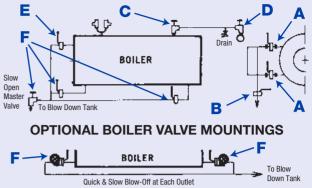
ASME/ANSI REQUIREMENTS ASME BOILER & PRESSURE VESSEL CODE Section 1 – Power Boilers (2013 Addenda) and ANSI B31.1 – Power Piping Code

(2014 Addenda) (SEE NOTE 1)

		(SEE NOTE I)
Index and Service	Reference	Comments
A Water Column Shut-Off Valves	BPV-1 PG 60.3.4 BPV-1 PG 60.3.7	Piping between water column and boiler to Be 1 in. minimum size. Shut-off valves must be through-flow type. Must indicate whether the valve is open or closed. Must be locked or sealed open.
B Water Column Drain	BPV-1 PG 60.2.3	Minimum pipe size 3/4 in., to install a valved drain to a safe point of discharge.
C Stop Valves	ANSI B31.1 PARA. 122.1.7 (A) (A.1)	Each boiler discharge outlet (except safety valve or reheater connections), must be fitted with a stop valve. Valves OS & Y rising stem type are preferred.
D Stop Valves at Common Header	ANSI B31.1 PARA. 122.1.7 (A.3) "STOP - CHECK"	When two or more boilers are connected to a common header, or when a single boiler is connected to a header having another steam source, the connection from each boiler having a manhole opening shall be fitted with two stop valves having an ample free-blow drain between them. The preferred arrangement consists of one stop-check valve (located closest to the boiler) and one valve of the style and design described in (A.1). Alternatively, both valves may be of the style and design described in (A.1).
E Surface Blow-Off	BPV-1 PG 59.3.2	Surface blow-off shall not exceed 2 ¹ / ₂ in. pipe size.
F Blow-Off Valves	BPV-1 PG 59.3.5	The minimum size of blow-off pipe and fittings shall be 1 in. The maximum size shall be $2^{1}/2$ in. (See code of exceptions on miniature boilers and electric boilers). On boilers with 100 square feet or less of heating surface, $3/4$ in. pipe and fittings may be used.
	ANSI B31.1 PARA. 122.1.7 (C.1)	Ordinary globe valves, and other valves with dams or pockets where sediment can collect, shall not be used on blow-off connections.
	(C.4)	Except for electric steam boilers having a normal water content of 100 Gal, traction- purpose, and portable boilers with allowable working pressure over 100PSIG, each bottom blow-off requires two slow-opening valves, or one quick opening valve at the boiler nozzle followed by a slow-opening valve.
	(C.5)	When the value of P required by para.122.1.4 (A.1) does not exceed 250 psig [1725 kPa (gage)], the valves or cocks shall be bronze, cast iron, ductile iron, or steel. The valves or cocks, if of cast iron, shall not exceed NPS 2 ¹ / ₂ and shall meet the requirements of the applicable ASME standard for Class 250, as given in Table 126.1, and if of bronze, steel, or ductile iron construction, shall meet the requirements of the applicable standards as given in Table 126.1 or para. 124.6.
	(C.9)	Boilers with multiple blow-off pipes may have single master valve on common header with single blow-off valve on each individual pipe. either master or individual blow-off valves shall be slow opening.
	(C.10)	Two independent slow opening valves, or a slow opening and a quick opening valve, may be combined in one body provided it is the equivalent of two separate valves and that the failure of one cannot affect the other.
	NOTE 1:	These guide lines are based on ASME and ANS to assist you in valve selection. However, they

BOILER VALVE MOUNTINGS

Refer to the following table for proper Valve to use at each location designed by index letter.





TO MEET ASME/ANSI REQUIREMENTS ISO 9001 CERTIFIED COMPANY



LATEST APPLICABLE CODES

ASME SECT. 1 -	2013 POWER BOILERS
ANSI B31.1 -	2014 POWER PIPING
ANSI B16.1 -	2010 CAST IRON FLANGES & FITTINGS
ANSI B16.5 -	2013 PIPE FLANGES & FLANGED FITTINGS
ANSI B16.34 -	2013 VALVES – FLANGED, THREADED & W.E.

: These guide lines are based on ASME and ANSI codes at time of printing and are intended to assist you in valve selection. However, they are subject to changes in the codes as they may occur. The actual codes should always be consulted for full details and requirements.

EVERLASTING® QUICK OPENING VALVES MEET ASME/ANSI CODE (INDEX B, E, F)

PRE	SSURE RATING F	SIG		E.J.	Deal	Available Sizes - Chart shows suggested Operating Pressure limits for easy operation with standard lever and Geared lever. Longer levers are available for higher pressure upon request.							
Primary Service	Max. Blow-Off	Suitable for Use with Index	Figure No.	End Type	Body Matl.								
Rating	Service †	Letter				1"	1 ¹ /4"	1 1/2"	2"	2 ¹ /2"			
250	200	B,F	4000-A 4001-A 4010-A 4011-A	SCR FLG SCR FLG	Iron Iron Iron Iron	250 250 —	250 250 —	200 200 250 250	200 200 215 215	100 100 150 150			
300	485	B,F	4000-S (57) 4001-S (57) 4010-S (57) 4011-S (57)	SCR FLG SCR FLG	Steel Steel Steel Steel	400 400 — —	300 300 — —	200 200 300 300	200 200 215 215	100 100 150 150			
600	910	B,F	4000-S (58) 4001-S (58) 4010-S (58) 4311-S (58)	SCR FLG SCR FLG	Steel Steel Steel Steel	550 550 —	450 450 —	270 270 300 300	200 200 215 215	100 100 150 150			



Fig. 4001 Series Lever Operated

Fig. 4000 Series Lever Operated



Fig. 4011, 4311 Series Lever & Gear Operated 4010 Series Not Illustrated

- Features
- Straight-through flow
 Leak proof seal disc has self lapping
- action, actually improves with use.Self wiping action of
- disc cannot hang-up on boiler scale

How figure 4000 Series operates

Line pressure and heavy spring hold disc firmly against the body seat, sealing off the flow. When operated, the disc slides across the body seat pushing harmful boiler scale away, and wiping clean the precision lapped surface.

Hand adjustment of the post packing is eliminated. Post packing is **self-adjusted** by a spring and line pressure. This prevents destructive erosion and leakage of stuffing box.

MATERIAL DATA

Figure No.	Body	Post	Disc	Seat Bushing	Lever Arm	Post Packing	Springs	Body Gasket	Operating Wrench
4000-A 4001-A	Cast Iron	Forged Bronze	Cast Iron		Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Forged Steel
4000-S (57) 4001-S (57)	Steel	Forged Bronze	Hard Stainless	Hard Stainless	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Forged Steel
4010-A 4011-A	Cast Iron	Forged Bronze	Cast Iron		Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Ductile Iron
4010-S (57) 4011-S (57)	Steel	Forged Bronze	Hard Stainless	Hard Stainless	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Ductile Iron
4000/4001-S (58) 4010/4311-S (58)	Steel	17-4 PH Stainless	Hard Stainless	Hard Stainless	Ductile Iron	Non- Asbestos	17-7PH	Corrugated Stainless Steel	Ductile Iron

DIMENSIONAL DATA

		Der		F irmer N		Dimensior			Size			2	21/2"				
		на	ing	Figure N	10.	Letter	1"	1 1/4"	1 1/2"	2"	21/2"	(57)	(58)			1 O.
o _0~f [.]	•	25	50	4000-A	1	F	35/8	3 5/8	41/2	45/8	51/4						□ 0-# 7.7
		300	/600 4	000-S (57)(58)	++F	5	51/4	6	61/4		13³/	8 13 3	/8			I KKT //Ľ I
		300	/600 4	002-S (57)(58)	++F	61/8	63/8	67/8	77/8		14 ³ /	4 143	14		CC.	1 NAH
	N.	25		4001-A		В	71/2	71/2	83/8	9	103/8				ЛЃ		
	5		00	4001-S (5		В	75/8	77/8	87/8	9	12				IM		
		60	00	4001-S (5	58)	В	81/2	9	101/2	117/8	15						
						J	4	43/4	51/4	51/4	61/4				Π.	UĽ	
- F		250, 60				L	9 18 ⁵ /8	9 18 ⁵ /8	15 ^{1/4} 15 ^{1/4}	15 ^{1/4} 15 ^{1/4}	23 23				Ē	_ D	
		0				0	55°	55°	55°	60°	23 60°				1-	D	. 1
Fig. 4000 Series						s	15/8	1 ³ /4	21/8	2 1/16	2 ³ /4					F	ig. 4001 Series
						-											
	Detting	Figure	Dimensio	on	Size		Dettern		Figure	D	msn		Size		21	/2"	
∏ <u>R</u> 0 ∕? "	Rating	No.	Letter		2"	21/2"	Rating		No.			1 1/2"	2"	21/2"	(57)	(58)	I π α ~0 < ∞I
	250	4010-A	F	41/2	45/8	51/4	300/600	4010)-S (57)(5	8) +	-+F	6	61/4		133/8	133/8	
	250	4011-A	В	83/8	9		800/600		2-S (57)(5		+F	67/8	77/8		14 3/4	14 3/4	
			J	53/4	61/4		300		11-S (57)			83/4	9	12			Indillin SAR
			L	181/4	183/8		600	40	11-S (58)				117/8	15"			111114
 + ↓ ζ ((?)) _>			L ^S	12 ¹ /2	121/2							5 ^{1/4}	5 ^{1/4} 18 ^{3/8}	6 ^{1/4}			
			0 S	130° 5	130° 51/4						-	181/4 121/2		23 15 ¹ /2			Б <u></u>
			3	1	3.74	0-74						12.72 130°	12.72 130°	120°			
Fig. 4010 Series												41/2	41/2	63/4			Fig. 4011 Series

TO SPECIFY — Everlasting Quick Opening Blow-Off Valve(s): figure number(s) ______, size _____, lever operated, sliding disc packless seating, bolted split body, for _____bs. meeting ASME/ANSI code. TO ORDER — Use figure number(s), state size, body material, type connection, for_____lbs.

†Pressures shown are maximum allowed by ASME Code. ++New F to F for 21/2" valves.

EVERLASTING® SLOW OPENING VALVES MEET ASME/ANSI CODE (INDEX B, C, D, E, F)

PRE	SSURE RATING F	PSIG				Available Sizes - Chart shows suggested Operating Pressure limits for easy operation with standard lever and Geared lever. Longer levers are available for higher pressure upon request.							
Primary Service	Max. Blow-Off	Suitable for Use with Index	Figure No.	End Type	Body Matl.								
Rating	Service †	Letter				1"	1 ¹ /4"	1 ¹ /2"	2"	2 ¹ /2"			
250	200	B,F	4060-A 4061-A B-6561 B-6571	SCR FLG FLG FLG	Iron Iron Iron Iron	250 — — —	250 — — —	250 250 250 250	250 250 250 250	250 250 250 250			
300	485	B,F	4060-S (57) 4061-S (57) B-6661 B-6671	SCR FLG FLG FLG	Steel Steel Steel Steel	605 605 — —	605 605 —	605 605 605 605	605 605 605 605	605 605 605 605			
600	910	B,F	4060-S (58) 4061-S (58) B-6761 B-6771	SCR FLG FLG FLG	Steel Steel Steel Steel	935 935 — —	935 935 — —	935 935 935 935 935	935 935 935 935	935 935 935 935			

Features

- Valve can be installed with hand wheel in any position.
- Straight-through-flow.
- Leak proof seal-disc has self lapping action, actually improves with use.
- Seal-disc has self wiping action; cannot hang-up on boiler scale.
- No retightening after cool down; seal not affected by temperature change.
- Real slow opening.
- · Hard seat resists erosion.

MATERIAL DATA

How figure 4060 and 4061 Series operate

Line pressure and heavy spring hold disc firmly against the body seat, sealing off the flow. When operated, the disc slides across the body seat pushing harmful boiler scale away, and wiping clean the precision lapped surfaces.

Hand adjustment of the post packing is eliminated. Post packing is **self-adjusted** by a spring and line pressure. This prevents destructive erosion or leakage of stuffing box.



Sectional View of Angle and "Y" Valve

How figure 6000 Series operates

These valves are of the outside Screw and Yoke type. The seat and disc are capable of withstanding the severe erosive flow of blow-down service. While quick opening Valve holds boiler water, the seat and disc can be easily removed for repair without removing the Valve from line.

Figure No.	Body	Post	Disc	Sea Bushi		Leve Arm		ost king	Sprii	ngs		Body asket	Clevis Nut	Hand	wheel	Lever	Screw Shaft
4060-A 4061-A	Cast Iron	Forged Bronze	Cast Iron	Hard Sta	inless	Ductil Iron		Ring :king	17-7	'PH		rugated less Steel	Iron	Ir	on	Ductile Iron	Steel
4060-4061S (57) 4060-4061S (58)	Carbon Steel	Forged Bronze 17-4PH	Hard Stainles	s Hard Sta	inless	Ductil Iron	e Pac	Ring king -Asb.	17-7	'PH		rugated less Steel	Iron	Ir	on	Ductile Iron	Steel
Figure No.	Body	Yoke	Disc	Seat	Ste	em	Yoke Nut	Yoke Nu			oke shing	Gland	Pack	ing	Sea Gask		Body Gasket
B6561 B6571	Cast Iron	Cast Iron	Hard Stainless	Stainless		nless eel	Bronze	Bror	ıze	Bro	onze	Ductile Iron	Comp.	Fiber	Graf	oil	Grafoil
B6661 B6671	Cast Steel	Cast Steel	Hard Stainless	Stainless		nless eel	Bronze	Bror	nze	Bro	onze	Ductile Iron	Comp.	Fiber	Graf	oil	Grafoil
B6761 B6771	Cast Steel	Cast Steel	Hard Stainless	Stainless	Stair Ste	nless eel	Bronze	Bror	ize	Bro	onze	Ductile Iron	Comp.	Fiber	Graf	oil	Grafoil

DIMENSIONAL DATA

	D. I.	Figure	Dimension			Size			F	Dation	Figure	Dimension		Size	
	Rating	Ňo.	Letter	1"	1 1/4"	1 1/2"	2"	2 1/2"		Rating	Ňo.	Letter	1 1/2"	2"	21/2"
	⊋/ 250	4060-A	F	35/8	35/8	41/2	45/8	51/4		250/300	B6561/B6661	E	4 1/4	5	6
	250	4061-A	В	_	_	83/8	9	103/8	<u>H</u> <u> </u>			G	5	51/2	53/4
	n l		н	8	8	10	101/2	101/2				H-Shut	141/2	153/8	16 ^{3/8}
1 X 78-78 81			J	13	13	14	14	151/2				H-Open	161/2	177/8	193/8
	1 R - 1		N	9	91/2	12	121/2			600	B6761	E	45/8	51/4	61/4
	2		S	-	5	51/2	51/2	51/2				G	53/8	6	61/4
Fig. 4060 Series			-	5	5		51/2					H-Shut	141/2		157/8
Fig. 4060 Series			W	9	9	9	9	9				H-Open	161/2	177/8	187/8

		Figure	Dimension			Size			21	/2"	
	Rating	No.	Letter	1"	1 1/4"	1 1/2"	2"	2"	(57)	(58)	
111 LATS	300/600	4060-S (57)(58)	++F	5	51/4	6	61/4		133/8	133/8	
	300/600	4062-S (57)(58)	++F	61/8	63/8	67/8	77/8		143/4	143/4	
	300	4061-S (57)	В	7 5/8	77/8	83/4	9	12			
	600	4061-S (58)	В	81/2	9	101/2	117/8	15			п
			н	71/4	71/4	71/4	71/4	91/2			
			J	11 1/2	12	12	121/2	16			
<u> </u>			N	11	10	101/2	13	13			- F
Fig. 4004 Carles			S	43/4	43/4	51/8	51/8	61/2			
Fig. 4061 Series			W	9	9	9	9	12			

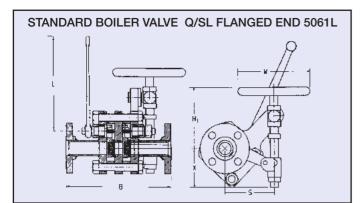
	Dutio	Figure	Dimension		Size	
<u> </u>	Rating	Ňo.	Letter	1 1/2"	2"	21/2"
	250/300	B6571/B6671	В	121/4	123/4	141/4
<i>Л</i> ЮЙ ЦН			H-Open	153/4	17 1/4	181/2
~~			X-Open	65/8	73/8	75/8
	600	B6771	В	127/8	131/2	15
B			H-Open	161/8	173/4	19 ^{1/8}
			X-Open	61/2	73/8	77/8

TO SPECIFY - Everlasting Slow Opening Blow-Off Valve(s): figure number(s) ______, size _____, wheel operated, sliding disc packless seating, for ______Ibs. meeting ASME/ANSI code. TO SPECIFY — Everlasting Slow Opening Blow-Off Valve(s): figure number(s) ______, size _____, wheel operated, rising stem, packless seating disc type, for ______lbs. meeting ASME/ANSI code.

TO ORDER - Use figure number(s), state size, body material, type connection, for_____lbs

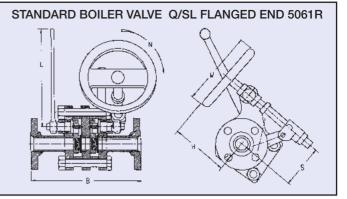
 $^{+}$ Pressures shown are maximum allowed by ASME Code ++New F to F for 21/2" valves.

DUPLEX & UNITANDEM VALVES MEET ASME/ANSI CODE (INDEX "F")



RATING 300 LB

Fi	g.			DIME	NSION		
506	61L	В	H	L	S	W	Х
11	/2	12 1/2	8 ¹ /2	12 1/5	5	9	4 1/ ₈
2	2	12	8 ¹ /2	18	5	9	4 1/ ₈



RATING 300 LB

Fig.			DIME	NSION		
5061R	В	Н	L	N	S	W
1 ¹ / ₂	11 ¹ /2	6 ¹ /2	12 ¹ /2	10 ¹ /2	5	9
2	12	7	18	13	5	9

How figure 5000 series operate

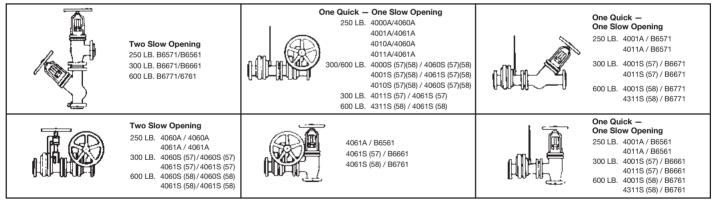
DUPLEX VALVES

A combination of quick and slow opening Valves in one body operates the same as figure 4000 series described on pages 2 and 3. The lever operated section is used as the sealing Valve and the handwheel operated section is the blowing Valve. The blowing Valve can be removed for repair while the sealing Valve remains in service (Fire Banked).

All Valve bodies are made of carbon steel and are easy to operate at maximum blow-off pressure.

TO SPECIFY—Enter figure number(s)		, size
and	lbs.	

TO ORDER—Use figure number(s), state size, body material, type connection, for______ lbs.



DISTRIBUTED BY

For detailed ratings and operating pressures see figure number of Valve on pages 2 and 3. TO SPECIFY—See data on pages 2 and 3. TO ORDER—Use figure number combination shown above, state size, body material, type connection, for _____ lbs.



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