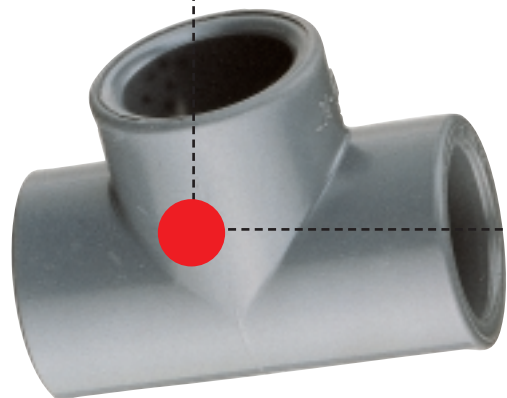
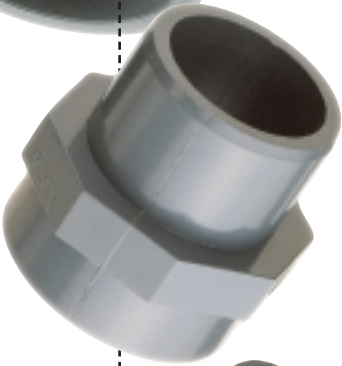
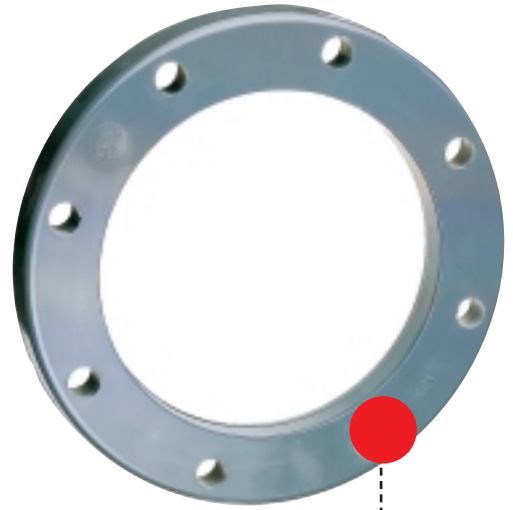


CATALOGUE  
PVC-U AND ABS  
IMPERIAL  
PIPES AND FITTINGS



**ASTORE**

THERMOPLASTIC PIPEWORK SYSTEMS

FOUNDED IN 1970, ASTORE HAS AND CONTINUES TO DEVELOP ADVANCED TECHNIQUES IN THE PRODUCTION OF THERMOPLASTIC PRESSURE FITTINGS AND VALVES.

SPECIALISTS IN THE SUPPLY OF COST-EFFECTIVE PIPE SYSTEMS TO A WIDE RANGE OF MARKET SECTORS, ASTORE HAVE THE ABILITY TO BE FLEXIBLE AND RESPONSIVE TO THE DEMANDS OF OUR CUSTOMERS.

AS AN INDICATION OF COMMITMENT TO QUALITY MANUFACTURE, ASTORE PVC-U AND ABS FITTINGS AND

PIPEWORK ARE UK WATER REGULATIONS ADVISORY SCHEME APPROVED. THE ITALIAN INSTITUTE OF PLASTICS (I.I.P.) HAS GRANTED CERTIFICATES OF CONFORMITY FOR THE ASTORE PRODUCTION SYSTEMS IN COMPLIANCE WITH UNI EN ISO 9002 (CERTIFICATE No 354).

ASTORE PRODUCTS ARE AVAILABLE VIA A NETWORK OF APPROVED STOCKISTS IN THE UK, SERVICED BY OUR CENTRAL SALES AND DISTRIBUTION CENTRE IN CANNOCK IN THE MIDLANDS.

## PRODUCT PROFILE

ASTORE OFFERS A COMPLETE RANGE OF IMPERIAL SIZE PVC-U AND ABS PRESSURE PIPE, FITTINGS AND VALVES (BOTH MANUAL AND ACTUATED) TO SATISFY THE REQUIREMENTS OF INSTALLERS AND SPECIFIERS.

THE SYSTEMS OFFERED BY ASTORE ENCOMPASS A WIDE RANGE OF PIPES AND FITTINGS TO BS IMPERIAL AND THREADED STANDARDS. A COMPLETE RANGE OF PIPELINE ACCESSORIES IN PVC-U AND ABS ARE ALSO AVAILABLE. THE PRODUCTS ARE DIVIDED INTO FOUR GROUPS: PIPES (PAGES 8-9),

IMPERIAL FITTINGS (PAGES 10-13), STUB FLANGES, GASKETS AND PIPE BRACKETS (PAGES 14-17) TRANSITION FITTINGS (PAGES 18-22). FOR FURTHER INFORMATION CONCERNING METRIC AND THREADED FITTINGS PLEASE CONSULT THE RELEVANT ASTORE METRIC PVC-U PRESSURE FITTING CATALOGUE.

THIS USER'S GUIDE SHOWS THE DESIGN AND INSTALLATION TECHNIQUES REQUIRED TO ACHIEVE A SAFE, LONG LASTING, HIGH INTEGRITY SYSTEM.

## STANDARDS AND APPROVALS

ASTORE IMPERIAL SIZE PRODUCTS ARE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

**PVC-U PIPE:** IMPERIAL BS 3505 - 3506, METRIC DIN 8061-2 KIWA 49 (REV.1)

**ABS PIPE:** BS 5391 PART 1

**PVC-U FITTINGS:** IMPERIAL BS 4346 PART 1, THREADED BS 21, ISO R7 DIN 2999

**ABS FITTINGS:** BS 5392 PART 1

ASTORE PVC-U FITTINGS ARE UK WATER REGULATIONS ADVISORY SCHEME APPROVED AND LISTED (LICENCE N° 9902025). ASTORE

ABS FITTINGS ARE UK WATER REGULATIONS ADVISORY SCHEME APPROVED AND LISTED (LICENCE N° 9902026).



## MATERIALS

### PVC-U

UNPLASTICISED POLYVINYL CHLORIDE RAW MATERIAL HAS THE FOLLOWING GENERAL CHARACTERISTICS:

ULTIMATE TENSILE STRENGTH (23°C) .....	53 MPa
TENSILE STRENGTH AT BREAK .....	45.00 MPa
YOUNG'S MODULUS.....	3060 MPa
COMPRESSIVE STRENGTH .....	55 MN/m <sup>2</sup>
POISSON'S RATIO.....	0.35
IZOD IMPACT STRENGTH (23°C) NOTCHED.....	0.08 kJ/m <sup>2</sup>
SPECIFIC GRAVITY .....	1.41
SOFTENING POINT (BS 2782 PART 1 METHOD 120B).....	77°C
LINEAR COEFFICIENT OF THERMAL EXPANSION.....	7.8 (x10 <sup>-5</sup> /°C)
THERMAL CONDUCTIVITY .....	0.147 W/m°C
SPECIFIC HEAT.....	0.84-2.1 kJ/kg.K

THE RAW MATERIAL USED FOR GASKETS AND 'O' RINGS IS EPDM (ETHYLENE PROPYLENE RUBBER).

### ABS

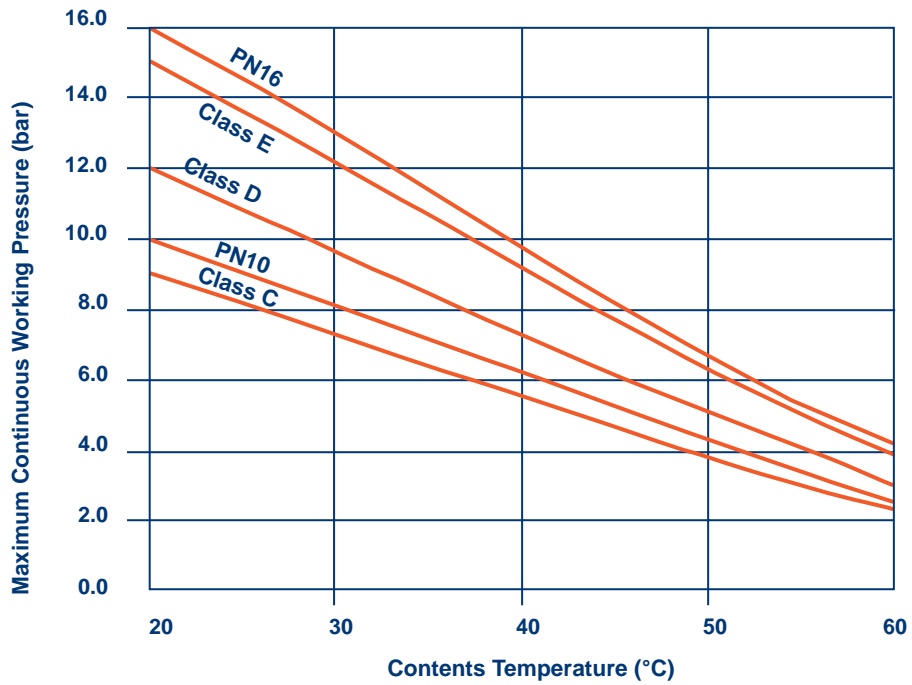
ACRYLONITRILE BUTADIENE STYRENE RAW MATERIAL HAS THE FOLLOWING GENERAL CHARACTERISTICS:

TENSILE STRENGTH AT YIELD (23°C).....	45 MPa
TENSILE MODULUS OF ELASTICITY.....	2200 MPa
POISSON'S RATIO.....	0.35
IZOD IMPACT STRENGTH (23°C) NOTCHED.....	35 kJ/m <sup>2</sup>
CHARPY IMPACT STRENGTH (23°C) NOTCHED.....	20 kJ/m <sup>2</sup>
SPECIFIC GRAVITY.....	1.04
SOFTENING POINT (BS 2782 PART 1 METHOD 120B).....	99°C
LINEAR COEFFICIENT OF THERMAL EXPANSION.....	10.1(x10 <sup>-5</sup> /°C)
THERMAL CONDUCTIVITY.....	0.157 W/m°C
SPECIFIC HEAT.....	2.1 kJ/kg.K
SELF IGNITION TEMPERATURE.....	540°C

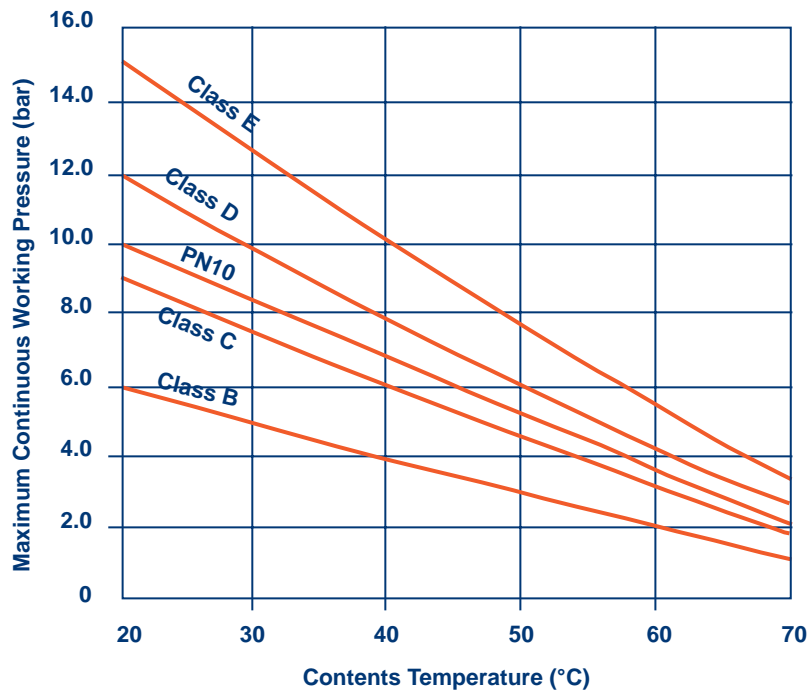
## WORKING CONDITIONS

THE GRAPHS BELOW SHOW THE PRESSURE/TEMPERATURE RELATIONSHIP. PVC-U SYSTEMS SHOULD NOT BE USED AT TEMPERATURES IN EXCESS OF +60°C OR BELOW +5°C, ABS SYSTEMS ARE NOT RECOMMENDED FOR USE AT TEMPERATURES IN EXCESS OF 70°C OR BELOW -40°C.

### PVC-U PRESSURE TEMPERATURE RELATIONSHIP



### ABS PRESSURE TEMPERATURE RELATIONSHIP



**PVC-U PIPEWORK SYSTEMS SHOULD NEVER BE USED FOR COMPRESSED AIR APPLICATIONS.**

WHEN USED CORRECTLY, ASTORE ABS SYSTEMS HAVE A LIFE EXPECTANCY OF 50 YEARS. HOWEVER, THIS CAN BE COMPROMISED BY POOR INSTALLATION PRACTICES OR CONTAMINATION BY SOME SYNTHETIC OILS AND LUBRICANTS. THESE SYNTHETIC OILS AND LUBRICANTS CAN SOMETIMES BE USED IN THE PRIMARY REFRIGERATION CYCLE OR IN THE MANUFACTURE OF SOME REFRIGERATION COMPONENTS AND ARE INCOMPATIBLE FOR USE WITH ABS SYSTEMS. BEFORE ASTORE ABS PIPEWORK IS COUPLED TO ANY HEAT

EXCHANGERS, EVAPORATION COILS OR SIMILAR EQUIPMENT IT IS IMPERATIVE TO CHECK WITH YOUR SUPPLIER TO ENSURE THAT THE EQUIPMENT IS FREE FROM CONTAMINANT OILS BEFORE PROCEEDING. IF THIS IS NOT POSSIBLE, THE COMPONENTS MUST BE THOROUGHLY FLUSHED THROUGH WITH METHYLATED SPIRIT, FOLLOWED BY WATER, TO REMOVE ANY CONTAMINANT OILS FROM THE MANUFACTURING PROCESS BEFORE INSTALLATION.

FOR DETAILS OF THE CHEMICAL RESISTANCE DATA REFER TO THE 'ASTORE GUIDE TO CHEMICAL RESISTANCE' TECHNICAL BROCHURE.

**FLOW CALCULATIONS**

PRESSURE DROP DUE TO FRICTION CAN BE DETERMINED FOR PRACTICAL PURPOSES USING THE FLOW NOMOGRAM OVERLEAF.

THE PRESSURE DROP AT A GIVEN FLOW RATE CAN BE DETERMINED AS FOLLOWS:

1. OBTAIN THE INTERNAL DIAMETER (ID) OF THE PIPE TO BE USED BY REFERRING TO THE PIPE DIMENSION TABLES ON PAGES 8 AND 9.
2. MARK THIS DIAMETER ON THE INTERNAL DIAMETER SCALE.
3. MARK THE REQUIRED FLOW RATE IN LITRES PER SECOND ON FLOW RATE SCALE.

4. DRAW A STRAIGHT LINE CONNECTING THESE TWO POINTS AND EXTEND THROUGH THE FLOW VELOCITY AND THE HYDRAULIC GRADIENT SCALES.

5. THE VELOCITY OF FLOW IN METRES PER SECOND IS DETERMINED FROM THE INTERSECTION WITH THE FLOW VELOCITY SCALE.

6. THE FRICTIONAL HEAD LOSS IN METRES PER 100 METRES OF PIPE CAN THEN BE READ OFF THE HYDRAULIC GRADIENT SCALE.

**PRESSURE DROP IN FITTINGS**

TO DETERMINE THE TOTAL PRESSURE DROP IN THE SYSTEM, THE TOTAL STRAIGHT PIPE LENGTH CALCULATED FOR THE FITTINGS IS ADDED TO THE TOTAL STRAIGHT PIPE LENGTH TO OBTAIN THE TOTAL DROP.

THE PRESSURE DROP IN FITTINGS CAN BE CALCULATED WITH THE FOLLOWING FORMULA:

$$L = K \times ID$$

WHERE L IS THE EQUIVALENT PIPE LENGTH (IN METRES), K IS THE FITTINGS CONSTANT (DIFFERENT FOR EACH KIND OF FITTING), ID IS THE FITTING INTERNAL DIAMETER IN MM.

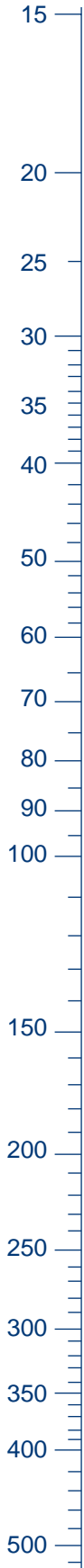
THE FITTINGS CONSTANT (K) IS SHOWN BELOW:

ELBOW 90° . . . . .	0.030
ELBOW 45° . . . . .	0.014
TEE 90° (STRAIGHT THROUGH). . . . .	0.012
TEE 90° (SIDE BRANCH). . . . .	0.060
BENDS 90° . . . . .	0.012
REDUCING BUSH (PER SIZE REDUCTION). . . . .	0.150

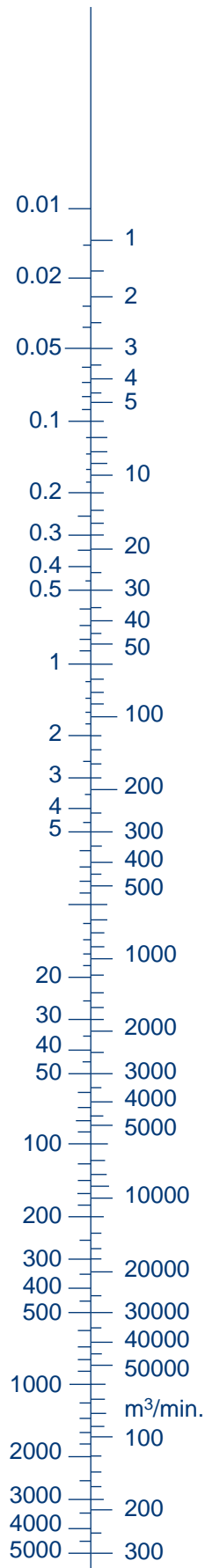
THESE VALUES ARE INCLUDED AS A GUIDE TO FACILITATE CALCULATION OF OVERALL SYSTEM PERFORMANCE AND SHOULD NOT BE USED IN ISOLATION.

# FLOW NOMOGRAM

Internal Diameter  
(mm)



Flow Rate  
L/sec L/min



Flow Velocity  
(m/s)



Hydraulic Gradient  
m/100m pipe

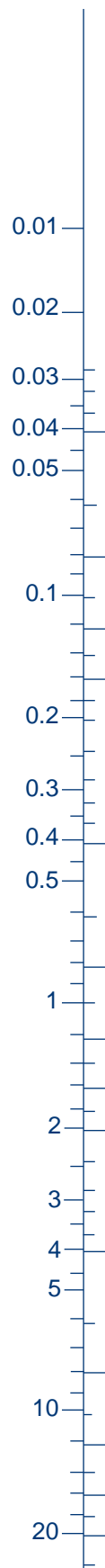


Diagram for water at 10°C

Approx. values only

THE RECOMMENDED DISTANCE BETWEEN SUPPORTS FOR PIPES FIXED IN A HORIZONTAL POSITION AND FILLED WITH WATER IS GIVEN IN THE TABLE BELOW. IF THE CONTENTS HAVE A SPECIFIC GRAVITY GREATER THAN 1, THE DISTANCE MUST BE DECREASED BY DIVIDING THE RECOMMENDED CENTRE DISTANCE BY SPECIFIC GRAVITY.

<b>HORIZONTAL SUPPORT DISTANCE IN METRES</b>			
<b>PIPE SIZE</b>	<b>PVC-U/ABS</b>	<b>PVC-U/ABS</b>	<b>ABS</b>
	<b>AT 20°C</b>	<b>AT 50°C</b>	<b>AT 70°C</b>
3/8"	0.8	0.5	0.4
1/2"	0.9	0.6	0.5
3/4"	1.0	0.7	0.6
1"	1.1	0.8	0.7
1 1/4"	1.2	0.9	0.7
1 1/2"	1.3	1.0	0.7
2"	1.4	1.1	0.8
2 1/2"	1.5	1.2	0.8
3"	1.6	1.2	0.9
4"	1.8	1.3	1.0
5"	2.0	1.5	1.1
6"	2.1	1.6	1.2
8"	2.3	1.8	1.5

NB. FOR VERTICAL PIPES, THE SUPPORT CENTRES SHOWN ABOVE CAN BE INCREASED BY 50%

## JOINTING PROCEDURES

THE SOLVENT CEMENT OPERATES BY CHEMICALLY SOFTENING THE OUTSIDE OF THE PIPE AND THE INSIDE OF THE FITTING. JOINT INTEGRITY IS GREATLY REDUCED IF THESE SURFACES ARE NOT ABSOLUTELY CLEAN AND PROPERLY PREPARED.

- 1) THE PIPE MUST BE CUT CLEAN AND SQUARE. A SUITABLE WHEEL CUTTER WILL ELIMINATE SWarf. A SAW MAY BE USED, HOWEVER THIS WILL CREATE DUST WHICH MAY ENTER THE PIPEWORK SYSTEM.
- 2) FILE A CHAMFER, APPROXIMATELY 3MM X 45°. THIS PREVENTS THE SOLVENT CEMENT LAYER BEING SCRAPED FROM THE SURFACE OF THE FITTING WHEN THE JOINT IS ASSEMBLED.
- 3) MARK THE PIPE A KNOWN DISTANCE FROM THE END AND CLEAR OF THE AREA TO BE ABRADED. THIS SHOULD BE USED TO CHECK THE PIPE PENETRATION INTO THE SOCKET AFTER ASSEMBLY.
- 4) THOROUGHLY ABRAD E THE END OF THE PIPE OVER A LENGTH EQUAL TO DEPTH OF THE FITTING SOCKET, USING CLEAN COARSE EMERY CLOTH.
- 5) THOROUGHLY ABRAD E THE INSIDE SURFACE OF THE FITTING SOCKET.
- 6) CLEAN THOROUGHLY THE ABRADED SURFACES OF PIPE AND FITTINGS USING A CLEAN, LINT FREE CLOTH OR PAPER TOWEL, MOISTENED WITH ASTORE MEK CLEANER.
- 7) USING A CLEAN BRUSH, APPLY THE ASTORE SOLVENT CEMENT TO THE PIPE AND FITTING USING LONGITUDINAL STROKES. THE ABRADED AREAS SHOULD BE COMPLETELY COVERED WITH THE CEMENT. THE AMOUNT REQUIRED WILL VARY WITH PIPE DIAMETER AND THE FIT BETWEEN PIPE AND FITTING, BUT SHOULD BE SUCH IN ALL CASES THAT THE CEMENT IS STILL LIQUID WHEN PIPE AND FITTING ARE ASSEMBLED. IT IS IMPORTANT TO APPLY CEMENT QUICKLY, TO ENABLE ASSEMBLY WITHOUT EXCESSIVE FORCE BEING REQUIRED.

8) IMMEDIATELY AFTER APPLICATION OF CEMENT, PUSH PIPE FULLY HOME INTO THE FITTING. DO NOT TWIST. HOLD THE PIPE AND THE FITTING FOR TIMES VARYING FROM A FEW SECONDS ON SIZES 3/8" TO 1 MINUTE ON SIZES 8" AND ABOVE. APPLICATION OF THE CORRECT AMOUNT OF CEMENT WILL RESULT IN A NEAT BEAD OF CEMENT AT THE EDGE OF THE FITTING AND THE PIPE. EXCESSIVE DEPOSITS INSIDE THE FITTINGS MUST BE AVOIDED AS THESE CAN WEAKEN THE WALL, PARTICULARLY ON SMALL SIZES. WHEN WORKING UNDER COLD CONDITIONS MAKE SURE THE JOINTS ARE FREE FROM FROST AND MOISTURE AND ALLOW EXTRA CURING TIME TO COMPENSATE FOR THE LOWER TEMPERATURE.

9) WIPE OFF EXCESS CEMENT FROM OUTSIDE OF THE JOINT.

THE DRYING TIME FOR JOINTS WILL VARY WITH FIT, AMOUNT OF SOLVENT CEMENT APPLIED, AMBIENT TEMPERATURE AND WORKING PRESSURE. IT IS RECOMMENDED THAT WHENEVER POSSIBLE, JOINTS ARE LEFT TO CURE FOR 24 HOURS BEFORE THE TEST PRESSURE IS APPLIED. HOWEVER, IT IS RECOGNISED THERE WILL BE TIMES WHEN JOINTS WILL NEED TO BE PUT INTO SERVICE WITHIN A FEW HOURS OF BEING MADE. A ROUGH BUT SAFE WORKING GUIDE, WHERE CONTENTS TEMPERATURE WILL NOT EXCEED 20°C, IS 1 HOUR PER BAR FOR SYSTEMS UP TO 4". FOR LARGER SIZES INCREASE THIS TIME TO 1 1/2 HOURS PER BAR. IN ANY EVENT JOINTS SHOULD BE ALLOWED TO CURE FOR A MINIMUM OF 4 HOURS.

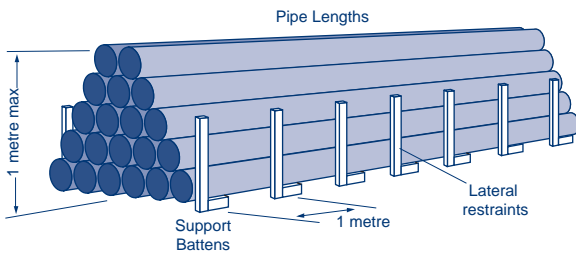
**HANDLING AND STORAGE**

CARE SHOULD BE TAKEN AT ALL STAGES OF HANDLING, TRANSPORTATION AND STORAGE. PIPE MUST BE TRANSPORTED BY A SUITABLE VEHICLE AND PROPERLY LOADED AND UNLOADED, E.G. WHEREVER POSSIBLE MOVED BY HAND OR MECHANICAL LIFTING EQUIPMENT. IT MUST NOT BE DRAGGED ACROSS THE GROUND.

THE STORAGE SHOULD BE FLAT, LEVEL AND FREE FROM SHARP STONES.

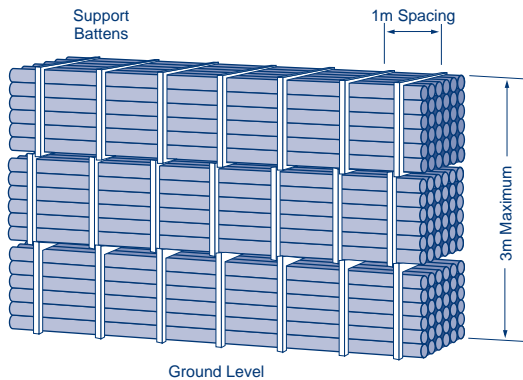
**LENGTHS**

PIPE LENGTHS STORED INDIVIDUALLY SHOULD BE STACKED IN A PYRAMID NOT MORE THAN ONE METRE HIGH, WITH THE BOTTOM LAYER FULLY RESTRAINED BY WEDGES. WHERE POSSIBLE, THE BOTTOM LAYER OF PIPES SHOULD BE LAID ON TIMBER BATTENS AT ONE-METRE CENTRES. ON SITE, PIPES MAY BE LAID OUT INDIVIDUALLY IN STRINGS. (WHERE APPROPRIATE, PROTECTIVE BARRIERS SHOULD BE PLACED WITH ADEQUATE WARNING SIGNS AND LAMPS.)



**BUNDLES**

BUNDLED PACKS OF PIPE SHOULD BE STORED ON CLEAR, LEVEL GROUND WITH THE BATTENS SUPPORTED FROM THE OUTSIDE BY TIMBERS OR CONCRETE BLOCKS. FOR SAFETY, BUNDLED PACKS SHOULD NOT BE STACKED MORE THAN THREE METRES HIGH.



SMALLER PIPES MAY BE NESTED INSIDE LARGER PIPES. SIDE BRACING SHOULD BE PROVIDED TO PREVENT STACK COLLAPSE.

SIMILAR PRECAUTIONS SHOULD BE TAKEN WITH FITTINGS AND THESE SHOULD BE KEPT IN PROTECTIVE WRAPPINGS UNTIL REQUIRED FOR USE.

**WEATHERING**

PROLONGED STORAGE (GREATER THAN 1 MONTH) OR STORAGE IN AREAS WHERE HIGH TEMPERATURE IS ANTICIPATED, THE STACK HEIGHT SHOULD NEVER EXCEED 4 LAYERS OR 1 METRE MAXIMUM HEIGHT. SUCH STACKS SHOULD BE PROTECTED FROM THE EFFECTS OF WEATHERING BY PLACING AN OPAQUE COVERING OVER THEM. IF FIXED TO THE SIDE BRACING THE SHEETS WILL PROVIDE PROTECTED AND SHADED CONDITIONS AND ALLOW A FREE PASSAGE OF AIR AROUND THE PIPES.

WHERE THE PIPES ARE TO BE INSTALLED IN LOCATIONS LIKELY TO BE PERMANENTLY EXPOSED TO PROLONGED PERIODS OF STRONG SUNLIGHT, SUCH AS IN TROPICAL COUNTRIES, THE LIFE CAN BE EXTENDED BY PAINTING THE PIPE WITH HOUSEHOLD GLOSS OR EMULSION. CELLULOSE BASED PAINTS SHOULD ONLY BE USED WITH EXTREME CARE AND CLOSE ATTENTION PAID TO THE MANUFACTURERS INSTRUCTIONS.

**PIPE CONTENTS IDENTIFICATION**

DO NOT PUT SELF-ADHESIVE LABELS DIRECTLY ONTO PIPE SURFACE AS THIS CAN CAUSE STRESS CRACKING. IT IS RECOMMENDED THAT SOME SORT OF BARRIER SUCH AS ALUMINIUM FOIL, IS PLACED BETWEEN THE PIPE AND IDENTIFICATION LABEL.

**TESTING**

IT IS SUGGESTED THAT THE FOLLOWING TEST PROCEDURE BE FOLLOWED, AFTER JOINTS HAVE BEEN ALLOWED TO DRY FOR THE APPROPRIATE MINIMUM TIME (AT LEAST 24 HOURS):

THE SYSTEM SHOULD BE DIVIDED CONVENIENTLY INTO TEST SECTIONS. FILL THE SECTION WITH COLD WATER MAKING SURE THAT NO AIR POCKETS REMAIN. DO NOT PRESSURISE AT THIS STAGE.

CHECK THE SYSTEM FOR LEAKS. IF NO LEAKS ARE APPARENT CHECK FOR AND REMOVE ANY REMAINING AIR. INCREASE PRESSURE UP TO 3 BAR. \*DO NOT PRESSURISE FURTHER AT THIS STAGE.

LEAVE THE SECTION PRESSURISED FOR 10 MINUTES. IF THE PRESSURE DECAYS, INSPECT FOR LEAKS AND RECTIFY AS NECESSARY. IF THE PRESSURE REMAINS CONSTANT, SLOWLY INCREASE THE HYDROSTATIC PRESSURE TO 1½ TIMES THE NOMINAL OPERATING PRESSURE.

LEAVE THE SECTION PRESSURISED FOR A PERIOD NOT EXCEEDING 1 HOUR. DURING THIS TIME THE PRESSURE SHOULD NOT CHANGE.

**CAUTION**

PERSONNEL MUST STAND WELL CLEAR WHEN PRESSURE TESTING SYSTEMS.

SIMILARLY, UNDER NO CIRCUMSTANCES SHOULD PRESSURE TESTS BE CARRIED OUT USING PRESSURISED GASES. SUCH A TEST COULD BE EXTREMELY DANGEROUS AND DOES NOT SERVE ANY USEFUL PURPOSE.

**\*NOTE:**

IF EXTENDED TIMES ARE REQUIRED TO ACHIEVE HYDROSTATIC PRESSURE, EITHER LEAKAGE HAS OCCURRED OR AIR REMAINS IN THE LINE. INSPECT FOR LEAKAGE AND IF NONE IS APPARENT, REDUCE THE PRESSURE AND CHECK FOR TRAPPED AIR WHICH MUST BE REMOVED BEFORE FURTHER PRESSURISATION IS COMMENCED.

IF A LEAKAGE SOURCE IS DIFFICULT TO ESTABLISH IT IS ACCEPTABLE TO PRESSURE THE LINE USING AIR OR NITROGEN TO A MAXIMUM PRESSURE OF 1.5 BAR. TEST JOINTS ETC. WITH A SOAP SOLUTION.

**HEALTH AND SAFETY AT WORK ACT AND COSHH REGULATIONS**

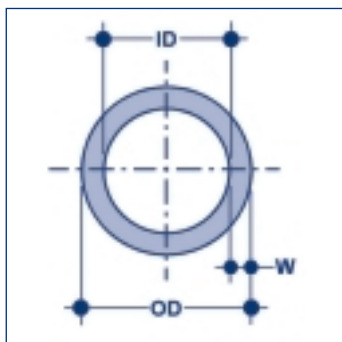
ATTENTION IS DRAWN TO THE REQUIREMENTS IN THE U.K. OF THIS ACT AND TO THE 1988 CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH) REGULATIONS.

ASTORE UK CANNOT ACCEPT RESPONSIBILITY FOR ACCIDENTS ARISING FROM THE MISUSE OF ITS PRODUCTS BECAUSE OF BAD INSTALLATION OR INCORRECT APPLICATION.



# PRC

## PVC-U PRESSURE PIPE CLASS C

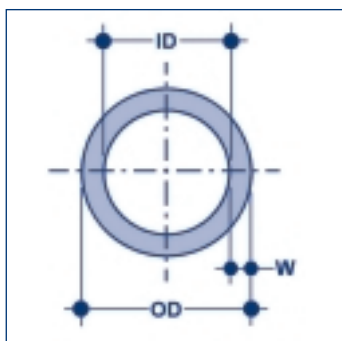


Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
2"	60.2	55.2	2.5	0.646	<b>PRC.0630</b>
3"	88.7	81.7	3.5	1.421	<b>PRC.0900</b>
4"	114.1	105.1	4.5	2.334	<b>PRC.1100</b>
5"	140.0	129.0	5.5	3.485	<b>PRC.1400</b>
6"	168.0	154.8	6.6	4.997	<b>PRC.1600</b>
8"	218.8	203.2	7.8	7.693	<b>PRC.2250</b>

6 METRE LENGTHS

# PRE

## PVC-U PRESSURE PIPE CLASS E

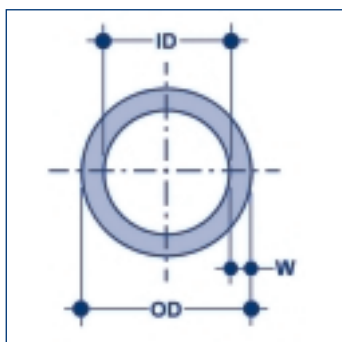


Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
1/2"	21.2	17.8	1.7	0.170	<b>PRE.0200</b>
3/4"	26.6	22.8	1.9	0.240	<b>PRE.0250</b>
1"	33.4	29.0	2.2	0.335	<b>PRE.0320</b>
1 1/4"	42.1	36.7	2.7	0.509	<b>PRE.0400</b>
1 1/2"	48.1	41.9	3.1	0.661	<b>PRE.0500</b>
2"	60.2	52.4	3.9	1.036	<b>PRE.0630</b>
3"	88.7	77.3	5.7	2.220	<b>PRE.0900</b>
4"	114.1	99.5	7.3	3.652	<b>PRE.1100</b>
6"	168.0	146.4	10.8	7.894	<b>PRE.1600</b>

6 METRE LENGTHS

# PAC

## ABS PRESSURE PIPE CLASS C



Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
1"	33.4	29.8	1.9	0.220	<b>PAC.0320</b>
1 1/4"	42.1	37.4	2.4	0.340	<b>PAC.0400</b>
1 1/2"	48.1	42.9	2.7	0.450	<b>PAC.0500</b>
2"	60.2	53.5	3.4	0.700	<b>PAC.0630</b>
2 1/2"	75.0	65.8	4.7	1.350	<b>PAC.0750</b>
3"	88.7	78.9	5.0	1.480	<b>PAC.0900</b>
4"	114.1	101.5	6.4	2.480	<b>PAC.1100</b>
5"	140.0	122.6	8.8	4.650	<b>PAC.1400</b>
6"	168.0	149.5	9.4	5.470	<b>PAC.1600</b>
8"	218.8	194.7	12.2	9.530	<b>PAC.2250</b>

6 METRE LENGTHS

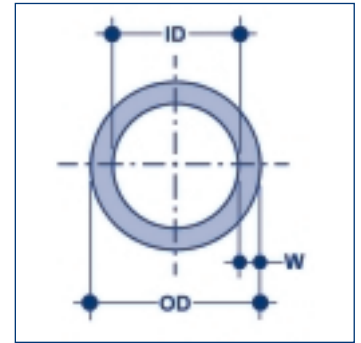
## PVC-U AND ABS PIPES

**ABS PRESSURE PIPE CLASS D**

**PAD**

Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
6"	168.0	143.7	12.3	6.88	<b>PAD.1600</b>

**6 METRE LENGTHS**

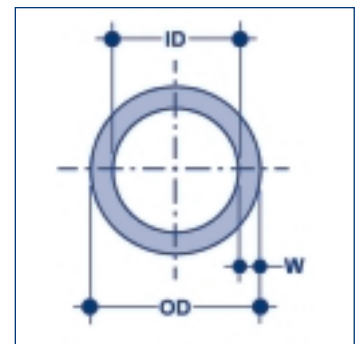


**ABS PRESSURE PIPE CLASS E**

**PAE**

Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
1/2"	21.2	17.6	1.9	0.140	<b>PAE.0200</b>
3/4"	26.6	21.9	2.4	0.210	<b>PAE.0250</b>
1"	33.4	27.6	3.0	0.330	<b>PAE.0320</b>
1 1/4"	42.1	34.6	3.8	0.520	<b>PAE.0400</b>
1 1/2"	48.1	39.5	4.4	0.680	<b>PAE.0500</b>
2"	60.2	49.5	5.4	1.060	<b>PAE.0630</b>
3"	88.7	72.7	8.1	2.280	<b>PAE.0900</b>
4"	114.1	93.7	10.3	3.760	<b>PAE.1100</b>

**6 METRE LENGTHS**

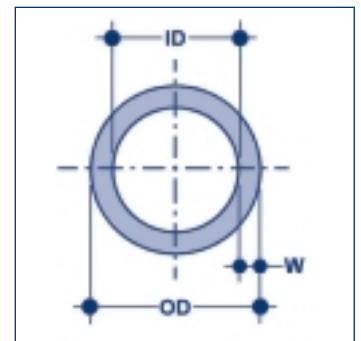


**ABS PRESSURE PIPE CLASS T**

**PAT**

Nom Dia.	OD mm	ID mm	Min. Wall (w) mm	Weight kg/m	Code
3/8"	17.0	10.3	3.4	0.160	<b>PAT.0160</b>
1/2"	21.2	14.4	3.5	0.220	<b>PAT.0200</b>
3/4"	26.6	19.7	3.5	0.290	<b>PAT.0250</b>
1"	33.4	25.2	4.2	0.440	<b>PAT.0320</b>
1 1/4"	42.1	32.0	5.1	0.680	<b>PAT.0400</b>
1 1/2"	48.1	36.7	5.8	0.870	<b>PAT.0500</b>
2"	60.2	46.3	7.0	1.310	<b>PAT.0630</b>

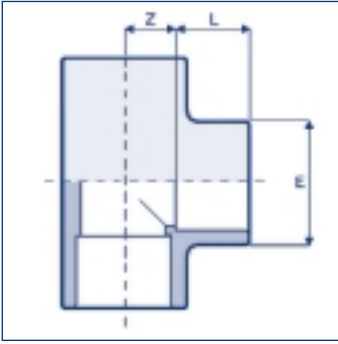
**6 METRE LENGTHS**



**ABS PIPES**

# T14

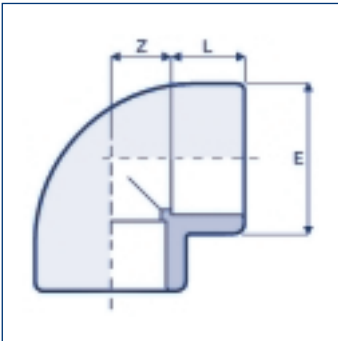
## TEE PLAIN



Nom Dia.	L	Z	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	11	28	<b>T14.0200</b>	35	27	400
3/4"	19	14	34	<b>T14.0250</b>	50	38	220
1"	22	17	42	<b>T14.0320</b>	70	53	130
1 1/4"	26	21	51	<b>T14.0400</b>	120	91	70
1 1/2"	31	26	61	<b>T14.0500</b>	185	141	90
2"	38	33	75	<b>T14.0630</b>	305	232	45
2 1/2"	44	39	89	<b>T14.0750</b>	505	384	30
3"	51	47	106	<b>T14.0900</b>	795	604	18
4"	61	57	129	<b>T14.1100</b>	1415	1075	10
5"	76	72	163	<b>T14.1400</b>	2740	2082	4
6"	86	82	186	<b>T14.1600</b>	3855	2930	3
8"	115	116	257	<b>T14.2250</b>	10500	-	-
8"	115	100	257	<b>T14.2250</b>	-	9600	-
10"	139	148	306	<b>T14.2800</b>	18600	N/A	-
12"	165	175	363	<b>T14.3150</b>	27200	N/A	-

# GO4

## ELBOW 90° PLAIN

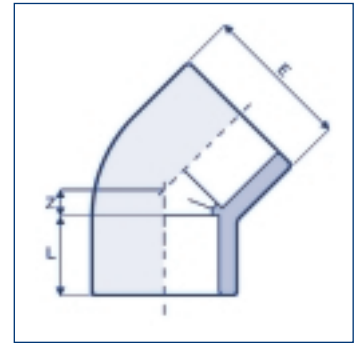


Nom Dia.	L	Z	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	11	28	<b>GO4.0200</b>	25	19	600
3/4"	19	14	34	<b>GO4.0250</b>	35	27	350
1"	22	17	42	<b>GO4.0320</b>	35	27	200
1 1/4"	26	21	51	<b>GO4.0400</b>	95	72	100
1 1/2"	31	26	61	<b>GO4.0500</b>	145	110	60
2"	38	33	75	<b>GO4.0630</b>	230	175	60
2 1/2"	44	39	89	<b>GO4.0750</b>	385	293	40
3"	51	47	106	<b>GO4.0900</b>	600	456	25
4"	61	57	129	<b>GO4.1100</b>	1020	775	14
5"	76	72	163	<b>GO4.1400</b>	2125	1615	6
6"	86	82	186	<b>GO4.1600</b>	2920	2219	4
8"	115	116	257	<b>GO4.2250</b>	8850	-	-
8"	115	112	256	<b>GO4.2250</b>	-	6900	-
10"	140	146	307	<b>GO4.2800</b>	13300	N/A	-
12"	165	175	363	<b>GO4.3150</b>	20300	N/A	-

**ELBOW 45° PLAIN**

**GY4**

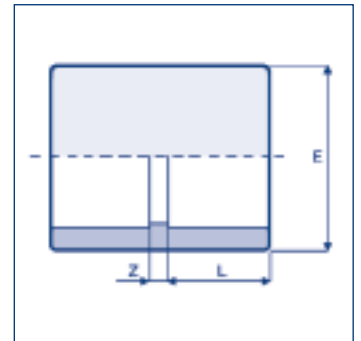
Nom Dia.	L	Z	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	5	28	<b>GY4.0200</b>	20	15	600
3/4"	19	6	34	<b>GY4.0250</b>	25	19	450
1"	22	8	42	<b>GY4.0320</b>	45	34	200
1 1/4"	26	10	51	<b>GY4.0400</b>	75	57	130
1 1/2"	31	12	61	<b>GY4.0500</b>	110	84	150
2"	38	14	75	<b>GY4.0630</b>	230	175	90
2 1/2"	44	17	89	<b>GY4.0750</b>	300	228	50
3"	51	20	106	<b>GY4.0900</b>	420	319	25
4"	61	24	129	<b>GY4.1100</b>	835	635	16
5"	76	31	163	<b>GY4.1400</b>	1620	1231	6
6"	86	35	186	<b>GY4.1600</b>	2265	1721	5
8"	116	65	259	<b>GY4.2250</b>	7250	5620	-
10"	140	66	307	<b>GY4.2800</b>	9800	N/A	-
12"	165	78	363	<b>GY4.3150</b>	15500	N/A	-



**SOCKET PLAIN**

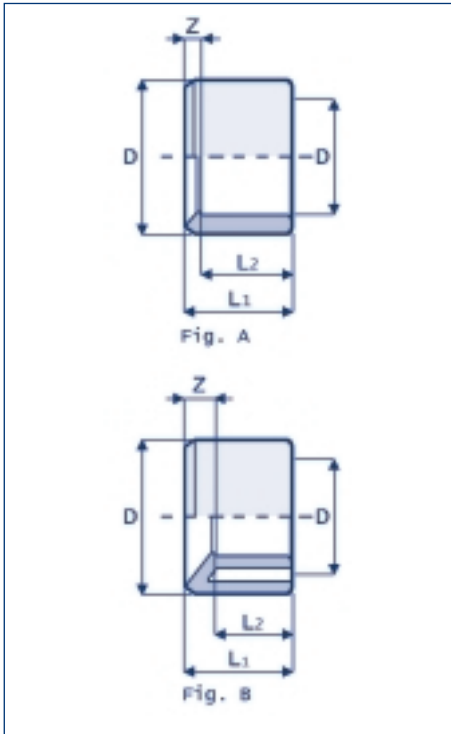
**MA4**

Nom Dia.	L	Z	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	3	28	<b>MA4.0200</b>	15	11	900
3/4"	19	3	34	<b>MA4.0250</b>	20	15	500
1"	22	3	42	<b>MA4.0320</b>	30	23	300
1 1/4"	26	3	51	<b>MA4.0400</b>	60	46	150
1 1/2"	31	3	61	<b>MA4.0500</b>	85	65	100
2"	38	3	75	<b>MA4.0630</b>	140	106	50
2 1/2"	44	4	89	<b>MA4.0750</b>	215	163	70
3"	51	5	106	<b>MA4.0900</b>	355	270	40
4"	61	6	129	<b>MA4.1100</b>	605	460	25
5"	76	8	162	<b>MA4.1400</b>	1230	935	10
6"	86	8	182	<b>MA4.1600</b>	1380	1049	6
8"	115	12	195	<b>MA4.2250</b>	4950	-	-
8"	119	11	257	<b>MA4.2250</b>	-	3668	-
10"	140	10	308	<b>MA4.2800</b>	5800	N/A	-
12"	165	13	362	<b>MA4.3150</b>	9800	N/A	-



# RC4

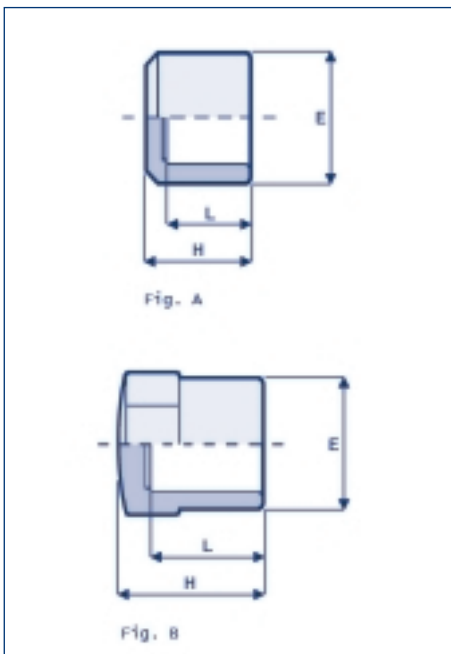
## REDUCING BUSH PLAIN



Nom Dia. DxD	L <sub>1</sub>	L <sub>2</sub>	Z	Fig.	Code	PVC-U gms	ABS gms	Box
3/4 x 1/2"	19	16	3	A	<b>RC4.025B</b>	5	4	2200
1 x 1/2"	22	16	6	B	<b>RC4.032B</b>	18	14	1100
1 x 3/4"	22	19	3	A	<b>RC4.032B</b>	10	8	1100
1 1/4 x 1"	26	22	4	A	<b>RC4.040D</b>	15	11	600
1 1/2 x 3/4"	31	19	12	B	<b>RC4.050C</b>	45	34	300
1 1/2 x 1"	31	22	9	B	<b>RC4.050D</b>	44	33	300
1 1/2 x 1 1/4"	31	26	5	A	<b>RC4.050E</b>	35	27	300
2 x 1"	38	22	16	B	<b>RC4.063D</b>	80	61	150
2 x 1 1/4"	38	26	12	B	<b>RC4.063E</b>	80	61	150
2 x 1 1/2"	38	31	7	A	<b>RC4.063F</b>	65	49	150
2 1/2 x 2"	44	38	6	A	<b>RC4.075G</b>	85	65	100
3 x 1 1/2"	51	31	20	B	<b>RC4.090F</b>	220	167	60
3 x 2"	51	38	13	B	<b>RC4.090G</b>	205	156	60
3 x 2 1/2"	51	44	7	A	<b>RC4.090H</b>	150	114	60
4 x 2"	61	38	23	B	<b>RC4.110G</b>	375	285	30
4 x 3"	61	51	17	A	<b>RC4.110I</b>	280	213	30
5 x 4"	76	61	15	B	<b>RC4.140L</b>	460	350	30
6 x 4"	86	61	25	B	<b>RC4.160L</b>	795	604	20
8 x 6"	115	90	25	A	<b>RC4.225O</b>	1400	-	-
8 x 6"	110	87	23	A	<b>RC4.225O</b>	-	1185	-
10 x 8"	140	115	25	A	<b>RC4.280R</b>	3500	N/A	-
12 x 10"	165	140	25	A	<b>RC4.315S</b>	4100	N/A	-

# CA4

## CAP PLAIN

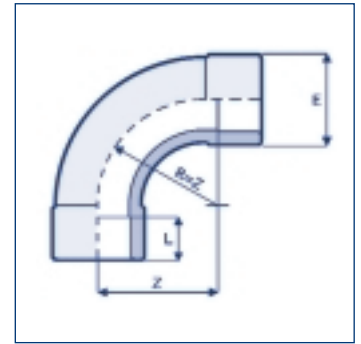


Nom Dia.	L	H	E	Fig.	Code	PVC-U gms	ABS gms	Box
1/2"	16	24	28	A	<b>CA4.0200</b>	49	37	1200
3/4"	19	27	34	A	<b>CA4.0250</b>	49	37	800
1"	22	30	42	A	<b>CA4.0320</b>	33	25	400
1 1/4"	26	35	51	A	<b>CA4.0400</b>	50	38	300
1 1/2"	31	40	61	A	<b>CA4.0500</b>	70	53	150
2"	38	48	75	A	<b>CA4.0630</b>	115	87	95
2 1/2"	44	59	89	B	<b>CA4.0750</b>	228	173	50
3"	51	67	106	B	<b>CA4.0900</b>	349	265	30
4"	61	77	129	B	<b>CA4.1100</b>	530	403	20
5"	76	108	162	A	<b>CA4.1400</b>	860	654	20
6"	86	126	181	A	<b>CA4.1600</b>	1317	990	-

**BEND 90° PLAIN**

# CU4

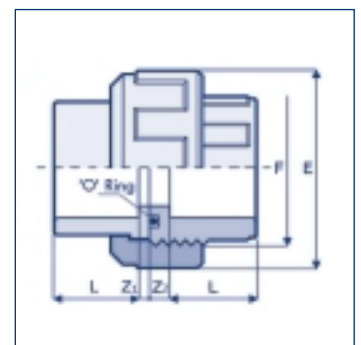
Nom Dia.	L	Z	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	40	28	<b>CU4.0200</b>	45	34	300
3/4"	19	50	34	<b>CU4.0250</b>	75	57	150
1"	22	64	41	<b>CU4.0320</b>	120	91	90
1 1/4"	26	80	51	<b>CU4.0400</b>	205	156	100
1 1/2"	31	100	65	<b>CU4.0500</b>	310	236	50
2"	38	126	77	<b>CU4.0630</b>	510	388	25
2 1/2"	44	150	94	<b>CU4.0750</b>	995	756	15
3"	51	180	113	<b>CU4.0900</b>	1765	1341	10
4"	61	220	137	<b>CU4.1100</b>	2805	2132	5



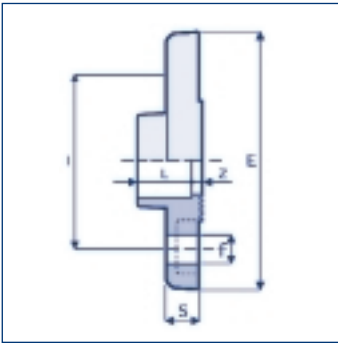
**UNION PLAIN**

# BO4

Nom Dia.	L	Z <sub>1</sub>	Z <sub>2</sub>	F	E	'O' Ring	Code	PVC-U gms	ABS gms	Box
1/2"	16	3	10	1"	42	4081	<b>BO4.0200</b>	42	32	350
3/4"	19	3	10	1/4"	52	4112	<b>BO4.0250</b>	70	53	200
1"	22	3	10	1/2"	59	4131	<b>BO4.0320</b>	97	74	150
1 1/4"	26	3	12	2"	72	6162	<b>BO4.0400</b>	156	119	80
1 1/2"	31	3	14	1/4"	79	6187	<b>BO4.0500</b>	216	164	50
2"	38	3	18	3/4"	96	6237	<b>BO4.0630</b>	368	280	30
2 1/2"	44	3	20	1/2"	116.6	6312	<b>BO4.0750</b>	560	426	15
3"	51	5	20	4"	131	6362	<b>BO4.0900</b>	750	570	12
4"	61	5	20	5"	159.4	6450	<b>BO4.1100</b>	1300	988	12



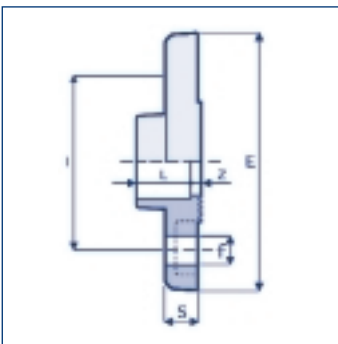
# FF4



## FULL FACE FLANGE DRILLED BS 10 TABLE D AND E

Nom Dia.	L	Z	E	I	f	S	No. Holes	Code	PVC-U gms	ABS gms	Box gms
1/2"	16	4	95	67	14	11	4	<b>FF4.0200</b>	70	53	150
3/4"	19	4	105	73	14	12	4	<b>FF4.0250</b>	87	66	120
1"	22	4	115	83	14	14	4	<b>FF4.0320</b>	137	104	80
1 1/4"	26	4	140	87	14	15	4	<b>FF4.0400</b>	237	180	60
1 1/2"	31	5	150	98	14	16	4	<b>FF4.0500</b>	80	213	40
2"	38	5	165	115	18	18	4	<b>FF4.0630</b>	395	300	25
3"	51	7	200	145	18	20	4	<b>FF4.0900</b>	780	593	10

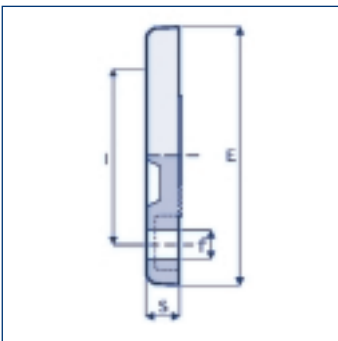
# FFN



## FULL FACE FLANGE DRILLED PN16

Nom Dia.	L	Z	E	I	f	S	No. Holes	Code	PVC-U gms	ABS gms
1/2"	15	4.5	95	65	14	11	4	<b>FFN.0200</b>	70	53
3/4"	19	4.5	105	75	14	12	4	<b>FFN.0250</b>	105	80
1"	22	4.5	115	85	14	14	4	<b>FFN.0320</b>	148	112
1 1/4"	26	4.5	142	100	18	15	4	<b>FFN.0400</b>	225	171
1 1/2"	31	4.5	152	110	18	16	4	<b>FFN.0500</b>	285	217
2"	38	4.5	165	125	18	18	4	<b>FFN.0630</b>	420	319
2 1/2"	44	6	185	145	18	19	4	<b>FFN.0750</b>	505	384
3"	51	7	200	160	18	20	8	<b>FFN.0900</b>	735	558
4"	61	8	220	180	18	22	8	<b>FFN.1100</b>	930	707

# FC4E



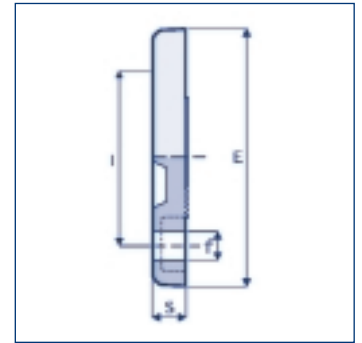
## BLANK FLANGE DRILLED TABLE D AND E

Nom Dia.	E	I	f	S	No. Holes	Code	PVC-U gms	ABS gms	Box gms
1/2"	95	67	14	11	4	<b>FC4E.0200</b>	99	75	250
3/4"	105	73	14	12	4	<b>FC4E.0250</b>	106	81	150
1"	115	83	14	14	4	<b>FC4E.0320</b>	206	157	120
1 1/2"	150	98	14	16	4	<b>FC4E.0500</b>	327	249	70
2"	165	115	18	18	4	<b>FC4E.0630</b>	358	272	40
3"	200	145	18	20	4	<b>FC4E.0900</b>	570	433	30
4"	220	178	18	22	8	<b>FC4E.1100</b>	766	582	20
6"	285	235	22	28	8	<b>FC4E.1600</b>	1455	1106	20

**BLANK FLANGE DRILLED PN16**

# FC4N

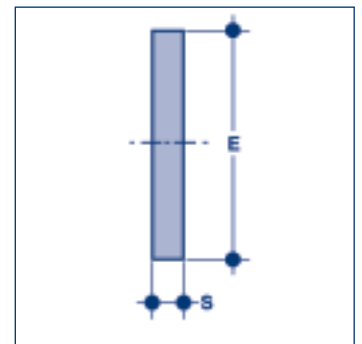
Nom Dia.	E	I	f	S	No. Holes	Code	PVC-U gms	ABS gms	Box
1/2"	95	65	14	11	4	<b>FC4N.0200</b>	99	75	250
3/4"	105	75	14	12	4	<b>FC4N.0250</b>	106	81	150
1"	115	85	14	14	4	<b>FC4N.0320</b>	206	157	120
1 1/2"	150	110	18	16	4	<b>FC4N.0500</b>	327	249	70
2"	165	125	18	18	4	<b>FC4N.0630</b>	358	272	40
3"	200	160	18	20	8	<b>FC4N.0900</b>	570	433	30
4"	220	180	18	22	8	<b>FC4N.1100</b>	766	582	20
6"	285	240	22	28	8	<b>FC4N.1600</b>	1455	1106	20



**BLANK FLANGE UNDRILLED**

# FC4P

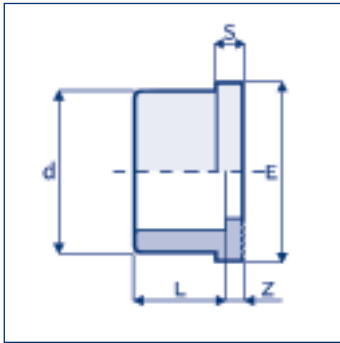
Nom Dia.	E	S	Code	PVC-U gms	ABS gms
1/2"	95	13	<b>FC4P.0200</b>	120	91
3/4"	105	13	<b>FC4P.0250</b>	145	110
1"	115	13	<b>FC4P.0320</b>	160	122
1 1/4"	140	13	<b>FC4P.0400</b>	205	156
1 1/2"	150	13	<b>FC4P.0500</b>	250	190
2"	165	13	<b>FC4P.0630</b>	300	220
2 1/2"	185	20	<b>FC4P.0750</b>	510	387
3"	200	20	<b>FC4P.0900</b>	690	524
4"	220	20	<b>FC4P.1100</b>	950	722
6"	250	25	<b>FC4P.1600</b>	2100	1596





# QR4

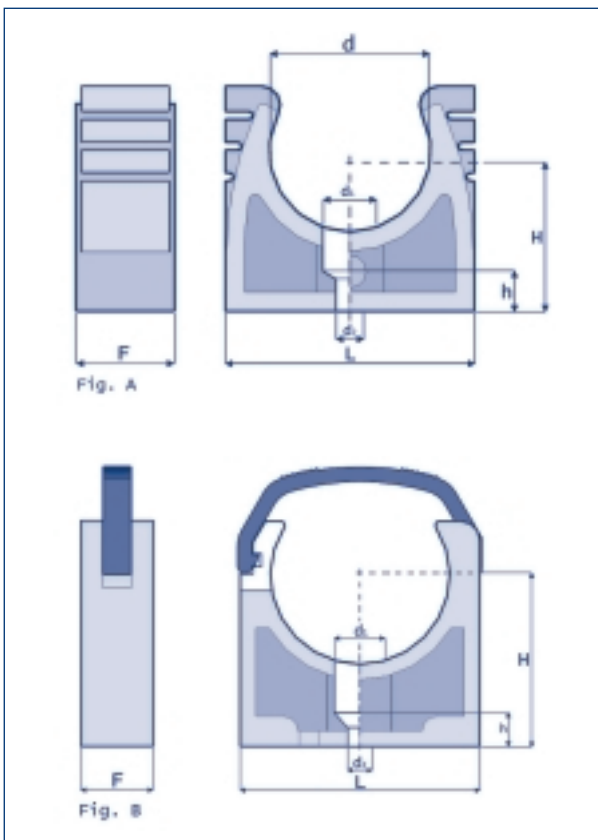
## STUB FLANGE SERRATED FACE



	Nom Dia.	L	Z	d	E	S	Code	PVC-U gms	ABS gms	Box
	1/2"	16	3	27	34	6	QR4.0200	10	8	1200
	3/4"	19	3	33	41	7	QR4.0250	14	11	750
	1"	22	3	41	50	7	QR4.0320	33	25	400
	1 1/4"	26	3	50	61	8	QR4.0400	37	28	250
	1 1/2"	31	3	61	73	8	QR4.0500	60	46	120
	2"	38	3	76	90	9	QR4.0630	110	84	80
	2 1/2"	44	3	90	106	10	QR4.0750	165	125	50
	3"	51	5	108	125	11	QR4.0900	270	205	60
	4"	61	5	131	150	12	QR4.1100	445	338	40
PVC-U	5"	76	5	165	188	17	QR4.1400	735	-	20
ABS	5"	76	7	171	180	14	QR4.1400	-	680	20
	6"	86	5	188	212	16	QR4.1600	1250	950	12
PVC-U	8"	116	8	250	270	20	QR4.2250	2105	-	6
ABS	8"	118	14	257	269	26	QR4.2250	-	2075	6
	10"	147	8	308	326	29	QR4.2800	3450	N/A	-
	12"	169	9	362	378	33	QR4.3150	5060	N/A	-

# ST4

## PIPE BRACKET IN PP\*



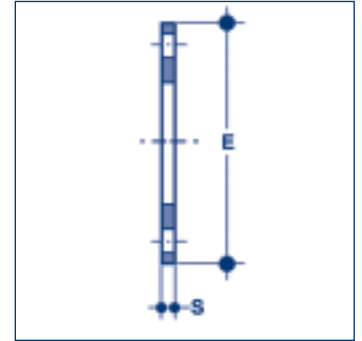
Nom Dia.	H	L	d <sub>2</sub>	d <sub>1</sub>	h	F	Fig.	Code	gms	Box	Pack
3/8"	22.0	28.0	5.5	10.5	7.5	16.0	A	ST4.0160	6	1500	10
1/2"	24.5	33.0	5.5	10.5	7.5	16.0	A	ST4.0200	7	1100	10
3/4"	28.2	38.0	5.5	10.5	7.5	16.0	A	ST4.0250	9	900	10
1"	31.5	48.0	5.5	10.5	7.5	16.0	A	ST4.0320	13	600	10
1 1/4"	41.5	54.0	5.5	10.5	7.5	20.0	B	ST4.0400	23	370	10
1 1/2"	46.5	64.5	7.0	14.0	9.0	23.0	B	ST4.0500	29	240	10
2"	56.0	80.0	7.0	14.0	9.0	25.0	B	ST4.0630	39	280	10
2 1/2"	63.6	94.0	9.0	17.0	10.5	27.5	B	ST4.0750	55	240	10
3"	72.0	115.0	9.0	17.0	13.5	30.0	B	ST4.0900	85	100	10
4"	81.0	138.5	9.0	17.0	13.5	30.0	B	ST4.1100	100	100	10

\* AVAILABLE ALSO IN BLACK PE

**EPDM GASKET - FULL FACE DRILLED BS10 TABLE D OR E**

**GFE**

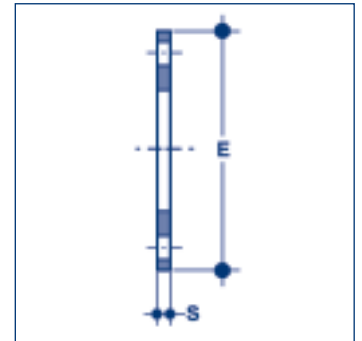
Nom Dia.	E	S	No. Holes	gms	Code
1/2"	95	3	4	30	<b>GFE.0200</b>
3/4"	101	3	4	36	<b>GFE.0250</b>
1"	114	3	4	35	<b>GFE.0320</b>
1 1/4"	120	3	4	40	<b>GFE.0400</b>
1 1/2"	135	3	4	55	<b>GFE.0500</b>
2"	156	3	4	57	<b>GFE.0630</b>
2 1/2"	165	3	4	56	<b>GFE.0750</b>
3"	186	3	4	99	<b>GFE.0900</b>
4"	219	3	8	114	<b>GFE.1100</b>
4"	219	3	4	116	<b>GFE.110E</b>
6"	279	3	8	160	<b>GFE.1600</b>
8"	340	3	8	162	<b>GFE.2250</b>



**EPDM GASKET - FULL FACE DRILLED PN10/16**

**GFN**

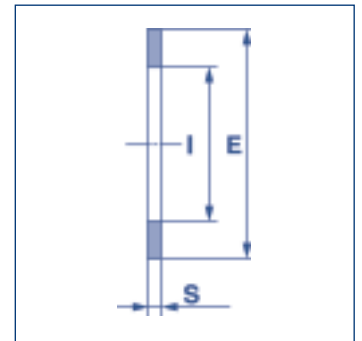
Nom Dia.	E	S	No. Holes	gms	Code
1/2"	95	3	4	30	<b>GFN.0200</b>
3/4"	101	3	4	36	<b>GFN.0250</b>
1"	114	3	4	35	<b>GFN.0320</b>
1 1/4"	120	3	4	40	<b>GFN.0400</b>
1 1/2"	135	3	4	55	<b>GFN.0500</b>
2"	156	3	4	57	<b>GFN.0630</b>
2 1/2"	176	3	4	78	<b>GFN.0750</b>
3"	186	3	8	99	<b>GFN.0900</b>
4"	219	3	8	114	<b>GFN.1100</b>
6"	279	3	8	160	<b>GFN.1600</b>
8"	340	3	12	195	<b>GFN.2250</b>



**EPDM GASKET FOR SERRATED STUB FLANGE (QR4)**

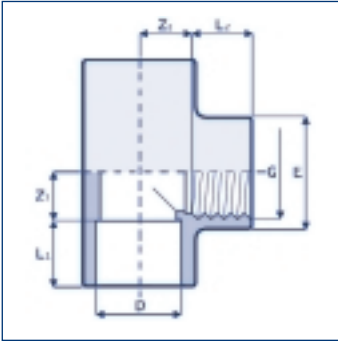
**GQP**

Nom Dia.	I	E	S	Code
1/2"	20	32	2	<b>GQP.0200</b>
3/4"	25	39	2	<b>GQP.0250</b>
1"	32	48	2	<b>GQP.0320</b>
1 1/4"	40	59	2	<b>GQP.0400</b>
1 1/2"	50	71	2	<b>GQP.0500</b>
2"	63	88	2	<b>GQP.0630</b>
2 1/2"	75	104	2	<b>GQP.0750</b>
3"	90	123	2	<b>GQP.0900</b>
4"	110	148	3	<b>GQP.1100</b>
5"	140	186	3	<b>GQP.1400</b>
6"	160	211	3	<b>GQP.1600</b>
8"	220	270	3	<b>GQP.2250</b>



# TI6

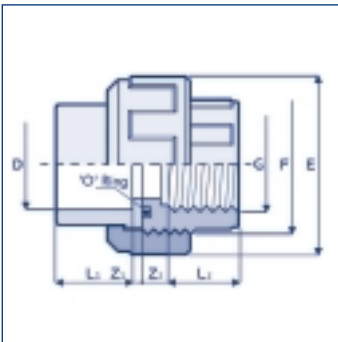
## TEE PLAIN/THREADED BRANCH



Nom Dia. D&G	L <sub>1</sub>	L <sub>2</sub>	Z <sub>1</sub>	Z <sub>2</sub>	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	15	11	12	28	<b>TI6.0200</b>	49	37	400
3/4"	19	16	14	16	34	<b>TI6.0250</b>	55	42	220
1"	22	19	17	20	42	<b>TI6.0320</b>	75	57	130
1 1/4"	26	21	21	25	51	<b>TI6.0400</b>	125	95	70
1 1/2"	31	21	26	35	61	<b>TI6.0500</b>	200	152	90
2"	38	25	33	45	75	<b>TI6.0630</b>	380	289	45
2 1/2"	44	30	39	52	89	<b>TI6.0750</b>	530	403	30
3"	51	33	47	64	106	<b>TI6.0900</b>	845	642	18

# BO6

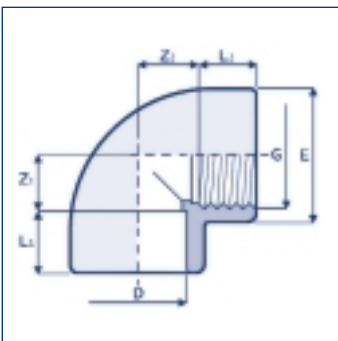
## UNION PLAIN/THREADED



Nom Dia. D&G	L <sub>1</sub>	L <sub>2</sub>	Z <sub>1</sub>	Z <sub>2</sub>	F	E	'O' Ring	Code	PVC-U gms	ABS gms	Box
1/2"	16	15	3	11.0	1"	42	4081	<b>BO6.0200</b>	42	32	350
3/4"	19	16	3	12.7	1 1/4"	52	4112	<b>BO6.0250</b>	70	53	200
1"	22	19	3	12.9	1 1/2"	59	4131	<b>BO6.0320</b>	96	73	150
1 1/4"	26	21	3	16.6	2"	72	6162	<b>BO6.0400</b>	155	118	80
1 1/2"	31	21	3	23.6	2 1/4"	79	6187	<b>BO6.0500</b>	237	180	50
2"	38	25	3	30.3	2 3/4"	96	6237	<b>BO6.0630</b>	405	308	30

# GO6

## ELBOW 90° PLAIN/THREADED

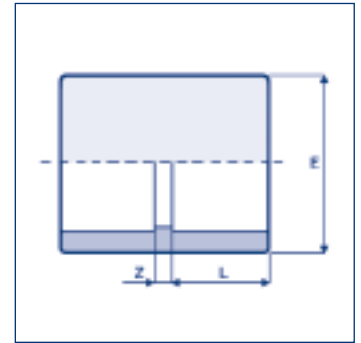


Nom Dia. D&G	L <sub>1</sub>	L <sub>2</sub>	Z <sub>1</sub>	Z <sub>2</sub>	E	Code	PVC-U gms	ABS gms	Box
1/2"	16	15	11	12	28	<b>GO6.0200</b>	25	19	600
3/4"	19	16	14	16	34	<b>GO6.0250</b>	38	29	350
1"	22	19	17	20	42	<b>GO6.0320</b>	60	46	200
1 1/4"	26	21	21	25	51	<b>GO6.0400</b>	95	72	100
1 1/2"	31	21	26	35	61	<b>GO6.0500</b>	165	125	60
2"	38	25	33	45	75	<b>GO6.0630</b>	280	213	60
2 1/2"	44	30	39	53	89	<b>GO6.0750</b>	417	317	40
3"	51	33	47	65	106	<b>GO6.0900</b>	690	524	25

INCH/METRIC SOCKET PLAIN

# MA5

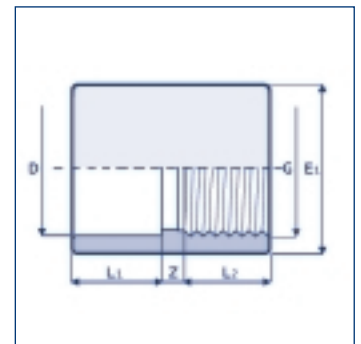
Diameter	L	Z	E	Code	PVC-U gms	Box
1/2" x 20	16	3	28	<b>MA5.0200</b>	15	900
3/4" x 25	19	3	34	<b>MA5.0250</b>	20	500
1" x 32	22	3	42	<b>MA5.0320</b>	30	300
1 1/4" x 40	26	3	51	<b>MA5.0400</b>	60	150
1 1/2" x 50	31	3	61	<b>MA5.0500</b>	85	100
2" x 63	38	3	75	<b>MA5.0630</b>	140	50
3" x 90	51	5	106	<b>MA5.0900</b>	355	40
4" x 110	61	6	129	<b>MA5.1100</b>	605	25



SOCKET PLAIN/THREADED

# MA6

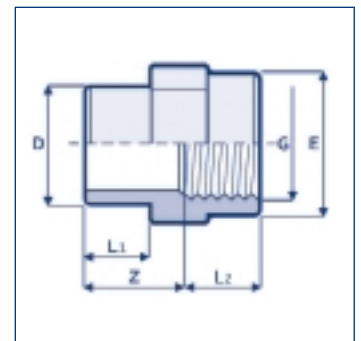
Nom Dia. D&G	L <sub>1</sub>	L <sub>2</sub>	Z	E <sub>1</sub>	Code	PVC-U gms	ABS gms	Box
1/2"	16	15	4	28	<b>MA6.0200</b>	15	11	900
3/4"	19	16	6	34	<b>MA6.0250</b>	25	19	500
1"	22	19	6	42	<b>MA6.0320</b>	40	30	300
1 1/4"	26	21	8	51	<b>MA6.0400</b>	60	46	150
1 1/2"	31	21	13	61	<b>MA6.0500</b>	100	76	100
2"	38	25	15	75	<b>MA6.0630</b>	180	137	50
2 1/2"	44	30	8	89	<b>MA6.0750</b>	225	171	70
3"	51	33	9	106	<b>MA6.0900</b>	355	270	40
4"	61	39	10	129	<b>MA6.1100</b>	555	422	25



ADAPTOR MALE PLAIN/FEMALE THREADED

# AF6

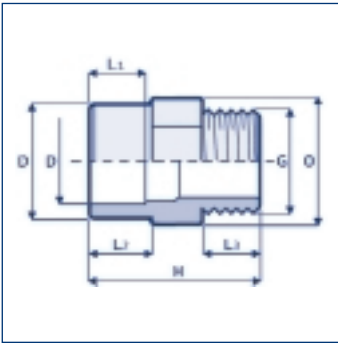
Nom Dia. D&G	L <sub>1</sub>	L <sub>2</sub>	E	Z	Code	PVC-U gms	ABS gms	Box
1/2"	16	15.0	28	22	<b>AF6.0200</b>	20	15	800
3/4"	19	16.3	34	29	<b>AF6.0250</b>	30	23	500
1"	22	19.1	42	32	<b>AF6.0320</b>	40	30	300
1 1/4"	26	21.4	51	37	<b>AF6.0400</b>	76	58	150
1 1/2"	31	21.4	58	42	<b>AF6.0500</b>	100	76	100
2"	38	25.7	72	50	<b>AF6.0630</b>	140	106	60



FITTINGS TRANSITION SERIES

# AM6

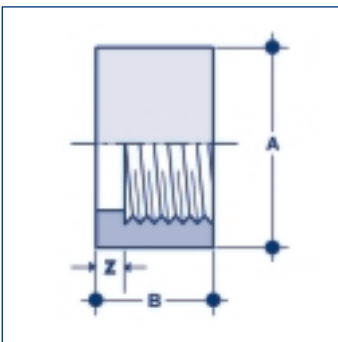
## ADAPTOR FEMALE PLAIN/MALE THREADED



Nom Dia. DxDxG	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	H	O	Code	PVC-U gms	ABS gms	Box
1/2" x 3/4" x 1/2"	16	19	15.0	46	30	<b>AM6.0200</b>	15	11	800
3/4" x 1" x 3/4"	19	22	16.3	50	36	<b>AM6.0250</b>	25	19	400
1" x 3/4" x 1"	22	26	19.1	57	46	<b>AM6.0320</b>	40	30	250
1 1/4" x 1" x 1 1/4"	26	31	21.4	67	55	<b>AM6.0400</b>	70	53	130
1 1/2" x 1 1/4" x 1 1/2"	31	38	21.4	74	65	<b>AM6.0500</b>	115	87	80
2" x 1 1/2" x 2"	38	44	25.7	84	80	<b>AM6.0630</b>	160	122	60
2 1/2" x 2" x 2 1/2"	44	51	30.2	99	95	<b>AM6.0750</b>	285	217	45
3" x 2 1/2" x 3"	51	61	33.3	113	115	<b>AM6.0900</b>	490	372	20
4" x 3" x 4"	61	68	39.3	120	130	<b>AM6.1100</b>	490	372	30

# RC6

## REDUCING BUSH PLAIN/THEADED

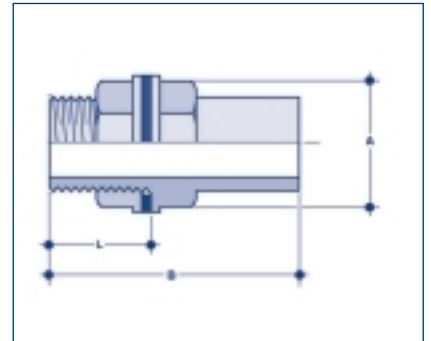


Nom Dia.	B	Z	A	Code	PVC-U gms	ABS gms
1/2" x 3/8"	16	6	21.4	<b>RC6.020A</b>	5	4
3/4" x 1/2"	20	5	26.5	<b>RC6.025B</b>	9	7
1" x 3/4"	25	6	33.6	<b>RC6.032C</b>	15	12

**TANK CONNECTOR PLAIN/THREADED**

**TC6**

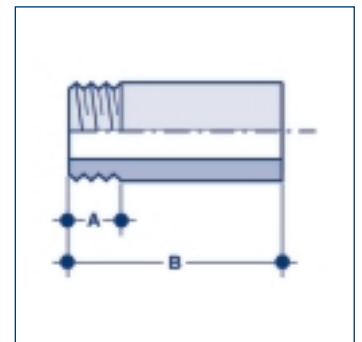
Nom Dia.	L	B	A	Code	PVC-U gms	ABS gms
1/2"	42	76	28	<b>TC6.0200</b>	34	26
3/4"	42	76	33	<b>TC6.0250</b>	39	30
1"	55	101	46	<b>TC6.0320</b>	110	80
1 1/4"	70	120	50	<b>TC6.0400</b>	154	120
1 1/2"	73	127	60	<b>TC6.0500</b>	207	170
2"	85	152	79	<b>TC6.0630</b>	358	325
2 1/2"	94	164	90	<b>TC6.0750</b>	471	430
3"	112	202	105	<b>TC6.0900</b>	656	700
4"	130	230	135	<b>TC6.1100</b>	1345	1225



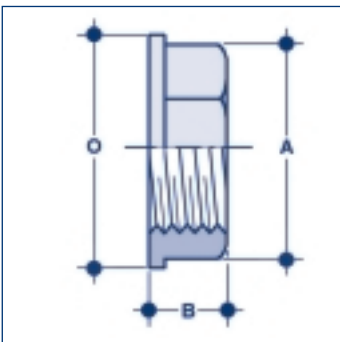
**BARREL NIPPLE PLAIN/THREADED**

**BN6**

Nom Dia.	A	B	Code	PVC-U gms	ABS gms
3/8"	13	42	<b>BN6.0160</b>	10	5
1/2"	16	49	<b>BN6.0200</b>	15	10
3/4"	18	55	<b>BN6.0250</b>	20	15
1"	21	62	<b>BN6.0320</b>	35	25
1 1/4"	23	72	<b>BN6.0400</b>	60	45
1 1/2"	30	87	<b>BN6.0500</b>	45	70
2"	30	87	<b>BN6.0630</b>	115	105
2 1/2"	35	106	<b>BN6.0750</b>	180	120
3"	38	127	<b>BN6.0900</b>	300	252
4"	40	150	<b>BN6.1100</b>	560	525



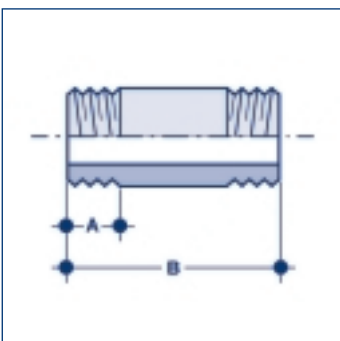
# NU2



## BACK NUT THREADED

Nom Dia. BSP	A	B	O	Code	PVC-U gms	ABS gms	Box
1/2"	29	13	37	<b>NU2.0200</b>	10	10	1500
3/4"	33	14	43	<b>NU2.0250</b>	10	10	1200
1"	46	16	56	<b>NU2.0320</b>	25	20	610
1 1/4"	50	18	59	<b>NU2.0400</b>	30	20	400
1 1/2"	60	19	70	<b>NU2.0500</b>	40	30	320
2"	79	21	92	<b>NU2.0630</b>	80	65	156
2 1/2"	95	23	105	<b>NU2.0750</b>	105	85	120
3"	110	27	125	<b>NU2.0900</b>	165	130	120
4"	139	30	152	<b>NU2.1100</b>	260	205	56

# BA2



## BARREL NIPPLES THREADED

Nom Dia. BSPT	A	B	Code	PVC-U gms	ABS gms
1/2"	16	49	<b>BA2.0200</b>	15	10
3/4"	18	55	<b>BA2.0250</b>	20	15
1"	21	62	<b>BA2.0320</b>	35	25
1 1/4"	23	72	<b>BA2.0400</b>	55	40
1 1/2"	30	87	<b>BA2.0500</b>	75	60
2"	30	87	<b>BA2.0630</b>	105	95
2 1/2"	30	105	<b>BA2.0750</b>	169	157
3"	38	127	<b>BA2.0900</b>	250	245
4"	40	150	<b>BA2.1100</b>	500	490







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MANUAL VALVES CATALOGUE



## > COMPANY APPROVAL

L'Istituto Italiano dei Plastici (IIP) ha ufficialmente attestato la conformità del sistema di qualità di "A.V.F. Astore Valves and Fittings srl" alla norma UNI EN ISO 9001 per l'attività di stampaggio ad iniezione di raccordi e parti di valvole in materiali termoplastici e assemblaggio di valvole.

Questo riconoscimento è per A.V.F. il coronamento di una politica aziendale volta ad integrare struttura organizzativa, risorse, responsabilità, processi e controlli per il raggiungimento di uno standard qualitativo generale, idoneo a soddisfare con continuità le esigenze dell'utilizzatore.

Per A.V.F. la Certificazione ISO 9001 è l'impegno ad operare costantemente al meglio del proprio know how, per la clientela è la sicurezza di poter contare su prodotti sempre affidabili, ed è il passaporto per entrare in segmenti di mercato dove questo riconoscimento è vincolante per stabilire relazioni commerciali improntate sulla qualità.

Italian Institute of Plastics (IIP) has officially attested the conformity of Astore production system to norm UNI EN ISO 9001 (certificate N° 354). This acknowledgment identifies the company business policy turned to integrate organisational structure, resources, responsibilities, processes and controls for the maintenance of a general suitable quality standard and satisfy the demands of the market. The range, the reliability and the service of Astore are recognized all over the world.



ISTITUTO ITALIANO DEI PLASTICI

CERTIFICATO n. 354  
CERTIFICATE no. \_\_\_\_\_  
UNI EN ISO 9001



## > STANDARDS

Astore ball valves are manufactured according to the following standards:

- ISO metric solvent weld series to ISO 727, EN 1452/4, complying with pipes to ISO 161/1, EN 1452/2
- BS solvent weld series to BS 4346/1, complying with pipes to BS 3506, BS 3505
- BSP threaded series to UNI ISO 228/1, DIN 2999, BS 21

La produzione di valvole a sfera Astore segue i seguenti standard:

- Serie per giunzione ISO metrica per incollaggio secondo ISO 727, EN 1452/4, accoppiabili con tubazioni conformi a ISO 161/1, EN 1452/2
- Serie per giunzione BS per incollaggio secondo BS 4346/1, accoppiabili con tubazioni conformi a BS 3506, BS 3505
- Serie per giunzione filettata BSP secondo UNI ISO 228/1, DIN 2999, BS 21

Die Produktion der Kugelventile von Astore entspricht folgenden Standards:

- Serie für metrische Klebeverbindung ISO gemäß ISO 727, EN 1452/4, verbindbar mit Rohren gemäß ISO 161/1, EN 1452/2
- Serie für Klebeverbindung BS gemäß BS 4346/1, verbindbar mit Rohren gemäß BS 3506, BS 3505
- Serie für Schraubverbindung BSP gemäß UNI ISO 228/1, DIN 2999, BS 21

La production des vannes Astore est conforme aux standards suivants:

- Série des joints ISO métrique pour collage selon ISO 727, EN 1452/4, pouvant être accouplés aux tuyaux conformes aux normes ISO 161/1, EN 1452/2
- Série des joints BS pour collage selon BS 4346/1, pouvant être accouplés aux tuyaux conformes aux normes BS 3506, BS 3505
- Série des joints filetés BSP selon UNI ISO 228/1, DIN 2999, BS 21

La producción de válvulas de bola Astore cumple con las siguientes normas:

- Serie unión ISO métrica para encolar según ISO 727, EN 1452/4, aptas para tuberías conformes a ISO 161/1, EN 1452/2
- Serie unión BS para encolar según BS 4346/1, aptas para tuberías conformes a BS 3506, BS 3505
- Serie rosca BSP según UNI ISO 228/1, DIN 2999, BS 21

## > CE

The Astore valves follow the Directive of the European Parliament PED 97/23/CE regarding pressure equipment and are produced according to UNI EN ISO 16135.

The sheet here attached shows the classification of the family valves, which are marked CE (in self-certification), or CE 1115 (under approval of Notified Body).

Le valvole Astore seguono la Direttiva del Parlamento Europeo PED 97/23/CE relativa alle attrezzature a pressione e sono prodotte in conformità alla norma UNI EN ISO 16135.

Nella tabella a fianco vengono descritte le classificazioni delle varie famiglie di valvole, che sono marcate CE (in regime di auto-certificazione), o CE 1115 (soggette a sorveglianza da parte di Organismo di Controllo Notificato).

Valves family	Mark
111	CE 1115
311	CE 1115
324	CE
326	CE
322	CE
302	CE
303	CE
800	CE 1115
VFO	CE 1115
VSA	CE 1115
VNR	CE 1115

>	<b>111</b>	BALL VALVE FOR INDUSTRIAL APPLICATION VALVOLA A SFERA PER INDUSTRIA KUGELVENTIL FÜR INDUSTRIELLE ANWENDUNGEN VANNE À TOURNANT SPHÉRIQUE POUR APPLICATION INDUSTRIELLE VÁLVULA DE BOLA PARA APLICACIONES INDUSTRIALES.....	6
>	<b>311</b>	BALL VALVE FOR PROCESSING PLANTS VALVOLA A SFERA PER IMPIANTI DI PROCESSO KUGELVENTIL FÜR ANLAGEN DER VERFAHRENSTECHNIK VANNE À TOURNANT SPHÉRIQUE POUR INSTALLATIONS DE PROCESS VÁLVULA DE BOLA PARA INSTALACIONES DE PROCESAMIENTO .....	8
>	<b>324</b>	BALL VALVE FOR WATER SUPPLY SYSTEMS AND SWIMMING POOLS VALVOLA PER TRASPORTO ACQUA E PER PISCINE KUGELVENTIL FÜR WASSERBEFÖRDERUNG UND SCHWIMMBÄDER VANNE À TOURNANT SPHÉRIQUE POUR LE TRANSPORT DE L'EAU ET POUR PISCINES VÁLVULA DE BOLA PARA TRANSPORTAR AGUA Y PARA PISCINAS .....	10
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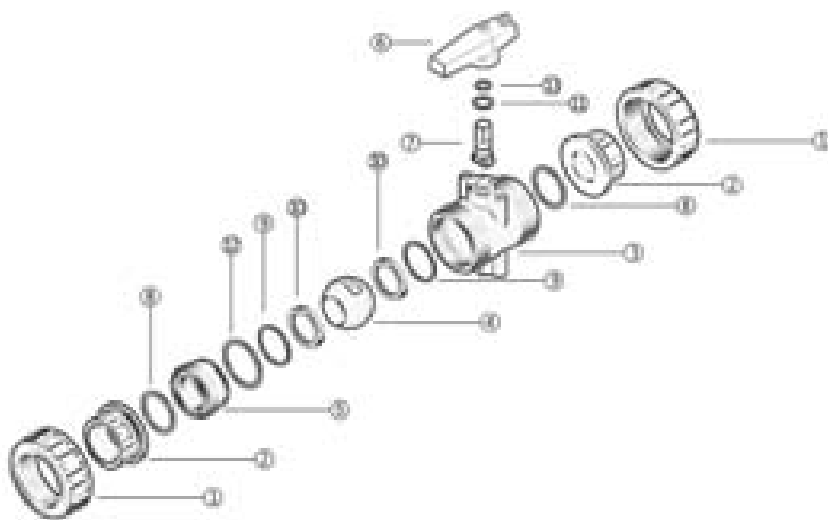
PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



D 16 - 3/8"÷32 - 1"



D 40 - 1 1/4"÷63 - 2"



Grey PVC ball valve for industrial applications, true union, adjustable support, provided with seatings for actuator brackets and connections. EPDM or FPM seals, PTFE ball seats. Operating pressure PN16 at 20° C. Versions available: ISO metric (1V111) and BS standard (3V111) plain solvent weld socket; BSP threaded socket (1V112). Available to be manufactured in other international standards (ASTM, JIS) upon request.

Valvola a sfera in PVC grigio per applicazioni industriali, bighiera, a smontaggio radiale, con supporto regolabile su sfera tonda. Provvista di alloggiamenti per staffaggio e collegamento attuatore. Guarnizioni in EPDM o FPM, sedi sfera in PTFE. Pressione di esercizio PN 16 a 20° C. Versioni disponibili per incollaggio femmina ISO metrico (1V111) e BS (3V111), filettata femmina BSP (1V112). Su richiesta, possibilità di esecuzioni in altri standard internazionali (ASTM, JIS).

Kugelventil aus grauem PVC für industrielle Anwendungen, Zweifach-Überwurfmutter mit Radialausbau, auf der runder Kugel befindet sich ein verstellbares Lager und eine Aussparung zur Befestigung und Verbindung des Stellglieds. Dichtungen sind aus EPDM oder FPM, Kugelsitze aus PTFE. Betriebsdruck PN 16 bei 20° C. Verfügbare Ausführungen für metrische Nut-Klebeverbindung ISO (1V111) und BS (3V111), Innengewinde BSP (1V112). Auf Anfrage sind Ausführungen in anderen internationalen Standards (ASTM, JIS) möglich.

Robinet 1/4 tour à bille en PVC gris pour applications industrielles, double anneau à démontage radial, avec support réglable sur sphère ronde, doté de espace creux de fixation et raccordement de l'actionneur. Joints en EPDM ou FPM, sièges de la sphère en PTFE. Pression d'exercice PN 16 à 20° C. Versions disponibles pour collage femelle ISO métrique (1V111) et BS (3V111), filetage femelle BSP (1V112). Sur demande, possibilité d'exécutions dans tuerca autres standards internationaux (ASTM, JIS).

Válvula de bola en PVC gris para aplicaciones industriales, con doble corona de desmontaje radial, soporte regulable. Asiento para grapas y conexión para accionador. Juntas en EPDM o FPM, asiento de la bola en PTFE. Presión de trabajo PN 16 a 20° C. Versiones disponibles para encolar hembra ISO métrica (1V111) y BS (3V111), rosca hembra BSP (1V112). Posibilidad de realización bajo pedido según otras normas internacionales (ASTM, JIS).

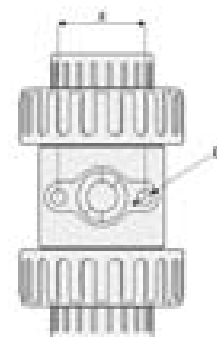
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuero	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungstrager	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM/FPM	2
9	seat O-ring	O-ring sotto PTFE	O-Ring	joint pour le siege	conjunto junta	EPDM/FPM	2
10	ball seat	guarnizione sfera	Kugeldichtung	siège	junta asiento	PTFE	2
11	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM/FPM	1
12	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM/FPM	1
13	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM/FPM	1



111 &lt;

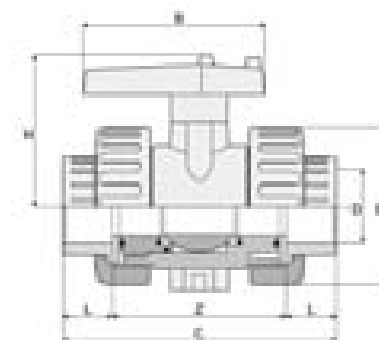
PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

DN	X	Ø
10	31	5.5
15	31	5.5
20	31	5.5
25	40	6.5
32	45	8
40	50	8
50	50	8



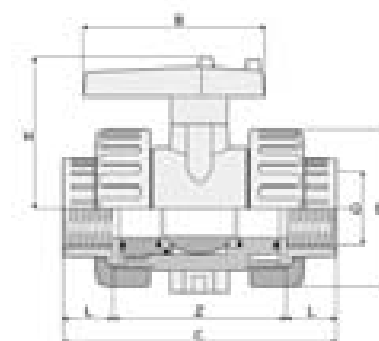
1V111 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
16	10	14	69	97	47	45	66	160	1V.111.160.00H	1V.111.160.10H	45
20	15	16	70	102	47	45	66	160	1V.111.200.00H	1V.111.200.10H	45
25	20	19	82	120	57	55	78	260	1V.111.250.00H	1V.111.250.10H	22
32	25	22	87	131	68	67	86	380	1V.111.320.00H	1V.111.320.10H	18
40	32	26	98	150	86	83	100	655	1V.111.400.00H	1V.111.400.10H	10
50	40	31	101	163	98	91	110	925	1V.111.500.00H	1V.111.500.10H	8
63	50	38	121	197	122	111	130	1695	1V.111.630.00H	1V.111.630.10H	8



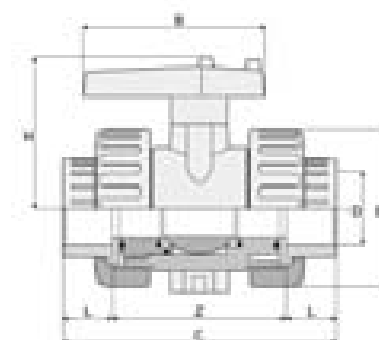
1V112 &lt;

G	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
3/8"	10	14	69	97	47	45	66	160	1V.112.160.00H	1V.112.160.10H	45
1/2"	15	16	70	102	47	45	66	160	1V.112.200.00H	1V.112.200.10H	45
3/4"	20	19	82	120	57	55	78	260	1V.112.250.00H	1V.112.250.10H	22
1"	25	22	87	131	68	67	86	380	1V.112.320.00H	1V.112.320.10H	18
1 1/4"	32	26	98	150	86	83	100	655	1V.112.400.00H	1V.112.400.10H	10
1 1/2"	40	31	101	163	98	91	110	925	1V.112.500.00H	1V.112.500.10H	8
2"	50	38	121	197	122	111	130	1695	1V.112.630.00H	1V.112.630.10H	8



3V111 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
3/8"	10	14	69	97	47	45	66	160	3V.111.160.00H	3V.111.160.10H	45
1/2"	15	16	70	102	47	45	66	160	3V.111.200.00H	3V.111.200.10H	45
3/4"	20	19	82	120	57	55	78	260	3V.111.250.00H	3V.111.250.10H	22
1"	25	22	87	131	68	67	86	380	3V.111.320.00H	3V.111.320.10H	18
1 1/4"	32	26	98	150	86	83	100	655	3V.111.400.00H	3V.111.400.10H	10
1 1/2"	40	31	101	163	98	91	110	925	3V.111.500.00H	3V.111.500.10H	8
2"	50	38	121	197	122	111	130	1695	3V.111.630.00H	3V.111.630.10H	8



&gt; 311

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for processing plants, true union, adjustable swivel support. EPDM or FPM seals, PTFE ball seats. Operating pressure PN 16 at 20° C up to D 63-2", PN 10 at 20° C D 75-2 1/2" 90-3", PN 6 at 20° C D 110-4".

Versions available: ISO metric (1V311) and BS standard (3V311) plain solvent weld socket; BSP threaded socket (1V312).

Available to be manufactured in other international standards (ASTM, JIS) upon request.

Valvola a sfera in PVC grigio per impianti di processo, bighiera a smontaggio radiale, con supporto regolabile su sfera tonda. Guarnizioni in EPDM o FPM, sedi sfera in PTFE.

Pressione di esercizio PN 16 a 20° C fino al D 63-2", PN 10 and 20° C D 75-2 1/2" 90-3", PN 6 a 20° C D 110-4".

Versioni disponibili per incollaggio femmina ISO metrico (1V311) e BS standard (3V311), filettata femmina BSP (1V312).

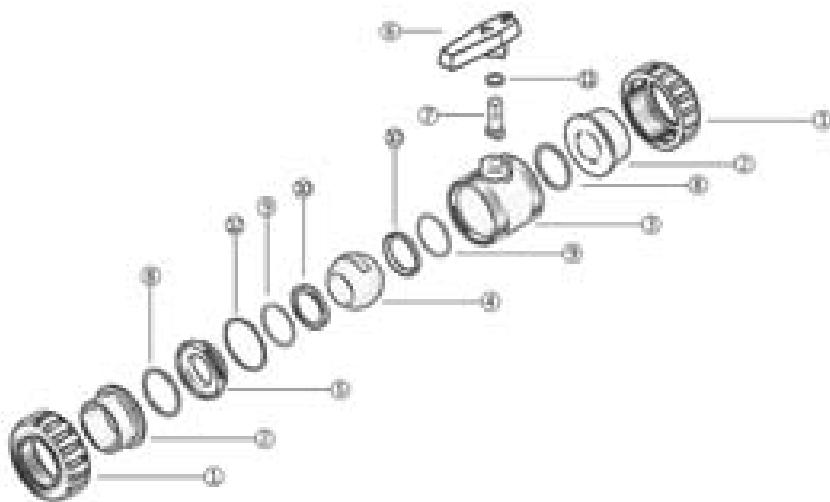
Su richiesta, possibilità di esecuzioni in altri standard internazionali (ASTM, JIS).

Kugelventil aus grauem PVC für Verfahrenstechnische Anlagen, Zweifach-Überwurfmutter mit Radialausbau, auf der runder Kugel befindet sich ein verstellbares Lager. Dichtungen sind aus EPDM oder FPM, Kugelsitze aus PTFE. Betriebsdruck PN 16 bei 20° C bis Durchm. 63-2", PN 10 bei 20° C Durchm. 75-2 1/2" 90-3", PN 6 bei 20° C Durchm. 110-4".

Ausführungen für metrische Nut-Klebeverbindung ISO (1V311) und BS Standard (3V311), Innengewinde BSP (1V312) sind verfügbar. Auf Anfrage sind Ausführungen in anderen internationalen Standards (ASTM, JIS) möglich.

Robinet 1/4 de tour à bille en PVC gris pour les installations de transformation, double anneaux à démontage radial, avec support réglable sur sphère ronde. Joints en EPDM ou FPM, sièges de la sphère en PTFE. Pression d'exercice PN 16 à 20° C jusqu'à D 63-2", PN 10 à 20° C D 75-2 1/2" 90-3", PN 6 à 20° C D 110-4". Versions disponibles pour collage femelle ISO métrique (1V311) et BS standard (3V311), filetage femelle BSP (1V312). Sur demande, possibilité d'exécutions dans d'autres standards internationaux (ASTM, JIS).

Válvula de bola en PVC gris para instalaciones de procesamiento, doble tuerca con desmontaje radial, soporte regulable sobre esfera redonda. Juntas en EPDM o FPM, asiento de la bola en PTFE. Presión de trabajo PN 16 a 20° C hasta el D 63-2", PN 10 a 20° C D 75-2 1/2" 90-3", PN 6 D 110-4". Versión disponible para encolar hembra ISO métrica (1V311) y BS standard (3V311), rosca hembra BSP (1V312). Posibilidad de realización bajo pedido según otras normas internacionales (ASTM, JIS).



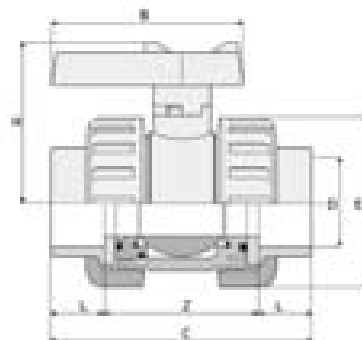
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM/FPM	2
9	seat O-ring	O-ring sotto PTFE	O-Ring	joint pour le siege	conjunto junta	EPDM/FPM	2
10	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PTFE	2
11	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM/FPM	1
12	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM/FPM	1

311 &lt;

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

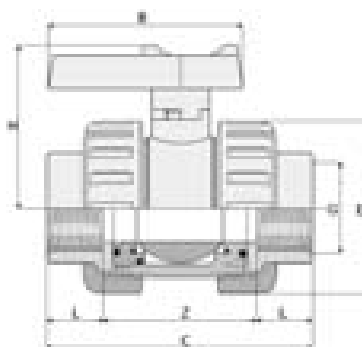
1V311 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
16	10	14	47	75	50	50	57	120	1V.311.160.00W	1V.311.160.10W	45
20	15	17	47	81	50	50	57	125	1V.311.200.00W	1V.311.200.10W	45
25	20	19	57	95	59	55	66	205	1V.311.250.00W	1V.311.250.10W	22
32	25	22	61	105	68	66,5	75	300	1V.311.320.00W	1V.311.320.10W	18
40	32	26	72	124	80	79,5	90	440	1V.311.400.00W	1V.311.400.10W	18
50	40	31	84	146	96	93	103	710	1V.311.500.00W	1V.311.500.10W	10
63	50	38	96	172	116	107	121	1110	1V.311.630.00W	1V.311.630.10W	8
75	65	44	170	258	196	151	212	3060	1V.311.750.00W	1V.311.750.10W	3
90	80	51	170	272	196	151	212	3110	1V.311.900.00W	1V.311.900.10W	3
110	100	61	193	315	239	178	212	5550	1V.311.110.00W	1V.311.110.10W	2



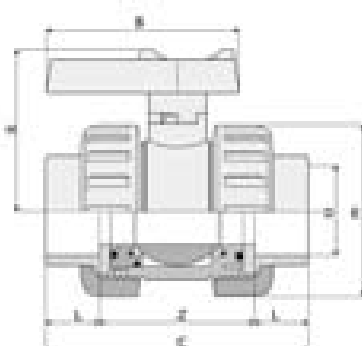
1V312 &lt;

G	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
3/8"	10	14	47	75	50	50	57	130	1V.312.160.00W	1V.312.160.10W	45
1/2"	15	17	47	81	50	50	57	135	1V.312.200.00W	1V.312.200.10W	45
3/4"	20	19	57	95	59	55	66	215	1V.312.250.00W	1V.312.250.10W	22
1"	25	22	61	105	68	66,5	75	310	1V.312.320.00W	1V.312.320.10W	18
1 1/4"	32	26	72	124	80	79,5	90	460	1V.312.400.00W	1V.312.400.10W	18
1 1/2"	40	31	84	146	96	93	103	730	1V.312.500.00W	1V.312.500.10W	10
2"	50	38	96	172	116	107	121	1130	1V.312.630.00W	1V.312.630.10W	8
2 1/2"	65	44	170	258	196	151	212	3060	1V.312.750.00W	1V.312.750.10W	3
3"	80	51	170	272	196	151	212	3110	1V.312.900.00W	1V.312.900.10W	3
4"	100	61	193	315	239	178	212	5550	1V.312.110.00W	1V.312.110.10W	2



3V311 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref. EPDM	Ref. FPM	Box
3/8"	10	14	47	75	50	50	57	120	3V.311.160.00W	3V.311.160.10W	45
1/2"	15	17	47	81	50	50	57	125	3V.311.200.00W	3V.311.200.10W	45
3/4"	20	19	57	95	59	55	66	205	3V.311.250.00W	3V.311.250.10W	22
1"	25	22	61	105	68	66,5	75	300	3V.311.320.00W	3V.311.320.10W	18
1 1/4"	32	26	72	124	80	79,5	90	440	3V.311.400.00W	3V.311.400.10W	18
1 1/2"	40	31	84	146	96	93	103	710	3V.311.500.00W	3V.311.500.10W	10
2"	50	38	96	172	116	107	121	1110	3V.311.630.00W	3V.311.630.10W	8
2 1/2"	65	44	170	258	196	151	212	3060	3V.311.750.00W	3V.311.750.10W	3
3"	80	51	170	272	196	151	212	3110	3V.311.900.00W	3V.311.900.10W	3
4"	100	61	193	315	239	178	212	5550	3V.311.110.00W	3V.311.110.10W	2



# > 324

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for water supply systems and swimming pools, true union, with adjustable support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C up to D 63-2", PN 10 D 75-2 1/2" 90-3", PN 6 D 110-4".

Version available: ISO metric (1V324) and BS standard (3V324) plain solvent weld socket, BSP threaded socket (1V325).

**Valvola a sfera in PVC grigio per trasporto acqua e applicazione piscine, bighiera a smontaggio radiale, con supporto regolabile. Guarnizioni in EPDM, sedi sfera in PE.**

Pressione di esercizio PN 16 a 20° C fino al D 63-2", PN 10 D 75-2 1/2" 90-3", PN 6 D 110-4".

Versione disponibile per incollaggio femmina ISO metrico (1V324) e BS standard (3V324), filettata femmina BSP (1V325).

**Kugelventil aus grauem PVC zur Wasserbeförderung und Schwimmbäder, Zweifach-Überwurfmutter mit Radialausbau, mit verstellbarem Lager.**

Dichtungen sind aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C bis Durchm. 63-2", PN 10 Durchm. 75-2 1/2" 90-4", PN 6 Durchm. 110-4".

Verfügbare Ausführung für metrische Nut-Klebeverbindung ISO (1V324) und BS standard (3V324) Innengewinde BSP (1V325).

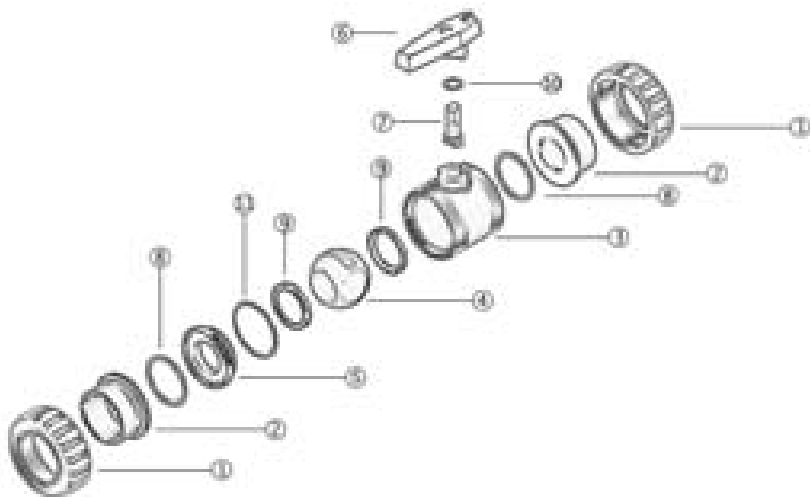
**Robinet 1/4 de tour à bille en PVC gris pour les installations de transformation, double anneaux à démontage radial, avec support réglable sur sphère ronde.**

Jointes en EPDM ou FPM, sièges de la sphère en PE. Pression d'exercice PN 16 à 20° C jusqu'à D 63-2", PN 10 D 75-2 1/2" 90-3", PN 6 D 110-4".

Version disponible pour collage femelle ISO métrique (1V324) et BS standard (3V324), filetage femelle BSP (1V325).

**Válvula de bola en PVC gris para transportar agua y para piscinas, tuercas, desmontaje radial, soporte regulable.**

Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C hasta el D 63-2", PN 10 D 75-2 1/2" 90-3", PN 6 D 110-4". Versión disponible para encolar hembra ISO métrica (1V324) y BS standard (3V324), rosca hembra BSP (1V325).



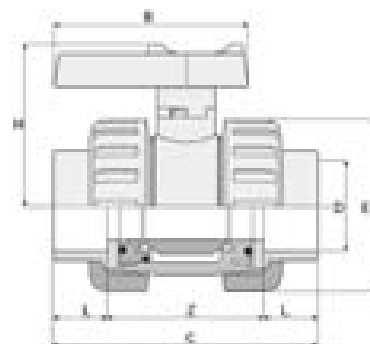
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlussstück	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	2
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1

324 &lt;

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

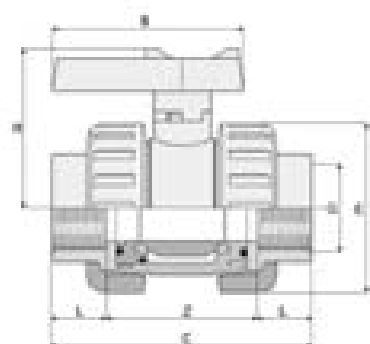
1V324 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
16	10	14	47	75	50	50	57	120	1V.324.160.00W	120
20	15	17	47	81	50	50	57	125	1V.324.200.00W	120
25	20	19	57	95	59	55	66	205	1V.324.250.00W	70
32	25	22	61	105	68	66,5	75	300	1V.324.320.00W	50
40	32	26	72	124	80	79,5	90	440	1V.324.400.00W	30
50	40	31	84	146	96	93	103	710	1V.324.500.00W	20
63	50	38	96	172	116	107	121	1110	1V.324.630.00W	10
75	65	44	170	258	196	151	212	3060	1V.324.750.00W	3
90	80	51	170	272	196	151	212	3110	1V.324.900.00W	3
110	100	61	193	315	239	178	212	5550	1V.324.110.00W	2



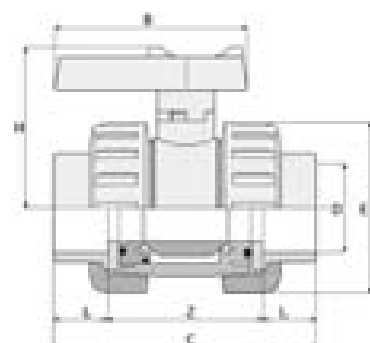
1V325 &lt;

G	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	47	75	50	50	57	120	1V.325.160.00W	120
1/2"	15	17	47	81	50	50	57	125	1V.325.200.00W	120
3/4"	20	19	57	95	59	55	66	205	1V.325.250.00W	70
1"	25	22	61	105	68	66,5	75	300	1V.325.320.00W	50
1 1/4"	32	26	72	124	80	79,5	90	440	1V.325.400.00W	30
1 1/2"	40	31	84	146	96	93	103	710	1V.325.500.00W	20
2"	50	38	96	172	116	107	121	1110	1V.325.630.00W	10
2 1/2"	65	44	170	258	196	151	212	3060	1V.325.750.00W	3
3"	80	51	170	272	196	151	212	3110	1V.325.900.00W	3
4"	100	61	193	315	239	178	212	5550	1V.325.110.00W	2



3V324 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	47	75	50	50	57	120	3V.324.160.00W	120
1/2"	15	17	47	81	50	50	57	125	3V.324.200.00W	120
3/4"	20	19	57	95	59	55	66	205	3V.324.250.00W	70
1"	25	22	61	105	68	66,5	75	300	3V.324.320.00W	50
1 1/4"	32	26	72	124	80	79,5	90	440	3V.324.400.00W	30
1 1/2"	40	31	84	146	96	93	103	710	3V.324.500.00W	20
2"	50	38	96	172	116	107	121	1110	3V.324.630.00W	10
2 1/2"	65	44	170	258	196	151	212	3060	3V.324.750.00W	3
3"	80	51	170	272	196	151	212	3110	3V.324.900.00W	3
4"	100	61	193	315	239	178	212	5550	3V.324.110.00W	2



## &gt; 334

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for water supply systems and swimming pools, true union, with adjustable support.  
EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C provided with compression fitting junction to connect PE ISO metric pipes from both sides.

Valvola a sfera in PVC grigio per trasporto acqua e applicazione piscine, bighiera a smontaggio radiale, con supporto regolabile. Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C provvista di giunto a compressione per connessione con tubi PE serie metrica da entrambi i lati.

Kugelventil aus grauem PVC für Wasserbeförderung und Schwimmbäder, Zweifach-Überwurfmutter mit Radialausbau, mit verstellbarem Lager. Dichtungen aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C Druckanschluss für die Verbindung mit PE-Rohren auf beiden Seiten.

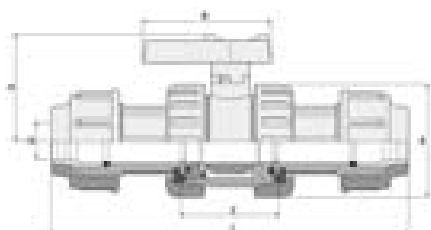
Robinet 1/4 de tour à bille en PVC gris pour les installations de transformation, double anneaux à démontage radial, avec support réglable sur sphère ronde. Joints en EPDM ou FPM, sièges de la sphère en PE.

Pression d'exercice PN 16 à 20° C dotée de joint à compression pour raccordement métrique à des tuyaux PE sur le deux côtés.

Válvula de bola en PVC gris para transportar agua y para piscinas, dos coronas, desmontaje radial, soporte regulable. Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C con junta de compresión para conectar tubos metricos en PE en ambos lados del cuerpo de la válvula.

Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	valve nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	body valve	corpo	Gehäuse	corp	cuerpo	PVC	1
3	ball valve	sfera	Kugel	sphère	bola	PVC	1
4	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
5	handle	maniglia	Handgriff	volant	maneta	PVC	1
6	stem	asta comando	Spindel	tige	eje	PVC	1
7	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	2
8	ball seat	guarnizione sfera	Kugeldichtung	siège	junta asiento	PE	2
9	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
10	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1
11	split ring	anello aperto	Haltering	bague ouverte	anillo abierto	PVC	2
12	body compr. fitting	corpo giunto compr.	Gehäuse (Klemm.)	corp du joint compr.	cuerpo junta de compr.	PVC	2
13	compr. fitting O-ring	O-ring giunto compr.	O-Ring (Klemm.)	O-ring du joint compr.	O-ring junta de compr.	NBR	2
14	clinching ring	anello di graffaggio	Klemmring	bague de serrage	anillo de cerrado	POM	2
15	compr. fitting nut	ghiera giunto compr.	Überwurfmutter (Klemm.)	ecrou du joint compr.	tuerca junta de compr.	PP	2

## &gt; 1V334



D	DN	C	E	H	B	Z	Gr.	Ref.	Box
20	15	175	50	50	57	74	193	1V.334.200.00W	60
25	20	195	59	55	66	85	292	1V.334.250.00W	30
32	25	212	68	63	75	85	450	1V.334.320.00W	20

## PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

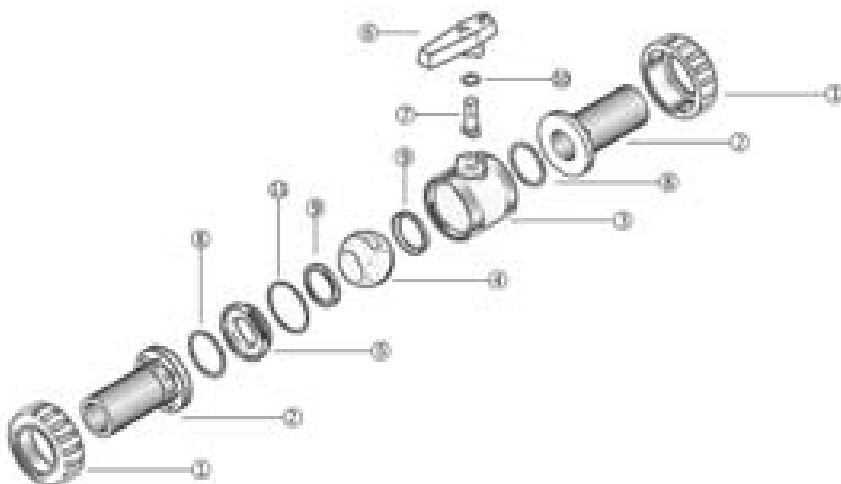
Grey PVC ball valve for water supply systems in PE pipes, true union, with adjustable support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C. Version available provided of PE 100 SDR 11 union ends, for butt welding and electrofusion (1V326).

Valvola a sfera in PVC grigio per connessioni con tubi in PE, bighiera a smontaggio radiale, con supporto regolabile. Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C. Provista di codoli in PE 100 SDR 11 per giunzioni testa a testa e per elettro fusione (1V326).

Kugelventil aus grauem PVC für PE Rohre, Zweifach-Überwurfmutter mit Radialausbau, mit verstellbarem Lager. Dichtungen sind aus EPDM, Kugelsitze sind aus PE. Betriebsdruck PN 16 bei 20° C. Verfügbare Ausführung mit einem Anschlussstück aus PE 100 SDR 11 für Stumpfschweissen und Heizwendelschweissen (1V326).

Robinet 1/4 de tour à bille en PVC gris pour les installations de transformation, double anneaux à démontage radial, avec support réglable sur sphère ronde. Joints en EPDM ou FPM, sièges de la sphère en PTFE. Pression d'exercice PN 16 à 20° C. Version disponible avec collet en PE 100 SDR 11 pour la connection bout a bout et electrofusion (1V326).

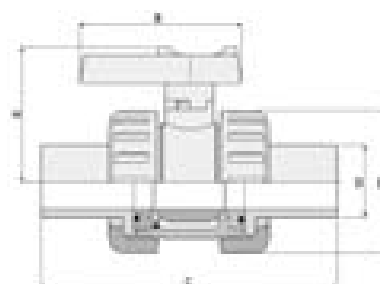
Válvula de bola en PVC gris para tubería en PE, dos tuercas, desmontaje radial, soporte regulable. Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C. Version disponible con manguito en PE 100 SDR 11 para uniones topa a topa y electricas (1V326).



Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlussstück	collet	manguito	PE 100	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	2
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	2
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	jointe de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1

1V326 &lt;

D	DN	C	E	H	B	Gr.	Ref.
20	15	152	50	50	57	125	1V.326.200.00W
25	20	192	59	55	66	215	1V.326.250.00W
32	25	201	68	66,5	75	320	1V.326.320.00W
40	32	220	80	79,5	90	460	1V.326.400.00W
50	40	246	96	93	103	740	1V.326.500.00W
63	50	272	116	107	121	1150	1V.326.630.00W



# > 322

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for water irrigation and supply systems, true union, free support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C up to D 63-2", PN 10 at 20° C D 75-2 1/2" 90-3", PN 6 at 20° C D 110-4". Versions available: ISO metric (1V322) and BS standard (3V322) plain solvent weld socket; BSP threaded female socket (1V321).

**Valvola a sfera in PVC grigio per irrigazione e per trasporto acqua,** bighiera a smontaggio radiale, con supporto libero.

Guarnizioni in EPDM, sedi sfera in PE.

Pressione di esercizio PN 16 a 20° C fino al D 63-2",

PN 10 a 20° C D 75-2 1/2" 90-3", PN 6 a 20° C D 110-4".

Versioni disponibili per incollaggio femmina ISO metrico (1V322) e BS standard (3V322), filettata femmina BSP (1V321).

Kugelventil aus grauem PVC zur Bewässerung und zur Wasserbeförderung, Zweifach-Überwurfmutter mit Radialausbau, mit freiem Lager. Dichtungen aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C bis Durchm. 63-2", PN 10 bei 20° C Durchm. 75-2 1/2" 90-3", PN 6 bei 20° C Durchm. 110-4". Verfügbare Ausführungen für metrische Nut-Klebeverbindung ISO (1V322) und BS standard (3V322), Innengewinde BSP (1V321).

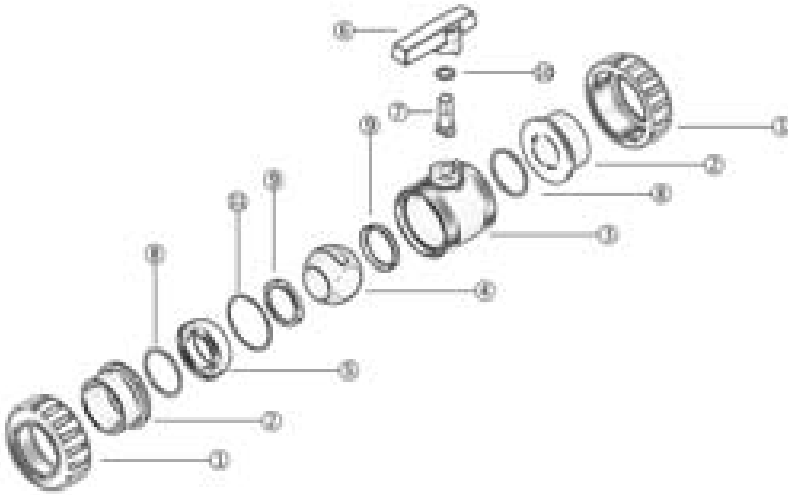
**Robinet 1/4 de tour à bille en PVC gris pour les installations de transformation,** double anneaux à démontage radial, avec support réglable sur sphère ronde. Joints en EPDM ou FPM, sièges de la sphère en PTFE. Pression d'exercice PN 16 à 20° C jusqu'à D 63-2", PN 10 à 20° C du D 75-2 1/2" 90-3", PN 6 à 20° C D 110-4".

Versions disponibles pour collage femelle ISO métrique (1V322) et BS standard (3V322), filetage femelle BSP (1V321).

Válvula de bola en PVC gris para riego y para transportar agua, doble tuerca con desmontaje radial, soporte libre.

Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C hasta el D 63-2", PN 10 a 20° C D 75-2 1/2" 90-3", PN 6 a 20° C D 110-4".

Versiones disponibles para encolar hembra ISO métrica (1V322) y BS standard (3V322), rosca hembra BSP (1V321).



Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	2
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1

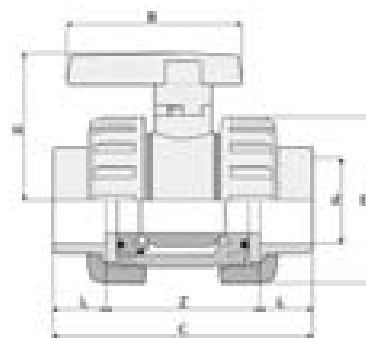


322 &lt;

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

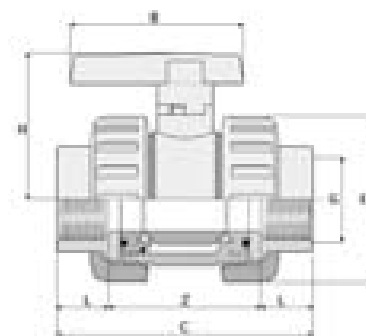
1V322 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
16	10	14	47	75	50	50	57	120	1V.322.160.00H	120
20	15	17	47	81	50	50	57	125	1V.322.200.00H	120
25	20	19	57	95	59	55	66	205	1V.322.250.00H	70
32	25	22	61	105	68	63	75	300	1V.322.320.00H	50
40	32	26	72	124	80	76	90	440	1V.322.400.00H	30
50	40	31	84	146	96	88	103	710	1V.322.500.00H	20
63	50	38	96	172	116	102	121	1110	1V.322.630.00H	10
75	65	44	170	258	196	151	212	3060	1V.322.750.00L	3
90	80	51	170	272	196	151	212	3110	1V.322.900.00L	3
110	100	61	193	315	239	178	212	5550	1V.322.110.00L	2



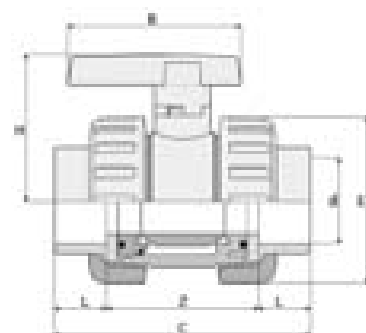
1V321 &lt;

G	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	47	75	50	50	57	130	1V.321.160.00H	120
1/2"	15	17	47	81	50	50	57	135	1V.321.200.00H	120
3/4"	20	19	57	95	59	55	66	215	1V.321.250.00H	70
1"	25	22	61	105	68	63	75	310	1V.321.320.00H	50
1 1/4"	32	26	72	124	80	76	90	460	1V.321.400.00H	30
1 1/2"	40	31	84	146	96	88	103	730	1V.321.500.00H	20
2"	50	38	96	172	116	102	121	1130	1V.321.630.00H	10
2 1/2"	65	44	170	258	196	151	212	3060	1V.321.750.00L	3
3"	80	51	170	272	196	151	212	3110	1V.321.900.00L	3
4"	100	61	193	315	239	178	212	5550	1V.321.110.00L	2



3V322 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	47	75	50	50	57	120	3V.322.160.00H	120
1/2"	15	17	47	81	50	50	57	125	3V.322.200.00H	120
3/4"	20	19	57	95	59	55	66	205	3V.322.250.00H	70
1"	25	22	61	105	68	63	75	300	3V.322.320.00H	50
1 1/4"	32	26	72	124	80	76	90	440	3V.322.400.00H	30
1 1/2"	40	31	84	146	96	88	103	710	3V.322.500.00H	20
2"	50	38	96	172	116	102	121	1110	3V.322.630.00H	10
2 1/2"	65	44	170	258	196	151	212	3060	3V.322.750.00L	3
3"	80	51	170	272	196	151	212	3110	3V.322.900.00L	3
4"	100	61	193	315	239	178	212	5550	3V.322.110.00L	2



# > 302

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for irrigation and water supply systems, single union, free support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C up to D 63-2", PN 10 at 20° C D 75-2 1/2" 90-3", PN 6 at 20° C D 110-4". Versions available: ISO metric (1V302) and BS standard (3V302) plain solvent weld socket; BSP threaded socket (1V301).

Valvola a sfera in PVC grigio per irrigazione e per trasporto acqua, monoghiera, con supporto libero.

Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C fino al D 63- 2", PN 10 a 20° C D 75-2 1/2" 90-3", PN 6 a 20° C D 110-4".

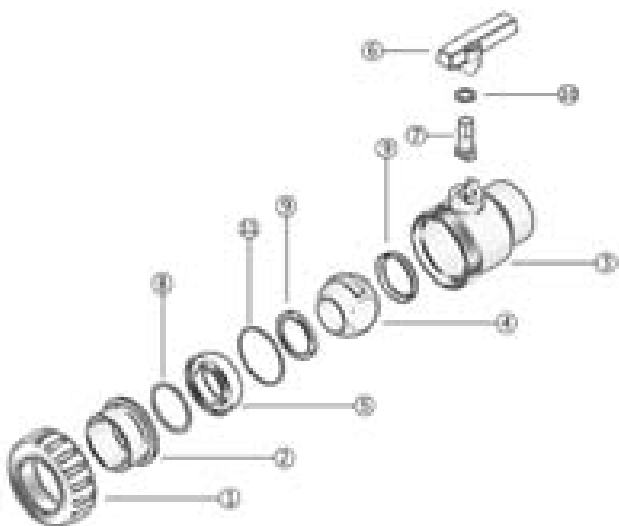
Versioni disponibili per incollaggio femmina ISO metrico (1V302) e BS standard (3V302), filettata femmina BSP (1V301).

Kugelventil aus grauem PVC zur Bewässerung und zur Wasserbeförderung, Einfach-Überwurfmutter, mit freiem Lager. Dichtungen aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C bis Durchm. 63-2", PN 10 bei 20° C Durchm. 75-2 1/2" 90-3", PN 6 bei 20° C Durchm. 110-4". Verfügbare Ausführungen für metrische Nut-Klebeverbindung ISO (1V322) und BS Standard (3V322), Innengewinde BSP (1V321).

Robinet à bille en PVC gris pour irrigation et transport d'eau, anneau simple avec support libre. Joints en EPDM, sièges de la sphère en PE. Pression d'exercice PN 16 à 20° C jusqu'à D 63-2", PN 10 à 20° C D 75-2 1/2" 90-3", PN 6 à 20° C. D 110-4".

Versions disponibles pour collage femelle ISO métrique (1V302) et BS standard (3V302), filetage femelle BSP (1V301).

Válvula de bola en PVC gris para riego y para transporte de agua, una tuerca, soporte libre. Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C hasta el D 63-2", PN 10 a 20° C D 75-2 1/2" 90-3", PN 6 a 20° C D 110-4". Versiones disponibles para encolar hembra ISO métrica (1V302) y BS standard (3V302), rosca hembra BSP (1V301).



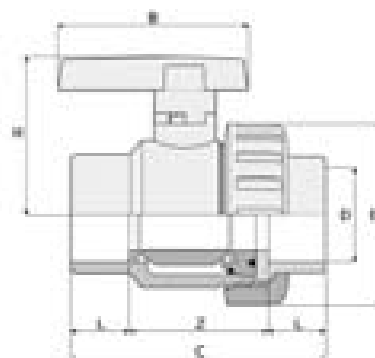
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	1
2	union end	collarino	Anschlussteil	collet	manguito	PVC	1
3	body	corpo	Gehäuse	corp	cuero	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	1
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1/2
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1
12	seat O-ring	O-ring sotto PTFE	O-Ring	joint pour la siege	conjunto junta	EPDM	2

302 &lt;

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

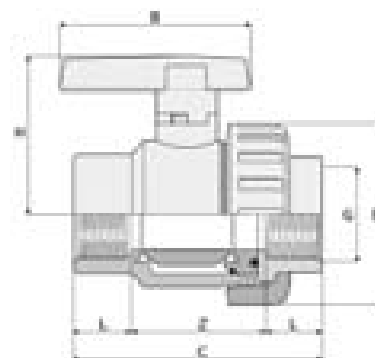
1V302 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
16	10	14	51	85	50	50	57	95	1V.302.160.00H	120
20	15	17	54	85	50	50	57	100	1V.302.200.00H	120
25	20	19	63	98	59	55	66	155	1V.302.250.00H	80
32	25	22	71	111	68	63	75	240	1V.302.320.00H	60
40	32	26	88	136	80	76	90	350	1V.302.400.00H	30
50	40	31	96	158	96	88	103	550	1V.302.500.00H	20
63	50	38	104	180	116	102	121	930	1V.302.630.00H	10
75	65	44	105	193	196	151	212	2230	1V.302.750.00L	4
90	80	51	105	207	196	151	212	2250	1V.302.900.00L	4
110	100	61	137	259	239	178	212	4310	1V.302.110.00L	2



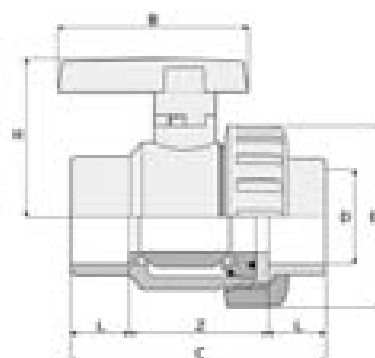
1V301 &lt;

G	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	51	85	50	50	57	105	1V.301.160.00H	120
1/2"	15	17	54	85	50	50	57	110	1V.301.200.00H	120
3/4"	20	19	63	98	59	55	66	165	1V.301.250.00H	80
1"	25	22	71	111	68	63	75	250	1V.301.320.00H	60
1 1/4"	32	26	88	136	80	76	90	370	1V.301.400.00H	30
1 1/2"	40	31	96	158	96	88	103	570	1V.301.500.00H	20
2"	50	38	104	180	116	102	121	950	1V.301.630.00H	10
2 1/2"	65	44	105	193	196	151	212	2230	1V.301.750.00L	4
3"	80	51	105	207	196	151	212	2250	1V.301.900.00L	4
4"	100	61	137	259	239	178	212	4310	1V.301.110.00L	2



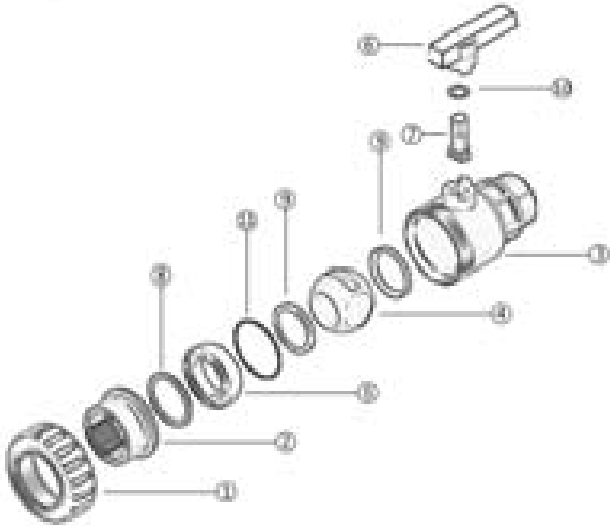
3V302 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	51	85	50	50	57	95	3V.302.160.00H	120
1/2"	15	17	54	85	50	50	57	100	3V.302.200.00H	120
3/4"	20	19	63	98	59	55	66	155	3V.302.250.00H	80
1"	25	22	71	111	68	63	75	240	3V.302.320.00H	60
1 1/4"	32	26	88	136	80	76	90	350	3V.302.400.00H	30
1 1/2"	40	31	96	158	96	88	103	550	3V.302.500.00H	20
2"	50	38	104	180	116	102	121	930	3V.302.630.00H	10
2 1/2"	65	44	105	193	196	151	212	2230	3V.302.750.00L	4
3"	80	51	105	207	196	151	212	2250	3V.302.900.00L	4
4"	100	61	137	259	239	178	212	4310	3V.302.110.00L	2



# > 303

PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



Grey PVC ball valve for irrigation and water supply systems, single union, free support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C. Version available: BSP threaded socket on nut side, male thread on valve body side (1V303).

Valvola a sfera in PVC grigio per irrigazione e per trasporto acqua, monoghiera, con supporto libero. Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C. Versione disponibile filettata femmina BSP lato ghiera e filettata maschio lato corpo valvola (1V303).

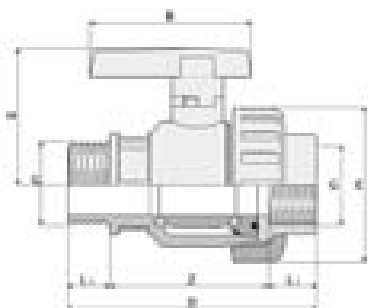
Kugelventil aus grauem PVC zur Bewässerung und Wasserbeförderung, Einfach-Überwurfmutter, mit freiem Lager. Dichtungen sind aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C. Mögliche Ausführung: Innengewinde BSP auf der Überwurfmutter und Außengewinde auf dem Ventilkörper (1V303).

Robinet à bille en PVC gris pour irrigation et transport d'eau, anneau simple avec support libre. Joints en EPDM, sièges de la sphère en PE. Pression d'exercice PN 16 à 20° C. Version disponible filetage femelle BSP côté anneau et filetage mâle côté corps de soupape (1V303).

Válvula de bola en PVC gris para riego y para transporte de agua, una corona, soporte libre. Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C. Versiones disponibles con rosca hembra BSP en el lado de la tuerca y rosca macho en el lado del cuerpo de la válvula (1V303).

Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	1
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	1
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	1
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1

## > 1V303



G	DN	L1	L2	Z	C	E	H	B	Gr.	Ref.	Box
3/8"	10	14	14	51	85	50	50	57	72	1V.303.160.00H	120
1/2"	15	17	17	54	85	50	50	57	95	1V.303.200.00H	120
3/4"	20	19	19	63	98	59	55	66	156	1V.303.250.00H	80
1"	25	22	22	71	111	68	63	75	238	1V.303.320.00H	60
1 1/4"	32	26	26	88	136	80	76	90	360	1V.303.400.00H	30
1 1/2"	40	31	31	96	158	96	88	103	540	1V.303.500.00H	20
2"	50	38	38	104	180	116	102	121	875	1V.303.630.00H	10

## PVC BALL VALVE VALVOLA A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC

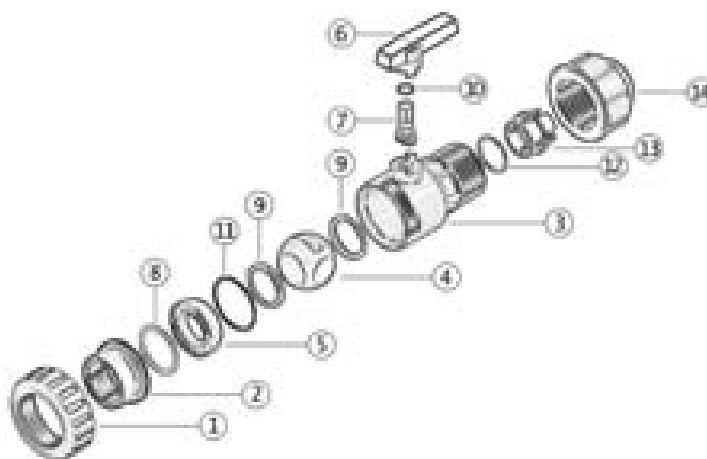
Grey PVC ball valve for irrigation systems, single union, free support. EPDM seals, PE ball seats. Operating pressure PN 16 at 20° C. Version available: BSP threaded socket on nut side, compression fitting for connection to PE pipes on valve body side (1V305).

Valvola a sfera in PVC grigio per irrigazione, monoghiera, con supporto libero. Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C. Versione disponibile filettata femmina BSP lato ghiera e provvista di giunto a compressione per connessione con tubi PE lato corpo valvola (1V305).

Kugelventil aus grauem PVC zur Bewässerung, Einfach-Überwurfmutter, mit freiem Lager. Dichtungen sind aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C. Verfügbare Ausführung Innengewinde BSP auf der Überwurfmutter und Druckanschluss für die Verbindung mit PE-Rohren auf Seiten des Ventilkörpers (1V305).

Robinet à bille 1/4 de tour en PVC gris pour l'irrigation, simple anneau, avec support libre. Joints en EPDM, sièges de la sphère en PE. Pression d'exercice PN 16 à 20° C. Version disponible filetage femelle BSP côté anneau et dotée de joint à compression pour raccordement à des tuyaux PE côté corps de soupape (1V305).

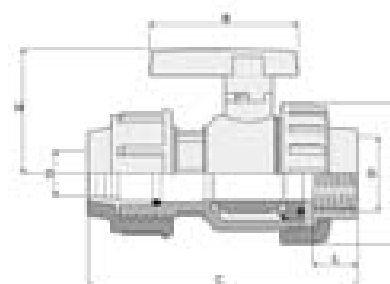
Válvula de bola en PVC para riego, una tuerca, soporte libre. Juntas en EPDM, asiento de la bola en PE. Presión de trabajo PN 16 a 20° C. Versión disponible con rosca hembra BSP del lado de la tuerca y junta de compresión para conectar tubos en PE en el lado del cuerpo de la válvula (1V305).



Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	1
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	1
9	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1
12	body O-ring	O-ring corpo	O-Ring	joint du corp	conjunto junta	NBR	1
13	clinching ring	anello di graffaggio	Klemmring	bague de serrage	anillo de cerrado	POM	1
14	nut	ghiera	Überwurfmutter	ecrou	tuerca	PP	1

1V305 &lt;

DxG	DN	L	C	E	H	B	Gr.	Ref.	Box
16x3/8"	10	14	99	50	50	57	42	1V.305.160.00L	120
20x1/2"	15	17	99	50	50	57	46	1V.305.200.00L	100
25x3/4"	20	19	115	59	55	66	110	1V.305.250.00L	60
32x1"	25	22	131	68	63	75	211	1V.305.320.00L	40
40x1 1/4"	32	26	158	80	76	90	320	1V.305.400.00L	20
50x1 1/2"	40	31	181	96	88	103	460	1V.305.500.00L	15
63x2"	50	38	221	116	102	121	690	1V.305.630.00L	8



# > 335

PVC BALL VALVE VALVOLE A SFERA IN PVC KUGELVENTIL AUS PVC ROBINET À TOURNANT SPHÉRIQUE EN PVC VÁLVULA DE BOLA EN PVC



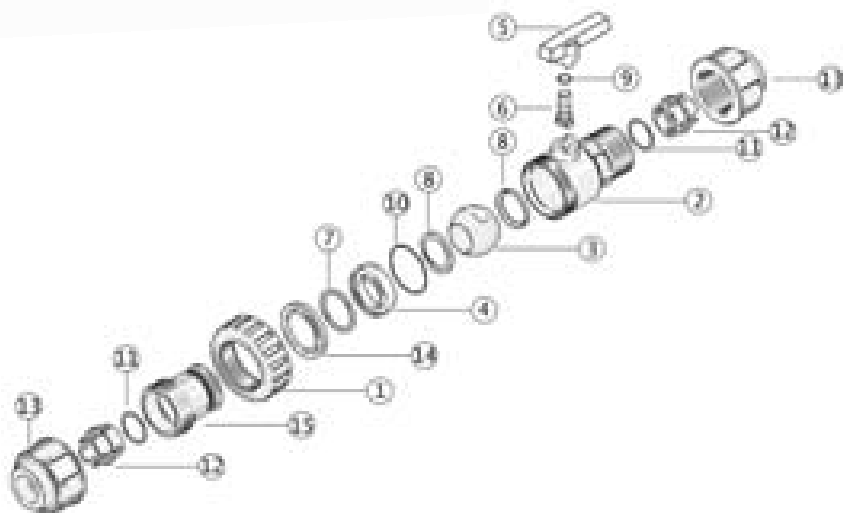
Grey PVC ball valve for irrigation systems, single union, free support. EPDM seals, PE ball seats.  
Operating pressure PN 16 at 20° C provided with compression fitting junction to connect PE ISO metric pipes from both sides.

Valvola a sfera in PVC grigio per irrigazione, monoghiera, con supporto libero. Guarnizioni in EPDM, sedi sfera in PE. Pressione di esercizio PN 16 a 20° C provvista di giunto a compressione per connessione con tubi PE serie metrica da entrambi i lati.

Kugelventil aus grauem PVC für die Bewässerung, Einfach-Überwurfmutter, mit freiem Lager.  
Dichtungen aus EPDM, Kugelsitze aus PE. Betriebsdruck PN 16 bei 20° C. Druckanschluss für metrische Verbindung mit PE-Rohren auf beiden Seiten.

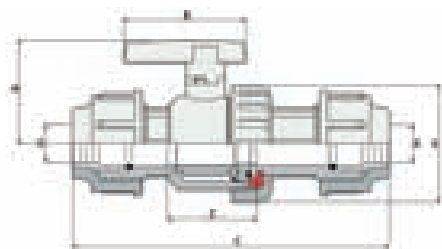
Robinet à bille 1/4 de tour en PVC gris pour l'irrigation, simple anneau, avec support libre. Joints en EPDM, sièges de la sphère en PE. Pression d'exercice PN 16 à 20° C.  
Dotée de joint à compression pour raccordement metrique à des tuyaux PE sur le deux côtés.

Válvula de bola en PVC gris para riego, una corona, soporte libre. Juntas en EPDM, asiento de la bola en PE.  
Presión de trabajo PN 16 a 20° C. Con junta de compresión para conectar tubos metricos en PE en ambos lados del cuerpo de la válvula.



Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	valve nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	1
2	body valve	corpo	Gehäuse	corp	cuerpo	PVC	1
3	ball valve	sfera	Kugel	sphère	bola	PVC	1
4	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
5	handle	maniglia	Handgriff	volant	maneta	PVC	1
6	stem	asta comando	Spindel	tige	eje	PVC	1
7	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	1
8	ball seat	guarnizione sfera	Kugeldichtung	siege	junta asiento	PE	2
9	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
10	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1
11	compr. fitting O-ring	O-ring giunto compr.	O-Ring (Klemm.)	joint compr. O-ring	junta de compr. O-ring	NBR	2
12	clinching ring	anello di graffaggio	Klemmring	bague de serrage	anillo de cerrado	POM	2
13	compr. fitting nut	ghiera giunto compr.	Überwurfmutter (Klemm.)	ecrou du joint compr	tuerca junta de compr.	PP	2
14	split ring	anello aperto	Haltering	bague ouverte	anillo abierto	PVC	1
15	body compr. fitting	corpo giunto compr.	Gehäuse (Klemm.)	corp du joint compr.	cuerpo junta de compr.	PVC	1

## > 1V335



D	DN	C	E	H	B	Z	Gr.	Ref.	Box
20	15	148	50	50	57	67	156	1V.335.200.00W	70
25	20	165	59	55	66	77	235	1V.335.250.00W	40
32	25	188	68	63	75	83	365	1V.335.320.00W	30

## 311 ABS &lt;

ABS BALL VALVE VALVOLA A SFERA IN ABS KUGELVENTIL AUS ABS ROBINET À TOURNANT SPHÉRIQUE EN ABS VÁLVULA DE BOLA EN ABS

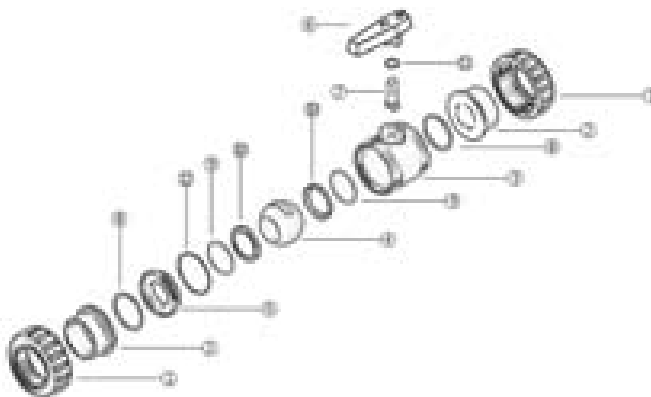
Grey ABS ball valve for processing plants, true union, adjustable support. EPDM seals, PTFE ball seats.  
Version available BS standard (3A311) plain solvent weld socket.

Valvola a sfera in ABS grigio per impianti di processo, bighiera a smontaggio radiale, con supporto regolabile.  
Guarnizioni in EPDM, sedi sfera in PTFE. Versione disponibile per incollaggio BS standard (3A311).

Kugelventile aus grauem ABS für Verarbeitungsanlagen Anlagen, Zweifacher-Überwurfmutter mit Radialausbau, auf der runder Kugel befindet sich ein verstellbares Lager.  
Dichtung ist aus EPDM, Kugelsitze sind aus PTFE. Verfügbare Ausführungen für BS Standard (3A311).

Robinet 1/4 de tour à bille en ABS gris pour les installations de transformation, double anneau à démontage radial, avec support réglable sur sphère ronde.  
Joints en EPDM ou FPM, sièges de la sphère en PTFE. Version disponible pour collage femelle BS standard (3A311).

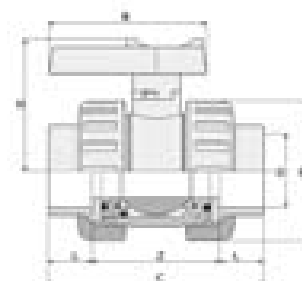
Válvula de bola en ABS gris para instalaciones de procesamiento, doble corona con desmontaje radial, soporte regulable sobre esfera redonda. Juntas en EPDM, asiento de la bola en PTFE.  
Versión disponible para encolar hembra BS standard (3A311).



Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	1
2	union end	collarino	Anschlussstück	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	support	supporto	Dichtungsträger	support	casquillo interior	PVC	1
6	handle	maniglia	Handgriff	volant	maneta	PVC	1
7	stem	asta comando	Spindel	tige	eje	PVC	1
8	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM	1
9	ball seat	guarnizione sfera	Kugeldichtung	siège	junta asiento	PE	2
10	stem O-ring	O-ring asta comando	O-Ring	joint de la tige	junta eje	EPDM	1
11	body O-ring	O-ring tenuta radiale	O-Ring	joint du corp	conjunto junta	EPDM	1
12	body O-ring	O-ring corpo	O-Ring	joint du corp	conjunto junta	NBR	1
13	clinching ring	anello di graffaggio	Klemmring	bague de serrage	anillo de cerrado	POM	1
14	nut	ghiera	Überwurfmutter	ecrou	tuerca	PP	1

3A311 &lt;

D	DN	L	Z	C	E	H	B	Gr.	Ref.EPDM	Box
3/8"	10	14	47	75	50	50	57	95	3A.311.160.00W	45
1/2"	15	17	47	81	50	50	57	95	3A.311.200.00W	45
3/4"	20	19	57	95	59	55	66	156	3A.311.250.00W	22
1"	25	22	61	105	68	66.5	75	228	3A.311.320.00W	18
1 1/4"	32	26	72	124	80	79.5	90	334	3A.311.400.00W	18
1 1/2"	40	31	84	146	96	93	103	540	3A.311.500.00W	10
2"	50	38	96	172	116	107	121	844	3A.311.630.00W	8
2 1/2"	65	44	170	258	196	151	212	2326	3A.311.750.00W	3
3"	80	51	170	272	196	151	212	2364	3A.311.900.00W	3
4"	100	61	193	315	239	178	212	4218	3A.311.110.00W	2



# > CLP

PVC WAFER CHECK VALVE VALVOLA A CLAPET IN PVC RÜCKSCHLAGKLAPPE AUS PVC  
CLAPET DE RETENUE À BATTANT EN PVC VÁLVULA DE CLAPETA EN PVC



PVC wafer check valve. Connection with flanges, Astore stubs (QR1) and flat gaskets (GQP). Pressure rating PN 5 at 20° C, maximum pressure rating of connected pipe PN 10.

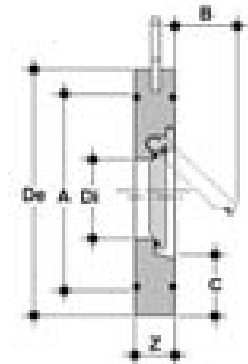
Valvola a clapet in PVC. Connessione in accoppiamento con collari e guarnizioni piane Astore (QR1 e GQP). Classe pressoria PN 5 a 20° C. Collegamento con tubazioni con massima classe pressoria PN 10.

Rückschlagklappe aus PVC. Verbindungen mit Astore Bundbuchsen und Dichtungen (QR1 und GQP). Betriebsdruck PN 5 bei 20° C. Zulässiger Rohre Betriebsdruck beträgt PN 10.

Clapet de retenue a battant en PVC. Jonction avec bride collet et joint Astore (QR1 et GQP). Pression de service maximal PN 5 à 20° C. Connexion avec tuyaux au maximal classe de pression PN 10.

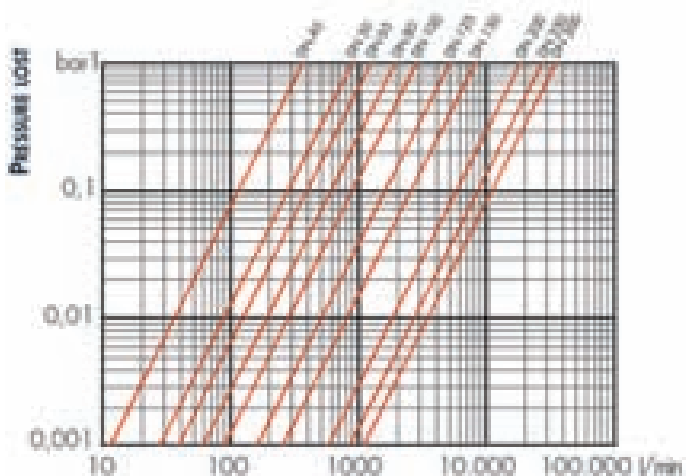
Válvula de clapeta en PVC. Junturas con manguito porta brida y junta Astore (QR1 y GQP). Presión de trabajo maxima PN 5 a 20° C. Utilizar con tubería con presión PN 10 maxima.

D	DN	De	Z	Di	A	B	C	Gr.	Code	A(hor)Bar	A(vert)Bar	B Bar
50	40	95	16	21	72	25	28	160	1VCLP50000	0,001	0,004	0,3
63	50	109	20	32	86	37	29	250	1VCLP63000	0,001	0,004	0,4
75	65	129	20	40	105	50	31	320	1VCLP75000	0,001	0,004	0,3
90	80	144	20	54	119	61	32	390	1VCLP90000	0,001	0,007	0,2
110	100	164	22	70	146	77	31	550	1VCLP110000	0,001	0,007	0,2
140	125	195	23	92	173	94	35	750	1VCLP150000	0,001	0,007	0,3
160	150	220	25	112	197	115	35	1100	1VCLP170000	0,001	0,007	0,1
225	200	275	35	154	225	152	38	2100	1VCLP230000	0,001	0,012	0,1
280	250	330	40	192	312	180	41	3500	1VCLP280000	0,001	0,012	0,1
315	300	380	45	227	363	215	41	5300	1VCLP330000	0,001	0,012	0,1



A Minimum pressure for valve opening  
Pressione minima per apertura valvola  
Mindestdruck für Ventilöffnung  
Pression minimale pour l'ouverture de la vanne  
Presión mínima para apertura de la válvula

B Minimum pressure for seal  
Pressione minima per la tenuta  
Mindestdruck für Abdichtung  
Pression minimale pour l'etancheite  
Presión mínima para la estanqueidad

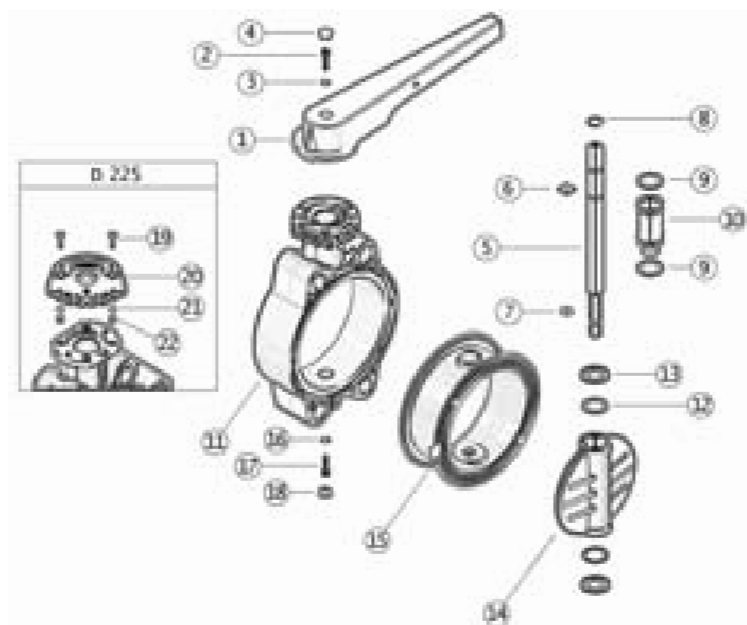




## PVC BUTTERFLY VALVE VALVOLA A FARFALLA IN PVC ABSPERRKLAPPE AUS PVC VANNE PAPILLON EN PVC VÁLVULA DE MARIPOSA EN PVC

Grey PVC butterfly valve for water supply systems, true union.  
EPDM seals, galvanised steel stem.  
Flange type coupling with collars and flanges. Range available  
from D 50 (DN 40) up to D 315 (DN 300). Diameters D 280-315  
provide of gear box as standard.  
Pressure rating and operating torque, see page 22.

Valvola a farfalla in PVC grigio per trasporto acqua, a smontaggio  
radiale. Guarnizioni in EPDM, stelo in acciaio zincato.  
Gamma disponibile da D 50 (DN 40) a D 315 (DN 300). Diametri  
D 280-315 provvisti di serie di riduttore a volantino. Per pressione  
di esercizio e coppia di manovra vedi tabella a pag. 22.



&gt; D 50 DN 40-D 75 DN 65



&gt; D 90 DN 80-160 DN 150



&gt; D 225 DN 200

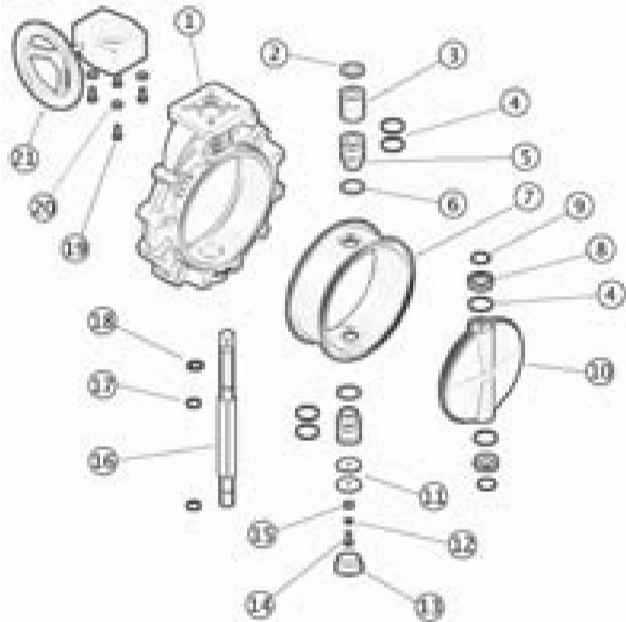
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	handle	maniglia	Handhebel	poignée	maneta	PVC	1
2	screw	vite	Schraube	vis	tornillo	stainless steel	1
3	washer	rondella	Scheibe	rondelle	arandela	stainless steel	1
4	protection cap	cappello protettivo	Schutzkappe	chapeau de protection	tapon	PE	1
5	shaft	stelo	Welle	tige	eje	zinc plated steel	1
6	shaft gasket	guarnizione stelo	Dichtung f. Welle	joint tige	junta eje	EPDM	1
7	shaft O-ring	O-ring stelo	O-Ring f. Welle	O-ring tige	junta eje	EPDM	1
8	seeger ring	anello seeger	Seeger Ring	bague seeger	anillo seeger	stainless steel	1
9	bush O-ring	O-ring bussola	O-Ring f. Buchse	O-ring douille	junta casquillo	EPDM	2
10	bush	bussola	Buchse	douille	casquillo	nylon	1
11	body	corpo	Gehäuse	corp	cuerpo	PVC	1
12	disc O-ring	O-ring disco	O-Ring Scheibe	O-ring papillon	junta compuerta	EPDM	2
13	anti-friction ring	anello antifrizione	Gleitring	bague anti-friction	casquillo	PTFE	2
14	disc	disco	Scheibe	papillon	compuerta	PVC	1
15	gasket	guarnizione	Dichtung/Auskleidung	manchette	junta cuerpo	EPDM	1
16	washer	rondella	Scheibe	rondelle	arandela	stainless steel	1
17	screw	vite	Schraube	vis	tornillo	stainless steel	1
18	protection cap	cappello protettivo	Schutzkappe	chapeau de protection	tapon	PE	1
19	screw	vite	Schraube	vis	tornillo	stainless steel	2
20	pad	piattello	Rastplatte	plateau	divisor	PVC	1
21	washer	rondella	Scheibe	rondelle	arandela	stainless steel	2
22	nut	dado	Mutter	ecrou	tuerca	stainless steel	2

&gt; 800

PVC BUTTERFLY VALVE VALVOLA A FARFALLA IN PVC ABSPERRKLAPPE AUS PVC VANNE PAPILLON EN PVC VÁLVULA DE MARIPOSA EN PVC



D 280+315 &lt;



Absperrklappe aus grauem PVC zur Wasserbeförderung, mit Radialausbau. Dichtungen aus EPDM, Shaft aus verzinktem Stahl. Flanschverbindung gekoppelt mit Bundringen und Flanschen. D 280-315 mit Handgetriebe. Betriebsdruck und Shaltmoment siehe Seite 22.

Vanne papillon en PVC gris pour le transport d'eau, à démontage radial. Joints en EPDM, bar de manoeuvre en acier zingué. Joint pour pose en accouplement avec collets et brides. Dimension disponible D 50 (DN 40) jusqu'au D 315 (DN 300). Les diametres D 280-315 sont dotée, standard, de reducteur manuel. Pour le pression d'exercice et la couple de manoeuvre voir page 22.

Válvula de mariposa en PVC gris para transporte de agua, desmontaje radial. Juntas en EPDM, vástago en acero galvanizado. Posibilidad de embridar y acoplar collares y bridas. Gama disponible desde D 50 (DN 40) hasta D 315 (DN 300). Diametros D 280-315 con reductor manual. Por la presión de trabajo y par de maniobra consultar pag. 22.

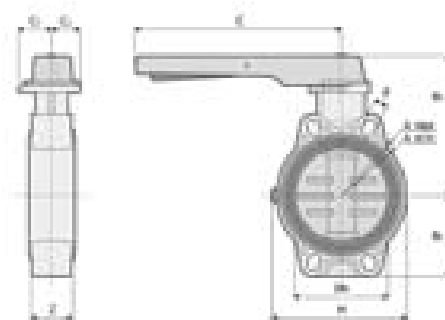
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	body	corpo	Gehäuse	corps	cuerpo	PVC	1
2	washer	rondella	Scheibe	rondelle	arandela	stainless steel	1
3	bush	bussola	Buchse	douille	casquillo	PP	1
4	bush O-ring	O-ring bussola	O-Ring Buchse	O-ring douille	junta casquillo	EPDM	4
5	bush for O-ring	bussola per O-ring	Buchse fuer O-Ring	douille pour O-ring	casquillo	PP	2
6	washer	rondella	Scheibe	rondelle	arandela	stainless steel	2
7	primary liner	guarnizione primaria	Auskleidung/Dichtung	manchette	junta cuerpo	EPDM	1
8	anti-friction ring	anello antifrizione	Gleitring	bague anti friction	casquillo	PTFE	2
9	disc O-ring	O-ring disco	O-Ring f. Scheibe	O-ring papillon	junta compuerta	EPDM	2
10	disc	disco	Klappenscheibe	papillon	compuerta	PVC	1
11	washer	rondella	Scheibe	rondelle	arandela	stainless steel	2
12	washer	rondella	Scheibe	rondelle	arandela	stainless steel	1
13	protection cap	cappellotto di protezione	Scutzkappe	chapeau de protection	tapon	PE	1
14	screw	vite	Schraube	vis	arandela	stainless steel	1
15	washer	rondella	Scheibe	rondelle	arandela	stainless steel	1
16	shaft	stelo	Welle	tige	eje	zinc plated steel	1
17	O-ring shaft	O-ring stelo	O-Ring f. Welle	O-ring tige	junta eje	EPDM	2
18	seeger ring	anello seeger	Seeger-Ring	bague-seeger	anillo seeger	stainless steel	1
19	screw	vite	Schraube	vis	tornillo	stainless steel	4
20	washer	rondella	Scheibe	rondelle	arandela	stainless steel	4
21	gear box	riduttore a volante	Handgetriebe	reducteur manuel	reductor manual	---	1

800 <

PVC BUTTERFLY VALVE VALVOLA A FARFALLA IN PVC ABSPERRKLAPPE AUS PVC VANNE PAPILLON EN PVC VÁLVULA DE MARIPOSA EN PVC

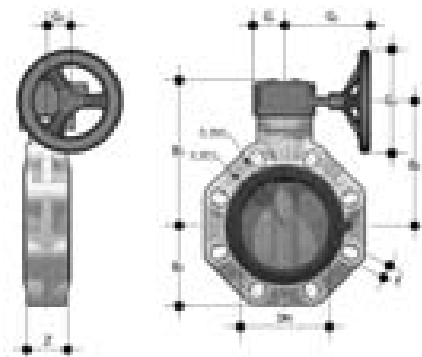
V800 <

D	DN	B2	B3	C	C1	C2	H	Z	A	min	A max	F	Gr.	n°holes	Ref.	Box
50	40	60	136	175	45	42	132	33	93	109	19	827	4	1V.800.500.00W	5	
63	50	70	143	175	45	42	147	43	108	124	19	1012	4	1V.800.630.00W	5	
75	65	80	168	250	45	53	165	46	128	144	19	1420	4	1V.800.750.00W	5	
90	80	90	182	250	45	53	130	49	145	159	19	1640	4	1V.800.900.00W	5	
110	100	105	196	250	45	53	150	56	165	190	19	1990	4	1V.800.110.00W	5	
140	125	121	215	355	45	53	185	64	204	215	23	3030	4	1V.800.150.00W	5	
160	150	132	229	355	45	53	210	70	230	242	23	3730	4	1V.800.170.00W	5	
225	200	161	309	425	65	82	325	71	280	298	23	8240	8	1V.800.230.00	2	

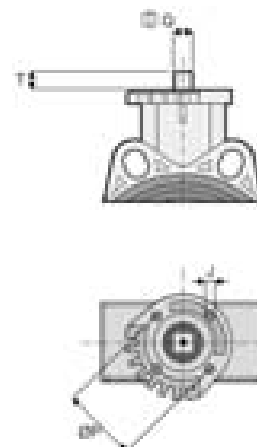


V800 <

D	DN	B2	B5	B6	G	G1	G2	G3	Z	A	min	A max	F	Gr.	n°holes	Ref.
280	250	210	317	281	88	236	76	250	114	335	362	25	18600	12	1V.800.280.00	
315	300	245	374	338	88	236	76	250	114	390	432	29	25600	12	1V.800.330.00	

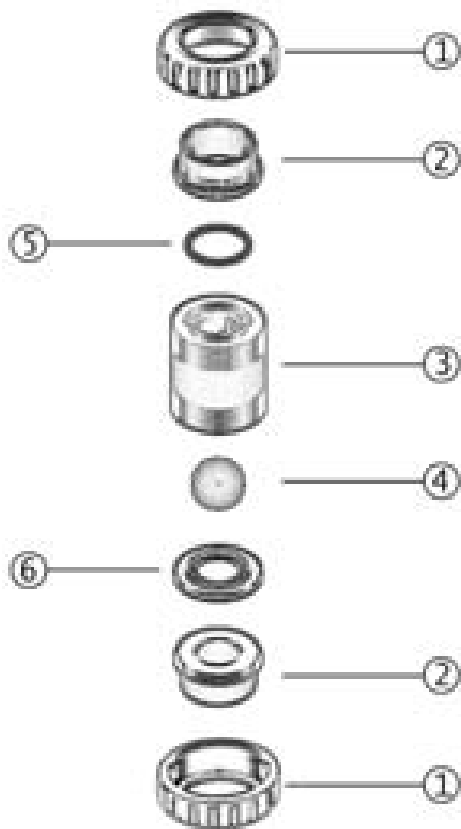


D	DN	PN	J	P	T	Q	Torque in N/m
50	40	16	7	50	12	11	8
63	50	16	7	50	12	11	10
75	65	10	7/9	50/70	12	11	12
90	80	10	9	70	16	14	25
110	100	10	9	70	16	14	45
140	125	10	9	70	19	17	60
160	150	10	9	70	19	17	90
225	200	10	11	102	24	22	140
280	250	6	11/13/17	102/125/140	29	22	100
315	300	4	11/13/17	102/125/140	29	22	180





PVC BALL FOOT VALVE VALVOLA DI FONDO A SFERA IN PVC BODEN-KUGELVENTIL AUS PVC  
CLAPET ANTI-RETOUR DE PIED EN PVC VÁLVULA DE FONDO DE BOLA EN PVC



Grey PVC ball foot valve, true union, vertical operation, with reference marks on body to ensure correct installation. EPDM or FPM (upon request) seals. Operating pressure PN 16 at 20° C. Versions available: ISO metric (1VFO311) and BS standard (3VFO311) plain solvent weld socket; BSP threaded socket (1VFO312). Available to be manufactured in other international standards (ASTM, JIS) upon request.

Valvola di fondo a sfera in PVC grigio, bighiera a smontaggio radiale, a funzionamento verticale, provvista di indicazione sul corpo per la corretta installazione.

Guarnizioni in EPDM o FPM (su richiesta). Pressione di esercizio PN 16 a 20° C. Versioni disponibili per incollaggio femmina ISO metrico (1VFO311) e BS standard (3VFO311), filettata femmina BSP (1VFO312). Su richiesta, possibilità di esecuzioni in altri standard internazionali (ASTM, JIS).

Boden-Kugelventil aus grauem PVC, Zweifacher-Überwurfmutter mit Radialausbau, stehender Betrieb, mit Markierung am Ventilkörper für die korrekte Installation.

Dichtungen sind aus EPDM oder FPM (auf Anfrage). Betriebsdruck PN 16 bei 20° C. Verfügbare Ausführungen für metrische Nut-Klebeverbindung ISO (1VFO311) und BS standard (3VFO311), Innengewinde BSP (1VFO312). Auf Anfrage sind Ausführungen in anderen internationalen Standards (ASTM, JIS) möglich.

Clapet anti-retour de pied en PVC gris, double anneaux, démontage radial, fonctionnement vertical, portant des indications sur le corps pour une installation correcte.

Joints en EPDM ou FPM (sur demande). Pression d'exercice PN 16 à 20° C. Versions disponibles pour collage femelle ISO métrique (1VFO311) et BS standard (3VFO311), filetage femelle BSP (1VFO312). Sur demande, possibilité d'exécutions dans d'autres standards internationaux (ASTM, JIS).

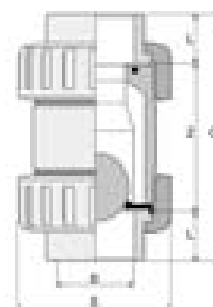
Válvula de fondo de bola en PVC gris, dos coronas, desmontaje radial, funcionamiento vertical, marcas de instalación en el cuerpo. Juntas en EPDM o FPM (bajo pedido). Presión de trabajo PN 16 a 20° C. Versiones disponibles para encolar hembra ISO métrica (1VFO311) y BS standard (3VFO311), rosca hembra BSP (1VFO312). Posibilidad de realización bajo pedido según otras normas internacionales (ASTM, JIS).

Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlussstück	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PVC	1
5	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM/FPM	1
6	ball gasket	guarnizione sfera	Stempeldichtung	joint pour la sphère	conjunto junta	EPDM/FPM	1

PVC BALL FOOT VALVE VALVOLA DI FONDO A SFERA IN PVC BODEN-KUGELVENTIL AUS PVC  
CLAPET ANTI-RETOUR DE PIED EN PVC VÁLVULA DE FONDO DE BOLA EN PVC

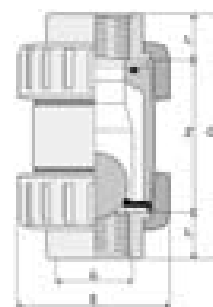
1VFO311 &lt;

D	DN	L	Z	C	E	Gr.	Ref.	Box
16	10	14	48	76	50	98	1VFO.311.160.00	120
20	15	17	48	82	50	104	1VFO.311.200.00	120
25	20	19	55	93	59	152	1VFO.311.250.00	80
32	25	22	62	106	68	244	1VFO.311.320.00	50
40	32	26	75	127	80	384	1VFO.311.400.00	30
50	40	31	84	146	96	607	1VFO.311.500.00	20
63	50	38	99	175	116	987	1VFO.311.630.00	10



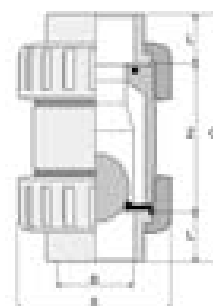
1VFO312 &lt;

G	DN	L	Z	C	E	Gr.	Ref.	Box
3/8"	10	14	48	76	50	98	1VFO.312.160.00	120
1/2"	15	17	48	82	50	104	1VFO.312.200.00	120
3/4"	20	19	55	93	59	152	1VFO.312.250.00	80
1"	25	22	62	106	68	244	1VFO.312.320.00	50
1 1/4"	32	26	75	127	80	384	1VFO.312.400.00	30
1 1/2"	40	31	84	146	96	607	1VFO.312.500.00	20
2"	50	38	99	175	116	987	1VFO.312.630.00	10



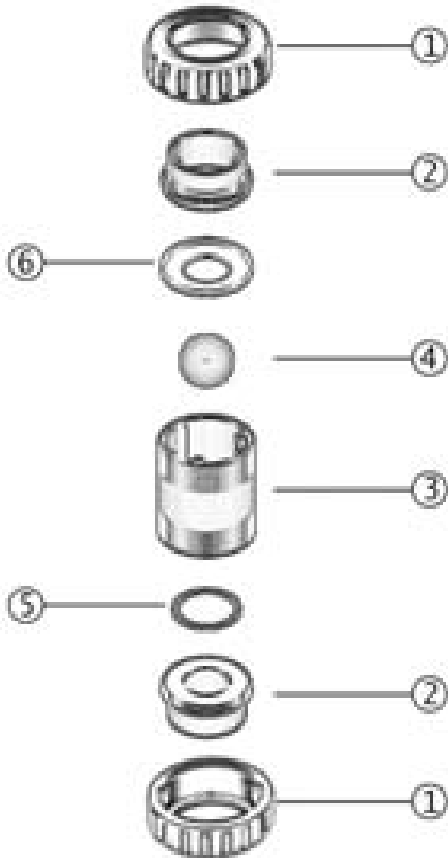
3VFO311 &lt;

D	DN	L	Z	C	E	Gr.	Ref.	Box
3/8"	10	14	48	76	50	98	3VFO.311.160.00	120
1/2"	15	17	48	82	50	104	3VFO.311.200.00	120
3/4"	20	19	55	93	59	152	3VFO.311.250.00	80
1"	25	22	62	106	68	244	3VFO.311.320.00	50
1 1/4"	32	26	75	127	80	384	3VFO.311.400.00	30
1 1/2"	40	31	84	146	96	607	3VFO.311.500.00	20
2"	50	38	99	175	116	987	3VFO.311.630.00	10



# > VSA

BALL AIR-RELEASE VALVE VALVOLA PER SFOGO ARIA KUGELVENTIL FÜR ENTLÜFTUNG  
VENTOUSE SPHÉRIQUE VÁLVULA DE BOLA PARA SALIDA AIRE



Grey PVC air-release ball valve, true union, vertical operation, with reference marks on body to ensure correct installation. EPDM or FPM (upon request) seals. Operating pressure PN 16 to 20° C. Versions available: ISO metric (1VSA311) and BS standard (3VSA311) plain solvent weld socket; BSP threaded socket (1VSA312). Available to be manufactured in other international standards (ASTM, JIS) upon request.

Valvola a sfera in PVC grigio per sfogo aria, bighiera a smontaggio radiale, a funzionamento verticale, provvista di indicazione per la corretta installazione.

Guarnizioni in EPDM o FPM (su richiesta). Pressione di esercizio PN 16 a 20° C. Versioni disponibili per incollaggio femmina ISO metrico (1VSA311) e BS standard (3VSA311), filettata femmina BSP (1VSA312). Su richiesta, possibilità di esecuzioni in altri standard internazionali (ASTM, JIS).

Kugelventil aus grauem PVC zur Entlüftung, Zweifach-Überwurfmutter mit Radialausbau, stehender Betrieb, mit Markierung am Ventilkörper für die korrekte Installation. Dichtungen aus EPDM oder FPM (auf Anfrage). Betriebsdruck PN 16 bei 20° C. Verfügbare Ausführungen für metrische Nut-Klebeverbindung ISO (1VSA311) und BS Standard (3VSA311), Innengewinde BSP (1VSA312). Auf Anfrage sind Ausführungen in anderen internationalen Standards (ASTM, JIS) möglich.

Vanne à bille en PVC gris pour évacuation d'air, double anneaux à démontage radial, fonctionnement vertical, portant des indications pour une installation correcte. Joints en EPDM ou FPM (sur demande). Pression d'exercice PN 16 à 20° C. Versions disponibles pour collage femelle ISO métrique (1VSA311) et BS standard (3VSA311), filetage femelle BSP (1VSA312). Sur demande, possibilité d'exécutions dans d'autres standards internationaux (ASTM, JIS).

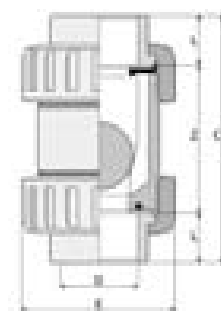
Válvula de bola en PVC gris para la salida aire, dos tuercas, desmontaje radial, funcionamiento vertical, marcas de instalación en el cuerpo. Juntas en EPDM o FPM (bajo pedido). Presión de trabajo PN 16 a 20° C. Versiones disponibles para encolar hembra ISO métrica (1VSA311) y BS standard (3VSA311), rosca hembra BSP (1VSA312). Posibilidad de realización bajo pedido según otras normas internacionales (ASTM, JIS).

Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	nut	ghiera	Überwurfmutter	ecrou	tuerca	PVC	2
2	union end	collarino	Anschlusssteil	collet	manguito	PVC	2
3	body	corpo	Gehäuse	corp	cuerpo	PVC	1
4	ball	sfera	Kugel	sphère	bola	PP	1
5	socket O-ring	O-ring tenuta testa	O-Ring	joint du collet	conjunto junta	EPDM/FPM	1
6	ball gasket	guarnizione sfera	Stempeldichtung	joint pour la sphère	conjunto junta	EPDM/FPM	1

BALL AIR-RELEASE VALVE VALVOLA PER SFOGO ARIA KUGELVENTIL FÜR ENTLÜFTUNG  
VENTOUSE SPHÉRIQUE VÁLVULA DE BOLA PARA SALIDA AIRE

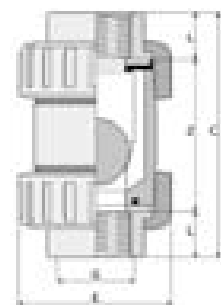
## 1VSA311 &lt;

D	DN	L	Z	C	E	Gr.	Ref.	Box
16	10	14	48	76	50	96	1VSA.311.160.00	120
20	15	17	48	82	50	96	1VSA.311.200.00	120
25	20	19	55	93	59	99	1VSA.311.250.00	80
32	25	22	62	106	68	145	1VSA.311.320.00	50
40	32	26	75	127	80	234	1VSA.311.400.00	30
50	40	31	84	146	96	357	1VSA.311.500.00	20
63	50	38	99	175	116	937	1VSA.311.630.00	10



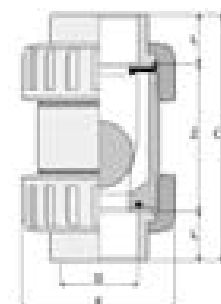
## 1VSA312 &lt;

G	DN	L	Z	C	E	Gr.	Ref.	Box
3/8"	10	14	48	76	50	96	1VSA.312.160.00	120
1/2"	15	17	48	82	50	96	1VSA.312.200.00	120
3/4"	20	19	55	93	59	99	1VSA.312.250.00	80
1"	25	22	62	106	68	145	1VSA.312.320.00	50
1 1/4"	32	26	75	127	80	234	1VSA.312.400.00	30
1 1/2"	40	31	84	146	96	357	1VSA.312.500.00	20
2"	50	38	99	175	116	937	1VSA.312.630.00	10



## 3VSA311 &lt;

D	DN	L	Z	C	E	Gr.	Ref.	Box
3/8"	10	14	48	76	50	96	3VSA.311.160.00	120
1/2"	15	17	48	82	50	96	3VSA.311.200.00	120
3/4"	20	19	55	93	59	99	3VSA.311.250.00	80
1"	25	22	62	106	68	145	3VSA.311.320.00	50
1 1/4"	32	26	75	127	80	234	3VSA.311.400.00	30
1 1/2"	40	31	84	146	96	357	3VSA.311.500.00	20
2"	50	38	99	175	116	937	3VSA.311.630.00	10



# > VNR

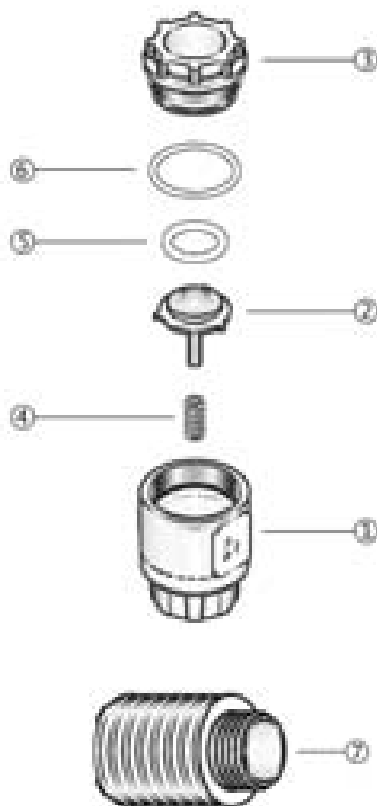
PVC CHECK VALVE VALVOLA DI NON RITORNO IN PVC FEDERRÜCKSCHLAGVENTIL MIT KOLBEN AUS PVC  
VANNE DE RETENUE EN PVC VÁLVULA ANTIRETORNO DE PVC



> VNR



> FLT



PVC check valve with spring and piston for horizontal and vertical applications. AISI 300 steel spring, EPDM gaskets. Maximum operating pressure 10 bar at 20° C.

Version available BSP female thread (1VNR201). The valve can be fitted with (FLT) for use as foot valve.

Valvola di non ritorno in PVC a molla e pistone, per funzionamento orizzontale e verticale. Molla in acciaio AISI serie 300, guarnizioni in EPDM. Pressione di esercizio massima 10 bar a 20° C. Versione disponibile filettata femmina BSP (1 VNR 201). Possibilità di integrare con filtro (FLT) per uso come valvola di fondo.

Federrückschlagventil mit Kolben, aus PVC, geeignet für waagerechten und senkrechten Einbau. Die Feder ist aus AISI 300-Stahl, Dichtungen sind aus EPDM.

Maximaler Betriebsdruck 10 bar bei 20° C. Lieferbare Ausführungen: Innengewinde BSP (1VNR201). Die Ausführung mit Innengewinde kann durch Montage eines zusätzlichen Filters (FLT) zu einem Bodenventil umgerüstet werden.

Vanne de retenue en PVC à ressort et à piston, pour fonctionnement horizontal et vertical. Ressort en acier AISI série 300, joints en EPDM. Pression maximum de service à 20° C: 10 BARS. Versione disponible fileté BSP (1VNR201). Possibilité d'équiper avec filtre (FLT) pour emploi comme soupape de pied.

Válvula antirretorno de PVC con muelle y pistón, para funcionamiento horizontal o vertical. Muelle de acero AISI serie 300, juntas de EPDM.

Presión máxima de trabajo 10 bar a 20° C. Versión con rosca hembra BSP (1VNR201). Posibilidad a integrar con el filtro (FLT) para utilizarla como válvula de fondo.

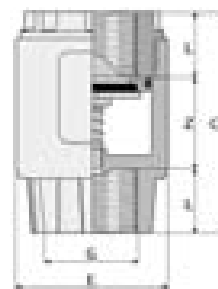
Pos.	Components	Componenti	Benennung	Composants	Componentes	Material	N°
1	body	corpo	Gehäuse	corp	cuerpo	PVC	2
2	piston	pistone	Stempel	douille	cono de cierre	PVC	2
3	lock nut	ghiera di connessione	Überwurfmutter	ecrou pour le corp	conjunto tuerca	PVC	1
4	spring	molla	Feder	ressort	muelle	stainless steel	1
5	piston O-ring	O-ring pistone	Stempeldichtung	joint d'etancheite	junta	EPDM	1
6	body O-ring	O-ring corpo	O-Ring Gehäuse	joint du corp	conjunto junta	EPDM	1
7	filter	filtro	Filternetz	tamis	rejilla	PVC	-



PVC CHECK VALVE VALVOLA DI NON RITORNO IN PVC FEDERRÜCKSCHLAGVENTIL MIT KOLBEN AUS PVC  
VANNE DE RETENUE EN PVC VÁLVULA ANTIRETORNO DE PVC

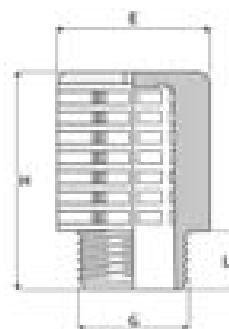
1VNR201 &lt;

G	DN	L	Z	C	E	Gr.	Ref.	Box
3/4"	20	16	33	65	45	75	1VNR.201.25000	200
1"	25	22	38	82	55	135	1VNR.201.32000	100
1 1/4"	32	26	45	97	68	234	1VNR.201.40000	50
1 1/2"	40	31	57	119	85	435	1VNR.201.50000	25
2"	50	38	73	149	107	875	1VNR.201.63000	10



FLT &lt;

G	L	H	E	Gr.	Ref.
3/4"	12	55	36,5	28	20.FLT.18M2.G025
1"	15,5	69	46,5	55	20.FLT.18M2.G032
1 1/4"	15,5	82,5	59	100	20.FLT.18M2.G040
1 1/2"	16	90,5	66	125	20.FLT.18M2.G050
2"	15	108,5	81	220	20.FLT.18M2.G063



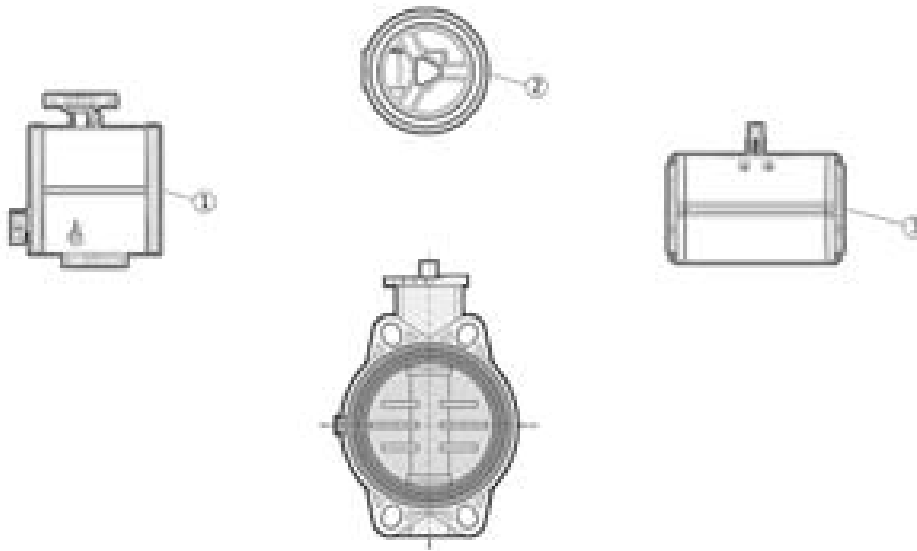
	DN 20	DN 25	DN 32	DN 40	DN 50
mmH <sub>2</sub> O	A 350	350	250	250	150
	B 100	100	250	300	300

A Minimum pressure for valve opening  
Pressione minima per apertura valvola  
Mindestdruck für Ventilöffnung  
Pression minimale pour l'ouverture de la vanne  
Presión mínima para apertura de la válvula

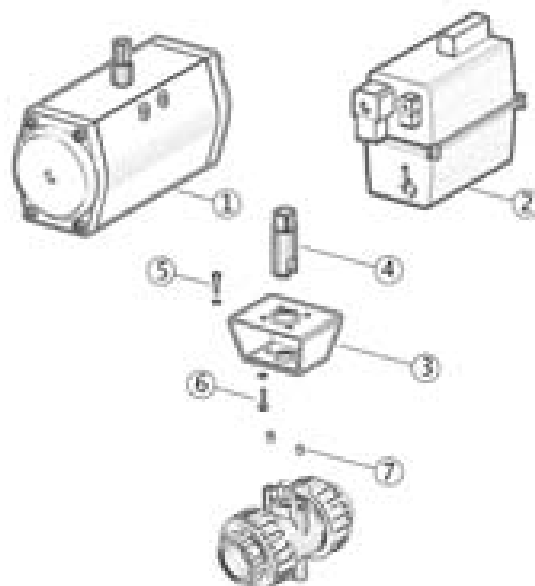
B Minimum pressure for seal  
Pressione minima per la tenuta  
Mindestdruck für Abdichtung  
Pression minimale pour l'étanchéité  
Presión mínima para la estanqueidad

&gt; 800

ACCESSORIES ACCESSORI ZUBEHÖR ACCESSOIRES ELEMENTOS ACCESORIOS



- 1 Electric actuator  
 Attuatore elettrico  
 Elektro - Antrieb  
 Actionneur électrique  
 Actuador eléctrico
- 2 Reduction gear box  
 Riduttore a volantino  
 Handgetriebe  
 Reducteur manuel  
 Reductor manual
- 3 Pneumatic actuator single or double acting  
 Attuatore pneumatico a semplice o doppio effetto  
 Pneumatischer Antrieb einfach oder doppelt wirkend  
 Actionneur pneumatique à simple ou double effet  
 Actuador neumatico simple y doble efecto



- 1 Pneumatic actuator single or double acting  
 Attuatore pneumatico a semplice o doppio effetto  
 Pneumatischer Antrieb einfach oder doppelt wirkend  
 Actionneur pneumatique a simple ou double effet  
 Actuador neumatico simple y doble efecto
- 2 Electric actuator  
 Attuatore elettrico  
 Elektro - Antrieb  
 Actionneur électrique  
 Actuador eléctrico
- 3+7 Kit for actuation  
 Kit per installazione attuatore  
 Kit für Antrieb  
 Accessoires pour l'installation de actionneur  
 Kit para actuador







A.V.F. ASTORE VALVES AND FITTINGS s.r.l.

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