

Victory 24-60

Making sure you get the maximum
from your small wind turbine

24 meter rotor diameter,

60 kW power generated,

240,000 kWh energy produced at 6 m/s:

the best performance in its category.

Even when wind speeds are low.

Victory 24-60 wins in production
and in profitability, it guarantees
a rapid return on investment.

gruppo tozzi

tozzi nord

everyone wins

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Registered Offices

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The company is managed
and coordinated by TRE S.p.a.
Tozzi Renewable Energy

Victory 24-60

Estimated annual energy production with K = 2

Annual average wind speed (m/s)	4	5	6	7	8
Annual average wind speed (mph)	9.96	11.20	13.44	15.68	18.00
Rated annual energy output (MWh/a)	116.7	181.9	240.6	288.8	325.6

Upwind Victory 24-60 wind turbine

Rated power	60 kW
Rotor diameter	24 m
Hub height	30 m
IEC Wind class	III A
Rated wind speed	8.8 m/s
Cut-in wind speed	2.5 m/s
Cut-out wind speed	20 m/s

Rotor

Type	Upwind
Rotational direction	Clockwise
Number of blades	3
Swept area	452.5 m ²
Blade material	GRP (epoxy resin)
Rotational speed	Variable: 10-43 rpm
Pitch control	Hydraulic actuation

Drive train

Hub	Rigid
Main bearings	Spherical roller bearing
Gearbox	Parallel axis, two stages - ratio 1: 20.6
Generator	PMS (Permanent Magnet Synchronous)
Grid feed	AC-DC-AC located at tower base
Grid code	Italy, CEI 0-21; UK, G59/3
Electrical connection	400 Vac 3ph, 50 Hz

Brake system

Primary brake system	Aerodynamic brake with emergency power supply
Secondary brake system	Slow shaft disc brake with emergency power supply

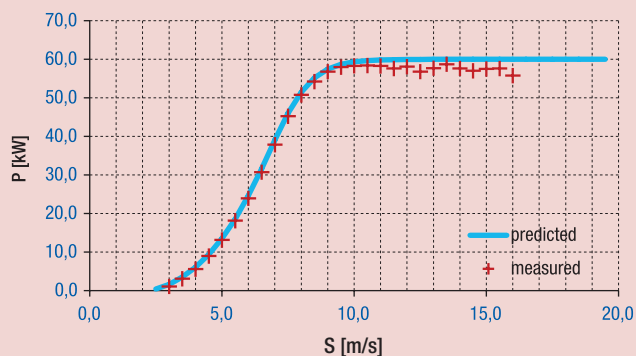
Yaw	Active yaw system
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Remote monitoring systems

	Tozzi Nord SCADA System
	Tozzi Nord Real Time Viewer
	Remote Monitoring system for Android (optional)



Certified power curve



IEC61400-12 certified power curve
IEC61400-11 certified acoustic noise measurement

