

The **Compact Sub Station** is a revolution in the modern world which find its use in the Industrial sector, on Construction sites, at Mines, in Hospitals, Townships, Shopping Malls, IT parks, Airports, to name a few. These substations can be placed in remote locations or in densely populated areas with equal ease.

The **Pai Kane** brand **Compact Substation**, is a plant-ready and single-tested unit where power is transformed from Medium voltage (MV) to Low voltage (LV). It contains a Medium Voltage, a Transformer & a Low Voltage room, properly compartmentalized with sheet metal so that any fault in one does not affect the other.

The CSS comprises of MV switchgear, a transformer, LV switchgear along with all necessary control wiring, Metering, Current transformers, Control MCBs, Lamps and auxiliary equipments. After connecting the MV & LV cables, the sub-station is ready for operation.



Features

- Pai Kane Compact Substation design conforms to IEC 62271-202 standards.
- Equipment is type tested by C.P.R.I, Bangalore.
- Compact design with highest level of safety due to enclosed structure box.
- High Operational reliability is achieved by MV & LV switchgear and protective relays to avoid overloading.
- Accessible at ground level but prevents accidental entry to energize equipments.
- No access to any live parts.
- Lockable doors.
- Smaller footprint, large saving in cost of land / real estate.
- Powder coating with excellent finish.
- Easy installation with No maintenance.
- Lifting lugs for mounting the sub station from the base.
- Easy transportation being a single unit.
- Excellent cost- performance ratio.
- Long and trouble free performance.
- Customer specific modules like APFC panel, Distribution panel, Metering section.



PAI KANE COMPACT SUB STATION

- Upto 33 KV
- Range: 100 - 2000 KVA

STANDARD RATING	100, 160, 200, 250, 315, 400, 500, 630	
MV COMPARTMENT	Indoor type Load Break Switch with HT HRC Fuse & Earth Switch	
	Rated Voltage	11KV / 22 KV
	Power Frequency withstand Voltage	28KVrms / 50 KVrms
	Impulse withstand Voltage	75 Kvp / 125 Kvp
	Rated Current	400 Amp
	Short time Current	25 kA
	Making Current	62.5 kAp
	Relevant Standard	IS 9920
	Mimic Diagram	
	Live-line indicator	
TRANSFORMER COMPARTMENT	Indoor type Oil cooled Hermetically sealed Distribution Transformer	
	Voltage Ratio	11/ 0.433KV, 22/ 0.433KV
	Separate source voltage test at Power Frequency (HV/LV)	28/3 kVrms,50/3 kVrms
	Impulse withstand Voltage	75 kVp, 125 kVp
	Induced over voltage withstand	22/0.866, 44/0.830
	Tapping details	Offload tap changer on HV winding
	Tapping range	+5% to -5% @2.5%
	Winding material	Copper
	Frequency	50 Hz
	Vector group	Dyn11
Relevant standard	IS 2026/ IEC 60076	
LV COMPARTMENT	MCCB, 3P, with Thermal Magnetic release for Over load & Short circuit with Rotary handle	
	Earth Fault Relay with CBCT	
	VAF meter with suitable Current Transformers	
	Indicating Lamps	
	Space heater with thermostat, Panel lamp with limit switch, Control wiring, etc.	

STANDARD RATING	750, 1000, 1250, 1600, 2000	
MV COMPARTMENT	Indoor type 2 way non-extensible SF6 insulated Ring Main Unit (RMU) with VCB & Disconnecter (Closed – Open – Earth switch)	
	Rated Voltage	11 KV / 22 KV / 33 KV
	Power Frequency withstand Voltage	28kVrms /50 kVrms /70kVrms
	Impulse withstand Voltage	75 Kvp /125 Kvp /170 Kvp
	Rated Current	400 Amp
	Short time Current	20 kA
	Duration	3 sec.
	Relevant Standard	IEC 62271 ñ 100, 102
	Self powered Protection Relay for Over current & Earth Fault with Highset - From 750 Kva onwards	
	Mimic Diagram	
Live-line indicator		
TRANSFORMER COMPARTMENT	Indoor type Oil cooled Hermetically sealed Distribution Transformer	
	Voltage Ratio	11/ 0.433KV, 22/ 0.433KV, 33/ 0.433KV
	Separate source voltage test at Power Frequency (HV/LV)	28/3 kVrms,50/3 kVrms,70/3 kVrms
	Impulse withstand Voltage	75 kVp, 125 kVp, 170 kVp
	Induced over voltage withstand	22/0.866, 44/0.830, 66/0.760
	Tapping details	Offload tap changer on HV winding
	Tapping range	+5% to -5% @2.5%
	Winding material	Copper
	Frequency	50 Hz
	Vector group	Dyn11
Relevant standard	IS 2026/ IEC 60076	
LV COMPARTMENT	ACB, 3P, Fixed Manual type with Thermal Magnetic release for Over load & Short circuit with accessories like UV coil, shunt coil etc.	
	Earth Fault Relay with CBCT	
	VAF meter with suitable Current Transformers	
	Indicating Lamps	
	Space heater with thermostat, Panel lamp with limit switch, Control wiring, etc.	



Choose Your Options

- LBS with HT HRC fuse with striker pin for protection
- SF6 insulated Ring Main Unit with VCB & 3 Position Disconnecter
- Self powered protection relay for Over current & Earth Fault
- Indoor type Hermetically sealed Oil cooled Distribution transformer
- Indoor type Cast Resin Dry type Distribution transformer
- LV Distribution panel in LV compartment
- APFC panel in LV compartment
- LT Check Metering in LV compartment with CT in sealed arrangement
- HT Metering compartment