Aliaxis
UTILITIES & INDUSTRY

FIP

VEE DN 65÷100

PVC-U

Easyfit 2-way ball valve

WATER

DN 65÷100

In collaboration with

Giugiaro Design, FIP has designed and developed

the VEE Easyfit!

The innovative ball

valve

for radial installation

and removal for easy

and safe installation and

long-term reliable operation.

EASYFIT 2-WAY BALL VALVE

• **Patented Easyfit system:** Innovative mechanism that allows the use of the hand lever with quick release system for adjusting the ball seal carriers

• Adhesive or threaded connections

• **Compatibility of the valve material** (PVC-U) for water, drinking water, in accordance with **current regulations.**

• The simple radial removal of the fitting from the pipe system allows the quick replacement of O-rings or ball seals without any tools

• **Valve body PN16 for radial installation and removal** (True Union), made of PVC-U and in accordance with European Directive 97/23/EC. Test requirements according to ISO 9393

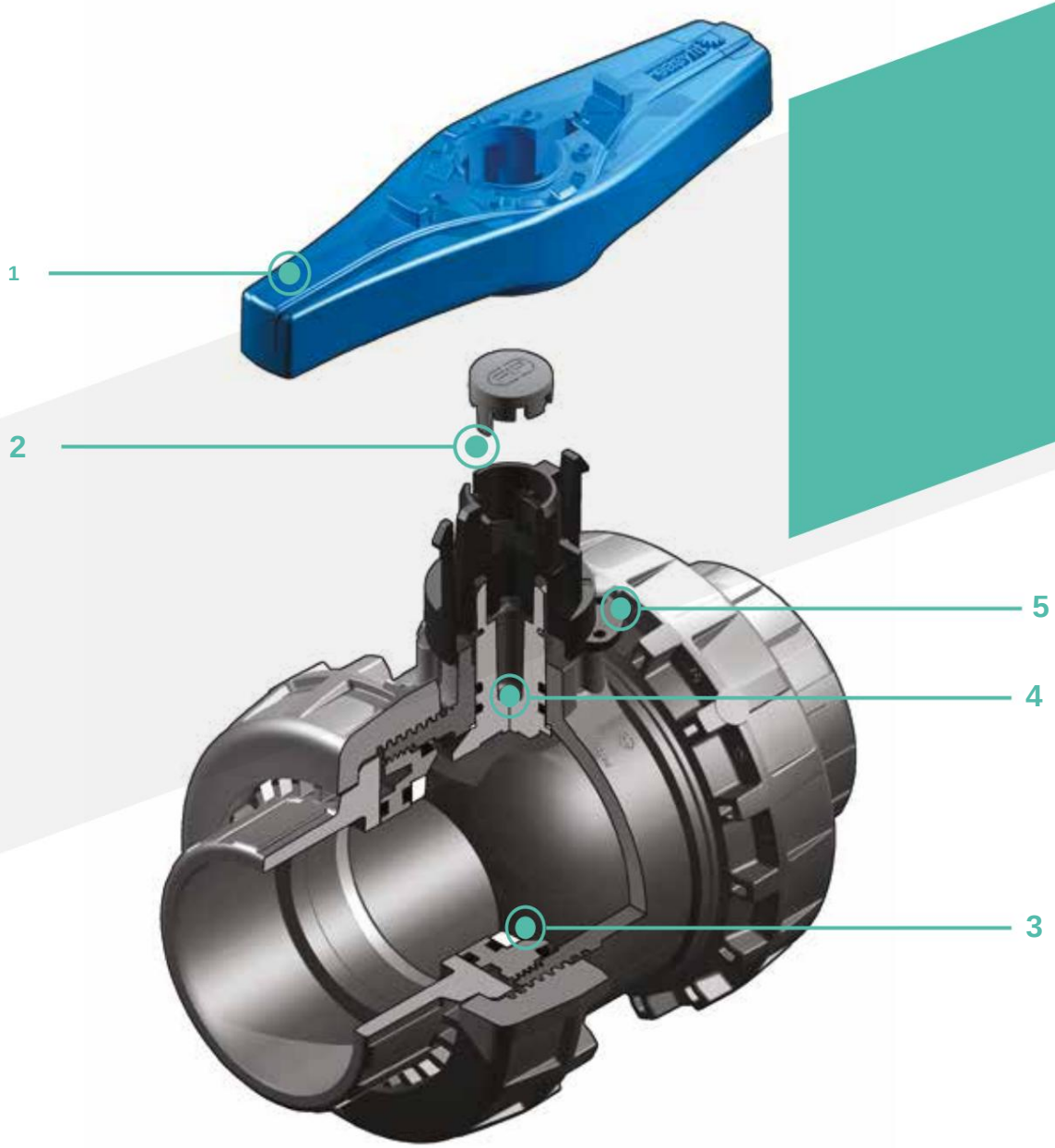
• Valve housing with integrated anchoring structure for the **special module Power Quick Easyfit** for installation of accessories or pneumatic and electric actuators

• With the ball valve in the closed position, the pressure-free side of the

• **Ball-shaped closure with**

full passage, floating with high-quality surface finish, manufactured in CNC machining centers to ensure precise dimensional tolerances and high-quality surface finishes

Construction	Easyfit 2-way ball valve for radial installation and removal with secured union nuts
dimension range	DN 65 ÷ 100
nominal pressure	PN 16 at 20° C water temperature
temperature range	0° ÷ 60° C
standard connection	**Klebeanschluss:** EN ISO 1452, EN ISO 15493, BS 4346/1, DIN 8063, NF T54-028, ASTM D 2467, JIS K 6743. For connection to pipelines according to EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741 **Thread connection:** ISO 228-1, DIN 2999, ASTM D 2467, JIS B 0203.
reference standards	**Guidelines for construction:** EN ISO 16135, EN ISO 1452, EN ISO 15493 **Test methods and requirements:** ISO 9393 **Criteria for installation:** DVS 2204, DVS 2221, UNI 11242 **Connections for drives:** ISO 5211
valve material	PVC-U
sealing material	EPDM (O-Ring Standardgröße); PE (ball seals)
control options	Manual control



1 Innovative hand lever

with quick release system
Easyfit, consisting of a central hub that is firmly connected to the spindle and an **ergonomic handle** that can be detached from the hub with a simple movement and used as **an adjustment key for**

the ball seal carriers
can be used.

2 Prepared for the Labelling System using the LCE module (available as an accessory). The grey protective cap on the hand lever can be replaced by a transparent cap and a label holder plate that can be customized with the LSE set (available as an accessory). The marking makes it possible **to identify the valve in the system** based on certain specifications

3 PE sealing system with

secured seal carrier,
the one with hand lever with
Easyfit quick release system is adjustable

4 spindle in high quality
Surface finish with **double O-ring and PTFE sliding disk** to
To limit friction to a minimum and ensure optimal
actuation torque to ensure

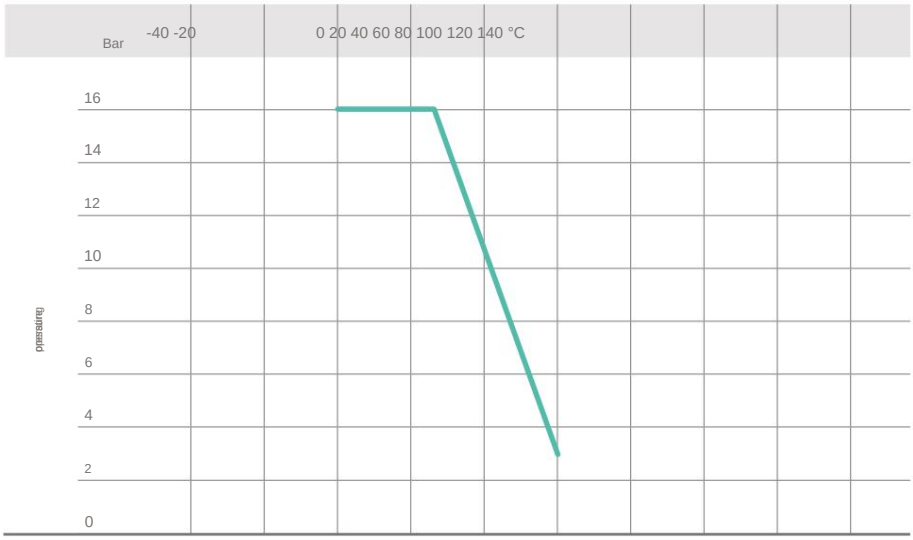
5 Valve housing, which is responsible for
Installation des SHE-Kits (als Accessory available) and the locking of the closing and opening process by

Use of a padlock enables

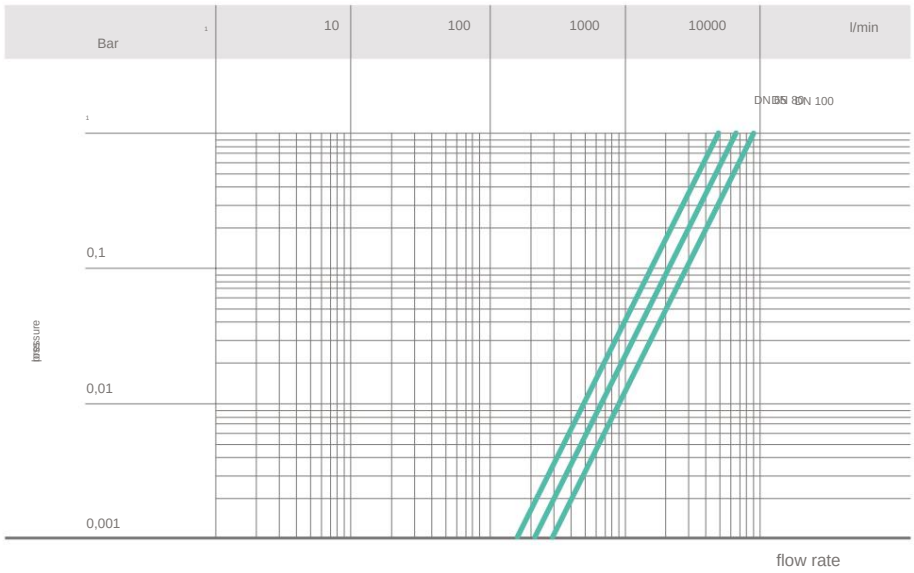
TECHNICAL DATA

PRESSURE-
TEMPERATURE DIAGRAM

For water and non-hazardous liquids for which the material has been classified as CHEMICALLY RESISTANT. In all other cases, an appropriate reduction in the nominal pressure PN is required (25 years with safety factor).



PRESSURE LOSS DIAGRAM



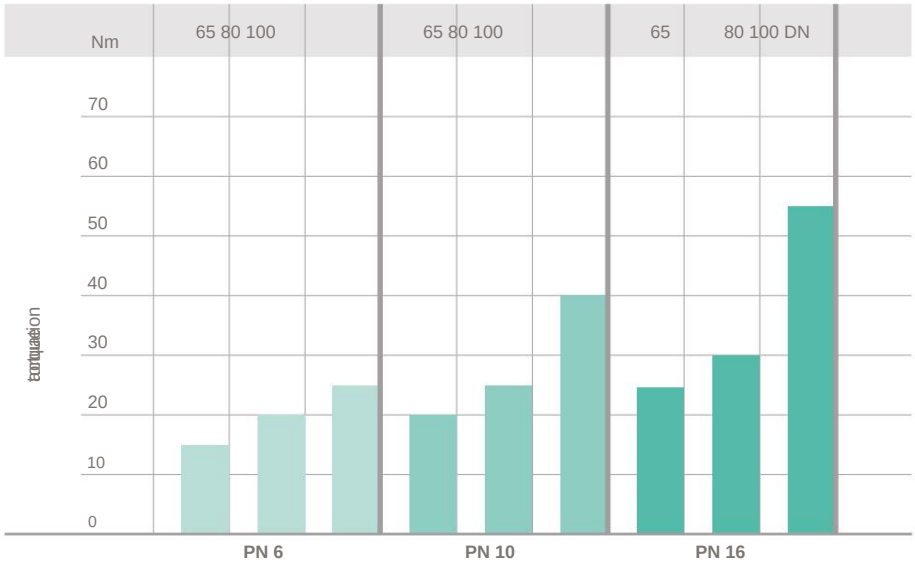
FLOW COEFFICIENT KV 100

The flow coefficient Kv100 is the water flow Q in l/min at 20° C and a pressure loss ÿp of 1 bar with the valve fully open.

The values for Kv100 given in the table refer to a fully open valve.

DN	65	80	100
Kv100 l/min	5000	7000	9400

ACTUATING TORQUE AT THE HIGHEST
OPERATING PRESSURE



DIMENSIONS

VEEIV
Easyfit 2-way ball valve, solvent sockets, metric

d	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
75	65	16	142	214	115	157	211	44	123	2750	VEEIV075E
90	80	16	151	239	126	174	248	51	146	3432	VEEIV090E
110	100	16	174,5	270	145	212	283	61	161	5814	VEEIV110E

VEEV
Easyfit 2-way ball valve, cylindrical BSP threaded sockets

R	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	211	30,2	150,6	2750	VEEFV212E
3”	80	16	151	239	126	174	248	33,3	181,4	3432	VEEFV300E
4”	100	16	174,5	270	145	212	283	39,3	204,4	5814	VEEFV400E

MANY
Easyfit 2-way ball valve, threaded sockets, series BS

d	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	211	44	123	2750	VEELV212E
3”	80	16	151	239	126	174	248	51	146	3432	VEELV300E
4”	100	16	174,5	270	145	212	283	63	157	5814	VEELV400E

WATER
Easyfit 2-way ball valve, threaded sockets, ASTM series

d	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	211	44,5	122	2750	VEEAV212E
3”	80	16	151	239	126	174	248	48	152	3432	VEEAV300E
4”	100	16	174,5	270	145	212	283	57,5	168	5814	VEEAV400E

PEATV
Easyfit 2-way ball valve, threaded sockets, NPT

R	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	211	33,2	144,6	2750	VEENV212E
3”	80	16	151	239	126	174	248	35,5	177	3432	VEENV300E
4”	100	16	174,5	270	145	212	283	37,6	207,8	5814	VEENV400E

VEEJV
Easyfit 2-way ball valve, threaded sockets, JIS series

d	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	243	61	121	2750	VEEJV212E
3”	80	16	151	239	126	174	272	64,5	143	3432	VEEJV300E
4”	100	16	174,5	270	145	212	332	84	164	5814	VEEJV400E

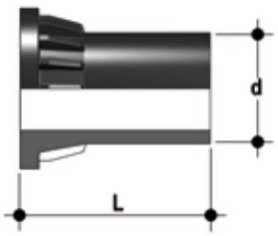
WATER
Easyfit 2-way ball valve, threaded sockets, JIS

R	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
2” 1/2	65	16	142	214	115	157	211	35	141	2750	VEEGV212E
3”	80	16	151	239	126	174	248	40	168	3432	VEEGV300E
4”	100	16	174,5	270	145	212	283	45	193	5814	VEEGV400E

WEB
Easyfit 2-way ball valve with inserts made of PE100 SDR11 for butt welding or electrofusion welding (CVDE)

d	DN	PN	B	C	C1	AND	H	L	WITH	g	Article number
75	65	16	141,5	214	115	157	331	71	189	2286	
90	80	10	151	239	126	174	367	88	191		
110	100	10	174,5	270	145	212	407	92	223	5814	VEEBEV110E
											VEEBEV075E
										3059	
											VEEBEV090E

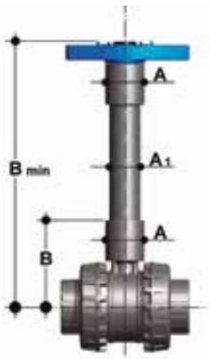
ACCESORIES



CVDE

Inserts made of PE 100 with long-leg welding sockets, for butt and electric socket welding

d	DN	PN	L	SDR	Article number
75	65	16	111	11	CVDE11075
90	80	16	118	11	CVDE11090VXE
110	100	16	127	11	CVDE11110VXE



WHY

lever extension

d	inch	DN	A	A1	BB min	article number Rohr ISO	article number Rohr ASTM-BS
75	2" 1/2	65	76	63	159 364	PSE090	PSE300
90	3"	80	76	63	166 371	PSE090	PSE300
110	4"	100	76	63	186 433	PSE110	PSE400

LCE

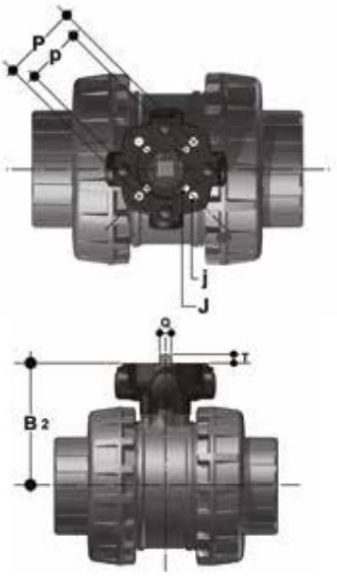
Transparent protective cap with label holder plate

d	DN	article number
75	65	LCE040
90	80	LCE040
110	100	LCE040

LSE

Set for marking and printing labels for Easyfit hand levers, consisting of self-adhesive and pre-punched sheets as well as the software for creating the labels.

d	DN	article number
75	65	LSE040
90	80	LSE040
110	100	LSE040



POWER QUICK EASYFIT

The valve can be equipped with standard electric or pneumatic actuators and worm gears for heavy operating conditions via a PP-GRP module designed according to the drilling template in accordance with ISO 5211.

d	DN	B2	Q	T	p x j	P x J	Article-number
75	65	129	14	16	F05 x 6,5	F07 x 8,5	PQE090
90	80	136	14	16	F05 x 6,5	F07 x 8,5	PQE090
110	100	156	17	19	F05 x 6,5	F07 x 8,5	PQE110

SHE

tamper-proof locking device kit

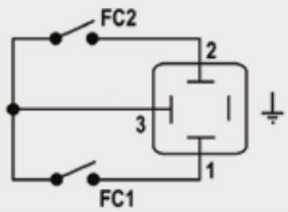
d	DN	article number
75	65	SHE090
90	80	SHE090
110	100	SHE110

MSE

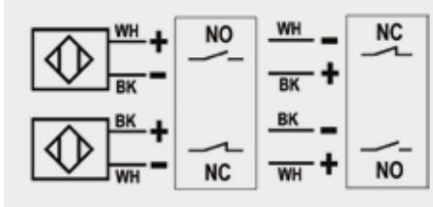
MSE is a limit switch box with electromechanical or inductive microswitches for remote indication of the valve position. Installation on the manual valve is possible using the Easyfit Power-Quick drive module.

The box can also be mounted on the VEE valve already installed in the system

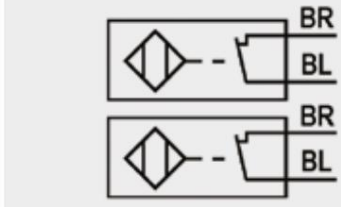
d	DN	A	B	B1	article number electromechanical	Article number inductive	Article number Namur
75	65	139	203	79	MSE1M	MSE1I	MSE1N
90	80	146	210	87	MSE1M	MSE1I	MSE1N
110	100	166	231	106	MSE2M	MSE2I	MSE2N



Electromechanical



Inductive



Namur

WH = white; BK = black; BL = blue; BR = brown

switch type	flow rate	Length of time [drives]	nominal operating voltage	nominal voltage	operating current	voltage drop	vacuum current	degree of protection
Electromechanical	250V - 5A	3 x 107	-	-	-	-	-	IP65
Inductive	-	-	5 ÷ 36 V	-	4 ÷ 200 mA	< 4.6 V	< 0.8 mA	IP65
Namur*	-	-	7.5 ÷ 30 V DC**	8.2V DC	< 30mA**	-	-	IP65

* Application with amplifier

** Outside potentially explosive areas

INDIVIDUAL ADJUSTMENT

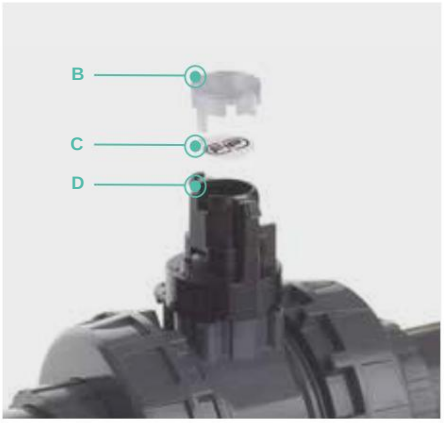
The VEE DN 65÷100 Easyfit valve is equipped with the Labelling System.

This system allows the production of individual labels for the hand lever.
This makes it particularly easy to add company logos, serial numbers or identification information to the valves to indicate the function of the valve in the system or the medium being transported or to enter specific information for customer service, such as the customer's name, installation date and installation location.

The grey protective cap (A) on the hand lever can be replaced with a special LCE accessory module.

The module comprises a rigid, transparent and waterproof protective cap made of PVC (B) and a white label holder plate, also made of PVC and with the FIP logo on one side (Fig. 2).

The plate housed in the protective cap can be removed and, when turned over, can be personalized with labels printed using the software included in the LSE kit.



To attach the label to the plate, follow these steps:

1) Release the hand lever from the middle hub (D) and remove the grey protective cap (Fig. 1).

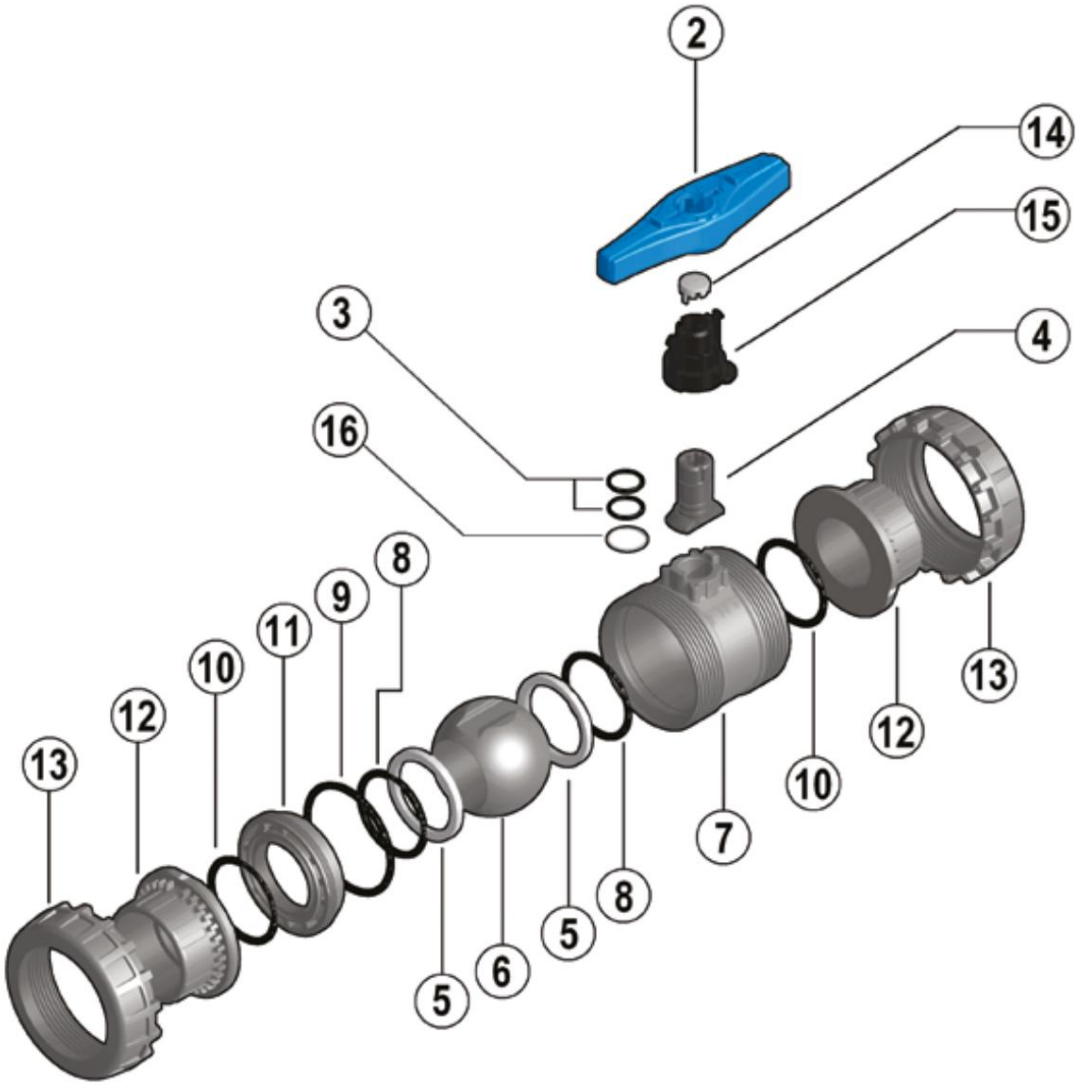
2) Stick the labels onto the plate (C) so that the recesses match. voices.

3) Insert the plate into the transparent protective cap to protect the label from protected from environmental influences (Fig. 3).

4) Place the transparent protective cap on the middle hub and make sure Make sure that the two pins (one narrow and one wide) are inserted into the corresponding recesses.

COMPONENTS

EXPLODED VIEW



2 ÿ Easyfit hand lever with quick release system (HI-PVC - 1)

3 ÿ Spindle seal (O-ring) (EPDM - 2)*

4 ÿ Spindle (PVC-U - 1) **5** ÿ Ball seal (PE - 2)*

6 ÿ Kugel (PVC-U - 1)*

7 ÿ Housing (PVC-U - 1)

8 ÿ O-Ring des ball seal carrier (EPDM - 2)*

9 ÿ Radial seal (O-ring) (EPDM - 1)*

10 ÿ O-Ring (EPDM - 2)*

11 ÿ Ball seal carrier (PVC-U - 1)

12 ÿ Insert (PVC-U - 2) **13** ÿ Union nut (PVC-U - 2) **14** ÿ Gray protective cap (PVC - 1)

15 ÿ Middle hub (HI-PVC - 1)

16 ÿ Sliding disc (PTFE - 1)*

* Spare parts

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

EXPANSION

1) Initiate preparations (release pressure and drain line).

2) Completely loosen the union nuts (13) from the valve housing and pull the housing (7) out sideways (Fig. 7-8).

3) Before removing the valve, any fluid remaining inside must be drained by opening the valve to 45° in a vertical position.

4) Place the valve in the closed position

5) Using the hand lever with the Easyfit quick release system (2), remove the ball seal carrier holder (11). Remove the hand lever from the middle hub (15) by pushing the clamping jaws of the hub inwards (Fig. 5-6). Now open the seal carrier using the released hand lever. Insert the two projections on the underside of the hand lever into the recesses on the seal carrier. You can remove the seal carrier by turning it anti-clockwise.

6) Press opposite side marked "ADJUST" onto the ball (6) until the ball seal carrier (11) comes out and then pull out the ball (6).

Be careful not to scratch the ball.

7) Remove the middle hub (15) by pulling it out of the

Pull out the spindle (4). Press inwards on the spindle so that it comes out of the housing and remove the sliding disk (16).

8) Remove the O-rings (3, 8, 9, 10) and the ball seals (6) by pulling them out of their grooves as shown in the exploded view.

INSTALLATION

1) All O-rings (3, 8, 9, 10) shown in the exploded view must be inserted into the corresponding grooves during assembly.

2) Position the sliding disc (16) on the spindle (4) and insert it from the inside of the housing (7).

3) Insert the ball seals (5) into the corresponding grooves in the housing (7) and on the seal carrier (11).

4) Insert the ball (6) and turn it to the closed position.

5) Place the seal carrier (11) into the housing and screw it in clockwise until it stops using the key insert (2).

6) Position the central hub (15) on the spindle (4) by applying firm downward pressure. Make sure that the key inside the hub aligns with one of the two recesses on the spindle.

7) Place the valve between the inserts (12) and tighten the union nuts clockwise, making sure that the O-rings (10) remain in the grooves (Fig. 7-8).

8) Replace the hand lever (2) on the central hub (15) and make sure that the two grooves in the central hole on the hand lever line up with the two ribs on one side of the hub. Apply light pressure until the two clamping jaws click into place.

Note: It is recommended to grease the rubber seals during assembly. Please note that mineral oils are not suitable as they damage EPDM rubber.

INSTALLATION

Before installation, please read all instructions:

1) Check whether the pipes and fittings are axially aligned. Mechanical stress (e.g. tensile stress) on the threaded connection is not permitted.

2) Loosen the union nuts (13) from the housing (7) and slide them onto the pipe sections.

3) Glue or screw the inserts (12) onto the pipe ends.

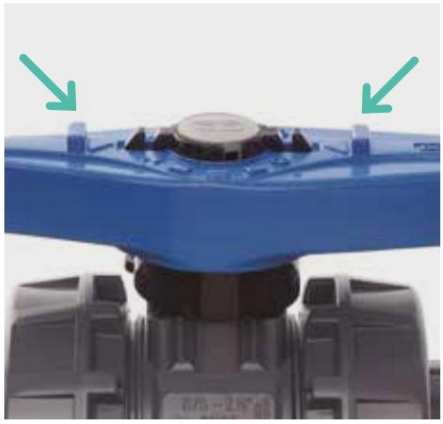
4) Place the valve between the inserts (Fig. 8).

Caution: In case of high pressure testing, the label “ADJUST” must be facing upstream.

5) Tighten the union nuts clockwise by hand (Fig. 7).

6) If required, the pipes can be secured with FIP pipe supports model ZIKM with possible
The VEE valve can be equipped with a simple

locking device to lock the closing and opening process using a padlock and thus protect the system against tampering (Fig. 12). The valve body and hub are designed for the use of a padlock that can be attached to the valve body with two self-tapping screws (see SHE accessories) (Fig. 11).



⚠ WARNINGS

- In case of using volatile liquids, such as
If you use liquids such as hydrogen peroxide (H2O2) or sodium hypochlorite (NaClO), it is advisable to contact customer service for safety reasons. These liquids, when they evaporate, can create dangerous overpressure in the area between the housing and the ball.

- Avoid abrupt closing and protect the valve from excessive
manual activity

Abb. 12