RECON'S

Solution for Energy Savings & Monitoring

Transformers

Voltage Stabilizers

Rectifier Equipments

An ISO 9001:2008 Certified Company

Recons Power Equipments Pvt. Ltd.

(formerly known as Rectifiers & Controls)

RECON'S

Introduction

Recons Power Equipments Pvt. Ltd. (formerly known as Rectifiers & Controls) an ISO 9001:2008 company was time-honored in the year 1987, and since then the company's principle activities are catering to the needs of the customer with a variety of products with the brand name RECON'S. With the endeavor to deliver not just a product but a concept in the power industry, today the company enjoys its status in the field of Transformers, Servo Voltage Stabilizers and Rectifier Equipments with over thousands of domestic and overseas customers.

Products We Proffer

- Oil Filled Distribution Transformer with Off Circuit Tap Changer.
- Oil Filled Distribution Transformer with Oil Filled OLTC.
- Dry Type (VPI) Distribution Transformer with Off Circuit Tap Links .
- Dry Type (VPI) Distribution Transformer with Air-Break OLTC.
- H.T. Transformer with Built-In Automatic Voltage Stabilizer.
- H.T. Automatic Servo Voltage Stabilizers.
- L.T. Automatic Servo Voltage Stabilizers.
- Package Substations.
- Balancing Transformers.
- Isolation Transformers.
- Induction Transformers.
- Special Purpose Transformers.
- Rectifier Equipments.

Applications

In automated operations, power breakdowns and fluctuations may cause heavy financial losses. Therefore, it becomes immensely important to avoid any such power related problem. RECON'S offers a wide range of Power Control Equipment for industries and commercial enterprises. These equipments find their applications in Engineering Units, Production Plants, Rolling Mills, Processing Units, Tea Estates, Distilleries & Beverages, Oil Plants, Township, Office Buildings, Hotels, Commercial Establishments etc.

Oil Cooled Distribution Transformers

Recon's cover a wide range Oil Cooled Transformers with Off Circuit Tap Changer / On Load Tap Changer (up to 5000 KVA in 11 KV & 33 KV) conforming to the international standards of quality and safety for industries and commercial set-ups. These transformers are designed and developed using latest technologies and can be provided with a variety of terminations so as to suit the requirements for new installation or replacement.

Optimum efficiency is ensured by delicate proportioning of core and winding losses using CRGO M3 to MOH Lamination, Electrolytic Grade pure copper, with Transposition in L.V. coil for current sharing in parallel Conductors, Electric grade press paper, boards and mineral oil. Thus better regulation is achieved resulting in longer life. Careful designing also reduces noise level to the minimum.

Transformer with Off circuit tap changer

Transformer with OLTC

Standard Fittings
(for Oil Cooled Transformers)

- Rating & Diagram plate
- Earthing terminals.
- Lifting lugs
- Thermometer pocket.
- Oil Conservator with drain plug
- Air release hole with plug.
- Oil Level indicator.
- Explosion vent with diaphragm.
- Top-filter Valve
- Inspection cover.
- Silica gel breather
- Drain –cum-bottom-filter valve.
- Cooling radiators
- Uni / Bi- directional rollers.

Optional Devices
(for Oil cooled Transformers)

- Bucholtz relay with alarm and trip contact.
- Oil temperature indicator with alarm and trip contacts.
- Winding temperature indicator with alarm and trip contacts.
- Magnetic oil level gauge with alarm & trip contacts.
- Marshalling box to house O.T.I. and W.T.I
- RTCC (Remote Tap Changer Control) Cubicle.
- Electronic Automatic Voltage Controller.
- Pressure Release Valve.
- Cable Box on H.T. & L.T. Side.

Standard Specifications:

Capacity	Up to 5000 KVA
No. of Phase	3 Phase
Frequency	50 Hz.
Voltage Range	11 KV / 22 KV / 33 KV
Tapping	**On Load Tap Changer** to provide +5% to15% Taps in steps of 1.25% OR **Off Circuit Tap Changer** for ± 5% Taps in steps of 2.5% each, on HT side.
Insulation	Class 'A'
Vector Group	Dyn 11
Duty Cycle	Continuous
Winding	Copper Wound
Terminals	As per required

**All the accessories shown do not form part of the standard equipment.*

Dry Type
Distribution Transformer

RECON'S covers a wide range of Dry Type (VPI) Transformer with Off Circuit Tap Links / On Load Tap Changer (up to 2500 KVA in 11 KV Class.) conforming to the international standards of quality and safety for industries and commercial set-ups. These transformers are designed and developed using latest technologies and can be provided with a variety of terminations so as to suit the requirements for new installation or replacement.

Dry Type Transformer with OLTC

Dry Type Transformer with OCTL

RECON'S offers technologically advanced range of Dry Type (VPI) Transformers using CRGO M3 to MOH Laminations, Electrolytic Grade copper. These transformers are designed for trouble-free performance, confirming to IS – 11171 with low power loss and low noise. Use of modern manufacturing techniques and optimum utilization of active materials ensures cost effectiveness, reliability and a long trouble-free performance.

RECON'S Dry Type (VPI) Transformers are fitted in enclosure for Indoor/Outdoor installations and are totally maintenance free and safe from fire as the material used is metal, ceramic, NOMEX and resin. It is environment friendly as there is no oil, hence handling becomes easier and there are no chance of spillages and leakage and there is minimal nontoxic smoke in case of fire. Use of Class 'F' / 'H' insulation increases the heat bearing capacity & enables the use of the transformer in humid and chemically polluted atmosphere also.

Applications – Fire safety and environmental aspects are of increasing importance. The substitution of oil filled transformers by dry type transformers is one of the most important steps towards it. Dry Type transformer is used when it has to be located near load center and in a fire hazardous place. Special type of fire resistant insulation is used for the windings thus reducing the fire risk considerably.

**All the accessories shown do not form part of the standard equipment.*

H.T. Transformer with Built In Automatic Voltage Stabilizer

(Transformer with Built In AVR)

Most of the times, it has been realized that even after installing Distribution transformer, the problem of fluctuating voltage remains on the L.T. side, resulting in improper function of electrical systems. H.T. Transformer with Built-In H.T. Automatic Voltage Stabilizer provides total solutions for voltage Regulation and Stabilization. The unit is basically a combination of H.T. Automatic Voltage Stabilizer and standard H.T. Distribution Transformer. These are available up to 5000 KVA in 11 KV & 33 KV class.

Standard transformers can correct limited voltage variations and cannot regulate the voltage in 'on load' condition. The only smart way to tackle this problem is by installing highly efficient H.T. Transformer with Built-In H.T. Automatic Voltage Stabilizer. These systems can be used in various industrial and commercial applications.

Working

The fluctuating voltage from electricity authority input is initially stabilized by the Built-In H.T. Automatic Voltage Stabilizer and then fed to the Transformer, providing constant L.T. Output within ± 1% accuracy.

Advantages

- Better Efficiency
- Protection of Motors
- Reduced Installation Cost
- Reduced Electricity Bill

Salient Features

- Compact Design
- Suitable for corrosive industrial sites
- Minimum Power Losses
- Low Maintenance
- Trouble Free operation
- Long service Life
- Space Saving

**All the accessories shown do not form part of the standard equipment.*

H.T. Automatic Voltage Stabilizers
(HT AVR)

H.T. Automatic Voltage Stabilizers are used to get stable input voltage, irrespective of the voltage received from electricity authorities. Additionally, these stabilizers also prevent the transformer and other electrical equipment from getting overloaded. Wide voltage variation ranges are taken care continuously and in on load condition. The variations of more than ± 1% of the rated output voltage are sensed through solid state relay. This relay operates on 230V, 1 Ø supply and sends signals to the stabilizer's motor, which drives the roller mechanism in a direction to bring voltage to the rated output voltage.

Construction

H.T. Automatic Servo Voltage Stabilizers have helical coils mounted on a conventional laminated core. Carbon rollers are assembled on a fiber glass carrier board and are traverse to the length of the coil track. The rollers are connected to the electric output terminals. Nearby the regulating coil, a number of compensating winding is connected in parallel, which are short circuited to reduce the effect of core-flux fringing. It also keeps the reactance of the regulator constant at any position of the rolling contact.

Why RECON'S Stabilizer Should be installed

- Energy saving is nearly 10% to 20%.
- Higher Efficiency (above 98%) & Minimum Load Losses.
- On Load Step Les voltage variation.
- Increased productivity by reducing breakdown periods of the machines.
- Low replacement cost.
- Extra depreciation claim as per Income Tax Act.
- Long Service life.

**All the accessories shown do not form part of the standard equipment.*

L.T. Automatic Voltage Stabilizers
(L.T. AVR)

L.T. Automatic Voltage Stabilizers hold its potential for units having either L.T. Supply or Low capacity H.T. Connections. L.T. AVR prevents direct exposure of fluctuating voltage to critical electrical equipment in any establishment. It also prevents frequent tripping of overload relays to ensure uninterrupted production. These are designed for Balanced Supply and Unbalanced Loads as well as Unbalanced Supply and Unbalanced Loads. The range of input supply for stabilizer depends upon the voltage condition at the supply point. However, some standard ranges for L.T. Automatic Voltage Stabilizers are as under.

Input Voltage Range	**300V - 460V 340V - 460V 360V - 460V**
Output Voltage	**400 / 415 ± 1%**

Auto & Buck Boost
Transformer Assembly

Salient Features

- Corrects voltage automatically and continuously.
- Protects costly manufacturing equipment.
- Less production losses and better efficiency.
- Reduction in electricity bills.
- Saves diesel cost as generator is not required to run at high/low voltages.
- Provides long service life.

Advantages

- Reduction in breakdown of the electrical equipment
- Energy saving ranging from 10 % to 20 %
- Extra depreciation from Income Tax

**All the accessories shown do not form part of the standard equipment.*

Package Sub-Station

It consist of three main equipments i.e. Transformers, MV Switchgear & LV Switchgear contain in separate compartments with weather proof housing. Each compartment is individually accessible by their own door from outside.

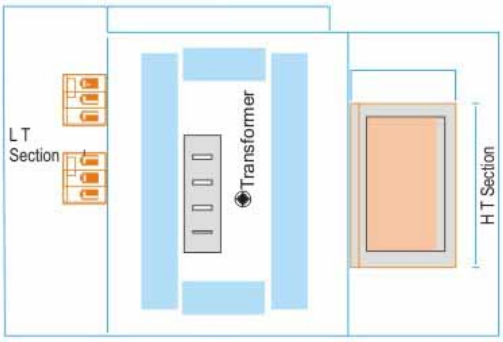
PSS is provided with four lifting eyes located on top for easy lifting and positioning of the whole unit at site. Only the incoming & outgoing cables need to the connected at site.

Made as per customer specific requirement.

The following items can be accommodated in LV Compartment:

- Moulded Case Circuit Breakers (MCCB's).Air Circuit Breakers (ACB's).
- LV Fuse Switches.
- Meters.

The PSS can be manufactured with Transformer rating upto 1600 KVA (Dry as well as Oil Cooled type).



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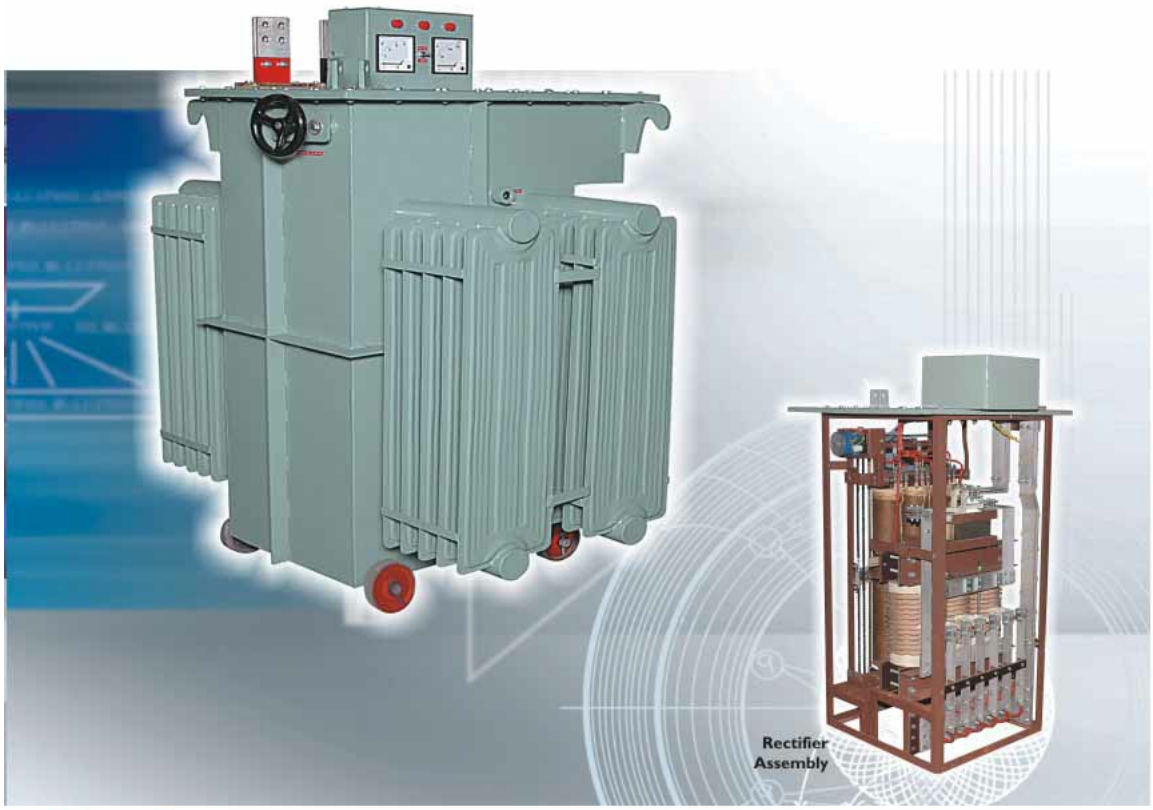
Rectifiers

RECON'S Silicon Rectifiers have been designed to fulfill the needs in electroplating, anodizing, hydrogenation and other electrochemical processes. These Silicon Rectifier Equipments are completely tailor made and are available in a range between 500 Amps to 15000 Amps at different output DC voltages. The Silicon Rectifiers are available in two different models depending upon the variable DC output voltage i.e. 40-100% in 15 steps and 0-100% step less on load control.



Salient Features

- Designed for 100% continuous duty cycle
- Compact design for space saving
- Lesser power consumption
- Negligible Maintenance
- Tested at each and every stage of manufacturing
- Liberal design & rigorous testing of the equipment
- Enables the trouble free service for long life

Some Standard Ratings Manufactured

On Load Volts	Current in Amperes
8	250, 500, 750, 1000, 2000, 3000 up to 15000
12	250, 500, 750, 1000, 2000, 3000 up to 15000
16	250, 500, 750, 1000, 2000, 3000 up to 15000
24	250, 500, 750, 1000, 2000, 3000 up to 7500

Non - Standard Ratings can be quoted on customers demand

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The Company

The integrated production facility is located at Faridabad (NCR), next to New Delhi, national capital of India. Recon's has its own facilities for accomplishing requirements derived for production and delivery. Having state-of-the-art infrastructure, the entire set-up is empowered with newest technologies. The streamlined production facility comprises of winding, fabrication, painting, assembly, and testing. Vast facilities ensure flexibility, cost effectiveness and operations channelization. Constant redesigning in production lines and adaptation of new methods in manufacturing systems allows expansion in terms of quality and volume. All the Power Control Equipments conform to latest international standards for quality and safety. To adjudge the quality of equipments, there is a dedicated, in-house quality check department, well-equipped with advanced testing machines, to monitor each stage of production for ensuring zero-defect systems.

Infrastructure

Certifications and Accolades


BSCIC

BSCIC Certifications Pvt. Ltd.

Certificate Of Registration

QUALITY MANAGEMENT SYSTEM

This is to certify that:

RECONS POWER EQUIPMENTS PVT. LTD.
PLOT NO. 38, SECTOR – 25
FARIDABAD, HARYANA, INDIA

Survey granted the certificate number: BN3833/3723/0511

and subsequent to the assessment conducted on 21 May 2011 and the organization found operating a Quality Management System which complies with the requirements of ISO 9001:2008 for the following Scope

Design, Manufacture and Supply of Rectifier Equipments, HT, LT Voltage Stabilizers, HT Transformers with Built-in Voltage Stabilizers, Distribution - Power Transformer & Industrial Transformers


Faridabad Chamber of Commerce & Industry

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By

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ITID QUALITY EXCELLENCE AWARD


NSIC

D&B

This is to certify that
Recons Power Equipments Private Limited
Plot No. 38, Sector 25,
Faridabad - 121 004, Haryana, India
is now part of the
Dun & Bradstreet Global Database
and has been assigned the
D&B D-U-N-S® Number: 65-056-0852

For Dun & Bradstreet Information Services India Private Limited

Authorised Signatory

July 12, 2011

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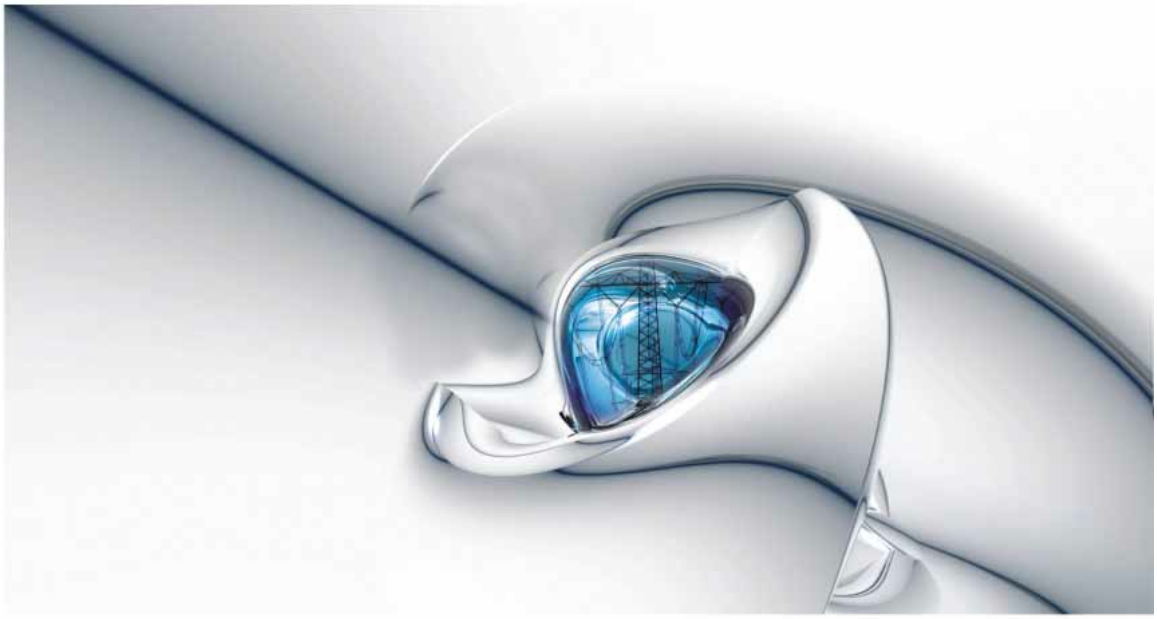
www.reconsindia.com



Recons Power Equipments Pvt. Ltd.

(Formerly known as **Rectifiers & Controls**)

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