

**THE COMPLETE
TURNKEY
SOLUTION,
CUSTOMISED &
FULLY EQUIPPED
UP TO 2.8 MWp,
22 FT. SHELTER
WITH FORCED AIR
COOLING SYSTEM**

From 300 to 2330 kVA

The very latest technological development by Ingeteam. All the devices required for a multi-megawatt system incorporated into a single shelter with three separate compartments and different cooling systems, easily transportable by road thanks to its small dimensions and low weight.

Maximize your investment with minimal effort

INGECON® SUN PowerStation SHE 22 is a compact, customisable and flexible solution that can be configured to suit each customer's requirements. Thanks to its panel-based structure, the internal layout can be customised to incorporate various INGECON® SUN inverters. Ideal for low environmental impact applications.

Extremely robust and long-lasting

The shelter can be easily transported by road, thanks to its small dimensions and low overall weight. The hot galvanised steel structure is designed to guarantee maximum mechanical strength and durability. The walls and roof contain a 50 mm rigid fire-proof polyurethane

foam filling, to guarantee perfect water resistance and correct thermal insulation.

Equipped with everything necessary

Inverters, Low Voltage parallel cabinet, auxiliary services panel, medium voltage cubicle and LV / MV transformer. Available with High-speed Ethernet / Fiber Optic communication infrastructure for Plug & Play connection to PV Plant Controller, monitoring and SCADA systems.

Maximum stability

All the devices are anchored to the base, to guarantee the maximum stability of the structure. The varnish used guarantees maximum protection against adverse weather conditions.

Complete accessibility

Thanks to its innovative design, all devices are readily accessible, thereby making it easier to inspect, maintain and repair the INGECON® SUN PowerStation SHE 22. The transformer compartment door is equipped with an Arel safety lock with a blocking code.

Innovative ventilation system

The internal temperature of inverter compartment is controlled by high efficiency hot air extraction plenums and centrifugal fan systems. A number of internal and external probes guarantee a constant ambient temperature. The incoming air is filtered through special grids mounted on the bottom of the walls.

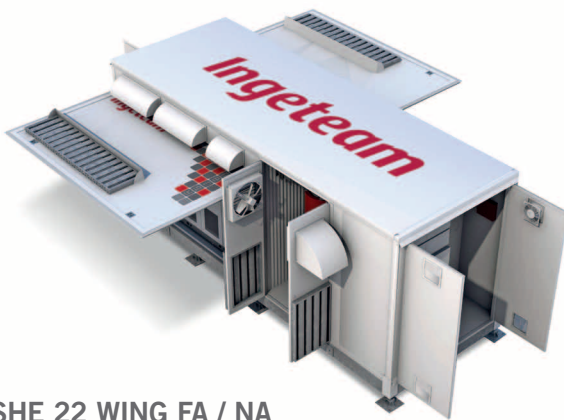




SHE 22 TUNNEL FA / NA



SHE 22 TUNNEL FA / FA



SHE 22 WING FA / NA



SHE 22 WING FA / FA

MAIN FEATURES

- Output power up to 2330 kVA.
- Available up to 36 kV output voltage.
- Available with cast resin or oil immersed hermetically sealed LV / MV transformers.
- Protection degree: IP54 / NEMA 3R for inverter compartment.
- Extremely compact design.
- Plug & Play solution.
- Maximum reliability, higher safety and reduced maintenance thanks to flexible copper busbars for Low Voltage power distribution.
- Fully customizable.
- Operating Temperature Range: from -20 °C to +60 °C. ⁽¹⁾
- Relative Humidity: 0 - 95%.
- Installation Altitude: 3000 m above sea level. ⁽¹⁾

⁽¹⁾ Refer to Technical Characteristics table for further details.

ELECTRICAL PROTECTIONS

- Reverse polarity.
- Output short-circuits and overloads.
- DC fuses.
- DC switch with door control.
- AC circuit breaker with door control.
- DC and AC overvoltage suppressors.
- Anti-islanding monitoring system with automatic disconnection.
- Insulation monitoring system.
- Automatic disconnection system in case of LV / MV transformer overheat.
- Emergency disconnection button, accessible from outside.

STANDARD EQUIPMENT

- Internal lighting system.
- Emergency lighting system.
- Auxiliary power outlet.
- Fire detection system with automatic disconnection (both DC and AC sides).
- Safety interlocks for MV transformer compartment door.
- Fire safety kit.
- Medium Voltage safety kit.
- First aid kit and safety signals.

OPTIONAL EQUIPMENT

In addition to the standard equipment, the INGECON® SUN PowerStation can be supplied with the following options:

- LV / MV transformer for the power supply to the auxiliary services panel.
- UPS for auxiliary services.
- INGECON® SUN String Control 16 / 32 string combiner boxes.
- Energy meter with GSM / GPRS system for remote metering.
- Meteo station.
- High-speed Ethernet / Fiber Optic communication infrastructure for Plug & Play connection to PV Plant Controller and SCADA systems.
- SCADA supervision, control and data acquisition system.
- PV Plant Controller compliant with the most widely international Grid Codes.
- Gateway for monitoring and control of the PV Plant by the Grid Operator using standard protocols (like IEC 61850, IEC 60870-5-101/104, DNP 3.0, etc.).
- HV surge arresters.
- Anti-rodent system.
- Human intrusion detection system.
- External lighting system.

Perfect **water resistance**
and **thermal insulation**

IP21 high efficiency
natural air ventilation
MV Transformer
compartment

Air extraction
anti-rain covers

Wing side doors for easy
access to the inverters

Air Intake filtered
sand trap grids

Extremely compact solution

IP54 / NEMA 3R forced
air ventilation
Inverter compartment

High efficiency hot air extraction
plenums for the inverters

Flexible copper busbars
for LV power distribution

IP55 / NEMA 3R
forced air ventilation
MV Cubicle compartment

INGECON® SUN
PowerMax inverters
up to **2330 kVA**

Oil immersed hermetically sealed
MV Transformer up to 36 kV

Easily adaptable to
different ground surfaces

		SHE 22 - FA / FA	SHE 22 - FA / NA
General Information			
Inverter Compartment	Cooling system	Forced air with temperature control	
	Air extraction / Air intake	Overpressure dampers with anti-rain covers / Filtered sand trap grids	
	Max. power consumption	400 W	
	Protection degree	IP54 / NEMA 3R	
Transformer Compartment	Cooling system	Forced air with temperature control	Natural air ventilation
	Air extraction / Air intake	Overpressure dampers with anti-rain covers / Filtered sand trap grids	Protective metal grids
	Max. power consumption	2,720 W	0 W
	Protection degree	IP54 / NEMA 3R	IP21
MV Cubicle compartment ⁽²⁾	Cooling system	Forced air with temperature control	
	Air extraction / Air intake	Filtered anti-rain grids	
	Max. power consumption	130 W	
	Protection degree	IP55 / NEMA 3R	
Operating temperature range ⁽³⁾		from -30 °C to +60 °C	
Relative humidity		0 - 95%	
Installation altitude ⁽⁴⁾		3,000 m above sea level	
Equipment			
Inverter version		X series (Master-Slave), M series (Multi-MPPT), B series (Monoblock)	
BT-AUX switchgear		BASE version (FULL version and high-speed communication infrastructure optional)	
LV / MV Transformer		Dry type cast resin or Oil immersed hermetically sealed	
MV Switchgear		1P-1L or 1P-2L protection cells	
Mechanical Information			
Structure Material		Steel	
Insulation		Sandwich panels containing a 50 mm rigid fire-proof polyurethane foam filling	

Notes: ⁽¹⁾ Equipped with oil immersed hermetically sealed LV / MV transformers ⁽²⁾ Including instrumentation, auxiliary services switchgear, monitoring systems ⁽³⁾ INGECON® SUN PowerMax, "M" and "X" series: rated output power indicated in the Technical Characteristics tables is guaranteed up to 45 °C operating temperature. Derating above 45 °C of 1.8% for each °C of increase until 60 °C operating temperature. -30 °C with optional kit ⁽³⁾ INGECON® SUN PowerMax, "B" series: rated output power indicated in the Technical Characteristics tables is guaranteed up to 50 °C operating temperature. Derating above 50 °C of 1.8% for each °C of increase until 60 °C operating temperature. -30 °C with optional kit ⁽⁴⁾ Please contact Ingeteam for altitudes higher than 1,000 m.

	Length	Width	Height
Size (mm)			
Body dimensions	6,750	2,450	3,050
Overall dimensions with doors open (Tunnel)	8,760	3,950	3,050
Overall dimensions with doors open (Wing)	8,560	6,750	3,050
Foundation dimensions	9,000	5,000	300

SHE 22 Wing

SHE 22 Tunnel

