

*TUGEth*er with the wind



Membership:

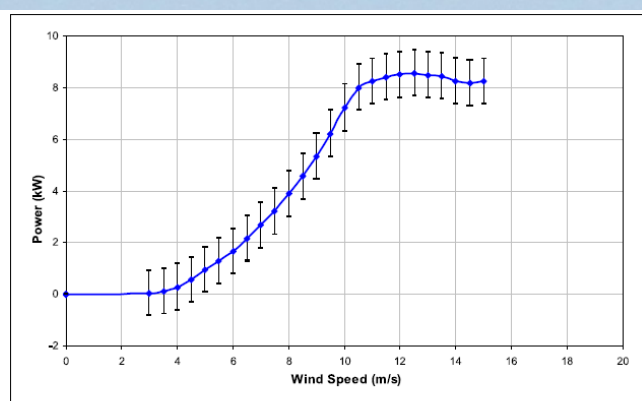


Estonian
WIND POWER
Association



Technical specification - TUGE[®] 10

<u>Operating data</u>	
Turbine type	TUGE [®] 10, TUGE10-83-70
Power	Rated power output 10 kW
Active wind range	2 – 25 m/s, rated wind speed 10 m/s,
Tower	18 or 22 m tilt-up self standing tubular tower (optional with ladder), alternative 30 m tilt-up self standing tubular tower, galvanized as standard, optionally painted
Environmental conditions	SWT class III – IEC 61400-2, operating temperature range -20 ... +40° C
Control	Active yaw, stall, yaw control accuracy $\pm 15^\circ$
Rotor	83 m ² , 70 rpm, 3-bladed upwind, clockwise rotation, GRP blades with fail-safe tip-brake
Generator	Permanent magnet synchronous, gearless, active temperature monitoring
Inverter	DVE GFI 10-K2 with integrated Beckhoff embedded PLC turbine control unit
Performance	3 m/s – 8195 kWh/y 4 m/s – 17643 kWh/y 5 m/s – 28071 kWh/y 6 m/s – 37744 kWh/y 7 m/s – 45935 kWh/y 8 m/s – 52366 kWh/y 9 m/s – 56925 kWh/y <i>Simulation with Fraunhofer IWES Small Wind Turbine Yield Estimator V2.2010</i>
Sound power level L _{WA,P}	Measurement tests in progress



Measured power curve corrected to sea level air density 1.225 kg/m³ (database B)