



**SXE DN 10÷50**  
PVC-C

Easyfit True Union ball check valve

# SXE DN 10÷50

The SXE Easyfit check valve with ball shutter line developed with Giugiaro Design stands out for the innovative installation method that guarantees reliable service over time. This valve is also equipped with a customising Labelling System.

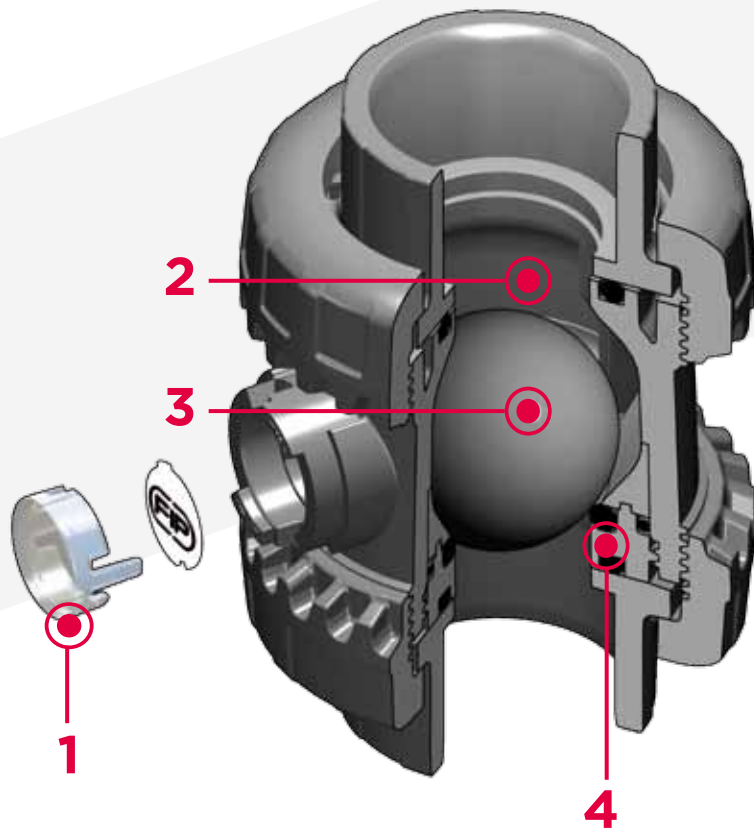


## EASYFIT TRUE UNION BALL CHECK VALVE

- Connection system for solvent weld and threaded joints
- Valve material compatibility **(PVC-C) with water conveyance, drinking water and other food substances according to** current regulations
- **PN16 True Union valve body** made for PVC-C injection moulding and European Directive 97/23/EC compliant for PED pressurised equipment. ISO 9393 compliant test requirements
- **Short face to face dimension** according to international regulation ISO 7508 series III "short" and fully interchangeable with VXE DN 10÷50 ball valve models
- Union nuts with rack for tightening adjustment via Easyfit handle or via Easytorque adjustment kit (available as accessories)
- Can be **installed** in either a **vertical** (preferable) or **horizontal** position

### Technical specifications

<b>Construction</b>	Easyfit True Union ball check valve with locked carrier
<b>Size range</b>	DN 10 ÷ 50
<b>Nominal pressure</b>	PN 16 with water at 20° C
<b>Temperature range</b>	0 °C ÷ 100 °C
<b>Coupling standards</b>	<b>Solvent welding:</b> EN ISO 15493, ASTM F 439. Can be coupled to pipes according to EN ISO 15493, ASTM F 441 <b>Thread:</b> ISO 228-1, DIN 2999, ASTM F437
<b>Reference standards</b>	<b>Construction criteria:</b> EN ISO 16137, 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-C
<b>Seal material</b>	EPDM, FPM



**1 Customisable Labelling System: built-in LCE module** on the valve body made up of transparent protection plug and customisable tag holder using the LSE set (available as accessory). The customisation lets you **identify the valve on the system according to specific needs**

**2 Optimised dynamic fluid design:** energy savings due to the improved valve Kv value and consequent reduced pressure drop

**3 High surface finish ball shutter:** **wear reduction**, increase in working life and reduced valve maintenance. Ideal for conveying dirty fluids, even with suspended solids and filaments thanks to the special design that permits **internal valve self-cleaning**

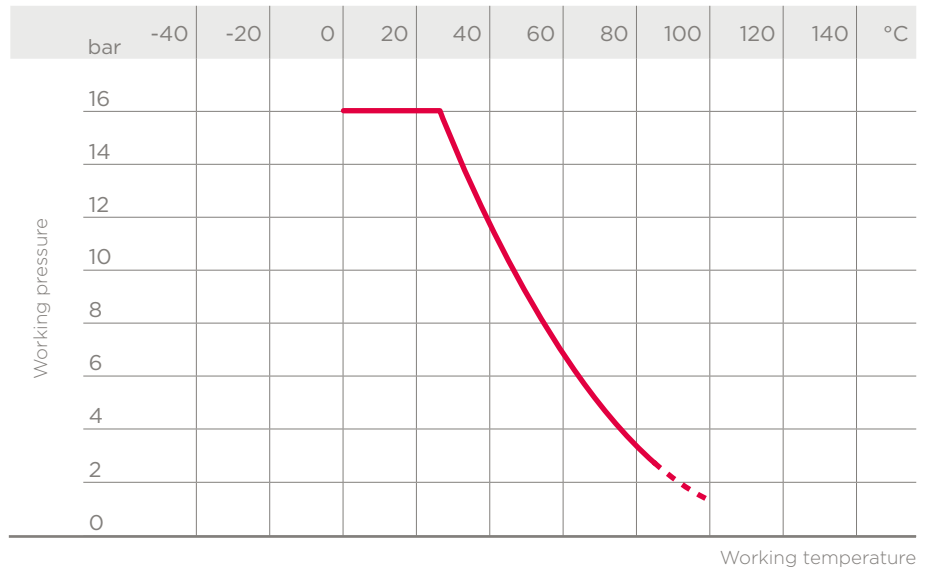
**4 Locked ball seat carrier:** safe disassembly for maintenance with the Easyfit multifunctional handle or Easytorque kit

# TECHNICAL DATA

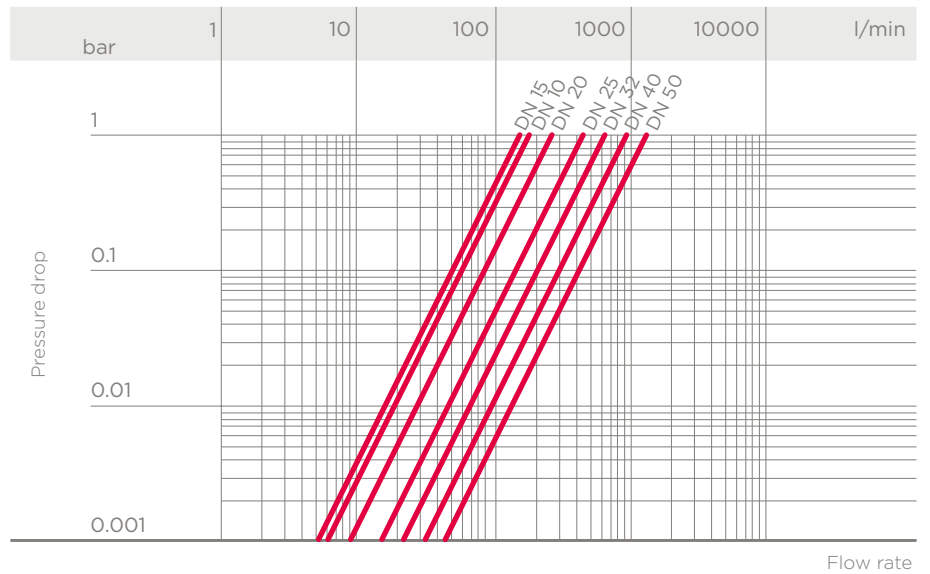
## PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids 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).

Note: When using PVC-C at working temperatures higher than 90°, it is advisable to first contact the service centre.



## 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  $\Delta p = 1$  bar pressure drop at a certain valve position.

The K<sub>v</sub>100 values shown in the table are calculated with the SXE valve completely open.

DN	10	15	20	25	32	40	50
K <sub>v</sub> 100 l/min	172	152	258	433	643	928	1343

## MINIMUM VALVE SEALING PRESSURE

DN	10	15	20	25	32	40	50
SXE (bar)	0.2	0.2	0.2	0.2	0.2	0.2	0.2

The PVC-U SXE valve can only be used with liquids with specific weight under 1.50 g/cm<sup>3</sup>.

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



## SXEIC

Easyfit ball check valve with female ends for solvent welding, metric series

d	DN	PN	E	H	L	Z	g	EPDM Code	FPM Code
16	10	16	54	82	14	54	145	SXEIC016E	SXEIC016F
20	15	16	54	82	16	50	148	SXEIC020E	SXEIC020F
25	20	16	63	91	19	53	190	SXEIC025E	SXEIC025F
32	25	16	72	103	22	59	300	SXEIC032E	SXEIC032F
40	32	16	85	120	26	68	460	SXEIC040E	SXEIC040F
50	40	16	100	139	31	77	675	SXEIC050E	SXEIC050F
63	50	16	118	174	38	98	1080	SXEIC063E	SXEIC063F



## SXEAC

Easyfit ball check valve with female ends, ASTM series

d	DN	PN	E	H	L	Z	g	EPDM Code	FPM Code
1/2"	15	16	54	96	22.5	51	148	SXEAC012E	SXEAC012F
3/4"	20	16	63	105	25.5	54	190	SXEAC034E	SXEAC034F
1"	25	16	72	117	28.7	59.5	300	SXEAC100E	SXEAC100F
1 1/4"	32	16	85	136	32	72	460	SXEAC114E	SXEAC114F
1 1/2"	40	16	100	147	35	77	675	SXEAC112E	SXEAC112F
2"	50	16	118	174	38.2	97.6	1080	SXEAC200E	SXEAC200F

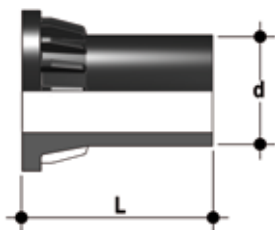


## SXENC

Easyfit ball check valve with female ends, NPT thread

R	DN	PN	E	H	L	Z	g	EPDM Code	FPM Code
1/2"	15	16	54	90	17.8	54.4	148	SXENC012E	SXENC012F
3/4"	20	16	63	93	18	57	190	SXENC034E	SXENC034F
1"	25	16	72	110	22.6	64.8	300	SXENC100E	SXENC100F
1 1/4"	32	16	85	127	25.1	76.8	460	SXENC114E	SXENC114F
1 1/2"	40	16	100	131	24.7	81.6	675	SXENC112E	SXENC112F
2"	50	16	118	161	29.6	101.8	1080	SXENC200E	SXENC200F

# ACCESSORIES



## CVDE

Long spigot PE100 end connectors for joints with electrofusion fittings or for butt welding

d	DN	PN	L	SDR	Code
20	15	16	55	11	CVDE11020
25	20	16	70	11	CVDE11025
32	25	16	74	11	CVDE11032
40	32	16	78	11	CVDE11040
52	40	16	84	11	CVDE11050
63	50	16	91	11	CVDE11063



## EASYFIT HANDLE DN 10÷50

Easyfit multifunctional handle for union nuts tightening SXE-SSE DN 10÷50

d	DN	Code
16 - 20	10 - 15	HAVXE020
25	20	HAVXE025
32	25	HAVXE032
40	32	HAVXE040
52	40	HAVXE050
63	50	HAVXE063

## EASYTORQUE KIT

Kit for union nut tightening adjustment and ball seat carrier for Easyfit DN 10÷50 valves.



d	DN	Torque union nuts*	Torque carrier*	Code
3/8"-1/2"	10-15	5 N m - 3,69 Lbf ft	3 N m - 2,21 Lbf ft	KET01
3/4"	20	5 N m - 3,69 Lbf ft	3 N m - 2,21 Lbf ft	KET01
1"	25	6 N m - 4,43 Lbf ft	4 N m - 2,95 Lbf ft	KET01
1"1/4	32	7 N m - 5,16 Lbf ft	4 N m - 2,95 Lbf ft	KET01
1"1/2	40	8 N m - 5,90 Lbf ft	5 N m - 3,69 Lbf ft	KET01
2"	50	10 N m - 7,38 Lbf ft	6 N m - 4,43 Lbf ft	KET01

\*calculated in ideal installation conditions





## LSE

Customisation set and label printing for Easyfit handle made up of precut adhesive sheets and software for guided label creation.

d	DN	Code
16	10	-
20	15	-
25	20	-
32	25	LSE020
40	32	LSE025
50	40	LSE032
63	50	LSE032

# CUSTOMISATION

The SXE DN 10+50 Easyfit valve is equipped with a Labelling System.

This system lets you create special labels to affix to the valve body. This makes it extremely easy to apply company logos, identification serial numbers or service indications such as, for example, the valve function in the system, the transported fluid, but also specific information for customer service, such as the customer name or installation date or location on the valves.

The specific LCE module is a standard supply and is made up of a rigid transparent water-resistant PVC plug and white label plate made of the same material, located next to the FIP logo (fig. 1).

The tag holder, inserted in the plug, can be removed and, once overturned, used for customisation by applying labels printed with the software supplied with the LSE set.

Proceed as follows to apply the label on the valve:

- 1) Extract the transparent plug from the seat on the valve body (fig. 1).
- 2) Extract the label plate from the transparent plug (fig. 2).
- 3) Apply the adhesive label on the tag holder to align the profiles matching the tab position.
- 4) Reinsert the tag holder in the transparent plug so that the label is protected against the elements.
- 5) Replace the transparent plug in its seat on the valve body.

Fig. 1



Fig. 2



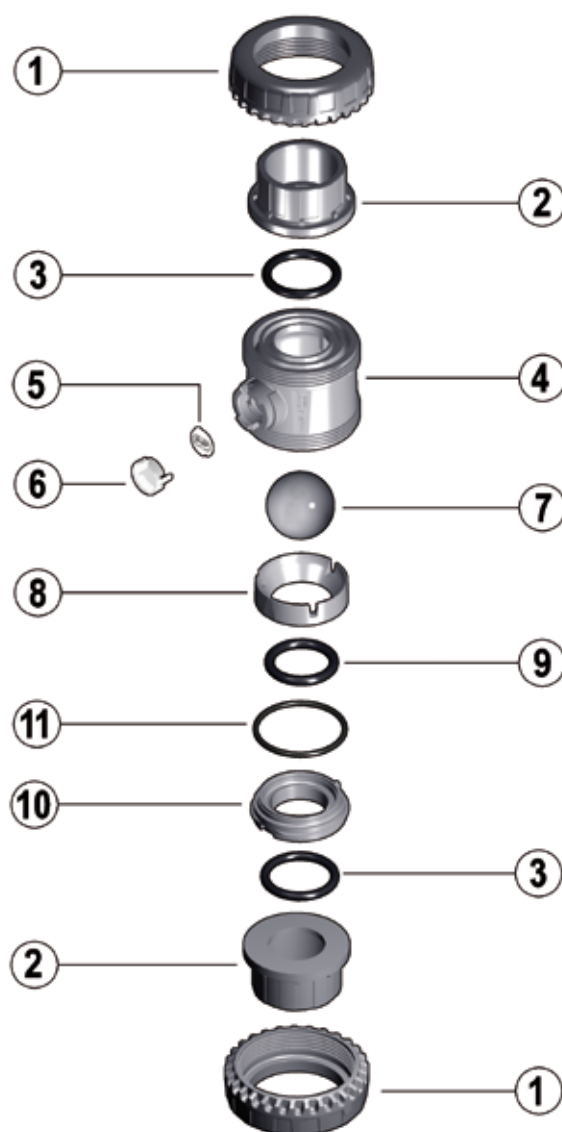
Fig. 3





# COMPONENTS

## EXPLODED VIEW



1 • Union nut (PVC-C - 2)

2 • End connector (PVC-C - 2)

3 • Socket seal O-Ring  
(EPDM o FPM - 2)

4 • Body (PVC-C - 1)

5 • Tag holder  
(PVC - 1)

6 • Transparent protection plug  
(PVC - 1)

7 • Ball (PVC-C - 1)

8 • Gland packing ring  
(PVC-C - 1)

9 • Ball seat O-Ring (EPDM  
or FPM - 1)

10 • Ball seat carrier (PVC-C - 1)

11 • Radial seal O-Ring  
(EPDM or FPM - 1)

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

## DISASSEMBLY

SXE valves do not require maintenance in normal operating conditions. In the event of leaks or wear, before performing maintenance, cut-off fluid upstream from the valve and make sure it is de-pressurised (downstream drain if necessary).

- 1) Fully drain residual liquid that could be aggressive for the operator and, if possible, circulate water to internally clean the valve.
- 2) To easily unscrew the union nuts when disassembling, use the Easyfit multifunctional handle (supplied as an accessory) (fig. 4) or Easytorque kit (fig. 5-6).
- 3) Unscrew the seal carrier (10) with the Easyfit multifunctional handle (fig. 7) or Easytorque kit (fig. 8).
- 4) Remove all internal components.

## ASSEMBLY

- 1) Reconstruct the valve following the exploded diagram on the previous page
- 2) Tighten the ball seat carrier (10) using the Easyfit multifunctional handle (fig. 7) or Easytorque torque wrench (fig. 8) according to the torque indicated in the enclosed instructions. This way valve installation and excellent operations are guaranteed.
- 3) Position the valve between the end connectors (2) and tighten the union nuts clockwise (1) using the Easyfit multifunctional handle (fig. 4) or Easytorque kit (fig. 5-6), being sure the socket seal O-ring (3) does not exit the seats.



**Note:** during assembly, it is advisable to lubricate the rubber seals. Mineral oils are not recommended for this task as they react aggressively with EPDM rubber.

Fig. 4



Fig. 5



Fig. 6



Fig. 7



# INSTALLATION

SXE valves can be installed both vertically (upward flow) or horizontally (with a minimum 0.2 bar back pressure).

Before proceeding with installation, please follow these instructions carefully:

- 1) Check that the pipes to be connected to the valve are aligned in order to avoid mechanical stress on the threaded joints.
- 2) Unscrew the union nuts (1) from the body (4) and insert them in the pipe segments.
- 3) Solvent weld or screw the end connectors (2) onto the pipe segments.
- 4) Position the valve body between the end connectors (fig. 9).
- 5) Fit the union nuts on the valve body and manually tighten clockwise until they become hard to turn; do not use wrenches or other tools that can damage the union nut surfaces.
- 6) For easy union nut tightening in assembly, use the Easyfit multifunctional handle (supplied as an accessory).
- 7) Overturn the handle and insert it on the valve stem so the handle teeth (A) match the union nut teeth (B) (fig. 10).
- 8) Turn the handle counter-clockwise to fully tighten the union nut (fig. 10). The rotation directions to tighten (TIGHTEN) and loosen (UNTIGHTEN) the union nuts are indicated on the handle (fig. 11). Generally, if pipes are not offset, a single turn is sufficient for correct tightening.
- 9) Repeat point 7 for the other union nut.

Note: A small force applied on the handle develops a torque much higher than manual tightening.

YOU can also, using the Easytorque kit (fig. 5-6), supplied as an accessory, tighten union nuts using a torque wrench to quantify the force and thus monitor the stress applied to the thermoplastic threads according to the installation indications in the instructions enclosed with the kit.

- 10) If necessary, support pipes with FIP pipe clip model ZIKM and DSM spacers.

Fig. 8



Fig. 9



Fig. 10

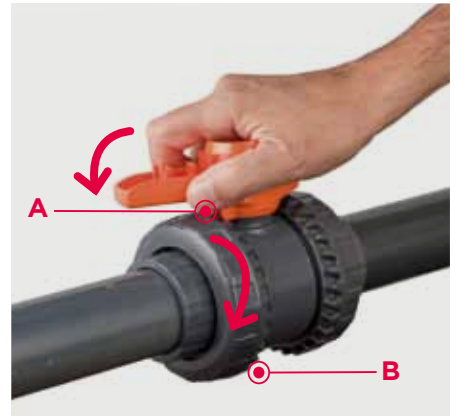


Fig. 11



## WARNINGS

- If volatile liquid such as Hydrogen Peroxide ( $H_2O_2$ ) or Sodium Hypochlorite ( $NaClO$ ) are used, for safety reasons we recommend you contact the service centre. These liquids, upon vaporising, could create hazardous over pressures in the area between the body and ball.
- Do not use compressed air or other gases to test thermoplastic lines.
- Always avoid sudden closing manoeuvres and protect the valve against accidental manoeuvres.