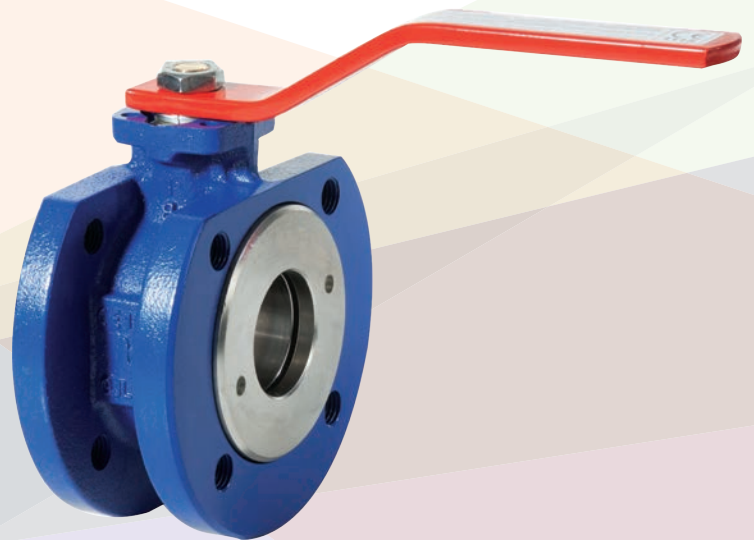


Serie B1

Valvole a sfera wafer in ghisa
Wafer cast iron ball valve



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DATASHEET



b-Smart, Be-Brandoni



brandoni
VALVES

www.brandonivalves.com

Valvola a sfera wafer in ghisa / Wafer cast iron ball valve

Le valvole serie B1 sono valvole di intercettazione a sfera tipo wafer con corpo in ghisa grigia e sfera flottante, realizzate in accordo alle normative di prodotto rilevanti ed al sistema di gestione della qualità EN ISO 9001.

Sono adatte per riscaldamento e condizionamento (HVAC), teleriscaldamento, trattamento e distribuzione dell'acqua, applicazioni industriali, agricole, per aria compressa, antincendio, oli e idrocarburi.

(Fatta salva la scelta corretta dell'articolo in base all'applicazione)

Sono idonee: per impieghi in linea e a fine linea, e per servizio che richieda frequenti azionamenti; il supporto integrato in accordo a ISO 5211 permette il facile montaggio di una ampia gamma di servocomandi.

Le valvole a sfera serie B1 presentano un passaggio pieno e diritto che minimizza le turbolenze e le perdite di carico.

Non sono idonee: per vapore, per la parzializzazione e regolazione della portata.

Accessori

- Prolunga per isolamento termico
- Cappuccio quadro per presa stradale
- Prolunga per presa stradale
- Kit Leva di manovra lucchettabile
- Kit interruttori di finecorsa per segnalazione Aperto/Chiuso
- Kit flangia ISO

Comandi

- Attuatori pneumatici a doppio e semplice effetto
- A richiesta: box finecorsa, posizionatore
- Attuatori elettrici
- Riduttori manuali

Certificazioni / Certifications



Conformi alla direttiva 2014/68/UE PED (ex 97/23/CE)
Conformi al D.M. 174 (direttiva 98/83/CE), per utilizzo a contatto con acqua potabile.

Norme costruttive e di collaudo (equivalenti):

Flange: EN1092 ISO 7005
Design: EN 1983, EN12516, ISO 5211
Marcatura EN19
Collaudo: testate al 100%, EN 12266 cat. A (ISO 5208 cat. A)

Series B1 consists of wafer-ball-type shut-off valves, with the body in cast iron and a floating ball, manufactured in accordance with the severe product standards and the quality management of ISO 9001.

Suitable for heating and conditioning (HVAC), district heating, distribution and water treatment, industrial applications, agricultural applications, for compressed air processing, for fire fighting, for oils and hydrocarbons.

(Please ensure the choice of the corresponding item)

YES: for installation in-line and end of line, for services with frequent acting, the integrated ISO 5211 support allows the installation of a wide range of actuators.

The B1 wafer ball valves are full and straight bore reducing turbulences and minimizing head loss.

NO: for steam, for choking and flow regulation.

Accessories

- Stem extension for thermal insulation
- Square cap for water main system connection
- Extension for water main system connection
- Kit for lockable operation lever
- Kit for limit switches for ON/OFF position indicator
- Kit for ISO flanges

Actuators

- Double acting and single acting pneumatic actuators
- On request: limit switches, position indicator
- Electric actuators
- Gear boxes

*In conformity with directive 2014/68/UE PED (ex 97/23/CE)
Suitable for drinking water application, comply with Italian regulation D.M.174*

Design and testing standards (correspondences) :

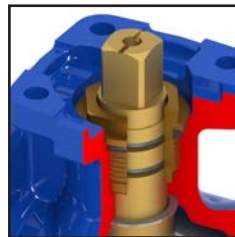
*Flanges: EN1092 ISO 7005
Design: EN 1983, EN12516, ISO 5211
Marking: EN19
Testing: 100% testing in accordance with EN 12266 cat. A (ISO 5208 cat. A)*



Verniciatura interna ed esterna con smalto epossidico, resistente alle alte temperature. Vernice a base acqua, a basso impatto ecologico.

Inside and outside epoxy coating, high-temperature resistance.

Environmentally friendly water-based paint.



Flangia in accordo a ISO5211 integrata per DN40-100. DN20-32 predisposti per montaggio Kit ISO.

Integrated flange, in accordance with ISO 5211 for DN 40-100. DN 20-32 suitable for mounting kit ISO.

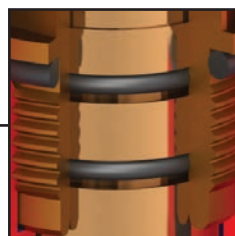


Doppia piastrina di fermo.

Sfilando una piastrina e ruotandola di 90° è possibile bloccare la leva in posizione aperta o chiusa.

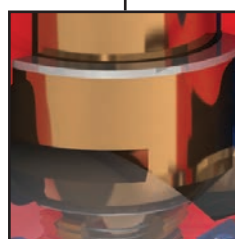
Twin stop plate.

Removing and repositioning one of the plate at 90° allows locking of the valve in ON-OFF position.



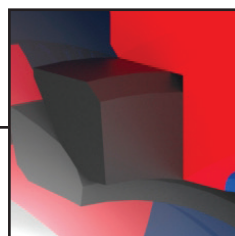
Il doppio O-Ring sullo stelo e la busola metallica garantiscono la tenuta dinamica anche nelle condizioni più gravose.

The dynamic seal of the stem is guaranteed by a double O-ring, even in severe working conditions.



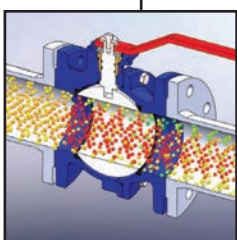
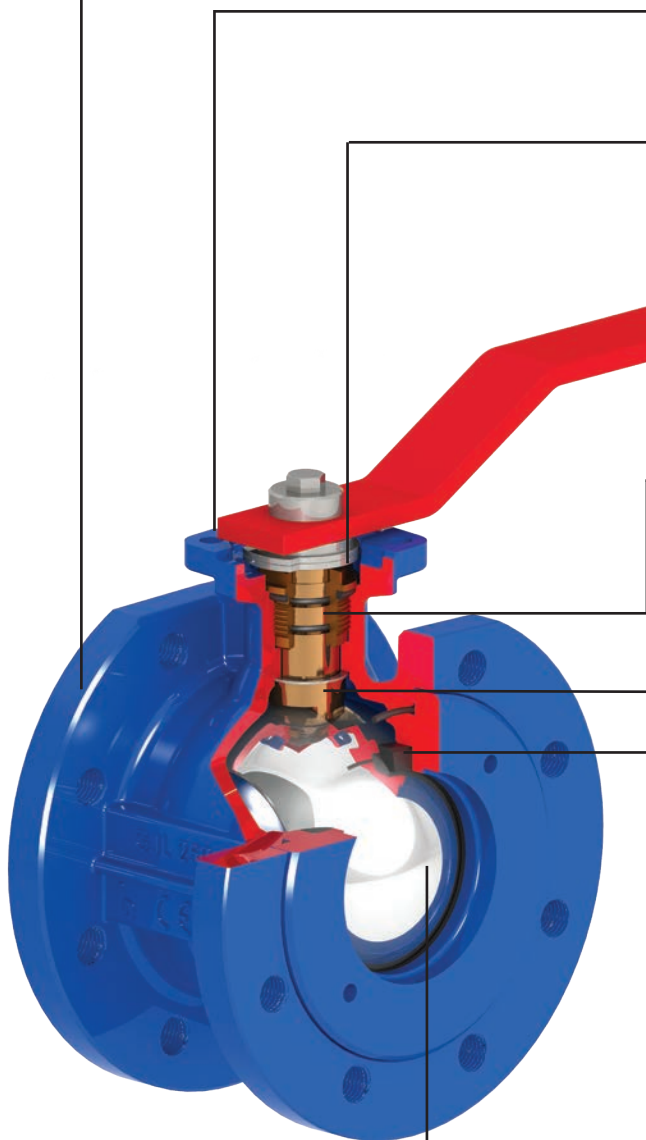
Stelo con design antiespulsione.

Blow-out proof stem.



Sede sfera in PTFE caricato, al variare della temperatura la coppia di manovra rimane costante.

Seat of ball in reinforced PTFE, as temperature changes, the torque remains constant.



Sfera a passaggio pieno e dritto, in ottone cromato o in acciaio inox.

Ball with full and straight bore, in chrome-plated brass or stainless steel.

Valvola a sfera wafer in ghisa / Wafer cast iron ball valve

O-Ring: NBR



B1.000

Corpo: Ghisa grigia
Sfera: Ottone
Asta: Ottone
O-ring: NBR
Temp: da -10 a +100°C

Body: Cast iron
Ball: Brass
Stem: Brass
O-ring: NBR
Temp: -10 +100°C



B1.010

Corpo: Ghisa grigia
Sfera: AISI 304
Asta: Ottone
O-ring: NBR
Temp: da -10 a +100°C

Body: Cast iron
Ball: AISI 304
Stem: Brass
O-ring: NBR
Temp: -10 +100°C



B1.011

Corpo: Ghisa grigia
Sfera: AISI 304
Asta: AISI 304
O-ring: NBR
Temp: da -10 a +100°C

Body: Cast iron
Ball: AISI 304
Stem: AISI 304
O-ring: NBR
Temp: -10 +100°C

O-Ring in FKM



B1.000 *

Corpo: Ghisa grigia
Sfera: Ottone
Asta: Ottone
O-ring: FKM
Temp: da -10 a +150°C

Body: Cast iron
Ball: Brass
Stem: Brass
O-ring: FKM
Temp: -10 +150°C



B1.010 *

Corpo: Ghisa grigia
Sfera: AISI 304
Asta: Ottone
O-ring: FKM
Temp: da -10 a +150°C

Body: Cast iron
Ball: AISI 304
Stem: Brass
O-ring: FKM
Temp: -10 +150°C



B1.011 *

Corpo: Ghisa grigia
Sfera: AISI 304
Asta: AISI 304
O-ring: FKM
Temp: da -10 a +150°C

Body: Cast iron
Ball: AISI 304
Stem: AISI 304
O-ring: FKM
Temp: -10 +150°C

- * Particolarmente indicate per Teleriscaldamento per acqua fino a 150°C
- * Most suitable for district heating for water up to 150 °C

Verniciatura: rivestimento epossidico interno ed esterno colore RAL 5002
Coating: inside and outside epoxy coated RAL 5002 colour

Combinazioni diverse disponibili su richiesta.
Special versions on request.

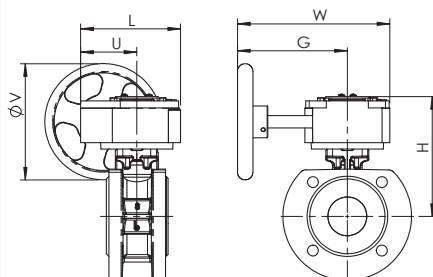
I componenti ed accessori realizzati in acciaio NON inox, anche se protetti da verniciatura, zincatura o altro trattamento, se utilizzati in ambienti all'aperto, in condizioni di forte umidità/condensa od in ambienti aggressivi, possono mostrare una durata di protezione all'ossidazione limitata nel tempo.
Components and accessories made in steel different from stainless steel, even if protected by painting or galvanizing, if used in outdoor environments, in conditions of high humidity / condensation or in aggressive environments, may exhibit a limited protection span against oxidation.

Comandi e accessori / Actuators and accessories



B1 + RM

Riduttore manuale
Gear box

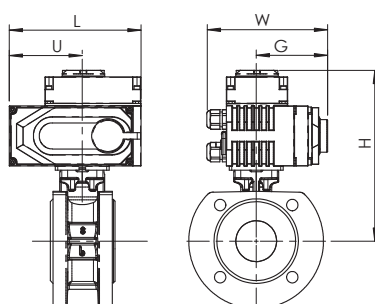


| DN | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|------------------|----------------|------|-----|-----|------|------|-----|------|
| B1 + RM | RM.0250 | | | | | | | |
| L | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| D | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| H | 154 | 161 | 166 | 141 | 149 | 157 | 180 | 195 |
| W | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| F | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 |
| V | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| Peso / Weight Kg | 6.2 | 6.84 | 7.9 | 9.7 | 11.4 | 14.8 | 17 | 22.8 |



B1 + AOX

Attuatori elettrici
Electric actuators

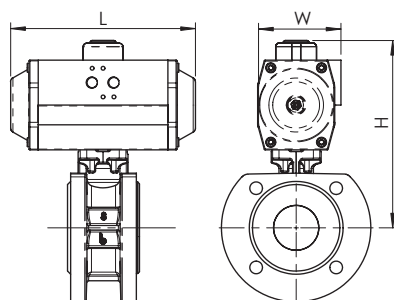


| DN | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| B1 + AOX | 003 | 003 | 003 | 005 | 005 | 008 | 015 | 015 |
| L | 123 | 123 | 123 | 160 | 160 | 160 | 189 | 189 |
| D | 74 | 74 | 74 | 89 | 89 | 89 | 107 | 107 |
| H | 205 | 212 | 177 | 200 | 208 | 216 | 247 | 262 |
| W | 100 | 100 | 100 | 121 | 121 | 121 | 145 | 145 |
| F | 65 | 65 | 65 | 84 | 84 | 84 | 89 | 89 |
| Peso / Weight Kg | 4 | 4.64 | 5.7 | 8.7 | 10 | 12.4 | 16.1 | 19.4 |

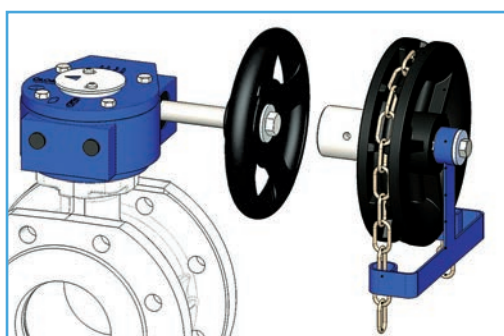


B1 + AP

Attuatori pneumatici
Pneumatic actuators



| DN | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| B1 + AP DE / DA | AP052 | AP052 | AP063 | AP063 | AP063 | AP075 | AP092 | AP105 |
| L | 147 | 147 | 165 | 165 | 165 | 182 | 262 | 270 |
| H | 184 | 191 | 212 | 186.5 | 195 | 215 | 255 | 285.5 |
| W | 72 | 72 | 83 | 83 | 83 | 95 | 109 | 125 |
| Peso / Weight Kg | 3.1 | 3.74 | 5.6 | 7.1 | 8.4 | 11.4 | 16.1 | 20.8 |
| B1 + AP SE / SPRING RETURN | AP075S | AP075S | AP075S | AP083S | AP083S | AP092S | AP125S | AP140S |
| L | 182 | 182 | 182 | 208 | 208 | 262 | 298 | 395 |
| H | 212 | 219 | 224 | 207.5 | 216 | 232 | 282 | 384.5 |
| W | 95 | 95 | 95 | 103 | 103 | 109 | 134 | 153 |
| Peso / Weight Kg | 4.76 | 5.4 | 6.46 | 8.7 | 10 | 14.2 | 21.5 | 31.3 |

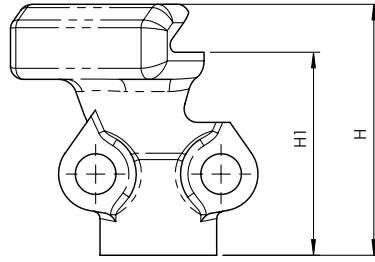
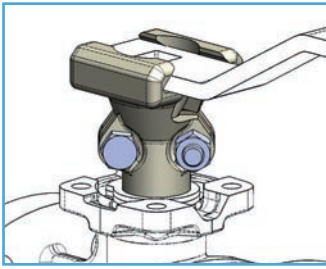


KCAT

Kit comando a catena
Chain driver kit

Valvola a sfera wafer in ghisa / Wafer cast iron ball valve

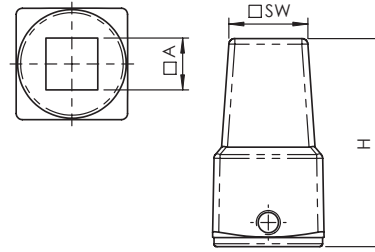
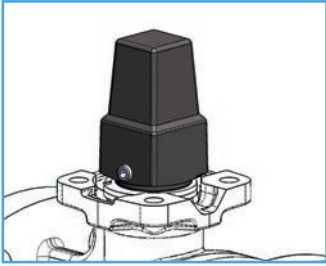
Comandi e accessori / Actuators and accessories



| | | |
|----|----------------|----------------|
| DN | 25-32-40-50-65 | 80-100-125-150 |
| H | 68 | 68 |
| H1 | 55 | 55 |

KITB2

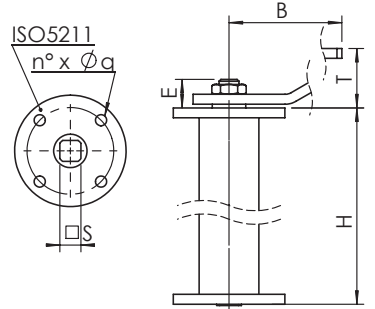
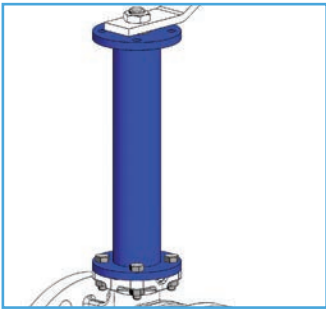
Prolunga per isolamento termico / Stem extension for thermal insulation



| | | | |
|----|----------|--------|---------|
| DN | 40-50-65 | 80-100 | 125-150 |
| SW | 26 | 26 | 26 |
| A | 14 | 17 | 22 |
| H | 69 | 69 | 71 |

KCAPB2

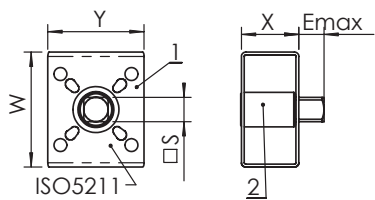
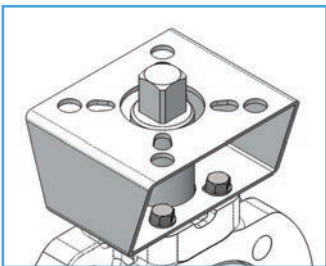
Cappuccio quadro per presa stradale / Square cap for water main system connection



| | | | | | | | |
|----------|------------------|-----|-----|-----|-----|------|------|
| DN | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
| H | 250-500-800-1000 | | | | | | |
| T | 48 | 48 | 48 | 48 | 48 | 59 | 59 |
| B | 230 | 230 | 230 | 280 | 360 | 450 | 560 |
| ISO 5211 | F05 | F05 | F05 | F07 | F07 | F10 | F10 |
| J | 50 | 50 | 50 | 70 | 70 | 102 | 102 |
| n° x Ø q | 4x7 | 4x7 | 4x7 | 4x9 | 4x9 | 4x11 | 4x11 |
| E | 22 | 22 | 22 | 23 | 23 | 27 | 27 |
| S | 14 | 14 | 14 | 17 | 17 | 22 | 22 |

KPRB2

Prolunga per presa stradale / Stem extension for water main system connection

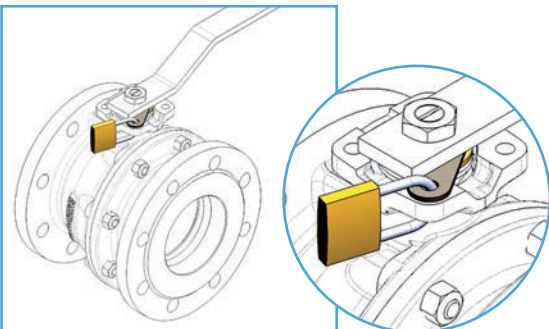


- 1) Flangia / Bracket
- 2) Giunto / Joint

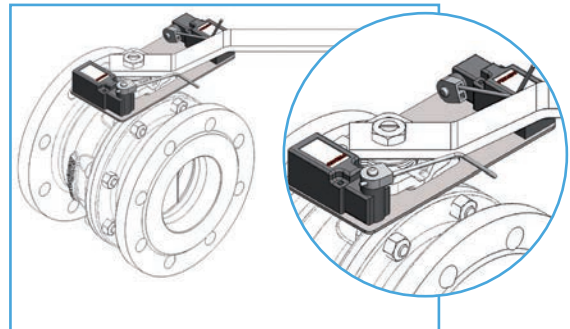
KISO.B1

Kit flangia ISO 5211 / Kit ISO 5211 flange

| | | | | | |
|--|-----------|-----------|----------|---------|---------|
| DN | 15-20 | 25-32 | 40-50-65 | 80 | 100 |
| ISO 5211' | F04-05-07 | F04-05-07 | F05-07 | F10-12 | F10-12 |
| S x E | 14 x 14 | 17 x 17 | 17 x 17 | 22 x 22 | 27 X 27 |
| S1 x E1'' | 11 x 11 | 11 x 11 | - | - | - |
| Foratura lato valvola Drilling valve side | F03-04 | F03-04 | F05-07 | F07-10 | F07-10 |
| X | 40 | 40 | 50 | 60 | 60 |
| Y | 70 | 70 | 70 | 120 | 120 |
| W | 80 | 80 | 100 | 120 | 120 |



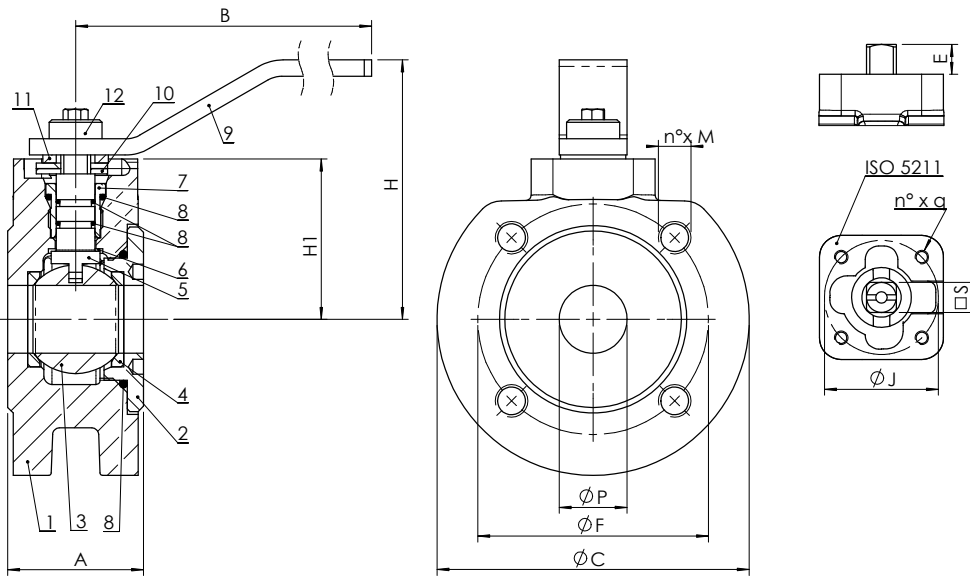
Kit leva di manovra lucchettabile (solo DN 40-100)
Kit lockable operation lever (only DN 40-100)



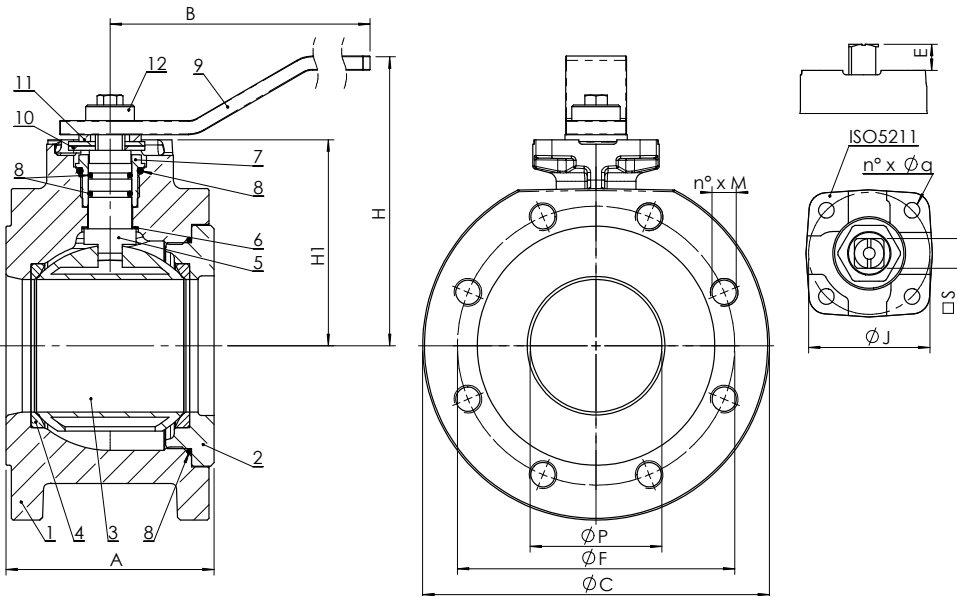
KFC

Kit interruttori di finecorsa per segnalazione Aperto/Chiuso (DN40-100)
Kit limit switches for ON/OFF position indicator (DN40-100)

B1 DN20 - 32



B1 DN40 - 100



Dimensioni (mm) / Dimensions (mm)

| DN | | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| P | | 20 | 25 | 32 | 40 | 50 | 63 | 76 | 95 |
| A | non unificato - not standardized | 40 | 50 | 55 | 65 | 80 | 100 | 120 | 130 |
| H | | 83 | 96 | 101 | 125 | 133 | 142 | 166 | 181 |
| H1 | | 52 | 59 | 64 | 78,5 | 87 | 95 | 118 | 132,5 |
| B | | 160 | 170 | 170 | 230 | 230 | 230 | 280 | 360 |
| C | | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 |
| n° x M | | 4x M12 | 4x M12 | 4x M16 | 4x M16 | 4x M16 | 4x M16 | 8x M16 | 8x M16 |
| F | | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 180 |
| ISO 5211 | | F03 | F04 | F04 | F05 | F05 | F05 | F07 | F07 |
| J | | 36 | 42 | 42 | 50 | 50 | 50 | 70 | 70 |
| n° x q | | 4x M5 | 4x M5 | 4x M5 | 4x7 | 4x7 | 4x7 | 4x9 | 4x9 |
| E | | 9,5 | 11 | 11 | 13,5 | 13,5 | 13,5 | 15 | 15 |
| S | | 9 | 11 | 11 | 14 | 14 | 14 | 17 | 17 |

Peso (kg) / Weight (kg)

| | | | | | | | | |
|-----------------|-----|------|-----|-----|-----|------|------|------|
| B1.000 | 1,9 | 2,54 | 3,6 | 5,1 | 6,4 | 8,8 | 11,5 | 14,8 |
| B1.010 - B1.011 | 1,9 | 2,54 | 3,6 | 5,4 | 7,1 | 10,5 | 12,7 | 18,5 |

Coppia di manovra (Nm) / Operating torque (Nm)

| DN | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----|----|----|----|----|----|----|----|-----|
| Nm | 15 | 18 | 18 | 18 | 20 | 40 | 70 | 100 |

N.B. al fine di ottimizzare la scelta del servocomando si consiglia di moltiplicare il momento torcente per il coefficiente di sicurezza K=1,5
 N.B.: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1,5

Materiali / Materials

| | Componente - Component | Materiale - Material | |
|----|--------------------------------------|--|---|
| 1 | Corpo - Body | Ghisa grigia - Cast iron EN GJL 250 | |
| 2 | Flangia - Ring nut | Ghisa grigia - Cast iron EN GJL 250 | |
| 3 | Sfera - Ball | Ottone CuZn40Pb2 Brass CuZn40Pb2 chrome plated | Acciaio inossidabile AISI 304 - Stainless steel AISI304 |
| 4 | Sede sfera - Ball seat | PTFE + Carbone - Carbon + Reinforced PTFE | |
| 5 | Asta - Stem | Ottone CuZn40Pb2 Brass CuZn40Pb2 | Acciaio inossidabile AISI 304 - Stainless steel AISI304 |
| 6 | Anello antifrizione - Sliding washer | PTFE | |
| 7 | Ghiera - Ring | Ottone CuZn40Pb2 Brass CuZn40Pb2 | Acciaio inossidabile AISI 304 - Stainless steel AISI304 |
| 8 | O Ring - O-ring | NBR | FKM (Viton®) |
| 9 | Leva - Handle | Acciaio al carbonio, verniciato epossidico - Carbon steel epoxy coated | |
| 10 | Piastrina fermo - Stop plate | Acciaio al carbonio zincato - Carbon steel Galvanized | |
| 11 | Anello elastico - Spring washer | Acciaio al carbonio zincato - Carbon steel Galvanized | |
| 12 | Distanziale - Spacer | Ottone CuZn40Pb2 - Brass CuZn40Pb2 | |

Pressione massima / Maximum pressure

| Tipo fluido * Fluids * | Montaggio Mounting | |
|---|-------------------------------|---------------------------|
| | TRA FLANGE BETWEEN FLANGES | FINE LINEA END OF LINE |
| Gas pericolosi G1 Hazardous gases G1 | NO | NO |
| Liquidi pericolosi L1 Hazardous liquids L1 | 16 bar | 10 bar |
| Gas non pericolosi G2 Non hazardous gases G2 | 16 bar | 10 bar |
| Liquidi non pericolosi G2 Non hazardous liquids G2 | 16 bar | 10 bar |
| Acqua** Water** | 16 bar | 16 bar |

* gas, liquidi pericolosi secondo 2014/68/EU e 1272/2008 (CLP)

** Per la raccolta, distribuzione e deflusso di acqua (PED 2014/68/EU 11.2b)

* hazardous gas, liquids acc. 2014/68/EU e 1272/2008 (CLP)

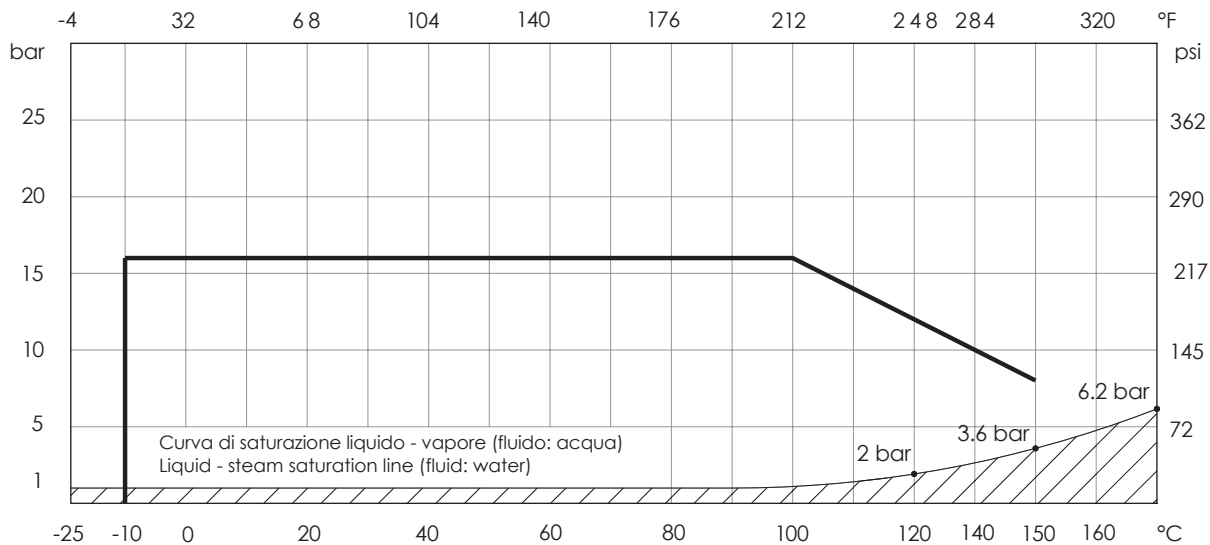
** For supply, distribution and discharge of water (PED 2014/68/EU 11.2b)

Temperatura / Temperature

| Temperatura Temperature | min °C | max °C | | | |
|----------------------------|--------|------------------------|-------|---------------|-------|
| | | continuo continuous | | picco peak | |
| | | L1 | G2,L2 | L1 | G2,L2 |
| NBR | -10 | 100 | 100 | - | 110 |
| FKM (Viton®) | -10 | 100 | 150 | - | 170 |

Attenzione: la pressione massima di utilizzo diminuisce con la temperatura, vedi diagramma "Pressione/Temperatura" G1, L1, G2, L2: vedi tabella a lato
NB: the maximum working pressure decreases while the temperature increases; please refer to "pressure/temperature" chart G1, L1, G2, L2: see chart to side

Diagramma Pressione/Temperatura - Pressure/temperature chart



NON ADATTA PER VAPORE. NON utilizzare in condizioni di temperature e pressione al di sotto della curva di saturazione liquido-vapore (area tratteggiata)
RANGE NOT SUITABLE FOR STEAM. DO NOT use when temperature and pressure are below the liquid-steam saturation line (hatched area)



Perdite di carico Fluido: acqua (1m H₂O = 0,098bar) / Head loss Fluid: water (1m H₂O = 0,098bar)

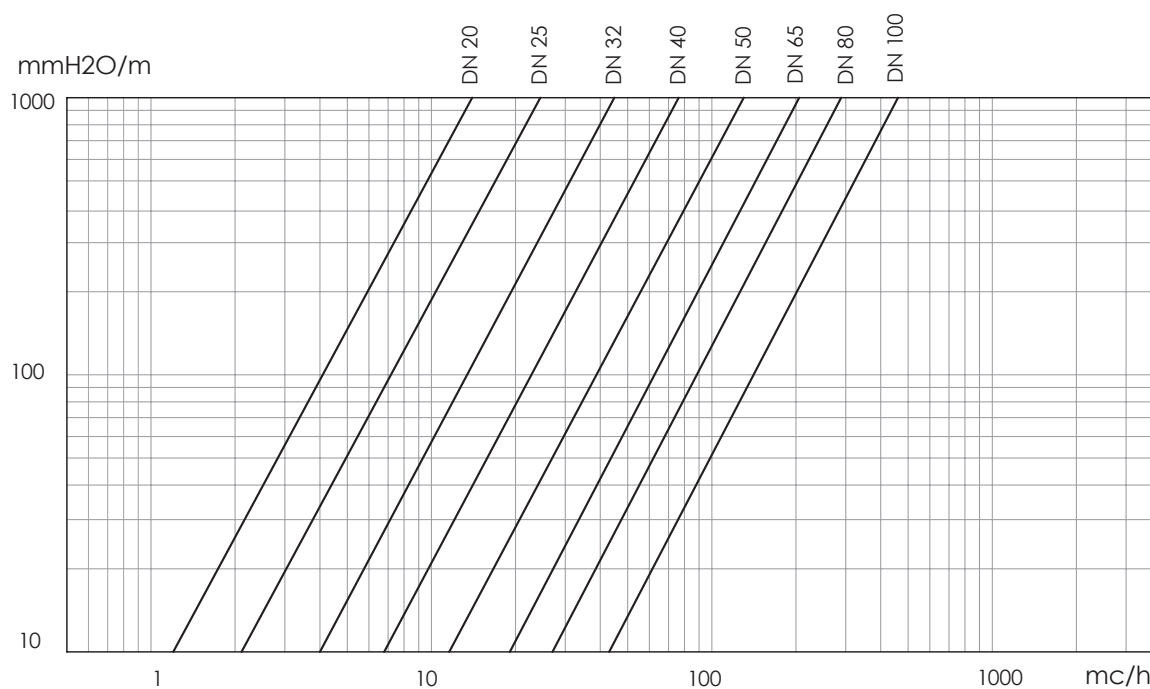


Tabella Kv - DN / Kv - DN chart

| DN | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----|------|------|-------|-----|-----|-----|-----|-------|
| Kv | 47.7 | 83.5 | 150.4 | 255 | 435 | 672 | 947 | 1'508 |

I dati e le caratteristiche di questo catalogo sono forniti a titolo indicativo. La Brandoni S.p.A. si riserva di modificare una o più caratteristiche delle valvole senza preavviso. Per maggiori informazioni www.brandonivalves.com.

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