

## PRESSURE RELIEF VALVE

### MODEL : SE-150-PS

#### 1.0 FEATURES :

- PRV with shroud can prevent environmental contamination as well as the catastrophe of fire or human injury.
- A durable die-cast aluminium shroud is provided.
- A 150mm NB-pipe compatible flange is provided for the directional oil drain output.
- Collection of oil spills in the safest location feasible.
- Shroud assembly can be mounted in six different directions.
- Single & double limit switch can be provided as per requirement.
- Offered in plug & socket variant only for hassle free connections.
- PRV is tested for IP-65 ingress & C4-M corrosion protection.

#### 2.0 PRODUCT DETAILS :

A pressure relief valve (PRV) is installed to protect an oil-filled transformer and similar electrical equipment when, due to any fault, the internal pressure rises above the safe limit. In the Model SE-150, the PRV is provided with a die-cast aluminium shroud that can be used to direct the discharge from the PRV to a safe place using 150 mm (6") NB pipe. The shroud with flange avoids spilling of discharge from the PRV all over the surrounding area. This avoids chances of fire and injury to the person near the transformer. The shroud can be mounted in six different directions. Two limit switches are provided inside the shroud, which initiate the precautionary electric system when the PRV operates at predetermined levels.

#### 3.0 CONSTRUCTION AND WORKING :

The Model SE-150 consists of a PRV subassembly and the shroud assembly. For mounting, 6 holes of  $\varnothing 14$  are provided on  $\varnothing 235$  PCD on the base of the PRV. For the operation, a port of about 150 mm is provided. A spring-loaded stainless steel diaphragm seals the port. The diaphragm rests on 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 a 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 PACKING :

PRV is packed properly in a corrugated box. The box must be handled with care. Rainguard is dismantled & kept separately in the same box. Customer needs to install it once PRV is mounted at site.

#### 5.0 INSTALLATION :

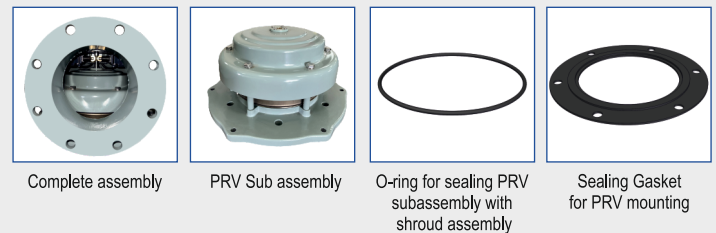
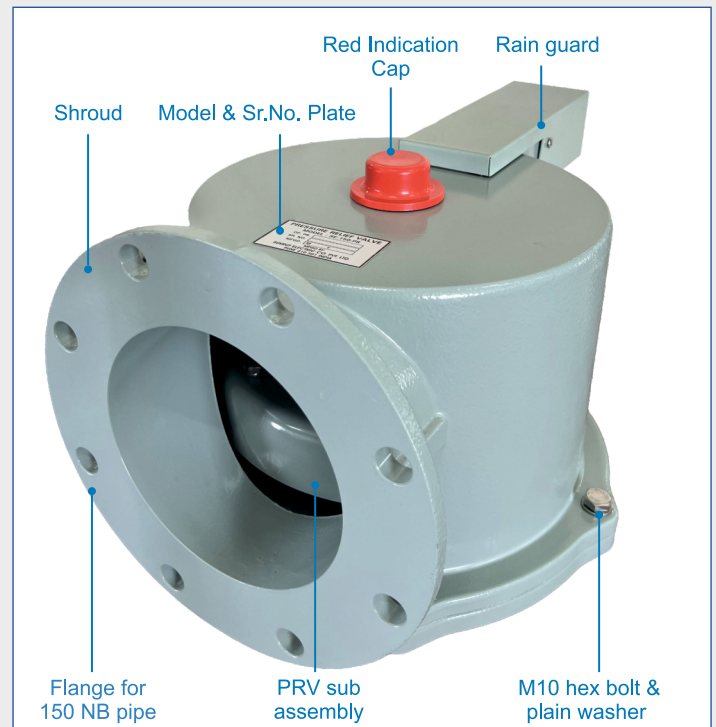
The user is liable for installing a leak-proof mounting pad as per Fig.3 at an appropriate location on the tank's top cover. It is important to choose a location where the red cap is visible and where the plug and socket connection is effortless. To enable the proper connection of the 150 mm NB drain pipe to the Shroud, the PRV must be positioned precisely .

The PRV sub assembly should be mounted as illustrated in Fig.1 by using bottom sealing gasket underneath & then equally tightening M12 hex bolts. The PRV shroud assembly should then be put together using six M10 bolts along with an appropriate o-ring. Once the mounting is done, PRV should be connected with external wiring using a plug and socket configuration. Once the wiring is complete, make sure to mount the rainguard.

#### 6.0 TESTS :

Each PRV is tested for following routine tests

1. Operating test at specified pressure with shroud by using air.



2. Leakage test, at 75% of specified pressure with shroud by using air for 24 hours.
3. Pneumatic test to check switch operation at specified pressure.
4. 2kV for one minute between live terminals and body.
5. Any other test as specified by customer.

#### 7.0 FAULTS AND REMEDIES:

In case of any faults, the PRV has to be returned to SUKRUT for repairs.

#### 8.0 ROUTINE MAINTENANCE:

Periodically, every six months PRV should be tested by using compressed air to check satisfactory working. Switch operation also should be checked.

#### 9.0 HOW TO ORDER:

Ask for quotation by informing the operating pressure & wiring Contact requirement as per Fig.2.

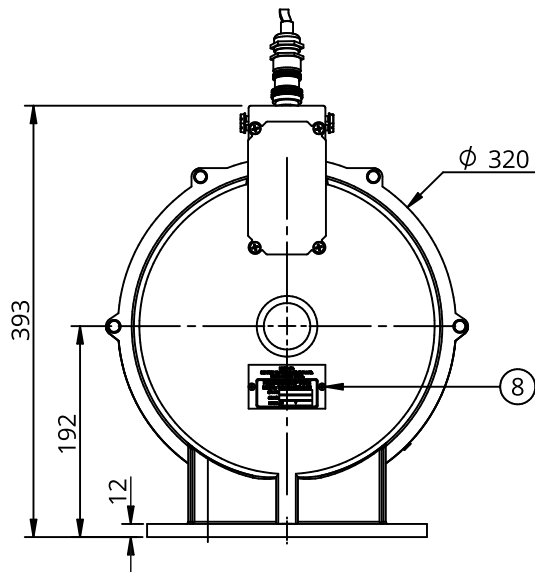
#### 10.0 GENERAL NOTES:

1. The operating pressure of PRV is not adjustable at site. Hence care should be taken at the time of specifying operating pressure.
2. The value of operating pressure should be worked out carefully considering strength of tank & existing static head of oil on PRV.
3. Handle the PRV cautiously. Particles or small fragments may enter the PRV from the tank side and might get trapped beneath the spring-loaded mechanism of the diaphragm. Oil will therefore continue to flow even when the tank's pressure is normal.
4. Do not open the terminal box cover unless necessary. It may void the warranty of the product.

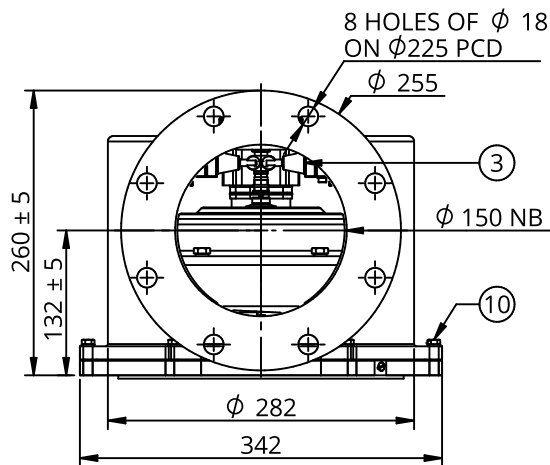


# PRESSURE RELIEF VALVE MODEL: SE-150-PS

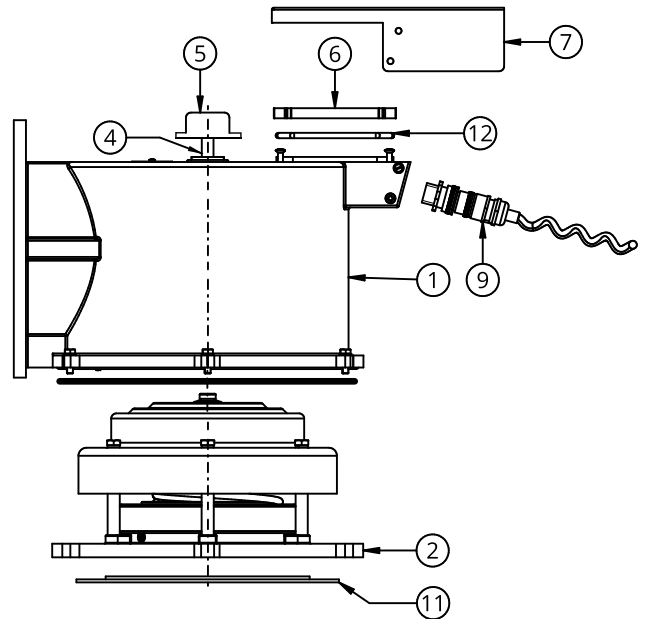
**FIG. 1 : PRV-SE-150-PS**



**TOP VIEW  
(RAIN GUARD HIDDEN)**



**FRONT VIEW**

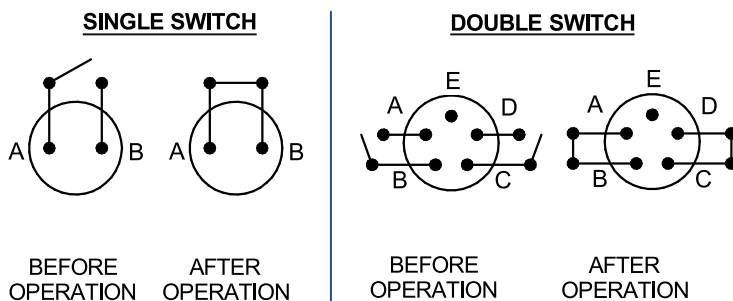


**EXPLODED VIEW**

**PART LIST FOR FIG. 1**

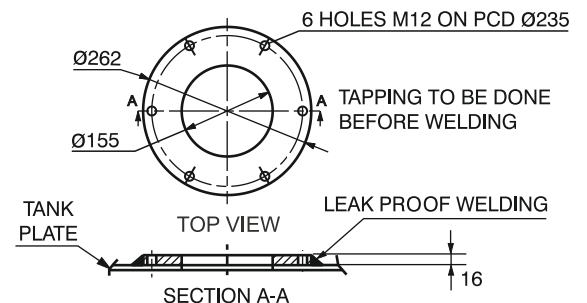
SR.NO.	DESCRIPTION	MATERIAL	QTY.
1.	AL. DIE CASTED SHROUD	ALUMINUM	1
2.	PRV SUB ASSEMBLY	—	1
3.	LIMIT SWITCH	—	2
4.	SWITCH ROD	ALUMINUM	1
5.	RED INDICATION CAP	NYLON	1
6.	TERMINAL BOX COVER	ALUMINUM	1
7.	RAINGUARD	M.S	1
8.	SR.NO. & MODEL PLATE	ALUMINUM	1
9.	PLUG & SOCKET ASSEMBLY	—	1
10.	M10 HEX BOLT & PLAIN WASHER	S.S	6
11.	BOTTOM SEALING GASKET	NBR	1
12.	O-RING	NBR	1

**FIG. 2 : WIRING DIAGRAM**



**CONTACT RATING : 5A-240V AC & 2A-110V DC**

**FIG. 3 : MOUNTING PAD**



**NOTE : MOUNTING PAD IS NOT IN SCOPE OF SUKRUT.**



Global technology for local needs

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