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EVERLASTING VALVE COMPANY
108 SOMOGYI COURT
SOUTH PLAINFIELD, NEW JERSEY 07080

1" TO 2-1/2" BOILER BLOW-OFF VALVES
CAST IRON OR CARBON STEEL BODY

BV-4000 REV. A
October 16, 1990

MANUAL OPERATED ROTATING SINGLE DISC VALVES

			LEVER OPERATED		HANDWHEEL OPERATED	
			SCREW END	FLANGED	SCREW END	FLANGED
C.I.	CL 250	Fig.	4000A	4001A	4060A	4061A
C.S.	CL 300	Fig.	4000S(57)	4001S(57)	4060S(57)	4061S(57)
C.S.	CL 600	Fig.	4000S(58)	4001S(58)	4060S(58)	4061S(58)

INSTALLATION, OPERATION, MAINTENANCE and REPAIR INSTRUCTIONS
(Refer to Specific Valve Drawing Supplied for Your Order)

We recommend compliance with State and ASME Boiler Codes.

Proper installation and maintenance will insure trouble free valve operation. Misuse of this valve may result in damage or injury. The manufacturer provides the following instructions for use and relies upon the purchaser to see to it that these instructions are given to the persons who will actually be using these valves. Valves should be inspected for any damage that may have occurred in shipment. Notify carrier and factory of any such damages as early as possible.

These valves are designed to seal against pressure from one direction. They will operate efficiently in blow-off pipe systems and environment where cast iron body or carbon steel body is acceptable. Cast Iron Class 250 can be used up to 200 psig. Carbon Steel Class 300 valves can be used up to 490 psig. Per ANSI B31.1. Carbon Steel Class 600 up to 935 psig.

We do not recommend cast iron valves for pressure or temperature shock; such as water-hammer or a fire hose on a hot valve.

INSTALLATION AND OPERATION:

1. This valve is suitable for holding pressure from one direction. It must be installed in the pipeline with pressure on the "inlet" side of the valve. Note cast iron valves have "inlet" cast on body. Carbon steel valves have an "inlet" plate fastened to valve. On horizontal pipelines, the valve chamber should be towards the top for better drainage.

2. (a) For screw end valves, the pipe threads must be made up using a suitable compound to seal the thread. Please note the temperature rating of the sealant. Make up all threads fully tight. If a thread is not tight enough, a lever operated valve may turn the valve during operation and the thread develop a leak.

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INSTALLATION AND OPERATION: (continued.....)

2. (b) The wrench or operating lever may be removed to provide a smaller swing clearance when making up pipe threads. Use a pipe wrench, not the valve handle, to make up pipe thread. The thread's hand tight engagement must be 4 to 5 threads. DO NOT make up pipe threads with insufficient thread engagement.

3. On making up flanged connections, care should be taken to select the correct gasket and use a suitable sealing compound or lubricant. Carbon Steel bolts may be used for cast iron valves. Alloy B7 steel bolts must be used on steel body valves. Bolting must be made up evenly. Snug-up first, then tighten up alternately across and finally full torque.

4. Always shut the valve fully; this will provide tight closure of seats for the longest possible time. Needless to say, leaving the valve in the "cracked" position would reduce seat life considerably.

5. Consideration for clearance of operating lever or handwheel should be made as well as where the operator is standing from a standpoint of safety. After valve has heated up or is on-stream, inspection should be made as in paragraph 6 of "MAINTENANCE".

MAINTENANCE:

6. When system is on-stream and has reached maximum operating temperature, inspection should be made for possible leakage at the body gasket and the post packing. If any leakage or suspected leakage appears at body gasket, body bolts should be pulled up evenly. DO NOT OVERTIGHTEN.

7. Internal stuffing box has self adjusting "V" ring packing. Steel valves have graphite impregnated teflon; iron valves have molded duck impregnated with NEOPRENE. If post leaks, replace "V" rings. Use only packing as supplied with the valves.

8. (a) Should any leakage appear at the seat, it may be due to some foreign particle lodged between the sealing faces. This can easily be cleared by operating the valve a few times. If for any reason valve does not perform satisfactorily, please notify the factory.

(b) LUBRICATION - Handwheel operated valves have two zerk fittings that require NEVER-SEEZ to be pumped in periodically (4 - 6 months). (NEVER-SEEZ Compound Corp., 2910 South 18th Avenue, Broadville, Illinois 60153).

REPAIR:

9. Shut off line pressure and remove valve from pipeline. Allow valve to cool.

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REPAIR: (continued.....)

10. Take valve apart and clean all parts thoroughly. Scrape out all old packing from stuffing box. Relap disc faces and entire face across seats; including the body gasket faces of the bonnets. If conditions of these faces will not clean up by lapping, they should be refaced by surface grinding prior to final lapping. Stone all sharp corners of seat & discs with a honing stone. On steel body valves, check for smear metal due to grinding; scraping may be necessary to remove this wire edge. Final edge finish is done with fine silicon carbide paper (240 grit). Loose or rough edges will cause the seat to fail.

11. Check the post bearing for correct clearance (.004" to .008"). If post bearing is badly worn, it must be bored out and fitted with a bushing. As service will allow, use bronze or cast iron if bronze is not tolerable.

12. If valve is fitted with seat bushings, which are press fitted into the port of the bonnets, check to be sure that they are securely in place.

13. Recommended repair parts are indicated by asterisk on parts list of drawing supplied for your order. Assembly must be done in a clean environment.

14. Clamp bonnet (G-1) to top of bench. Install "V" rings on post with lips facing the pressure side. DO NOT damage lips. Lubricate post hole and seat with NEVER-SEEZ Compound. Push post/"V" ring assembly into stuffing box taking care not to damage the lips. (Edge of stuffing box hole must not be sharp.)

    Refer to drawing to be sure all parts go together correctly. If valve is flanged, assemble body studs in those body bolt holes that face the flange. These studs can only be assembled from the seat face side. Snug up two or four body bolts and operate valve by hand to verify that parts have been assembled correctly.

15. Body bolts must be pulled up evenly and alternately across. First snug them all up evenly, then pull them up tight evenly and finally torque them up to 50 ft./lbs. for 1/2" and 9/16" bolts, 100 ft./lbs. for 5/8" bolts and 270 ft./lbs. for 7/8" bolts.

16. Finally install lever or handwheel operator. On handwheel operated valves, check for proper centering of disc when valve is fully shut. A slight overtravel is preferred.

17. If you do not have the proper facilities to make the repair, send the valve to us and we will repair it for you. Our charge for this work is moderate and the valve when returned will be as good as new.

18. After repair please review all sections of this instruction BV-4000 REV. A.

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TESTING:

19. Valve body & seat should be hydrostatically tested water tight as follows:

		BODY TEST	SEAT TEST
		HYDROSTATIC	HYDROSTATIC
Class 300	Steel	1125 psig	825 psig
Class 250	Iron	750 psig	500 psig

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January 20, 2003

BV-1

REPAIR INSTRUCTIONS

DISC (NO. 8W): The disc has a precision lapped face. It must be mated to a reconditioned seat face that has been ground and lapped. If grinding is not available, a smooth machine cut concentric with the port , can be taken. Tool marks must be lapped out. If a lapping machine is available, the seat face could possible be restored by lapping ONLY.

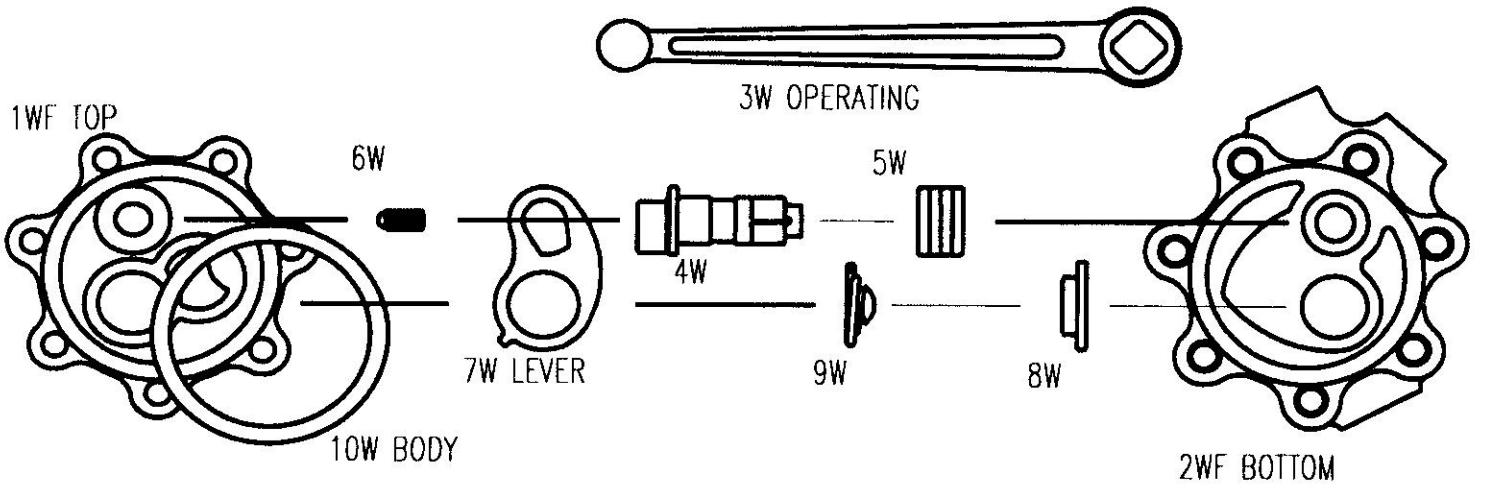
LEVER ARM (NO. 7W): The lever arm is make with an easy sliding fit over the head-end of the post, about 1/64" all around – a perfectly free fit.

INLET BONNET: The gasket face should be cleaned up only when necessary. Max. finish 0.020" is allowable without machining back face.

LUBRICATION: Use Never-Seez on seat faces and mineral oil on the "V"-rings and post.

"V"-RING SET (NO. 5W): Rotate by hand when assembling to post to avoid damage to lips. Do not force ring on post. Lips of "V"-rings must face inside of valve body.

BOLTING: Tighten body bolts lightly and evenly all around before final tightening.



PART NAME	PART NO.
Top Bonnet Screwed, Iron	1W
Top Bonnet Flanged, Iron	1WF
Bottom Bonnet Screwed, Iron	2W
Bottom Bonnet Flanged, Iron	2WF
Operating Wrench, Steel	3W
Post, Forged Bronze	4W
Post Packing Set	5W

PART NAME	PART NO.
Post Spring & Rivet	6W
Lever Arm, Ductile Iron	7W
Disc for Iron Valve, Iron	8W
Disc for Steel Valve, 440-C SS	8W
Disc Spring & Rivet	9W
Body Gasket, Corrugated Stainless	10W

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