

BOILER BLOWDOWN VALVES

QUICK OPENING VALVE MEET ASME/ANSI

TYPE 4000-A / 4001-A



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

Material								
Figure				Lever	Post		Body	Operating
No.	Body	Post	Disc	Arm	Packing	Springs	Gasket	Wrench
4000-A	Cast	Forged	cast	Ductile	V-Ring		Corrugated	Forged
4001-A	iron	Bronze	iron	iron	Packing	17-7PH	Stainless Steel	Steel

Dimensional								
Rating	Figure	Dimension	Size					
	No.	Letter	1"	1¼"	11⁄2"	2"	21/2	
		F	3.5/8	3.5/8	4.1/2	4.5/8	5.1/4	
250	4000-A	В	7.1/2	7.1/2	8.3/8	9	10.3/8	
		J	4	4.3/4	5.1/4	5.1/4	6.1/4	
	4001-A	L	9	9	12.1/2	18	23	
		0	55°	55°	55°	60°	60°	
		S	1.5/8	1.3/4	2.1/8	2.3/16	2.3/4	
		O S	55° 1.5/8	55° 1.3/4	55° 2.1/8	60° 2.3/16	60 2.3	

Pressure Rating PSIG								
Primary	Max.	Max.	Suitable for	Figure	End	Body		
Service	Blow-Off	Steam	Use with	No.	Туре	Matl.		
Rating	Service [†]	Service*	Index Letter					
250	200	250	BEE	4000-A	SCR	iron		
200	200	200	D, L, I	4001-A	FLG	iron		

Fig. 4000 Series

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

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.						

3/4"	1"	1¼"	11⁄2"	2"	21⁄2"
250	250	250	200	200	100
-	250	250	200	200	100

Boiler Valve Mountings

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



ASME/ANSI Requirements ASME Boiler & Presure Vessel Code Section 1 - Power Boiler (1990 Addenda) and ANSI B31.1 - Power Piping Code (1990 Addenda) (See Note 1)

Index and Service	Reference	Comments
A: Water Column	BPV-1, PG 60.2.2	Piping between water column and boiler to be 1 in. minimum size
Shut-Off Valves	BPV-1, PG 60.2.5	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	BPV-1	Minimum pipe size ¾ in. Rising bends or pockets must have a separate drain.
Column Drain	PG 60.2.3	
C: Stop Valves	ANSI B31.1	Each boiler discharge outlet (except safety valve or reheater connections), must be fitted with a stop valve.
	PARA. 122.1.7	Valves over 2 in. to be OS & Y rising stem type.
D: Stop Valves	ANSI B31.1	When boilers are connected to a common header, the connection from each boiler having a manhole opening shall be fitted
at Common	PARA. 122.1.7	with two stop valves consisting preferably of one automatic non-return valve (set next to the boiler) and a second valve of the
Header		OS & Y type, or two valves of the OS & Y type shall be used. A free-blow visible drain shall be fitted between the two stop valves.
E: Surface	BPV-1	Surface blow-off shall not exceed 2½ in. pipe size.
Blow-Off	PG 59.3.2	
F: Blow-Off Valve	ANSI B31.1	The minimum size of blow-off pipe and fittings shall be 1 in. The maximum size shall be 2½ in. (See code for exceptions on miniature
	PARA. 122.1.7	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	Ordinary strainght-run globe valves, and other valves with dams or pockets where sediment can collect, shall not be used
	PARA. 122.1.7	on blow-off connections. Except for high temperature water, traction or portable boilers, pressures over 100 PSIG require two
		slow opening valves or one slow opening valve and a quick opening valve.
		For maximum working pressures up to 200 PSIG, Class 250 iron valves may be used for blow-off service. (See maximum working
		pressure table for steel valve rating). 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.
		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.
G: Fuel Shut-Off	ANSI B31.1	Cast ductile iron valves may be used for fuel gas service.
	PARA. 122.8.1	

Note 1: These guide line 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

*last updated 03/16

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