

# VV DN 10÷50

Angle seat valve



# VV DN 10÷50

The VV angle seat valve is a shutting-off and regulating valve particularly suitable for clean fluids.

## ANGLE SEAT VALVE

- Connection system for solvent weld, threaded and flanged joints
- Can be installed in any position
- **No metal parts in contact with the fluid**
- **Valve material compatibility** (PVC-U) with water, drinking water and other food substance conveyance according to **current regulations**
- Can be maintained with the valve body installed

Technical specifications	
<b>Construction</b>	Angle seat shutting-off and regulating valve
<b>Size range</b>	DN 10 ÷ 50
<b>Nominal pressure</b>	<b>DN 10÷25:</b> PN 16 with water at 20 °C <b>DN 32÷50:</b> PN 10 with water at 20 °C
<b>Temperature range</b>	0 °C ÷ 60 °C
<b>Coupling standards</b>	<b>Solvent welding:</b> EN ISO 1452, EN ISO 15493, BS 4346-1, , NF T54-028, ASTM D 2467, JIS K 6743. Can be coupled to pipes according to EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741. <b>Thread:</b> ISO 228-1, EN 10226-1/2, ASTM D 2467, JIS B 0203. <b>Flanging system:</b> ISO 7005-1, EN ISO 1452, EN ISO 15493, EN 558-1 (DN 10÷50) , EN 1092-1, ANSI B.16.5 cl. 150, JIS B 2220.
<b>Reference standards</b>	<b>Construction criteria:</b> EN ISO 1452, EN ISO 15493 <b>Test methods and requirements:</b> ISO 9393 <b>Installation criteria:</b> DVS 2204, DVS 2221, UNI 11242
<b>Valve material</b>	PVC-U
<b>Seal material</b>	EPDM+PTFE (FKM+PTFE on request)
<b>Control options</b>	Manual control

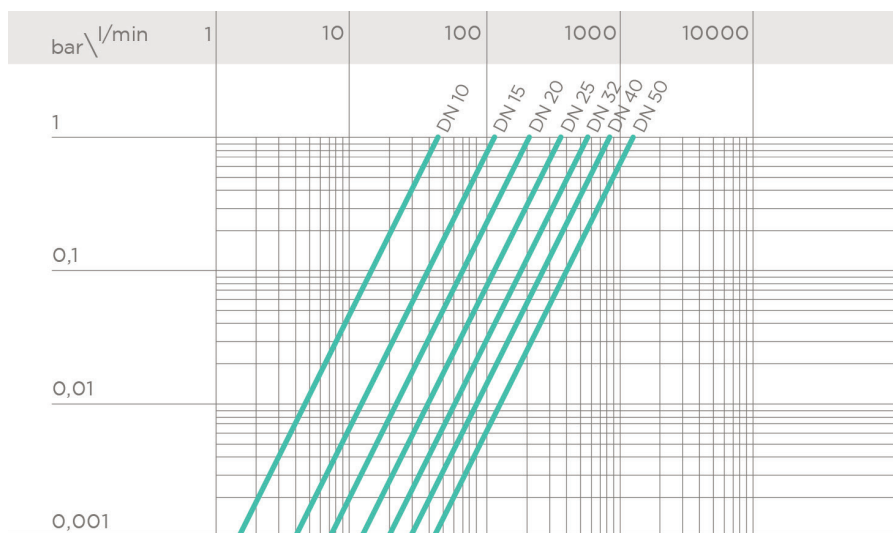
# TECHNICAL DATA

## PRESSURE VARIATION ACCORDING TO TEMPERATURE

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



## PRESSURE DROP GRAPH



## K<sub>v</sub>100 FLOW COEFFICIENT

The K<sub>v</sub>100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position. The Kv100 values shown in the table are calculated with the valve completely open.

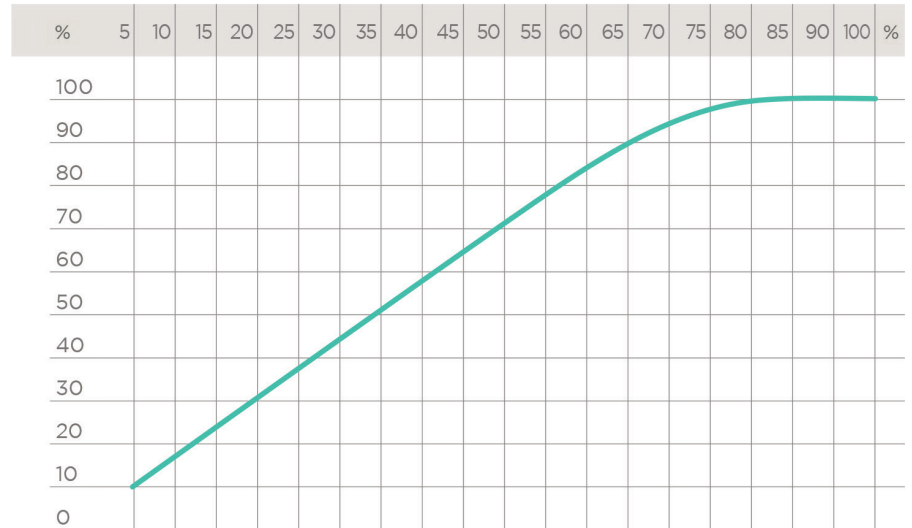
DN	10	15	20	25	32	40	50
Kv100 l/min	47	110	205	375	560	835	1300

## RELATIVE FLOW COEFFICIENT GRAPH

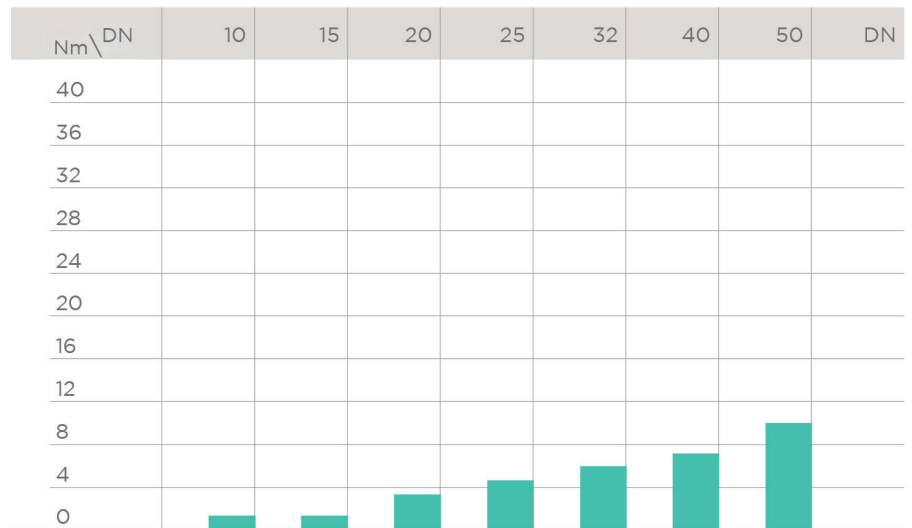
The relative flow coefficient is the flow rate through the valve as a function of the degree of valve opening.

Horizontal axis: Percentage opening of the valve

Vertical axis: Relative flow coefficient

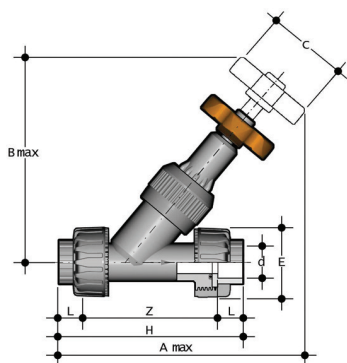


## OPERATING TORQUE AT MAXIMUM WORKING PRESSURE



The information in this leaflet is provided in good faith. No liability will be accepted concerning technical data that is not directly covered by recognised international standards. FIP reserves the right to carry out any modification. Products must be installed and maintained by qualified personnel.

# DIMENSIONS

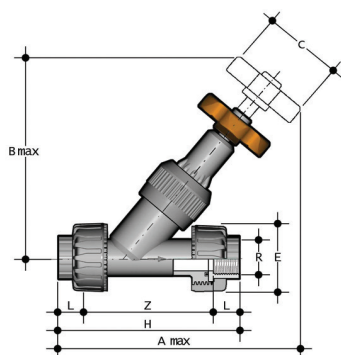


## VVUIV

Angle seat valve with female union ends for solvent welding, metric series

d	DN	PN	A max	B max	C	E	H	L	Z	g	EPDM+PTFE code
16	10	16	170	124	60	55	135	14	107	238	VVUIV016E
20	15	16	173	124	60	55	135	16	103	251	VVUIV020E
25	20	16	197	146	60	66	158	19	120	413	VVUIV025E
32	25	16	223	173	70	75	176	22	132	621	VVUIV032E
40	32	16	258	195	85	87	207	26	155	903	VVUIV040E
50	40	16	295	222	105	100	243	31	181	1320	VVUIV050E
63	50	16	359	269	130	120	298	38	222	2238	VVUIV063E

su richiesta disponibili anche altri standard di connessione

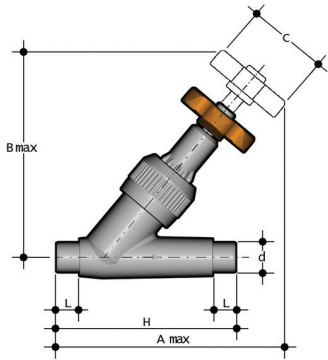


## VVUFV

Angle seat valve with BSP threaded female union ends

R	DN	PN	A max	B max	C	E	H	L	Z	g	EPDM+PTFE code
3/8"	10	16	170	124	60	55	135	11,4	112,2	238	VVUFV038E
1/2"	15	16	173	124	60	55	143	15	113	251	VVUFV012E
3/4"	20	16	197	146	60	66	160	16,3	127,4	413	VVUFV034E
1"	25	16	223	173	70	75	183	19,1	144,8	621	VVUFV100E
1 1/4"	32	10	258	195	85	87	214	21,4	171,2	903	VVUFV114E
1 1/2"	40	10	295	222	105	100	235	21,4	192,2	1320	VVUFV112E
2"	50	10	359	269	130	120	285	25,7	233,6	2238	VVUFV200E

su richiesta disponibili anche altri standard di connessione

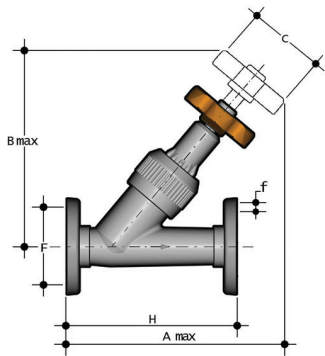


## VVDV

Angle seat valve with male ends for solvent welding, metric series

d	DN	PN	A max	B max	C	H	L	g	EPDM+PTFE code
16	10	16	136	124	60	114	14	150	VVDV016E
20	15	16	146	124	60	124	16	160	VVDV020E
25	20	16	165	146	60	144	19	250	VVDV025E
32	25	16	188	173	70	154	22	380	VVDV032E
40	32	10	217	195	85	174	26	480	VVDV040E
50	40	10	247	222	105	194	31	820	VVDV050E
63	50	10	299	269	130	224	38	1345	VVDV063E

su richiesta disponibile versione VVOAV con flange fisse, foratura ANSI B 16.5 Cl. 150 #FF



## VVOV

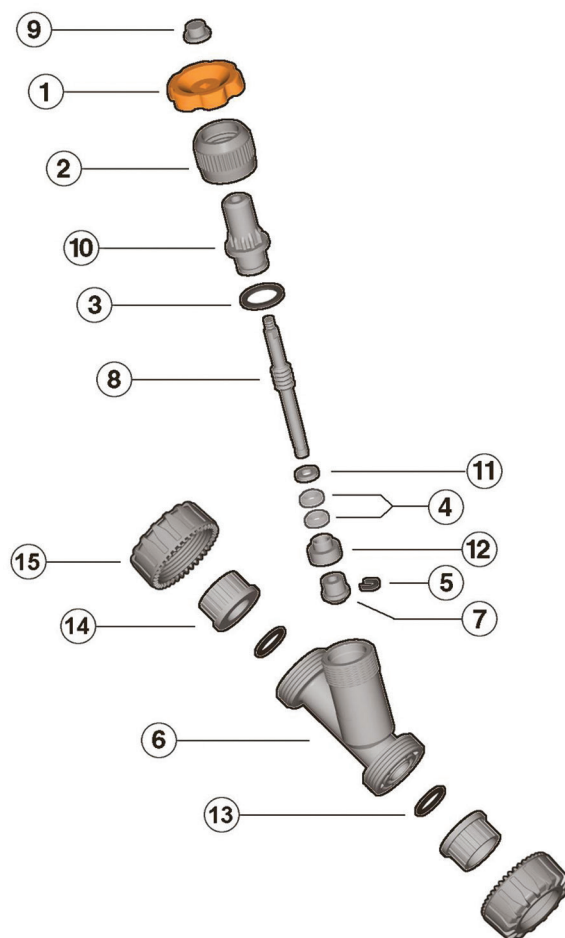
Angle seat valve with fixed flanges, drilled PN10/16

d	DN	PN	A max	B max	C	F	f	H	g	EPDM+PTFE code
20	15	16	146	124	60	65	14	130	300	VVOV020E
25	20	16	166	146	60	75	14	150	455	VVOV025E
32	25	16	191	173	70	85	14	160	655	VVOV032E
40	32	10	219	195	85	100	18	180	1025	VVOV040E
50	40	10	249	222	105	110	18	200	1390	VVOV050E
63	50	10	302	269	130	125	18	230	2155	VVOV063E

su richiesta disponibile versione VVOAV con flange fisse foratura ANSI B 16.5 Cl. 150 #FF

# COMPONENTS

## EXPLODED VIEW



**1** Handwheel (PVC-U - 1)

**2** Union nut (PVC-U - 1)

**3** O-Ring (EPDM-FKM - 1)\*

**4** Gland Packing (PE-PTFE - 2)\*

**5** Locking clip (PVC-U - 1)

**6** Body (PVC-U - 1)

**7** Shutter (PVC-U - 1)

**8** Stem (PVC-U - 1)

**9** Nut (PVC-U - 1)

**10** Bonnet (PVC-U - 1)

**11** Bottom sleeve (PVC-U - 1)

**12** Gland (PVC-U - 1)

**13** Socket seal O-Ring (EPDM-FKM - 2)

**14** End connector (PVC-U - 2)

**15** Union nut (PVC-U - 2)

\* Spare parts

The material of the component and the quantity supplied are indicated between brackets

## DISASSEMBLY

- 1) Isolate the valve from the fluid flow.
- 2) Unscrew the union nut (2) anticlockwise and then remove the internal assembly, complete with all its components, from the body (6).
- 3) Remove the locking clip (5) and shutter (7).
- 4) Remove the gland (12).
- 5) Unscrew the nut (9) remove the handwheel (1) and union nut (2).
- 6) Rotate the stem (8) clockwise and remove it completely from the bonnet (10). At this point it is possible to access the gland packing (4), the bottom sleeve (11) and the O-Ring (3) which be easily removed.

## ASSEMBLY

- 1) Insert the stem (8) in the bonnet (10) and screw anticlockwise.
- 2) Insert in order: O-Ring, (3) bottom sleeve (11) and gland packing (4).
- 3) Place the union nut (2) on the stem, screw on the handwheel (1) and nut (9).
- 4) Insert the gland (12) and shutter (7) on the stem (8), insert the locking clip (5) in its housing.
- 5) Insert the completed assembly in the body, making sure that the locating tab on the bonnet sits in its housing in the body
- 6) Lock the union nut.



**Note:** maintenance operations can be carried out with the valve body installed. During assembly operations, it is advisable to lubricate the rubber seals. Mineral oils are not recommended for this task as they react aggressively with EPDM rubber.

## INSTALLATION

- 1) Install the valve such that the arrow stamped on the body indicates the direction of fluid flow
- 2) If the valve is installed in a vertical position, if the connection is solvent welded, make sure that the solvent does not enter inside the body, as this would damage the seating of the seal.
- 3) Before putting the valve into service, check the tightness of the union nut (2).

## WARNINGS

Do not use compressed air or other gases to test thermoplastic lines.  
Always avoid sudden closing manoeuvres and protect the valve from accidental manoeuvres.