

MEDIUM VOLTAGE STATION FOR DECENTRALIZED PV SYSTEMS WITH 1500 V STRING INVERTERS

MV solution up to 6.4 MVA

MV station designed to connect Ingeteam's three-phase string inverters to a medium voltage grid.

String inverter optimization

The StringStation has been conceived to enable and optimize the use of Ingeteam's INGECON® SUN 160TL inverters at utility scale, ensuring a perfect connection between the PV power plant and the grid. This turnkey solution is capable of connecting up to 6.4 MW of 1500 V 3Play inverters to a medium voltage grid.

Available worldwide

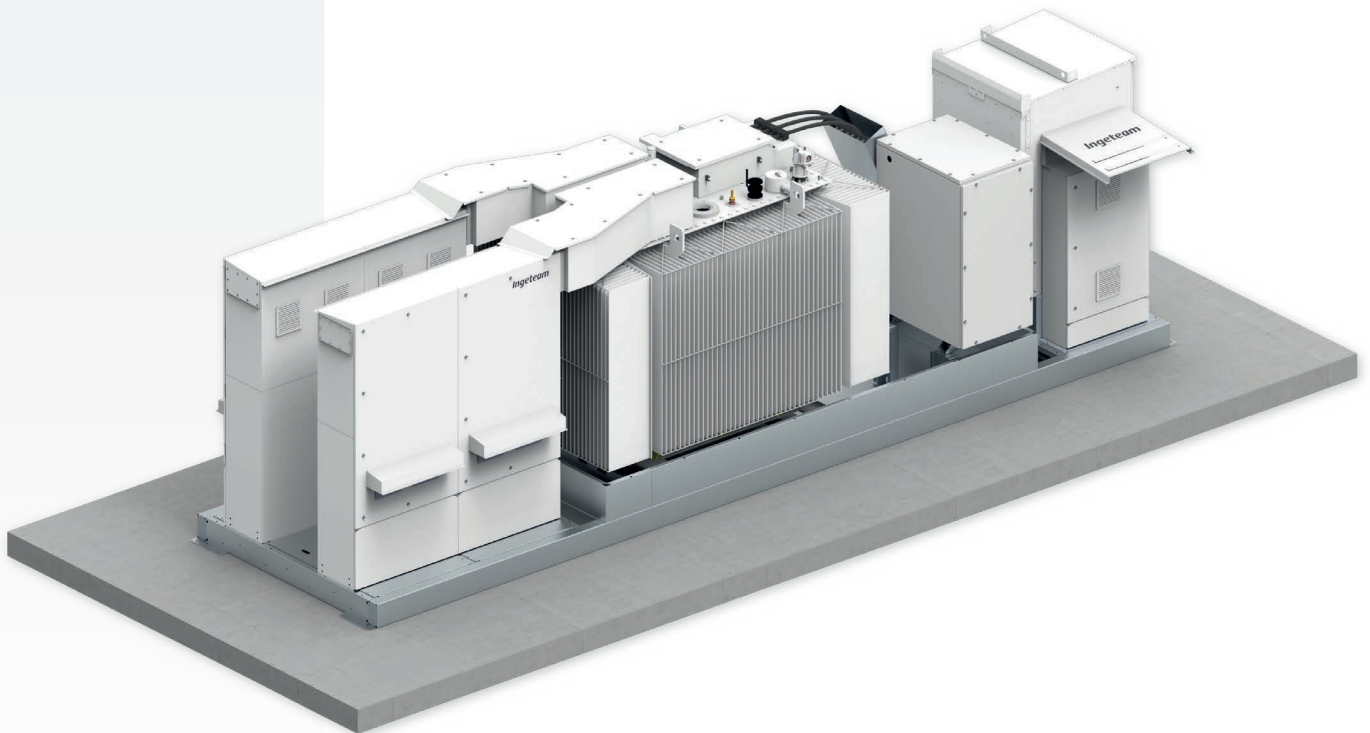
The INGECON® SUN StringStation can be marketed and installed everywhere in the world, as it is supplied totally integrated and it is easily transportable as a Plug & Play solution.

Equipped with everything necessary

It is supplied with the low-voltage string-inverter protections, auxiliary services, LV / MV transformer and medium-voltage switchgear. Available with high-speed Ethernet or Wi-Fi to communicate with the PV inverters.

Maximum cost-effectiveness

The INGECON® SUN StringStation is a standard solution designed to maximize the compactness and cost-effectiveness of the overall equipment. All the elements are prepared to withstand adverse weather conditions. Moreover, they are supplied pre-connected and pre-integrated into a skid in order to guarantee a Plug & Play installation.



MAIN FEATURES

- Output power up to 6.4 MW at 25 °C.
- Compatible with INGECON® SUN 160TL inverters.
- Available up to 34.5 kV output voltage.
- Available with outdoor-mounted hermetically-sealed LV / MV transformer (up to 6.4 MVA).
- IP54 MV Switchgear.
- Plug & Play solution.
- Maximum reliability, higher safety.
- Reduced maintenance.
- Relative humidity (non-condensing): 0-100%.
- Max. installation altitude: 3,000 meters above sea level.
- UPS for auxiliary services.
- High-speed Ethernet or Wi-Fi to communicate with the PV inverters.

AC COMBINER BOX

- Scalable system thanks to its modular design.
- Circuit breaker up to 1,500 A or 3,000 A, depending on the model of AC Combiner Box.
- 1500 V DC fuses.
- Forced air ventilation.
- General LV protection with an AC circuit breaker.
- HV surge arresters.

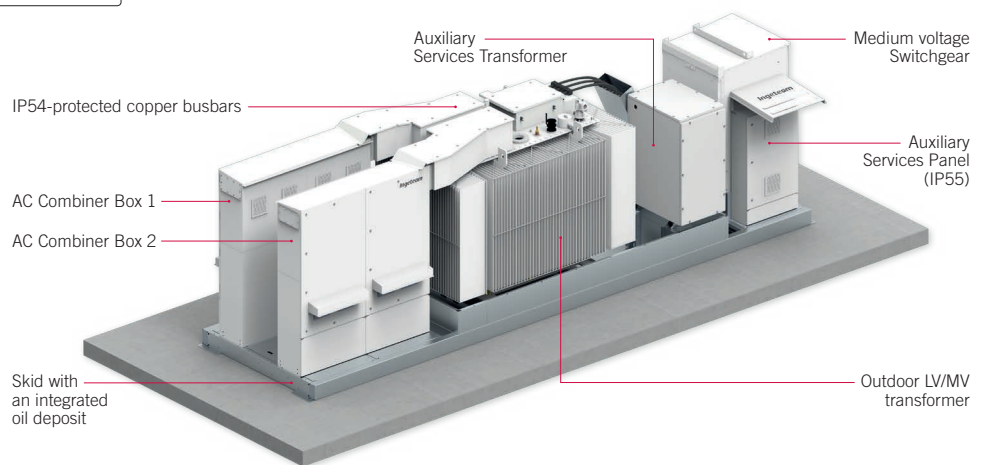
STANDARD MV EQUIPMENT

- LV / MV transformer with reduced power losses.
- 1L1A MV switchgear.
- DGPT2 relay included in the transformer.
- MV protection with circuit breaker.
- Oil deposit integrated in the skid.
- Filtering kit in the oil deposit.

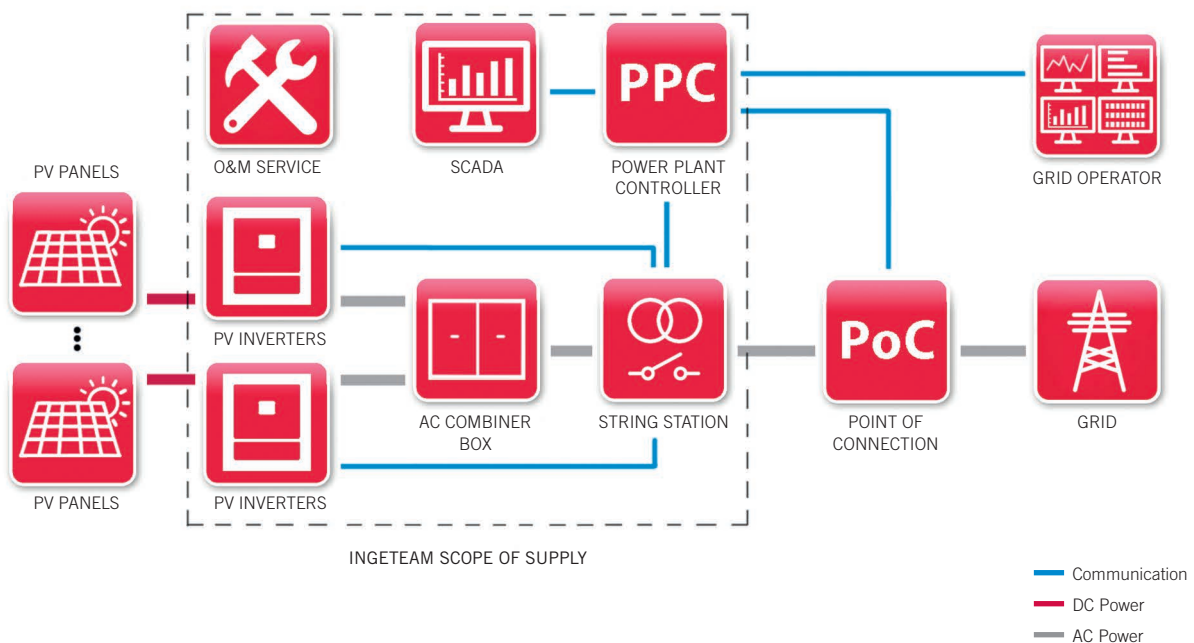
OPTIONAL ACCESSORIES

- 2L1A MV switchgear.
- Energy meter for auxiliary services.
- LV protection for each inverter with circuit breaker and residual current device.

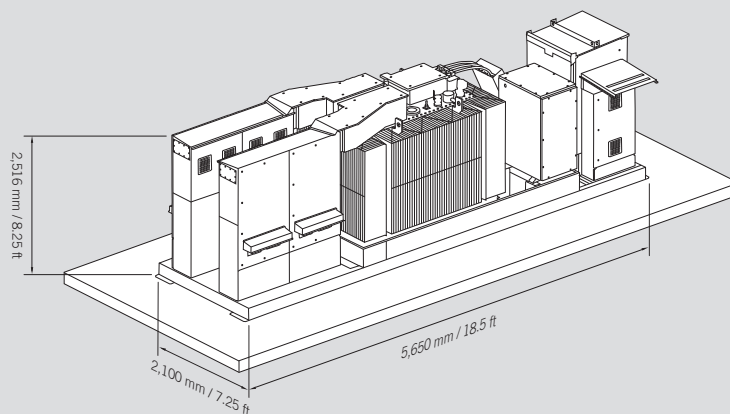
COMPONENTS



PV PLANT CONFIGURATION



	SST 1600	SST 3200	SST 4800	SST 6400
AC Combiner Box				
Model:				
- 1,500 A	✓		✓	
- 3,000 A		✓	✓	✓✓
Rated power at 25 °C / 40 °C / 50 °C	1,608 kW / 1,488 kW / 1,452 kW	3,216 kW / 2,976 kW / 2,904 kW	4,824 kW / 4,464 kW / 4,356 kW	6,432 kW / 5,952 kW / 5,808 kW
Number of inverters	11	22	33	44
AC current at 25 °C / 40 °C / 50 °C	1,474 A / 1,364 A / 1,331 A	2,948 A / 2,728 A / 2,662 A	4,422 A / 4,092 A / 3,993 A	5,896 A / 5,456 A / 5,324 A
AC voltage	630 V			
Frequency	50 / 60 Hz			
Overcurrent protection	Circuit breaker			
Residual Current Device	Optional			
AC max. cross section	185 mm ² (7 inverters up to 240 mm ²). One cable per terminal			
Cooling system	Forced air ventilation			
Max. power consumption	750 VA			
Protection degree	IP54			
LV / MV Transformer				
Medium voltage	From 20 kV up to 35 kV, 50-60 Hz			
Cooling system	ONAN			
Max. efficiency	99%			
Protection degree	IP54			
MV Switchgear				
Medium voltage	Up to 35 kV			
Rated current	630 A			
Cooling system	Natural air ventilation			
Max. power consumption	0 W			
Protection degree	IP54			
General data				
Operating temperature range	from -20 °C to +50 °C			
Relative humidity (non-condensing)	0 - 100 %			
Maximum altitude	3,000 masl (power derating starting at 2,000 masl)			
Equipment				
Inverter version	INGECON® SUN 160TL			
LV-AUX Switchgear	Standard version (optional monitoring system)			
LV / MV Transformer	Oil-immersed hermetically sealed transformer			
MV Switchgear	1L1A cells (2L1A optional)			
Mechanical information				
Structure type	Hot dip galvanized steel skid			
Body dimensions	5,650 x 2,210 x 2,516 mm / 18.5 x 7.25 x 8.25 ft			
Standards	IEC 62271-212, IEC 62271-200, IEC 60076, IEC 61439-1			





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