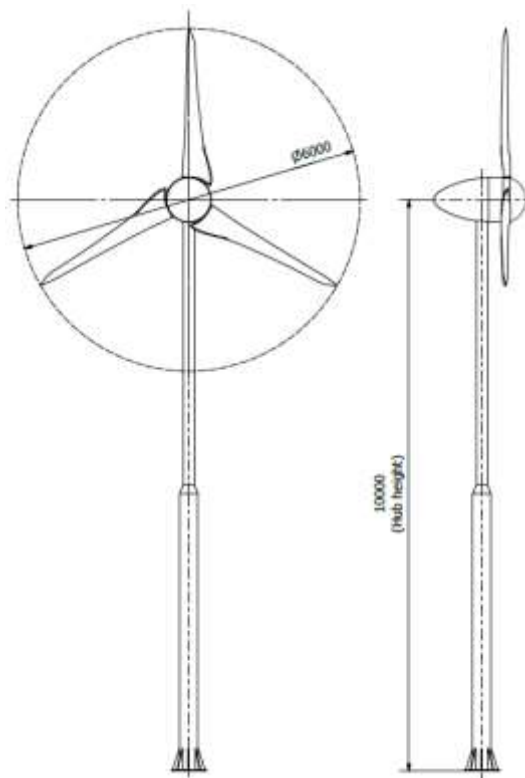


my!Wind

10 kW wind turbine

Product specification



Design data

Rated power:	10,0 kW
Cut-in wind speed:	2,5 m/s
Rated wind speed:	10.5 m/s
Cut-out wind speed:	none
IEC wind class:	II
Max. survival wind speed:	59,5 m/s
Max. mean annual wind speed:	8,5 m/s
Electrical configuration:	direct drive
Operating temperature range:	-20°C to +40°C

Rotor

Number of blades:	3
Diameter:	6 m
Rotor area:	28.26 m ²
Rated speed:	200 rpm
Wind direction arrangement:	upwind
Blade material:	fibreglass
Max. tip speed:	70 m/s

Generator

Type:	permanent magnet multi-pole
Number of phases:	3
Rated power:	10,0 kW
Rated speed:	200 rpm
Rated efficiency:	82%
Protection:	IP 56
Voltage:	400 V
Frequency:	variable

Yaw

Type:	Active upwind (electrical)
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Control

Controller type:	Programmable logic unit (PLC)
Manufacturer:	SIEMENS
Software:	my!WIND
Communication:	RJ45, internet

Safety system

Speed limitation:	Passive blade pitch
Operational brake:	Active yawing (out of wind)
Emergency brake:	Electromagnetic (fail safe: needs power to open)

Tower

Hub height:	10, 16 and 18 m
Type:	tubular steel
Construction:	Self-supporting or guy-wired
Material:	zinc-coated steel

Masses

Nacelle without rotor:	200 kg
Rotor blade:	19 kg each
Complete rotor (hub):	105 kg
Yaw:	40 kg
Freestanding tower:	495 kg
Guy-wired tower:	182 kg
Gin pole freestanding:	70 kg
Gin pole guy-wired:	80 kg
Total weight freestanding:	787.5 kg
Total weight guy-wired:	484.5 kg

Calculated annual energy yield

Weak wind site (4.0 m/s average wind speed):	8 100 kWh
Strong wind site (7 m/s average wind speed):	21 500 kWh

Power production depending on site (roughness, turbulence).