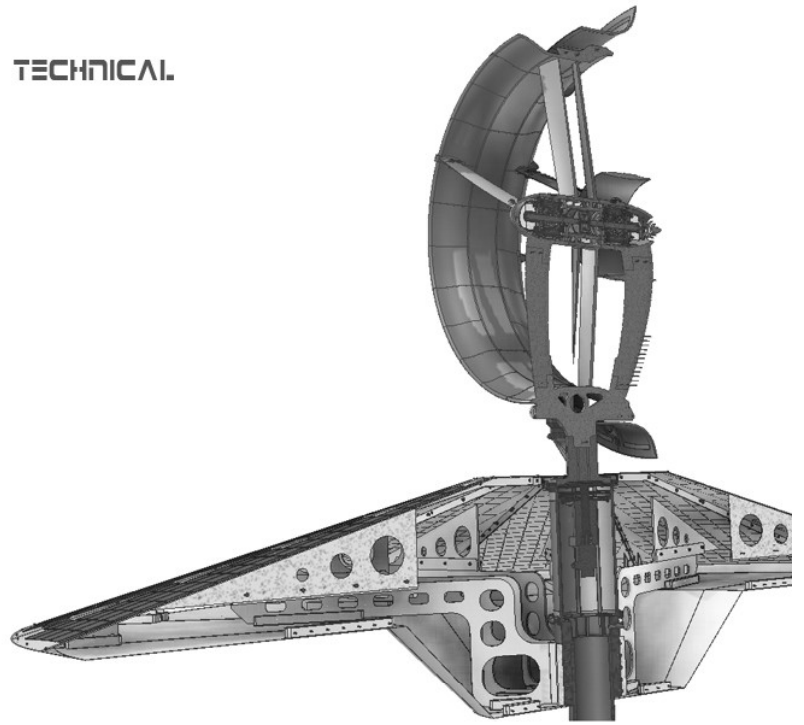


Vetrosun is hybrid device for wind and solar energy conversion. It is made from Vetar 10 wind turbine and specially shaped solar panels. When placed together, solar panels form slanted platform which deflect air mass toward Vetar 10 turbine intake.

As a consequence air velocity inside turbine is increased which automatically increase Vetar 10 normal energy output, in this case, for about 15%. Vetrosun is all locations solution for best utilization of both, wind and solar energy. Combined installed power of Vetrosun 13i4.2 is 17.2 kW, 13 kW for wind energy and 4.2 kW for solar energy.





Technical data	
Rated power wind	10 kW @ 14 m/s
Rated power solar per 1 panel	0.35 kW @ 1000 W/m ²
Rated power solar per 12 panels	4.2 kW @ 1000 W/m ²
Max power wind	13 kW @ 15.5 m/s
Max power solar per 1 panel	0.35 kW @ 1000 W/m ²
Max power solar per 12 panels	4.2 kW @ 1000 W/m ²
Turbine design standard	AWEA, MCS, IEC - 61400-2, Wind class 1
Start-up wind velocity	1.5 m/s
Cut-in wind velocity	3 m/s
Cut-out wind velocity	50 m/s
Survival wind velocity	75 m/s
Rotor diameter	1.97 m
Highest diameter	2.86 m
Rated power rotation frequency per rotor	11.42 Hz (685 RPM)
Max power rotation frequency per rotor	12.2 Hz (730 RPM)
Each generator voltage	550 V AC @ 730 RPM
Each generator type	V-GEN 6.5, PM, out-runner
Grid feeding	400 V, 50 Hz, 3 phase 3W or 4W + PE
Turbine controller	Aurora Wind Interface 15 kW
Inverter	Aurora Trio 20 kW
Yaw Controller	Active
Rotor rotation controller	Active yaw
Breaking system	Resistors braking, Electromagnetic brakes
Remote monitoring	Aurora Interface monitoring system, LAN, wireless/GPRS/3G
Interface	Graphic - Display
Designed life span	> 20 Years
Tower	Free standing
Turbine mass	375 kg
Combined solar units mass	1230 kg
Individual solar unit mass	102.5 kg
Acoustic emission	< 35 dB
Warranty	5 years

