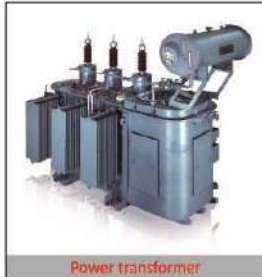




Distribution oil-filled transformer with off-circuit tap switch



Distribution transformer with corrugated tank



Power transformer



Dry type transformer with on-load changer



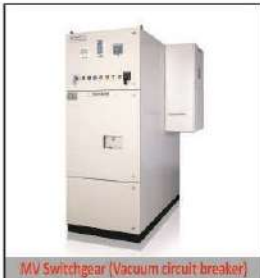
Dry type transformer with off-circuit tap links



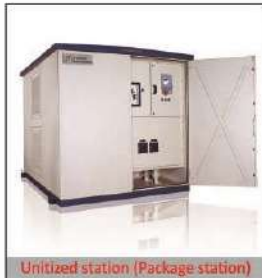
Furnace duty transformer



Cast resin transformer



MV Switchgear (Vacuum circuit breaker)



Unitized station (Package station)

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# CAST RESIN TRANSFORMER



to MS, MOH and ZDKH types

- Electric circuit: copper 99.9% pure electric grade, foil for LV and strip for HV, duly casted with resin under vacuum
- Dielectric circuits: Nomex glass fibre components along with resin casted components
- Thermal Circuit: natural cooling through effective axial and radial ducts and air vent between LV to HV and LV to Core

## Specific features

- Design conforms to relevant standards IEC 76, IEC 726, IS 11171, IS 2026 and as per any other international standards
- Designed to withstand short circuit forces, thermal stresses and electrical impulses. Low partial discharge
- Low load power losses and low noise
- Fire retardant, compact and best suited for indoor installations
- Installation can be very close to load center thereby LT cable cost saving
- Advanced manufacturing techniques to ensure cost effectiveness
- Reliable, user friendly, easy to install and occupies less space

## Specification

- Cast resin dry type transformer  
11kV / 433V, 22kV/433V, 33kV/433V, 3 Phase, 50 Hz
- Off circuit tap links  $\pm 5\%$  in steps of 2.5%
- Class F and H insulation
- HV Delta connected, LV Star connected with Dyn 11 vector group / as per customer specification
- Natural air cooling and forced air cooling
- Duty cycle – continuous
- Winding - Copper / Aluminum duly resin casted
- Enclosure - IP 21 to IP 43 and as per customer specifications
- Cable box on HV, Cable box/ busduct on LV
- Painting shades as per IS and IEC standards

## Standard fittings

- Rating and diagram plate
- Earthing terminals - 2
- Off-circuit tap links
- Enclosure - IP 21 For Indoor / IP 43 for Outdoor application
- Lifting lugs
- Jacking lugs

## Optional accessories

- PT-100 sensors in each coil
- Winding temperature scanner with alarm and trip coil

## Inspection and testing

- Incoming material inspection at vendors place
- Stage inspections at end of each process
- Identification and traceability

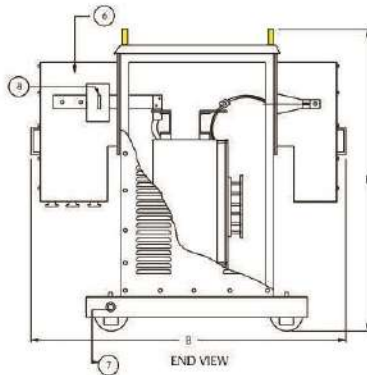
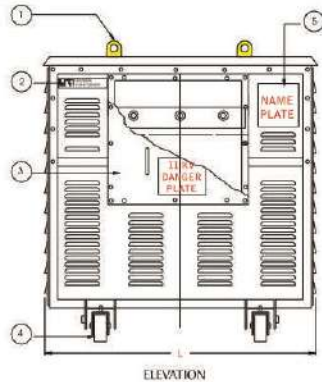
Final routine tests as per IS and IEC standards conducted as follows

- Voltage ratio
- Winding resistance
- Impedance voltage
- No load current with losses and load losses
- Separate source voltage withstand test
- Insulation measurement
- Induced over voltage test
- Noise level measurement

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# CAST RESIN TRANSFORMER

## Technical specifications



Key	
1.	Lifting lugs
2.	Monogram
3.	HV cable box
4.	Bi-directional rollers
5.	Name plate
6.	LV cable box
7.	Earthing terminals
8.	Additional neutral

## Mechanical dimensions:

Sl. No.	Rating kVA	Overall dimensions(mm)			Total Weight kg	%Z
		Length(L)	Breadth(B)	Height(H)		
1	250	1600	1600	1500	1750	5.00
2	315	1650	1650	1600	2050	5.00
3	400	1650	1700	1600	2350	5.00
4	500	1650	1700	1600	2500	5.00
5	630	1700	1900	2100	2600	5.00
6	750	2000	2000	2100	2750	5.00
7	1000	1950	2100	2100	3400	5.00
8	1250	2000	2100	2300	4200	6.25
9	1500	2000	2100	2300	4900	6.25
10	1600	2200	2000	2450	5250	6.25
11	2000	2300	2000	2600	6050	6.25
12	2500	2300	2000	2600	6400	6.25

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# POWER TRANSFORMER



## Features

- Designed for 25 years of trouble-free performance
- Design conforms to IS 2026, IEC 60076, ANSI and other relevant standards
- Low power loss and low noise
- Designed to withstand electrical impulses and thermal and dynamic stresses
- Optimum utilization of active materials for compactness
- Modern manufacturing techniques ensure cost effectiveness and reliability

## Specifications

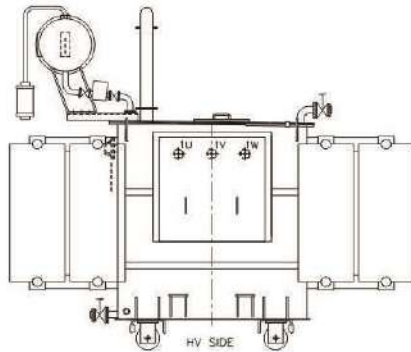
- 3 phase, 50 Hz in voltages of 11kV, 22kV, 33kV, 66 kV & 110 kV & 132 kV
- Off-circuit tap changer to provide  $\pm 5\%$ ,  $\pm 7.5\%$  &  $+5\%$  to  $-10\%$  taps in steps of 2.5%
- On load tap changer to provide  $+5\%$  to  $-15\%$  taps in steps of 1.25%, 1.7%, 10-21% @ 1.75% as standard range & also custom built for any other ranges, OLTC will be internally / externally mounted as per requirement
- Class A, uniform/non-uniform insulated
- Vector group Dyn 11, YNd 11, YNyn 0
- Continuous duty, double copper wound
- Painting as per IS/IEC standards
- Both HV & LV side outdoor bushings or cable boxes
- Cooling radiators/fans.
- Standard fittings as per IS/IEC standards
- Buchholz relay with alarm and trip contact with shut off valves
- Oil temperature indicator with alarm and trip contact
- Winding temperature indicator with alarm and trip contact
- Magnetic oil level gauge with alarm contact
- Marshalling box to house oil temperature indicator and winding temperature indicator
- Cooler control unit
- Neutral current transformer

## Optional accessories

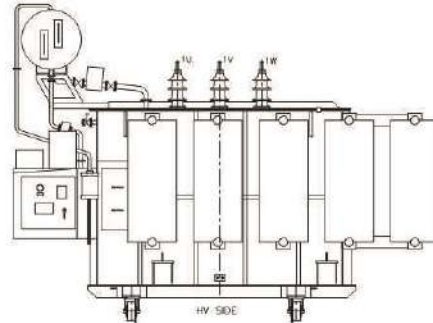
- Winding temperature indicator and oil temperature indicator with remote indication
- RTDs for winding temperature measurement
- Oil preservation system through air cell/thermosphyon filter
- Neutral earthing bar with epoxy supports

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# POWER TRANSFORMER



POWER TRANSFORMER OIL COOLED WITH OFF CIRCUIT



POWER TRANSFORMER OIL COOLED WITH OLTC

### 66/11kV Dyn11

kVA	NLL	LL	% Z
5000	8	34	7.15
6300	9	42	7.15
8000	10	50	8.35
10000	12	57	8.35
12500	14	72	10.00
16000	16	84	10.00
20000	18	98	12.50

### 33/11kV Dyn11

kVA	NLL	LL	% Z
5000	6.5	34	7.15
6300	7.5	42	7.15
8000	8.5	50	8.35
10000	10	57	8.35
12500	12	72	10
16000	14	84	10
20000	16	98	10

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# DISTRIBUTION TRANSFORMER



## Features

- Designed for 25 years of trouble-free performance
- Design conforms to IS 2026, BS 171, IEC 76 and other relevant standards
- Low power loss and low noise
- Designed to withstand electrical impulses, thermal and dynamic stresses
- Optimum utilization of active materials for compactness
- Modern manufacturing techniques ensure cost effectiveness and reliability

## Optional accessories

- Pressure relief valve without contact/with contact
- Buchholz relay with alarm and trip contact
- Oil temperature indicator with alarm and trip contact
- Winding temperature indicator with alarm and trip contact
- Magnetic oil level gauge with alarm contact
- Marshalling box to house oil temperature indicator and winding temperature indicator
- Neutral current transformer

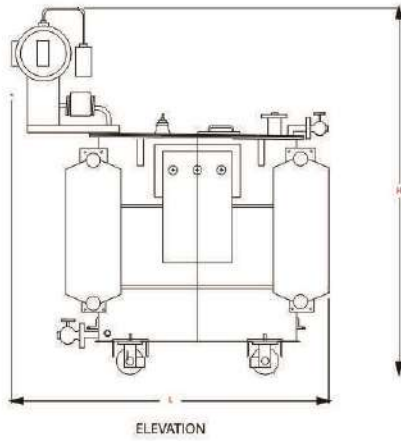
## Specifications

- 3 phase, 50 Hz in voltages of 11kV, 22kV and 33kV
- Off-circuit tap changer to provide +5% to -10% & +5% taps in steps of 2.5% as standard range
- On-load tap changer to provide +7% to -21% taps in steps of 1.75% & +5% to -15% taps in steps of 1.25% as standard range & also custom built for any range
- Class A insulated
- Vector group Dyn 11
- Continuous duty
- Copper wound / Aluminum wound
- Painting as per IS/IEC standards
- HV side cable box / Bare bushing
- LV side cable box/bus duct
- Standard fittings as per IS 2026/IEC 76



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# DISTRIBUTION TRANSFORMER



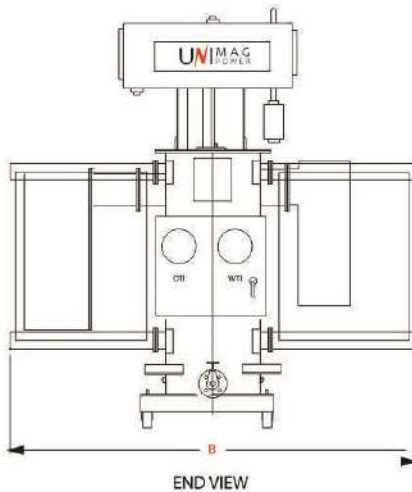
Transformer Dimensions with Off Circuit Tap Links (11000/433V)

Sl.No.	Rating kVA	Overall Dimensions (mm)			Total Wt.	
		Length(L)	Width(W)	Height(H)	kg.	%Z
1	100	2050	1450	1200	2650	4
2	150	2100	1475	1300	1050	4
3	200	2150	1500	1350	1350	4
4	250	2250	1550	1400	1600	4
5	315	2300	1600	1450	2000	4
6	400	2350	1650	1500	2500	4
7	500	1950	1750	1600	2800	4
8	630	2000	1800	1675	3200	4
9	750	2100	1850	1800	3750	5
10	1000	2150	1900	2000	4400	5
11	1250	2200	1950	2200	5000	5
12	1600	2300	2000	2300	5500	6
13	2000	2450	2100	2450	6100	6
14	2500	2600	2200	2600	6500	6
15	3150	2750	2400	2800	7250	7

Transformer Dimensions with On Load Tap Changer (11000/433V)

Sl.No.	Rating kVA	Overall Dimensions (mm)			Total Wt.	
		Length(L)	Width(W)	Height(H)	kg.	%Z
1	500	1950	2400	2200	3200	4
2	630	2200	2430	2250	3600	4
3	750	2230	2450	2300	4100	5
4	1000	2250	2585	2350	4750	5
5	1250	2280	2600	2400	5350	5
6	1600	2450	2620	2500	5900	6
7	2000	2580	2680	2600	6500	6
8	2500	2680	2700	2750	7000	6

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# UNITIZED SUB STATION (PACKAGE SUB STATION)



## Salient features

- Design conforms to IEC 62271-202 standards
- The compartmentalized construction prevents accidental entry to energized areas
- Meets IP53/IP23 degree of protection
- Tailored configuration to customer needs
- Designed to withstand electrical impulses, thermal and dynamic stresses
- Variety and choices for MV/LV switchgear
- Low power loss and low noise transformer
- Number of feeders for LV can be customer specific
- Easy to install
- Delivery ready for commissioning
- Modern manufacturing techniques ensure cost effectiveness, reliability and long trouble free performance

## Product Range

Range from 63 kVA to 2500 kVA of Voltage class 3.3 kV to 33kV with oil cooled transformer, with & without ON Load Tap Changer (OLTC)  
 Range from 63 kVA to 2500 kVA of Voltage class 3.3 kV to 33kV with Dry type (Cast Resin Type & VPI type) transformer, with & without ON Load Tap Changer (OLTC)

Applications :- Oil type for outdoor & Dry type for both Indoor & Outdoor

## Unitized sub station-standard components

HV compartment	Transformer compartment	LV compartment
Ring Main Unit (RMU)	Oil filled transformer OR Dry type/Cast resin transformer	Incomer air circuit breaker and distribution MCCBs with built in over current and short circuit protection
Internal lighting	Internal lighting	Metering (voltmeter and ammeter with selector switches)
Compartment fitted with lockable swing handle and three point latch	Cable/bus bars for HV and LV Circuit breaker connection	Electrical indicators
Over current & earth fault protection	Current transformers for metering	Internal lighting
Door limit switch	Louvered covers	Space heater with thermostat control
Boots for cable termination		Auxiliary supply plug & socket
		Compartment fitted with lockable swing handle and three point latch

## Optional accessories

- HV metering
- Vacuum circuit breaker with protection for HV system
- Load break switch for HV system
- APFC panel
- LT Distribution Panel
- Synchronisation Panel

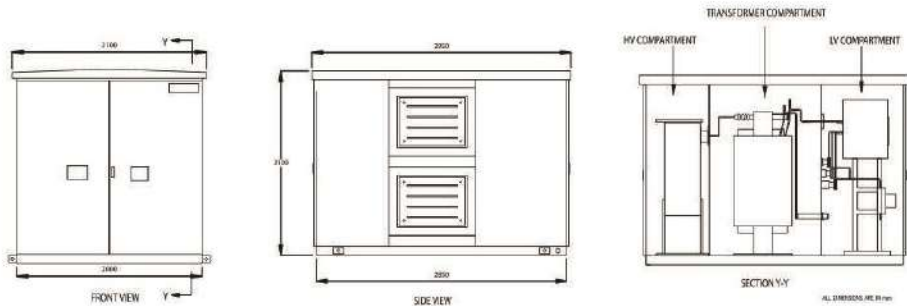


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# UNITIZED SUB STATION (PACKAGE SUB STATION)

## General arrangement of package sub station



### Technical specification

Electrical characteristics	
Rated voltage (kV)	12
Rated insulation level (kVrms/kVp)	28/75
Rated frequency (Hz)	50
Ratings	
Oil filled transformer	63 kVA to 2500 kVA
HV voltage	11kV
LV voltage	433V, 3 Phase
Frequency	50Hz
Dimension - Upto 1000 kVA	2100mm (W) x 2950mm (L) x 2100mm (H)
- 1250 kVA	2300 mm (W) x 4200mm (L) x 2400mm (H)
- to 2500 kVA	
Dry / Cast Resin / VPI Transformer	63 kVA to 2500 kVA
HV voltage	11kV
LV voltage	433V, 3 Phase
Frequency	50Hz
Dimension - Upto 1000 kVA	2100mm (W) x 2950mm (L) x 2100mm (H)
- 1250 kVA	2200 mm (W) x 3500mm (L) x 2300mm (H)
- to 2500 kVA	
RMU	11kV, 3 Phase, 50 Hz Switch- 630A, 12kV, 21kA, 3 phase Breaker-200A/630A, 12kV, 21kA, 3 phase
Transformer	11kV/433V, 3 phase, 50 Hz with off circuit tap switch +5% to -10% in steps of 2.5% Vector Group Dyn 11
LV breaker	433V, 3 Phase, 50 Hz
Incomer breaker	400A to 2500A, 50kA
Distribution MCCBs	100A to 800A, 50kA

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# DRY TYPE TRANSFORMER



## Features

- Designed for 25 years of trouble free performance
- Design conforms to IS 2026/11171, IEC 76/726 and other international standards
- Low power loss and low noise
- Designed to withstand electric impulses, thermal and dynamic stresses
- Optimum utilization of active materials for compactness
- Modern manufacturing techniques ensure cost effectiveness and reliability
- Installation close to center of load and consumption thereby saving expensive LT cable and thus avoiding voltage drop and power loss
- Averts fire and prevents it from spreading

## Optional accessories

- Winding temperature scanner with alarm and trip contact
- PT-100 sensor in each limb
- Forced ventilation
- Remote tap changer control cubicle for OLTC transformers
- Neutral current transformer

## Specifications

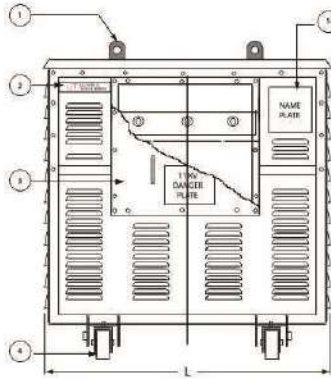
- Vacuum impregnated dry type distribution transformer
- 3 phase, 50 Hz, 11kV/433V
- Off-circuit tap links to provide +5% to -10% taps in steps of 2.5%
- On load tap changer (Air Insulated / Vacuum Type steps of 1.25% / 2.5% respectively)
- Class F/H insulated
- Vector group Dyn11
- Continuous duty
- Copper wound / Aluminum wound
- HV side cable box
- LV side cable box/bus duct
- Painting as per IS/IEC standards
- Standard fittings as per IS/IEC standards
- Enclosure with cooling mesh/louvers



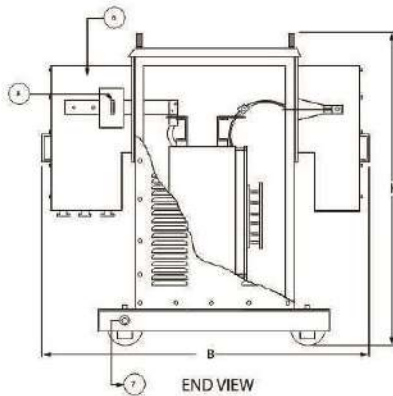
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# DRY TYPE TRANSFORMER

## Technical Specifications



ELEVATION



END VIEW

- |                          |                      |
|--------------------------|----------------------|
| ① Lifting lugs           | ⑤ Name Plate         |
| ② Monogram               | ⑥ LV cable box       |
| ③ HV cable box           | ⑦ Earthing terminals |
| ④ Bi-directional rollers | ⑧ Additional neutral |

### Transformer Dimensions with Off Circuit Tap Links (11000/433V)

Sl.No.	Rating	Overall Dimensions (mm)			Total Wt.	
		Length(L)	Width(W)	Height(H)	kg.	%Z
1	100	2050	1450	1200	2650	4
2	150	2100	1475	1300	1050	4
3	200	2150	1500	1350	1350	4
4	250	2250	1550	1400	1600	4
5	315	2300	1600	1450	2000	4
6	400	2350	1650	1500	2500	4
7	500	1950	1750	1600	2800	4
8	630	2000	1800	1675	3200	4
9	750	2100	1850	1800	3750	5
10	1000	2150	1900	2000	4400	5
11	1250	2200	1950	2200	5000	5
12	1600	2300	2000	2300	5500	6
13	2000	2450	2100	2450	6100	6
14	2500	2600	2200	2600	6500	6
15	3150	2750	2400	2800	7250	7

### Transformer Dimensions with On Load Tap Changer (11000/433V)

Sl.No.	Rating	Overall Dimensions (mm)			Total Wt.	
		Length(L)	Width(W)	Height(H)	kg.	%Z
1	500	1950	2400	2200	3200	4
2	630	2200	2430	2250	3600	4
3	750	2230	2450	2300	4100	5
4	1000	2250	2585	2350	4750	5
5	1250	2280	2600	2400	5350	5
6	1600	2450	2620	2500	5900	6
7	2000	2580	2680	2600	6500	6
8	2500	2680	2700	2750	7000	6

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# MV SWITCHGEAR



## Product Range

- Voltage class 3.3 kV, to 33 kV panels
- Current rating upto 1600A
- Application - indoor & outdoor

## Standard components

- Lockable local / remote selector switch
- Breaker control switch
- Electrical indicators
- Metering and protective relay
- Alarm annunciation system
- Vacuum circuit breaker with metallic shutter assembly
- Spout assembly & fixed contacts
- Current and potential transformer
- PVC sleeved copper/aluminum bus bars
- Space heater with control

## Salient features

- Compartmentalized design
- Design conforms to IS 3427/IEC 298 standards
- Compact, sturdy, reliable, safe, easy to operate VCB
- Designed to withstand electrical impulses, thermal and dynamic stresses
- Meets IP4X degree of protection for Indoor  
Meets IP55/IP4XW degree of protection for outdoor
- Extendable from both sides of panel
- No live parts are accessible and exposed
- Safety interlocks to prevent insertion & withdrawal of the VCB from the panel in its closed condition
- Modern manufacturing technique ensures cost effectiveness, reliability and long trouble free performance



## Optional accessories

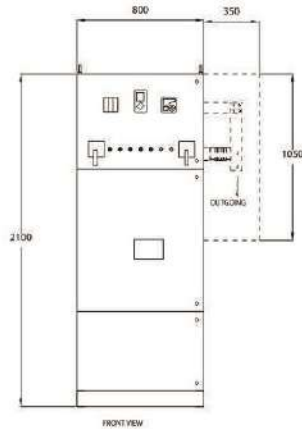
- Metering and protective system as per customer specification
- Auxiliary supply according to customer requirements
- Draw out potential transformer
- Earthing truck
- Surge arrester

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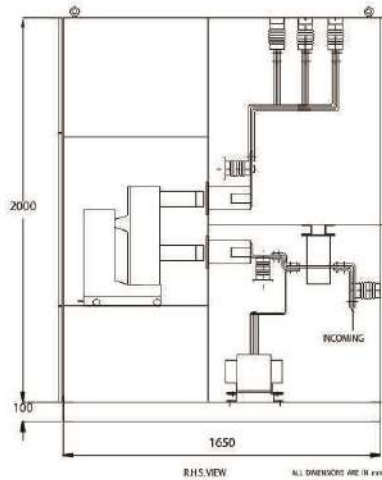
# MV SWITCHGEAR

## Technical specification /11kV Panel



Rating	Unit	Indoor M.V. switchgear
Type		SGICB-25/SGICC-25/SGICD-25/SGICE-25
Rated current	Amps	630 / 800 / 1250 / 1600
Rated voltage	kV	12
Rated frequency	Hz	50
Rated bus bar current	Amps	Up to 1600
Rated insulation level	kVrms/kVp	28/75
Rated short circuit braking current	kA	18.4 / 25 / 26.3
Duration of rated short circuit current	Seconds	3
Rated short circuit making current-assy	kA	62.5
Rated short circuit breaking current-assy	kA	62.5
Rated operating sequence		O - 0.35 - CO - 180S - CO
Auxiliary supply	VDC	24/48/110/220
Dimension of panel (W x H x L)	mm	800 x 2100 x 1650
Cable box (if attached) (W x H x L)	mm	650 x 1050 x 350
Weight of panel with breaker (approx)	kg	800 to 1000

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# FURNACE DUTY TRANSFORMER



## Main features

- Transformers are designed for induction furnace, arc furnace & submerged arc furnace application
- Magnetic circuit - lamination CRGO M3 to M5 type
- Electric circuit - electrolytic grade 99.9% pure copper with transposition in LV coil for current sharing in parallel conductors
- Dielectric circuits - electric grade press paper, boards and mineral oil
- Thermal circuit - adequate cooling ducts are provided radially & axially for the smooth flow of oil internally. Radiators cooling banks are provided for natural air cooling ONAN & additional fans for ONAF cooling. High current transformers are provided with OFW cooling

## Specific features

- Designed for trouble-free performance during surges & frequent short circuits
- Design conforms to IS 2026, IEC 60076, IS 12977 and other relevant standards
- High current at low voltages
- Designed to withstand electrical impulses and thermal and dynamic stresses
- Optimum utilization of active materials for compactness
- Modern manufacturing techniques ensure cost effectiveness, reliability and a long trouble-free performance

## Specifications

- 3 phase, 50 Hz in voltages of 11kV, 22kV, 33kV
- Off-circuit tap changer to provide  $\pm 5\%$ ,  $\pm 7.5\%$  &  $+5\%$  to  $-10\%$  taps in steps of 2.5%
- On load tap changer to provide  $+5\%$  to  $-15\%$  taps in steps of 1.25% as standard range and also custom built for any other ranges. OLTC will be internally/externally mounted as per the requirement
- Class A, uniform/non-uniform insulated
- Vector group Dyn 11, YNd 11, Dd0y11
- Continuous duty, double copper wound
- Painting as per IS/IEC standards
- Both HV & LV side outdoor bushings/ cable box/bus ducts/bus bar risers
- Standard fittings as per IS/IEC standards

## Protective devices

- Buchholz relay with alarm and trip contact with shut off valves
- Oil temperature indicator with alarm and trip contact
- Winding temperature indicator with alarm and trip contact
- Magnetic oil level gauge with alarm contact
- Pressure relief valve with alarm and trip contact
- Marshalling box to house oil temperature indicator and winding temperature indicator
- Cooler units like oil to water heat exchanger pressure gauges, flow gauges, etc
- Neutral current transformer

## Optional accessories

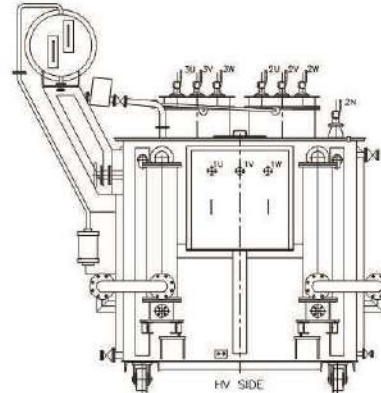
- Winding temperature indicator and oil temperature indicator with remote indication
- RTDs for winding temperature measurement

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# FURNACE DUTY TRANSFORMER

Sl.no	Rating	Voltage rating	%Z	Overall dimensions(mm)			Total weight
	kVA	Volts		Length(L)	Breadth(B)	Height(H)	kg
1	400	415 / 480	5	1815	1720	2450	2775
2	565	415 / 480	5	1900	1950	2550	2975
3	688	415 / 480	5	2000	2000	2650	3575
4	1250	415 / 480	5	2125	2200	2910	4830
5	1840	11000 / 575	7	2750	2390	2750	5880
6	2875	11000 / 575	8	2800	2800	2920	7555
7	3250	11000/1000-1000	6.25	2650	2940	3000	9060
8	7500	33000/1200-1000	7	3690	3780	3795	18720
9	9000	1000/1135-1135	8	3350	4150	3700	18500
10	9000	1000/1100-1100	8	3280	2850	3510	13635

Note: Due to constant improvement in the product, Universal Power Transformer Pvt. Ltd., reserves the right to change specifications and details mentioned in this brochure.



FURNACE TRANSFORMER OIL COOLED WITH OFF CIRCUIT

When considering your requirement of a furnace duty transformer, please provide us the following information for customisation of your product.

- ▶ **kVA rating**  
Indicate the maximum LV current, and the LV voltage tap
- ▶ **LV**  
Maximum, normal & minimum voltage, no. of steps with step voltage
- ▶ **HV and LV connections**  
Indicate whether star/delta/open delta
- ▶ **Vector group reference**
- ▶ **Temperature rise**
- ▶ **Type of cooling**  
Indicate whether ONAN/DNAF/OFW
- ▶ **Impedance voltage**  
Indicate the percent age impedance, including the maximum and minimum impedance requirements if any, and the corresponding LV voltage tap
- ▶ **Tapping details**  
Indicate the type of tap changer, whether off circuit tap switch or OLTC
- ▶ **Terminal arrangements**  
Indicate HT and LT terminal arrangement required, whether outdoor bushings/cable box/copper bus bars. Indicate disposition of HT and LT terminals, and laminations if any on the number of bars on LT side

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# TURNKEY PROJECTS DIVISION

## INTRODUCTION

Universal Power has been manufacturing transformers to world class standards for more than 25 years. Our obsession with quality, the commitment to our customers and the dedication to R&D and HR have made us one of the leading manufacturers of high quality power products. Our products conform to international quality and environmental standards.

An ISO certification is part of our detailed quality assessment policy, which along with computer aided designs and other modern tools have been our driving force.



Now, with a view to offer our valuable customers an enhanced level of service, and in order to foster the growth of our business, we have commenced the handling of turnkey projects. This involves the supply, erection, testing and commissioning of power projects in the following:

- Hydro power stations
- Co-Gen power plants
- Wind and hybrid power stations
- Switchyards
- Sub-stations
- Transmission lines up to 220kv

Our range of products consists of:

- |                             |                                 |
|-----------------------------|---------------------------------|
| • Distribution transformers | • Unitized sub stations         |
| • Dry type transformers     | • MV switchgear                 |
| • Furnace transformers      | • Battery and battery chargers  |
| • Cast resin transformers   | • LV Panels- PCC & MCC          |
| • Power transformers        | • Control and protection panels |

## TURNKEY PROJECTS

Our areas of expertise include project management, project co-ordination, design engineering, procurement, supply, erection, site supervision, testing & commissioning.

Universal Power has wide experience in engineering and design activities from concept formulation to execution of a number of switchyards and substations up to 220KV for power plants, utilities and industries. We possess a class-1 electrical contractor's license.

We also undertake MV & LV projects which include:

- |                              |                          |
|------------------------------|--------------------------|
| • MV voltage metering panels | • DBs                    |
| • Transformers               | • Power & control cables |
| • DGs                        | • Supply                 |
| • DG panels                  | • Erection               |
| • PCC                        | • Testing                |
| • MCC                        | • Commissioning          |



The optimization, selection and design of various equipment, including the switchyard and substation are executed taking into account various system parameters such as:

- |                    |                                      |
|--------------------|--------------------------------------|
| • Voltage          | • Dynamic and short circuit stresses |
| • Fault level      | • Mechanical strength required       |
| • Frequency        | • Pull on conductors                 |
| • Load current     | • Weight of equipment                |
| • System impedance | • Soil resistivity                   |

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# TURNKEY PROJECTS DIVISION

## SYSTEM ENGINEERING

Our company ensures complete customer satisfaction by means of innovative engineering, highly competent technical personnel, optimal designs and careful selection of equipment.

The Universal Power design objective is to provide maximum reliability, flexibility and continuity of service. This objective is met with the lowest investment costs that satisfy the system requirements.



Our scope of services on turnkey projects is as mentioned below:

- Basic study and site inspection
- Consultancy services and detailed system study
- Working out conceptual designs of switchyards and power distribution schemes
- Preparation of single line diagrams, plan and section layout drawings
- Preparation of specifications for total electrics
- Total system earthing design
- Protection co-ordination
- Survey of transmission lines from 11KV to 220KV
- Design, erection, testing & commissioning of transmission lines up to 220 KV
- Illumination design
- Cable scheduling, interfacing, routing and trench routing
- Civil construction work, erection of equipment and steel structures
- Training of personnel in operation and maintenance of the plant
- A wide network of branches for better and faster communication
- The project division also provides service for getting approval from statutory bodies



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