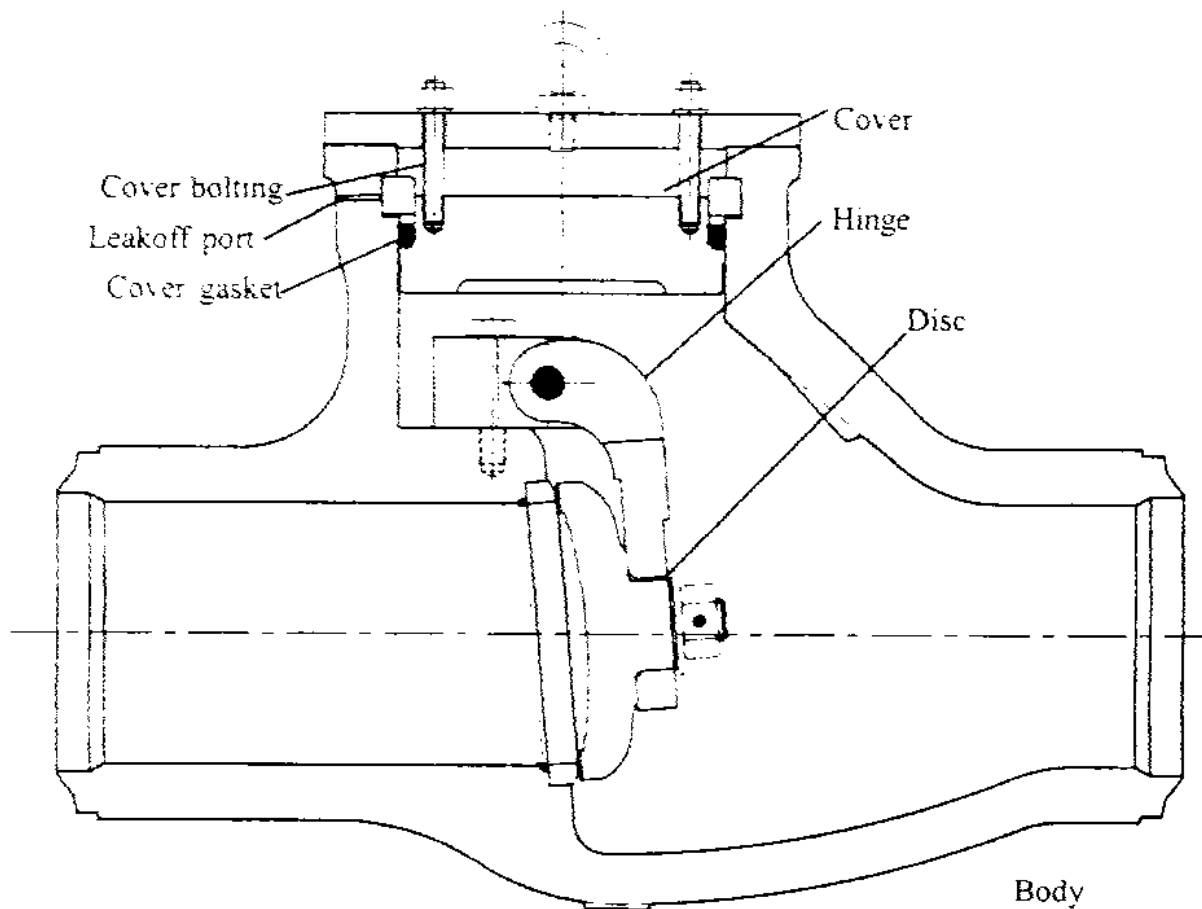


# Installation, Operating & Maintenance instructions for AIL Cast Steel Pressure Seal Cover Check valves with CE Marking



## 1. Typical swing check valves

AIL Check valves are swing check valves used to prevent back flow. The fluid flow in a straight line comparable to that in a gate valve. The valve is kept open by the flow. In the event of back flow or flow stoppage, the disc swings back to close automatically.



## 2. Valve Name Plate marking

- a. Every valve is provided with a stainless steel name plate fixed to the cover. The details on the name plate are as follows;

		AUDCO INDIA LIMITED INDIA			ASME B16.34			
ASME	1500	SIZE	DN 150 (6 IN)	DISC	HF	CATEGORY	31	3575
38°C	255.5 bar (g)	CAT.	385.1.2-5	SEAT	HF	255.5 bar (g)@0-C		
S. NO.		BODY	WCB	YEAR		142.1 bar (g)@-427-C		

## 3. Storage

- a. All swing check valves are shipped in the closed position with the end protector in place. A stopper is provided to restrict the movement of the disc during shipment and handling.
- b. Valves should be stored in a clean dry environment and suitably covered to prevent ingress of moisture and dust
- c. All valves should be handled with slings through the body of the valve.

### **3.1. Planning & Responsibilities**

When installing or maintaining valves

- a. Conduct a risk assessment and eliminate or reduce hazards to an acceptable level
- b. Follow safe systems of works
- c. Observe all site health and safety rules
- d. Due to the variety of duties in which this product can be employed, it is the end users' responsibility to ensure the compatibility of the media with the material of construction of the product for each specific application
- e. Before equipment is installed in areas which may be subject to extreme seismic activity consult AIL with data

### **3.2 Do's & Don'ts**

- a. Wear all necessary protective equipment for conducting the work
- b. Never remove or maintain a valve or joint unless the line has been fully drained and de-pressurized
- c. Ensure that the valves are used within the pressure temperature service conditions as per ASME B 16.34 Sec 2. Also refer name plate for pressure and temperature limits. In case of additional assistance, consult with AIL.

#### **4. Preparation for installation**

- a. The stopper provided to restrict the movement of the disc during shipment and handling, should be removed from the valve
- b. When shipped, a rust preventive oil is applied on the valve bore and other machined exposed surfaces. This can be removed with a commercial solvent if necessary.
- c. Check that the valve internals are clean and free of dirt, grit and other extraneous particles.
- d. In BW end valves ensure that the end preparation is in line with the mating pipe ends and free from any damage / nicks etc.
- e. Ensure that the pipeline has been flushed free of dirt, weld spatter etc before installation.

## **Warning :**

Ensure the stopper (provided inside the valve to restrict the movement of the disc during shipment and handling) is removed

BW end preparation should be protected till ready for installation on the pipe.

All valves are pressure tested at the factory. Should customer desire a test before installation, ensure test pressures as per the ASME B 16.34 section 7, API 598 and BS 6755 Part 1 Rate-B requirements.

## **5. Installation**

- a. Swing check valve shall be installed with the flow opening the disc. Arrow mark on the valve casting indicates the correct direction of flow.
- b. These check valves should be used in vertical lines or horizontal lines. In vertical lines, they should be used for upward flow only.
- c. Installation of valves should follow prevailing site standards.

#### **d. Installation of valves with BW end construction**

- d<sub>1</sub>. The valve ends and the pipe ends / flanges should be aligned.
- d<sub>2</sub>. Pipe work in BW end construction should also have the correct gap to allow the end to end dimension of the valve.
- d<sub>3</sub>. Correct welding material shall be used as per approved procedures for welding with no weld spatter.

#### **Warning**

Swing check valves must not be installed at the outlet of a reciprocating pump. The pulsating flow will destroy the sealing surfaces and valve internals.

#### **6. Operation**

Swing check valves are kept open by flow. Gravity and reversal of flow, move the disc back to the seat, preventing back flow. These are self operated valves.

## **7. Maintenance**

AIL swing check valves are of rugged construction and requires little maintenance.

### **Cover Gasket**

Generally the pressure seal cover gasket assembly does not require any maintenance in normal operation. In the event a leakage is noticed in the leak-off port in the body (see valve figure) it is recommended that the cover bolting be tightened to stop this leakage.

## **8. Repair kits**

Repair kits are available for all AIL check valves, consisting of a cover gasket. Details of the content are found in the instruction sheet supplied with the kit

Dismantling of valves for attending replacement of cover gasket should be done under expert supervision, after de-pressurizing the line and evacuating all line fluid from the valve.



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**ENGINEERING PRODUCT FILE**

Document No  
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series Index

Revision no 3  
Date 01.08.08  
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**PRODUCT : CAST STEEL PRESSURE SEAL COVER CHECK VALVE**

**DOCUMENT TITLE: DECLARATION OF CONFORMITY**

**Manufacturer :**

Audco India Limited ,  
Mount Poonamallee Road , Manapakkam , Chennai-600 089 , India  
Plant at Maraimalai Nagar, B-8,MMDA Industrial Area, Maraimalai Nagar, TamilNadu – 603 209, India  
Plant at Enathur, Kancheepuram, TamilNadu – 631 552, India  
Plant at Malumichampatti village, Coimbatore, Tamil Nadu – 641021, India  
Plant at Nava India Road, Peelamedu, Coimbatore – 641004, India

**Description of Pressure Equipment :**

Cast Steel Pressure Seal Cover Check Valve

**Conformity Assessment Procedure:**

Module- ' H ' of the Pressure Equipment Directive 97/23/EC - up-to Category III, Group 1 & 2

**Notified Body Carrying out inspection and monitoring of manufacturers Quality Assurance System :**

DET NORSKE VERITAS , VERITASVEIEN 1, 1322 HOVIK , NORWAY (0575)


**Technical Standards and Specification used :**

ASME B16.34	Valves –Flanged, Threaded and Welding Ends
EN 12516	Industrial Valves – Shell design strength
API 598	Valve Inspection & Testing
EN 12266	Industrial valves – Testing of valves
ISO 5208	Industrial valves – Testing of valves

**Other Community Directives :**

Not applicable

**Authorized Person for the Manufacturer :**

<u>Signature</u>	<u>Name</u>	<u>Position</u>	<u>Date</u>
	G.Ravindran	Sr. DGM	01.08.08
		Product Design & Development	