

Enclosures

Hinges

Locks

Handles

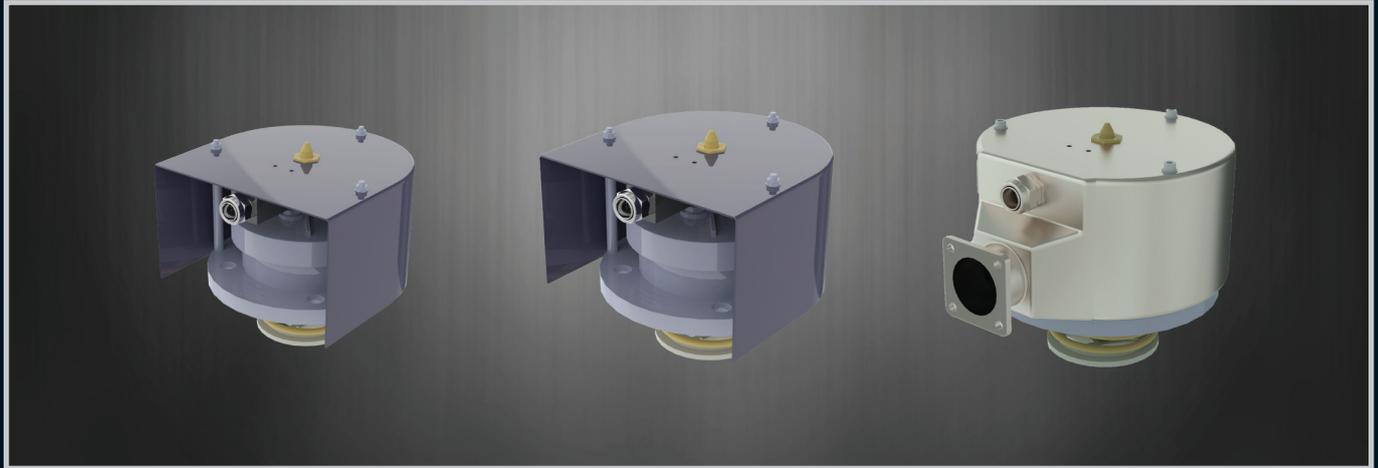
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Pressure Relief devices/valves are typically classified in the Transformer industry as safety or protection devices.

The application of these devices is to limit a sudden rise in oil pressure, inside a free-breathing oil cooled Transformer tank. The device will operate when the inside oil-pressure is greater than that of the set pressure. The device has a directional cover that will allow any hot oil to be safely expelled. The device will then close and seal, preventing any further loss of oil, preventing excessive mechanical stresses on the tank walls.

ALLBRO Pressure Relief Devices are manufactured, tested and assembled at our factory in the East of Johannesburg, South Africa.

CONSTRUCTION

For durability and reliability, the body and cap of the devices are manufactured from powder-coated, moulded aluminium. Two of Allbro's PRV models have the standard Powder-coated mild steel covers. Allbro also manufactures a Corrosion Resistant device known as the T80SS. Where the cover encloses the unit completely, the cover is made from is 316 Stainless steel.

INDIVIDUAL TESTING OF DEVICES

As part of our testing process, all devices are 100% tested, given a serial number and supplied with a test report.

Each device is tested and checked for:

- Operational Function test, this test ensures that the device operates at the required pressure, using compressed air and a calibrated pressure gauge.
- Efficacy of seal test, this test is to ensure that the device does not leak. Each device is subjected to an 8 hour soak test in oil, at 60°C and at 20 KPa pressure.
- Final Switch check, to ensure that the contacts change-over on operation of the device.

Below is an example of the test apparatus and a typical Test Report, supplied with each device:



* Allbro's in-house PRV Efficacy of seal test & Operational Function Test equipment

DEVICE SELECTION GUIDE

1. Device Size: Allbro offers TWO sizes of devices. The size required is dependant on the volume of oil that is required to be discharged.

- T50 for volumes up to 3,000 liters.
- T80 for volumes up to 9,000 liters.

2. Device Operating Pressure

It remains the responsibility of the customer to ensure that the correct pressure setting is requested, depending on the application of the device. The location of where the device is mounted on the transformer, will determine which pressure setting is required.

We offer FIVE operating pressures for both the T50 & T80 devices, depending on customer requirements.

Below is a table showing available pressures:

KPA	Psi
50	7
70	10
90	13
125	18
150	21

DEVICE INSTALLATION RECOMMENDATIONS

- Ensure that the mounting flanges are clean before mounting the device.
- The 4x Mounting studs should be crossed-torqued and tightened to a maximum of 60Nm. Over-torquing may crack the device housing.
- The opening of the device cover should always be orientated towards areas that are designed to accommodate a possible burst of hot oil.

When mounting the device on the side walls of a transformer, the device bleed screw should always be orientated towards the highest point of device. This will allow for the device to bleed should there be any air trapped inside the device, after the transformer is filled with oil

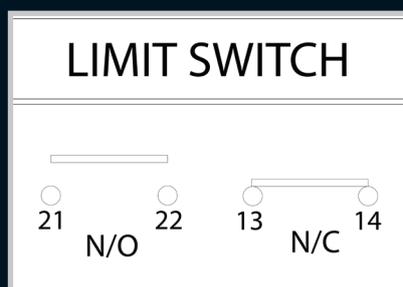
LIMIT SWITCH DETAILS

A Limit Switch is mounted internally, between the operating device and the cover. The electrical specifications of the shown below



SPECIFICATION	
Rating	500V
Shock withstand	50g
Impulse withstand voltage	6kV
Working temperature	-25°C to +70°C
Switching Frequency	3600 cycles/h
Load Factor	0.5
Short circuit Protection	10A gG fuse

A typical limit Switch Configuration is shown below. Other configurations are available on request.



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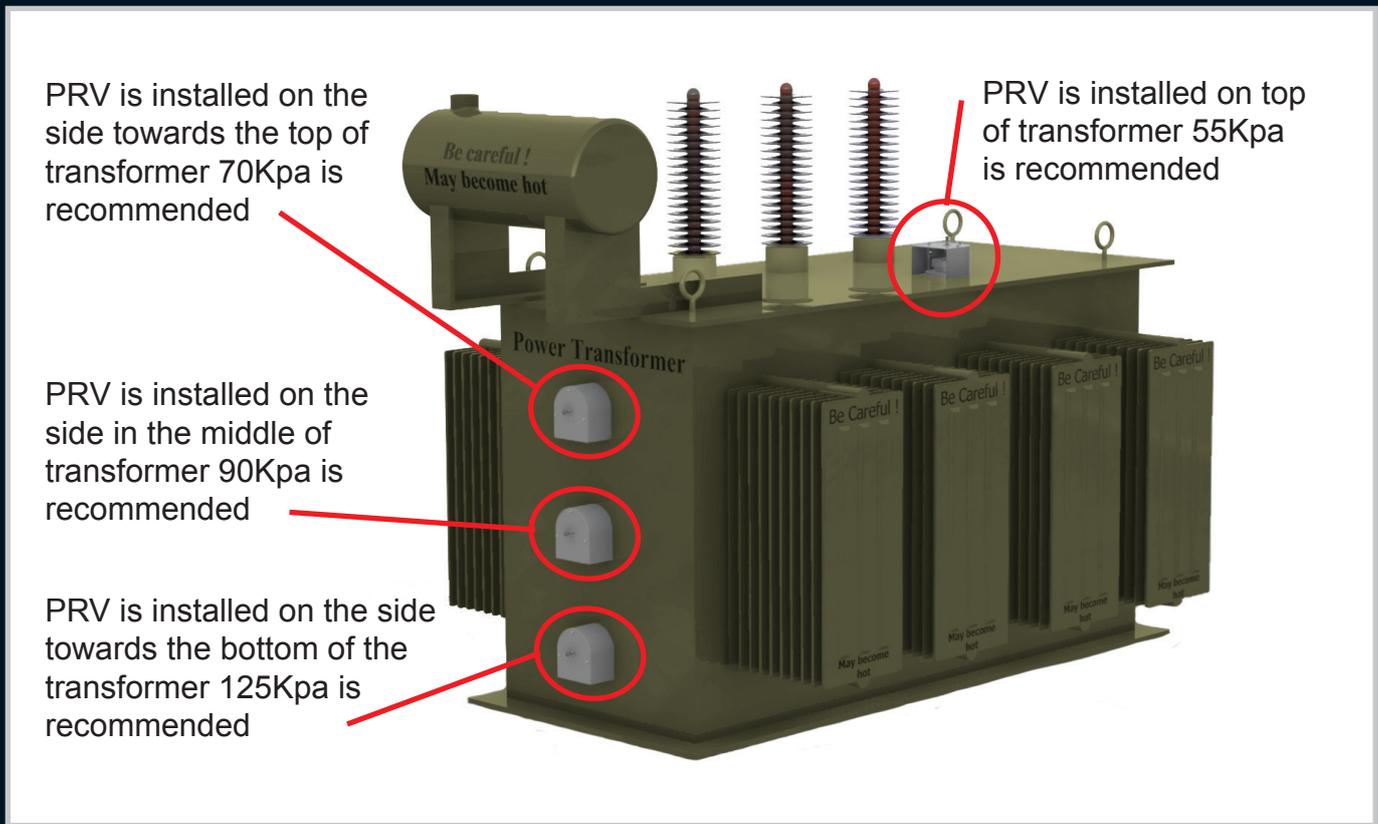
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Kpa RECOMMENDATION OF PRV (Pressure Relief Valve) BASED ON POSITION ON THE TRANSFORMER.



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