

Compact KIOSK Substations

A Simplified Perspective

WHAT IS A KIOSK COMPACT SUBSTATION

A Kiosk Substation is a complete compact substation package including;

- ❖ MV switchgear (RMU), Transformer and LV switchgear installed inside a lockable enclosure on a steel or concrete plinth.
- ❖ Various MV and LV switchgear and transformer configurations are possible.
- ❖ They come fully tested and are made to utility specifications or to customer specifications for private networks.

Necessity of Compact Substation

- ❖ Cost effective means of reticulating LV distribution voltages via available MV voltage source through a distribution transformer.
- ❖ Compact one-stop-shop for reticulating power in rings
- ❖ They eliminate costly electrical infrastructure costs as they are manufactured off site, delivered and only MV and LV cables connection is required at site
- ❖ All compartments are segregated and come fully tested and are made to utility specifications or to customer specifications of private networks.
- ❖ Various switchgear and transformer configurations are possible.

Most Common Variants

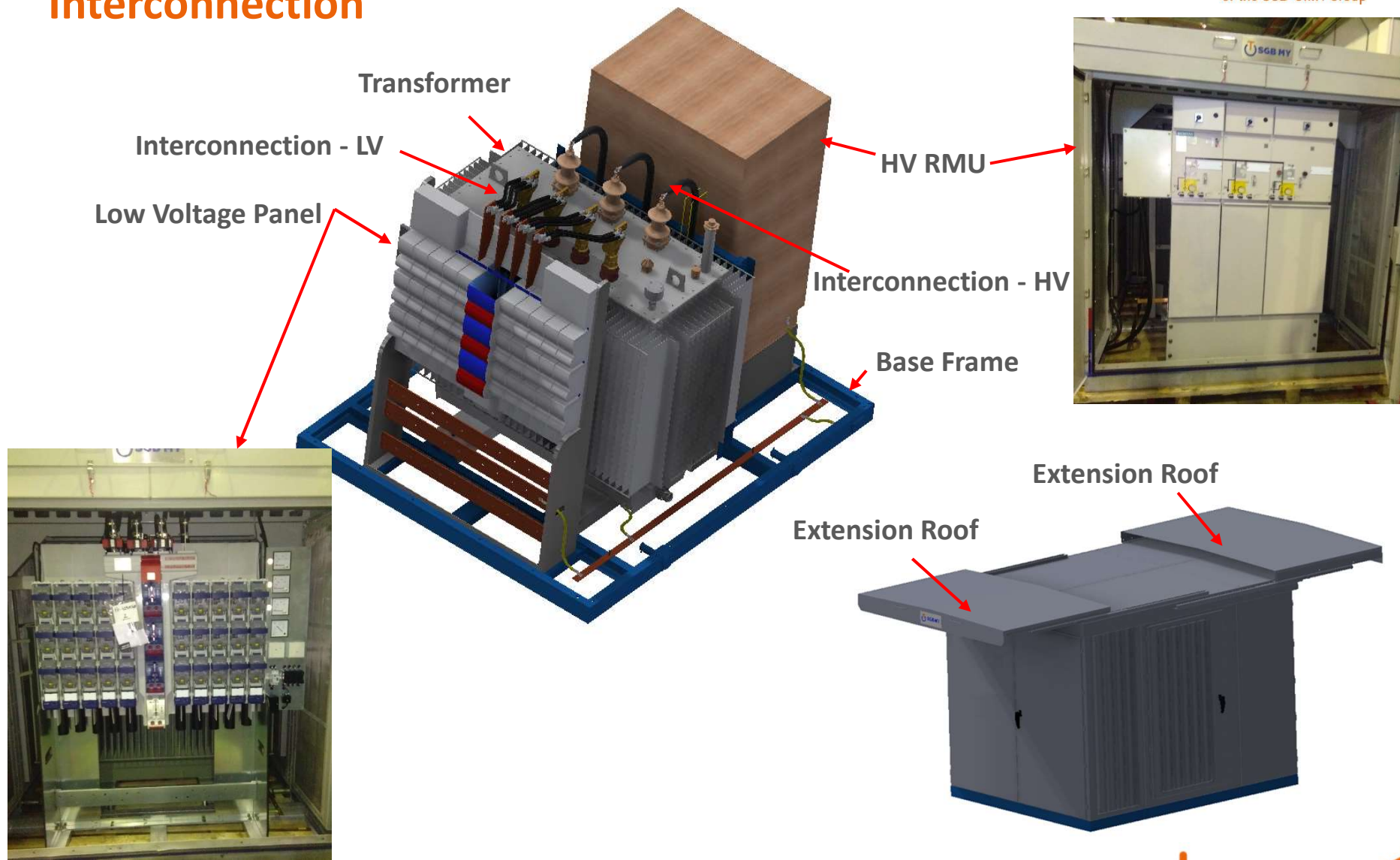
Type of Kiosk	RMU	Transformer	LV	Notes
Tr Only Kiosk	0	1	1	LV could be simply busbar or MCCB or ACB connected (note 1)
1 Ring Sw + Tr	1	1	1	LV could be simply busbar or MCCB or ACB connected (note 1)
2 Ring switches + TR	2	1	1	LV could be MCCB or ACB connected (note 2)
2 Ring switches + 1 MV CB + Tr	2+1	1	1	LV could be MCCB or ACB connected (note 2)
2 Ring switches + 2 MV CB + Tr	2+2	1	1	LV could be MCCB or ACB connected (note 2)
2 Ring switches + 1 MV FS + Tr	2+1FS	1	1	LV could be MCCB or ACB connected (note 2)
1 Ring switch + 1 MV FS + Tr	1+1FS	1	1	LV could be MCCB or ACB (note 1)

1000 kVA, 11/0.433 kV Compact Substation

Components	Make
1000 kVA 11/0.433 kV Transformer	SGB MY
Enclosure Housing IP35	SGB MY
Low Voltage Panel 1600A – 10 Outgoings	Others
MV switchgear, 8DJH-RRT	Others



Interconnection



Successfully Type Tested @ CPRI Bhopal, INDIA

- ❖ **Temperature Rise Test (Enclosure: Class 10)**
- ❖ **Internal Arcing Test (Class IAC-B-20 kA/0.1 Sec)**



- ❖ **Verification of Sound Level (< 60 dB)**
- ❖ **Verification of Degree of Protection (IP:35)**