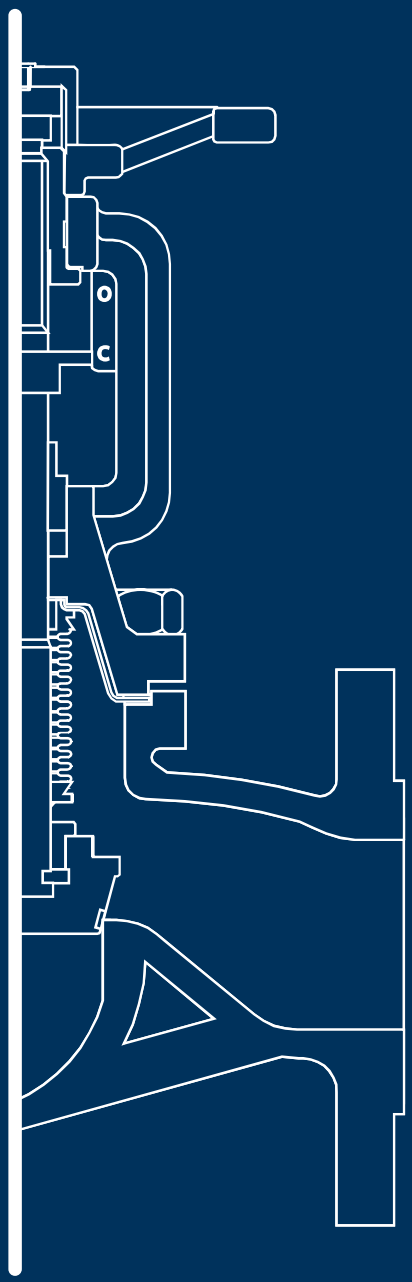
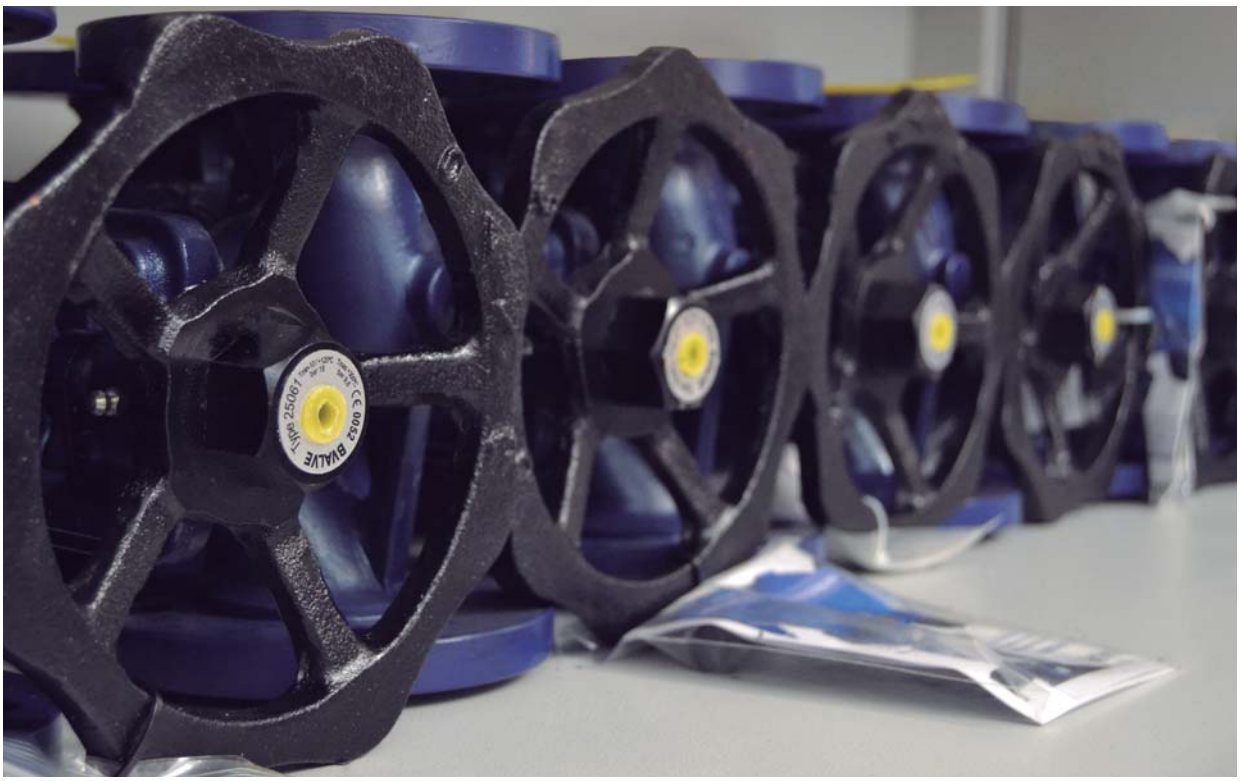


BVALVE®

Manufacturing range



Bellows sealed valves

BVALVE	High quality bellows sealed valves	page 02
BV25061	**PN16** Cast Iron	page 14
BV25064	**PN16** Nodular Cast Iron	page 15
BV25063	**PN25** Nodular Cast Iron	page 17
BV25065	**PN40** Carbon steel	page 23
BV25066	**PN40** Stainless Steel	page 25
BV25065HP	**PN40** Carbon steel	page 31
BV25066HP	**PN40** Stainless Steel	page 33
CONNECTIONS	Butt weld / other flange connections	page 34
ACTUATORS	Electric / pneumatic actuators	page 36
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Gland packing globe valve

BV25060	**PN16** Cast Iron	page 41

Pressure reducing valve

PRV50065	Pressure Reducing Valve (Steam)	page 46
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Traps and strainers

BV66	Thermodynamic disc traps	page 51
BV500	Float trap with thermostatic air vent	page 52
BV12064	Y type strainers - Flanged ends PN16	page 54
BV12065	Y type strainers - Flanged ends PN40	page 56
BV800	Y type strainers - Threaded ends	page 58

BVALVE High quality bellows sealed valves

BVALVE manufactures high quality bellows sealed globe valves. Our company guarantees the quality and the perfect tightness of our valves according to EN standards.

BVALVE valves are ideal to be applied on: steam industrial boilers, chemical, petrochemical and process industries. Most important applications are steam, thermal oil, overheated water and chemical products.

Besides, our products are characterized by quality and full safety, due to oversized components, free rotating disc, conical plug and the non ejectable stem.

BVALVE submits all of its products to pressure and tightness tests. Therefore, in order to verify the resistance of all components, valves are tested through thousands of opening and closing cycles.

CE 0052 TÜV NORD CERTIFIED TA-LUFT VDI 2440

Machining

Painting

Micrometer

Test bench

Stock

Stock

Features of high quality bellows sealed valves

BVALVE Bellows Sealed Globe Valves include flanges designed according to EN 1092, face to face distance as per EN 558-1, ACME threaded stem screws and grounded shafts. Moreover, our stainless steel multilayer bellows are designed for a long life service as they display a minimum life cycle as per MSS SP-117. Further premium characteristics include metal back seat, safety stuffing box packing made of pure graphite, and graphite-stainless steel gasket, housed in tongue and grooved flanges. Besides, our hard faced stainless steel plugs show a conical shape while being able to rotate 360º.

Free rotating conical plug: Our 360º free rotation plugs improve the cleaning of dirt or impurities fluids may carry allowing a tighter clousure while avoiding vibrations from being transmitted to the valve stem.

Multi-layer bellow: Depending on their sizes, our valves contain double, triple and quadruple bellows which are welded to the stems and not to the plug, preventing them from transmitting vibrations to the bellows and therefore extending ther lives.

Non ejectable stems: Stem includes mechanical stop which at the same time perform the function of locking metal to metal in the opened positions and hence prevent stems from being ejected due to process pressures. Meanwhile, mechanical stop adds robustness when valves are opened. Furthermore, our valves are equipped with pure graphite safety packings.

Kvs values

Definition of Kv value:

Kv value is the amount of water (m^3/h) at 20°C that flows through a valve at a fix opening rate (%) when pressure drop between inlet/outlet is 1 bar. Kvs is the Kv value when valve is 100% opened.

Determination of Kv value

Liquids (water, etc.)	$K_V = Q \cdot \sqrt{\frac{\rho}{1000 \cdot \Delta P}}$	K_V = Flow coefficient (m^3/h) Q = Volumetric flow (m^3/h) ρ = Density (kg/m^3)
Saturated steam	Subcritical flow $\Delta P < \frac{P_1}{2}$ $K_V = \frac{G}{22{,}4\ \sqrt{\Delta P \cdot P_2}}$	K_V = Flow coefficient (m^3/h) G = Mass flow (kg/h) ΔP = Pressure drop (bar) P_1 = Upstream pressure (bar a) P_2 = Downstream pressure (bar a)
	Critical flow $\Delta P > \frac{P_1}{2}$ $K_V = \frac{G}{11.2 \cdot P_1}$	
Superheated steam	Subcritical flow $\Delta P < \frac{P_1}{2}$ $K_V = \frac{G}{31{,}7 \cdot \sqrt{\Delta P / V_2}}$	K_V = Flow coefficient (m^3/h) G = Mass flow (kg/h) ΔP = Pressure drop (bar) P_1 = Upstream pressure (bar a) P_2 = Downstream pressure (bar a) V_2 = Specific volume (m^3/h) @ P_2, T_1 V = Specific volume (m^3/h) @ $P_1/2$, T_1
	Critical flow $\Delta P > \frac{P_1}{2}$ $K_V = \frac{G}{22{,}4 \sqrt{\Delta P / V}}$	
Gases	Subcritical flow $\Delta P < \frac{P_1}{2}$ $K_V = \frac{Q_N}{514} \sqrt{\frac{\rho_N \cdot T_1}{\Delta P \cdot P_2}}$	K_V = Flow coefficient (m^3/h) Q_N = Volumetric flow (Nm^3/h) ρ_N = Density (kg/Nm^3) T_1 = Upstream temperature (K) ΔP = Pressure drop (bar) P_1 = Upstream pressure (bar a) P_2 = Downstream pressure (bar a)
	Critical flow $\Delta P > \frac{P_1}{2}$ $K_V = \frac{Q_N}{257 \cdot P_1} \sqrt{\rho_N \cdot T_1}$	

Simplified sizing ecuations acc. to ISA and IEC standards

Permissible differential pressure acc. EN 13709

PN	DN													
	15	20	25	32	40	50	65	80	100	125	150	200	250	300
PN 16	16											14	9	6
PN 25	25										21	14	9	6
PN 40	40									33	21	14	9	6

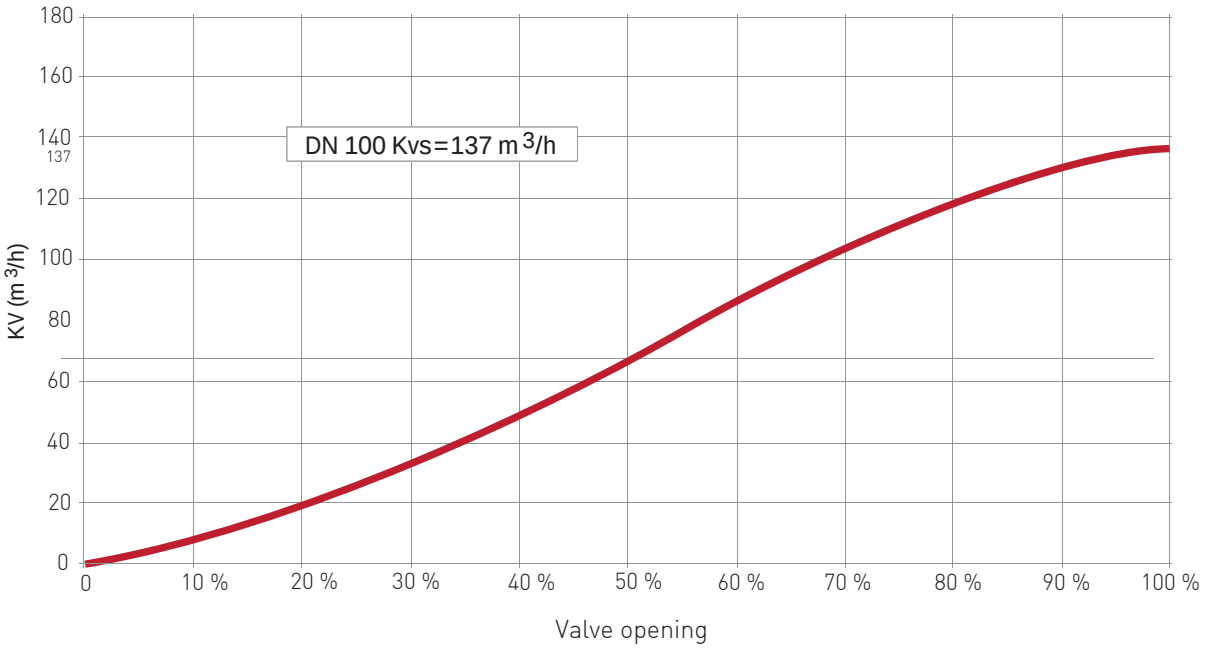
Kvs values

Kvs value standard plug

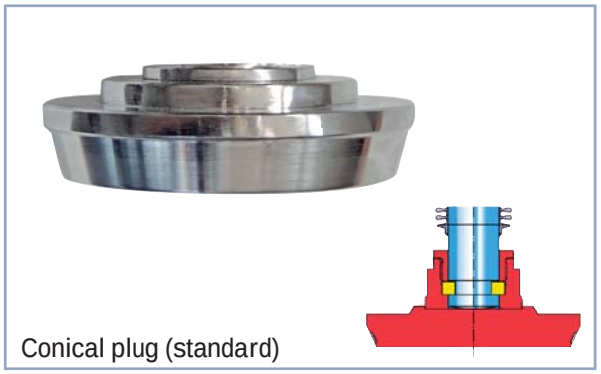
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
KVS	4.8	7.3	11.7	17.8	27.3	43	75.1	111	176	264	369	701	1056	1691

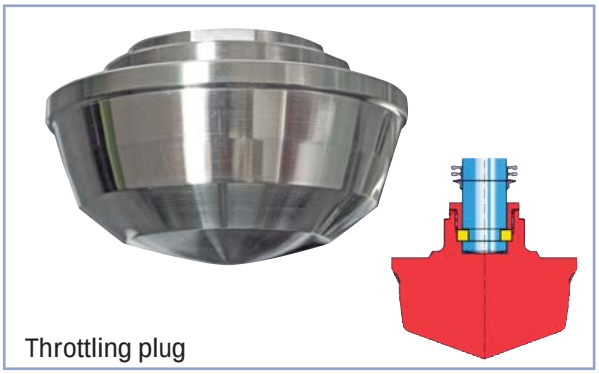
Throttling plug Kvs value

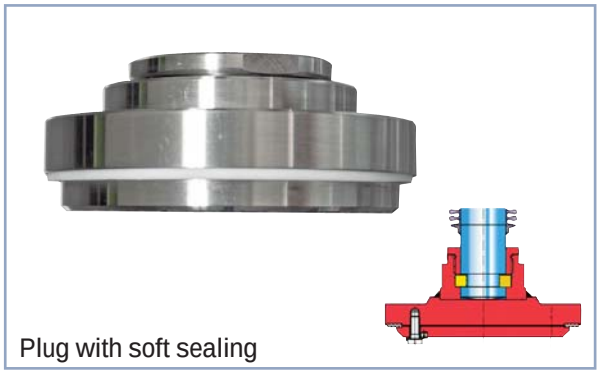
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
KVS	4.36	6.76	9.21	16.3	25.1	36.8	61.7	91.6	137	184	287	471	898	1410

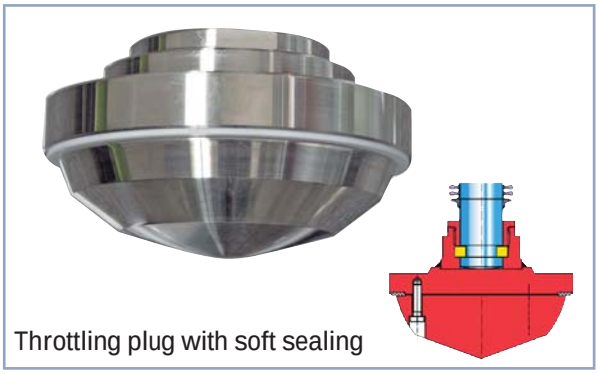


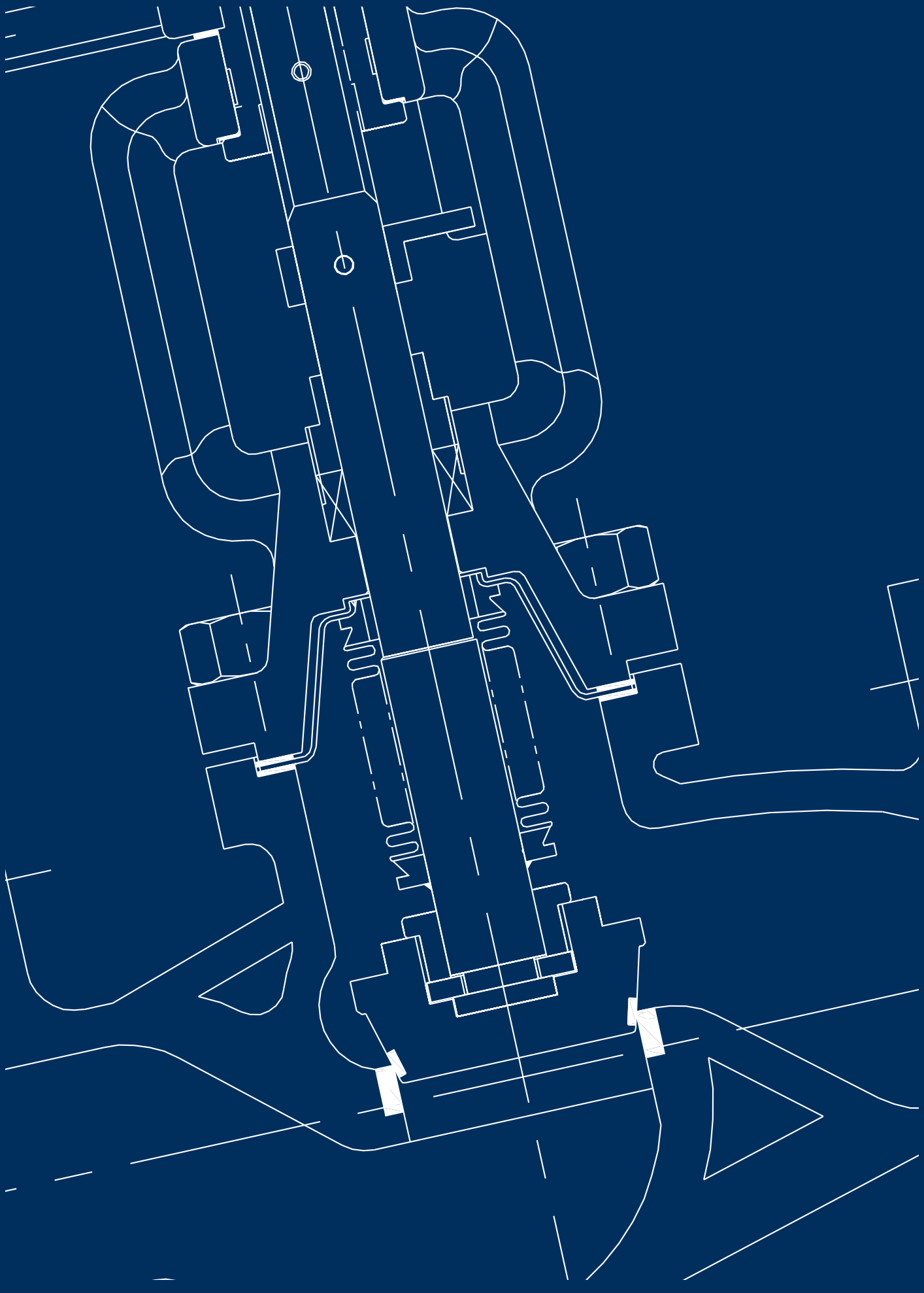
Optional plug types











BVALVE

Bellows sealed valves

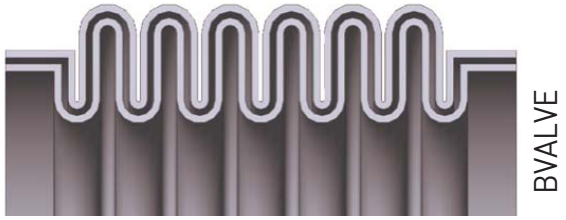
PN16-PN25

Competitor advantages of BVALVE bellows sealed valves

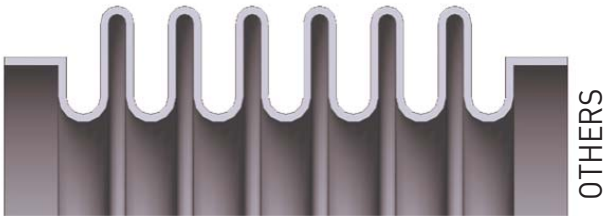
DIN bellows sealed valves have become highly popular in steam and thermal oil markets due to the mass consumption the industry demand has generated.
Unfortunately, this increase in demand has led to a massive manufacturing of these valves at very low prices. This situation has caused a drastic reduction in quality performance and therefore missing this valve's main target, being a maintenance free stop valve.
BVALVE however has avoided reducing our quality standards while maintaining our bellow sealed valves at highly competitive prices.

FEATURES	BVALVE	OTHERS
Non ejectable stem	YES	NO
Metal back seated tightness in opened position	YES	NO
360º free rotation disc	YES	On request
Bearings on the wheel for easy valve operation	YES	NO
Stroke limiter	YES	On request
Wide thread stem that prevents the valve from blocking	YES	NO
Tongued body and bonnet	YES	NO

Multi Layer Bellows

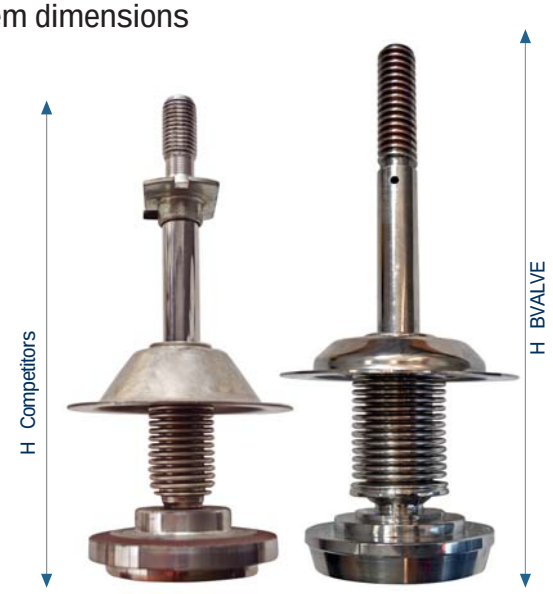


- Double, triple and quadruple layer bellows depending on the size of the valve.
- Bellows designed to support 10,000 operation cycles.
- Bellows are welded to the stem and not to the disc, preventing the transmission of vibrations to the bellows, and therefore extending the life of the bellows.



- Just one bellow layer, which means a lower resistance to breakage.
- Bellows designed to support less than 10,000 operation cycles.
- Bellows are welded to the disc, which transmits the vibrations to the bellows, decreasing their lives.

Stem dimensions

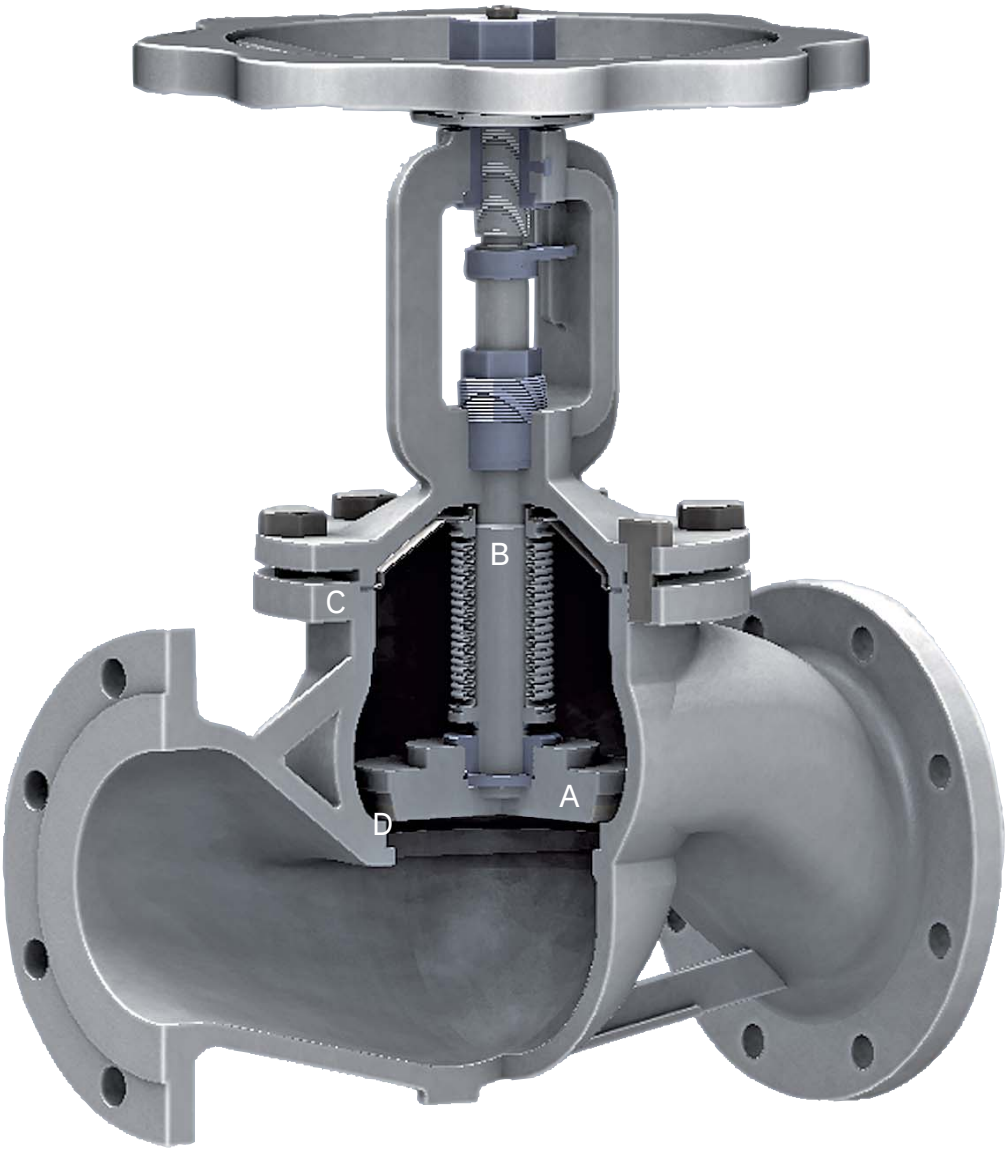


DN	H (mm) BVALVE	H (mm) Competitors
15	210	205
20	210	205
25	225	210
32	225	210
40	250	225
50	260	230
65	300	245
80	330	265
100	390	365
125	400	395
150	485	425
200	590	550
250	750	720

Features of high quality bellows sealed valves

BVALVE Bellows Sealed Globe Valves have flanges acc. to EN 1092-2, face to face as per EN 558-1 and ACME stem screw thread and grounded shaft. Some of Bvalve's premium features are multiply layer bellows with long service life made of stainless steel, minimum life cycle of bellows as per MSS SP-117, metal back seat, safety stuffing box packing made of pure graphite, graphite + stainless steel gasket housed in a tongue and grooved flange, seat ring hard faced, conical disc and 360° rotating plug made of stainless steel + HARD FACED.

- High quality bellow Made in Germany
- Standard 360° free rotation and conical plug (A)
- ZERO LEACKAGE!
- No ejectable stem (B)
- Tongued and grooved body and bonnet (C)
- Plug and seat hardfaced (D)



CE 0052 TÜV NORD

Why BVALVE Bellows sealed valves are the best in the market?

BVALVE launches its own bellow sealed valves, having improved all elements design, and therefore making this valve the best choice in the market.

1 **Free Rotating Plug.** 360º free rotation disc, allowing the cleaning of impurities that may carry the fluid. Besides, closure surface is different in every cycle and at the same time, it does not transmit the vibrations to the valve stem.

2 **Conical Plug.** Lower contact surface between plug and seat enhances a tighter clousure.

3 **Multi Layer Bellows.** Double, triple and quadruple bellows wall depending on the size of the valve. It is welded to the stem and not to the disc, preventing the transmission of vibrations and extending the life of the bellows.

4 **Non Ejectable Stem.** Non ejectable stems: Stem includes mechanical stop which at the same time perform the function of locking metal to metal in the opened positions and hence prevent stems from being ejected due to process pressures. Meanwhile, mechanical stop adds robustness when valves are opened. Furthermore, our valves are equipped with pure graphite safety packings.

5 TA-LUFT Packing

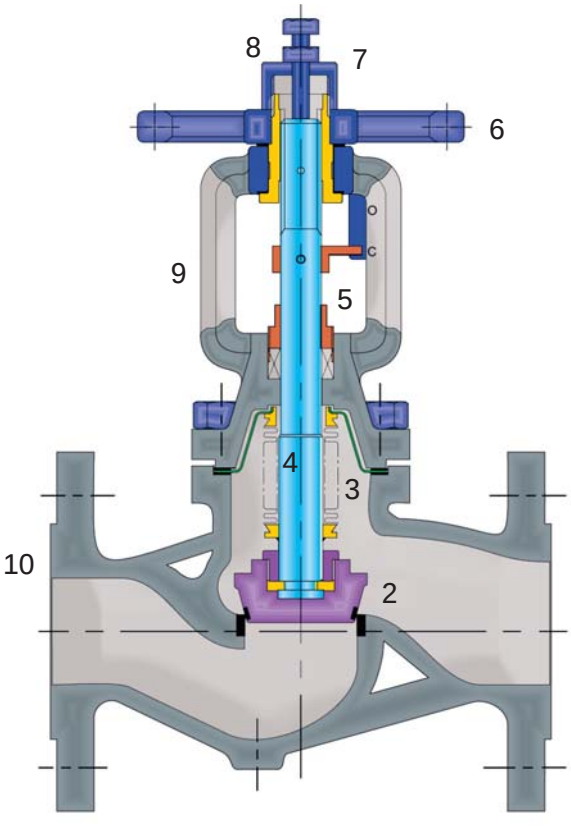
6 Robust and Ergonomic Hand Wheel

7 ACME Thick Thread stem

8 **Stop screw, stroke limiter and lubrificator**. Anti-friction bearings that eases the valve opening and closing.

9 With **robust yoke** design and opening indicator.

10 **Flange faces with thin machining acc. EN 1092,** high quality cast iron and nodular cast iron, EN 10204 3.1 certificate available.



CE 0052 TÜV NORD

BVALVE
CE0052
Tmax +300°C
bar 9.6

BV25061 | PN16 EN 1092-2

Cast Iron EN-JL 1040

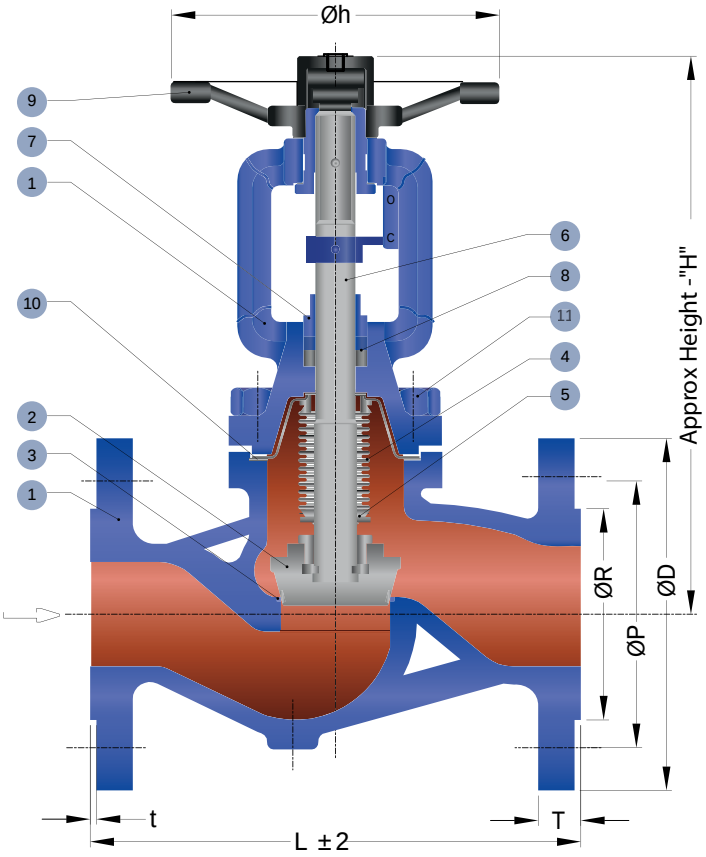
Temperature min. -10°C

Temperature max. +300°C

CE 0052 TÜV NORD

Testing pressure in bar

Hydro	Body	24
	Seat	18
Air	Seat	07



Nº	COMPONENT	MATERIALS
1	Body & Bonnet	EN-JL 1040 Cast Iron
2	Plug	St. Steel 1.4021 + Hard Faced 13% Cr
3	Seat	ASTM - A105 + Hard Faced 13% Cr
4	Bellow	St. Steel 1.4541 / AISI-321
5	Bellow collar	St. Steel 1.4541
6	Stem	St. Steel 1.4006
7	Gland	St. Steel 1.4021
8	Packing	Pure Graphite
9	Hand Wheel	EN-GJS-400-18-LT Nodular
10	Bonnet Gasket	Graphite + Stainless steel
11	Bolt & Nuts	Carbon Steel Gr.10.9

ZERO LEACKAGE
DIN: Rate A acc.EN12266-1

Face to face dimensions acc. to EN558-1
Flanges acc. to EN 1092-2 form B

DN	PN	ØD (outer flange) diameter)	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	16	95	65	46	14	2	4/Ø14	130	150	4	215	4,80
20	16	105	75	56	16	2	4/Ø14	150	150	5	220	5,16
25	16	115	85	65	16	3	4/Ø14	160	150	6.5	230	5,98
32	16	140	100	76	18	3	4/Ø19	180	150	8	235	7,80
40	16	150	110	84	18	3	4/Ø19	200	200	10	255	11,20
50	16	165	125	99	20	3	4/Ø19	230	200	13	265	13,60
65	16	185	145	118	20	3	4/Ø19	290	250	16,5	325	22,90
80	16	200	160	132	22	3	8/Ø19	310	250	20	335	27,40
100	16	220	180	156	24	3	8/Ø19	350	300	25	385	40,30
125	16	250	210	184	26	3	8/Ø19	400	350	32	425	67,20
150	16	285	240	211	26	3	8/Ø23	480	400	38	485	89,20
200	16	340	295	266	30	3	12/Ø23	600	450	51	615	143,50
250	16	405	355	319	32	3	12/Ø28	730	500	63	780	241,00
300	16	460	410	370	32	4	12/Ø28	850	600	75	970	435,00

all dimensions in mm.

WORKING CONDITIONS					
Temperature °C	-10/120	150	200	250	300
Pressure Bar	16	14,4	12,8	11,2	9,6

BV25064 | PN16 EN 1092-2

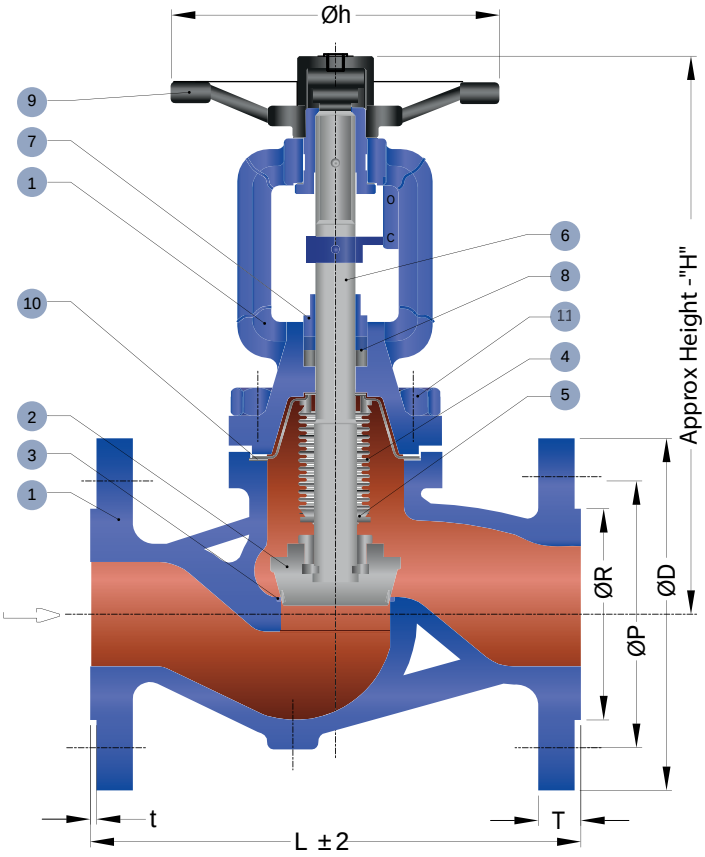
Nodular Cast Iron EN-GJS-400-18-LT

Temperature min. -10°C

Temperature max. +350°C

Testing pressure in bar

Hydro	Body	24
	Seat	18
Air	Seat	07



Nº	COMPONENT	MATERIALS
1	Body & Bonnet	EN-GJS-400-18-LT Nodular Cast Iron
2	Plug	St. Steel 1.4021 + Hard Faced 13% Cr
3	Seat	ASTM - A105 + Hard Faced 13% Cr
4	Bellow	St. Steel 1.4541 / AISI-321
5	Bellow collar	St. Steel 1.4541
6	Stem	St. Steel 1.4006
7	Gland	St. Steel 1.4021
8	Packing	Pure Graphite
9	Hand Wheel	EN-GJS-400-18-LT Nodular
10	Bonnet Gasket	Graphite + Stainless steel
11	Bolt & Nuts	Carbon Steel Gr.10.9

ZERO LEACKAGE
DIN: Rate A acc.EN12266-1

Face to face dimensions acc. to EN558-1
Flanges acc. to EN 1092-2 form B

DN	PN	ØD (outer flange) diameter)	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	16	95	65	46	16	2	4/Ø14	130	150	4	215	4,08
20	16	105	75	56	16	2	4/Ø14	150	150	5	220	5,16
25	16	115	85	65	17	3	4/Ø14	160	150	6.5	230	8,98
32	16	140	100	76	18	3	4/Ø19	180	150	8	235	7,80
40	16	150	110	84	19	3	4/Ø19	200	200	10	255	11,20
50	16	165	125	99	20	3	4/Ø19	230	200	13	265	13,06
65	16	185	145	118	20	3	4/Ø19	290	250	16,5	325	22,90
80	16	200	160	132	22	3	8/Ø19	310	250	20	335	27,40
100	16	220	180	156	24	3	8/Ø19	350	300	25	385	40,30
125	16	250	210	184	26	3	8/Ø19	400	350	32	425	67,20
150	16	285	240	211	26	3	8/Ø23	480	400	38	485	89,20
200	16	340	295	266	30	3	12/Ø23	600	450	51	615	143,50
250	16	400	355	319	32	3	12/Ø28	730	500	64	780	241,0
300	16	455	410	370	24.5	4	12/Ø28	850	600	76	970	410,00

all dimensions in mm.

WORKING CONDITIONS						
Temperature °C	-10/120	150	200	250	300	350
Pressure Bar	16	15,5	14,7	13,9	12,8	11,2

BVALVE
Flow, Systems & Controls

BV25063 | PN25 EN 1092-2

Nodular Cast Iron EN-GJS-400-18-LT

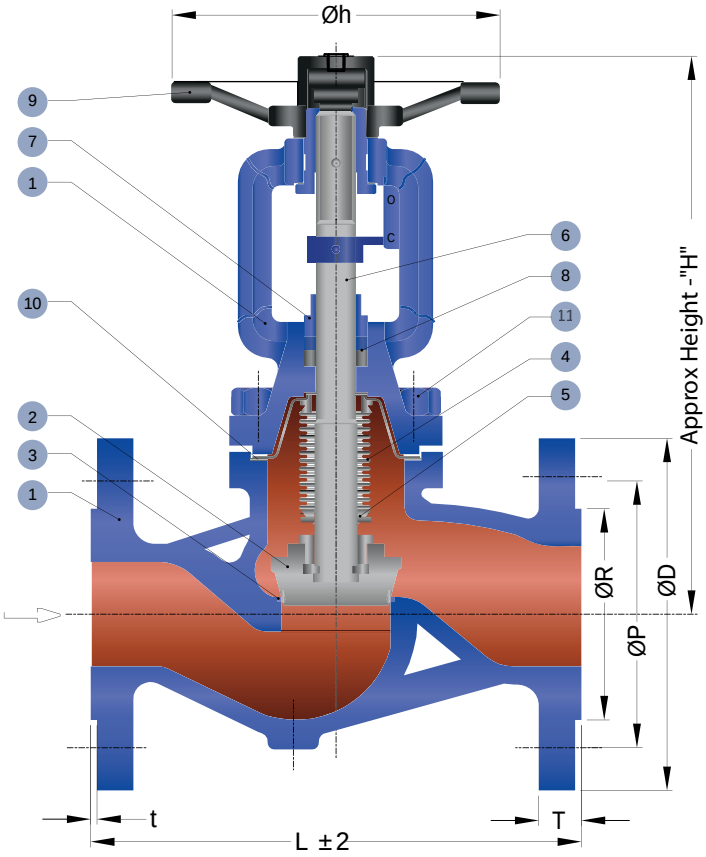
Temperature min. -10°C

Temperature max. +350°C

CE 0052 TÜV NORD

Testing pressure in bar

Hydro	Body	37,5
	Seat	27,5
Air	Seat	07



N°	COMPONENT	MATERIALS
1	Body & Bonnet	EN-GJS-400-18-LT Nodular Cast Iron
2	Plug	St. Steel 1.4021 + Hard Faced 13% Cr
3	Seat	ASTM - A105 + Hard Faced 13% Cr
4	Bellow	St. Steel 1.4541 / AISI-321
5	Bellow collar	St. Steel 1.4541
6	Stem	St. Steel 1.4006
7	Gland	St. Steel 1.4021
8	Packing	Pure Graphite
9	Hand Wheel	EN-GJS-400-18-LT Nodular
10	Bonnet Gasket	Graphite + Stainless steel
11	Bolt & Nuts	Carbon Steel Gr.10.9

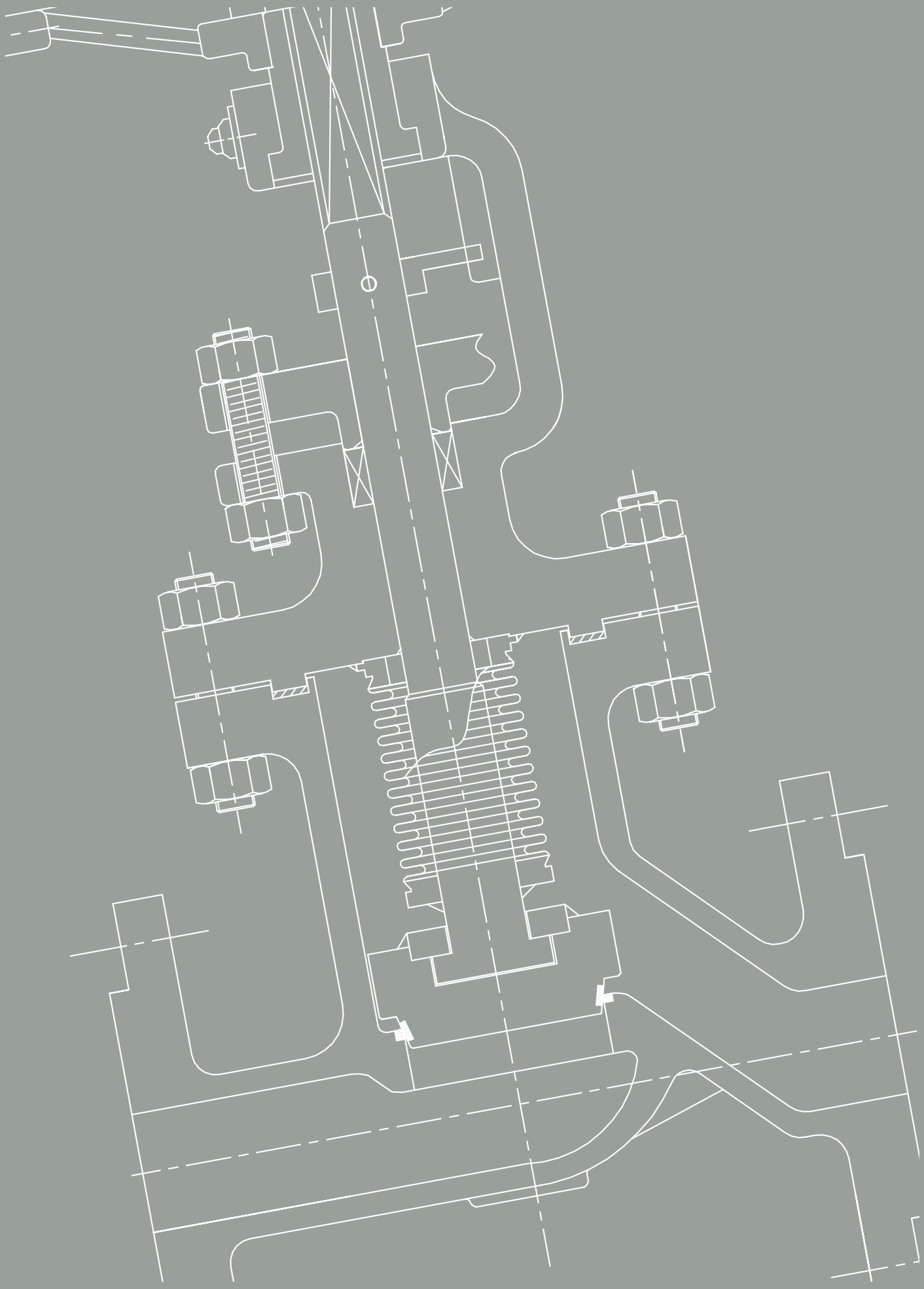
ZERO LEACKAGE
DIN: Rate A acc.EN12266-1

Face to face dimensions acc. to EN558-1
Flanges acc. to EN 1092-2 form B

DN	PN	ØD (outer flange) diameter)	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	25	95	65	46	16	2	4/Ø14	130	150	4	215	5,00
20	25	105	75	56	18	2	4/Ø14	150	150	5	220	5,50
25	25	115	85	65	19	3	4/Ø14	160	150	6.5	230	6,40
32	25	140	100	76	19	3	4/Ø19	180	150	8	235	8,30
40	25	150	110	84	19	3	4/Ø19	200	200	10	265	14,20
50	25	165	125	99	20	3	4/Ø19	230	200	13	275	14,14
65	25	185	145	118	22	3	8/Ø19	290	250	16,5	325	24,80
80	25	200	160	132	24	3	8/Ø19	310	250	20	355	27,90
100	25	235	190	156	24	3	8/Ø23	350	300	25	410	42,20
125	25	270	220	184	26	3	8/Ø28	400	350	32	450	67,00
150	25	300	250	211	28	3	8/Ø28	480	400	38	525	91,00
200	25	360	310	274	34	3	12/Ø28	600	450	51	640	147,00

all dimensions in mm.

WORKING CONDITIONS						
Temperature °C	-10/120	150	200	250	300	350
Pressure Bar	25	24,3	23	21,8	20	17,5



BVALVE

Bellows sealed valves

PN40

Six reasons why our valve is better BV25065

Straight type bellows sealed globe valves for demanding applications can be supplied in carbon steel 1.0619 / WCB and stainless steel 1.4408 / CF8M, both with flanged or buttweld ends.

Application (Carbon steel):

Powerstations, thermal oil processes, gas industry, processing technology, vapour facilities, recycling plants, vacuum installations, etc.

Medium (Carbon steel):

Medium and high pressure steam, superheated steam, gases, thermal oil, overheated water and gases, etc.

Application (Stainless steel):

Recycling plants, chemical industry, process water installations, process with aggressive media

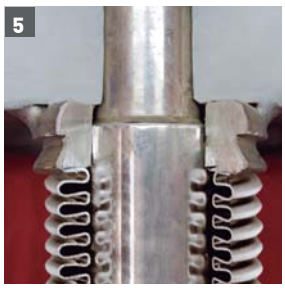
Medium (Stainless steel):

Process water, aggressive media, corrossive and toxic fluids, ethylen dioxide, H_2SO_4, etc.

1. Completely welded multiple layer stainless steel bellows are secured against torque and designed to last for 30,000 operations. These provide higher safety and avoid leakage in case of broken packing.

2. Standard 360º free rotation and conical plug provides a tighter closure while maintaining seat clean from shards. Both seat and plug are made out of hardened chromium steel 1.4021 or armored with stellite.

3. TA-LUFT certified full size safety gland packing made of pure graphite together with our bellows, provide a fully reliable 0 leakage unit. Can also be supplied in PTFE if requested for chemical applications.

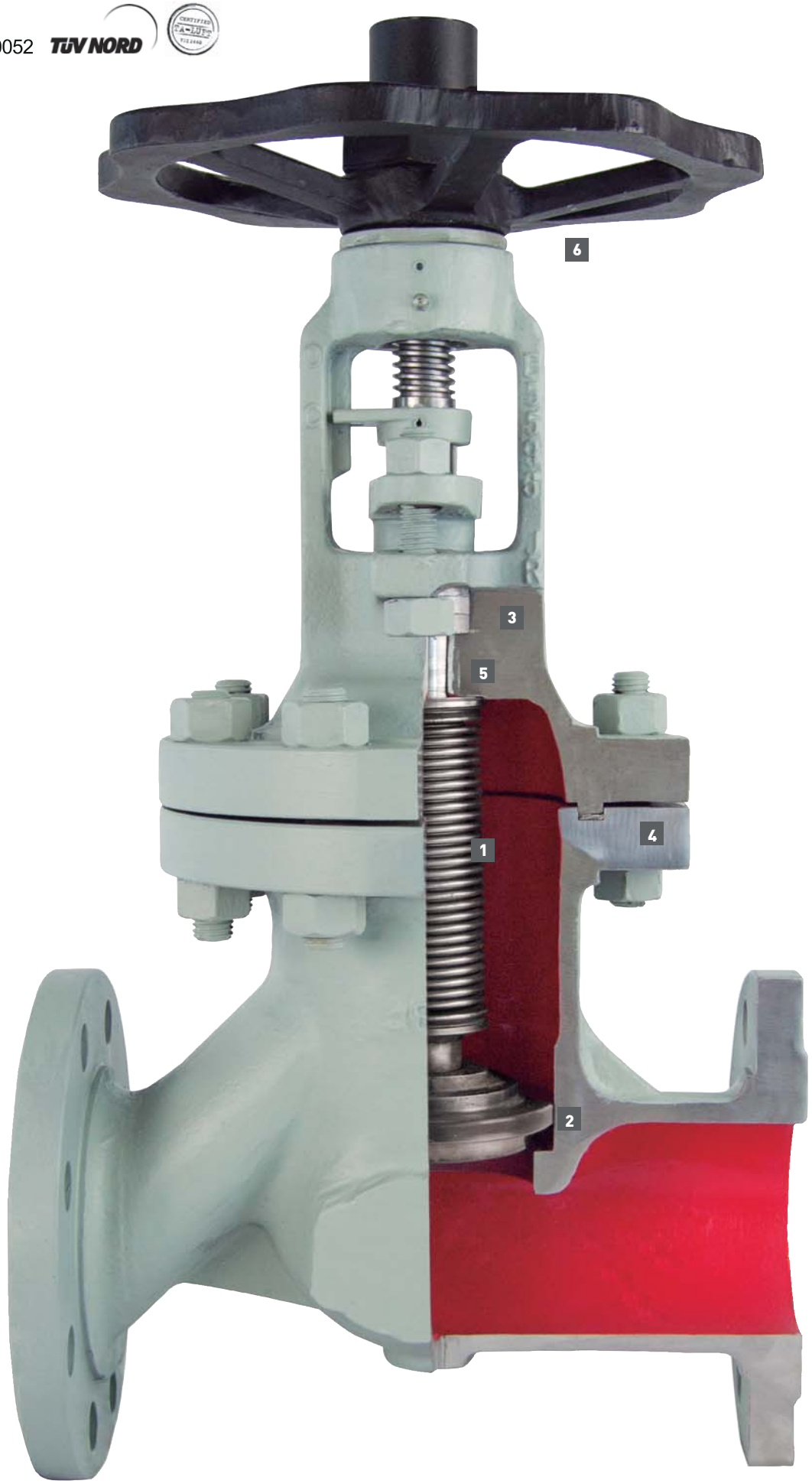


4. Stainless steel cam profiled bonnet gasket coated with pure graphite, mounted in tongue and grooved bonnet flanges reinforces operating safety in case of leakage. Can also be supplied in PTFE if requested for chemical applications.

5. Metal back seat has two features: Mechanical limitation for open position while guaranteeing a zero leackage in case of broken bellows.

6. Oversized wheel for easy handling .Position Indicator allows user to know in which opening / closing stage is the valve without having to operate it.

CE 0052 TÜV NORD



BV25065 | PN40 EN 1092-1

Carbon steel WCB (1.0619)

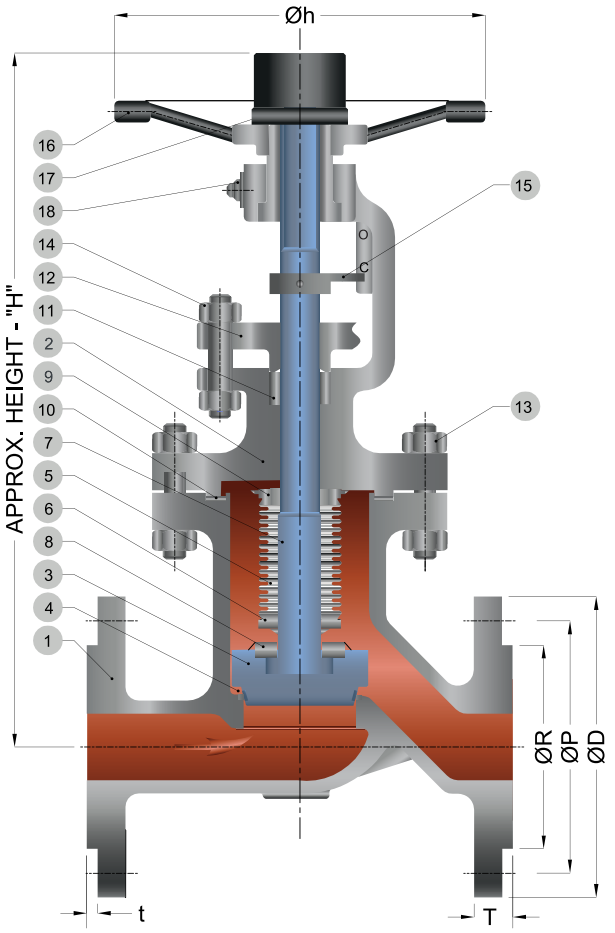
Temperature min. -10°C

Temperature max. +400°C

CE 0052 TÜV NORD

Testing pressure in bar

Hydro	Body	60
	Seat	44
Air	Seat	07



N°	COMPONENT	MATERIALS
1	Body	1.0619 / ASTM - A 216 Gr.WCB
2	Bonnet	1.0619 / ASTM - A 216 Gr.WCB
3	Plug	ASTM - A 217 Gr.CA15 + 13% Cr. OVERLAY
4	Integral seat	ASTM - A 216 Gr.WCB (1.0619) + 13% Cr. OVERLAY
5	Bellow	AISI - 321
6	Bellow collar	ASTM - A 276 TYPE 316
7	Stem	ASTM - A 276 TYPE 410
8	Collar ring	ASTM - A 276 TYPE 410
9	Top collar	ASTM - A 276 TYPE 316
10	Gasket	SPW - SS 304 + GRAPHITE
11	Packing	GRAPHITE
12	Gland bush /Flange	1.0619 / ASTM - A 216 Gr.WCB
13	Fastener	ASTM - A 193 Gr.B7 / A 194 Gr.2H
14	Gland stud & nut	ASTM - A 193 Gr.B7 / A 194 Gr.2H
15	Guide plate/Indicator	CARBON STEEL
16	Hand wheel	MILD STEEL / NODULAR CAST IRON
17	Hand wheelNut/cap	CARBON STEEL
18	Grease nipple	CARBON STEEL

ZERO LEACKAGE
DIN: Rate A acc.EN12266-1
Face to face acc. to EN558-1
Flanges acc. to EN 1092-1 form B

DN	PN	ØD (outer flange) diameter	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	40	95	65	45	16	2	4/Ø14	130	150	4	260	8.5
20	40	105	75	58	18	2	4/Ø14	150	150	5	265	9.5
25	40	115	85	68	18	2	4/Ø14	160	150	6.5	280	11.5
32	40	140	100	78	18	2	4/Ø18	180	200	8	290	17.0
40	40	150	110	88	19	3	4/Ø18	200	200	10	318	19.0
50	40	165	125	102	20	3	4/Ø18	230	200	13	335	21.5
65	40	185	145	122	22	3	8/Ø18	290	250	16,5	415	33.5
80	40	200	160	138	24	3	8/Ø18	310	300	20	440	45.0
100	40	235	190	162	24	3	8/Ø22	350	300	25	515	61.5
125	40	270	220	188	26	3	8/Ø26	400	350	32	600	102.0
150	40	300	250	218	28	3	8/Ø26	480	400	38	655	122.0
200	40	375	320	285	34	3	12/Ø30	600	450	51	788	222.0
250	40	450	385	345	38	3	12/Ø33	730	500	64	930	362.0
300	40	515	450	410	42	4	16/Ø33	850	600	75	1.140	533.0

all dimensions in mm.

WORKING CONDITIONS							
Temperature °C	-10/120	150	200	250	300	350	400
Pressure Bar	40	35,2	33,3	30,4	27,6	25,7	23,8

BV25066 PN40 EN 1092-1

Stainless Steel CF8M (1.4408)

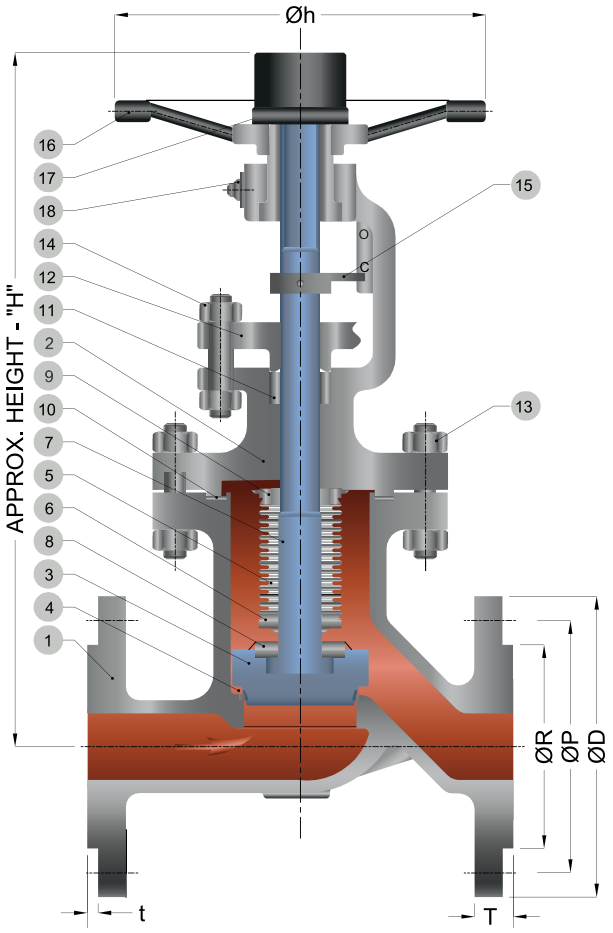
Temperature min. -60°C

Temperature max. +400°C

CE 0052 TÜV NORD

Testing pressure in bar

Hydro	Body	60
	Seat	44
Air	Seat	07



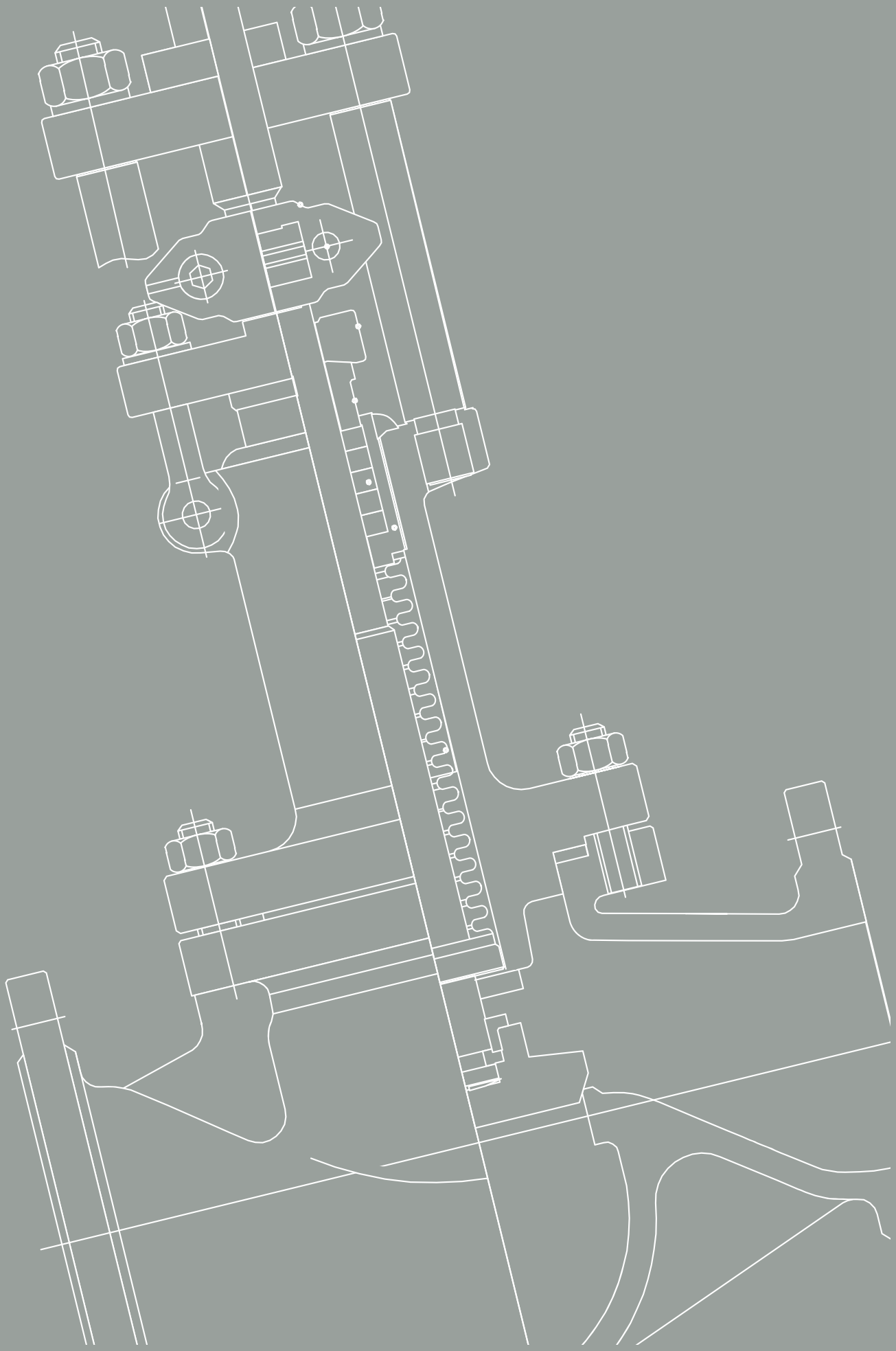
Nº	COMPONENT	MATERIALS
1	Body	1.4408 / ASTM - A 351 Gr.CF8M
2	Bonnet	1.4408 / ASTM - A 351 Gr.CF8M
3	Plug	1.4408 / ASTM - A 351 Gr.CF8M + Stellited Gr.6
4	Integral seat	1.4408 / ASTM - A 351 Gr.CF8M + Stellited Gr.21
5	Bellow	1.4571 / AISI - 316Ti
6	Bellow collar	1.4401 / ASTM - A 276 TYPE 316
7	Stem	1.4401 / ASTM - A 276 TYPE 316
8	Collar ring	1.4401 / ASTM - A 276 TYPE 316
9	Top collar	1.4401 / ASTM - A 276 TYPE 316
10	Gasket	SPW - SS 316 + GRAPHITE
11	Packing	GRAPHITE
12	Gland bush /Flange	1.4408 / ASTM - A 351 Gr.CF8M
13	Fastener	ASTM - A193 Gr.B8M / A194 Gr.8M
14	Gland stud & nut	ASTM - A193 Gr.B8M / A194 Gr.8M
15	Guide plate/Indicator	1.4408 / ASTM - A 351 Gr.CF8M
16	Hand wheel	MILD STEEL / NODULAR CAST IRON
17	Hand wheel Nut/cap	1.4401 / AISI - 316
18	Grease nipple	1.4401 / AISI - 316

ZERO LEACKAGE
DIN: Rate A acc.EN12266-1
Face to face acc. to EN558-1
Flanges acc. to EN 1092-1 form B

DN	PN	ØD (outer flange) diameter	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	40	95	65	45	16	2	4/Ø14	130	150	4	260	8.5
20	40	105	75	58	18	2	4/Ø14	150	150	5	265	9.5
25	40	115	85	68	18	2	4/Ø14	160	150	6.5	280	11.5
32	40	140	100	78	18	2	4/Ø18	180	150	8	290	17.0
40	40	150	110	88	19	3	4/Ø18	200	200	10	318	19.0
50	40	165	125	102	20	3	4/Ø18	230	200	13	335	21.5
65	40	185	145	122	22	3	8/Ø18	290	250	16,5	415	33.5
80	40	200	160	138	24	3	8/Ø18	310	300	20	440	45.0
100	40	235	190	162	24	3	8/Ø22	350	300	25	515	61.5
125	40	270	220	188	26	3	8/Ø26	400	350	32	600	102.0
150	40	300	250	218	28	3	8/Ø26	480	400	38	655	122.0
200	40	375	320	285	34	3	12/Ø30	600	450	51	788	222.0
250	40	450	385	345	38	3	12/Ø33	730	500	64	930	362.0
300	40	515	450	410	42	4	16/Ø33	850	600	75	1.140	533.0

all dimensions in mm.

WORKING CONDITIONS								
Temperature °C	-60/-10	-10/150	150	200	250	300	350	400
Pressure Bar	40	40	36,3	33,7	31,8	29,7	28,5	27,4



BVALVE

Bellows sealed valves

PN40 HP

Six reasons why our valve is better BV25065 HP

Straight type bellows sealed globe valves for demanding applications can be supplied in carbon steel 1.0619 / WCB and stainless steel 1.4408 / CF8M, both with flanged or buttweld ends.

Application (Carbon steel):

Powerstations, thermal oil processes, gas industry, processing technology, vapour facilities, recycling plants, vacuum installations, etc.

Application (Stainless steel):

Recycling plants, chemical industry, process water installations, process with aggressive media

Medium (Carbon steel):

Medium and high pressure steam, superheated steam, gases, thermal oil, overheated water and gases, etc.

Medium (Stainless steel):

Process water, aggressive media, corrossive and toxic fluids, ethylen dioxide, H_2SO_4, etc.

1. Completely welded multiple layer stainless steel bellows are secured against torque and designed to last for 30,000 operations. These provide higher safety and avoid leakage in case of broken packing.

2. Standard 360º free rotation and conical plug provides a tighter closure while maintaining seat clean from shards. Both seat and plug are made out of hardened chromium steel 1.4021 or armored with stellite.

3. TA-LUFT certified full size safety gland packing made of pure graphite together with our bellows, provide a fully reliable 0 leakage unit. Can also be supplied in PTFE if requested for chemical applications..

4. Stainless steel cam profiled bonnet gasket coated with pure graphite, mounted in tongue and grooved bonnet flanges reinforces operating safety in case of leakage. Can also be supplied in PTFE if requested for chemical applications.

5. Metal back seat has two features: Mechanical limitation for open position while guaranteeing a zero leackage in case of broken bellows.

6. Position Indicator allows user to know in which opening / closing stage is the valve without having to operate it.

Three more reasons High Preformance design (HP)

7

8

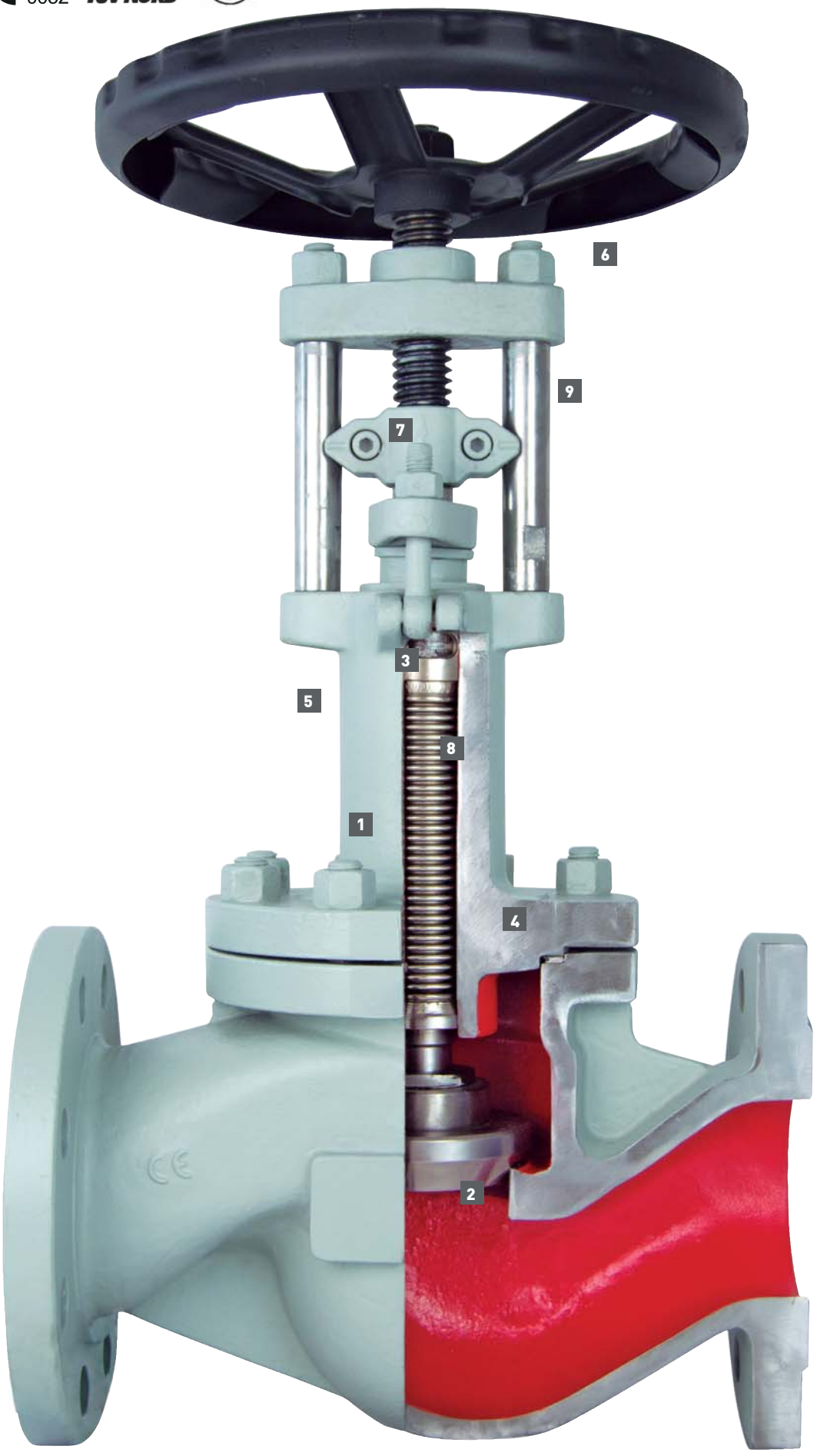
9

7. Two piece stem stops torque from being transmitted to bellows and plug. Upper stem is easily changeable to adapt different actuators. Both temperature and dilatation in stem are reduced, diminishing the valve´s probability of blocking.

8. Extended Bellows and Bonnet enhances safety for the operator since temperature effect is easily dissipated while increasing bellows life span.

9. Towers included in standard design allow these valves to be actuated, therefore becoming a control valve. This may also perform regulation when including throttling plug.

CE 0052 TÜV NORD



BV25065HP PN40 EN 1092-1

Carbon steel WCB (1.0619)

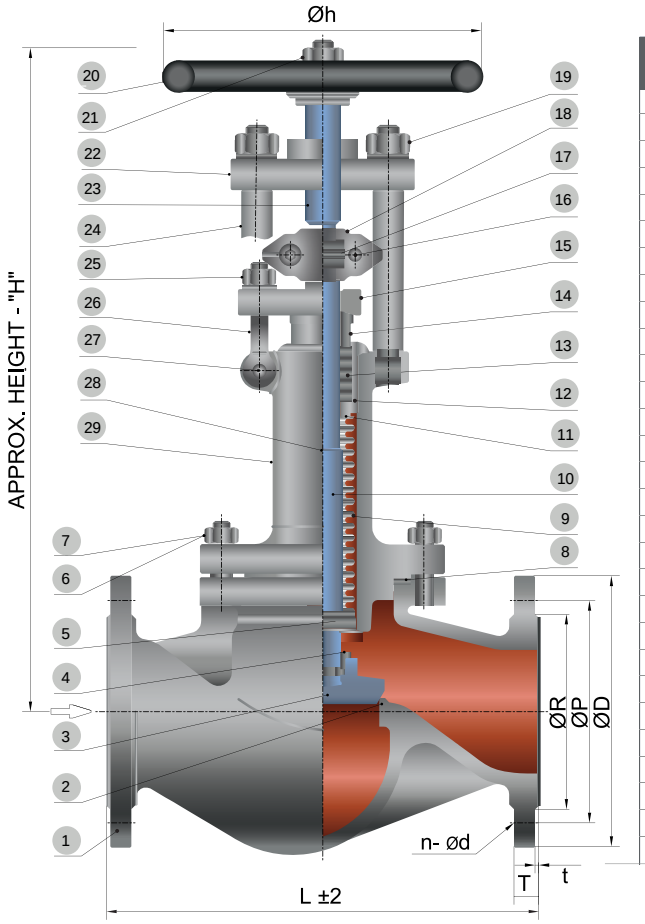
Temperature min. -10°C

Temperature max. +400°C

CE 0052 TÜV NORD

Testing pressure in bar

Hydro	Body	60
	Seat	44
Air	Seat	07



N°	COMPONENT	MATERIALS
1	Body	GS-C25
2	Seat	GS-C25+410 + hardening 410
3	Disc	ASTM - A 105 + hardening 410
4	Disc nut	ASTM - A 105
5	Lower collar	A182 - 316L
6	Studs	A193 B7
7	Nuts	A192 2H
8	Gasket	Graphite + SS304
9	Bellows	1.4571 / A182 - 316Ti
10	Lower stem	1.4021 / A276 420
11	Upper stem	1.4404 / A182 - 316L
12	Stuffing box	1.4301 / A276 304
13	Packing	Flexible graphite
14	Gland Sleeve	1.4021 / A276 420
15	Gland flanged	GS-C25
16	HEX bolt	A193 B7
17	Prevent friction sheet	A29 1045
18	Locator	GS-C25
19	Nut	A194 - 2H
20	Handwheel	Ductil Iron / Steel
21	Nut	A194 2H
22	Columns nut	ASTM A105
23	Upper stem	1.4006 / A276 410
24	Columns	1.4021 / A276 420
25	Jack nut	A194 2H
26	Jack bolt	A193 B7
27	Pin	A29 1035
28	Back seat	A276 420
29	Bonnet	GS - C25

ZERO LEACKAGE: DIN: Rate A acc.EN12266-1

Face to face acc. to EN558-1. Flanges acc. to EN 1092-1 form B

DN	PN	ØD (outer flange) diameter)	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	40	95	65	45	16	2	4/Ø14	130	180	4	298	5,3
20	40	105	75	58	18	2	4/Ø14	150	180	5	298	6,3
25	40	115	85	68	18	2	4/Ø14	160	180	6.5	309	7,6
32	40	140	100	78	18	2	4/Ø18	180	180	8	309	9,1
40	40	150	110	88	18	3	4/Ø18	200	200	10	381	14
50	40	165	125	102	20	3	4/Ø18	230	200	13	390	19
65	40	185	145	122	22	3	8/Ø18	290	250	16,5	410	27
80	40	200	160	138	24	3	8/Ø18	310	300	20	480	33
100	40	235	190	162	24	3	8/Ø22	350	300	25	518	50
125	40	270	220	188	26	3	8/Ø26	400	350	32	695	75
150	40	300	250	218	28	3	8/Ø26	480	400	38	715	109
200	40	375	320	285	34	3	12/Ø30	600	450	51	875	197
250	40	450	385	345	38	3	12/Ø33	730	600	64	1.064	327
300	40	515	450	410	42	4	16/Ø33	850	600	75	1.140	422

all dimensions in mm.

WORKING CONDITIONS							
Temperature °C	-10/120	150	200	250	300	350	400
Pressure Bar	40	35,2	33,3	30,4	27,6	25,7	23,8

BV25066HP PN40 EN 1092-1

Stainless Steel CF8M (1.4408)

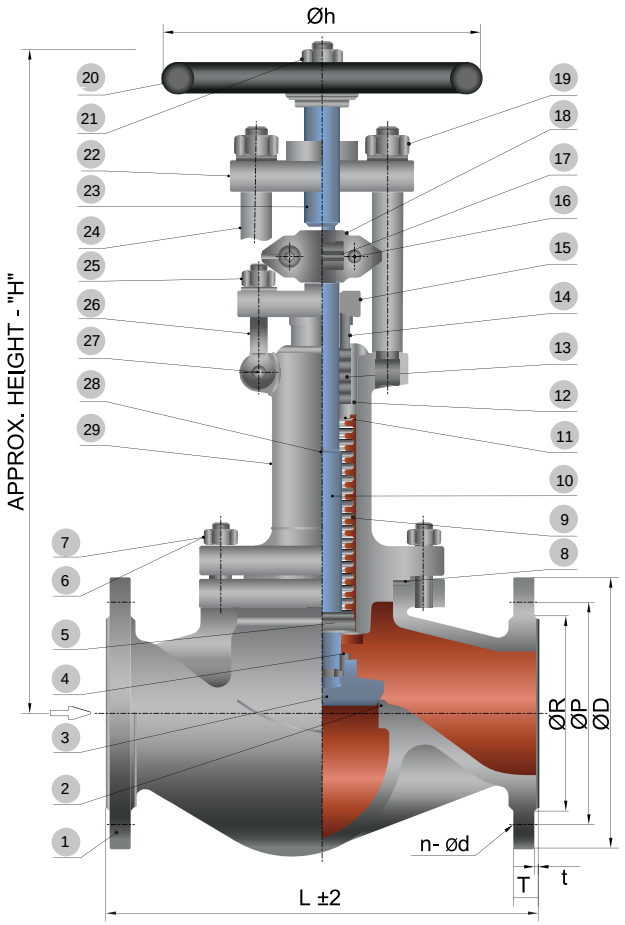
Temperature min. -60°C

Temperature max. +400°C

0052 TÜV NORD

Testing pressure in bar

Hydro	Body	60
	Seat	44
Air	Seat	07



Nº	COMPONENT	MATERIALS
1	Body	1.4408 / A351 CF8M
2	Seat	1.4408 / A351 CF8M + Stellited 21
3	Disc	1.4408 / A351 CF8M + Stellited 6
4	Disc nut	1.4401 / A276 316
5	Lower collar	1.4404 / A182 316L
6	Studs	A193 B8M
7	Nuts	A194 8M
8	Gasket	SPW SS316 + Graphite
9	Bellows	1.4571 / A182 316Ti
10	Lower stem	1.4401 / A276 316
11	Upper stem	1.4404 / A182 316L
12	Stuffing box	A276 316L
13	Packing	Flexible graphite
14	Gland Sleeve	1.4401 / A276 316
15	Gland flanged	A351 CF8
16	HEX bolt	A193 B8
17	Prevent friction sheet	A29 1045
18	Locator	A351 CF8
19	Nut	A194 8M
20	Handwheel	Ductile iron / Steel
21	Nut	A194 8M
22	Strud nut	1.4406 / A351 CF8M
23	Upper stem	1.4406 / A276 410
24	Strud	1.4021 / A276 420
25	Jack nut	A194 8M
26	Jack bolt	A193 B8
27	Pin	A276 304
28	Back seat	A276 316
29	Bonnet	1.4408 / A351 CF8M

ZERO LEACKAGE: DIN: Rate A acc.EN12266-1

Face to face acc. to EN558-1. Flanges acc. to EN 1092-1 form B

DN	PN	ØD (outer flange) diameter	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	40	95	65	45	16	2	4/Ø14	130	180	9	260	5,4
20	40	105	75	58	18	2	4/Ø14	150	180	9	265	6,4
25	40	115	85	68	18	2	4/Ø14	160	180	1,5	280	7,7
32	40	140	100	78	18	2	4/Ø18	180	180	11	290	9,3
40	40	150	110	88	19	3	4/Ø18	200	200	15	318	14,2
50	40	165	125	102	20	3	4/Ø18	230	200	16	335	19,3
65	40	185	145	122	22	3	8/Ø18	290	250	19	415	27,3
80	40	200	160	138	24	3	8/Ø18	310	300	22,8	440	33,5
100	40	235	190	162	24	3	8/Ø22	350	300	29	515	50,6
125	40	270	220	188	26	3	8/Ø26	400	350	36	600	76
150	40	300	250	218	28	3	8/Ø26	480	400	43	655	110
200	40	375	320	285	34	3	12/Ø30	600	450	54	788	199
250	40	450	385	345	38	3	12/Ø33	730	600	70	930	330
300	40	515	450	410	42	4	16/Ø33	850	600	80	1.140	426

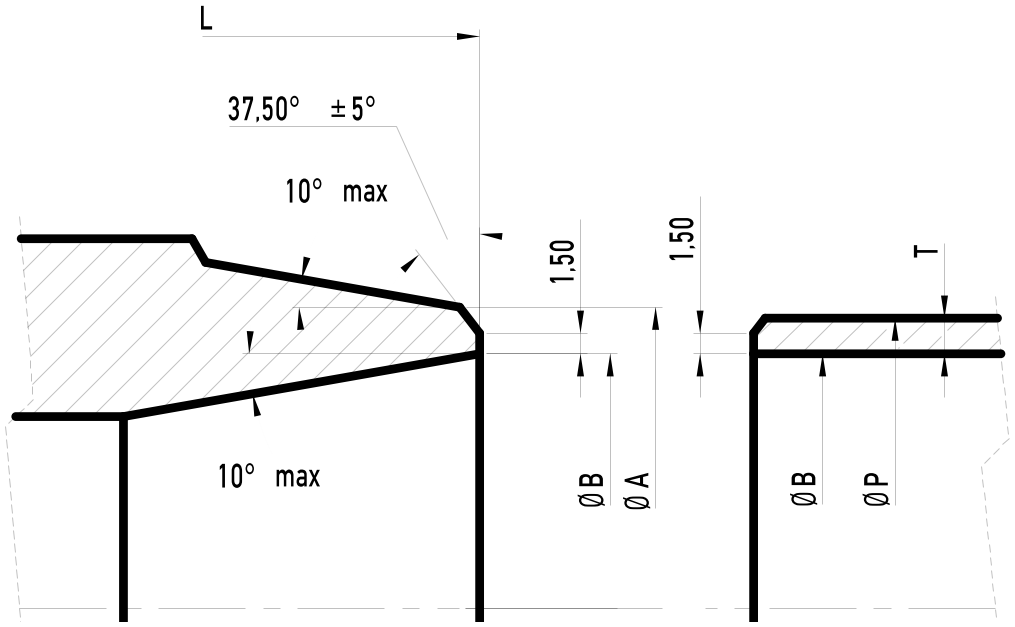
all dimensions in mm.

WORKING CONDITIONS								
Temperature °C	-60/-10	-10/150	150	200	250	300	350	400
Pressure Bar	40	40	36,3	33,7	31,8	29,7	28,5	27,4

Butt weld ends connections

for carbon steel and stainless steel

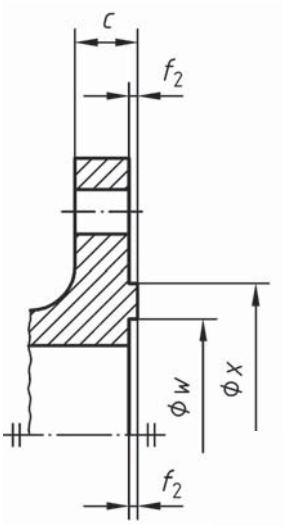
Edge shapping acc. to DIN EN ISO 5817



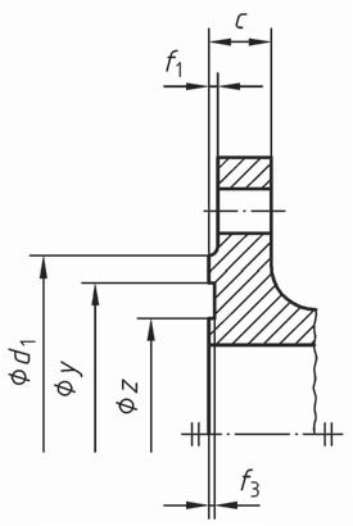
DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Butt Weld ends according to DIN EN 12627															
L	(mm)	130,00	150,00	160,00	180,00	200,00	230,00	290,00	310,00	350,00	400,00	480,00	600,00	730,00	850,00
ØA	(mm)	22,00	28,00	35,00	44,00	50,00	62,00	77,00	91,00	117,00	144,00	172,00	223,00	278,00	329,00
ØB	(mm)	17,30	22,30	28,50	37,20	43,10	53,90	68,90	80,90	104,30	130,70	157,10	204,90	257,00	307,90
T	(mm)	2,00	2,30	2,60	2,60	2,60	3,20	3,60	4,00	6,50	4,50	5,60	7,10	8,00	8,00
ØP	(mm)	21,30	26,90	33,70	42,40	48,30	60,30	76,10	88,90	117,30	139,70	168,30	219,10	273,00	323,90

Face to face dimension according to DIN EN 12982 (EN558-1)
Butt Weld ends according to DIN EN 12627 Fig 4
Pipe according to DIN EN EN 10220 (ISO 4200)

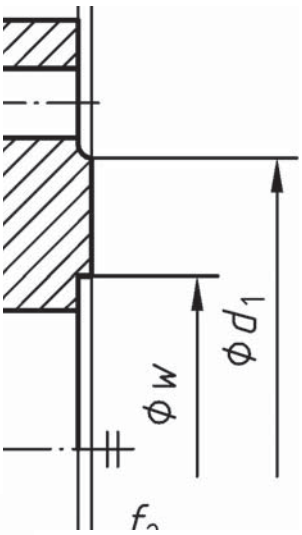
Other flange connections



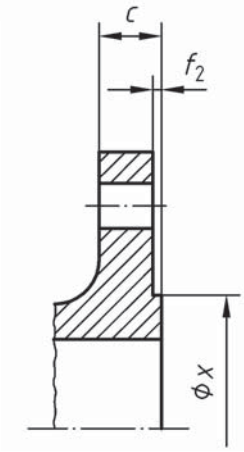
Type C: Tongue



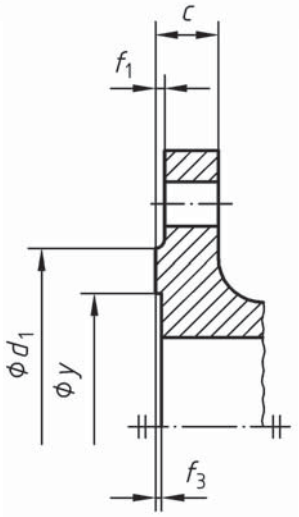
Type D: Groove



Type G: O-ring spigot



Type E: Spigot



Type F: Recess

Flange connections according to EN 1092-1

DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
PN16	d_1	45	58	68	78	88	102	122	138	158	188	212	268	320	378
PN25	d_1	45	58	68	78	88	102	122	138	162	188	218	278	335	395
PN40	d_1	45	58	68	78	88	102	122	138	162	188	218	285	345	410
	f_1	2	2	2	2	3	3	3	3	3	3	3	3	3	4
	f_2	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	5	5	5	5	5	5
	f_3	4	4	4	4	4	4	4	4	4,5	4,5	4,5	4,5	4,5	4,5
	f_4	2	2	2	2	2	2	2	2	2,5	2,5	2,5	2,5	2,5	2,5
PN16 PN25 PN40	W^b	29	36	43	51	61	73	95	106	129	155	183	239	292	343
	x	39	50	57	65	75	87	109	120	149	175	203	259	312	363
	y	40	51	58	66	76	88	110	121	150	176	204	260	313	364
	Z^b	28	35	42	50	60	72	94	105	128	154	182	238	291	342
	$\alpha\approx$	-	-	41°	41°	41°	41°	41°	41°	32°	32°	32°	32°	32°	32°
	R	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	3	3	3	3	3	3

Face to face dimensions according to DIN EN 12982 (EN558-1)
Flange ends according to EN1092-1

NOTE 1 Dimension C includes the raised face thickness
NOTE 2 Cross section diameter of the O-ring is 2 × R

Actuators

Electric and pneumatic actuators

BVALVE provides a large range of different actuators for automate bellow sealed valves.The robust gearing is designed to perform millions of setting cycles. The pneumatic actuators have been developed for challenging environments. Use of high-quality components and materials guarantee outstanding reliability and service life.

Our electric linear actuators feature a very flexible microcontroller. Intelligent algorithms spare the valve and control intelligently, even when external interference such as frost, contamination in the medium or failure of the control signal occur.

Pneumatic actuators

- Actuators with high thrust and short actuation time
- Comply with requirements for explosion proof areas
- Mode of operation: spring opens / air closes or opens
- Mechanical position indication
- Ambient temperature: -40...+80°C
- Operating mode: alternatively spring closes / opens

Electric actuators

- Microprocessor controlled with automatic self-calibration on start up. LED indication of actuator status
- Wear-free distance measuring system - no potentiometer
- Permanent storage of stroke in EPROM memory
- Wire break recognition in 2...10 VDC and 4...20 mA operation
- Bonnet detachable in four positions, 90° locking
- Safety position for switching a binary signal (frost safety)
- Integrated, self-controlling heater
- Input and output signal independently reversible
- Input signal freely adjustable: 3-point or modulating

Linear actuators

Supply	Input signal	Application	Fail-safe function	kN	Form	Type
Electric	0...10 V DC 2...10 V DC 0...20 mA 4...20 mA 3-P	Product information				
		Industry	–	0,15 - 2,5	⚲	MC15 - MC250
				4 - 10	⚲	MC400 - MC1000
				1 - 5	⚲	MC103 - MC503
				10 - 15	⚲	MC1003 - MC1503
			■	1 - 2,5	⚲	MC103SE - MC253SE
		Retrofit for valves				
	3-P	Product information				
		Industry	–	0,6 - 5	⚲	MC55DL - MC500DL
				0,8 - 5	⚲	MC83DL - MC503DL
Pneumatic	0...20 mA 4...20 mA 3-P	Product information				
		Industry	■	2,8 - 32	⚲	AMA-N160 - AMA-N2160

Accessories

» Special flange sealing surface for special tightness requirements
According EN 1092-1 forms C,D,E,F,G,H (differing form B)

» Limit Switches
Set of one or two mechanical limit switches with vertical or horizontal installation

» Free from oil and grease treatment ready for oxygen application

» Packing box and body-bonnet gasket in gylon (+280°C) or PTFE (+200°C)
Special applications where graphite is not recommended

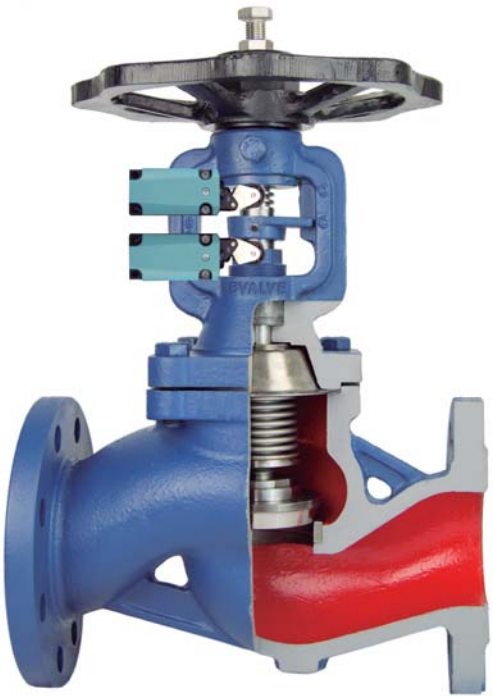
» X-RAY Test for flange end connection
Analysis of potential volumetric defaults in castings

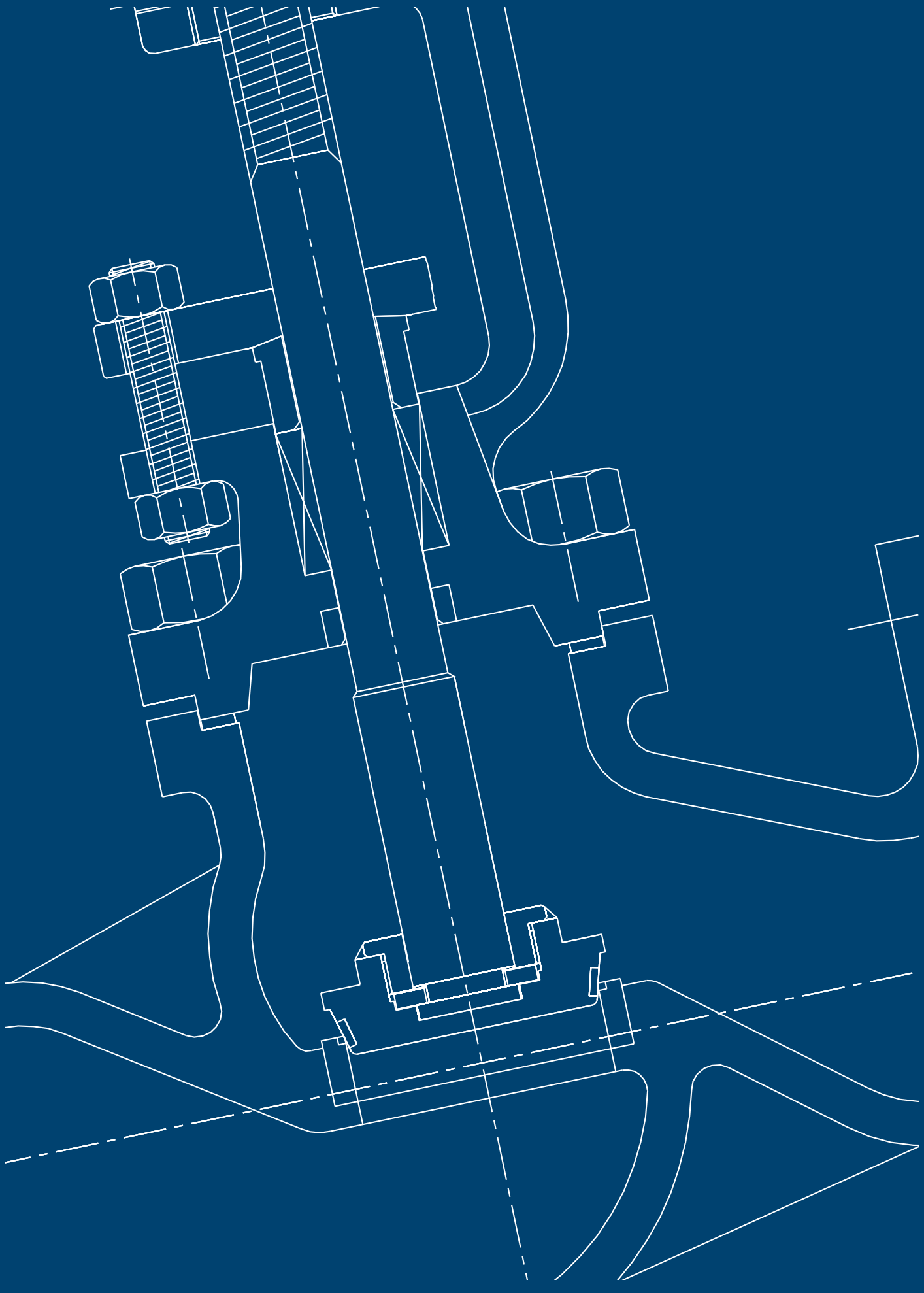
» X-RAY Test for buttweld end connection
Analysis of potential volumetric defaults in castings

» Chain Locking Device
Security method to avoid non authorized operations

» Automation
Possibility of equipping valves with pneumatic or electric actuators

Nominal Pressure	PN 16		PN 25	PN 40			
Material	Cast Iron	Nodular Cast Iron	Nodular Cast Iron	Carbon Steel	Stainless Steel	Carbon Steel	Stainless Steel
Figure	BV25061	BV25064	BV25063	BV25065	BV25066	BV25065HP	BV25066HP
AVAILABLE OPTIONS UNDER REQUEST							
Specialflange sealing surface	X	X	X	X	X	X	X
Limit switches	X	X	X	X	X	X	X
Free from oil & grease treatment	X	X	X	X	X	X	X
Leaking detection port	X	X	X	X	X	X	X
X-RAY test for flange connections	X	X	X	X	X	X	X
X-RAY test for buttweld connections				X	X	X	X
Packing and gasket in PTFE (+200°C)				X	X	X	X
Packing and gasket in gylon (+280°C)				X	X	X	X
Chain locking device	X	X	X	X	X	X	X
Automation						X	X
Throttling plug	X	X	X	X	X	X	X
Soft sealing in gylon or PTFE	X	X	X	X	X	X	X





BVALVE

Gland packing
Globe valves

Gland packing globe valves

BVALVE Globe Valves include flanges designed according to EN 1092-2, face to face distance as per EN 558-1, ACME threaded stem screws and grounded shafts. Further premium characteristics include metal back seat, safety stuffing box packing made of pure graphite, and graphite-stainless steel gasket, housed in tongue and grooved flanges. Besides, our hard faced stainless steel plugs show a conical shape while being able to rotate 360º.

Free rotating conical plug: Our 360º free rotation plugs improve the cleaning of dirt or impurities fluids may carry allowing a tighter clousure while avoiding vibrations from being transmitted to the valve stem.

Non ejectable stems which at the same time perform the function of locking metal to metal in the opened positions and hence prevent stems from being ejected due to process pressures. Meanwhile, mechanical stop position when valves are opened adds robustness to them.Furthermore, our valves are equipped with pure graphite safety packings.

Aditional features:

TA-LUFT packing

Robust and ergonomic hand wheel

ACME Thick thread stem

Stop screw, stroke limiter and grease nipple

Flange faces with thin machining acc. EN 1092-2

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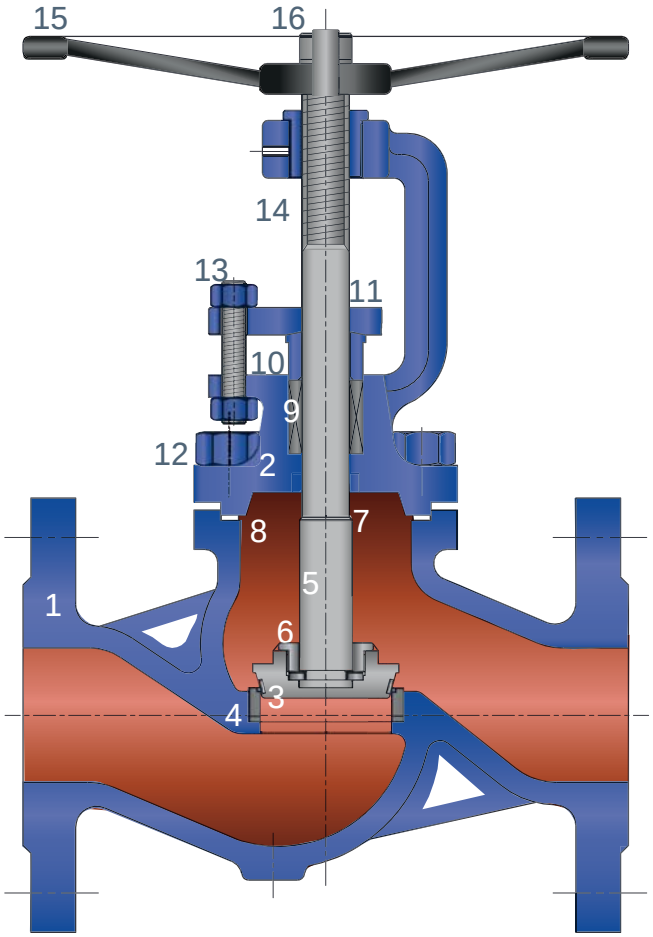
1	Body	GG 25
2	Bonnet	GG 25
3	Plug	ASTM - A 216 Gr. WCB 13% Cr. Overlay
4	Seat ring	ASTM - A 105 13% Cr. Overlay
5	Stem	ASTM - A 276 TYPE 410
6	Stem nut	ASTM - A 217 Gr. CA15
7	Bonnet bush	ASTM - A 276 Type 410
8	Gasket	Graphite + Stainless steel
9	Packing	Graphite
10	Gland bush	ASTM - A 276 Type 410
11	Gland flange	Carbon steel (IS: 2062)
12	Hex bolt	Carbon steel Gr. 10.9
13	Gland stud / nut	Carbon steel (ASTM - A 307 Gr.B)
14	Yoke bush	SG Iron
15	Hand wheel	Cast iron
16	Hand wheel nut	Carbon steel (IS: 2062)



Gland packing globe valve BV25060
Cast iron PN 16
WT: -10ºC up to +300ºC

Straight through with flanges DIN (EN 1092-2)

Free maintenance

Body material: Cast iron EN-JL 1040

Metal/Metal closure in opening position

Non ejectable steam

Free rotating plug 360º

Pure graphite packing

OPTIONS UNDER REQUEST

Free of oil and grease surface treatment

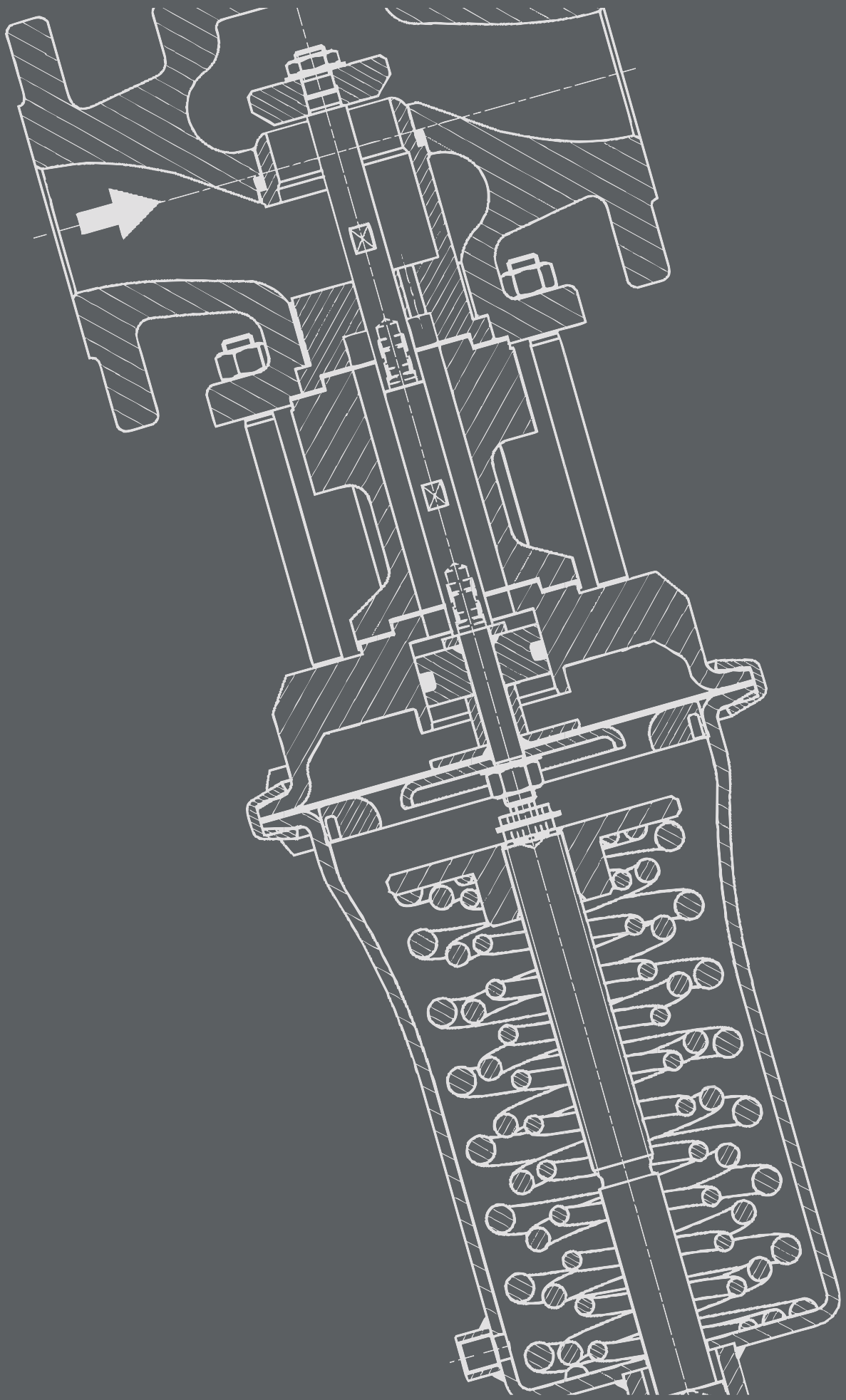
Free of oil and grease surface treatment ready for oxygen application

Soft sealing in gylon +280ºC

Flanges facing end acc. EN1092-2 with raised face serrated finish

DN	PN	ØD (outer flange) diameter)	ØP (Bolt cercle)	ØR	T (FGL.THK)	t	NO.OF HOLE / Ø	L (Face to face)	Øh	STROKE	H (closed)	Weight (Kg)
15	16	95	65	46	16	2	4/Ø 14	130	150	4	220	4,8
20	16	105	75	56	16	2	4/Ø 14	150	150	5	225	5,5
25	16	115	85	65	17	3	4/Ø 14	160	150	6.5	235	6,6
32	16	140	100	76	18	3	4/Ø 19	180	150	8	245	9,0
40	16	150	110	84	18	3	4/Ø 19	200	200	10	270	12,5
50	16	165	125	99	20	3	4/Ø 19	230	200	13	275	14,9
65	16	185	145	118	20	3	4/Ø 19	290	250	16.5	335	25,7
80	16	200	160	132	22	3	4/Ø 19	310	250	20	350	28,2
100	16	220	180	156	24	3	8/Ø 19	350	300	25	388	42,0
125	16	250	210	184	26	3	8/Ø 19	400	350	32	420	63,0
150	16	285	240	211	26	3	8/Ø 23	480	400	38	485	84,0
200	16	340	295	266	30	3	12/Ø 23	600	450	51	605	156,0
250	16	405	355	319	32	3	12/Ø 28	730	500	63	730	242,0

WORKING CONDITIONS					
Temperature ºC	-10/120	150	200	250	300
Pressure Bar	16	14,4	12,8	11,2	9,6



BVALVE®

Pressure Reducing Valves

Pressure Reducing Valve PRV50065

BVALVE further expands its position as one of the leading suppliers of self-acting control valves by launching a new pressure reducing valve PRV50065, setting a new standard for dimensions and equipment:

» Compact construction:
Minimum space needed and therefore enhances ease of installation (on average 20% less than competition models)

» Closed spring cap made of stainless steel (1.4404/SS316L)
Provides longer life span for the spring while avoiding its corrosion

» Does not require compensating cask: Thus direct connection to pipe

» Medium-wetted internal parts made of stainless steel (1.4404 / SS316L)

» High regulating accuracy due to the balance plug

» High quality body made of cast steel (GS-C 25):
Instead of lower quality materials used by competitors such as cast iron or ductile iron

» Leakage line connection with adjusting screw seal

» Easy setting of nominal values

Typical Applications

» Steam, water, condensate cycle system

» Industrial air

» Technical gases

» Conventional heat exchangers

» Conventional fuel supply and residues disposal

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Pressure Reducing Valve PRV50065

PRV50065 is a self-acting pressure reducing valve which offers an accurate regulating control while displaying an easy installation and maintenance. These are used to maintain a certain pressure downstream without requiring the use of any pneumatic or electrical control elements.

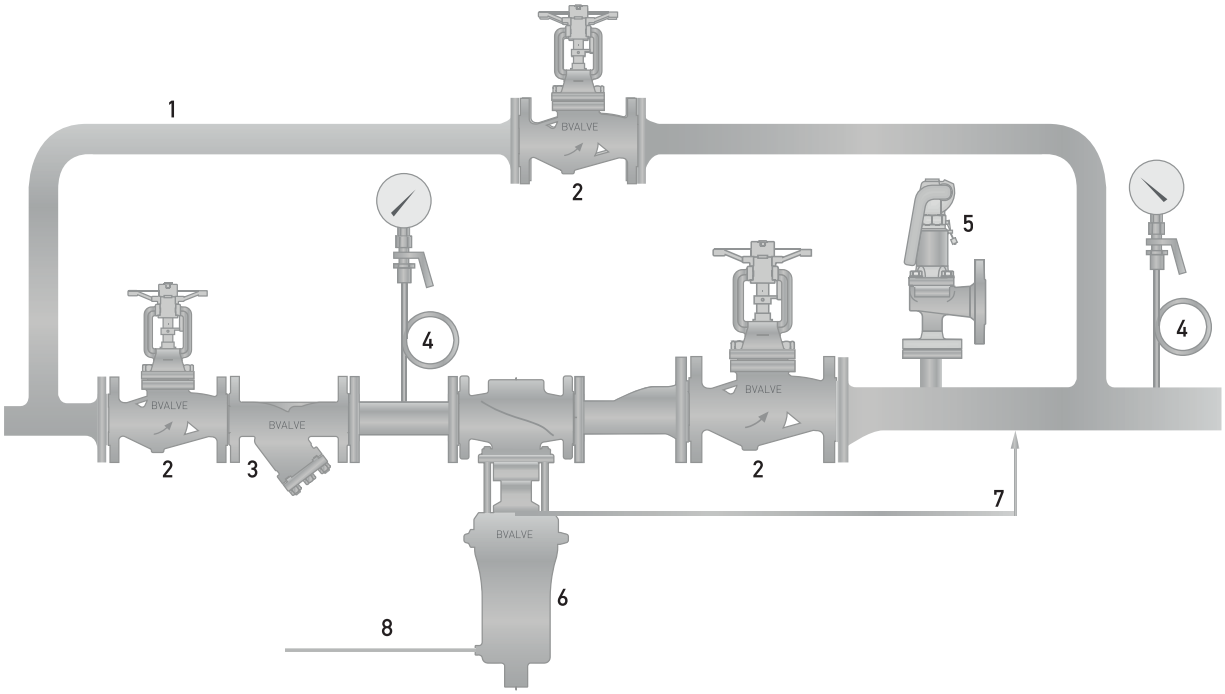
PRV50065 is a diaphragm operated, spring loaded and proportionally balanced valve for high flow rate applications. Moreover, valve body is made out of casted steel, internal parts are manufactured in stainless steel and valve cone is fitted with a metallic seal.

Outlet pressure to be controlled (set pressure) is balanced through its control unit due to the force applied by the valve's spring. Therefore, as outlet pressure overpasses set pressure, valve's cone approaches the seat and hence medium's volume is reduced. In the same way, once outlet pressure drops, outlet gap increases. Furthermore, rotating the adjusting screw clockwise increases outlet pressure.

PRV50065 requires a sense line to be installed on-site.

However, these are not shut-off elements to ensure a perfect tightness closure. In accordance with DIN EN 60534-4 and / or ANSI FCI 70-2 they are allowed to feature a class IV leakage rate (metal sealing cone – 0,01% KVS value).

When installing, it is advised to do so in a horizontal strain, with spring cap pointing downwards and making sure flow direction meets arrow conveniently described in body. Still, valve may be installed both upwards and downwards when working with gases.

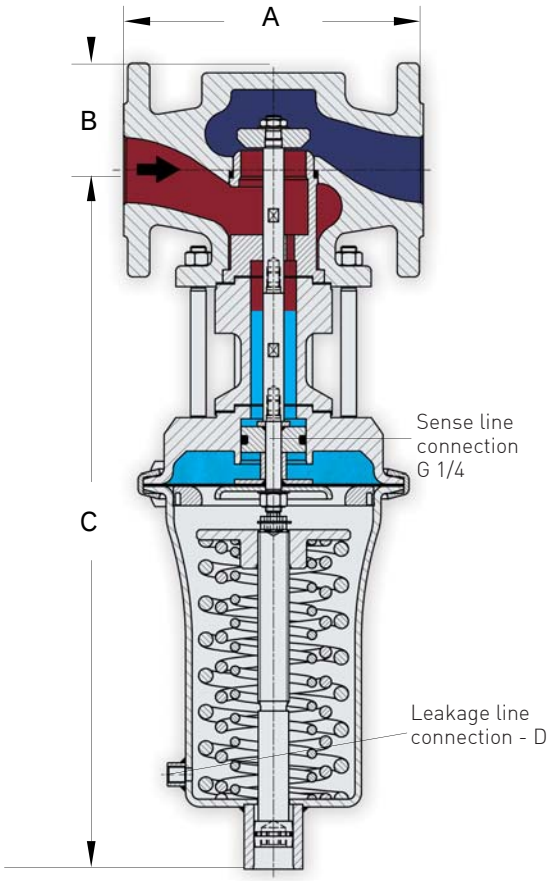


1 Bypass line for Maintenance
2 BVALVE bellows sealed valve
3 BVALVE strainer
4 Pressure Gauge
5 Safety Valves
6 BVALVE Pressure Reducer
7 Sense Line
8 Leakage Line

Installation in a horizontal line without strain with the spring cap pointing vertically downwards in such a way that the arrow on the body points in the direction of flow. For gases, the installation can take place with the spring cap pointing either downwards or upwards. For use with liquids the valve must be installed with the spring cap pointing downwards.

PRV50065
Steam services

GS-C 25 1.0619 (A216-WCB)
Temperature min. -10°C
Temperature max. +250°C



Technical Data

Connection DN	15 - 100
Nominal Pressure PN	16 - 25
Inlet Pressure	up to 25 bar
Outlet Pressure	0.8 - 10 bar
K_{vs}-Value	4.5 - 115 m³/h
Temperature	250 °C
Medium	Steam

Materials

Body	GS-C 25 1.0619 (A216-WCB)*
Diaphragm Housing	stainless steel 1.4404 (SS316L)
Medium wetted Internal Parts	stainless steel 1.4404 / 1.4462 (SS316L / Duplex)
Valve Seal	stainless steel 1.4404
Diaphragm	EPDM
O-ring	EPDM

Dimensions [mm]

Size	Nominal diameter DN								
	15	20	25	32	40	50	65	80	100
A	130	150	160	180	200	230	290	310	350
B	60	60	60	75	75	75	112	112	112
C	380	380	380	540	540	540	610	610	610
D	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4

Weights [kg]

Nominal diameter DN								
15	20	25	32	40	50	65	80	100
11	12	13	35	37,5	40	72	75	82

WORKING CONDITIONS

T	-10 °C	130 °C	150 °C	200 °C	250 °C
bar	40	38	36	33	30

Setting Ranges [bar], Nominal Pressure PN

bar	0.3 - 1.1	0.8 - 2.5	2 - 5	4 - 10
PN	40/2.5	40/6	40/10	40/16

K_{vs} Values [m³/h]

DN	15	20	25	32	40	50	65	80	100
min.	0.8	0.8	0.8	1	1	1	1	1	1
0.3-1.1 bar	3,6	6	6	20	32	40	50	55	65
0.8-10 bar	4,5	8	8	20	32	40	90	100	115

Reduction Ratio

Setting Ranges	DN		
	DN 15 - 25	DN 32 - 50	DN 65 - 100
4,5 - 10 bar	10 : 1	8 : 1	5 : 1
2 - 5 bar	20 : 1	15 : 1	10 : 1
0.8 - 2.5 bar	30 : 1	20 : 1	12 : 1
0.3 - 1.1 bar	15 : 1	11 : 1	6 : 1

e.g.: DN 50, set point 3 bar, inlet pressure 16 bar
Min. outlet pressure: 16/15 = 1,067 bar < 3 bar, thus set pressure selected is within operating range.

Standard

» Body made of GS-C 25 1.0619 (A216-WCB)
» Medium wetted internal parts made of stainless steel 316L / Duplex
» Closed spring cap with leakage line connection and sealed adjusting screw
» Balanced cone for controlling the outlet pressure independently from the inlet pressure
» Sense line connection
» EPDM elastomeres
» Tightness Class IV < 0,01% Kvs value

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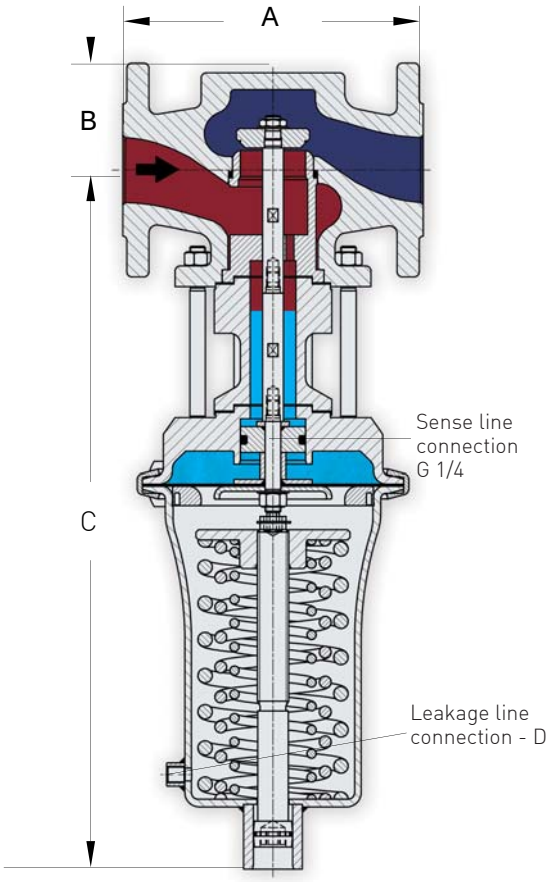
PRV50065S
Liquid & Gas

GS-C 25 1.0619 (A216-WCB)
Temperature min. -10°C
Temperature max. +130°C



Technical Data

Connection DN	15 - 100
Nominal Pressure PN	16 - 40
Inlet Pressure	up to 40 bar
Outlet Pressure	0.8 - 10 bar
K_{vs}-Value	4.5 - 115 m³/h
Temperature	130°C
Medium	Liquids, gases

Materials

Body	GS-C 25 1.0619 (A216-WCB)*
Diaphragm Housing	stainless steel 1.4404 (SS316L)
Medium wetted Internal Parts	stainless steel 1.4404 / 1.4462 (SS316L / Duplex)
Valve Seal	EPDM**
Diaphragm	EPDM**
O-ring	EPDM**

* body optionally made of stainless steel 1.4408 (CF8M)
** elastomeres optionally made of FKM, NBR, PTFE or other materials

Dimensions [mm]

Size	Nominal diameter DN								
	15	20	25	32	40	50	65	80	100
A	130	150	160	180	200	230	290	310	350
B	60	60	60	75	75	75	112	112	112
C	380	380	380	540	540	540	610	610	610
D	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4

Weights [kg]

Nominal diameter DN								
15	20	25	32	40	50	65	80	100
11	12	13	35	37,5	40	72	75	82

WORKING CONDITIONS

T	-10 °C	130 °C
bar	40	38

Setting Ranges [bar], Nominal Pressure PN

bar	0.3 - 1.1	0.8 - 2.5	2 - 5	4 - 10
PN	40/2.5	40/6	40/10	40/16

K_{vs} Values [m³/h]

DN	15	20	25	32	40	50	65	80	100
min.	0.8	0.8	0.8	1	1	1	1	1	1
0.3-1.1 bar	3,6	6	6	20	32	40	50	55	65
0.8-10 bar	4,5	8	8	20	32	40	90	100	115

Reduction Ratio

Setting Ranges	DN		
	DN 15 - 25	DN 32 - 50	DN 65 - 100
4,5 - 10 bar	10 : 1	8 : 1	5 : 1
2 - 5 bar	20 : 1	15 : 1	10 : 1
0.8 - 2.5 bar	30 : 1	20 : 1	12 : 1
0.3 - 1.1 bar	15 : 1	11 : 1	6 : 1

e.g.: DN80, set point 6 bar, inlet pressure 20 bar
Min. outlet pressure: 20/5 = 4 bar < 6 bar, thus set pressure selected is within operating range.

Standard

» Body made of GS-C 25 1.0619 (A216-WCB)*
» Medium wetted internal parts made of stainless steel 316L / Duplex
» Closed spring cap with leakage line connection and sealed adjusting screw
» Balanced cone for controlling the outlet pressure independently from the initial pressure
» Sense line connection
» EPDM elastomeres
» Bubble tightness zero leackage type

Options

» Various diaphragm and seal materials suitable for your medium

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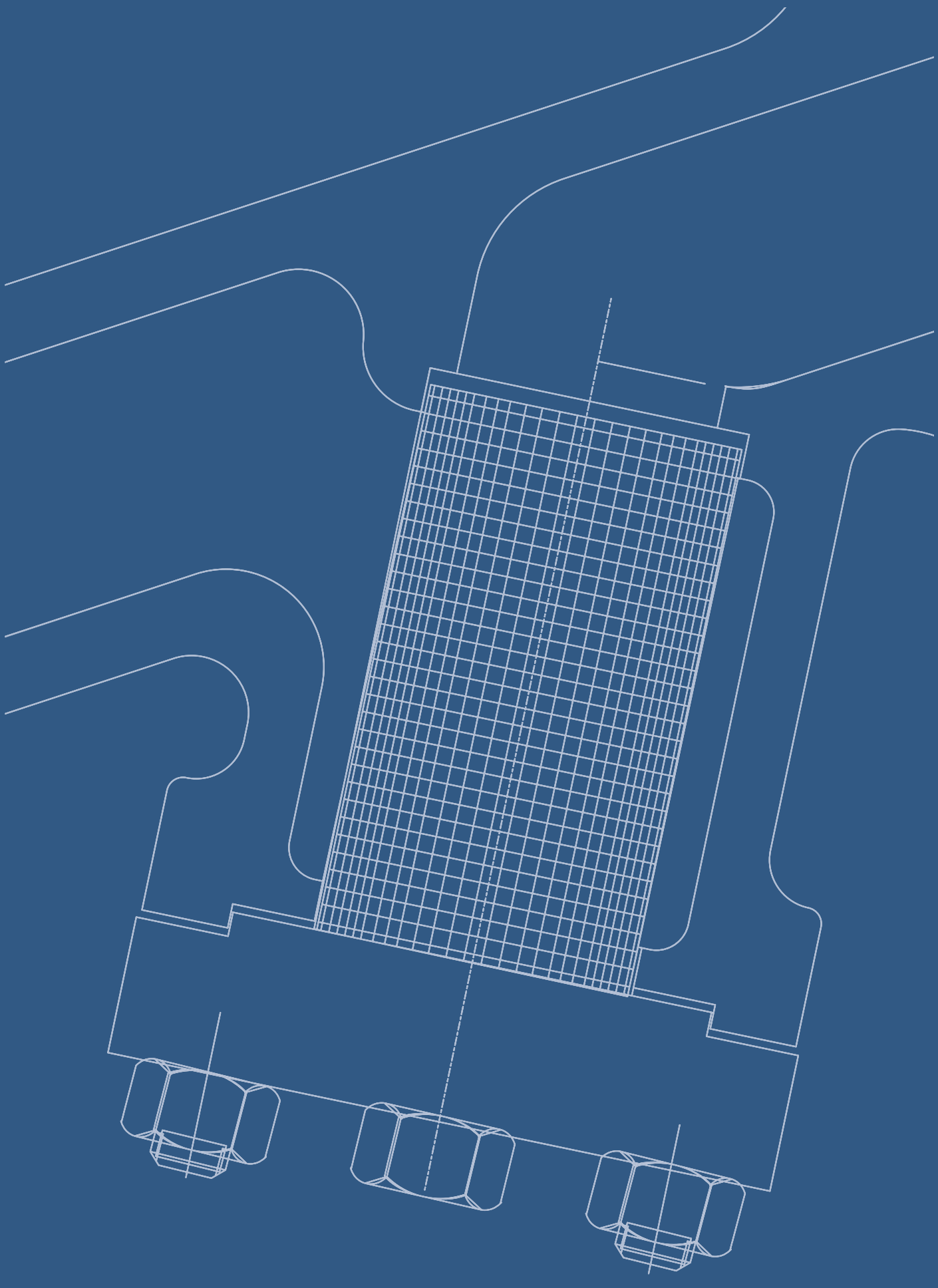


BVALVE®

Traps & Strainers

Thermodynamic disc traps

The BV66 is a brand new line of compact and ligthweigth thermodynamic disc traps designed to efficiently discharge condensate on applications with working pressures up to 42 bar (609 psi). Disc trap completely made of Stainless Steel with integrated strainer. These simple, yet rugged, traps will provide economical long-term performance on drip leg, tracing, and process services.

Specifications

Size: 1/2", 3/4", 1"

End connections:
Threaded BSPP
Flange connections on request

Materials:
- Body: Stainless steel ASTM A743 (CA 40F)
- Cover: Stainless steel AISI 304
- Disc: Stainless steel AISI 420
- Strainer: Stainless steel AISI 304
- Strainer Cap: Stainless steel AISI 304

Maximum Operating Temperature: 400º C (752ºF)

Operating Pressure: 42 bar g. (609 psig)

Maximum Back Pressure:
Must no exceed 80% of inlet pressure.

Design conditions:
63 bar g./400ºC/Hidraulic test @ 95 bar g.

Installation:
Horizontal pipe for an appropiate use.

» Easy in-line inspection and maintenance

Simple one-piece thermodynamic cartrigde which can be inspected and replaced without having to remove the steam trap from the line.

» Single moving part

Simple, yet effective design uses just one moving part to enhaze minimal maintenance and long operating life.

» All parts made in Stainless Steel

Body material and trim are made in stainless steel. Besides, body surface is nickel plated to avoid oxidation.

» High capacities

Optimized porting configuration provides higher flow capacities than other cartrigde designs.

» Rugged design

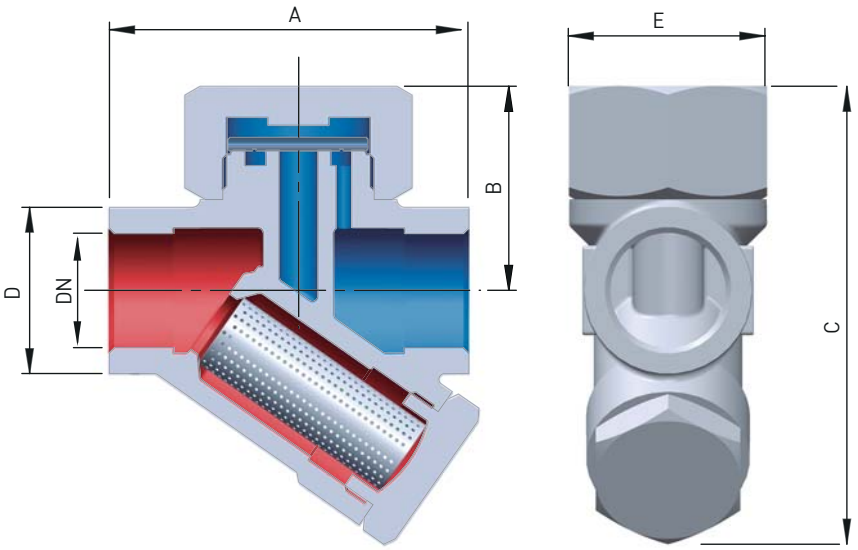
Withstands the effects of water hammer, vibration, and corrosive environments.

BV66

Max. operating temp. 400°C — Stainless steel

Operating pressure 42 bar g — ASTM A743 (CA 40F)

Dimensions and weight



DN	1/2"	3/4"	1"
A	78	78	95
B	39,2	39,2	54
C	93	93	121
D	34	34	44
E	41	41	52
Weight (Kg)	1,10	1,10	1,60

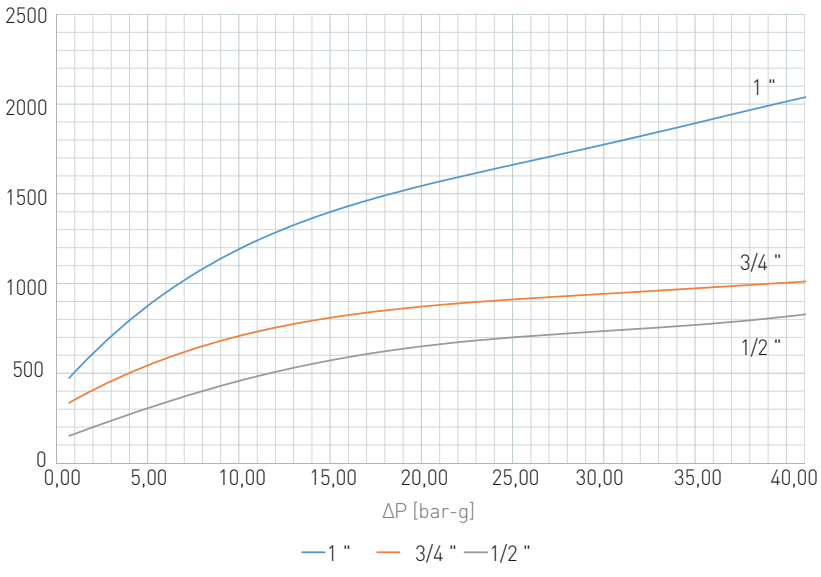
Dimensions in mm

Discharge capacities

Differential Pressure Barg	1/2"	3/4"	1"
0,7	151	339	476
0,8	155	341	484
1	161	352	502
2	203	401	623
3	239	452	701
4	261	502	798
6	342	594	923
8	403	651	1069
10	454	701	1236
15	576	803	1398
20	642	886	1502
25	701	901	1699
30	725	949	1753
42	804	1043	2018

Note: Discharge capacities in Kg/h with outlet pressure 0 bar.

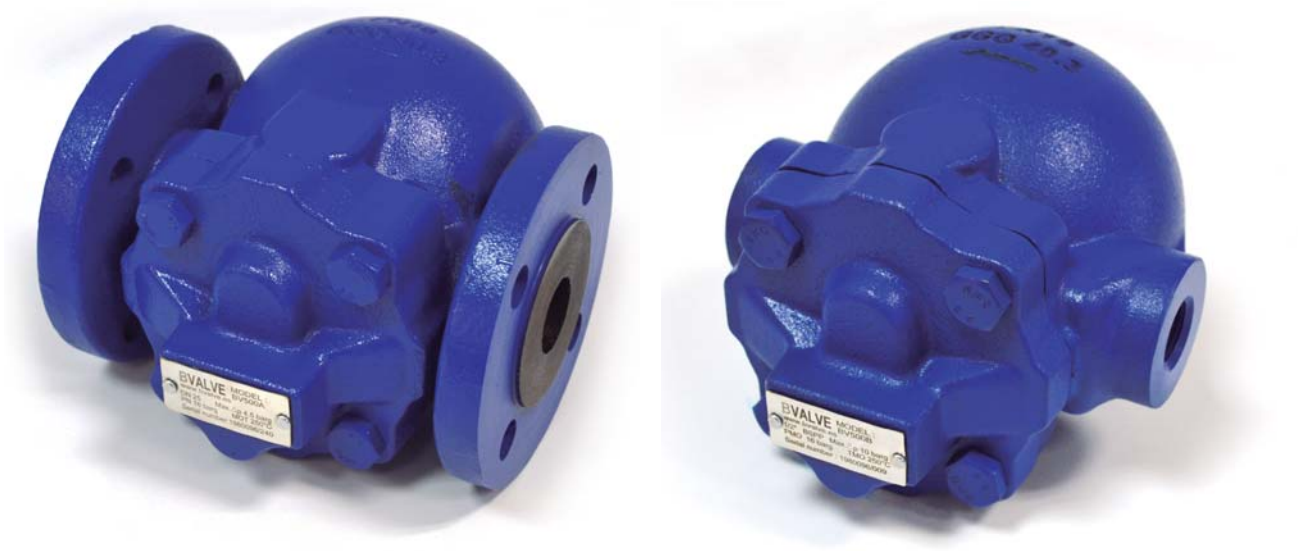
Discharge capacity [kg/h]



Float trap with thermostatic air vent

Flanged DIN PN 16 Threaded end BSPP

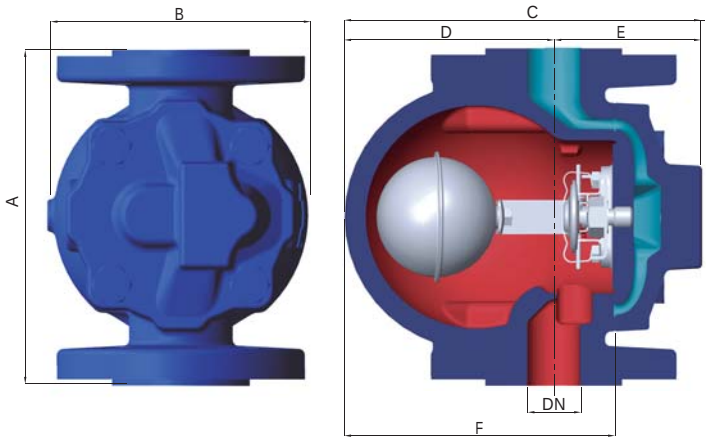
The BV500 is a float & thermostatic style steam trap with an inline, straight-through body design, which eliminates the staggered piping usually associated with this type of steam trap. It utilizes a stainless steel float and a simple lever mechanism to open or close the valve in correlation to the amount of condensate present. The opening is proportional to the condensate rate and is unaffected by instantaneous pressure changes. The BV500 is used where fast response and continuous condensate discharge is required such as on heat exchangers, tanks, pans, ovens, and drying cylinders.



Dimensions and weight flanges connection

DN	15	20	25	40	50
A	150	150	160	320	320
B	108,5	108,5	123	237,4	262,2
C	156	156	170	276,7	290,2
D	81,5	81,5	99,5	245,2	252,2
E	74,5	74,5	70,5	31,5	38
F	114	114	128	203	205
Weight (Kg)	3,2	3,2	4,7	17,6	22

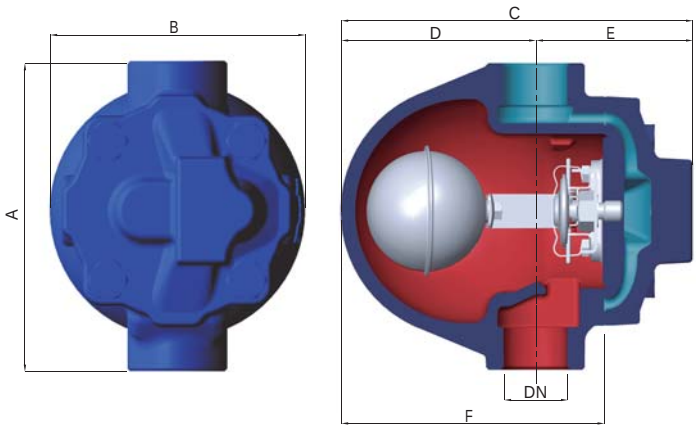
Dimensions in mm.



Dimensions and weight thread connection

DN	1/2"	3/4"	1"	1-1/2"	2"
A	145	145	145	270	300
B	120	120	120	237,4	262,2
C	167	167	167	280,2	292,2
D	92,5	92,5	92,5	245,2	252,2
E	74,5	74,5	74,5	35	40
F	125	125	125	203	205
Weight (Kg)	3,2	3,2	4,7	17,6	22

Dimensions in mm



BV500

Max. operating temperature: 250°C
Operating pressure: 16 barg

Installation

The BV500 steam trap must be fitted with the float arm in a horizontal plane so that the float will rise and fall vertically within the trap body. Nominal sizes DN 15, DN 20 and DN 25 can be installed both in horizontal and vertical pipes by turning the cover 90°.

Specifications

Sizes: DN 15, DN 20, DN 25, DN 40 and DN 50
End connections: Flanged DIN PN 16 / Thread end BSPP
Maximum Allowable Pressure: 25 bar
Maximum Allowable Temperature: 300°C
Maximum Operating Pressure: 16 bar
Maximum Differential Pressure: 4,5 bar, 10 bar, 14 bar
Maximum Operating Temperature: 250°C

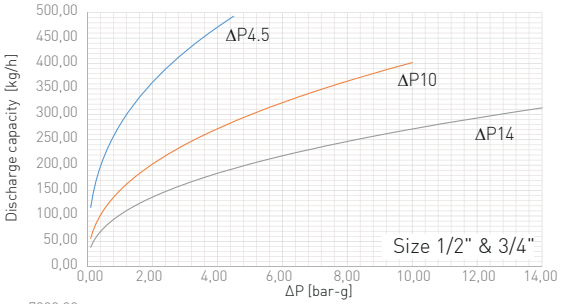
Materials:

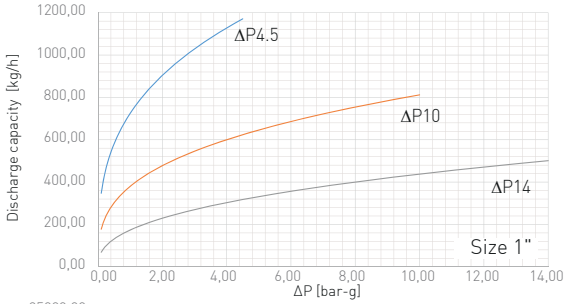
Body & Cover: Ductile iron GGG 40.3
Thermostatic Capsule: Stainless steel
Air Vent Seat / Float Seat: Stainless steel 304
Main Valve (Ball): Stainless steel 304
Float & Float Lever: Stainless steel 304

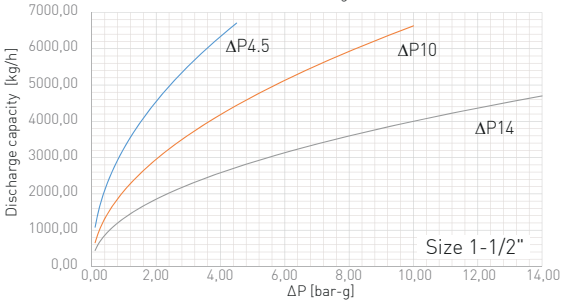
Discharge capacities

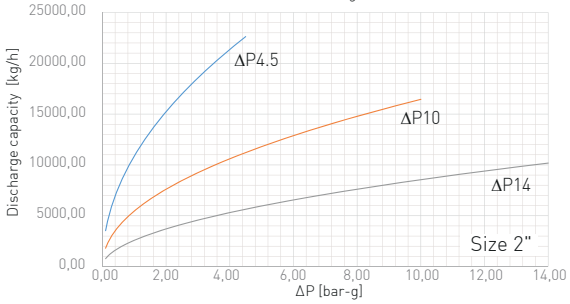
Differential Pressure Barg	ΔP4,5 (A)				ΔP10 (B)				ΔP14 (C)			
	1/2"-3/4"	1"	1-1/2"	2"	1/2"-3/4"	1"	1-1/2"	2"	1/2"-3/4"	1"	1-1/2"	2"
0.1	115	365	1100	3500	55	187	660	1800	38	68	450	850
0.2	160	425	1450	4800	75	211	925	1600	52	90	625	1250
0.3	180	491	1800	6000	89	249	1150	3100	62	101	750	1450
0.4	190	523	2150	6950	100	280	1300	3500	70	133	850	1700
0.6	225	601	2650	8500	125	314	1625	4250	82	145	1050	2150
0.8	260	689	2950	9600	140	359	1825	4800	93	159	1200	2500
1	275	721	3250	12500	160	391	2125	5400	100	172	1300	2750
2	360	901	4500	15000	200	483	3000	7500	135	224	1800	3600
3	425	1003	5500	17500	240	552	3600	9200	170	272	2250	4500
4.5	500	1225	6700	22500	280	608	4400	11250	190	316	2750	5500
5					300	653	4600	11850	200	323	2900	5850
6					320	699	5100	13100	220	349	3200	6400
8					360	749	6000	15000	250	401	3600	7500
10					400	801	6700	16300	270	451	4000	8400
14									310	503	4700	9500

Notes: 1. Discharge capacities in Kg/h with outlet pressure 0 bar.









Y type strainers

Flanged ends

Features

BVALVE introduces its new Y type strainers which stop pipelines and equipment from blockage through the filtering of foreign matter which tends to build up in pipelines, such as solids or contaminants. They are therefore used to avoid expensive shut downs and to secure pumps' suction inlet, valves, and pipeline equipment from damaging.

Typical Applications

These may be applied on processes containing steam, thermal oil, water, hot water, compressed air, chemical fluids and LPG among others.

Specifications

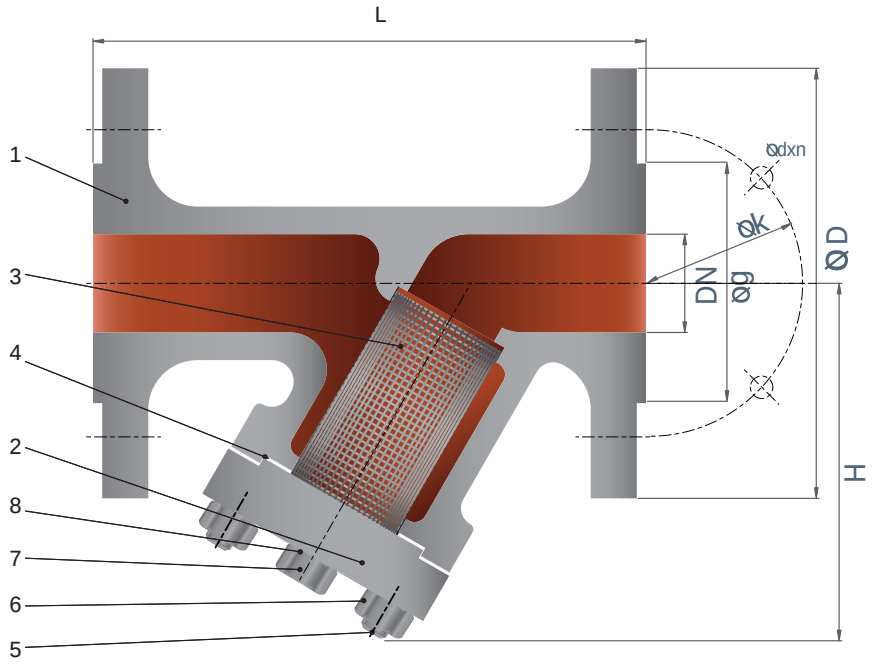
Size:	DN15-DN300
Body and cover:	Nodular cast iron EN-GJS-400-18-LT
Screen:	AISI304
Gasket:	Graphite
Studs / nuts:	CARBON STEEL Gr.10.9

Connections:	Flanges DIN EN1092-2 PN16
Desing:	DIN EN 12516
Working Conditions:	EN 1092-2 PN16 (-10 °C / 350 °C)
Face to Face:	DIN EN 558-1
Test:	EN 12266-1 P10

BV12064 | PN16 EN 1092-2

Nodular cast iron

Temperature min. -10ºC
Temperature max. +350ºC



Nº	COMPONENT	MATERIALS
1	Body	EN-GJS-400-18-LT
2	Bonnet	EN-GJS-400-18-LT
3	Screen	Stainless Steel 304
4	Gasket	Graphite
5	Stud	CARBON STEEL Gr.10.9
6	Nut	CARBON STEEL Gr.10.9
7	Drain Plug	CARBON STEEL (Gr.1518)
8	Gasket	Graphite

DN / Size	Mesh (mm.)
15 - 50	1
65 - 80	1,25
100 - 300	1,60
DN200 - DN300 screens include supporting basket	

Dimensions (mm)

DN / Size	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850
H	66	72	85	90	118	133	180	210	247	284	326	432	538	605
ØD	95	105	115	140	150	165	185	200	220	250	285	340	405	460
Øk	65	75	85	100	110	125	145	160	180	210	240	295	355	410
dxn	14x4	14x4	14x4	19x4	19x4	19x4	19x4	19x8	19x8	19x8	23x8	23x12	28x12	28x12
Weight(kg)	2,2	2,8	3,5	5,5	7	9,5	24	31,3	42,4	84	96	110	180	286
Øg	46	56	65	76	84	99	118	132	156	184	211	266	319	370

WORKING CONDITIONS						
Temperature ºC	-10/120	150	200	250	300	350
Pressure Bar	16	15,5	14,7	13,9	12,8	11,2

Y type strainers

Flanged ends

Features

BVALVE introduces its new Y type strainers which stop pipelines and equipment from blockage through the filtering of foreign matter which tends to build up in pipelines, such as solids or contaminants. They are therefore used to avoid expensive shut downs and to secure pumps suction inlet, valves and pipeline equipment from damaging.

Typical Applications

These may be applied on processes containing steam, thermal oil, water, hot water, compressed air, chemical fluids and LPG among others.

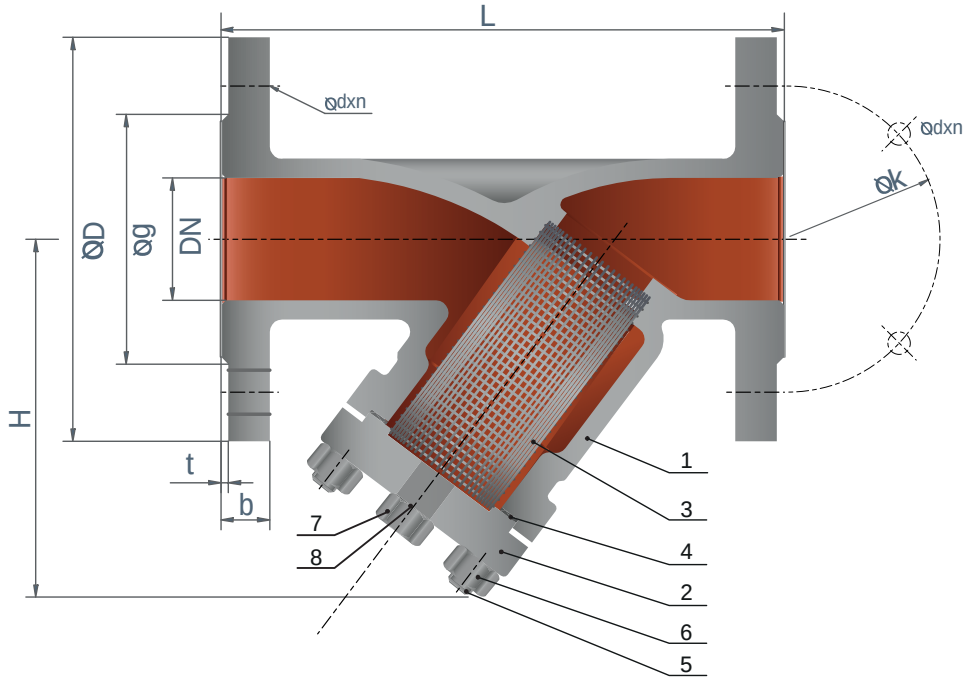
Specifications

Size:	DN15-DN300
Body / bonnet:	Carbon Steel DIN 17245 GS-C25 / 1.0619
Screen:	AISI 316 / 1.4401
Gasket:	Graphite
Studs and nuts:	ASTM A193 B7 / 194-2H
Connections:	Flanges DIN EN 1092-B1

Design:	EN 12916
Working Conditions:	EN 1092-1 (-10 °C / 400 °C)
Face to Face:	EN 558-1
Test:	EN 12666-1 P10
Marking:	DIN EN 19
Painting:	High temperature up to 600ºC

BV12065 | PN40 EN 1092-1
Carbon steel

Temperature min. -10°C
Temperature max. +400°C



N°	COMPONENT	MATERIALS
1	Body	DIN 17245 GS-25
2	Bonnet	DIN 17245 GS-25
3	Screen	AISI 316 / 1.4401
4	Gasket	Graphite + Stainless Steel 16
5	Stud	ASTM A193 B7
6	Nut	ASTM A193 B7
7	Drain Plug	DIN 17243 C22 8
8	Gasket	Graphite + Stainless Steel 16

DN / Size	Mesh (mm.)
15 - 50	1
65 - 80	1,25
100 - 300	1,60
DN200 - DN300 screens are with supporting basket	

Dimensions (mm)

DN / Size	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850
H	97	98	108	113	138	147	170	204	240	288	334	380	452	600
ØD	95	105	115	140	150	165	185	200	235	270	300	375	450	515
Øk	65	75	85	100	110	125	145	160	190	220	250	320	385	450
b	16	18	18	18	18	20	22	24	24	26	28	34	38	42
dxn	14x4	14x4	14x4	18x4	18x4	18x4	18x8	18x8	22x8	26x8	26x8	30x12	33x12	33x16
Weight (Kg)	2,8	3,7	5,1	6,7	9,1	11,4	16,4	22,5	33	47,2	66,3	139	237	341
Øg	45	58	68	78	88	102	122	138	162	188	218	285	345	410
t	2	2	2	2	3	3	3	3	3	3	3	3	3	4

WORKING CONDITIONS							
Temperature °C	-10/120	150	200	250	300	350	400
Pressure Bar	40	35,2	33,3	30,4	27,6	25,7	23,8

Y type strainers
Threaded ends

Features

BVALVE introduces its new Y type strainers which stop pipelines and equipment from blockage through the filtering of foreign matter which tends to build up in pipelines, such as solids or contaminants. They are therefore used to avoid expensive shut downs and to secure pumps suction inlet and pipeline equipment from damaging.

Typical Applications

These may be applied on processes containing steam, thermal oil, water, hot water, compressed air, chemical fluids and LPG among others.

Specifications

Sizes: 1/2" - 2"

Invesment casting

Y type

SS316 screen

Screwed-in cap

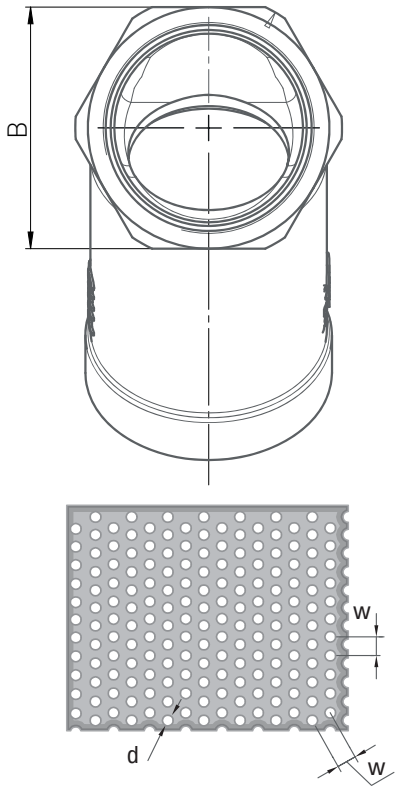
Connecting threads: Thread ends BSP female

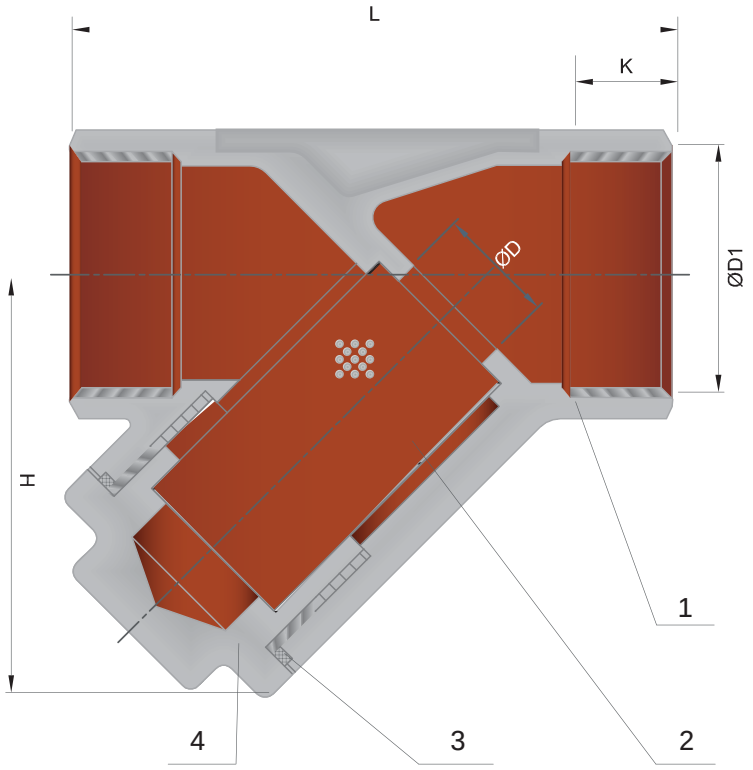
Max operating temperature: 210ºC

Max operating pressure: PN40

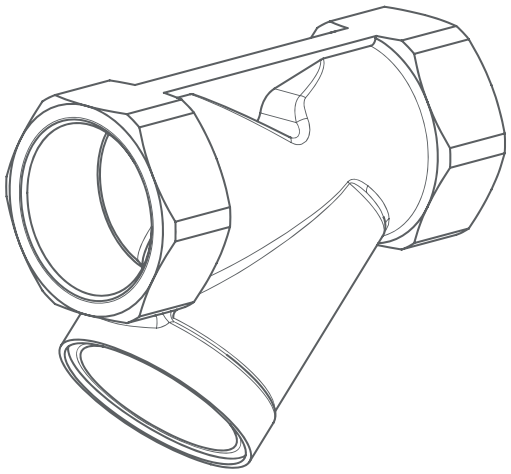
BV800 | PN40 EN 1092-1
Stainless steel

Temperature min. -10ºC
Temperature max. +210ºC



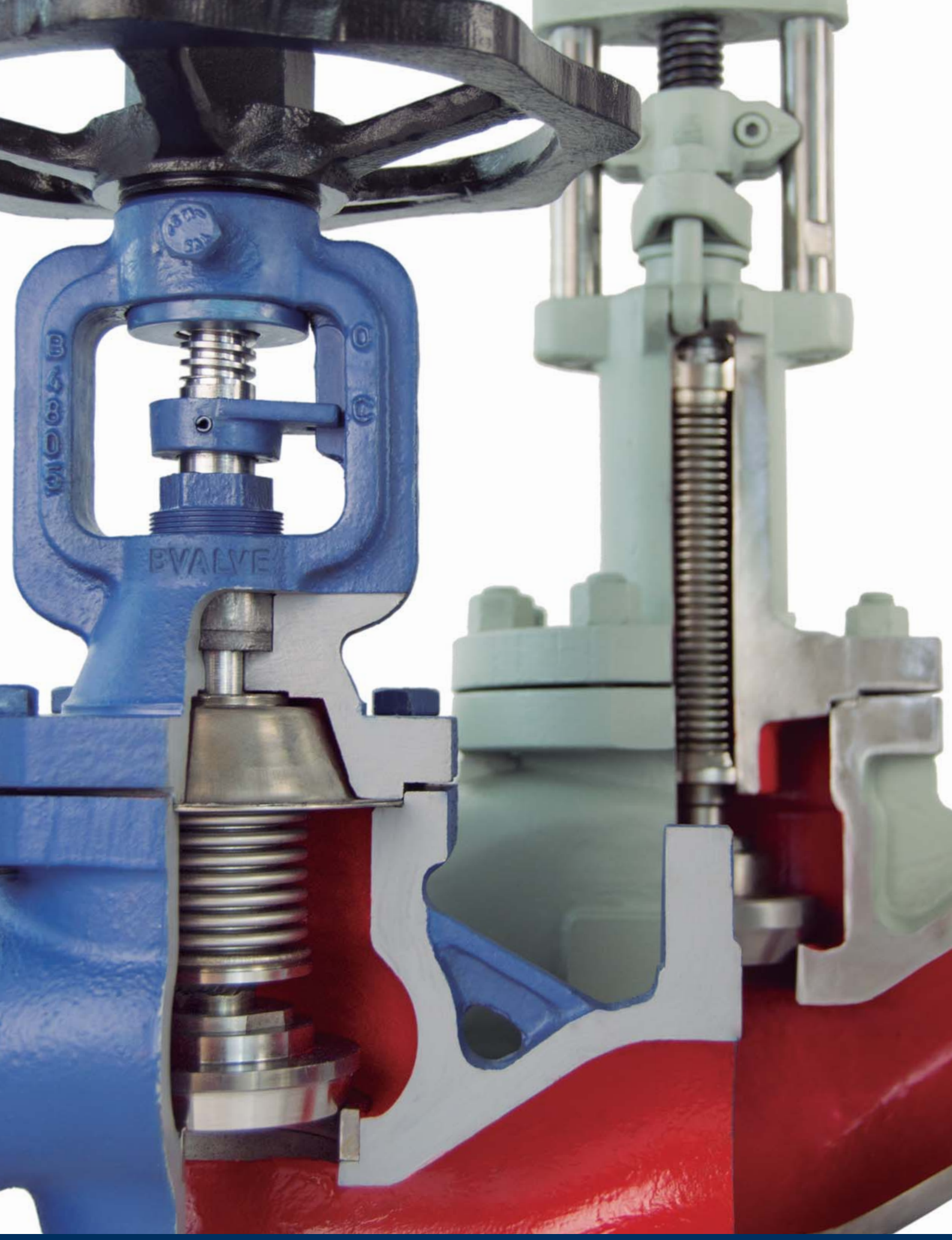


Nº	COMPONENT	MATERIALS
1	Body	A351-CF8M
2	Screen	SS316
3	Joint gasket	PTFE
4	Cap	A351-CF8M



Dimensions (mm)

Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2
øD	15	20	25	32	40	50
B	26	32	40	48	55	68
(H)	45	52	68	70	80	98
L	64	80	90	106	119	140
øD1	1/2 BSP	3/4 BSP	1 BSP	1- 1/4 BSP	1-1/2 BSP	2 BSP
W	2	2	2	2	2	2
d	1	1	1	1	1	1
Kgs	0,2	0,320	0,565	0,735	1,040	1,630



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