



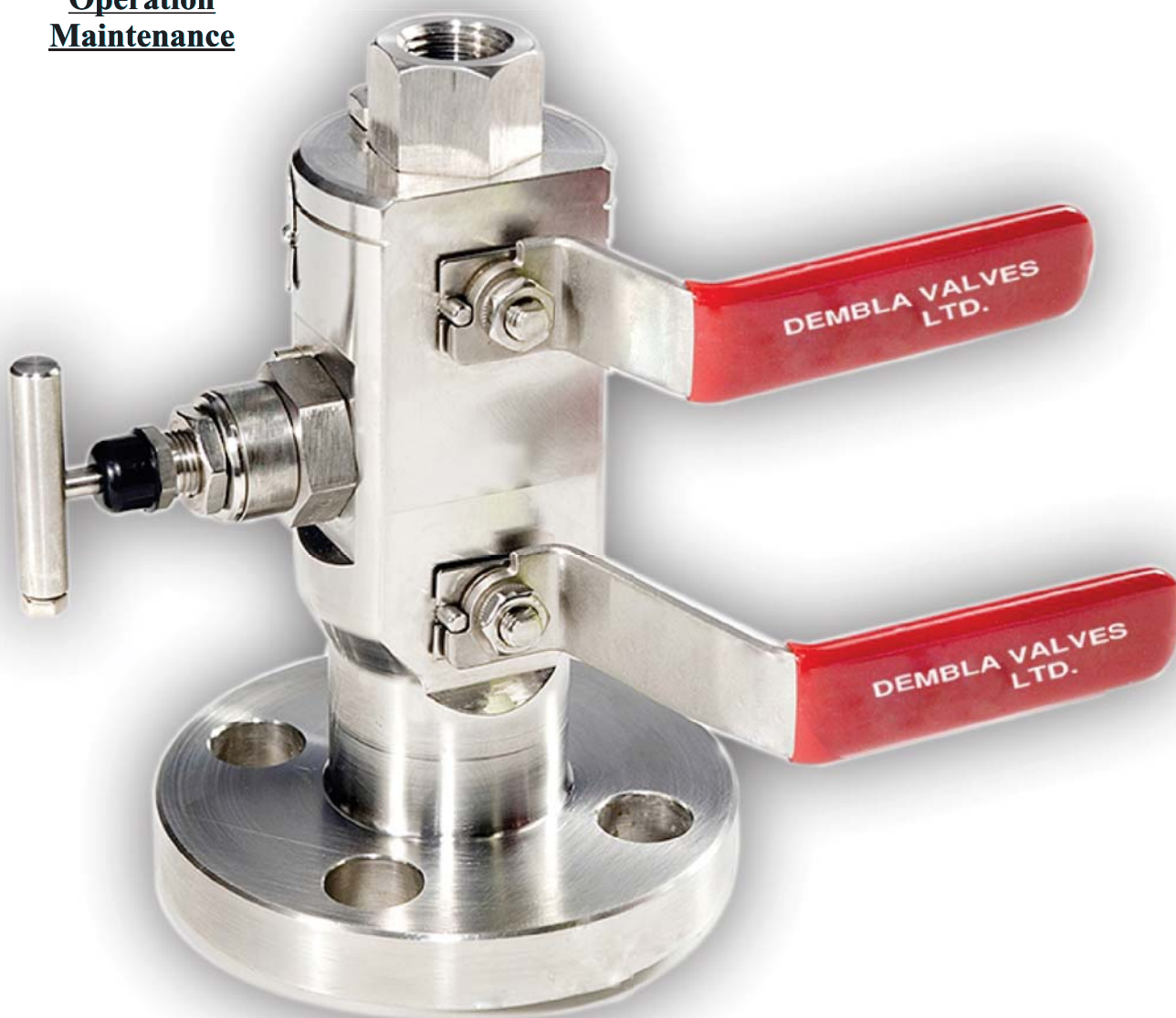
Dembla

Instruction Manual

Double Block & Bleed Valve

Series - DBB - 01

Installation
Operation
Maintenance



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1.0 Foreword

1.1 Scope of Instruction Manual:

This Instruction Manual covers information regarding Installation and Maintenance of **Double Block & Bleed Valve**.

1.2 Copyrights and Modification Rights Reservation:

Dembla Valves Ltd. retains the Copyright on the contents of this Instruction Manual. The Total content of this Instruction Manual described here corresponds to the Information during preparation of the Instruction Manual. It is user's responsibility to refer the latest version. All data, specifications and Illustrations here are subjected to Technical Modifications and improvements and hence Modification can be done by us at any time without any prior notice. No claim to Modification or repair of these Valves, which have already been supplied by us, can be made.

2.0 Storage & Preservation:

All Valves are dispatched in the closed/open position as ordered and it is recommended that they are left in this position during storage. All protective packing should remain in position until the Valve is to be installed. Valve should be stored in a clean and dry environment, without disturbing company setting. Protect it from shock & lifting damage.



Caution

If hoisting the Valve, use a nylon sling to protect the surface. Also, take care to prevent people from being injured in case the hoist or rigging slips unexpectedly. For Valve Weight refer Valve Packing Slip.

3.0 Valve Marking

- 1) Valve name plate attached on Valve by riveting carrying all Valve Identification Information.
- 2) Markings like Valve Size, Rating, Material etc. are as cast on valve Bodies.
- 3) Valve Serial no. punched on Valve Body Flange for Valve Traceability.

4.0 Health & Safety:

- 1) Before attending to Valve Installation/Maintenance, the Instruction Manual must be compulsorily read and understood properly.
- 2) Valve must be operated by qualified personnel.
- 3) Ensure that the operator handling these Valves must follow Safety and Accident Prevention Rules and Regulations.
- 4) Follow the Safety Instructions before Installation, Maintenance or removing the Valve.
- 5) Always wear protective gloves, clothing and eyewear when performing any Installation operations to avoid personal injury.
- 6) All Safety Messages such as Cautions, Warnings and Notes are highlighted in this Instruction Manual which must be strictly followed to avoid any possibility of arising danger / risk of damage to the equipment / person's life.
- 7) No Liability on Manufacturer for any wrong handling, improper commissioning and wrong assembly.
- 8) Line must be fully drained and de-pressurized before Installation or maintenance of Valve.



9) Never handle Valves that have been used on harmful substances unless they have been completely decontaminated and certified safe to handle.

10) If the processes or environments that the products are used in are likely to cause temperature (high or low) that may cause injury to person if touched, then adequate insulation / protection must be fitted. It is recommended that the insulation allows easy access for maintenance, to the sealant fittings, and to the Valve operator.

11) Valve must be protected from earthquake loading, traffic & wind.

12) No Modification / Conversions are allowed without written authorization from Dembla Valves Ltd.



13) Do not remove the protection caps from the ends until the valve is to be mounted in line.

5.0 Unpacking:

For Carton

1. Keep Carton in position (Carton 'upside' should not be 'down').
2. Cut plastic strip properly which is tied around Carton & remove it.
3. Cut cello tape properly which is stuck on Carton opening.
4. Open Carton properly.
5. Remove foam properly along with polythene wrapping.
5. Lift the valve properly & keep on clean & dry place



For Wooden Box

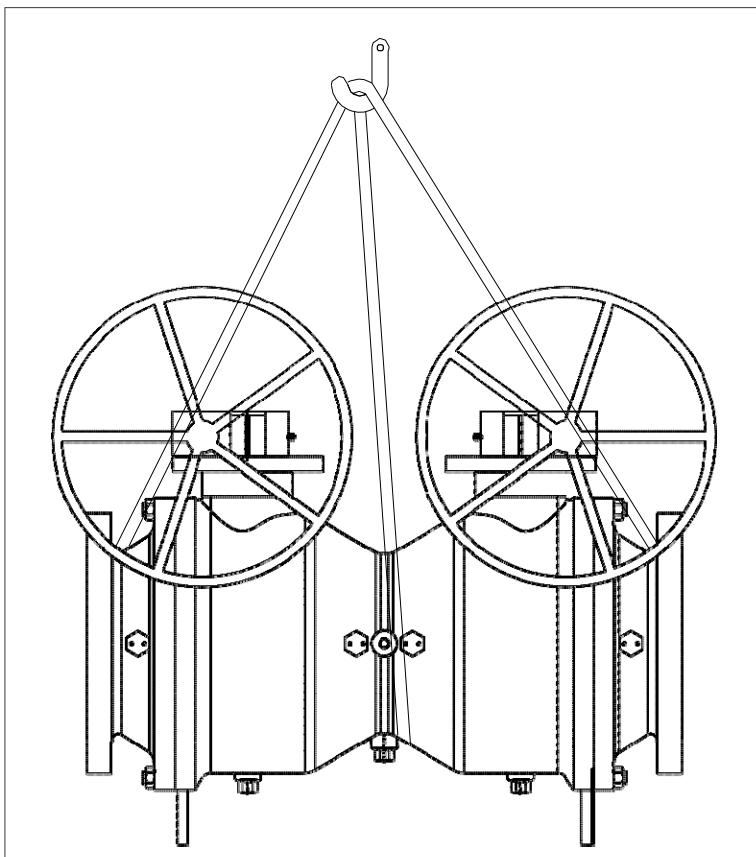
1. Keep Wooden Box in Position ('upside' of Wooden Box should not 'down').
2. Cut iron strip properly which is tied around Wooden Box & remove it.
3. Remove nail properly from top cover with proper equipment.
4. Loosen and remove Valve fixing nut (from inside of Box).
5. Lift the valve properly as shown in figure 1.



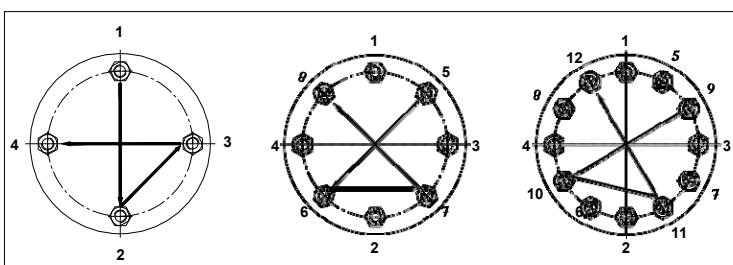
6.0 Lifting Details

Valve should be lifted by using suitable belt or rope that are looped around the valve body and side connection neck and gear eye bolt support shall also be taken as shown as in figure1.

Figure 1: -



6.1 Torque Tightening



Step 1: Spanner tight ensuring that 2-3 threads extend above nut

Step 2: Tighten each bolt to one-third of the final required torque following the pattern as shown above.

Step 3: Increase the torque to two-thirds following the pattern shown above.

Step 4: Increase the torque to full torque following the pattern shown above.

Step 5: Perform one final pass on each bolt working clockwise from bolt 1, at the full final torque.

6.2 Gear Operated & Handwheel Operational Open & Close Procedure

Ensure that the force applied on the hand wheel of the gear bore or lever shall not exceed 360 N. Clockwise rotation of handwheel close the valve & anticlockwise rotation open the valve for gear operated valves.

Do not disturb the gear box open / close adjustment bolt setting unless & utilities required.

6.3 Open & Close Procedure of Gear Operated Valve

1. Loosen & Remove Nut from Mounting flange of valve assembly.
2. Lift Gearbox along with Stud from assembly.
3. Tight Allen bolt with the help of Allen key.
4. Place Gearbox along with stud on Mounting flange by guiding bore diameter of Valve shaft.
5. Tight Nut with the help of spanner.
6. Operate valve (Open/Close) to ensure smooth operation of valve.

6.4 Open & Close Procedure of Lever Operated Valve

- 1) Hold / place the valve in such a way that marking should be in front side of assembly. (Body should be in left side and side connection in right side).
- 2) Insert lever sleeve on lever keeping indicator position and logo on the top side.
- 3) Place the lock-plate on mounting flange of valve in such a way that lock-plate hole no.1 should match with valve mounting flange tapping no.4 and lock-plate hole no.2 should match with mounting flange tapping no.2. Insert screws on both holes of lock-plate and tight with screwdriver.
- 4) Place the lever on shaft by keeping lever position parallel to the pipeline when valve is open position.
- 5) Insert locknut in shaft on lever and tight with the help of spanner.
- 6) Insert stopper pin in rest of the tapped hole of mounting flange no.1 and 3 and tight with the help of screwdriver.
- 7) Ensure the opening and closing of valve with proper stopping arrangement as per standard

7.0 Operation, Inspection & Maintenance

7.1 Operation

- a) Flush the pipeline carefully when valve is mounted to remove all possible impurities. Before flushing keep the valve fully open.
- b) Valve should be opened & closed slowly to avoid any hammering effect on the valve as well as pipeline also.
- c) Valve should be used in accordance with the pressure & temperature chart.

7.2 Periodic Inspection and maintenance

- a) Annual inspection should be made to check up valve body, Ball, & Stem if worn or pitted, substitute new one
- b) It is recommended to replace seat, body gasket stem packing washers unless the parts are in good condition.

7.3 Lubrication

When the lube fitting is provided, valve should be lubricated periodically. Stem must be brushed with the lubricants to avoid damage and excessive torque from developing. Valve should never be operated without lubricated stem.

8.0 Disassembly

- 1) For disassembly hold the valve properly.
- 2) Loosen the lever nut & remove the lever.
- 3) Loosen & remove stud and nuts from end pieces.
- 4) Remove the end pieces & keep it on clean and dry place.
- 5) Remove the gasket from body.
- 6) Remove the seat ring.
- 7) Remove the ball.
- 8) Remove the stem.
- 9) Remove the needle valve.

Note: -

- 1) Always use new gasket for assembly.
- 2) Keep all parts clean and dry place.
- 3) Replace damage parts for assembly.
- 4) Make sure disc, ball & seat should not be damage while handling. (Caused Leakage)
- 5) Use two spanners to tighten the joint in sequence as shown.

9.0 Reassembly

- 1) Hold valve body properly.
- 2) Insert gasket in valve body.
- 3) Insert the needle valve
- 4) Insert the stem.
- 5) Insert the ball.
- 6) Insert the seat ring.
- 7) Insert the gasket from body.
- 8) Insert the end pieces & keep it on clean and dry place.
- 9) Insert stud and nuts from end pieces.
- 10) Insert lever nut & remove the lever.
- 11) For assembly hold the valve properly.

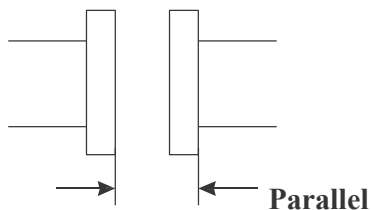
10.0 Flow Direction

All valves are bidirectional ready to install on the pipe line.

11.0 DO's and DONT'S

Do's

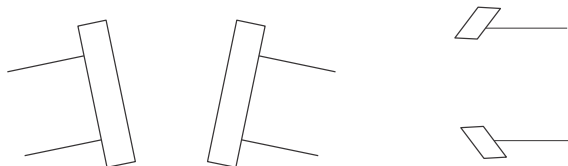
A) Pipe Work



B) Use the valve within pressure & temperature limits.

DON'T'S

A) Pipe Work



B) Do not use the valve for the higher pressure & temperature than maximum limits

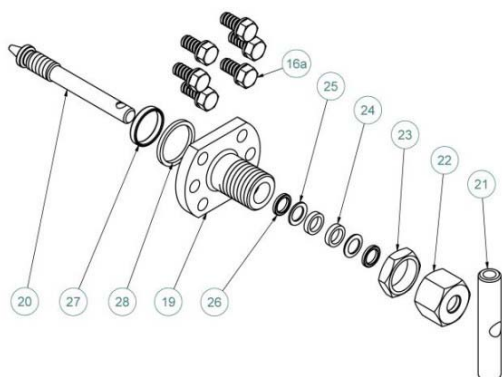
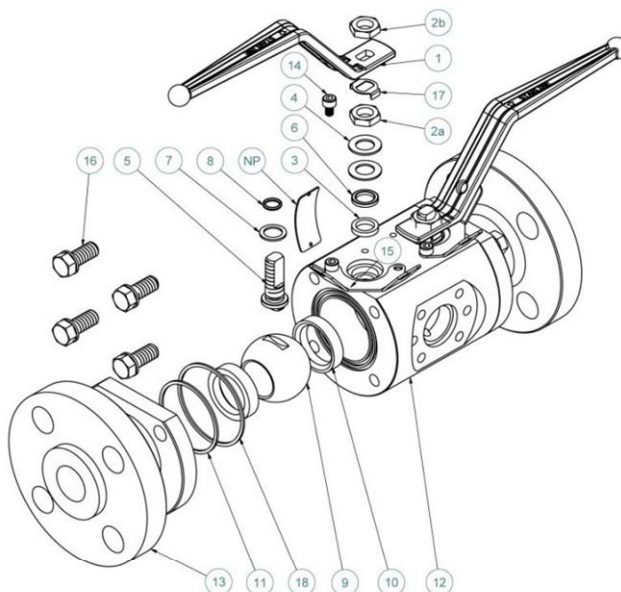
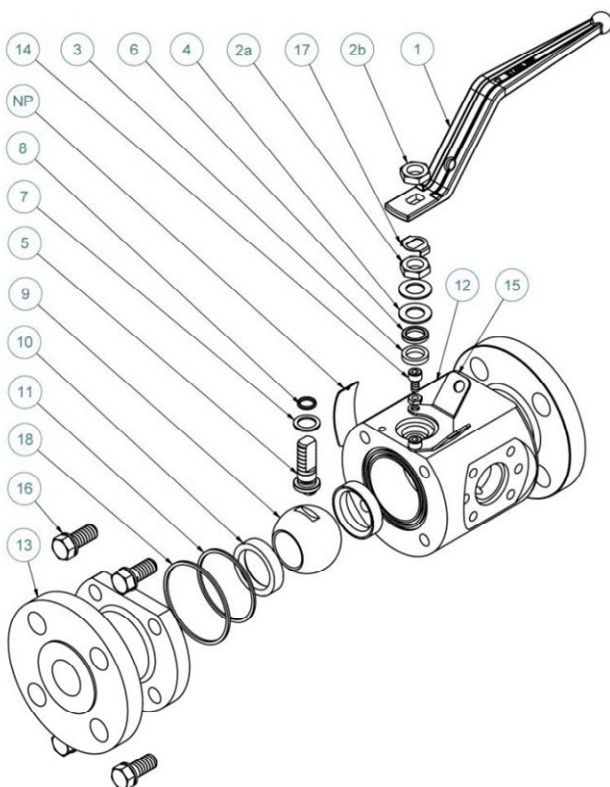
12.0 Recommended Spares

Each body - End Piece assembly is assigned with serial number, which can be found on the valve flange OD. Ordering spares please do not miss to the valve sr. no. Prefix V-12345.....

It is recommended to stock the following part for commission and routine service.

Sr. No.	Part Name	Recommended Quantity
1	Ball	One Set for Every ten Identical
2	Body Gasket	Two Set for Every ten Identical
3	Seat Ring	One Set for Every ten Identical
4	Gland Packing	One Set for Every ten Identical

13.0 Part Illustrated



ITEM NO.	SBB QTY.	DBB QTY.	PART NAME	SPARE PART
NP	1	1	Name Plate	
1	1	2	Handle	
2A – 2B	2	4	Handle nut	
3	1	2	Packing ring	X
4	2	4	Spring washers	
5	1	2	Stem + antistatic device	
6	1	2	Gland packing	
7	1	2	Thrust washer	X
8	1	2	Stem O-ring	X
9	1	2	Ball	
10	2	4	Seats	X
11	1	2	1° Body seals	X
12	1	1	Body	
13	1	2	End connections	
14	2	2	Stop-pin	
15	1	2	Locking Device	
16	4	8	Bolts	
16A	6	6	Needle Bolts	
17	1	2	Stop washer	
18	1	2	2° Body seals	X
19	1	1	Needle Body	
20	1	1	Needle Stem	
21	1	1	Needle Handle	
22	1	1	Packing Nut	
23	1	1	Lock Nut	
24	2	2	Packing Ring	X
25	2	2	Anti-extrusion Ring	X
26	3	3	Gland Packing	
27	1	1	Needle O-Ring	X
28	1	1	Needle Gasket	X

Note: After the complete use of valve dispose the valve as per your local laws.

Note: While ordering spares, please do not miss to indicate 'Valve Serial No.' appearing on nameplate fixed on the Actuator Valve Serial No. also appears on the Valve Body dully punched. The valve serial no. Begins with prefix V, eg V - 12345.....

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