

BASIC COMPONENTS

- MS/ CRC Sheet fabricated Enclosure as per IS 14786
- Load Balancing Lifting Hooks
- Collapsible hinge mounted doors
- MV/LV switchgear enclosure with IP54
- Corrugated tank for ONAN Transformer with IP 54
- Dry & Cast resin transformer enclosure with IP 23
- Safety door switches
- Inter connecting MV & LV cables/ Bus bars
- Powder coated paint, Shade – RAL / IS-5 or as per customer requirement

SPECIAL FEATURES

- ➔ Completely factory built
- ➔ Superior Aesthetics
- ➔ Convenience in portability
- ➔ Ready to install & Commission
- ➔ Compact in size
- ➔ Minimal maintenance

➔ TECHNICAL SPECIFICATIONS

Medium Voltage Compartment

MV Switchgear	Upto 22 kV
Type of Switchgear	LBS / SFU / Circuit Breaker / RMU / VCB
Insulation Medium	SF6 Gas or Vacuum
Tripping	Fuse / Relay
Short Circuit Rating	Upto 20 kA or as per customer requirement

Transformer Compartment

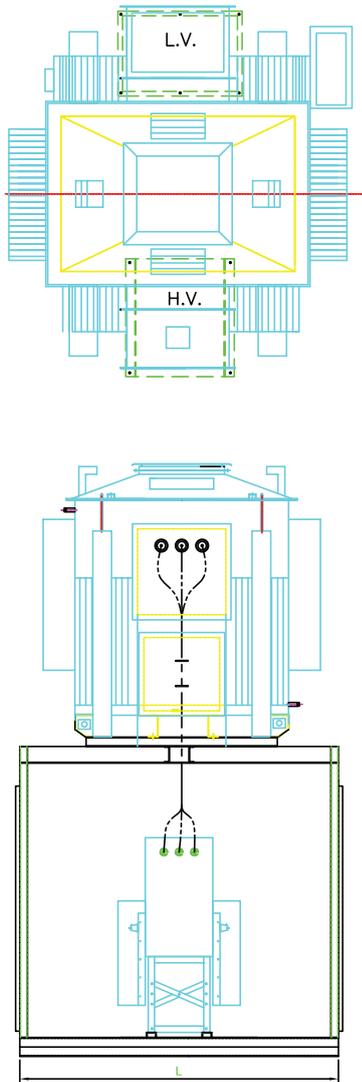
Installation	Outdoor / Indoor Ground Mounted
Type of cooling	Oil Immersed / Dry Type
Rating	63 to 1000 kVA
Voltage	3.3 to 22/0.433 kV or any specific
Phase / Frequency	3 Phase / 50 or 60 Hz
Vector Group	Dyn1 or Dyn5 or Dyn11 or any specific

Low Voltage Compartment

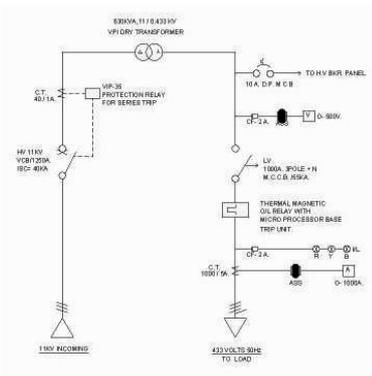
LV Switchgear	ACB's, MCCB's or HRC Fuse
Current Rating	Upto 2000 Amps
Voltage	433 Volts
No. of Poles	3 / 4
Short Circuit Rating	Upto 50 kA or as per customer requirement



➔ PRODUCT DIAGRAM



➔ SINGLE LINE DIAGRAM



➔ GENERAL DETAILS

Tower Substations are designed for use in distribution application as well as for dedicated loads. Tower substation's are easy to install and are of low cost. These are basic & simplest configuration required for distribution substation. Tower Substation are designed in accordance with IS 14786 / IEC 61330 standards with degree of protection for IP 54 with ONAN transformer & with Dry / Cast resin transformer only transformer enclosure with IP 23 or as per customer requirement.

Following are the dimensional and weight details for a typical 11kV, Tower Substation

SR.	Rating	Overall dimensions (mm)			Approx WT.
NO.	(kVA)	LENGTH (L)	BREADTH (B)	HEIGHT (H)	(KGS)
1	100 to 250	1800	1800	3800	3000
2	315 to 630	1800	2000	4000	4000
3	750 to 1000	2000	2000	4400	5250

**Dimensions and weight may vary for any specific or special requirement.*

➔ OPTIONAL FEATURES

- M.V. Drawout type breaker
- M.V. Earth Fault (E/F), Over Current (O/C) relay
- Aluminum or copper winding
- Stainless Steel Tank
- DGPT Relay
- Pressure Release Valves
- M.V./L.V. Orientation, made to suit
- L.T. Micro-Processor Based Trip unit
- L.T. MFM/ Load Manager
- L.T Earth Fault (E/F), Over Current (O/C) relay
- HT metering / Load manager
- SCADA or PLC compatible
- Feeder pillar (HRC fuse / MCCB based)
- Dry type / Cast resin transformer
- For ONAN transformer, PRV, MOG, WTI / OTI & Bucholz relay
- For Dry / CRT transformer, space heaters, surge arresters, Temp. scanner

Specification	Oil Type	Dry Type
Tapping	Off Circuit Switch	Off Circuit Links
Insulation Class	'A'	'F'
Temperature Rise	Oil / Winding up to 55/65°C	Winding up to 130°C
Temperature Protection	OTI, WTI	RTD