



# ROLLING CONTACT TYPE SERVO VOLTAGE STABILIZERS

30KVA-2000 KVA  
OIL COOLED

**S-POWER** LT Servo Voltage Stabilizers are auto wound Transformers having Helical Coils made out of Copper Strip, mounted on a conventional Laminated core (whereas most of the manufacturers in the market use wire wound coils on toroidal core called variac).

Carbon Rollers assembled on a fibre glass carrier board traverse the length of the coil, as shown in the picture (whereas in variac type stabilizers, ordinary carbon brushes are used which slide on the wire wound coils, while correcting the voltage resulting in more wear and tear).

These rollers are connected to the output terminals and as they are driven over the track, a variable voltage is obtained.

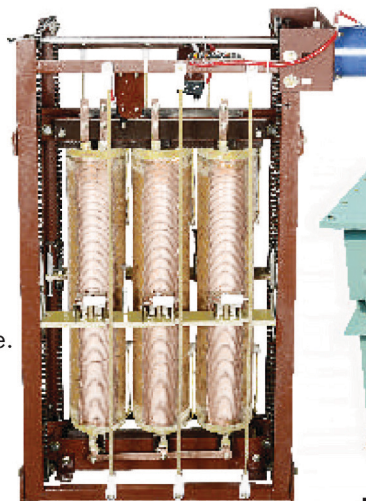
The variation of more than  $\pm 1\%$  of the rated output voltage is sensed through Microprocessor Based Controller which sends signals to the Servo Motor which further drives the Rollers upward or downward, so as to increase or decrease the voltage to the required level.



Industrial Servo Voltage Stabilizer

## SALIENT FEATURES:

1. Stepless on load Rolling Contact Type Regulator
2. Designed for 100% Continuous Duty Cycle
3. No Waveform Distortion
4. Very High Efficiency
5. Negligible maintenance
6. Dimensions can be customized as per available space.



Internal View  
of Regulator



Domestic Voltage Stabilizer



Mfd By :



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Dealer :



# Technical Specification

<b>In-Put VAC:</b>	240VAC-500VAC/270VAC-500VAC/300VAC-500VAC/340VAC-500VAC(50Hz)
<b>Out-Put VAC:</b>	380VAC/400VAC/415VAC $\pm$ 1% (50Hz) Adjustable
<b>Metering:</b>	Digital Display for Input Voltage & Output Voltage and Output Current Integrated In Controller. Digital Display for Input Voltage & Output Voltage and Output Current Integrated In Controller.
<b>Indications:</b>	Single Phasing, Overload, Output Voltage Low, Output Voltage High,
<b>Cooling:</b>	ONAN (Natural Oil Cooled)
<b>Ambient: Temp</b>	50 Deg. C Max.
<b>Housing:</b>	MS Fabricated Tank Filled With Transformer Oil. Installation: Outdoor, Potential Free Terminals for High/Low Voltage, Single Phasing & Overload Shall Be Provided Which Can Be Connected To The MCCB/Contactor Fitted In Your Outgoing Panel.
<b>Controller:</b>	Micro Processor Based Controller
<b>General Arrangement</b>	The Equipment's will be contained inside a Sheet Steel Tank Fitted with Cooling Radiator and Mounted On Unidirectional Rollers.
<b>The Fittings Would Include As Follows:</b>	(A) Lifting Lugs. (B) Digital Display for Input & Output Voltage and Output Current (All At a Glance Not On Selecting By Any Switch) (C) Drain Valve. (D) Oil Level Gauge) Thermometer Pocket F) Rating Plate (G) Earthling Terminal. (H) Oil Filling Hole
<b>Automatic Control Gear Consists Of:-</b>	A) 1no. Microprocessor Based Controller. B) 1nos. Reversing Geared Motor Units. C) 3nos. Limit Switches In Order To Avoid Overrunning Highest And Lowest Position, Chain Drive, Coupling Devices And All Electrical Connections.
<b>Terminal Arrangements:</b>	Cable Box Will Be Provided For Input And Output Terminals To Receive Pvc Cables.
<b>Central Constructional Features:</b>	The Unit Shall Have Three Distinct Features As Under: I) Hand Control ii) Motor Control iii) Automatic Control <b>i) Hand Control</b> Hand Wheel Will Be Located On The Front Of The Regulator Tank At Convenient Operative Height. <b>ii) Motor Control:</b> Raise /Lower Push Button Control By Means Of Small Single Phase Reversible Geared Motor Of The Permanent Capacitor Type Shall Be Provided. The Limit Switches Shall Be Provided To Restrict The Travel At Extreme Positions. With This Arrangement, It Would Also Be Possible To Provide Remote Control Of The Regulating Unit. The Reversible Geared Motor Would Of 'Step-Syn' Type. <b>iii) Automatic Control:</b> For Automatic Correction Of Fluctuating Supply Voltage We Shall Provide Microprocessor Based Controller Which Will Sense The Output Voltage And Provide Signal To The Driving Motor For Necessary Correction.
<b>Detailed Constructional Details:</b>	Tanks & Radiators: Tanks Shall Be Of MS Sheet .The Construction Shall Be Robust and Substantial, Suitable for Road / Rail Transport And To With Stand Vibration. Pressed Steel Radiators Shall Be Provided .Tanks shall be provided with Lifting Lugs. Inspection Hole With Cover Shall Also Be Provided. Tank Shall Be Coated With Light Grey Epoxy Paint.
<b>Core:</b>	Core Shall Be Built From Cold Rolled Grain Oriented Silicon Steel Laminations. The Core Laminations Shall Be Insulated From Each Other By Suitable High Temperature Resistant, Oil Proof Adherent Coating Materials. Core Clamps And Clamping Bolts Shall Be Heavily Insulated From The Core Laminations.The Insulation Of Core Bolt Shall Be Minimum Of Class 'A'. The Bottom And Top Frames Shall Be Connected With The Tie Rods To Make A Complete Structure Rigid For Carrying The Weight Of Core Coil Assembly Without Unduly Stressing The Laminations Or Windings. Lifting Eyes Shall Be Provided On The Frame For Removal Of Core Assembly From The Tank.
<b>Winding And Insulation:</b>	Winding Shall Be Three Phase With Minimum Class 'A' Insulation. High Conductivity Electrolytic Quality Copper (99.99 % Pure) Of 'Birla Sterling' Shall Be Used For Winding. The Voltage Regulator Will Be Having Helical Coils Mounted On A Conventional Laminated Core.
<b>Insulation Oil:</b>	Insulation Oil Shall Conform To Is: 335. Transformer Units And Regulator Unit Shall Be Supplied With Initial Fill Of Oil. BDV of Transformer Oil Will Be 50 KV
<b>Cooling:</b>	Unless Otherwise Specified, The Stabilizer Unit Shall Be Oil Immersed Natural Air Cooled Type ( ONAN)
<b>Testing:</b>	Following Tests Will Be Got Conducted Our Works Before Dispatch. I) Insulation Resistance, ii) High Voltage Test, Iii) DVDF Test, Iv) Voltage Range Test, V) Measurement of Di-Electric Strength of Oil, Vi) No Load Loss (Core Loss) Vii) Load Loss (Copper Loss)
<b>Installation &amp; Commissioning: -</b>	All Activities Of Installation, Such As Unloading & Placement At Site, Civil Work, Cable Laying, Providing & Crimping Cable Lugs, Joining The Cables To The Equipment Terminals And Any Other Site Activities Required For Installation Of Our Equipment Are Excluded From Our Scope. However, Supervision Of Our Engineer For Testing & Commissioning Of The Equipment Will Be Provided By Us Free Of Cost. Test Certificate Of Oil Will Be Provided Along With The Equipment.