INDIAN STANDARD 8448
SPECIFICATION FOR AUTOMATIC LINE VOLTAGE CORRECTORS(STEP TYPE) FOR DOMESTIC USE

Automatic line voltage correctors (ALVCs), also known as automatic **voltage stabilizers** or automatic buck/boost transformers, are devices designed to regulate and maintain a stable output voltage despite fluctuations in the input voltage from the power supply. They are commonly used with domestic electrical appliances to ensure optimal performance and protect against damage caused by voltage variations.

The Indian Standard **IS 8448:1989**, specifies the requirements of Automatic Line Voltage Correctors(Step Type) rated up to **5 kVA for single phase operation** for use with **domestic electrical equipment**, such as **refrigerators**, **television** sets and **air-conditioners**. Unless otherwise specified, the rated input voltage range shall be **160 to 260 V** and the output voltage shall be **210-250 V**.

We expect the ALVC or Stabilizer to be **safer to operate**, durable, protect the equipment from **voltage fluctuations**, efficient and less **heat generation** while in operation. The standard addresses these requirements through various tests and **constructional requirements** which are as below

Safety Requirements

1. Usage of suitable protective device like **fuse, MCB**
2. Protection against electric shock
3. Leakage current
4. Mechanical Strength
5. Stability
6. Creepage distances and clearances
7. Provision for earthing
8. High Voltage Test
9. Induced voltages

Temperature Rise – Limits specified for rise in temperature

Performance Requirements –

1. Output voltage test (voltage shall not fall below 195 V)
2. Efficiency – shall not be less than 95 %
3. Test for continuous operation
4. Damp heat cycle test.

From the above, it is evident that IS 8448 ensures the **safety, efficiency and reliability** of Automatic Line voltage correctors (Step Type) for use with domestic appliances. For further details, please refer to IS 8448.