

High Tension Voltage Regulators



An Energy Saving Equipment



Makpower Transformers Pvt. Ltd.

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This is the most modern design of High Voltage regulator used to correct the variation in HV supply voltage. These are available in three voltage range i. e. 6KV, 11KV and 33KV. This type of regulator corrects the supply voltage by means of on load tap changer switch.

The Automatic Step Voltage Regulator (ASVR) are available in three types :

- If the variation of input high voltage is within 15-20% of the rated voltage; the step-down transformer can be provided with ON LOAD TAP CHANGER(OLTC).The voltage sensing relay of the OLTC panel choose the suitable tap automatically resulting the regulated output voltage.
- If the variation of input high voltage is more then 20% of the rated voltage, the OLTC is attached with a star connected high voltage auto transformer having suitable taps in addition of normal step down transformer and placed in the same cabinet. The voltage sensing relay of the OLTC panel choose the suitable tap automatically and regulated HT voltage (+ 1%) from the auto-transformer is fed to the step-down transformer.
- If step-down transformer without regulator had already been installed or if the capacity of the step-down transformer is very high (more then 2MVA); the regulator is made in separate cabinet. This type of regulator consists of an auto-transformer with OLTC. Regulated HT voltage from the regulator is fed to the step-down transformer.

CONTROL PANEL :

The ASVRs are controlled by a electronic voltage sensing relay, which continuously sense the variation in output voltage due to the variation in input voltage, the relay gives the necessary commands to the servo-motor and automatically corrects the out-put voltage.

ON LOAD TAP CHANGER :

Externally mounted, high speed diverter resistor type on load tap changer. Switching time of a flag change within 75 microseconds. No of step may be 8/16/ 28 and current rating may be 200/400/600/ 800/1200 Amps as required.

ADVANTAGES :

Economic: The price of these ASVRs are about 70% with respect to conventional type regulators, when rating is more then 300 KVA.

- Energy saver: The ASVR's consumes 1/3rd component losses (Load loss and No load losses) with respect to conventional type regulators.
- Faster correction time: It only requires 60 seconds for full range correction of voltage, where as conventional type regulators requires 6-8 minutes time for full range voltage correction.
- Reliability: The ASVRs are reliable then any other conventional type regulators (variable contact types, carbon roller and carbon brush types).
- Compactness: The ASVRs are integral units of regulator and transformer with OLTC (within the same cabinet) i.e. transformer with inbuilt voltage stabilizer, thus becomes smart in look and space saving.
- Universally accepted energy saver equipment (10 to 15% energy can be saved by using this type equipment).
- Maintenance: Practically maintenance free equipment. Reliability of the moving contacts of OLTC (made of High conductive and low resistive alloy metals) are far greater than carbon roller type moving contacts.

RANGES:

The present product range of MTPL includes ASVRs in 6 KV, 11 KV, 33 KV system and up to 10000 KVA. We also manufacture tailor- made equipments as per requirements of our customers.

SATISFIED CUSTOMERS

| Name of the Firm | Transformers Specification | Nos. |
|---|---|------|
| Rexon Strips Ltd Sundargarh, Orissa | 3000 KVA, 27-33 KV & 8.8 - 11 KV/433 Volts with On Load Tap Changer | 1 |
| Japfa Comfed India Limited West | 1250 KVA, 33000/415 Volts with On Load Tap Changer | 1 |
| Space Metric Agencies (P) Ltd. Janglepur, Kolkata | 1000 KVA, 6500-11000/433 Volts with On load Tap Changer | 1 |
| Shiv Shakti Sponge Iron Ltd. Jamshedpur | 1000 KVA, 27000-33000/433 Volts with On load Tap Changer | 1 |
| R.D.Tea Ltd. Bidhannagar, Siliguri | 1000 KVA, 8000-12000/433 Volts Automatic Step Voltage Regulator | 1 |
| Limtex Tea & Industries Ltd. Siliguri, West Bengal | 1000 KVA, 8800-11000/433 Volts with On load Tap Changer | 1 |
| Sarat Export (P) Ltd. Chanditala, Howrah | 630 KVA, 8250-11550/433 Volts Automatic Step Voltage Regulator | 1 |
| Vikram India Limited. Kisanganj | 500 KVA, 6500-11000/433 Volts Automatic Step Voltage Regulator | 1 |
| Sakantala Electricals Assam | 200 KVA, 4500-11500/11000 Volts Automatic Step Voltage Regulator | 1 |