

CD72SR

Control Disc Steam Trap

Installation and Operation Manual



**Please read and save
these instructions**



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General Safety Information

This document should be used by an experienced person as a guide for installing the Armstrong CD72SR Control Disc Steam Trap. Selection or installation of equipment should always be accompanied by competent technical assistance. You are encouraged to contact Armstrong International Inc., or its local sales representative for additional information.

Product Information

Armstrong CD72SR is a disc styled trap designed to control the trap's cycle rate. The reduced cycle rate provides Armstrong CD72SR trap with a longer service life than typical disc traps. This enhanced performance ensures minimum maintenance time and reduced steam costs.

The capacity of Armstrong CD72SR has been engineered specifically for the following applications: large steam main drips, process equipments and HVAC heating equipments at constant pressure.

Armstrong CD72SR is available in socket weld and screwed connections (flanged connections on request) for the maximum operating pressure range of 600psig @ 486°F (41.4 barg @ 252°C) and in 1/2", 3/4" and 1" (DN15, DN20, DN25) sizes.

Note:

- Minimum pressure for satisfactory operation is 5 psig (0.34 barg).
- Maximum back pressure should not exceed 80% of the inlet pressure. If back pressure exceeds 80% of inlet pressure, the trap may not shut. At 50% to 70% back pressure traps may become unstable. Therefore, Armstrong suggests limiting back pressure to 50% of inlet pressure.

Product Installation

1. Before installing the trap, blow down the piping that leads to the trap's inlet. Use full line pressure. Be sure that the maximum operating pressure (PMO) of the trap is adequate for the installation. (The PMO is stamped on the nameplate).
2. Install the trap inlet below the liquid level of the equipment to be drained. Make inlet piping as short as possible. Use a minimum number of elbows and other restrictions in inlet and outlet piping. Install a dirt pocket in the line ahead of the trap.
3. To allow for maintenance, install a valve on each side of the trap and a downstream testing tee (unless test valve is used as the downstream valve). All valves should be full ported type to avoid restricting flow.
4. If possible, install the trap in the horizontal position. For freeze-resistant applications, inlet piping must be pitched towards the pipe for gravity flow. Additionally, the trap must be installed vertically, discharging downward. Discharge piping must be self-draining.

Maintenance Requirements

Wear progresses simultaneously on both the disc and the seating surfaces. Simply replacing the disc is not sufficient to repair a disc trap; both disc and seat must be renewed. In cases of minor wear causing cycling, the disc may be replaced but the seat surfaces must also be lapped and/or cleaned again to near flatness. If a trap's seat wear is deeper than .01 (0.25), it has progressed beyond the depth of the hardened seat surface of most disc traps. If the seat is lapped flat, the softer material is exposed, and additional service life will be shortened. Theoretically the seats may be lapped or machined, however, any alteration of the internal components of any disc trap can change its operating characteristics. Armstrong does not recommend re-lapping the seating area of the Series CD Controlled Disc Traps.

Seat and Disc replacement procedure

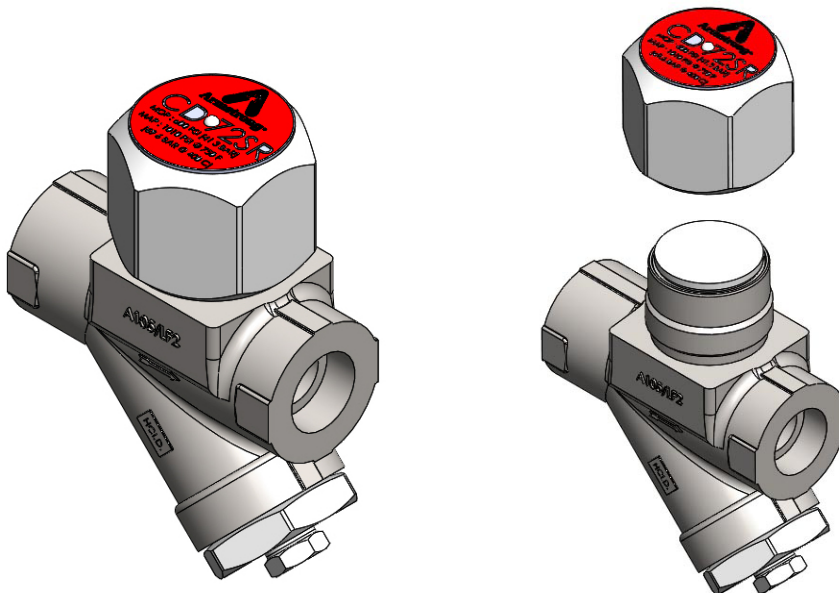


CAUTION: This set of instructions is for a complete replacement of repair kit including cap. It may be noted that, during disassembly of the cap, the cap threads may get damaged and may not seal properly as intended during reassembly. In such case, the existing cap needs to be replaced with a new cap.

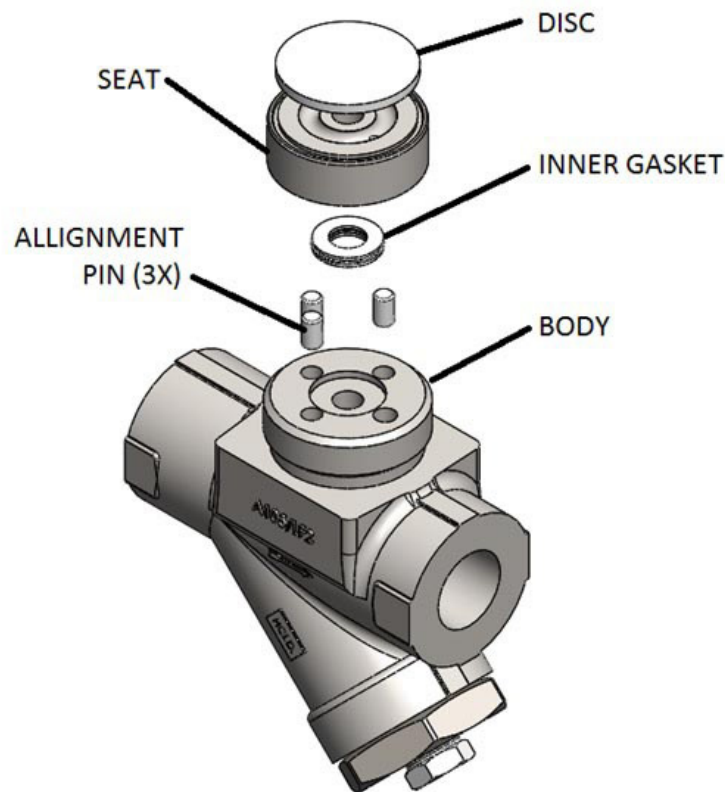
Please refer to torque requirements for sealing the cap in step no.10 of the “Seat and Disc replacement procedure”.

DISASSEMBLY

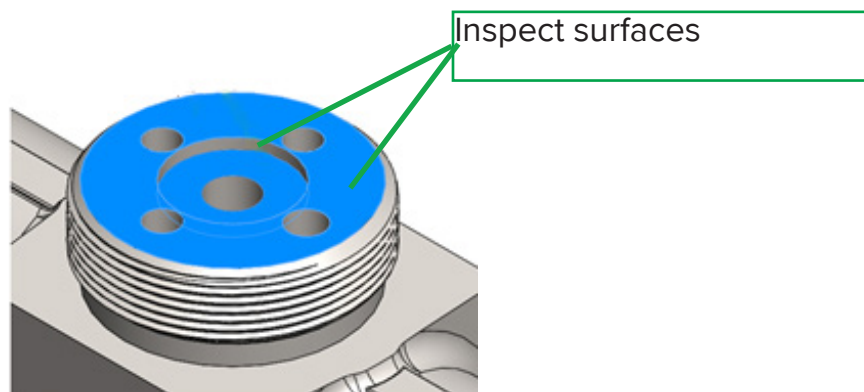
1. Ensure that the pressure has been safely relieved and the trap is cooled out. Secure the trap firmly with a vise with the cap facing upward.
2. Loosen the cap and unthread it by hand.



3. Gently remove the seat, disc, three alignment pins and the inner gasket.



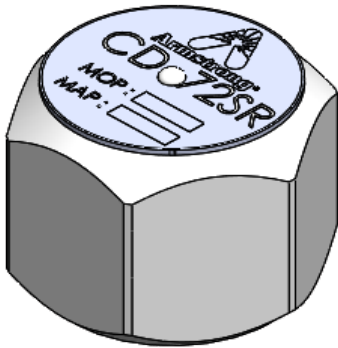
4. If the trap is to be rebuilt, inspect the top surfaces of the body (highlighted below) for steam cutting, nicks, gouges or any other visible signs of damage. Also inspect the exposed threads of the body for any damage.



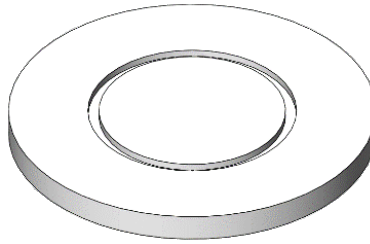
REASSEMBLY

CONTENTS OF REBUILD KIT

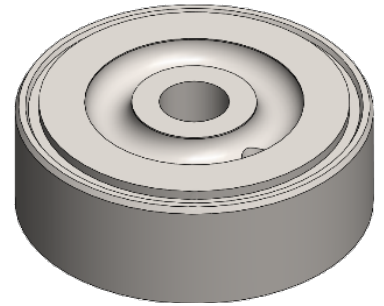
CAP - 1 NO.
(with name-plate embedded)



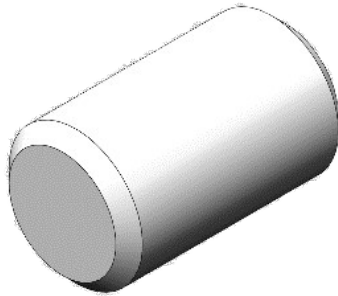
DISC - 1 NO.



SEAT - 1 NO.



ALIGNMENT PINS - 3 NOS.

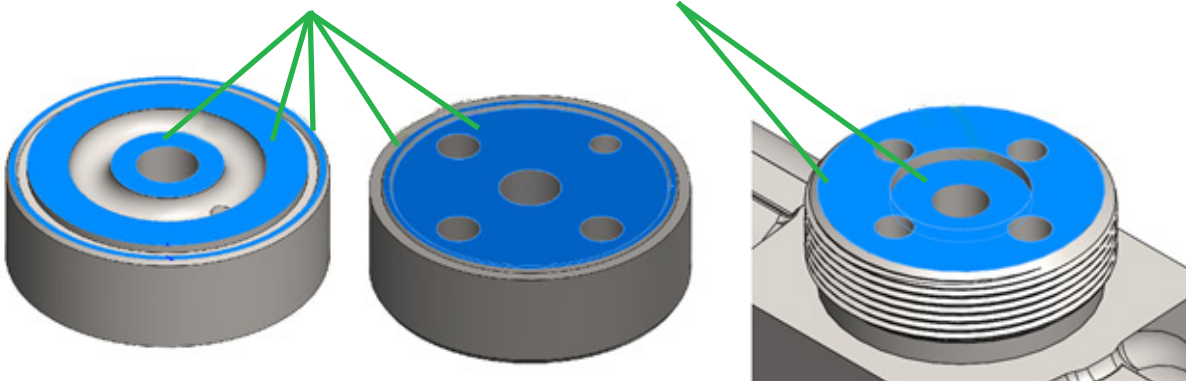


INNER GASKET - 1 NO.



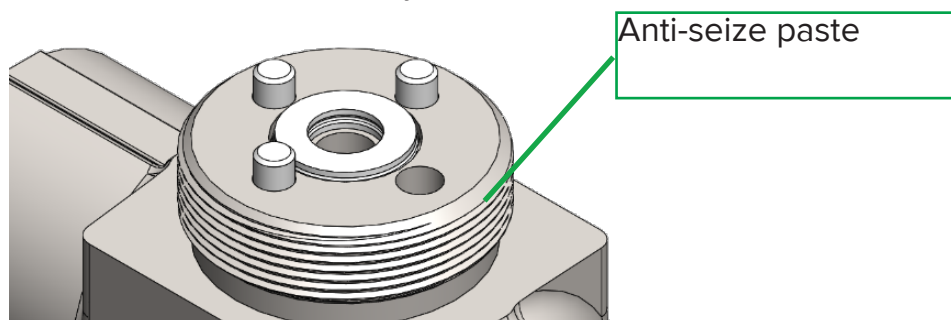
1. Firmly secure the trap body with a vise and exposed threads facing upwards.
2. Gently clean the surfaces on the seat and the body (as shown in pictures below) with a soft damp cloth. Inspect the surfaces for any nicks, gouges or any other visible signs of damage.

Clean and inspect surfaces

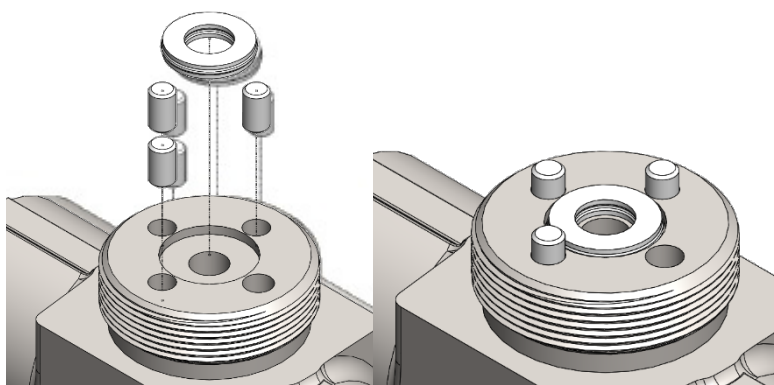


Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.

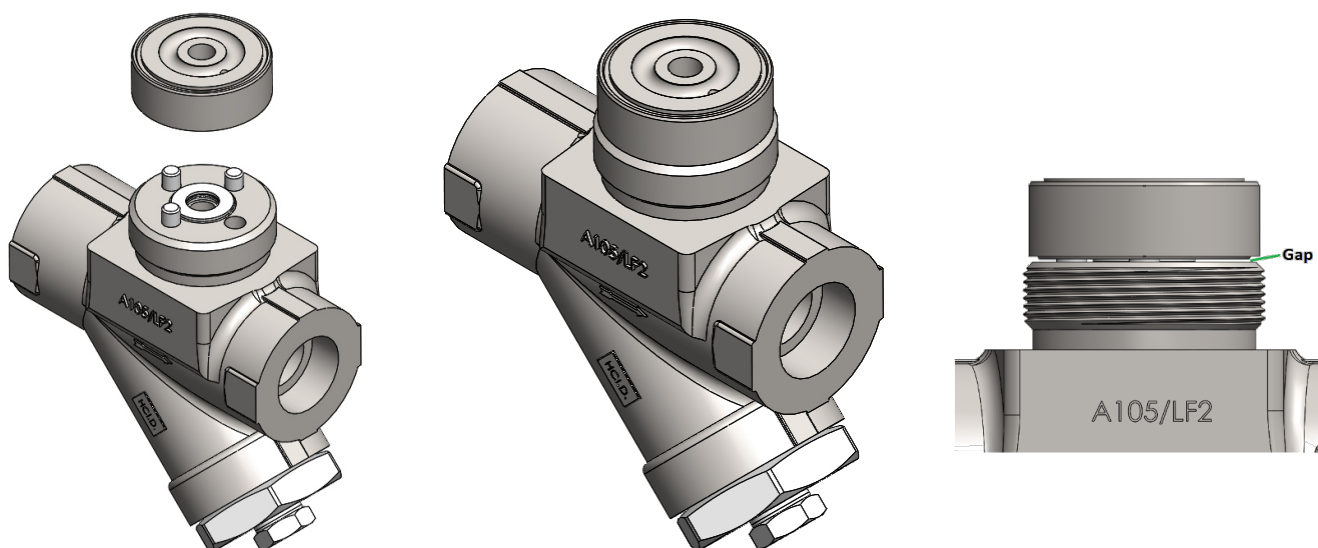
3. Apply anti-seize paste to the cap threads on the body.



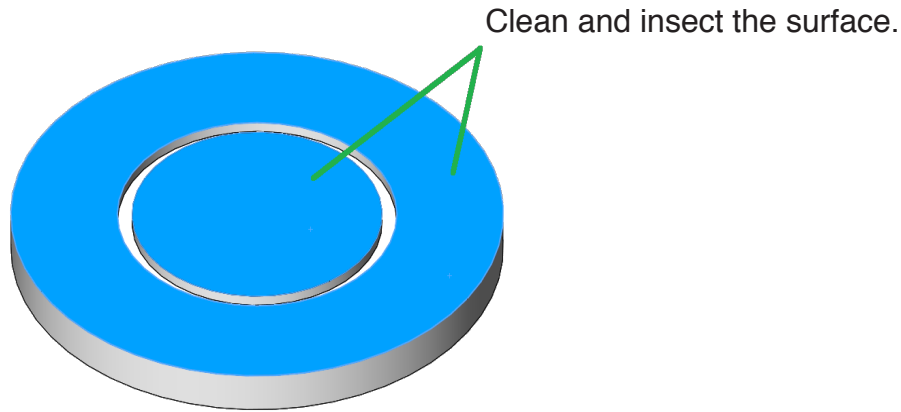
4. Place the alignment pins (3 nos.) and the inner gasket in the body as shown below:



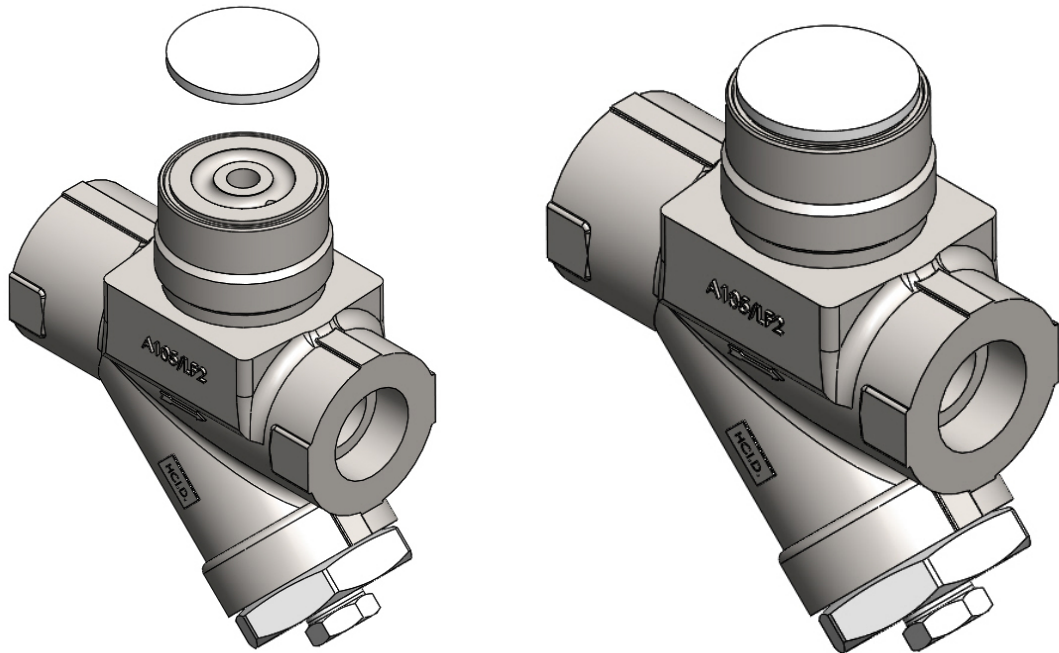
5. Place the seat on the top of the body as shown below. Ensure that the alignment pins line up with the holes in the bottom of the seat. Note that, when placed over the pins, the seat should be free to move and small gap be visible between the seat and the body.



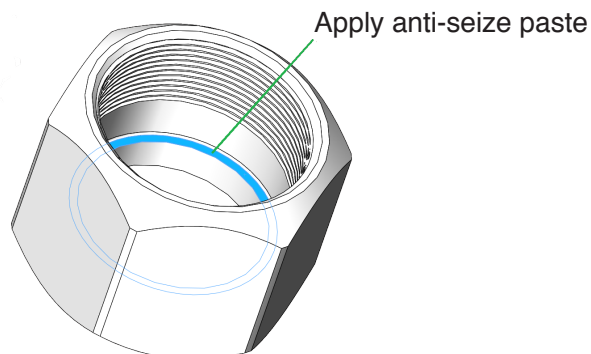
6. Gently clean the surface with a soft damp cloth as shown below. Inspect the surfaces for any nicks, gouges or any other visible signs of damage.



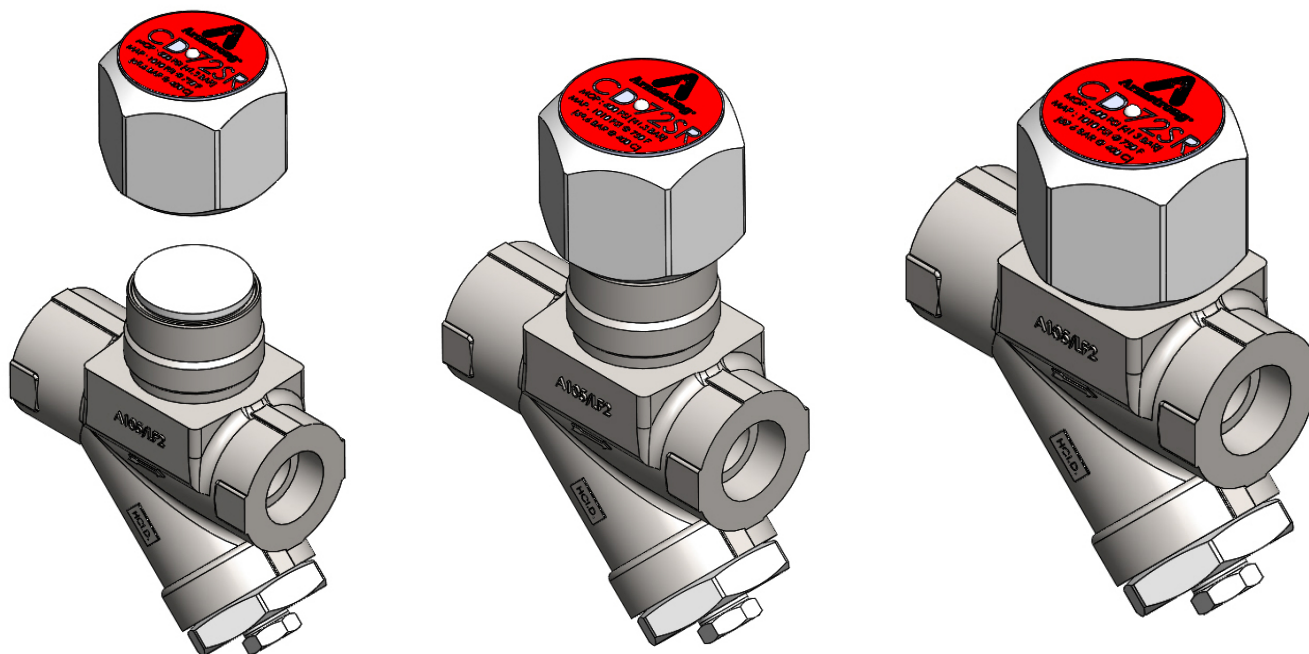
7. Place the disc on top of the seat. The groove in the disc should be facing downwards. Ensure that the disc is centered on the seat.



8. Apply anti-seize paste to the inside of the cap on the surface, spread out evenly. Do not apply any other lubricant on the surface.



9. Slowly slide the cap over the seat and disc. Gently thread the cap down by hand until it stops and tighten it. Gently shake the trap and look for sound of disc moving inside the cap. Now proceed to the next step. If the disc cannot be heard moving inside the cap, it may be caught between the cap and the seat. Slowly remove the cap, recenter the disc on the top of seat and gently re-tighten the cap by hand. Repeat this procedure until the disc can be heard moving inside the cap.



10. Using a manual torque wrench, tighten cap to 220lb-ft (300N-m). Never use an impact tool.

Troubleshooting

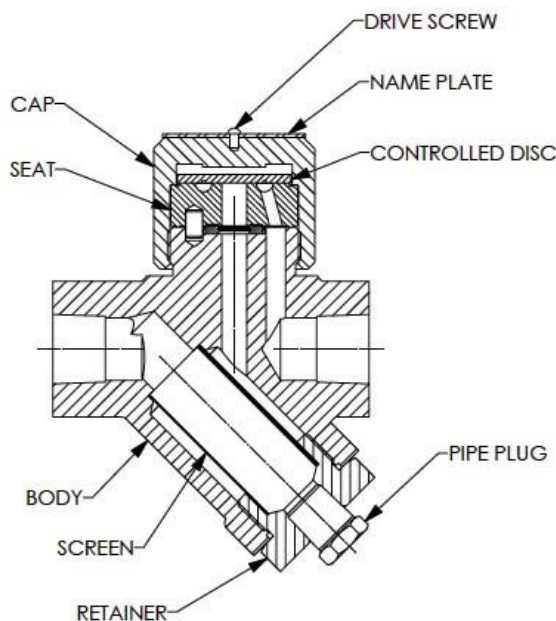
Problem	Causes	Solution
Steam Loss	<ol style="list-style-type: none"> 1. Control disc damage 2. Seat damaged 	Replace it.
No Condensate Discharge.	<ol style="list-style-type: none"> 1. Dirt or sediment in screen. 2. Screen damaged and scale lodged in the passage. 3. Control disc or seat damaged. 	<ol style="list-style-type: none"> 1. Blowdown by pipe plug. 2. Replace the screen and clean the passage. 3. Replace it

Repair Parts

To order for replacement of Control disc, Seat and Screen please specify the model details and the size of the trap. For further assistance contact Armstrong representative.

The repair components and their respective part numbers are listed in the table below:

Model	Size	Control Disc	Seat	Gasket	Cap	Dowel Pin	Name plate & screw	Screen	Retainer	Plug
CD72SR	1/2" 3/4" 1" (DN15, DN20, DN25)	D96002	D96003	A8906	D96001	D96004 (3 nos. per piece)	D10932 & A6091	A22290	D9198	D13834
Repair Kit	D107738							Not applicable		



Limited Warranty and Remedy

Armstrong International, Inc. or the Armstrong division that sold the product (“Armstrong”) warrants to the original user of those products supplied by it and used in the service and in the manner for which they are intended, that such products shall be free from defects in material and workmanship for a period of one (1) year from the date of installation, but not longer than 15 months from the date of shipment from the factory, (unless a Special Warranty Period applies, as listed below). This warranty does not extend to any product that has been subject to misuse, neglect or alteration after shipment from the Armstrong factory. Except as may be expressly provided in a written agreement between Armstrong and the user, which is signed by both parties, Armstrong DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

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