

PRESSURE RELIEF DEVICE

MODEL : RT-50

1.0 FEATURES :

- 1.1 Avoids disaster or injury to person by providing Cover.
- 1.2 A strong structure of S.S for Cover with louvers.
- 1.3 Rain guard is provided to protect Limit Switch.
- 1.4 Reliable operation of PRD.

2.0 SCOPE:

When pressure in tank rises beyond predetermined safe limit, the PRD operates & performs following functions.

- 2.1 Reduces the pressure in the tank by instantaneously opening the port.
- 2.2 Initiates precautionary electrical system by operating limit switch

3.0 CONSTRUCTION & WORKING :

For mounting PRD, four holes of 18 dia on 125 PCD are provided on the base. For the operation, a port to suit 70 dia opening in tank is provided. The port is sealed by a spring loaded diaphragm. The diaphragm rests on a rubber ring, thereby keeping the port sealed during normal pressure in the tank. As soon as the pressure in the tank rises above predetermined safe limit, the diaphragm gets lifted from its seat thereby opening the port. The diaphragm seals the port again after the pressure in the tank reduces to safe limit. A switch is provided for initiating electrical safety system. The lifting of diaphragm from its seat is linked to the switch. Therefore, the first lift of diaphragm operates the switch. To avoid repeated on - off, manual resetting type switch is used. So even if the diaphragm operates repeatedly, the switch remains operated until it is reset manually.

4.0 TESTS:

Each PRV is tested for following Routine Tests

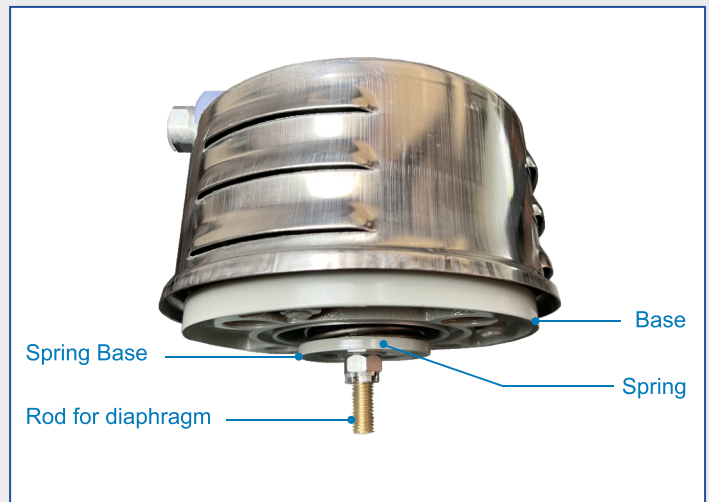
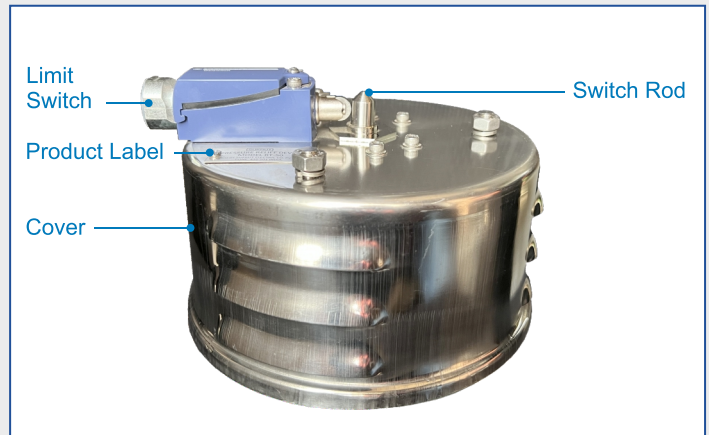
- 4.1 Operating Pressure Test at specified value with compressed air.
- 4.2 Leakage Test, at 75% value of specified operating pressure, with transformer oil at room temperature for 24 hours.
- 4.3 Switch operation Test as per Wiring Diagram by operating PRD with compressed air.
- 4.4 Breakdown Test at 2 kV for one minute between live terminals and body.

A Test Certificate is issued with each PRD. All above tests are included in the Test Certificate.

5.0 INSTALLATION:

5.1 LOCATION FOR INSTALLATION - For installation, user has to provide a leak proof Mounting Pad as per Fig. 2 of drawing at suitable place on top cover of the tank. The position should be selected in such a way that the indicating rod should be seen easily as it needs to be reset manually after the operation of PRD & at the same time wiring should be easy.

5.2 PROCEDURE - By removing 3 Nos. M8 Nuts, remove the cover of PRD. Place the PRD in proper position with O Ring on Mounting Pad. Tighten 4 Nos M16 bolts with washer to install the PRD. Always tighten opposite bolts carefully. Negligence in tightening the bolts may result in cracking of the Base of PRD thus making it unserviceable. Replace the Cover by matching arrow on cover with arrow on base. Then tighten 3 Nos. M8 nuts with washers. Open the cover of Limit Switch and do the wiring as per Fig 3 & 4.



6.0 SPECIFICATIONS :

- | | |
|--|-----------------------------------|
| 6.1 Liquid in tank | : Transformer oil - IS-335 |
| 6.2 Degree of protection | : IP-65 |
| 6.3 Operating pressure (Order any one value) | : 0.28 to 0.84 kg/cm ² |
| 6.4 Operating tolerance | : ±0.10 kg/cm ² |
| 6.5 Operating time | : Instantaneous |
| 6.6 Switch resetting | : Manual |
| 6.7 Operating temperature | : -10 to +100°C of Oil |
| 6.8 Environment | : Indoor or Outdoor |
| 6.9 Port opening | : Suitable for 70mm Port |
| 6.10 Corrosion Resistance | : C4-M |

7.0 FAULTS AND REMEDIES :

Only the Limit Switch can be replaced if necessary. For all other faults, the PRD has to be returned to SECPL for repairs.

8.0 HOW TO ORDER :

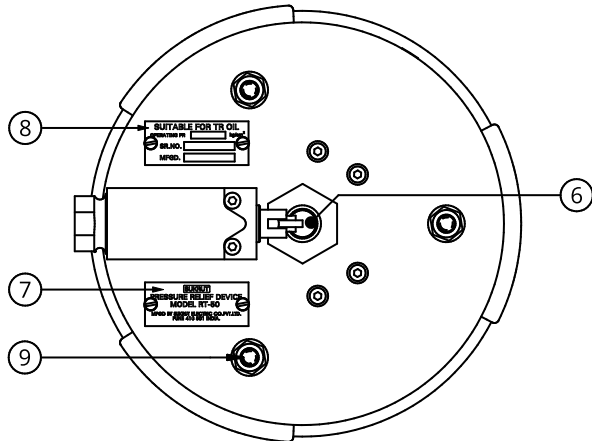
To make an offer, We need to know Model Number and Operating Pressure (any one value)



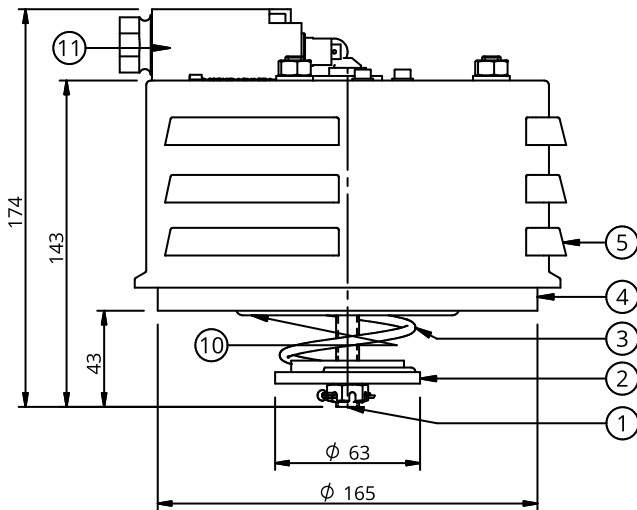
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FIG 1. PRESSURE RELIEF DEVICE MODEL : RT - 50



TOP VIEW



FRONT VIEW

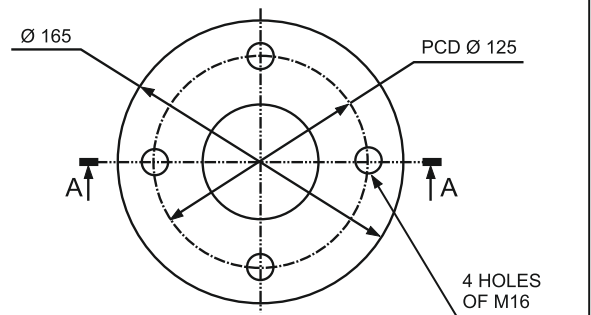
NOTES:

1. All dimensions are in 'MM'.
2. Except Mounting Dimensions, all other dimensions are given for reference only.

PART LIST FOR FIG. 1

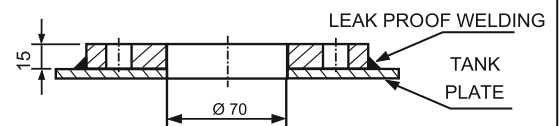
S/N	DESCRIPTION	MATERIAL	QTY
1.	ROD FOR DIAPHRAGM	BRASS	1
2.	SPRING BASE	ALUMINIUM	1
3.	SPRING	S.S	1
4.	BASE	ALUMINIUM	1
5.	PROTECTION COVER	S.S 316	1
6.	SWITCH ROD	S.S 316	1
7.	LABEL - MODEL PLATE	S.S 316	1
8.	LABEL - SR. NO. & OP. PRESSURE	S.S 316	1
9.	HEX NUT M8	S.S	3
10.	SEALING O-RING	NBR	1
11.	LIMIT SWITCH	—	1

FIG. 2 : MOUNTING PAD



TOP VIEW

TANK PLATE IS NOT SHOWN IN TOP VIEW



SECTION A-A

TAPPING TO BE DONE BEFORE WELDING
MOUNTING PAD IS NOT SUPPLIED BY SUKRUT

FIG.3 : STANDARD WIRING DIAGRAM FOR 1 NO + 1 NC CONTACT

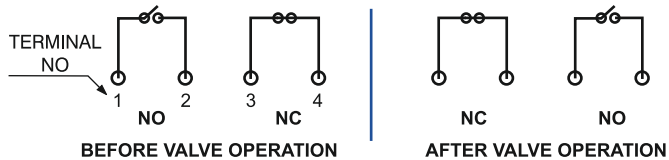
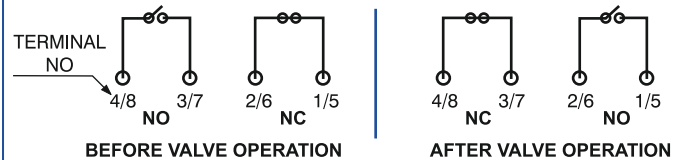


FIG.4 : STANDARD WIRING DIAGRAM FOR 2NO + 2NC CONTACT



1. In case of 2NO+2NC contacts two different switches of 1NO+1NC contacts will be provided
2. Switch resetting has to be done manually.

GENERAL NOTES :

1. Purchase Order should be placed with detailed specifications of PRD.
2. For any assistance, correspondence should be made giving reference of Sr. No. of PRD.



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