OMAL S.p.A. Società Benefit
Headquarters: Via Ponte Nuovo 11, Rodengo Saiano (Brescia) Italy
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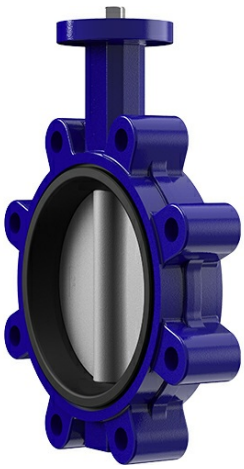
KRAVEN Butterfly valve
Item 885-886-887



Macro Butterfly valves

Category Ductil iron butterfly valves KRAVEN

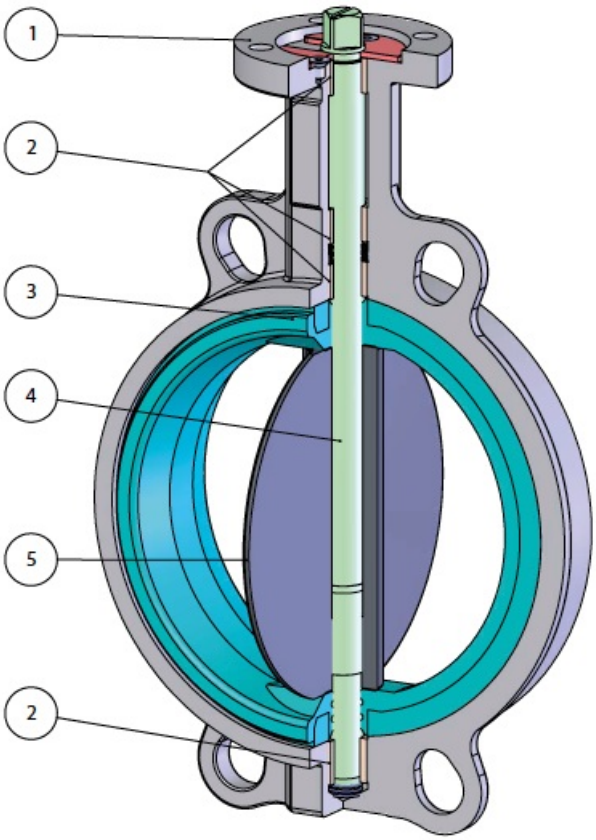
Ductil iron butterfly valve for mounting between flanges, “lug” type

ITEM 885
Body: ductil iron
Disc: ductil iron
Liner: see table

ITEM 886
Body: ductil iron
Disc: CF8M (316 S.S.)
Liner: see table

ITEM 887
Body: ductil iron
Disc: Bronze aluminium
Liner: see table

benefits



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.

features

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:

· Available range: from DN 40 to DN 300
· Standard flanges: PN 10/16 - from DN 40 to DN 150;
PN 10 from DN 200 to DN 300.
PN 16 from DN 200 to DN 300.
· 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;
· Working pressure between flanges:
PN 16 bar for DN 40 to DN 150;
PN 10 or PN 16 bar for DN 200 to DN 300.
· Thickness of epoxy coating: 160 ÷ 200 µ. RAL: 5002.
· EPDM for potable water from -20°C to +120°C;
· EPDM white from -20°C to +120°C;

ON REQUEST EXECUTIONS:

· LUG ANSI 150 (Pmax 16 bar);
· 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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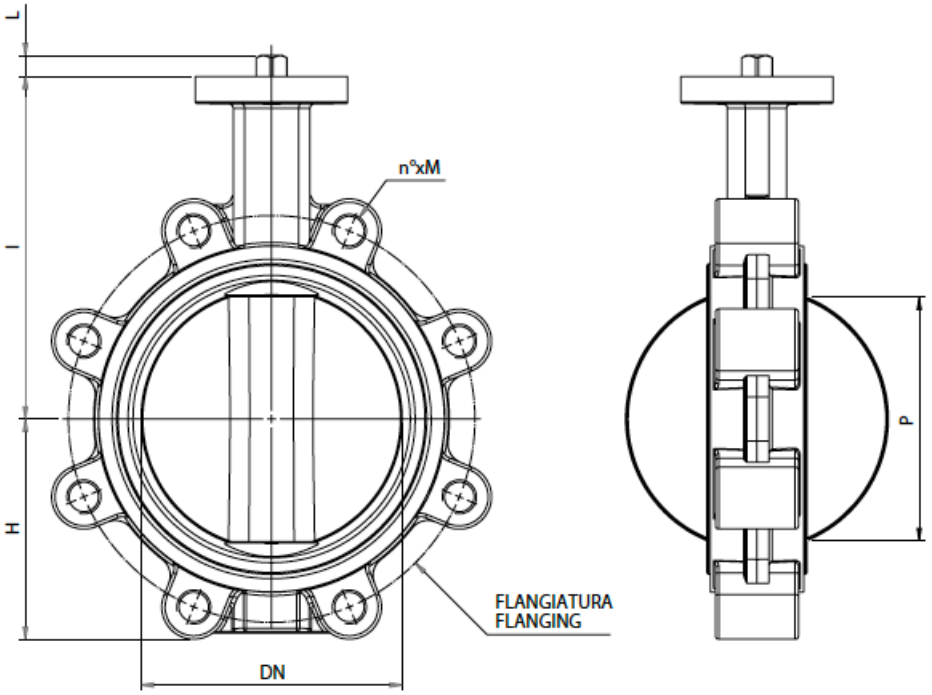
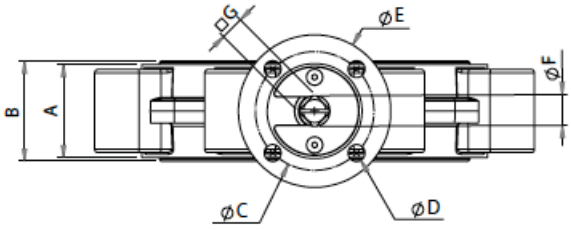
dimensions





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DIMENSIONS														
SIZE		A	B	ØC	ØD	ØE	ØF	□G	H	I	L	P	FLANGING		
DN [mm]	[inch]												PN10	PN16	ANSI 150
DN 40	1"1/2	32	35	50	8	65	12,1	9	55	133	9	29	Ø110 n4 x M16		Ø98,6 n4 x 1/2"
DN 50	2"	42	46,1	50	8	65	12,1	9	57	143	9	32	Ø125 n4 x M16		Ø120,7 n4 x 5/8"
DN 65	2"1/2	45	49,1	50	8	65	14,1	11	68	152	11	46,5	Ø145 n4 x M16		Ø139,7 n4 x 5/8"
DN 80	3"	45	48,4	50	8	65	14,1	11	82	160	11	65	Ø160 n8 x M16		Ø152,4 n4 x 5/8"
DN 100	4"	51	55,3	70	10	90	14,1	11	100	181	11	91	Ø180 n8 x M16		Ø190,5 n8 x 5/8"
DN 125	5"	55	58,8	70	10	90	18,1	14	112	194	14	111	Ø210 n8 x M16		Ø215,9 n8 x3/4"
DN 150	6"	55	59,1	70	10	90	18,1	14	126	202	14	146	Ø240 n8 x M20		Ø241,3 n8 x3/4"
DN 200	8"	59	64,1	102	12	125	22,1	17	162	240	17	195	Ø295 n8 x M20	Ø295 n12 x M20	Ø298,5 n8 x3/4"
DN 250	10"	67	71,8	102	12	125	28,2	22	193	272	22	242	Ø350 n12 x M20	Ø355 n12 x M24	Ø362 n12 x7/8"
DN 300	12"	77	81	103	12	125	28,2	22	238	320	22	293	Ø400 n12 x M20	Ø410 n12 x M24	Ø431,8 n12 x7/8"

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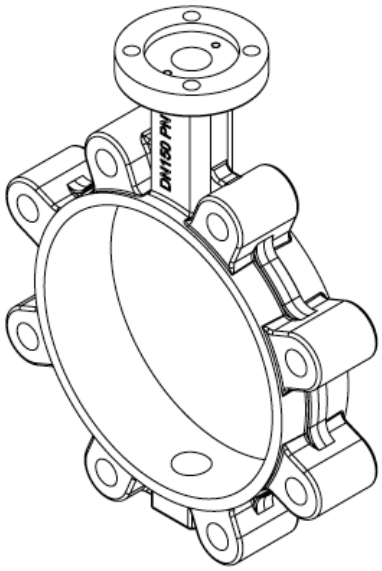
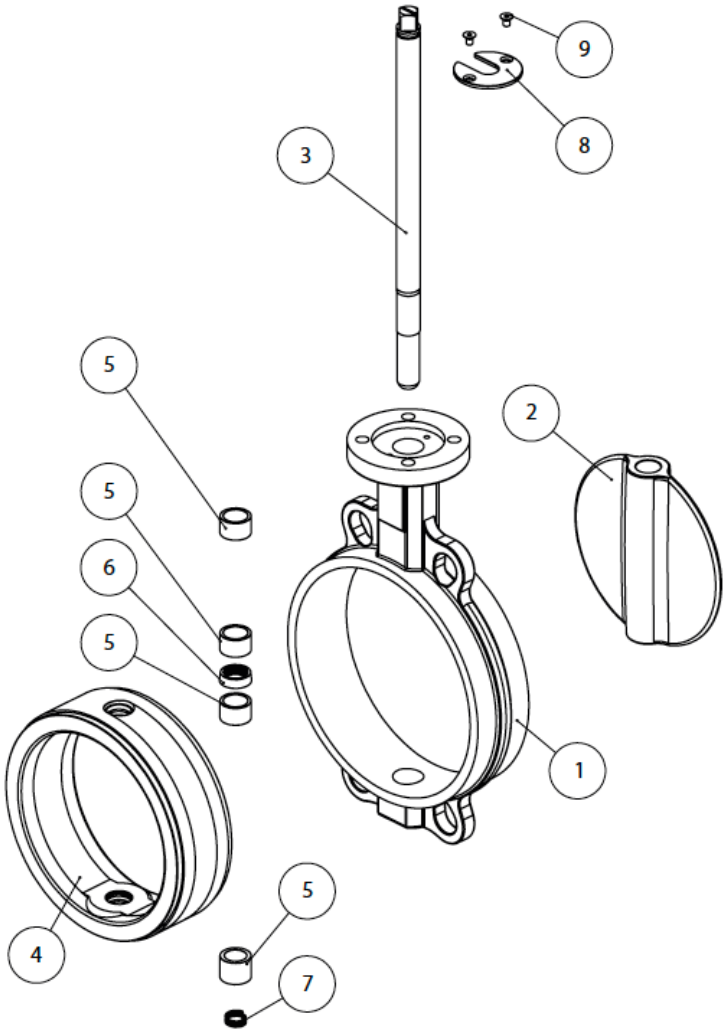
materials

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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diagrams and breakaway torque

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

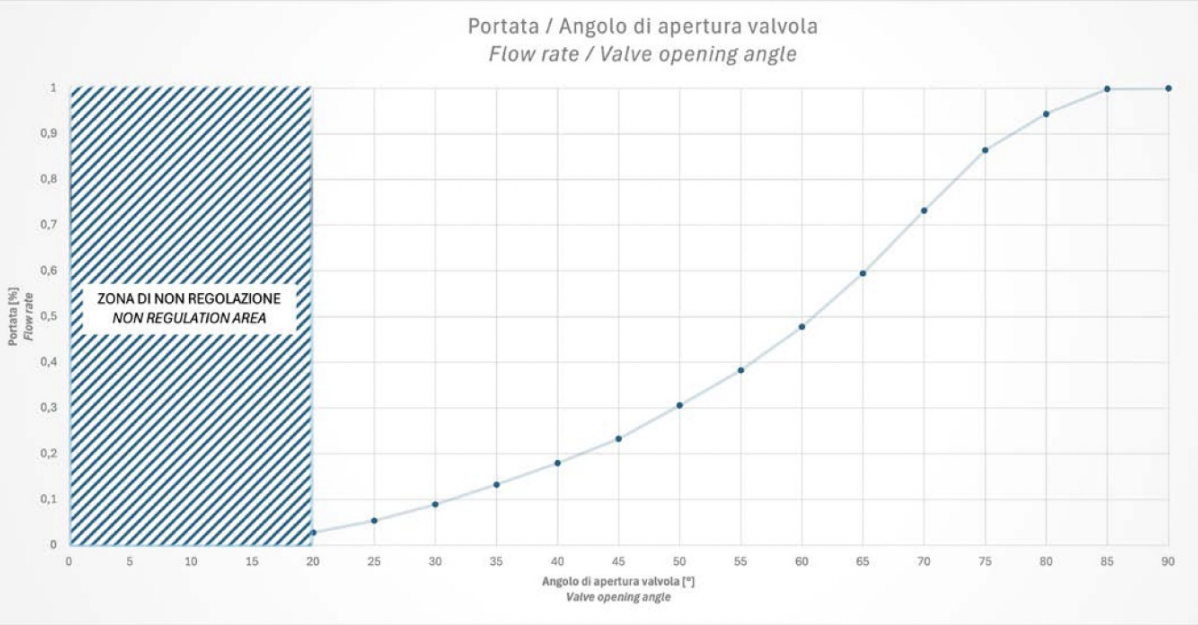
VALORI DI KV [M³/H] *FLOW RATE VALUES [M³/H]*															
Misura *Size*	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**
DN40	1	2	5	8	12	17	22	27	34	42	50	55	57	60	60
DN50	2	5	8	13	19	26	34	44	56	70	83	94	99	102	102
DN65	4	10	18	26	37	49	65	83	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
ANSI 150	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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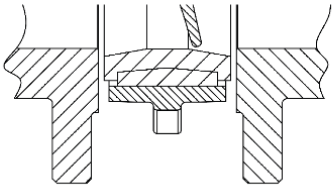
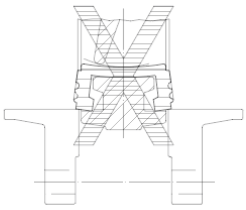
ISTRUZIONI PER IL MONTAGGIO *MOUNTING INSTRUCTIONS*



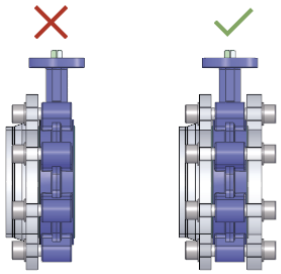
La distanza tra le flange deve permettere l'introduzione della valvola senza che la guarnizione interferisca con le stesse. Durante l'operazione la farfalla deve trovarsi in posizione semichiusa.

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.

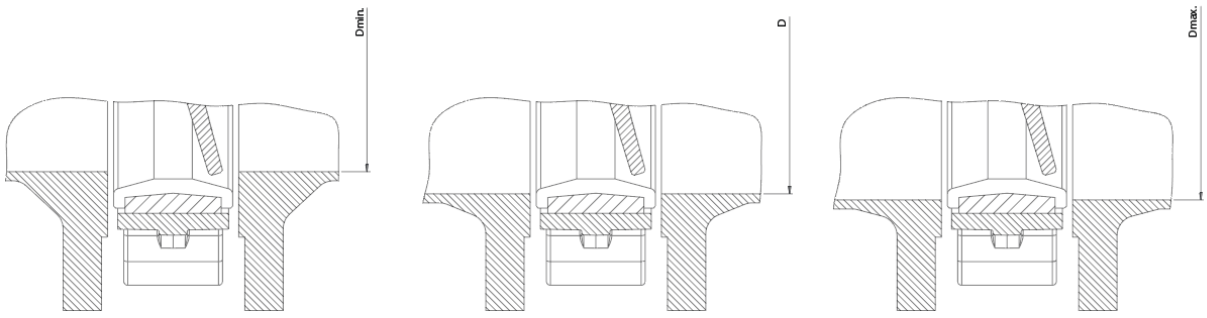


I diametri delle flange devono essere conformi ai valori indicati.

• 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