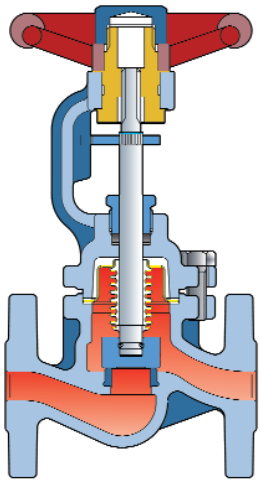
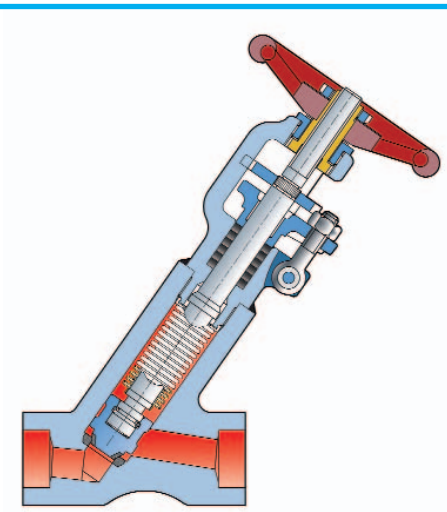
BONETTI®



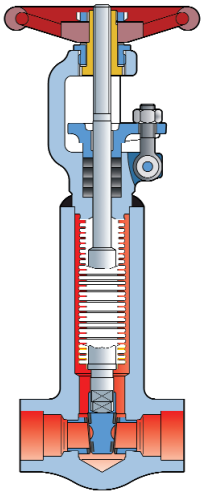
BONETTI®

Stop Valves
Bellows Sealed
DIN PN 16 - 25 - 40
ASME Class 150 - 300



BONT®

Forged Steel Globe Valves
Type WBY - L
Bellows Sealed
ASME Class
800 - 1500 - 2500



BONT®

Forged Steel Gate Valves
Type GWBT - L
Bellows Sealed
ASME Class
800 - 1500

INDEX

FIGURE NUMBER INDEX

Rating to DIN 2401

Max. Operating TEMPERATURE to DIN °C	Max. Operating PRESSURE (bar) PN16 Material Schedule 43	PN16 Material Schedule 41	PN25 Material Schedule 41	PN40 Material Schedule 51-53-63	PN63 Material Schedule 51-63
-10 +120	16	16	25	40	63
200	13	13	20	35	50
250	11	12	18	32	45
300	10	11	16	28	40
350	-	10	15	24	36
400	-	-	-	21	32

Max Operating Pressure and Temperature according to DIN 2401. For Mat. Sch. 43 also compliance with AD Merkblatt W3/1 and for Mat. Sch. 41 also compliance with AD Merkblatt W3/2. Above operating range for information only.
Max. actual Pressure and Temperature must be aknowledged by relevant Inspecting Authority.

Rating to ASME B16.34 or API 602

Max. Operating TEMPERATURE to ASME °C	Max. Operating PRESSURE (bar) Class 150 Material Schedule 51-53	Class 150 Material Schedule 63	Class 300 Material Schedule 51-53	Class 300 Material Schedule 63	Class 600 Material Schedule 51	Class 600 Material Schedule 63	Class 800 Material Schedule 71	Class 800 Material Schedule 11	Class 800 Material Schedule 31	Class 1500 Material Schedule 71	Class 1500 Material Schedule 11	Class 1500 Material Schedule 31
-29 +38	16.6	19.0	51.1	49.6	102.1	99.3	136.2	137.9	132.4	255.3	258.6	248.1
100	17.7	16.2	46.4	42.2	92.8	84.4	123.7	130.0	112.5	231.9	243.8	211.0
200	14.0	13.7	43.8	35.7	87.6	71.3	116.9	121.3	95.1	219.1	227.4	178.4
300	10.2	10.2	38.7	31.6	77.5	63.3	103.3	113.2	84.4	193.7	212.1	158.1
400	6.5	6.5	34.5	29.1	69.0	58.2	92.0	97.6	77.6	172.5	182.9	145.6
425	5.6	5.6	28.8	28.7	57.5	57.3	76.7	93.6	76.4	143.8	175.5	143.3
500	-	2.8	-	26.8	-	53.7	-	74.1	71.6	-	139.0	134.1
538	-	1.6	-	25.4	-	50.7	-	43.6	67.6	-	81.8	126.8
595	-	-	-	-	-	-	-	17.0	58.6	-	32.0	109.9
600	-	-	-	-	-	-	-	-	57.2	-	-	107.2
700	-	-	-	-	-	-	-	-	26.5	-	-	49.7
800	-	-	-	-	-	-	-	-	9.3	-	-	17.5

For flanged ends of Austenitic Stainless Steel Valves (Mat. Sch. 31-63) Max. Operating Temperature 538 °C

BONETTI® and BONT®
Bellows Sealed Valves

GENERAL INFORMATION
BONETTI® and BONT® Bellows Seal Valves described in this bulletin are:
- Shut-off valves with metallic sealing
  - 13% Cr for medium - low temperature
  - Stellite Gr. 6 hard faced for high pressure and temperature
    On request soft sealing made of PTFE is available (see Fig. 526,527).
- Body-bonnet connection (depending on rating)
  - Bolted or
  - Screwed and seal welded or
  - Welded
- External sealing by means of metallic bellows and an additional safety packing.

APPLICATION RANGE
Our Bellows Seal Valves are zero emission and maintenance free. An uninterrupted metallic barrier is positioned between the piping and the environment. The components that during valve operation are subject to relative movements are welded onto the extremities of a metallic bellows that absorbs and compensates the shiftings. Hence these valves are suitable for any fluid and are recommended when zero emission characteristics are required to protect the environment and the health of the workers from pollutive leaks, to prevent expensive wastes due to loss of energy and fluid, and to eliminate the not negligible cost of replacement of the packing.
In conclusion, the valves are particularly suitable for dangerous, inflammable, lethal and explosive media.

DESIGN
The particular characteristics of these valves have been obtained by means of correct sizing and material selection, by a shrewd and long test in laboratory and plants under severe working conditions allowed by the rating, and a quality system adhering to ISO 9001 requirements. The adopted bellows are fully in compliance with existing international standards (MSS SP 117, BS5352 etc.) and are made of Austenitic Stainless Steel or Hastelloy. Different materials as Inconel and Monel are available on request.
The life (corresponding to the number of cycles) is much longer than that required by the relative standards.
Generally our Bellows Seal Valves are fitted with rising not rotating stem to avoid additional torsional stresses on the bellows

DESIGN
BONETTI® and BONT® Bellows Seal Valves are on-off type. The standard plug can be easily replaced with a regulating plug (Fig. 528) to obtain a Regulating Valve.
Note: standard design of BBT-L valves size DN 250 (10”) is equipped with balanced plug (reversed flow working) to minimise operating effort. This solution can be fitted, on request, also on sizes DN 150 and 200 (6” and 8”).

RATINGS
The max operating Pressures, related to the max operating Temperatures per each Rating are shown on page 2 for information only. The max operating conditions are anyhow those recommended by the pertinent Inspecting Organization on installation.
In case of heavy service with pipes exposed to shocks, vibrations, repeated stresses, condensate hammering etc., and with harmful fluids, valves with body of steel, even for limited operating conditions, shall be selected.

When ordering or enquiring, the valve heaviest operating conditions (kind of fluid, pressure, temperature), shall be advised.

MATERIAL SCHEDULES
The Bellows Seal Valves are manufactured in different Material Schedules. For "Material Schedule" we mean the material quality of each valve component.
For all the different figures of valves the applicable part list is shown on each descriptive page.
Here below we list the main components of the different Material Schedules:

Material Schedule	Body Material	Disk-Seat Material
11	Forged Alloy Steel	Stellite Gr.6
31	Forged Stainless Steel Tp.316	Stellite Gr.6
41	Nodular Cast Iron	13% Cr Steel
43	Cast Iron	13% Cr Steel
51	Forged Carbon Steel	13% Cr Steel
53	Cast Carbon Steel	13% Cr Steel
63	Forged or Cast Stainless Steel Tp.316	S.S. Tp.316
71	Forged Carbon Steel	Stellite Gr.6

SIZES (DN)
Standard sizes are DN 15(1/2") through DN 250 (10").

CONNECTIONS
Bellows Valves illustrated in this catalogue have the following end connections:
- Flanged according to UNI, DIN, AFNOR etc
- Flanged according to ASME B16.5
- Socket Weld according to ASME B16.11
- Butt Weld according to ASME B16.25 or DIN 3239
- Female Screwed NPT or BSP

ACTUATED VALVES
The BONETTI® and BONT® Bellows Seal Valves of any size, rating and material can be equipped with pneumatic, hydraulic or electric actuator for remote control.

SHIPPING PREPARATION
Our valves are supplied after passing the prescribed dimensional and functional tests. All valves are protected by polythene closures on connections and external painting for storage and shipping purposes. Wooden containers are recommended for overseas shipments.

OPTIONAL
1 For temperature below 200 °C, Disk Seat can be supplied of soft material (normally PTFE+Graphite) instead of metal, Fig. 526, Fig. 527.
2 Regulating Disk can be supplied on Flow Control Valves, Fig. 528.

Soft Seal Disks

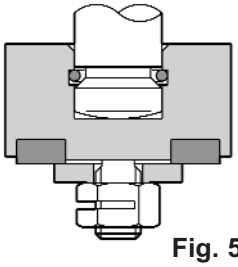


Fig. 526

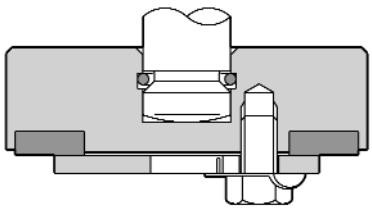


Fig. 527

Regulating Disk

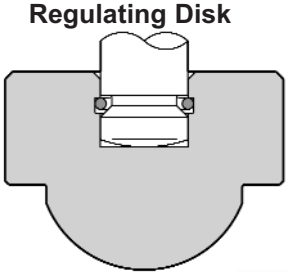


Fig. 528

BONETTI® Valves type BBT-L Bellows sealed

Stop Valves - Cast Iron JL 1040
Rating DIN 2401 PN16
Flanged Ends to DIN 2533 - PN16
Size DN 15 to DN 200

1 Standard Flanges are Raised Face, drilled.

2 Face-to-Face dimensions (A) to DIN 3202-F1.

3 Standard Material Schedule: 43.

4 Operating Range: The parts of Cast Iron JL1040 (former GG-25 DIN 1691) are heat treated for annealing.
The use of Cast Iron Valves is to be excluded with harmful fluids (inflammables, toxic, corrosive, etc.) and for heavy service with pipes exposed to shocks, vibrations, repeated stresses, condensate hammering, etc.

5 Seat and Disk of Stainless Steel.

6 OS & Y Rising non-rotating Stem.

7 Stroke Indicator, Antirotation Device.

8 Backup Packing.

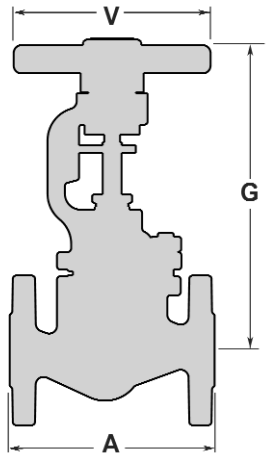


Fig. 511

Type	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
	mm			mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	15	511	43	130	200	125	8	95	14	4	14	65	4,1	7	6
BBT-L	20	511	43	150	200	125	8	105	16	4	14	75	4,8	12	10
BBT-L	25	511	43	160	210	125	11	115	16	4	14	85	6,0	16	14
BBT-L	32	511	43	180	210	125	11	140	18	4	18	100	7,0	22	19
BBT-L	40	511	43	200	225	150	15	150	18	4	18	110	9,6	37	32
BBT-L	50	511	43	230	230	150	17	165	20	4	18	125	12	58	50
BBT-L	65	511	43	290	250	175	18	185	20	4	18	145	17	85	75
BBT-L	80	511	43	310	260	175	21	200	22	8	18	160	20	140	120
BBT-L	100	511	43	350	340	225	26	220	24	8	18	180	33	215	185
BBT-L	125	511	43	400	360	225	33	250	26	8	18	210	50	335	285
BBT-L	150	511	43	480	405	300	42	285	26	8	22	240	70	470	400
BBT-L	200	511	43	600	500	400	53	340	30	12	22	295	105	840	720

Part		Part Material for Material Schedule 43
1	Body	JL1040 (formerGG-25 DIN 1691) + H.T.
1.1	Seat	AISI 420
2	Bonnet	JL1040 (formerGG-25 DIN 1691) + H.T.
3	Disk ●	ASTM A182 F6 ●
4	Stem	ASTM A182 F6
6	Packing	Graphite
7	Handwheel	Cast Iron
8	Handwheel Nut	Carbon Steel + Plated
10.1	Screw	5.6
11	Yoke Bushing	Carbon Steel + Plated
13	Packing Gland	Carbon Steel + Plated
23	Indicator, Antirotation	Carbon Steel + Plated
42	Retaining Ring	Alloy Steel
43	Antifriction Washer	Carbon Steel C70
60	Bellows	AISI 321 / AISI 316Ti
61	Gasket	Graphite
70	Connecting Ring	Stainless Steel

● A105 + 13% Cr for DN 200

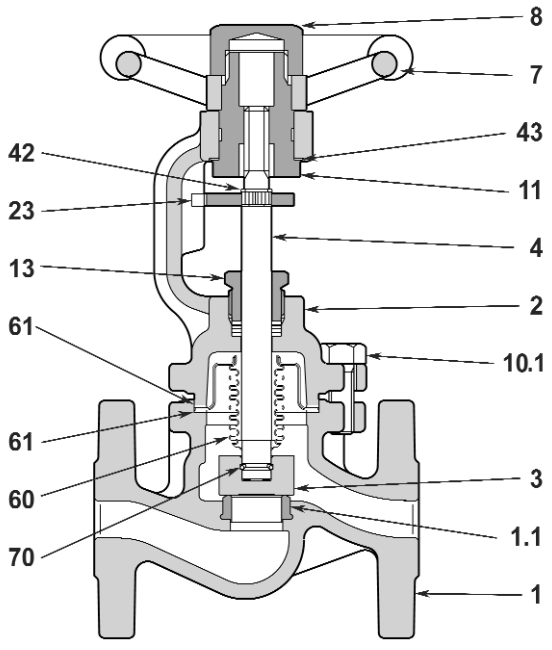


Fig. 511

BONETTI® Valves type BBT-L Bellows sealed

Stop Valves - Nodular Cast Iron JS 1049
Rating DIN 2401 - PN 16 and PN 25
Flanged Ends to DIN 2533 - PN 16 - Size DN 65 to DN 250
- PN 25 - Size DN 15 to DN 200

1 Standard Flanges are Raised Face, drilled.
2 Face-to-Face dimensions (A) to DIN 3202-F1.
3 Standard Material Schedule: 41.
4 Seat and Disk of Stainless Steel.
5 OS & Y Rising non-rotating Stem.
6 Stroke Indicator, Antirotation Device.
7 Backup Packing.

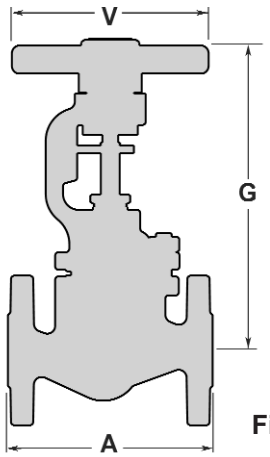


Fig. 513

Type PN 16	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
	mm			mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	65	513	41	290	250	175	18	185	20	4	18	145	17	85	75
BBT-L	80	513	41	310	260	175	21	200	22	8	18	160	20	140	120
BBT-L	100	513	41	350	340	225	26	220	24	8	18	180	33	215	185
BBT-L	125	513	41	400	360	225	33	250	26	8	18	210	50	335	285
BBT-L	150	513	41	480	405	300	42	285	26	8	22	240	70	470	400
BBT-L	200	513	41	600	500	400	53	340	30	12	22	295	105	840	720
BBT-L	250	513	41	730	650	600	70	405	32	12	26	320	300	1300	1150

Type PN 25	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
	mm			mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	15	513	41	130	200	125	8	95	16	4	14	65	4,1	7	6
BBT-L	20	513	41	150	200	125	8	105	18	4	14	75	4,8	12	10
BBT-L	25	513	41	160	210	125	11	115	18	4	14	85	6,0	16	14
BBT-L	32	513	41	180	210	125	11	140	18	4	18	100	7,0	22	19
BBT-L	40	513	41	200	225	150	15	150	18	4	18	110	9,6	37	32
BBT-L	50	513	41	230	230	150	17	165	20	4	18	125	12	58	50
BBT-L	65	513	41	290	250	175	18	185	22	8	18	145	17	85	75
BBT-L	80	513	41	310	260	175	21	200	24	8	18	160	20	140	120
BBT-L	100	513	41	350	340	225	26	235	24	8	22	190	33	215	185
BBT-L	125	513	41	400	360	225	33	270	26	8	26	220	51	335	285
BBT-L	150	513	41	480	405	300	42	300	28	8	26	250	71	470	400
BBT-L	200	513	41	600	500	400	53	360	34	12	26	310	106	840	720

Part		Part Material for Material Schedule 41
1	Body	JS1049 (former GGG-40.3 DIN 1693)
1.1	Seat	AISI 420
2	Bonnet	JS1049 (former GGG-40.3 DIN 1693)
3	Disk ●	ASTM A182 F6 ●
4	Stem	ASTM A182 F6
6	Packing	Graphite
7	Handwheel	Cast Iron
8	Handwheel Nut	Carbon Steel + Plated
10	Stud Bolt and Nut	5.6 - 5.2
11	Yoke Bushing	Carbon Steel + Plated
13	Packing Gland	Carbon Steel + Plated
23	Indicator, Antirotation	Carbon Steel + Plated
42	Retaining Ring	Alloy Steel
43	Antifriction Washer	Carbon Steel C70
60	Bellows	AISI 321 / AISI 316Ti
61	Gasket	Graphite
70	Connecting Ring	Stainless Steel

● A105 + 13% Cr for DN 200

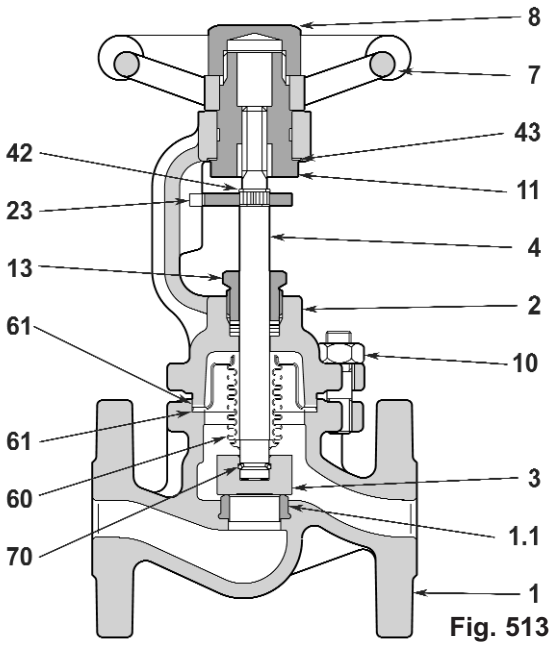


Fig. 513

BONETTI® Valves type BBT-L Bellows sealed

Stop Valves - Carbon Steel - Stainless Steel
Rating DIN 2401 PN 40
Flanged Ends to DIN 2545 PN 40
Size DN 15 to DN 250

1 Standard Flanges are Raised Face, drilled.
2 Face-to-Face dimensions (A) to DIN 3202-F1.
3 Standard Material Schedule: 51, 53, 63.
4 Seat and Disk of Stainless Steel.
5 OS & Y Rising non-rotating Stem for Fig. 515 only.
6 Stroke Indicator, Antirotation Device for Fig. 515 only.
7 Backup Packing.

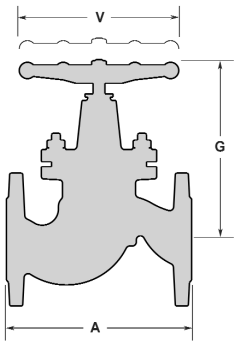


Fig. 514

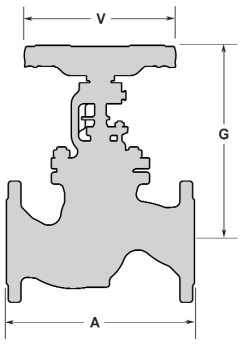


Fig. 515

Type	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
	mm			mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	15	514	51 - 63	130	160	125	5	95	16	4	14	65	2,5	4	3,5
BBT-L	20	514	51 - 63	150	162	125	6	105	18	4	14	75	6,0	8	7
BBT-L	25	514	51 - 63	160	180	125	7	115	18	4	14	85	6,5	14	12
BBT-L	32	514	51 - 63	180	188	125	9	140	18	4	18	100	8,5	22	19
BBT-L	40	514	51 - 63	200	205	125	12	150	18	4	18	110	11,5	35	30
BBT-L	50	514	51 - 63	230	250	200	13	165	20	4	18	125	16,5	56	48
BBT-L	65	515	51 - 63	290	290	250	17	185	22	8	18	145	21	85	75
BBT-L	80	515	51 - 63	310	305	250	20	200	24	8	18	160	28	140	120
BBT-L	100	515	51 - 63	350	360	300	25	235	24	8	22	190	45	215	185
BBT-L	125	515	51 - 63	400	420	400	28	270	26	8	25	220	65	335	285
BBT-L	150	515	51 - 63	480	470	400	37	300	28	8	25	250	98	470	400
BBT-L	200	515	51 - 63	600	520	600	45	375	34	12	30	320	170	805	690
BBT-L	250	515	51 - 63	730	650	600	70	450	38	12	33	345	405	1250	1070

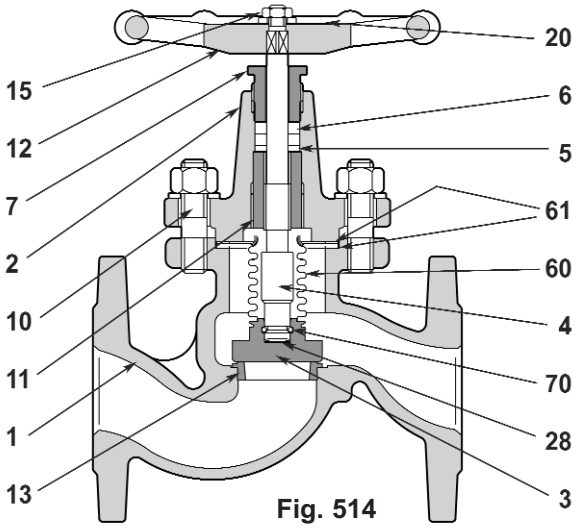


Fig. 514

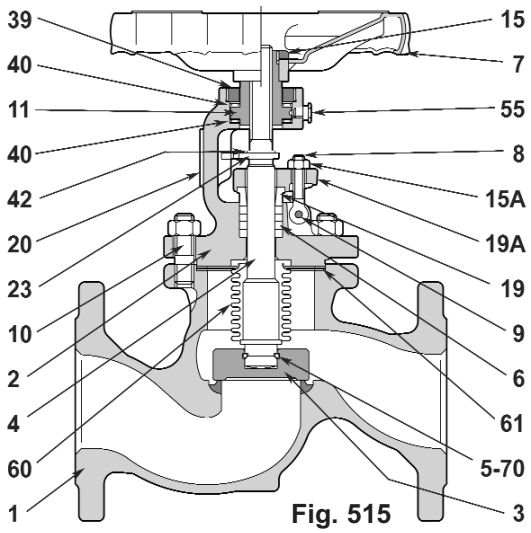


Fig. 515

Part for Fig. 514		Part Material for Material Schedule 51-53	63
1	Body	ASTM A105 ★ ASTM A216 WCB ★	ASTM A182 F316 ★ ASTM A351 CF8M ★
2	Bonnet	ASTM A105	ASTM A182 F316
3	Disk	ASTM A182 F6	ASTM A182 F316
4	Stem	ASTM A479 410	ASTM A479 316 Nitr.
5	Bottom Ring	Carbon Steel	Reinforced Graphite
6	Packing	Graphite	Graphite
7	Threaded Gland	Carbon Steel	Carbon Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Bonnet Bush ▲	OT58 UNI 5707	ASTM A439 D2C
12	Handwheel	Cast Iron	Cast Iron
13	Seat	ASTM A182 F6	ASTM A182 F316
15	Nut	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel
28	Antifriction Plate	OT58 UNI 5707	N.A.
60	Bellows	AISI 321 / AISI 316Ti	AISI 321 / AISI 316Ti
61	Gasket	Graphite	Graphite
70	Connecting Ring	Spring Steel	Stainless Steel

▲ for DN 32, 40, 50 only ★ depending on size

Part for Fig. 515		Part Material for Material Schedule 51-53	63
1	Body	ASTM A216 WCB+13%Cr	ASTM A351 CF8M
2	Bonnet	ASTM A216 WCB	ASTM A351 CF8M
3	Disk	ASTM A182 F6 ★ ASTM A105 + 13%Cr ★	ASTM A182 F316 ASTM A182 F316
4	Stem	ASTM A182 F6	ASTM A479 316 Nitr.
5	Split Nut ■	ASTM A105 Hardened	ASTM A564 630
6	Packing	Graphite	Graphite
7	Handwheel	Cast Iron	Cast Iron
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300
15	Handwheel Nut	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H
19	Gland	ASTM A105	ASTM A479 304
20	Name Plate	Stainless Steel	Stainless Steel
23	Indicator, Antirotation	Carbon Steel + Plated	Stainless Steel
39	Retaining Nut	Carbon Steel	Carbon Steel
40	Thrust bearing	Alloy Steel	Alloy Steel
42	Retaining Ring	Alloy Steel	Alloy Steel
55	Lubricator	Steel	Steel
60	Bellows	AISI 321 / AISI 316Ti	AISI 321 / AISI 316Ti
61	Gasket	Graphite	Graphite
70	Connecting Ring	Stainless Steel	Stainless Steel

■ for DN 32, 40, 50 only ★ depending on size

BONETTI® Valves type BBT-L Bellows sealed

Stop Valves - Carbon Steel - Stainless Steel
Rating ASME B16.34 - Class 150
Flanged Ends to ASME B16.5
Size 1/2" to 6"

1 Standard Flanges are Raised Face, drilled.
2 Face-to-Face dimensions (A) to ASME B16.10.
3 Standard Material Schedule: 51, 53, 63.
4 Seat and Disk of Stainless Steel.
5 OS & Y Rising non-rotating Stem for Fig. 517 only.
6 Stroke Indicator, Antirotation Device for Fig. 517 only.
7 Backup Packing.

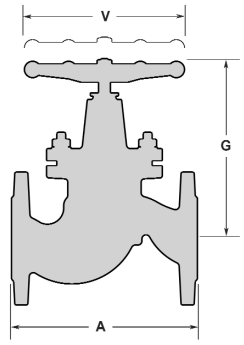


Fig. 516

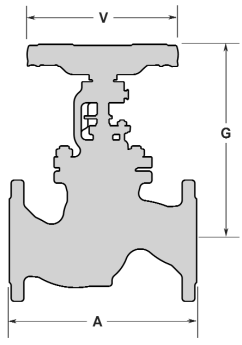


Fig. 517

Type	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
				mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	1/2"	516	51 - 63	108	160	125	4,5	89,0	11,2	4	16	60,4	2,5	5	4
BBT-L	3/4"	516	51 - 63	117	162	125	6,0	98,5	12,7	4	16	69,9	3,0	7	6
BBT-L	1"	516	51 - 63	127	172	125	7,0	108,0	14,3	4	16	79,4	5,0	10	8,5
BBT-L	1.1/2"	516	51 - 63	165	189	125	12,0	127,0	17,6	4	16	98,5	9,5	23	20
BBT-L	2"	516	51 - 63	203	205	125	13,0	152,0	19,0	4	16	120,6	15	37	32
BBT-L	3"	517	51 - 63	241	305	250	20,0	190,0	24,0	4	19	152,0	24	140	120
BBT-L	4"	517	51 - 63	292	365	300	25,0	230,0	24,0	8	19	190,0	38	215	185
BBT-L	6"	517	51 - 63	406	470	400	37,0	280,0	25,4	8	22	241,0	79	460	390

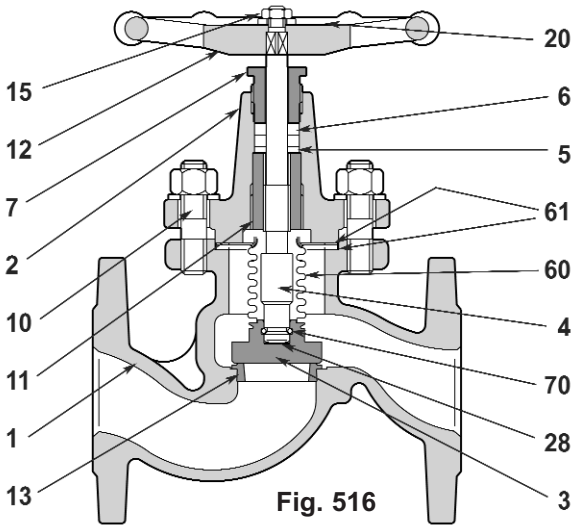


Fig. 516

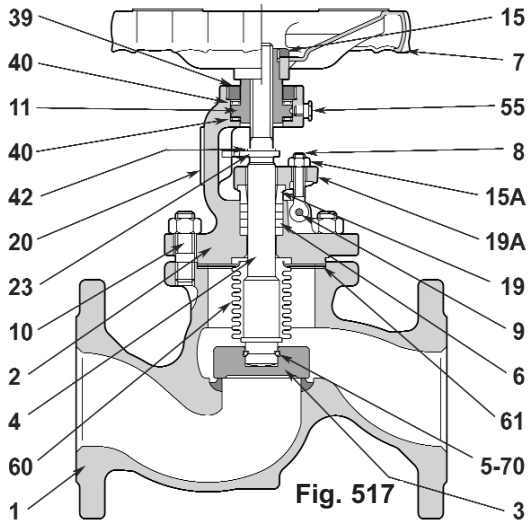


Fig. 517

Part for Fig. 516		Part Material for Material Schedule 51-53	63
1	Body	ASTM A105 ★ ASTM A216 WCB ★	ASTM A182 F316 ★ ASTM A351 CF8M ★
2	Bonnet	ASTM A105	ASTM A182 F316
3	Disk	ASTM A182 F6	ASTM A182 F316
4	Stem	ASTM A479 410	ASTM A479 316 Nitr.
5	Bottom Ring	Carbon Steel	Reinforced Graphite
6	Packing	Graphite	Graphite
7	Threaded Gland	Carbon Steel	Carbon Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Bonnet Bush ▲	OT58 UNI 5707	ASTM A439 D2C
12	Handwheel	Cast Iron	Cast Iron
13	Seat	ASTM A182 F6	ASTM A182 F316
15	Nut	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel
28	Antifriction Plate	OT58 UNI 5707	N.A.
60	Bellows	AISI 321 / AISI 316Ti	AISI 321 / AISI 316Ti
61	Gasket	Graphite	Graphite
70	Connecting Ring	Spring Steel	Stainless Steel

Part for Fig. 517		Part Material for Material Schedule 51-53	63
1	Body	ASTM A216 WCB+13%Cr	ASTM A351 CF8M
2	Bonnet	ASTM A216 WCB	ASTM A351 CF8M
3	Disk	ASTM A182 F6	ASTM A182 F316
4	Stem	ASTM A182 F6	ASTM A479 316 Nitr.
5	Split Nut ■	ASTM A105 Hardened	ASTM A564 630
6	Packing	Graphite	Graphite
7	Handwheel	Cast Iron	Cast Iron
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300
15	Handwheel Nut	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H
19	Gland	ASTM A105	ASTM A479 304
20	Name Plate	Aluminium	Aluminium
23	Indicator, Antirotation	Carbon Steel + Plated	Stainless Steel
39	Retaining Nut	Carbon Steel	Carbon Steel
40	Thrust bearing	Alloy Steel	Alloy Steel
42	Retaining Ring	Alloy Steel	Alloy Steel
55	Lubricator	Steel	Steel
60	Bellows	AISI 321	AISI 321
61	Gasket	Graphite	Graphite
70	Connecting Ring	Stainless Steel	Stainless Steel

▲ for size 1.½" and 2" only

★ depending on size

■ for size 6" only

BONETTI® Valves type BBT-L Bellows sealed

Stop Valves - Carbon Steel - Stainless Steel
Rating ASME B16.34 - Class 300
Flanged Ends to ASME B16.5
Size 1/2” to 6”

1 Standard Flanges are Raised Face, drilled.
2 Face-to-Face dimensions (A) to ASME B16.10.
3 Standard Material Schedule: 51, 53, 63.
4 Seat and Disk of Stainless Steel.
5 OS & Y Rising non-rotating Stem for Fig. 519 only.
6 Stroke Indicator, Antirotation Device for Fig. 519 only.
7 Backup Packing.

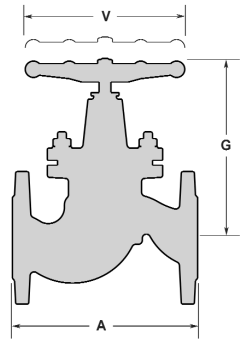


Fig. 518

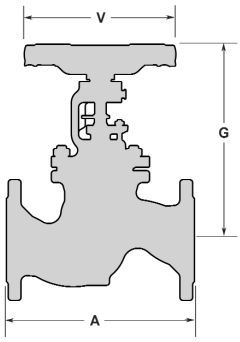


Fig. 519

Type	DN	Fig	Mat. Sched.	Dimensions A	G	V	Stroke	Flange Dimension Outs. Dia.	Thick.	No. of Holes	Dia. of Holes	Dia. of Bolt Circle	Weight	Flow Coefficient Cv	Kv
				mm	mm	mm	mm	mm	mm		mm	mm	kg		
BBT-L	1/2"	518	51 - 63	152	160	125	4,5	95,2	14,3	4	16	66,5	3,0	5	4
BBT-L	3/4"	518	51 - 63	178	162	125	6,0	117,3	15,8	4	19	82,5	4,5	7	6
BBT-L	1"	518	51 - 63	203	180	125	7,0	124,0	17,6	4	19	88,9	6,5	14	12
BBT-L	1.1/2"	518	51 - 63	228	205	125	12,0	155,4	20,6	4	22	114,3	13	35	30
BBT-L	2"	518	51 - 63	267	250	200	13,0	165,1	22,4	8	19	127,0	18	56	48
BBT-L	2,1/2"	519	51 - 63	292	315	250	18,0	190,5	25,4	8	22	149,3	30	140	120
BBT-L	3"	519	51 - 63	317	370	300	24,0	209,5	28,5	8	22	168,1	37	165	140
BBT-L	4"	519	51 - 63	356	430	400	28,0	254,0	31,8	8	22	200,0	59	250	210
BBT-L	6"	519	51 - 63	445	515	600	42,0	317,5	36,6	12	22	269,7	120	530	450

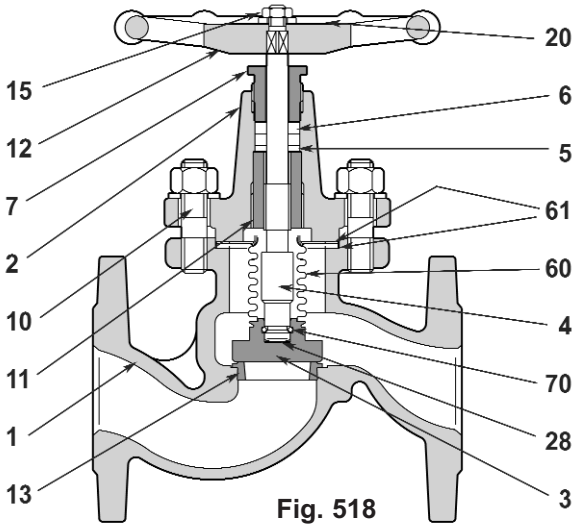


Fig. 518

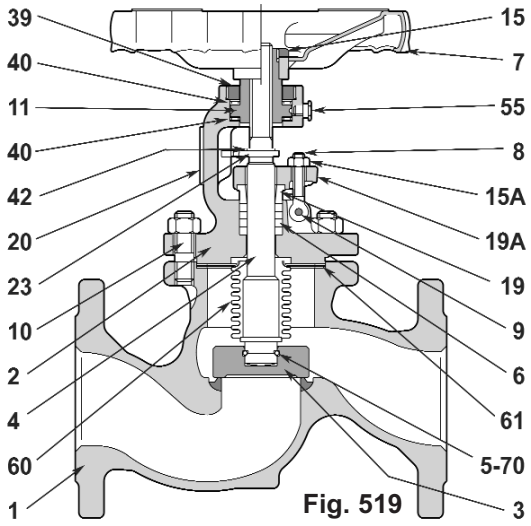


Fig. 519

Part for Fig. 518		Part Material for Material Schedule 51-53	63
1	Body	ASTM A105 ★ ASTM A216 WCB ★	ASTM A182 F316 ★ ASTM A351 CF8M ★
2	Bonnet	ASTM A105	ASTM A182 F316
3	Disk	ASTM A182 F6	ASTM A182 F316
4	Stem	ASTM A479 410	ASTM A479 316 Nitr.
5	Bottom Ring	Carbon Steel	Reinforced Graphite
6	Packing	Graphite	Graphite
7	Threaded Gland	Carbon Steel	Carbon Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Bonnet Bush ▲	OT58 UNI 5707	ASTM A439 D2C
12	Handwheel	Cast Iron	Cast Iron
13	Seat	ASTM A182 F6	ASTM A182 F316
15	Nut	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel
28	Antifriction Plate	OT58 UNI 5707	N.A.
60	Bellows	AISI 321 / AISI 316Ti	AISI 321 / AISI 316Ti
61	Gasket	Graphite	Graphite
70	Connecting Ring	Spring Steel	Stainless Steel

Part for Fig. 519		Part Material for Material Schedule 51-53	63
1	Body	ASTM A216 WCB+13%Cr	ASTM A351 CF8M
2	Bonnet	ASTM A216 WCB	ASTM A351 CF8M
3	Disk	ASTM A182 F6 ★ ASTM A105 + 13% Cr ★	ASTM A182 F316 ASTM A182 F316
4	Stem	ASTM A182 F6	ASTM A479 316 Nitr.
5	Split Nut ■	ASTM A105 Hardened	ASTM A564 630
6	Packing	Graphite	Graphite
7	Handwheel	Cast Iron	Cast Iron
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel
10	Stud Bolt and Nut	ASTM A193 B7/A194 2H	ASTM A193 B7/A194 2H
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300
15	Handwheel Nut	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H
19	Gland	ASTM A105	ASTM A479 304
20	Name Plate	Aluminium	Aluminium
23	Indicator, Antirotation	Carbon Steel + Plated	Stainless Steel
39	Retaining Nut	Carbon Steel	Carbon Steel
40	Thrust bearing	Alloy Steel	Alloy Steel
42	Retaining Ring	Alloy Steel	Alloy Steel
55	Lubricator	Steel	Steel
60	Bellows	AISI 321	AISI 321
61	Gasket	Graphite	Graphite
70	Connecting Ring	Stainless Steel	Stainless Steel

▲ for size 1.½” and 2” only ★ depending on size

■ for size 4” and 6” only ★ depending on size

BONT® Valves type WBY-L Bellows sealed

Stop Valves - Forged Steel - Y Shape
Rating ASME B16.34 - Class 800
SW Ends or BW Ends or Screwed Ends
Size 1/2" to 2"

1 Standard Ends:
- S.W. to ASME B16.11
- B.W. to ASME B16.25
- B.W. to DIN 3239
- Screwed Ends NPT or BSP

2 Standard Material Schedule:
- 71: Body and Bonnet of ASTM A105
  Trim of Stellite Gr.6.
- 11: Body and Bonnet of ASTM A182 F11
  Trim of Stellite Gr.6.
- 31: Body and Bonnet of ASTM A182 F316
  Trim of Stellite Gr.6.

3 Seat and Disk Stellite Gr. 6 hardened, for all Material Schedules.

4 OS & Y rising non-rotating Stem.

5 Screwed and sealwelded Bonnet.

6 Integral Backseat

7 Backup Packing to API 602 / BS 5352.

8 Large Corrosion Allowance

9 Actuator available

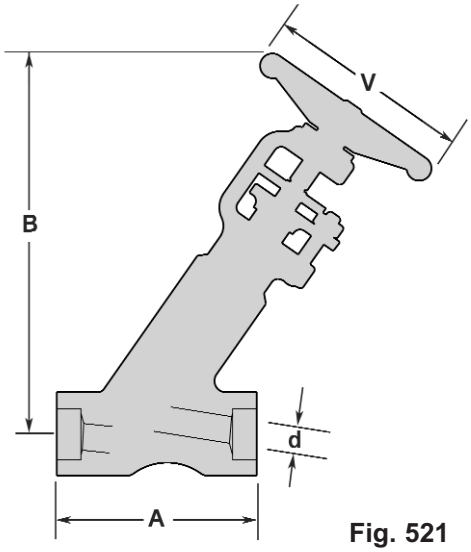


Fig. 521

Type	Size	A mm	B mm	V mm	d mm	Stroke mm	Cv	Kv	Weight kg
WBY-L	1/2"	105	200	95	12,0	6,0	4	3,5	4,0
WBY-L	3/4"	105	200	95	14,0	6,0	4,5	3,9	4,0
WBY-L	1"	110	210	95	17,5	6,0	8	6,9	5,1
WBY-L	1.1/2"	160	315	175	28,0	12,0	17	14,7	11,8
WBY-L	2"	188	340	175	39,5	13,0	19	16,5	16,4

	Part	Part Material for Material Schedule 71	11	31
1	Body	ASTM A105 +Stellite Gr. 6	ASTM A182 F11 +Stellite Gr. 6	ASTM A182 F316 +Stellite Gr. 6
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F316
3	Disk	ASTM A182 F6 +Stellite Gr. 6	ASTM A182 F6 +Stellite Gr. 6	ASTM A479 T316 +Stellite Gr. 6
4	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 630
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Gland Flange	ASTM A105	ASTM A182 F11	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
23	Indicator, Antirotation	Carbon Steel + Plated	Carbon Steel + Plated	Carbon Steel + Plated
39	Look Nut	ASTM A105	ASTM A105	ASTM A105
42	Retaining Ring	Carbon Steel	Carbon Steel	Carbon Steel
43	Antifriction Washer	Carbon Steel C70	Carbon Steel C70	Carbon Steel C70
60	Bellows	Hastelloy C276	Hastelloy C276	Hastelloy C276
70	Connecting Ring	Inconel	Inconel	Inconel

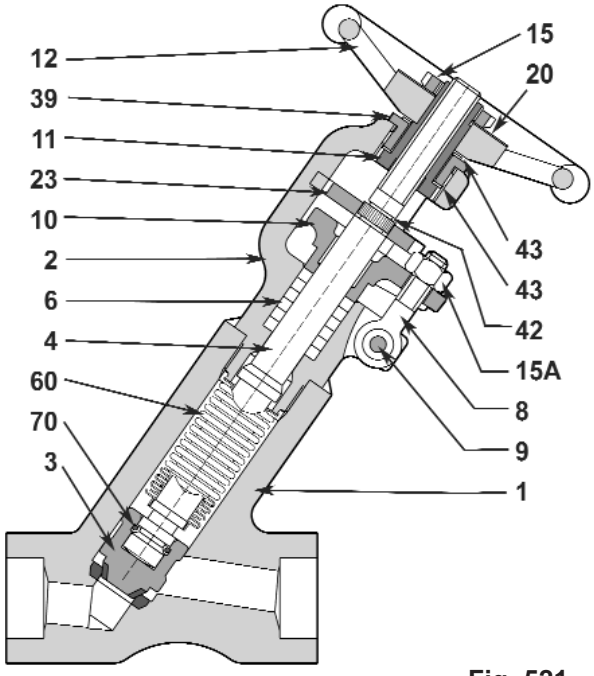


Fig. 521

BONT® Valves type WBY-L Bellows sealed

Stop Valves - Forged Steel - Y Shape
Rating ASME B16.34 - Class 1500, 2500
SW Ends or BW Ends or Screwed Ends
Size 1/2” to 2”

1 Standard Ends:
- S.W. to ASME B16.11
- B.W. to ASME B16.25
- B.W. to DIN 3239
- Screwed Ends NPT or BSP

2 Standard Material Schedule:
- 71: Body and Bonnet of ASTM A105
  Trim of Stellite Gr.6.
- 11: Body and Bonnet of ASTM A182 F11
  Trim of Stellite Gr.6.
- 31: Body and Bonnet of ASTM A182 F316
  Trim of Stellite Gr.6.

3 Seats and Disk Stellite Gr. 6 hardened, for all Material Schedules.

4 OS & Y rising non-rotating Stem.

5 Sealwelded Bonnet.

6 Integral Backseat

7 Backup Packing to API 602 / BS 5352.

8 Large Corrosion Allowance

9 Actuator available

10 **Valves according to Rating ASME B16.34 - Class 2500 available on request**

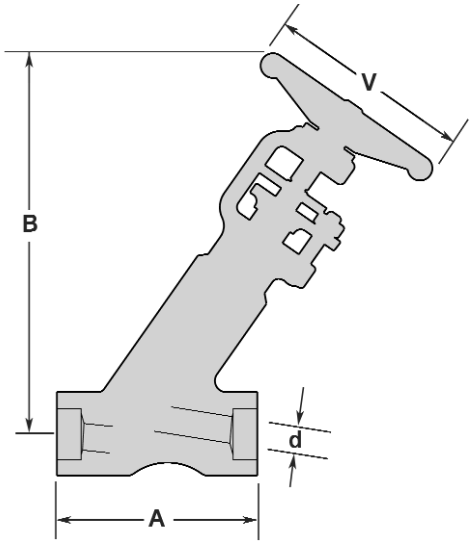


Fig. 522

Type Size Class 1500		A mm	B mm	V mm	d mm	Stroke mm	Cv	Kv	Weight kg
WBY-L	1/2"	105	200	95	12,0	6,0	4	3,5	4,0
WBY-L	3/4"	105	200	95	14,0	6,0	4,5	3,9	4,0
WBY-L	1"	110	210	145	17,5	6,0	8,5	6,9	5,1
WBY-L	1.1/2"	160	315	175	28,0	12,0	17	14,7	11,8
WBY-L	2"	188	340	175	39,5	13,0	19	16,5	16,4

	Part	Part Material for Material Schedule 71	11	31
1	Body	ASTM A105 +Stellite Gr. 6	ASTM A182 F11 +Stellite Gr. 6	ASTM A182 F316 +Stellite Gr. 6
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F316
3	Disk	ASTM A182 F6 +Stellite Gr. 6	ASTM A182 F6 +Stellite Gr. 6	ASTM A479 T316 +Stellite Gr. 6
4	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 630
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Gland Flange	ASTM A105	ASTM A182 F11	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
23	Indicator, Antirotation	Carbon Steel + Plated	Carbon Steel + Plated	Carbon Steel + Plated
39	Look Nut	ASTM A105	ASTM A105	ASTM A105
42	Retaining Ring	Carbon Steel	Carbon Steel	Carbon Steel
43	Antifriction Washer	Carbon Steel C70	Carbon Steel C70	Carbon Steel C70
60	Bellows	Hastelloy C276	Hastelloy C276	Hastelloy C276
70	Connecting Ring	Inconel	Inconel	Inconel

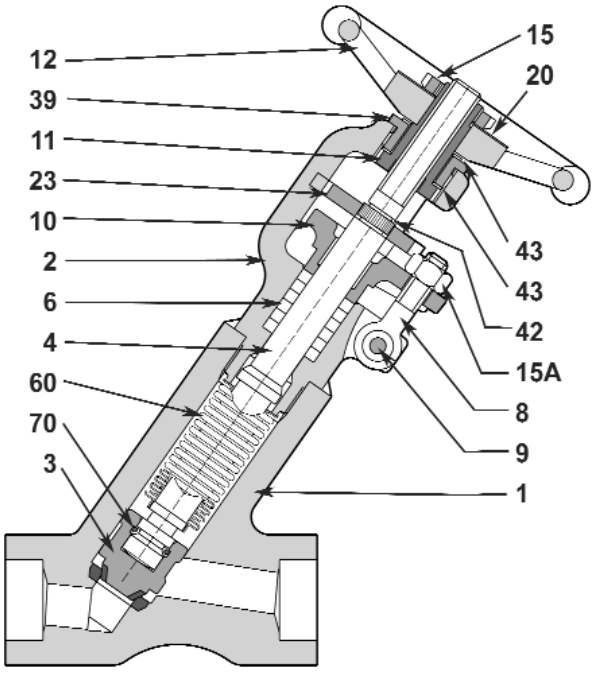


Fig. 522

BONT® Gate Valves type GWBT-L Bellows sealed

Forged Steel
Rating API 602 - Class 800, 1500
SW Ends or BW Ends or Screwed Ends
Size 1/2" to 2"

1 Standard Ends:
- S.W. to ASME B16.11
- B.W. to ASME B16.25
- B.W. to DIN 3239
- Screwed Ends NPT or BSP

2 Standard Material Schedule:
- 71: Body and Bonnet of ASTM A105
  Trim of Stellite Gr.6.
- 11: Body and Bonnet of ASTM A182 F11
  Trim of Stellite Gr.6.
- 31: Body and Bonnet of ASTM A182 F316
  Trim of Stellite Gr.6.

3 Seats and Disk Stellite Gr. 6 hardened, for all Material Schedules.

4 OS & Y rising non-rotating Stem.

5 Sealwelded Bonnet.

6 Integral Backseat

7 Backup Packing to API 602 / BS 5352.

8 Large Corrosion Allowance

9 Actuator available

10 **Valves according to Rating ASME B16.34 - Class 1500 available on request**

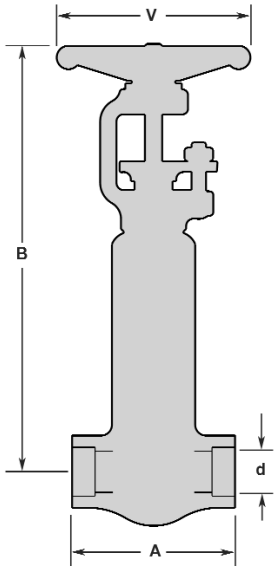


Fig. 524

Type Class 800	Size	A mm	B mm	V mm	d mm	Stroke mm	Cv	Kv	Weight kg
GWBT-L	1/2"	90	240	95	14,0	16,0	5	4,5	4,3
GWBT-L	3/4"	90	240	95	14,0	16,0	10	8,5	4,5
GWBT-L	1"	105	280	95	18,0	21,0	30	26	5,6
GWBT-L	1.1/2"	135	395	175	30,0	35,0	50	43	10,8
GWBT-L	2"	160	435	175	36,5	41,0	60	52	18,0

	Part	Part Material for Material Schedule 71	11	31
1	Body	ASTM A105 +Stellite Gr. 6	ASTM A182 F11 +Stellite Gr. 6	ASTM A182 F316 +Stellite Gr. 6
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F316
3	Gate	ASTM A182 F6 +Stellite Gr. 6	ASTM A182 F6 +Stellite Gr. 6	ASTM A479 T316 +Stellite Gr. 6
4	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 630
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Gland Flange	ASTM A105	ASTM A182 F11	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
39	Look Nut	ASTM A105	ASTM A105	ASTM A105
42	Retaining Ring	Carbon Steel	Carbon Steel	Carbon Steel
43	Antifriction Washer	Carbon Steel C70	Carbon Steel C70	Carbon Steel C70
60	Bellows	AISI 316 Ti	AISI 316 Ti	AISI 316 Ti
72	Seat	ASTM A182 F6 +Stellite Gr. 6	ASTM A182 F6 +Stellite Gr. 6	ASTM A479 F316 +Stellite Gr. 6

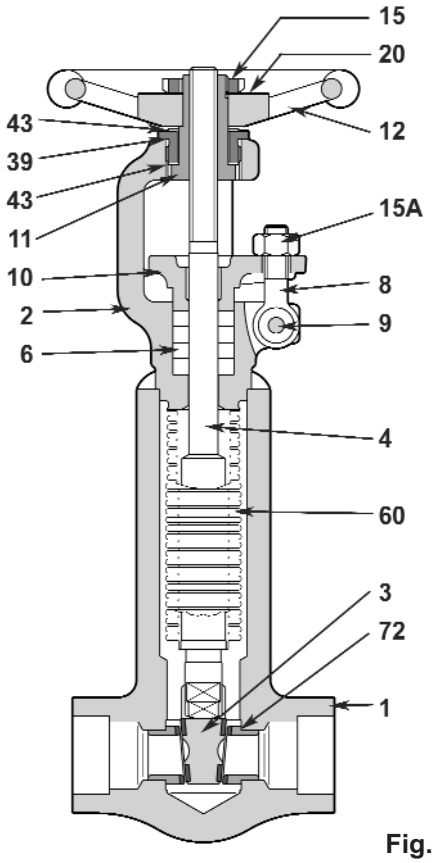


Fig. 524

In 1905, **Cesare Bonetti** opened a shop in Milan, Italy, to manufacture small hand valves to meet the local demand. In the early 1920s, this small but growing firm, took on a new industrial look and moved into the production and sale of industrial valves.

BONETTI®, by this time, had become a well known company for the production of piston valves, sleeve-packed cocks, and glass level gauges. Subsequently, the production range, bearing the **BONT**® and **CMI Pasquini**® registered trademarks was increased to include new valves for high temperature and high pressure service designed to meet the strictest requirements of the time and using the most advanced design and manufacturing technology. This included double sealing valves, bellows valves, diaphragm valves, and magnetic level gauges.

After two expansions, in 1969, the company moved to its new headquarters and main factory in Garbagnate Milanese, where Bonetti continues its passion for growth through research, development and design accuracy. Such expansion continued with the new factories of Limburg an der Lahn (Germany) and Suzhou (Popular Republic of China).

Production facilities are supported by international joint-ventures and by a sales network serving Customers in the whole world.

In 2005 BONETTI purchased Williams Valve Engineering ball valves business and manufacturing, moving all facilities in its Garbagnate main factory.
***WVE** (Williams Valve Engineering)* trademark is now identifying the new Bonetti's ball valve line.

This, in turn, increases its opportunities to continue to grow and expand.

Facilities:

Enclosed surface	66,000 sq.m
Offices building (with car parking below) for three stories	2,200 sq.m
Facilities building (mess-hall, locker rooms, sanitary department, etc.) for three stories	2,000 sq.m
Manufacturing shed (including Production Department and general Facilities)	19,000 sq.m

A wide international sales network

Please apply for more information about our International Technical Sales Organisation

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