SAVE ENERGY

Install

Indian POWER

3 Years Warranty

Distribution Transformer

Automatic Voltage Controller

5 Years Warranty

OUR PRODUCT RANGE

- Automatic Voltage Controller
- HT AVR (Two-in-One)
- Isolation Transformers
- Distribution Transformers
- Furnace Transformers
- Electroplating Rectifiers

POWER ELECTRICAL & CONTROLS

An ISO 9001 : 2015 Certified Co.

INTRODUCTION

An ISO-9000 Certified Company, Power Electrical & Controls has over 30 years of experience in the manufacturing of Transformers & Servo Stabilizers. The company believes in quality oriented products and therefore the best and most suitable raw materials are used in the manufacturing process. Power Electrical & Controls, a group born from the Zeal & Passion of Professionally qualified engineers with a varied combined experience of more than three decade to harness technology to create Indian POWER products which meet the needs of today's demanding business entities.

Our company has played a pioneering role in power conditioning and has grown to be one of the largest company in manufacturing of Servo Voltage Stabilizers & Distribution Transformers.

The company has expertise in designing and manufacturing of customized Cast Resin / Dry Type / Oil Cooled / Resin Impregnated transformers & Servo Stabilizers (AVC) up to 7.5MVA, 11KV & 33KV.

HT AVR 11KV & 33KV (TWO IN ONE)

DISTRIBUTION TRANSFORMERS

AUTOMATIC VOLTAGE CONTROLLER / SERVO VOLTAGE STABILIZER

FURNACE TRANSFORMERS

ELECTROPLATING RECTIFIERS

ULTRA ISOLATION TRANSFORMERS


CERTIFICATE

This is to certify that the Quality Management System of

POWER ELECTRICAL & CONTROLS

has been assessed and found to conform to the requirements of

ISO 9001:2015

For the following scope

We provide prompt and immediate supply backed by 24 Hours Services to fulfill Valued Requirements of our Valuable Customers Just in Time at most competitive prices.

Applications: Engineering Units, Tea Estates, Tube Mills, Paper Mills, Clubs, Hotels, Rice Shellers, Hospitals, Nursing Homes, Flour Mills, High Rise Buildings, Rubber Industries, Cement Plants, Pharmaceutical Units, Food Processing Units, Cold Storages, Footware & Leather Units, Textile Mills, Distilleries & Beverages, Oil & Vanaspati Plants.

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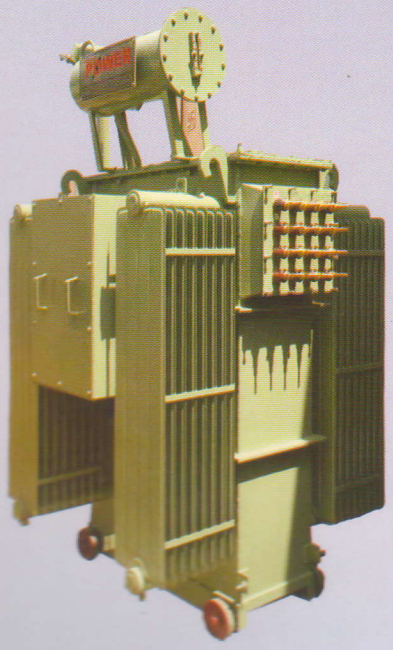
HT AUTOMATIC VOLTAGE CONTROLLER 11KV & 33KV/400V

(H.T. Transformer with Built-in Automatic Voltage Stabilizer - Two In One)

Indian Power HT AVR Two-in-one system is a revolutionary landmark in the industry when it comes to voltage regulation and stabilization. Even after the installation of standard distribution transformer the problem of low/high voltage on the LT side persists, resulting in improper operation of the electrical equipment. It is ideal to install Servo Controlled Automatic Voltage Controller either on LT side or HT side.

Indian POWER make Transformer with built-in rolling contact type AVR are suitable for indoor/ outdoor installation.

The standard off-circuit tapping of transformers can correct limited voltage variation and cannot regulate the voltage while in 'On Load' conditions. We have developed state-of-the-art technology two-in-one system with Transformer having built-in HT Automatic Voltage Stabilizer voltage on the LT Side. The equipment is basically a combination of HT AVR with a standard distribution transformer. The Fluctuating voltage from grid is initially controlled by the HT AVR and then fed to the transformer resulting in the constant L.T. Output within +/-1% accuracy and the biggest advantage being its robust design, Lesser losses & more efficiency make the distribution transformer to utilize up to 100% capacity.



H.T. TRANSFORMER
RANGE : UPTO 10 MVA 11 & 33 KV SUPPLY VOLTAGE

Indian POWER H.T. Stabilizer Comprises of:

- Step Down Unit. Double Wound
- Buck/ Boost Unit, Double Wound
- Stabilizer Unit, Auto Wound delta connected with rolling contacts capable of moving on the winding through Automatic, Motorized, Control Unit
- Manual mechanism for regulation of the voltage at the output side.

SD= Step down Transformer, BB= Buck/ Boost Transformer, R= Regulator, M= Servo Motor, C= Electronic Control Circuits.

TECHNICAL SPECIFICATIONS

Input Voltage	9 KV to 13 KV; 50 C/S; 3 Ph, 3 wire (OTHER RANGE ON REQUEST)
Output Voltage	11 kV, 3Ph, 50 C/S; 3 Wire (OTHER RANGE ON REQUEST)
Type of AVR	*Balance Type with Three Phase control * Unbalance Type with Each Phase Control CKT & Mechanism.
Efficiency	99%
Cooling	ONAN
Type	Indoor/Outdoor
Temp.	35 Degree Cs. Above, ambient
Rise Mounting	On Uni-Directional Wheels
Correct Rate	1.25% of Input Voltage
Duty Cycle	100%
Wave form Distortion	Virtually Nil
Over Load Capacity	200% for 1 Minute

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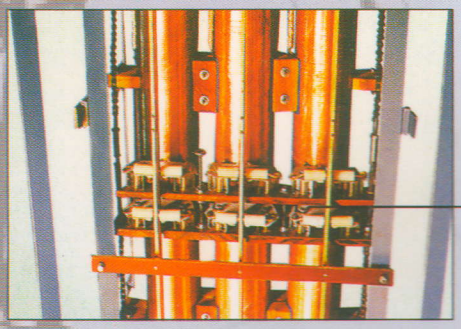
AUTOMATIC VOLTAGE CONTROLLER / SERVO VOLTAGE STABILIZER

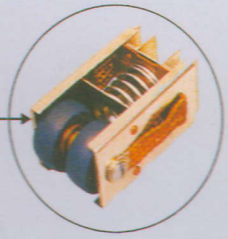
AVC/SVS primarily consists of the following :

Linear, Vertical Rolling Contact Voltage Regulator, Double Wound Buck / Boost Type Series Transformers, Electronic Control Circuit Module Type and Monitoring Panel

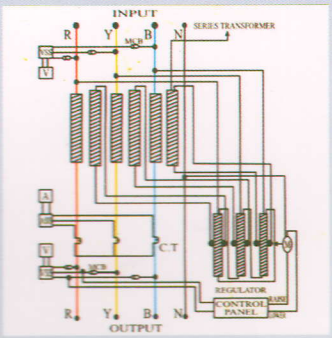
We are using heavy section of electrolytic grade rectangular copper strip instead of cooper wire in our regulator to minimize the losses & increase the efficiency of equipment. We are using self lubricating Carbon Roller Assemblies instead of flat Carbon Brushes which offers more reliability and trouble free performance of the equipment. We are using CRGO lamination to minimize losses and for getting better efficiency of the equipment.



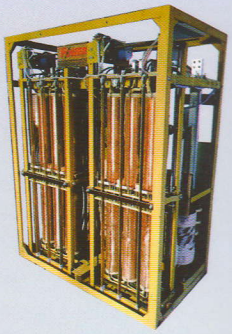
Close view of Regulator



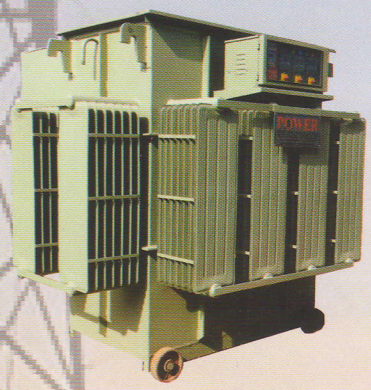
Carbon Roller Assembly



Basic Circuit



Inner view of Stabilizer (Balanced Type)



BALANCED TYPE

UNBALANCED TYPE

SERVO VOLTAGE STABILIZERS (30KVA TO 7000KVA)

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TECHNICAL SPECIFICATIONS OF AVC

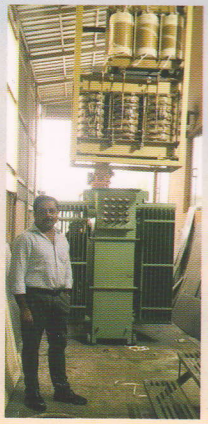
Indian POWER Automatic Voltage Controllers are available in a wide range and various models. The Standard three phase models are suitable for balanced & unbalanced supply and loads. The Standard models confirm to the following specification :

INPUT VOLTAGE	360-450 V	350-460 V	340-460 V	340-480 V	320-480 V	300-500 V
Efficiency (as per calculation)	99.5%	99.3%	99.10%	99%	98.7%	98.10%
Output Voltage	400 V + 1%, 3 Phase, 50Hz					
Output Voltage Adjustment	+5%					
Output Voltage Regulation	+ 1% (at no load / full load)					
Correction Rate	10 V - 15 V / second (or as per requirement)					
Temperature Rise (Max.)	35° C - 40° C above ambient					
Cooling	Naturally Oil Cooled					
Insulation	Class 'A'					
Type	Indoor					
Mode of Operation	Fully Automatic / Semi Automatic / Manual					
Mounting	On Uni-directional Wheel					
Wave form distortion	Nil					
Duty Cycle	100% Continuous					

STANDARD ACCESSORIES

1. Voltmeter with Selector Switch for I/P & O/P
2. Ammeter with Selector Switch
3. MCBs for Control Circuit
4. Lifting Lugs
5. Drain Valve
6. Oil Level Gauge
7. Earthing Terminal
8. Rating Plate
9. Junction Box
10. Thermometer Pocket

* All specifications / calculations are subjected to change due to regular improvements in products without prior notice.

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DRY TYPE DISTRIBUTION TRANSFORMER

Indian POWER

Dry type transformer are non-explosive fire resistant, air insulated, and are cooled by natural circulation of air through ducts provided in the windings. High temperature and high dielectric insulating materials like glass fiber reinforced, nomex insulating tapes are used in such a way that the entire assembly is capable of withstanding high electrical and mechanical stresses with good dissipation of heat causing low temperature rise within the prescribed limit of insulation class.

Standard

The Dry Type transformer are manufactured to comply with National International Standards BIS, IS 11171, IEC 76, IS1180.

Description

The winding are made up of electrolytic Grade, Soft and bright annealed copper conductors covered with nomex insulating tapes. The wound coils are preheating and impregnated with silicon varnish under vacuum pressure and undergo a curing cycle. The low voltage coils are wound over glass fiber reinforced cylinder having high mechanical strength. The high voltage coils are supported over yoke on glazed porcelain or resin insulators. The core is made of CRGO silicon steel laminations duly annealed after shearing and assembled in mitred construction for low "NO LOAD" LOSS.

The yoke frame has adjustable pressure plates to clamp & secure the coils adequately. Lifting arrangements is provide on the top yoke frame so that the core and coil assembly is lifted. OFF-CIRCUIT TAPPING if required are provided on HV winding and terminated on fiber glass terminal board for changing the transformer ratio in "OFF Circuit" position.

Applications

Fire safety and environmental aspects are of increasing importance especially in respect of energy supply. The substitution of oil-filled transformers by dry type transformers is one of the most important step towards it. Dry Type transformer is used when it has to be located near load center and in a fire hazardous place. As there is no oil used in the transformer and special type of fire resistant insulation are used for the windings the fire risk is considerably reduced.

STANDARD SPECIFICATIONS

Capacity	Up to 2500 KVA
No. of Phases	3 Phase
Frequency	50 Hz.
Voltage Range	11 KV & 33KV
Tapping	On Load Tap Changer to provide +5% to -15% Taps in steps of 1.25% on the H.T. Side. Else, Off Circuit Tap Links for ± 5% Taps on H.T. Side in steps of 2.5% each.
Insulation	Class 'F' (for Dry Type Trf.)
Vector Group	Dyn 11
Duty Cycle	Continuous
Winding	Copper Wound
Terminals	As per requirement

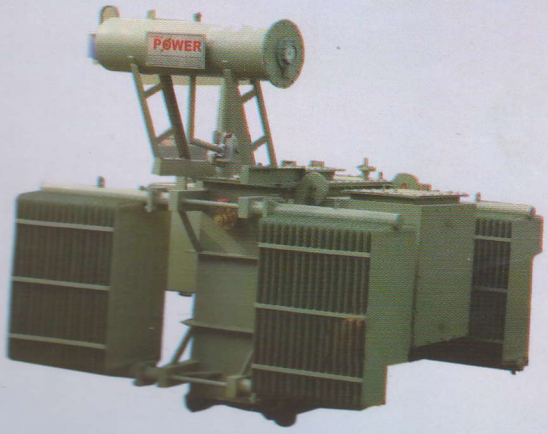
DRY TYPE TRANSFORMERS HAS THE FOLLOWING ADVANTAGE

- More efficient
- Non toxic
- Highly safe
- Non flammable
- Space saving by placing near the load end
- Low Noise
- Low Maintenance
- Can be supplied with off circuit links

Indian POWER

DISTRIBUTION TRANSFORMERS RANGE: 63 KVA to 5000 KVA

Inner view of Distribution Transformer



(11 KV & 33 KV Voltage Class / 433 V)

STANDARD FITTINGS

Indian POWER transformers are designed and tested as per IS:2026, IS 1180, BS-171, IEC-76 & IEC-726

- Monogram Plate
- Rating and Diagram
- 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 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 Temprature Indicator (stem type)
- Externally Operated off Circuit tap changing switch
- Pressure relief valve without electrical contacts
- Sampling Valve (for 2000 KVA & Above Trf. Only)

ACCESSORIES (OPTIONAL)

- LV and HV Cable Boxes
- Winding Temperature Indicator
- Buchholz Relay
- Megnetic oil level gauge
- Marshalling Box
- Disconnecting Chamber
- Oil Temperature Indicator with Electrical Contacts
- Pressure relief valve with electrical contacts

ISOLATION TRANSFORMER

Isolation Transformers are effective for Isolating sensitive equipment's from Line Voltage transients, spikes & DC Leakage etc. They are specially designed for sensitive critical equipment's and stopping such disturbances generated by the noisy equipment load from being injected into the power line. Technically, any transformers that have no direct current path between it's primary & secondary winding provides Isolation.

TECHNICAL SPECIFICATION

Input	Output	Rating Available
415V AC 3 PH	415VAC 3 PH	10 KVA to 2000KVA
or as per requirement		Both Oil & Dry Type

System/Connection	:	Delta/ Star (As per requirement)
Ration	:	1:1 (As per Requirement)
Regulation	:	5%
Power Factor	:	0.75 lead to 0.75 Lag
Insulation Resistance	:	Better than 5 Mega ohm
Coupling Capacitance	:	0.01 PF for 100 Db
Leakage Current	:	Less than 20 Micro Amps
Type of Execution	:	Closed Type
Operating Temperature	:	0° C To 45° C
Type of Cooling	:	ONAN/ Natural Air/ Forced Air

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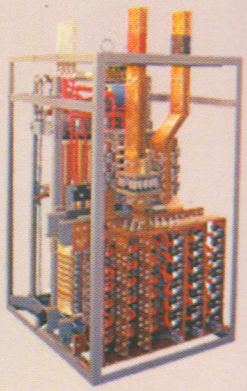
ELECTROPLATING RECTIFIER

BRIEF SPECIFICATIONS

Input Voltage	:	380-440 Volts, 3-Phase 50 Hz AC Supply or any other voltage
Output Voltage	:	Fixed Rated Maximum DC Voltage 0-8V 0-12V 0-16V 0-24V or variable from zero to maximum rated voltage
Output Current	:	Rated maximum DC current
Temperature Rise	:	Less that 45°C above ambient at the top of the oil
Efficiency	:	Depends on voltage and current rating of rectifier



Rectifier is an equipment that coverts AC into DC Supply, Indian POWER make Silicon Rectifier are widely used in Electroplating, Anodising, Hydrogenation and all other electrochemical processes. These are tailor made, covering a wide range from 500 Amps to 20,000 Amps at different output DC voltage as per requirement.

OUR ESTEEMED CLIENTELE

McDonald's, ALCHEMIST, PRIYAGOLD, SEL, asianpaints, DCM TEXTILES, Kurl-on India's largest Selling mattress, Faiveley TRANSPORT, ANCHOR, Cipla, SONALIKA INTERNATIONAL HEAVY DUTY, Venky's, JAYPEE CEMENT, JSL JINDAL STAINLESS, Crompton Greaves EVERYDAY SOLUTIONS, BAJAJSONS LIMITED, Adon agro, SIGMA, CHITKARA UNIVERSITY, ALP AEROFLEX, PUNCOM, FENA BETTER PRODUCTS, CLEANER WORLD, Vardhman, Hindustan Unilever Limited, Siddhivinayak Industries, Jindal Hospital, JLPL Working Towards A Golden Tomorrow, DARA GROUP, POLY PLASTIC, FREUDENBERG INNOVATING TOGETHER, BAJWA DEVELOPERS LTD., THUNDERBOLT, BHARAT ELECTRONICS, tynor, MARVEL Tea, Windlas Healthcare Pvt. Ltd., Sir Ganga Ram Kolmet Hospital, Green Land Cements Pvt Ltd, CDBL, verka Phulo Phalo. Pure Khao Piyo., AMERICAN MACHINE & ROLLFORM TECH, GROZ-BECKERT, Frooti, KUDOS, TATA GLOBAL BEVERAGES, TEHRI TISCON TMT, Steelbird Helmets, BARBEQUE NATION, manav mangal SMART SCHOOL, EXIDE INDUSTRIES LIMITED, SUN PHARMA, HETERO HEALTHCARE LTD, VARUNA

The Power Management Group

Manufactured By: