

Introduction

Wherever electricity is used, **SAMSTAT** has helped make it more versatile, By providing an easy and efficient source feeding power at variable voltage. If you are not yet familiar with **SAMSTAT** Control System, you are missing some important benefits of using electric power.

SAMSTAT is Continuously Variable Voltage Autotransformers. They usually form part of system in which other components such as transformers, rectifier stacks, etc. are used as power components, and error sensing devices and servo-drive motors used for automatic operation. Our engineers are well experienced in such applications and are always available for consultation to prospective users.

SAMSTAT is an autotransformer, using a round strip wound core, instead of the usual E & I laminations. The entire winding is in a single layer, with a small gap left between start and end of the winding.

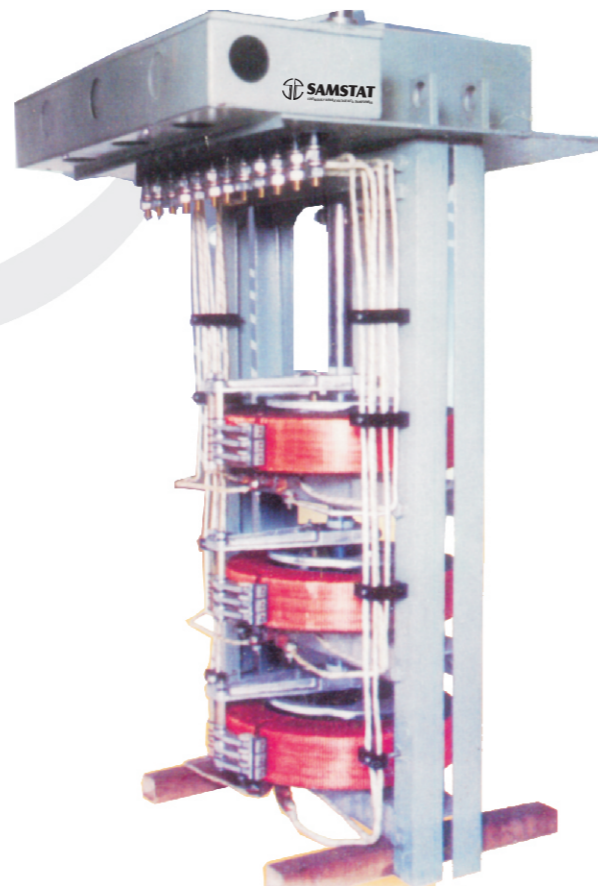
The proportion between iron section and copper turns is such that at the maximum applied AC voltage of 50 Hz, it does not get saturated and is designed to take only a small magnetizing current. The applied voltage is uniformly distributed over the winding. Thus, if 240 Volts are given to 240 turns, every turn shares one volt. Voltage between, say 10 consecutive, Turns is thus, 10 Volts.

By carefully baring the insulation of the wire over one face, a sliding brush is made to contact any turn of the winding. The output is taken between one end and the brush arm. The brush, while moving, contacts the next turn before it breaks away from the previous. Thus, there is no interruption in output voltage, while brush slides along the winding's contact surface.

The "Shorting" that the brush produces between the two turns, does produces

between the two turns, does produce a current that circulates between them, but it is quite small to produce any undesirable effects like heating or sparking. This is because, the voltage between the two consecutive turns is very small. Being a true transformer, the maximum voltage available is made about 12% higher than the input voltage.

The Maximum Current that can be drawn depends on the size of the wire used. The important specification of **SAMSTAT** model is the maximum current it can give out to the load. Models from 0.7 Amp to 200 Amps are made.



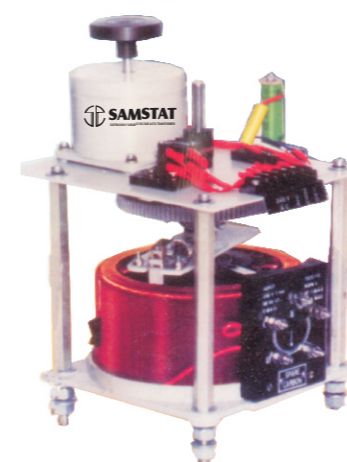
HOW ABOUT SAMSTAT FOR 3 PHASE SUPPLY.

They are made by connecting three single phase **SAMSTAT** together. The brush arms are moved by a common shaft. The three windings are connected in Star and the Star point is connected to the neutral of the system. Thus, a 3 Phase voltage variable from zero to 440 Volts is obtained.

SAMSTAT are available with motor-drive. The type of motor used for driving is specially made for this application. It is 240 Volts AC motor operating with speed of 60 RPM. Synchronous

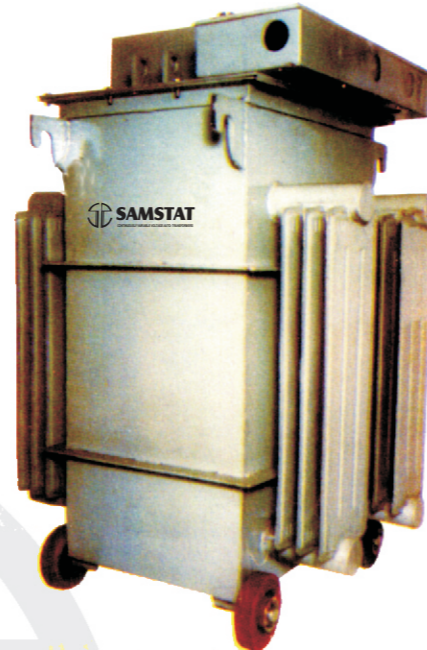
at 50 Hz. It is instantly reversible and can be stopped without overrun. Gears between motor and **SAMSTAT** shaft are used to get lower speed. The time

taken for the full sweep is the specification used, e.g.. 15 seconds, 30 seconds etc. That is the time taken for the brush to move from zero voltage position to



Salient Features:

Rugged Construction
Excellent Regulation
High Efficiency
No Wave form Distortion
Silver Plated Commutator
Over-load Capacity
Low Operating Torque
Smooth and Linear Output
Low Magnetizing Current
Negligible Magnetizing Current
Negligible Maintenance
Trouble-Free Long Life



Models

(A) Air cooled Variable Auto Transformer (Single Phase/ Two Phase & Three Phase)

- 1) Open / Flush Panel Mounting Type
- 2) Closed / Enclosed
- 3) Motorized Variable Auto transformer

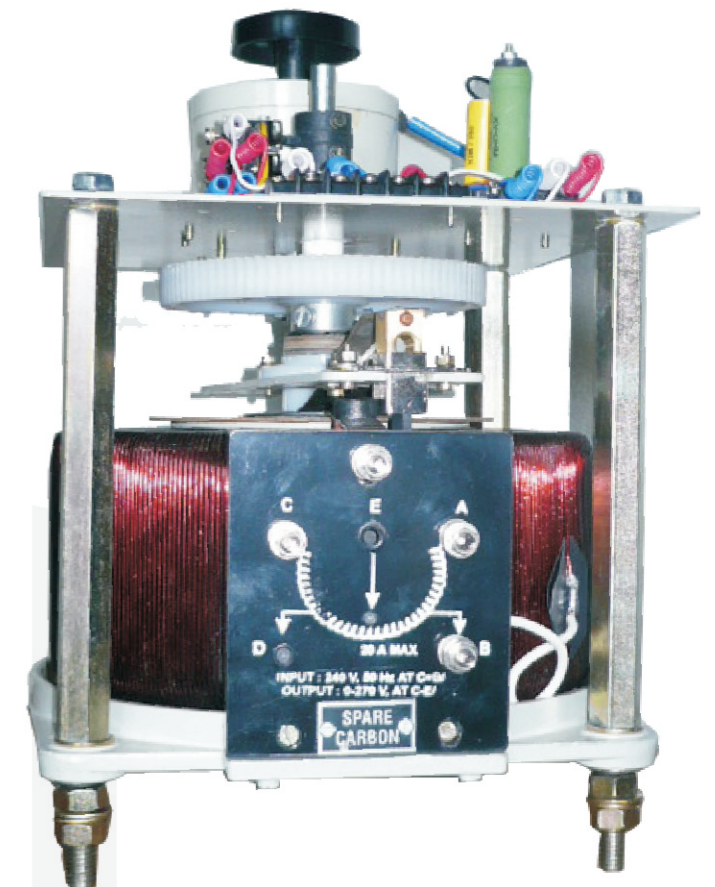
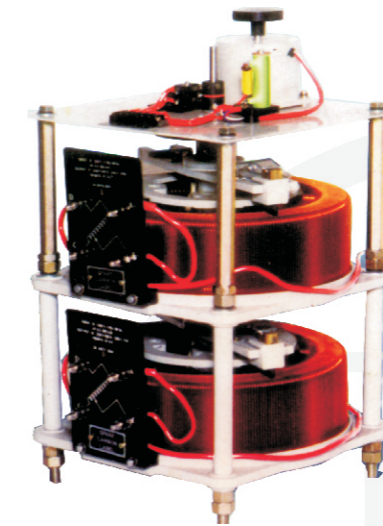
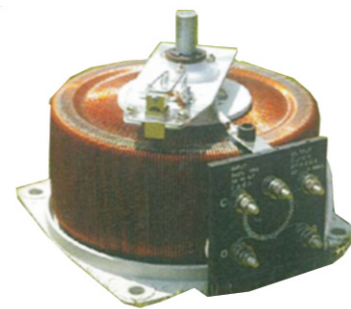
B) Oil Cooled Variable Auto Transformer (Single Phase/ Two Phase & Three Phase)

- 1) With Tank/ Without Tank.
- 2) Motorized Variable Auto Transformer.

C) We make Variacs as per Customer design or Specific Design by Customer Standard Current Rating.

Standard Current Rating

- (A) Air cooled Type 2 Amp to 40 Amp Single Phase / Two Phase / Three Phase
(B) Oil cooled Type 2 Amp to 2000 Amp Single Phase / Two Phase / Three Phase



Our Products Range

- ◆ Low Tension Transformer
- ◆ Oil Cooled Instrument Transformer
- ◆ Resin Cast Instrument Transformer
- ◆ High Voltage Test Equipments
- ◆ Impregnation Plant for Epoxy Casted C.T.'s & V. T .'s
- ◆ Control Panels
- ◆ Samstat Single Phase & Three Phase air Cooled / Oil Cooled Variable Voltage Auto - Transformers
- ◆ CT/PT Testing Panel
- ◆ Fluidized Electrostatic Powder Coating Equipments.
- ◆ Servicing & Repairing of Instrument of Transformers.

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