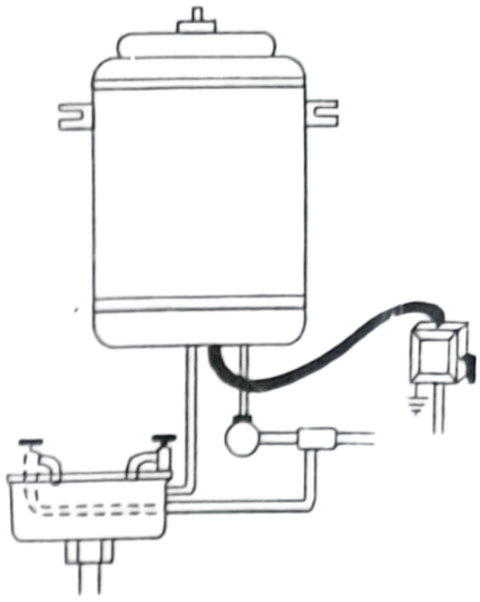
Geyser:-

Types Of Geyser:-
(1)Stroge (2000Watt)
(2)Instant(3000Watt)
Names of the parts of a geyser

- Outer Body – The external casing that protects internal components.
- **I**nner Tank – Stores and heats water, usually made of stainless steel or coated metal.
- Heating Element – Converts electrical energy into heat to warm the water.
- Thermostat – Regulates water temperature and prevents overheating.
- Thermal Cutout (Safety Valve) – Cuts off power if the temperature exceeds the safe limit.
- Inlet Pipe – Allows cold water to enter the geyser.
- Outlet Pipe – Releases hot water for use.
- Magnesium Anode Rod – Prevents corrosion inside the tank.
- Pressure Release Valve (PRV) – Releases excess pressure to prevent tank bursts.
- Indicator Lights – Show power and heating status.
- Insulation Layer – Maintains water temperature by reducing heat loss.
- Drain Valve – Used to empty the tank for maintenance.

Geyser: It is a type of water heater. Water, ranging from 5 litre to 100 litre can be boiled in it. Following are the parts of a geyser:

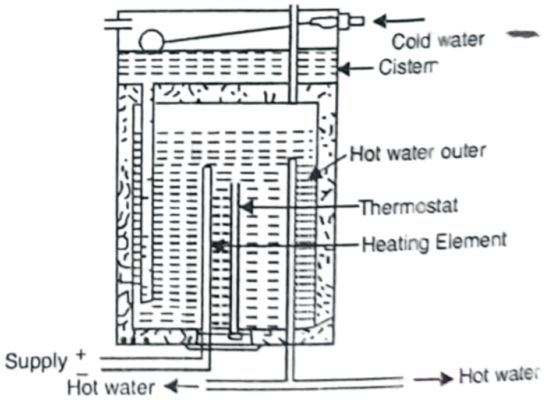


1. **Metal Tank:** In the geysers of good quality, the tank is made of copper. It consists of two vessels, inner vessel and outer vessel. Inner vessel, containing water, is made of 99.9% pure electrolytic tinned copper so that it does not rust. Some geysers are also made of iron. In those cases, nickel plating or chrome plating is done on the inner vessel. It can withstand pressure upto 100 PSI (7 kg/cm^2) and normal working pressure of 30 PSI (2.1 kg/cm^2). The outer vessel is the casing of red lead coated steel so that it does not rust. The annular space between the vessels is filled with thermal insulating material such as glass wool to prevent heat loss by leakage.

2. **White Iron Cover:** This is made of corrosion resistant iron sheet and is mounted on the upper part of the geyser and normally white colour is sprayed on it. It does the work of trapping the heat of the warm water.
3. **Heating Element:** A heating element of around 30 cm. long is fixed to the inner vessel at the bottom. This element is of three types:
   (a) **Tube Type.**
   (b) **Open Type.**
   (c) **Closed Type.**
   - **Tube Type:** This kind of element, like the unit of electric range, remains in the tube filled with magnesium oxide. It works like an insulator and prevents the element touching the wall. The ends of the tube are fitted in the connector of ebonite which have pins for the connections. This element is fixed on the heating unit with the help of chuck nut.
   - **Open Type:** This type of heating unit is made by putting the element of ordinary table heater in a porcelain ring. These rings are put in the iron rod whose one end is fitted with a piece of iron rod and the terminals also, so that the defective terminal can be replaced easily.
   - **Closed Type:** This kind of heating unit is made of a hollow iron rod with heating element and the filling of plaster of paris or any other insulating fire proof material. This kind of heating unit has long life because being stationary, it does not become defective frequently.
4. **Thermostat:** An ISI marked, stem type, highly sensitive, automatic temperature control device with range of 25°C to 85°C and set a steady of 65°C is fitted with heating element. A safety valve is attached with inlet set to operate at 50 PSI (3.5 kg/cm²).

Note: Geysers are available in vertical model and horizontal model in the capacity of 15, 25, 35 etc. litres.

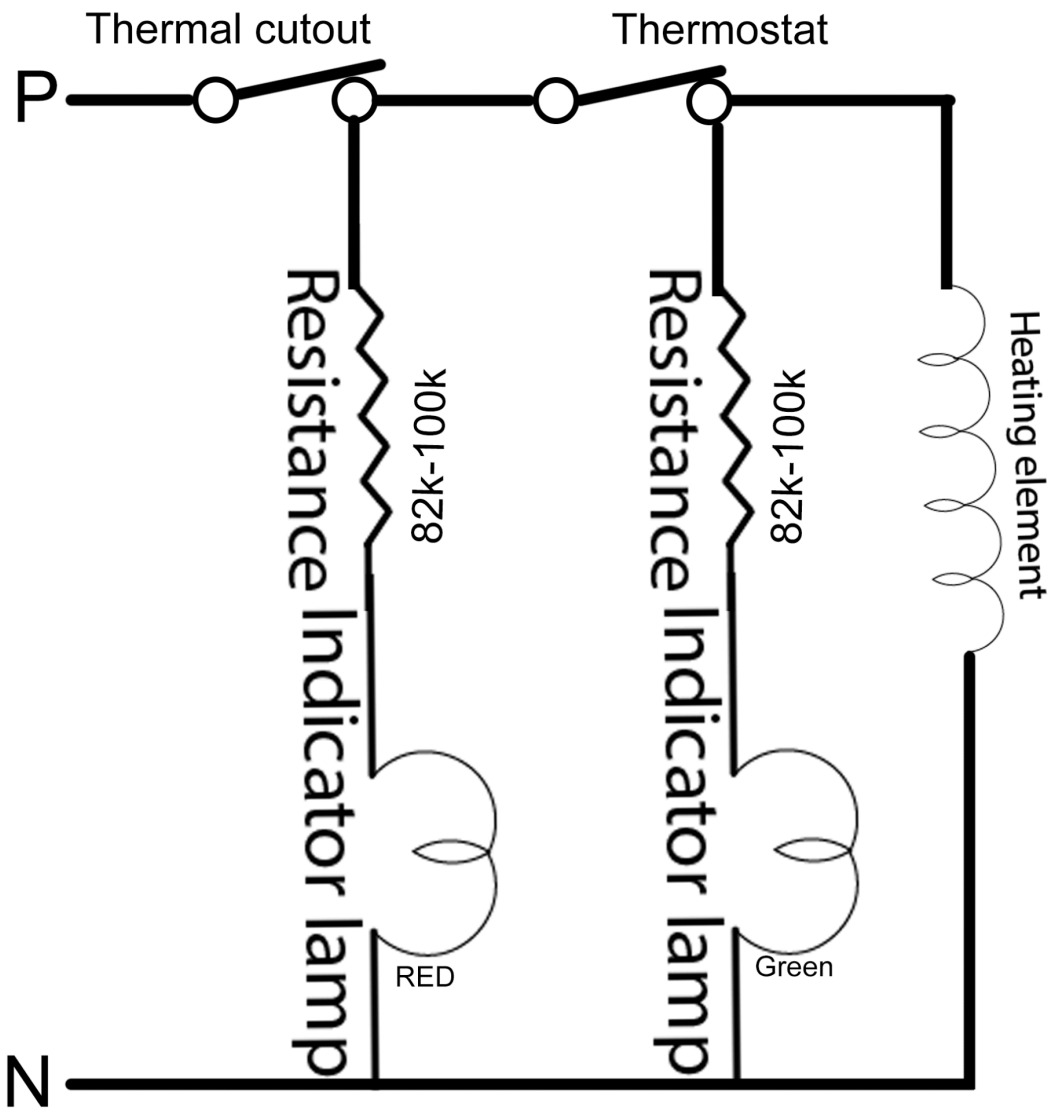
Pressure Type Water Heater:



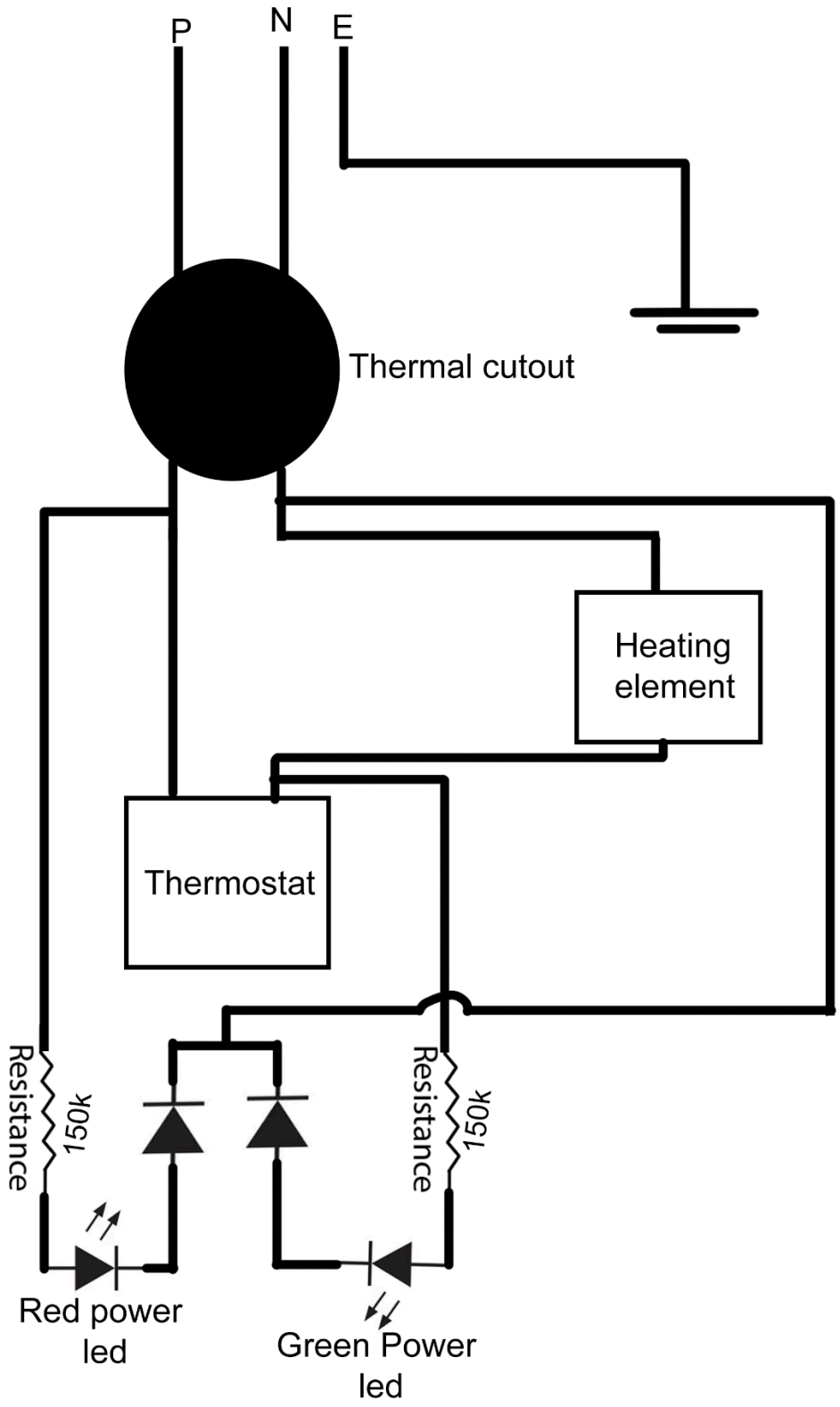
This type of water heater is also called cistern type heater. When the hot water needed at various points, this type of heater is used. This kind of water heater gets water supply through the cistern which is connected to the water mains with a float valve to control the flow. The bottom of the water heating is connected to a long vertical pipe, whose open end over hangs the tank. The hot water outlet is taken out at the bottom of the heater and branches out into a number of pipe lines of hot water at various points.

1. The geyser should not be switched ON unless it is completely filled with water.
2. It should be properly earthed.
3. In case of direct connection with municipal water supply, it must be fitted with vacuum relief valve (VRV) at inlet.

Instant geyser circuit diagram:-



Storage geyser circuit diagram:-



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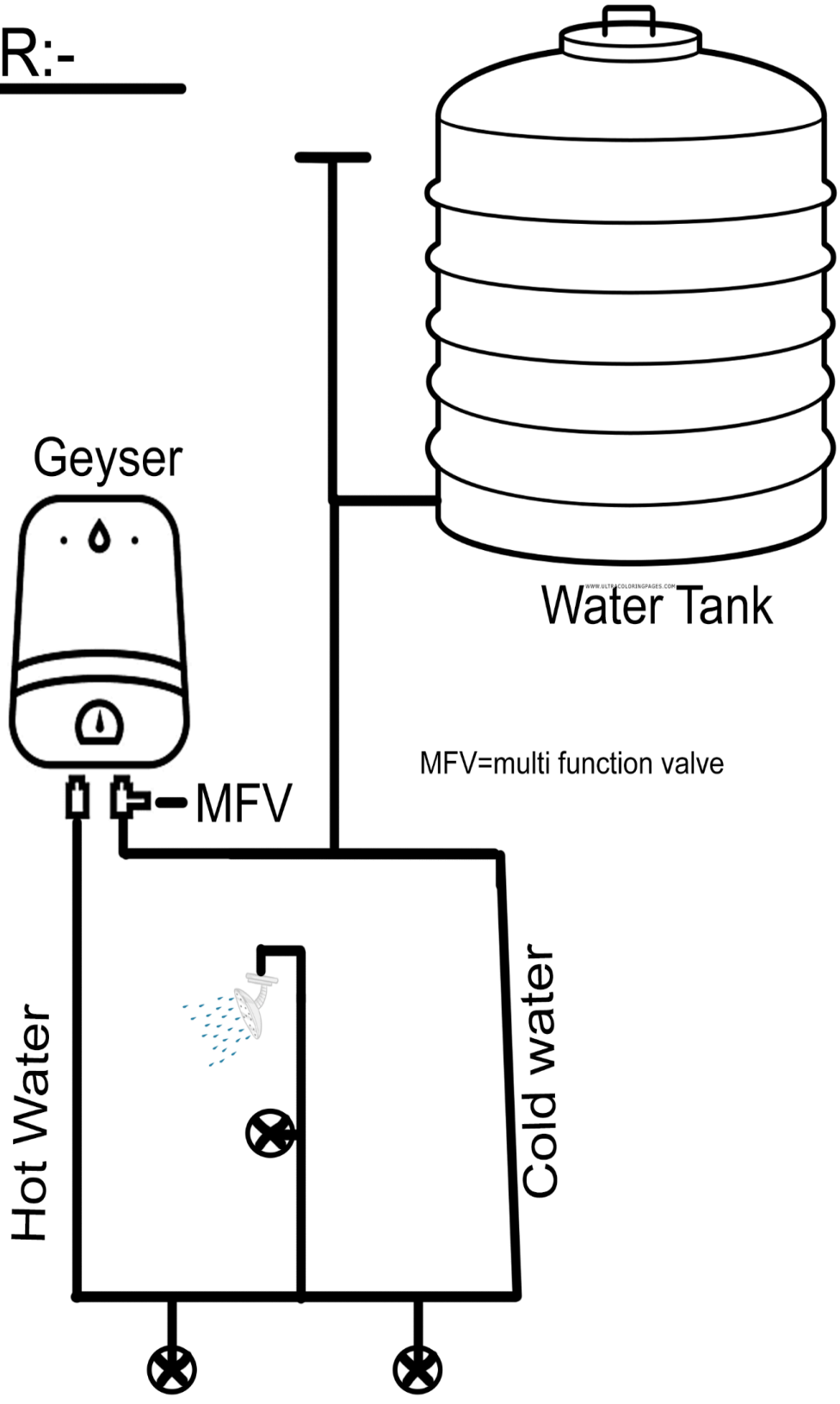
Geyser
Water Tank
MFV=multi function valve
MFV
Hot Water
Cold water