INSTALLATION, OPERATING and MAINTENANCE MANUAL

Balanced Pressure Thermostatic Steam Trap

MODEL: DC1-21

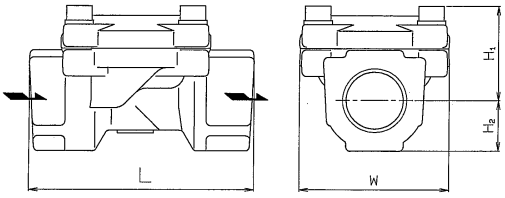
MIYAWAKI INC.

SAFETY INSTRUCTION

Prior to using the DC1-21 steam trap, read this manual thoroughly to understand the correct handling and operating procedure.
The manual should be used by experienced personnel as a guide to the installation and maintenance of the Steam Traps.
We ask you to contact MIYAWAKI or its local representative if further information is required.

1. Dimensions and Technical Specification

The balanced pressure thermostatic steam trap DC1-21 is equipped with a membrane capsule and can be used up-to an operating pressure of 2.1 MPa (305psig).
The steam trap discharges the condensate automatically at a temperature 5°C (capsule H) or 15°C (capsule L) below saturation temperature.



Model	Connection	Size	Max. Operating Pressure		Max. Operating Temperature		Dimension mm (inch)				Weight	
			MPa	psig	°C	°F	L	H1	H2	W	kg	lb
DC1-21H DC1-21L	Screwed Rc, NPT	1/4"	2,1	305	220	428	65 (2.6)	30 (1.2)	15 (0.6)	53 (2.1)	0.4	0.9
		3/8"										
		1/2"					75 (3.0)	32 (1.3)	17 (0.7)		0.5	1.1
		3/4"										
		1"					80 (3.1)	35 (1.4)	21 (0.8)			

2. Installation

CAUTION	Before installing the trap, always blow down the piping that leads to the trap's inlet

1. Install the trap according to the direction of the arrow on the body which indicates the direction of flow.
2. The steam trap DC1-21 can be installed either horizontally or vertically.
3. Install the trap at the lowest pont of the steam using equipment to be drained.
4. Install the trap so that the condensate will flow naturally into the trap.
5. The trap is equipped with an integral strainer. But in case of dirty steam it is recommended to install additionally a strainer upstream the trap.

3. Trouble-shooting

The steam trap should be checked for proper operation at least once a year.
The thermostatic steam trap DC1-21 is discharging the condensate intermittently.

Problem	Reason
Steam is leaking or blowing through	- Too high operating pressure - Scale is lodged between the membrane capsule and the seat - The membrane capsule and/or the seat are worn or damaged
No discharge	- The seat is plugged - The strainer is plugged - Damaged membrane capsule
The requested temperature level of the equipment which should be drained cannot be reached	- Wrong installation (inlet/outlet) of the trap - The steam inlet pressure is too low - Air cannot be vented from the equipment - Discharge capacity of the trap is too low

4. Maintenance, Disassembling and Assembling

WARNING	Before disassembling a steam trap, be sure to close the valves in both supply and discharge lines, reduce the pressure inside the trap to atmospheric pressure, and allow the trap to cool before opening it.

This trap can be repaired and disassembled without removing the trap from the pipe line.
For cleaning purpose or changing parts perform the following steps:

4.1. Untighten the bolts (9) of the cover (2) (wrench size 10mm) and remove the cover. Now the stop spring (5) and the membrane capsule can be taken out.

4.2. Untighten the seat (4) (wrench size 17mm) and unscrew it.
Take the seat, the seat gasket (7) and the screen (6) out.

4.3. Clean the body and the screen.

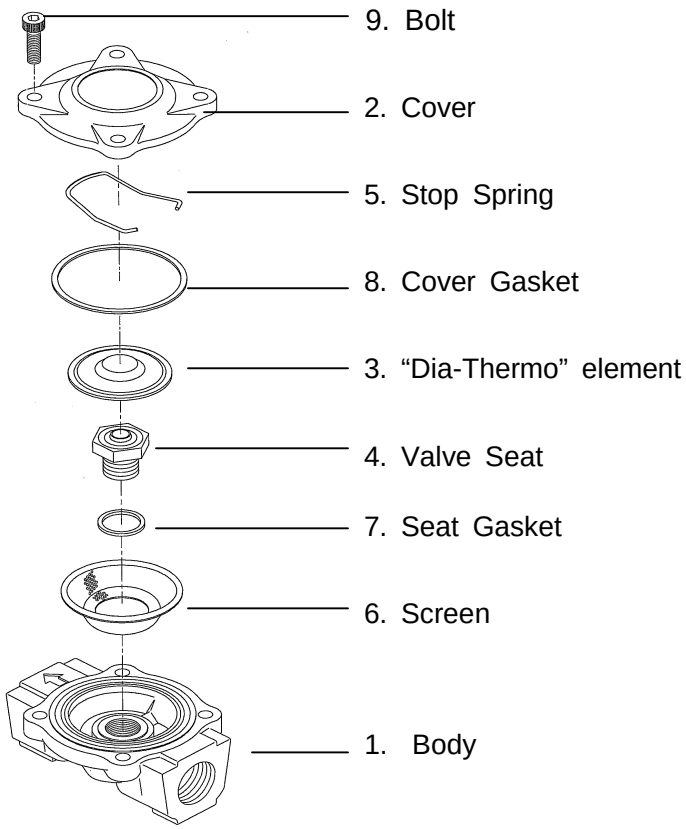
4.4. Check the parts and replace worn or damaged ones.

4.5. Assemble the trap in the opposite way of disassembling.

4.6. At first, put in the screen, then tighten the seat (torque: 220 kgf/cm / 22Nm).
Don't forget the seat gasket (7) !

4.7 Put the membrane capsule on the seat and put the stop spring into the cover.
Put a new cover gasket on the body and tighten the cover bolts (torque: 90kgf/cm / 9 Nm).

5. Details and Spare Parts List



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