



Dembla

# Instruction Manual

## Swing Check Valve

### Series - SCV - 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 **Dembla's Swing Check 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.



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.



## 5.0 Unpacking :

### For Carton

- .Keep Carton in position (Carton 'up side' should not be 'down').
- .Cut plastic strip properly which is tied around Carton & remove it. (White in color).
- .Cut cello tape properly which is stuck on Carton opening.
- .Open Carton properly.
- .Remove foam properly along with polythene wrapping.
- .Lift the valve properly & keep on clean & dry place



### For Wooden Box

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





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### 6.0 Lifting Details :

- .Valve should be lifted by using chain
  - .or bearer cables that are looped around
  - .the valve body as shown in figure 1.
- (Take care valve should not damage while handing).



FIG.1



## 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, Disc, & Stem if worn or pitted, substitute new one
- b) It is recommended to be replace seat , body gasket stem packing washers unless the parts in good condition .

### 7.3 Lubrication

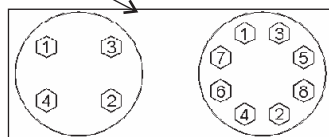
When the lube fitting are provided, valve should be lubricated periodically. Stem threads must be brushed with the lubricants to avoid damage and excessive torque from developing . Valve should never be operated without lubricated stem tread or yoke sleeves.

## 8.0 Disassembly

- 1) For disassembly hold the valve properly.
- 2) Loosen & remove stud and nuts from bonnet.
- 3) Remove the bonnet & keep it on clean and dry place.
- 4) Remove the gasket from body.
- 5) Hold hinge and disc then Loose and remove hinge pin properly.
- 6) Hold hinge and remove quarter pin.
- 7) Loosen and remove disc lock nut.
- 8) Remove Washer .
- 9) Remove disc from hinge.
- 10) Loosen and remove drain plug if required .

### 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 edge 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) Hold Hinge properly.
- 4) Insert disc in hinge & lock it with the help of lock nut and washer.
- 5) Insert quarter pin in lock nut hole and spread it .
- 6) Remove the holed from hinge and insert this assembly(Hinge & Disc) in valve body .
- 7) Maintain the position of hinge in body as shown in following figure.
- 8) Insert the hinge pin in hinge and body.
- 9) Place the bonnet on body and bolt it with stud and nut.
- 10) Check the drain plug is properly fitted .
- 11) Remove the holed from body and keep the valve assembly on proper place.

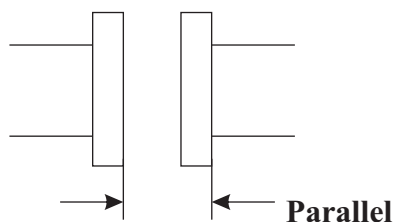
### 10.0 Flow Direction

Verify that the direction of the flow in the line corresponds to the arrow indicated on the valve body . However standard valves are bidirectional.

### 11.0 DO's and DONT'S

#### Do's

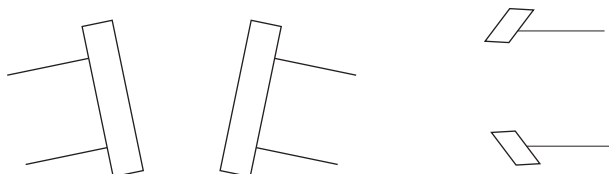
##### A) Pipe Work



**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**

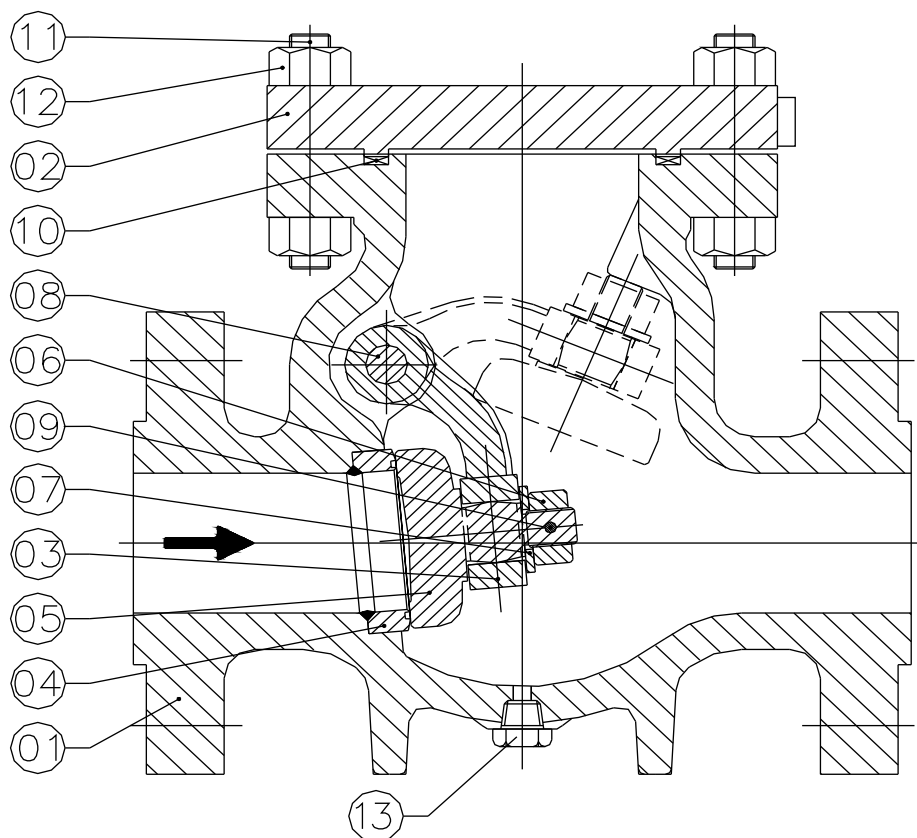
### 12.0 Recommended Spares

Each body -bonnet 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 as spares for commission and routine service.

Sr. No.	Part Name	Recommended Quantity
1	Seat	One for Every ten Identical
2	Body Gasket	Two for Every ten Identical
3	Hinge Pin	One for Every ten Identical
4	Seat Ring	One for Every ten Identical

**13.0 Part Illustrated**



**FIG.2**

<b>Item</b>	<b>Description</b>	<b>Item</b>	<b>Description</b>
<b>1</b>	<b>Body</b>	<b>8</b>	<b>Hinge Pin</b>
<b>2</b>	<b>Bonnet</b>	<b>9</b>	<b>Quarter Pin</b>
<b>3</b>	<b>Hinge</b>	<b>10</b>	<b>Gasket (Body To Bonnet)</b>
<b>4</b>	<b>Seat Ring</b>	<b>11</b>	<b>Stud (Body To Bonnet)</b>
<b>5</b>	<b>Disc</b>	<b>12</b>	<b>Nut (Body To Bonnet)</b>
<b>6</b>	<b>Disc Lock Nut</b>	<b>13</b>	<b>Drain Plug</b>
<b>7</b>	<b>Washer</b>		



**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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