



**VKR DN 10÷50**  
PVC-U

DUAL BLOCK® regulating ball valve

# VKR DN 10÷50

The VKR DUAL BLOCK® valve combines high reliability and safety aspects typical of VKD full bore ball valves with the new flow adjustment function with typical linear curve that meets the most stringent needs typical of industrial applications.

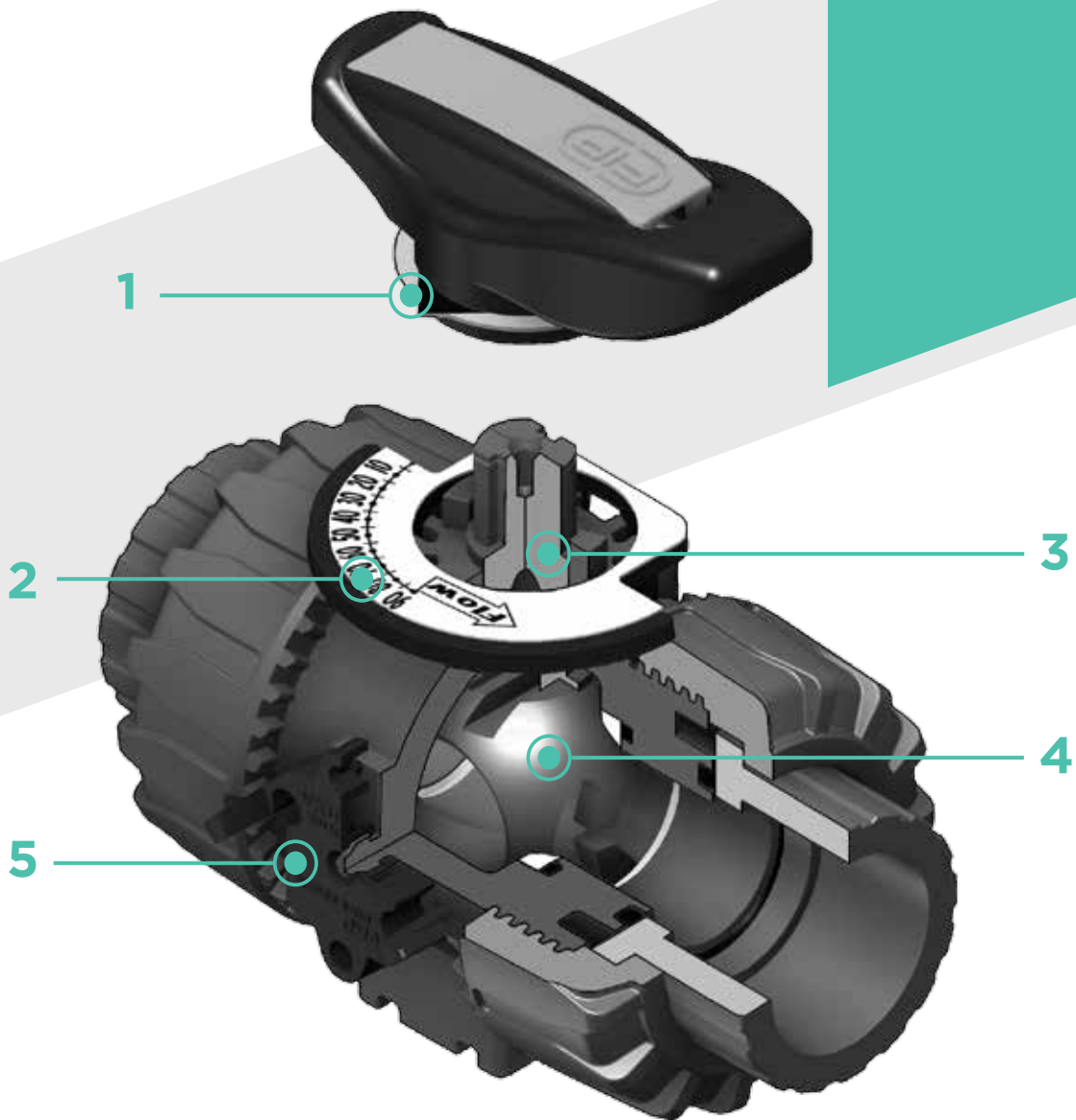


## DUAL BLOCK® REGULATING BALL VALVE

- Connection system for solvent weld, threaded and flanged joints
- Patented **SEAT STOP®** ball carrier system that lets you micro-adjust seals and minimise the axial force effect.
- Easy radial dismounting allowing quick replacement of O-rings and ball seats without any need for tools
- **PN16 True Union valve body** made for rigid PVC-U injection moulding equipped with built-in bores for actuation. ISO 9393 compliant test requisites
- Option of dismounting downstream pipes with the valve in the closed position
- High surface finish stem with double O-Ring and double connection key to ball
- **Integrated bracket** for valve anchoring
- Ball seat carrier can be adjusted using the **Easytorque adjustment kit**
- Actuation option: version with electric modulating actuator with 4-20 mA / 0-10 V inlet and 4-20 mA / 0-10 V outlet to monitor the position
- Valve suitable for carrying fluids that are clean and free of suspended particles

### Technical specifications

|                            |  |
|----------------------------|--|
| <b>Construction</b>        | 2-way True Union adjusting ball valve with locked carrier and union nuts.  |
| <b>Size range</b>          | DN 10 ÷ 50   |
| <b>Nominal pressure</b>    | PN 16 with water at 20 °C  |
| <b>Temperature range</b>   | 0 °C ÷ 60 °C   |
| <b>Coupling standards</b>  | <p><b>Solvent welding:</b> EN ISO 1452, EN ISO 15493, BS 4346-1, DIN 8063, NF T54-028, ASTM D 2467, JIS K 6743. Pipe coupling as per EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741</p> <p><b>Thread:</b> ISO 228-1, DIN 2999, ASTM D 2464, JIS B 0203</p> <p><b>Flanging system:</b> ISO 7005-1, EN ISO 1452, EN ISO 15493, EN 558-1, DIN 2501, ANSI B.16.5 cl. 150, JIS B 2220</p> |
| <b>Reference standards</b> | <p><b>Construction criteria:</b> EN ISO 16135, EN ISO 1452, EN ISO 15493</p> <p><b>Test methods and requirements:</b> ISO 9393</p> <p><b>Installation criteria:</b> DVS 2204, DVS 2221, UNI 11242</p> <p><b>Actuator couplings:</b> ISO 5211</p>   |
| <b>Valve material</b>      | PVC-U  |
| <b>Seal material</b>       | EPDM, FPM (standard size O-Ring); PTFE (ball seats)  |
| <b>Control options</b>     | Manual control; electric actuator  |



**1** HIPVC ergonomic multifunctional handle with **position indicator** and tool to adjust the ball seat carrier

**2** Flow direction indication plate and opening angle with **graduated scale with 5° detail** for clear and accurate readings

**3** 90° operating angle that permits **the use of standard quarter turn actuators**

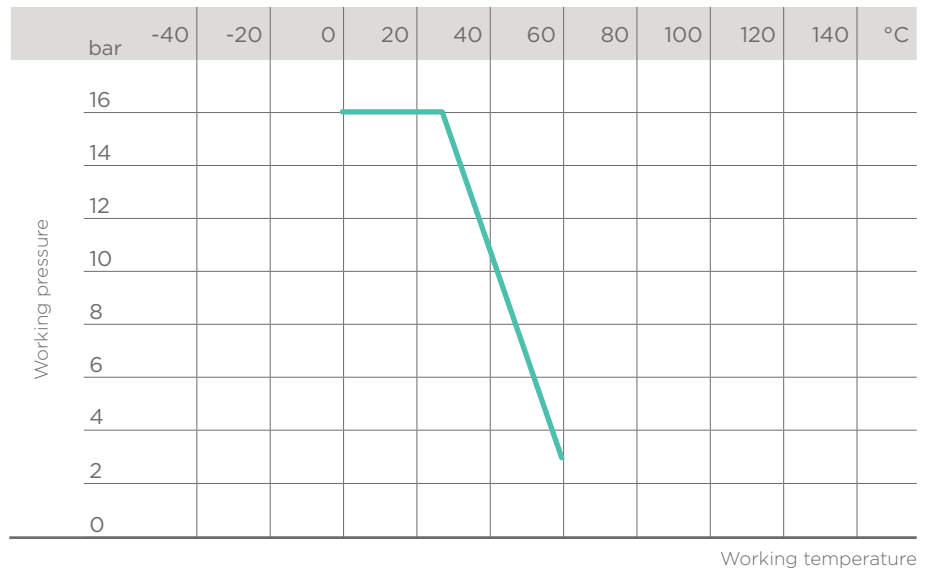
**4** The patented ball design provides **linear flow adjustment** throughout its range of operation even when the valve is open just a few degrees and guarantees minimum pressure drops

**5** Patented **DUAL BLOCK®** system: prevents union nuts from loosening even under extreme operating conditions: e.g. vibration or thermal expansion

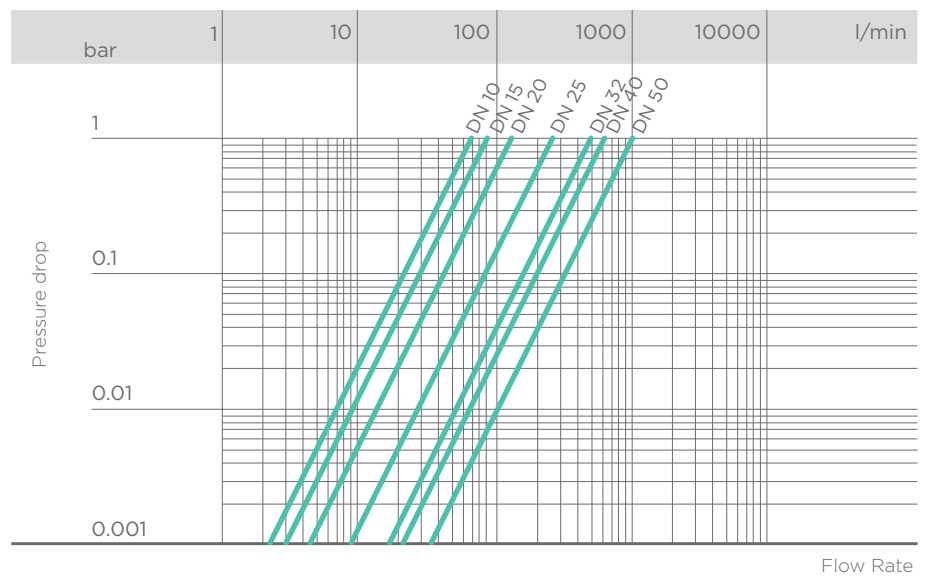
# TECHNICAL DATA

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

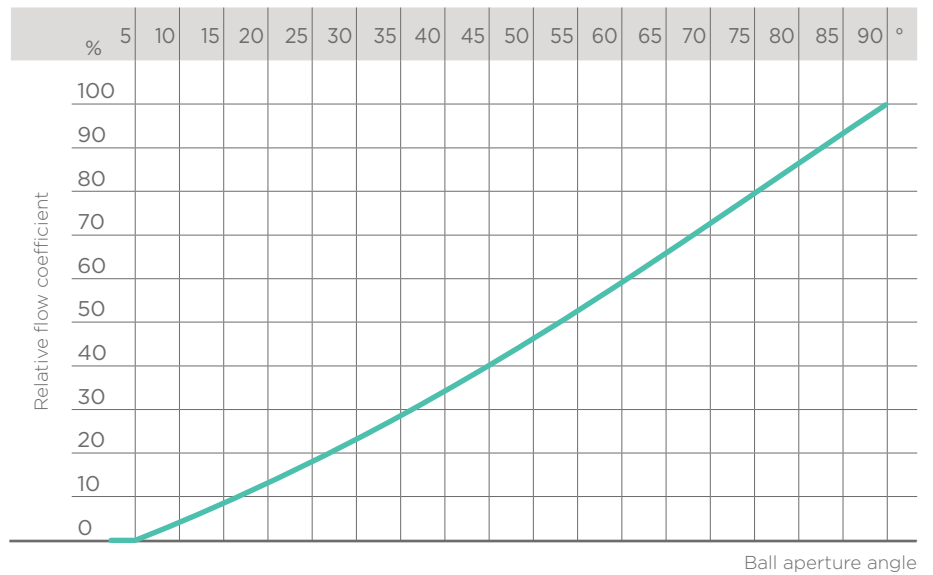
The K<sub>v</sub>100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position.

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

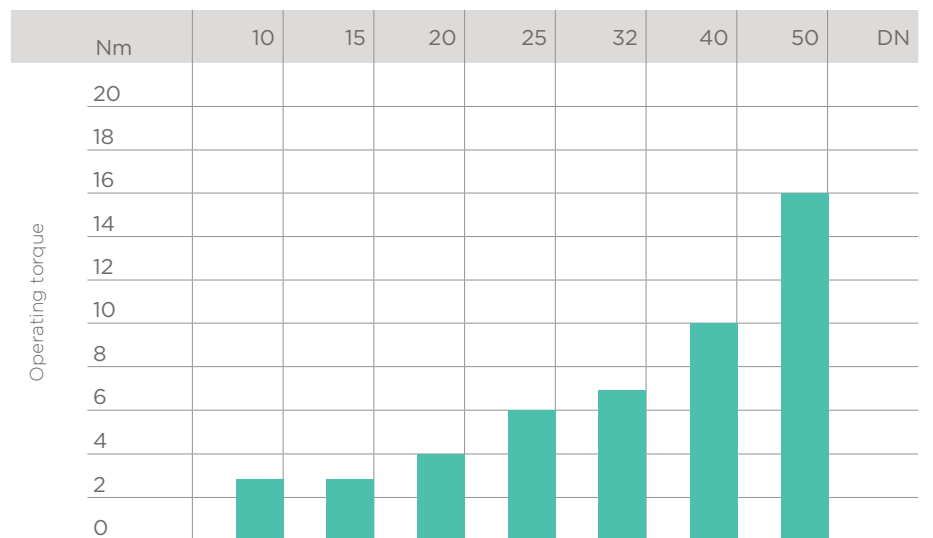
| DN                       | 10 | 15 | 20  | 25  | 32  | 40  | 50   |
|--------------------------|----|----|-----|-----|-----|-----|------|
| K <sub>v</sub> 100 l/min | 83 | 88 | 135 | 256 | 478 | 592 | 1068 |

## RELATIVE FLOW COEFFICIENT DIAGRAM

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

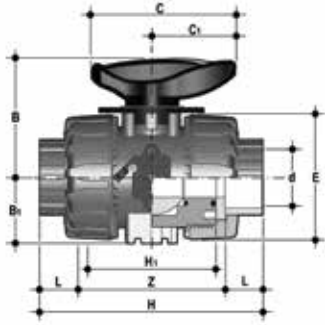


## OPERATING TORQUE AT MAXIMUM WORKING PRESSURE



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.

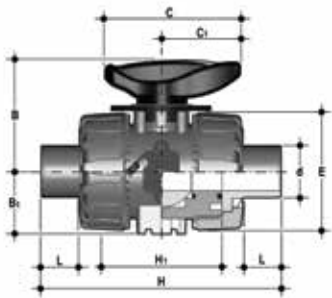
# DIMENSIONS



## VKRIV

DUAL BLOCK® regulating ball valve with female ends for solvent welding, metric series

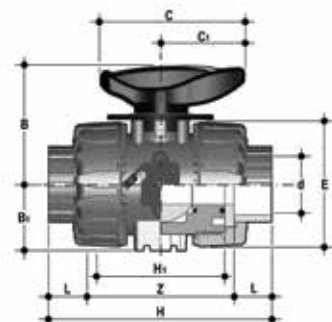
| d  | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | Z   | g    | EPDM Code | FPM Code  |
|----|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|-----|------|-----------|-----------|
| 16 | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 14 | 75  | 215  | VKRIV016E | VKRIV016F |
| 20 | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 16 | 71  | 205  | VKRIV020E | VKRIV020F |
| 25 | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 115 | 70             | 19 | 77  | 330  | VKRIV025E | VKRIV025F |
| 32 | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 128 | 78             | 22 | 84  | 438  | VKRIV032E | VKRIV032F |
| 40 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 146 | 88             | 26 | 94  | 693  | VKRIV040E | VKRIV040F |
| 50 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 164 | 93             | 31 | 102 | 925  | VKRIV050E | VKRIV050F |
| 63 | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 199 | 111            | 38 | 123 | 1577 | VKRIV063E | VKRIV063F |



## VKRDV

DUAL BLOCK® regulating ball valve with male ends for solvent welding, metric series

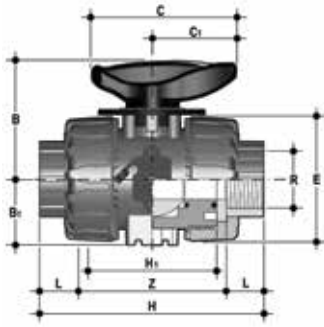
| d  | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | g    | EPDM Code | FPM Code  |
|----|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|------|-----------|-----------|
| 16 | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 149 | 65             | 14 | 215  | VKRDV016E | VKRDV016F |
| 20 | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 124 | 65             | 16 | 220  | VKRDV020E | VKRDV020F |
| 25 | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 144 | 70             | 19 | 340  | VKRDV025E | VKRDV025F |
| 32 | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 154 | 78             | 22 | 443  | VKRDV032E | VKRDV032F |
| 40 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 174 | 88             | 26 | 693  | VKRDV040E | VKRDV040F |
| 50 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 194 | 93             | 31 | 945  | VKRDV050E | VKRDV050F |
| 63 | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 224 | 111            | 38 | 1607 | VKRDV063E | VKRDV063F |



## VKRLV

DUAL BLOCK® regulating ball valve with female ends for solvent welding, ASTM series

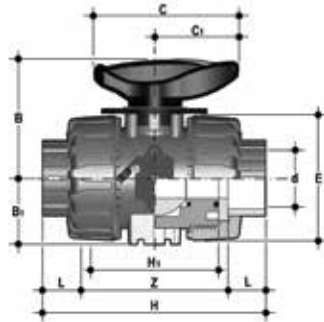
| d      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L    | Z   | g    | EPDM Code | FPM Code  |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|------|-----|------|-----------|-----------|
| 3/8"   | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 14.5 | 74  | 210  | VKRLV038E | VKRLV038F |
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 16.5 | 70  | 205  | VKRLV012E | VKRLV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 115 | 70             | 19   | 77  | 335  | VKRLV034E | VKRLV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 128 | 78             | 22.5 | 83  | 433  | VKRLV100E | VKRLV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 146 | 88             | 26   | 94  | 703  | VKRLV114E | VKRLV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 164 | 93             | 30   | 104 | 925  | VKRLV112E | VKRLV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 199 | 111            | 36   | 127 | 1647 | VKRLV200E | VKRLV200F |



## VKRFV

DUAL BLOCK® regulating ball valve with BSP threaded female ends

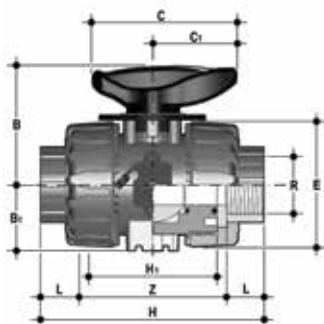
| R      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | Z   | g    | EPDM Code | FPM Code  |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|-----|------|-----------|-----------|
| 3/8"   | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 12 | 80  | 215  | VKRFV038E | VKRFV038F |
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 110 | 65             | 15 | 80  | 210  | VKRFV012E | VKRFV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 116 | 70             | 16 | 83  | 335  | VKRFV034E | VKRFV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 134 | 78             | 19 | 96  | 448  | VKRFV100E | VKRFV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 153 | 88             | 21 | 110 | 678  | VKRFV114E | VKRFV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 156 | 93             | 21 | 113 | 955  | VKRFV112E | VKRFV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 186 | 111            | 26 | 135 | 1667 | VKRFV200E | VKRFV200F |



## VKRAV

DUAL BLOCK® regulating ball valve with female ends for solvent welding, ASTM series

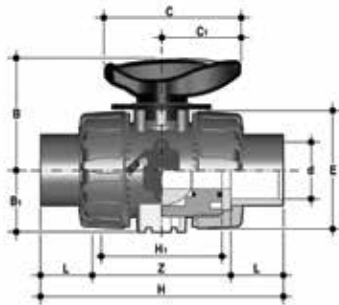
| d      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L    | Z     | g    | EPDM Code | FPM Code  |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|------|-------|------|-----------|-----------|
| 3/8"   | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 117 | 65             | 19.5 | 78    | 230  | VKRAV038E | VKRAV038F |
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 117 | 65             | 22.5 | 72    | 215  | VKRAV012E | VKRAV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 129 | 70             | 25.5 | 78    | 345  | VKRAV034E | VKRAV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 142 | 78             | 28.7 | 84.6  | 448  | VKRAV100E | VKRAV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 162 | 88             | 32   | 98    | 718  | VKRAV114E | VKRAV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 172 | 93             | 35   | 102   | 975  | VKRAV112E | VKRAV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 199 | 111            | 38.2 | 122.6 | 1712 | VKRAV200E | VKRAV200F |



## VKRN

DUAL BLOCK® regulating ball valve with female ends, NPT thread

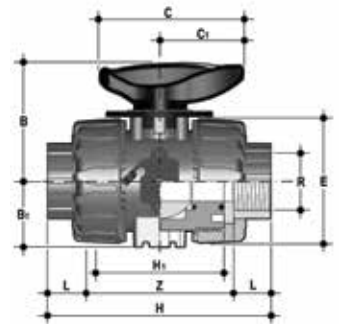
| R      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L    | Z     | g    | EPDM Code | FPM Code |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|------|-------|------|-----------|----------|
| 3/8"   | 10 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 13.7 | 75.6  | 215  | VKRN038E  | VKRN038F |
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 111 | 65             | 17.8 | 75.4  | 210  | VKRN012E  | VKRN012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 117 | 70             | 18   | 81    | 335  | VKRN034E  | VKRN034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 135 | 78             | 22.6 | 89.8  | 448  | VKRN100E  | VKRN100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 153 | 88             | 25.1 | 102.8 | 678  | VKRN114E  | VKRN114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 156 | 93             | 24.7 | 106.6 | 955  | VKRN112E  | VKRN112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 186 | 111            | 29.6 | 126.8 | 1667 | VKRN200E  | VKRN200F |



## VKRJV

DUAL BLOCK® regulating ball valve with female ends for solvent welding, JIS series

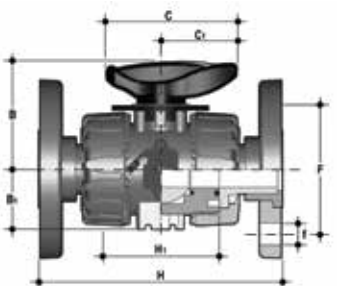
| d      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | Z   | g    | EPDM Code | FPM Code  |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|-----|------|-----------|-----------|
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 131 | 65             | 30 | 71  | 225  | VKRJV012E | VKRJV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 147 | 70             | 35 | 77  | 335  | VKRJV034E | VKRJV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 164 | 78             | 40 | 84  | 448  | VKRJV100E | VKRJV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 182 | 88             | 44 | 94  | 728  | VKRJV114E | VKRJV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 212 | 93             | 55 | 102 | 1015 | VKRJV112E | VKRJV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 248 | 111            | 63 | 122 | 1727 | VKRJV200E | VKRJV200F |



## VKRGV

DUAL BLOCK® regulating ball valve with female ends, JIS thread

| R      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | Z   | g    | EPDM Code | FPM Code  |
|--------|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|-----|------|-----------|-----------|
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 103 | 65             | 16 | 71  | 210  | VKRGV012E | VKRGV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 115 | 70             | 19 | 77  | 330  | VKRGV034E | VKRGV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 128 | 78             | 22 | 84  | 438  | VKRGV100E | VKRGV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 146 | 88             | 25 | 96  | 678  | VKRGV114E | VKRGV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 164 | 93             | 26 | 112 | 975  | VKRGV112E | VKRGV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 199 | 111            | 31 | 137 | 1627 | VKRGV200E | VKRGV200F |

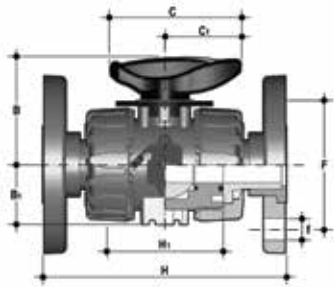


## VKROV

DUAL BLOCK® regulating ball valve with EN/ISO/DIN fixed flange, drilled PN10/16. Face to face according to EN 558-1

| d  | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | F   | H   | H <sub>1</sub> | U | f  | Sp | g    | EPDM Code | FPM Code  |
|----|----|----|------|----------------|-----|----------------|-----|-----|----------------|---|----|----|------|-----------|-----------|
| 20 | 15 | 16 | 54   | 29             | 67  | 40             | 65  | 130 | 65             | 4 | 14 | 11 | 375  | VKROV020E | VKROV020F |
| 25 | 20 | 16 | 65   | 34.5           | 85  | 49             | 75  | 150 | 70             | 4 | 14 | 14 | 590  | VKROV025E | VKROV025F |
| 32 | 25 | 16 | 69.5 | 39             | 85  | 49             | 85  | 160 | 78             | 4 | 14 | 14 | 713  | VKROV032E | VKROV032F |
| 40 | 32 | 16 | 82.5 | 46             | 108 | 64             | 100 | 180 | 88             | 4 | 18 | 14 | 1108 | VKROV040E | VKROV040F |
| 50 | 40 | 16 | 89   | 52             | 108 | 64             | 110 | 200 | 93             | 4 | 18 | 16 | 1485 | VKROV050E | VKROV050F |
| 63 | 50 | 16 | 108  | 62             | 134 | 76             | 125 | 230 | 111            | 4 | 18 | 16 | 2347 | VKROV063E | VKROV063F |

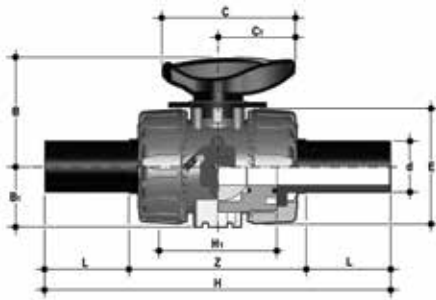




## VKROAV

DUAL BLOCK® regulating ball valve with ANSI B16.5 cl.150#FF fixed flange

| d      | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | F     | H   | H <sub>1</sub> | U | f    | Sp | g    | EPDM Code  | FPM Code   |
|--------|----|----|------|----------------|-----|----------------|-------|-----|----------------|---|------|----|------|------------|------------|
| 1/2"   | 15 | 16 | 54   | 29             | 67  | 40             | 60.3  | 143 | 65             | 4 | 15.9 | 11 | 460  | VKROAV012E | VKROAV012F |
| 3/4"   | 20 | 16 | 65   | 34.5           | 85  | 49             | 69.9  | 172 | 70             | 4 | 15.9 | 14 | 632  | VKROAV034E | VKROAV034F |
| 1"     | 25 | 16 | 69.5 | 39             | 85  | 49             | 79.4  | 187 | 78             | 4 | 15.9 | 14 | 853  | VKROAV100E | VKROAV100F |
| 1" 1/4 | 32 | 16 | 82.5 | 46             | 108 | 64             | 88.9  | 190 | 88             | 4 | 15.9 | 14 | 1313 | VKROAV114E | VKROAV114F |
| 1" 1/2 | 40 | 16 | 89   | 52             | 108 | 64             | 98.4  | 212 | 93             | 4 | 15.9 | 16 | 1669 | VKROAV112E | VKROAV112F |
| 2"     | 50 | 16 | 108  | 62             | 134 | 76             | 120.7 | 234 | 111            | 4 | 19.1 | 16 | 2577 | VKROAV200E | VKROAV200F |

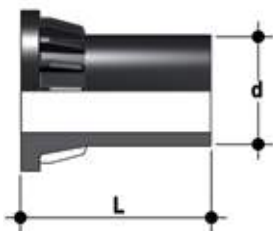


## VKRBEV

Dual Block® regulating ball valve with PE100 SDR 11 male end connectors for butt welding or electrofusion (CVDE)

| d  | DN | PN | B    | B <sub>1</sub> | C   | C <sub>1</sub> | E   | H   | H <sub>1</sub> | L  | Z   | g    | EPDM Code  | FPM Code   |
|----|----|----|------|----------------|-----|----------------|-----|-----|----------------|----|-----|------|------------|------------|
| 20 | 15 | 16 | 54   | 29             | 67  | 40             | 54  | 175 | 65             | 41 | 94  | 220  | VKRBEV020E | VKRBEV020F |
| 25 | 20 | 16 | 65   | 34.5           | 85  | 49             | 65  | 210 | 70             | 52 | 106 | 340  | VKRBEV025E | VKRBEV025F |
| 32 | 25 | 16 | 69.5 | 39             | 85  | 49             | 73  | 226 | 78             | 55 | 117 | 443  | VKRBEV032E | VKRBEV032F |
| 40 | 32 | 16 | 82.5 | 46             | 108 | 64             | 86  | 243 | 88             | 56 | 131 | 693  | VKRBEV040E | VKRBEV040F |
| 50 | 40 | 16 | 89   | 52             | 108 | 64             | 98  | 261 | 93             | 58 | 145 | 945  | VKRBEV050E | VKRBEV050F |
| 63 | 50 | 16 | 108  | 62             | 134 | 76             | 122 | 293 | 111            | 66 | 161 | 1607 | VKRBEV063E | VKRBEV063F |

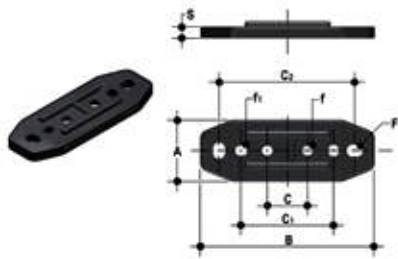
# ACCESSORIES



## 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 |



## PMKD

Mounting plate

| d  | DN | A  | B   | C  | C <sub>1</sub> | C <sub>2</sub> | F   | f   | f <sub>1</sub> | S | Code  |
|----|----|----|-----|----|----------------|----------------|-----|-----|----------------|---|-------|
| 16 | 10 | 30 | 86  | 20 | 46             | 67.5           | 6.5 | 5.3 | 5.5            | 5 | PMKD1 |
| 20 | 15 | 30 | 86  | 20 | 46             | 67.5           | 6.5 | 5.3 | 5.5            | 5 | PMKD1 |
| 25 | 20 | 30 | 86  | 20 | 46             | 67.5           | 6.5 | 5.3 | 5.5            | 5 | PMKD1 |
| 32 | 25 | 30 | 86  | 20 | 46             | 67.5           | 6.5 | 5.3 | 5.5            | 5 | PMKD1 |
| 40 | 32 | 40 | 122 | 30 | 72             | 102            | 6.5 | 5.3 | 5.5            | 5 | PMKD2 |
| 50 | 40 | 40 | 122 | 30 | 72             | 102            | 6.5 | 5.3 | 5.5            | 5 | PMKD2 |
| 63 | 50 | 40 | 122 | 30 | 72             | 102            | 6.5 | 5.3 | 5.5            | 5 | PMKD2 |



## EASYTORQUE KIT

Kit for ball seat carrier tightening adjustment for DUAL BLOCK® DN 10÷50 series valves

| d         | DN    | Tightening torque recommended* | Code  |
|-----------|-------|--------------------------------|-------|
| 3/8"-1/2" | 10-15 | 3 N m - 2,21 Lbf ft            | KET01 |
| 3/4"      | 20    | 4 N m - 2,95 Lbf ft            | KET01 |
| 1"        | 25    | 5 N m - 3,69 Lbf ft            | KET01 |
| 1" 1/4    | 32    | 5 N m - 3,69 Lbf ft            | KET01 |
| 1" 1/2    | 40    | 7 N m - 5,16 Lbf ft            | KET01 |
| 2"        | 50    | 9 N m - 6,64 Lbf ft            | KET01 |

\*calculated in ideal installation conditions

# FASTENING AND SUPPORTING

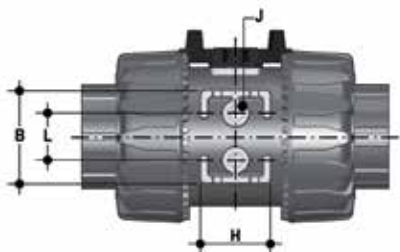


All valves, whether manual or driven, must be adequately supported in many applications.

The VKR valve series is therefore provided with an integrated bracket that permits direct anchoring of the valve body without the need of other components.

For wall installation, dedicated PMKD mounting plates which are available as accessories can be used. These plates should be fastened to the valve before wall installation.

PMKD plates also allow VKD valve alignment with FIP ZIKM pipe clips as well as allowing different sizes of valves to be aligned.

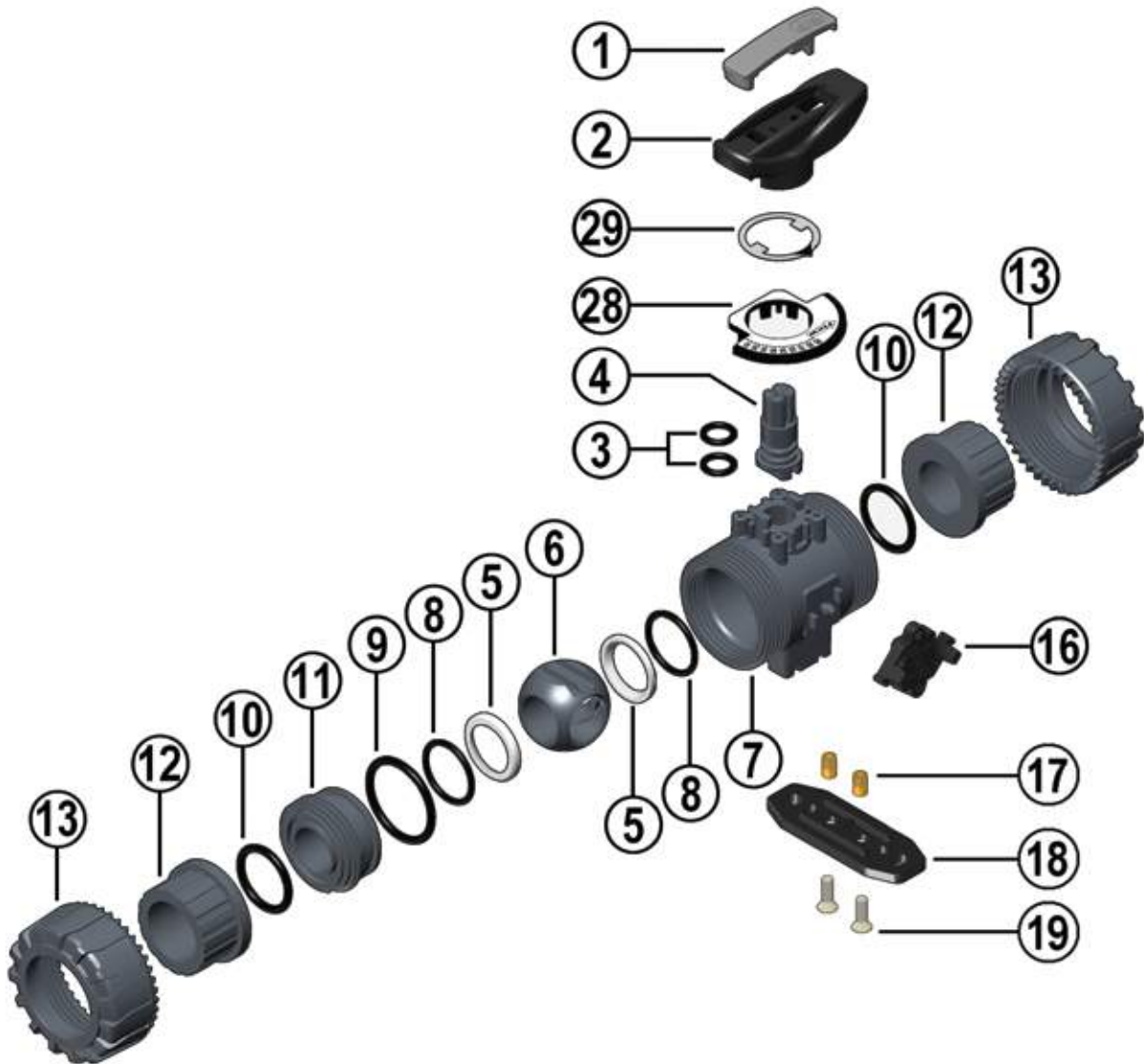


| d  | DN | B    | H  | L  | J*      |
|----|----|------|----|----|---------|
| 16 | 10 | 31.5 | 27 | 20 | M4 x 6  |
| 20 | 15 | 31.5 | 27 | 20 | M4 x 6  |
| 25 | 20 | 40   | 30 | 20 | M4 x 6  |
| 32 | 25 | 40   | 30 | 20 | M4 x 6  |
| 40 | 32 | 50   | 35 | 20 | M6 x 10 |
| 50 | 40 | 50   | 35 | 20 | M6 x 10 |
| 63 | 50 | 60   | 40 | 20 | M6 x 10 |

\* With threaded inserts

# COMPONENTS

## EXPLODED VIEW



1 · Handle insert (PVC-U - 1)

2 · Handle (HIPVC - 1)

3 · Stem O-ring  
(EPDM-FPM - 2)\*

4 · Stem (PVC-U - 1)

5 · Ball seat (PTFE - 2)\*

6 · Patented ball design  
(PVC-U - 1)

7 · Body (PVC-U - 1)

8 · Ball seat O-ring  
(EPDM-FPM - 2)\*

9 · Radial seal O-Ring  
(EPDM, FPM - 1)

10 · Socket seal O-Ring  
(EPDM, FPM - 2)

11 · Ball seat carrier  
(PVC-U - 1)

12 · End connector (PVC-U - 2)

13 · Union nut (PVC-U - 2)

16 · DUAL BLOCK® (POM - 1)

17 · Threaded inserts  
(STAINLESS steel or Brass - 2)\*\*

18 · Distance plate  
(PP-GR - 1)\*\*

19 · Screw (STAINLESS steel - 2)\*\*

28 · Graduated plate  
(POM-PVC - 1)

29 · Indicator (PVC - 1)

\* Spare parts

\*\* Accessories

The component material and quantity supplied are indicated in the parentheses.

## DISMOUNTING

- 1) Isolate the valve from the line (release the pressure and empty the pipeline).
- 2) Unlock the union nuts by pressing the lever on the DUAL BLOCK® (16) along the axis and separate it from the union nut (fig. 1). It is also possible to completely remove the block device from the body of the valve.
- 3) Fully unscrew the union nuts (13) and extract the body sideways.
- 4) Before dismantling, hold the valve in a vertical position and open it 45° to drain any liquid that might remain.
- 5) After closing the valve, remove the special insert (1) from the handle (2) and push the two projecting ends into the corresponding recesses on the ball seat carrier (11). Rotate the stop ring anti-clockwise to extract it.
- 6) Pull the handle (2) upwards to remove it from the valve stem (4).
- 7) Make sure that the position indicator (29) remains properly fastened to the handle (2).
- 8) Press on the ball from the side opposite the "REGULAR - ADJUST" label, being sure not to scratch it, until the ball seat carrier exits (11), then extract the ball (6).
- 9) Press the stem (4) inwards until it exits the valve body.
- 10) All the O-rings (3, 8, 9, 10) and PTFE ball seats (5) must be removed from their grooves, as shown in the exploded view.

## ASSEMBLY

- 1) All the O-rings (3, 8, 9, 10) must be inserted in their grooves as shown in the exploded view.
- 2) Insert the stem (4) from inside the body (7).
- 3) Place the PTFE ball seats (5) in the housings in the body (7) and in the ball seat carrier (11).
- 4) Insert the ball (6) in the body as shown in Fig. 3
- 5) Screw the carrier (11) into the body and tighten up in the clockwise direction using the special insert (1) to limit stop.
- 6) Position the indicator (29) on the handle with the pointer set to 0 on the graduated scale while making sure that the valve is in the closed position (fig. 2-3).
- 7) Insert the handle (2) with the insert (1) in its housing on the stem (4).
- 8) Insert the valve between the end connectors (12) making sure that they match the direction of flow shown on the plate (fig. 2) then tighten the union nuts (13) making sure that the socket seal O-rings (10) do not come out of their grooves.



**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

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) Check that the DUAL BLOCK® union nut locking device (16) is fitted to the valve body.
- 3) To release the union nuts (13), axially press the release lever to separate the lock and then unscrew it in the counter-clockwise direction.
- 4) Unscrew the union nuts (13) and insert them on the pipe segments.
- 5) Solvent weld or screw the end connectors (12) onto the pipe ends.
- 6) Position the valve between the pipe end connectors making sure that the direction of flow is the same as shown on the plate (Fig.4). Hand tighten the union nuts in the clockwise direction. Do not use a wrench or other tools which might damage the surface.
- 7) Lock the union nuts by returning the DUAL BLOCK® to its housing, pressing on it until the hinges lock on the nuts.

8) If necessary, support the pipework with FIP pipe clips or by means of the carrier built into the valve itself (see paragraph "fastening and supporting").

Seals can be adjusted using the removable insert on the handle.

The seals can be installed later with the valve installed on the pipe by simply tightening the union nuts. This "micro adjustment", only possible with FIP valves thanks to the patented "Seat stop system", allows the seal to be recovered where PTFE ball seats are worn due to a high number of operations.

The Easytorque kit can also be used for micro adjustments (fig. 5).

Fig. 5



## WARNINGS

- Always avoid sudden closing operations and protect the valve from accidental operations.



**Aliaxis**  
UTILITIES & INDUSTRY

**FIP - Formatura Iniezione Polimeri**

Loc. Pian di Parata, 16015 Casella Genova Italy

Tel. +39 010 96211

Fax +39 010 9621.209

info.fip@aliaxis.com

[www.fipnet.com](http://www.fipnet.com)



Code LEVAMAV

