



Sunnytek Solar Sweden

80 KW vertical Francis turbine 30 meters water head Page 1/2 8 November 2017

Sunnytek & partners offers a hydro power turbine based on vertical Francis turbine principle with 80 KW output at 30 meters water head. This is an efficient design with moderate costs and short pay off. Vertical turbines are compact.

Francis turbines are the best solution and can handle large variations in water flow over seasons. This unit can work between 140 liter / sec to 340 Liter / sec with acceptable performance and efficiency.

The system is normally delivered as a complete kit with generator + turbine governor system.

Control unit is included for automatic remote control of the power station. Sunnytek can deliver this system integrated into a standard 20 our 40 feet container for easier work when installed and reduced total costs.



Technical specifications and data

Model	Francis Turbine STF160-LJZ-35
Water head	H=30meter
Water flow	Q=0.14~0.34m ³ /s
Output power	N=30~80KW
Penstock	Diameter 40cm
Runner diameter	Diameter 35cm
Rated speed	1000rpm
Efficiency	Measured at rated point—90%
Runaway speed	Max 2000rpm

Generator performance

Model	Generator: STZ75-6
Rated capacity	Power 75KW
Voltage	Rated voltage---400V
Cosine	Rated power factor—0.8
Speed	Rated speed—1000rpm
Frequency	Rated frequency—50HZ
Efficiency	Rated efficiency—90%
Output power	Practical output 80KW

Speed control

Speed Governor	Model STSD-300
Valve	DN400 mm diameter

Control panel

Control cabinet	Model BKF-10-/480
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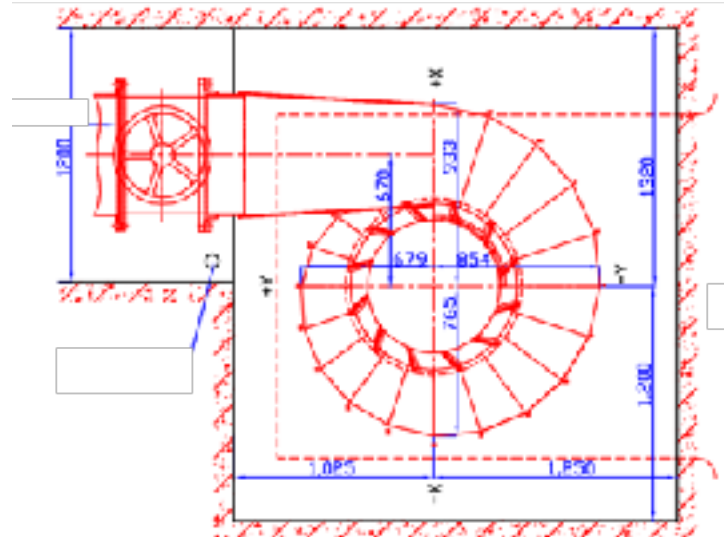
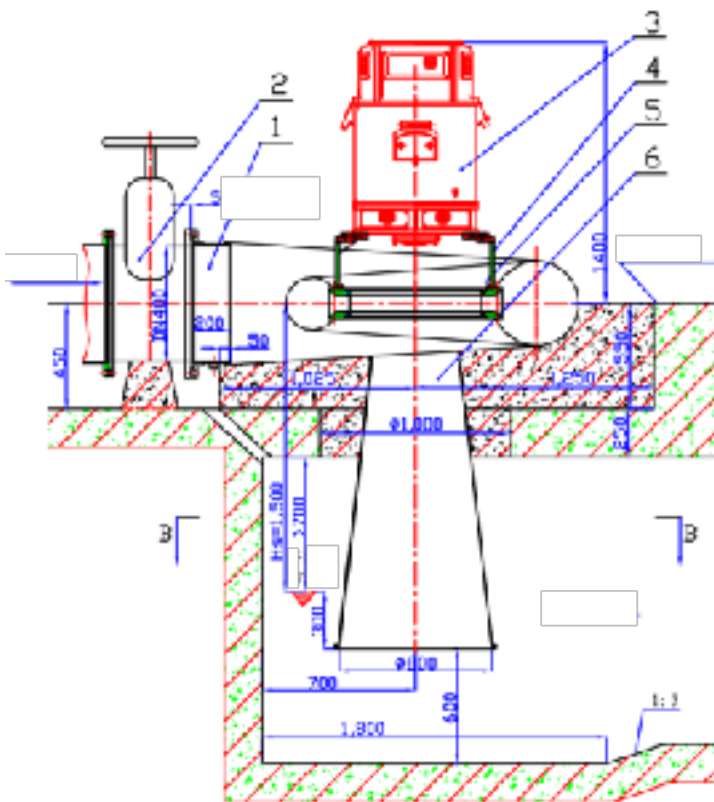


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Optional

- * MPPT inverter with electronic connection to external grid. This can compensate for large deviations in speed and power in best ways.
- * Battery energy storage and equaliser system for better balance of local grids
- * Hybrid system where we add solar power or wind mills to cooperate in same local grid. In many areas dry season limits water flow but then we have more sun. This balance in a better way.



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