

SG 2.9-129
Built on a foundation of continuous innovation





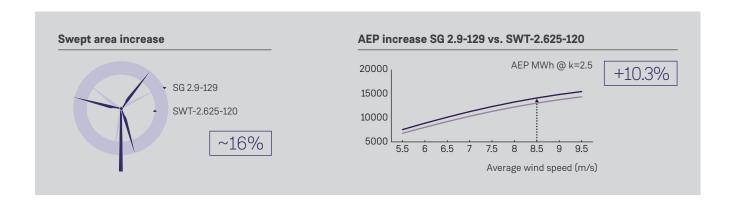
Increased capacity factor for greater returns

SG 2.9-129: a turbine with a certified 25-year design lifetime built for the needs of the American market

Siemens Gamesa, your technology partner One of the key aspects to Siemens Gamesa's success is the continuous development of advanced products adapted to the business case of every customer. We strive to provide the suitable technological solutions for each project, while driving down the LCoE.

For this reason, we offer a catalog of solutions adapted to every type of site and condition, backed by:

- Our reputation as a stable partner (over 138 GW installed worldwide).
- A track record spanning more than 40 years.
- The recognition of the wind power sector.



The SG 2.9-129 wind turbine for medium to low-wind sites

The SG 2.9-129 wind turbine is the Siemens Gamesa onshore turbine developed to meet the medium to low-wind site and market conditions of the American market. The turbine is designed based on the foundation of the 2.3 MW geared product series, one of the most robust and successful turbine lines in the market, with over half of the 11,212* units installed globally installed in North America (8,010 units). The product configuration maintains a similar design, utilizing components from its predecessor, the SWT-2.625-120.

To deliver the lowest Cost of Energy and maximize performance across various sites in the U.S., the SG 2.9-129 is designed with the higher capacity factor our customers demand. This improved model demonstrates our ability to offer flexible solutions for every context while delivering a certified 25-year design lifetime, standard.

Siemens Gamesa technology

The experience acquired through our products, specifically in the optimization of design, prototyping, validation and industrialization processes, along with enhanced design tools such as FEA, thermal modeling and grid analysis has been a key factor in the development of the SG 2.9-129 wind turbine.

- Siemens Gamesa has incorporated technologies into this wind turbine, boosting capacity and simplifying maintenance.
- Aeroelastic tailored blades with 129-m rotor diameter.
- IntegralBlade® technology, DinoTails® Next Generation,
 Vortex Generators and cross-section (airfoil) designs.
- Adaptive yaw system for optimized performance.
- Gearbox with two planetary stages and one helical for increased capacity.
- Efficient direct cooling system.

Technical specifications

General details	
Rated power	2.9 MW
IEC class	S
Control	Pitch and variable speed
Standard operating temperature	Range from -20°C to 45°C (1)

Rotor	
Diameter	129 m
Swept area	13,070 m²
Power density	221.88 W/m ²

Blades	
Length	63.5 m
Airfoils	Siemens Gamesa
Material	Fiberglass reinforced with epoxy
	resin

Tower	
Туре	Tubular steel tower
Height	87 m and site-specific

Gearbox	
Туре	3 stages

Generator	
Туре	Full scale converter
Voltage	690 V AC
Frequency	60 Hz
Protection class	IP 54
Power factor	0.9 CAP-0.9 IND throughout the power range (2)

- (1) Different versions and optional kits are available to adapt machinery to high or low temperatures and saline (C4) or dusty environments. Derating may apply under certain siting conditions above 30°C.
- (2) Power factor at generator output terminals on lower side of MV transformer.

^{*} Figures as of CY4Q2023

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