



**WELCOME TO
MULTI-WING WORLD!**

**CUSTOMIZABLE FANS FOR
ANY CONSTRUCTION APPLICATION**

**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





"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	630/8-8/48.5"/PPG/1ZL/Orifice Plate	Operational Impeller Limits	
Tip Speed	30 m/s	121 m/s (3668 RPM)	
Temperature	15 °C	-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 ³	Static impeller data		
Airflow	3.35 m ³ /s	Moment of Inertia	0.0598 kgm ²
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 ³		

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.

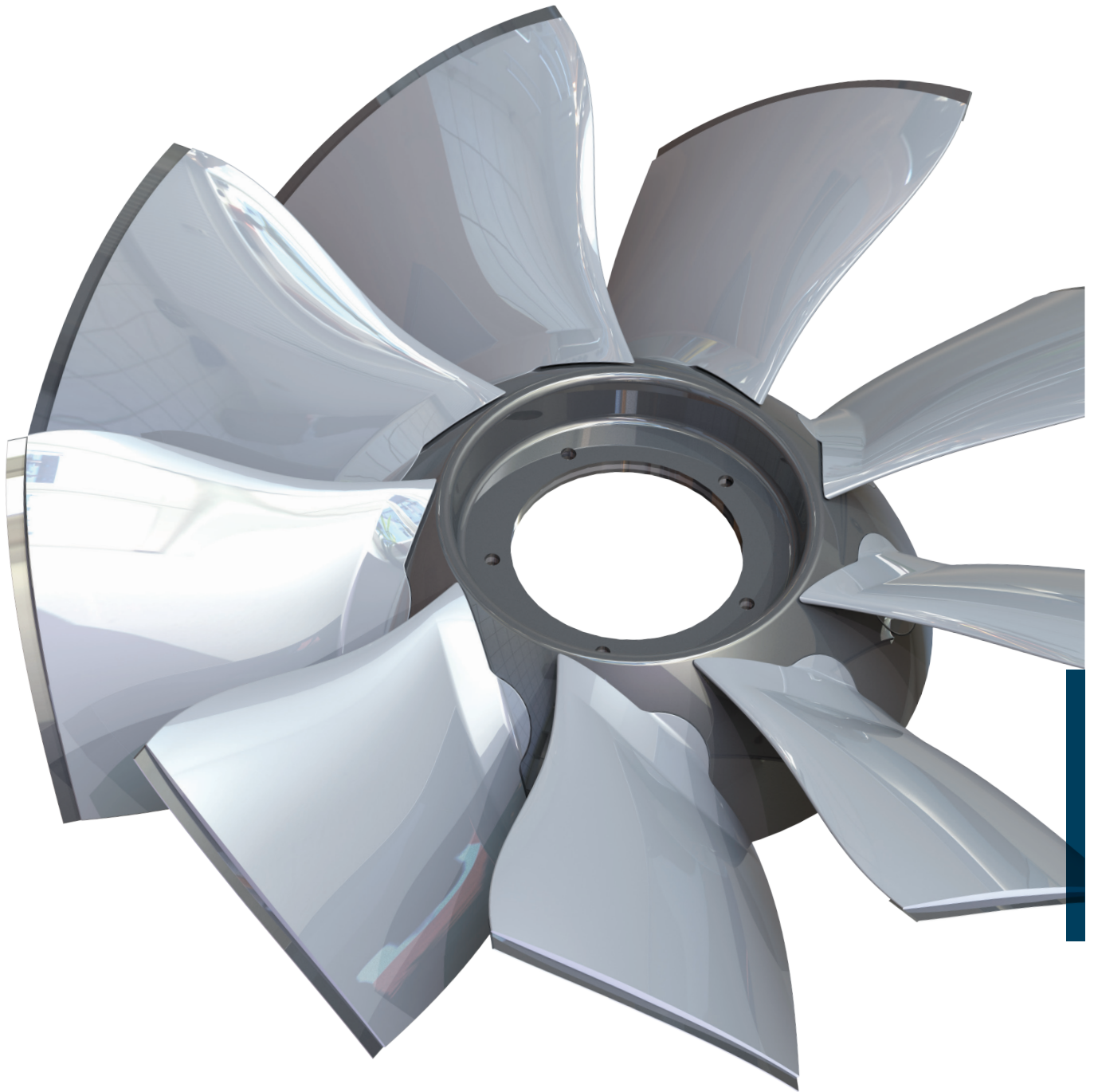
Local Service

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

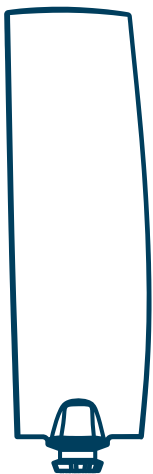
3. Manufacturing

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

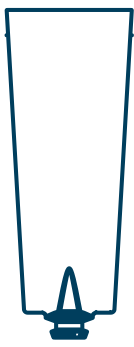
4. Delivery

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

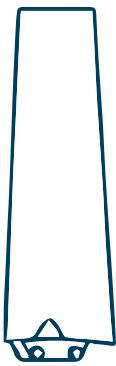
OUR BLADES



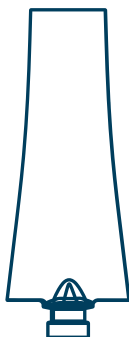
PM6



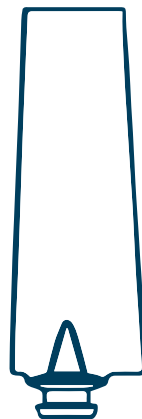
IR



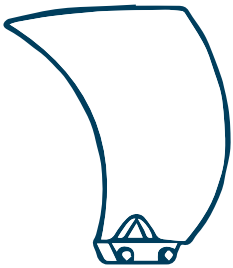
3H



TR



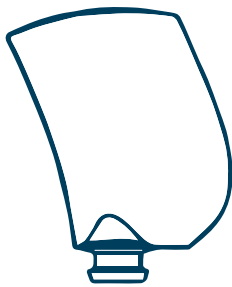
4Z



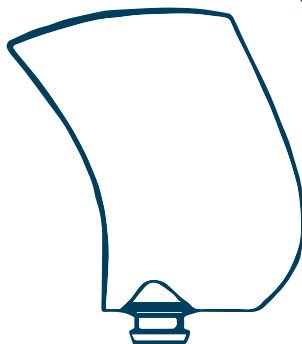
1H



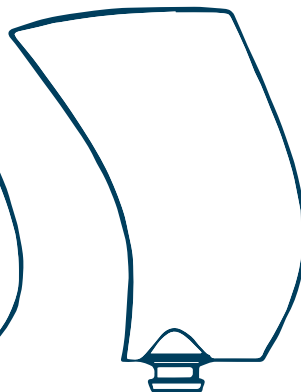
4H



1Z



2Z

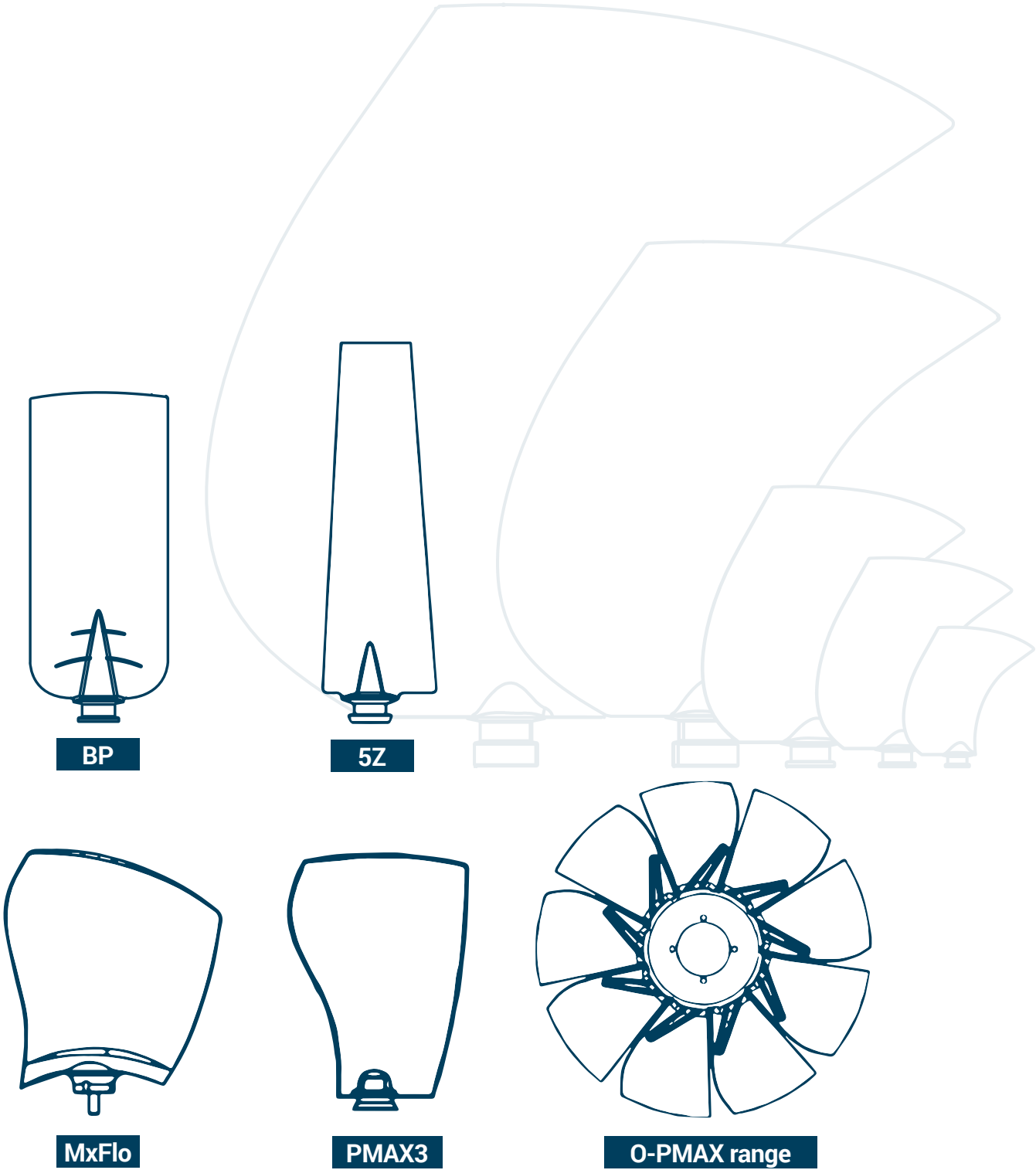


7Z

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

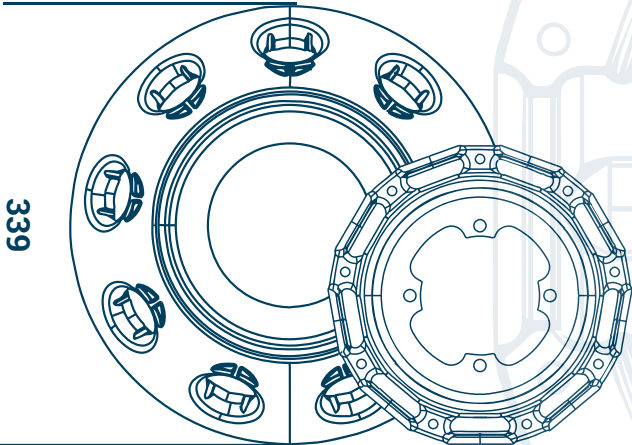


At Multi-Wing flexibility is a key word. Not only when matching the right fan with the duty point, but also when it comes to mounting your fan. Regardless if it is a straight bore for electrical motors, a conical bore for hydraulic pumps, a flange drive on the diesel engine or the bushing for Nema type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

Discover our full hubs online at multi-wing.com

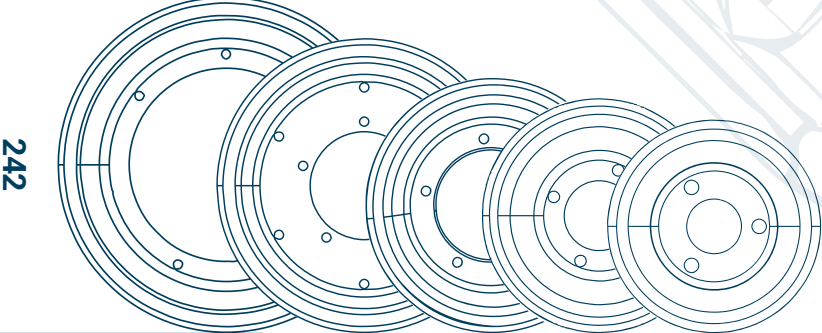


MxFlo & PMAX3 Plates



339

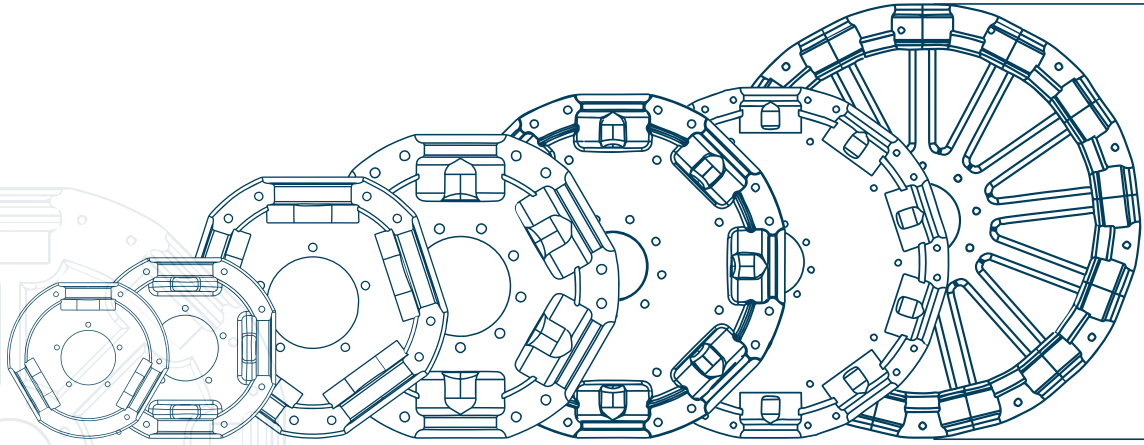
H Retaining Plates



242

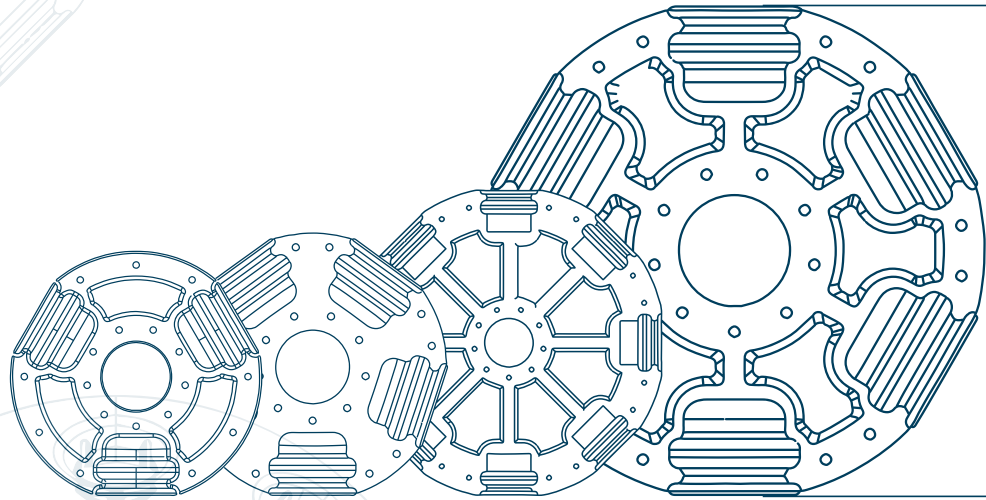
OUR HUBS

W Retaining Plates



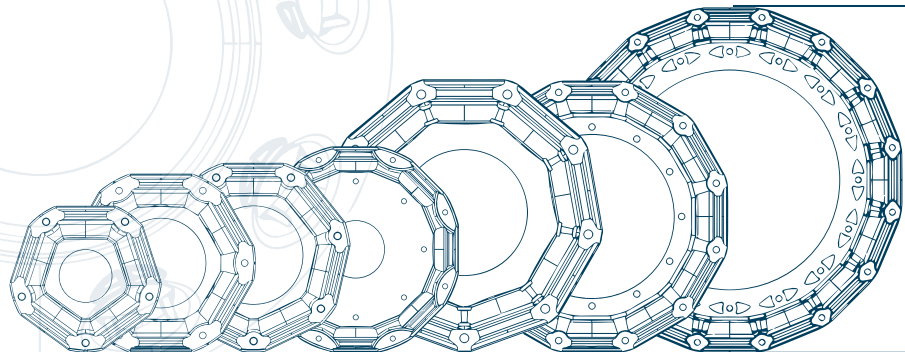
716

G Retaining Plates

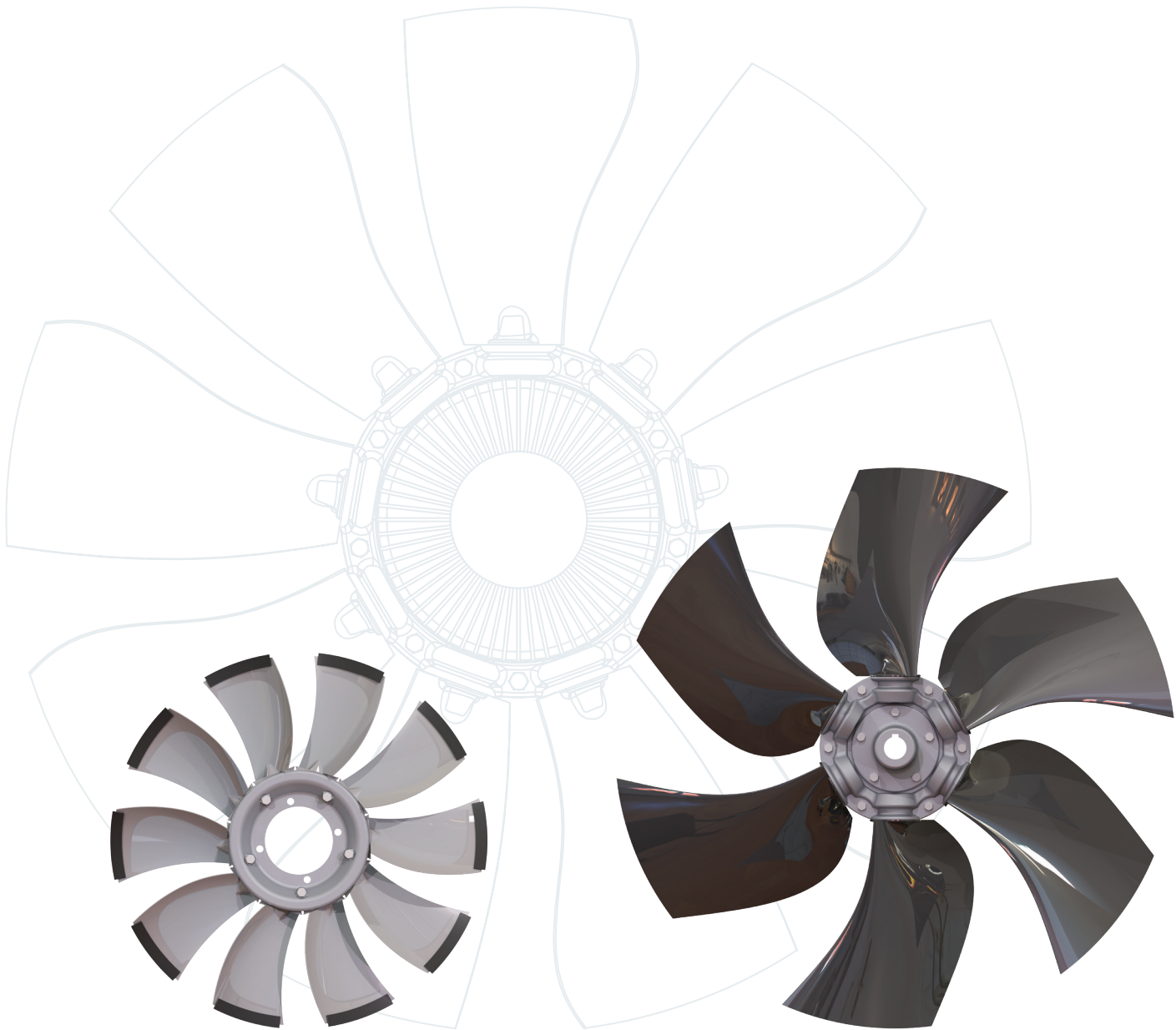


716

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 excavators, wheel loaders, rollers, pavers, reefer-units and radiators in the wind turbine industry.

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

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

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 stationary applications such as mobile, fan units, gen-sets, dryers and radiators.

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

- Airfoil
- Broad paddle
- 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).

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 industrial ventilation, gen-sets, condenser units and evaporator applications.

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

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

X-large diameter fans

Multi-Wing's X-large size range offers custom axial fans from 2134 to 2743mm (84.01 to 108 inch) in diameter. The X-large size fans are typically used in applications like cooling towers and large condenser units.

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

- Airfoil
- Sickle

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

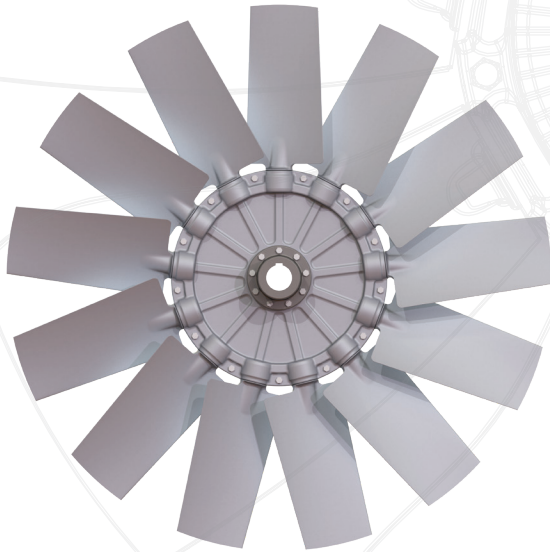
Aluminium, EN AC-Al Si12Cu1(Fe) (AL)
Temperature range: -60°C to +245°C. High temperature tested at 250°C for maximum 2 hours and at 300°C for maximum 1 hour.

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

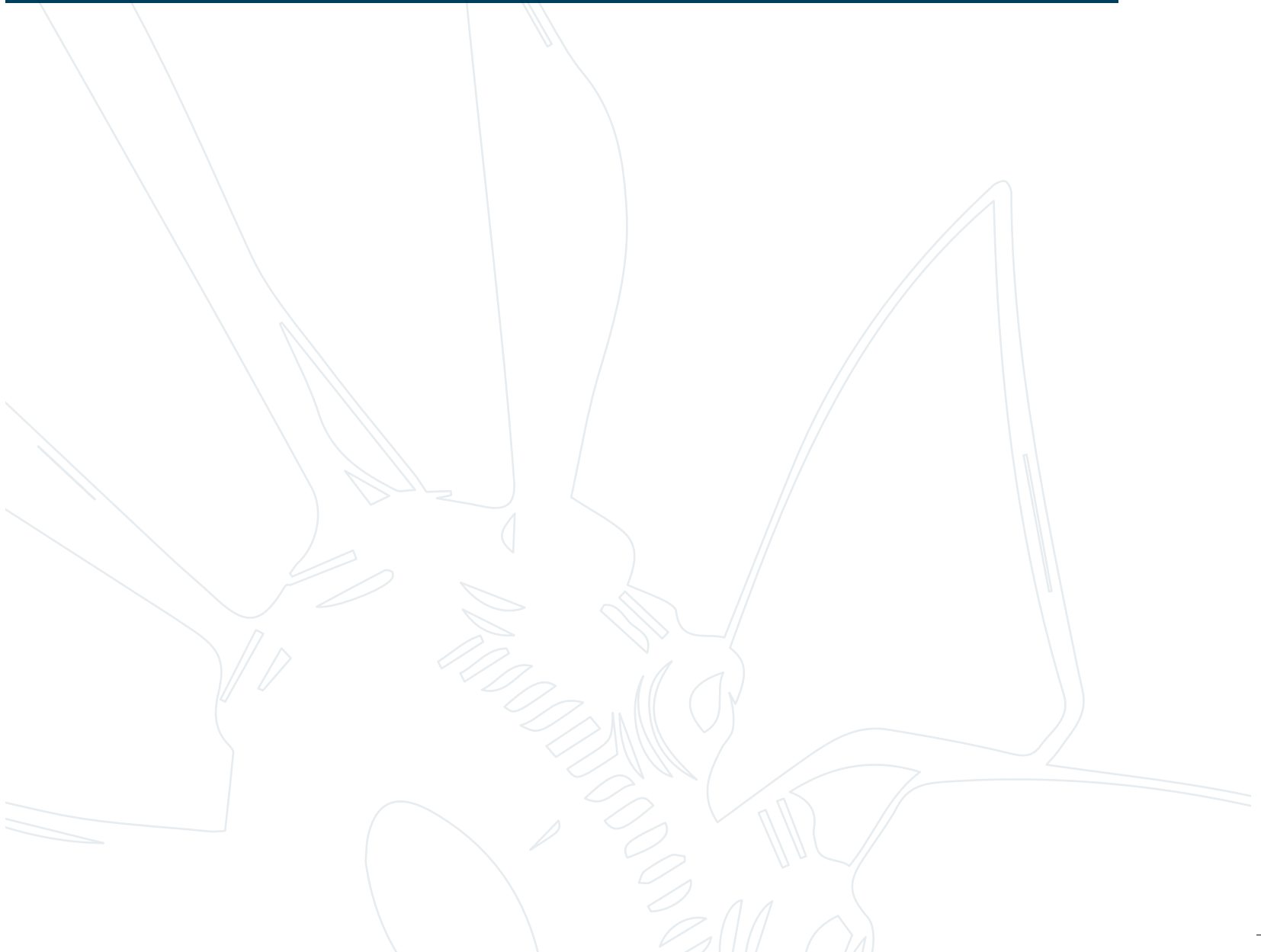
PPG

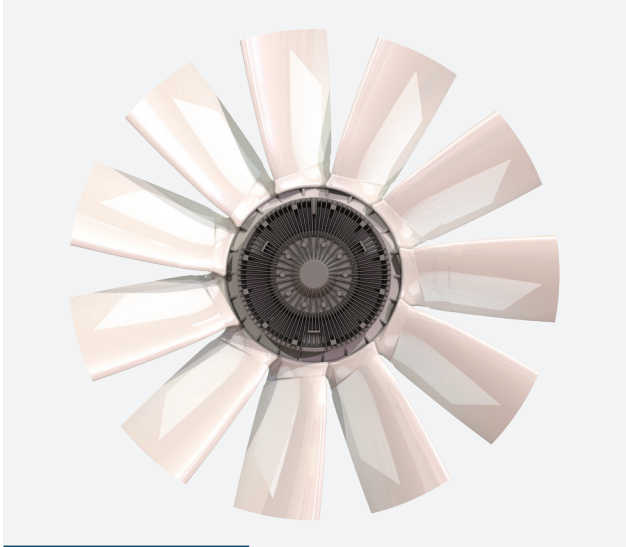
Glass Reinforced Polypropylene (PPG)
Temperature range:
-30°C to +90°C

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.





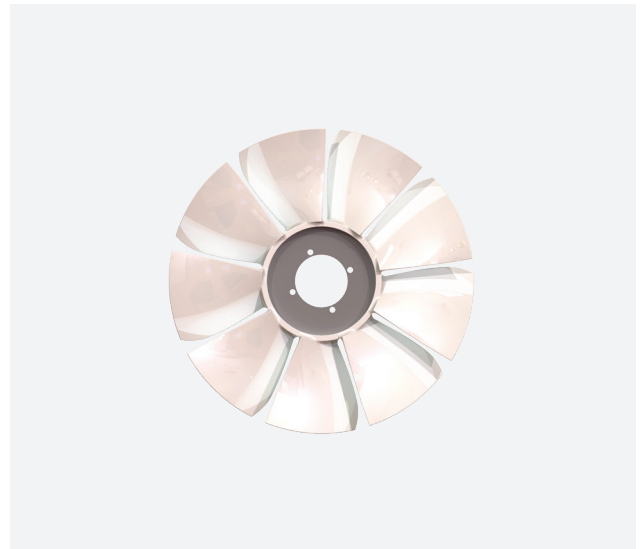
O-PMAX4



9W2



4H



O-PMAX2



7Z

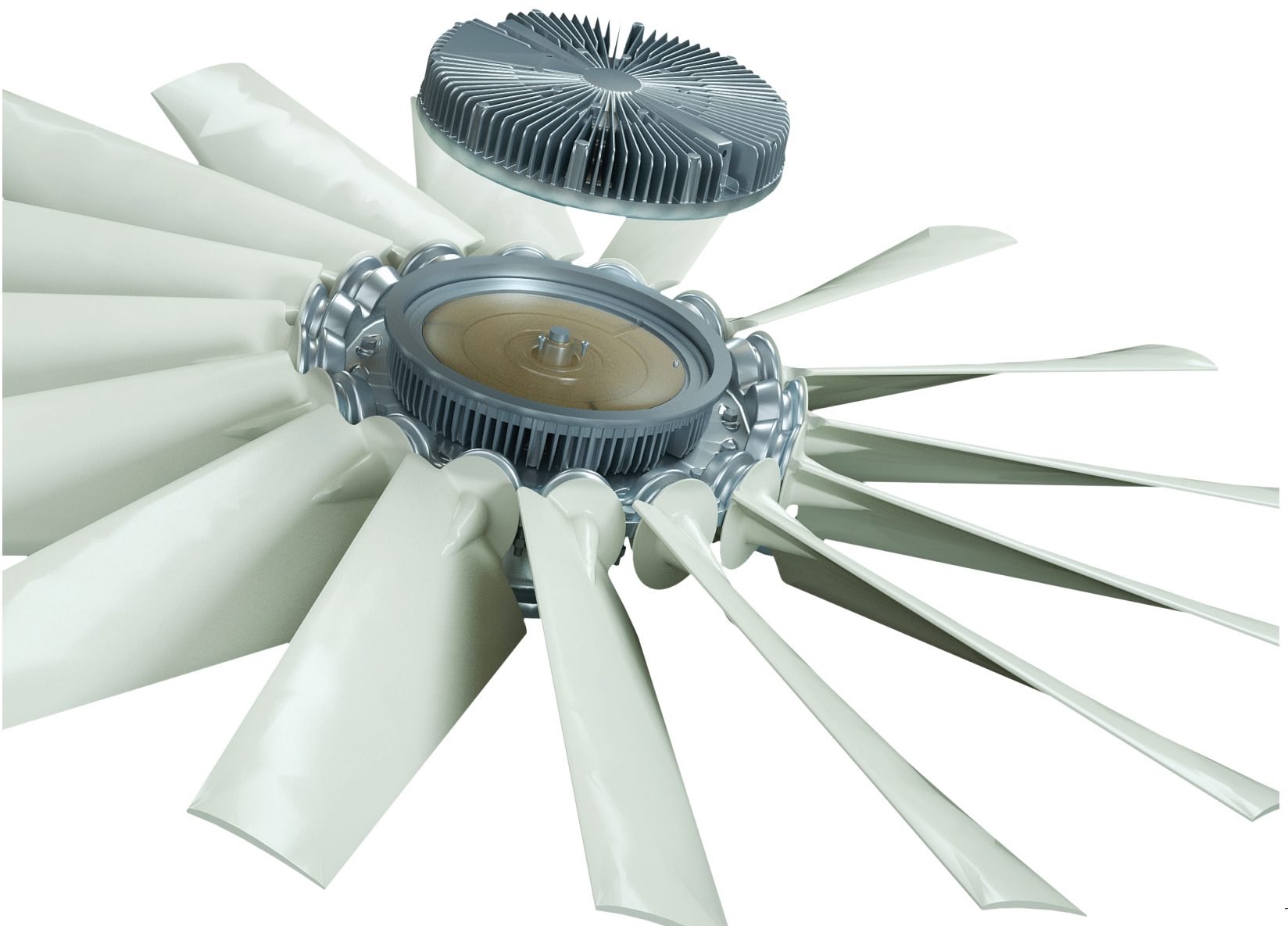


PMAX3



FAN & CLUTCH

One Integrated Solution | Custom-made | Mixed Flow Fan
Speed Regulation | Easy Maintenance | E-viscous & Bi-metal Clutches
Tier 4 & Stage IIIB Compliant | Plug & Play

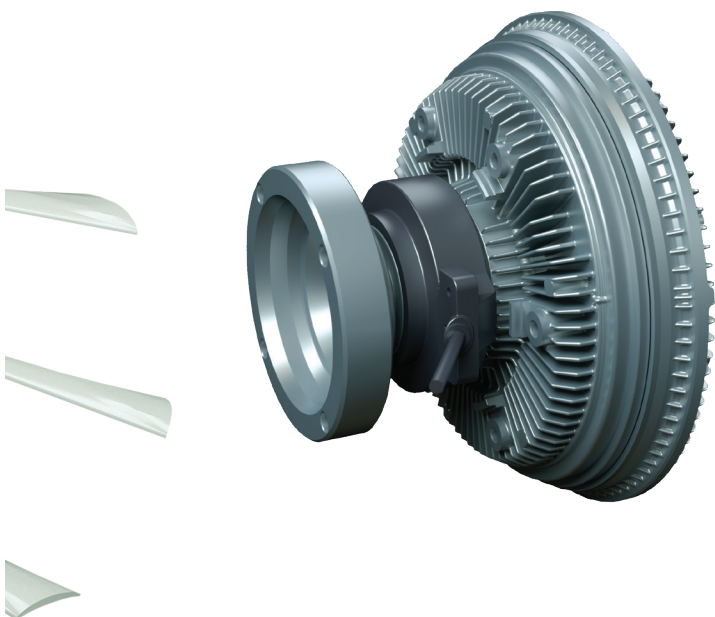
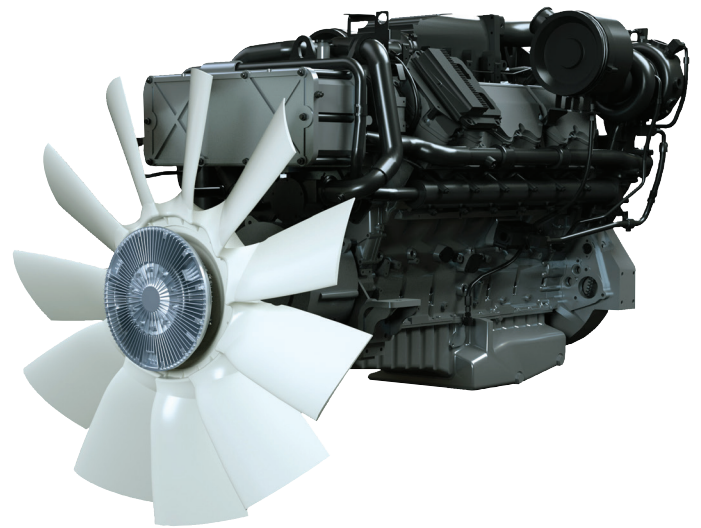




Bi-metal clutch features and advantages

- 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 4 and Stage IIIB 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

CONSTRUCTION MACHINERY APPLICATIONS





ROLLERS

High Vibration
Reliability & Durability
High Productivity
Energy Efficient
Minimum Blade Deflection



Engine cooling for rollers demands fans that are highly reliable, durable and can tolerate high levels of vibration. Multi-Wing's custom axial fans feature minimum blade deflection and are an efficient choice for reduced emission engines and EGR engines. Our fans can be driven by engine or hydraulics. Multi-Wing's fans are an optimal fit for small, medium and large rollers.



Best suitable Multi-Wing solutions for small, medium and large rollers:

- O-PMAX2, 1H, diameter 340-550mm, BM clutches available, suitable for EPS
- 4H, 2Z2, 7Z2, O-PMAX4, diameter 550-700mm, BM/EV clutches available, suitable for EPS
- O-PMAX4, 7Z, 7Z2, 6W, diameter 700+mm, EV clutches available, suitable for EPS



Best suitable Multi-Wing solutions for mini / compact, medium, large and mining excavators:

- O-PMAX2, PMAX3, 1H, diameter 320-450mm, BM clutches available, suitable for EPS
- O-PMAX3, PMAX3, 1H, 2Z2, diameter 400-520mm, EV clutches available, suitable for EPS
- 2Z2, 7Z, 7Z2, diameter 500-760mm, EV clutches available, suitable for EPS
- 6W, 9W2, PMAX5, PMAX7, diameter 1000-1600mm, suitable for EPS



EXCAVATOR

Power & Performance

Fuel Efficiency

Reliability

Low Noise

High Efficiency

Suitable for Hydraulic Drive

Engine cooling for excavators requires fans to provide power, performance and reliability. Multi-Wing's custom axial fans also improve engine cooling, fuel efficiency and limit noise (up to 4 dBA reduction with the EPS add-on). Our high-efficiency fans are suitable for hydraulic drive, variable rotation speed (reversible to clean radiator), reduced emission engines and EGR engines. Multi-Wing's one-piece fans feature stiff blades which are both compact and robust.

DUMP TRUCK

High Vibration

High Temperature

Reliability & Durability

Abrasive Dust & Stones

High Efficiency

Low Noise



Multi-Wing's custom-made axial fans provide the highest levels of strength and durability in dump truck engine cooling. Our axial fans perform with the utmost reliability under harsh conditions, including high vibration, high operating temperatures and exposure to abrasive dust and stones. Designed for minimum blade deflection, our fans fit reduced emission engines and EGR engines. Multi-Wing fans can be driven by engine or hydraulics. Our axial fan solutions are mostly used in articulated dump trucks and mining trucks.



Best suitable Multi-Wing solutions for articulated and mining dump trucks:

- O-PMAX4, 7Z, 7Z2, diameter 600-760mm, suitable for EPS
- 7Z2, 6W, PMAX5, diameter 800-1100mm, suitable for EPS
- 7W, 9W2, PMAX7, PMAX9, diameter 1100-2000mm, suitable for EPS



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

- O-PMAX2, O-PMAX3, 1H, 4H, 6H, diameter 320-650mm, BM clutches available, suitable for EPS
- O-PMAX4, 7Z, 7Z2, diameter 650-800mm, EV clutches available, suitable for EPS
- O-PMAX4, 7Z, 7Z2, PMAX5, diameter 760-1000mm, EV clutches available, suitable for EPS
- 6W, 9W2, PMAX5, PMAX7, diameter 1000-1500mm, suitable for EPS



WHEEL LOADER

Reliability & Durability

Low Noise

Fuel Efficiency

Productivity

Versatility

Recognized for their high strength, reliability and durability, Multi-Wing's custom axial fans are designed to improve engine cooling, fuel efficiency and reduce noise across a variety of Wheel Loader components. Multi-Wing's fans are suitable for hydraulic drive or e-viscous clutches, speed modulation, reduced emission engines and EGR engines. Multi-Wing's tailor-made axial fans are ready to meet the demands of compact (45-100hp), mid-size (120-270hp), large (300-600hp) and mining (800-2300hp) wheel loaders' demands.

GEN-SETS

Reliability & Durability

24/7 Availability

Extreme Vibration

High Temperature

Pusher Fan

Low Noise

High Efficiency

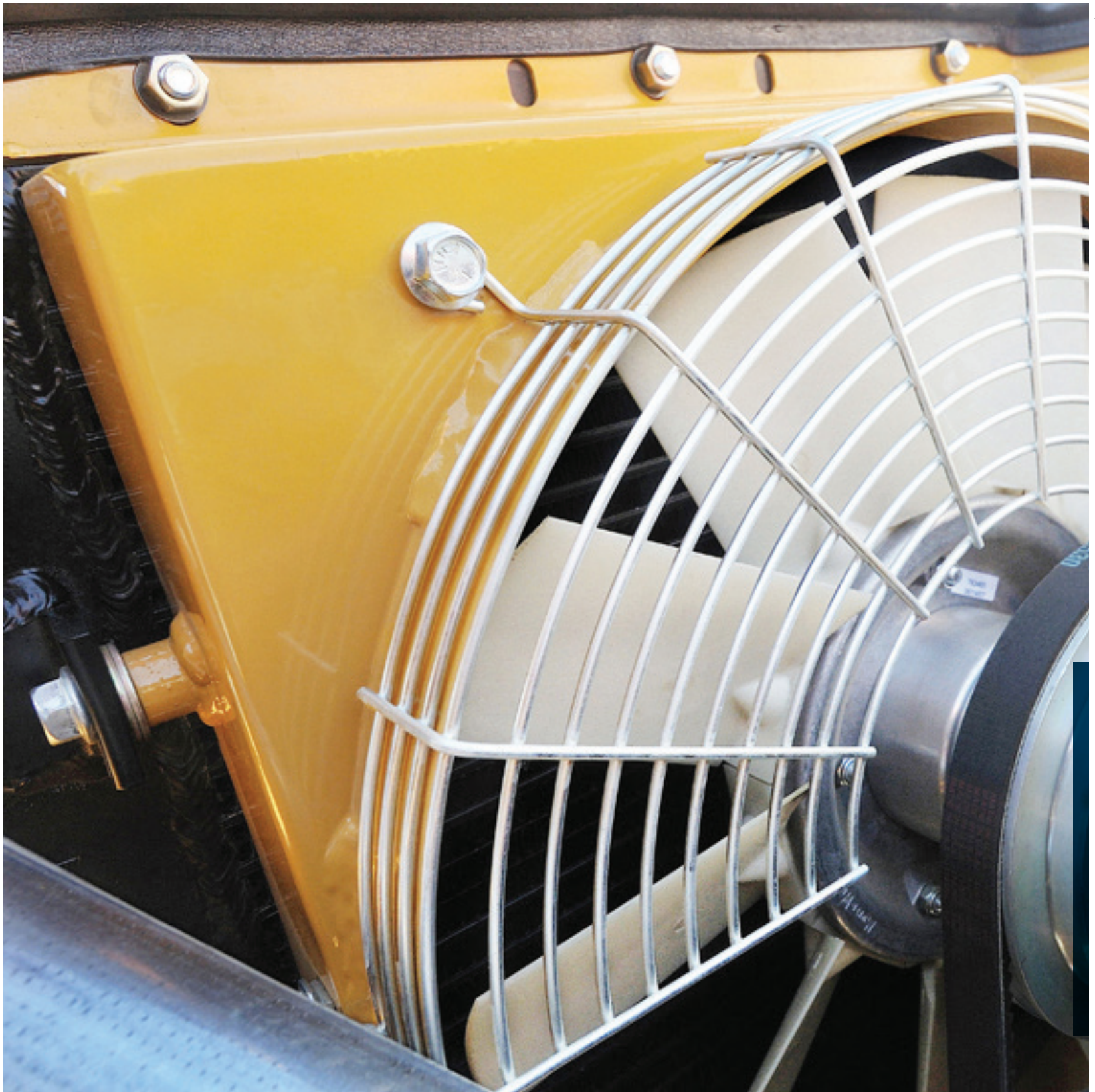


Generator Set engine cooling fans must be highly durable, strong and reliable. Multi-Wing's custom axial fans perform with 24/7 availability under harsh conditions such as high temperatures and extreme vibration. Our fans accommodate the possibility of flywheel mounting, feature minimum blade deflection, produce low noise, and are highly efficient at reducing parasitic loss. Multi-Wing's solutions can be found in mobile and stationary generator sets.



Best suitable Multi-Wing solutions for mobile and stationary generator sets:

- O-PMAX2, O-PMAX4, 2Z2, 7Z, 7Z2, diameters 550-1250mm, EV clutches available, suitable for EPS
- 7Z2, 5W, 6W, PMAX5, 9W2, diameter 800-2000mm, EV clutches available, 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, 10G, 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

FORKLIFTS

Lowest Possible Noise
Fuel Savings
Compact Dimensions
High Static Pressure



Multi-Wing's forklift axial fans run quiet with minimal noise, provide fuel savings and have compact dimensions. Our fans can be used in small, medium and large forklifts.



Best suitable Multi-Wing solutions for small, medium and large forklifts:

- 1H, O-PMAX2, diameters 380-520mm, BM clutches available, suitable for EPS
- O-PMAX2, O-PMAX3, diameters 460-600mm, BM clutches available, suitable for EPS
- PMAX3, diameters 350-640mm, BM clutches available, suitable for EPS
- O-PMAX4, diameters 600-762mm, BM and EV clutches available, suitable for EPS



Best suitable Multi-Wing solutions for reachstacker, masted stacker, straddle carrier, shuttle carrier container handlers:

- O-PMAX2, O-PMAX3, diameters 520-600mm, BM clutches available, suitable for EPS
- 2Z2, O-PMAX4, diameters 600-762mm, BM and EV clutches available, suitable for EPS
- PMAX3, diameters 350-640mm, BM clutches available, suitable for EPS
- 7Z, diameters 500-1000mm, BM and EV clutches available, suitable for EPS



CONTAINER HANDLERS

- Fuel Savings**
- Low Noise**
- High Pressure**
- Compact Dimensions**
- Low Noise**
- High Efficiency**
- Corrosion Proof**

Container handler engine cooling demands axial fans with compact dimensions that provide high pressure, high efficiency and low noise. Multi-Wing's custom axial fans run optimally and are always an energy efficient choice. The axial fans' corrosion resistant materials are perfect for the harsh environments of logistics.

AIRPORT GROUND SUPPORT EQUIPMENT

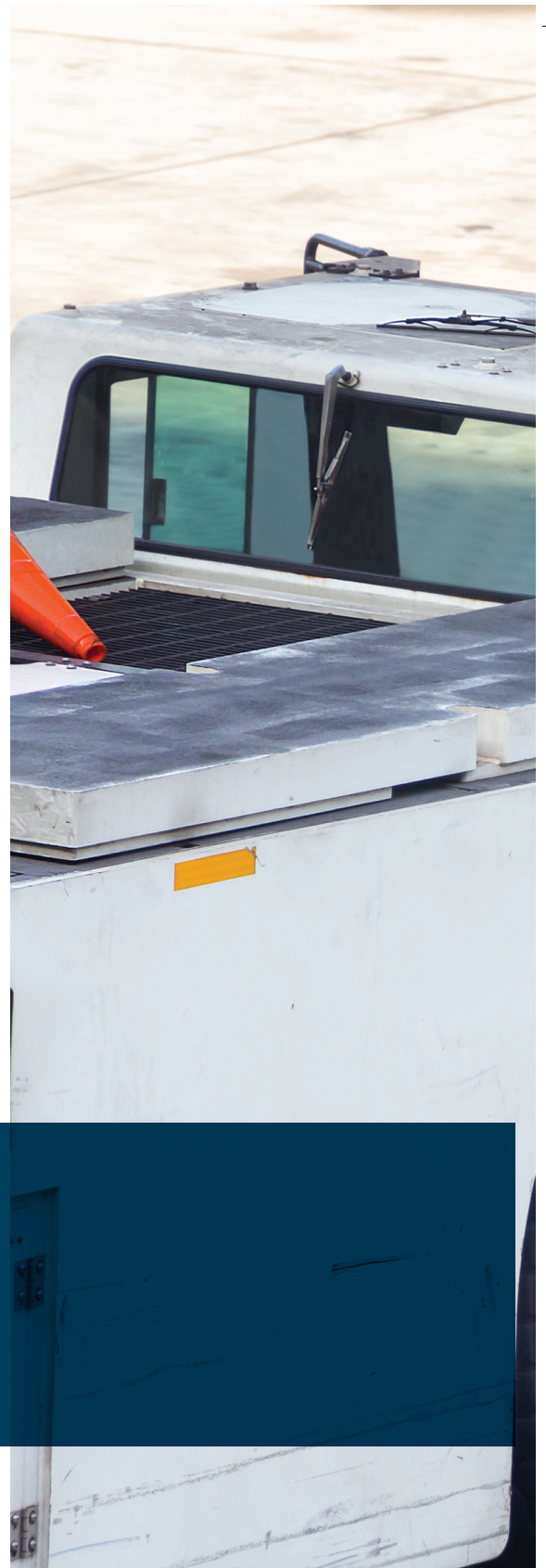
Fuel Savings

Robust

Low Maintenance

Energy Efficient

Multi-Wing's engine cooling axial fans used in airport ground support equipment provide low maintenance, high durability and energy efficient operation.





Best suitable Multi-Wing solutions for tugs, tractors, pushback, ground power unit, air conditioner unit, belt loaders and air starters:

- 1H, O-PMAX2, diameters 380-520mm, BM and EV clutches available, suitable for EPS
- O-PMAX2, O-PMAX3, diameters 460-600mm, BM and EV clutches available, suitable for EPS
- 2Z2, O-PMAX4, diameters 600-762mm, BM and EV clutches available, suitable for EPS
- PMAX3, diameters 350-640mm, BM and EV clutches available, suitable for EPS

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



Your Multi-Wing

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