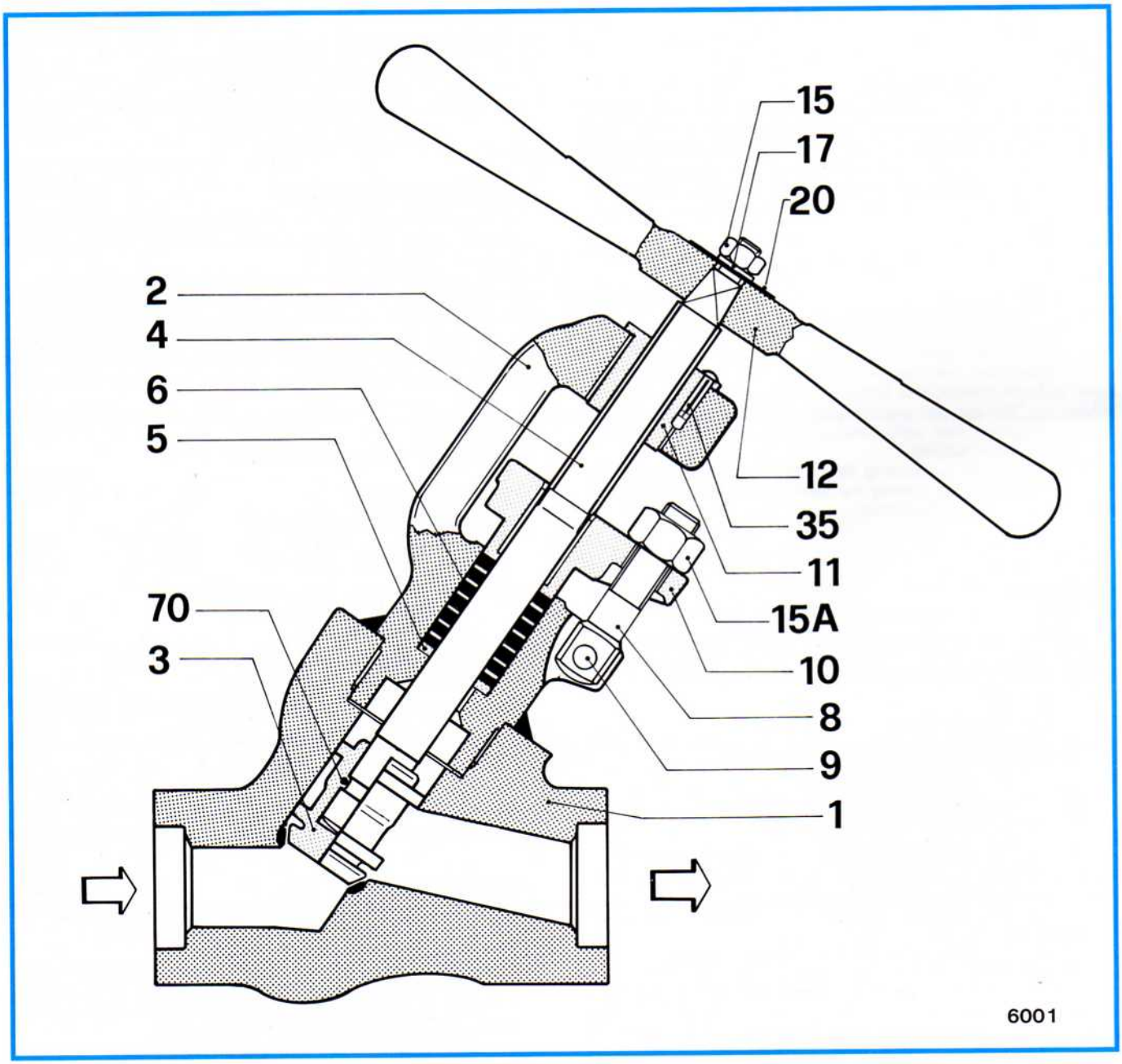
BONT® Valves Type WBY

ASME Class 600 - 900 - 1700 - 2700 - 4500 lb
Forged Steel - Seal Welded Bonnet

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. Passages contours minimize turbulence, vibration, erosion.
Final machining in a single operation of seating and other surfaces insures perfect alignment of all components.

2 BONNET

Always forged and of same material as body. Screwed and seal welded to the body to avoid any leakage.
Welding lip contour allows an easy valve dismantling and successive welding operation.
Backseat is integral and isolates effectively packing chamber from line pressure.
On request backseat can be Stellite faced. Yoke design permits easy repacking.

3 DISK

Seating surface is always Stellite Gr. 6.
It is axially connected with the stem, but does not rotate with it. The disk is pushed against the seat or pulled against the backseat with axial non-rotating movement.
Fully guided (bottom and top) in the body to prevent shaking in any semiclosing position and side thrust against stem.
Any galling or spinning is avoided. The design allows many renewing operations of the seating surface.
According to Class, Size and Operation of the valve, at our exclusive option, the disk is made in compliance with one of the following models (Fig. 6005):

A - of 13% Cr alloy steel or stainless steel, with seating surface and bottom-guide Stellite hardfaced. Consists of two precision welded parts (3 and 18) holding the Disk Pad (14) and the stem head in perfect alignment, lubricated for life,

B - made as in A, and moreover with a second top-guide of Stellite Gr. 6,

C - made of precision cast Stellite Gr. 6, connected with the stem by the Connecting Ring (70), also of Stellite.

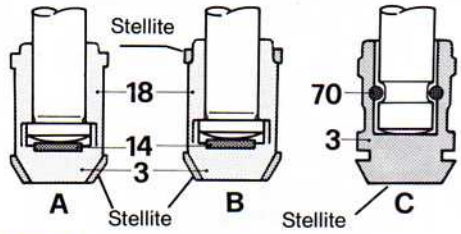


Fig. 6005

4 STEM

Of 13% Cr stainless steel, heat treated against corrosion and for the best mechanical features. In the Material Schedule 31 stem is of special stainless steel ASTM A564 T.630 (17-4 PH).
Threads are ACME. Surfaces are carefully machined for a longer life of packing and yoke bushing threads.

6 PACKING

Prescribed packing chamber roughness is max. 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) are of the same material, permitting outside turning of the swing bolts for easier repacking.

10 GLAND FLANGE

In one piece of forged steel. Its design permits easy removal and allows ample space for repacking.

11 YOKE BUSHING

Usually of special aluminium bronze. Accurate machining guarantees perfect alignment and lowest coefficient of friction with the stem and eliminates seizure possibility.
Screwed into the bonnet and fixed by one Grooved Rivet (35).

12 HANDLE

Of forged steel. Its form permits sure grip. A pyramid shaped square provides a perfect fit on the stem. Fixed on stem by hexagon Nut (15) and locking Washer (17). Handwheel available on request instead of handle. Impactor handle is supplied on larger size and higher rating valves.

20 NAME PLATE

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

ACTUATED VALVES

Every WBY BONT Valve of any Size, Class and Material Schedule, Check Valves excepted, can be Power Actuated, that is equipped with electrical, hydraulic or pneumatic actuator.
Actuator is available with:

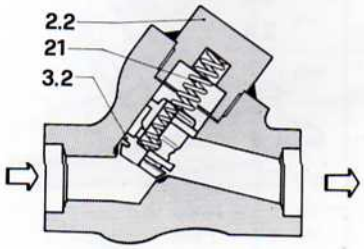
- torque limit switches, adjustable both at the time of delivery and on the plant during the operation,
- travel limit switches,
- local dial position indicators,
- "OPEN-CLOSED" indicating lights,
- auxiliary switches for various signals or operations,
- inductive or resistive position transmitter.

The BONT Valves type WBY are manufactured also in the models:

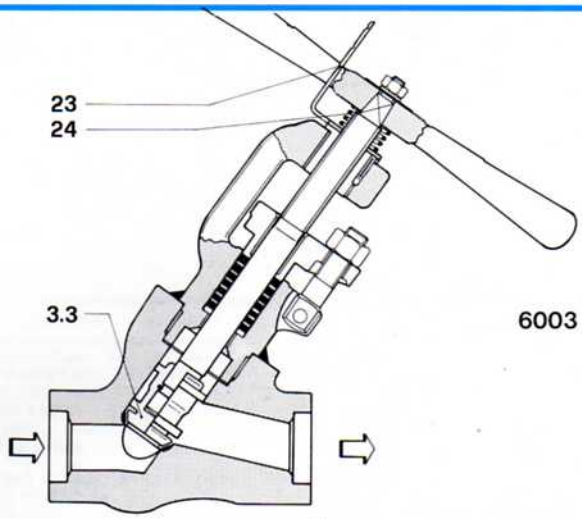
Piston Check Valve (Fig. 6002), where the Disk (3.2) is free in the Body, but loaded against the seat by the helical Spring (21). The Bonnet (2.2) is blind and is screwed and seal welded to the body. Thanks to the body Y pattern and the helical spring, piston check valve operates perfectly on both horizontal and vertical pipes.

Manual Flow Control Valve (Fig. 6003), where the Disk (3.3) is shaped for a fine control. Seating and regulating surface of disk can be Stellite Gr. 6 faced on request. The position of the valve disk is evidenced by the Indicator (23) kept in place by the Spring (24).

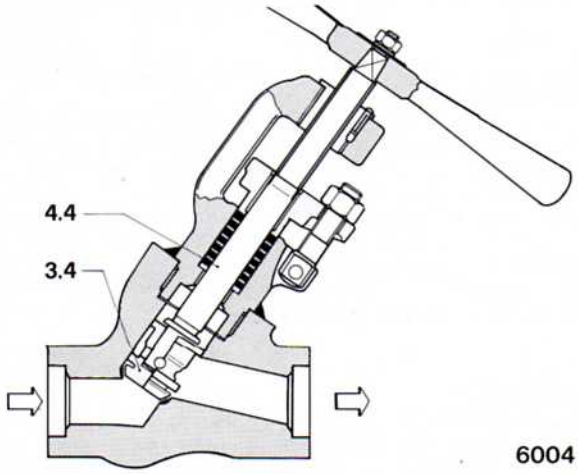
Stop-Check Valves (Fig. 6004), where the Stem (4.4) and the Disk (3.4) are sliding connected. In this way disk, with stem in back position, allows valve to operate as Piston Check. With stem screwed into the valve, flow is interrupted in both directions. Being this valve without spring, it must be installed in position which allows the disk to close by gravity.



6002



6003



6004

BONT® Valves Type WBY

ASME Class 600 lb- Forged Steel
Seal Welded Bonnet
Size 1/2" to 4"

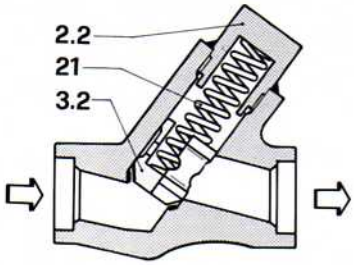
Connections (see Page 18):

Socket Weld	(S.W.)	ASME B 16.11	(Code: OSW)
Butt Weld	(B.W.)	ASME B 16.25	(Code: BWA)
Butt Weld	(B.W.)	DIN 3239	(Code: BWD)

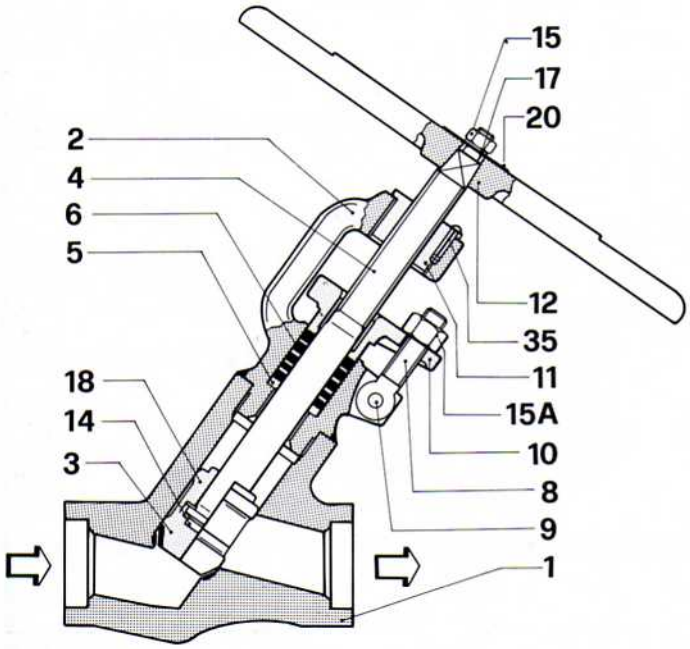
For Valves larger than 2": B.W. Connections only.

Standard Material Schedules: 71-11-22-31

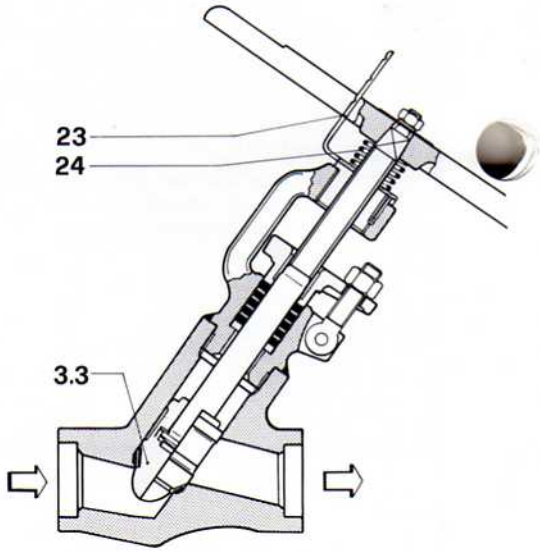
Rating for each Material Schedule on page 17.



6012 - Piston Check Valve



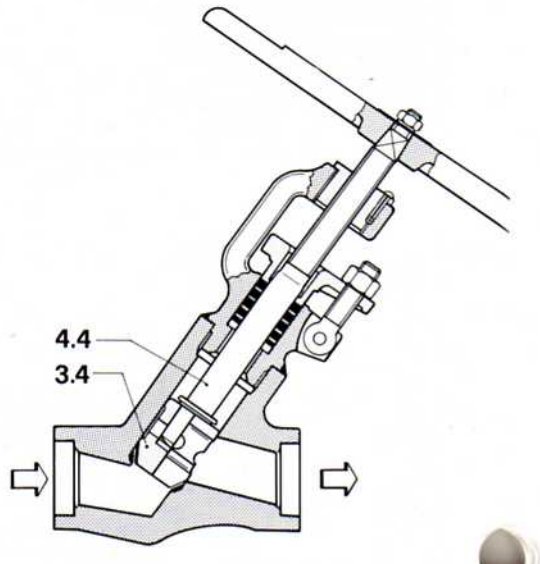
6011 - Stop Valve



6013 - Manual Flow Control Valve

Part Material For Material Schedule

Item	Part	71	11	22	31
1	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F11 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellite Gr. 6
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F22	ASTM A182 F316
2.2	Bonnet				
3	Disk	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A479 T316 + Stellite Gr. 6 (see Fig. 6005)
3.2	Disk				
3.3	Disk				
3.4	Disk				
4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.4	Stem				
5	Bottom Ring	Fe ARMCO	Fe ARMCO	Fe ARMCO	ASTM A479 T316
6	Packing	Graphite	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
10	Gland Flange	ASTM A105	ASTM A105	ASTM A105	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handle	ASTM A105	ASTM A105	ASTM A105	ASTM A105
14	Disk Pad	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
15	Handle Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
18	Disk Cap	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A479 T316
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600	Inconel 600
23	Indicator	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
24	Spring	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
35	Grooved Rivet	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
70	Connecting Ring	Stellite	Stellite	Stellite	Stellite



6014 - Stop Check Valve

BONT® Valves Type WBY

ASME Class 1700 lb- Forged Steel
Seal Welded Bonnet
Size 1/2" to 4"

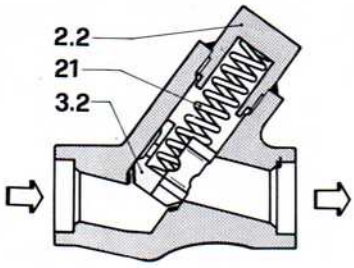
Connections (see Page 18):

Socket Weld	(S.W.)	ASME B 16.11	(Code: OSW)
Butt Weld	(B.W.)	ASME B 16.25	(Code: BWA)
Butt Weld	(B.W.)	DIN 3239	(Code: BWD)

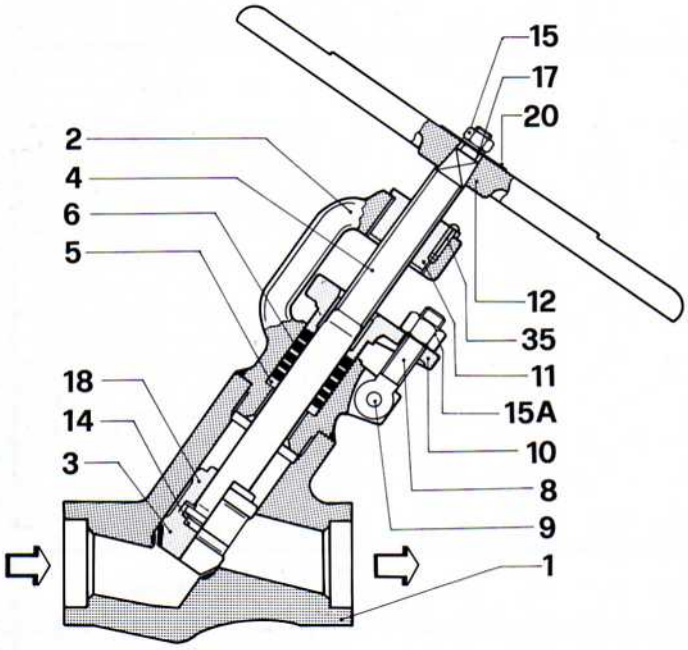
For Valves larger than 2": B.W. Connections only.

Standard Material Schedules: 71-11-22-31

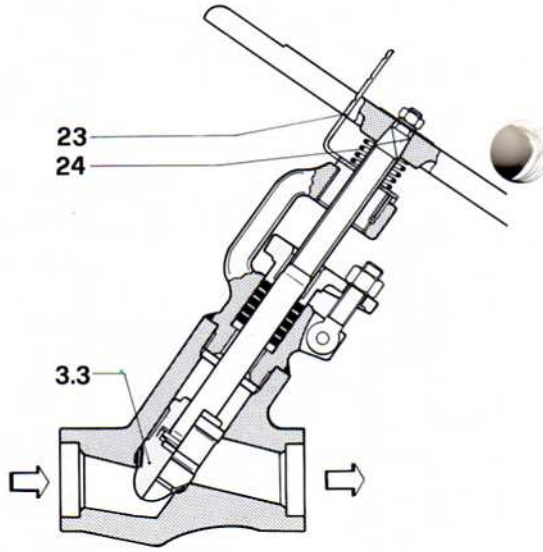
Rating for each Material Schedule on page 17.



6032 - Piston Check Valve



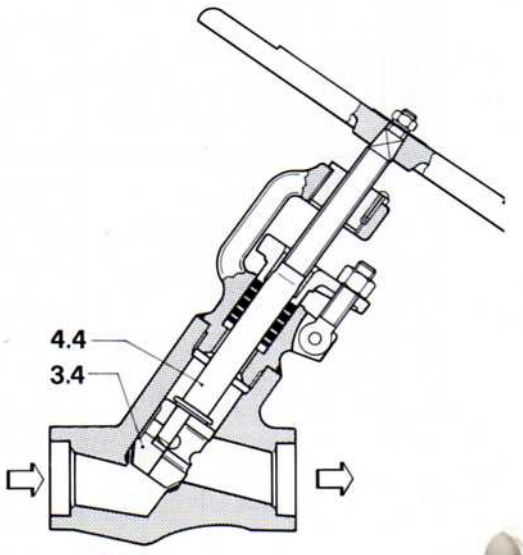
6031 - Stop Valve



6033 - Manual Flow Control Valve

Part Material for Material Schedule

Item	Part	71	11	22	31
1	Body	ASTM A105 + Stellite Gr. 6	ASTM A182 F11 + Stellite Gr. 6	ASTM A182 F22 + Stellite Gr. 6	ASTM A182 F316 + Stellite Gr. 6
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F22	ASTM A182 F316
2.2	Bonnet				
3	Disk	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A479 T316 + Stellite Gr. 6 (see Fig. 6005)
3.2	Disk				
3.3	Disk				
3.4	Disk				
4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.4	Stem				
5	Bottom Ring	Fe ARMCO	Fe ARMCO	Fe ARMCO	ASTM A479 T316
6	Packing	Graphite	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
10	Gland Flange	ASTM A105	ASTM A105	ASTM A105	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handle	ASTM A105	ASTM A105	ASTM A105	ASTM A105
14	Disk Pad	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
15	Handle Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
18	Disk Cap	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A479 T316
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600	Inconel 600
23	Indicator	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
24	Spring	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
35	Grooved Rivet	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
70	Connecting Ring	Stellite	Stellite	Stellite	Stellite



6034 - Stop-Check Valve

BONT® Valves Type WBY

ASME Class 2700 lb- Forged Steel
Seal Welded Bonnet
Size 1/2" to 4"

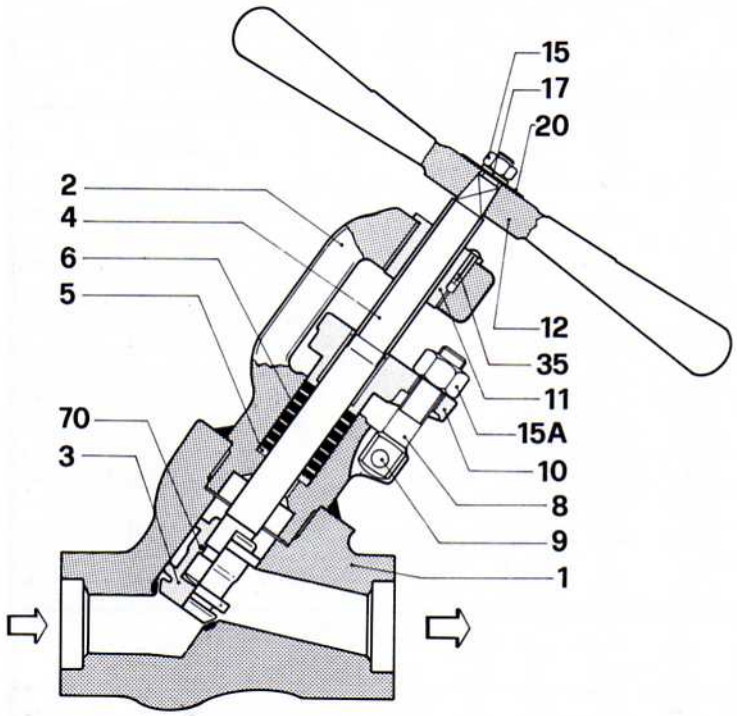
Connections (see Page 18):

Socket Weld	(S.W.)	ASME B 16.11	(Code: OSW)
Butt Weld	(B.W.)	ASME B 16.25	(Code: BWA)
Butt Weld	(B.W.)	DIN 3239	(Code: BWD)

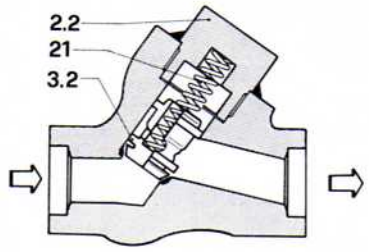
For Valves larger than 2": B.W. Connections only.

Standard Material Schedules: 71-22-31

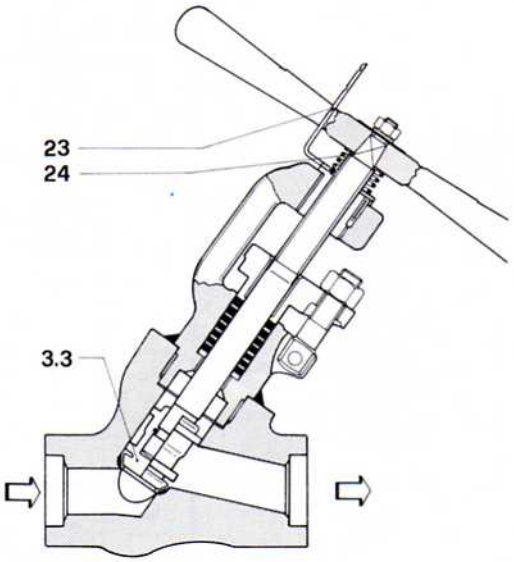
Rating for each Material Schedule on page 17.



6041 - Stop Valve



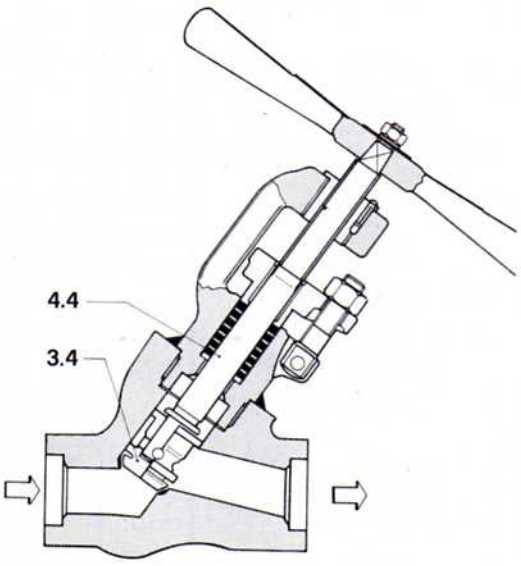
6042 - Piston Check Valve



6043 - 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
2	Bonnet	ASTM A105	ASTM A182 F22	ASTM A182 F316
2.2	Bonnet			
3	Disk	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A182 F6 + Stellite Gr. 6 (see Fig. 6005)	Stellite Gr. 6 or ASTM A479 T316 + Stellite Gr. 6 (see Fig. 6005)
3.2	Disk			
3.3	Disk			
3.4	Disk			
4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A564 T.630
4.4	Stem			
5	Bottom Ring	Fe ARMCO	Fe ARMCO	ASTM A479 T316
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 A105	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handle	ASTM A105	ASTM A105	ASTM A105
14	Disk Pad	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6
15	Handle Nut	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel
18	Disk Cap	ASTM A182 F6	ASTM A182 F6	ASTM A479 T316
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600
23	Indicator	Carbon Steel	Carbon Steel	Carbon Steel
24	Spring	Alloy Steel	Alloy Steel	Alloy Steel
35	Grooved Rivet	Carbon Steel	Carbon Steel	Carbon Steel
70	Connecting Ring	Stellite	Stellite	Stellite



6044 - Stop-Check Valve