**OMAL S.p.A. Società Benefit**
Siège social: Via Ponte Nuovo 11, Rodengo Saiano (Brescia) Italie
Site de production: Via Brognolo 12, Passirano (Brescia) Italie
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# KRAVEN Butterfly valve
# Item 875-876-877

Macro Vannes à papillon

Catégorie Vannes à papillon en fonte KRAVEN

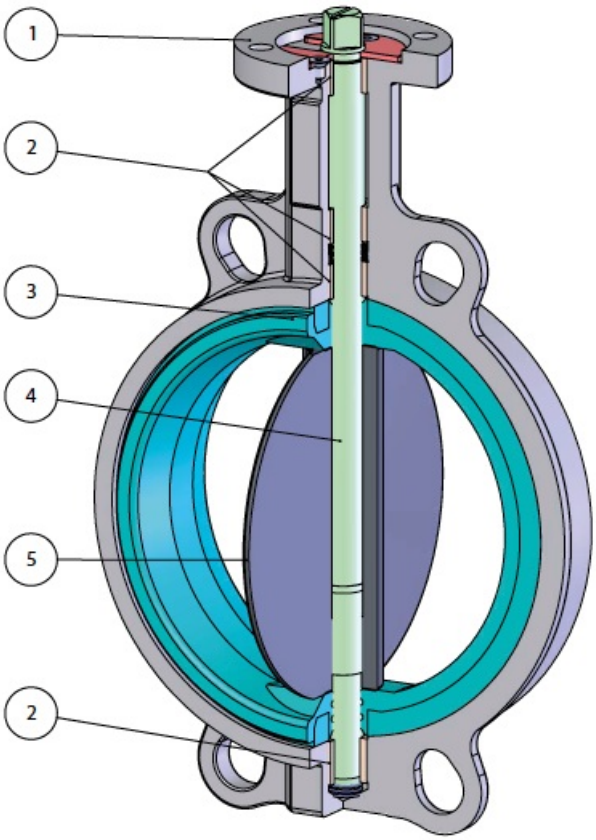
Ductil iron butterfly valve for mounting between flanges, “wafer” type

**ITEM 875**
Body: ductil iron
Disc: ductil iron
Liner: see table

**ITEM 876**
Body: ductil iron
Disc: CF8M (316 S.S.)
Liner: see table

**ITEM 877**
Body: ductil iron
Disc: Bronze aluminium
Liner: see table

## avantages



**1. EN ISO 5211 top mounting**
Easy coupling with every kind of drives.

**2. Four guiding bushings on the shaft**
It grants a perfect alignment of the shaft on the body and prevents oscillations even with high pressure.
Less friction between the shaft and body.

**3. Vulcanized liner on rigid ring**
Less deformation of the liner.
Easy assembly / disassembly of the liner for maintenance.
No deformation of the liner between the flanges during assembly.
Greater dimensional accuracy during the injection/molding.

**4. Shaft 1 piece without fixing components**
Easy assembly / disassembly of the disc for maintenance.

**5. Lapped surface of the disc's circumference**
Better tightness and less wear of the liner.
Lower torque due to less friction between the disc and liner.

**Wide range of LINER materials**
Various applications possibility.

**PED Certificate**
Full compliance with European Safety Standards for Pressure Equipment.

**ATEX Certificate**
Installation is allowed in a potential explosive environment.

# caractéristiques

### GENERAL FEATURES

OMAL butterfly valves, available in wafer or lug version from DN40 to DN300, are designed and manufactured to be used in most applications in all industrial fields:
· General requirements in accordance with UNI EN593.
· Face to face as per EN 558 series 20.
· Tightness at 16 bar according to EN 12266-1 rate A.
· Integral sealing (with liner vulcanized on hard ring) which avoids any contact between fluid and valve body.
· Sealing design allowing perfect adherence to the valve body and perfect tightness to the flanges, without additional parts. Clamping between flanges does not influence the torque of the valve.
· Lapped disc edges that allows better tightness, reduced torque and low wear of the liner.
· Bushes to support the shaft.
· Coupling between stem and disc with splined connection to reduce clearance
· Valve neck with top work as per EN ISO 5211 for easy connections with all different types of actuators.
· All components properly treated against corrosion.
OMAL will be free to change all specifications and data included in this catalogue at any time, so as to improve the quality and the performance of its products.

### STANDARD EXECUTIONS:

· Standard flanges: PN 6, PN 10 - PN 16 - ANSI 150;
· General requirements in accordance with UNI EN593.
· Face to face as per EN 558 serie 20.
· Valve head as per ISO 5211.
· Tightness as per EN 12266-1 rate A .
· Operating Temperature of liners:
EPDM: from -20°C to +120°C;
NBR: from -20°C to +80°C;
FKM: from -12°C to +180°C;
· Maximum working pressure 16 bar (also ANSI 150);
· For vacuum applications;
· EPDM for potable water from -20°C to +120°C;
· EPDM white from -20°C to +120°C;

### ON REQUEST:

· Polished CF8M disc (Ra max 0.4);
· Bronze aluminium and FKM disc;

### CERTIFICATIONS:

· According to 2014/68/EU “PED”.
· Conformity to the italian D.M.n°174 suitable with drinking water and alimentary fluid (V876).
· ATEX version in conformity with European Directive 2014/34/EU.
· ATEX certificate on request.

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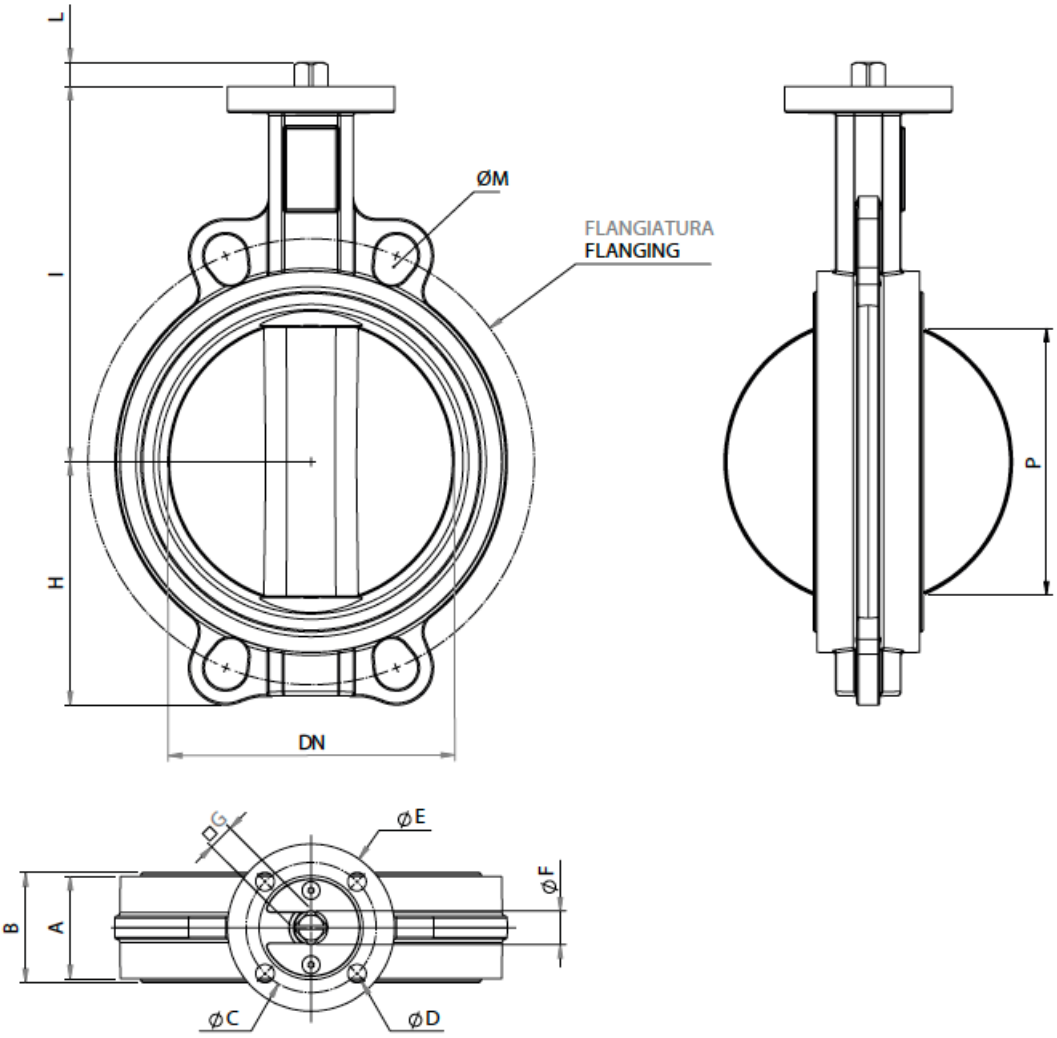
## dimensions




A: Scartamento valvola *Face to face*  B: Guarnizioni non compresse *Liner not compressed*

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| DIMENSIONS | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | | A | B | ØC | ØD | ØE | ØF | □G | H | I | L | P | FLANGING | | | | | | | |
| DN [mm] | [inch] | | | | | | | | | | | | PN6 | ØM | PN10 | ØM | PN16 | ØM | ANSI 150 | ØM |
| DN 40 | 1"1/2 | 32 | 35 | 50 | 8 | 65 | 12,1 | 9 | 55 | 133 | 9 | 29 | 100 | 18 | 110 | 18 | 110 | 18 | 98 | 16 |
| DN 50 | 2" | 42 | 46,1 | 50 | 8 | 65 | 12,1 | 9 | 57 | 143 | 9 | 32 | 110 | 18 | 125 | 18 | 125 | 18 | 121 | 19 |
| DN 65 | 2"1/2 | 45 | 49,1 | 50 | 8 | 65 | 14,1 | 11 | 68 | 152 | 11 | 46,5 | 130 | 18 | 145 | 18 | 145 | 18 | 140 | 16 |
| DN 80 | 3" | 45 | 48,4 | 50 | 8 | 65 | 14,1 | 11 | 82 | 160 | 11 | 65 | 150 | 18 | 160 | 18 | 160 | 18 | 152 | 19 |
| DN 100 | 4" | 51 | 55,3 | 70 | 10 | 90 | 14,1 | 11 | 100 | 181 | 11 | 91 | 170 | 18 | 180 | 18 | 180 | 18 | 191 | 19 |
| DN 125 | 5" | 55 | 58,8 | 70 | 10 | 90 | 18,1 | 14 | 112 | 194 | 14 | 111 | 200 | 18 | 210 | 18 | 210 | 18 | 216 | 22 |
| DN 150 | 6" | 55 | 59,1 | 70 | 10 | 90 | 18,1 | 14 | 126 | 202 | 14 | 146 | 225 | 22 | 240 | 22 | 240 | 22 | 241 | 26 |
| DN 200 | 8" | 59 | 64,1 | 102 | 12 | 125 | 22,1 | 17 | 162 | 240 | 17 | 195 | 280 | 22 | 295 | 22 | 295 | 22 | 298 | 22 |
| DN 250 | 10" | 67 | 71,8 | 102 | 12 | 125 | 28,2 | 22 | 193 | 272 | 22 | 242 | 335 | 22 | 350 | 22 | 355 | 26 | 362 | 25 |
| DN 300 | 12" | 77 | 81 | 103 | 12 | 125 | 28,2 | 22 | 238 | 320 | 22 | 293 | 395 | 22 | 400 | 22 | 410 | 26 | 432 | 25 |

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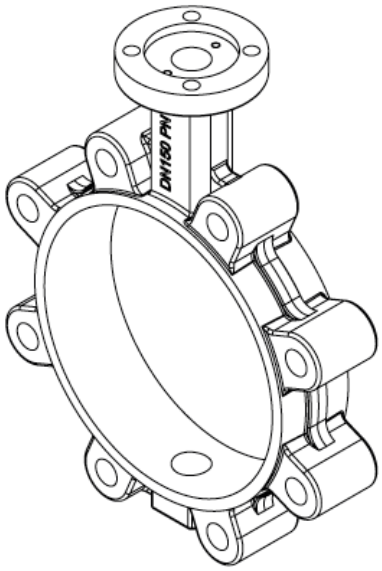
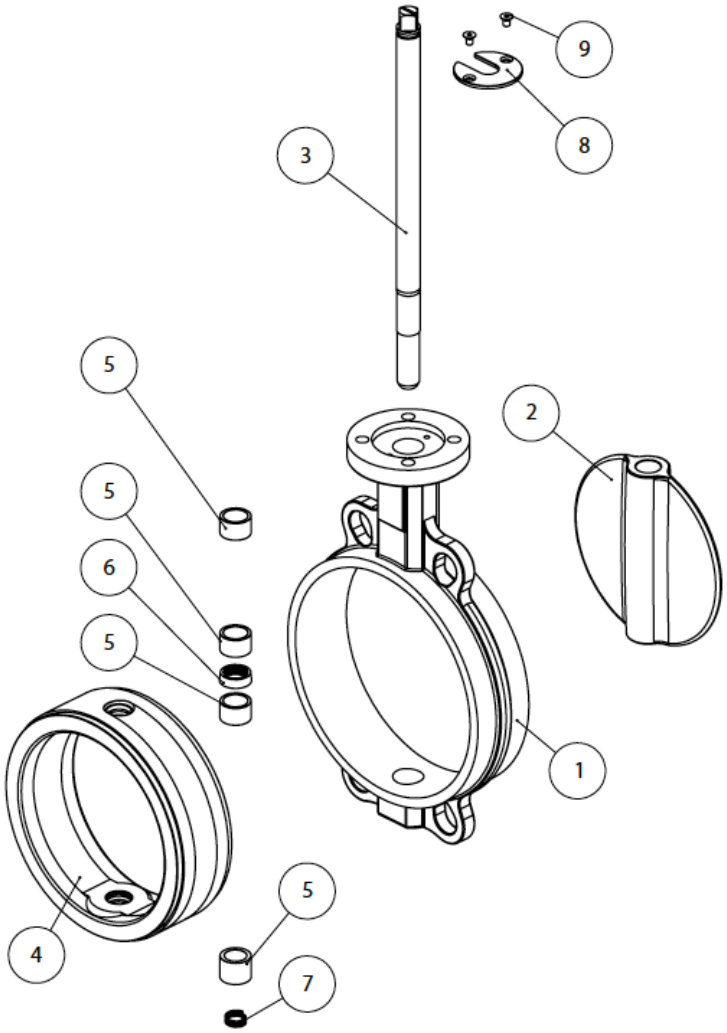
## matériaux

**CORPO LUG** *LUG BODY*



| MATERIALS | | |
|---|---|---|
| 1 | Body | EN GJS 400-18 LT |
| 2 | Disc | A351 CF8M (316 S.S.), EN GJS 450-10 |
| 3 | Upper shaft | A276 S42000 (420 S.S.) |
| 4* | Liner | EPDM-NBR-FKM |
| 5* | Bush | Epoxy resin |
| 6* | Shaft seal | EPDM-NBR-FKM |
| 7 | Spring antistatic device | Stainless steel |
| 8 | Anti blow-out system | Carbon steel |
| 9 | Screws | Stainless steel |

* Components of spare part kit KGK...
If other valve materials are required, please contact our offices.

| MATERIAL APPLICATIONS | | |
|---|---|---|
| **MATERIAL** | **FEATURES** | **APPLICATIONS** |
| DUCTIL IRON EN GJS 400-18 LT | Mechanical strength as good as stainless steel. Operating temperature (°C): -20°/+200°. | General applications. Used as a standard for body and disc. |
| STAINLESS STEEL A351-CF8M | Excellent corrosion resistance. | Food, chemical, pharmaceutical...etc |
| EPDM, EPDM WHITE | Operating temperature (°C): -20°/+120°. Unsuitable for hydrocarbons. | Water (soft, sea, glycolic and industrial), steam, ozone, bases and diluted acids, acetic solvents, alcohol, caustic soda, atmospheric agents. |
| NBR | Good abrasion/wear resistance. Good chemical and mechanical srenght to mineral oils, some hydrocarbons and aliphatic solvents. Operating temperature (°C): -20° / + 80°. Unsuitable for acetone, ketones, nitrates and chlorinated hydrocarbons. | General applications, compressed air, cold water, hydraulic fluids, methane, butane, petroleum, sea water, abrasive materials for pneumatic circuits, animal and vegetables fats. |
| FKM | Excellent chemical and mechanical strenght to heat, atmospheric agents, benzoic solvents. Gas-proof. Unsuitable for steam and boiling water. Operating temperature (°C): -12° / +180°. | Solvents (acetic excluded), solid hydrocarbons, oxygenating fuels, acids, bases, hydraulic fluids, oils. |
| EPDM FOR POTABLE WATER | Suitable for potable water accordingly to italian law D.L. 174/2004. Operating temperature (°C): -20 / + 120. Unsuitable for hydrocarbons. | Water (soft, sea, glycolic and industrial), steam, ozone, bases and diluted acids, acetic solvents, alcohol, caustic soda, atmospheric agents. |

**NOTE:** The table above lists typical features and applications of all "OMAL" products. Nevertheless, if unusual situations occur (i.e. special applications, contacts with particular fluids, extraordinary pressure or temperature conditions, ...) the elements which determine corrosion and abrasion might change and, as a consequence, metal performances might change, too. It is always the customer who has to choose the right material; however, our sales department is willing to meet all customers requests.

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## diagrammes et couples de démarrage

### DIAGRAMMA PERDITA DI CARICO-PORTATA *PRESSURE LOSS-FLOW DIAGRAM*

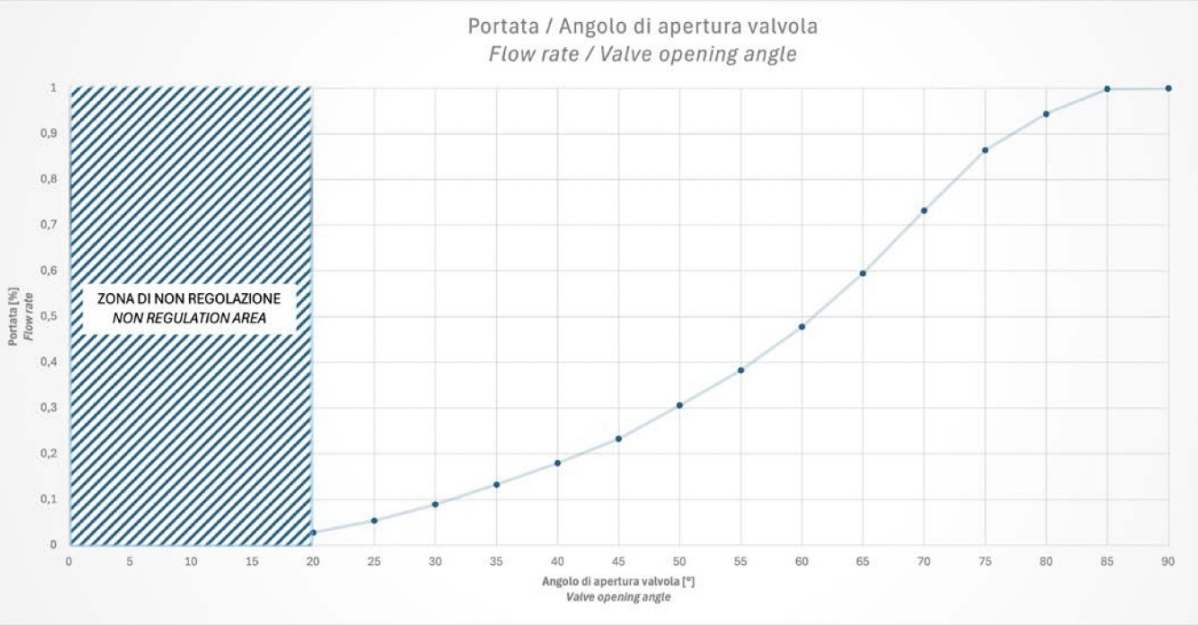
| VALORI DI KV [M³/H] *FLOW RATE VALUES [M³/H]* | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Misura** *Size* | **20** | **25** | **30** | **35** | **40** | **45** | **50** | **55** | **60** | **65** | **70** | **75** | **80** | **85** | **90** |
| DN40 | 1 | 2 | 5 | 8 | 12 | 17 | 22 | 27 | 34 | 42 | 50 | 55 | 57 | 60 | 60 |
| DN50 | 2 | 5 | 8 | 13 | 19 | 26 | 34 | 44 | 56 | 70 | 83 | 94 | 99 | 102 | 102 |
| DN65 | 4 | 10 | 18 | 26 | 37 | 49 | 65 | 83 | 102 | 127 | 150 | 172 | 181 | 182 | 182 |
| DN80 | 9 | 18 | 29 | 44 | 59 | 77 | 101 | 126 | 157 | 196 | 241 | 285 | 311 | 329 | 330 |
| DN100 | 24 | 39 | 59 | 81 | 106 | 137 | 175 | 219 | 278 | 345 | 425 | 504 | 558 | 581 | 582 |
| DN125 | 35 | 58 | 80 | 105 | 133 | 178 | 227 | 280 | 355 | 442 | 544 | 654 | 751 | 809 | 809 |
| DN150 | 69 | 100 | 137 | 178 | 235 | 299 | 386 | 486 | 608 | 770 | 954 | 1156 | 1355 | 1489 | 1488 |
| DN200 | 110 | 172 | 239 | 312 | 408 | 515 | 671 | 861 | 1081 | 1374 | 1740 | 2185 | 2548 | 2788 | 2790 |
| DN250 | 213 | 312 | 415 | 544 | 691 | 894 | 1104 | 1393 | 1752 | 2197 | 2728 | 3308 | 3795 | 4044 | 4047 |
| DN300 | 296 | 416 | 565 | 731 | 946 | 1175 | 1540 | 1949 | 2445 | 3111 | 3883 | 4772 | 5618 | 6198 | 6194 |

Il valore Kv é il valore di portata in m3/h (con acqua a 15°C) provocante la caduta di pressione di 1 bar.

*Kv is the coefficient, expressed in m3/h (with water at 15°C) causing a pressure loss of 1 bar.*

*Cv factor is the flow of water at 60°F in US gallons/minutes (gpm) at appressure drop of 1lb / in2.*

*Cv = 1,156 * Kv*




Andamento indicativo della portata in funzione dell'angolo di apertura. La portata varia in funzione della dimensione valvola. Per i valori puntuali delle differenti misure fare riferimento alla tabella precedente.

*Indicative flow characteristic as a function of the opening angle. Flow rate values vary according to valve size. For specific values for each valve size, please refer to the table above.*

| BREAKAWAY TORQUES Nm | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Size** | **DN 40 1"1/2** | **DN 50 2"** | **DN 65 2"1/2** | **DN 80 3"** | **DN 100 4"** | **DN 125 5"** | **DN 150 6"** | **DN 200 8"** | **DN 250 10"** | **DN 300 12"** |
| PN 10 bar | | | | | | | | 130 | 180 | 270 |
| PN 16 bar | 9 | 10 | 17 | 24 | 42 | 60 | 90 | 180 | 245 | 365 |

Torque can vary depending on temperature and type of fluid; a safety factor of 1.3 must be applied. Torque can drop on high frequency of operations. The actuator/ valve sizing, indicated on the following pages, are based for valves to be used with liquids or gaseous fluids, clean, and for medium temperatures. For further information, or different uses please contact our sales department.

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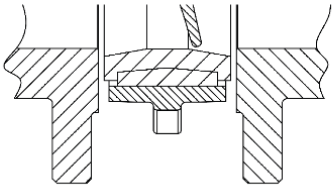
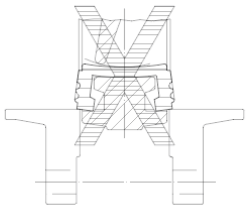
## ISTRUZIONI PER IL MONTAGGIO *MOUNTING INSTRUCTIONS*



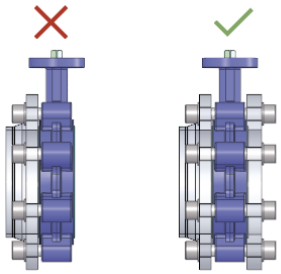
La distanza tra le flange deve permettere l'introduzione della valvola senza che la guarnizione interferisca con le stesse. Durante l'operazione la farfalla deve trovarsi in posizione semichiusa.

*When the valve is being inserted, the flanges must be at such a distance from one another to make inspection possible without any contacts between flanges and sealing. Meanwhile, the butterfly must be kept in "half-closed" position.*



Le valvole lug, se usate come valvole di fine linea, devono essere montate con una contro-flangia e sono declassate a PN10. A prescindere dal PN valvola Non è consentito il montaggio senza flangia a valle.

*When used as end-of-line valves, lug valves shall be installed with a downstream mating flange and are derated to PN10. Regardless of the valve PN rating installation without the downstream mating flange is not permitted.*

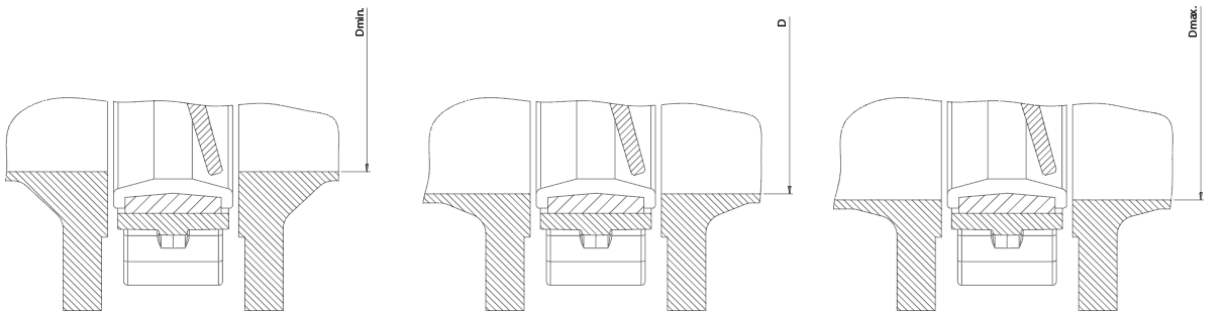


I diametri delle flange devono essere conformi ai valori indicati.

• Dmin è il diametro minimo interno della flangia (o del tubo) per evitare l'interferenza con l'apertura del disco (nel caso di valvola perfettamente centrata);
• D è il diametro interno della flangia (o del tubo) per un utilizzo ottimale;
• Dmax è il diametro massimo possibile interno della flangia (o del tubo), nel caso di valvola perfettamente centrata, per un utilizzo in pressione ridotta a 10 bar.

*The flange bore diameters shall comply with the specified values.*

*• Dmin is the minimum internal diameter of the flange (or pipe) required to prevent interference with the disc opening when the valve is perfectly centered;*
*• D is the internal diameter of the flange (or pipe) for optimum operation;*
*• Dmax is the maximum possible internal diameter of the flange (or pipe), when the valve is perfectly centered, for operation at a reduced pressure rating of 10 bar.*




**DIMENSIONI FLANGE *FLANGE SIZE***

| diametro *diameter* / valvola *valve* | | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 | DN 125 | DN 150 | DN 200 | DN 250 | DN 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dmin* | mm. | 30 | 34 | 48 | 67 | 93 | 113 | 147 | 196 | 244 | 295 |
| D | mm. | 47 | 57 | 73,5 | 88 | 109 | 128 | 169 | 207 | 262 | 319 |
| Dmax* | mm. | 59,2 | 63,5 | 77,5 | 91 | 122 | 145 | 175 | 221,5 | 277 | 329 |

(*) Accertarsi che la valvola sia ben centrata tra i tiranti.
*Please check that body is well centered between tie rods.*

## documents

### Istruzioni

UIT00A92 - Foglietto Valvole Farfalla Kraven

### Certificati

Certificato ATEX Kraven
Certificato PED Kraven
WRAS

### Manuali

UMA0083W - Valvole Farfalla Kraven 875-876-877 885-886-887