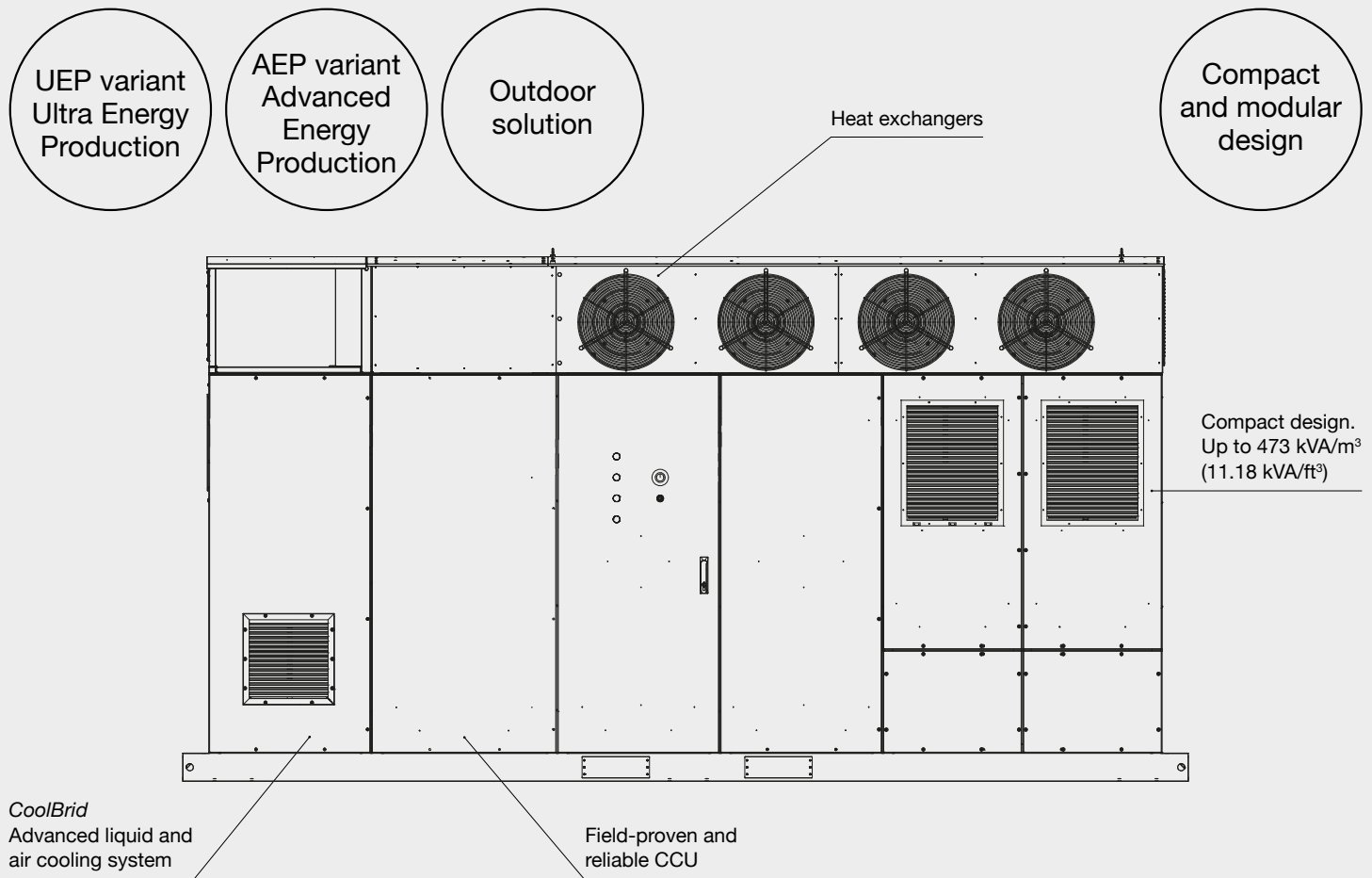






Gamesa Electric PV 3X series PV Inverters AEP & UEP

Maximum energy and versatility
for utility-scale projects



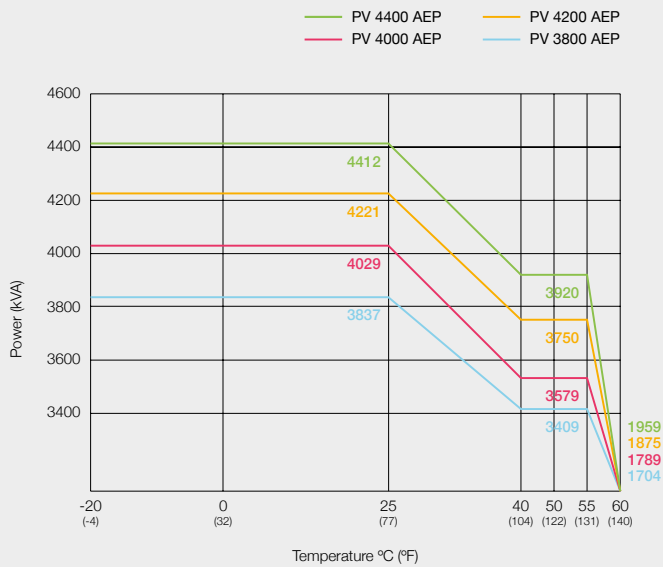


Gamesa Electric PV 3X series High-power PV Inverter family

 <p>Better LCoE</p>	<p>Compact design which allows 2-inverter solution of up to 9400 kVA in a standard 40 ft skid, achieving overall cost reduction by using less PV station units per project</p>	<p>Design with best-in-class component that guarantees less probability of failure and therefore less operation cost (materials and workforce)</p>	<p>Market leading inverter efficiency of 99.5%</p>
 <p>Reliability</p>	<p>Smart liquid/air <i>CoolBrid</i> cooling system that allows critical components to work at temperature level far below the limit, guaranteeing product life span</p>	<p>Tier I suppliers for critical components (power semiconductors, capacitors, inductances and control cards) with best-in-class MTBF values</p>	<p>“Easy to support” concept, with heavy components in removable trays, reducing maintenance and repair time (MTTR)</p>
 <p>Grid compliance</p>	<p>An extensive list of grid-codes compliance, including the most demanding ones, such as Germany, Mexico, Jordan, South Africa and more</p>	<p>Full operating range reactive power supply for both day and night operation through the so-called Statcom mode</p>	<p>Non-characteristic harmonics cancellation over distorted and unbalanced grids (weak grids)</p>
 <p>Higher yield</p>	<p>High DC/AC ratio (up to 200%) to be prepared for bifacial modules, achieving higher production values</p>	<p>Enhanced MPPT algorithm that provides outstanding MPPT efficiency values at static and dynamic states</p>	<p>More yield even in challenging sites: operating up to 55°C (up to 3.6% more energy production) and 2000 m (6561 ft) without derating</p>

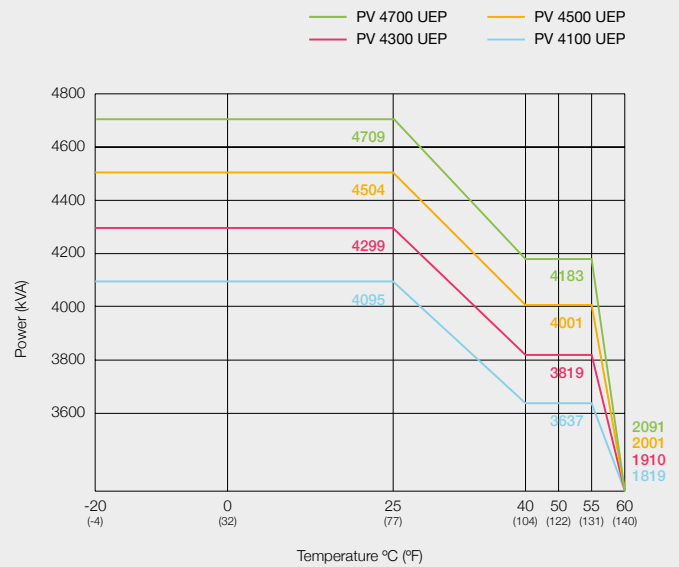
AEP Configurations

Up to 4400 kVA at 1500 V



UEP Configurations

Up to 4700 kVA at 1500 V



Different product configurations available to optimize performance in demanding environments, IEC and UL certifications as well as different voltage levels to fit customers' needs.



	PV 3800 AEP	PV 4000 AEP	PV 4200 AEP	PV 4400 AEP
DC Input				
Ratio DC / AC	Up to 200%			
Max. DC Current @25°C [77°F]	2 x 2362 A			
Max. DC Current @40°C [104°F]	2 x 2100 A			
Max. DC Current @55°C [131°F]	2 x 2100 A			
Max. DC Current @60°C [140°F]	2 x 1050 A			
Maximum Short-circuit Current, I _{sc} PV	Up to 9000 A			
DC Voltage Range	835 - 1500 V	875 - 1500 V	915 - 1500 V	955 - 1500 V
DC Voltage Range MPPT	835 - 1300 V	875 - 1300 V	915 - 1300 V	955 - 1300 V
Nr of DC Ports	max 24 fuse +/- monitored max 36 fuse + monitored			
Fuse Dimensions	125 A to 500 A			
Max. Wire Cross Section per DC Input	2 x 400 mm ² - 800 AWG			
MPPT	1			
Energy Production from	0.5% Pn approx.			
AC Output				
Nominal AC Power @25°C [77°F]	3837 kVA	4029 kVA	4221 kVA	4412 kVA
Nominal AC Power @40°C [104°F]	3409 kVA	3579 kVA	3750 kVA	3920 kVA
Nominal AC Power @55°C [131°F]	3409 kVA	3579 kVA	3750 kVA	3920 kVA
Nominal AC Power @60°C [140°F]	1704 kVA	1789 kVA	1875 kVA	1959 kVA
Maximum Output AC Current	3692 A			
Nominal AC Voltage	600 Vrms	630 Vrms	660 Vrms	690 Vrms
Max. Wire Cross Section per AC Output Phase	6 x 400 mm ²			
AC Power Frequency	50 / 60 Hz			
THD of AC Current	< 1%			
Reactive Power Range	Any			
Efficiency				
Max. Efficiency	99.50%			
Euro Efficiency	99.32%			
CEC Efficiency	99.01%	99.02%	99.14%	99.04%
Stand-by Power Consumption	< 200 W			
Protective Devices				
DC Input	Fuse and motorized load disconnecter			
AC Input	Motorized air circuit breaker			
Overvoltage Protections AC	Type 1 + 2 SPD			
Overvoltage Protections DC	Type 1 + 2 SPD			
Communications				
Control	Modbus TCP / IP (Profinet, CAN upon request)			
Monitoring	Modbus TCP / IP			
Other Features				
LVRT	Yes			
HVRT	Yes			
Working Ambient Temperature*	-20°C / +60°C (-4°F / +140°F). Option -40°C (-40°F)			
Relative Humidity	4% - 100% (without condensation)			
Max. Altitude (Whithout Derating)**	2000 m (6561ft)			
Dimensions (Width x Height x Depth)	4325 x 2250 x 1022 mm / 170.3 x 88.5 x 40.2 in			
Weight	3945 Kg (8697 lb)			
Protection	IP55 class 1 / NEMA3R			
Cooling	Liquid & forced air			
Main Standards				
IEC 62109-1	IEC 62920	IEEE519	Rule 21	
IEC 62109-2	EN 50530	PO12.2	Rule 14	
IEC 61000-6-2	IEC 62116	UL 1741-SA	PRC 024	
IEC 61727	IEC 61683	CSA C22.2	NEC	
EN 55011	IEC 60529	UL62109-1		

* With derating from 25°C / 77°F

** Up to 4000 m (13123 ft) with derating, as optional

	PV 4100 UEP	PV 4300 UEP	PV 4500 UEP	PV 4700 UEP
DC Input				
Ratio DC / AC	Up to 200%			
Max. DC Current @25°C [77°F]	2 x 2500 A			
Max. DC Current @40°C [104°F]	2 x 2220 A			
Max. DC Current @55°C [131°F]	2 x 2220 A			
Max. DC Current @60°C [140°F]	2 x 1110 A			
Maximum Short-circuit Current, I _{sc} PV	Up to 9000 A			
DC Voltage Range	835 - 1500 V	875 - 1500 V	915 - 1500 V	955 - 1500 V
DC Voltage Range MPPT	835 - 1300 V	875 - 1300 V	915 - 1300 V	955 - 1300 V
Nr of DC Ports	max 24 fuse +/- monitored max 36 fuse + monitored			
Fuse Dimensions	125 A to 500 A			
Max. Wire Cross Section per DC Input	2 x 400 mm ² - 800 AWG			
MPPT	1			
Energy Production from	0.5% Pn approx.			
AC Output				
Nominal AC Power @25°C [77°F]	4095 kVA	4299 kVA	4504 kVA	4709 kVA
Nominal AC Power @40°C [104°F]	3637 kVA	3819 kVA	4001 kVA	4183 kVA
Nominal AC Power @55°C [131°F]	3637 kVA	3819 kVA	4001 kVA	4183 kVA
Nominal AC Power @60°C [140°F]	1819 kVA	1910 kVA	2001 kVA	2091 kVA
Maximum Output AC Current	3940 A			
Nominal AC Voltage	600 Vrms	630 Vrms	660 Vrms	690 Vrms
Max. Wire Cross Section per AC Output Phase	6 x 400 mm ²			
AC Power Frequency	50 / 60 Hz			
THD of AC Current	< 1%			
Reactive Power Range	Any			
Efficiency				
Max. Efficiency	99.45%			
Euro Efficiency	99.29%			
CEC Efficiency	99.02%	99.07%	99.11%	99.14%
Stand-by Power Consumption	< 200 W			
Protective Devices				
DC Input	Fuse and motorized load disconnecter			
AC Input	Motorized air circuit breaker			
Overvoltage Protections AC	Type 1 + 2 SPD			
Overvoltage Protections DC	Type 1 + 2 SPD			
Communications				
Control	Modbus TCP / IP (Profinet, CAN upon request)			
Monitoring	Modbus TCP / IP			
Other Features				
LVRT	Yes			
HVRT	Yes			
Working Ambient Temperature*	-20°C / +60°C (-4°F / +140°F). Option -40°C (-40°F)			
Relative Humidity	4% - 100% (without condensation)			
Max. Altitude (Whithout Derating)**	2000 m (6561ft)			
Dimensions (Width x Height x Depth)	4325 x 2250 x 1022 mm / 170.3 x 88.5 x 40.2 in			
Weight	4045 Kg (8918 lb)			
Protection	IP55 class 1 / NEMA3R			
Cooling	Liquid & forced air			
Main Standards				
IEC 62109-1	IEC 62920	IEEE519	Rule 21	
IEC 62109-2	EN 50530	PO12.2	Rule 14	
IEC 61000-6-2	IEC 62116	UL 1741-SA	PRC 024	
IEC 61727	IEC 61683	CSA C22.2	NEC	
EN 55011	IEC 60529	UL62109-1		



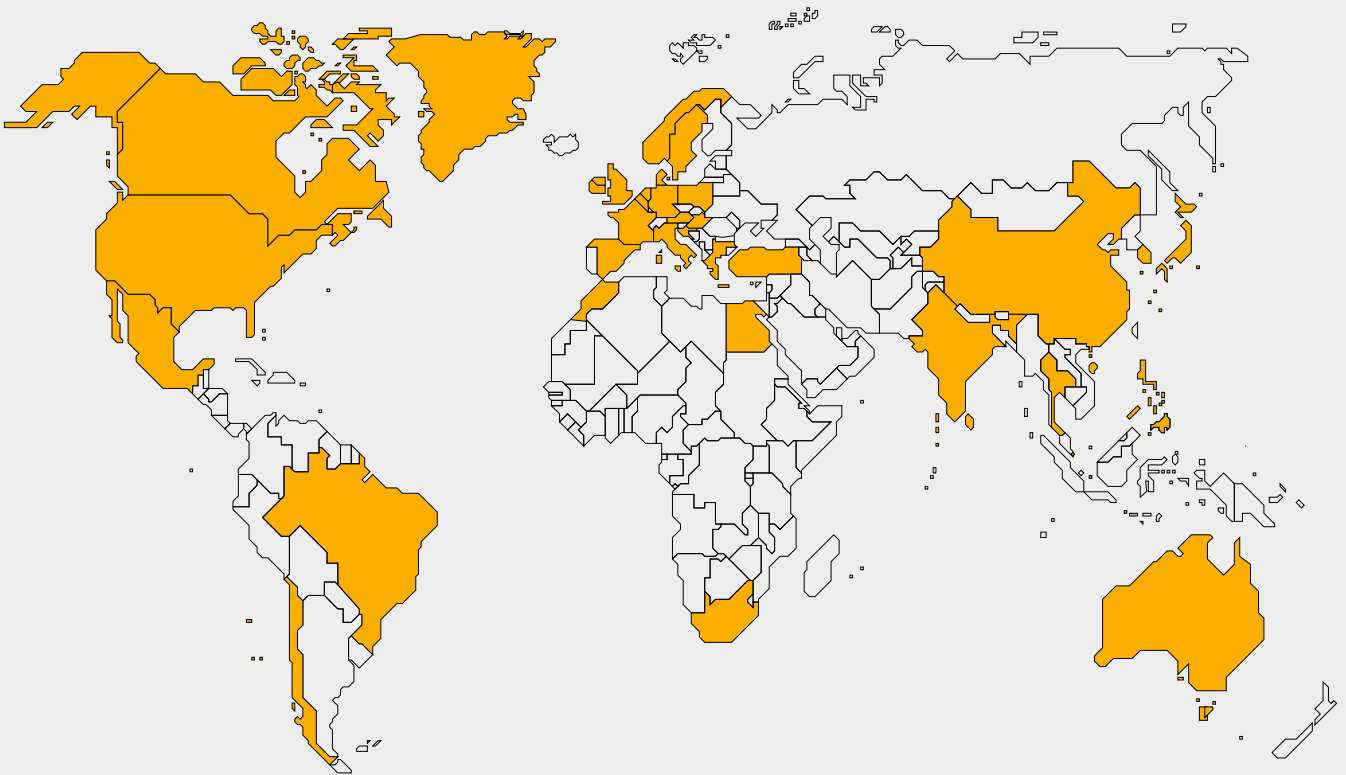
+2.7 GW
SOLAR ENERGY



+100 GW
WIND POWER



+90
COUNTRIES



Worldwide presence

Australia
Austria
Belgium
Brazil
Canada

Chile
China
Croatia
Denmark
Egypt

France
Germany
Greece
Hong Kong
Hungary

India
Ireland
Italy
Japan
Korea

Mexico
Morocco
Netherlands
Norway
Philippines

Poland
Singapore
South Africa
Sri Lanka
Sweden

Thailand
Turkey
UK
USA

