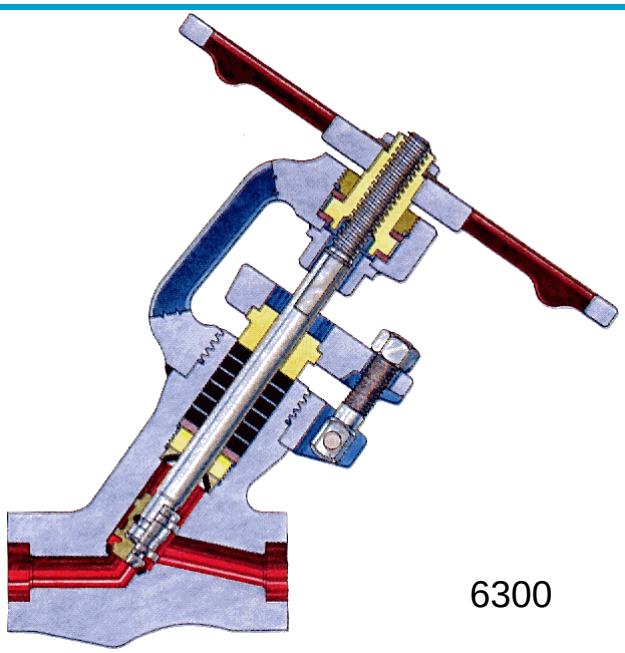
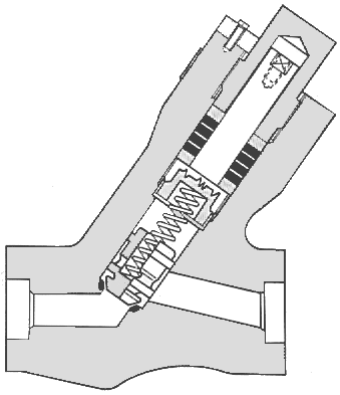
BONETTI ®



6300

BONT ®

Forged Steel Valves
Type BLY
Bonnetless
ASME Class
1700 - 2700 - 4500 lb



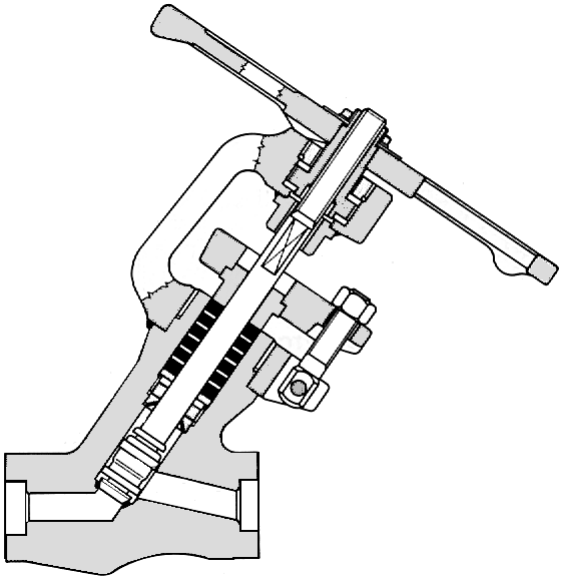


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FIGURE NUMBER INDEX

BONT® Valves Type BLY

FOREWORD

Unlike many other manufacturers, we design, experiment, manufacture and test the most important parts under one roof to ensure complete satisfaction of the customers and strict accordance with the most used international Standards.

APPLICATION RANGE

The Bonnetless BONT Valves Type BLY are designed to meet the requirements of the main customers under the heaviest duties like Superheated Steam at very high temperature and pressure, Feed Water at high pressure, Vent and Drain at the typical conditions of Supercritical Cycles as well as Chemical Plants under high pressure, e.g. NH_3 Synthesis and Petrochemical Installations.

DESIGN

BLY Valves are "full-bore" Valves.
BLY Valves are bonnet less valves, namely there is not bonnet The sole pressurized pieces are the Body, the Disk and the Backseat. Instead of bonnet there is the Yoke with structural functions only, non contacting the fluid and not pressurized. The bonnet less design eliminates the body/bonnet sealing, therefore no presence of gaskets, pressure welds, seal welds as well as of bolts and pressure resisting threads.
BLY Valve can be dismantled in few minutes on the line for inspection and maintenance. Same time is needed for reassembling and putting in service without welding operations according to procedures.
The Backseat consist of the Backseat Ring (stellited on request) and the Locking Ring fixed into the Body and easily removable.
Type BLY Valves have rising and non-rotating Stem. The thrust on the Yoke Bushing is held up by means of two roller-bearings.
The position of the valve Disk is indicated by the protrusion of the Stem from the Yoke Bushing.
Type BLY Valves are "streamlined", i.e. their Body is Y pattern with inclined Stem. This design allows less fluid turbulence and higher Flow Coefficient Values, in comparison with T pattern valves.

OPERATION

BLY Valves perform the following operations: Stop, Piston-Check, Manual Flow Control, Stop-Check. All the valves, Piston-Check excepted, can be power actuated and can be furnished with a locking device in any position, including a padlock with key.

RATINGS (see Page 13)

BLY Valves are suitable for Rating Class 1700 - 2700 - 4500 lb according to the international recognized standards and in particular to ASME B 16.34 prescriptions.

STANDARDS

BLY Valves have been designed, where applicable, in accordance with the most used international Standards. namely:

ASME B 16.11	ASME B 16.25	ASME B 16.34
ASTM Standard	MSS SP-25	DIN 3239

ASME Boiler and Pressure Vessel Code Sect. III.

MATERIAL SCHEDULES

BLY Valves are manufactured in different Material Schedules. For "Material Schedule" we mean the material quality of each valve component.
In the descriptive page relevant to each valve are plainly indicated the materials used for each piece and Material Schedule. Here below we Fist the main characteristic elements of the different Material Schedules:

Material Schedule	Body Material	Disc Seat
71 11 22 31	ASTM A 105 ASTM A 182 F11 ASTM A 182 F22 ASTM A 182 F316	Stellite Gr. 6

The seating surfaces of all BONT valves are of Stellite Gr. 6, deposited into the Body with highly specialized and automatic procedure which, guarantees the achievement of stated constant characteristics. In general, the Disk is precision cast Stellite Gr. 6.

SIZES

BLY Valves are manufactured in the following Sizes:
Up and including ASME Class 1700 lb: from 1/2" up to 3"
ASME Class 2700 and 4500 lb: from 1/2" up to 2".
Valves sized 1/4" and 3/8" on request.

CONNECTIONS (see Page 14)

BLY Valves have the following pipe connections:

- standard	Socket Weld ASME B 16.11
- on request	Butt Weld ASME B 16.25 or DIN 3239 or Threaded NPT ASME B1.20.1 or Flanged to ASME or DIN.

FLOW COEFFICIENT

The Flow Coefficient Values indicated for each valve in the descriptive pages were measured experimentally in our plant, in accordance with ISA-S75.02.
Values are given in Metrical Units (Kv) and in English Units (Cv).
By definition, Kv is the number of m^3/h of water that will low through a full open valve with a pressure drop of 1 kg/cm^2.
By definition, Cv is the volume of water at 60 °F in American gallons per minute which flow through a valve, in the full open position, under 1 psi differential pressure.

CODE No.

The Code No. is composed as follows:		Example
- Type of Valve: **BLY**		**BLY**
- Size:	005 = 1/2" 007 = 3/4" 010 = 1" 015 = 1.1/2" 020 = 2" 025 = 2.1/2" 030 = 3"	**010**
- Operation:	IT = Stop RT = Piston Check IT RE = Manual Flow Control RI = Stop-Check	**IT**
- Rating: 15=17001b; 25=2700 lb; 45 = 4500 lb		**25**
- Material Schedule: 71 or 11 or 22 or 31		**22**
- Connections: 0SW = Socket Weld ASME BWA = Buff Weld ASME BWD = Butt Weld DIN		**0SW**
- Packing: GR = Graphite SP = SpecialGR		**GR**
Resulting Code No. (as in example):		**BLY010IT25220SWGR**

INSTALLATION

Welding procedures issued by an engineering company or final owner should be followed. Please do not forget that:
- Valve should be partially open during welding,
- If the valve will be normally closed, piping should be flushed, then open and close the valve 2-3 times before finally seating, to prevent solid particles from remaining between seat and disk,
- BLY Valves are fully suitable for Acid Washing,
- Check packing tightness during initial operation and eliminate and leakage by retorquing the Swing Bolt Nuts.

MAINTENANCE

Very easy for BLY Valves.
Procedure Bulletin and Servicing Kit of tools are available on request.

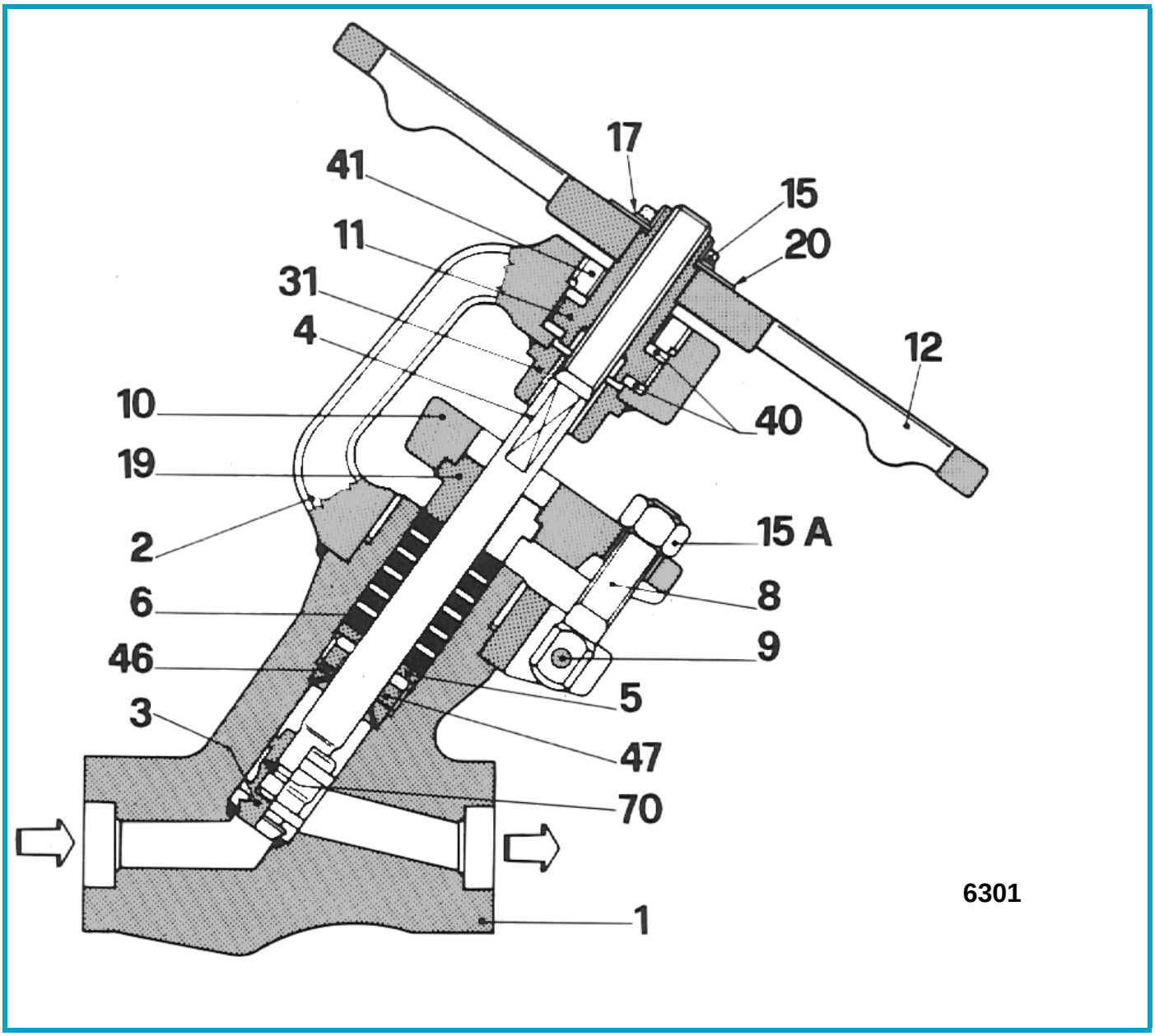
SHIPPING PREPARATION

BLY Valves are supplied only after undergoing the prescribed dimensional and operating tests.
For storage and shipment valves are protected with corrosion inhibitor oil on the internals, polythene caps on end connections, stem head protection and external painting or are dried and sealed each one in a single polythene bag. Packing in wooden boxes should be recommended.

In order to proceed at the same rate with the development requirements of the products, we reserve the right to carry out any necessary alterations, without notice.

BONT® Valves Type BLY
ASME Class 1700 - 2700 - 4500 lb - Forged Steel
Bonnetless - Non-rotating Stem

Construction Details



1 BODY

Always forged. Available in Carbon Steel, Cr Mo Low Alloy Steel or Stainless Steel.
Seat is integral of Stellite Gr. 6 deposited with highly specialized and automatic procedure which guarantees the achievement of stated constant characteristics. The deep thickness of the deposited Stellite enables many renewing operations of the seating surface.
Streamlined internal contours and inclined stem permit "soft" flow and reduce losses of pressure. Passage contours minimize turbulence, vibration, erosion and are self-draining.
Backseat is 2-piece. Stiffly coupled with the Body to avoid transmission of axial loads to gland assembly, as per the latest Standards. The Backseat Ring (46) is stellited on request and is firmly kept in place by the Locking Ring (47) threaded in the Body that can be easily removed by means of suitable tool. Final machining in a single operation of seating and other surfaces insures perfect alignment of all components.

2 YOKE

Always forged and standard of carbon steel, has structural functions only and is not under pressure. Threaded outside the body and kept in place by means of one welding tack that can be easily removed and remade for inspection or maintenance. No pressure seals. No seal welds.

3 DISK

Generally, precision cast Stellite Gr. 6. Fully guided (bottom and top) in the Body to prevent shaking in any semiclosing position and side thrust against Stem. The Connecting Ring (70) of Stellite connects the Disk with the Stem (4). Any galling or spinning is avoided. The design allows many renewing operations of the seating surface. When backseated, Disk is pulled against Backseat with axial non rotating movement.

4 STEM

Of 13% Cr stainless steel, heat treated against corrosion and for the best mechanical features, or of special stainless steel ASTM A564 T.630 (17-4 PH).
Steam is rising and non-rotating for all sizes and classes. The Yoke Bushing (11) is riding on two Roller Bearings (40). This design insures a lower driving and closing torque. less wear of Packing Rings (6) and a better flow control.

6 PACKING

The packing chamber is very smooth machined into the Body: max. roughness 32 microinches.
Packing is made of an adequate number of preformed Rings (6).
Graphite is standard. Special qualities available.

8 SWING BOLTS

Heat treated of alloy steel. Pins (9) permit outside turning of the Swing Bolts for easier repacking.

10 PACKING

Of forged steel. Its design permits easy removal and allows ample space for repacking. The split Gland (19) is of stainless steel and easy to remove.

11 BUSHING

Usually of special Aluminium Bonze. Accurate machining guarantees perfect alignment and lowest coefficient of friction with Stem and eliminates seizure possibility.
Fixed with the Handwheel (12), the Yoke Bushing rotate in the Yoke (2) and is kept in place by means of two Roller Bearings (40) and one Locking Ring (41). This design insures a lower torque.

12 HANDWHEEL

Of nodular cast iron. Its form permits sure grip. Impactor Handwheel is not necessary thanks to the two roller Bearings.

20 NAME PLATE

The Name Plate is fixed on each valve and bears all prescribed indications.

ACTUATED VALVES

Every BLY BONT Valves of any Size, Class and Material Schedule, Check Valves excepted, can be Power Actuated, that is equipped with electrical, hydraulic or pneumatic actuator.
The design, of BLY Valves as well their overdimensioning enableeasy mounting of any actuator. Actuator is available with:

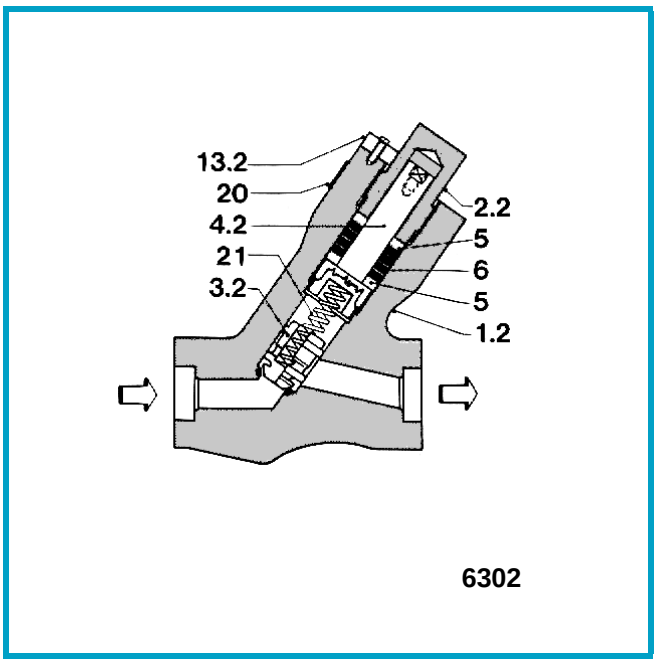
- torque limit switches, adjustable both at the time of delivery and on the plant during the operation,
- travel limit switches,
- local dial positon indicators,
- “OPEN-CLOSED” indicating lights,
- auxiliary switches for various signals or operations,
- inductive or resistive position transmitter.

Class 1700 valve construction may be different, in some particulars, respect to above desciption.
The BONT Valves type BLY are manufactured also in the models:

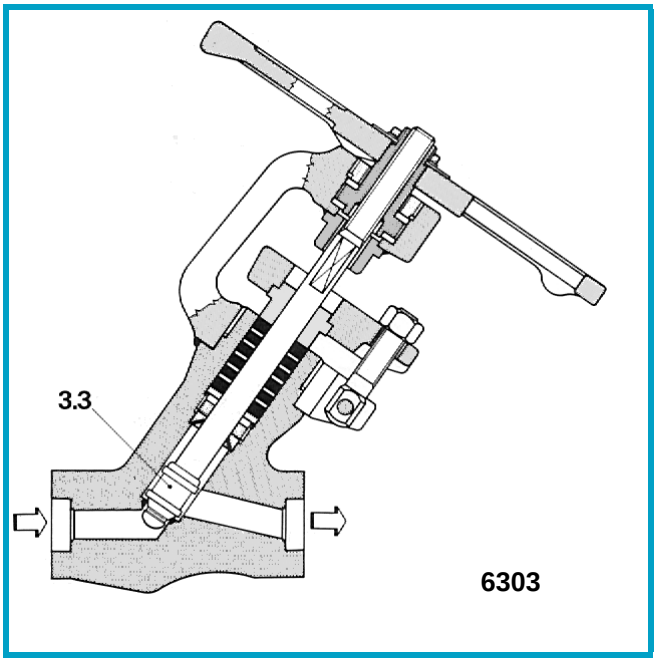
Piston Check Valve (Fig. 6302), where the Disk (3.2) is free in the Body, but loaded against the seat by a helical Spring (21). Thanks to the body Y pattern and the helical spring, piston check valve operate perfectly on both horizontal and vertical pipes.

Manual Flow Control Valve (Fig. 6303), where the Disk (3.3) is shaped for a fine control. Disk and Stem are one piece to avoid vibration. Seating and regulating surface of disk can be Stellite Gr. 6 faced on request. The position of the valve disk is indicated by the protrusion of the stem from the yoke bushing

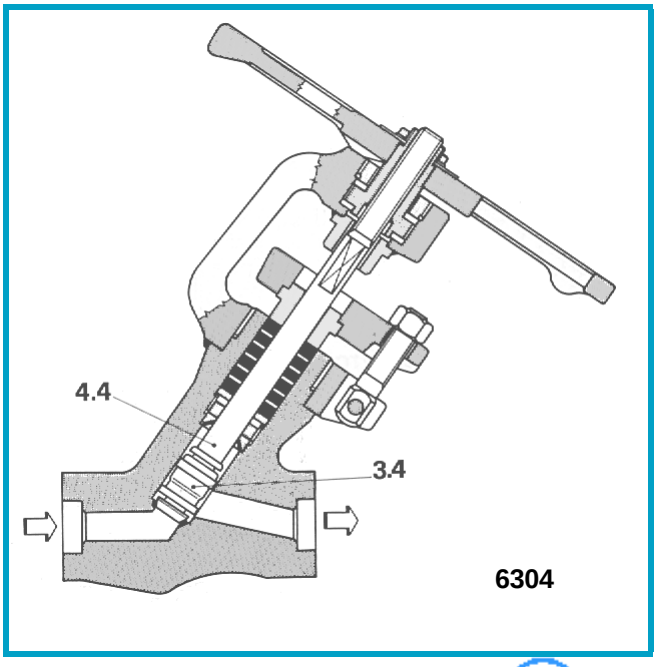
Stop-Check Valve (Fig. 6304), where Stem (4.4) and Disk (3.4) are sliding connected. In this way disk, with stem in back position, allows valve to operate as Piston Check. With stem screwed into the valve, flow is interrupted in both directions. Being this valve without spring, it must be installed in position which allows the disk to close by gravity.



6302



6303



6304

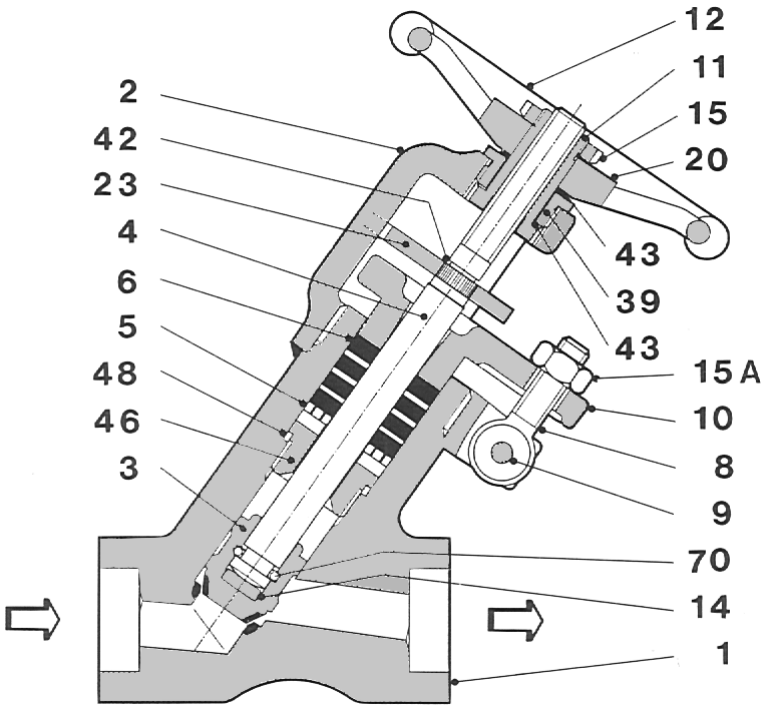
BONT® Valves Type BLY

ASME Class 1700 lb - Forged Steel
Bonnetless - Non-Rotating Stem
Size 1/2” to 3”

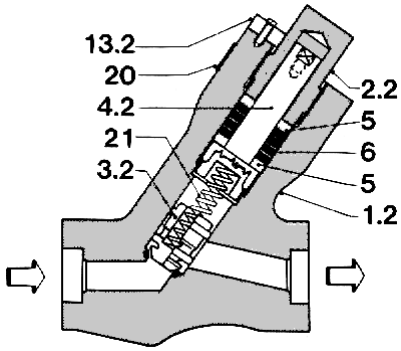
Connections (see Page 14):

Socket Weld	S.W. ANSI B 16.11	(Code: 0SW)
Butt weld	B.W. ANSI B 16.25	(Code: BWA)
Butt Weld	B.W. DIN 3239	(Code: BWD)

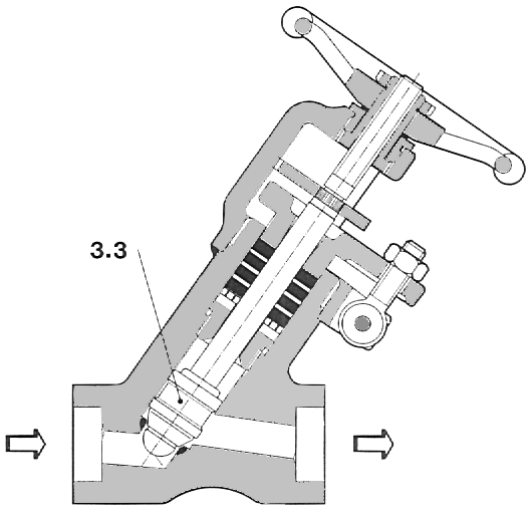
Standard Material Schedules: 71-11-31
Rating for each Material Schedule on Page 13



6321 - Stop Valve



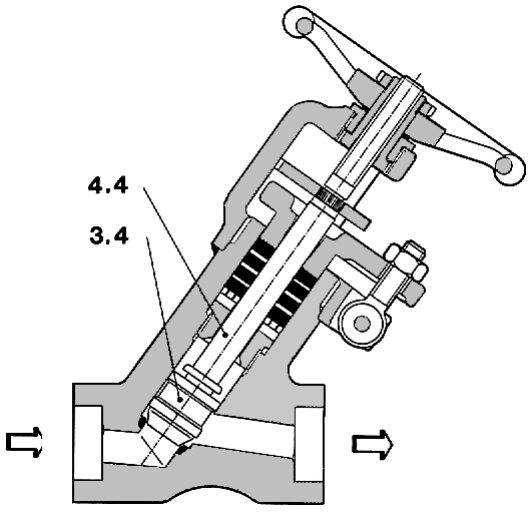
6322 - Piston Check Valve



6323 - Manual Flow Control Valve

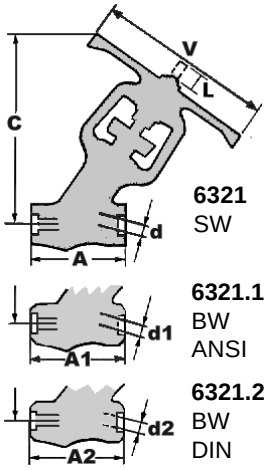
Part Material for Material Schedule

Item	Part	71	11	31
1	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F11 + Stellite Gr. 6	ASTM A182 F316 + Stellite Gr. 6
1.2	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F11 + Stellite Gr. 6	ASTM A182 F316 + Stellige Gr. 6
2	Yoke	ASTM A105	ASTM A105	ASTM A105
2.2	Bonnet	ASTM A 105	ASTM A182 F11	ASTM A182 F316 nitrited
3	Disk	ASTM A182 F6 + Stellite Gr. 6	ASTM A182 F6 + Stellite Gr. 6	ASTM A479 T.316 + Stellite Gr. 6 + nitr.
3.2	Disk	ASTM A182 F6 + Stellite Gr. 6	ASTM A182 F6 + Stellite Gr. 6	ASTM A479 T.316 + Stellite Gr. 6 + nitr.
3.3	Disk-Stem	ASTM A182 F6 + Stellite Gr. 6	ASTM A182 F6 + Stellite Gr. 6	ASTM A564 T.630
3.4	Disk	ASTM A182 F6 + Stellite Gr. 6	ASTM A182 F6 + Stellite Gr. 6	ASTM A479 T.316 + Stellite Gr. 6 + nitr.
4	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 T.630
4.2	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 T.630
4.4	Stem	ASTM A182 F6	ASTM A182 F6	ASTM A564 T.630
5	Bottom Ring	ASTM A479 T.316	ASTM A479 T.316	ASTM A479 T.316
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTMA193B7	ASTMA193B7	ASTMA193B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Packing Flange	ASTM A105	ASTM A105	ASTM A182 f316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel
13.2	Locking Plate and Bolt	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTMA1942H	ASTMA1942H	ASTMA1942H
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel	Inconel	Inconel
31	Antirotation Indicator	Carbon Steel + zinc.	Carbon Steel + zinc.	Carbon Steel + zinc.
40	Bearing	Alloy Steel	Alloy Steel	Alloy Steel
41	Locking Ring	ASTM A105	ASTM A105	ASTM A105
42	Retaining Ring	Alloy Steel	Alloy Steel	Alloy Steel
43	Antifriction Washer	Carbon Steel C70	Carbon Steel C70	Carbon Steel C70
46	Backseat Ring	ASTM A564 T.630	ASTM A564 T.630	ASTM A564 T.630
48	Gasket	Graphite	Graphite	Graphite
70	Connecting Ring	Stellite	Stellite	Stellite



6324 - Stop-Check Valve

Stop Valves (Fig. 6321)



6321 SW

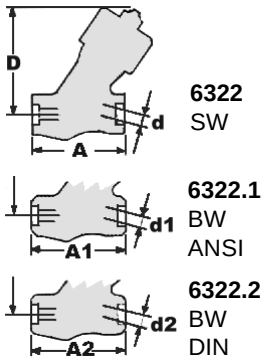
6321.1 BW ANSI

6321.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.						
1/2"	105	105	105	180	95	12.0	15	4	(5)	8.0	BLY	005	IT	15	71 or 11 or 31	0SW or BWA or BWD	GR
3/4"	105	105	105	180	95	17.5	15	10	(12)	8.0	BLY	007	IT	15			GR
1"	110	110	110	220	145	22.5	22	16	(19)	8.0	BLY	010	IT	15			GR
1.1/2"	160	160	160	300	175	34	27	34	(40)	16.0	BLY	015	IT	15			GR
2"	188	188	188	320	175	44	36	55	(64)	25.0	BLY	020	IT	15			GR
2.1/2"	-	305	305	680	400	50	70	100	(118)	80.0	BLY	025	IT	15			GR
3"	-	305	305	680	400	60	70	100	(118)	80.0	BLY	030	IT	15			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Piston Check Valves (Fig. 6322)



6322 SW

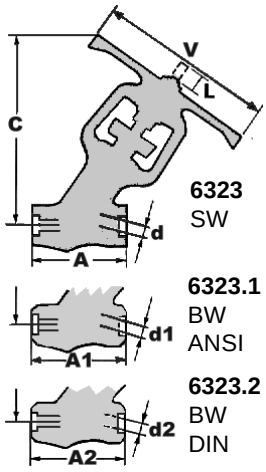
6322.1 BW ANSI

6322.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	D mm	d mm	Kv	(Cv)	Weight kg	CODE No.						
1/2"	110	110	110	180	14.0	4	(5)	6.0	BLY	005	RT	15	71 or 11 or 31	0SW or BWA or BWD	GR
3/4"	110	110	110	180	14.0	10	(12)	6.0	BLY	007	RT	15			GR
1"	154	154	154	200	19.0	16	(19)	6.0	BLY	010	RT	15			GR
1.1/2"	188	188	188	250	31.5	34	(40)	13.0	BLY	015	RT	15			GR
2"	224	224	224	300	39.5	55	(64)	19.0	BLY	020	RT	15			GR
2.1/2"	-	305	380	380	50	100	(118)	55.0	BLY	025	RT	15			GR
3"	-	305	380	380	60	100	(118)	55.0	BLY	030	RT	15			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Manual Flow Control Valves (Fig. 6323)



6323 SW

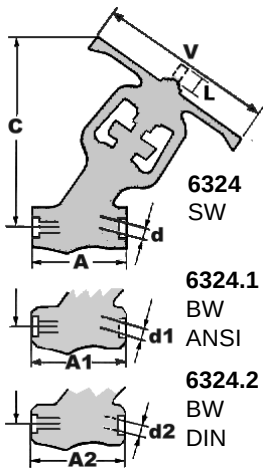
6323.1 BW ANSI

6323.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.						
1/2"	105	105	105	180	95	12.0	15	4	(5)	8.0	BLY	005	RE	15	71 or 11 or 31	0SW or BWA or BWD	GR
3/4"	105	105	105	180	95	17.5	15	10	(12)	8.0	BLY	007	RE	15			GR
1"	110	110	110	220	145	22.5	22	16	(19)	8.0	BLY	010	RE	15			GR
1.1/2"	160	160	160	300	175	34	27	34	(40)	16.0	BLY	015	RE	15			GR
2"	188	188	188	320	175	44	36	55	(64)	25.0	BLY	020	RE	15			GR
2.1/2"	-	305	305	680	400	50	70	100	(118)	80.0	BLY	025	RE	15			GR
3"	-	305	305	680	400	60	70	100	(118)	80.0	BLY	030	RE	15			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Stop Check Valves (Fig. 6324)



6324 SW

6324.1 BW ANSI

6324.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.						
1/2"	105	105	105	180	95	12.0	15	4	(5)	8.0	BLY	005	RI	15	71 or 11 or 31	0SW or BWA or BWD	GR
3/4"	105	105	105	180	95	17.5	15	10	(12)	8.0	BLY	007	RI	15			GR
1"	110	110	110	220	145	22.5	22	16	(19)	8.0	BLY	010	RI	15			GR
1.1/2"	160	160	160	300	175	34	27	34	(40)	16.0	BLY	015	RI	15			GR
2"	188	188	188	320	175	44	36	55	(64)	25.0	BLY	020	RI	15			GR
2.1/2"	-	305	305	680	400	50	70	100	(118)	80.0	BLY	025	RI	15			GR
3"	-	305	305	680	400	60	70	100	(118)	80.0	BLY	030	RI	15			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

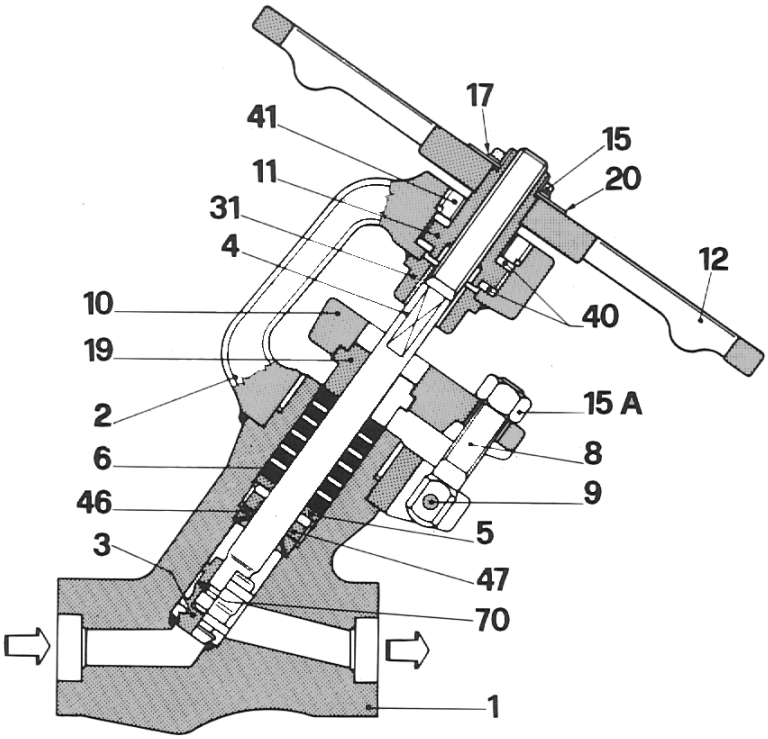
BONT® Valves Type BLY

ASME Class 2700 lb - Forged Steel
Bonnetless - Non-Rotating Stem
Size 1/2” to 2”

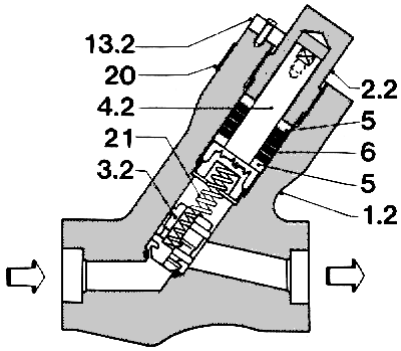
Connections (see Page 14):

Socket Weld	S.W. ANSI B 16.11	(Code: 0SW)
Butt weld	B.W. ANSI B 16.25	(Code: BWA)
Butt Weld	B.W. DIN 3239	(Code: BWD)

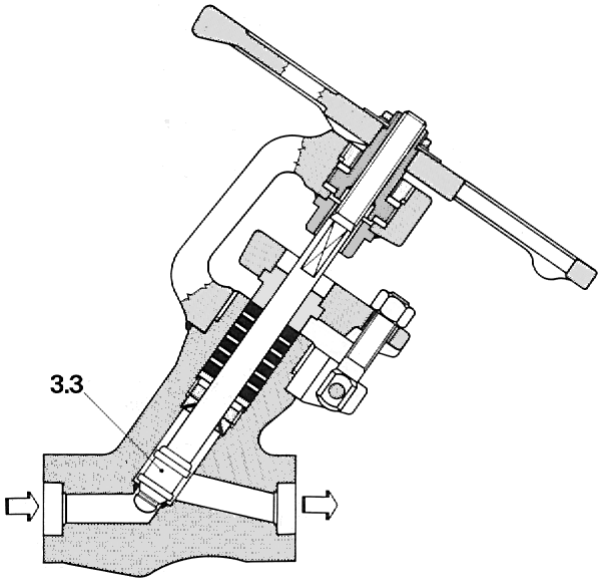
Standard Material Schedules: 71-11- 22 -31
Rating for each Material Schedule on Page 13



6341 - Stop Valve



6342 - Piston Check Valve

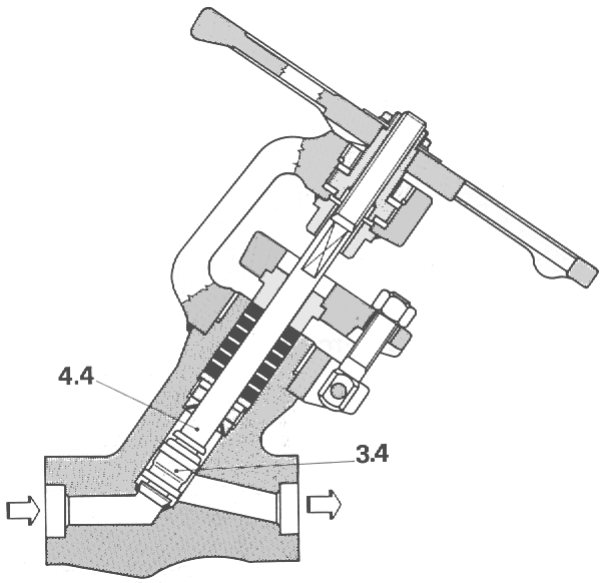


6343 - Manual Flow Control Valve

Part Material for Material Schedule

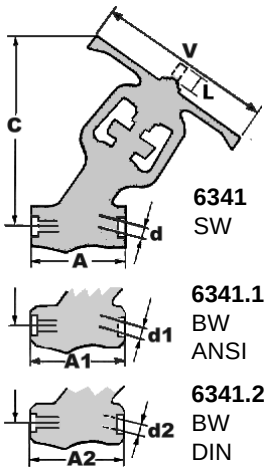
Item	Part	71	22	31
1	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellite Gr. 6
1.2	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellige Gr. 6
2	Yoke	ASTM A105	ASTM A105	ASTM A105
2.2	Bonnet	ASTM A 105	ASTM A182 F22	ASTM A182 F316 nitrited
3	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
3.2	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
3.3	Disk-Stem	ASTM A564 T.630	ASTM A479 T.410 c. 3 + Stellite Gr. 6	ASTM A564 T.630
3.4	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.2	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
5	Bottom Ring	Bont R.L.G.	Bont R.L.G.	Bont R.L.G.
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTMA193B7	ASTMA193B7	ASTMA193B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Packing Flange	ASTM A105	ASTM A105	ASTM A182 f316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Nodular Cast Iron	Nodular Cast Iron	Nodular Cast Iron
13.2	Locking Plate and Bolt	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTMA1942H	ASTMA1942H	ASTMA1942H
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel
19	Gland	Stainless Steel	Stainless Steel	Stainless Steel
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600
31	Antirotation Ring	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
40	Bearing	Alloy Steel	Alloy Steel	Alloy Steel
41	Locking Ring	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
42	Retaining Ring	Alloy Steel	Alloy Steel	Alloy Steel
46	Backseat Ring	ASTM A479 T.316	ASTM A479 T.316 (+ Stellite Gr.6 on request)	ASTM A479 T.316
47	Locking Ring	ASTM A564 T.630	ASTM A564 T.630	ASTM A564 T.630
70	Connecting Ring	Stellite	Stellite	Stellite

In **Material Schedule 11**, materials are the same as Mat. Schedule 22, with the exception of the Body (1, 1.2) and the Bonnet (2.2) that are made of ASTM A182 F11



6344 - Stop-Check Valve

Stop Valves (Fig. 6341)



6341 SW

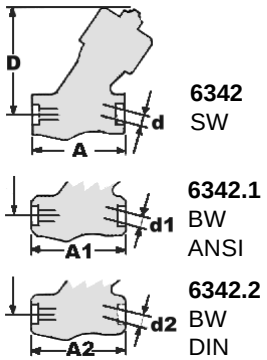
6341.1 BW ANSI

6341.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.					
1/2"	110	110	110	295	200	14.0	16	4	(5)	8.0	BLY 005 IT 25	71 or 11 or 22 or 31	0SW or BWA or BWD	GR
3/4"	110	110	110	295	200	14.0	16	10	(12)	8.0	BLY 007 IT 25			GR
1"	154	154	154	360	300	19.0	22	10	(12)	17.0	BLY 010 IT 25			GR
1.1/2"	188	188	188	410	300	31.5	30	32	(37)	26.5	BLY 015 IT 25			GR
2"	224	224	224	515	400	49.5	43	53	(62)	51.0	BLY 020 IT 25			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Piston Check Valves (Fig. 6342)



6342 SW

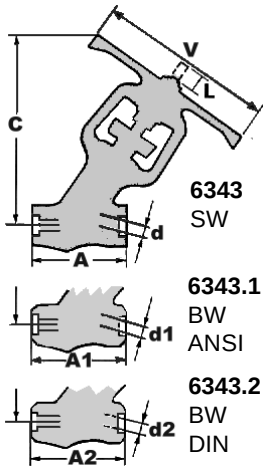
6342.1 BW ANSI

6342.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	D mm	d mm	Kv	(Cv)	Weight kg	CODE No.					
1/2"	110	110	110	180	14.0	4	(5)	6.0	BLY 005 RT 25	71 or 11 or 22 or 31	0SW or BWA or BWD	GR
3/4"	110	110	110	180	14.0	6	(7)	6.0	BLY 007 RT 25			GR
1"	154	154	154	200	19.0	10	(12)	14.0	BLY 010 RT 25			GR
1.1/2"	188	188	188	250	31.5	32	(37)	20.0	BLY 015 RT 25			GR
2"	224	224	224	300	39.5	53	(62)	41.0	BLY 020 RT 25			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Manual Flow Control Valves (Fig. 6343)



6343 SW

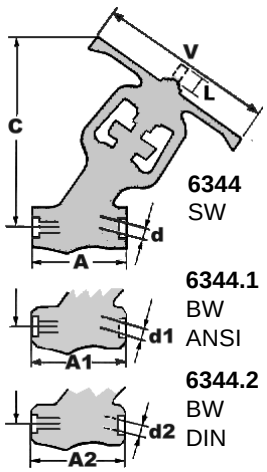
6343.1 BW ANSI

6343.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.					
1/2"	110	110	110	295	200	14.0	16	4	(5)	8.0	BLY 005 RE 25	71 or 11 or 22 or 31	0SW or BWA or BWD	GR
3/4"	110	110	110	295	200	14.0	16	10	(12)	8.0	BLY 007 RE 25			GR
1"	154	154	154	360	300	19.0	22	10	(12)	17.0	BLY 010 RE 25			GR
1.1/2"	188	188	188	410	300	31.5	30	32	(37)	26.5	BLY 015 RE 25			GR
2"	224	224	224	515	400	49.5	43	53	(62)	51.0	BLY 020 RE 25			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Stop Check Valves (Fig. 6344)



6344 SW

6344.1 BW ANSI

6344.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.					
1/2"	110	110	110	295	200	14.0	16	4	(5)	8.0	BLY 005 RI 25	71 or 11 or 22 or 31	0SW or BWA or BWD	GR
3/4"	110	110	110	295	200	14.0	16	10	(12)	8.0	BLY 007 RI 25			GR
1"	154	154	154	360	300	19.0	22	10	(12)	17.0	BLY 010 RI 25			GR
1.1/2"	188	188	188	410	300	31.5	30	32	(37)	26.5	BLY 015 RI 25			GR
2"	224	224	224	515	400	49.5	43	53	(62)	51.0	BLY 020 RI 25			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

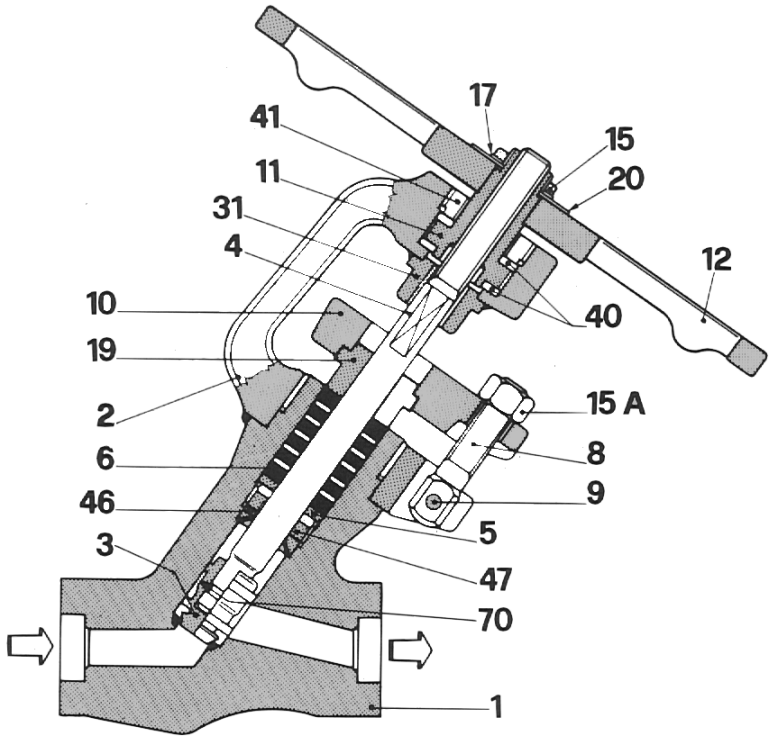
BONT® Valves Type BLY

ASME Class 4500 lb - Forged Steel
Bonnetless - Non-Rotating Stem
Size 1/2” to 2”

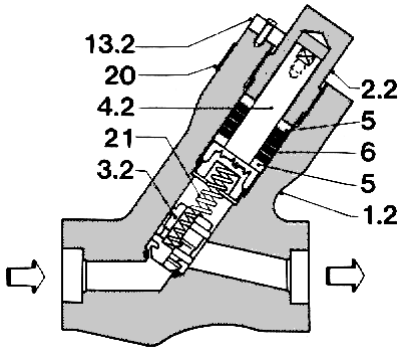
Connections (see Page 14):

Socket Weld	S.W. ANSI B 16.11	(Code: 0SW)
Butt weld	B.W. ANSI B 16.25	(Code: BWA)
Butt Weld	B.W. DIN 3239	(Code: BWD)

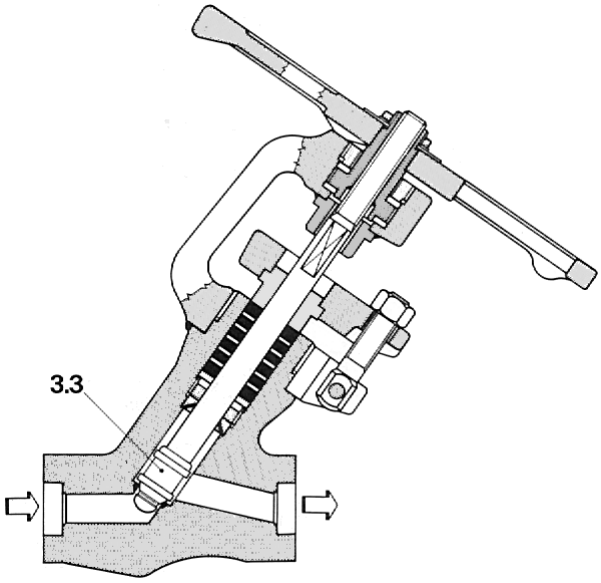
Standard Material Schedules: 71-11- 22 -31
Rating for each Material Schedule on Page 13



6351 - Stop Valve



6352 - Piston Check Valve

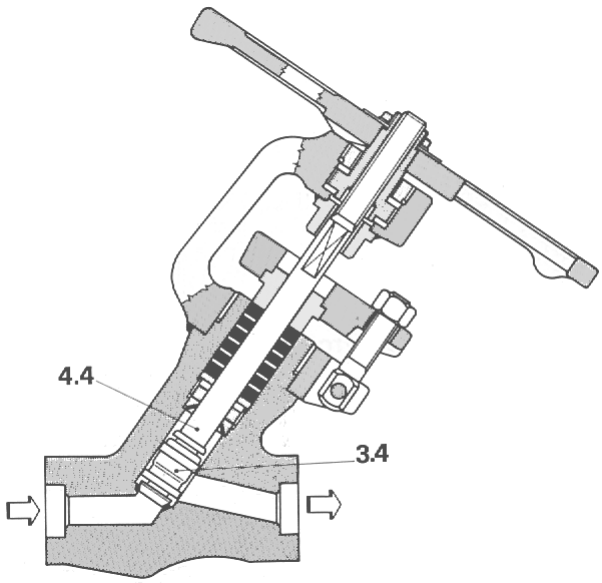


6353 - Manual Flow Control Valve

Part Material for Material Schedule

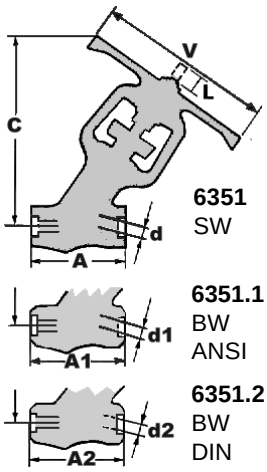
Item	Part	71	22	31
1	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellite Gr. 6
1.2	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellige Gr. 6
2	Yoke	ASTM A105	ASTM A105	ASTM A105
2.2	Bonnet	ASTM A 105	ASTM A182 F22	ASTM A182 F316 nitrited
3	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
3.2	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
3.3	Disk-Stem	ASTM A564 T.630	ASTM A479 T.410 c. 3 + Stellite Gr. 6	ASTM A564 T.630
3.4	Disk	Stellite Gr. 6	Stellite Gr. 6	Stellite Gr. 6
4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.2	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
5	Bottom Ring	Bont R.L.G.	Bont R.L.G.	Bont R.L.G.
6	Packing	Graphite	Graphite	Graphite
8	Swing Bolt	ASTMA193B7	ASTMA193B7	ASTMA193B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel
10	Packing Flange	ASTM A105	ASTM A105	ASTM A105
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handwheel	Nodular Cast Iron	Nodular Cast Iron	Nodular Cast Iron
13.2	Locking Plate and Bolt	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel	ASTM A105 Stainless Steel
15	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTMA1942H	ASTMA1942H	ASTMA1942H
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel
19	Gland	Stainless Steel	Stainless Steel	Stainless Steel
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600
31	Antirotation Ring	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
40	Bearing	Alloy Steel	Alloy Steel	Alloy Steel
41	Locking Ring	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
42	Retaining Ring	Alloy Steel	Alloy Steel	Alloy Steel
46	Backseat Ring	ASTM A479 T.316	ASTM A479 T.316 (+ Stellite Gr.6 on request)	ASTM A479 T.316
47	Locking Ring	ASTM A564 T.630	ASTM A564 T.630	ASTM A564 T.630
70	Connecting Ring	Stellite	Stellite	Stellite

In **Material Schedule 11**, materials are the same as Mat. Schedule 22, with the exception of the Body (1, 1.2) and the Bonnet (2.2) that are made of ASTM A182 F11



6354 - Stop-Check Valve

Stop Valves (Fig. 6351)



6351 SW

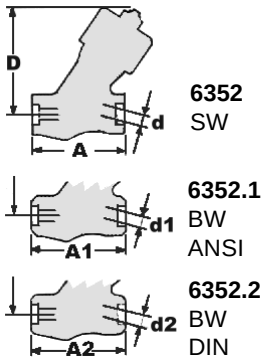
6351.1 BW ANSI

6351.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.				71 or 11 or 22 or 31	0SW or BWA or BWD	
1/2"	154	154	154	360	300	14.0	20	2	(2.5)	18.0	BLY	005	IT	45			GR
3/4"	154	154	154	360	300	14.0	20	4	(5)	18.0	BLY	007	IT	45			GR
1"	154	154	154	360	300	14.0	20	6	(7)	18.0	BLY	010	IT	45			GR
1.1/2"	224	224	224	490	400	31.5	30	19	(22)	54.0	BLY	015	IT	45			GR
2"	224	224	224	490	400	31.5	30	21	(25)	53.0	BLY	020	IT	45			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Piston Check Valves (Fig. 6352)



6352 SW

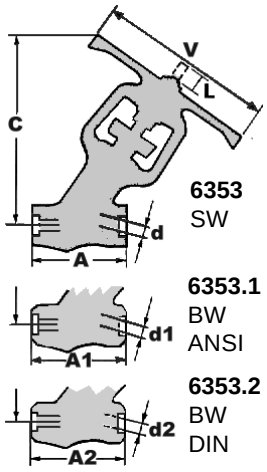
6352.1 BW ANSI

6352.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	D mm	d mm	Kv	(Cv)	Weight kg	CODE No.				71 or 11 or 22 or 31	0SW or BWA or BWD	
1/2"	154	154	154	200	14.5	2	(2.5)	15.0	BLY	005	RT	45			GR
3/4"	154	154	154	200	14.0	4	(5)	15.0	BLY	007	RT	45			GR
1"	154	154	154	200	14.0	6	(7)	15.0	BLY	010	RT	45			GR
1.1/2"	224	224	224	300	31.5	19	(22)	44.0	BLY	015	RT	45			GR
2"	224	224	224	300	31.5	21	(25)	43.0	BLY	020	RT	45			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Manual Flow Control Valves (Fig. 6353)



6353 SW

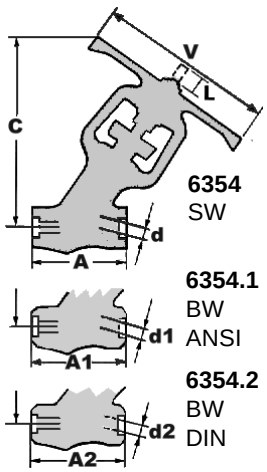
6353.1 BW ANSI

6353.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.				71 or 11 or 22 or 31	0SW or BWA or BWD	
1/2"	154	154	154	360	300	14.0	20	2	(2.5)	18.0	BLY	005	RE	45			GR
3/4"	154	154	154	360	300	14.0	20	4	(5)	18.0	BLY	007	RE	45			GR
1"	154	154	154	360	300	14.0	20	6	(7)	18.0	BLY	010	RE	45			GR
1.1/2"	224	224	224	490	400	31.5	30	19	(22)	54.0	BLY	015	RE	45			GR
2"	224	224	224	490	400	31.5	30	21	(25)	53.0	BLY	020	RE	45			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

Stop Check Valves (Fig. 6354)



6354 SW

6354.1 BW ANSI

6354.2 BW DIN

SIZE mm	DIMENSIONS A mm	A1 mm	A2 mm	C mm	V mm	d mm	L	Kv	(Cv)	Weight kg	CODE No.				71 or 11 or 22 or 31	0SW or BWA or BWD	
1/2"	154	154	154	360	300	14.0	20	2	(2.5)	18.0	BLY	005	RI	45			GR
3/4"	154	154	154	360	300	14.0	20	4	(5)	18.0	BLY	007	RI	45			GR
1"	154	154	154	360	300	14.0	20	6	(7)	18.0	BLY	010	RI	45			GR
1.1/2"	224	224	224	490	400	31.5	30	19	(22)	54.0	BLY	015	RI	45			GR
2"	224	224	224	490	400	31.5	30	21	(25)	53.0	BLY	020	RI	45			GR

Dimensions d1 and d2 depend on requested B.W. connections, see Page 14.

MATERIALS

Material		ASTM A105	ASTM A182F11	ASTM A182F22	ASTM A182F316	StelliteGr.6	ASTM A479 T.410C.3	ASTM A193B7	ASTM A1942H	ASTM B150 C62300	ASTEM B166 N06600	ASTM A1948F	ASTM A564T.630 Cond. H1075
Chemical Analysis		(Note 1)											
Carbon	%	0,35 max	0,10-0,20	0,15 max	0,08 max	1	0,13 max	0,38-0,48	0.40 max		0,15 max	0,15 max	0,07
Manganese	%	0,60-105	0,30-0,80	0,30-0,60	2,00 max		1,00 max	0,75-1,00		0,5 max	1,0 max	2,00 max	I max
Phosphorus	%	0,04 max	0,04 max	0,04 max	0,04 max		0,04 max	0,04 max	0,04 max			0,20 max	0,04 max
Sulphur	%	0,05 max	0,04 max	0,04 max	0,03 max		0,03 max	0,04 max	0,05 max		0,015 max	0,35 max	0,03 max
Silicon	%	0,35 max	0,5-1,0	0,5 max	1,00 max		1,00 max	0,20-0,35		0,25 max	0,5 max	1,00 max	1 max
Chromium	%		1,0-1,5	2,0-2,5	16,00-18,00	28	11,5-13,5	0,80-1,10			14-17	17-19	15,0-17,5
Nickel	%				10,00-14,00		0,50 max			1.0 max	72 min+Co	8-10	3-5
Molybdenum	%		0,44-0,65	0,87-1,13	2,00-3,00			0,15-0,25					1,2-2
Copper	%									82,2 min	0,50 max		3-5
Aluminium	%									8,5-10,0			
Iron	%									2,0-4,0	6-10		
Cobalt	%					66							
Tungsten	%					5							
Mechanical features							(Note 2)			(Note 2)	(Note 2)		(Note 2)
Tensile Strength	psi	70.000	70.000	75.000	75.000		130.000	125.000		78.000	155.000		145.000
	MPa	485	485	515	515		900	860		542	1.069		1.000
Yield Strength	psi	36.000	40.000	45.000	30.000		100.000	105.000		32.000	90.000		125.000
	MPa	250	275	310	205		690	720		221	620		862
Elongation on 2"	%min	22	20	20	30		12	16		15	10		13

Notes for Materials

1 We utilize also steel with lower Carbon content (=0,25%).

2 Mechanical features depend on heat treatment. Prescribed heat treatment permits us to obtain the most suitable physical and chemical characteristics.

Notes for Ratings

3 Ratings of tables are those indicated by ASME B 16.34 for Classes 1500-2500-4500 lb and extrapolated for Classes 1700-2700 lb.

4 Because of possible transformation of carbides into graphite, ASME B 16.34,does not recommend the use of Carbon steel valves (Mat. Sch. 71) over 800°F (425°C) for extended periods.

5 Same standard does not reccomend the use for extended periods of valves with body of ASTM Al 82 F 22 steel over 1050°F (565°C).

6 Utilization of valves with body of ASTM A182 F316 with temperatures over 1 000°F (538°C) up to 1500°F (816°C) should be evaluated each time, taking into consideration fluid corrosion specifications and possible thermal stresses.

RATINGS

Metrical Units

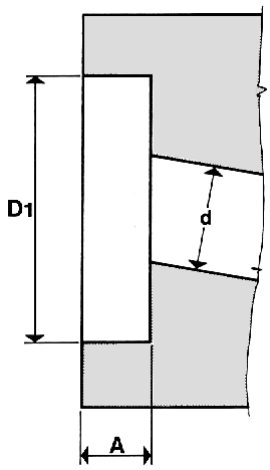
Operating Temperature °C	Max Operating Pressure bar Class 1500			Max Operating Pressure bar Clas 1700			Max Operating Pressure bar Class 2500				Max Operating Pressure bar Class 2700				Max Operating Pressure bar Class 4500			
	Material Schedule			Material Schedule			Material Schedule				Material Schedule				Material Schedule			
	71	11	31	71	11	31	71	11	22	31	71	11	22	31	71	11	22	31
-29 +38	255,3	258,6	248,3	289,3	293,1	281,4	425,5	431,0	431,0	413,8	459,5	465,5	465,5	446,9	765,8	775,8	775,8	744,8
50	250,4	258,6	240,7	283,8	293,1	272,8	417,3	431,0	431,0	401,2	450,7	465,5	465,5	433,3	751,1	775,8	775,8	722,2
100	231,9	257,4	210,9	262,8	291,8	238,9	386,5	429,1	429,5	351,7	417,4	463,4	463,9	379,6	695,7	772,3	773,1	633,2
150	226,1	248,7	192,4	256,3	281,8	217,9	376,9	414,5	418,3	320,8	407,1	447,5	451,8	346,3	678,4	746,2	752,9	577,6
200	219,1	239,7	178,5	248,3	271,6	202,1	365,2	399,6	406,5	297,2	394,4	431,4	439,0	320,9	657,3	719,6	731,8	535,1
250	208,6	231,0	167,0	236,4	261,6	189,1	347,7	385,0	386,3	278,2	375,5	415,5	417,0	300,2	625,8	692,6	694,9	500,8
300	193,7	214,4	158,1	219,5	242,8	179,1	322,8	357,2	357,2	263,5	348,6	385,6	385,6	284,5	581,0	642,7	642,7	474,5
350	184,8	201,1	152,3	209,4	227,7	172,5	308,0	335,4	335,4	253,8	332,6	362,0	362,0	274,1	554,4	603,4	603,4	456,9
375	182,3	194,1	149,3	206,6	219,7	169,3	303,9	323,3	323,3	249,1	328,2	348,9	348,9	269,0	547,0	581,9	581,9	448,3
400	172,5	183,1	147,2	195,5	207,2	166,8	287,5	304,9	304,9	245,4	310,5	329,0	329,0	265,0	517,5	548,6	548,6	441,8
425	143,8	175,7	145,6	163,0	198,8	164,9	239,6	292,5	292,5	242,9	258,8	315,7	315,7	262,2	431,4	526,3	526,3	437,2
450	100,2	169,1	144,3	113,5	191,6	163,4	166,9	281,9	281,9	240,4	180,3	304,4	304,4	259,4	300,5	507,1	507,1	432,8
475	67,7	158,2	143,4	76,7	179,4	162,3	112,9	263,9	263,9	239,0	121,9	285,0	285,0	257,9	203,2	474,9	474,9	430,2
500	44,0	126,1	136,7	49,9	142,8	154,8	73,3	210,1	231,8	228,0	73,2	226,9	250,3	246,1	131,9	378,5	417,3	410,4
525	25,9	90,8	126,4	29,4	102,7	143,0	43,2	151,2	180,6	210,7	46,6	163,1	194,8	227,3	77,7	272,4	325,3	379,1
550		63,6	119,8		71,8	135,5		105,9	127,9	199,5		114,2	138,0	215,2		190,7	230,6	359,0
575		44,0	114,0		49,8	129,0		73,4	87,7	190,1		79,1	94,6	205,0		132,1	158,0	341,9
600		30,3	99,5		34,1	112,6		50,5	57,4	166,0		54,3	61,8	179,0		90,8	103,3	298,5
625		20,2	79,2		22,8	89,6		33,6	37,1	131,7		36,2	40,0	142,1		60,3	67,0	237,3
650		12,8	63,3		14,5	71,5		21,2	23,3	105,7		22,9	24,9	113,9		38,1	41,4	189,8
675			51,5			44,5				65,5				70,5				118,1
700			42,0			47,4				69,8				75,2				125,8
725			35,0			39,4				58,2				62,6				104,9
750			28,7			32,4				47,7				51,4				85,6
775			22,9			25,7				38,0				40,9				68,4
800			17,4			19,5				29,2				31,3				52,6
	Note 4	Note 5	Note 6	Note 4	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6

English Units

Operating Temperature °F	Max Operating Pressure psi Class 1500			Max Operating Pressure psi Clas 1700			Max Operating Pressure psi Class 2500				Max Operating Pressure psi Class 2700				Max Operating Pressure psi Class 4500			
	Material Schedule			Material Schedule			Material Schedule				Material Schedule				Material Schedule			
	71	11	31	71	11	31	71	11	22	31	71	11	22	31	71	11	22	31
-20+100	3705	3750	3600	4200	4250	4080	6170	6250	6250	6000	6665	6750	6750	6480	11110	11250	11250	10800
200	3375	3750	3095	3825	4250	3505	5625	6250	6250	5160	6075	6750	6750	5570	10120	11250	11250	9290
300	3280	3610	2795	3720	4090	3165	5470	6015	6070	4660	5910	6495	6555	5030	9845	10830	10925	8390
400	3170	3465	2570	3590	3925	2910	5280	5775	5880	4280	5700	6235	6350	4620	9505	10400	10585	7705
500	2995	3325	2390	3395	3765	2705	4990	5540	5540	3980	5390	5980	5980	4295	8980	9965	9965	7165
600	2735	3025	2255	3100	3425	2555	4560	5040	5040	3760	4925	5440	5440	4060	8210	9070	9070	6770
650	2685	2940	2220	3045	3330	2515	4475	4905	4905	3700	4835	5295	5295	3995	8055	8825	8825	6660
700	2665	2840	2170	3020	3215	2460	4440	4730	4730	3620	4795	5105	5105	3910	7990	8515	8515	6515
750	2520	2660	2135	2895	3010	2420	4200	4430	4430	3560	4535	4780	4780	3845	7560	7970	7970	6410
800	2060	2540	2110	2335	2675	2390	3430	4230	4230	3520	3705	4565	4565	3800	6170	7610	7610	6335
850	1340	2435	2090	1520	2760	2365	2230	4060	4060	3480	2410	4385	4385	3755	4010	7305	7305	6265
900	860	2245	2075	975	2545	2350	1430	3745	3745	3460	1545	4045	4045	3735	2570	6740	6740	6230
950	515	1595	1930	585	1805	2185	860	2655	3145	3220	930	2865	3395	3475	1545	4785	5665	5795
1000	260	1080	1750	295	1220	1980	430	1800	2170	2915	465	1940	2340	3145	770	3240	3910	5245
1050		720	1720		815	1945		1200	1455	2865		1295	1570	3090		2160	2625	5155
1100		480	1525		540	1725		800	915	2545		860	985	2745		1440	1645	4575
1150		310	1185		350	1340		515	570	1970		555	615	2125		925	1030	3550
1200		190	925		215	1045		315	345	1545		340	370	1665		565	615	2775
1250			735			830				1230				1325				2210
1300			585			660				970				1045				1750
1350			480			540				800				860				1440
1400			380			430				630				660				1130
1450			290			325				465				520				875
1500			205			230				345				370				620
	Note 4	Note 5	Note 6	Note 4	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6	Note 4	Note 5	Note 5	Note 6

CONNECTIONS

Socket Weld (S.W.) Connections ASME B 16.11

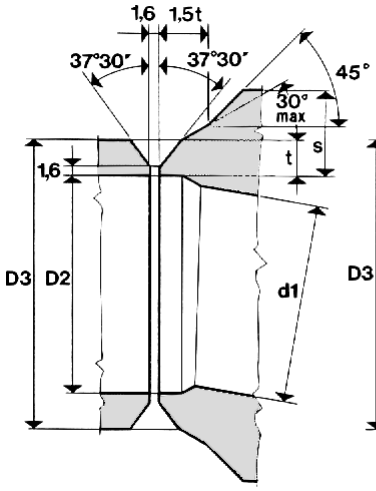


6101

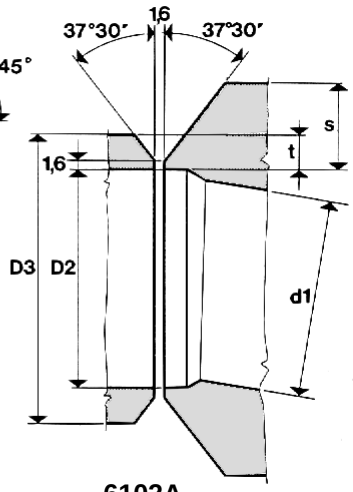
Size	Inches		Millimeters	
	D1 minimum	A minimum	D1 minimum	A minimum
1/4"	.555	3/8	14,10	9,53
3/8"	.690	3/8	17,53	9,53
1/2"	.855	3/8	21,72	9,53
3/4"	1.065	1/2	27,06	12,70
1"	1.330	1/2	33,79	12,70
1.1/4"	1.675	1/2	42,55	12,70
1.1/2"	1.915	1/2	48,65	12,70
2"	2.406	5/8	61,12	15,88

- Above sizes expressed in inches are taken from ASME B16.1 i (for details see above Standard).
- Sizes expressed in millimeters are converted from those in inches, they are not binding and are only as indication for user's convenience.
- Minimum wall thickness of socket welding is according to ASME B 1 6.34.

Butt Weld (B.W.) Connections ASME B 16.25



6102



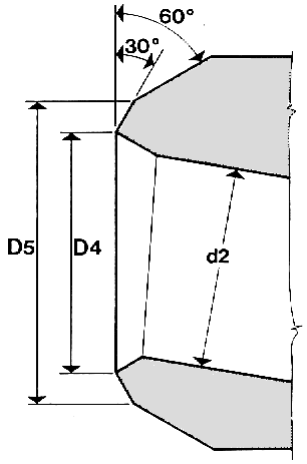
6102A

Dimension of Pipes, according to ASME B 36.10						
SIZE	Schedule D3 mm (in)	80 t mm (in)	Schedule D3 mm (in)	160 t mm (in)	Schedule 03 mm (in)	XXS t mm (in)
1/2"	21.3 (0.840)	3.73 (0.147)	21.3 (0.840)	4.78 (0.188)	21.3 (0.840)	7.47 (0.294)
¾"	26.7 (1.050)	3.91 (0.154)	26.7 (1.050)	5.56 (0.219)	26.7 (1.050)	7.82 (0.308)
1"	33.4 (1.315)	4.55 (0.179)	33.4 (1.315)	6.35 (0.250)	33.4 (1.315)	9.09 (0.358)
1.1/2"	48.3 (1.900)	5.08 (0.200)	48.3 (1.900)	7.14 (0.281)	48,3 (1.900)	10.15 (0.400)
2"	60.3 (2.375)	5.54 (0.218)	60.3 (2.375)	8.74 (0.344)	60.3 (2.375)	11.07 (0.436)
2.1/2"	73.0 (2.875)	7.01 (0.276)	73.0 (2.875)	9.53 (0.375)	73.0 (2.875)	14.02 (0.552)
3"	88.9 (3.500)	7.62 (0.300)	88.9 (3.500)	11.13 (0.438)	88.9 (3.500)	15.24 (0.600)
4"	114.3 (4.500)	8.56 (0.337)	114.3 (4.500)	13.49 (0.531)	114.3 (4.500)	17.12 (0.674)

Fig. 6102: Applicable for thickness of valve wall s > 22,2 mm
Fig. 6102A: Applicable for thickness of valve s = 22,2 mm

- Dimension d1 depends on requested Schedule.

Butt Weld (B.W.) Connections DIN 3239



6103

Size		PN100		PN160		PN250		PN320		PN400		PN640	
		D4	D5	D4	D5	D4	D5	D4	D5	D4	D5	D4	D5
10	3/8"	13	20	13	20	12	20	12	20	10	20	11	24
15	1/2"	17	24	17	24	16	24	15	24	17	31	16	25
25	1"	28	37	27	37	27	39	24	39	28	48	24	52
40	1.1/2"	43	54	41	54	38	54	35	54	39	57	34	72
50	2"	54	67	52	67	47	67	47	71	49	83	46	92
65	2.1/2"	70	83	65	83	59	83	65	96	68	110	--	--
80	3"	82	96	76	96	79	110	76	110	76	122	--	--
100	4"	106	121	97	121	97	129	--	--	--	--	--	--

-- Above sizes - in millimeters - are taken from DIN 3239, Form D, Ausführung 2 (see above Standard for details).
-- When ordering valves with butt weld connections. please indicate size of pipe to be welded to valve.
-- Dimension d2 depends on requested PN.

Conversion Table from °C to °F

°C	°F	°C	°F	°C	°F	°C	°F
–270	–454	165	329	520	968	1100	2012
–260	–436	170	338	525	977	1120	2048
–250	–418	175	347	530	986	1140	2084
–240	–400	180	356	535	995	1160	2120
–230	–382	185	365	540	1004	1180	2156
–220	–364	190	374	545	1013	1200	2192
–210	–346	195	383	550	1022	1220	2228
–200	–328	200	392	555	1031	1240	2264
–190	–310	205	401	560	1040	1260	2300
–180	–292	210	410	565	1049	1280	2336
–170	–274	215	419	570	1058	1300	2372
–160	–256	220	428	575	1067	1320	2408
–150	–238	225	437	580	1076	1340	2444
–140	–220	230	446	585	1085	1360	2480
–130	–202	235	455	590	1094	1380	2516
–120	–184	240	464	595	1103	1400	2552
–110	–166	245	473	600	1112	1420	2588
–100	–148	250	482	605	1121	1440	2624
– 95	–139	255	491	610	1130	1460	2660
– 90	–130	260	500	615	1139	1480	2696
– 85	–121	265	509	620	1148	1500	2732
– 80	–112	270	518	625	1157	1520	2768
– 75	–103	275	527	630	1166	1540	2804
– 70	– 94	280	536	635	1175	1560	2840
– 65	– 85	285	545	640	1184	1580	2876
– 60	– 76	290	554	645	1193	1600	2912
– 55	– 67	295	563	650	1202	1620	2948
– 50	– 58	300	572	655	1211	1640	2984
– 45	– 49	305	581	660	1220	1660	3020
– 40	– 40	310	590	665	1229	1680	3056
– 35	– 31	315	599	670	1238	1700	3092
– 30	– 22	320	608	675	1247	1750	3182
– 25	– 13	325	617	680	1256	1800	3272
– 20	– 4	330	626	685	1265	1850	3362
– 17,8	0	335	635	690	1274	1900	3452
– 15	5	340	644	695	1283	1950	3542
– 10	14	345	653	700	1292	2000	3632
– 5	23	350	662	710	1310	2050	3722
0	32	355	671	720	1328	2100	3812
5	41	360	680	730	1346	2150	3902
10	50	365	689	740	1364	2200	3992
15	59	370	698	750	1382	2250	4082
20	68	375	707	760	1400	2300	4172
25	77	380	716	770	1418	2350	4262
30	86	385	725	780	1436	2400	4352
35	95	390	734	790	1454	2450	4442
40	104	395	743	800	1472	2500	4532
45	113	400	752	810	1490	2550	4622
50	122	405	761	820	1508	2600	4712
55	131	410	770	830	1526	2650	4802
60	140	415	779	840	1544	2700	4892
65	149	420	788	850	1562	2750	4982
70	158	425	797	860	1580	2800	5072
75	167	430	806	870	1598	2850	5162
80	176	435	815	880	1616	2900	5252
85	185	440	824	890	1634	2950	5342
90	194	445	833	900	1652	3000	5432
95	203	450	842	910	1670		
100	212	455	851	920	1688		
105	221	460	860	930	1706		
110	230	465	869	940	1724		
115	239	470	878	950	1742		
120	248	475	887	960	1760		
125	257	480	896	970	1778		
130	266	485	905	980	1796		
135	275	490	914	990	1814		
140	284	495	923	1000	1832		
145	293	500	932	1020	1868		
150	302	505	941	1040	1904		
155	311	510	950	1060	1940		
160	320	515	959	1080	1976		

Pressure/Temperature Table for Saturated Water Steam

bar	°C
1,0	99,1
1,5	110,7
2,0	119,6
2,5	126,7
3,0	132,8
3,5	138,1
4,0	142,9
4,5	147,2
5,0	151,1
5,5	154,7
6,0	158,0
6,5	161,1
7,0	164,1
7,5	167,1
8,0	169,6
8,5	172,2
9,0	174,5
9,5	176,7
10	179,0
11	183,2
12	187,0
13	190,7
14	194,1
15	197,3
16	200,4
17	203,3
18	206,1
19	208,8
20	211,4
22	216,2
24	220,7
26	225,0
28	228,9
30	232,7
35	241,4
40	249,1
45	256,2
50	262,7
55	268,6
60	274,2
65	279,5
70	284,4
75	289,1
80	293,6
85	297,8
90	301,9
95	305,8
100	309,5
105	313,3
110	316,5
115	319,8
120	323,1
125	326,2
130	329,3
135	332,2
140	335,1
145	337,8
150	340,6
155	343,2
160	345,7
165	348,3
170	350,6
175	353,0
180	355,4
185	357,5
190	359,8
195	361,9
200	364,1
205	366,1
210	368,1
215	370,2
220	372,0
225	374,0

In Milan, in 1905 Cesare Bonetti opened a small shop and manufactured to order any cocks for the local requirement.
In the early twenties this small firm took on a new industrial look and moved towards production and trade of industrial valves only.
Bonetti is, by this time, becoming a well-known company for production of piston valves, sleeve-packed cocks and glass level gauges.
Later the production range, bearing the BONT registered trade-mark includes the new valves for high pressure and temperature meeting the strictest requirements of the most advanced technology, besides double-sealing valves, bellows valves, diaphragm valves, magnetic level gauges.
After two enlargements the company in 1969 moves to the new Garbagnate Milanese Works where Bonetti's typical trend for research, development and design accuracy has more opportunity to expand.
Certification according to ISO 9001 / UNI EN 29001.

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)		17,500 sq.m

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