDM seals.
PTFE ball seats.

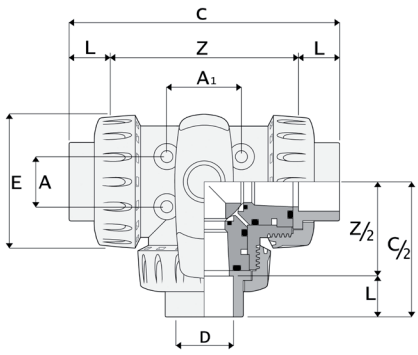
D	PN	DN	H	B	E	L	Z	C	H1	A1	A	g	Code
20	10	15	52	66	53	16	76	108	27,5	24	24	245	1V93002000
25	10	20	61	77	62	19	90	128	32,5	31	25	385	1V93002500
32	10	25	68	88	71	22	100	144	36,5	40	27	560	1V93003200
40	10	32	76	102	84	26	121	173	43	41	32	875	1V93004000
50	10	40	91	117	98	31	135	197	51,5	53	28	1290	1V93005000
63	10	50	107	140	117	38	167	243	59,5	58	35	2085	1V93006300



1V931

Three-way grey PVC ball valve, BSP female threaded socket, with free ball support and radial disassembly.
T bore ball.
EPDM seals.
PTFE ball seats.

D	PN	DN	H	B	E	L	Z	C	H1	A1	A	g	Code
1/2"	10	15	52	66	53	15	86	116	27,5	24	24	245	1V93102000
3/4"	10	20	61	77	62	16	98	130	32,5	31	25	385	1V93102500
1"	10	25	68	88	71	19	113	151	36,5	40	27	560	1V93103200
1"1/4	10	32	76	102	84	22	136	180	43	41	32	875	1V93104000
1"1/2	10	40	91	117	98	22	145	189	51,5	53	28	1290	1V93105000
2"	10	50	107	140	117	26	178	230	59,5	58	35	2085	1V93106300



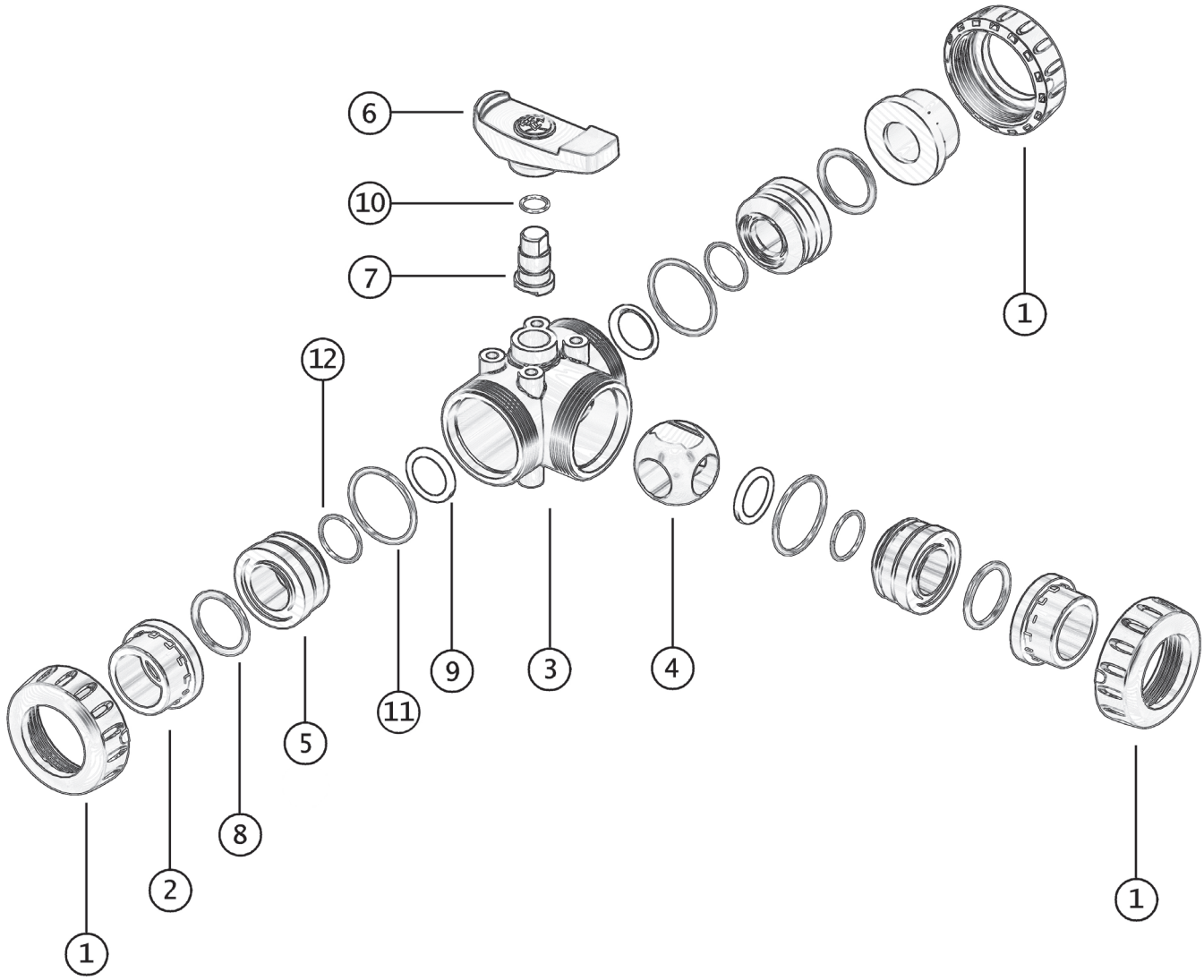
3V930

Three-way grey PVC ball valve, BS Standard plain solvent weld socket, with free ball support and radial disassembly.
T bore ball.
EPDM seals.
PTFE ball seats.

D	PN	DN	H	B	E	L	Z	C	H1	A1	A	g	Code
1/2"	10	15	52	66	53	16	74	108	27,5	24	24	245	3V93002000
3/4"	10	20	61	77	62	19	90	128	32,5	31	25	385	3V93002500
1"	10	25	68	88	71	22	100	144	36,5	40	27	560	3V93003200
1"1/4	10	32	76	102	84	26	121	173	43	41	32	875	3V93004000
1"1/2	10	40	91	117	98	30	137	197	51,5	53	28	1290	3V93005000
2"	10	50	107	140	117	36	171	243	59,5	58	35	2085	3V93006300

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 3)	**5**	Support for ball seat (PVC-U - 3)	**9**	Ball steam (PTFE - 3)
2	Union end (PVC-U - 3)	**6**	handle (PVC-U - 1)	**10**	Stem O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**7**	Stem (PVC-U - 1)	**11**	Radial O-ring (EPDM - 3)
4	Ball (PVC-U - 1)	**8**	Socket O-ring (EPDM - 3)	**12**	O-ring for ball seat (EPDM - 3)

Inside brackets are indicated the material and the quantity supplied for each component.

800

Astore 800 is a butterfly valve for water supply systems.

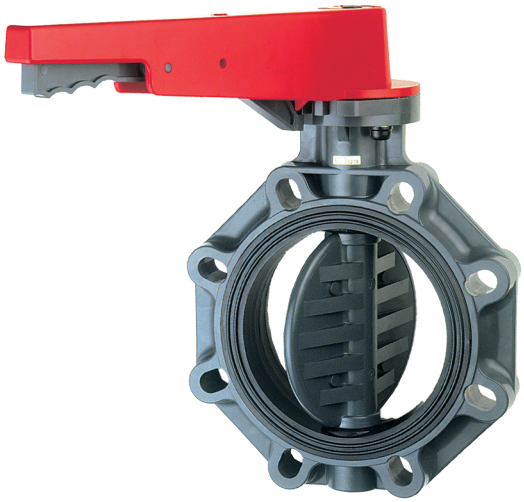
BUTTERFLY VALVE FOR WATER SUPPLY SYSTEMS

- Customization system consisting of transparent protective cap and label plate.

Technical specifications	
Construction	Grey PVC butterfly valve
Size range	DN 40÷300
Nominal pressure	DN 40÷50: PN16 with water at 20°C DN 65÷200: PN10 with water at 20°C DN 250: PN6 with water at 20°C DN 300: PN4 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Flanging system:** EN ISO 1452, EN ISO 15493, DIN 2501, ISO 7005-1, EN 1092-1, ANSI B16.5 Cl.150
Valve and disc material	PVC-U
Shaft material	Zinc plated steel
Liner material	EPDM
Control options	Manual control (handle: DN 40÷200; gear box: DN 250÷300)

DN 40 ÷ 65

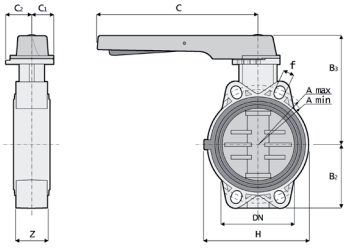
DN 80 ÷ 150



DN 200

DN 250 ÷ 300

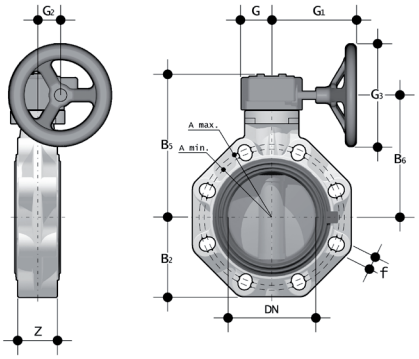
DIMENSIONS



1V800

Grey PVC butterfly valve.
Handle manual control.
EPDM liner.
Zinc plated steel stem.

D	PN	DN	B2	B3	C	C1	C2	H	Z	A min	A max	F	g	n°holes	Torque in N/m	Code
50	10	40	60	136	175	45	42	132	33	93	109	19	827	4	8	1V80050000W
63	10	50	70	143	175	45	42	147	43	108	124	19	1012	4	10	1V80063000W
75	10	65	80	168	175	45	45	165	46	128	144	19	1420	4	12	1V80075000W
90	10	80	90	182	250	45	45	130	49	145	159	19	1640	4	25	1V80090000W
110	10	100	105	196	250	45	45	150	56	165	190	19	1990	4	45	1V80011000W
140	10	125	121	215	335	45	45	185	64	204	215	23	3030	4	60	1V80015000W
160	10	150	132	229	335	45	45	210	70	230	242	23	3730	4	90	1V80017000W
225	10	200	161	309	425	65	82	325	71	280	298	23	8240	8	140	1V80023000



1V800

Grey PVC butterfly valve.
Gear box manual control.
EPDM liner.
Zinc plated steel stem.

D	PN	DN	B2	B5	B6	G	G1	G2	G3	Z	A min	A max	F	g	n°holes	Torque in N/m	Code
280*	6	250	210	317	281	88	236	76	250	114	335	362	25	18600	12	140	1V80028000
315*	4	300	245	374	338	88	236	76	250	114	390	432	29	25600	12	200	1V80033000

ACCESSORIES

24 V AC/DC ELECTRICAL ACTUATION KIT

24 V AC/DC eletrical actuation kit for V800 butterfly valves

d	Code
50÷75	KIT800CE075V24
90-110	KIT800CE110V24
140-160	KIT800CE160V24
225	KIT800CE225V24
280-315	KIT800CE315V24

90-240 V AC ELECTRICAL ACTUATION KIT

90-240 V AC eletrical actuation kit for V800 butterfly valves

d	Code
50÷75	KIT800CE075V220
90-110	KIT800CE110V220
140-160	KIT800CE160V220
225	KIT800CE225V220
280-315	KIT800CE315V220

DA PNEUMATICAL ACTUATION KIT

Double action pneumatical actuation kit for V800 butterfly valves

d	Code
50÷75	KIT800CPDA075
90	KIT800CPDA090
110	KIT800CPDA110
140	KIT800CPDA140
160	KIT800CPDA160
225	KIT800CPDA225
280-315	KIT800CPDA315

SA PNEUMATICAL ACTUATION KIT

Single action pneumatical actuation kit for V800 butterfly valves

d	Code
50	KIT800CPSA050
63-75	KIT800CPSA075
90	KIT800CPSA090
110	KIT800CPSA110
140	KIT800CPSA140
160	KIT800CPSA160
225	KIT800CPSA225
280	KIT800CPSA280
315	KIT800CPSA315

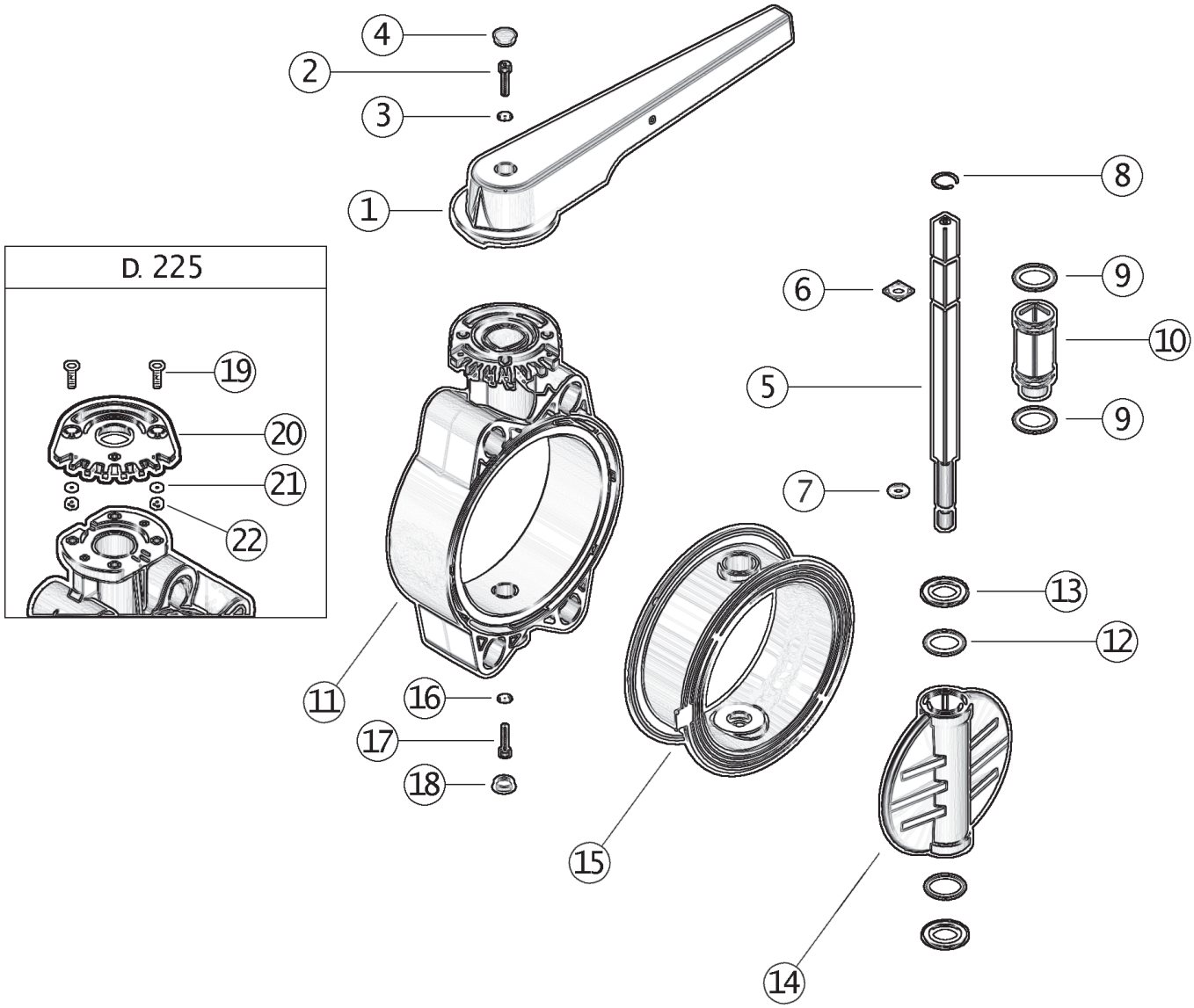
GEAR BOX KIT

Gear box kit for V800 butterfly valve including: gear box, bolts and, if necessary, the square adaptor

d	DN	Code
75÷110	65-100	GEAR01V800
140-160	125-150	GEAR02V800
225	200	GEAR03V800
280-315	250-300	GEAR04V800

COMPONENTS

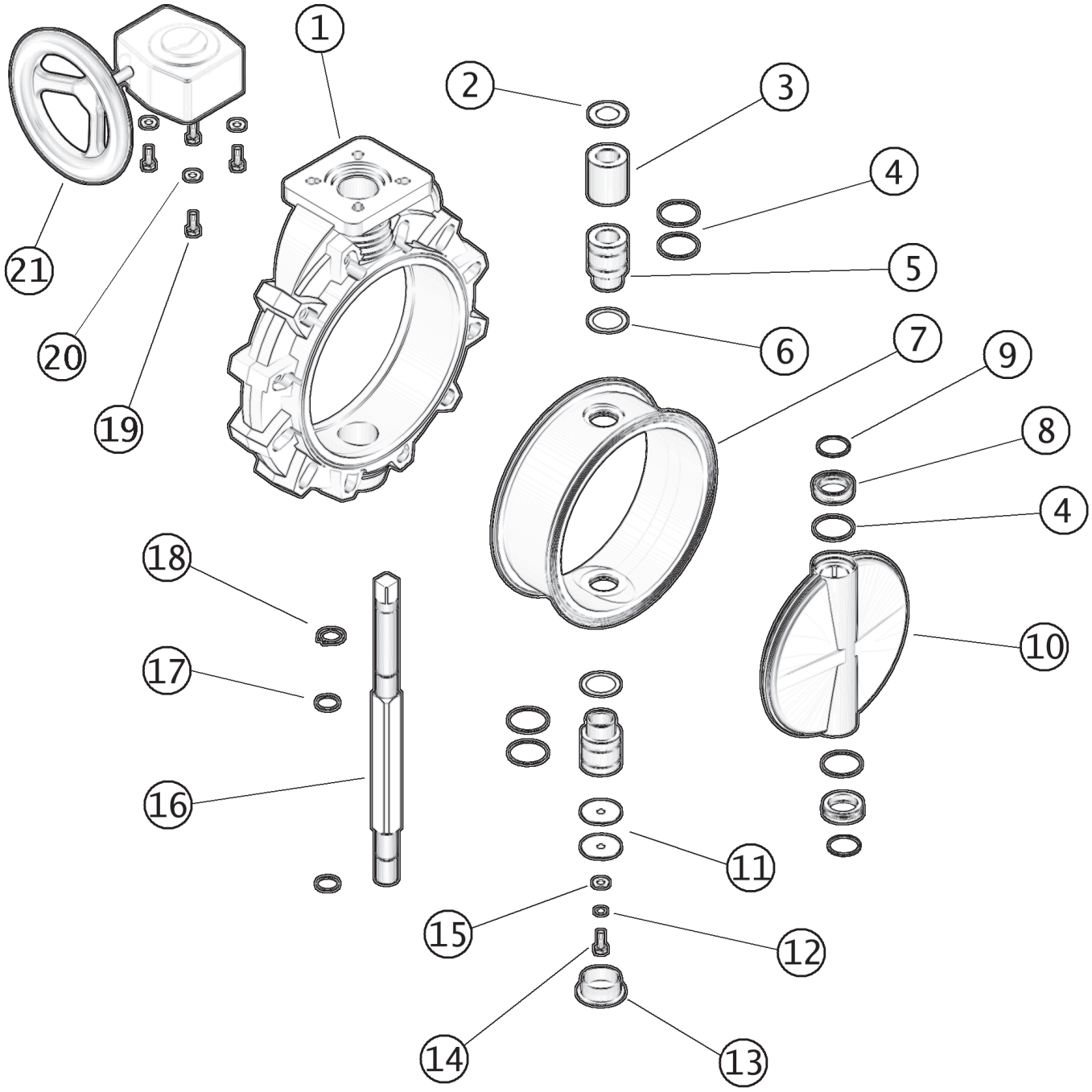
EXPLODED VIEW DN 40÷200



1	Handle (PVC-U - 1)	**9**	Bush O-ring (EPDM - 2)	**17**	Screw (Stainless steel - 1)
2	Screw (Stainless steel - 1)	**10**	Bush (Nylon - 1)	**18**	Protection cap (PE - 1)
3	Washer (Stainless steel- 1)	**11**	Body (PVC-U - 1)	**19**	Screw (Stainless steel - 2)
4	Protection cap (PE - 1)	**12**	Disc O-ring (EPDM - 2)	**20**	Pad (PVC-U - 1)
5	Shaft (Zinc plated steel - 1)	**13**	Anti-friction ring (PTFE - 2)	**21**	Washer (Stainless steel - 2)
6	Shaft gasket (EPDM - 1)	**14**	Disc (PVC-U - 1)	**22**	Nut (Stainless steel - 2)
7	Shaft O-ring (EPDM - 1)	**15**	Gasket (EPDM - 1)		
8	Seeger ring (Stainless steel - 1)	**16**	Washer (Stainless steel - 1)		

Inside brackets are indicated the material and the quantity supplied for each component.

EXPLODED VIEW DN 250÷300



1	Body (PVC-U - 1)	**8**	Anti-friction ring (PTFE - 2)	**15**	Washer (Stainless steel - 1)
2	Washer (Stainless steel - 1)	**9**	Disc O-ring (EPDM - 2)	**16**	Shaft (Zinc plated steel - 1)
3	Bush (PP - 1)	**10**	Disc (PVC-U - 1)	**17**	O-ring shaft (EPDM - 2)
4	BushO-ring (EPDM - 4)	**11**	Washer (Stainless steel - 2)	**18**	Seeger ring (Stainless steel - 1)
5	Bush for O-ring (PP - 2)	**12**	Washer (Stainless steel - 1)	**19**	Screw (Stainless steel - 4)
6	Washer (Stainless steel - 2)	**13**	Protection cap (PE - 1)	**20**	Washer (Stainless steel - 4)
7	Primary liner (EPDM - 1)	**14**	Screw (Stainless steel - 1)	**21**	Gear box (1)

Inside brackets are indicated the material and the quantity supplied for each component.

230

Astore 230 is a true union spring check valve, radially disassemblable and installable in horizontal or in vertical position, which allows the flow only in one direction.

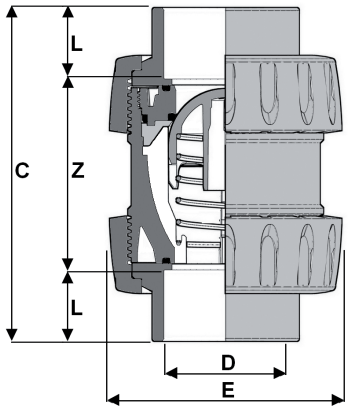
TRUE UNION SPRING CHECK VALVE

- Versions available: ISO metric (1V230) and BS standard (3V230) plain solvent weld socket, BSP female threaded socket (1V231).
- Customization system consisting of transparent protective cap and label tag (DN 65-100).
- Stainless Steel AISI 316 spring.
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	True union grey PVC spring check valve, radially disassemblable
Size range	DN 10 ÷ 100
Nominal pressure	DN 10÷50: PN16 with water at 20°C DN 65÷100: PN10 with water at 20°C
Temperature range	0 °C ÷ 60 °C
Minimum sealing pressure	0,08 bar
Coupling standards	**Solvent welding:** ISO metric (model 1V230) and BS standard (model 3V230)
	Thread: Standard BSP (Model 1V231)
Valve material	PVC-U
Seal material	EPDM (O-ring)
Control options	Manual control

DN 10 ÷ 100

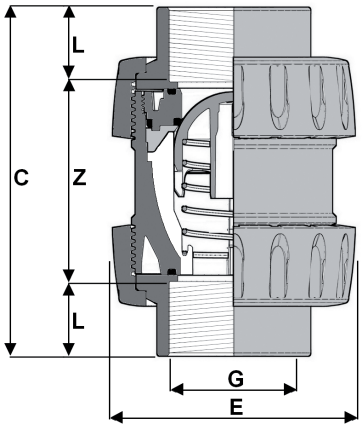
DIMENSIONS



1V230

True union grey PVC spring check valve, ISO metric plain solvent weld socket.
Stainless Steel AISI 316 spring.
EPDM seals.

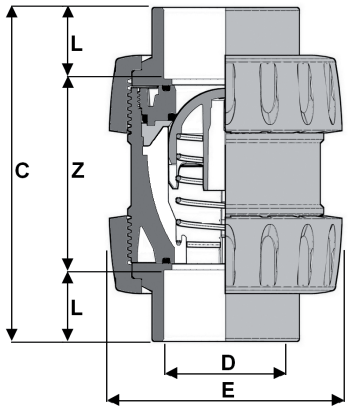
D	PN	DN	L	Z	C	E	g	Code
16	16	10	14	54	82	53	100	1V23001600
20	16	15	16	50	82	53	105	1V23002000
25	16	20	19	53	91	62	150	1V23002500
32	16	25	22	59	103	71	250	1V23003200
40	16	32	26	68	120	84	370	1V23004000
50	16	40	31	77	139	98	590	1V23005000
63	16	50	38	98	174	117	990	1V23006300
75	16	65	44	123	211	157	2480	SSEIV075E
90	16	80	51	146	248	174	3090	SSEIV090E
110	16	100	61	161	283	212	5370	SSEIV110E



1V231

True union grey PVC spring check valve, BSP female threaded socket.
Stainless Steel AISI 316 spring.
EPDM seals.

G	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	13	56	82	53	100	1V23101600
1/2"	16	15	17	56	90	53	105	1V23102000
3/4"	16	20	19	55	93	62	150	1V23102500
1"	16	25	22	66	110	71	250	1V23103200
1"1/4	16	32	24	79	127	84	370	1V23104000
1"1/2	16	40	24	83	131	98	590	1V23105000
2"	16	50	29	103	161	117	990	1V23106300
2"1/2	16	65	30,2	150,6	211	157	2480	SSEFV212E
3"	16	80	33,3	181,4	248	174	3090	SSEFV300E
4"	16	100	39,3	204,4	283	212	5370	SSEFV400E



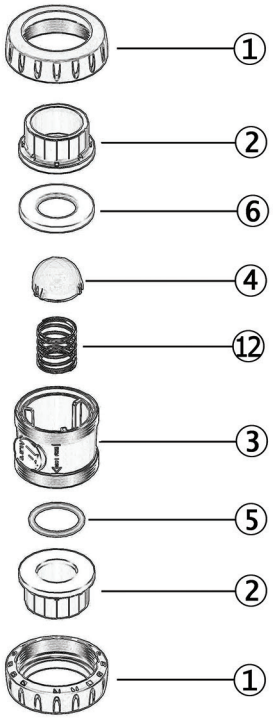
3V230

True union grey PVC spring check valve, BS Standard plain solvent weld socket.
Stainless Steel AISI 316 spring.
EPDM seals.

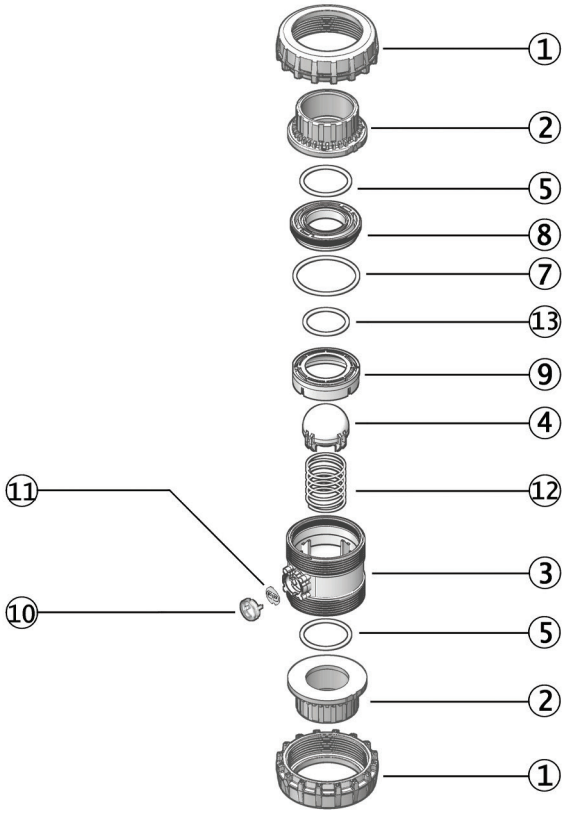
D	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	15	52	82	53	100	3V23001600
1/2"	16	15	17	48	82	53	105	3V23002000
3/4"	16	20	19	53	91	62	150	3V23002500
1"	16	25	22	59	103	71	250	3V23003200
1"1/4	16	32	26	68	120	84	370	3V23004000
1"1/2	16	40	31	77	139	98	590	3V23005000
2"	16	50	38	98	174	117	990	3V23006300
2"1/2	16	65	44	123	211	157	2480	SSEIV075E
3"	16	80	51	146	248	174	3090	SSELV300E
4"	16	100	63	157	283	212	5370	SSELV400E

COMPONENTS

EXPLODED VIEW



DN 10 ÷ 50



DN 65 ÷ 100

1	Nut (PVC-U - 2)	**6**	Piston gasket (EPDM - 1)	**11**	Tag holder (PVC-U - 1)
2	Union end (PVC-U - 2)	**7**	Radial seal O-ring (EPDM - 1)	**12**	Spring (Stainless Steel AISI 316 - 1)
3	Body (PVC-U - 1)	**8**	Support (PVC-U - 1)	**13**	Piston O-ring (EPDM - 1)
4	Piston (PVC-U - 1)	**9**	Packing presser ring (PVC-U - 1)		
5	Socket O-ring (EPDM - 1)	**10**	Transparent service plug (PVC-U - 1)		

Inside brackets are indicated the material and the quantity supplied for each component.

CROV

Astore CROV is a clapet check valve, designed to be installed between collars and flanges, which allows the flow only in one direction.

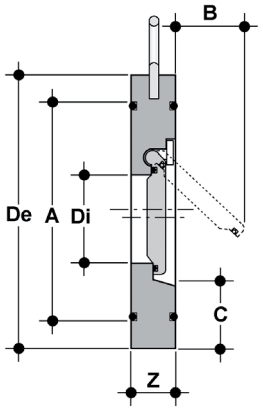
CLAPET CHECK VALVE

- Connection with pipes with maximum pressure rating PN 10

Technical specifications	
Construction	Grey PVC clapet check valve
Size range	DN 40 ÷ 300
Nominal pressure	PN5 bar with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Flanging system:** DIN 2501 PN 10, EN ISO 1452,EN ISO 15493
Reference standards	**Construction criteria:** EN ISO 16137 EN ISO 1452, EN ISO 15493
	Test methods and requirements: ISO 9393
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
Body and disc material	PVC-U
Seal material	EPDM

DN 40 ÷ 300

DIMENSIONS



CROV

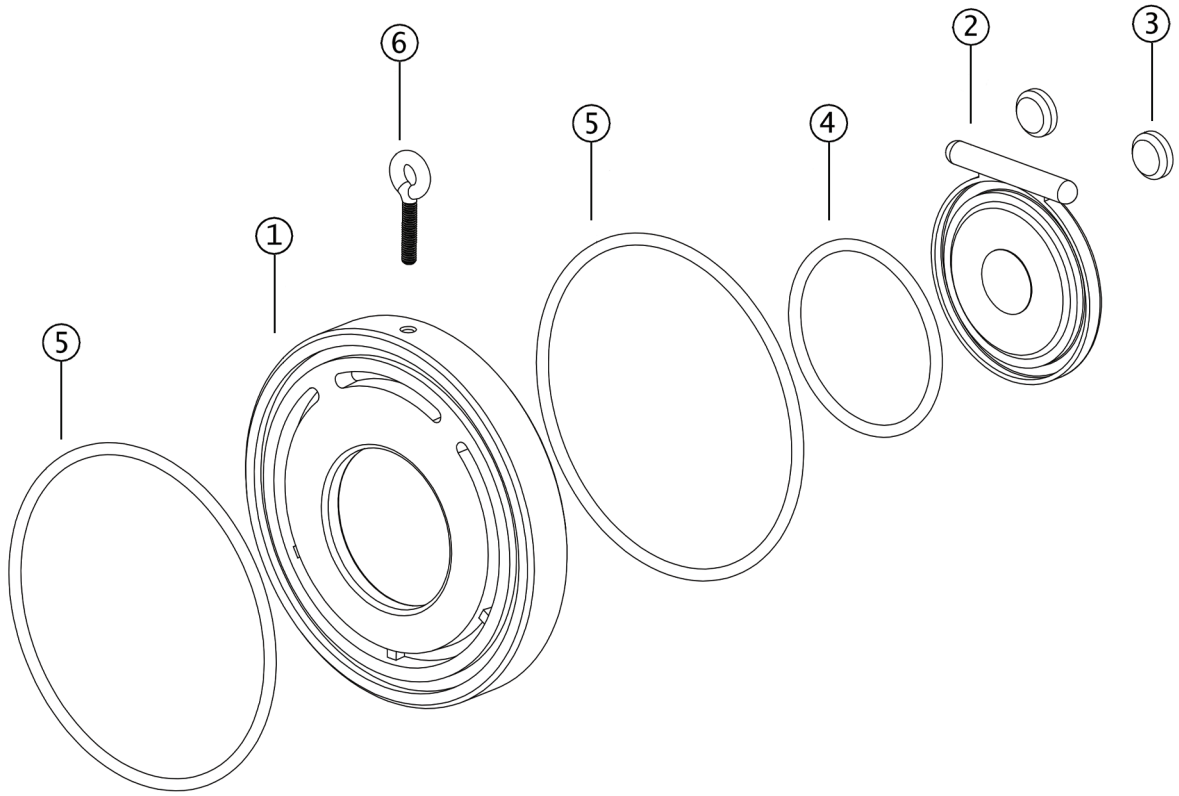
PVC-U/EPDM clapet check valve

D	PN	DN	De	Z	Di	A	B	C	g	A(hor) Bar	A(vert) Bar	B Bar	Code
50	10	40	95	16	22	72	25	28	160	0,001	0,002	0,3	CROV050E
63	10	50	109	18	32	86	37	29	260	0,001	0,003	0,3	CROV063E
75	10	65	129	20	40	105	50	31	330	0,001	0,003	0,3	CROV075E
90	10	80	144	20	54	119	61	32	400	0,001	0,003	0,2	CROV090E
110	10	100	164	23	70	146	77	31	560	0,001	0,003	0,2	CROV110E
140	10	125	195	23	92	173	94	35	760	0,001	0,003	0,2	CROV140E
160	10	150	220	26	105	197	100	40	1120	0,001	0,005	0,2	CROV160E
225	10	200	275	34	154	225	152	38	2130	0,001	0,005	0,2	CROV225E
280	10	250	330	40	192	312	180	41	3540	0,001	0,008	0,2	CROV280E
315	10	300	380	45	227	363	215	41	5350	0,001	0,008	0,2	CROV315E

A - Minimum pressure for valve opening
B - Minimum ppressure for valve sealing

COMPONENTS

EXPLODED VIEW



1	Body (PVC-U - 1)	**3**	Disc holder (PVC-U - 2)	**5**	O-ring body (EPDM - 2)
2	Disc (PVC-U - 1)	**4**	O-ring disc (EPDM - 1)	**6**	Eyelet (Zinc plated carbon steel- 1)

Inside brackets are indicated the material and the quantity supplied for each component.

210

Astore 210 is a true union foot ball valve, radially disassemblable and installable in vertical position, which allows the flow only in one direction.

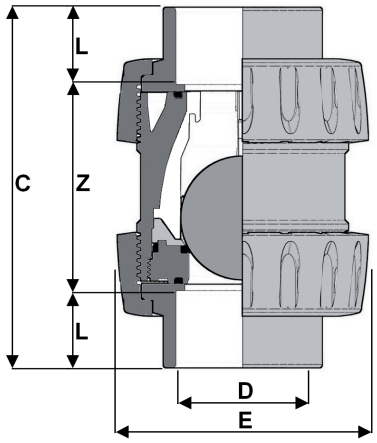
TRUE UNION FOOT BALL VALVE

- Versions available: ISO metric (1V210) and BS standard (3V210) plain solvent weld socket, BSP female threaded socket (1V211).
- Customization system consisting of transparent protective cap and label tag (DN 65-100).
- Visual indication on the body for correct installation.
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	True union foot spheric ball valve, radially disassemblable
Size range	DN 10 ÷ 100
Nominal pressure	DN 10÷50: PN16 with water at 20 °C DN 65÷100: PN10 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO metric (model 1V210) and BS standard (model 3V210)
	Thread: BSP standard female (model 1V211).
Minimum sealing pressure	0,2 bar
Valve material	PVC-U
Seal material	EPDM (O-Ring and ball seats)
Control options	Manual control

DN 10 ÷ 100

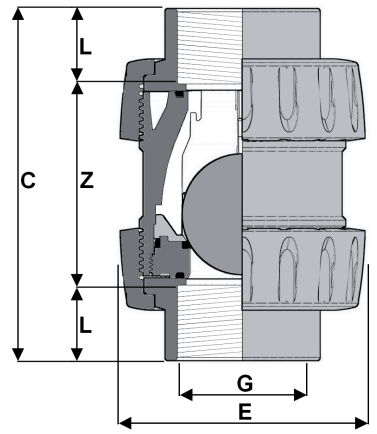
DIMENSIONS



1V210

True union grey PVC foot spheric ball valve, ISO metric plain solvent weld socket.
EPDM seals.

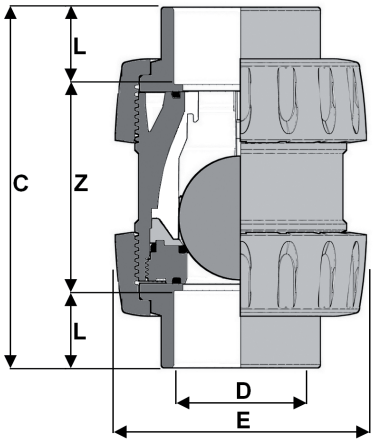
D	PN	DN	L	Z	C	E	g	Code
16	16	10	14	54	82	53	100	1V21001600
20	16	15	16	50	82	53	105	1V21002000
25	16	20	19	53	91	62	150	1V21002500
32	16	25	22	59	103	71	250	1V21003200
40	16	32	26	68	120	84	370	1V21004000
50	16	40	31	77	139	98	590	1V21005000
63	16	50	38	98	174	117	990	1V21006300
75	16	65	44	123	211	157	2605	SXEIV075E
90	16	80	51	146	248	174	3300	SXEIV090E
110	16	100	61	161	283	212	5770	SXEIV110E



1V211

True union grey PVC foot spheric ball valve, BSP female threaded socket.
EPDM seals.

G	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	13	56	82	53	100	1V21101600
1/2"	16	15	17	56	90	53	105	1V21102000
3/4"	16	20	19	55	93	62	150	1V21102500
1"	16	25	22	66	110	71	250	1V21103200
1"1/4	16	32	24	79	127	84	370	1V21104000
1"1/2	16	40	24	83	131	98	590	1V21105000
2"	16	50	29	103	161	117	990	1V21106300
2"1/2	16	65	30,2	150,6	211	157	2605	SXEFV212E
3"	16	80	33,3	181,4	248	174	3300	SXEFV300E
4"	16	100	39,3	204,4	283	212	5770	SXEFV400E



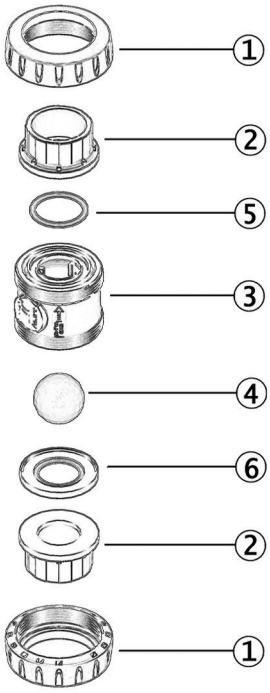
3V210

True union grey PVC foot spheric ball valve, BS Standard plain solvent weld socket. EPDM seals.

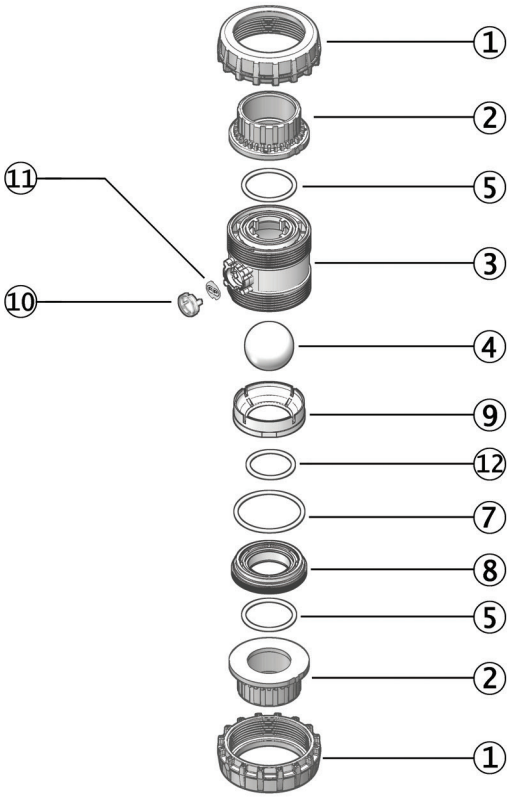
D	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	15	52	82	53	100	3V21001600
1/2"	16	15	17	48	82	53	105	3V21002000
3/4"	16	20	19	53	91	62	150	3V21002500
1"	16	25	22	59	103	71	250	3V21003200
1"1/4	16	32	26	68	120	84	370	3V21004000
1"1/2	16	40	31	77	139	98	590	3V21005000
2"	16	50	38	98	174	117	990	3V21006300
2"1/2	16	65	44	123	211	157	2605	SXEIV075E
3"	16	80	51	146	248	174	3300	SXELV300E
4"	16	100	61	157	283	212	5770	SXELV400E

COMPONENTS

EXPLODED VIEW



DN 10 ÷ 50



DN 65 ÷ 100

1	Nut (PVC-U - 2)	**6**	Ball seat (EPDM - 1)	**11**	Tag holder (PVC-U - 1)
2	Union end (PVC-U - 2)	**7**	Radial O-ring (EPDM - 1)	**12**	Ball O-ring (EPDM - 1)
3	Body (PVC-U - 1)	**8**	Support (PVC-U - 1)		
4	Ball (PVC-U - 1)	**9**	Packing presser ring (PVC-U - 1)		
5	Socket O-ring (EPDM - 2)	**10**	Transparent service plug (PVC-U - 1)		

Inside brackets are indicated the material and the quantity supplied for each component.

220

Astore 220 is a true union air release ball valve, radially disassemblable and installable in vertical position, which allows the ejection of air from the system.

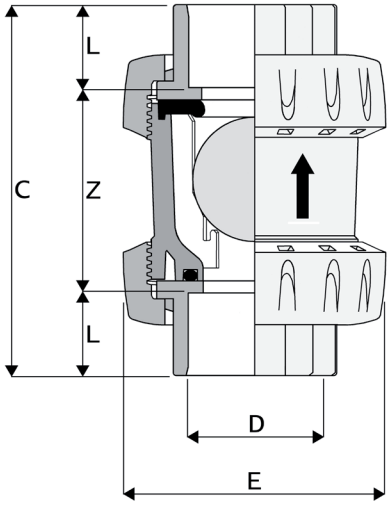
TRUE UNION AIR RELEASE BALL VALVE

- Versions available: ISO metric (1V220) and BS standard (3V220) plain solvent weld socket, BSP female threaded socket (1V221).
- Visual indication on the body for correct installation.
- Available to be produced in other international standards (ASTM, JIS, NPT) upon request.

Technical specifications	
Construction	True union grey PVC air release spheric ball valve, radially disassemblable
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** ISO metric (model 1V220), BS standard (model 3V220)
	Thread: BSP (model 1V221)
Valve material	PVC-U
Seal material	EPDM (O-Ring and ball seats)
Control options	Manual control

DN 10 ÷ 50

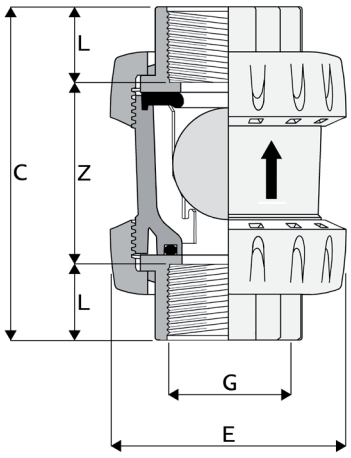
DIMENSIONS



1V220

True union grey PVC air release spheric ball valve, ISO metric plain solvent weld socket.
EPDM seals.

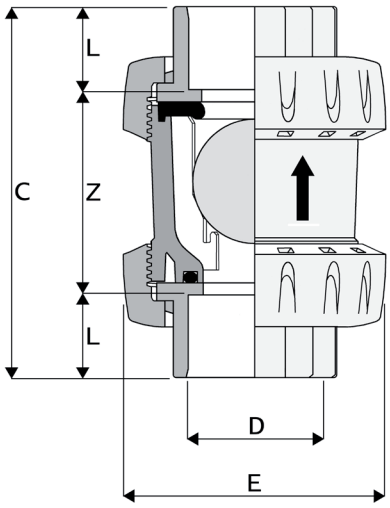
D	PN	DN	L	Z	C	E	g	Code
16	16	10	14	54	82	53	95	1V22001600
20	16	15	16	50	82	53	100	1V22002000
25	16	20	19	53	91	62	140	1V22002500
32	16	25	22	59	103	71	230	1V22003200
40	16	32	26	68	120	84	350	1V22004000
50	16	40	31	77	139	98	560	1V22005000
63	16	50	38	98	174	117	950	1V22006300



1V221

True union grey PVC air release spheric ball valve, BSP female threaded socket.
EPDM seals.

G	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	13	56	82	53	95	1V22101600
1/2"	16	15	17	56	90	53	100	1V22102000
3/4"	16	20	19	55	93	62	140	1V22102500
1"	16	25	22	66	110	71	230	1V22103200
1"1/4	16	32	24	79	127	84	350	1V22104000
1"1/2	16	40	24	83	131	98	560	1V22105000
2"	16	50	29	103	161	117	950	1V22106300



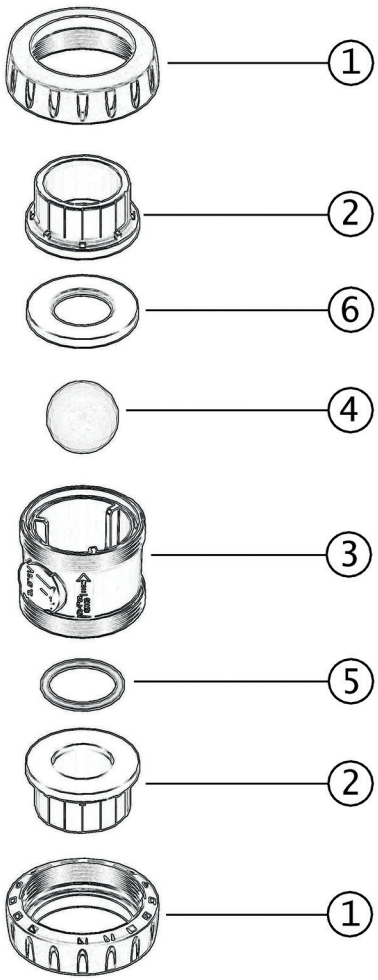
3V220

True union grey PVC air release spheric ball valve, BS Standard plain solvent weld socket. EPDM seals.

D	PN	DN	L	Z	C	E	g	Code
3/8"	16	10	15	52	82	53	95	3V22001600
1/2"	16	15	17	48	82	53	100	3V22002000
3/4"	16	20	19	53	91	62	140	3V22002500
1"	16	25	22	59	103	71	230	3V22003200
1"1/4	16	32	26	68	120	84	350	3V22004000
1"1/2	16	40	31	77	139	98	560	3V22005000
2"	16	50	38	98	174	117	950	3V22006300

COMPONENTS

EXPLODED VIEW



1	Nut (PVC-U - 2)	**3**	Body (PVC-U - 1)	**5**	Socket O-ring (EPDM - 1)
2	Union end (PVC-U - 2)	**4**	Ball (PP - 1)	**6**	Ball seat (EPDM - 1)

Inside brackets are indicated the material and the quantity supplied for each component.