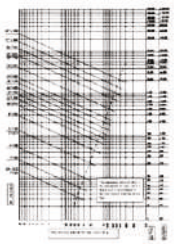
RAX

Arabian Rax for Manufacturing

BELGICAST by RAX

Check Valves and Strainers

Manufacturing Program



DN 40 - 1200 / PN 10 - 250

Dual Plate Check Valves

Operation

The plates of the check valve open when for example the pump is started and immediately close again when the pump is switched off. This closure is only driven by the hydrostatic pressure and the reset force of the spring. The check valve can be installed vertically and horizontally making it a flexible solution for different applications.

Model C

Features

Short face to face distance according to ISO 5752, Series 16, and DIN 3202 K3
Valid for installation between flanges PN10, PN16, PN25, PN40 or ANSI-150.
Maximun working pressure 40 bar.
For higher pressures, our dual plate model B is available.
Minimum back pressure to ensure water tightness 0,5 bar.

Wafer version as standard, flanged type upon request.
Quick and silent closing.
Versions in cast iron and welded steel protected with epoxy powder coating.
Maximum working temperature according to material selection.
See pages 18 and 19 for correct installation.

Model B

Features

Face to face distance according to API-594.
Rating class 150/1500 or PN 10/250
Maximum working pressure 250 bar.
Minimum back pressure to ensure water tightness 0,5 bar.

Wafer version as standard, flanged type upon request.
Quick and silent closing.
Versions in welded steel protected with epoxy powder coating.
Maximum working temperature according to material selection.
See pages 18 and 19 for correct installation.

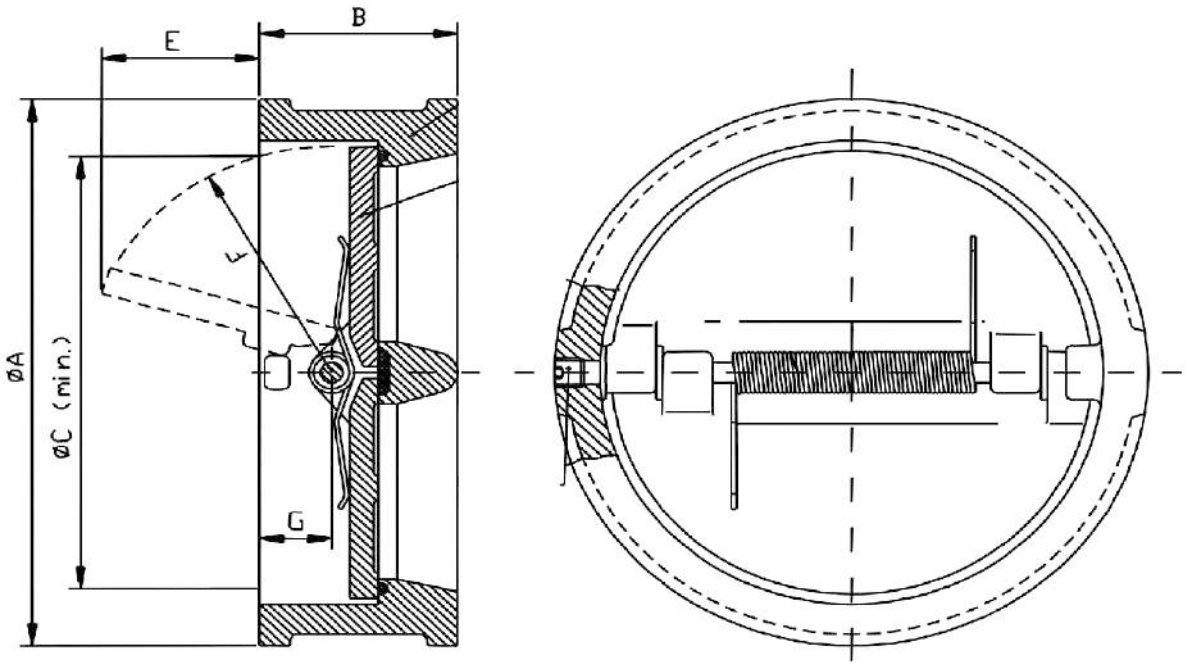
Materials

Body: GG-25*, GGG-40*, ASTM A216 Gr WCB,
CF-8M Plates: GGG-40*, ASTM A216 Gr WCB, CF-8M, Al-br
Shafts: AISI-304, AISI-316, Monel 400
Springs: AISI-302, AISI-316, Inconel 750X
Liner: EPDM, BUNA-N, Heat EPDM, Viton.
*Body and plates in cast iron only available for model C
Other materials upon request.

BELGICAST dual plate check valves are a perfect choice for desalination plants since they are available with body and plates made of duplex stainless steel according to DIN 14469, material extremely resistant both to corrosion and abrasion, with a PREN value higher than 40.
Body: Duplex DIN14469 A 890 5A
Plates: Duplex DIN14469 A 890 5A
Shafts: 254 SMO
Springs: Inconel 625
Liner: EPDM

Dual Plate Check Valves

Dimensions Model C



DN		DN				B					C					E	F	G	WEIGHT (kg) PN10/16	WEIGHT (kg) PN25
mm	"	mm 10	PN 16	ANSI 125/150*	PN25	PN 40	PN 10	PN 16	ANSI 125/150	PN25	PN40	PN 10	PN 16	ANSI 125/150	PN 16	PN 40					
40	1½	94				94	43**					55					12	33	21	1	1
50	2	108		104		108	43					55					12	33	21	1.3	1.3
65	2½	128		124		--	46					58,5					12	33	18.7	2.4	2.4
80	3	143		136		143	64					71					18	41	30.8	3.2	3.2
100	4	163		169		169	64					96					28	52	30.2	4.2	4.2
125	5	194		194		194	70					125					35	70	30.3	7	7
150	6	219		219		224	76					128					33	70	37	9	9
200	8	275		275		293	89					192					60	104	36	15	15
250	10	329		338		355	114					244					81	126	48	27	27
300	12	380		408		519	114					295					100	153	49	34	34
350	14	440		450		***	127				***	320				***	108	168	57	55	55
400	16	490		514		***	140				***	380				***	137	195	58	70	70
450	18	540	556	543	***	***	152				***	420				***	152	217	65	100	***
500	20	595	618	605	***	***	152				***	480				***	175	247	65	120	***
600	24	696	735	716	***	***	178				***	585				***	222	299	77	180	***
700	28	810	810	830	***	***	229				***	690				***	250	352	103	260	***
800	32	915	915	937	***	***	241				***	780				***	290	395	107	350	***
900	36	1015	1015	1046	***	***	241				***	850				***	332	445	112	520	***
1000	40	1124	1124	1216	***	***	300				***	940				***	332	483	152	760	***
1200	48	1340	1340	1380	***	***	350				***	1150				***	442	601	159	1200	***

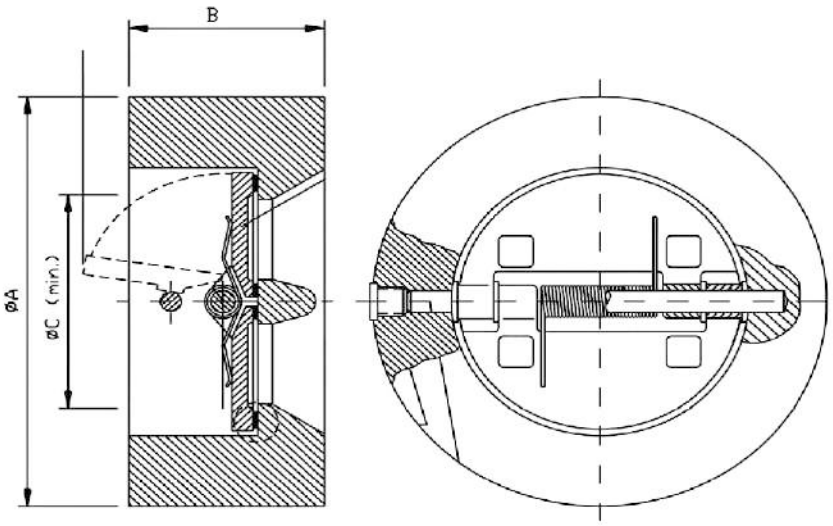
*Only for installation between flanges

**Figure not according to ISO 5752

*** Model B available, dimensions on page 6

Dual Plate Check Valves

Dimensions Model B



DN		CLASS 150			CLASS 300			PN 10			PN 16			PN 25			PN 40		
mm	"	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
50	2	104	60	28	108	60	28	108	60	28	108	60	28	108	60	28	108	60	28
65	2 1/2	124	67	-	128	67	-	128	67	-	128	67	-	128	67	-	128	67	-
80	3	136	73	40	143	73	40	143	73	40	143	73	40	143	73	40	143	73	40
100	4	169	73	88	179	179	88	163	73	88	163	73	88	169	73	88	169	73	88
125	5	194	83	110	215	86	110	194	83	110	194	83	110	194	83	110	194	83	110
150	6	219	98	112	248	98	112	219	98	112	219	98	112	224	98	112	224	98	112
200	8	275	127	175	306	127	175	275	127	175	275	127	175	284	127	175	293	127	175
250	10	338	146	210	360	146	210	329	146	210	329	146	210	338	146	210	355	146	210
300	12	408	181	270	419	181	270	380	181	270	380	181	270	402	181	270	419	181	270
350	14	450	184	300	484	222	320	440	184	300	440	184	300	460	184	300	476	222	320
400	16	514	191	372	538	232	370	490	191	372	495	191	372	514	191	372	548	232	370
450	18	548	203	416	595	264	430	540	203	416	556	203	416	565	203	416	572	264	430
500	20	605	219	560	652	292	460	595	219	560	618	219	560	625	219	560	630	292	460
600	24	716	222	580	772	318	550	696	222	580	735	222	580	733	222	580	748	318	550
*700	28	830	282	640	895	370	680	810	282	640	810	282	640	834	282	640	853	370	680
750	30	880	305	662	950	370	720	-	-	-	-	-	-	-	-	-	-	-	-
*800	32	937	305	750	1000	420	770	915	305	750	915	305	750	942	305	750	974	420	770
900	36	1046	368	830	1115	480	880	1015	638	830	1015	368	830	1042	368	830	1084	480	880
1000	40	-	-	-	-	-	-	1124	431	890	1124	431	890	1154	431	890	1194	540	995
1200	48	1380	524	1145	1486	630	1190	1340	524	1145	1340	524	1145	1364	524	1145	1400	630	1190

DN		CLASS 600			CLASS 900			CLASS 1500			PN 64			PN 100			PN 160			PN 250		
mm	"	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
50	2	108	60	28	140	70	-	140	70	-	114	60	28	120	60	28	120	70	-	136	70	-
65	2 1/2	128	67	-	162	83	-	162	83	-	138	67	-	146	67	-	144	83	-	154	83	-
80	3	146	73	40	166	83	60	172	83	60	149	73	50	155	73	50	154	83	60	172	83	60
100	4	190	80	88	203	102	80	208	102	80	175	80	88	182	80	88	181	102	80	202	102	80
150	6	265	137	105	286	159	130	280	159	130	248	137	105	258	137	105	258	159	130	285	159	130
200	8	318	165	180	356	206	170	350	206	170	310	165	180	325	165	180	325	206	170	360	206	170
250	108	397	213	230	432	241	210	432	247	210	356	213	230	390	213	230	390	241	210	442	247	210
300	12	455	229	280	496	292	260	518	305	255	425	229	280	460	229	280	458	292-	260-	540	305	255
350	14	490	273	315	518	356	290	575	356	290	487	273	315	512	273	315	-	-	-	-	-	-
400	16	562	305	360	572	384	320	640	384	320	544	305	360	572	305	360	-	-	-	-	-	-
450	18	610	362	402	636	451	400	702	468	400	588	362	402	628	362	402	-	-	-	-	-	-
500	20	680	368	450	696	451	420	754	533	420	658	638	450	706	368	450	-	-	-	-	-	-
600	24	788	438	540	836	495	540	900	559	540	766	438	540	818	438	540	-	-	-	-	-	-

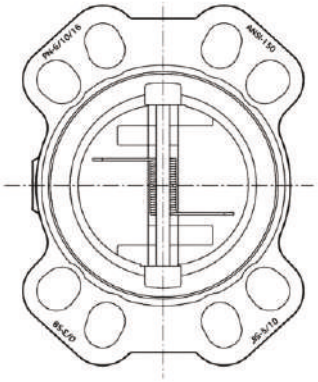
DN 40 - 300 / PN 10 - 16

Dual Plate Check Valves

EMG Model

Features

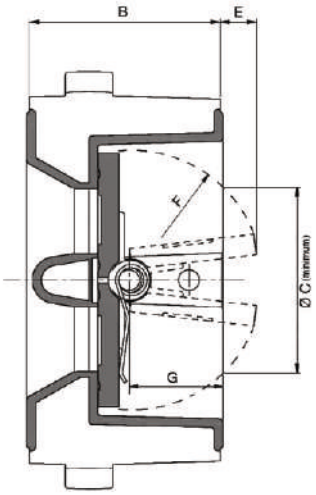
Short face to face distance according to DIN 3202 K3
Centering lugs valid for installation between flanges Pn6, Pn10, Pn16, ANSI-150, BS Table E/D, JIS 5K/10K.
Maximum working pressure 16 bar.
For higher pressures, our dual plate model C and model B are available.
Minimum back pressure to ensure water tightness 0,5 bar
Internal fully lined body with NBR or EPDM.
No flange gasket required.
Casette type internal parts, allowing easy replacement (plates, shaft and springs)
Quick and silent closing
No external holes or plugs in the body.
Protected with blue epoxy powder coating
Maximum working temperature according to material selection
See pages 18 and 19 for correct installation.



Materials

Code	Body	Plates	Shafts	Springs	Keys	Liner
105	GG-25	AISI-316	AISI-304	AISI-302	AISI-316	NBR
701	GG-25	AISI-316	AISI-304	AISI-302	AISI-316	EPDM
177	GGG-40	AISI-316	AISI-304	AISI-302	AISI-316	NBR
718	GGG-40	AISI-316	AISI-304	AISI-302	AISI-316	EPDM

Note : Codes 177 amd 718 frp, DN40 tp DN65
Codes 105 amd 701 frp, DN80 tp Dn300
Other materials upon request



Dimensions

DN (mm)	DN (inch)	B	C	E	F	G
40	1 1/2	33	43	8	23,5	15
50	2	43	49	10	29	21
65	2 1/2	46	64	14	35,5	22
80	3	64	70	11	42	30
100	4	64	91	21	51,5	30
125	5	70	125	38	66	32
150	6	76	148	47	77	32
200	8	89	200	64	101	35
250	10	114	240	78	129	48
300	12	114	300	103	158	50

Dual Plate Check Valves

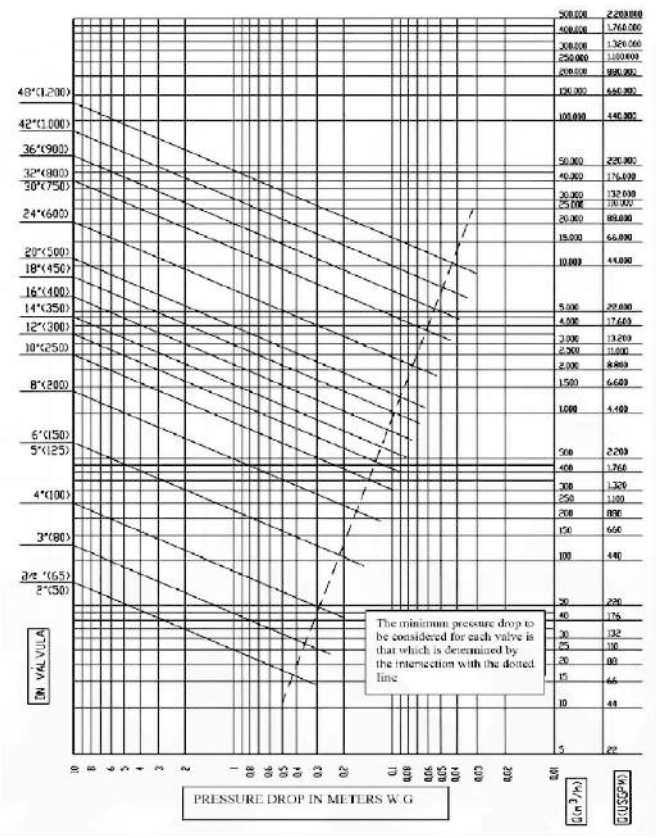
Rubber liner and applications

MATERIAL	ISO	CHEMICAL NAME		WORKING TEMP. (°C)
EPDM	EPDM	Ethylene-Propylene Terpolymer	Water, weak mineral acids and basis, water ketones, esters	-10° +80°
EPDM-HT			High temperature	-10° +130°
			Normative FDA	-20° +130°
NITRILE	NBR	Acrylonitrile-Butadiene Copolymer	Oils, Greases, Fuel, Gas oil, Co_2, CO, H_2	-10° +80°
HYPALON	CSM	Chlorosufonated Polyethylene	Moderate resistance to oil, greases and weak acids	-20° +120°
VITON	FPM	Hexafluorpropylene vinylidene fluoride copolymer	Best chemical resistence	-150° +200°
		HFP-VDF-TFE terpolymer	Oxygenated Gasoline	-5° +70°
NATURAL	NR	1,4 cis Polyisoprene	Very good abrasion resistance	-15° +70°
SILICONE	MVQ	Poly methyl vonyl siloxane	Highest and lowest temperature resistance	-16° +200°
STEAM SILICONE			Steam water	-60° +140°

Guidance information provided by rubber suppliers.
Final performance of the rubber will depend on media composition

Dual Plate Check Valves

Pressure drop



DN		CV	KV m³/sg	mm water column spring action
mm	"			
40	1 1/2	90	0.0215	300
50	2	90	0.0215	300
65	2 1/2	90	0.0215	300
80	3	150	0.0359	300
100	4	300	0.0718	200
125	5	800	0.19157	150
150	6	800	0.19157	150
200	8	1700	0.4070	140
250	10	3000	0.7183	140
300	12	4000	0.9578	130
350	14	5350	1.2811	130
400	16	7400	0.772	100
450	18	10000	2.394	70
500	20	130000	3.113	70
600	24	24000	5.747	60
700	28	40000	9.578	60
800	32	45500	10.895	50
900	36	62000	14.846	50
1000	40	90000	21.551	40
1200	48	130000	31.130	30

SHAFT ON VERTICAL POSITION

PRESSURE DROP WITH STANDARD SPRING

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
KV	0,0215	0,0215	0,0359	0,0718	0,19157	0,19157	0,407	0,7183	0,9578	1,2811	1,772	2,394	3,113	5,747	9,578	10,895	14,846	21,551	31,13
Standard Spring	0,3	0,3	0,3	0,2	0,15	0,15	0,14	0,14	0,13	0,13	0,1	0,07	0,07	0,06	0,06	0,05	0,05	0,04	0,03
Flow m3/s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Density	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P mm.W.c.	300	300	300	200	150	150	140	140	130	130	100	70	70	60	60	50	50	40	30

0,0718

PRESSURE DROP WITH LOW TORQUE SPRING

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
KV	0,0215	0,0215	0,0359	0,0718	0,19157	0,19157	0,407	0,7183	0,9578	0,2811	1,772	2,394	3,113	5,747	9,578	10,895	14,846	21,551	31,13
Low Torque Spring	0,21	0,21	0,21	0,14	0,105	0,105	0,098	0,098	0,091	0,091	0,07	0,049	0,049	0,042	0,042	0,035	0,035	0,028	0,021
Flow m³/s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Density	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P mm.W.c.	210	210	210	140	105	105	98	98	91	91	70	49	49	42	42	35	35	28	21

PRESSURE DROP WITH HIGH TORQUE SPRING

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
KV	0,0215	0,0215	0,0359	0,0718	0,19157	0,19157	0,407	0,7183	0,9578	0,2811	0,772	0,394	3,113	5,747	9,578	10,895	14,846	21,551	31,13
High Torque Spring	0,39	0,39	0,39	0,26	0,195	0,195	0,182	0,182	0,169	0,169	0,13	0,091	0,091	0,078	0,078	0,065	0,065	0,052	0,039
Flow m³/s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Density	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P mm.W.c.	390	390	390	260	195	195	182	182	169	169	130	91	91	78	78	65	65	52	39

MINIMAL PRESSURE TO OPEN

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
Standard Spring																			
ΔP mm.W.C.	300	300	300	200	150	150	140	140	130	130	100	70	70	60	60	50	50	40	30
Low torque Spring																			
ΔP mm.W.C.	210	210	210	140	105	105	98	98	91	91	70	49	49	42	42	35	35	28	21
High Torque Spring																			
ΔP mm.W.C.	390	390	390	260	195	195	182	182	169	169	130	91	91	78	78	65	65	52	39

THIS TABLE IS APPICABLE AS LONG AS THE FLOW RATE IS BELOW THE CRITICAL VALUE, i.e.: $\Delta P < F_L^2 (P_1 - P_v)$

F_L^2..... 0,65 (Pressure-drop factor)

P_1..... Pressure at the valve inlet

P_v.....Vapour pressure of the liquid

DN 25 - 400 / PN 10 - 16

Ball Check Valves - BV-05-38

Flanged and threaded type

Features:

Maximum working pressure 16 bar up to Dn200, begger sizes 10 bar.
valid for installation between Pn10 or Pn16 flanges or BSP thread.
Temperature from - 10°C to 80°C
Minumum differential pressure to ensure water rightness 0,5 bar
Full bore.
Easy maintenance.
Anti-corrosion epoxy coating.

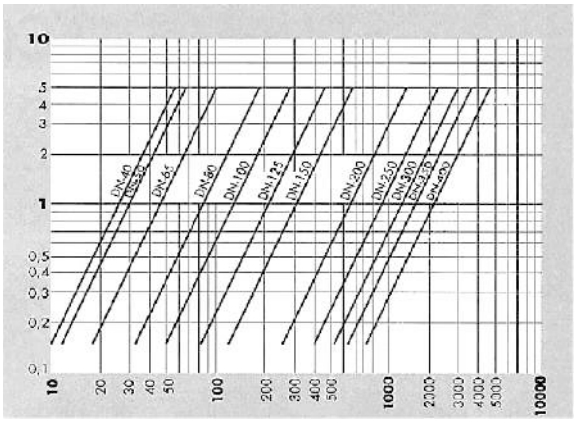
Operation :

Operation is based on a free ball housed inside the body which is pushed by the the pumped flow to the side cavity, allowing the liquid to pass through. When the pump stops and the ball is no longer pushed aside, it takes up a position in the inlet port and prevents flow return.

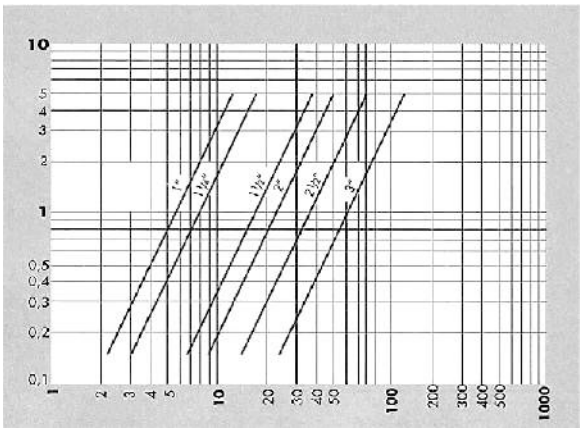
Ball check valve specially designed for pumping waste water.
It can also be used with clean water because of its low

Pressure drop:

Flanged type



Threaded type



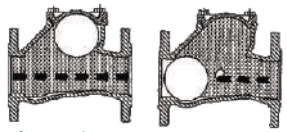


Figure 1

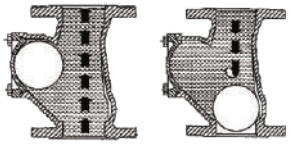


Figure 2

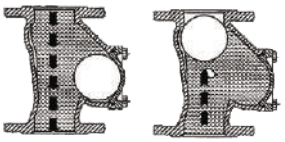
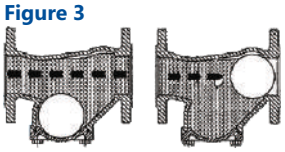


Figure 3



Internal ball types:

Ball check valves may also be supplied with balls of lower weight depending on particular requirements.
Floating balls may be supplied on request for the following models to work as a dual-purpose vent (air admission and discharge):
as a dual-purpose vent (air admission and discharge):

- Flanged type: ND-80 to ND-200
- Threaded type: ND 40 to ND 65

Installation:

May be fitted horizontally or vertically.

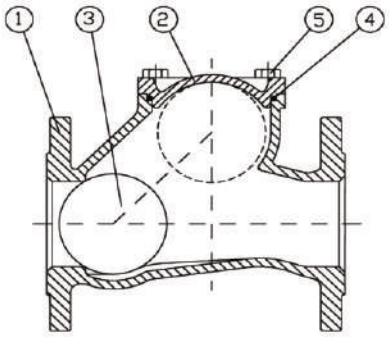
- Horizontal flow
  valves to be installed with cover at the top, as figure 1
- Vertical flow upwards
  valves to be installed as figure 2
- Floating ball-check valves

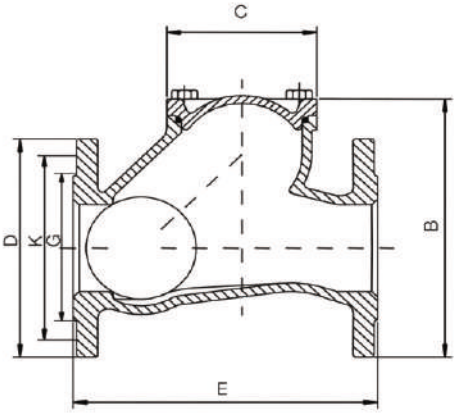
  Ball check valves can be fitted as an air valve (vertically installed) or to prevent used water from flowing back. In this case, valves can be installed in either horizontal or vertical pipes, but they must always be fitted as shown in figure 3 for upward vertical flow and according to figure 4 for horizontal flow.

Ball Check Valves - BV-05-38

Materials and dimensions

Flanged type

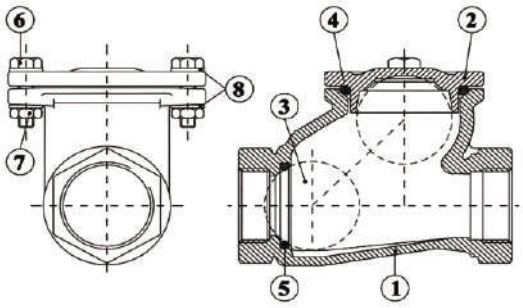


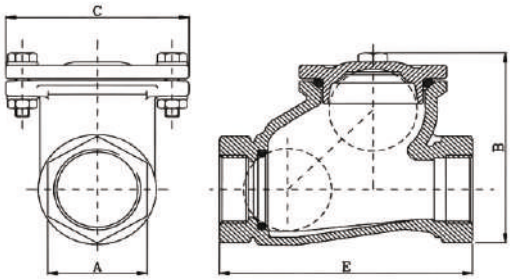


Nº	NAME	Nº OF PARTS	MATERIAL
1	BODY	1	GGG-40
2	BALL	1	DN 40/200 ALUMINIUM +NITRYL DN 250/400 GGG-40+NITRYL
3	BONNET	1	GGG-40
4	BODY BONNET GASLET	1	NITRILE
5	BOLTS	ACC/DN	STAINLESS STEEL

DN		ISO 2531 PN-10				E	C	B	KVo m3/h	Weight Kg
mm	"	D	K	G	nºXd					
40	1 1/2	150	110	88	4x19	180	95	172	80	7,5
50	2	165	125	102	4x19	200	95	180	90	8,5
65	2 1/2	185	145	122	4x19	240	114	210	140	12
80	3	200	160	138	8x19	260	128	240	253	15
100	4	220	180	158	8x19	300	160	285	396	22
125	5	250	250	188	8x23	350	200	330	642	34
150	6	285	240	212	8x23	400	230	390	962	45
200	8	340	295	268	8x28	500	320	480	1990	80
250	10	400	350	320	12x28	600	414	600	3100	135
300	12	450	400	370	12x28	700	460	680	4100	200
350	14	505	460	430	16x28	850	596	800	5050	300
400	16	565	515	482	16x28	1100	690	1050	6500	600

Threaded type





Nº	NAME	Nº OF PARTS	MATERIAL
1	BODY	1	GGG-40
2	BONNET	1	GGG-40
3	BALL	1	PHENOLIC RESIN
4	BODY BONNET GASKET	1	NITRILE
5	SEAT GASKET	1	NITRILE
6	SCREW	2	STAINLESS STEEL
7	NUT	2	STAINLESS STEEL
8	WASHERS	4	STAINLESS STEEL

DN		A	B	C	E	KVo m3/h	Weight Kg
mm	inch						
25*	1	45	92	96	120	18	1.9
32	11/4	50	105	106	135	32	2.4
40	1 1/2	60	115	112	142	58	2,8
50	2	70	155	136	175	75	3,7
65	21/2	90	170	155	198	118	6,3
80	3	105	197	180	138	185	7,6

*Valves without bonnet. Drawing upon request.

DN 50 - 250 / PN 10 - 16

Iprocheck - BV-05-92

Axial disc foot valve

Features:

Axial disc check valve for protection and non-return on pumping equipment for either clean or/and filter water.
High hydraulic performance.
Minimum back pressure to ensure water tightness 0,5 bar for valves up to DN 150, bigger sizes 1 bar.
Silent operation.
May be fitted in horizontal or vertical position
Excellent water hammer performance.
Temperature from - 10oC to +80oC.
Anti-corrosion epoxy protection.
Easy maintenance

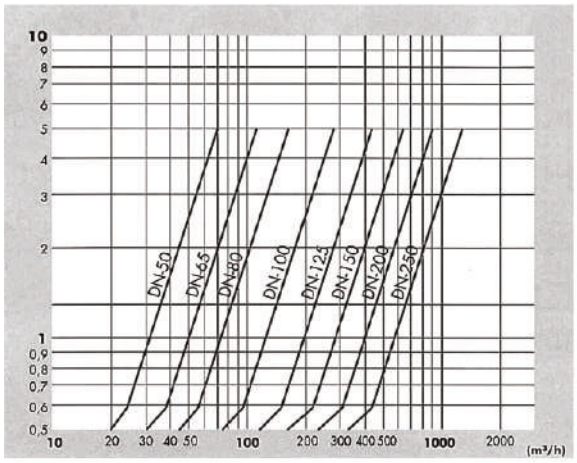
Strainer is supplied upon request. Standard material of the strainer is zinc coated, upon request in stainless steel.
The strainer basket protects pumping equipment against the entry of foreign objects capable of damaging impellers and other pump components.

Operation:

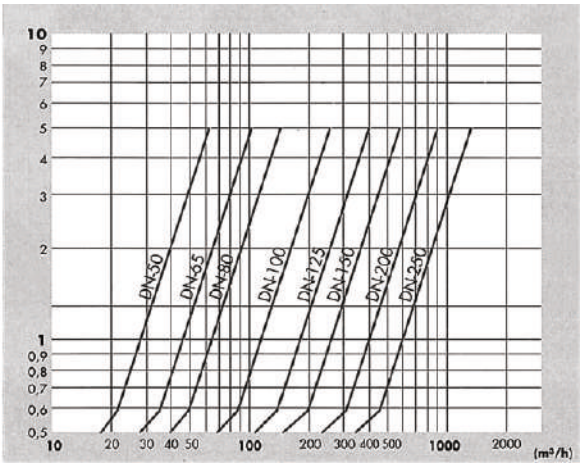
When the pumping equipment is in operation, the disc is pushed back allowing the fluid to flow. When the pump stops, the disc is quickly closed by spring pressure before any over pressure occurs due to the return flow.

Pressure drop:

Iprocheck

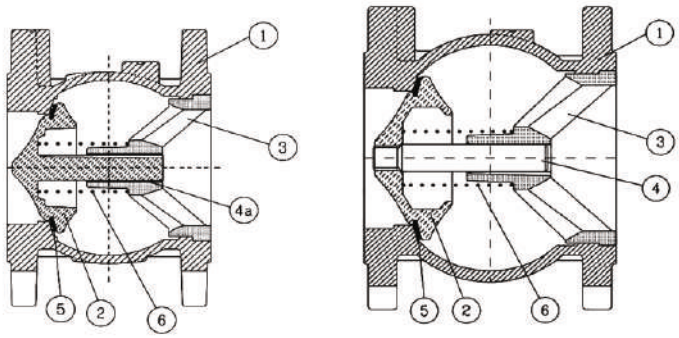


Iprocheck with strainer

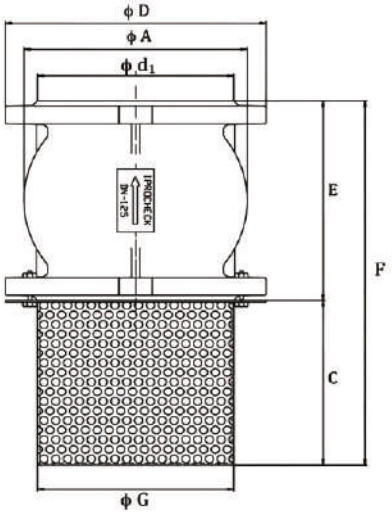


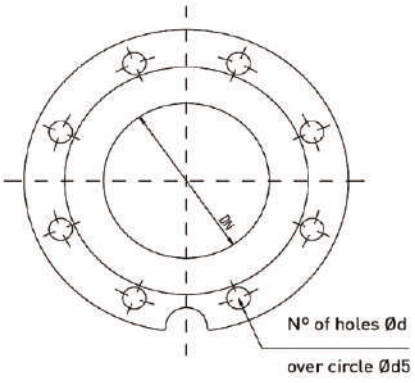
Iprocheck - BV-05-92

Materials and dimensions



Nº	NAME	Nº OF PARTS	MATERIAL
1	BODY	1	GG-25
2	WEDGE	1	GG-25
3	GUIDE	1	GG-25
4	STEM	1	AISI 303
4a	BUSH	2	DN 50/80 NYLON 6-52Mo DN 100/150 ST. STEEL AISI 300 DN 200/250 BRONZE
5	SEALING GASKET	2	EPDM
6	SPRING	2	AISI 302
7	STRAINER	1	ZINC COATED STEEL or AISI 304





DN	PN-10		PN-16		A	C	D	E	F	G	d1	KVo m³/h	Valve Weight Kg	Basket Weight Kg
	d5	nºxd	d5	nºxd										
50	125	4x19	125	4x19	96	77	165	100	177	91	102	100	6	0,4
65	145	4x19	145	4x19	121	100	185	120	220	127	120	160	5,5	0,7
80	160	8x19	160	8x19	140	125	200	136	261	127	138	230	11,0	0,8
100	180	8x19	180	8x19	185	142	220	176	317	164	158	390	15,0	1
125	210	8x19	210	8x19	214	166	250	200	366	180	188	625	23,0	1,5
150	240	8x23	240	8x23	248	200	285	234	434	212	212	900	30,0	2,7
200	295	8x23	295	12x23	345	300	340	300	600	255	270	1100	48,5	3,5
250	350	12x23	355	12x23	415	380	405	370	750	330	320	1800	81,5	4,5

DN 40 - 400 / PN 10 - 16

Swing check valve - B6 50

Features:

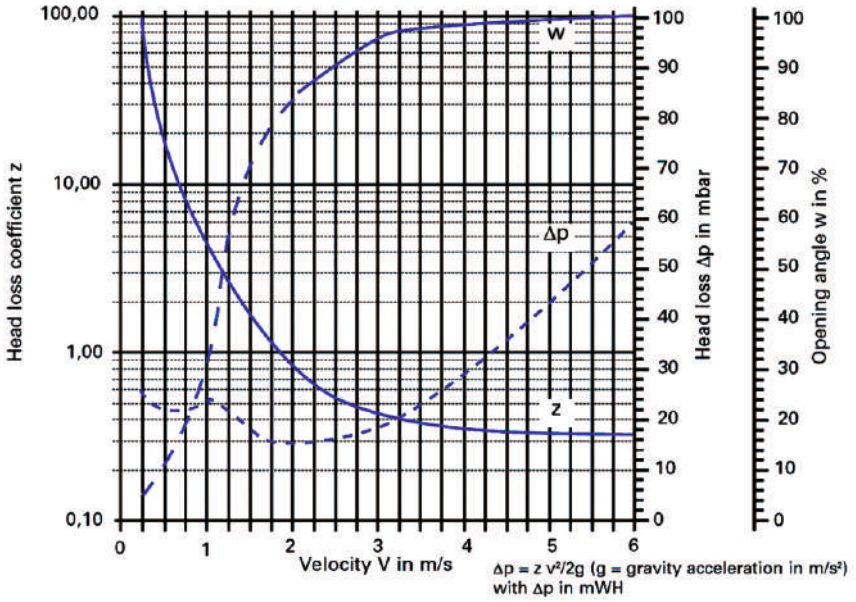
Maximum working pressure 16 bar up to DN300, bigger sizes 10 bar
Maximum temperature : from 0°C to +60°C
Maximum speed : 3m/s for PN10 and 4 m/s for PN16
Seating: class A according to standard EN 12666-1
Face-to-face dimensions according to EN 558-1 series 48 and ISO 5752 series 48.
Flang drilling according to standards EN 1092 - 2 ISO 7005-2

Description:

Low headloss
Opening on low differential pressure
Stainless steel seat (except Dn40)
Stainless steel shaft
Lubricated bearings
Removable bonnet for easy maintenance
Horizontal or upward vertical mounting
Weight-loaded lever upon request

Hydraulic features:

Measured curve of a swing check valve DN100 with weight-loaded lever, mounted on vertical pipe, for water at 20°C. Thanks to geometric similarity, these values can be applied to other nominal diameters for approximate calculation. Please, consult us for exact values and data for other nominal diameters.



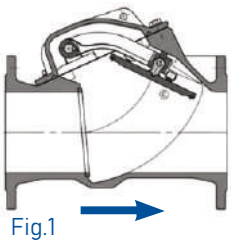


Fig.1

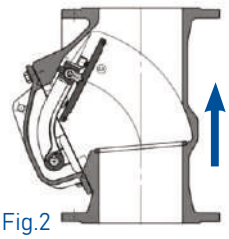


Fig.2

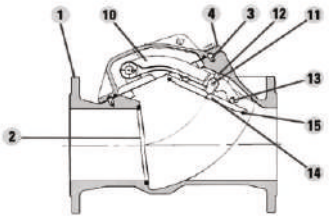
Installation:

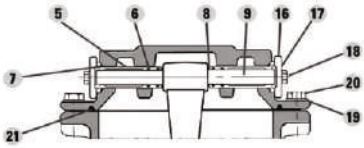
In order to avoid accidents caused by the weight-loaded lever travel, install a protective guard system according to rules in force(seeoptions.
The arrow indicates the flow direction, pumps in operation (same direction as that indicated on the swing check valve). Horizontal installation (Fig. 1) or upward vertical installation (Fig. 2) possible. For swing check valves with weight-loaded lever, the weight must always assist (or help) the closing of the flap.

Swing check valve - B6 50

Materials and dimensions

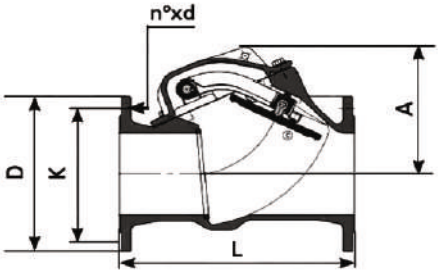
Item	Designation	Qty.	Materials	Standards
1	Body	1	Ductile iron / EN-GJS-400-15	EN 1563
2	Seat	1	Stainless steel 420/ X30CN3	EN 10088
3	Centring pin	2	Stainless 316Ti/X6CrNiMoTi17-12-2	EN 10088
4	Bonnet*	1	Ductile iron/EN-GJS-400-15	EN 1563
5	Bearing	2	Copper alloy / CuZn39Pb3	EN 12165
6	O-ring	4	Elastomer/NBR	
7	O-ring	2	Elastomer/NBR	
8	Bush	2	Polyacetal/POM	
9	Shaft	1	Stainless steel 420 / X20Cr13	EN 10088
10	Clapper art	1	Stainless Steel CF-8/GX5CrNi19-10	EN 10283
11	Pin	1	Stainless steel 430F/X14CrMoS17	EN 10088
12	Buffer	1	Elastomer / NBR	
13	Buffer	2	Elastomer/NBR	
14	Flap	1	Stainless steel 304/X5CrNi18-10	EN 10088
15	Resilient valve disc	1	Elastomer/NBR	
16	Blind flange* : without weight-loaded lever	2	Ductile iron/EN-GJS-400-15	EN 1563
	with weight-loaded level	1	Ductile iron/EN-GJS-400-15	EN 1563
17	Washer	4	Stainless steel A2	EN 10088
18	Screw	4	Stainless steel A2	EN 10088
19	Washer	acc/DN	Stainless steel A2	EN 10088
20	Screw	acc/DN	Stainless steel A2	EN 10088
21	Body/bonnet gasket	1	Elastomer / NBR	

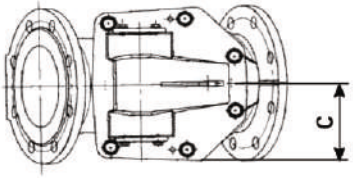




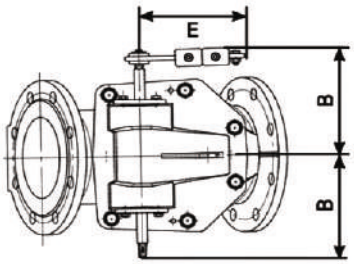
*Blue epoxy coating.

Swing check valve without Weight-loaded lever

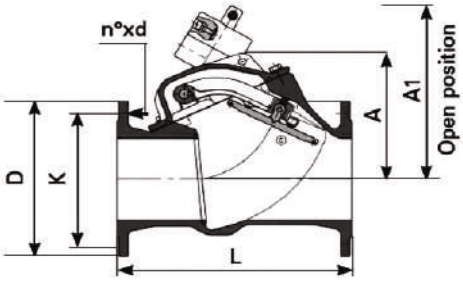


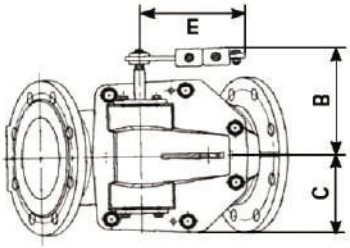


Swing check valve with Weight-loaded lever on left side, and shaft protruding on both



Swing check valve with Weight-loaded lever on left





Drawings for DN 50 to 300, please consult us for other DN.

DN	D	ISO PN10 drilling K	ISO PN10 drilling n°xd	ISO PN16 drilling K	ISO PN16 drilling n°xd	L	A	A1	B	C	E	Weight W/O lever	Weight W/O lever	By-pass DN/ weight
	mm	mm		mm		mm	mm	mm	mm	mm	mm	kg	kg	mm/kg
40	150	110	4x19	110	4x19	180	115	-	-	-	-	8	-	-
50	165	125	4x19	125	4x19	200	105	226	131	74	170	10	12	-
65 drilled 60	185	135	4x19	135	4x19	240	105	226	131	74	180	12	14	-
65	185	145	4x19	145	4x19	240	105	226	131	74	180	12	14	-
80 drilled 4/8 holes	200	160	4x19+8x19	160	4x19+8x19	260	145	264	170	170	180	21	23	15/1.1
80	200	160	8x19	160	8x19	260	145	264	170	170	180	21	23	15/1.1
100	220	180	8x19	180	8x19	300	200	264	170	170	180	24	27	20/1.5
125	250	210	8x19	210	8x19	350	220	317	195	140	180	40	43	20/1.5
150	285	240	8x23	240	8x23	400	230	317	195	140	180	46	50	20/1.5
200	340	295	8x23	295	8x23	500	300	391	265	185	230	230	80	25/1.7
250	400	350	12x23	355	12x28	600	385	490	355	245	230	148	154	25/1.7
300	455	400	12x23	410	12x28	700	410	500	355	245	250	169	175	32/2.0
350	520	460	16x23	-	-	800	400	610	415	278	400	320	360	32/2.0
400	580	515	16x23	-	-	900	455	660	445	325	400	430	480	40/3.0

DN 40 - 400 / PN 10 - 16

“Y” strainer - BC-03-20

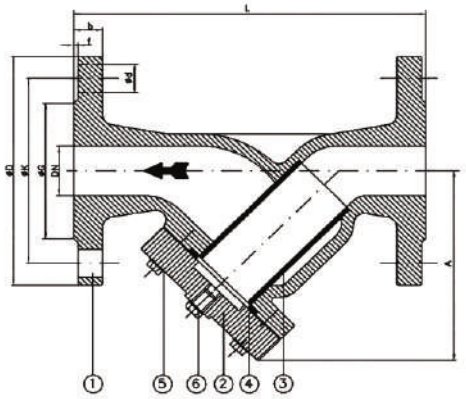
Features:

Maximum working pressure 16 bar up to DN300, bigger sizes 10 bar
Face-to-face distance according to EN 558 series 1.
Flange connection according to ISO 70052 PN16.
Maximum working pressure 16 bar.
Simple strainer for network protection services.
Easy maintenance and installation.
Widely used in irrigation networks.
Anticorrosive epoxy coating.
Mesh hole dimension 1,6 mm

Material and dimensions

Item	Description	Material
1	Body	GG-25
2	Bonnet	GG-25
1	Screen	AISI-304
4	Body Bonnet gasket	EPDM
5	Bolting	Stainless Steel A2
6	Plug	Malleable iron

DN	L	D	K	G	f	b	dxn°	A	Ø Screen hole	Weight (kg)
40	200	150	125	102	3	19	19x4	107	1,6	6,4
50	230	165	125	102	3	19	19x4	116	1,6	7,9
65	290	185	145	122	3	19	19x4	141	1,6	11,5
80	310	200	160	138	3	19	19x4	162	1,6	13,5
100	350	220	180	158	3	19	19x4	192	1,6	17,6
125	400	250	210	188	3	19	19x4	244	1,6	2,6
150	480	285	240	212	3	19	23x8	277	1,6	37,5
200	600	340	295	268	3	20	23x12	348	1,6	62
250	730	405	355	319	3	22	28x12	433	1,6	122
300	850	460	410	370	4	24,5	28x12	477	1,6	160



Strainer box – MP type

DN 40 – 400 / PN 10 – 16

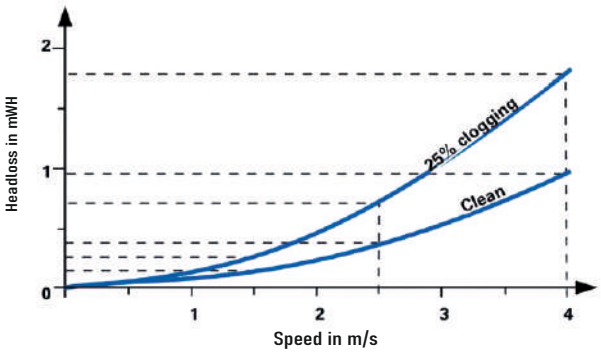
Features:

Maximum working pressure 25 bar
Maximum working pressure 16 bar.
Flange drilling according to EN 1092 – 2 and ISO 7005-2:ISO PN10, 16 or 25
Temperatures: +1°C to +70°C
Standard mesh: 2 mm (optional: 0,5 or 1 mm, 8x8 mm).

Description:

Compact design.
Lateral drain plugs allowing installation of a drainage valve (upon request).
for maintenance without interrupting the water distribution supply.
Anticorrosive epoxy powder coating.
Easy dismantling of the bonnet and the screen from the top.
Widely used in drinking water and irrigation networks.

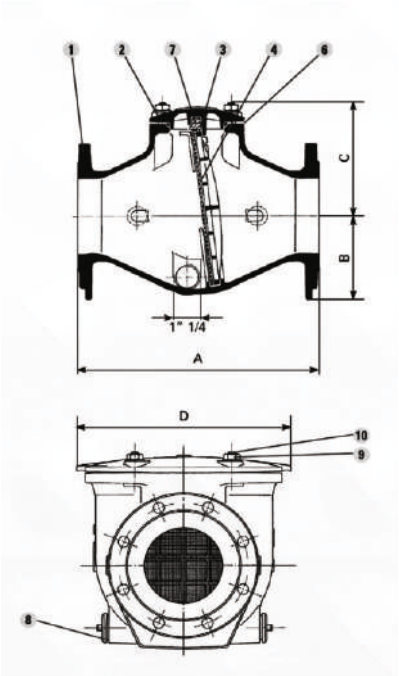
Hydraulic features:



Headloss is low, even in case of partial clogging thanks to an important filtering section.

DN	A mm	B mm	C mm	D mm	Weight kg
50*	230	82	112	210	21
65*	230	88	112	210	23
80***	300	105	142	260	25,5
100	300	105	142	260	28,5
125	400	142	192	360	41,5
150	400	142	192	3601	44,5
200	500	198	230	452	79,5
250	600	212	230	452	93

* Double drilling 50/40
** Double drilling 65/60
*** Loose flanges enable mounting on flanges 4 and 8 holes.



Item	Designation	Qty	Materials	Standards
1	Body	1	Ductile iron/EN-GJS 450-10	EN 1563
2	Bonnet	1	Ductile iron/EN-GJS 450-10	EN 15631
3	Screen holder	1	Ductile iron/EN-GJS 450-10	EN 1563
4	Standard screen (2mm mesh)	1	Stainless steel 316L/X2CrNiMo 17-12-2	EN 10088
5	Optional screen*	1	Stainless steel 316L/X2CrNiMo 17-12-2	EN 100881
6	O-ring body/bonnet	1	Elastomer / EPDM	
7	filter gasket	1	Elastomer / NBR	
8	Drain cap 1>>1/4	2	Copper-alloy/CuZn39Pb2	EN 1216
9	Bolts	acc/DN	Galvanised steel	EN ISO 898
10	Studs	acc/DN	Stainless steel 303/X8CrNiS 18-9	EN 10088

*Mesh of 0.5 - 1 or 8x8 mm.

Technical information is valid for DN40-250 - Series F3 10. Drawing for bigger sizes upon request.

Installation and use instructions

Assembly in pipe

Water assembly: valves must be installed between pipe flanges with bolts or through studs, placing applicable gaskets between valve and flange faces. The valve body outside diameter is guided and centered by bolts or through studs used for valve mounting on pipe flanges.
Flanged type: bolts must be tightened gradually and diagonally following a pattern that ensures that none are completely tighteneed while the rest are completely loose.

Minimum pressure for tightness

For BELGICAST dual plate check valves and ball check valves the minimum pressure for tightness (backpressure on the plates/ ball) is 0,5 bar (5 water column meters).

Mounting precautions

A proper performance of a check valve requires that the flow is as uniform as possible and that turbulence is minimized to avoid that when the valve is opened, the plates can be opened and closed in rotation angle next to the total opening position, producing the rapid wear of the washers and the side faces of the hinges of the plates.
Check valves can be installed on horizontal or vertical pipes with upwards or downwards fluid flow. however the following precautions should be noticed:

Dual plate check valves

- **Horizontal flow**

Valves must be mounted with the disc rotation axis in vertical position, such that the discs seat on the support rings and have a balanced swing taking the same stress

- **Vertical flow upwards**

There is no definite position for the disk axis in this case, any direction being acceptable, selecting the most adequate direction depending on the pipe layout.

For this valve arrangement, the seat takes the disc weight, and an additional pressure drop takes place. In these cases and for diameters above 6", mounting low torque springs for counteracting the disk weight effect is recommended.

- **Vertical flow downwards**

Regarding the disc axis, the above stated applies,

For this valve arrangement, the disk weights is in the opening direction, and this must be known in advance to be able to mount high torque springs for valve diameters greater than 6".

Installation and use instructions

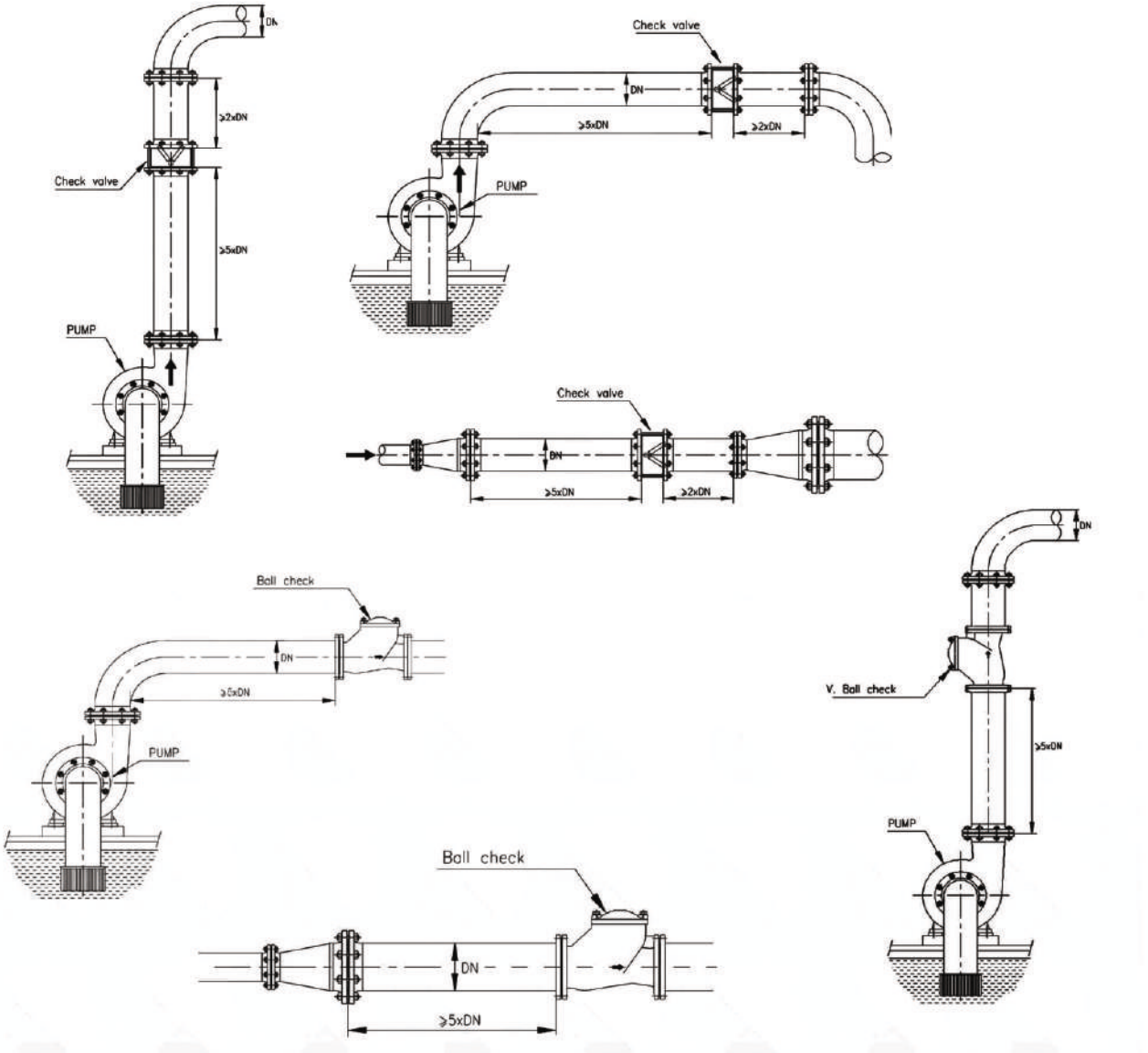
General installation precautions for check valves

A correct performance of a check valve requires that the flow is as uniform as possible and that turbulence is minimized, to avoid that when the valve is opened, the plates can be opened and closed in rotation angle next to the total opening position, producing the rapid wear of the washers and the side faces of the hinges of the plates.

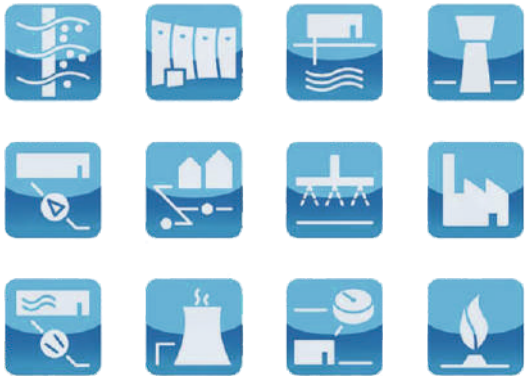
Therefore it is very important to consider the following:

1) For valves with elastic set, never weld next to the valve.
2) Never install the valve when flow is intermittent (Pulsations).
3) If the valves is to be installed at a conical diffuser outlet, it must be adequately designed to avoid turbulence at the valve inlet. If it should be possible, off center diffusers with guiding vanes should be placed at diffuser outlet.
4) If the valves is to be installed at an elbow outlet, the same precautions as per above paragraph shall be taken.
5) When mounted on pump discharge side, valves must be installed as for as possible from diffusers and elbows, in a stable flow area, at a minimum distance of 5 times the valve nominal diameter.

For correct performance and to avoid premature wearing, it must be avoided to install this kind of valves in areas where the flow could be turbulent. In order to assure that the valve is working under stable flow conditions. It must be installed after a minimum straight pipe length of 5 times the DN of the valve from the pump of other elements which could provoke turbulence, such as cones, bends...



Your choice in waterflow control



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