

MACROPLAST TRANSFORMERS

Four Decades of Excellence

An ISO 9001:2015 Certified Company



www.macroplasttransformers.com



Leading Manufacturer & Exporter of Transformers

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About us

Macroplast Transformers is an ISO 9001:2015 certified company engaged in the Designing, Manufacturing and Testing of high-quality transformers since 1983. We have been manufacturing our products at our state-of-the-art facilities in Greater Noida, U.P, India and Dar-es-Salaam, Tanzania, Africa. Besides catering for the domestic market, we are exporting our products to countries in Asia, Africa, Middle East and European Union.

With our state-of-the-art infrastructure and team of experienced engineers, technicians, IT and administrative professionals, we have been able to leave an indelible mark of satisfaction and trust on our esteemed customers.

We believe in breeding the spirit of technological innovation and specialize in designing and manufacturing customized transformers based on the requirements of our esteemed clients. That is how we invariably score high on customer satisfaction translating into repeat business.

Quality Assurance

Being a quality focused organization, our first and foremost objective is to satisfy our customers at all levels. Our quality team ensures that the products are manufactured as per the specifications provided by our customers and in accordance with National and International standards.

We strongly believe in the power of innovation and Research & Development is at the core of our focus. We invest greatly in designing the transformers in order to achieve optimum quality products that meet our customer's satisfaction level. All of our products are Type Tested in Government-Accredited Testing Laboratories, in accordance with the relevant IS & IEC Standards.



Our Infrastructure

Manufacturing Facilities

- ✦ Manufacturing units in India and Africa to serve our esteemed customers all around the world
- ✦ Dedicated plants for production of different types of Transformers
- ✦ State-of-the-art Dehydration Chambers
- ✦ Dedicated Oil Filtration Plants
- ✦ In-house Oil Storage facilities
- ✦ In-house Steel Fabrication Unit with Shot Blasting and Painting facility
- ✦ 24/7 Power Back-up to ensure continuous work flow



Testing Facilities

- ✦ Dedicated Testing Labs for testing different types of Transformers
- ✦ High Voltage and Temperature Rise Testing facility to test Transformers up to 132 KV System Voltage
- ✦ All Transformers are tested with the help of most advanced and accurate Testing Instruments
- ✦ All Routine and Type Tests are performed in accordance with the relevant IS & IEC Standards

USPs of 'MPL' Make Transformers

- ✦ Highly efficient and durable
- ✦ Long lasting with guaranteed service life of at least 15 years
- ✦ Best quality at most reasonable price
- ✦ Customized as per the client's requirement
- ✦ Most of the components produced 'In House'
- ✦ In House steel fabrication facility



Distribution & Power Transformers

(UPTO 5 MVA, 33 KV CLASS)

Distribution Transformers are used for supplying low voltage power to the consumer loads.

Power Transformers are used for transmission of power from the generating stations and sub-stations.

ADVANTAGES

- ✦ Steps down the voltage to a level used by the consumer
- ✦ Controlling and stabilizing the voltage transmission
- ✦ No starting time required
- ✦ Efficiency is very high (greater than 98%)
- ✦ Static Machine with no moving parts hence maintenance cost is very low
- ✦ Provides isolation to the ground

TECHNICAL SPECIFICATIONS

Power Rating	Upto 5000 KVA (5 MVA)
Input Voltage(HV Side)	Upto 33 KV
Output Voltage(LV Side)	Upto 11 KV
Type	Hermetically Sealed / Free Breathing
Cooling Method	Oil Cooled / Air Cooled
Rated Frequency	50Hz
Tap Changing Method	On-Load / Off-Load
Vector Group	As per client's requirement
No-Load Losses	As per client's requirement
Load Losses	As per client's requirement
Percentage Impedance	As per client's requirement
Applicable Standard	IS 1180, 2026 & IEC 60076

FITTINGS & ACCESSORIES

- ✦ HV & LV Bushings
- ✦ HV & LV Terminals
- ✦ HV & LV Terminal Connectors
- ✦ Silica Gel Breather
- ✦ Arcing Horns
- ✦ Oil Level Indicator
- ✦ On-Load or Off-Load Tap Changers
- ✦ Cooling Fans & Radiators
- ✦ Oil Temperature Indicator (OTI)
- ✦ Winding Temperature Indicator (WTI)
- ✦ Buchholz Relay
- ✦ Marshalling Box
- ✦ Surge Arresters with mounting Brackets (Optional)



1000 KVA, 33 KV
Distribution Transformer



200 KVA, 11 KV
Distribution Transformer



50 KVA, 33 KV
Distribution Transformer



Power Transformer

Current Transformers

(UPTO 132 KV CLASS)

Current Transformers are used to step down the current from a high value (say 200 A) to a lower value (1 or 5 A) suitable for measuring instruments like ammeter, energy meters and protective relays.

ADVANTAGES

- ✦ Provides electrical isolation between high voltage power circuit and measuring instruments
- ✦ Reduces insulation cost of measuring instruments
- ✦ Ensures the safety of operators
- ✦ Reduces utility losses
- ✦ Protects the device during fault conditions

TECHNICAL SPECIFICATIONS

System Voltage	Upto 132 KV
Primary Current	Upto 3000 A
Secondary Current	1 A or 5 A
Type	Oil Immersed / Dry Type
Rated Frequency	50 Hz
Accuracy Class (Metering)	0.2s, 0.2, 0.5s, 0.5, 1
Accuracy Class (Protection)	3P, 5P, 10P
Rated Burden	2.5 VA to 50 VA
Applicable Standard	IS 16227, 2705 IEC 61869, 60044

FITTINGS & ACCESSORIES

- ✦ Porcelain Bushings
- ✦ Primary & Secondary Terminals
- ✦ Terminal Connectors
- ✦ Oil Level Indicator
- ✦ Nitrogen Filling Valve
- ✦ Pressure Release Device
- ✦ SS Bellows (optional)
- ✦ Junction Box (optional)



33 KV Dead Tank Current Transformer



33 KV Double Bushing Current Transformer



66 KV Live Tank Current Transformer



MV Current Transformer (Resin Cast)



LV Current Transformer (Resin Cast)



LV Current Transformer (Tape Wound)

Voltage Transformers

(UPTO 132 KV CLASS)

Voltage Transformers are used to step down the voltage from a high value (say 33000 V) to a lower value (110 V) suitable for measuring instruments like voltmeters, energy meters and protective relays.

Residual Voltage Transformers (RVTs) are special type of Voltage Transformers used to protect the Capacitor Banks from Earth fault.

ADVANTAGES

- ✦ Provides electrical isolation between high voltage power circuit and measuring instruments
- ✦ Reduces insulation cost of measuring instruments
- ✦ Ensures the safety of operators
- ✦ Reduces utility losses
- ✦ Protects the device during fault conditions

TECHNICAL SPECIFICATIONS

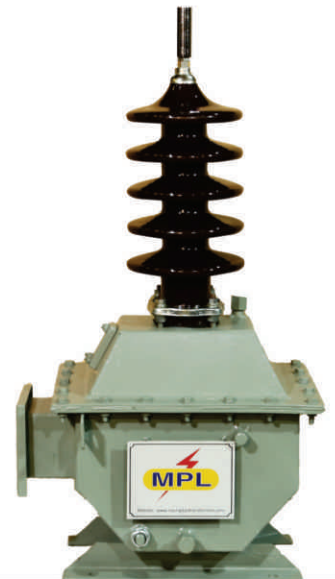
System Voltage	Upto 132 KV
Primary Voltage	Upto 132,000 V
Secondary Voltage	110 V, 220 V
Type	Oil Immersed / Dry Type
Rated Frequency	50 Hz
Accuracy Class (Metering)	0.2, 0.5, 1
Accuracy Class (Protection)	3P, 5P, 10P
Rated Burden	10 VA to 1000 VA
Applicable Standard	IS 16227, 3156 IEC 61869, 60044

FITTINGS & ACCESSORIES

- ✦ Porcelain Bushings
- ✦ Primary & Secondary Terminals
- ✦ Terminal Connectors
- ✦ Oil Level Indicator
- ✦ Nitrogen Filling Valve
- ✦ Pressure Release Device
- ✦ Junction Box (optional)



66 KV Voltage Transformer with Conservator



33 KV Voltage Transformer without Conservator



MV Voltage Transformer (Resin Cast)



Residual Voltage Transformer (RVT)

Combined CT-VT Metering Units and Cubicles

(UPTO 33 KV CLASS)

- ✦ Combined CT-VT Metering Units and Cubicles are used for metering at high voltage side of the distribution system.
- ✦ Combined CT-VT Metering Units are Oil Immersed type whereas Combined CT-VT Metering Cubicles are Dry type in construction.
- ✦ Combined CT-VT Metering Units consist of 03 nos. single phase polyester / paper insulated CTs and 01 no. three phase polyester / paper insulated VT enclosed inside a metal tank filled with Transformer oil.
- ✦ Combined CT-VT Metering Cubicles consist of 03 nos. single phase resin cast CTs and 01 no. three phase resin cast VT enclosed inside a metal cubicle in the lower compartment. The three phase energy meter is installed in the upper compartment.

ADVANTAGES

- ✦ Indoor / Outdoor installation
- ✦ Prevents power theft
- ✦ Compact unit - easy to handle
- ✦ Light weight and compact
- ✦ Economical

TECHNICAL SPECIFICATIONS

System Voltage	Upto 33 KV
Type	Oil Immersed / Dry Type
Rated Frequency	50 Hz
Accuracy Class (CT)	0.2s 0.2, 0.5s, 0.5, 1
Rated Burden (CT)	2.5 VA to 30 VA
Accuracy Class (VT)	0.2, 0.5, 1
Rated Burden (VT)	10 VA to 50 VA
Primary Current	Upto 1000 A
Secondary Current	1 A or 5 A
Primary Voltage	Upto 33 KV
Secondary Voltage	110 V
Applicable Standard	IS 16227, 2705, 3156 & IEC 61869, 60044

FITTINGS & ACCESSORIES

- ✦ Porcelain Bushings
- ✦ Primary & Secondary Terminals
- ✦ Terminal Connectors
- ✦ Oil Level Indicator
- ✦ Nitrogen Filling Valve
- ✦ Pressure Release Device
- ✦ Surge Arresters with mounting brackets (optional)
- ✦ Energy Meter (optional)
- ✦ Meter Box (optional)



Combined CT-VT
Metering Unit



Combined CT-VT
Metering Cubicle

LV Electrical Panels

- ✦ LV Electrical Panels consist of low voltage switchgear devices which are used to protect the costly equipment during fault condition.
- ✦ Used for metering and protection
- ✦ Dry type units, used for indoor applications.
- ✦ The enclosure is made up of CRCA sheet of varying thickness with switchgear devices and energy meter installed inside it.

ADVANTAGES

- ✦ Protects costly equipment during fault condition
- ✦ Low maintenance cost
- ✦ Less in weight and volume
- ✦ Compact and easy to handle
- ✦ Economical

FITTINGS & ACCESSORIES

- ✦ Bus Bars (Copper/Aluminium)
- ✦ MCBs / MCCBs
- ✦ Terminal Blocks
- ✦ Low Voltage Current Transformers
- ✦ Surge Arresters
- ✦ Protection relays
- ✦ Energy Meter (optional)



Low Voltage Electrical Panel

Servo Voltage Stabilizers

(UPTO 5 MVA)

- ✦ Servo Voltage Stabilizer is a servo motor-controlled device used to provide a constant voltage at the output within a specified range of input voltage.
- ✦ Main parts of Servo Voltage Stabilizer are :
 - Dimmer
 - Buck Boost Transformer
 - Synchronous Motor
 - Contactor or Relay
 - MCB, MCCB
 - Carbon Brush
 - Electronic Circuit

ADVANTAGES

- ✦ High output voltage correction accuracy of $\pm 1\%$
- ✦ Saves power
- ✦ Switch less operation
- ✦ High load capacity
- ✦ Perfect voltage stabilization to prevent intricate machines used in hospitals and industries from getting damaged due to voltage fluctuations

TECHNICAL SPECIFICATIONS

Power Rating	Upto 5000 KVA (5 MVA)
Input Voltage Range	150 V to 480 V (3-Phase)
Output Voltage Range	380 / 400 / 415 / 430 V (3-Phase)
Type	Dimmer Type / Roller Type
Cooling Method	Oil Cooled / Air Cooled
Rated Frequency	50 Hz
Duty Cycle	Continuous 24 hours
Efficiency	Greater than 98%
Operation	Auto / Manual
Applicable Standard	IS 9815, 2026 & IEC 60076

FITTINGS & ACCESSORIES

- ✦ Input & Output Terminals
- ✦ Digital Display
- ✦ Changeover switch
- ✦ MCB, MCCB
- ✦ Oil Level Indicator



Servo Voltage Stabilizer
(Dimmer Type)



Servo Voltage Stabilizer
(Roller Type)

STEEL FABRICATION ITEMS

+ **Junction Box for CT & PT**

The Junction box is used for housing all the secondary wiring of either CT or PT at one place. It is reachable by the operator to do the connections effectively and ensures his safety. Our CT and PT Junction boxes are manufactured using high quality steel, powder coated and fitted with high grade terminal blocks for durability and efficient performance.

+ **Marshalling Box for Transformers**

Marshalling Box is used for housing the indicating instruments. In addition, all the secondary wiring from current transformers, relays, oil level gauges etc., are terminated on to terminal blocks, from which cables can be taken to the supply and control connections.

+ **Meter Box for Combined CT-VT Metering Units**

Meter Box is used for housing the Energy Meter along with Terminal blocks. All the secondary wiring of the Combined CT-VT Metering Unit are terminated on to terminal blocks, from which cables can be taken to the supply and control connections of the Energy Meter.

+ **DT Meter Box**

The LV cables of Distribution Transformers are passed through the window of Ring Type CTs installed inside the lower compartment of DT Meter Box. The energy meter is housed in the upper compartment. The secondary wires of CTs are brought from the lower compartment to the upper compartment through cable glands for connection with the Energy meter.

+ **Supporting Structures**

Supporting Structures are used for mounting CTs, PTs & Transformers. 'Macroplast' manufactures steel supporting structures which are hot dip galvanized and have a long life.



CT-PT Junction Box



Meter Box



DT Meter Box

Repair & Maintenance of Transformers

With the expertise in designing, manufacturing & testing of transformers for the last four decades, Macroplast has also started undertaking repair & maintenance works of damaged Current Transformers, Potential (Voltage) Transformers & Distribution Transformers. Rectification work of the transformer is done after proper study and analysis of the fault that took place in the transformer and employing suitable measures to rectify the same in the best possible and most economical manner.

INDIAN CLIENTS

- ✦ Larsen & Toubro. Ltd. (L&T)
- ✦ Bajaj Electricals Ltd. (BEL)
- ✦ Vindhya Telelinks Ltd. (Birla Group)
- ✦ National Thermal Power Corporation (NTPC)
- ✦ Steel Authority of India Ltd. (SAIL)
- ✦ IRCON International Ltd. (Indian Railways)
- ✦ Bharat Heavy Electricals Ltd. (BHEL)
- ✦ Power Grid Corporation of India Ltd. (PGCIL)
- ✦ Reliance Energy (Reliance Group)
- ✦ SMS Infrastructure Ltd.
- ✦ State Electricity Boards (SEB's)

INTERNATIONAL CLIENTS

- ✦ Rural Electrification Agency (REA)
- ✦ Tanzania Electric Supply Company (TANESCO)
- ✦ Kenya Power Lighting Company (KPLC)
- ✦ Ceylon Electricity Board (CEB)
- ✦ Lanka Electricity Company Pvt. Ltd. (LECO)
- ✦ Nepal Electricity Authority (NEA)
- ✦ Zimbabwe Electricity Transmission & Distribution Company (ZETDC)
- ✦ Zambia Electricity Supply Corporation Ltd. (ZESCO)
- ✦ Uganda Electricity Distribution Company Ltd. (UEDCL)
- ✦ Public Electricity Company (PEC, Yemen)
- ✦ UMEME Ltd., Uganda

INDIAN CLIENTS



INTERNATIONAL CLIENTS





MACROPLAST TRANSFORMERS

Distribution & Power Transformers | Combined CT-VT Metering Units & Cubicles
Servo Voltage Stabilizers | Current Transformers | Voltage Transformers | Steel Fabrication Items
Electrical Panels | Repair & Maintenance of Transformers

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