

# L147 4.3 MW

## LP4: The ultimate onshore wind turbine platform



With the LP4 platform Lagerwey introduces the ultimate onshore wind turbine generation. The LP4 platform is based on the successful LP2 platform with DDPM technology and advanced tower designs. The LP4 generation turbines are designed for various wind classes and can be built with the Lagerwey Climbing Crane. This makes Lagerwey wind turbines cost-efficient throughout the entire life cycle.

### Experience

Lagerwey is a Dutch manufacturer of direct drive wind turbines. We are an established company with 40 years of experience in the development of innovative wind turbines. Various technological spin-offs can be found in other products on the market. Our objective is to continuously reduce the cost price per kWh of wind energy, so that you have the best return on your wind project. For this we have been working together with strategic partner ENERCON since 2018.

### Tower/crane - combination

All wind turbines in the LP4 platform can be built at great height by using our smart modular tower, the Modular Steel Tower (MST). This system consisting of steel plates that are assembled on site, makes it possible to create ever higher towers against low additional costs. The modular tower can also be installed with a unique crane. This Lagerwey Climbing Crane will simplify the wind turbine's installation and reduce the cost price per kilowatt hour even more.

### Generator – high torque, little noise

Thanks to smart design, our Direct Drive Permanent Magnet (DDPM) generator does not require a cooling system or gear box. The efficiency of the generator is very high, approximately 97% at both full and partial load. As our DDPM generator contains few moving parts, significantly less wear takes place in comparison to other wind turbines. This will make the generator very robust and highly suitable for demanding circumstances in both warm and cold climates.

### We unburden our customers

Our wind turbines are delivered ready-to-operate. Our engineering, production and service departments ensure high quality in design and production, great reliability and optimum performance. We unburden our customers and will offer you a unique approach in which we will work together at a successful wind energy project.

**ADVANTAGE THROUGH SIMPLICITY**



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## Technical Data

### GENERAL

Nominal power	4.3 MW
Rotor diameter	147 m
IEC class	IIA
Turbine concept	Direct drive, variable speed, variable pitch, full power converter

### ROTOR

Type	3 blades, upwind rotor
Rotor surface	16,972 m <sup>2</sup>
Power control	Electric pitch control
Blade material	Glassfiber reinforced polyester
Lightning protection	Integrated in the blade, in direct contact with foundation

### GENERATOR

Type	Lagerwey multi-pole synchronous generator
Field generation	Permanent magnet
Main bearing	Double row of conical bearings
Cooling	Based on air flow around the outside of generator (cooling fins)

### SAFETY SYSTEM

Type	3 independent pitch control systems with emergency power provision
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### CONVERTER

Type	Full power AC-DC-AC
Control system	IGBT-Control
Cooling	Water-cooled

### OPERATIONAL DATA

Cut in wind speed	2.5 m/s
Cut out wind speed	25 m/s
Power factor	Regulated

### OTHER

Service brake system	Standard
Lubrication system	Automatically controlled bearing and gear lubrication

### TOWER

Type	MST - Modular Steel Tower
Hub height	126 / 155 m

### OPTIONS

Service lift	Standard
Rescue module gondola	Standard
Noise reduction	Standard
Obstacle light/markings	Optional
Ice management system	Optional
Cast shade regulation	Optional