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# LABORATORY HOT SET TEST APPARATUS FOR XLPE CABLES. SSI 521 HSVS As per IS: 10810 (Pt. 30) & IS; 7098 (Pt.1, 2 & 3)



An ISO 9001:2008 Company  
GMP compliant

Laboratory Hot Set Test Apparatus is designed to determine the elongation & permanent set of insulation of armored and unarmored single, twin, three, four and multi-core cross linked Polyethylene (XLPE) insulated & PVC sheathed cables for electric supply and control purposes under specified conditions of load temperature and air flow, as specified in IS: 7098.

- A double walled cabinet with inside chamber of stainless steel and outside of mild steel duly painted. Inner dimensions of the chamber are 30 cm x 50 cm x 20 cm (W x H x D). The door is fitted with a full view glass to observe the specimen under test.
- Temp. Range of the oven is ambient to  $250 \pm 2^{\circ}\text{C}$ . at sensor point, controlled by PI digital temperature indicating controller. The test requirement as per IS: 7098 is  $200 \pm 3^{\circ}\text{C}$  for 15 minutes.
- The oven is designed to give 8 to 20 air changes per hour. The air inlet is provided at the bottom in such a way that air flows over the surface of test pieces and leaves near the top of the oven. An air flow meter (Rota meter) is fitted to control and monitor the airflow rate.



(Actual instrument may differ from the photograph due to regular improvements )

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## S.S. INSTRUMENTS PVT. LTD.



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- ✚ Grips are provided at the top of the oven to hang specimen/s. For each sample a set of suitable weights up to 1 kg are provided with provision to attach the weights to one end of the test pieces.
- ✚ Elongation is measured using laser pointers coupled with calipers for accurate results. The LC of calipers is 0.01 mm.
- ✚ Cutting blade provided inside the chamber to cut the sample without opening the oven door.

## Difference between Hot Air Oven and Hot Set Oven :

**The test requirement is 8 to 20 air changes per hour, measured on a Flow Meter.** According to IS standard, if the **Oven does not have a regulated air supply, the oven is then termed as a Hot Air Oven and not a Hot Set Oven** (as offered by some manufactures) and cannot be used for this kind of test

Also if normal oven is used for the test, the operator will have to open the front door to hang the samples, resulting in loss of temperature. As the test is only 15 mins, it will not be possible to regain the temperature. In our Hot Set oven, we use an **especially designed Top Hanger** which can be hanged from the top of the Hot Set Oven, without opening the front door. To achieve minimum loss of temperature, we provide two hanger assemblies. One is used as dummy that is used for achieving the desired temperature. In the meanwhile operator can assemble the sample, weights etc on the other hanger, which can be then put in the oven, just by replacing the dummy into the oven. This way the loss in temperature is not more than few degrees.

- Air source to provide 8-20 air changes per hour, a compressor \ compressed air line of 4 to 10 liters \ min. is required. If this facility is not already available, a suitable air compressor may be purchased directly .
- Sample Conditioning: The test specimens are required to be kept at a temperature of  $27 \pm 2$  deg C for a period of 16 hours, immediately before the test. If the conditioning chamber is not available with you, the same (Model SSI-507A) can be purchased from us.

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Weights



Grips



Sample Hanging system



Laser Pointers with Calipers



Extra Dummy Hanger

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