

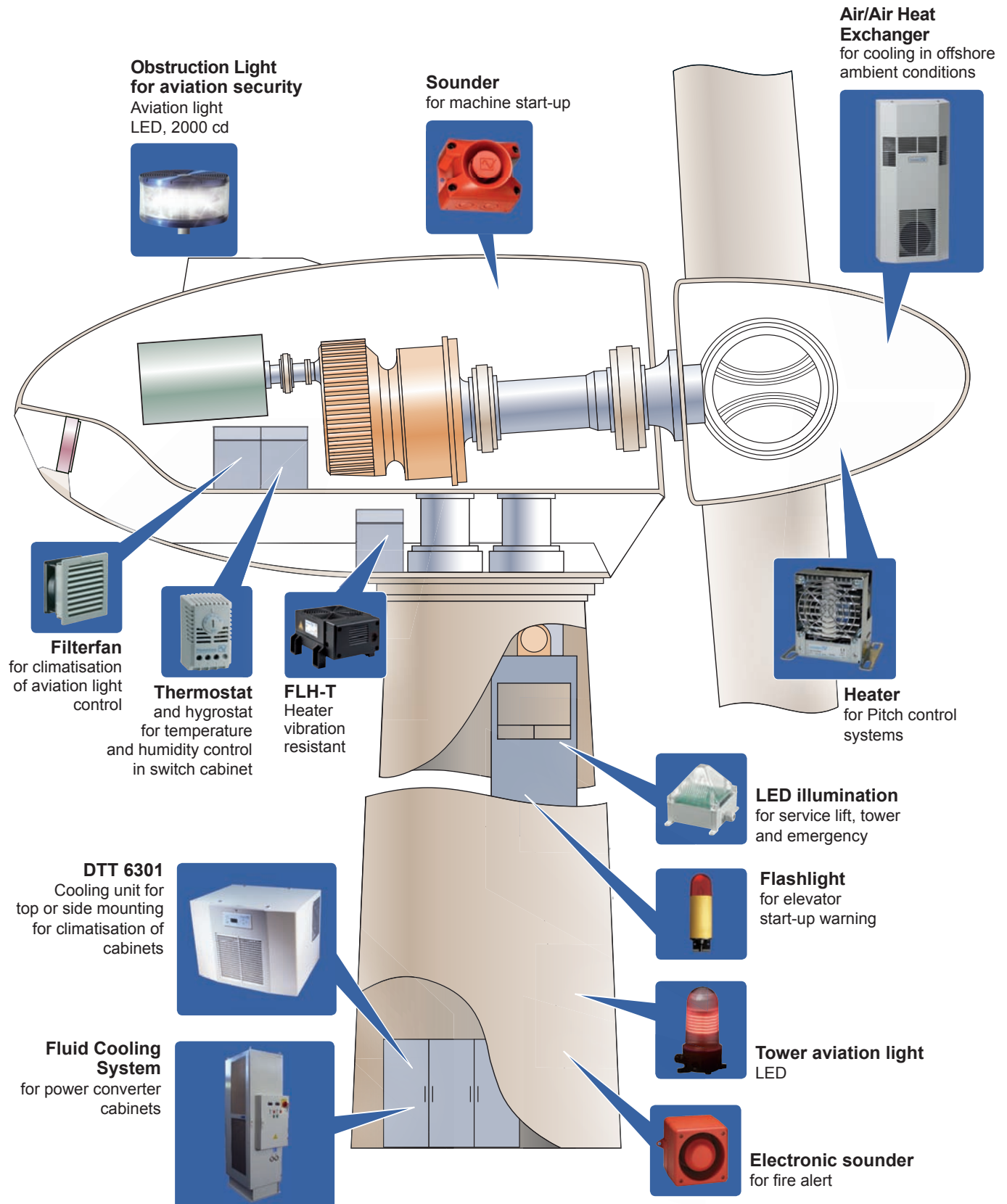
Thermal Management and Signaling Technology for Wind Energy

Edition 13.1



Innovative Equipment for Wind Power Plants

Pfannenberg is one of the leading companies in thermal management and signaling solutions in wind energy. Pfannenberg is supplier for all major wind energy OEM's and their suppliers, all over the world – in USA, Europe, China and India. Pfannenberg provides innovative solutions like reliable IP 55 protected Filterfans with 300% longer service life for extreme dusty environments or top mounting cooling units with unique condensate safety for cabinets located in the base of towers where space is limited.



Signaling Technology and Thermal Management

... for wind energy applications

Advantages at a glance:

Heaters

- 10 - 10 000 W
- available with integrated thermostat
- tested according to railway standard "shock and vibration resistancy"
- wide range for all applications of hygrostats and thermostats



Obstruction Light Systems

- full range of low and medium intensity light
- lifetime > 20 years with innovative LED-Technology
- GPS synchronisation integrated
- integrated GPS and twilight sensor
- twilight switch integrated
- for on- and offshore applications
- easy to install - only power supply needed
- international approvals; AVV, ICAO (FAA pending)
- replacement kits for all common types



Cooling Systems

- service reduced filterfans with increased airflow rate
- cooling units and filterfans for side mounting or top mounting
- cooling units 300 - 4 000 W
- filterfans 25 - 950 m³/h, IP 54 or IP 55
- energy efficient **ECOOL** technology
- air/air heat exchanger for corrosive ambient conditions



Lights

- LED continuous light or xenon flashlight
- impact resistance IK 08
- available in SIL/PL, safety monitored
- IP 65, 66
- maintenance-free
- low power consumption 200 mA
- vibration resistant
- long lifetime > 50 000 h
- conform to EN 54-23



Fluid Cooling Systems

- wide range of cooling capacity 1 - 150 kW
- optimised systems for worldwide climate zones



Electronic Sounders

- available in SIL/PL, safety monitored
- IP 65, 66
- impact resistant
- maintenance-free
- vibration resistant
- conform to EN 54-3



Pfannenbergl – Global Wind Energy Competence

For more than 15 years Pfannenbergl develops solutions for the wind energy manufacturers worldwide. All substantial wind turbine manufacturers count on the experience and authority of Pfannenbergl, if it concerns reliable thermal management of plants and safe signaling.

The Pfannenbergl Group has advanced as a globally operating thermal management and signaling technology specialist with subsidiaries and distributors in 42 countries on all five continents.

Pfannenbergl offers products for all aspects of industrial thermal management of switch cabinets, machine and building safety: Filterfans, cooling units, chillers, heaters, thermostats, hygrometers, sounders, flashlights, status lights, aviation and traffic lights, accessories and spare parts.

Since more than 50 years leading companies from various industry sectors are putting their trust into Pfannenbergl system solutions: Energy, Automotive, Chemicals, IT, Machinery, Oil & Gas, Infrastructure.



"We at Pfannenbergl understand our customers. Satisfying their needs is our top priority, when analyzing, developing, and elaborating product solutions."

Andreas Pfannenbergl, CEO and Managing Director



Serving the global market on site

- Pfannenbergl offices
- Sales representatives



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