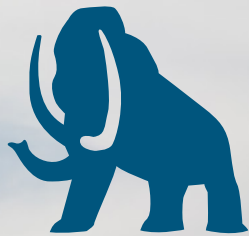


**MAMMOTH**  
**FANS**



**COMMERCIAL &  
INDUSTRIAL SERIES**

# Contents

01 Overview

---

02 Technology

---

03 Commercial Series

---

04 Industrial Series

---

05 Warranty

---

06 Contact

---



# Overview

Mammoth Fans is proud to introduce a new series of fans that are set to revolutionise commercial cooling. The Mammoth Fan range features world class Permanent Magnet Synchronous Motor (PMSM) technology and precision-led aerodynamic design in mammoth proportions.

With energy efficiency, design and ultimate performance in mind, Mammoth Fans have developed the latest in High Volume Low Speed (HVLS) ceiling fans for large commercial and industrial spaces to suit Australian conditions. Whether it is large outdoor alfresco spaces, industrial warehouses, agricultural buildings, gymnasiums, halls or public spaces, Mammoth Fans has the perfect solution for your project. Experience the cooling breeze from Mammoth Fans.

With market leading features of supreme efficiency, low noise, minimal maintenance, easy installation and advice backed by a 5 year warranty, Mammoth Fans are here to keep you cool.

Depending on your space, there are multiple sizes to choose from in each series:

## Commercial Series

Super High Volume Low Speed (SHVLS) single phase 240V ceiling fan in silver or black in four sizes: 2.5m, 3.0m, 3.6m and 4.2m.

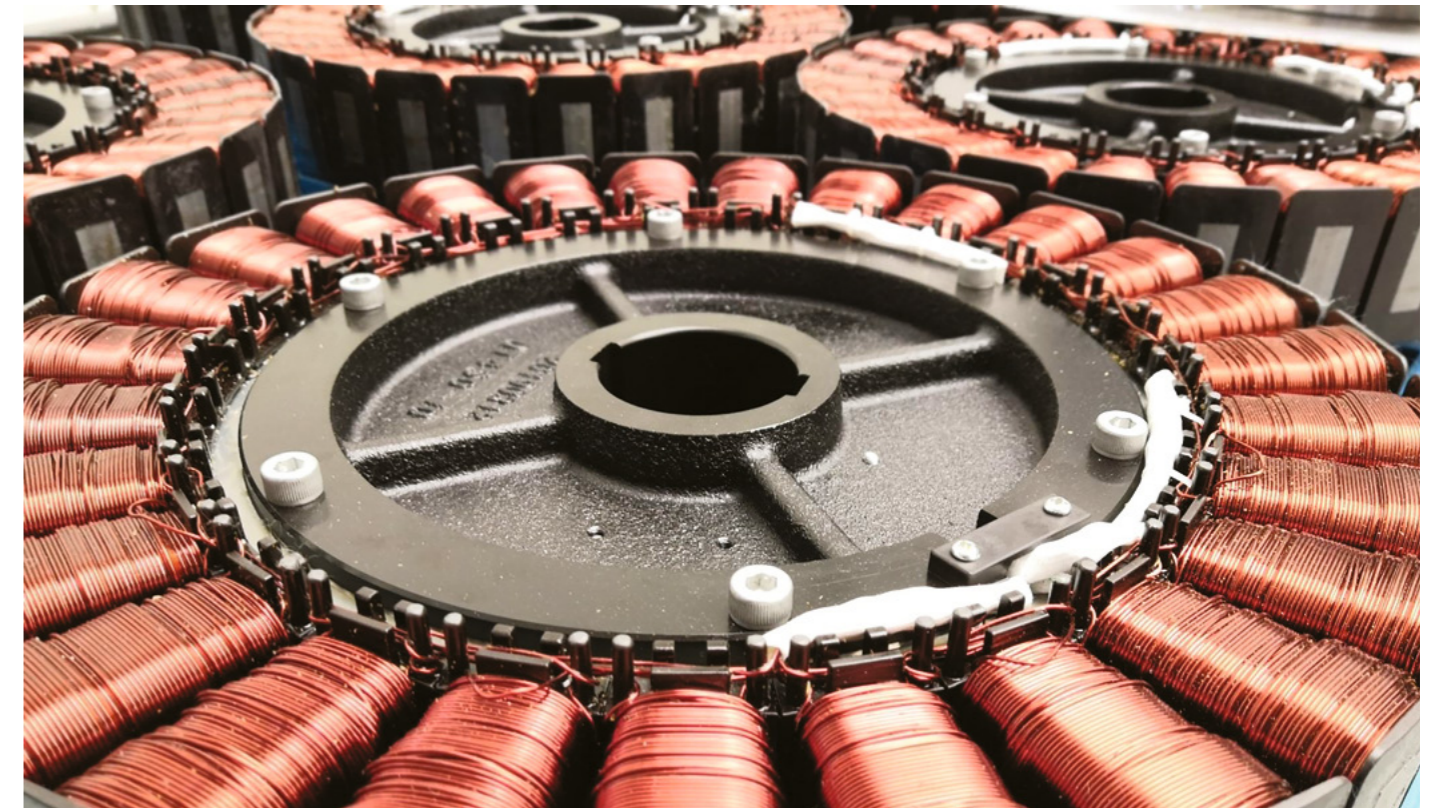
## Industrial Series

Super High Volume Low Speed (SHVLS) single phase 240V ceiling fan in silver in three sizes: 5.5m, 6.1m and 7.3m.



Every Mammoth Fan is thoroughly inspected and tested before being released for sale. In addition to any warranty rights or conditions under statutory regulations, Mammoth Fans warrant all of its ceiling fans against defective workmanship and faulty materials for 5 years from the date of purchase. Mammoth Fans undertake, at its option, to repair or replace, free of charge, each product or part when the appropriate conditions are met.

# Technology



## The power of PMSM technology

PMSM technology is one of the most advanced examples of fan engineering on the market today. Compared with traditional brush and AC motors, the Permanent Magnet Synchronous Motor provides a larger, more comfortable air volume that is both dynamic and quiet.

The airflow from Mammoth Fans is considered dynamic as it feels like a natural breeze increasing and decreasing the air volume, rather than other fans and air conditioners which can feel artificial and consistent blowing of air which can be uncomfortable.

Remarkably energy efficient, the Mammoth Fan range comes in various sizes to suit multiple projects, varying speed options and a super efficient design with next to no maintenance.

## How DOES the PMSM work?

PMSM is an electromagnetic device produced by a permanent magnet as a medium for the conversion of mechanical energy and electromagnetic energy to each other. In addition, the amazingly efficient Permanent Magnet Synchronous brushless direct drive motor on the Mammoth Industrial Series Fan delivers maximum performance when it comes to speed control accuracy, torque, density balance, low noise and greater energy efficiency.

# Commercial Series



**The Mammoth Commercial Fan Series are the perfect solution for ultimate energy efficient cooling of commercial spaces in a beautiful streamlined design.**

The Commercial Series are Super High Volume, Low Speed (SHVLS) fans delivering maximum results in a wide range of applications. These fans use world class PMSM technology for larger air volume and a cooler more comfortable space.

## Features

- Huge air movement up to 7550m<sup>3</sup>/min
- 1-8°C effective body cooling depending on speed selection
- Dynamic air circulation in large spaces
- Creates a cool, comfortable working environment
- Reduces moisture/humidity in the air
- Mixes hot and cold air

In the Australian market, other HVLS fans adopt traditional motor and drive technology and multiple gears which inevitably lead to large losses in energy transmission versus the direct drive of the Mammoth Fan motor.

## 5 Mammoth fans can do the job of 70 smaller fans.

To effectively cover a 2000m<sup>2</sup> area, you would normally need up to 70 traditional ceiling fans. But with the Mammoth Commercial Series, only 5 fans are needed. A 4.2m diameter Mammoth Commercial Series Fan, with only 400 watts of power, can cover an area approximately 400m<sup>2</sup>.

Let's assume that we operate 5 Mammoth Commercial Series Fans for 4 years, 8 months per year (due to the seasons) at 10 hours per day. The total running time would be 10,000hrs per fan.

The total energy required for the 5 Mammoth Fans would be 20,000 kWh over the 4 year period. In comparison, the smaller fans operating at 60 watts per fan for the same amount of time, but with 70 units, to generate a smaller airflow, you would use over twice as much power at 42,000 kWh.

From this example, we can clearly see that Mammoth Fans save 22,000Kw per hour, making it 52% more efficient than the small fans, with a higher airflow.

## The Conversion rate from the electric energy to kinetic energy comparison:

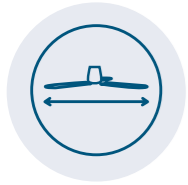
Mammoth SHVLS motor efficiency:

**86%**

Traditional SHVLS motor efficiency:

**78%**





### Light Weight

With a low profile motor of only 300mm high, the versatile Mammoth Fans Commercial Series brings style and efficiency to a magnitude of applications.

The Commercial Series, weighing less than 52kg, dramatically reduces the load bearing on the structure. This is perfect for spaces that impose strict size and weight requirements.



### Advanced Safety Features

The Mammoth Fan is on top of its game when it comes to adhering to strict safety standards, giving you peace of mind knowing that no expense has been spared.

Our advanced safety features include:

- Stable for life with the use of forged steel and aircraft grade aluminium
- Multiple safety supports in every structure
- Primary and secondary locking mechanism on blades to ensure safe operation over years of use
- Strict metal fatigue tests to ensure long-term safety and stability



### Super Quiet

So powerful and yet so quiet, the advanced PMSM makes Mammoth Fans one of the first fans to achieve noise levels under 45dB.

Noise Level (dB)	SHVLS MAMMOTH	HVLS STANDARD
Electromagnetic noise	36	40
Drive noise	20	48
Air flow noise	35	37
<b>TOTAL</b>	<b>40</b>	<b>50.3</b>



### Low Maintenance

Maintaining cooling systems with traditional gear drives can be costly and time consuming. Thanks to the technology of the PMSM, electromagnetic interaction and bearing transmission, the Mammoth Fans are virtually maintenance free, general cleaning is recommended.



# Applications

With four models in the Mammoth Commercial Fan Series we have the perfect solution for ultimate energy efficient cooling of commercial spaces in a beautiful streamlined design.

## Sports Industry

Fitness centres, gyms, swimming pools, athletic training stadiums.

## Entertainment

Restaurants, art galleries, museums, sports/music stadiums, zoos, children's playgrounds, outdoor undercover alfresco dining areas.

## Public Spaces

Airports, railway stations, bus terminals.

## Commercial Places

Exhibition Centres, showrooms, shopping centres, supermarkets, large format retail.

## Businesses

Warehouses, factories, large open plan office spaces, sheds and garages.

## Others

Atriums, undercover outdoor areas.

# Commercial Specs



## 1.1 Technical Information

Dimensions (WxHxDmm) 260x162x68

	211404/211405	211406 / 211407	211419 / 211420	211421 / 211422
<b>SKU</b>	211404/211405	211406 / 211407	211419 / 211420	211421 / 211422
<b>Diameter</b>	2.5m (8ft)	3.0m (10ft)	3.6m (12ft)	4.2m (14ft)
<b>Rated voltage</b>	220-240V - 50Hz	220-240V - 50Hz	220-240V - 50Hz	220-240V - 50Hz
<b>Rated power</b>	260W / 0.26kW	300W / 0.3kW	330W / 0.33kW	350W / 0.35kW
<b>Full load current</b>	0.8A	1.1A	1.3A	1.5A
<b>Max. speed</b>	130RPM	110RPM	95RPM	72RPM
<b>Air volume at max. speed</b>	4550m <sup>3</sup> /min	5250m <sup>3</sup> /min	6560m <sup>3</sup> /min	7550m <sup>3</sup> /min
<b>Weight</b>	41kg	44kg	48kg	52kg

Weight: the weight doesn't contain control cabinet, top connection parts, etc. Input power: 220V/1PH±10%. Motor: PMSM (Permanent-magnet synchronous motor).

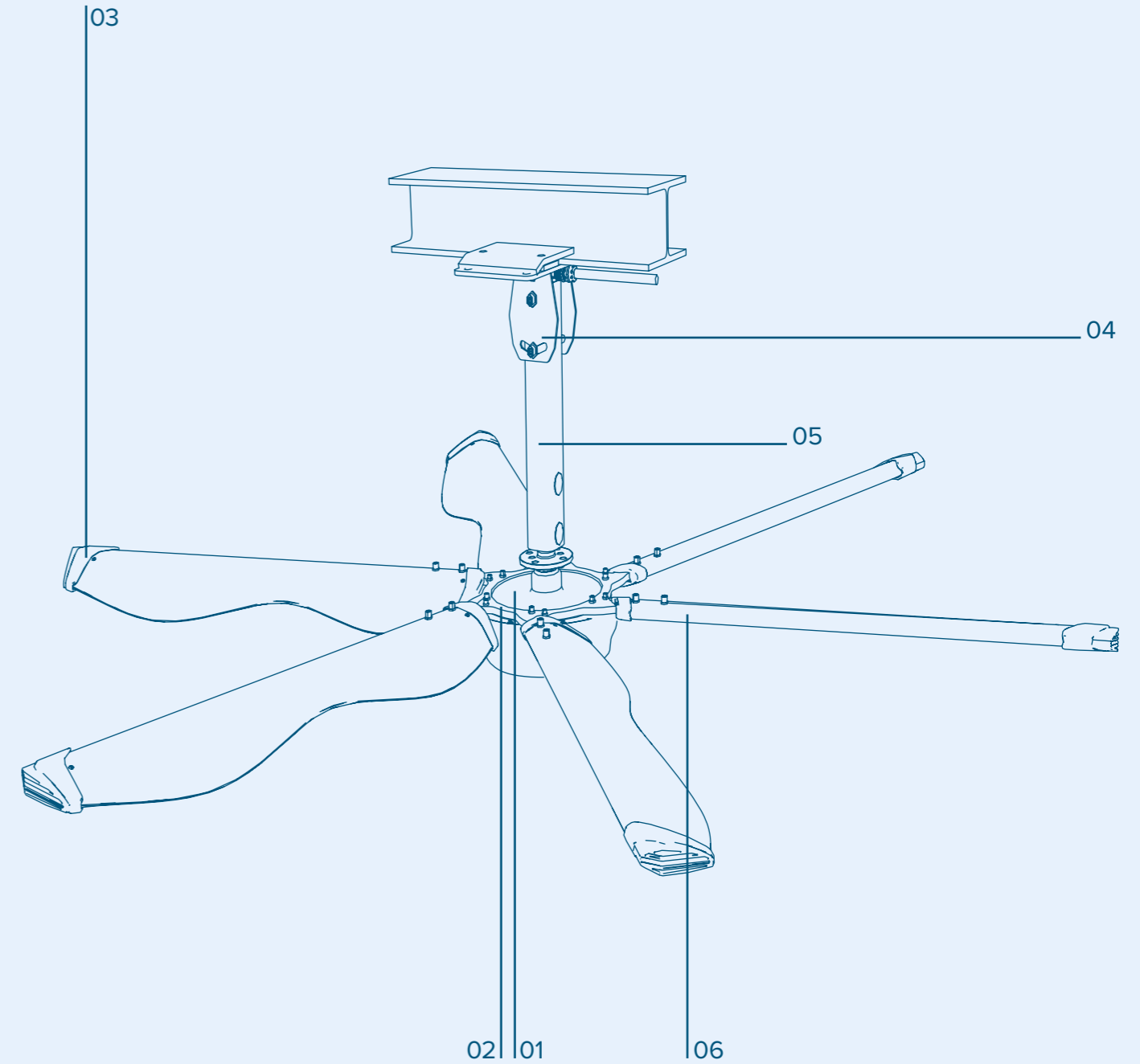
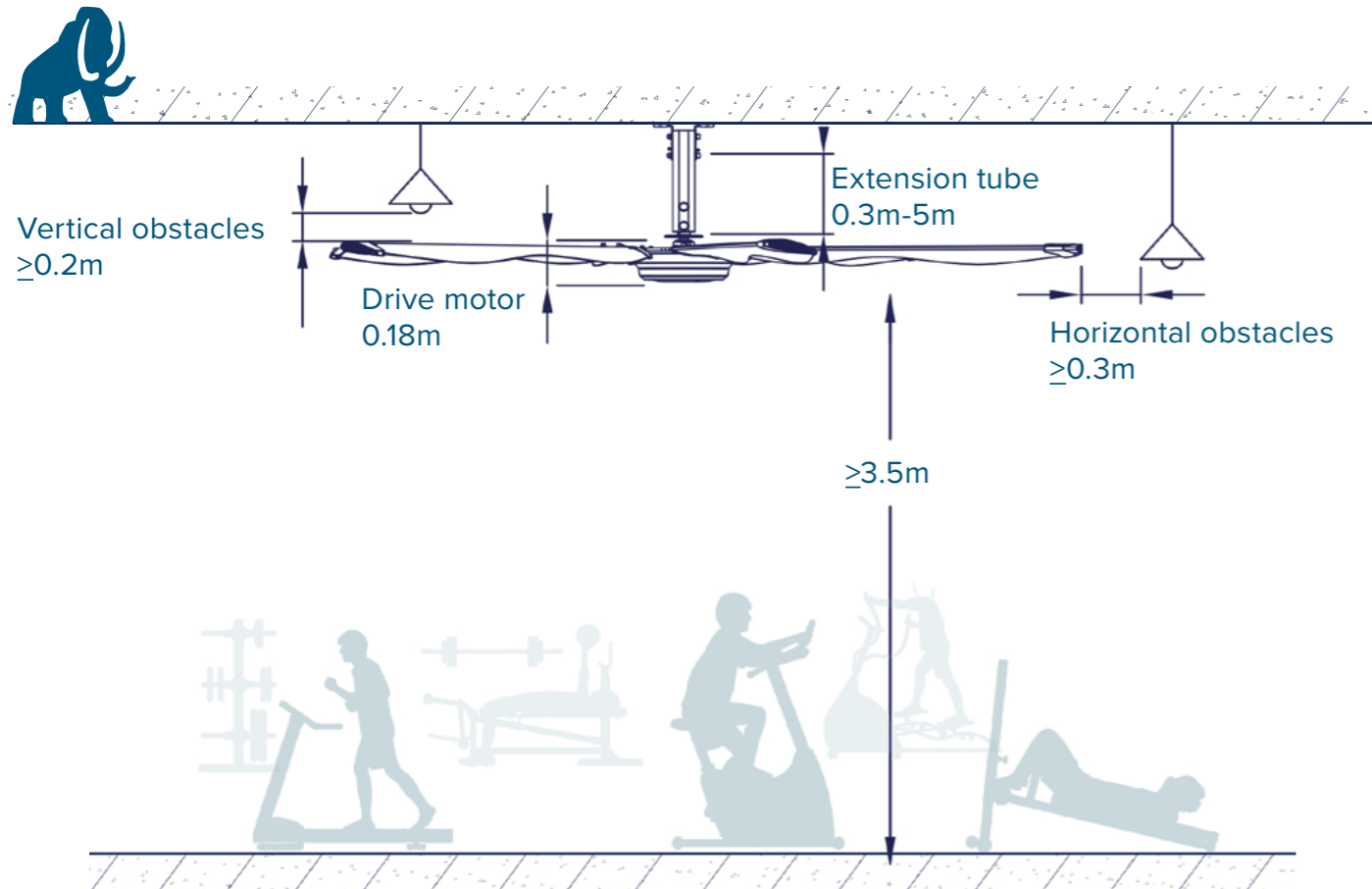
# Installation

## Installation options

Installation must be arranged by a qualified electrician. We can help you with the design and recommendation. In most cases, clear access and a scissor lift may be required for installation of the Mammoth Commercial Series. All models operate on 240 volt single phase.

## Product Working Conditions

Environment	Condition
Installation space	Interior.
Environment temperature	-15°C~55°C To improve reliability, use the product where the temperature does not change sharply.
Humidity	Less than 95% RH.
Environment	Non-corrosive, flammable gases, metal powder, oil, water and other foreign bodies will not enter the controller inside the place. Less salty.
Humidity	Less than 1,000m.



01 PMSM Motor

02 Integrated fan blade connector

03 Winglet

04 L-shaped top plate

05 Extension tube

06 Fan blade

# Industrial Series

The power of advanced Permanent Magnetic Synchronous Motor (PMSM) technology – the Mammoth Industrial Series of super charged fans brings its precision-led design and advanced technological features to areas that need efficient and effective cooling.

The Industrial Series from Mammoth Fans are Super High Volume, Low Speed (SHVLS) fans delivering maximum results in a wider range of applications. These fans use world class PMSM technology for larger air volume and a cooler more comfortable space.

## Features

- Wind speed 1-4m/s speed regulation
- 1-8°C effective body cooling depending on speed
- Creates the effect of a natural breeze
- Excellent air circulation in a large environment
- Ideal for dehumidification and reducing dampness
- Mixes hot and cold air
- Improves work conditions for employees and in turn improves productivity

## The power of Advanced PMSM technology

Mammoth Fans are the perfect blend of precision-led design, functionality and designer form, elevating the look and comfort of any industrial space. With the high-tech PMSM (permanent magnet synchronous motor), the maximum size is up to 7.3 meters. The Mammoth range combines aerodynamic technology, PWM (Pulse-width modulation) which is the method of reducing the average power delivered by an electrical signal, control technology, communication control and industrial design.

Utilizing the latest in Japanese motor technology, you're guaranteed to have years of uninterrupted performance from your Mammoth Fan.

### More versatile

The low profile design of the Mammoth Fan allows for more versatility over other HVLS fans in the market, with a motor height of just 300mm versus others at 800mm above the blade, the Mammoth Industrial range has greater applications for lower ceilings.

### Dehumidification and dampness

Mammoth is designed to mix the entire air space, which helps eliminate moisture with good dispersion and absorption. This greatly improves indoor air quality and obtains a healthy, dry and safe environment. In addition, it can avoid the noise of an air conditioning system and the dampness from evaporative cooling.

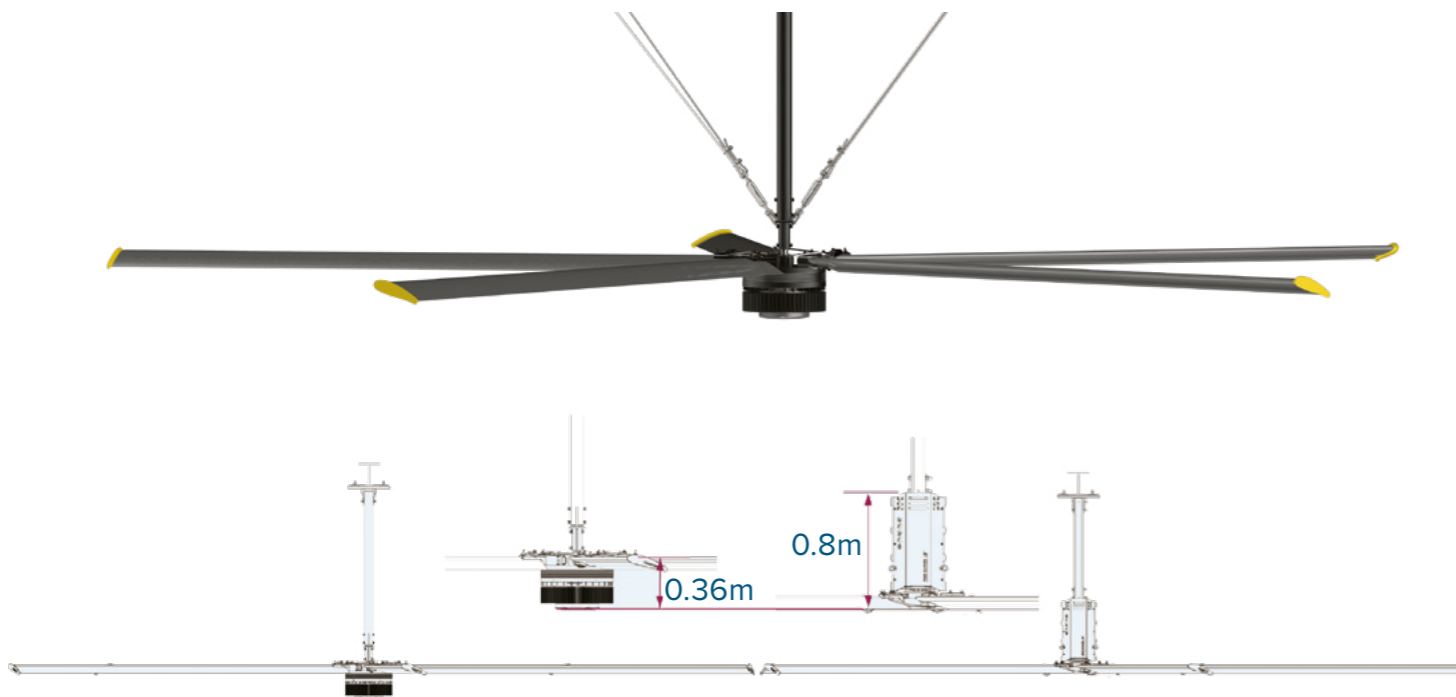
### High Efficiency

Due to the advanced technology used in the Mammoth Fans PMSM is able to achieve a much greater

efficiency for energy consumed and converted to airflow of the fan, giving the Mammoth Fans an outstanding 'B' level of efficiency in the European standards.

### Body Cooling

The natural breeze from the Industrial Mammoth Fans promotes the evaporation of the sweat on the body, effectively reducing body temperature by 1-8°C depending on the speed setting. The three-dimensional breeze created by the Mammoth mimics a natural wind effect, which makes the body feel cooler and more comfortable.





### Saves Energy

Mammoth adopts the latest PMSM technology and unique external rotor torque design. Compared with the traditional asynchronous motor, the PMSM eliminates the friction energy consumption within a gear box. With a maximum torque reaching 260N.m, it can output more stable air flow.

With outstanding performance, the Mammoth Fan is able to reach 15,550m<sup>3</sup> air movement per minute, which exceeds other HVLS fan air volume by more than 30%.



### Natural Ventilation

In very large enclosed spaces, the choice for ventilation is extremely limited. Warehouse roof ventilators do little for the comfort of personnel at ground level. Air conditioning, especially in poorly insulated sites is not cost effective. The huge Mammoth Industrial Fans will work together with warehouse roof ventilators and side ventilation to create what feels like a natural breeze throughout the entire space. This breeze will improve air quality, reduce heat exhaustion, improve productivity and safety on those hot Australian days.



### Super Quiet

With many industrial fans on the market producing a noise level above 50dB, from the common asynchronous motor design, the noise from the motor shell and the friction noise within the gearbox, all of which Mammoth Fans avoids. With the application of the PMSM in the Mammoth Fans, the noise level is reduced to a comfortable 43dB.



### Low Maintenance

The Mammoth Industrial Series motor does not have a gear box and therefore no significant maintenance is required. Maintaining cooling systems with traditional gear drives can be costly and time consuming. But thanks to the technology of the PMSM, electromagnetic interaction and bearing transmission, plus the advanced air cooled design of the Mammoth motor, simple maintenance of cleaning the blades and checking all support wires, blade bolts are tightened is all the maintenance required. The Mammoth Fan is virtually maintenance free.



# Application

The Mammoth Fan is perfect for a wide range of application areas. The super large air volume and coverage area brings a comfortable, natural breeze for a comfortable work environment.

With a motor that is only 300mm high, the versatile Mammoth Industrial Fan brings a huge amount of air movement, style and efficient cooling to industrial spaces all over Australia.

## Industrial Application

Logistics and warehousing.

## Sports Industry

Gymnasiums, indoor sports fields/courts.

## Play/Activity Centre

Large indoor play centres and climbing centres.

## Traffic Hub

Railway station, bus terminals.

## Commercial Sites

Exhibition center, museums, large shopping centres, large format retail sites, hardware/DIY and timber sites.

## Other Areas

Training and education buildings, outdoor undercover alfresco dining areas.



# Industrial Specs



Long lasting, robust, smart and reliable. With trouble shooting options available from the front panel, access to the internals of the controller are rarely required.

	5.5m	6.1m	7.3m
<b>SKU</b>	211401	211416	211400
<b>No. of blades</b>	5	5	5
<b>Input voltage</b>	Single phase 220-240V	Single phase 220-240V	Single phase 220-240V
<b>Power</b>	900W	1.1kW	1.5kW
<b>Airflow</b>	13,800m <sup>3</sup> /min	14,650m <sup>3</sup> /min	15,550m <sup>3</sup> /min
<b>IP rating</b>	55	55	55
<b>Width/Diameter</b>	5500mm	6100mm	7300mm
<b>Weight</b>	112kg	120kg	124kg
<b>Full current load</b>	4.2A	4.4A	4.9A
<b>Noise level</b>	43dB	43dB	43dB
<b>Fan speed</b>	68RPM MAX	62RPM MAX	54RPM MAX
<b>Warranty</b>	5 years from date of purchase	5 years from date of purchase	5 years from date of purchase
<b>Colour</b>	Silver	Silver	Silver

# Installation

## Installation options

Installation must be arranged by a qualified electrician. We can help you with the design and recommendation. In most cases, clear access and a scissor lift will be required for the Industrial Mammoth Fans. All models operate on 240 volt single phase.

## Cleaning process

Please ensure the power to your Mammoth Fan is isolated before completing any cleaning and maintenance work. Also ensure you follow all local regulations in regards to safe working at heights. Periodic cleaning of your ceiling fan is the only maintenance required.

Use a soft brush or lint-free cloth to avoid scratching the paint finish.

A damp cloth can be used to wipe down the blades, however, ensure that excess water doesn't enter any wiring connections as this could damage the fan and cause a safety issue.

Ensure that the fitting does not come in contact with any organic solvents or cleaners.

The motor has a permanently lubricated ball bearing which does not require maintenance or re-oiling.

## Repair and maintenance

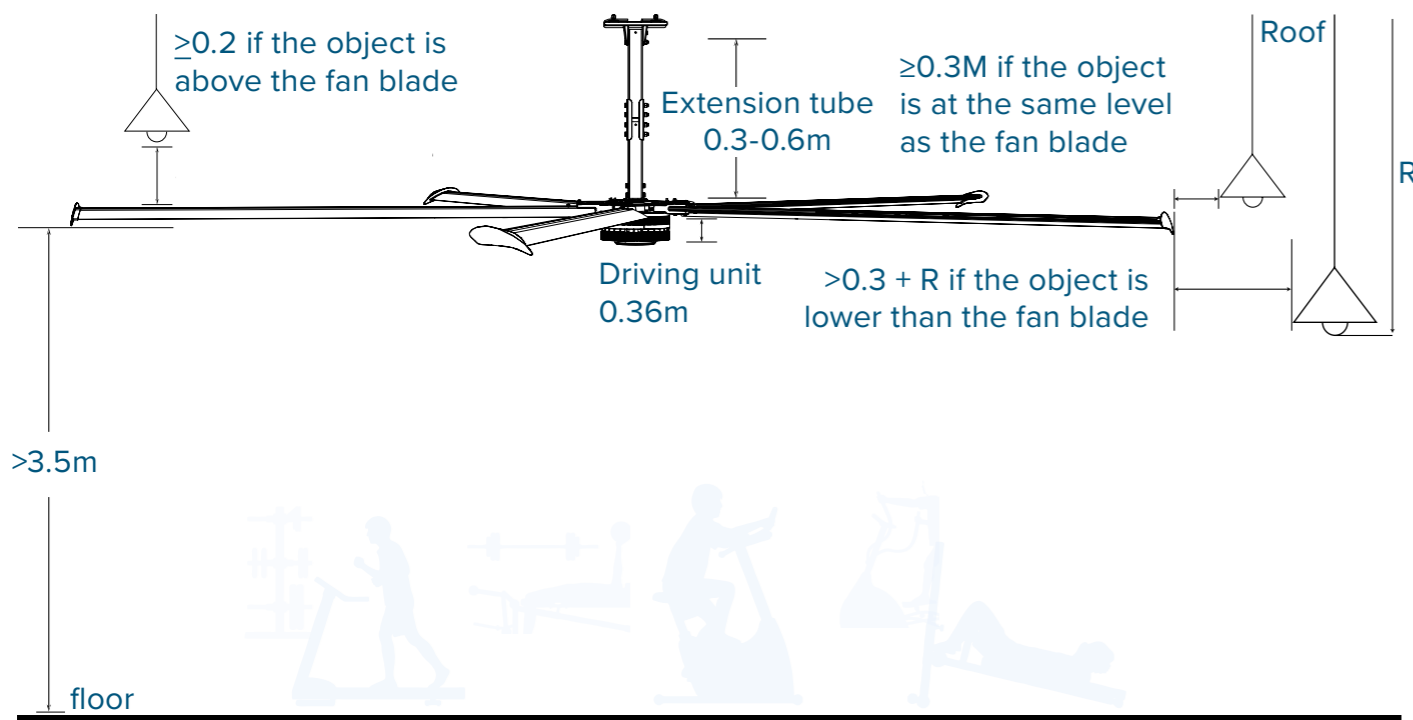
Our product design is maintenance free, but in order to ensure the fan's long life and normal operation, the fan should also be maintained, especially for applications in harsh environments. For any maintenance on the fan or inverter controller, please make sure that the fan stops running and cut off the power supply of the controller to protect personnel.

If the fan produces severe noise or vibration during abnormal operation, it indicates that a mechanical part is damaged. At this time, it should be shut down immediately and a thorough inspection should be done

## Time interval

## Recommended maintenance work content

Time interval	Recommended maintenance work content
Trial run	Check the fan for abnormal running sound or vibration Frequency conversion controller dust removal.
Every 2500hrs of work	Fan blade dust removal.
Every 5000hrs of work	Check mechanical fasteners to ensure that there is no looseness. Check the wire cable to make sure there is no damage.



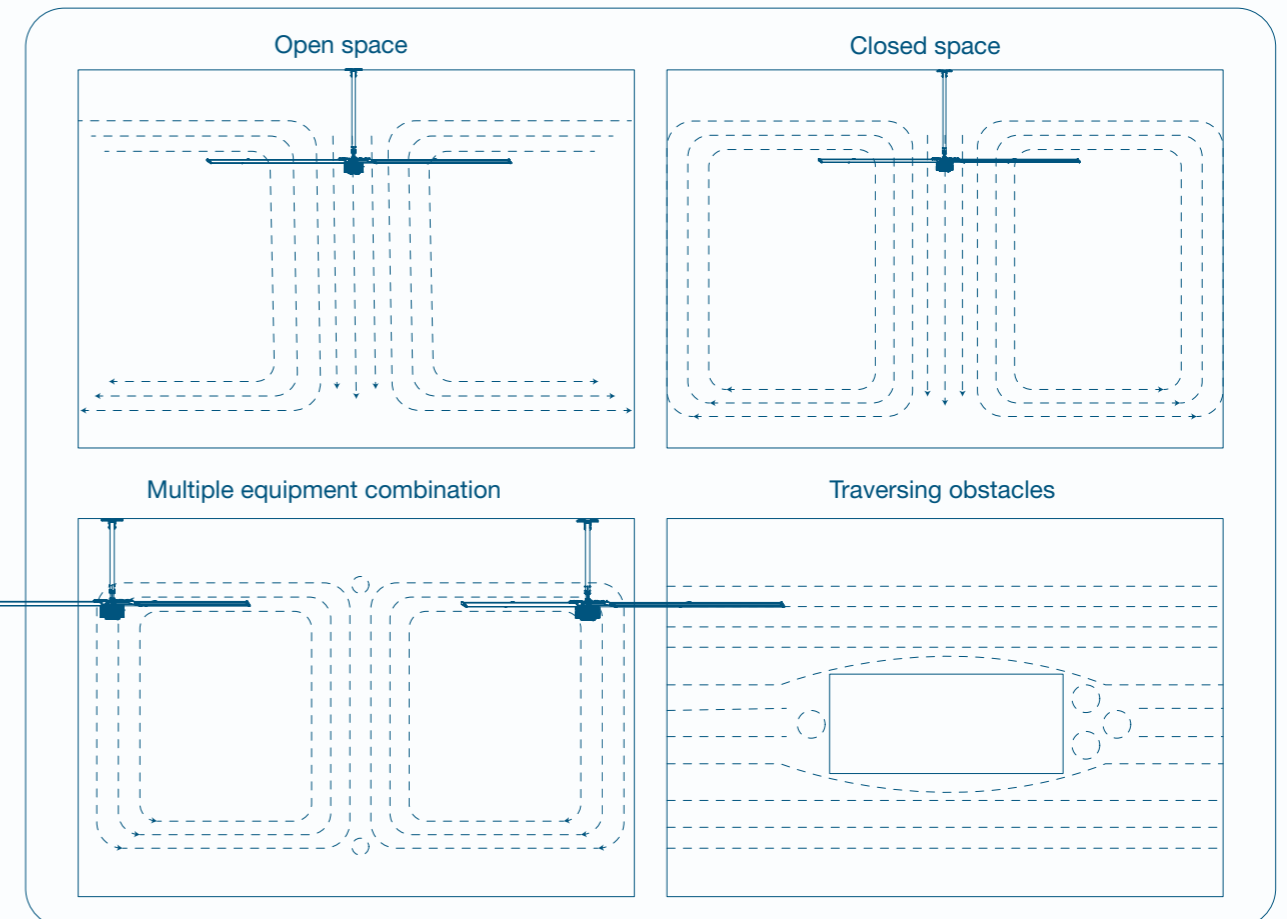
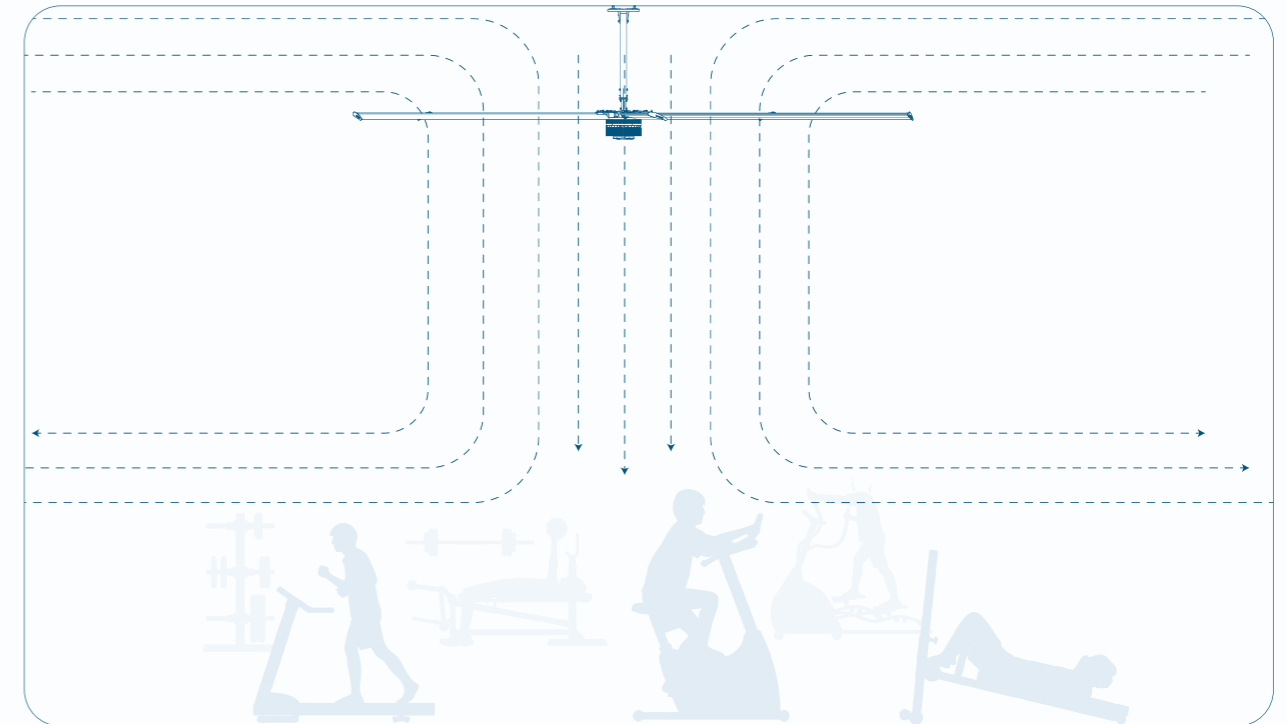
# Warranty

## All of the Mammoth Commercial and Industrial Fans come with a 5 YEAR WARRANTY

Every Mammoth Fan is thoroughly inspected and tested before being released for sale. In addition to any warranty rights or conditions under statutory regulations, Mammoth Fans warrant all of its ceiling fans against defective workmanship and faulty materials for 5 years from the date of purchase. Mammoth Fans undertake, at its option, to repair or replace, free of charge, each product or part thereof on condition that.

- The fan or relevant part has not been subjected to misuse, neglect, or been involved in an accident
- The repairs are not required as a result of normal wear and tear
- The product was installed by a licensed electrical contractor and to the guidelines outline in the manual
- A copy of the original receipt of purchase is presented

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

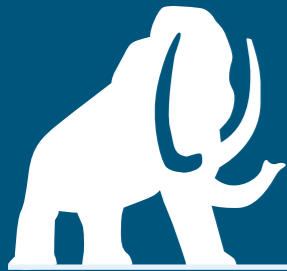


# Notes

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# Contact



You can email us on  
[info@mammothfans.com.au](mailto:info@mammothfans.com.au)

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## State contacts

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<b>QLD</b>	(07) 3216 9039	<a href="mailto:qldsales@mammothfans.com.au">qldsales@mammothfans.com.au</a>
<b>WA</b>	(08) 9444 9653	<a href="mailto:wasales@mammothfans.com.au">wasales@mammothfans.com.au</a>
<b>SA</b>	(08) 8374 0553	<a href="mailto:sasales@mammothfans.com.au">sasales@mammothfans.com.au</a>

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Mammoth Fans Support Centre  
For any maintenance and support enquiries please  
contact the Mammoth Fans support team on:  
**1800 602 243**





[mammothfans.com.au](http://mammothfans.com.au)



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