

We Touch your Electricity Every Second
We Protect your Machines from Fluctuations

Red Phase
स्वदेशी अपनाओ, देश बचाओ

SAVE ENERGY INSTALL

OTHER PRODUCT RANGE

- **SERVO VOLTAGE STABILIZERS**
5kVA to 7000kVA
- **DISTRIBUTION TRANSFORMER WITH OLTC**
11/33kv Class 63kVA to 10MVA
- **ELECTRO PLATING RECTIFIERS**
100Amps to 2000Amps
- **ULTRA ISOLATION TRANSFORMERS**
5kVA to 5000kVA
- **STEP UP / DOWN TRANSFORMERS**
5kVA to 10MVA
- **ONLINE IGBT UPS**
1kVA to 200kVA
- **ELECTRICAL DISTRIBUTION PANELS**



Why us ?

CNC Make

Aesthetic Looks

Better Efficiency

Powder Coated Tank

Flawless Performance

Micro Processor Technology

www.redphaseindia.com

RED PHASE ENGINEERS

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M.: +91-991475-0001, 855688-0002, Email : info@redphaseindia.com

RED PHASE SWITCHGEARS

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INFRASTRUCTURE

Red Phase

સ્વદેશી અપનાઓ, દેશ બચાઓ





Late Sh. Thakur Kewal Singh
Founder of **Red Phase**

Red Phase one of the leading quality manufacturers of wide range of Servo Stabilizers, Industrial Voltage Controller, CNC Voltage Stabilizer, Isolation Transformer, CVT Constant Voltage Transformer designed & manufactured by highly trained engineers.

The name trusted all over India since 1987. This trust is built over Shear dedicated, hard work & Commitment to quality. The learning acquired over 25 years has been harnessed to offer superior quality product at competitive price.

Being An ISO 9001 : 2008 / CPRI certified company, our product is manufactured as per ISO Standards. today with more than 2 decade of experience in the manufacturing of Electrical products, has grown up in geographical range to become one of the leading manufacturing of Electrical products. Our product comprehensively fulfilled the request of national & international standards specification & their stringent requirement. We manufactured our each product under one roof to achieve better quality. We strive to maintain the quality & uniqueness of our product, keeping our price low & deliver it on a schedule. Our effect has been awarded with repeat orders from private & public sectors, Big Industries, Educational Institutes & Big MNC.

INFRASTRUCTURE

We have our own state of art manufacture unit located at Chandigarh, India our Company has a very sound state of the art infrastructure & skilled manpower in following departments.

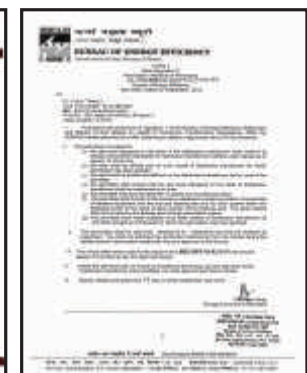
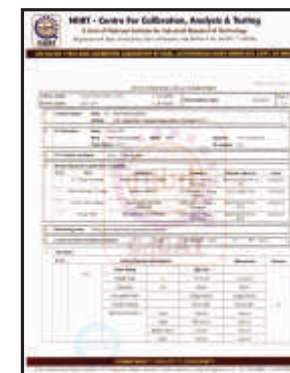
- Production & Fabrication
- Testing & Quality Control
- Design & Development
- After Sale Service AMC

Our Unit are equipped with all modern manufacturing facilities & modern testing which helps to meet diverse product need we draw our strength from highly motivated workforce which control of Experience Engineers, Supervisors & Workers within to meet the demand of the enlightened Customers.

QUALITY POLICY

Quality has been major concern and a prime reason for our success in an arena full of competition. To ensure superior quality products, we have our own facility equipped with variety of testing facilities. We carry out several quality control tests and inspections during the various stages of production and prior to the delivery, so as to ensure our products comply with international standards.

Being An ISO 9001:2008 / CPRI certified company, all our products are used & Manufactured under quality standards.





Red Phase

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SERVO VOLTAGE STABILIZERS
(Capacity 5 kVA to 7000 kVA)

**500 kVA INDOOR BALANCE TYPE
SERVO VOLTAGE STABILIZER**

INTRODUCTION

In spite of best efforts, no state electricity board can ensure constant voltage to the customer because of long and inadequate distribution lines and irregular load pattern on distribution transformers. Generally Voltage is low during day time and high during night hours. Moreover on holidays peak hours, rainy days and when agricultural and Industrial load is switched off, the voltage rises sharply which is more dangerous.

This higher current affects the electrical motors (particularly smaller capacity motors upto 7.5 H.P.) in three ways :

1. Higher current produces higher losses in electrical motors which causes premature failure of winding.
2. These higher losses of electric motors also increase the losses of cables, switches, transformers and other associated equipments.
3. For smooth continuous operation of motors, over load relays are usually set at 20% higher setting. With the installation of the stabilizer and maintaining 390/400 volts, the motor will operate smoothly drawing. In case single phasing occurs, the relay will trip in 40-50 seconds. The motor can withstand the high current for this period and will be safe. Also, the relays, contractors, switchgears, etc. incorporated with the motor will be safe.



**630 kVA INDOOR BALANCE TYPE
SERVO VOLTAGE STABILIZER**

COMPARISON BETWEEN Red⚡Phase MAKE & CONVENTIONAL DIMMER MAKE SERVO VOLTAGE STABILIZER

Red⚡Phase Make Roller Type Regulator

- ✓ Electricity consumption is 0.5 to 1.5% depending upon the model and input voltage variation.
- ✓ Suitable for continuous 100% duty cycle.
- ✓ The carbon (graphite) Roller roll, while moving on the coil track, so contact Point of the roller goes on changing which prolongs the life of the rollers.
- ✓ Life at full load is 15-20 years.
- ✓ Negligible losses in full Buck/Boost Condition.
- ✓ Five years Unconditional Warrantee.

Dimmer Make with Flat Carbon brush Regulator

- ✗ Electricity consumption is 2 to 7% depending upon the model and input voltage variation.
- ✗ Suitable for only 30% to 40% duty cycle.
- ✗ Since the contact is by brush having flat surface, wear & tear of the brush is more and requires frequent replacement.
- ✗ Maximum life is 2-3 years at full load.
- ✗ Max. Losses in full Buck/Boost condition.
- ✗ Normal Warrantee for one year.

APPLICATION :

Though stabilizer are useful for any kind of application, there are most suitable for 24 hours continuous process plants where breakdown due to fluctuation results in heavy financial losses. These include:

- CEMENT PLANT
- FLOUR MILLS
- CLUBS
- ENGINEERING UNITS
- HOTELS
- PHARMACEUTICAL UNITS
- ROLLINGS MILLS
- RICE SHELLERS
- TUBE MILLS
- TEXTILE MILLS
- PAPER MILLS
- RUBBER INDUSTRIES
- COLD STORAGES
- FOOD PROCESSING UNITS
- HOSPITALS & NURSING HOME
- TEA ESTATE
- FOOTWEAR & LEATHER UNITS
- DISTILLERIES & BEVERAGES
- OIL & VANASPATHI PLANTS
- HIGH RISE BUILDERS

The Table Below Gives Approximate Quantitative Advantages of Automatic Voltage Controller at Various Fluctuation Levels:

Input Voltage Variation	% Reduction in Breakdown Possible Motor Load Below 10 HP.	Possible Lighting Load	Approx. Power Saving Possible Motor Load Below 10 HP.	Possible Lighting Load
380-400 volts	Nil	Nil	Nil	Nil & No. Servo Stabilizer Required
380-420 volts	5%	10%	3%	5%
380-440 volts	10%	20%	5%	10%
280-460 volts	40%	40%	7%	20%
380-480 volts	60%	60%	10%	30%

TECHNICAL SPECIFICATIONS

Red⚡Phase Stabilizer are available in a wide range and various model. The standard three phase models are suitable for balanced & unbalanced supply and loads. The standard models confirm to the following specification:

Input Voltage	360-460 V,	340-460 V,	320-480 V,	300-480 V
Efficiency (as per calculated)	99.58%	99.35%	99.0%	98.7%
Output Voltage	400 V \pm 1%, 3 phase, 50 Hz			
Cooling	Naturally Oil Cooled			
Type	Indoor			
Temperature Rise (Max.)	35°C above ambient			
Mounting.	On Uni-directional Wheel			
	Nil			
	100% Continuous			

THE TABLE BELOW COMPARES THE BEHAVIOUR . OF H.P. MOTOR AT DIFFERENT VOLTAGE :

Input Voltage	Current	KVA	P.F.
400	7.5 A	5.2	0.8
425	11% More	18% More	0.7
435	19% More	28% More	0.61
445	26% More	38% More	0.57

The table below compares the behaviour of 60 watt lamp at different voltage :

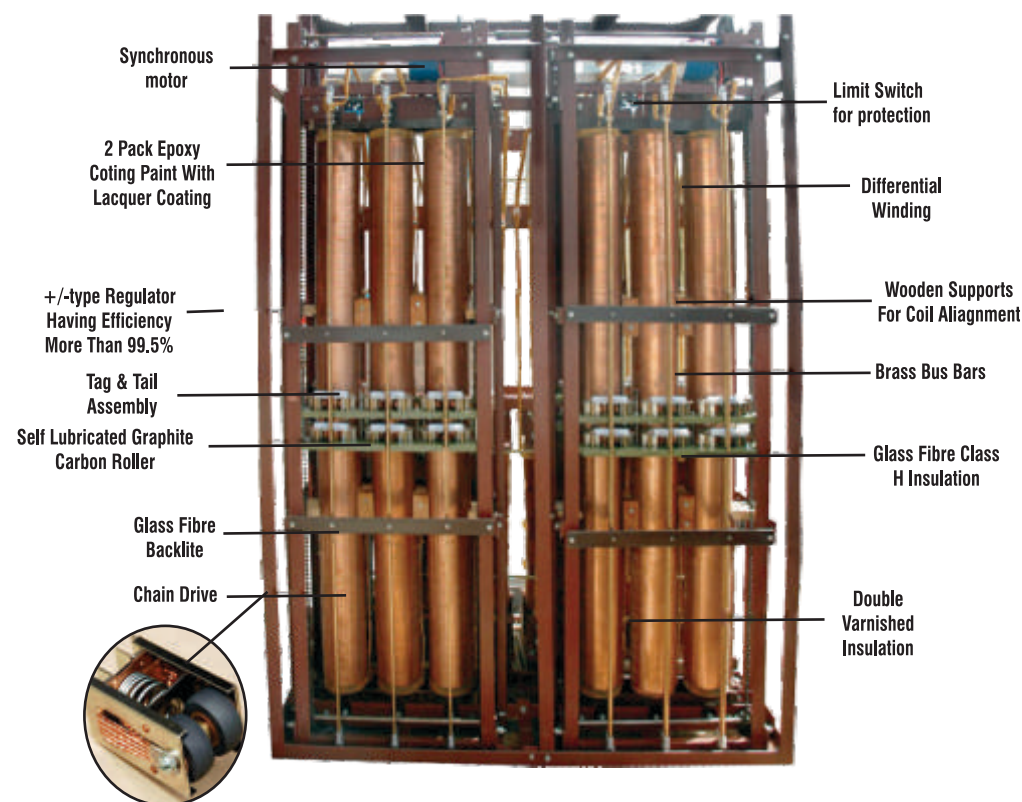
Voltage	Current	Watts	Luminous Intensity	Life in Hours
230	0.26	60 W	710	1000
240	0.27	65 W - 8.3% More	820	575
250	0.28	70.6 - 17.6% More	943	338
260	0.29	75.4 - 25.6% More	1073	200
270	0.31	83.4 - 39% Moer	1213	100

Loss comparison of Red⚡Phase Make Regulator and Conventional make Regulator :

Capacity	Power make Roller type regulator Losses	Conventional make Carbon brush type Dimmerstat losses
60 A	575 W	1050 W
75 A	730 W	2055 W
100 A	900 W	3105 W

ADVANTAGE :

- Reduction in Breakdown of Electrical Equipments
- Improvement in Power Factor (only in Case of High Voltage)
- Power Saving (reduction in Power Bills)
- Depreciation as per Income Tax Act. in India
- Uniform Quality of end Products
- Better Efficiency in Plant
- Reducation in MDI





CNC Voltage Stabilizer
Capacity 5 kVA To 75 Kva



1500 kVA Servo Voltage Stabilizer
Unbalanced Type



1250 kVA Servo Voltage Stabilizer & Unbalanced Type



1250 kVA Automatic Voltage Controller With Acb Protection



Electro Plating Rectifier
24 Volt 2500 Amps



HT-AVR 750 kVA
Outdoor Type



Inner View Of 2500 kVA Servo Voltage Stabilizer
Unbalanced Type



**1000 KVA Distribution Transformer,
11KV Class with OLTC (Outdoor Type)**

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**DISTRIBUTION TRANSFORMER
(11KV & 66 KV Voltage Class)
With OLTC & HT-AVR**

RANGE : 63 KVA T 5000 KVA

PRODUCT RANGE

Power & Distribution Transformers 63 KVA to 5000 KVA in 11 & 33 KV voltage class.

STANDARDS

Red Phase transformers are designed and tested as per IS : 2026, BS-171, IEC-76 & IEC-726.

VECTOR GROUP

Transformers will be connected as per vector group reference Dyn 11, Other vector groups can be offered as per specific requirements.

STANDARD FITTINGS

- Monogram plate
- Rating and diagram plate
- Earthing terminals - 2 Nos
- Cover lifting hooks
- Lifting lugs
- Jacking Lugs (500 KVA & above)
- Prismatic glass oil level indicator
- Drain-cum bottom filter valve with plug
- Oil filling hole with plug on conservator
- Oil filling hole with plug on conservator
- Oil conservator with drain plug
- Air release plug
- Silicagel air breather
- Bi-directional flat rollers
- HV terminals-outdoor bushings
- LV terminals-outdoor bushings
- LV additional neutral-1 No. outdoor bushing without socket (for star connected enclosed LV terminals)
- Pressed sheet radiators (tank mounted upto 800 KVA and detachable thereafter)
- Filter valve with plug
- Thermometer pocket
- Oil temperature Indicator (stem type)
- Externally operated off circuit tap changing switch
- Pressure relief valve without electrical contacts
- Sampling valve (for 2000 KVA & above Trf. only)

DISTRIBUTION TRANSFORMER

ACCESSORIES (OPTIONAL)

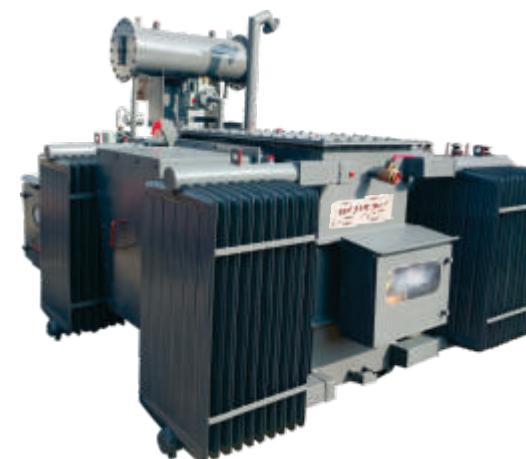
- ✓ LV and HV cable boxes
- ✓ Winding temperature indicator
- ✓ Buchholz relay
- ✓ Magnetic oil level gauge
- ✓ Marshalling box
- ✓ Disconnecting chamber
- ✓ Oil temperature indicator with electrical contacts
- ✓ Pressure relief valve with electrical contacts

TERMINAL ARRANGEMENTS

H.V. -Bare Bushings or Cable Box, L.V. - Bare Bushings or Cable Box. Disconnecting chambers can also be provided on both HV and LV Cable boxes.

TEMPERATURE RISE

Red⚡Phase Transformers are designed for a maximum temperature rise of 50 / 55 °C of oil / winding. Lower temperature rise can be offered on request.



SUPERIOR FEATURE OF **Red⚡Phase** MAKE DISTRIBUTION TRANSFORMER

CORE

The core is constructed from low loss, cold rolled, grain oriented, annealed laminations of electrical sheet steel conforming to the latest international standards. Special frame is built in-house for clamping the core to reduce the magnetic noise as well as making the whole structure rigid and robust.

WINDINGS

Coils are wound with electrolytic high conductivity paper covered or synthetic enameled copper conductors. Cooling ducts are provided to keep the hot spot temperature as low as possible. Coils are dried in electric ovens. Rigid connection support and coil clamping is provided to ensure high short circuit strength.

INSULATION

Precompressed board PARMALI board and JAPANESE insulation paper of best quality is used.

TAPPING

A. OFF CIRCUIT TAP CHANGING SWITCH

Tapping from $\pm 5\%$ to -5% in steps of 2.5% for HV variation or as per customer's requirements

B. ON LOAD TAP CHANGER

Tapping range as per specific requirements can be offered. OLTC for remote / auto / parallel operation can also be offered.

OIL

Oil is tested for resistivity, dielectric and acidic characteristic conforming to IEC - 296 / IS - 335. Before topping up, oil is filtered throughly.

TANKS

The tanks are made of M.S. Steel plates / sheets with adequate bracing & stiffeners. Tanks are pressure tested to withstand any type of inside or outside pressure. All the external surfaces are given a primary coat of zinc chromate, red oxide and two finishing coats of grey paint. The inner surfaces are given a coat of heat and oil resisting paint.

PAINTING

All the external surfaces are given a primary coat of red oxide and two finishing coats of paints. Paints and enamel varnish used conform to IS : 104 & 2932.

TERMINAL ARRANGEMENT & BUSHING

Following arrangements are provided : (a) H.V. - Bare of cable box bushings (b) L.V. - Bare or cable box bushings, disconnecting chambers can also be provided on both HV & LV cable boxes. Bushing conforms to IS : 3347, 2099, HV / LV bushing terminals of brass / copper conformers IS : 3347 Section - II metal part.

GASKET & JOINTS

All gaskets used for making oil tight joints to be with cork as base banded by oil resisting synthetic material or rubber. Neoprene rubber is used for oil tight joints for HV & LV terminals. The gaskets conformers to IS : 4253, Part - II - 1980 (Reaffirmed 1999) NC 777, RC 70C.



**Manufacturing
Process**

OUR PRESTIGIOUS CLIENTS

... Global footprints around the world !



Our Footprints in India

Dehradun	Assam
Haridwar	Guwahati
Roorkee	Patna
Yamunanagar	Chhatisgarh
Karnal	Goa
Ambala	Jamnagar
Rohtak	Rajkot
Panipat	Gandhinagar
New Delhi	Bhopal
Ghaziabad	Bangaluru
Moradabad	Ranchi
Ludhiana	Imphal
Gurdaspur	Shillong
Jammu	Mizoram
Mandi	Odisha
Dharamshala	Jaipur
Kangra	Agartala
Solan	Kolkata
Shimla	Kanpur

Mfg. & Exporters of : Online UPS, Servo, Power & Distribution Transformer

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