



**WELCOME TO  
MULTI-WING WORLD!**

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**CUSTOMIZABLE FANS FOR  
ANY AGRICULTURAL APPLICATION**

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**FIT INTO YOUR OWN APPLICATION  
CUSTOM AXIAL FANS  
HIGH QUALITY MATERIALS**



# ABOUT OUR PRODUCTS

We offer the widest selection of axial fans on the global market. Multi-Wing has a solution for every need from HVAC/R and engine cooling applications.

**Discover our full custom axial fan range online at [multi-wing.com](https://www.multi-wing.com)**

Our products are designed to be custom-made, modular, innovative and environmental-friendly.

**60+ years of experience**  
in engineering and manufacturing

**100% application freedom**  
for HVAC/R and engine cooling

**9000+ axial fans**  
for you to customize

**100% commitment from Multi-Wing**  
highest quality, best service

**100 000+ combinations**  
for your applications





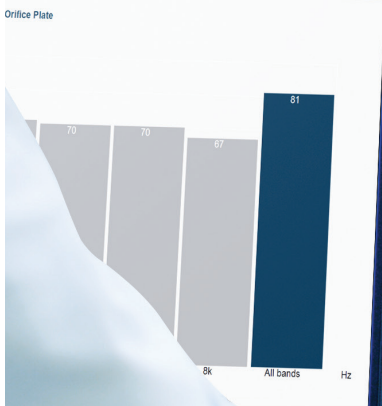


*"Our sales team is wide-spread all over Europe. Multi-Wing's local accessibility gives customers the opportunity to get the right service, support and the right product. Our sales engineers work hard to develop the best individual proposal for an optimal engine cooling solution."*

**Franz Frieling,  
Sales Director**



Airflow	Static Pres	Power	Efficiency	Sound
2.5	80.3	0.522	57	81.3
2.57	84.7	0.607	53	81.4
2.58	85	0.64	51	84.8
2.58	85	0.64	51	84.8
2.58	85	0.64	51	84.8
2.3	89.2	0.558	51	86.7



Impeller Information	Airflow	Static Pres	Power	Efficiency	Sound
630/8-8/48.5"/PPG/1ZL/Orifice Plate	3.35	61.6	0.974	46	98.1
630/8-8/45"/PPG/1ZL/Orifice Plate	3.15	62.3	0.843	47	94
630/8-8/43.5"/PPG/1ZL/Orifice Plate	3.08	62.7	0.791	47	92.3
630/8-8/41.5"/PPG/1ZL/Orifice Plate	2.94	63.1	0.726	48	90.1
630/8-8/41"/PPG/1ZL/Orifice Plate	2.91	63.2	0.71	48	89.5
630/8-8/40"/PPG/1ZL/Orifice Plate	2.85	63.4	0.68	48	88.4

Operational Data		Operational Impeller Limits	
Tip Speed	30 m/s	Tip Speed	121 m/s (3668 RPM)
Temperature	15 °C	Temperature	-30 °C - 90 °C
Air Velocity	10.7 m/s	Diameter range	445 - 658 mm
Torque	10.1 Nm	Blade, load factor	6.34 %
Axial Force	41.3 N	Hub, load factor	3.45 %
		Power, load factor	N.A. %

Current Working Point @ 920 RPM-1,226 kg/m <sup>3</sup>		Static impeller data	
Airflow	3.35 m <sup>3</sup> /s	Moment of Inertia	0.0598 kgm <sup>2</sup>
Dynamic Pressure	70.8 Pa	Blade Centrifugal force	289 N
Static Pres	61.6 Pa	Solidity factor	0.57
Total Pres	132 Pa	Hub / Dia ratio	0.422
Power	0.974 kW	Mass with std. boss	3.25 kg
Efficiency	46 %	Motor Type	6-90-24-8-50Hz
Sound	98.1 LW dB		
Density	1,226 kg/m <sup>3</sup>		



# ABOUT OUR SERVICES

We are a company of engineers, designers, specialized production, sales, finance, customer service, supply chain, HR and marketing professionals. Together, our team works hard to ensure that you receive the highest quality custom-designed axial fans, precisely as ordered and delivered on time to meet your project goals.

## **Application Engineering**

Our sales engineers have long years of experience, deep knowledge and understanding of customer applications. Our sales engineers know how to reduce noise by adding winglets/bristles, ensure optimum axial positioning showing results on performance and noise. Taken to extreme, we can develop an optimized impeller solution for any specific application.

## **Validation**

We test every impeller configuration in different types of shrouds simulating the engine profile. Your products go through mechanical validation such as FEA and testing.

## **Local Service**

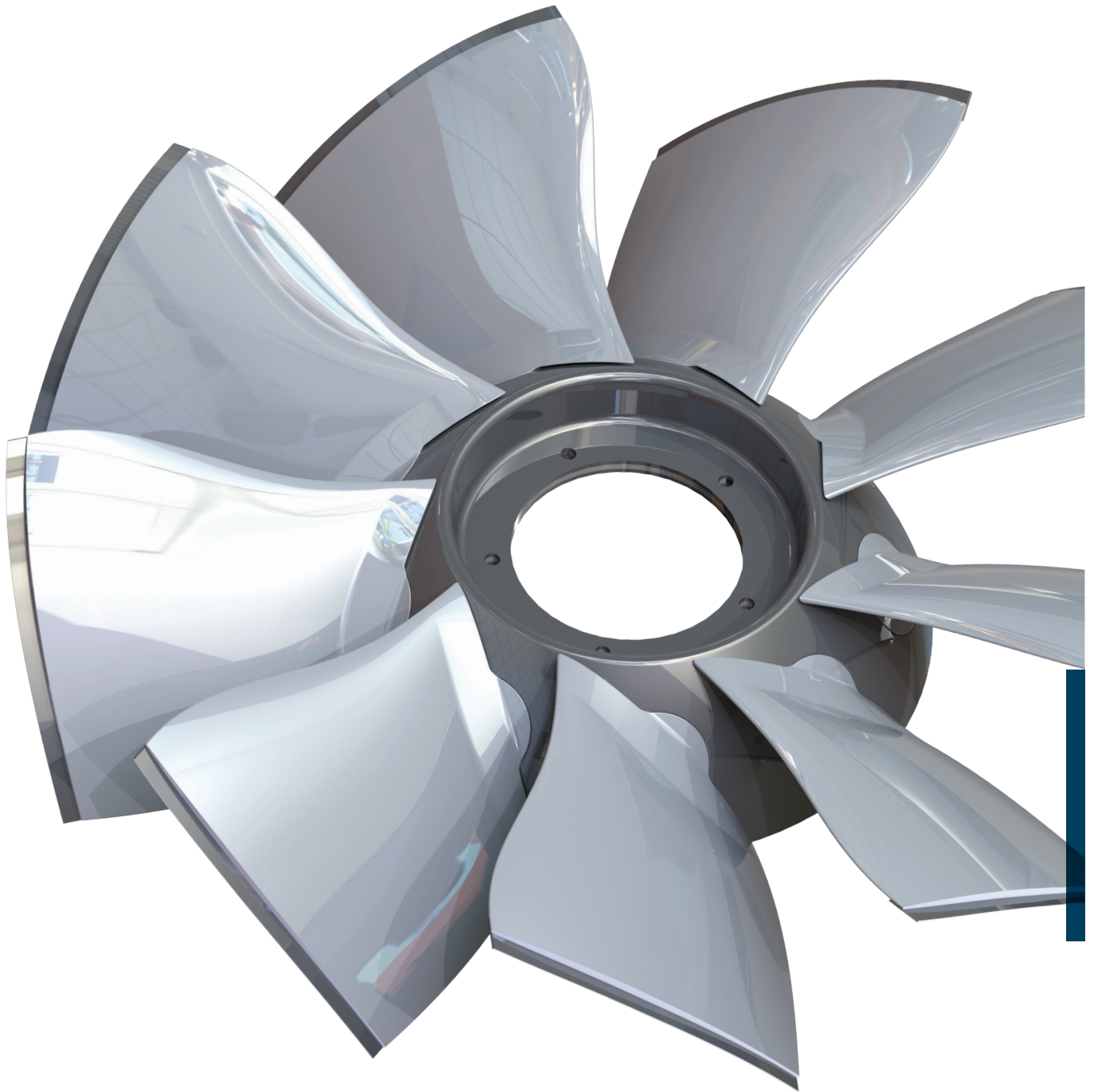
We assemble your custom axial fans in factories all over the world. All major global languages are available.

## **Customer Support**

330+ professionals in 20+ locations worldwide are ready to take care of your needs 24/7/365.







## Four steps to a perfect custom

### 1. Development

Our customers benefit from our long-term R&D investments. We use computational fluid dynamics and other innovative technologies such as in-house rapid prototyping product testing; product mechanical validation process, sound testing in accordance to ISO 3745:2017, ISO 3744:2010 and ISO 6393:2008; and wind tunnel testing in accordance to AMCA 300 Fig.3 in our facilities in Europe and China.

### 2. Engineering

Applying to Multi-Wing experience dating back to the 50s, our sales engineers choose the optimal custom axial fan solution. The selections are based on decades of generated data which forms the base of our well-documented fan selection.





# PERFECT CUSTOM AXIAL FAN

Our product line is versatile - manufactured so that the number of blades, material, pitch angle, diameter and rotation direction can be adjusted to suit any HVAC/R and engine cooling requirements. Our custom axial fans range from 200mm to 2746mm (7.8 to 108 inch) in diameter.

## axial fan for any application

### 3. Manufacturing

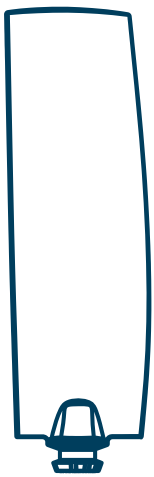
We manufacture custom axial fans in our 20+ production facilities all around the world. We are ISO 9001:2015, 14001:2015 and ISO 45001:2018 certified.

### 4. Delivery

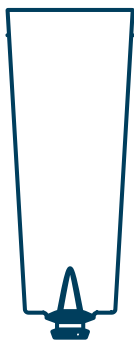
We are proud to deliver our industry-leading products on time and with care to our diverse customers worldwide.



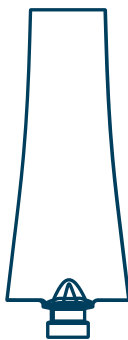
# OUR BLADES



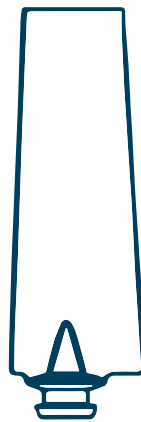
**PM6**



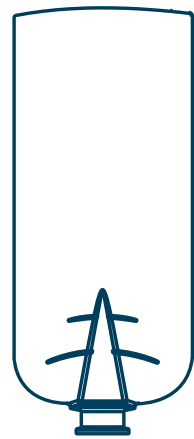
**IA**



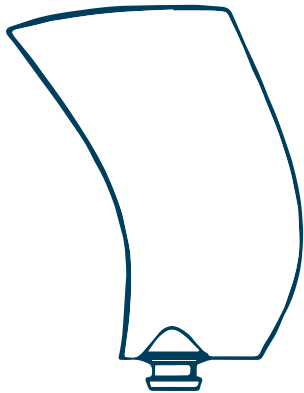
**TR**



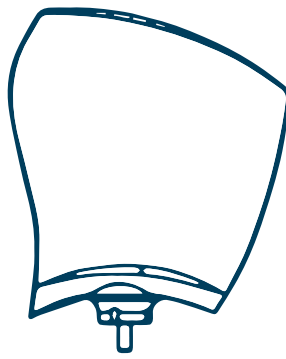
**Airfoil**



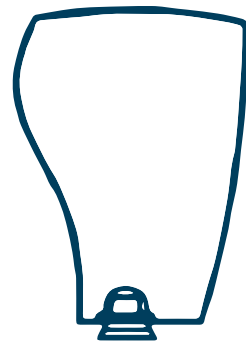
**BP**



**7Z**



**MxFlo**



**PMAX**



Our custom axial fans can be designed from various axial blade profiles and different materials to fit perfectly any HVAC/R or engine cooling need.

Properly selected blade design and material contribute to optimal air flow, high performance and low noise operation.

**Discover our full blade range online at [multi-wing.com](http://multi-wing.com)**

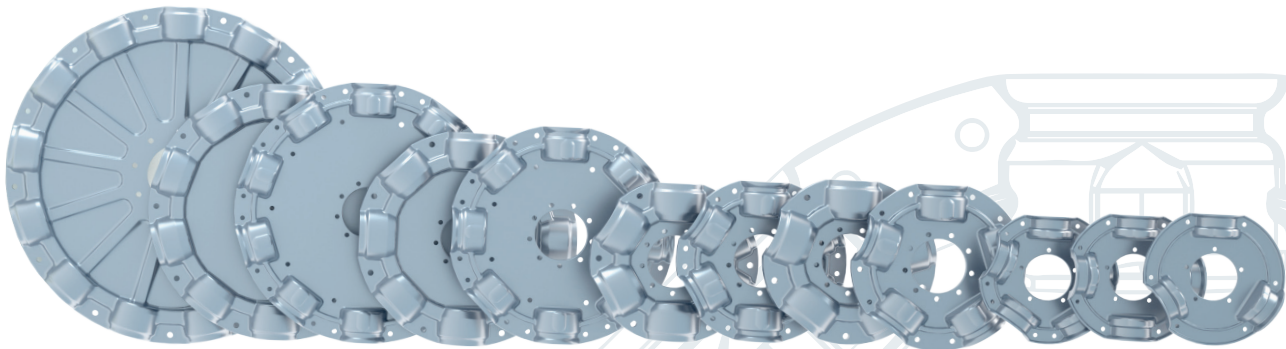


**O-PMAX range**

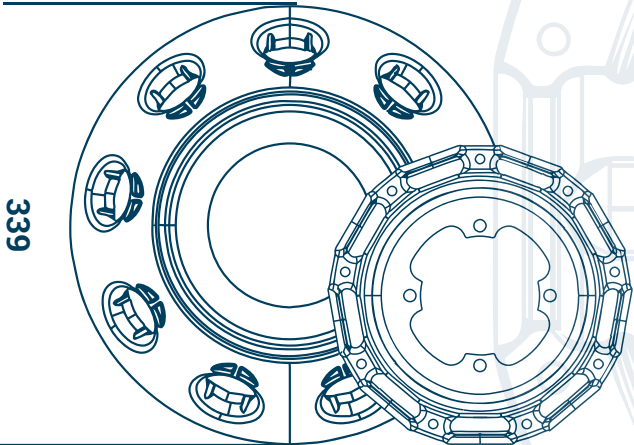


At Multi-Wing flexibility is a key word. Not only when matching the right fan with the duty point, but also when it comes to mounting your fan. Regardless if it is a straight bore for electrical motors, a conical bore for hydraulic motors, a flange drive on the diesel engine or the bushing for Nema type motors you will find the right hub in our range.

**Discover our full hubs online at [multi-wing.com](http://multi-wing.com)**

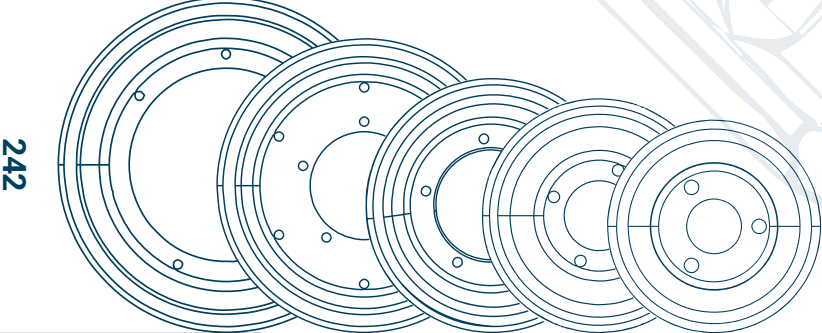


**MxFlo & PMAX3 Plates**



339

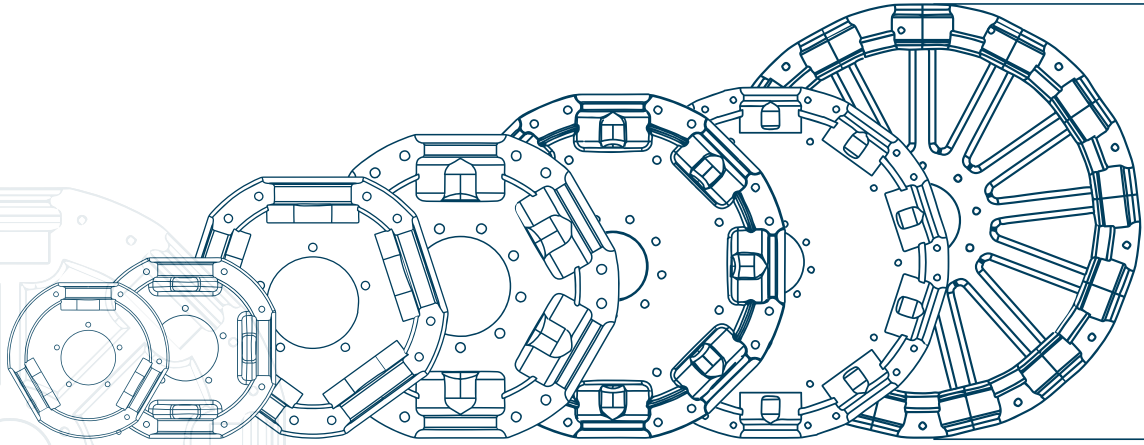
**H Retaining Plates**



242

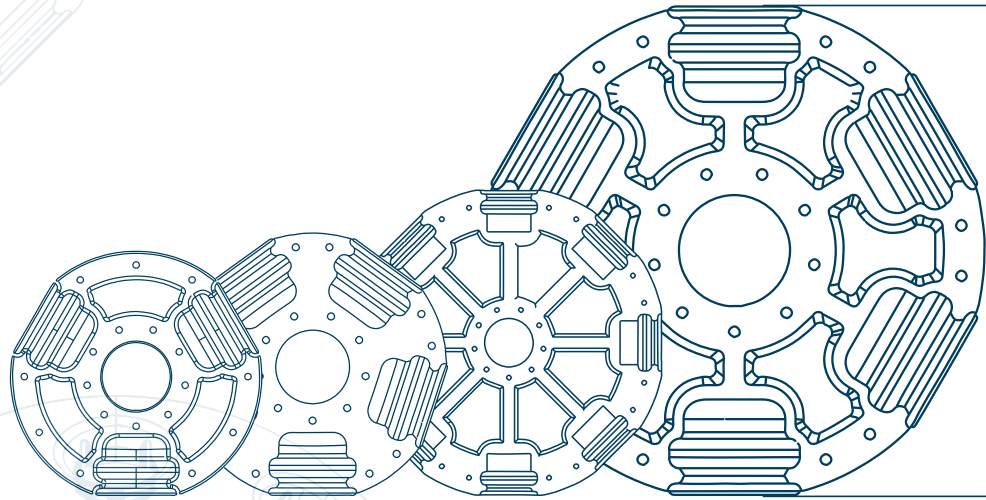
# OUR HUBS

W Retaining Plates



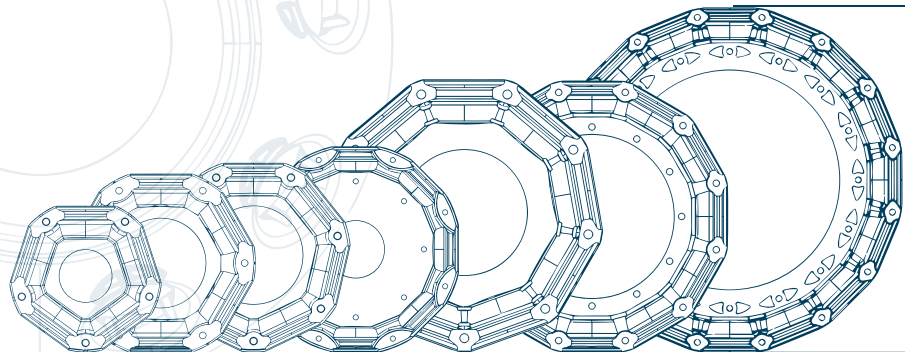
716

G Retaining Plates



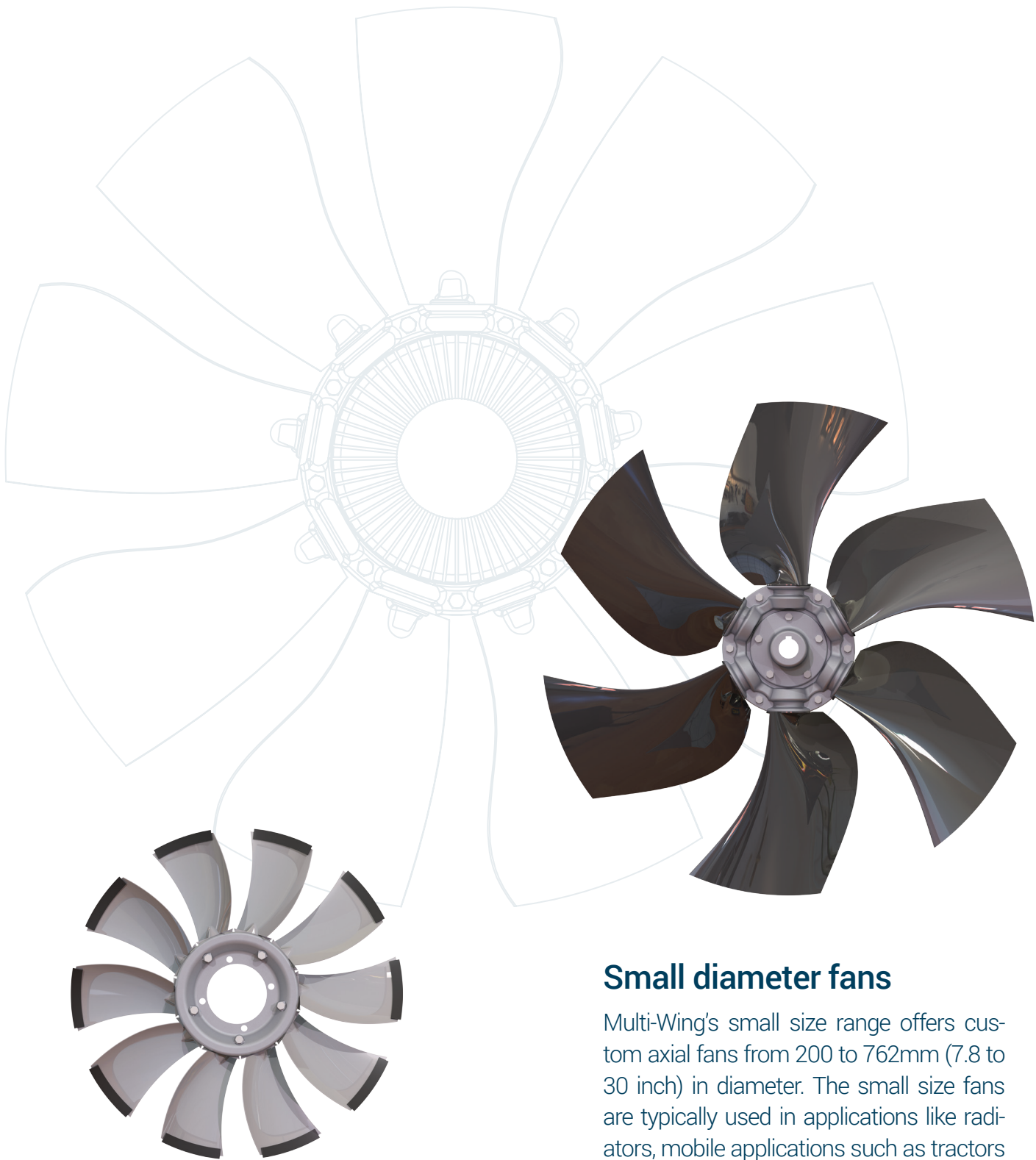
716

Z Retaining Plates



380





## Small diameter fans

Multi-Wing's small size range offers custom axial fans from 200 to 762mm (7.8 to 30 inch) in diameter. The small size fans are typically used in applications like radiators, mobile applications such as tractors and farm loaders.

Multi-Wing's small size range includes the following axial fans profiles:

- Airfoil
- Broad paddle
- EMAX
- Increasing arc
- PressureMAX
- Sickle
- True reversible

# OUR SIZES

Our custom axial fans are categorized into a range of sizes, made for easy selection of the most suitable solution for any HVAC/R or engine cooling application.

Find your optimal axial fan solution by diameter ranging from 200 to 2746mm (7.8 to 108 inch).

## Medium diameter fans

Multi-Wing's medium size range covers custom axial fans from 762 to 1219mm (30 to 48 inch) in diameter. The medium size fans are typically used in medium and high HP tractors, harvesters, loaders, sprayers and radiators.

Multi-Wing's medium size range includes the following axial fans profiles:

- Airfoil
- Broad paddle
- Increasing arc
- PressureMAX
- Sickle
- True reversible

## Large diameter fans

Multi-Wing's large size range introduces custom axial fans from 1219 to 2134mm (48 to 84 inch) in diameter. The large size fans are typically used in harvesters, high HP tractors and stationary agricultural equipment.

Multi-Wing's large size range includes the following axial fans profiles:

- Airfoil
- Broad paddle
- Increasing arc
- PressureMAX
- Sickle
- True reversible



# OUR MATERIALS

Through high-quality materials, we provide you with the best axial fan. This is part of our commitment to being at the leading edge of fan technology.

Each application calls for different combinations of materials to suit different working conditions, speeds and temperatures.

## High temperature AL available

### AL

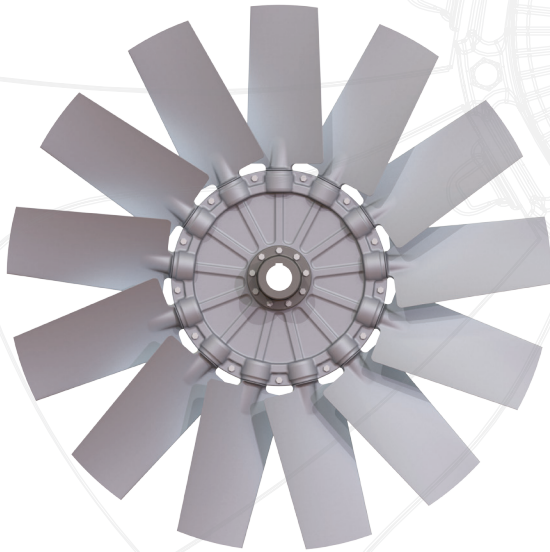
Aluminium, EN AC-Al Si12Cu1(Fe) (AL)  
Temperature range: -60°C to +245°C. High temperature tested at 250°C for maximum 2 hours and at 300°C for maximum 1 hour.

### PAG

Glass Reinforced Polyamide (PAG)  
Temperature range: -40°C to +120°C

### PAGAS

Anti Static Glass Reinforced Polyamide (PAGAS)  
For explosion proof working conditions.  
Temperature range: -40°C to +120°C



## PAGI

Glass Reinforced Polyamide, Industrial quality (PAGI)  
Temperature range:  
-40°C to +120°C

## PAGST

Vibration Stabilized Glass Reinforced Polyamide (PAGST)  
Temperature range: -40°C to +120°C

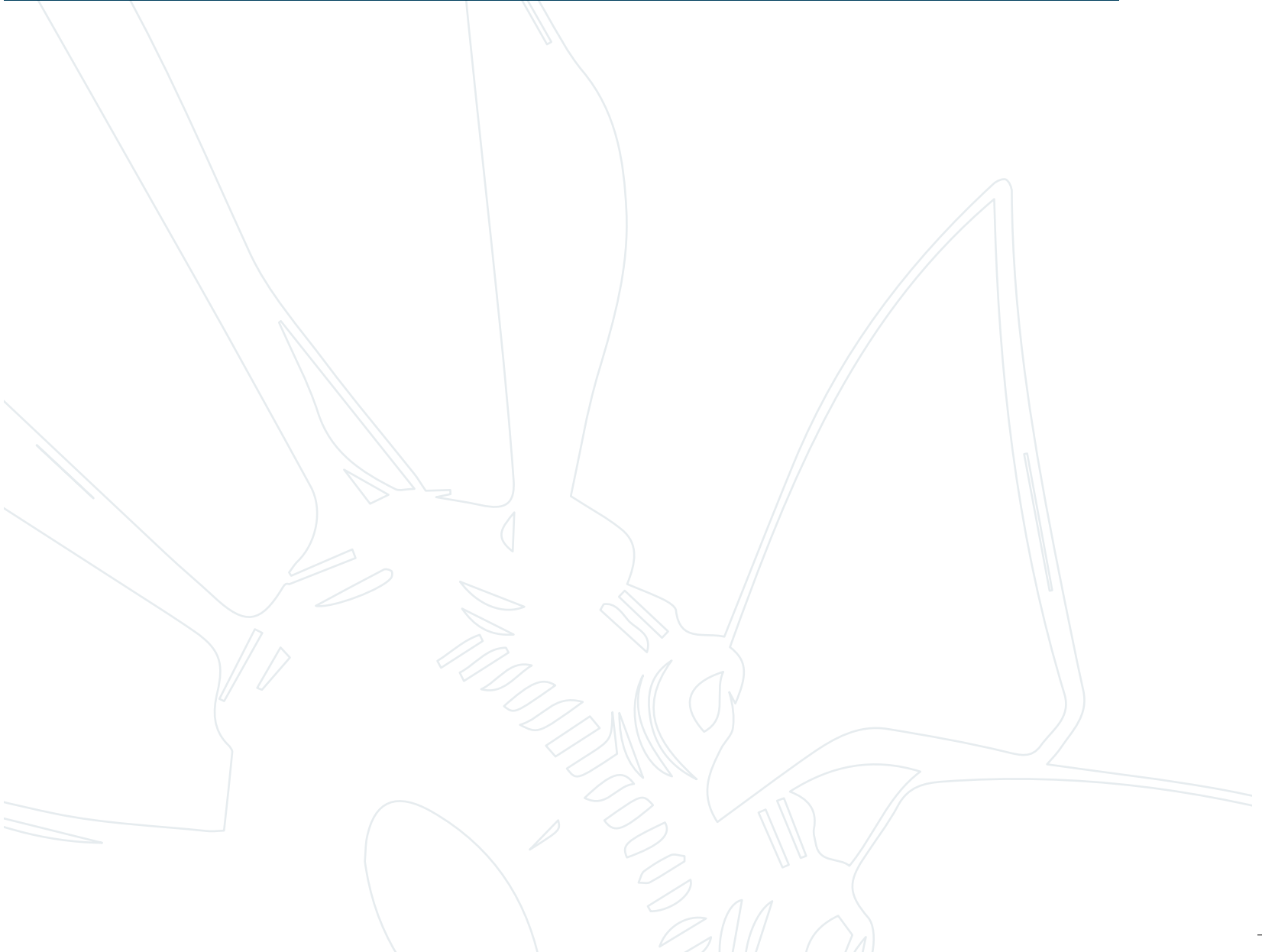
## PPG

Glass Reinforced Polypropylene (PPG)  
Temperature range:  
-30°C to +90°C

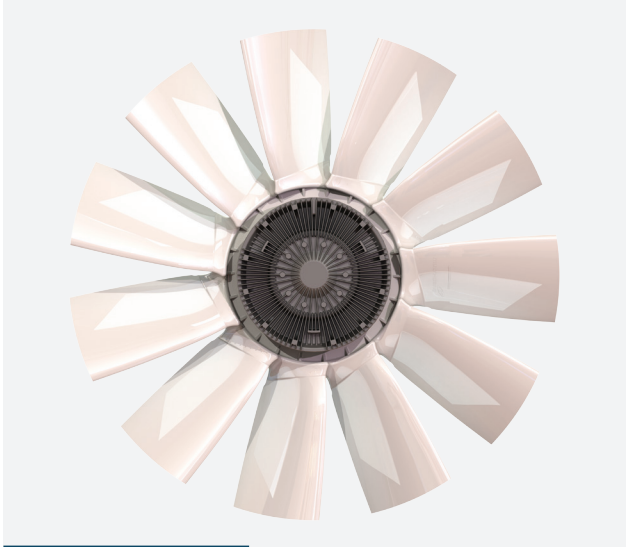
# LATEST COLLECTION

## **9000+ axial fans for your to customize**

Our product line is versatile - manufactured so that the number of blades, material, pitch angle, diameter and rotation direction can be adjusted to suit any HVAC/R and engine cooling requirements. Our custom axial fans range from 200mm to 2746mm (7.8 to 108 inch) in diameter.







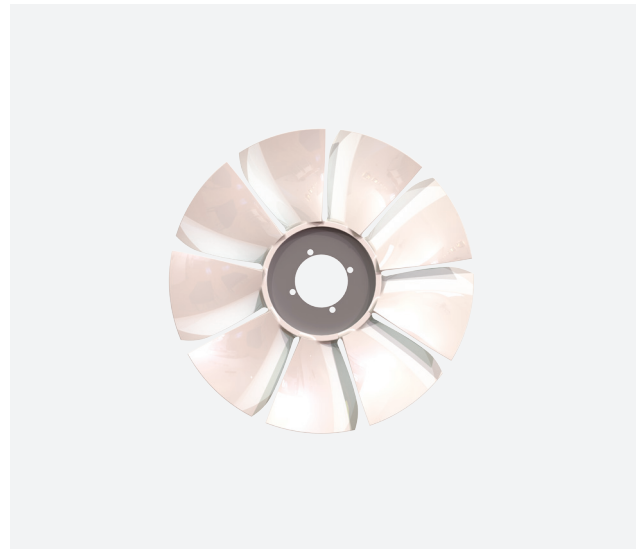
**O-PMAX4**



**9W2**



**4H**



**O-PMAX2**



**7Z**

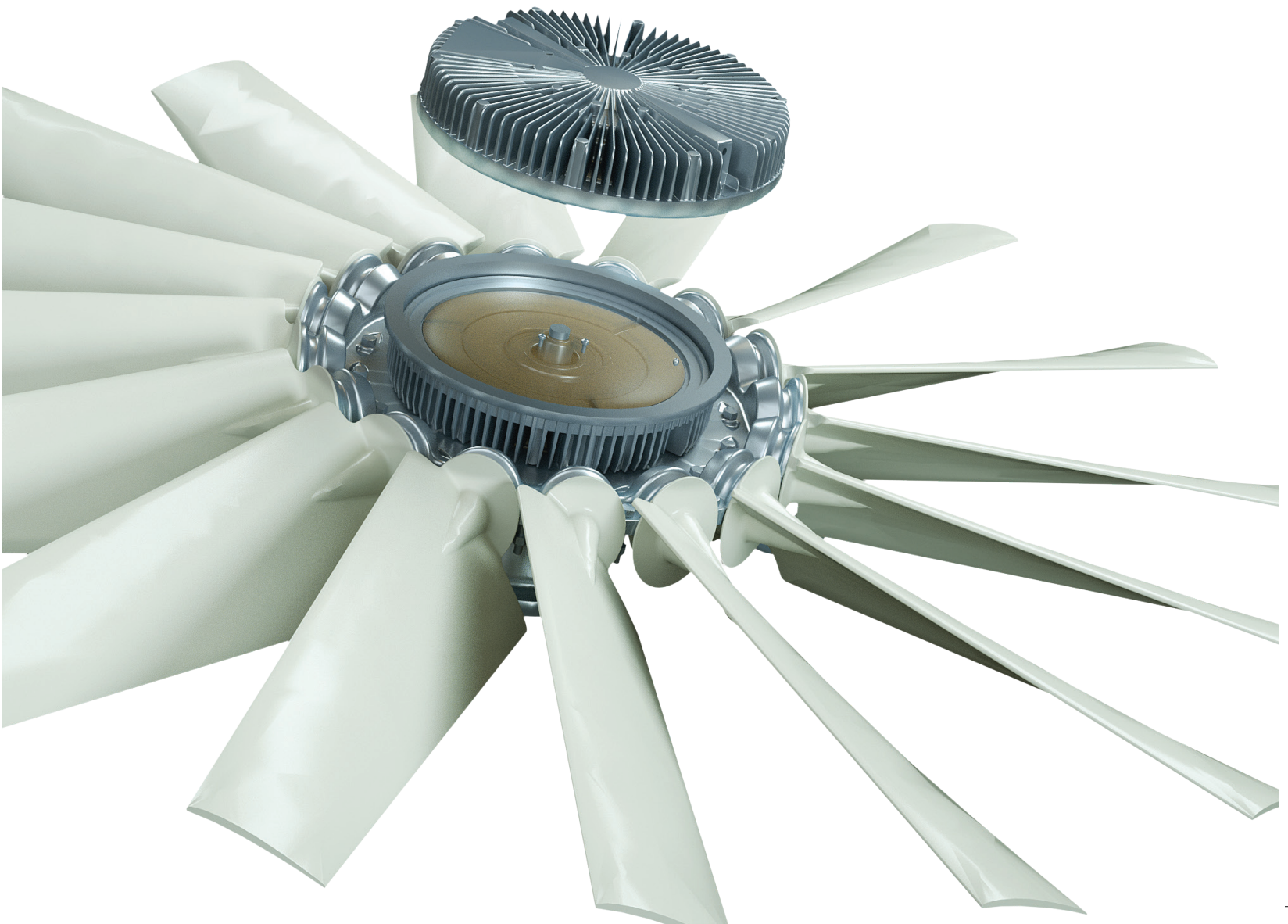


**PMAX3**



# FAN & CLUTCH

One Integrated Solution | Custom-made | Mixed Flow Fan  
Speed Regulation | Easy Maintenance | E-viscous & Bi-metal Clutches  
Tier 5 & Stage V Compliant | Plug & Play

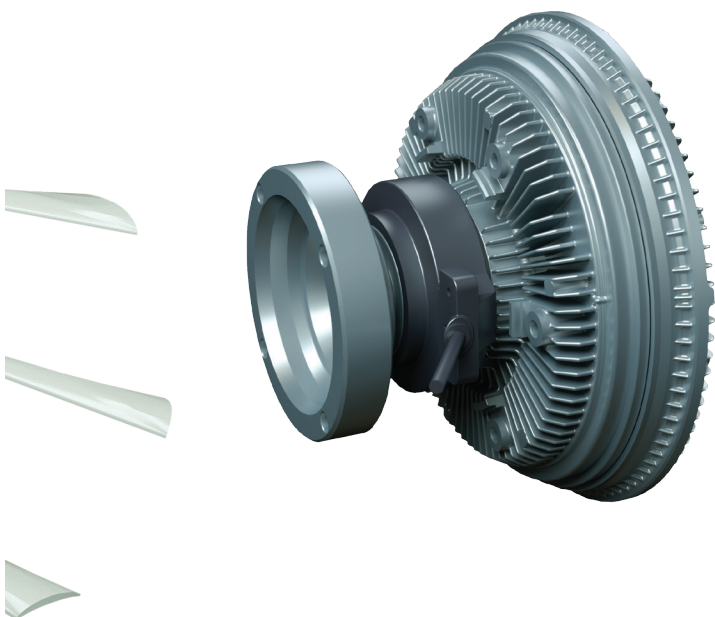
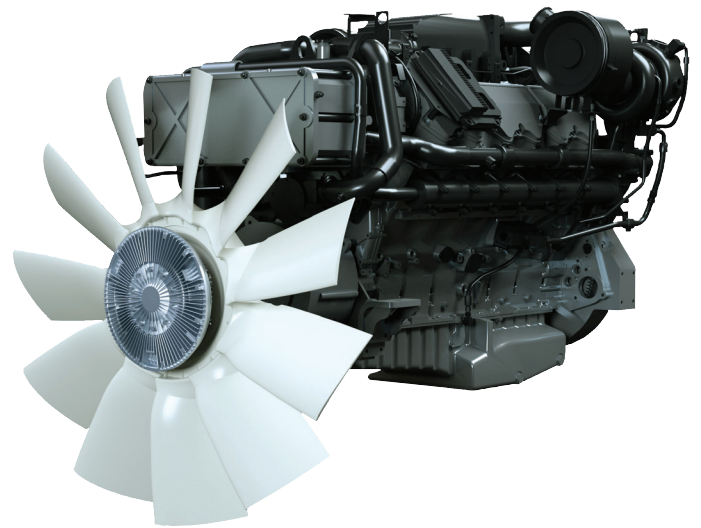




## Bi-metal clutch features and advantages

- High temperature sensitivity and fast response time
- Light weight
- Flexible mounting interface

Multi-Wing's custom-made Fan & Clutch solution regulates speed, optimizes fuel consumption and reduces noise emissions. Cost-effective bi-metal and electronically controlled (e-viscous) clutches are designed for an expanded and precise speed controllability, characterized by low maintenance and plug & play ease of use. Fan & Clutch solutions are Tier 5 / Stage V compliant. The best use of Multi-Wing's Fan & Clutch is in engine cooling applications such as agriculture and construction machinery.



## Electronically controlled clutch features and advantages

- Wide torque range and fast response time
- Precise modulation thanks to fan speed monitoring
- Very low disengaged speed
- Flexible mounting interface



# AGRICULTURAL MACHINERY APPLICATIONS











**Best suitable Multi-Wing solutions for compact, utility and high power tractors:**

- OPMAX2, 1H, 6H, diameter 320–450mm, suitable for EPS
- OPMAX2, OPMAX3, diameter 450–600mm, BM/EV clutches available, suitable for EPS
- OPMAX4, diameter 600–760mm, EV clutches available, suitable for EPS
- OPMAX4, 7Z, 7Z2, diameter 680–1000mm, EV clutches possibility, suitable for EPS





# TRACTORS

**Fuel Efficiency**

**High Pressure & Temperature**

**Limited Space**

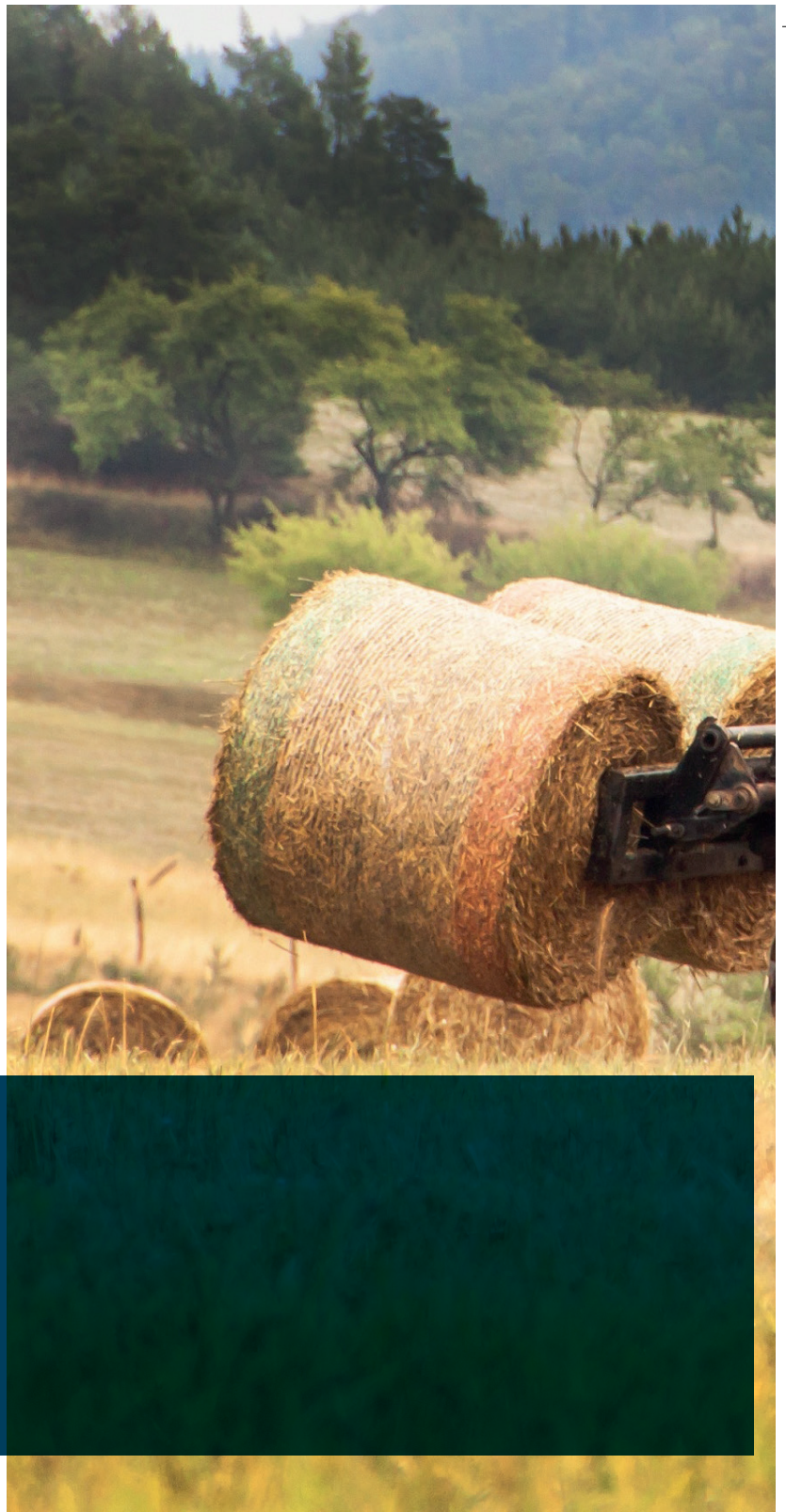
**Low Noise**

**High Efficiency**

**Minimal Blade Deflection**

Engine cooling for tractors requires one-piece or modular fans which can operate under very high pressure and temperatures, while still achieving improved fuel efficiency and low noise. Multi-Wing's custom axial fans can be supplied with fuel saving bimetal and electronically controlled viscous clutches. Our fans are robust, compact for limited space and feature minimal blade deflection. Multi-Wing high efficiency fans fit reduced emission engines and EGR engines. Our fans have been performance validated by engine bay simulations in wind tunnels. Multi-Wing's one-piece or modular fans can be used in compact (<40 hp), utility (40-100 hp) and high power (100-600 hp) tractors.

# FARM LOADER



**Reliability & Durability**

**Low Noise**

**Fuel Efficiency**

**Productivity**

**Versatility**

Engine cooling for farm loaders requires one-piece or modular fans which can operate in rough terrain and under high pressure and temperatures, while still achieving improved fuel efficiency and low noise. Multi-Wing's custom axial fans can be driven by hydraulic motors or directly by the engine and supplied with fuel saving viscous clutches. Our fans are robust, compact for limited space and feature minimal blade deflection. Multi-Wing high efficiency fans fit reduced emission engines and EGR engines. Our fans have been performance validated by engine bay simulations in wind tunnels.





**Best suitable Multi-Wing solutions for compact, mid-size, large and mining wheel loaders:**

- OPMAX2, 1H, 6H, diameter 320–450mm, suitable for EPS
- OPMAX2, OPMAX3, diameter 450–600mm, BM/EV clutches available, suitable for EPS
- OPMAX4, diameter 600–760mm, EV clutches available, suitable for EPS





**Best suitable Multi-Wing solutions for combine harvester in sizes  
150–210 hp, 210–310 hp, 310–650 hp:**

- 4Z, 5Z, 6Z, OPMAX4, diameters 600–850mm, suitable for EPS
- 5Z, 6Z, 7Z, 7Z2, 5W, diameters 850–1100mm, suitable for EPS
- 1W, 5W, 6W, diameters 1100–1250mm, suitable for EPS

**Best suitable Multi-Wing solutions for forage harvester in sizes  
450–630 hp, 680–900 hp, 900–1100 hp:**

- 6Z, 7Z, 5W, 6W, 9W2, 7Z2, diameter 900–1600mm





# HARVESTERS

**High Vibration & Temperature**

**Abrasive Dust**

**Reliability & Durability**

**High Static Pressure**

**High Efficiency**

Recognized for their high strength, reliability, and durability, Multi-Wing's custom axial fans for combine and forage harvesters are designed to operate under harsh conditions such as high-static pressure, vibration, temperature and abrasive dust. Our fans maintain ample pressure reserve for fouled radiators, feature low blade deflection and are fit for reduced emission and EGR engines.

# FIELD SPRAYERS

**Fuel Efficiency**

**Corrosion Proof**

**High Durability**

**Maximum Airflow and Throw**

**Minimum Blade Deflection**



Custom-made axial fans used in engine cooling for field sprayers must commit to high durability, strength, and corrosion resistance. Multi-Wing's custom axial fans produce maximum airflow and throw for mist-blower and self-propelled engines. Our fans feature minimum blade deflection and can be driven by engine or hydraulics.





**Best suitable Multi-Wing solutions for mist-blower and self-propelled field sprayers:**

- OPMAX4, 5W, 6W, diameter 600–920mm, suitable for EPS
- 4H, 6Z, OPMAX2, OPMAX4, 7Z, 7Z2, diameter 550–760mm, suitable for EPS





**Best suitable Multi-Wing solutions for mobile and stationary radiators:**

- O-PMAX2, O-PMAX3, O-PMAX4, 1H, 4H, 6H, 5W, 6Z, 7Z, 7Z2, 9W2 PMAX3,
- PMAX5, PMAX7, PMAX9, diameters 320-2746mm, BM and EV
- clutches available, suitable for EPS





# RADIATORS



- High Performance**
- High Durability & Strength**
- Low Noise**
- Minimum Blade Deflection**
- Cost Efficiency**
- Engine or Hydraulic Driven Fans**
- Versatile**
- High Temperature & Vibration**

Tailor-made Multi-Wing axial fans contribute to high performance, low noise and cost effective radiator operation. Our fans feature minimum blade deflection and can be engine or hydraulic powered.

# LIVESTOCK VENTILATION

**High Efficiency**

**Low Operational Cost**

**Low Noise**

**Corrosion Resistant Materials**

**High CFM per Watt Output**

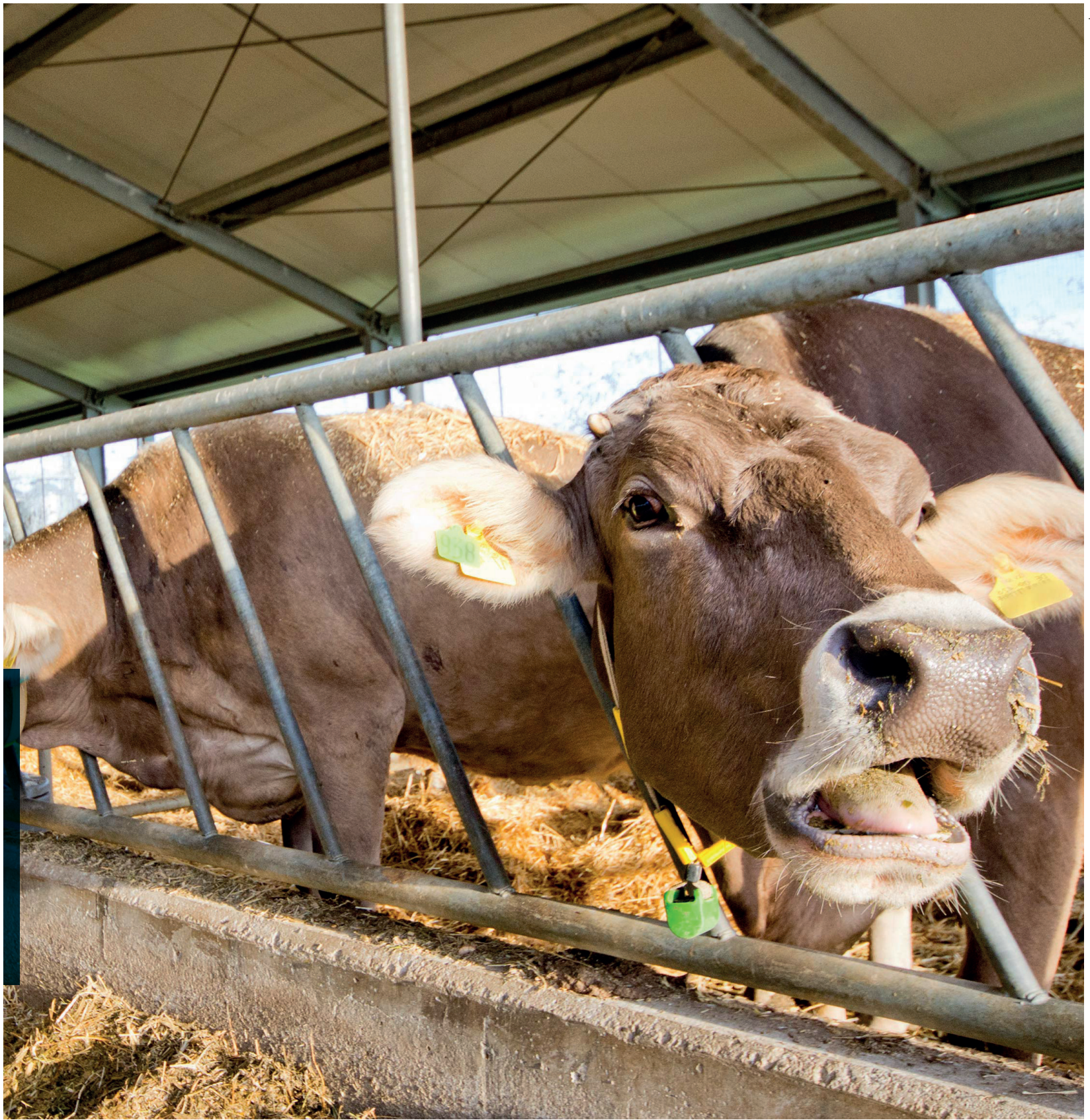
**UV Resistant**



Maximum airflow / low pressure Multi-Wing axial fans make the perfect solution for any standardized or customized livestock ventilation unit. Our fans are ideal for agricultural ventilation as they accommodate a temperature range from -40°C up to +60°C, -40°F up to +140°F. Our high energy efficiency, lightweight designed custom-made fans generate energy efficiency through maximum CFM/Watt or minimum W/1000m<sup>3</sup>/h.

The axial fans' corrosion resistant materials are perfect for the rough environments of high-performance agricultural applications.





**Best suitable Multi-Wing solutions for any livestock ventilation:**

- Medium size fans EMAX4, 4Z, 5Z, diameter 560–915mm, suitable for EPS
- Large size fans 6W, 9W, diameters 1250–1980mm, suitable for EPS





**Best suitable Multi-Wing solutions for bin / batch dryer and continuous flow dryer:**

- EMAX4, 5Z, diameter 560–915mm, suitable for EPS
- 5W, 6W, diameters 800–1250mm, suitable for EPS





# GRAIN DRYERS

**High Static Pressure**

**Energy Efficient**

**Low Noise**

**Corrosion Proof**

**Durability**

Multi-Wing's grain drying fans are built from industrial strength aluminum, to ensure durability, low noise and high static pressure under intense heat. Our custom-made axial fans provide the necessary high static pressure for excellent performance and we offer powder coating for high corrosion resistance.

**We are available around the globe**  
with local service and support.



## Your Multi-Wing

The present publication is drawn up by way of information only and does not constitute an offer binding upon Multi-Wing. Multi-Wing has compiled the content of this publication to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Multi-Wing explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Multi-Wing.



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