

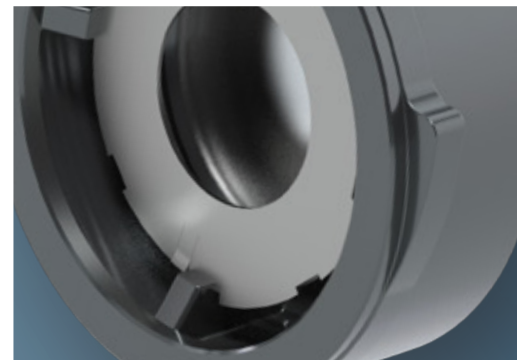
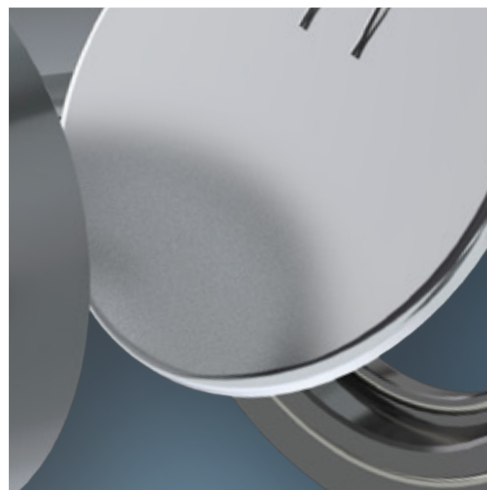
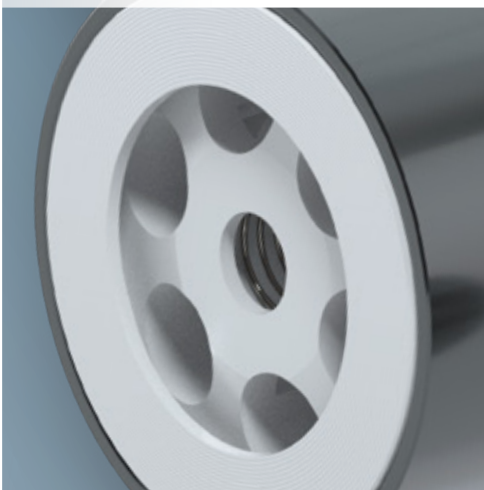
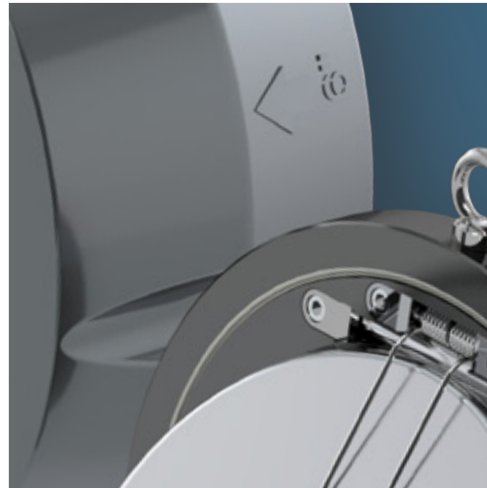
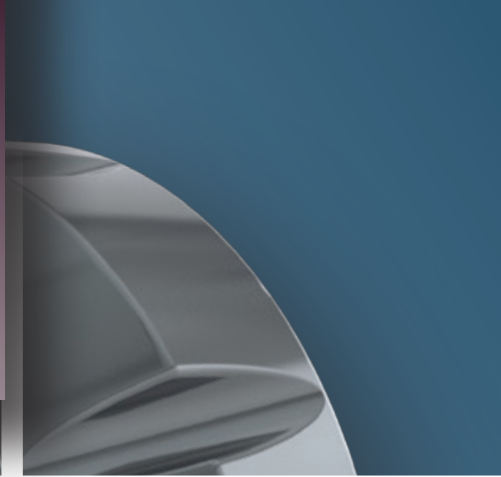


GHIBSON

valves

**Check
valves**

**DISC &
SWING Type**





Check valves

DISC & SWING Type

DISC TYPE Gibson disc check valves (G Series) represent an extensive combination of solutions starting from low pressure design up to 160 Bars.

G series is basically composed by three product line (GA-GB / GN-GT / GH) with a wide range of materials and customizations.

SWING TYPE Gibson swing check valves (GS series) are manufactured in many materials as well as pressure ratings and flange connections. Available for general purpose applications and also with spring loaded flap.



DISC TYPE

GA - GB Series

- GA 015 1
- GB 015 2
- GB 023 3
- head losses 4
- temperature/pression 4

GN - GT Series

- GN 011 - GN 015 - GN 115 5
- GT 011 - GT 015 - GT 115 5
- head losses 6
- temperature / pressure 6
- springs table 6

GH Series

- GH 011 - GH 015 7
- head losses 8
- temperature / pressure 8
- springs table 8

SWING TYPE

GS Series

- GS 011 - GS 015 9
- GS 011 - GS 015 with spring 9
- dimensions table 10
- head losses 10
- temperature/pression 10
- rate of flow 10



GIBSON

Zola Predosa
Bologna

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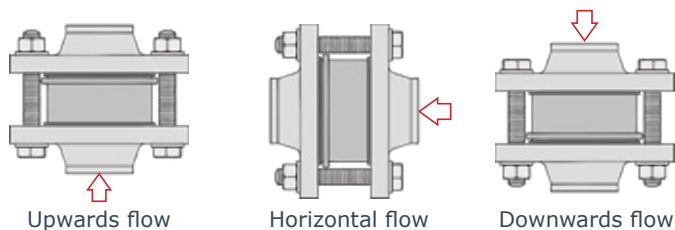
GA 015 DN 15 - 100 • 1/2" - 4"

Features and Advantages

Little dimensions and low weights
 Face to face acc.to DIN EN 558-1 Series 49 (DIN 3202 K4).
 Opening pressure from 20 to 500 mBar.
 Usable also as vacuum breaker, overpressure and bottom valve.
 No leakage with soft seat and acc.to DIN 3230 BN3 with metal seat.
 Low head losses.

GB 015 DN 15 - 100 • 1/2" - 4"

To be installed in any position

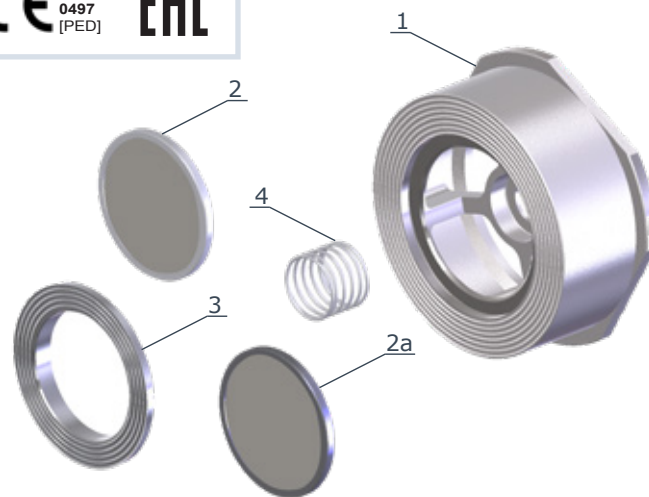
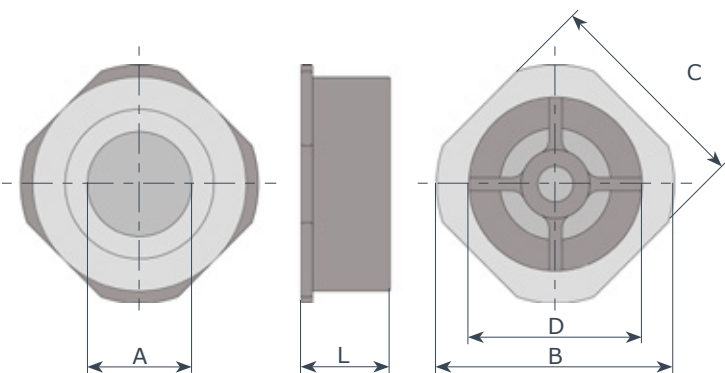


GA 015 DN 15 - 100 • 1/2" - 4"

Features

DN 15/100: P max: **52 Bar**
 Flange:
 DN 15÷80 **PN 6÷40, A150÷300**
 DN 100 **PN 10÷40, A150÷300**

Certifications



DN	15	20	25	32	40	50	65	80	100
A	15	20	24	31	38	47	62	77	95
B	53	63	73	84	94	107	131	140	162
C	45	55	65	74	82	96	118	130	162
D	27	33	39	54	64	78	96	100	131
L	16	19	22	28	32	40	46	50	60
Kg	0.11	0.14	0.26	0.4	0.6	0.95	1.3	1.9	3.4

item	q.ty	part	material
1	1	body	• A351 - CF8M (AISI 316)
2	1	disc-standard	• A240 (AISI 316L)
2A	1	on request	• A240 (AISI 316L) + NBR • A240 (AISI 316L) + EPDM • A240 (AISI 316L) + FKM
3	1	seat disc on request	• A182 (AISI 316) • A182 (AISI 316) + PTFE
4	1	spring-standard on request	• AISI 316 • Hastelloy C4

This type of valve cannot be used with spirometallic packing.

minimum opening pressure with standard springs										
flusso	DN	15	20	25	32	40	50	65	80	100
△	mBar	25	25	25	27	29	29	31	32	33
▷	mBar	23	23	23	24	25	25	26	26	27
▽	mBar	21	21	21	21	21	21	21	21	21
△ without spring	mBar	2	2	2	3	4	4	5	5	6

special spring table										
DN	15	20	25	32	40	50	65	80	100	
50 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
100 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
200 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
300 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
500 mBar	Y	Y	Y	Y	Y	Y	N	N	N	

Y = available / N = not available
 Opening values may vary ±10%



GB 015 DN 15 - 100 • 1/2" - 4"

Features

DN 15/100: P max: 52 Bar

Flange:

DN 15÷80

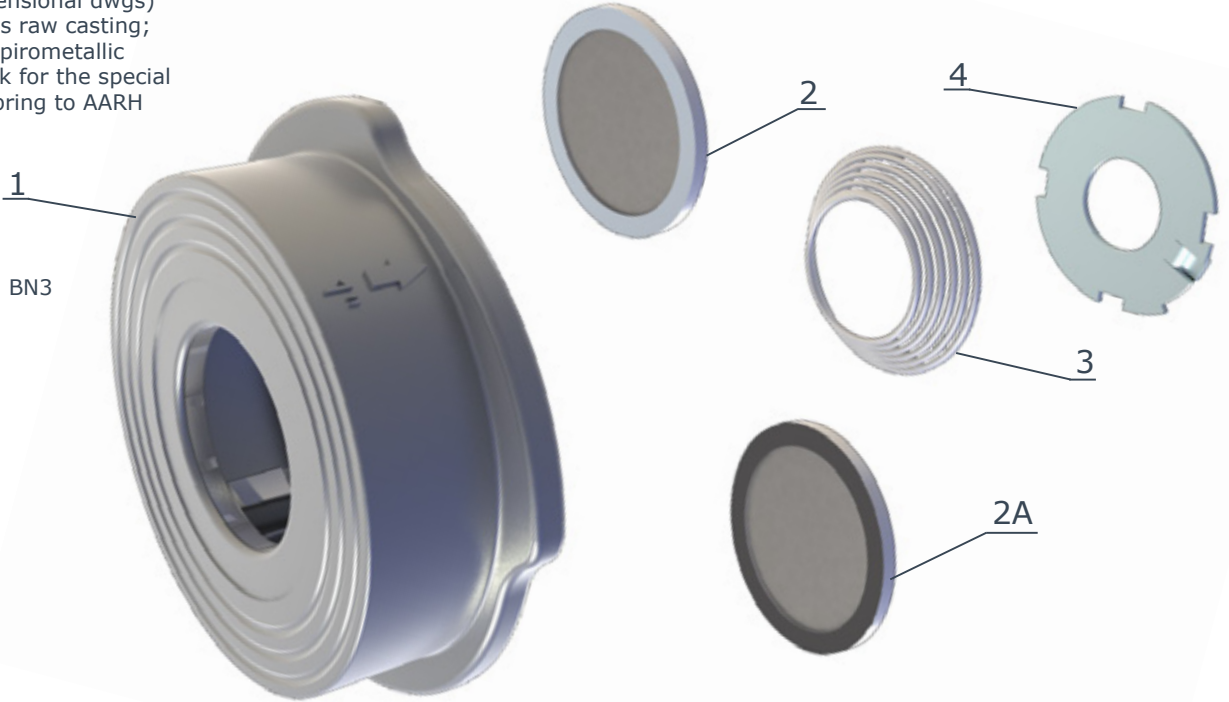
PN 6÷40, A150÷300

DN 100

PN 10÷40, A150÷300

Final quality of face A (reference can be found in dimensional dwgs) for standard valves is raw casting; in case of use with spirometallic packing (API601) ask for the special machining that will bring to AARH 250/500 quality.

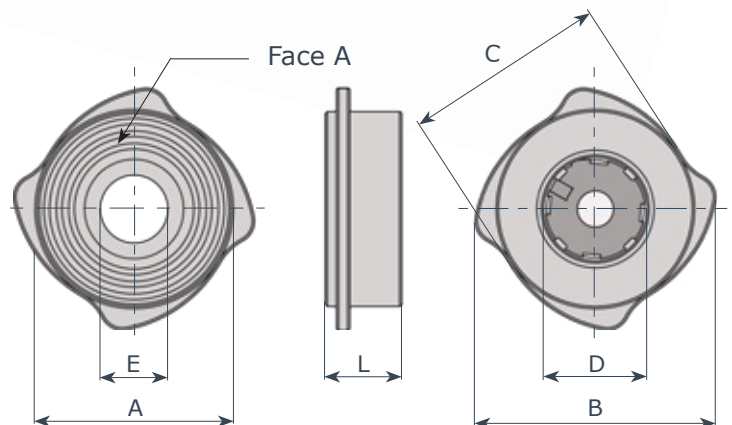
No leakage with soft seat and acc.to DIN 3230 BN3 with metal seat.



Certifications



GB 015			
iem	q.ty	part	material
1	1	body	• A351 - CF8M (AISI 316)
2	1	disc -standard	• A240 (AISI 316L)
2A	1	on request	• A240 (AISI 316L) + NBR • A240 (AISI 316L) + EPDM • A240 (AISI 316L) + FKM
3	1	spring standard	• AISI 316
4	1	stop ring	• A240 (AISI 316L)



minimum opening pressure with standard springs										
flow	DN	15	20	25	32	40	50	65	80	100
△	mBar	25	25	25	27	28	30	30	25	21
▷	mBar	23	23	23	25	23	24	24	19	15
▽	mBar	21	21	21	22	18	18	18	13	9
△ without spring	mBar	nd	nd	nd	nd	nd	nd	nd	nd	nd

GB 015									
DN	15	20	25	32	40	50	65	80	100
A	43	48	58	68	75	94	113	129	159
B	54	64	71	81	93	110	130	149	181
C	45	54	63	72	82	95	115	131	160
D	23	28	36	50	58	71	86	105	130
E	14	19	25	31	38	48	62	77	95
L	17	20	22	28	32	40	46	50	60
Kg	0.11	0.18	0.26	0.4	0.55	1	1.5	2	3.2



GB 023 DN 15 - 100 • 1/2" - 4"

Caratteristiche

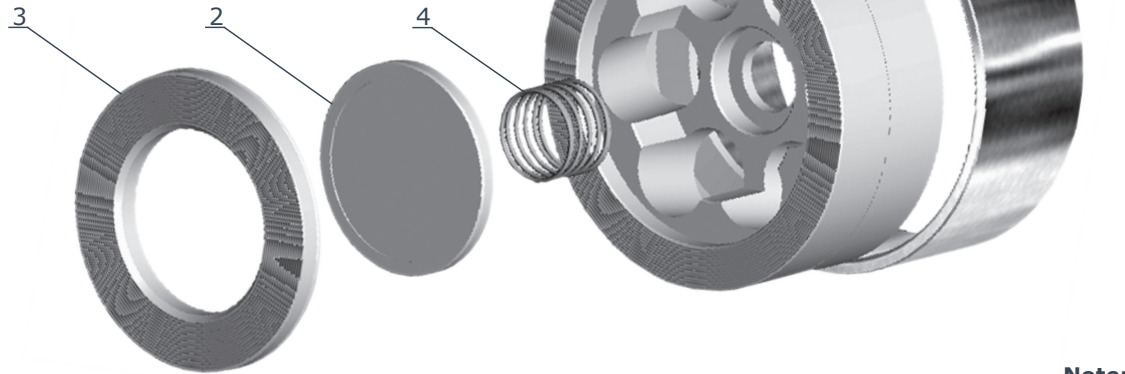
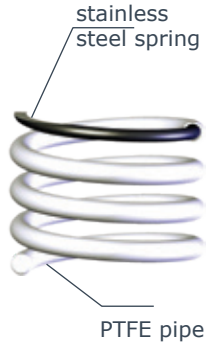
Features

DN 15÷100 PN 10÷16

Max working pressure: 6 Bar

Max working temperature: 180°C

This type of valve cannot be used with spirometallic packing.



On request spring can be coated with a PTFE pipe sealed at the end.

Note: assembly GB 023 with PN6 / ANSI150 flanges is possible without stainless steel jacket.

Certifications



GB 023			
iem	q.ty	part	material
1	1	body	• PTFE
2	1	disc	• PTFE
3	1	seat	• PTFE
4	1	spring <i>on request</i>	• Hastelloy C4 • AISI 316 + PTFE • AISI 316 + Cheniflon
5	1	jacket	• AISI 304

DN	15	20	25	32	40	50	65	80	100
screw	4x M12	4x M12	4x M12	4x M16	4x M16	4x M16	4x M16	4x M16	8x M16
tightening torque Nmt	10	10	20	35	35	35	40	40	45

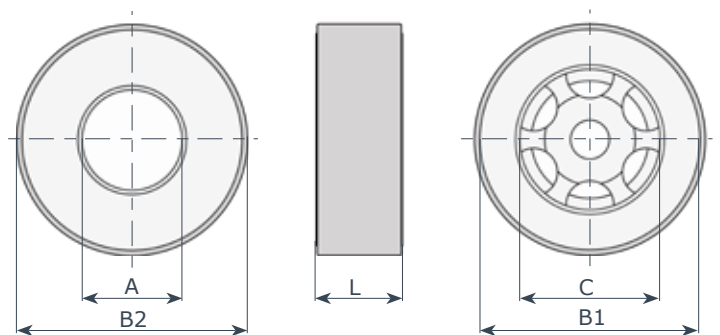
Note for installation:

Centre the valve carefully before tightening the flanges. Tighten the flange screws by applying the torque values shown nearby. Remember to cross tighten the screws. These values are measured at room temperature with new screws and lubricated threads.

special spring table (olny spring A316+Nyflon)										
DN	15	20	25	32	40	50	65	80	100	
50 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
100 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
200 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
300 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y	
500 mBar	Y	Y	Y	Y	Y	Y	N	N	N	

Y = available / N = not available

Opening values may vary ±10%



minimum opening pressure with standard springs										
flow	DN	15	20	25	32	40	50	65	80	100
△	mBar	23	23	24	25	26	26	27	27	29
▷	mBar	22	22	22.5	23	23.5	23.5	24	24	25
▽	mBar	21	21	21	21	21	21	21	21	21
△ without spring	mBar	1	1	1.5	2	2.5	2.5	3	3	4

GB 023										
DN	15	20	25	32	40	50	65	80	100	
A	15	20	25	32	38	47	63	79	96	
B1	44	54	64	75	85	96	116	133	154	
B2	50	60	70	80	90	107	130	140	62	
C	30	38	40	56	65	78	95	100	120	
L	16	19	22	28	32	40	46	50	60	
kg	0.11	0.16	0.24	0.32	0.4	1	1.4	1.7	2.2	

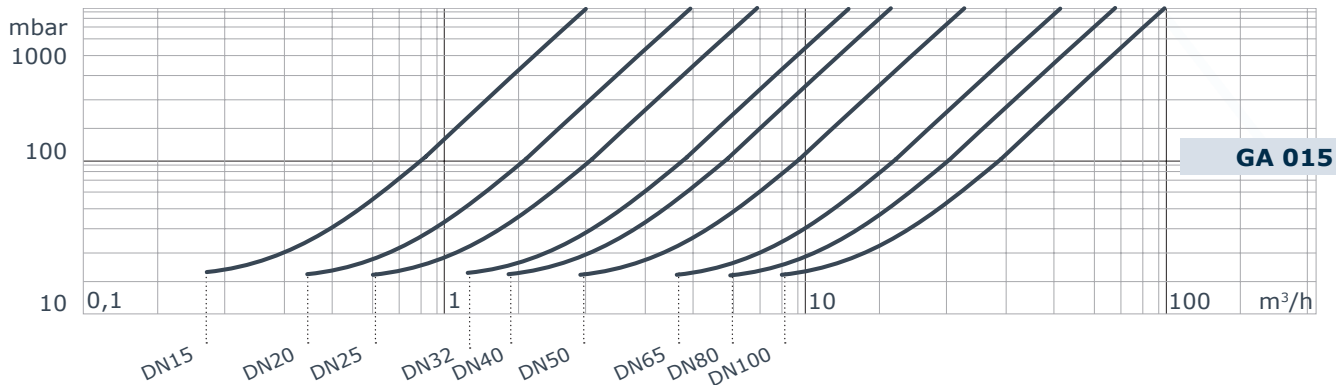


GA 015

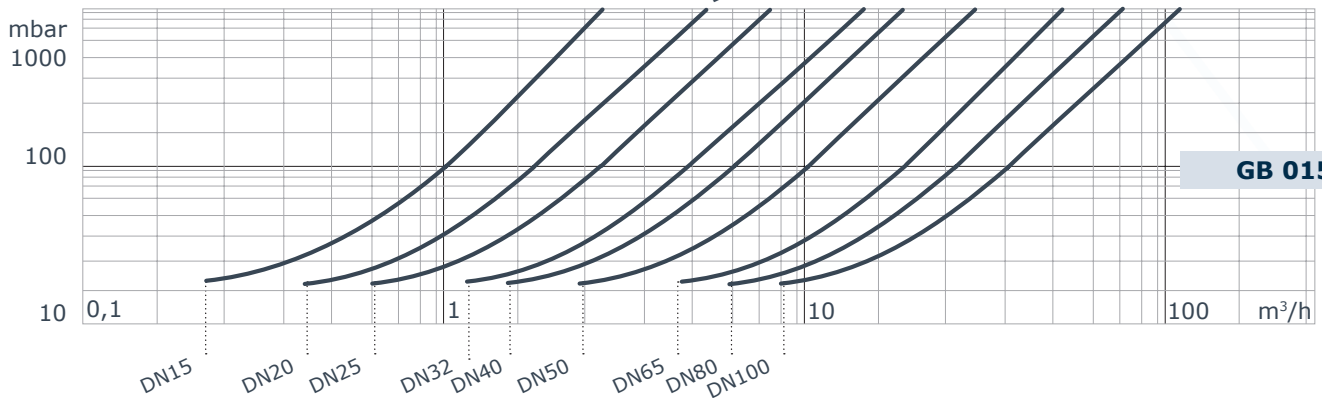
GB 015

GB 023

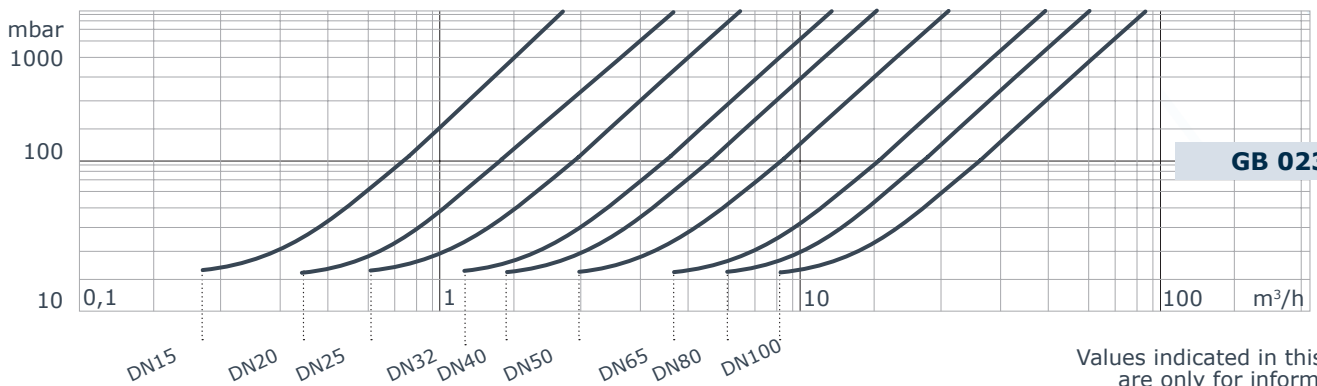
Head losses (H2O - 20°C - horizontal flow, standard spring)



GA 015



GB 015



GB 023

Values indicated in this table are only for informations

Formula for calculation of equivalent flow rate to H2O

$$Q_e = Q \sqrt{\frac{d}{1000}}$$

For different liquid, gas or steam head losses are determined by equivalent water flow rate, as follows:

Q_e equivalent water flow (m³/h o l/s) Q fluid flow (m³/h o l/s) d fluid specific gravity (Kg/m³)

Temperature - pressure diagram

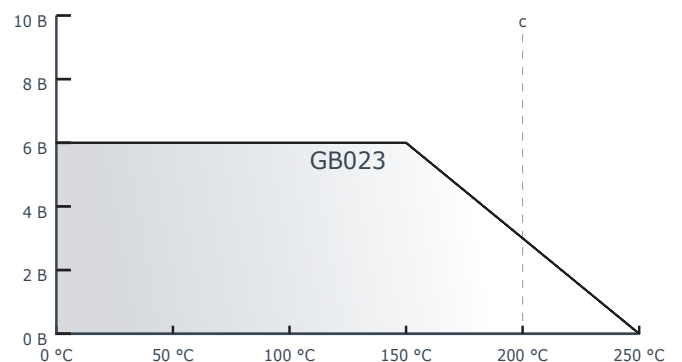
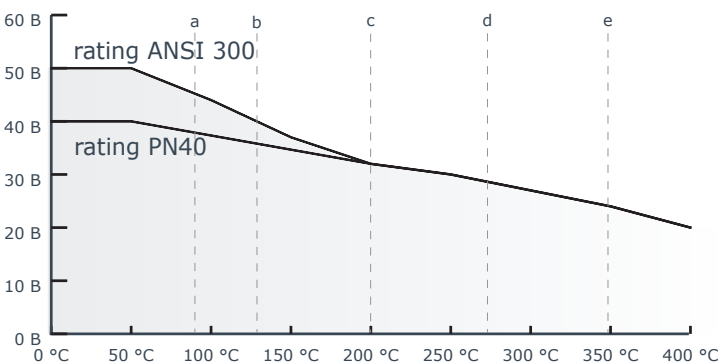
a NBR T_{MAX} = 95°C

b EPDM T_{MAX} = 130°C

c FKM T_{MAX} = 200°C

d spring AISI 316 T_{MAX} = 270°C

e spring HASTELLOY C4 T_{MAX} = 350°C





GN 011 - GN 015 - GN 115 DN 15 - 100 • 1/2" - 4"

Features and Advantages

Little dimensions and low weights.
Face to face acc. to **DIN EN 558-2 Series 52 (DIN 3202 K5)**
Opening pressure from 20 to 500 mBar.
No leakage with soft seat; acc. to DIN 3230 BN3 with metallic seat. Low head losses.
Usable also as vacuum breaker, overpressure and bottom valve.

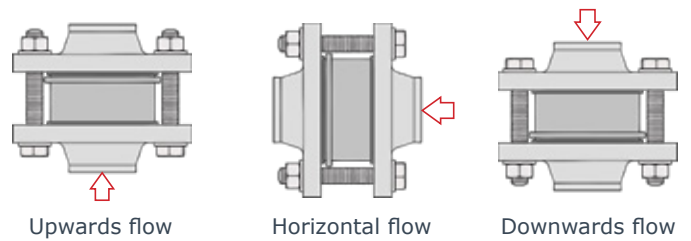
GN 011 - GN 015 - GN 115 P max: 52 Bar

Flange:

GN011 GN015 DN 15÷100 PN 10÷40, A150÷300
GN115 DN 15÷80 PN 10÷40, A150÷300

GT 011 - GT 015 - GT 115 DN 15 - 100 • 1/2" - 4"

To be installed in any position



GT 011 - GT 015 - GT 115 P max: 160 Bar

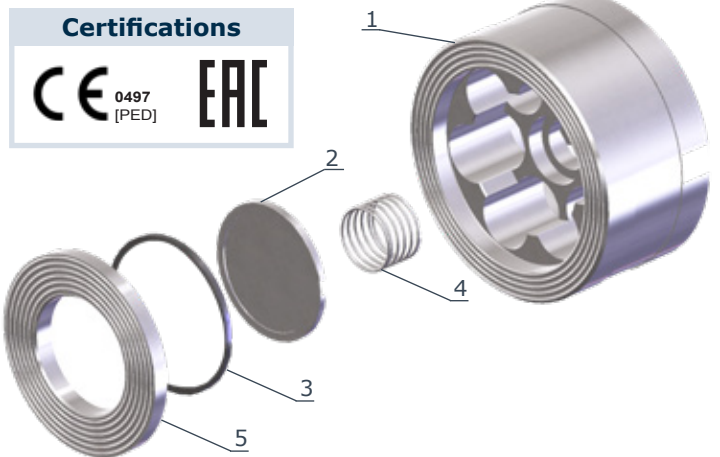
Flange:

GT011 GT015 DN 15÷100 PN 63÷160, A600÷900
GT115 DN 15÷80 PN 63÷160, A600÷900

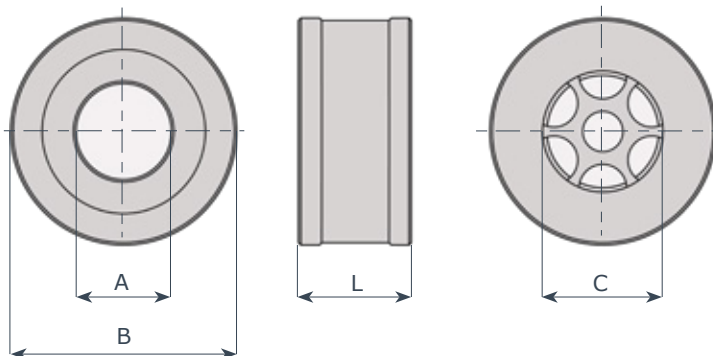
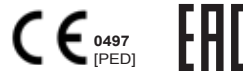
This type of valve cannot be used with spirometallic packing.

item	q.ty	part	GN 011 - GT 011	GN 015 - GT 015	GN 115 - GT 115
			material	material	material
1	1	body	• zinc plated steel A105	• A182 (AISI 316)	• Hastelloy B574/99
2	1	disc -standard	• A240 (AISI 316L)	• A240 (AISI 316L)	• Hastelloy B574/99
3	1	O Ring	• NBR • EPDM • FKM • PTFE	• NBR • EPDM • FKM • PTFE	• NBR • EPDM • FKM • PTFE
4	1	spring -standard on request	• AISI 316	• (AISI 316) • Hastelloy C4	• Hastelloy C4
5	1	seat	• A182 (AISI 316)	• A182 (AISI 316)	• Hastelloy B574/99

minimum opening pressure with standard springs										
flow	DN	15	20	25	32	40	50	65	80	100
△	mBar	25	25	25	27	29	29	31	32	33
▷	mBar	23	23	23	24	25	25	26	26	27
▽	mBar	21	21	21	21	21	21	21	21	21
△ without spring	mBar	2	2	2	3	4	4	5	5	6



Certifications



DN	GT Series								
	15	20	25	32	40	50	65	80	100
A	15	20	24	30	38	47	62	77	96
B	46	60	70	80	90	107	130	145	178
C	21	25	30	40	48	60	85	90	110
L	25	31.5	35.5	40	45	56	63	71	80
Kg	0.3	0.6	1	1.3	1.8	2.5	4	5.9	8

DN	GN Series								
	15	20	25	32	40	50	65	80	100
A	15	20	24	31	38	47	62	77	96
B	46	56	69	75	85	107	125	138	165
C	21	25	30	40	48	60	88	90	110
L	25	31.5	35.5	40	45	56	63	71	80
Kg	0.3	0.6	1	1.3	1.8	2.5	4	5.9	8

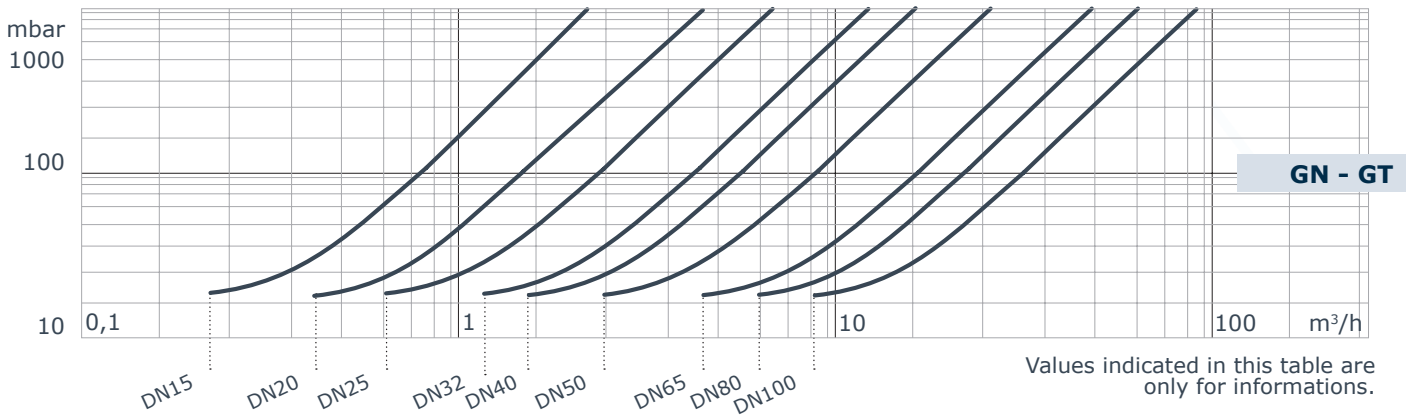


GN 011 - GN 015

GT 011 - GT 015

GN 115 - GT 115

Head losses (H₂O - 20°C - horizontal flow, standard spring)



Values indicated in this table are only for informations.

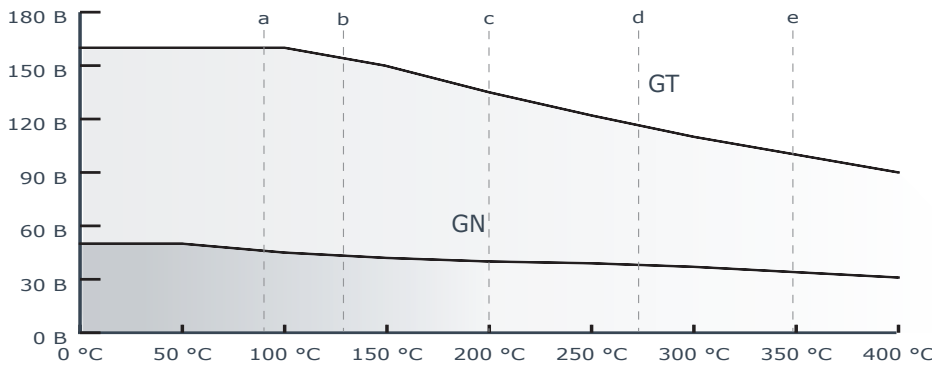
Formula for calculation of equivalent flow rate to H₂O

$$Q_e = Q \sqrt{\frac{d}{1000}}$$

For different liquid, gas or steam head losses are determined by equivalent water flow rate, as follows:

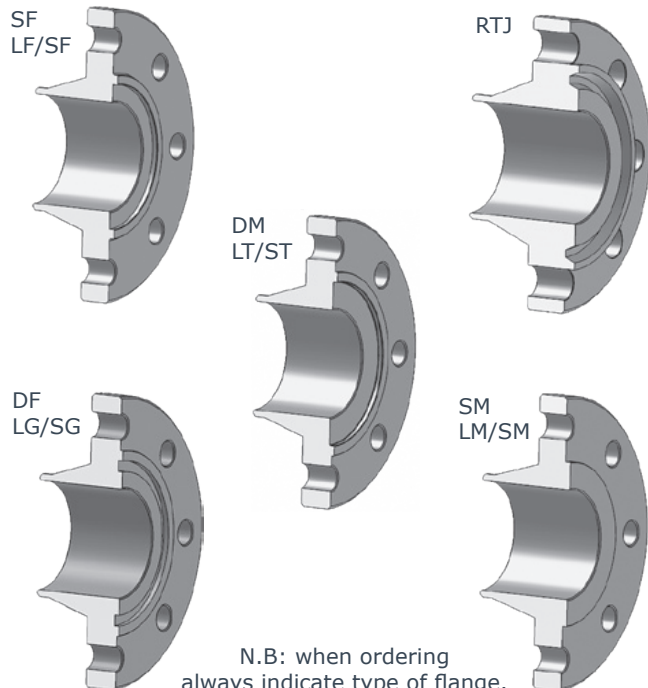
Q_e equivalent water flow (m³/h o l/s) Q fluid flow (m³/h o l/s) d fluid specific gravity (Kg/m³)

Temperature - pressure diagram



- a NBR T_{MAX} = 95°C
- b EPDM T_{MAX} = 130°C
- c FKM PTFE T_{MAX} = 200°C
- d spring AISI 316 T_{MAX} = 270°C
- e spring HASTELLOY C4 T_{MAX} = 350°C

GN and GT valves can be inserted between following flanges:



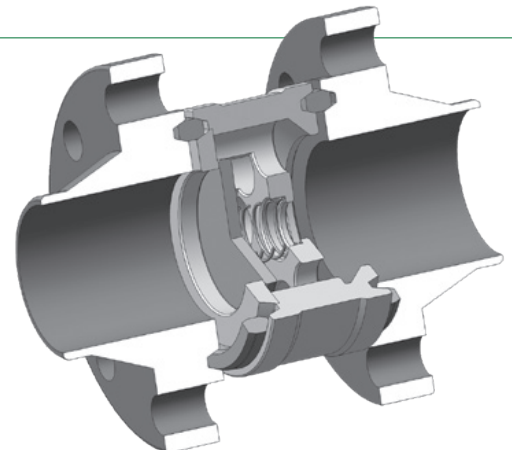
N.B: when ordering always indicate type of flange.

special spring table

DN	15	20	25	32	40	50	65	80	100
50 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y
100 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y
200 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y
300 mBar	Y	Y	Y	Y	Y	Y	Y	Y	Y
500 mBar	Y	Y	Y	Y	Y	Y	N	N	N

Y = available / N = not available
Opening values may vary ±10%

Application of GT valves with ANSI RTJ flanges:



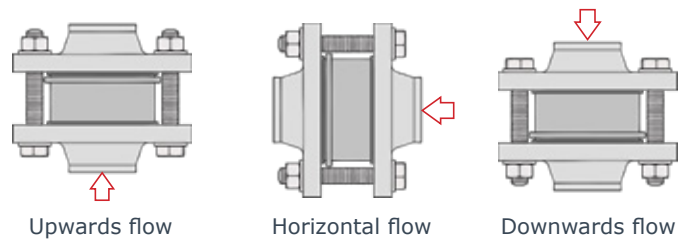


GH 011 - GH 015 DN 125- 200 • 5" - 8"

Features and Advantages

Little dimensions and low weights.
Face to face acc. to **DIN EN 558-1 Series 49 (DIN 3202 K4)**.
Opening pressure from 10 to 500 mBar.
Usable also as vacuum breaker, overpressure and bottom valve.
No leakage with soft seat.
acc. to DIN 3230 BN3 with metallic seat.
Low head losses.

To be installed in any position



GH 011 - GH 015

P max: 25 Bar

Flange:

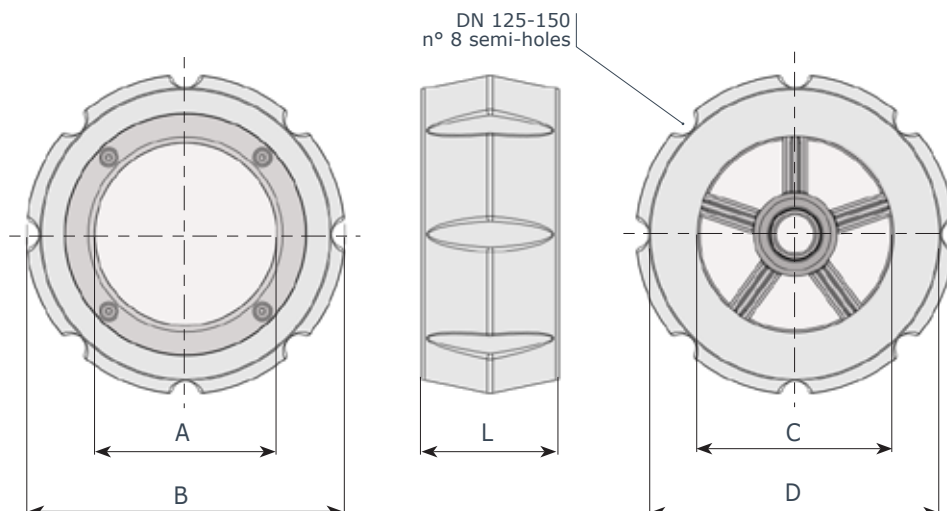
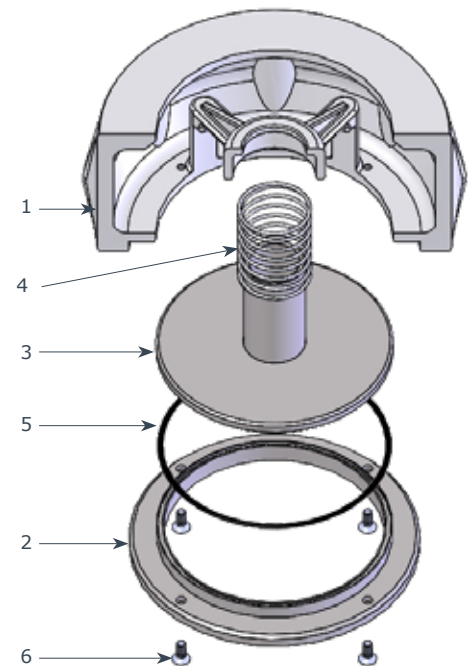
DN 125÷200 PN 10÷25, A150

This type of valve cannot be used with spirometallic packing.

Certifications:



item	q.ty	part	GH 011	GH 015
			material	material
1	1	body	• ASTM A216 WCB	• A351 - CF8M (AISI 316)
2	1	seat	• A240 (AISI 316L)	• A240 (AISI 316L)
3	1	disc	• A240 (AISI 316L)	• A240 (AISI 316L)
4	1	spring-standard <i>on request</i>	• AISI 316	• AISI 316 • Hastelloy C4
5	1	O-Ring	• NBR • EPDM • FKM • PTFE	• NBR • EPDM • FKM • PTFE
6	4	screw	• A182 (AISI 316)	• A182 (AISI 316)

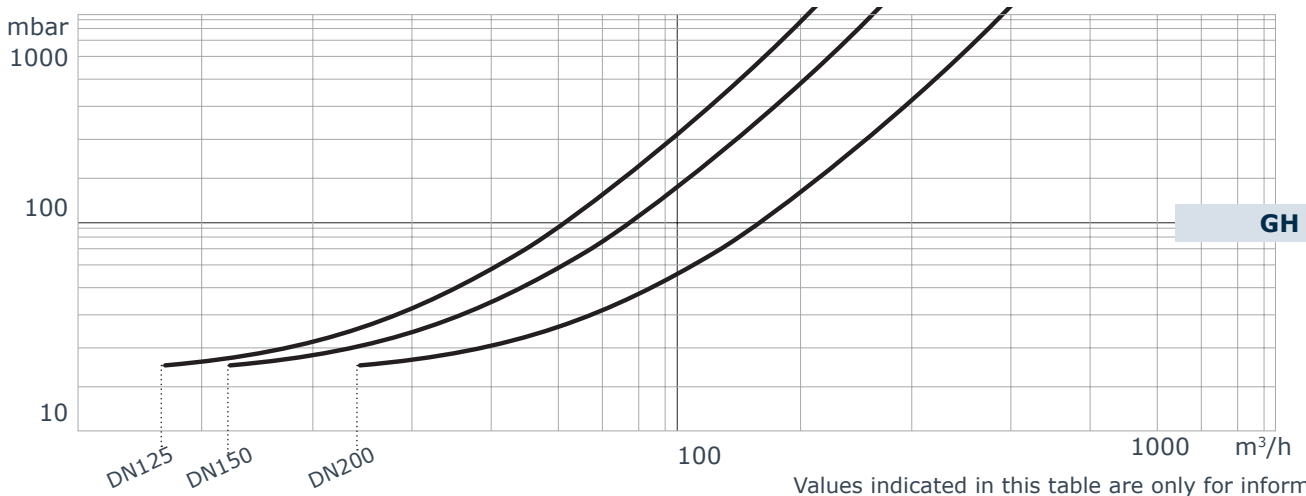


DN	125	150	200
A	120	140	183
B	210	242	273
C	125	150	200
D	192	220	-
L	90	106	140
GH 011 Kg	8.1	12.3	19.0
GH 015 Kg	8.2	12.5	19.3



GH 011 - GH 015

Head losses (H2O - 20°C - horizontal flow, standard spring)



Formula for calculation of equivalent flow rate to H2O

$$Q_e = Q \sqrt{\frac{d}{1000}}$$

For different liquid, gas or steam head losses are determined by equivalent water flow rate, as follows:

Q_e equivalent water flow (m^3/h o l/s)

Q fluid flow (m^3/h o l/s)

d fluid specific gravity (Kg/m^3)

Temperature - pressure diagram

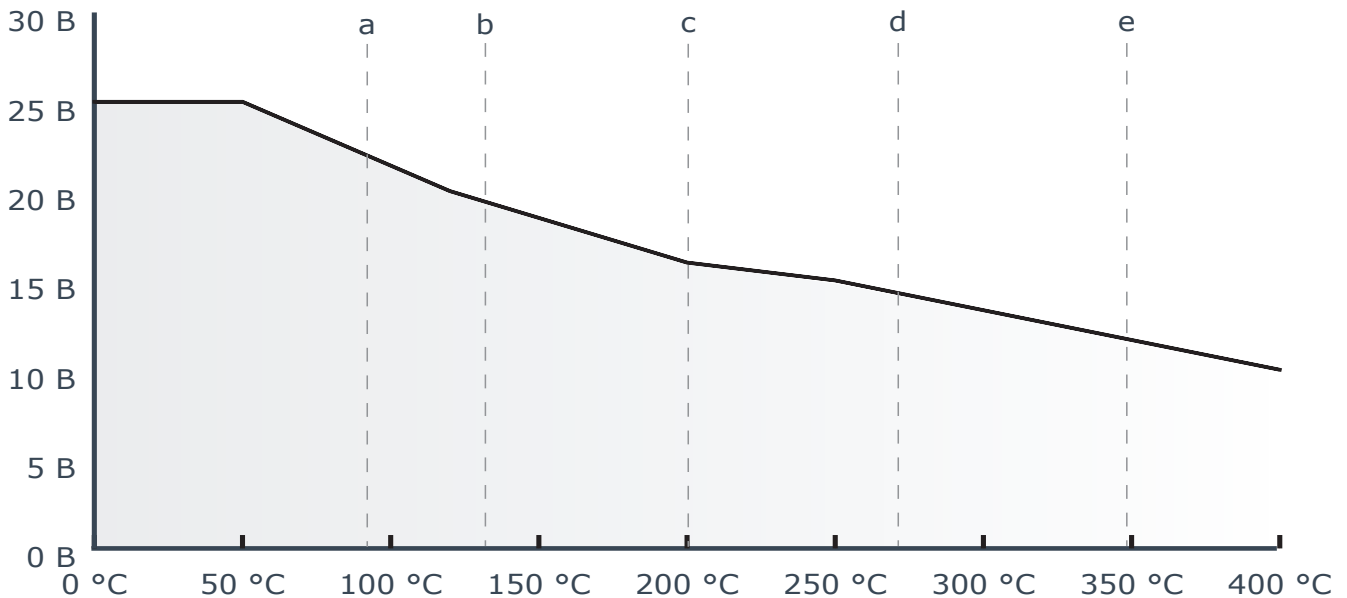
a NBR $T_{MAX} = 95^\circ C$

b EPDM $T_{MAX} = 130^\circ C$

c FKM $T_{MAX} = 200^\circ C$

d spring AISI 316 $T_{MAX} = 270^\circ C$

e spring HASTELLOY C4 $T_{MAX} = 350^\circ C$



Minimum opening pressure with standard springs

flow	DN	125	150	200	flow	DN	125	150	200
△	mBar	34	36	36	▽	mBar	17	18	18
▷	mBar	22	23	27	△ without spring	mBar	8	9	10



GS 011 - GS 015 DN 40 - 500 • 1^{1/2}" - 20"

Features and Advantages

Little dimensions and low weights.
Easy mounting between flanges with any packing. To be installed with vertical (only upwards) or horizontal flow.
For downwards fluids spring version is to be used.
No leakage with soft seat;
acc. to API 598 with metallic seat.
DIN EN 558-1 Series 97
Low head losses.

GS 011 - GS 015

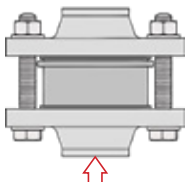
Flange:

DN 40÷500 PN 6÷16, A150 - P max:25 Bar
DN 40÷300 ANSI 300 - P max:52 Bar

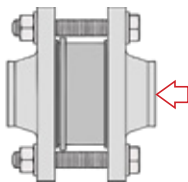
Certifications:



To be installed in two positions



Upwards flow



Horizontal flow

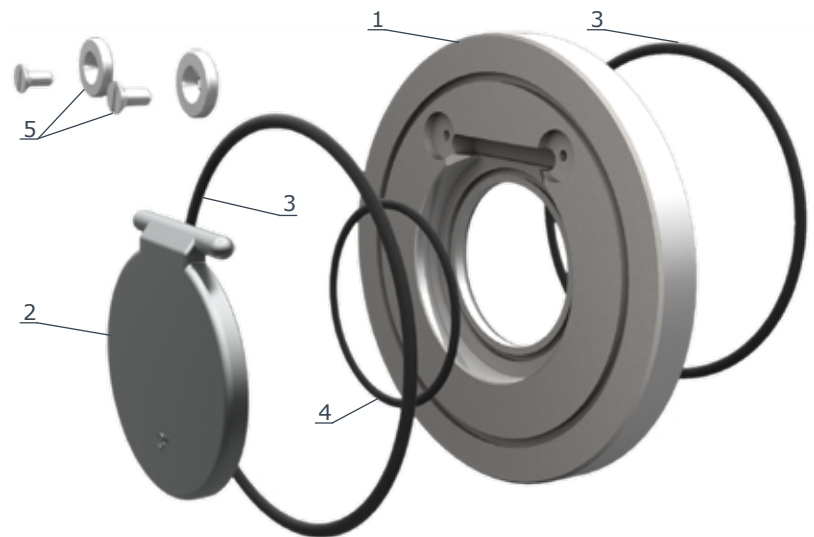
NOTE 1

In these pages you will find the description of the standard swing check valves.

On request different materials can be supplied (Aluminium-Bronze, Hastelloy, Monel, Duplex, etc.).

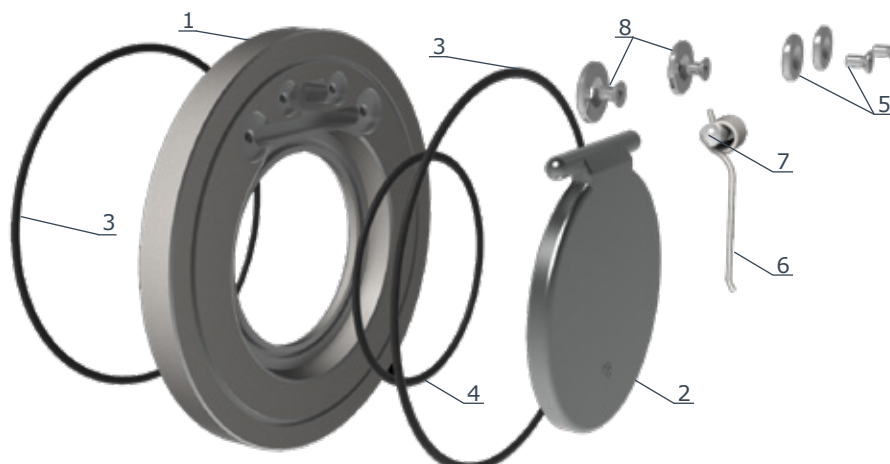
NOTE 2

The standard GS valve model can be installed between flanges with spirometallic packings only in metal seated version (without O-rings) and with valve body Stock finish AARH 125-250.



standard type

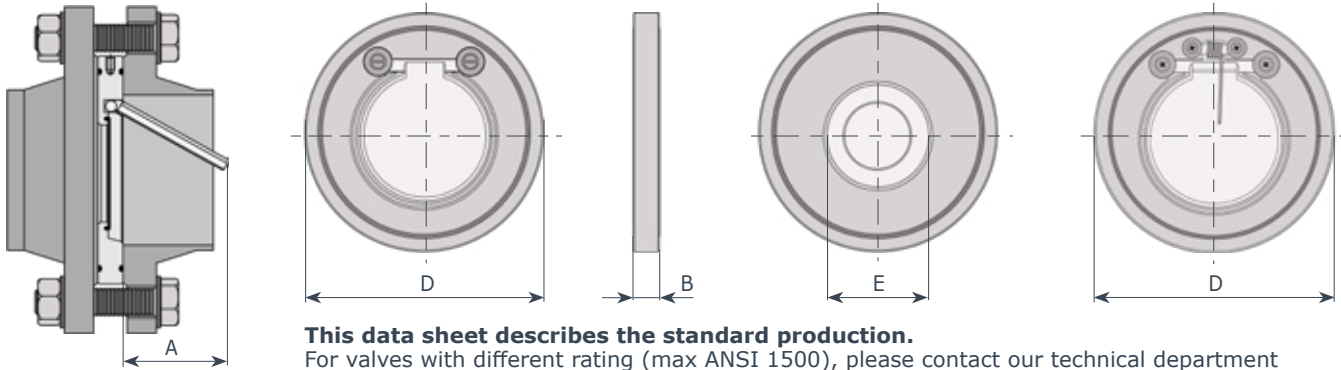
			GS 011	GS 015
item	q.ty	part	material	material
1	1	body	• zinc plated steel	• AISI 316
2	1	clapet	• AISI 316 (DN 40-200) • zinc plated steel (DN 250-500)	• AISI 316
3-4	1	O.ring	• NBR (BUNA) • EPDM • FKM (VITON) • PTFE	• NBR (BUNA) • EPDM • FKM (VITON) • PTFE
5	2 + 2	screw	• AISI 316	• AISI 316
6	1	spring	• AISI 316	• AISI 316
7	1	pin	• AISI 316	• AISI 316
8	2 + 2	screw	• AISI 316	• AISI 316



spring type



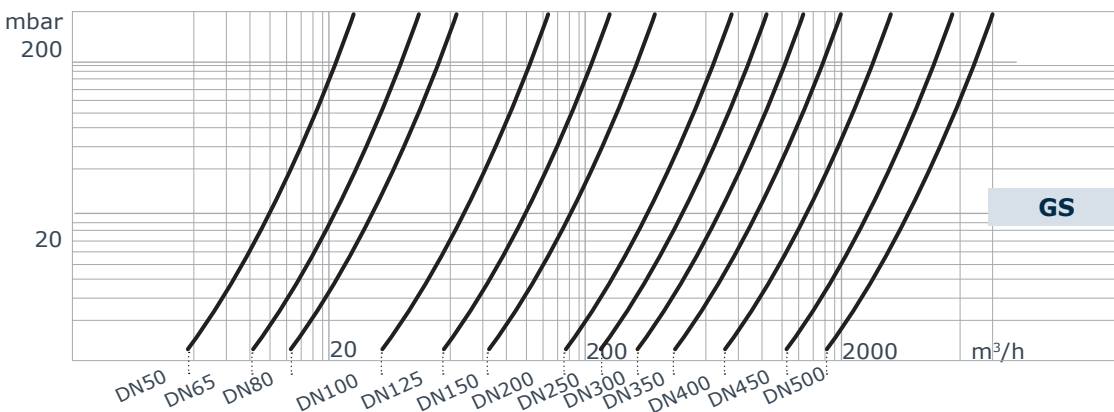
GS 011 - GS 015



This data sheet describes the standard production.
For valves with different rating (max ANSI 1500), please contact our technical department

DN	A	PN 6			PN 10			PN 16			ANSI 150			Kg max	ANSI 300			Kg
		D	E	B	D	E	B	D	E	B	D	E	B		D	E	B	
40	30	88	22	14	95	22	14	95	22	14	86	22	14	0.7	95	22	14	0.7
50	35	98	32	14	109	32	14	109	32	14	106	32	14	0.9	109	32	14	0.9
65	48	118	40	14	128	40	14	128	40	14	124	40	14	1.2	128	40	14	1.2
80	60	134	54	14	145	54	14	145	54	14	138	54	14	1.5	145	54	14	1.5
100	78	154	70	18	164	70	18	164	70	18	175	70	18	2.5	179	70	18	3.2
125	98	184	92	18	195	92	18	195	92	18	195	92	18	3.2	214	92	32	7.6
150	117	209	112	20	221	112	20	221	112	20	221	112	20	5.3	249	112	32	10.3
200	160	264	154	22	275	154	22	275	154	22	279	154	22	9.7	308	154	42	19.7
250	200	319	200	26	330	200	26	330	200	26	339	200	26	16.2	359	200	47	24.8
300	235	375	240	32	380	240	32	387	240	32	410	240	32	28	425	240	52	45.6
350	258	425	270	38	440	270	38	447	270	38	450	270	38	32	-	-	-	-
400	300	475	310	44	490	310	44	495	310	44	514	310	44	48	-	-	-	-
450	331	530	355	50	540	355	50	557	355	50	548	355	50	63	-	-	-	-
500	368	580	405	56	595	405	56	619	405	56	605	405	56	87	-	-	-	-

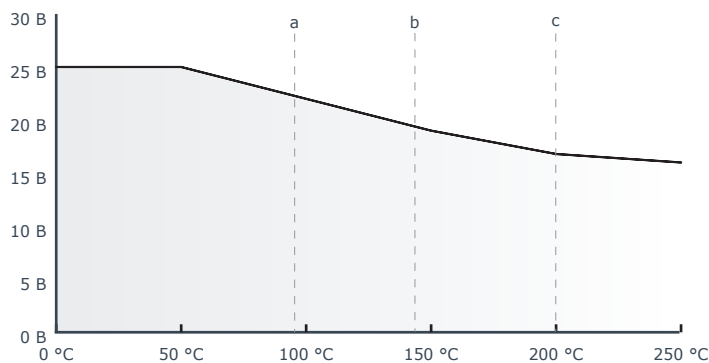
Head losses (H2O - 20°C - horizontal flow)



- a NBR T_{MAX} = 95°C
- b EPDM T_{MAX} = 130°C
- c VITON T_{MAX} = 200°C
- PTFE T_{MAX} = 200°C

Values indicated in this table are only for informations.

Temperature - pressure diagram



Formula for calculation of equivalent flow rate to H2O

For different liquid, gas or steam head losses are determined by equivalent water flow rate, as follows:

$$Q_e = Q \sqrt{\frac{d}{1000}}$$

- Q_e equivalent water flow (m³/h o l/s)
- Q fluid flow (m³/h o l/s)
- d fluid specific gravity (Kg/m³)







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