

PS 9k/15k/21k/25k

Solar-operated Submersible AC Pump Systems

Characteristics

- flow rate up to 130 m³/h
- lift up to 160 m
- maintenance-free
- high efficiency

Application

- drinking water supply
- livestock watering
- pond management
- irrigation
- etc.

Components

Motor

- 3-phase AC motor
- corrosion-resistant construction
- stainless steel splined shaft
- NEMA mounting dimensions
- hermetically-sealed windings
- water lubrication
- pressure equalizing diaphragm
- max. submerged depth: 700 m/2,300 ft
- max. water temperature: 30 °C/86 °F
- PH value: 6-9
- IP 68

Pump End (PE)

- centrifugal multistage direct-coupled pump end
- non-return valve
- material: stainless steel (AISI 304), rubber
- dry running protection (optional)
- max. sand content: 50 g/m³, a higher content will wear the pump and reduce its life span considerably
- max. salt content: 300–500 ppm at max. 30 °C/85 °F, higher salt contents require lower water temperatures
- pH value: 6–9
- high life expectancy

Performance

		PS 9k	PS 15k	PS 21k	PS 25k
output power, nominal	[kW]	7.5	11.0	15.0	18.0
output voltage	[VAC]	380–440	380–440	380–440	380–440
max. input voltage, Voc	[VDC]	750	750	750	750
min. input voltage, Vmp	[VDC]	500	500	500	500
max. flow rate	[m ³ /h 1,000 US Gal./h]	130 34.4	130 34.4	130 34.4	160 34.4
max. vertical lift	[m ft]	160 530	120 400	120 400	160 530

Controller PSkAC

- controlling of the pump system and monitoring of the operating states
- mounted at surface (no electronic parts submerged)
- two control inputs for well probe (dry running protection), float or pressure switches, remote control etc.
- automatic reset 20 minutes after well probe turns pump off
- data logger for historical dates: running time, starting/shut down time of day, max. power/voltage of day, accumulated energy of day etc.
- display of current running data such as: input/output current/power/voltage, pump speed, temperature
- speed control selectable, max. and min. speed
- solar operation: integrated MPPT (Maximum Power Point Tracking)
- input: Voc max. 750VDC, Vmp min. 500VDC
- output: 400VAC 3-phase, 30–60 Hz
- max. efficiency 97 %, advanced IGBT
- enclosure: IP 41 (sealed, weather-proof)
- ambient temperature: –10 to +45 °C

Safety Features

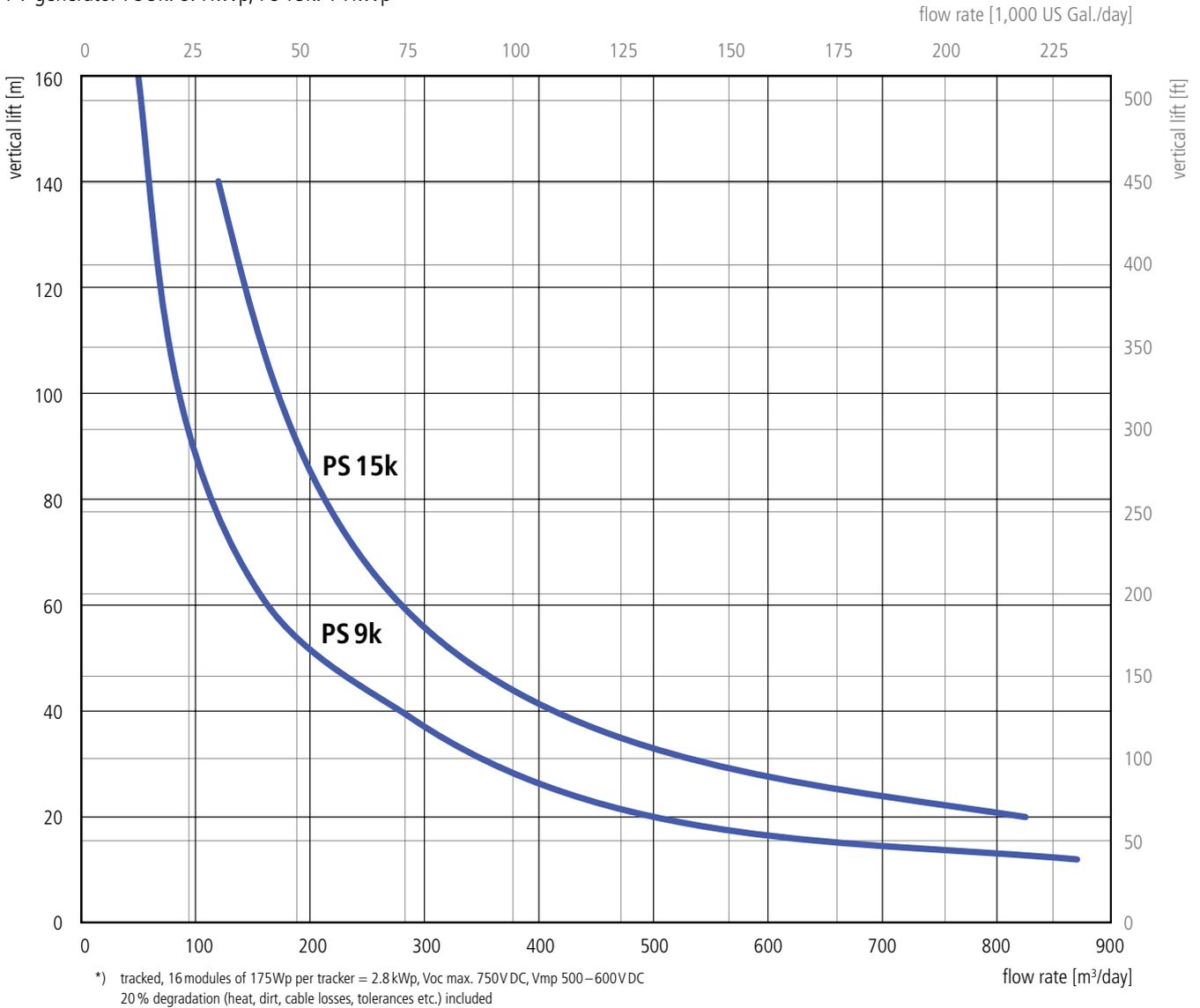
- protection against
 - over current
 - under voltage
 - over speed
 - over temperature
 - reverse polarity
 - low water



photo may differ

Daily Flow Rate

6 kWh/m²/day, 8 peak flow hours per day
PV generator PS 9k: 8.4 kWp, PS 15k: 14 kWp*



Pump Layout Service

For each PSk pump system a choice of different pump ends is available to guarantee best performance for specific flow rates and lift. The above diagrams represents the consolidated optimum of all the available pump ends for the whole performance range.

LORENTZ provides the service of a individual pump system layout for its customers.