

Solutions for



HVAC/ Refrig- era- tion

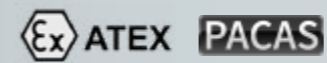
Axial Fans and Clutches

Smart Fan Technology

WingFan's core competence in aerodynamic engineering allows us to develop advanced technology blade profiles to minimize fan power consumption with the lowest noise emissions.

Advanced CFD development tools enable us to offer highly efficient and light weight fan solutions for all types of HVAC and refrigeration fans. Various blade materials are available to meet the requirements of almost any application. Validation of fan performance data is performed on our state-of-

the-art wind tunnel built according to AMCA Std. 210-99 (fig.15). Compliance to the ErP energy efficiency directive for electrically driven fans can be easily checked using the integrated ErP feature in our SELECT fan selection software.



Anti-Static fans

Our flame retardant carbon fiber reinforced **PACAS** blade material is suitable for all **ATEX**, mining and offshore applications with a temperature range from -40 to 110°C. Special epoxy coatings can also be applied to the hubs to further improve the resistance to sparks caused by debris impact. Typical applications: Compressors, oil and gas industrial coolers, chemical plant coolers.

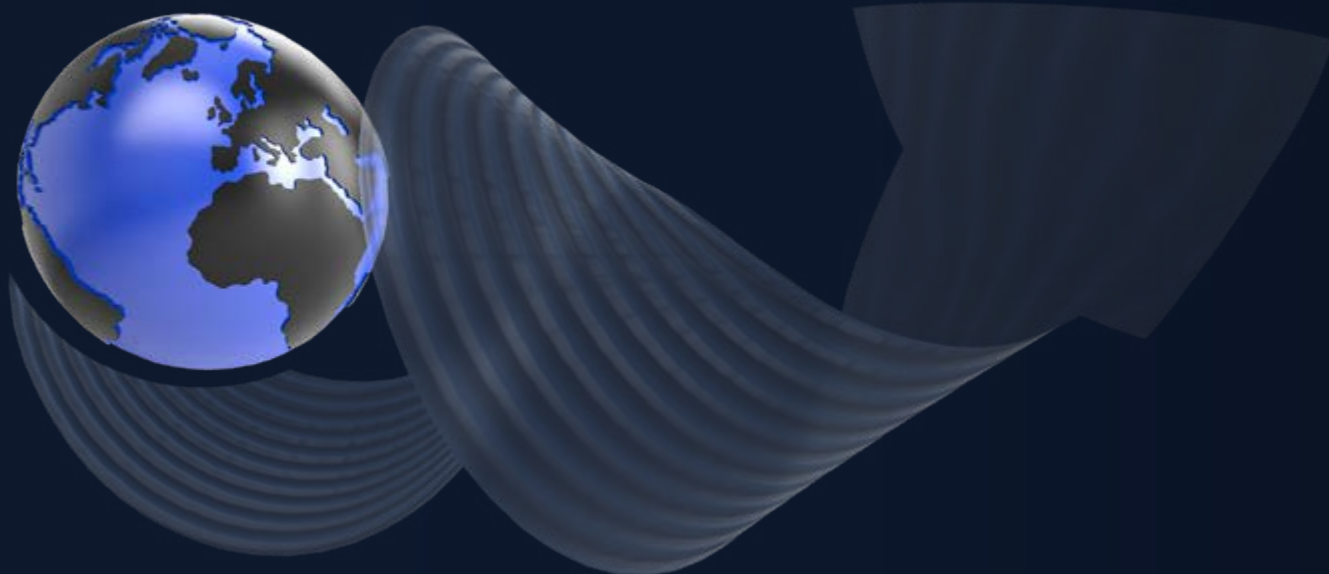
BLEX® the gap

With WingFan's BLEX® technology, the **static pressure is dramatically improved** and the noise may be reduced by 2 to 3 dB(A). The **noise at the fan blade tips** caused by air slippage and turbulence **is significantly reduced** due to minimized tip clearances.

The same air flow can be achieved while reducing pitch angle and fan speed, thus lowering power consumption. The overall **system efficiency is increased** by up to 20% resulting in significant **fuel/energy savings**.

The flexible nylon fabric is designed to adapt the fan diameter to the contour of the shroud thereby reducing the clearance close to ZeroTip®.

All regular blade profiles in the WingFan product range made of PA and PAG material are available with state-of-the-art BLEX® technology.



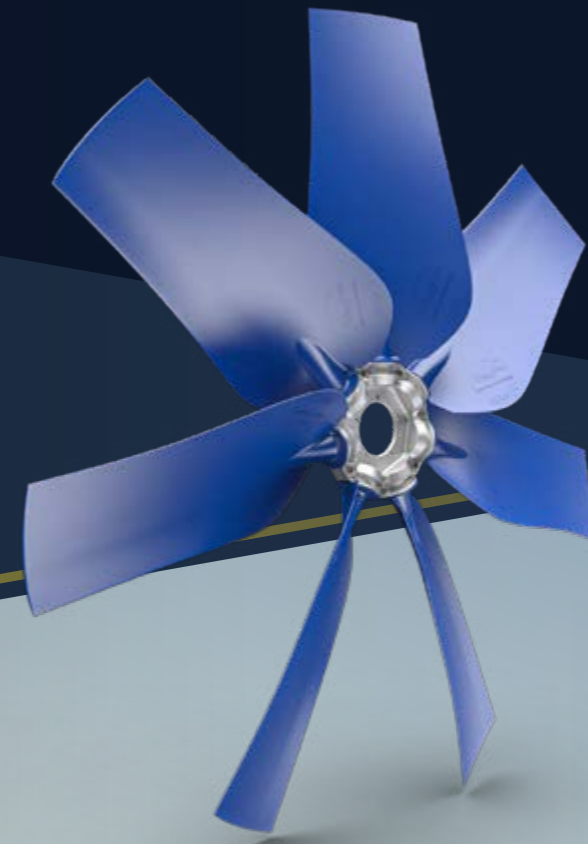
Cooling Towers

Large diameter fan and low energy consumption



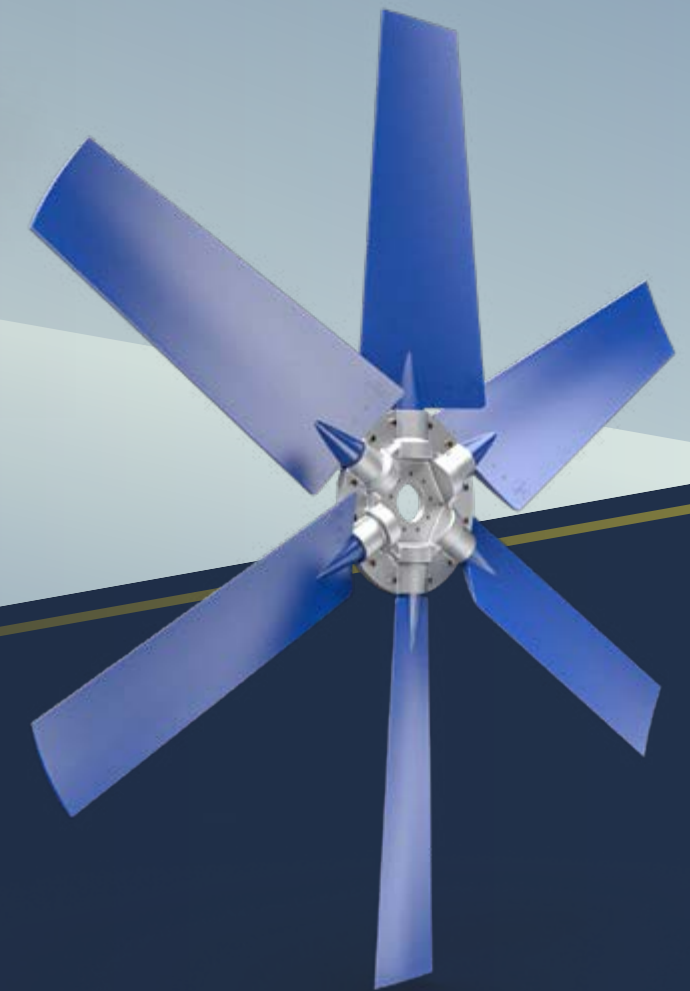
Large diameter cost effective fans for induced or forced draught cooling towers with low power consumption and noise characteristics are important selection criteria. Our BLEX blade extension technology can assist in dramatically reducing the noise emissions by reducing the

tip clearance close to zero, which also results in a measureable power consumption reduction. In some cases the performance of a fan fitted BLEX blade extensions is increased to the extent that a lower motor speed can be used, further reducing the fan noise.



Lightweight and highly efficient

The wide chord width of the new **EDGE5** blade profile helps to minimize noise and performs exceptionally well industrial cooling tower applications up to a maximum diameter of 1357 mm.



Robust and powerful

The **P9T**, the most robust fan in the Wing-Fan range with a maximum fan diameter of 1980 mm. Minimum deflection is ensured due to the heavy duty design of the blade and hub.

Heat Exchangers

Longer motor life and operating cost reduction



WingFan's robust yet lightweight fans for oil coolers and dry coolers can be fitted with a wide variety of center bosses to fit any electric motor. Our weight optimized thermoplastic blade material not only

increases the bearing life of the motors, but are also a cost-effective cooling solution for standardized modular heat exchangers.



RPM reduction

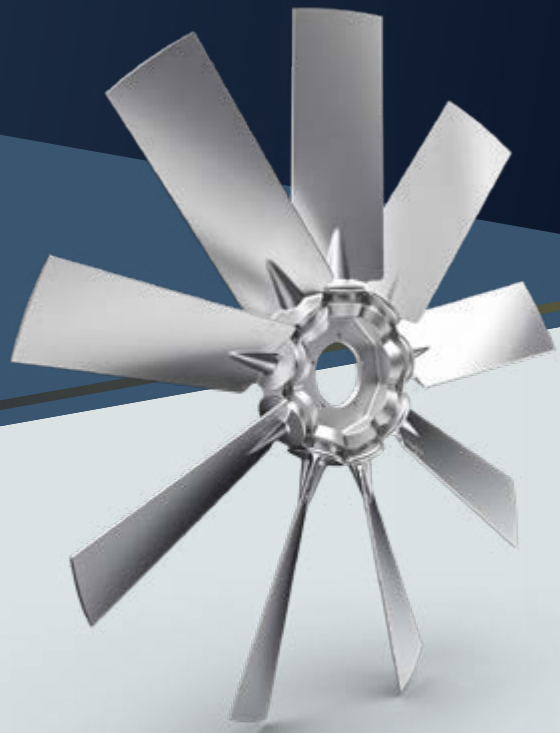
Sickle profiles such as our **S45Y** and **S4Z** can help to reduce noise by minimizing operating rpm and tip speed for diameters up to 950 mm.



Quiet and efficient

The new lightweight **EDGE5** blade profile has been developed specifically to meet the noise and efficiency targets of industrial heat exchanger applications up to a diameter of 1357 mm.

Wood Drying Kilns



Equal airflow in both directions

The aluminium **R4Z** is a reliable and efficient truly reversible fan for all dryer applications requiring periodic airflow direction reversal.



New benchmark on the market for reversible airflow

Ensuring highly-efficient performance the **FLIP5** is usable for an air exchange in both axial directions.



Robust and efficient in corrosive environments

Wood drying kilns and other dryers require fans that can efficiently deliver equal airflow in both airflow directions at high temperatures and humidity in a corrosive environment. These challenging

conditions are perfectly mastered with our high efficiency truly reversible aluminium blade profiles covering diameters up to 1185 mm.

Livestock Ventilation

NEW

Best volumetric efficiency and super quiet fan

The new **HEOS6** blade profile is specially designed for climate-controlled barn-applications with diffuser and delivers high airflow with best efficiency at low rpm.

Large diameter and low power consumption

The 6 bladed **P9T** is a widely used highly efficient and quiet fan for cooling dairy cow sheds in the hottest climates.

Axial fan solutions for efficient climate control

Energy efficiency and low noise are important factors when selecting a fan for climate controlled livestock environments. WingFan has developed state-of-the-art fan solutions powered with highly efficient permanent magnet motors for many of

the industry leaders in livestock ventilation. Climate controlled sheds and barns for poultry, dairy cows, pigs and turkeys dramatically reduce the energy bill while improving the welfare of the animals and farm workers while improving the yield.



Marine Ventilation

Built in fans to resist the most adverse conditions for offshore applications

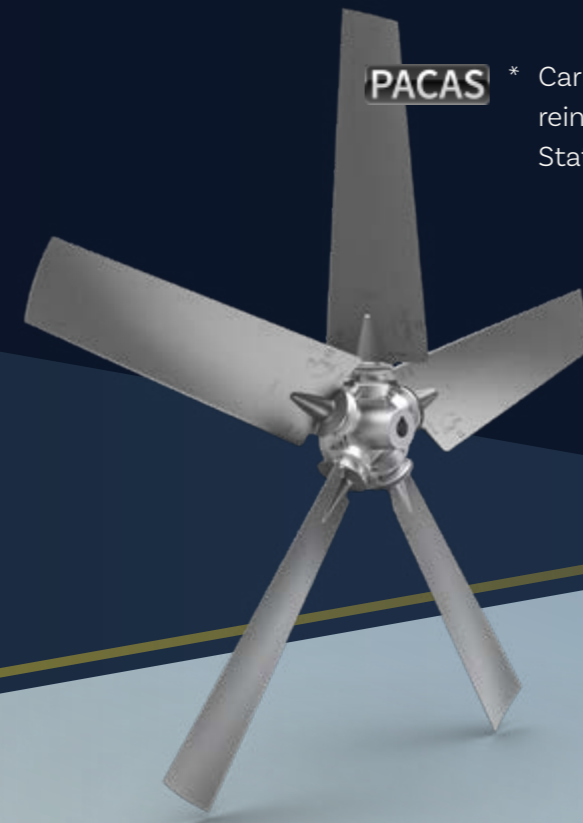


Built to fit in many offshore applications, WingFan's extra heavy duty fans can work in the most aggressive and corrosive environments, assuring a long

life and operating hours at any type of installation. From ships to oil platforms, we ensure our fans are designed to meet your demands.

PACAS

* Carbon fiber reinforced Anti-Static material



Explosive atmospheres

Our **PACAS blade material** is suitable for most **ATEX** applications ensuring safety in explosive atmospheres.

The efficiency and low characteristics of our Z and H blade series can help significantly **reduce the power consumption and noise**.



AL

** Aluminium blade material



Corrosion resistant

For applications requiring an aluminum fan, the versatile **P3H** airfoil profile increasing the overall fan efficiency. The compact dimensions make the P3H a perfect solution for challenging requirements with limited space.

All our fans assembled for marine applications come with **A2/A4 bolts and nuts** to prevent corrosion.



Train Applications

WingFan has developed a special fan blade material PAGAFR* that meets most fire standards worldwide (e.g. **EN 45545-2**

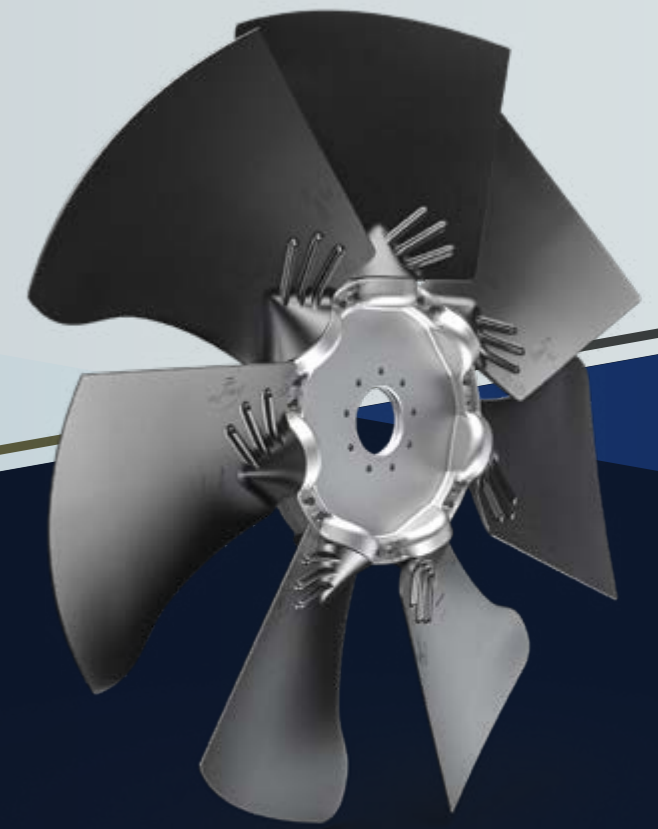
and **NFPA 130**) to comply with the latest and most stringent international safety standards for rail applications.



Special materials that meet most fire standards worldwide

Our fans can also be offered with special corrosion resistant hub coatings and railway compliant fastening systems. We have the right fan solution for roof mounted or underfloor HVAC units (split

or compact), as well as extra-heavy duty large diameter fans for locomotive cooling systems. WingFan axial fans are also suitable for hydraulically driven reverse operation to clean clogged coolers.



Low noise and robust

High performance with low noise emissions are two requirements that **S45Y** achieves in modern train applications.



Overcome high resistance

The **S14H** in an 8 bladed configuration overcomes even the highest cooling package resistances with minimum noise.



PAGAFR

*PAG Advanced Flame Retardant

Smart Fan Selection Software

We make things easier for you!

WingFan SELECT 3D, the leading fan selection software in the industry, is the best tool to **support your fan sizing**. Learn about the unique features like 3D visualization, resonance data, project management or 3D file export.

Free download at
wingfan.com



3D Visualization

The feature create highly accurate 3D visualizations to show what the fan configuration will look like once completed.



Resonance Check

This particular feature identify and/or confirm a high vibration level caused by a resonance frequency caused by the chosen fan speed.



Performance Data

The feature is intended to provide an overview of the performance of the selected fan and its parameters.



3D Animation

Automated 3D Animation provides a faster way to easily visualize the function and behavior of your fan configuration.



Drawing Export

Each individual fan selection can be exported as a technical drawing to the Portable Document Format (PDF).



3D File Export

An important function in the data exchange relationship between the SELECT and CAD worlds is the ability to port the Fan assembly into mechanical design software for the purposes of physical clearance checking.






WE DELIVER TO ALL FIVE CONTINENTS



We think global and act local!

WingFan with its headquarters in Hamburg, Germany is operating a global network of manufacturing on 5 continents and distribution in over 36 countries.

WingFan also offers phone support for your product and technical questions. To discuss a specific application, specification question or request a prototype, contact the WingFan location closest to you.


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