37% MORE SWEPT AREA.
N117/2400: EXCELLENCE IN EFFICIENCY.

Top yields for light wind sites.
THE LARGEST
With its rotor blades of nearly 58 metres, the N117/2400 is the largest wind turbine in its category. Its rotor diameter is 17 metres longer than that of the N100/2500. In developing these rotor blades, Nordex has remained true to its tried-and-tested technology: the profile and connection system are the same as for the previous models from this platform. In addition, Nordex has geared the rotor dimensions exactly to the requirements of lower wind locations. Carbon fiber-reinforced plastic ensures the stability of structures exposed to particular strain.
The N117/2400 is specifically designed to generate high yields even at low wind speeds. Its rotor sweep of 10,715 square metres – almost 3,000 square metres more than its predecessors – results in a performance that is correspondingly impressive. The N117/2400 provides 17 percent more yield compared to turbines previously offered for IEC 3 locations, making it the most efficient IEC 3 machine in its power class.
The N117/2400 sets the highest standards for economic efficiency. Its rotor swept area output of around 4,500 square metres per megawatt sets a new record. Every year, the N117/2400 notches up more than 3,500 full-load hours at typical locations, outstripping other products in its category by 20 percent. It achieves a capacity factor of up to 40 percent. With the N177/2400 in regions with lower winds, Nordex customers can ensure high and constant production of electricity.
Attractive wind locations can be close to residential areas. To design wind farms ideally for these spaces, a large turbine with minimal noise emission is required. This is why the N117/2400 does not exceed the sound power level of 105 decibels. The turbine also meets the structural height limitation criterion: on the 91-metre standard tower, it is below the critical overall height of 150 metres. Even on the 140-metre hybrid tower it is under 200 metres.
Experience is the key to building reliable power plants: the N117/2400 is the result of eleven years of consistent technical development of the platform up to 2.5 megawatts. In the year 2000, Nordex was the first manufacturer in the world with a 2.5 megawatt series turbine. Step by step, the company has built up a varied portfolio with machines for every wind location and is today on the market with the Gamma Generation, the Efficiency Class. The N117/2400 rotor giant adds yet another, even more powerful machine to the Efficiency Class. Its design includes the knowledge gained from 26 years of engineering in the wind industry and experience from installing more than 4,400 wind turbines. Nordex customers benefit from sophisticated technology and an extremely robust design.
## DATASHEET

### N117/2400

#### Operating data
- Rated power: 2,400 kW
- Cut-in wind speed: 3 m/s
- Cut-out wind speed: 20 m/s

#### Rotor
- Diameter: 116.8 m
- Swept area: 10,715 m²
- Speed: 7.5–13.2 rpm
- Tip speed: 72 m/s
- Speed control: Variable via microprocessor
- Overspeed control: Pitch angle

#### Gearbox
- Construction: Combined spur/planetary gear or differential gearbox

#### Generator
- Construction: Double-fed asynchronous generator
- Cooling system: Liquid/air cooling
- Voltage: 660 V
- Grid frequency: 50/60 Hz

#### Control
- Control centre: PLC controlled
- Grid connection: Via IGBT converter
- Distance control: Remote-controlled surveillance system

#### Brake system
- Main brake: Pitch angle
- Secondary brake: Disk brake

#### Lightning protection
- Fully compliant with EN 62305

#### Tower
- Construction: Tubular steel tower, hybrid tower (140 m)
- Rotor hub height/Certification: 91 m/IEC 3a, DIBt 2
- 140 m/IEC 3a, DIBt 2

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Series start: July 2012. Please see the Nordex website at www.nordex-online.com for the latest technical data.