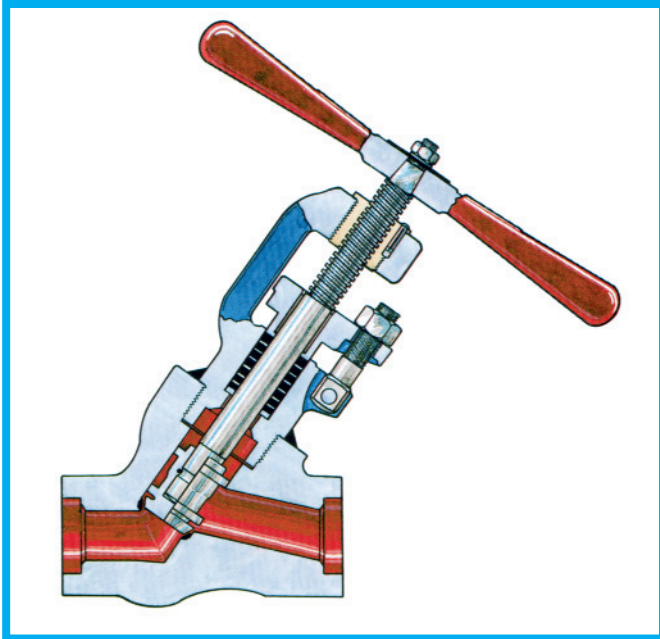


# BONETTI®



**BONT®**

**Forged Steel Valves**

**Type WBY**

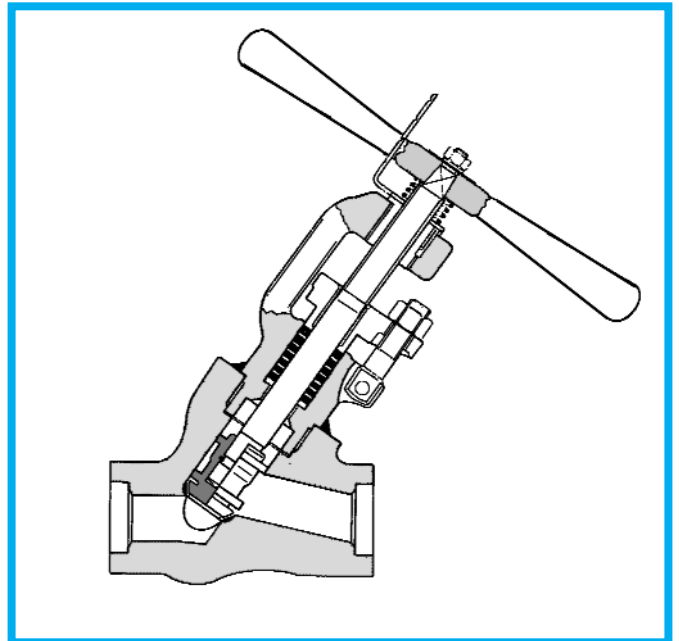
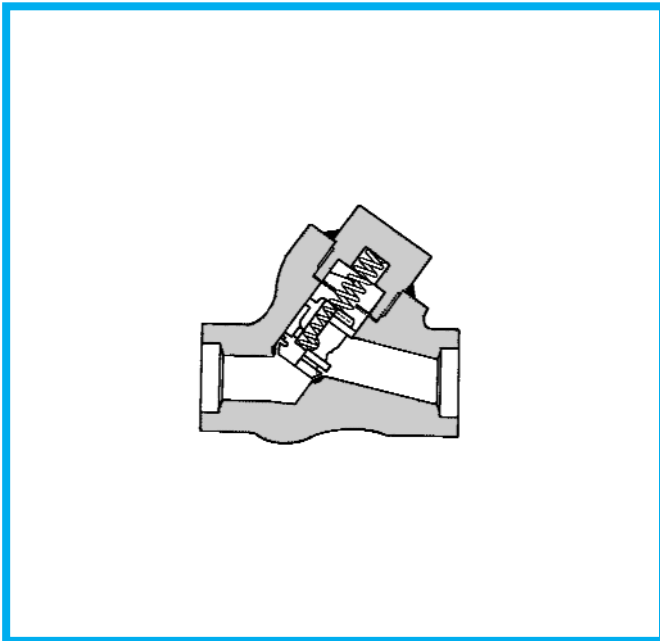
**Welded Bonnet**

**ASME Class**

**600 - 900 - 1700**

**2700 - 4500**

**(Dimensions in English units)**



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## MATERIAL SCHEDULES

Item	Part	71	11	22	31	91
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	ASTM A182 F91 + Stellite Gr. 6
2	Bonnet					
2.2	Bonnet	ASTM A 105	ASTM A182 F11	ASTM A 182 F22	ASTM A182 F316	ASTM A182 F91
3	Disk					
3.2	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)	Stellite Gr. 6 or ASTM A479 T316 + Stellite Gr. 6 (see Fig. 6005)
3.3	Disk					
3.4	Disk					
4	Stem					
4.4	Stem	ASTM A479 T.410 Cond. 3	ASTM A479 T.410 Cond. 3	ASTM A 479 T.410 Cond. 3	ASTM A564 T.630	ASTM A453 Gr. 660
5	Bottom Ring	Fe ARMCO	Fe ARMCO	Fe ARMCO	ASTM A479 T316	Fe ARMCO
6	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
8	Swing Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8
9	Pin	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	35NC6
10	Gland Flange	ASTM A105	ASTM A105	ASTM A105	ASTM A182 F316	ASTM A182 F316
11	Yoke Bushing	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300	ASTM B150 C62300
12	Handle	ASTM A105	ASTM A105	ASTM A105	ASTM A105	ASTM A105
14	Disk Pad	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	AISI 420
15	Handle Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
15A	Bolt Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 Gr 8
17	Washer	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
18	Disk Cap	ASTM A182 F6	ASTM A182 F6	ASTM A182 F6	ASTM A479 T316	ASTM A479 T316 + Stellite Gr 6
20	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
21	Spring	Inconel 600	Inconel 600	Inconel 600	Inconel 600	Inconel 600
23	Indicator	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
24	Spring	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
35	Grooved Rivet	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
70	Connecting Ring	Stellite	Stellite	Stellite	Stellite	Stellite

# BONT® Valves type WBY

## FOREWORD

Unlike many other manufacturers, we design, experiment, manufacture and test the most important BONT® Valve parts under one roof in our own facilities. Various set of rigorous testing are done in order to ensure not only the complete satisfaction of the customers, but also to make sure our products are within the strict compliance guidelines of the most widely used international Standards.

## APPLICATION RANGE

The BONT® valves type WBY are designed to meet the requirements of most customers under the most severe applications, such as 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 applications in chemical plants under higher pressure, e.g. NH<sub>3</sub> synthesis and also for petrochemical installations.

## DESIGN

WBY valves are "full-bore" valves. WBY valves are "streamlined", i.e. their body is "Y pattern" with inclined stem. This design allows less fluid turbulence and higher flow coefficient values when compared to "T pattern" valves. Body/bonnet welding performs perfect sealing of the body/bonnet screwed connection. WBY valves disk is a "loose" disk, so that both in the closing operation as during opening and in back seating the disk moves axially, and does not rotate when it comes in contact with sealing surfaces. WBY valves can be easily maintained "on site", by removing the body/bonnet seal welding without dismantling valve from the piping. After inspection and/or maintenance, seal welding can be easily restored.

## OPERATION

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

## RATINGS & STANDARDS (see Page 13)

WBY valves designs are in accordance to Class 600 - 900 - 1700 - 2700 - 4500 of the ASME B16.34 standard and also according to other internationally recognized standards, namely: ASME B16.11 - ASME B16.25 - ASME B16.34 - ASTM Standards - MSS SP-25 - DIN 3239 - ASME Boiler and Pressure Vessel Code Sect. III. Generally, WBY valves are oversized versus such Standards (see pag. 12, note 7) In addition, valves for special operating conditions can be supplied on request.

## MATERIAL SCHEDULES

WBY valves are manufactured in different material selections or "schedules". By "schedule" we refer to the material composition of each valve component.

Below we list the main characteristic elements of the different material schedules:

Material Schedule	Body & Bonnet Material	Disc & Seat
71	ASTM A 105	Stellite Gr. 6
11	ASTM A 182 F11	
22	ASTM A 182 F22	
31	ASTM A 182 F316	
91	ASTM A 182 F91	

The seating surfaces of all BONT® WBY valves are hardened with Stellite Gr. 6, deposited into the body under highly specialized and automated procedure which guarantees the achievement of stated constant characteristics and dimensional uniformity. In some applications the disk could be supplied in precision cast Stellite Gr. 6.

## SIZES

WBY valves are manufactured in the following standard sizes and pressure classes, up to and including ASME Class 4500: 1/2" up to 4". Valves sized 1/4" and 3/8" can be supplied on request.

## CONNECTIONS (see Page 11)

WBY valves are supplied with the following pipe connections:  
 - standard Socket Weld ASME B16.11  
 - on request Butt Weld ASME B16.25 or DIN 3239 or Threaded NPT ASME B1.20.1 or Flanged to ASME or DIN.  
 Valves over 2" cannot be supplied with socket weld ends

## FLOW COEFFICIENT

The flow coefficient values indicated for each valve in the following pages were measured experimentally in our plant, in accordance with ISA-S75.02. Values are given in metric units (Kv) and in English units (Cv). By definition, Kv is the number of m<sup>3</sup>/h of water that will flow through a fully opened valve with a pressure drop of 1 kg/cm<sup>2</sup>. By definition, Cv is the volume of water at 60 °F in American gallons per minute which flow through a valve, in the fully opened position, under 1 psi differential pressure.

## CODE No.

The Code No. is composed as follows:

		Example
- Type of Valve:	<b>WBY</b>	<b>WBY</b>
- Size:	<b>005</b> = 1/2" <b>007</b> = 3/4" <b>010</b> = 1" <b>015</b> = 1.1/2" <b>020</b> = 2" <b>025</b> = 2.1/2" <b>030</b> = 3" <b>040</b> = 4"	<b>020</b>
- Operation:	<b>IT</b> = Stop <b>RT</b> = Piston Check <b>RE</b> = Manual Flow Control <b>RI</b> = Stop-Check	<b>IT</b>
- Rating:	<b>06</b> =600 - <b>09</b> =900 - <b>15</b> =1700; <b>25</b> =2700; <b>45</b> =4500	<b>25</b>
- Material Schedule:	<b>71</b> or <b>11</b> or <b>22</b> or <b>31</b> or <b>91</b>	<b>22</b>
- Connections:	<b>OSW</b> = Socket Weld ASME <b>BWA</b> = Butt Weld ASME <b>BWD</b> = Butt Weld DIN	<b>OSW</b>
- Packing:	<b>GR</b> =Graphite - <b>SP</b> =Special - <b>00</b> =Missing	<b>GR</b>
Resulting Code No. (as in example):		<b>WBY020IT25220SWGR</b>

## INSTALLATION

Welding procedures issued by an engineering company or final owner should be followed. However, it should be kept on mind that:  
 - Valve should be partially open during welding,  
 - If the valve will be normally closed, piping should be flushed, then the valve should open and close 2-3 times before finally seating, to prevent solid particles from remaining between seat and disk,  
 - WBY valves are fully suitable for acid washing,  
 - Check packing tightness during initial operation and eliminate and leakage by retorquing the swing bolt nuts.

## MAINTENANCE

Maintenance procedures and service bulletins are available on request. These include recommended tools and kits.

## SHIPPING PREPARATION

WBY valves must undergo complete dimensional and operational tests prior to shipment. For storage and shipping protection, valves are coated with corrosion inhibitor oil on the internal areas, polyethylene caps on end connections, as well as stem thread protection. On request valves can be supplied with external painting or sealed in polyethylene bag for dry shipment and storage. Packing in wooden cases is used where specified, required or recommended.

In order to continue our on-going research and development and the resulting improvement of our product, we reserve the right to make any changes or alterations to our product range, without prior notice.

**BONT® Valves type WBY**  
**ASME Class 600 - 900 - 1700 - 2700 - 4500**  
**Forged steel**  
**Screwed and welded body/bonnet connection**

ASME Class	Standard Material Schedule
600	71 - 11 - 22 - 31
900	71 - 11 - 22 - 31
1700	71 - 11 - 22 - 31 - 91
2700	71 - 22 - 31 - 91
4500	71 - 22 - 31 - 91

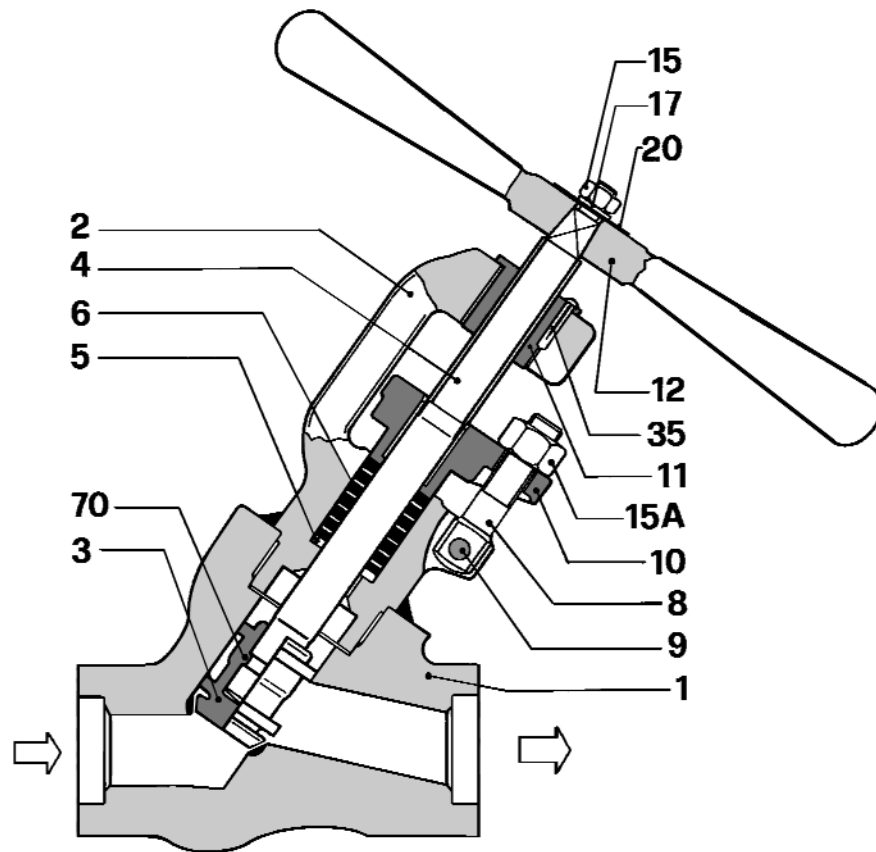
**Items**

Item	Part
1	Body
2	Bonnet
2.2	Bonnet
3	Disk
3.2	Disk
3.3	Disk
3.4	Disk
4	Stem
4.4	Stem
5	Bottom Ring
6	Packing
8	Swing Bolt
9	Pin
10	Gland Flange
11	Yoke Bushing
12	Handle
14	Disk Pad
15	Handle Nut
15A	Bolt Nut
17	Washer
18	Disk Cap
20	Name Plate
21	Spring
23	Indicator
24	Spring
35	Grooved Rivet
70	Connecting Ring

**MATERIAL SCHEDULES**

Here below we list the main characteristic elements of the different Material Schedules (See pag. 2 for complete Material Table):

Material Schedule	Body & Bonnet Material	Disc & Seat
71	ASTM A 105	Stellite Gr. 6
11	ASTM A 182 F11	
22	ASTM A 182 F22	
31	ASTM A 182 F316	
91	ASTM A 182 F91	



**1 BODY**

Always forged. Available in Carbon Steel, Cr Mo Low Alloy Steel or Stainless Steel. Streamlined internal contours and inclined stem permit "soft" flow and reduce losses of pressure. Passage contours minimize turbulence, vibration, erosion and are self-draining. Integral seat is hard surfaced with Stellite Gr. 6, deposited with highly specialized automated procedure, which guarantees constant uniform characteristics for positive shut off and long life. The extra thickness of the deposited Stellite allows several subsequent renewal operations of the seating surface to insure continue positive shut off. Final machining of the seat surface and other surfaces in a single operation insures perfect alignment of all components.

**2 BONNET**

Always forged and of same material as the body. Screwed to body and seal welded to avoid any leakage. Welding lip contour

can be easily removed allowing valve dismantling for inspection or maintenance. Backseat is integrally machined and positively isolates the packing chamber from line pressure.

On request backseat can be supplied with stellite hard face. Yoke design permits easy installation and removal of packing.

**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 vibration in any position and also avoid side thrust against the stem. The design allows several surface renewal operations of the seating surface.

According to Class, Size and Operation of the valve, at our option, the disk is made in compliance with one of the following models (Fig. 6005):

- A - made 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 same as in A, but with the addition of a second top-guide of Stellite Gr. 6,
- C - made of precision cast Stellite Gr. 6, with connection to the stem by the Connecting Ring (70), also made of Stellite.

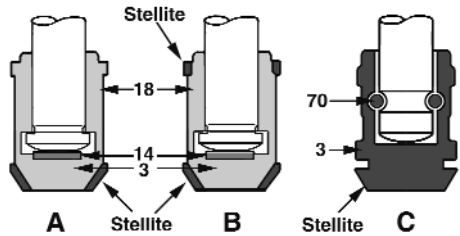


Fig. 6005

#### 4 STEM

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

#### 6 PACKING

Standard packing chamber roughness is max. 32 microinches. Packing (6) is made of an adequate number of preformed Rings. Graphite is standard. Special materials available upon request.

#### 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

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

#### 11 YOKE BUSHING

Usually made of special aluminum bronze. Accurate machining guarantees perfect alignment and lowest coefficient of friction with the stem and eliminates seizure possibility. It is screwed into the bonnet and fixed by one Grooved Rivet (35). Also available in NI-Resist to meet NACE Standards.

#### 12 HANDLE

Made of forged steel. Its contour permits sure grip. A pyramid shaped square connection provides a perfect fit on the stem. Fixed on stem by hexagon Nut (15) and locking Washer (17). Handwheel is 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 required indications or recommended information.

#### ACTUATED VALVES

Every WBY BONT® valve of any size, class and material schedule, Check Valves excepted, can be Power Actuated, with either electrical, hydraulic or pneumatic actuators.

Actuators are available with:

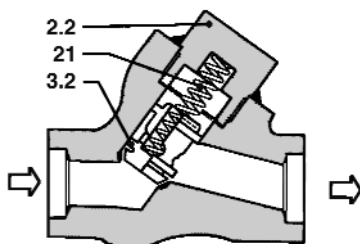
- torque limit switches, adjustable both at the time of delivery and on the plant during the operation,
- travel limit switches,
- local dial position indicators,
- "OPEN-CLOSED" indicating lights,
- auxiliary switches for various signals or operations,
- inductive or resistive position transmitter.

The BONT® Valves type WBY are also manufactured in these models:

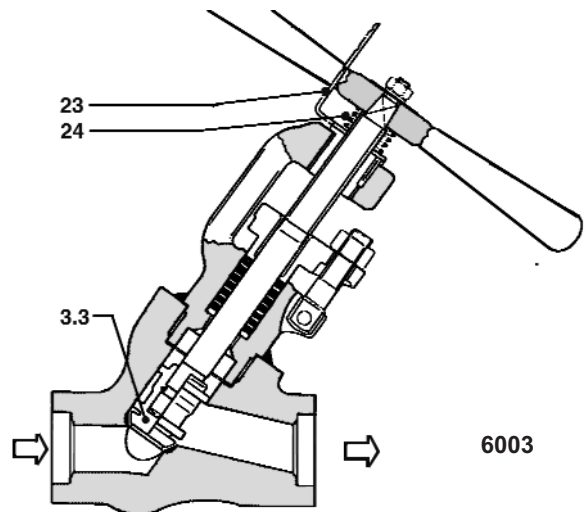
**Piston Check Valve** (Fig. 6002), where the Disk (3.2) is free in the Body, but loaded against the seat by the helical Spring (21). The Bonnet (2.2) is blind and is screwed and seal welded to the body. Thanks to the body Y pattern and the helical spring, piston check valve operates perfectly on both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

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

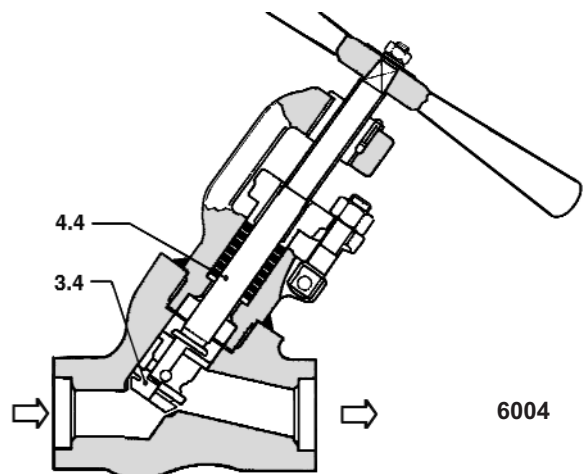
**Stop-Check Valve** (Fig. 6004), where the Disk (3.4) is allowed to slide on the Stem (4.4) while remaining connected. This allows valve, to act as a Piston Check valve when the stem is in the fully open position. With the stem screwed into the valve, flow is shut off in both directions. Since this valve does not have a spring, it must be installed in a position such that it allows the disk to close by gravity.



6002

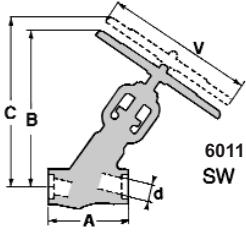


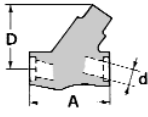
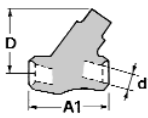
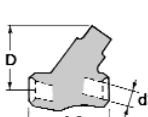
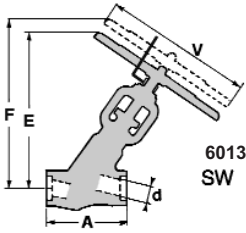


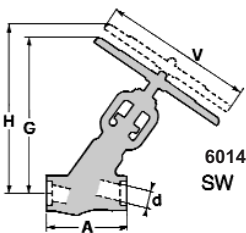

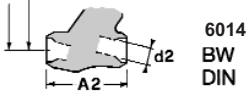


6003



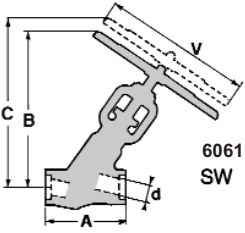
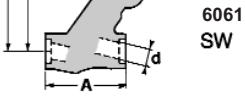





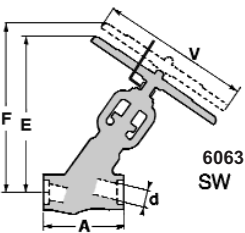

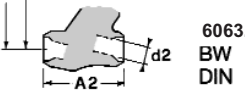
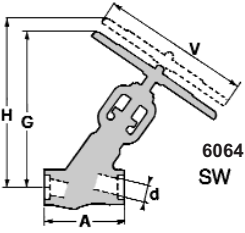


6004

**BONT® Valves type WBY ASME Class 600**  
**Forged steel - Standard Material Schedule: 71 - 11 - 22 - 31**

Stop Valves	SIZE inches	A	A1	A2	B	C	V	d	Kv	Cv	Weight lb	Code Number					
		in.	in.	in.	in.	in.	in.	in.									
 <p>6011 SW</p>  <p>6011.1 BW ASME</p>  <p>6011.2 BW DIN</p>	1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 IT 06	71 or 11 or 22 or 31	OSW or BWA or BWD	GR		
	3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 IT 06			GR		
	1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 IT 06			GR		
	1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 IT 06			GR		
	2"	7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 IT 06			GR		
	2.1/2"	12.008	12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 IT 06			GR		
	3"	12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 IT 06			GR		
	4"	12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 IT 06			GR		
	 <p>6012 SW</p>  <p>6012.1 BW ASME</p>  <p>6012.2 BW DIN</p>	1/2"	A	A1	A2	D	d	Kv	Cv	Weight lb	Code Number	71 or 11 or 22 or 31			OSW or BWA or BWD	00	
		3/4"	4.134	4.134	4.134	2.953	0.472	4	5	4.0	WBY 005 RT 06					00	
1"		4.331	4.331	4.331	3.150	0.886	16	19	5.5	WBY 010 RT 06	00						
1.1/2"		6.299	6.299	6.299	4.331	1.339	34	40	12.1	WBY 015 RT 06	00						
2"		7.402	7.402	7.402	5.906	1.732	53	62	20.9	WBY 020 RT 06	00						
2.1/2"		12.008	12.008	12.008	9.252	2.205	81	95	70.5	WBY 025 RT 06	00						
3"		12.008	12.008	12.008	9.252	2.677	103	120	66.1	WBY 030 RT 06	00						
4"		12.008	12.008	12.008	9.252	2.677	103	120	66.1	WBY 040 RT 06	00						
 <p>6013 SW</p>  <p>6013.1 BW ASME</p>  <p>6013.2 BW DIN</p>		1/2"	A	A1	A2	E	F	V	d	Kv	Cv		Weight lb	Code Number			
		3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12		5.5	WBY 005 RE 06		71 or 11 or 22 or 31	OSW or BWA or BWD
	1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 RE 06	GR				
	1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 RE 06	GR				
	2"	7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 RE 06	GR				
	2.1/2"	12.008	12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 RE 06	GR				
	3"	12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 RE 06	GR				
	4"	12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 RE 06	GR				
	 <p>6014 SW</p>  <p>6014.1 BW ASME</p>  <p>6014.2 BW DIN</p>	1/2"	A	A1	A2	G	H	V	d	Kv	Cv	Weight lb	Code Number				
		3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 005 RI 06	71 or 11 or 22 or 31	OSW or BWA or BWD		
1"		4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 RI 06	GR				
1.1/2"		6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 RI 06	GR				
2"		7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 RI 06	GR				
2.1/2"		12.008	12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 RI 06	GR				
3"		12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 RI 06	GR				
4"		12.008	12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 RI 06	GR				

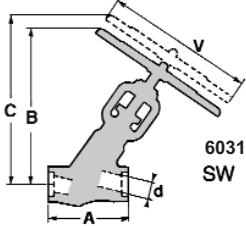


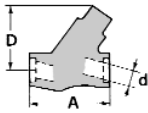
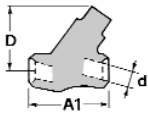
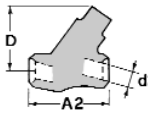
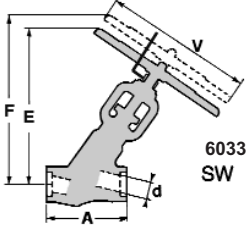


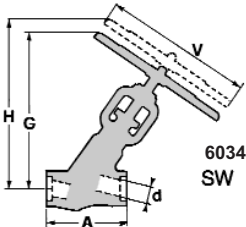


Dimensions d1 and d2 depend on requested BW connections - (see pag. 11)

**BONT® Valves type WBY - ASME Class 900**  
**Forged steel - Standard Material Schedule: 71 - 11 - 22 - 31**

 <b>Stop Valves</b>	SIZE	A	A1	A2	B	C	V	d	Kv	Cv	Weight	Code Number						
	inches	in.	in.	in.	in.	in.	in.	in.			lb							
 <b>6061 SW</b>   <b>6061.1 BW ASME</b>   <b>6061.2 BW DIN</b>	1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 IT 09	71 or 11 or 22 or 31	OSW or BWA or BWD	GR			
	3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 IT 09			GR			
	1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 IT 09			GR			
	1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 IT 09			GR			
	2"	7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 IT 09			GR			
	2.1/2"		12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 IT 09			GR			
	3"		12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 IT 09			GR			
	4"		12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 IT 09			GR			
	 <b>6062 SW</b>   <b>6062.1 BW ASME</b>   <b>6062.2 BW DIN</b>	1/2"	4.134	4.134	4.134	2.953	0.472	4	5	4.0		4.0			WBY 005 RT 09	71 or 11 or 22 or 31	OSW or BWA or BWD	00
		3/4"	4.134	4.134	4.134	2.953	0.689	10	12	4.0		4.0			WBY 007 RT 09			00
1"		4.331	4.331	4.331	3.150	0.886	16	19	5.5		5.5	WBY 010 RT 09	00					
1.1/2"		6.299	6.299	6.299	4.331	1.339	34	40	12.1		12.1	WBY 015 RT 09	00					
2"		7.402	7.402	7.402	5.906	1.732	53	62	20.9		20.9	WBY 020 RT 09	00					
2.1/2"			12.008	12.008	9.252	2.205	81	95	70.5		70.5	WBY 025 RT 09	00					
3"			12.008	12.008	9.252	2.677	103	120	66.1		66.1	WBY 030 RT 09	00					
4"			12.008	12.008	9.252	2.677	103	120	66.1		66.1	WBY 040 RT 09	00					
 <b>6063 SW</b>   <b>6063.1 BW ASME</b>   <b>6063.2 BW DIN</b>		1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 RE 09	71 or 11 or 22 or 31	OSW or BWA or BWD			GR
		3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 RE 09					GR
	1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 RE 09	GR					
	1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 RE 09	GR					
	2"	7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 RE 09	GR					
	2.1/2"		12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 RE 09	GR					
	3"		12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 RE 09	GR					
	4"		12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 RE 09	GR					
	 <b>6064 SW</b>   <b>6064.1 BW ASME</b>   <b>6064.2 BW DIN</b>	1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 RI 09			71 or 11 or 22 or 31	OSW or BWA or BWD	GR
		3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 RI 09					GR
1"		4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 RI 09	GR					
1.1/2"		6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 RI 09	GR					
2"		7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 RI 09	GR					
2.1/2"			12.008	12.008	20.079	21.654	15.748	2.205	81	95	103.6	WBY 025 RI 09	GR					
3"			12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 030 RI 09	GR					
4"			12.008	12.008	20.079	21.654	15.748	2.677	103	120	99.2	WBY 040 RI 09	GR					

Dimensions d1 and d2 depend on requested BW connections - (see pag. 11)

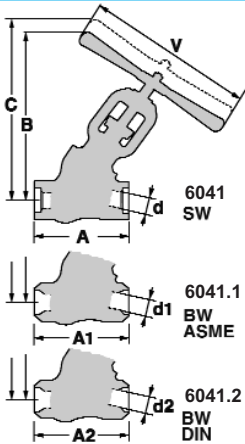
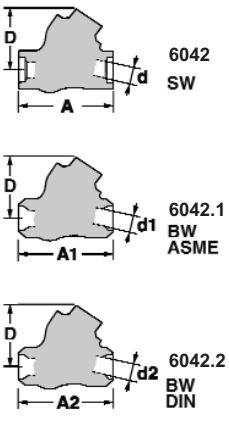
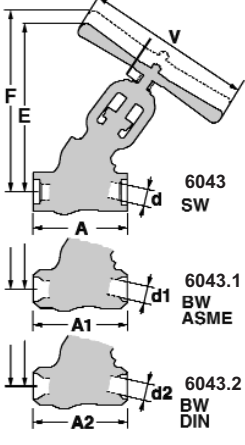
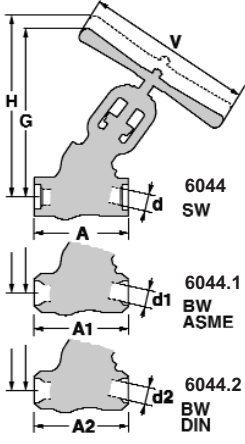
**BONT® Valves type WBY - ASME Class 1700**  
**Forged steel - Standard Material Schedule: 71 - 11 - 22 - 31 - 91**

Stop Valves	SIZE inches	A	A1	A2	B	C	V	d	Kv	Cv	Weight lb	Code Number						
		in.	in.	in.	in.	in.	in.	in.										
 <p>6031 SW</p>  <p>6031.1 BW ASME</p>  <p>6031.2 BW DIN</p>	1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 IT 15	71 or 11 or 22 or 31 or 91	OSW or BWA or BWD	GR			
	3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 IT 15			GR			
	1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 IT 15			GR			
	1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 IT 15			GR			
	2"	7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 IT 15			GR			
	2.1/2"	12.008	12.008	20.079	21.654	15.748	1.969	81	95	105.8	WBY 025 IT 15	GR						
	3"	12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 030 IT 15	GR						
	4"	12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 040 IT 15	GR						
	 <p>6032 SW</p>  <p>6032.1 BW ASME</p>  <p>6032.2 BW DIN</p>	1/2"	4.134	4.134	4.134	2.953	0.472	4	5	4.0	WBY 005 RT 15	71 or 11 or 22 or 31 or 91			OSW or BWA or BWD	00		
		3/4"	4.134	4.134	4.134	2.953	0.689	10	12	4.0	WBY 007 RT 15					00		
		1"	4.331	4.331	4.331	3.150	0.886	16	19	5.5	WBY 010 RT 15					00		
		1.1/2"	6.299	6.299	6.299	4.331	1.339	34	40	12.1	WBY 015 RT 15					00		
2"		7.402	7.402	7.402	5.906	1.732	53	62	20.9	WBY 020 RT 15	00							
2.1/2"		12.008	12.008	9.252	1.969	81	95	70.5	WBY 025 RT 15	00								
3"		12.008	12.008	9.252	2.362	103	120	68.3	WBY 030 RT 15	00								
4"		12.008	12.008	9.252	2.362	103	120	68.3	WBY 040 RT 15	00								
 <p>6033 SW</p>  <p>6033.1 BW ASME</p>  <p>6033.2 BW DIN</p>		1/2"	4.134	4.134	4.134	7.677	8.268	6.299	0.472	4	5		6.2	WBY 005 RE 15		71 or 11 or 22 or 31 or 91	OSW or BWA or BWD	GR
		3/4"	4.134	4.134	4.134	7.677	8.268	6.299	0.689	10	12		6.2	WBY 007 RE 15				GR
		1"	4.331	4.331	4.331	9.843	10.630	8.858	0.886	16	19		8.4	WBY 010 RE 15				GR
		1.1/2"	6.299	6.299	6.299	12.402	13.583	11.811	1.339	34	40		19.8	WBY 015 RE 15				GR
	2"	7.402	7.402	7.402	16.929	18.307	15.748	1.732	53	62	27.6	WBY 020 RE 15	GR					
	2.1/2"	12.008	12.008	20.472	22.047	15.748	1.969	81	95	108.0	WBY 025 RE 15	GR						
	3"	12.008	12.008	20.472	22.047	15.748	2.362	103	120	103.6	WBY 030 RE 15	GR						
	4"	12.008	12.008	20.472	22.047	15.748	2.362	103	120	103.6	WBY 040 RE 15	GR						
	 <p>6034 SW</p>  <p>6034.1 BW ASME</p>  <p>6034.2 BW DIN</p>	1/2"	4.134	4.134	4.134	7.283	7.874	6.299	0.472	4	5	5.5	WBY 005 RI 15	71 or 11 or 22 or 31 or 91	OSW or BWA or BWD			GR
		3/4"	4.134	4.134	4.134	7.283	7.874	6.299	0.689	10	12	5.5	WBY 007 RI 15					GR
		1"	4.331	4.331	4.331	9.449	10.236	8.858	0.886	16	19	7.7	WBY 010 RI 15					GR
		1.1/2"	6.299	6.299	6.299	12.008	13.189	11.811	1.339	34	40	18.7	WBY 015 RI 15					GR
2"		7.402	7.402	7.402	12.402	14.173	15.748	1.732	53	62	26.5	WBY 020 RI 15	GR					
2.1/2"		12.008	12.008	20.079	21.654	15.748	1.969	81	95	105.8	WBY 025 RI 15	GR						
3"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 030 RI 15	GR						
4"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 040 RI 15	GR						

Dimensions d1 and d2 depend on requested BW connections - (see pag. 11)

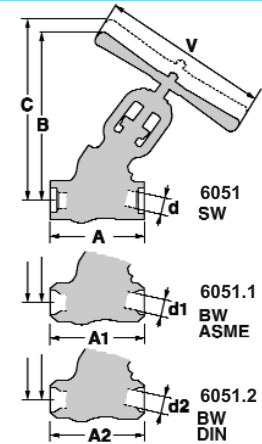
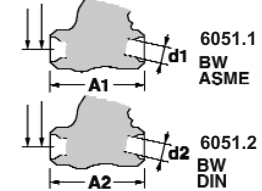
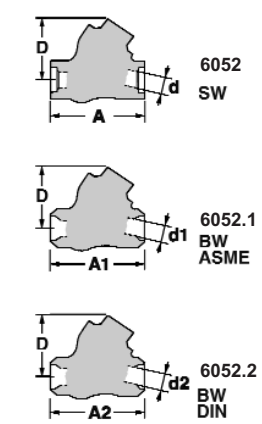
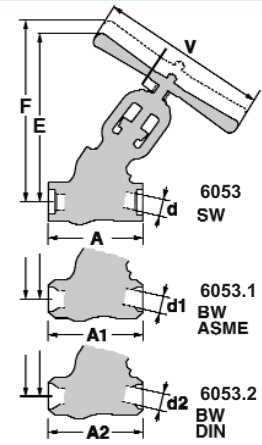
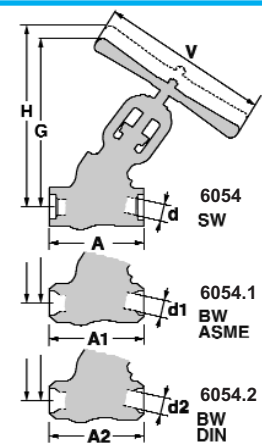


**BONT® Valves type WBY - ASME Class 2700**  
**Forged steel - Standard Material Schedule: 71 - 22 - 31 - 91**

Stop Valves		SIZE	A	A1	A2	B	C	V	d	Kv	Cv	Weight	Code Number					
		inches	in.	in.	in.	in.	in.	in.	in.	in.		lb						
		1/2"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	4	5	8.8	WBY 005 IT 25	71 or 22 or 31 or 91	OSW or BWA or BWD	GR		
		3/4"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	10	12	8.8	WBY 007 IT 25			GR		
		1"	6.063	6.063	6.063	11.811	12.598	11.811	0.768	16	19	17.6	WBY 010 IT 25			GR		
		1.1/2"	8.819	8.819	8.819	16.535	18.110	15.748	1.181	34	40	59.5	WBY 015 IT 25			GR		
		2"	8.819	8.819	8.819	16.535	18.110	15.748	1.555	53	62	57.3	WBY 020 IT 25			GR		
		2.1/2"		12.008	12.008	20.079	21.654	15.748	1.969	81	95	105.8	WBY 025 IT 25			GR		
		3"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 030 IT 25			GR		
		4"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 040 IT 25			GR		
Piston Check Valves		SIZE	A	A1	A2	D	d	Kv	Cv	Weight	Code Number							
		inches	in.	in.	in.	in.	in.	in.			lb							
		1/2"	4.331	4.331	4.331	3.150	0.551	4	5	5.5			WBY 005 RT 25			71 or 22 or 31 or 91	OSW or BWA or BWD	00
		3/4"	4.331	4.331	4.331	3.150	0.551	10	12	5.5			WBY 007 RT 25					00
		1"	6.063	6.063	6.063	4.134	0.886	16	19	11.0			WBY 010 RT 25	00				
		1.1/2"	8.819	8.819	8.819	6.299	0.768	34	40	33.1			WBY 015 RT 25	00				
		2"	8.819	8.819	8.819	6.299	1.555	53	62	30.9			WBY 020 RT 25	00				
		2.1/2"		12.008	12.008	9.252	1.969	81	95	70.5			WBY 025 RT 25	00				
		3"		12.008	12.008	9.252	2.362	103	120	68.3			WBY 030 RT 25	00				
		4"		12.008	12.008	9.252	2.362	103	120	68.3			WBY 040 RT 25	00				
Manual Flow Control Valves		SIZE	A	A1	A2	E	F	V	d	Kv	Cv	Weight	Code Number					
		inches	in.	in.	in.	in.	in.	in.	in.	in.			lb					
		1/2"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	4	5	9.3	WBY 005 RE 25	71 or 22 or 31 or 91	OSW or BWA or BWD			GR
		3/4"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	10	12	9.3	WBY 007 RE 25					GR
		1"	6.063	6.063	6.063	11.811	12.598	11.811	0.768	16	19	18.7	WBY 010 RE 25			GR		
		1.1/2"	8.819	8.819	8.819	16.535	18.110	15.748	1.181	34	40	59.5	WBY 015 RE 25			GR		
		2"	8.819	8.819	8.819	16.535	18.110	15.748	1.555	53	62	58.4	WBY 020 RE 25			GR		
		2.1/2"		12.008	12.008	20.079	21.654	15.748	1.969	81	95	108.0	WBY 025 RE 25			GR		
		3"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	103.6	WBY 030 RE 25			GR		
		4"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	103.6	WBY 040 RE 25			GR		
Stop - Check Valves		SIZE	A	A1	A2	G	H	V	d	Kv	Cv	Weight	Code Number					
		inches	in.	in.	in.	in.	in.	in.	in.	in.			lb					
		1/2"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	4	5	8.8	WBY 005 RI 25			71 or 22 or 31 or 91	OSW or BWA or BWD	GR
		3/4"	4.331	4.331	4.331	9.449	10.236	8.858	0.551	10	12	8.8	WBY 007 RI 25					GR
		1"	6.063	6.063	6.063	11.811	12.598	11.811	0.768	16	19	17.6	WBY 010 RI 25	GR				
		1.1/2"	8.819	8.819	8.819	16.535	18.110	15.748	1.181	34	40	59.5	WBY 015 RI 25	GR				
		2"	8.819	8.819	8.819	16.535	18.110	15.748	1.555	53	62	57.3	WBY 020 RI 25	GR				
		2.1/2"		12.008	12.008	20.079	21.654	15.748	1.969	81	95	105.8	WBY 025 RI 25	GR				
		3"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 030 RI 25	GR				
		4"		12.008	12.008	20.079	21.654	15.748	2.362	103	120	101.4	WBY 040 RI 25	GR				

Dimensions d1 and d2 depend on requested BW connections - (see pag. 11)

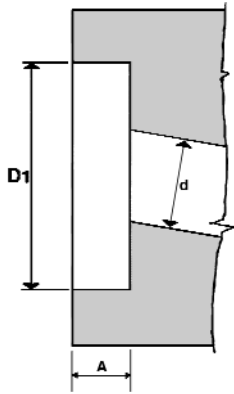
**BONT® Valves type WBY - ASME Class 4500**  
**Forged steel - Standard Material Schedule: 71 - 22 - 31 - 91**

Stop Valves		SIZE	A	A1	A2	B	C	V	d	Kv	Cv	Weight	Code Number						
		inches	in.	in.	in.	in.	in.	in.	in.	in.			lb						
	1/2"	6.063	6.063	6.063	11.811	12.598	11.811	0.472	4	5	19.8		WBY 005 IT 45	71 or 22 or 31 or 91	OSW or BWA or BWD	GR			
	3/4"	6.063	6.063	6.063	11.811	12.598	11.811	0.472	10	12	19.8		WBY 007 IT 45			GR			
	1"	6.063	6.063	6.063	11.811	12.598	11.811	0.551	16	19	18.7		WBY 010 IT 45			GR			
	1.1/2"	8.819	8.819	8.819	16.535	17.913	15.748	1.220	34	40	58.4		WBY 015 IT 45			GR			
	2"	8.819	8.819	8.819	16.535	17.913	15.748	1.220	53	62	57.3		WBY 020 IT 45			GR			
	2.1/2"		12.008	12.008	20.079	21.654	15.748	1.575	81	95	110.2		WBY 025 IT 45			GR			
	3"		12.008	12.008	20.079	21.654	15.748	1.575	103	120	110.2		WBY 030 IT 45			GR			
	4"		12.008	12.008	20.079	21.654	15.748	1.575	103	120	110.2		WBY 040 IT 45			GR			
		1/2"	4.331	4.331	4.331	3.150	0.551	4	5	5.5						WBY 005 RT 45	71 or 22 or 31 or 91	OSW or BWA or BWD	00
		3/4"	4.331	4.331	4.331	3.150	0.551	10	12	5.5						WBY 007 RT 45			00
		1"	6.063	6.063	6.063	4.134	0.886	16	19	11.0						WBY 010 RT 45			00
		1.1/2"	8.819	8.819	8.819	6.299	0.768	34	40	33.1						WBY 015 RT 45			00
2"		8.819	8.819	8.819	6.299	1.555	53	62	30.9				WBY 020 RT 45	00					
2.1/2"			12.008	12.008	9.252	1.969	81	95	70.5				WBY 025 RT 45	00					
3"			12.008	12.008	9.252	2.362	103	120	68.3				WBY 030 RT 45	00					
4"			12.008	12.008	9.252	2.362	103	120	68.3				WBY 040 RT 45	00					
		1/2"	6.063	6.063	6.063	12.205	12.992	11.811	0.472	4	5	20.9		WBY 005 RE 45	71 or 22 or 31 or 91	OSW or BWA or BWD			GR
		3/4"	6.063	6.063	6.063	12.205	12.992	11.811	0.472	10	12	20.9		WBY 007 RE 45					GR
		1"	6.063	6.063	6.063	12.205	12.992	11.811	0.551	16	19	19.8		WBY 010 RE 45					GR
		1.1/2"	8.819	8.819	8.819	16.929	18.307	15.748	1.220	34	40	59.5		WBY 015 RE 45					GR
	2"	8.819	8.819	8.819	16.929	18.307	15.748	1.220	53	62	58.4		WBY 020 RE 45	GR					
	2.1/2"		12.008	12.008	20.472	22.047	15.748	1.575	81	95	112.4		WBY 025 RE 45	GR					
	3"		12.008	12.008	20.472	22.047	15.748	1.575	103	120	112.4		WBY 030 RE 45	GR					
	4"		12.008	12.008	20.472	22.047	15.748	1.575	103	120	112.4		WBY 040 RE 45	GR					
		1/2"	6.063	6.063	6.063	11.811	12.598	11.811	0.472	4	5	19.8		WBY 005 RI 45			71 or 22 or 31 or 91	OSW or BWA or BWD	GR
		3/4"	6.063	6.063	6.063	11.811	12.598	11.811	0.472	10	12	19.8		WBY 007 RI 45					GR
		1"	6.063	6.063	6.063	11.811	12.598	11.811	0.551	16	19	18.7		WBY 010 RI 45					GR
		1.1/2"	8.819	8.819	8.819	16.535	17.913	15.748	1.220	34	40	58.4		WBY 015 RI 45					GR
2"		8.819	8.819	8.819	16.535	17.913	15.748	1.220	53	62	57.3		WBY 020 RI 45	GR					
2.1/2"			12.008	12.008	20.079	21.654	15.748	1.575	81	95	110.2		WBY 025 RI 45	GR					
3"			12.008	12.008	20.079	21.654	15.748	1.575	103	120	110.2		WBY 030 RI 45	GR					
4"			12.008	12.008	20.079	21.654	15.748	1.575	103	120	110.2		WBY 040 RI 45	GR					

Dimensions d1 and d2 depend on requested BW connections - (see pag. 11)

# CONNECTIONS

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

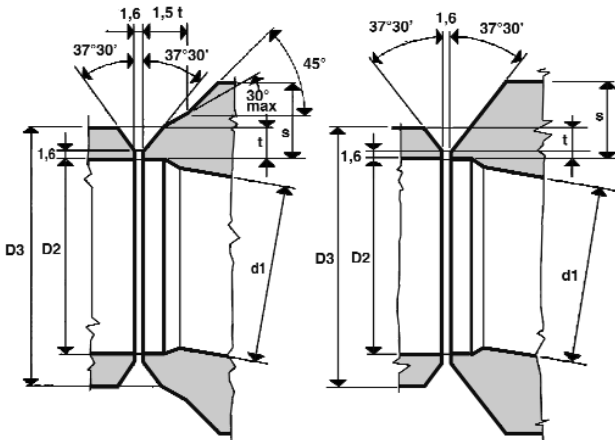


6101

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 B16.11 (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

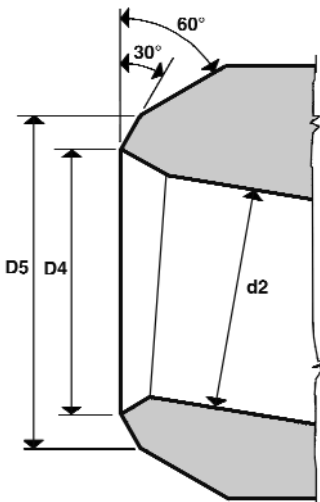
SIZE	Schedule 80		Schedule 160		Schedule 03 XXS	
	D3 mm (in)	t mm (in)	D3 mm (in)	t mm (in)	D3 mm (in)	t mm (in)
1/2"	21.3 (0.840)	3.73 (0.147)	21.3 (0.840)	4.78 (0.188)	21.3 (0.840)	7.47 (0.294)
3/4"	26.7 (1.050)	3.91 (0.154)	26.7 (1.050)	5.56 (0.219)	26.7 (1.050)	7.82 (0.308)
1"	33.4 (1.315)	4.55 (0.179)	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		PN 100		PN 160		PN 250		PN 320		PN 400		PN 640	
		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.

# MATERIALS

Material		ASTM A105	ASTM A182F11	ASTM A182F22	ASTM A182F316	ASTM A182F91	Stellite Gr.6	ASTM A479 T.410C.3	ASTM A193 B7	ASTM A182 F XM 19	ASTM A194 2H	ASTM B150 C62300	ASTM B166 N06600	ASTM A182 F6	ASTM A564T.630 Cond.H1075	ASTM A453 Gr. 660
<b>Chemical Analysis</b>		(Note 1)														
<b>Carbon</b>	%	0.35 max	0.10-0.20	0.15 max	0.08 max	0.08-0.12	1	0.13 max	0.38-0.48	0.06 max	0.40 max		0.15 max	0.15 max	0,07	0.08 max
<b>Manganese</b>	%	0.60-105	0.30-0.80	0.30-0.60	2.00 max	0.30-0.60		1.00 max	0.75-1.00	4.0-6.0		0.5 max	1.0 max	1.00 max	1.0 max	2.00 max
<b>Phosphorus</b>	%	0.04 max	0.04 max	0.04 max	0.04 max	0.02 max		0.04 max	0.04 max	0.04 max	0.04 max			0.04 max	0.04 max	0.040 max
<b>Sulphur</b>	%	0.05 max	0.04 max	0.04 max	0.03 max	0.01 max		0.03 max	0.04 max	0.03 max	0.05 max		0.015 max	0.30 max	0.03 max	0.030 max
<b>Silicon</b>	%	0.35 max	0.5-1.0	0.5 max	1.00 max	0.20-0.50		1.00 max	0.20-0.35	1.00 max		0.25 max	0.5 max	1.00 max	1.0 max	1.00 max
<b>Chromium</b>	%		1.0-1.5	2.0-2.5	16.00-18.00	8.00-9.50	28	11.5-13.5	0.80-1.10	20.5-23.5			14.0-17.0	11.5-13.5	15.0-17.5	13.5-16.0
<b>Nickel</b>	%				10.00-14.00	0.40 max		0.50 max		11.5-13.5		1.0 max	72 min+Co	0.50 max	3.0-5.0	24.0-27.0
<b>Molybdenum</b>	%		0.44-0.65	0.87-1.13	2.00-3.00	0.85-1.05			0.15-0.25	1.5-3.0					1.2-2.0	1.0-1.5
<b>Copper</b>	%											82.2 min	0.50 max		3.0-5.0	
<b>Aluminium</b>	%											8.5-10.0				0.35 max
<b>Iron</b>	%											2.0-4.0	6.0-10.0			
<b>Cobalt</b>	%						66									
<b>Tungsten</b>	%						5									
<b>Titanium</b>	%															1.90-2.35
<b>Columbium</b>	%									0.10-0.30						
<b>Mechanical features</b>								(Note 2)				(Note 2)	(Note 2)			
<b>Tensile Strength</b>	psi MPa	70000 485	70000 485	75000 515	75000 515	85000 585		130000 900	125000 860	100000 690		78000 542	155000 1.069	110000 760	145000 1000	130000 895
<b>Yield Strength</b>	psi MPa	36000 250	40000 275	45000 310	30000 205	60000 415		100000 690	105000 720	55000 380		32000 221	90000 620	85000 585	125000 862	85000 585
<b>Elongation on 2"</b>	%min							12	16	35		15	10	15	13	15

## Notes for Materials (Those Notes apply also to Rating Tables on page 13)

- We utilize also steel with lower Carbon content ( $\leq 0,25\%$ ).
- Mechanical features depend on heat treatment. Prescribed heat treatment permits us to obtain the most suitable physical and chemical characteristics.

## Notes for Rating (Those Notes apply also to Rating Tables on page 13)

- Ratings of tables are those indicated by ASME B 16.34 for Classes 600 - 900 - 1500 - 2500 - 4500 and extrapolated for Classes 1700-2700
- Due to a possible transformation of carbides into graphite, ASME B 16.34 does not recommend the use of Carbon steel valves (BONETTI Mat. Sch. 71) over 800°F (425°C) for extended periods.
- For ASTM A182 F11 and for ASTM A182 F22 (BONETTI Mat. Sch. 11 and 22) ASME B 16.34 recommends:  
"Use normalized and tempered material only - Not to be used over 1100 °F (595 °C).
- At temperature above 1000 °F (538 °C) material ASTM A182 F316 (BONETTI Mat. Sch. 31) must be used only when the Carbon content is 0.04% or higher.
- As BONT valves are oversized versus International Standard prescription, including ASME B 16.34, effective maximum operating condition can be communicated on request.





# CERTIFICATE

**Quality-System**  
for Pressure Equipment Manufacturer  
according to Directive 97/23/EC

Certificate-No.: 04 202 2 130 02 00004

**Name and address of  
manufacturer:**

**Cesare Bonetti S.p.A.**  
Via Cesare Bonetti, 17  
20024 Garbagnate Milanese (Mi) – Italy

It is hereby certified, that the manufacturer had introduced and applies a quality system according to Directive 97/23/EC. The manufacturer is authorized, to affix the following sign to those equipments he produced in the range of validity of this QA-system:

**CE 0044**

Audied according to Directive 97/23/EC: **QA-system (module H)**

Audit report No.: **303463**

Scope: **Forged and cast valves**

Production facility:

**Cesare Bonetti S.p.A.**  
Via Cesare Bonetti, 17  
20024 Garbagnate Milanese (MI) – Italy

Essen, 13.05.2002

TÜV CERT Certification Body  
for Pressure Equipment of  
RWTÜV Systems GmbH

  
(Middelhaue)

Notified Body, Code 0044

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Kurfürstenstr. 58  
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Tel. ++49-201/825-2727  
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e-mail Barbara.Holstein@rwtuev.de

Member of



CONFÉDÉRATION EUROPÉENNE D'ORGANISMES DE CONTRÔLE

Rev 0  
Cert EC Cesare Bonetti.doc



# CERTIFICATE

The TÜV CERT Certification Body  
for QM-Systems of RWTÜV Systems GmbH

hereby certifies in accordance with TÜV CERT  
procedure that

**CESARE BONETTI S.p.a.**

Via C. Bonetti, 17  
20024 Garbagnate Milanese (MI), Italy

has established and applies a quality system for

Engineering and manufacturing of valves, glass and  
magnetic level gauges, magnetic switches and accessories

An audit was performed, Report No. 2.5-0190/2004

Proof has been furnished that the requirements according to

ISO 9001 : 2000 / EN ISO 9001 : 2000

are fulfilled. The certificate is valid until 16 February 2007

Certificate Registration No. 04100 20040189



Essen, 17.02.2004

The TÜV CERT Certification Body for QM systems  
of RWTÜV Systems GmbH

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**<sup>®</sup>, 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**<sup>®</sup> and **CMI Pasquini**<sup>®</sup> 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 around the 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 now identifies the new Bonetti's ball valve line.

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

Facilities:	
Enclosed surface	711,000 sq.ft.
Offices building (with car parking below) for three stories	24,000 sq.ft.
Facilities building (mess-hall, locker rooms, sanitary department, etc.) for three stories	21,500 sq.m
Manufacturing shed (including Production Department and general Facilities)	205,000 sq.ft.



Cont. SMA 283/93

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