MULTI-WING™

PRODUCT CONCEPT

Multi-Wing designs industrial axial fans for the worldwide Ventilation, Cooling and Industrial Heat Exchanger markets.
Our innovative system of standard, interchangeable components uses a broad range of blade profiles and materials. The result: axial fans tailored to your specific requirements with superior low-noise performance, outstanding engineering support and short lead times.

INNOVATIVE
DESIGN

HIGH
PERFORMANCE

MODULAR
FLEXIBILITY

LOW NOISE
OPERATION

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Airfoil Series

THE ANSWER IN AIR–MOVING APPLICATIONS

Saves Power. Reduces Noise. High Efficiency.
Low-noise Signature and Low-power Consumption.
Available in live blade materials. Customized to your specification.

Multi-Wing's airfoil profiles provide uniform, high-volume airflow with low power consumption for optimum efficiency. The airfoil's twisted design reduces turbulence across the blade's surface, resulting in low-noise impellers. Our airfoil series is widely used in the ventilation and cooling industries along with engine cooling applications where requirements are more demanding.

Multi–Wing's airfoil fans are the answer for virtually any air–moving application.

Our airfoil profile's twisted blade creates a broad operating range, making it suitable for everything from the most demanding engine-cooling applications to simple ventilation.

Axial FAN Series

PROFILES

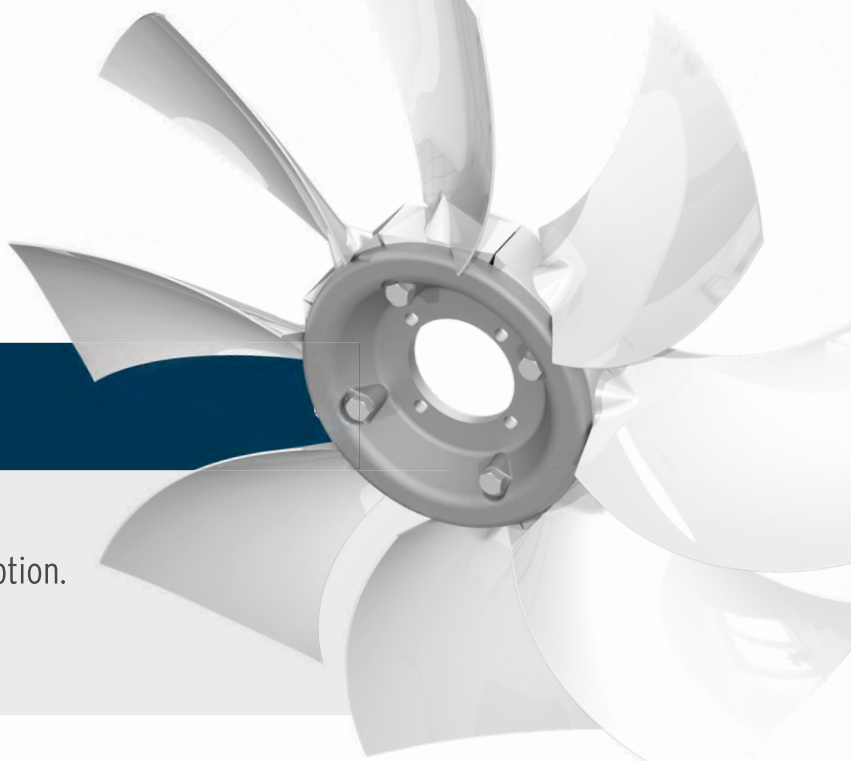
H		Z			W				G	C	VK		
2H	3H	3Z	4Z	5Z	5W	6W	7W	9W	10G	3C	502 6-6 VKL	560 8-8 VKR	790 9-9 VKL
225-742		225-1261			504-1981				1210-2746	405-792	360-760		

Diameters min. - max. (mm)

APPLICATIONS

Cooling towers
Engine cooling
Heat exchangers
HVAC
Refrigeration

Sickle Series



THE ANSWER IN AIR–MOVING APPLICATIONS

Saves Power. Reduces Noise. High Efficiency.
Low-noise Signature and Low-power Consumption.
Available in five blade materials.
Customized to your specification.

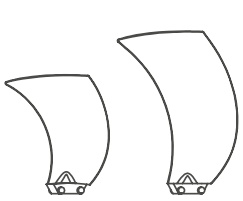
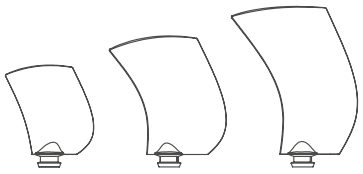
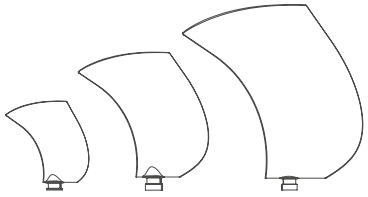
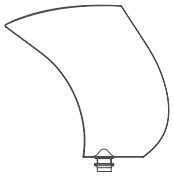
The blades' large chord length and thin trailing edge combine to generate greater pressure at lower speed while significantly reducing noise levels. Imagine cutting your noise levels in half while generating more pressure at lower speed. And with companies at all levels working to comply with the European Union's directive on noise emission, our sickle-blade impellers can help you compete here and around the world.

Multi–Wing's sickle series blades are the answer for virtually any airmoving application.

The sickle profile is a natural selection for applications requiring low noise such as radiator packages for stationary and mobile construction, agriculture, compressors, generators and refrigeration applications.

Axial FAN Series

PROFILES

H	Z	W	G
			
1H 4H	1Z 2Z 7Z	1W 2W 3W	1G
225 - 742	225 - 1261	504 - 1981	1210 - 2746

Diameters min. - max. (mm)

APPLICATIONS

Condensers
Cooling towers
Engine cooling
Radiators
Refrigeration
Ventilator

True Reversible Series

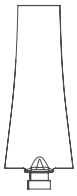
HOMOGENOUS AIRFLOW AND LONG THROW–LENGTH

High Efficiency Airfoil Profile with high efficiency and equal airflow in both rotation directions. Cost effective and customised to your exact specifications.

The use of counter-rotating side-by-side fans increases its throw distance and the velocity at greater distance and by enabling more uniform airspeed at drying processes. TR7L provide up to 74 % total efficiency and low noise levels. Also available in aluminum.

Axial FAN Series

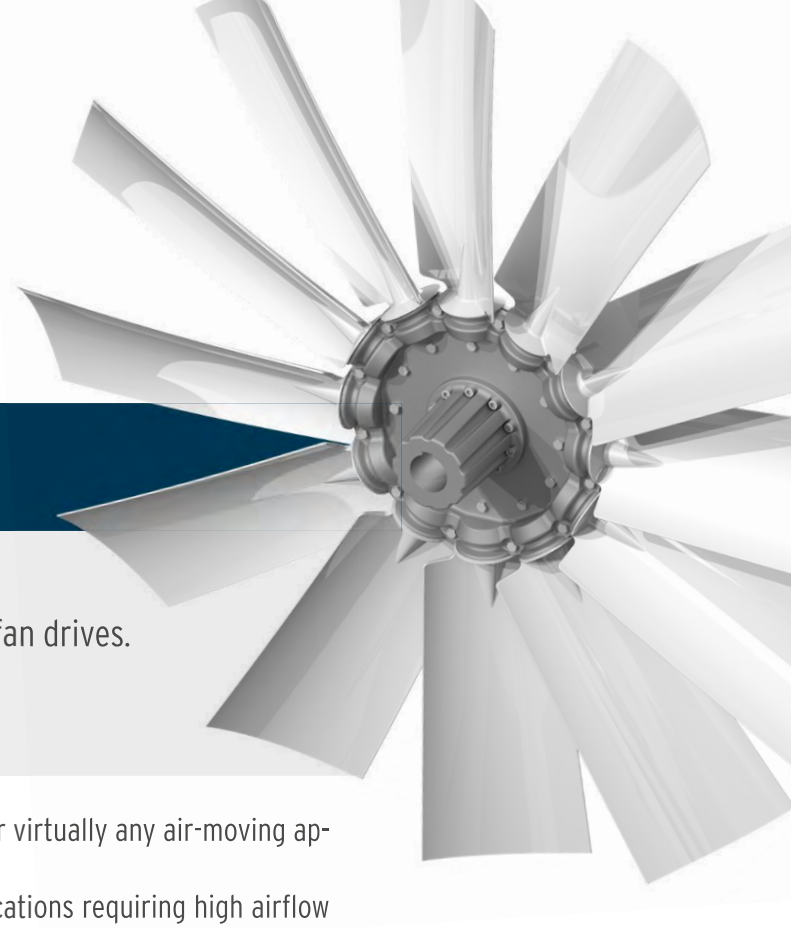
PROFILES

TR		
		
TR7Z	TR8Z	TR11W
319 - 1095	405 - 1175	567 - 1606
Diameters min. - max. (mm)		

APPLICATIONS

Brick drying
Food processing
Ventilation
Wood drying/kilns
Tanneries and radiator applications

Increasing Arc Series



THE PERFECT FIT IN THE TIGHTEST CONDITIONS

High Performance in Challenging Environment.
Lower moment of inertia means reduced wear of fan drives.
Hydraulic and Clutch mounts available.
Customized to your exact specification.

Multi-WIng's increasing arc series blade are the answer for virtually any air-moving application
The increasing arc series is the perfect solution for applications requiring high airflow and high static pressure, operating with inefficient inlet geometry - a sharp-edge inlet or large tip clearance. Common in engine cooling applications and radiator packages.
The increasing arc profile blades' broad tip area improves impeller performance in less-than-ideal conditions

Axial FAN Series

PROFILES

H	Z
	
6H	6Z
225 - 742	319 - 1255

Diameters min. - max. (mm)

APPLICATIONS

Construction equipment
Crane
Agriculture Equipment
Emergency vehicle, bus and motor coach
Engine Power unit
Generator
Turf maintenance equipment

Broad Paddle Series

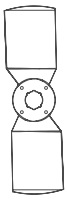
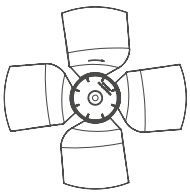
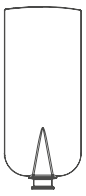
THE ANSWER FOR LOW–SPEED PERFORMANCE

The Answer for Low-Speed Performance. Low-noise Signature and Low-power Consumption. High airflow. Maintain performance at lower speeds. High solidity due to a large chord length. Customized to your exact specification.

The broad paddle profile produces higher pressure at low speeds due to its broad chord width. Lower operating speeds result in lower tip-speedgener-ated noise.

The broad paddle profile is ideal for coil applications such as oil coolers, aircooled condensers and dry coolers.

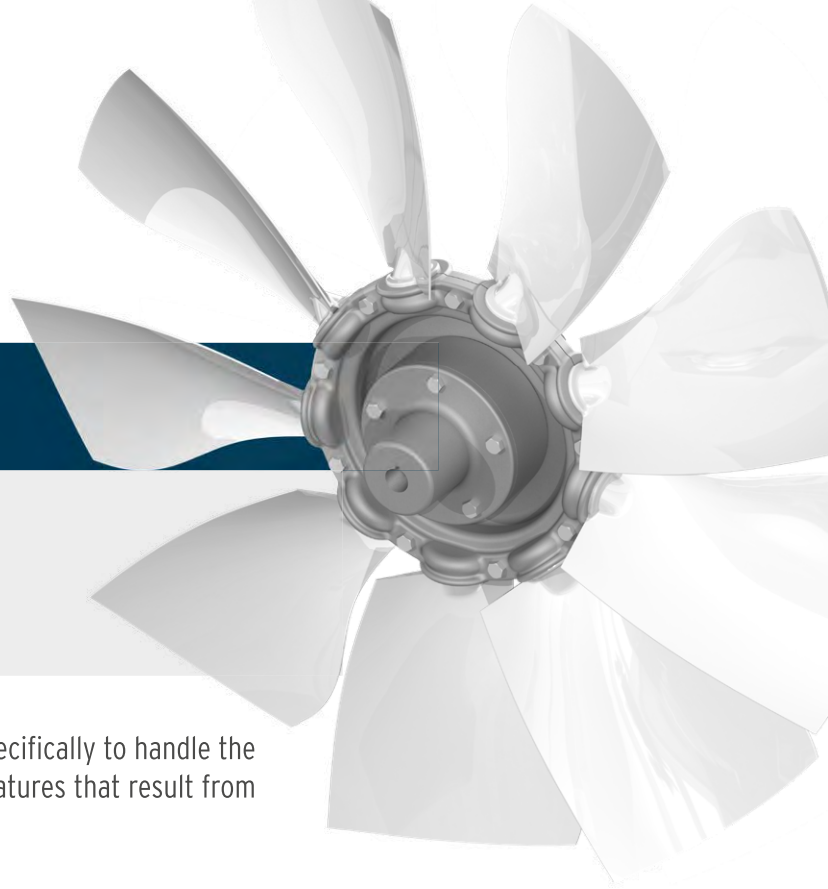
Axial FAN Series

PROFILES		
D	M	W
		
8D	8M	8W
360 - 660	285 - 508	504 - 1656
Diameters min. - max. (mm)		

APPLICATIONS

Chillers
Condensers
Cooling Tower
Refrigeration
Ventilator

PressureMAX



THE HIGH–PRESSURE SOLUTION FOR TIER 4 ENGINE COOLING

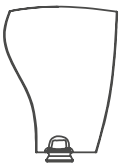
High static pressure and narrow depth for restricted spaces. Minimal blade deflection. Decreased operation noise.

Multi-Wing's new PressureMAX axial fan is designed specifically to handle the high heat rejection requirements and ambient temperatures that result from Tier 4/Stage IIIB and later emission standards.

The innovative blade design delivers 20 percent more static pressure and is 5-7 percent more efficient than standard airfoil profiles, saving horsepower and fuel. And with virtually zero blade deflection its narrow axial depth makes it a perfect fit for engine compartments with a limited cooling envelope.

Axial FAN Series

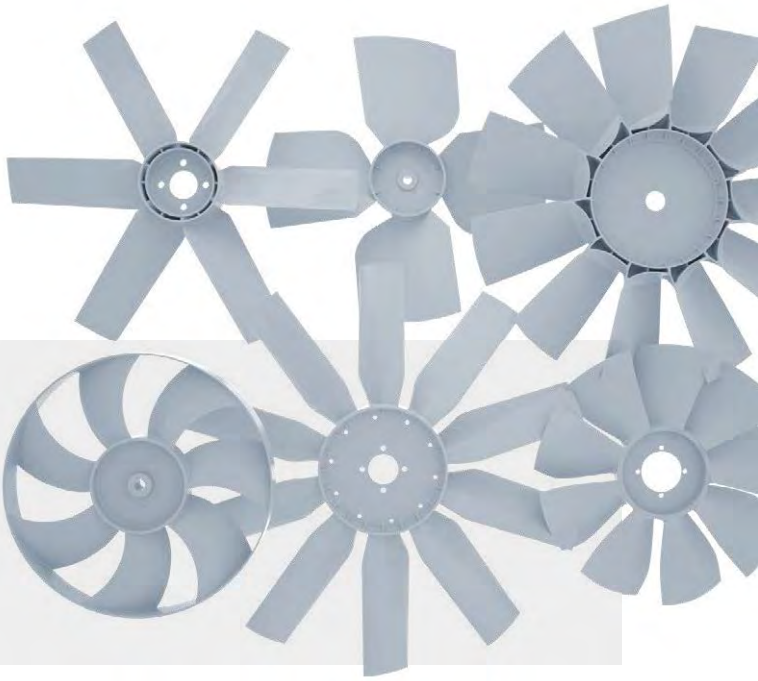
PROFILES

PMAX	
	
PMAX3	PMAX6
432 - 635	627 - 1295
Diameters min. - max. (mm)	

APPLICATIONS

Condensers
Cooling towers
Engine Cooling
Radiators
Refrigeration
Ventilator

ONE-PIECE Moulded Fans



Optimized Performance for High-Volume Projects. Ultimate tailor-made air-moving solutions. Designed using the most advanced technology in the market. Extensively tested determine the ideal configuration. High Airflow and Static Pressure with improved Efficiency.

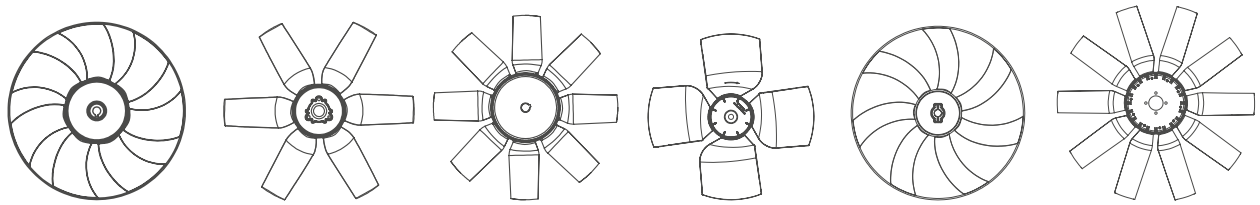
We design one-piece moulded axial fans for all types of applications, ranging from ventilation and cooling to industrial heat exchanger units. The one-piece moulded fans are 100% customised using our state-of-the-art technology and our research and development expertise.

The moulded fan provides outstanding performance while reducing power consumption and noise. We develop the impellers to match exact duty points and application geometries. The result is high-tech impellers at low cost.

Our one piece moulded fans are available in diameter ranging from **147 - 720 mm**

Axial FAN Series

PROFILES



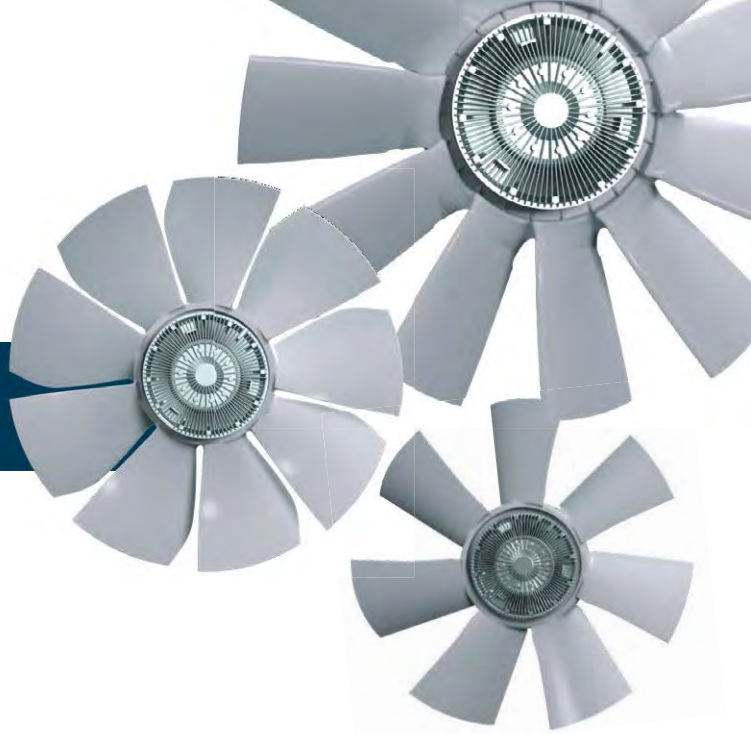
315 7-7 OPL | 355 6-6 OPL | 355 8-8 OPL | 440 4-4 OPL | 550 7-7 OPL | 550 10-10 OPL

APPLICATIONS

HVAC/R

Radiators

O-PMAX Series



THE HIGH-PRESSURE SOLUTION FOR TIER 4 ENGINE COOLING

One-Piece fan. Noise reduced up to 10 dB.
5% Increased efficiency. Fixed Pitch Angle.
Number of Blades customizable.

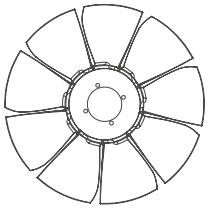
Multi-Wing's O-PMAX series offers a strong, high pressure solution with good efficiency for both standard and custom inlets. It can be fitted for bimetal and E-visco clutches for reduced fuel consumption. The OPMAXes are designed and targeted as main cooling fans for both CE and Agri segments. Especially the agri segment is a highly competitive market and therefore the impellers are designed as one-piece moulded. The goal is to supply OPMAX impellers in max diameters direct from moulds without extra handling to save cost.

O-PMAX will help to save energy, increase fuel efficiency of machines, work towards better energy-efficiency ratings, reduce emissions and ultimately contribute to making the world a better place.

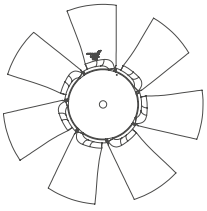
Our one piece moulded fans are available in diameter ranging from **360 - 762 mm**

Axial FAN Series

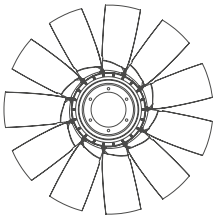
PROFILES



O-PMAX2



O-PMAX3



O-PMAX4

APPLICATIONS

Tractors
Farm Loaders
Backhoe Loaders
10 - 15T Excavators

EMAX Fan

MULTI–WING'S HIGHEST EFFICIENCY BLADE PROFILE

Leading the Efficiency Revolution. Up to 77 percent total efficiency. Computer-optimized blade design. Decreases noise by 2 to 3 dB. Reduces energy consumption. Customized for your specifications. ErP Directive Compliant.

Multi-Wing's EMAX Blade Profile contributes to power consumption reduction while reducing noise by 2-3dB. Flexible EMAX design is highly adjustable to fit 5 different existing hub sizes and enables 23 different pitch angles. The EMAX blade is perfect in ventilation applications that require high efficiency rates and meets the ErP 2020 Directive. It helps minimize power consumption of the final product.

Axial FAN Series

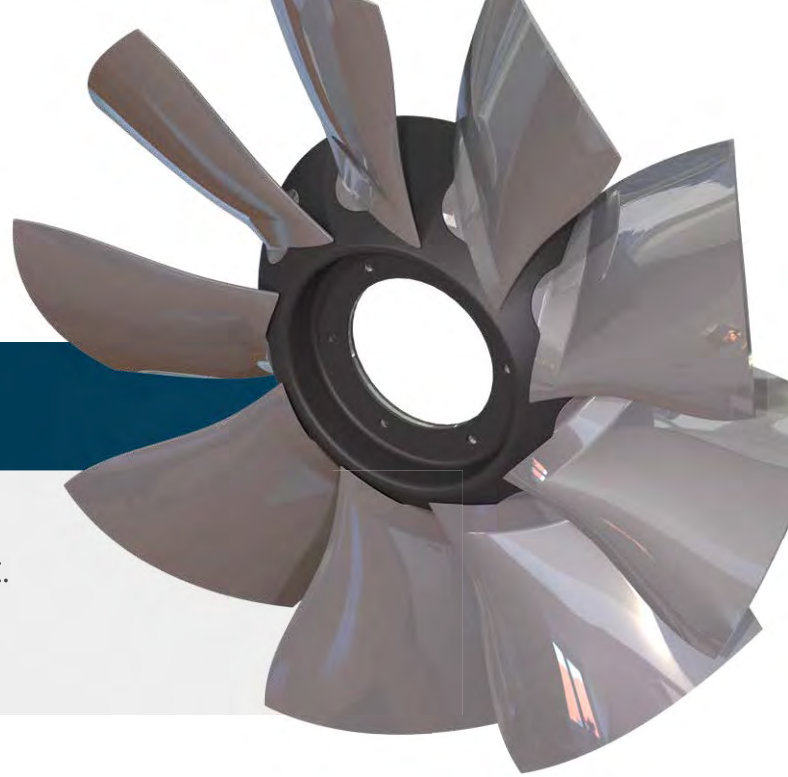
PROFILES
EMAX

EMAX4
624 - 920
Diameters min. - max. (mm)

APPLICATIONS

Air-cooled condensers
Chillers
Cooling towers
Commercial refrigeration
Evaporators
Heat Exchangers

MxFlo Fans



THE MIXED FLOW FAN FOR HIGH PRESSURE AND EFFICIENCY

Very High Static Pressure. Peak Efficiency at Higher Pressure. Narrow Blade Profile. Clutches Fit. Tier 4F, Tier 5 and Stage V Compliant. Optimises Performance. Less Fuel Consumption.

The Multi-Wing MxFlo is designed to provide high pressure and high efficiency in the demanding conditions engine manufacturers face using orifice plates and large tip clearances, and it fits perfectly with a viscous clutch. Built to solve the stringent emission requirement for Nonroad Engine, the MxFlo delivers its peak performance under the most challenging conditions.

The MxFlo has a propriety design that combines strategic features from Multi-Wing's long line of blade design advances. all rooted in an innovative new hub. With a narrow axial depth the MxFlo was built for the limited installation space available in engine compartments filled with cooling packages and other obstructions. And its combined axial and radial downstream airflow around the engine body while reducing turbulences and increasing efficiency.

Axial FAN Series

PROFILES
MxFlo

MxFlo
624 - 920
Diameters min. - max. (mm)

APPLICATIONS

Off-highway equipment

Aluminium Fan Blades

HIGH–STRENGTH COMPONENT SYSTEM

Engineered Product. High Efficiency. Adjustable and Fixed Pitch. Low Noise/Low Power Consumption. Corrosion Resistant. Custom-engineered impellers.

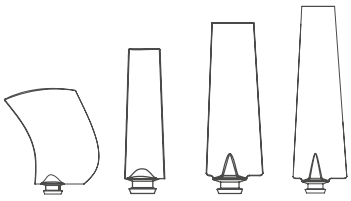
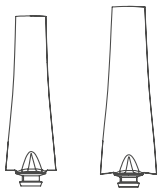
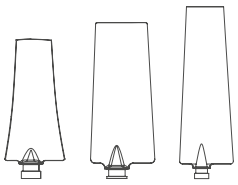
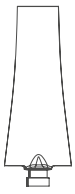
Multi-Wing's high-strength blades are tested and proven worldwide in the toughest conditions. Our die-cast aluminum blades produce an aerodynamically superior profile. We offer thousands of options in building the perfect fan for you.

Multi–Wing's Aluminum Fans are the answer for virtually any airmoving application.

The success of our aluminum fan series starts with our high quality components. Precision die casting allows us to twist the blade along the length, creating a more uniform airflow across the blade surface. Our blades' thin leading and trailing edges reduce turbulence across the blade profile, creating our signature high-efficiency, low-noise aluminum fans.

Axial FAN Series

PROFILES

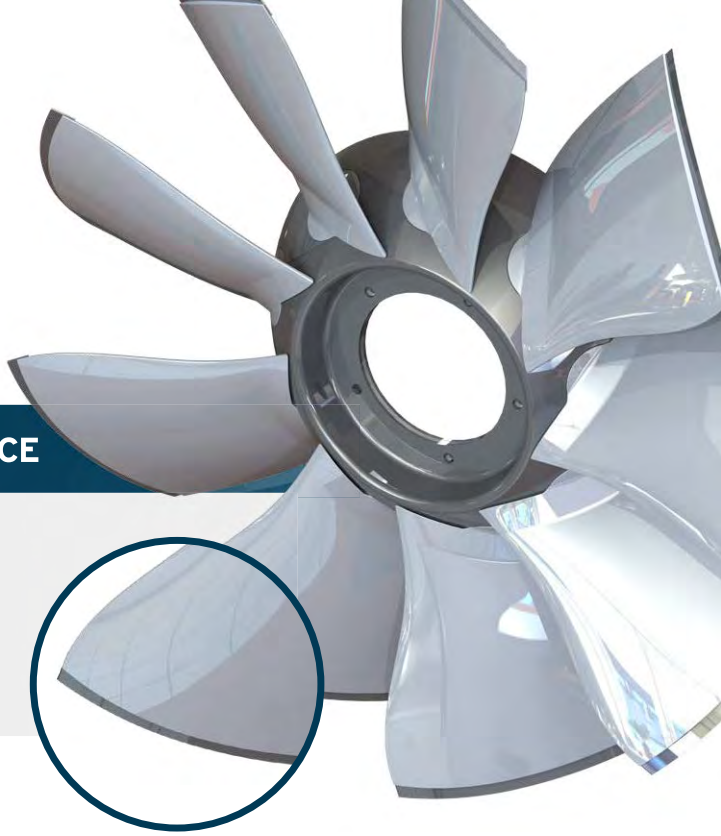
C	H	Z				TR		W			TR
											
3C	3H	2Z	3Z	4Z	5Z	TR7Z	TR8Z	5W	6W	9W	TR11W
281 - 792	178 - 737	406 - 1275						914 - 1956			

Diameters min. - max. (mm)

APPLICATIONS

Air cooled condensers
Freezer
Coolers
Evaporators
Food processing
Food storage

EPS
Fan Blade Extension



CLOSING THE GAP FOR BETTER PERFORMANCE

Closing the Gap for Better Performance. Bristles on the end of each blade. Closes the gap between the shroud and the fan tip. Minimizes turbulence in the blade. Improves fan performance and reduces noise.

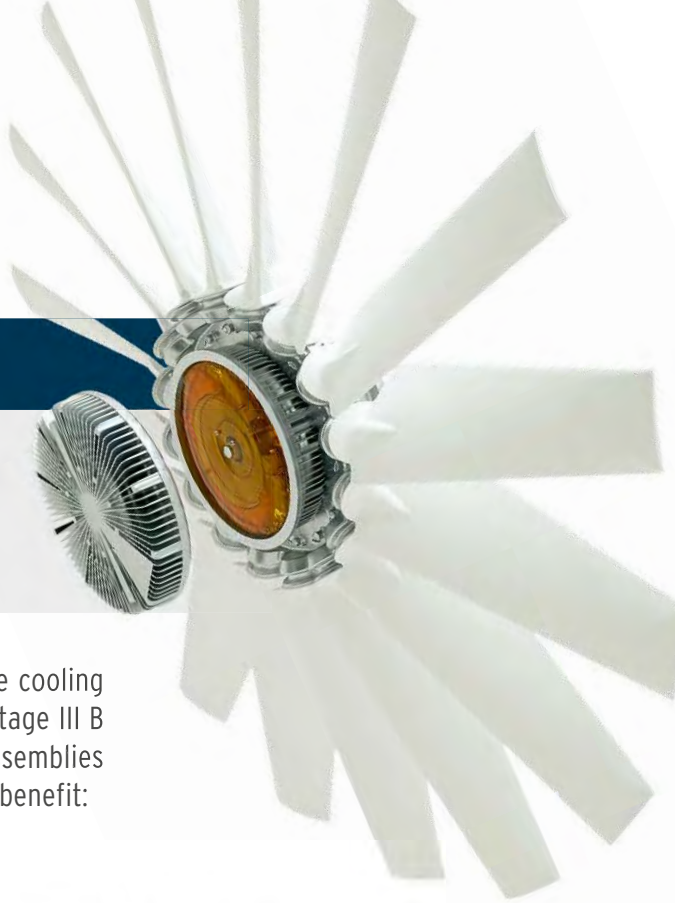
- Improve pressure by up to 25 percent
- Increase efficiency by up to eight percentage points
- Operating temperatures up to 280°F (120°C)
- Third-party tested for chemical resistance
- Withstand loads of more than 1016 N/in. (40 N/mm)—performing at maximum operating speed for PAG fans
- Fatigue testing proves that performance and noise remain unchanged even after 400,000 impacts

With bristles on the end of each blade, Multi-Wing's EPS fan blade extensions close the gap between the shroud and the fan tip. These fan blade extensions minimize turbulence in the blade, improve fan performance and reduce noise. Static strength tested for maximum durability in tough off-road and HVAC applications, EPS fan blade extensions are compatible with Multi-Wing fans.

Fan & Clutch

COOLING SOLUTION

One Integrated Solution. Custom-made. Mixed Flow Fan. Speed Regulation. No Maintenance. E-viscous & Bimetal Clutches. Tier 4F, Tier 5 & Stage V compliant. Plug & Play



Multi-Wing designs high efficient customized fans for your engine cooling challenges such as stringent emission requirements for Tier 4 / Stage III B and beyond. For a fan speed modulation we offer a wide range of assemblies with bi-metal or electronically controlled viscous clutches to your benefit:

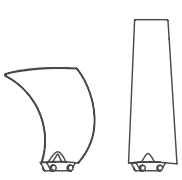
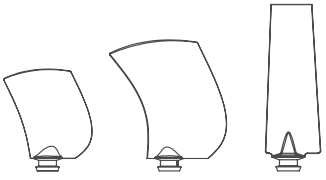
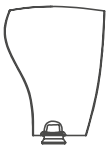
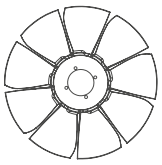
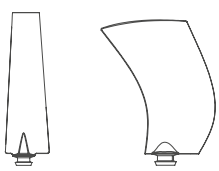
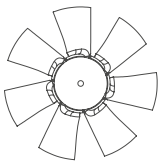
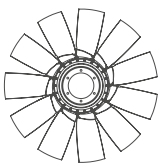
Bi-metal clutch features and advantages

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

Electronically controlled clutch features and advantages:

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

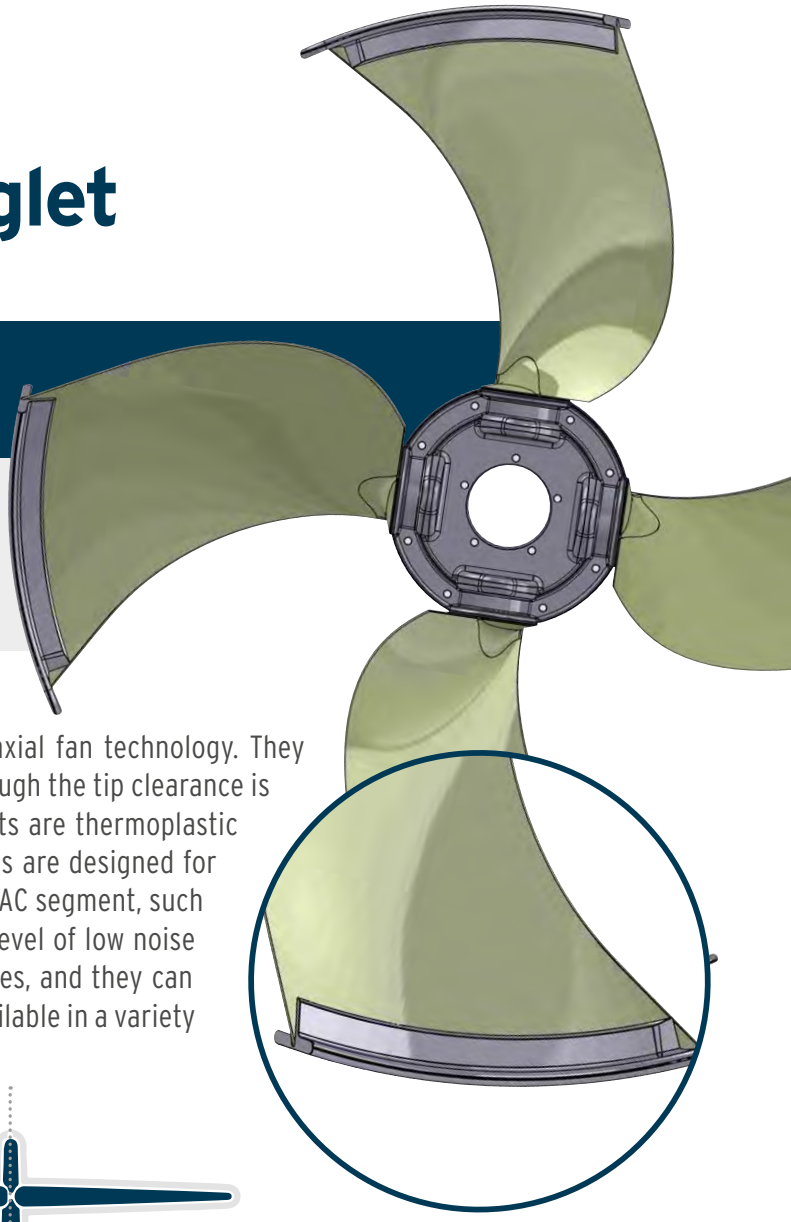
CORRESPONDING BLADE PROFILE

H	Z	MxFlo	PMAX	OPMAX
 1H 3H	 1Z 2Z 4Z	 MxFlo	 PMAX3	 OPMAX2
 4H	 5Z 7Z			 OPMAX3
				 OPMAX4

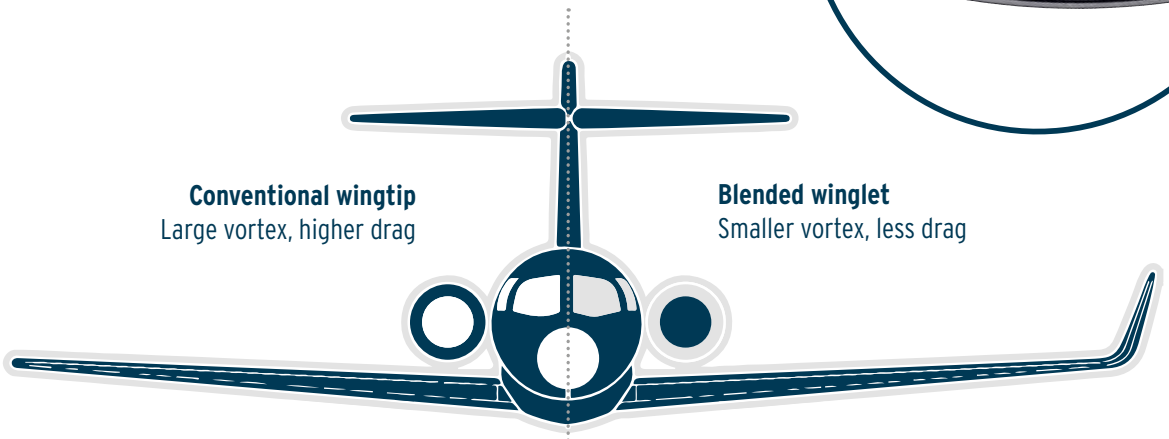
Our Add-On Winglet

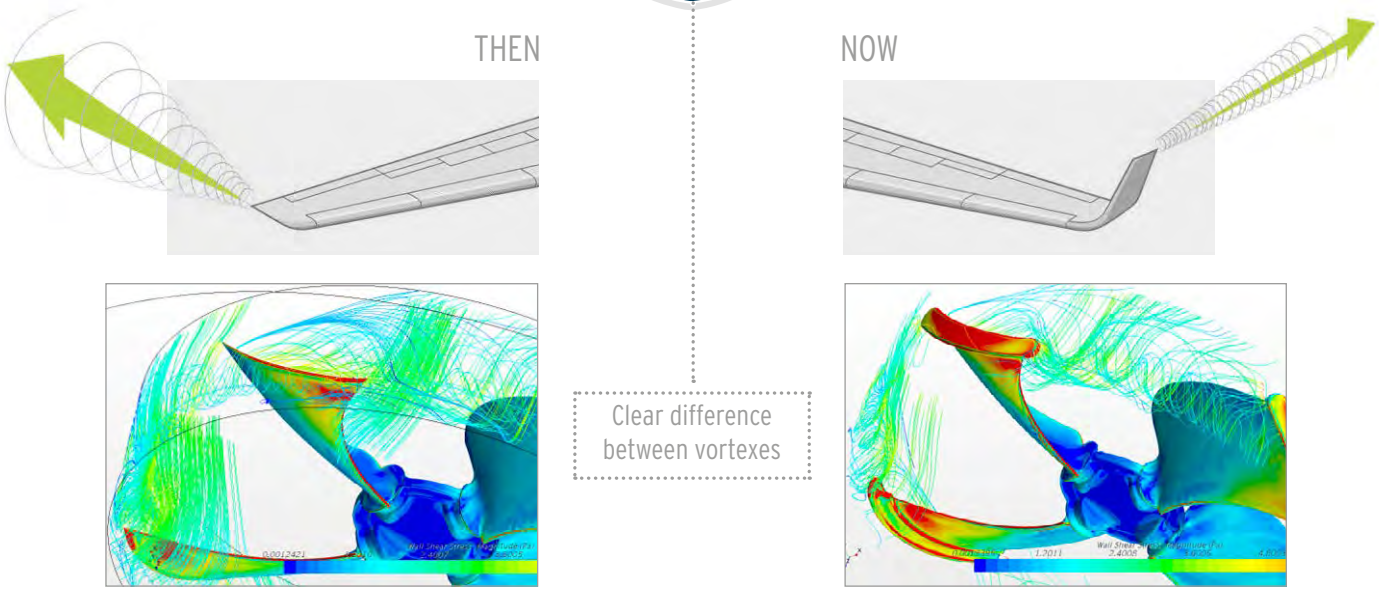
WINGLETS CREATE OBSTACLES TO THE FLOW IN THE TIP CLEARANCE

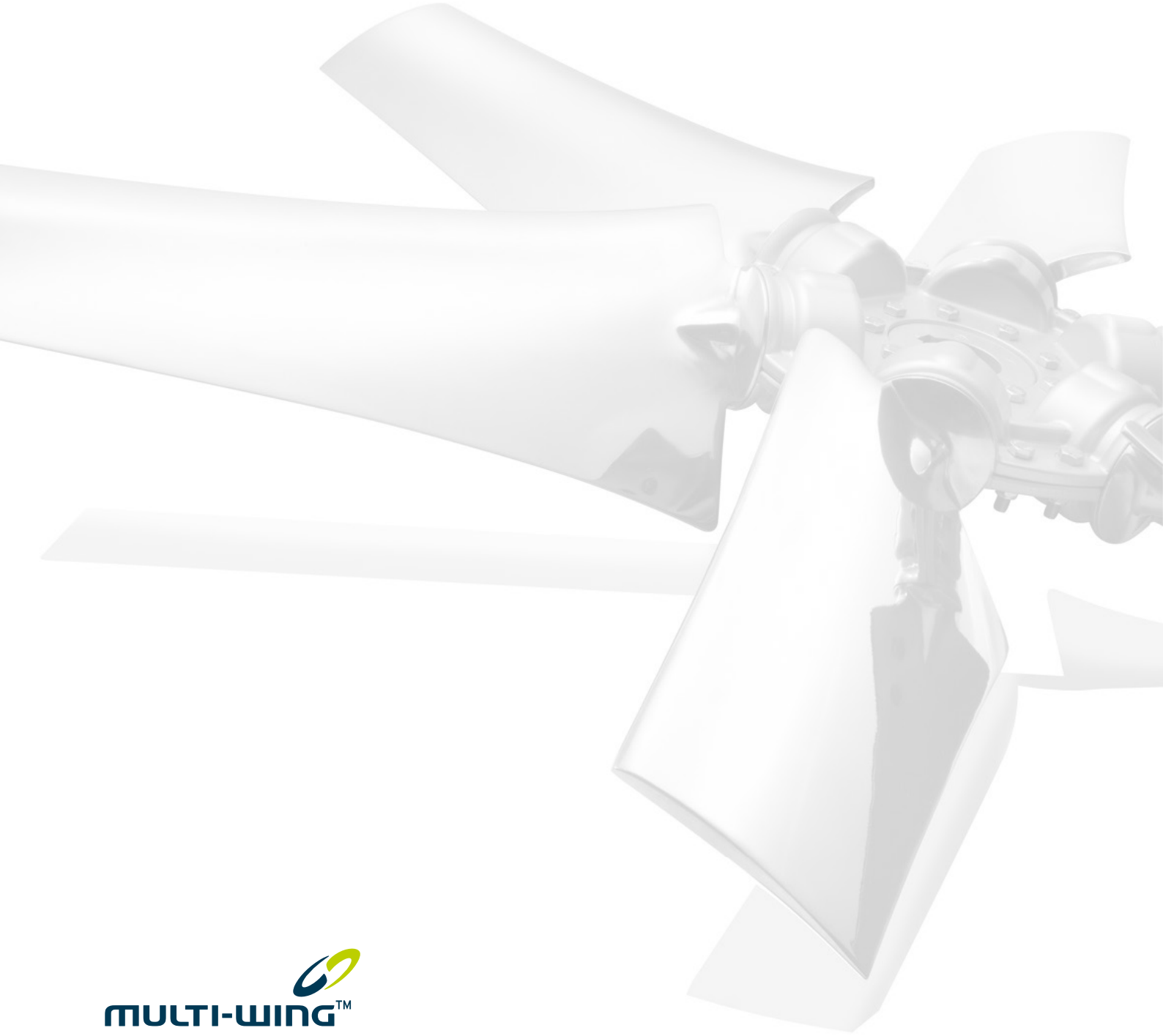
Add-on to the Tip of the Blade. Next Level of Low Noise Solutions. Effective Fan Upgrade. Impressive Reduction of Sound. Cost Saving



The winglet is a highly effective addition to the best axial fan technology. They reduce noise by up to 7dBA as the leakage of the air through the tip clearance is prevented and blade tip vortexes are minimized. Winglets are thermoplastic add-ons that are fixes on the top of each blade. Winglets are designed for industrial cooling applications in the middle pressure HVAC segment, such as condensers, flatbed coolers, and V-coolers Our next level of low noise solutions has been designed specifically for 1W fan blades, and they can be modified to fit other blade profiles. The blades are available in a variety of materials.







MULTI-WING™

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Download the fan selection app.

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