



Sunnytek Solar Sweden

Hydro power 30 meter / 100 KW in stainless steel

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This 100 KW Francis turbine is a special model for applications in polluted corrosive water. Turbine wheel and some interior parts are corrosive resistant to resist corrosion and some particles in water flow. There are a number of applications in waste water from sewage we target with this system. Here it is lots of hidden energy that can be collected by this solution. There are smaller and larger models with same design we can offer.



Technical specifications and parameters.

System	Horisontal Francis turbine 2 X Fulcrum structure
Runner blades	Stainless steel diameter 36 cm
Water head	30 meter
Water flow	400 liter / sec
Efficiency	Typical 91% for the turbine
Rotational speed	1000 RPM
Control	Speed controls unit by PLC operated hydraulic governor
Stabiliser	Fly wheel design in heavy steel
Generator type	Brushless excitation In sublation class F/F
Output Voltage	400 Volt AC optional 440 volt 50 to 60 Hz
Efficiency	93% Power factor 0.8 of generator
Frequency	50-60Kz spec when ordered
Governor with	PLC control. Digital control Hydraulic servo system valves and pump
Flow control	Inlet valve with electrical control. Flange mounted.
Control panel temperature	Automatic security systems. Power control. control. External system hydraulic regulator. RS 485 computer interface Included
Kit and spares parts and seals and For installation	Tool kit for service and installation. Random spare some key spare parts. Installation and assembly lifting kit.



Options

Installed in a container preinstalled components for easy and fast start up MPPT phase lock inverter and power control with Web interface.

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Turbine models Francis design**

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Output power	Water flow	Runner diameter	Speed
75 KW	350 liter / sec	35 cm	1000 rpm / 50 Hz
118KW	500 liter / sec		1000 rpm / 50 Hz
160 KW	653 liter / sec	42 cm	1000 rpm / 50 Hz
300 KW	1260 liter / sec		900 rpm / 60 Hz
400 KW	1800 liter / sec	50 cm	900 rpm / 60 Hz

All systems include following

- * Francis water turbine system
- * Brushless generator
- * Governor with hydraulic control and PLC system
- * Inlet valve with electric operation
- * Synchronisation panel and control cabinet with system protection functionality
- * Service kit for installation works
- * Spare part kit

These systems have a good quality and a very good cost in purchasing and operation. This makes many new sites possible to be profitable that did not be OK earlier. We offer other hydro power solutions from small to very big beside what is on this paper.



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