



SXE-SSE DN 65÷100
PVC-U

Easyfit True Union ball and spring check valve

SXE-SSE DN 65÷100

The Easyfit check valve line developed with Giugiaro Design offers two different versions: SXE with ball shutter and SSE with spring loaded shutter. Easyfit check valves stand out for the innovative installation method that guarantees reliable service over time.

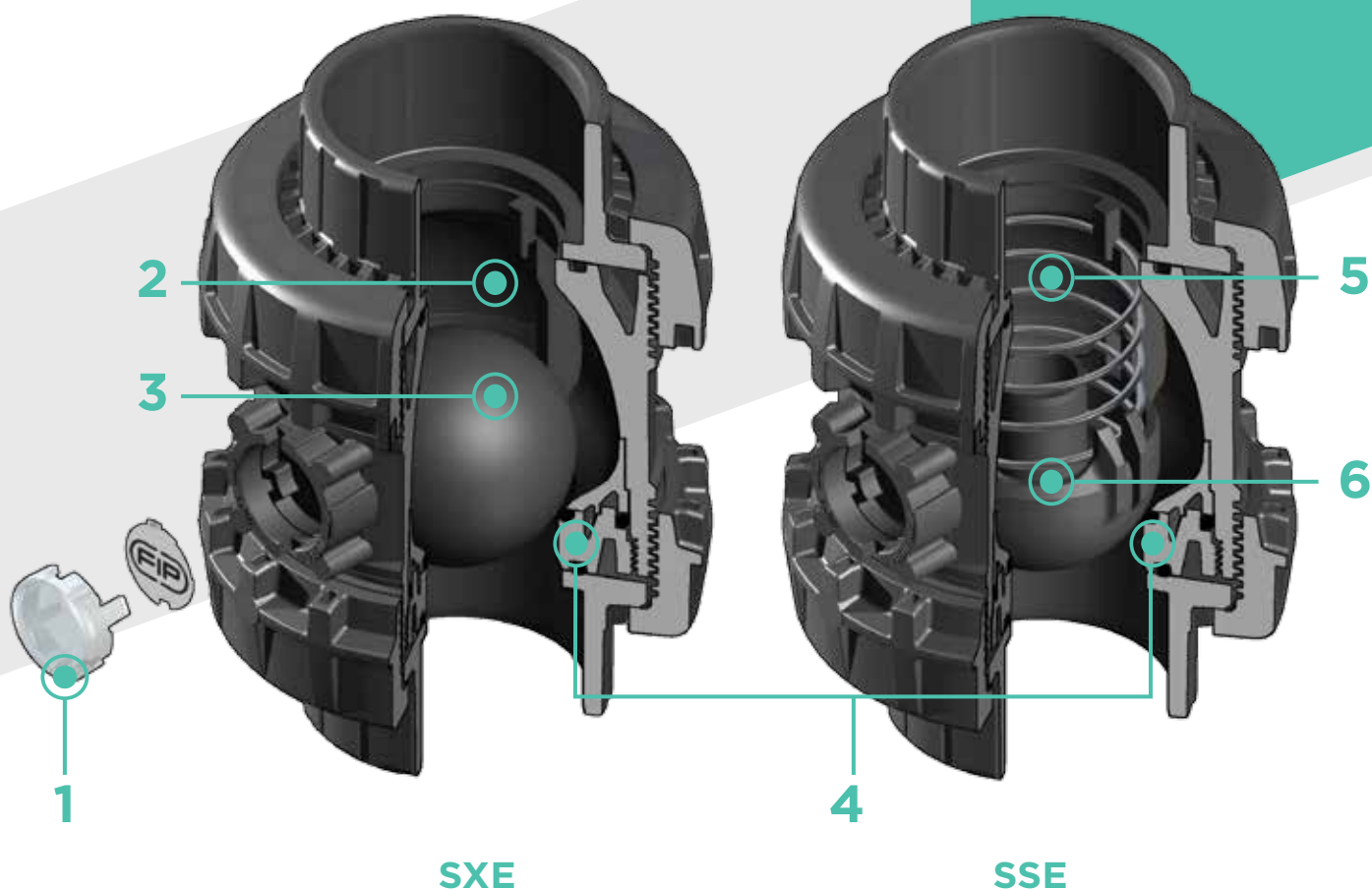
This valve is also equipped with a customisable Labelling System.



EASYFIT TRUE UNION BALL AND SPRING CHECK VALVE

- Connection system for solvent weld and threaded joints
- **Valve material compatibility** (PVC-U) with water, drinking water and other food substance conveyance according to **current regulations**
- **PN16 True Union valve body** made for PVC-U injection moulding and compliant with European Directive 97/23/EC for PED pressurised equipment. Test requirements compliant with ISO 9393
- Easy radial dismounting and fully interchangeable with VEE and VXE 65-100 valve models
- Union nut profile that perfectly adapts to the Easyfit multifunctional handle hooked insert (available as an accessory) that lets you control union nut rotation
- **Vertical** (preferable for SXE model) and **horizontal installation** potential

| Technical specifications | |
|------------------------------|--|
| Construction | SXE: Easyfit True Union ball check valve with locked carrier SSE: Easyfit True Union spring check valve with locked carrier |
| Size range | DN 65 ÷ 100 |
| Nominal pressure | PN 16 with water at 20 °C |
| Temperature range | 0 °C ÷ 60 °C |
| Coupling standards | Solvent welding: EN ISO 1452, EN ISO 15493, BS 4346-1, DIN 8063, NF T54-028, ASTM D 2467, JIS K 6743. Pipe coupling capacity according to EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741 Thread: ISO 228-1, DIN 2999, ASTM D 2464, JIS B 0203 |
| Reference standards | Construction criteria: EN ISO 16137, EN ISO 1452, EN ISO 15493 Test methods and requirements: ISO 9393 Installation criteria: DVS 2204, DVS 2221, UNI 11242 |
| Valve material | PVC-U |
| Seal material | EPDM, FPM (standard size O-Ring) |
| Spring material (SSE) | Available in STAINLESS Steel 316, A316 PTFE encapsulated |



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 potential 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: **reduced wear**, longer working life and reduced valve maintenance. Ideal to convey dirty fluids, even with suspended fluids or filaments, thanks to the special design that permits **internal valve self-cleaning**

4 Locked ball seat carrier: safe dismantling for maintenance with the Easyfit multifunctional handle

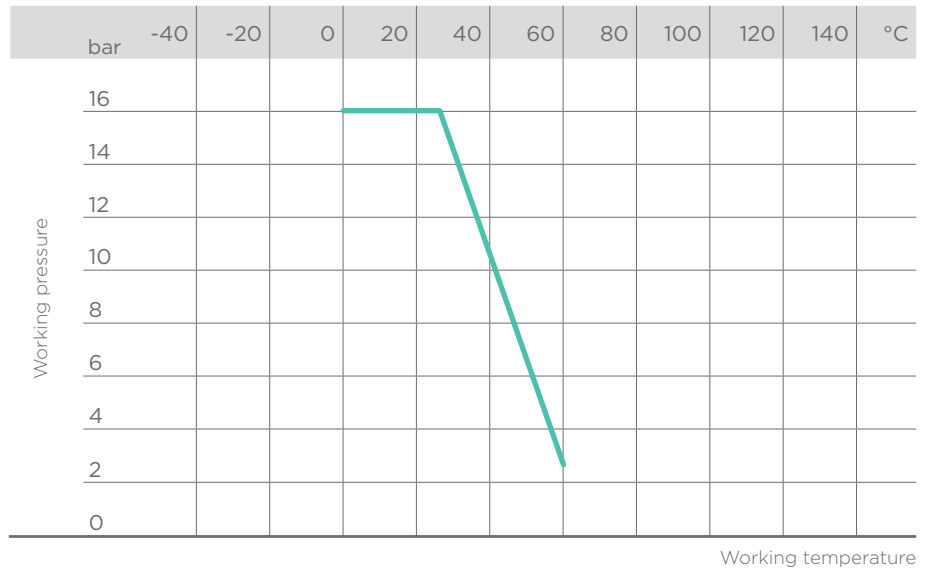
5 Ideal for horizontal installations: **perfect seal even with low back pressure.** **Silent** and durable even with strong vibrations and pulsating fluid

6 PVC-U shutter and springs available in STAINLESS Steel 316, A316 PTFE encapsulated: maximum reliability in a **wide field of applications** from salt water to aggressive acids

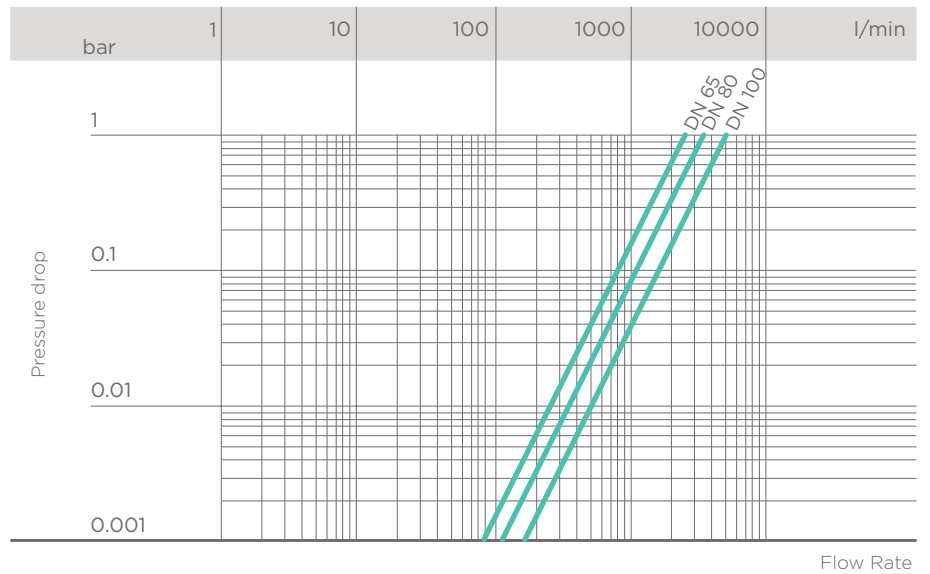
TECHNICAL DATA

PRESSURE VARIATION ACCORDING TO TEMPERATURE

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



PRESSURE DROP GRAPH



K_v100 FLOW COEFFICIENT

The K_v100 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 K_v100 values shown in the table are calculated with the SXE valve completely open.

| DN | 65 | 80 | 100 |
|--------------------------|------|------|------|
| K _v 100 l/min | 2586 | 3444 | 5093 |

MINIMUM VALVE SEALING PRESSURE

The PVC-U SXE valve can only be used with liquids with specific weight under 1,37g/cm³.

| DN | 65 | 80 | 100 |
|-----------|------|------|------|
| SXE (bar) | 0.2 | 0.2 | 0.2 |
| SSE (bar) | 0.08 | 0.08 | 0.08 |

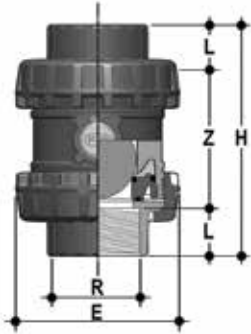
DIMENSIONS



SXEIV

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

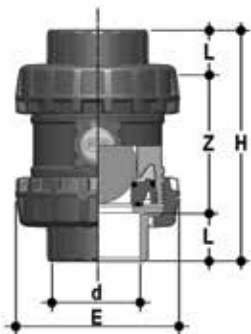
| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|-----|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 75 | 65 | 16 | 157 | 211 | 44 | 123 | 2605 | SXEIV075E | SXEIV075F |
| 90 | 80 | 16 | 174 | 248 | 51 | 146 | 3300 | SXEIV090E | SXEIV090F |
| 110 | 100 | 16 | 212 | 283 | 61 | 161 | 5770 | SXEIV110E | SXEIV110F |



SXEFV

Easyfit ball check valve with BSP threaded female ends

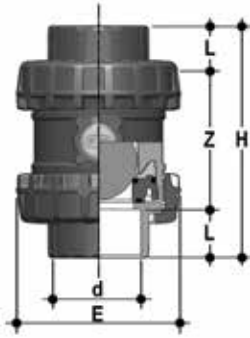
| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-------|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 30.2 | 150.6 | 2605 | SXEFV212E | SXEFV212F |
| 3" | 80 | 16 | 174 | 248 | 33.3 | 181.4 | 3300 | SXEFV300E | SXEFV300F |
| 4" | 100 | 16 | 212 | 283 | 39.3 | 204.4 | 5770 | SXEFV400E | SXEFV400F |



SXELV

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

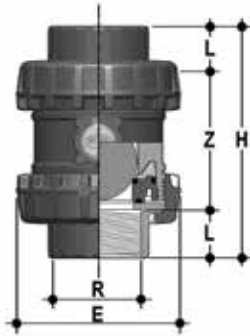
| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 44 | 123 | 2605 | SXELV212E | SXELV212F |
| 3" | 80 | 16 | 174 | 248 | 51 | 146 | 3300 | SXELV300E | SXELV300F |
| 4" | 100 | 16 | 212 | 283 | 63 | 157 | 5770 | SXELV400E | SXELV400F |



SXEAV

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

| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 44.5 | 122 | 2605 | SXEAV212E | SXEAV212F |
| 3" | 80 | 16 | 174 | 248 | 48 | 152 | 3300 | SXEAV300E | SXEAV300F |
| 4" | 100 | 16 | 212 | 283 | 57.5 | 168 | 5770 | SXEAV400E | SXEAV400F |



SXENV

Easyfit ball check valve with female ends, NPT thread

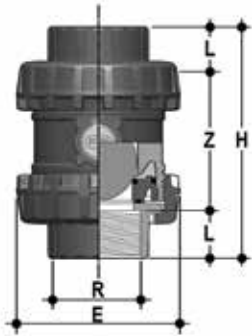
| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-------|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 33.2 | 144.6 | 2605 | SXENV212E | SXENV212F |
| 3" | 80 | 16 | 174 | 248 | 35.5 | 177 | 3300 | SXENV300E | SXENV300F |
| 4" | 100 | 16 | 212 | 283 | 37.6 | 207.8 | 5770 | SXENV400E | SXENV400F |



SXEJV

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

| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 243 | 61 | 121 | 2605 | SXEJV212E | SXEJV212F |
| 3" | 80 | 16 | 174 | 272 | 64.5 | 143 | 3300 | SXEJV300E | SXEJV300F |
| 4" | 100 | 16 | 212 | 332 | 84 | 164 | 5770 | SXEJV400E | SXEJV400F |



SXEGV

Easyfit ball check valve with female ends, JIS thread

| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 35 | 141 | 2605 | SXEGV212E | SXEGV212F |
| 3" | 80 | 16 | 174 | 248 | 40 | 168 | 3300 | SXEGV300E | SXEGV300F |
| 4" | 100 | 16 | 212 | 283 | 45 | 193 | 5770 | SXEGV400E | SXEGV400F |



SXEBEV

Easyfit ball check valve with PE100 SDR 11 male end connectors for butt welding or electrofusion (CVDE)

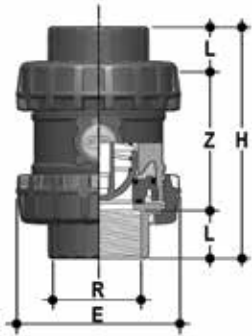
| d | DN | E | H | L | Z | g | EPDM Code | FPM Code |
|-----|-----|-----|-----|----|-----|------|------------|------------|
| 75 | 65 | 157 | 331 | 71 | 189 | 2605 | SXEBEV075E | SXEBEV075F |
| 90 | 80 | 174 | 367 | 88 | 191 | 3300 | SXEBEV090E | SXEBEV090F |
| 110 | 100 | 212 | 407 | 92 | 223 | 5770 | SXEBEV110E | SXEBEV110F |



SSEIV

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

| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|-----|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 75 | 65 | 16 | 157 | 211 | 44 | 123 | 2480 | SSEIV075E | SSEIV075F |
| 90 | 80 | 16 | 174 | 248 | 51 | 146 | 3090 | SSEIV090E | SSEIV090F |
| 110 | 100 | 16 | 212 | 283 | 61 | 161 | 5370 | SSEIV110E | SSEIV110F |



SSEFV

Easyfit spring check valve with BSP threaded female ends

| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-------|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 30.2 | 150.6 | 2480 | SSEFV212E | SSEFV212F |
| 3" | 80 | 16 | 174 | 248 | 33.3 | 181.4 | 3090 | SSEFV300E | SSEFV300F |
| 4" | 100 | 16 | 212 | 283 | 39.3 | 204.4 | 5370 | SSEFV400E | SSEFV400F |



SSELV

Easyfit spring check valve with female ends for solvent welding, BS series

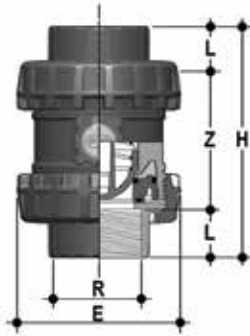
| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 44 | 123 | 2480 | SSELV212E | SSELV212F |
| 3" | 80 | 16 | 174 | 248 | 51 | 146 | 3090 | SSELV300E | SSELV300F |
| 4" | 100 | 16 | 212 | 283 | 63 | 157 | 5370 | SSELV400E | SSELV400F |



SSEAV

Easyfit spring check valve with female ends for solvent welding, ASTM series

| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 44.5 | 122 | 2480 | SSEAV212E | SSEAV212F |
| 3" | 80 | 16 | 174 | 248 | 48 | 152 | 3090 | SSEAV300E | SSEAV300F |
| 4" | 100 | 16 | 212 | 283 | 57.5 | 168 | 5370 | SSEAV400E | SSEAV400F |



SSENV

Easyfit spring check valve with female ends, NPT thread

| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-------|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 33.2 | 144.6 | 2480 | SSENV212E | SSENV212F |
| 3" | 80 | 16 | 174 | 248 | 35.5 | 177 | 3090 | SSENV300E | SSENV300F |
| 4" | 100 | 16 | 212 | 283 | 37.6 | 207.8 | 5370 | SSENV400E | SSENV400F |



SSEJV

Easyfit spring check valve with female ends for solvent welding, JIS series

| d | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|------|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 243 | 61 | 121 | 2480 | SSEJV212E | SSEJV212F |
| 3" | 80 | 16 | 174 | 272 | 64.5 | 143 | 3090 | SSEJV300E | SSEJV300F |
| 4" | 100 | 16 | 212 | 332 | 84 | 164 | 5370 | SSEJV400E | SSEJV400F |



SSEGV

Easyfit spring check valve with female ends, JIS thread

| R | DN | PN | E | H | L | Z | g | EPDM Code | FPM Code |
|--------|-----|----|-----|-----|----|-----|------|-----------|-----------|
| 2" 1/2 | 65 | 16 | 157 | 211 | 35 | 141 | 2480 | SSEGV212E | SSEGV212F |
| 3" | 80 | 16 | 174 | 248 | 40 | 168 | 3090 | SSEGV300E | SSEGV300F |
| 4" | 100 | 16 | 212 | 283 | 45 | 193 | 5370 | SSEGV400E | SSEGV400F |

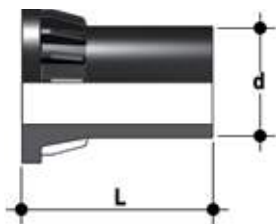


SSEBEV

Easyfit spring check valve with PE100 SDR 11 male end connectors for butt welding or electrofusion (CVDE)

| d | DN | E | H | L | Z | g | EPDM Code | FPM Code |
|-----|-----|-----|-----|----|-----|------|------------|------------|
| 75 | 65 | 157 | 331 | 71 | 189 | 2480 | SSEBEV075E | SSEBEV075F |
| 90 | 80 | 174 | 367 | 88 | 191 | 3090 | SSEBEV090E | SSEBEV090F |
| 110 | 100 | 212 | 407 | 92 | 223 | 5370 | SSEBEV110E | SSEBEV110F |

ACCESSORIES



CVDE

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

| d | DN | PN | L | SDR | Code |
|-----|-----|----|-----|-----|--------------|
| 75 | 65 | 16 | 111 | 11 | CVDE11075 |
| 90 | 80 | 16 | 118 | 11 | CVDE11090VXE |
| 110 | 100 | 16 | 127 | 11 | CVDE11110VXE |



EASYFIT HANDLE DN 65÷100

Easyfit multifunctional handle for union nut tightening SXE-SSE DN 65÷100

| d | DN | Code |
|-----|-----|----------|
| 75 | 65 | HSVXE075 |
| 90 | 80 | HSVXE090 |
| 110 | 100 | HSVXE110 |



LSE

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

| d | DN | Code |
|-----|-----|--------|
| 75 | 65 | LSE063 |
| 90 | 80 | LSE063 |
| 110 | 100 | LSE063 |

CUSTOMISATION

SXE and SSE DN 65÷100 Easyfit valves are equipped with a customisable 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 tag holder made of the same material, one side of which bears the FIP logo.

The 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.

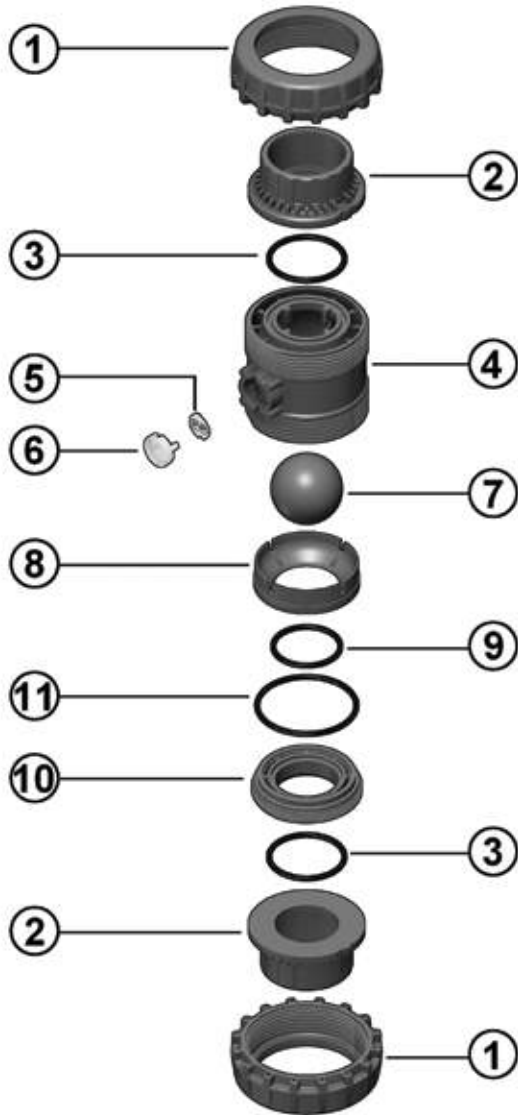
Proceed as follows to apply the label on the valve:

- 1) Remove the transparent plug from the housing on the valve body.
- 2) Extract the tag holder from the transparent plug.
- 3) Apply the adhesive label on the 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.



COMPONENTS

EXPLODED VIEW



SXE



SSE

- 1 · Union nut (PVC-U - 2)
- 2 · End connector (PVC-U - 2)
- 3 · Socket seal O-Ring (EPDM, FPM - 2)
- 4 · Body (PVC-U - 1)
- 5 · Tag holder (PVC - 1)

- 6 · Transparent protection plug (PVC - 1)
- 7 **SXE** · Ball (PVC-U - 1)
- 7 **SSE** · Shutter (PVC-U - 1)
- 8 · Gland packing ring (PVC-U - 1)
- 9 **SXE** · Ball seat O-Ring (EPDM, FPM - 1)

- 9 **SSE** · Shutter seat O-ring (EPDM, FPM - 1)
- 10 **SXE** · Ball seat carrier (PVC-U - 1)
- 10 **SSE** · Shutter seat carrier
- 11 · Radial seal O-Ring (EPDM, FPM - 1)
- 12 · Spring (STAINLESS steel* - 1)

* Also available made of A316 PTFE encapsulated
The component material and quantity supplied are indicated in the parentheses.

DISMOUNTING

SXE

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) For easy union nut tightening in assembly, use the Easyfit multifunctional handle (supplied as an accessory).
- 3) Unscrew the ball seat carrier (10) with the Easyfit multifunctional handle: introduce the two protrusion on the top of the handle in the grooves in the carrier (10) and unscrew, extracting it counter-clockwise.
- 4) Remove all internal components.

SSE

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) For easy union nut tightening in assembly, use the Easyfit multifunctional handle (supplied as an accessory).
- 3) Unscrew the ball seat carrier (10) with the Easyfit multifunctional handle: introduce the two protrusion on the top of the handle in the grooves in the carrier (10) and unscrew, extracting it counter-clockwise.
- 4) Remove all internal components.

ASSEMBLY

SXE

- 1) Reconstruct the valve following the exploded view on the previous page.
- 2) Tighten the ball seat carrier (10) using the Easyfit multifunctional handle. This ensures optimal valve installation and operations (fig. 3).
- 3) Position the valve between the end connectors (2) and tighten the union nuts clockwise (1) using the Easyfit multifunctional handle (fig. 7) being sure the socket seal O-ring (3) does not exit the seats.

SSE

- 1) Reconstruct the valve following the exploded view on the previous page.
- 2) Tighten the ball seat carrier (10) using the Easyfit multifunctional handle. This ensures optimal valve installation and operations (fig. 3).
- 3) Position the valve between the end connectors (2) and tighten the union nuts clockwise (1) using the Easyfit multifunctional handle (fig. 7) being sure the socket seal O-ring (3) does not exit the seats.



Note: 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.

Fig. 1



Fig. 2



Fig. 3



Fig. 4



INSTALLATION

SXE and SSE valves can be installed both vertically (upward flow) and horizontally (SXE with 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. 1).
- 5) Place the union nuts on the valve body and start tightening manually clockwise until they are hard to turn. Do not use wrenches or other tools that can damage the union nut surface (fig. 2).
- 6) For easy union nut tightening in assembly, use the Easyfit multifunctional handle (supplied as an accessory).
- 7) Extract the hooked insert in the handle (fig. 5) overturn it and fit it in the seat on the lower part of the handle (fig. 6).
- 8) Fit the tool on the external union nut profile until firmly and safely secured that allows for adequate torque without damaging the union nut in any way (fig. 7).
- 9) Repeat point 7 for the other union nut.
- 10) When tightened, remove the hooked insert and replace it in its seat in the handle.
- 11) If necessary, support the pipe with FIP pipe clip model ZIKM and DSM distance plates.

WARNINGS

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

Fig. 5



Fig. 6



Fig. 7



Fig. 8





Aliaxis
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