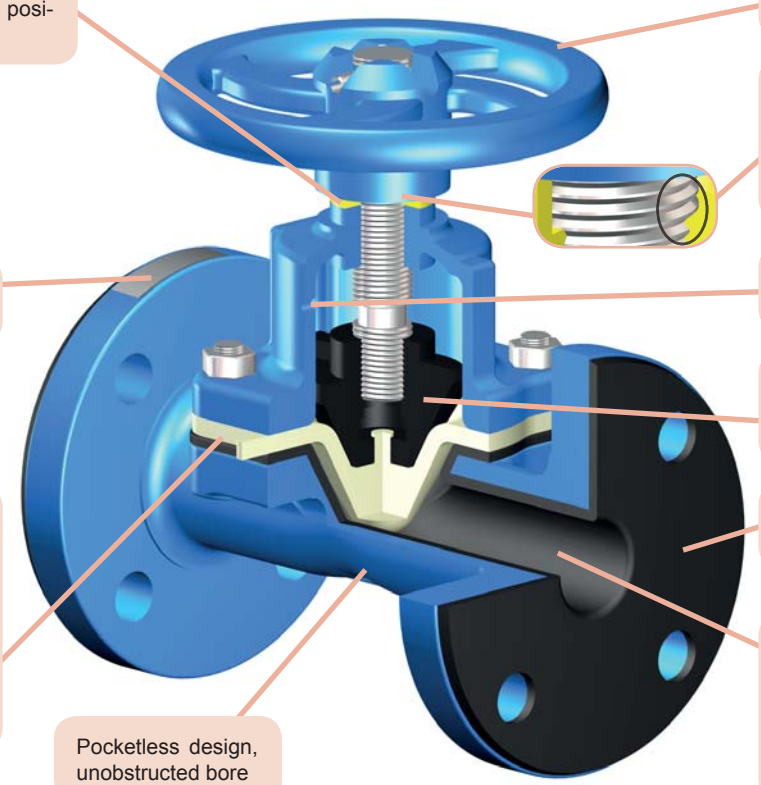
Design Attributes

Straight Through Type Diaphragm Valves are linear motion valves, bidirectional, for stopping the flow of the service fluid when necessary, not being suitable for regulation purposes. Valves close by turning the handwheel clockwise. Valves are bolted bonnet, seatless design, with a diaphragm as closure element, with rising handwheel. Valves are offered with a broad range of diaphragms and linings materials to resist to abrasion and corrosion duties. Their straight passage makes them more suitable for on/off applications in comparison to Weir Type, when low pressure drop is required or in case of abrasive media. The valves are inexpensive and easy to maintain, being the optimal solution for a large number of applications.



Yellow position indicator, for clear and positive valve position from any angle

Ergonomic and rugged rising handwheel

Grease reservoir integrated in the spindle chamber that lubricates the spindle along operations thus avoiding valve spindle jamming

Nameplate incl. batch no. for full traceability

Witness hole to detect leakage at diaphragm failure

Precise compressor plate; guides and operates the diaphragm up and down

Closure Diaphragms; manufactured from elastomeric materials; provide 100% seating tightness in both directions while isolating the valve trim from fluid. Wide choice of polymers to satisfy any industrial application

Full rubber flange face in all rubber lined valves as standard

Porousless linings; provides the application engineer with a wide choice of linings of high chemical and abrasion resistance without need of expensive basic metal valve materials

Pocketless design, unobstructed bore

Main Features

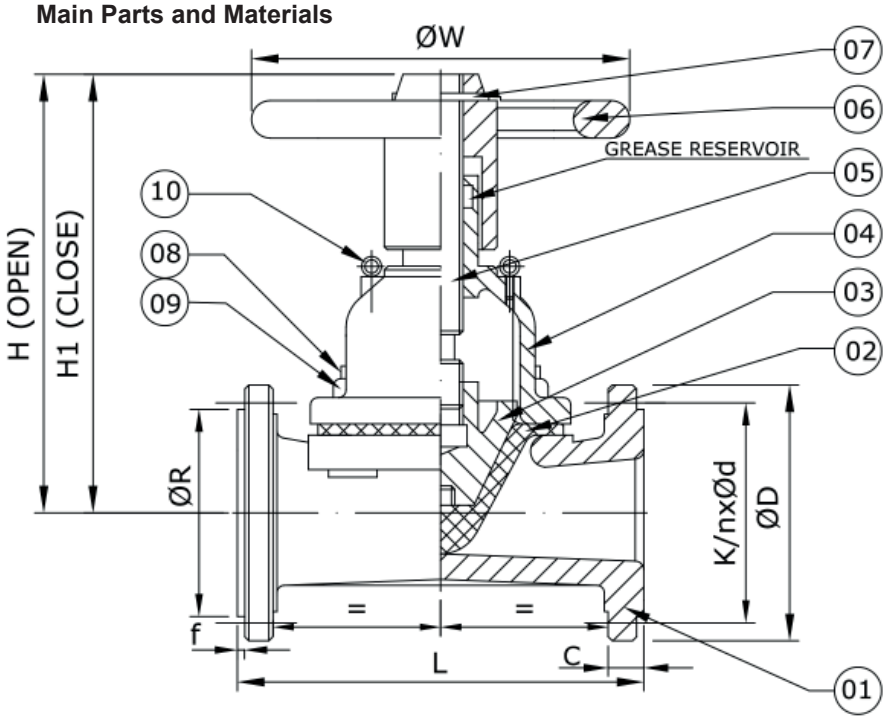
Valve design: EN 13397, EN 12516
Face to face length: EN 558 Series 1 (DIN 3202F1) or EN 558 Series 7 (BS 5156)
Valve end connections: Flanged to EN 1092-2 type 21/B, PN10/16 (DN15-150); PN10 (DN200-300)
(*valves DN65 with 4 holes as accepted variant in standard*)
option drilling to ASA150#
Female thread to ISO 228-1 (DIN 259-BSPP)
Marking: EN 19
Pressure Tests: EN 12266-1
Seat leakage rate: Rate A (full seat tightness in both directions)
Inside and outside primer paint layer black color for protection during storage and transport
Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC

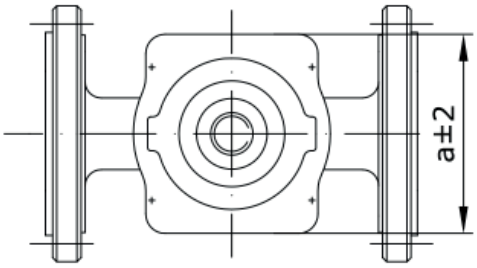
Options

Other materials, other ratings and connections, pneumatic or electric atuator, limit switches, sealed bonnet, interlocking arrangement, padlocking or handwheel hood to avoid non-authorized operation. Please consult us

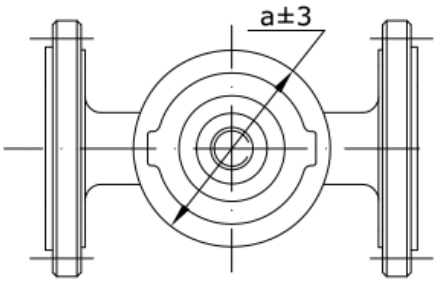
Unlined valves with flanged ends

Main Parts and Materials





SIZE: DN 15 TO DN 80



SIZE: DN 100 TO DN 300

NO.	PART		MATERIAL
1	BODY	SC_	Cast iron EN-JL1040 (GG25)
		SD_	Ductile iron EN-JS1030 (GGG40)
2	DIAPHRAGM	Rubber	Natural (D10) / EPDM (D20) / Butyl (D30) / Nitrile (D40) / Neoprene (D50) / Hypalon (D60) / Viton (D70)
3	COMPRESSOR		Cast iron EN-JL1040 (GG25)
4	BONNET	SC_	Cast iron EN-JL1040 (GG25)
		SD_	Ductile iron EN-JS1030 (GGG40)

NO.	PART	MATERIAL
5	SPINDLE	Steel
6	HANDWHEEL	Cast iron EN-JL1040 (GG25)
7	H/W DOWEL PIN	Steel (EN42)
8	BODY STUDS	Steel
9	BODY NUTS	Steel
10	EYE BOLT*	Steel

* Only for some sizes

Main Valve Parameters

	DN	15	20	25	32	40	50	65
L	EN 558 S7 (BS 5156)	108	114	127	146	159	190	216
	EN 558 S1 (DIN 3202 F1)	130	150	160	180	200	230	290
	H (open)	110	108	132,5	130,5	131,5	194,5	220
	H1 (close)	102	100	120	118	119	177	196
	a	71	71	85	85	85	115	130
	ØW	100	100	120	120	120	164	220
FLANGED ENDS TO EN PN10	ØD	95	105	115	140	150	165	185
	C	14	16	16	18	18	20	20
	ØR	45	58	68	78	88	102	122
	f	2	2	2	2	3	3	3
	nxØd	4x14	4x14	4x14	4x18	4x18	4x18	4x18
	ØK	65	75	85	100	110	125	145
FLANGED ENDS TO ASA150#*	ØD	89	98	108	117	127	152	178
	C	11,5	11,5	11,5	13	14,5	16	17,5
	ØR	35	43	51	64	73	92	105
	f	1,6	1,6	1,6	1,6	1,6	1,6	1,6
	nxØd	4x16	4x16	4x16	4x16	4x16	4x19	4x19
	ØK	60,3	69,8	79,4	88,9	98,4	120,6	139,7
Approx. Weight	EN 558 S7 (BS 5156)	3,3	3,6	4,3	6,5	7	10,5	15,5
	EN 558 S1 (DIN 3202 F1)	3,8	4	4,8	7,5	8	11,5	16,5

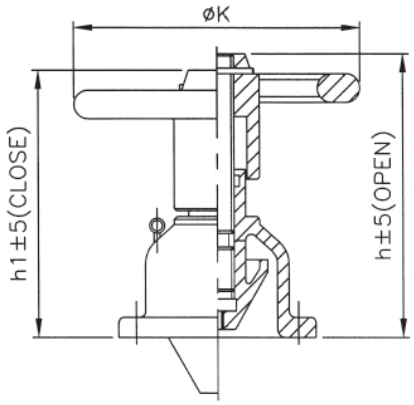
*Unless specific agreement with COMEVAL, valves with flanges 150# will be usually supplied as EN/DIN flanges with 150# drilling, since pressure is limited to EN/DIN

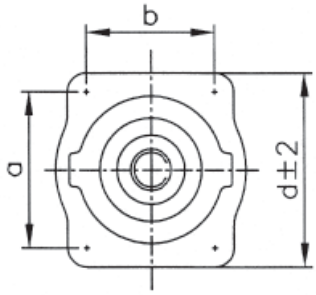
Dimensions in mm subject to manufacturing tolerance / Weights in kg

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

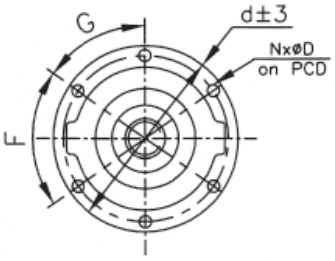
The engineer, designing a system or a plant, is responsable for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

Main Bonnet Dimensions

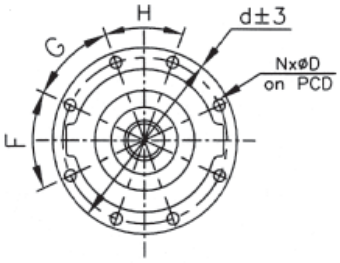




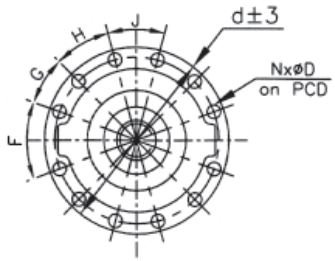
SIZE: DN 15 TO DN 80



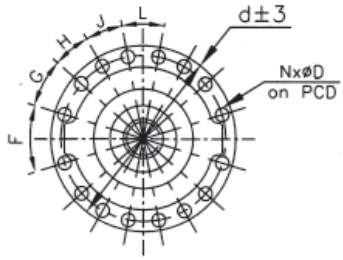
SIZE: DN 100



SIZE: DN 125 TO DN 200



SIZE: DN 250



SIZE: DN 300

DN	a	b ØPCD	d	h	h1	ØK	NxØD	Weight	ANGLES BETWEEN THE HOLES F	G	H	J	L
15	54	30	71	93,5	86,0	100	4x7	1,2	---	---	---	---	---
20	54	30	71	93,5	86,0	100	4x7	1,2	---	---	---	---	---
25	64	51	85	105,0	93,0	120	4x9	2,0	---	---	---	---	---
32	64	51	85	105,0	93,0	120	4x9	2,0	---	---	---	---	---
40	64	51	85	105,0	93,0	120	4x9	2,0	---	---	---	---	---
50	89	64	115	165,0	147,5	164	4x11	4,5	---	---	---	---	---
65	102	83	130	185,0	161,0	220	4x13	7,0	---	---	---	---	---
80	137	102	171	231,0	201,0	240	4x17	11,0	---	---	---	---	---
100	---	Ø171	Ø200	243,0	210,5	270	6x13	14,5	70º	55º	---	---	---
125	---	Ø205	Ø234	264,0	226,5	270	8x13	18,0	50º	45º	40º	---	---
150	---	Ø254	Ø290	346,0	295,0	360	8x13	31,0	60º	40º	40º	---	---
200	---	Ø305	Ø350	395,0	333,0	460	8x17	50,0	60º	40º	40º	---	---
250	---	Ø381	Ø430	507,0	434,5	525	12x21	79,0	40º	25º	30º	30º	---
300	---	Ø451	Ø512	641,0	546,0	600	16x21	115,0	34º	24º20'	19º	19º	21º20'

Dimensions in mm subject to manufacturing tolerance / Weights in kg

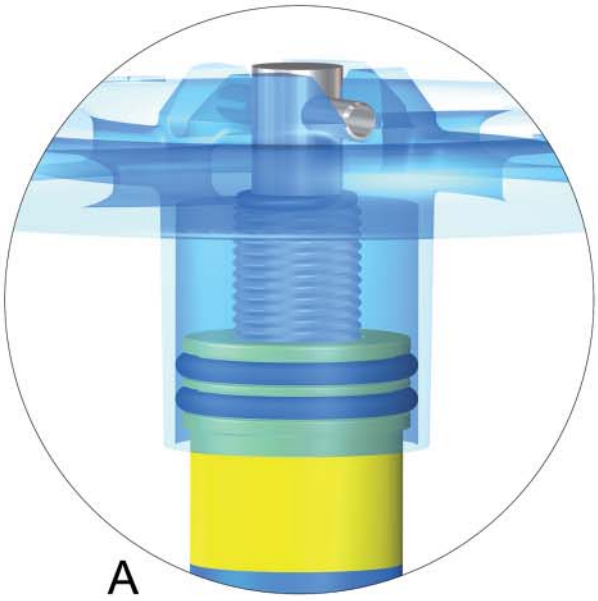
Special Arrangements

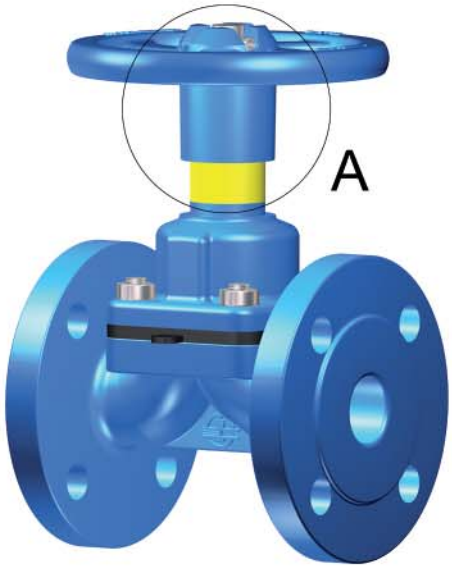
Sealed bonnet

Sealed bonnets mean an essential safety requirement when handling toxic or hazardous fluids. This design prevents fluid emissions in case of diaphragm rupture and, consequently, avoiding harmful risks to plant personnel.

The bonnet is sealed off by two VITON O-rings across the bonnet neck.

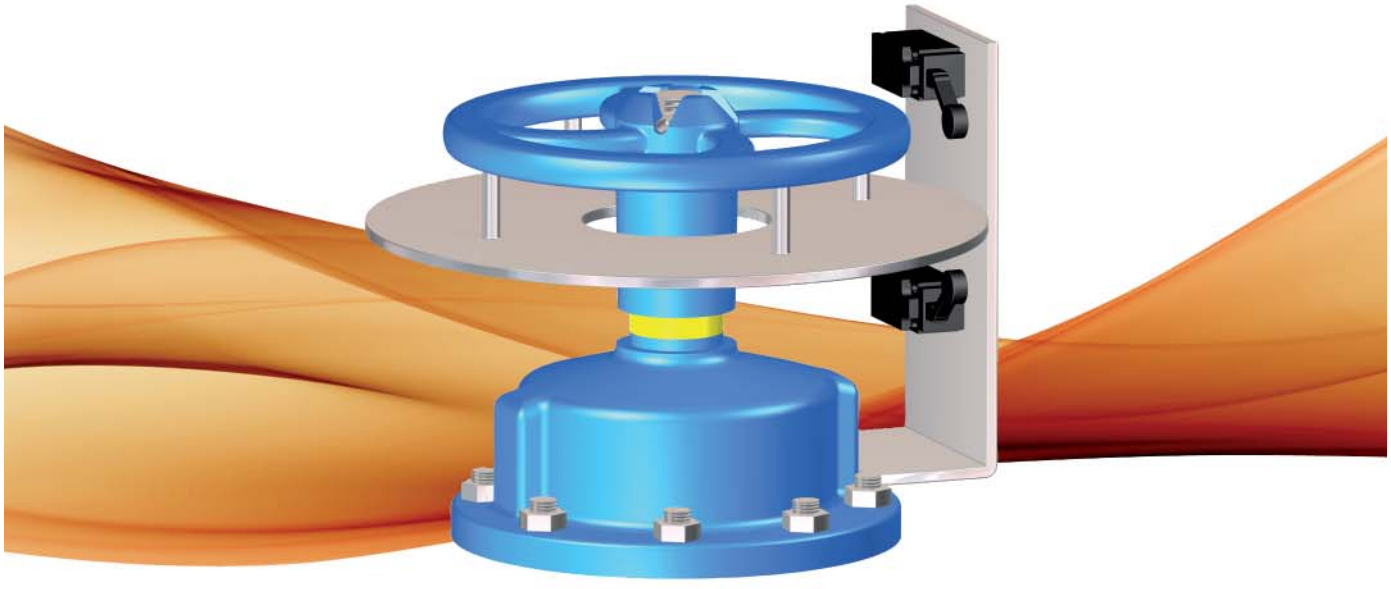
These rings are retaining the eventual leakage until a new diaphragm is mounted and thus service integrity restored.





Limit switches

Limit switches are often used to provide remote signal on the valve status. Electro mechanical limit switches or proximity switches can be provided on a special assembly consisting of a protruding rod angle plate (fix unit) where the switches are bolted and a round plate (moving unit) which moves up and down along with the hand wheel to activate the switches for open and closed position. If just a single signal is required, a single switch for open or closed signal should be mounted.



Bonnet options apply for manual operation. DIAVAL® can engineer and provide further tailor made options on request.

Special Arrangements

Padlocking device

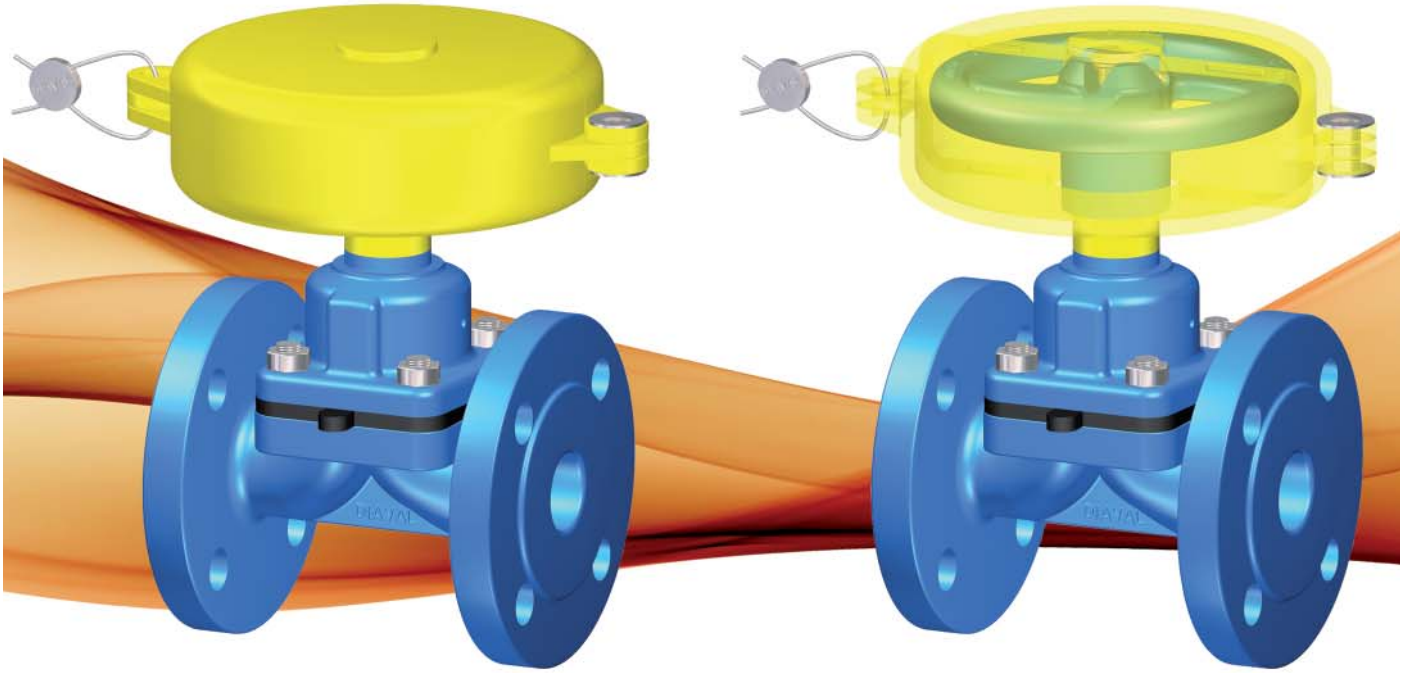
Conventional padlocking device that prevents unauthorized valve operation; the complete set consists in two empty steel rolls interconnected by a rod where the padlock is held.

The lower roll is fitted onto one of the bonnet union bolts whilst the upper one blocks the hand wheel free turn. A chain links both rolls thus making the integral set.

The device is provided with padlock and keys which are replaceable by the plant operator. No duplicate of padlock keys are kept at DIAVAL, therefore is plant owner responsibility to create their own set of keys and keeping procedure.

This system maybe provided as an option with new valves or, alternatively, can also be assembled in field on existing DIAVAL® valves.

Hand wheel protecting hood



Two halves plastic hood conveniently sealed to avoid valve operation by unauthorized personnel.

There are several hoods in accordance with the hand wheel diameter. This hoods can be provided as an option with new valves or, alternatively, can also be assembled in field on existing DIAVAL® valves.

Bonnet options apply for manual operation. DIAVAL® can engineer and provide further tailor made options on request..