



Gearless Technology **Permanent Magnet** **Direct Drive System**

- Proven performance in the field.
- High efficiency with encapsulated PM generator.
- Grid friendly electricity by AC/DC/AC full power conversion system.
- Low maintenance needs due to the simple direct drive system.
- SCADA & CMS(Condition Monitoring System) available.

750 kW

SIVA U50 / U57

You Can Trust Siva
Simple Yet **Powerful**

Siva Windturbine India Private Limited
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|------------------|------------------------|
| 1. Spinner | 10. Lightning Arrester |
| 2. Nacelle cover | 11. Wind Vane |
| 3. Blade | 12. Anemometer |
| 4. Rotor Hub | 13. Hydraulic Unit |
| 5. Main Shaft | 14. Controller |
| 6. Machine Frame | 15. Cooler |
| 7. PM Generator | 16. Tower |
| 8. Rotor Brake | 17. Power Converter |
| 9. Yaw Drive | 18. Service Crane |

Technical Data 750 kW

SIVA U50/ U57

	U50	U57
Type	Horizontal axis, Upwind, Variable speed	Horizontal axis, Upwind, Variable speed
Rated power	750kW	750kW
Rotor diameter	50m	57m
Hub height	50m, Tubular steel tower	68m, Tubular steel tower
Power regulation	Pitch Control	Pitch control
Rotational speed	9~28rpm	9~28rpm
Cut-in / Cut-out wind speed	3m/s / 25m/s	3m/s / 25m/s
Rated wind speed	12.5m/s	11.5m/s
Extreme wind speed(V _{e50})	70m/s	52.5m/s
Design type class	IEC IA	IEC IIIA
Design life time	20years	20years
Temperature range	Operation: -10°C to 40°C, Standstill: -20°C to 50°C	
Drive train	Main bearing Generator	Two separate roller bearing Radial flux with permanent magnet, Synchronous
Power converter	Full capacity AC / DC / AC Grid connection, IGBT Type	
Brake systems	Aerodynamic brake with pitch battery back up mechanical rotor brake	
Control system	PLC with embedded software based on RTOS(real time operating system)	
Pitch system	Independent blade pitch via electric motor drive	

