

Solutions for



# Agri- cul- ture

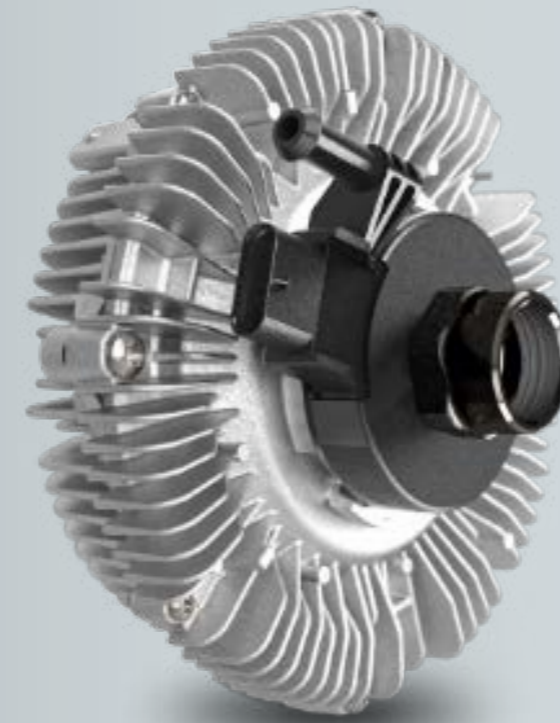
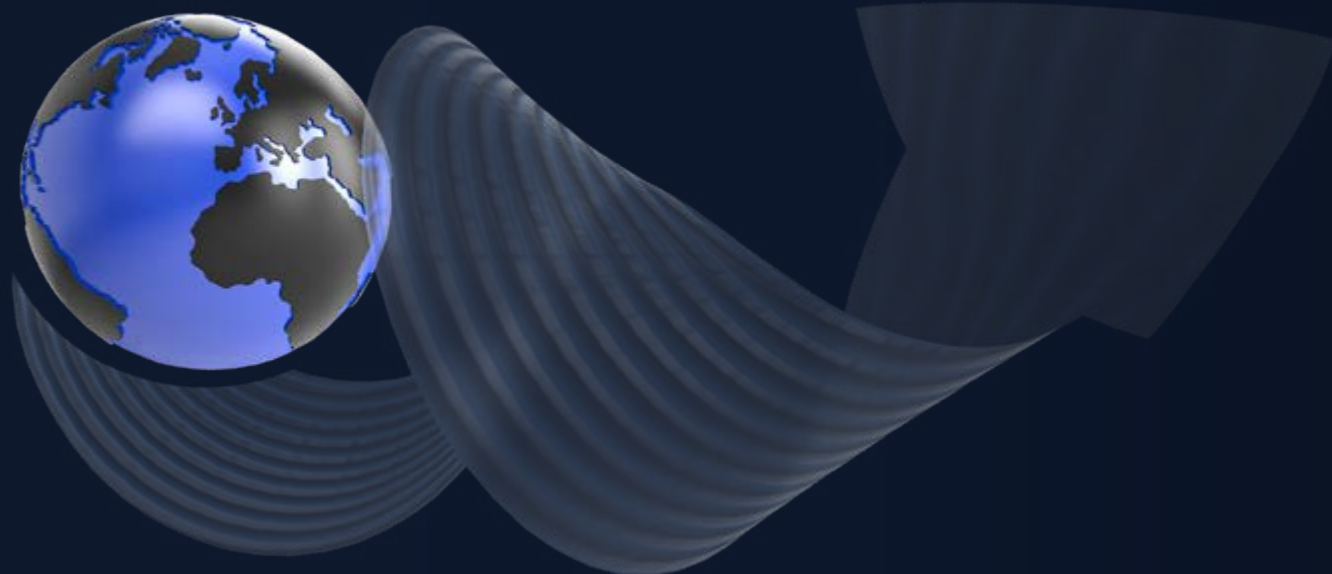
Axial Fans and Clutches

# Smart Fan Technology

WingFan's core competence in aerodynamic engineering provides you with the most advanced technology to comply with noise and emissions legislations.

Every agricultural application has its unique requirements that have to be addressed individually. Our axial fan solutions for agricultural machinery and related applications are custom configured to minimize fuel consumption and provide optimal cooling with minimal fan noise.

Specialized agricultural machines require fans with enough performance reserves to deal with severe radiator fouling issues and the fan must be robust enough to withstand severe dust and debris ingress. WingFan has developed innovative fan blade geometries for the most challenging cooling applications for the world's largest OEM agricultural machinery manufacturers.



## FanClutch solutions

Clutches control the fan speed in direct proportion to the engine cooling needs resulting in **improved fuel economy, lower cyclic fan noise** and **increased operator comfort**.

Choose from our highly advanced maintenance free electronic viscous clutches that can be precisely controlled by the ECU, or fully modulating bi-metal clutches that sense the temperature of the air passing through the heat exchanger for accurate fan engagement.

## 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.



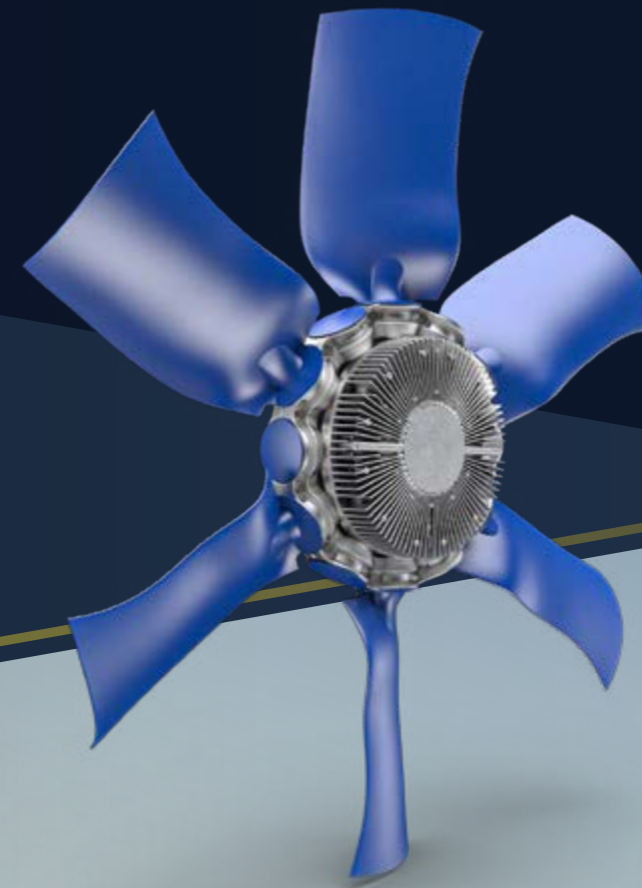
# Tractors

Ready for the future –  
Fulfills Stage V directives



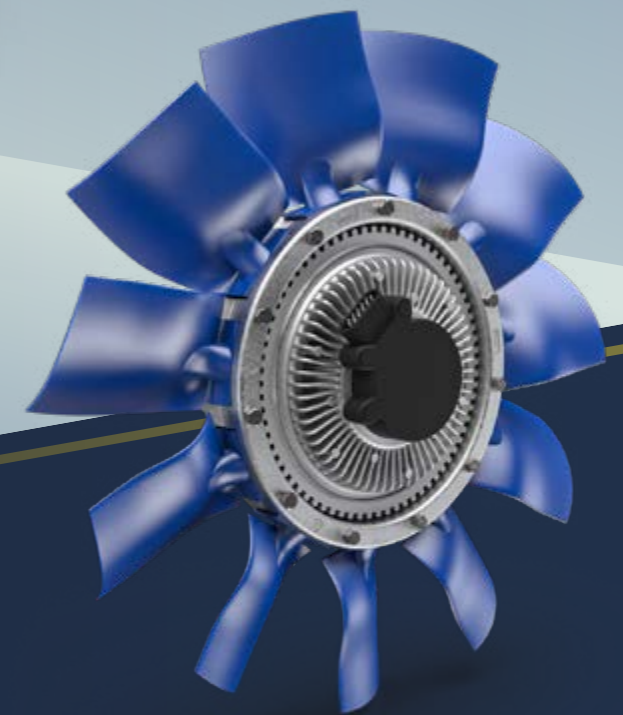
WingFan has worked together with many tractor OEMs to design small diameter space-saving fans specially adapted to the dimensions of a bimetal or electronically controlled viscous clutch to dramatically reduce noise and fuel con-

sumption while increasing the air-to-boil temperature. We have indepth knowledge and the know-how to solve the challenging cooling issues in extremely cramped engine compartments with stringent emissions regulations.



## Highest pressure fan in its class

Unparalleled static pressure and airflow performance from the newest addition to our product range. The highly versatile **S38Z** was designed to cool Tier 4 Final engines from 140 - 500 hp in cooling packages with extremely high resistance and the possibility of fouling.



## Compact and powerful

Highly efficient **S13H** axial fan + clutch combination with very compact dimensions perfectly suited for 90 to 140 hp tractors actively contributes to fuel saving and minimizing fan noise.

# Combine Harvester

Master extreme conditions with trusted performance



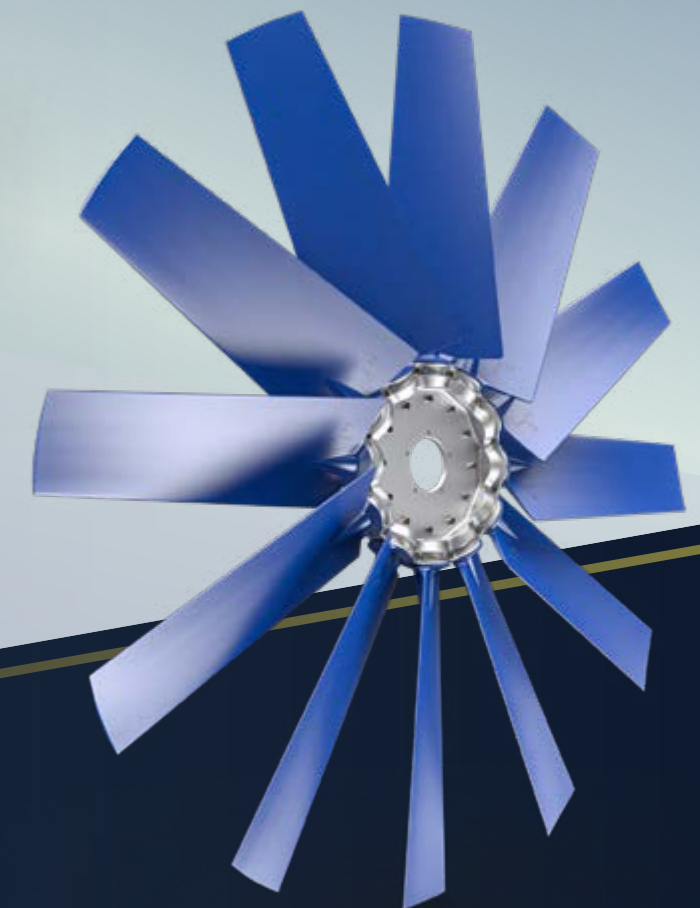
World leading combine harvester OEMs have trusted the performance and durability of WingFan's combine harvester cooling fans for more than 3 decades. Extremely dusty conditions, unfavorable airflow and high resistance caused by

rotating radiator screens or planar dust extraction systems are commonly found in modern combine harvesters. These conditions can all be efficiently mastered with our range of heavy duty robust fuel saving fans.



## Unmatched rigidity

Extremely stiff reinforced nylon **S45Y** blades ensure maximum cooling performance and durability in cooling packages fitted with multiple dust filtering systems, even in the hottest and dustiest climates.



## Minimum power drain, maximum airflow

The highly efficient **P6Z** blades minimize the power draw from the engine while delivering the maximum airflow to create a dust inhibiting air curtain in the most advanced downdraught combine harvester cooling system currently available.

# Forage Harvester

Toughest materials for the roughest environment



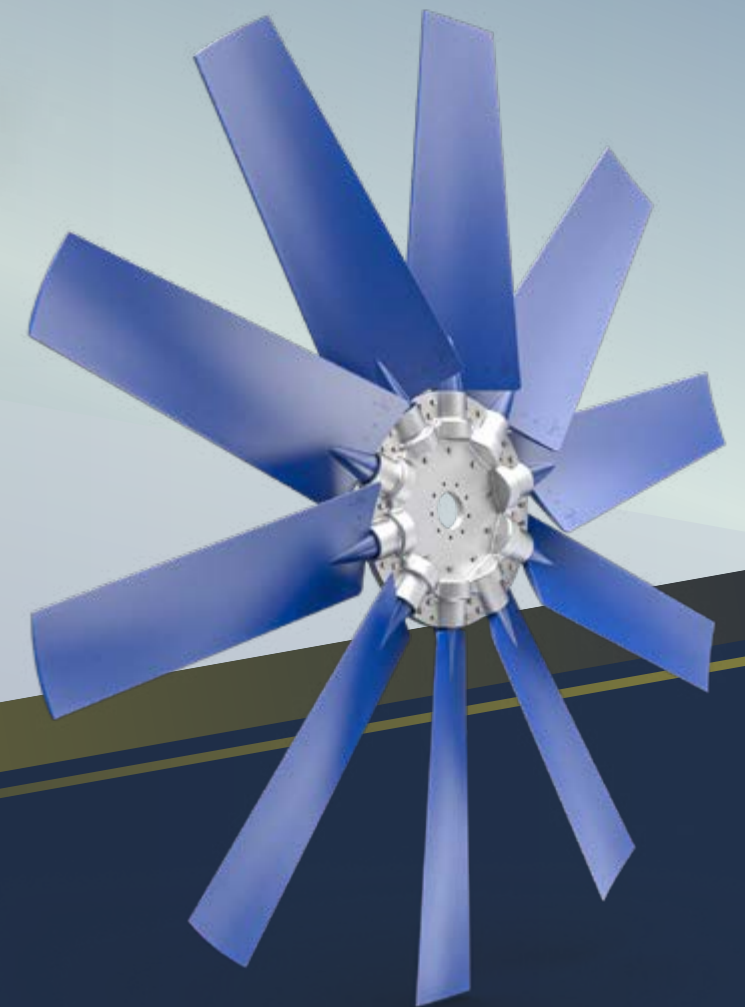
WingFan's extra heavy duty fans can be found cooling many of the world's most powerful forage harvesters. The unique difficulties in cooling the 450 to 1100 hp engines while the harvesters

traverse rough terrain at speed require the toughest materials and the most advanced fan designs to withstand the high vibration, gyroscopic forces and extreme temperatures.



## Better efficiency and fuel economy

The high efficiency of the **P8Y** measurably reduces the fuel consumption while providing ample cooling airflow at full engine power even in the hottest climates. The low projected width of the P8Y allows the fan to be mounted in the most cramped engine bays.



## Robust and powerful

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

# Specialized Applications

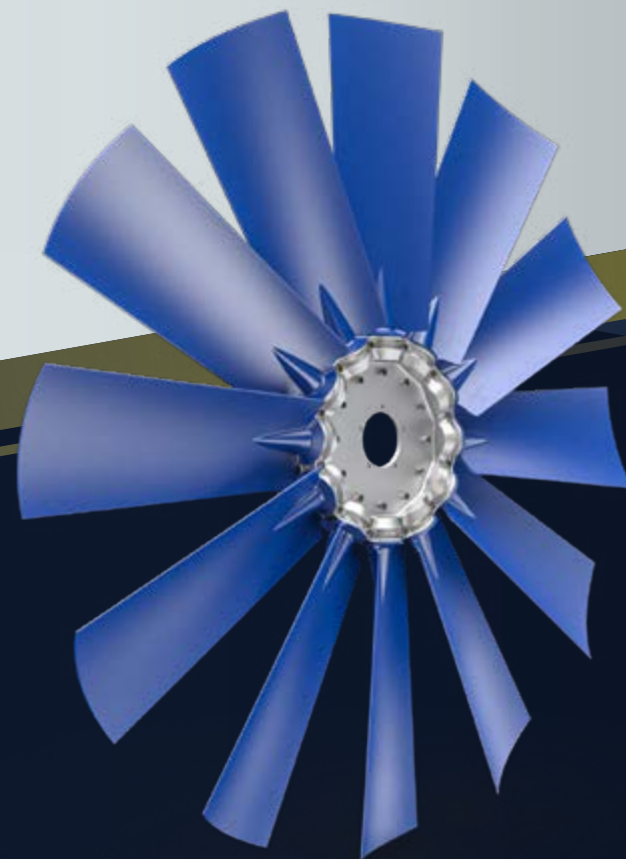


## Highest pressure for cramped engine bays

The advanced aerodynamic design of the **S13H** helps the blade to achieve up to 50% more static pressure than other fans of similar size.

## Reversible to clear radiator fouling

Very compact axial dimensions, durability and the ability to reverse the fan rotation to clear fouled radiators in large sugar beet harvesters were just a few of the challenges overcome by using the slender **K7Z** fan.

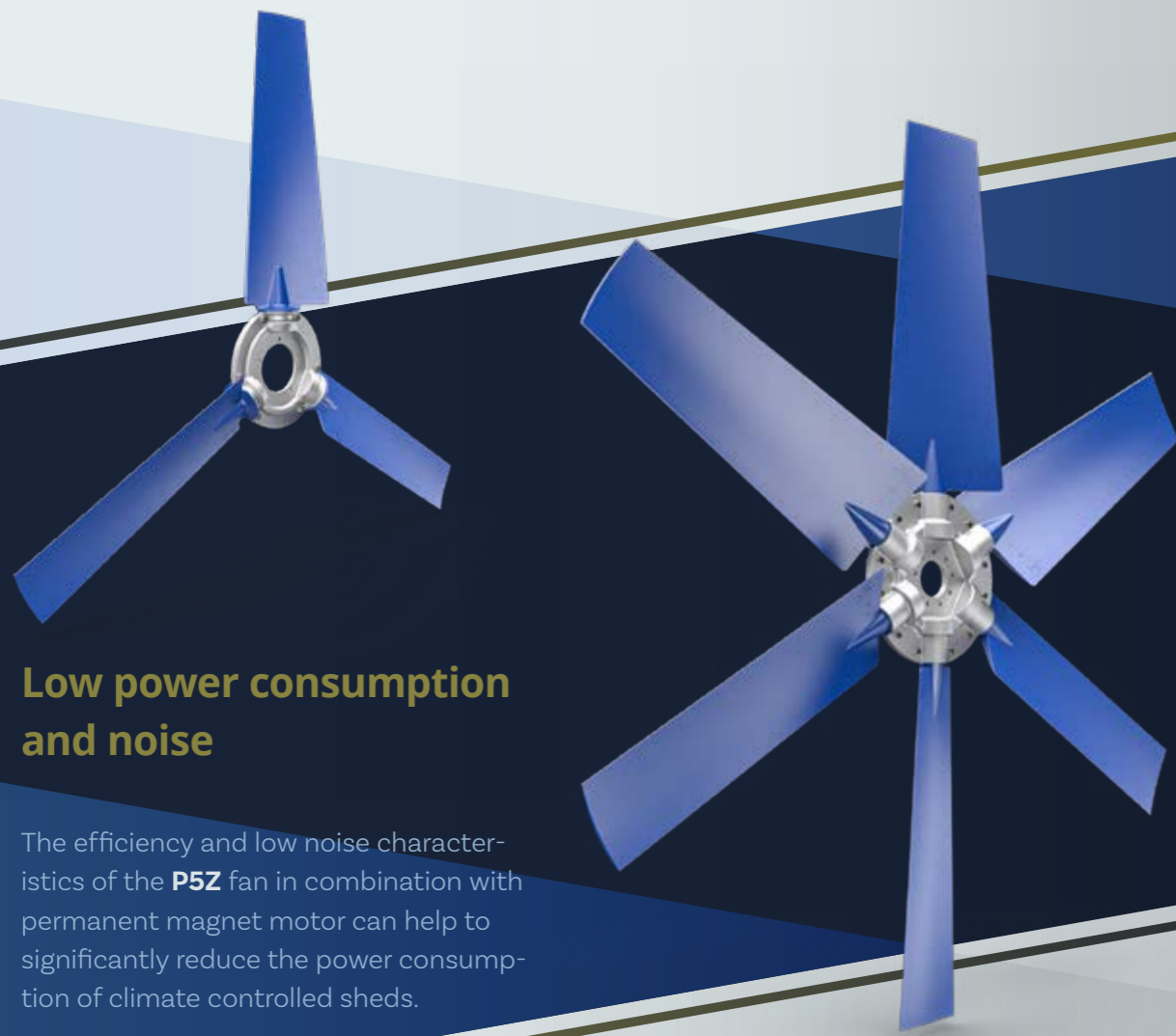


## Unique solutions for specialized applications

Manufacturers of specialized farming machinery turn to WingFan to help them solve some of the most unusual cooling demands with highly compact hydraulically driven fans. Even cooling packages with very high resistance can be effi-

ciently cooled with our new high pressure S13 blade profile. WingFan's experienced team of engineers will gladly provide guidance to find the best fan solution for your unique air movement demands.

# Livestock Cooling



## Low power consumption and noise

The efficiency and low noise characteristics of the **P5Z** fan in combination with permanent magnet motor can help to significantly reduce the power consumption of climate controlled sheds.

## Low noise fans for contented livestock

The excellent efficiency very low noise emissions of the **P9T** fan has proven to be ideal for dairy cow ventilation systems improving the milk yield by up to 25% in hot climates.



## Climate control in livestock environment

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.

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](http://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.






-  WingFan Headquarters
-  Subsidiaries with full local production facility
-  Licenced distributors



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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