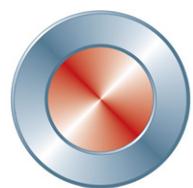
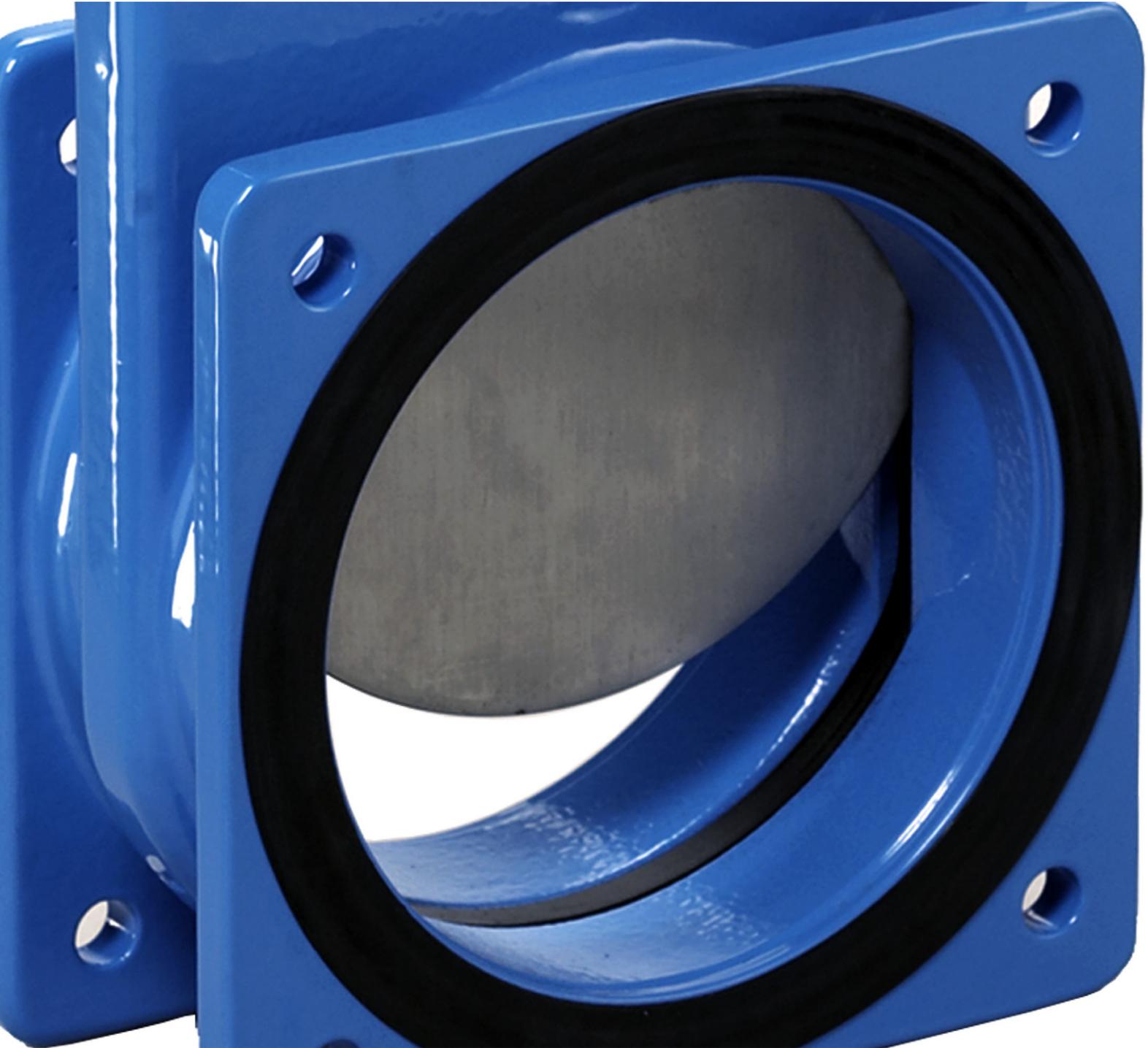


## Knife gate valve WB12



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SINCE 1666

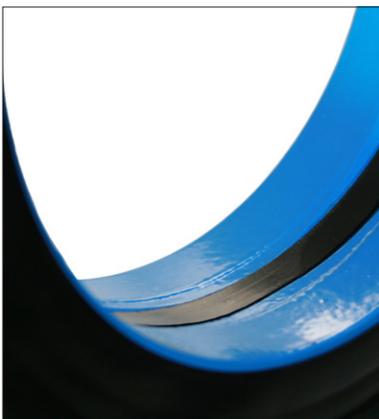
## Knife gate valve WB12

Stafsjö's knife gate valve WB12 is bi-directional tight and can therefore be installed into a pipe system independent of pressure direction. A square flanged valve body with integrated flange gaskets makes it easy to install and also allows end-of-pipe installations. WB12 has a full bore with no cavity which gives excellent flow characteristics, and this makes it suitable for fluids, sludge and liquids with solids in suspensions such as water, sewage and bio mass.

WB12 has a robust epoxy coated valve body in cast iron. Its extended face-to-face and square flanges enable easy replacement of other bonnet type valves. It is equipped with a gate in stainless steel, which has a polished edge in order to minimize friction and to lower required operation force. The valve is supplied with a one piece moulded sealing profile in either Nitrile or EPDM, whose steel core support and maximizes its service life. The gland box is equipped with Stafsjö's box packing TwinPack™, to secure that no media reaches the surrounding environment. A box bottom scraper, which is standard on DN 200, prolongs the box packing braids' service life. The valve is modular designed and it can easily be supplied with different types of actuators and accessories.

The WB12 valve is designed, manufactured, inspected and tested according to the European Pressure Equipment Directive (PED 97/23/EC) category I and II module A1. The valve is CE marked when it is applicable.

Other WB version beside the WB12, is the WB11 and fully lugged WB14 which both are available up to DN 300. The WB11 is also available with additional tapped holes for square flange connection. The WB is available from DN 350 up to DN 1200.



### Excellent flow characteristics

A straight bore with a sealing profile in level with bore, gives minimal pressure losses since the media can pass it practically unnoticed.



### Fully lugged and simple to install

Bi-directional sealing, square flanges with extended face-to-face and integrated flange gaskets makes it very easy to install and to replace other bonnet type valves. The valve flanges also enable end-of-pipe installations.



### First-rate sealing capacity

A gland box supplied with three layers of our TwinPack™, which is specially developed and made for Stafsjö's valves, secures that no media reaches the surrounding environment.

## Design data

| Sizes           | Face-to-face dimension         | ATEX Design   |
|-----------------|--------------------------------|---|
| DN 150 - DN 200 | Stafsjö manufacturing standard | ATEX 94/ 9/EG II cat 3 G/D for zone 2 and 22 on request |

Other sizes on request

| Leakage rate   | Pressure tests   |
|--|--|
| EN 12266-1:2003 rate A: No visually detectable leakage is allowed for duration of the test | Pressure tests are performed with water at 20° C according to EN 12266-1:2003. Pressure shell test: 1,5 times maximum allowable working pressure for open valve. Pressure seat tightness test: 1,1 times maximum allowable differential pressure for closed valve. |

| Maximum working pressure body at 20 °C |     | Maximum differential pressure at 20 °C |     |
|--|-----|--|-----|
| DN                                     | bar | DN                                     | bar |
| 150 - 200                              | 4   | 150 - 200                              | 4   |

## Basic equipment

| A. Valve Body |      |                |                     |
|---------------|------|----------------|---------------------|
| Material      | Code | Type           | Max. temperature °C |
| Cast iron     | (A)  | EN-JL1040/GG25 | 200                 |

Standard color valve body: epoxy, RAL 5015, thickness 140-200µm.

| B. Gate         |                           |
|-----------------|---------------------------|
| Material        | Type                      |
| Stainless steel | EN 1.4301/AISI304/SS 2333 |

Option:

|                 |                            |
|-----------------|----------------------------|
| Stainless steel | EN 1.4404/AISI316L/SS 2348 |
|-----------------|----------------------------|

| C. Sealing profile |      |                     |
|--------------------|------|---------------------|
| Material           | Code | Max. temperature °C |
| EPDM               | (E)  | 120                 |
| Nitrile            | (N)  | 100                 |

| D. Box packing |      |                     |
|----------------|------|---------------------|
| Material       | Code | Max. temperature °C |
| TwinPack™      | (TY) | 260                 |

## Actuators

| Manual                       | Code | Automatic                        | Code |
|------------------------------|------|----------------------------------|------|
| Hand wheel <sup>1)</sup>     | (HW) | Pneumatic cylinder               | (EC) |
| Hand lever <sup>2)</sup>     | (HL) | Electric motor                   | (EM) |
| Chain wheel <sup>2)</sup>    | (CW) | Hydraulic cylinder <sup>2)</sup> | (MH) |
| Ratchet wrench <sup>2)</sup> | (RW) |                                  |      |
| Bevel gear <sup>2)</sup>     | (BG) |                                  |      |

<sup>1)</sup> For recommended size, see page 5, column E. <sup>2)</sup> For recommended size, see separate data sheet.

| Double-acting pneumatic cylinder |         |                    | Electric motor (AUMA multi-turn) |           |            |
|----------------------------------|---------|--------------------|----------------------------------|-----------|------------|
| DN valve                         | EC type | Maximum Force (kN) | DN valve                         | AUMA type | Attachment |
| 150                              | EC 125  | 3,5                | 150                              | SA 07.2   | F10/A      |
| 200                              | EC 160  | 9,0                | 200                              | SA 07.6   | F10/A      |

The table above gives recommended cylinder sizes at normal operation with 5 bar air pressure. For other operating conditions, pls contact Stafsjö or your local representative for advice.

Electric motors are mounted according to standard ISO 5210. The table above gives recommended motor sizes at normal operation. For other operating conditions, please contact Stafsjö or your local representative for advice.

The actuators are described in separate data sheets. For advice and information on other actuators or on ATEX-classified ones, please contact Stafsjö or your local representative.

## Accessories

| Knife gate valve        |       |                       |                               |
|-------------------------|-------|-----------------------|-------------------------------|
| Accessories             | Code  | Model                 | Design                        |
| Mechanical limit switch | (MLS) | Omron D4V             | 12-250 V AC/12-125 DC, IP 65  |
| Inductive limit switch  | (ILS) | ifm electronic IG0006 | 2-wire, 20-250 V AC/DC, IP 67 |
|                         |       | ifm electronic IG5401 | 3-wire, 10-36 V DC PNP, IP 67 |
| Stem extension          | (SES) | Short                 | Pipe Length < 1,5 m           |
|                         | (SEL) | Long                  | Pipe Length > 1,5 m           |

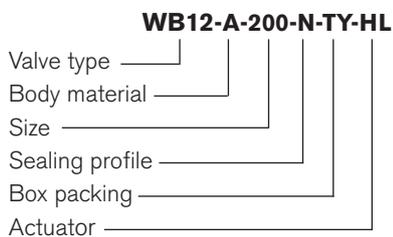
  

| Pneumatic cylinder    |         |   |   |
|-----------------------|---------|---|---|
| Accessories           | Code    | Model                                   | Design  |
| Solenoid valve        | (SV)    | Parker Namur valves for EC 100 - EC 160 | G1/4", Mono stable 5/2, Namur series VDI/VDE 3845, IP 65, 24 V DC/110 V AC/220 V AC |
|                       |         | Parker Namur valves for EC 200 - EC 320 | G1/2", Mono stable 5/2, Namur series VDI/VDE 3845, IP 65, 24 V DC/110 V AC/220 V AC |
| Magnetic limit switch | (MagLS) | KITA KT-50R for EC 100 - EC 320         | 2-wire, 5-240 V AC/DC, IP 65  |
|                       |         | KITA KT-50N for EC 100 - EC 320         | 3-wire, 10-30 V DC, IP 65   |

The accessories are described in separate data sheets. For advice and information on other accessories or on ATEX-classified ones, please contact Stafsjö or your local representative.

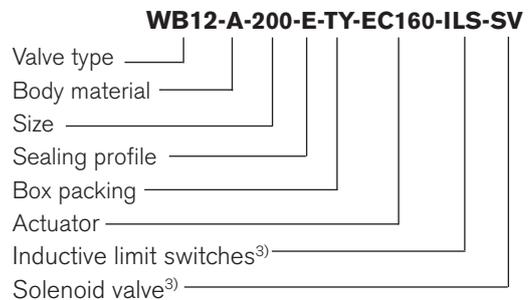
## Specify the Stafsjö valve

Stafsjö's valves are modular designed and they can easily be customized with gate, sealing profile and box packings according to media and requirements, as well for actuators and accessories. Below are examples of how you can specify your Stafsjö valve. Further information is available on [www.stafsjo.com](http://www.stafsjo.com).



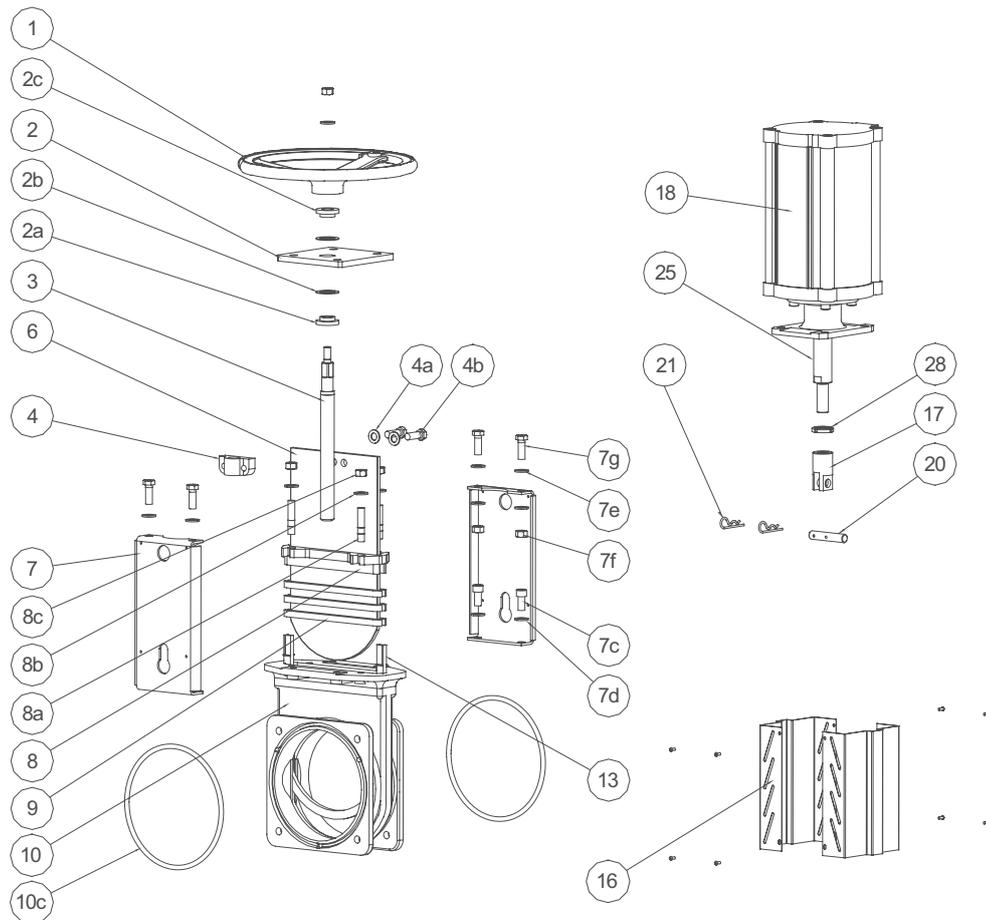
Alloy must be specified if it differ from standard.

<sup>3)</sup> All electronics must be specified in detail.



ILS: ifm electronic IG0006

SV: Parker Numur valve G1/4", 5/2, 220 V AC

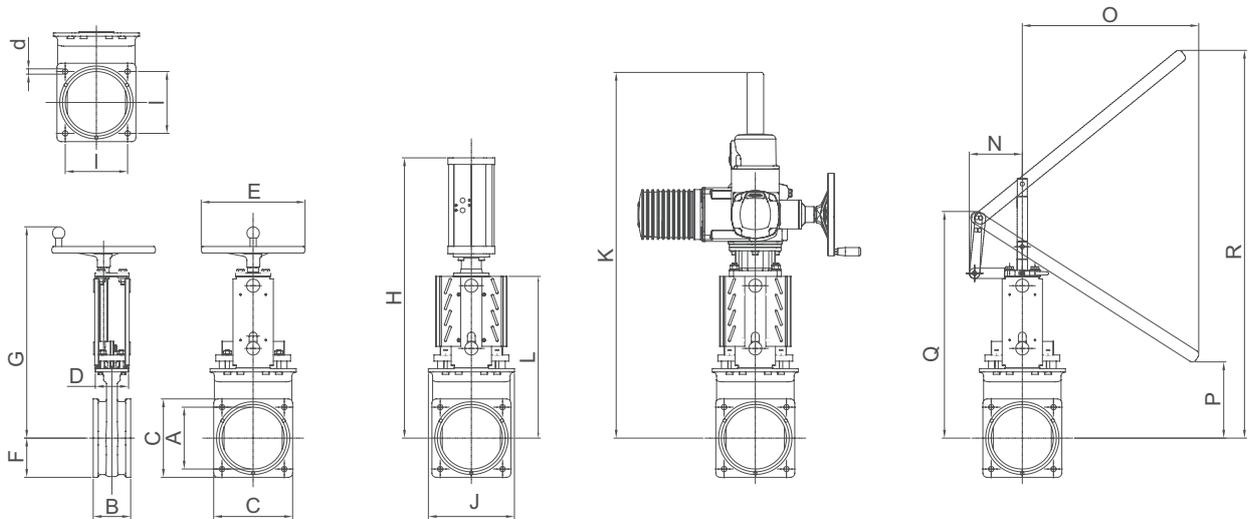


## Part list

| Pos. | Part         | Material (Name)  |
|------|--------------|--|
| 1    | Hand Wheel   | Epoxy coated cast iron<br>Ø 200 - Ø 315 (EN:JL1040/GG25) |
| 2    | Yoke         | Steel (EN 1.0038/SS 1312),<br>epoxy coated               |
| 2a   | Bearing      | Brass (CuZn39Pb3/SS 5170)                                |
| 2b   | Slide washer | POM  |
| 2c   | Bearing      | Brass (CuZn39Pb3/SS 5170)                                |
| 3    | Stem         | Stainless steel (EN 1.4016/SS 2320)                      |
| 4    | Stem nut     | Brass (CuZn39Pb3/SS 5170)                                |
| 4a   | Washer       | Stainless steel (A2)                                     |
| 4b   | Bolt         | Stainless steel (A2)                                     |
| 6    | Gate         | See equipment B  |
| 7    | Beam         | Steel (EN 1.0038/SS 1312),<br>epoxy coated               |
| 7c   | Bolt         | Stainless Steel (A2)                                     |
| 7d   | Washer       | Stainless Steel (A2)                                     |
| 7e   | Washer       | Stainless Steel (A2)                                     |
| 7g   | Bolt         | Stainless Steel(A2)                                      |
| 8    | Gland        | Carbon steel (ASTM A216/WCC),<br>epoxy coated            |

| Pos.              | Part                          | Material (Name)                            |
|-------------------|-------------------------------|--|
| 8a                | Studbolt                      | Stainless Steel (A2)                       |
| 8b                | Washer                        | Stainless Steel (A2)                       |
| 8c                | Nut                           | Stainless steel (A2)                       |
| 9 <sup>4)</sup>   | Box packing                   | See equipment D                            |
| 9a <sup>4)</sup>  | Box bottom<br>scraper         | DN 200: UHMWPE                             |
| 10                | Valve body                    | See equipment A                            |
| 10c <sup>4)</sup> | Flange sealing                | Nitrile                                    |
| 13 <sup>4)</sup>  | Sealing profile               | See equipment C                            |
| 16                | Gate guard, not<br>for HW, HL | Steel (EN 1.0038/SS 1312),<br>epoxy coated |
| 17                | Gate clevis                   | Stainless steel (EN 1.4305/SS 2346)        |
| 18                | Cylinder                      | See data sheet                             |
| 20                | Clevis pin                    | Stainless steel (EN 1.4305/SS 2346)        |
| 21                | Locking pins                  | Stainless steel (EN 1.4305/SS 2346)        |
| 25                | Piston rod                    | Stainless steel (EN 1.4301/SS 2333)        |
| 28                | Locking nut                   | Stainless steel (EN 1.4305/SS 2346)        |

<sup>4)</sup> Recommended spare parts



## Main dimensions

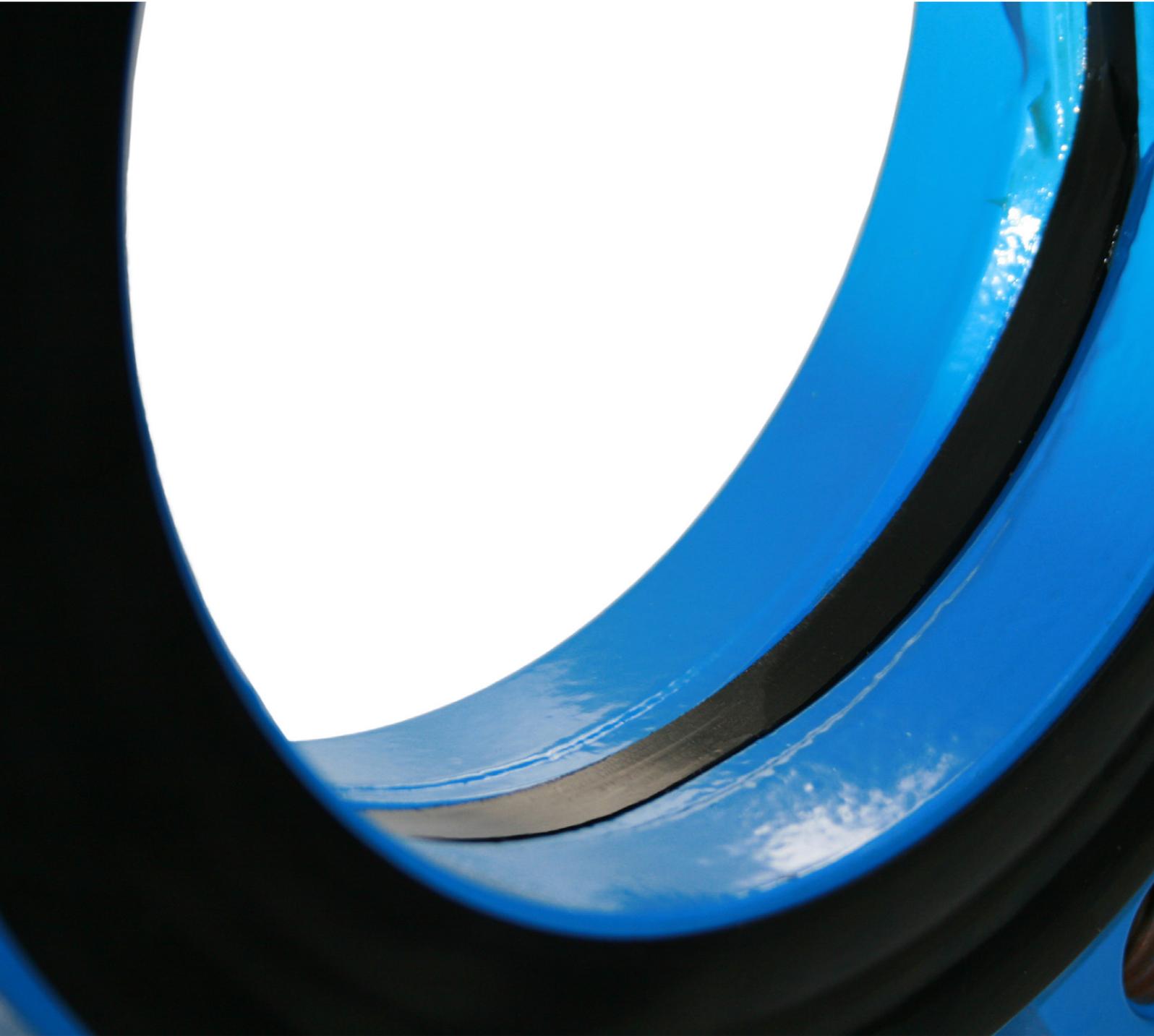
### Dimensions (mm)

| DN  | A   | B  | C   | D   | d  | E   | F   | G   | H   | I   | J   | K   | L   | M   | N   | O   | P   | Q   | R    | Weight <sup>5)</sup> |
|-----|-----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------------------|
| 150 | 150 | 90 | 190 | 80  | 13 | 250 | 95  | 464 | 727 | 150 | 207 | 794 | 392 | 695 | 127 | 425 | 185 | 549 | 940  | 14                   |
| 200 | 200 | 94 | 235 | 145 | 13 | 317 | 123 | 562 | 849 | 180 | 270 | 818 | 483 | 852 | 216 | 623 | 249 | 715 | 1123 | 27                   |

<sup>5)</sup> Weight in kg for valve equipped with hand wheel.

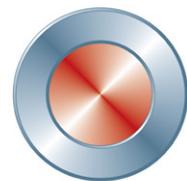
Main dimensions are only for information. Contact Stafsjö for certified drawings.

Further information is available on [www.stafsjo.com](http://www.stafsjo.com)



## Globally active. Locally represented.

AFRICA South Africa: Valve & Automation (Pty) Ltd, ASIA China: EBRO ARMATUREN (BEIJING) CO., LTD, India: Ebro Armaturen India Pvt. Ltd, Indonesia: Contromatic Prima Mandiri PT, Japan: SKC Co. Ltd, Malaysia: Precision Control SdnBnd, Philippines: EBRO ARMATUREN (PHILIPPINES) INC., Thailand: EBRO VALVES (Trading) Co. Ltd., Vietnam: EBRO VALVES (Thailand) Co., Ltd, AUSTRALIA WITH OCEANIA Australia: EBRO ARMATUREN Pacific PTY. LTD, New Zealand: H.J.Asmuss&Co.Ltd, EUROPE Austria: EBRO ARMATUREN GmbH, Belgium: V.C.T. - Valve & Connector Technology n.v., Denmark: Valtor Industri A/S, Finland: Tecalemit Flow Oy, France: EBRO ARMATUREN and GL&V, Germany: EBRO ARMATUREN Gebr. Bröer GmbH, Great Britain: EBRO Valves Ltd, Hungary: EBRO ARMATUREN Kft, Ireland: Induchem Components Ltd, Iceland: Hédinn HF, Italy: EBRO VALVOLE SRL, The Netherlands: EBRO VALVES B.V., Norway: BAGGES AS, Poland: EBRO ARMATUREN GmbH, Portugal: AxFlow Comércio de Equipamentos LDA, RUSSIA/BELARUS/UKRAINE: EBRO ARMATUREN and LesBumMash Ltd, Spain: EBRO ARMATUREN ESPAÑA, S.L., Switzerland: EBRO Armaturen Est. & Co. KG, Sweden: Stafsjö Valves AB and Ahlsell, Turkey: EBRO ARMATUREN Otomasyon Sistemleri San ve Tic Ltd. Sti NORTH & SOUTH AMERICA Argentina: ESCO ARGENTINA SA, Brazil: Ebro Stafsjö Valves do Brasil LTD, Canada: Armour Valve Ltd, Chile: Ebro Stafsjö Valves Chile Ltd, USA: EBRO ARMATUREN USA Inc., For other countries, please contact us directly.



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