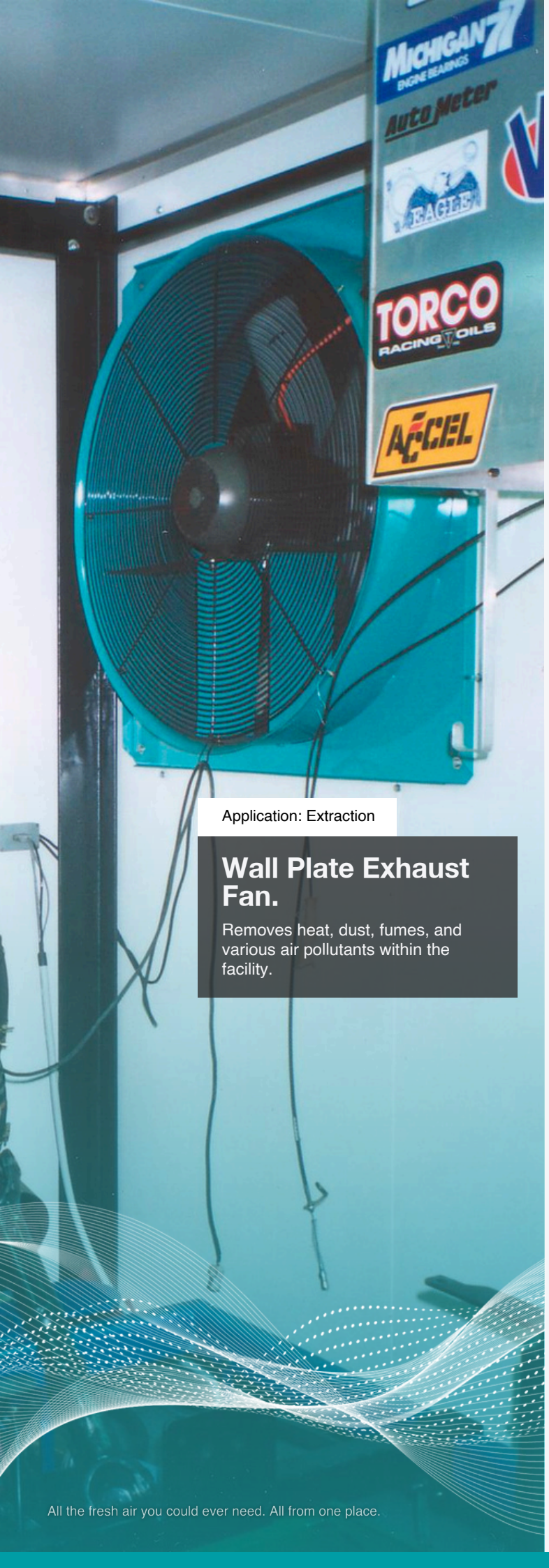


Industry brochure.

Common ventilation challenges & solutions in the manufacturing industry.

All the fresh air you could ever need. All from one place.



Application: Extraction

Wall Plate Exhaust Fan.

Removes heat, dust, fumes, and various air pollutants within the facility.

Table of **contents.**

02
Ventilation solutions for manufacturing industry air challenges.

04 Heat buildup and inconsistent temperatures.
05 Airborne contaminants produced by manufacturing activities.
07 Accumulation of dust and particulate matter.
08 Odour from chemicals, solvents and other toxic materials.
09 Processes requiring heat and warmth distribution.

10
Ventilation for specific requirements.

11 Chemical processing and pharmaceutical manufacturing ventilation.
02 Woodwork and carpentry facilities ventilation.
13 Metal works and welding fumes ventilation.
14 Spray booth and paint fume ventilation.

15
Fanquip service.

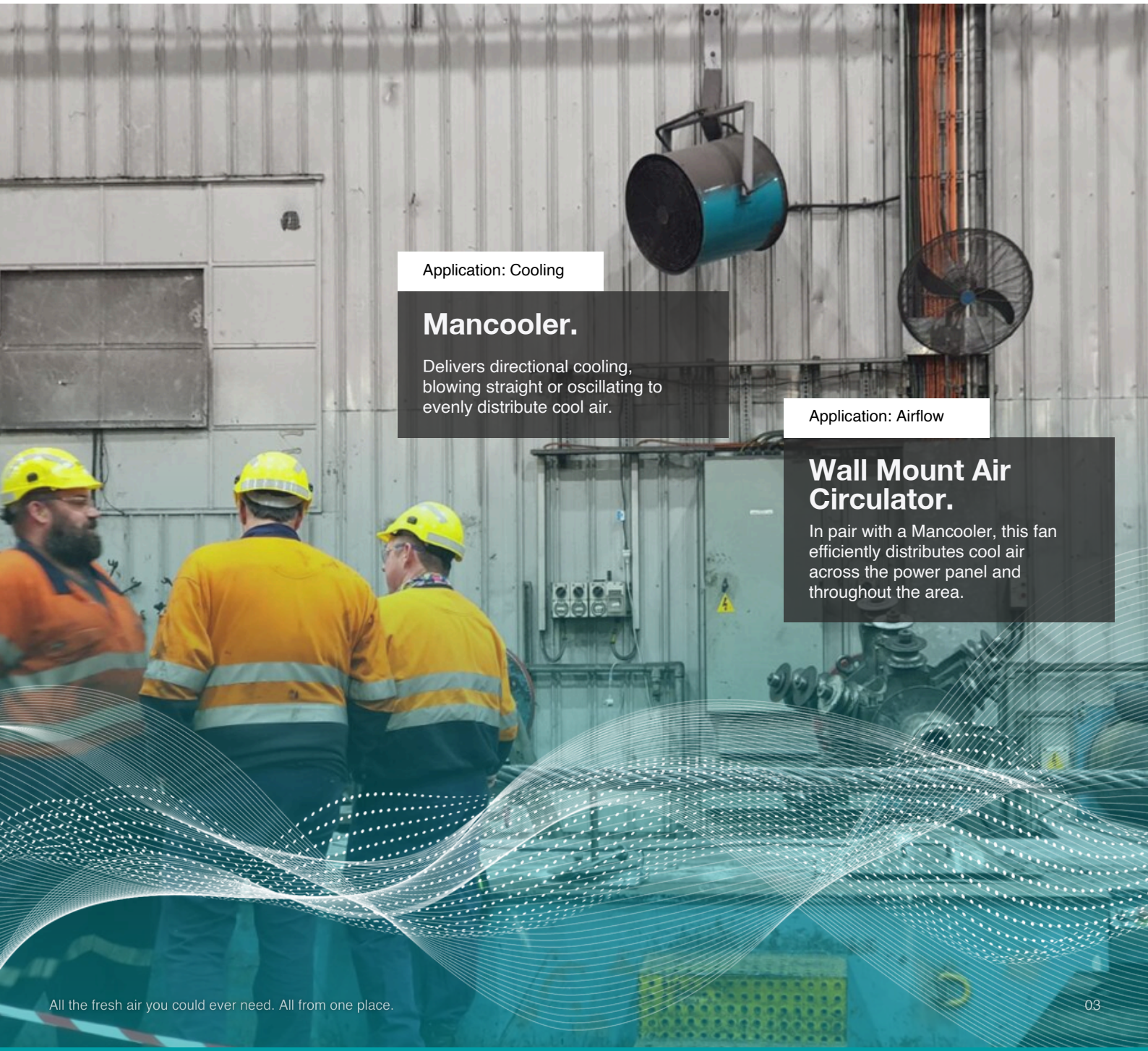
15 Installation & maintenance.

16
Haven’t found a solution for your challenge?

16 Fanquip can provide you with a customised solution tailored to address your specific ventilation challenge.

Ventilation and air challenges in the manufacturing industry.

In the manufacturing industry, proper ventilation is critical for creating a safe and efficient workspace, safeguarding the quality of products, and ensuring equipment functionality. It's instrumental in eliminating pollutants from the air, managing temperatures and odours, and adhering to industry regulations. Through customer analysis, we have identified common ventilation concerns and requirements prevalent within the manufacturing settings. Here, we present a selection of fans common in manufacturing environments, aimed at resolving these prevalent concerns.



Application: Cooling

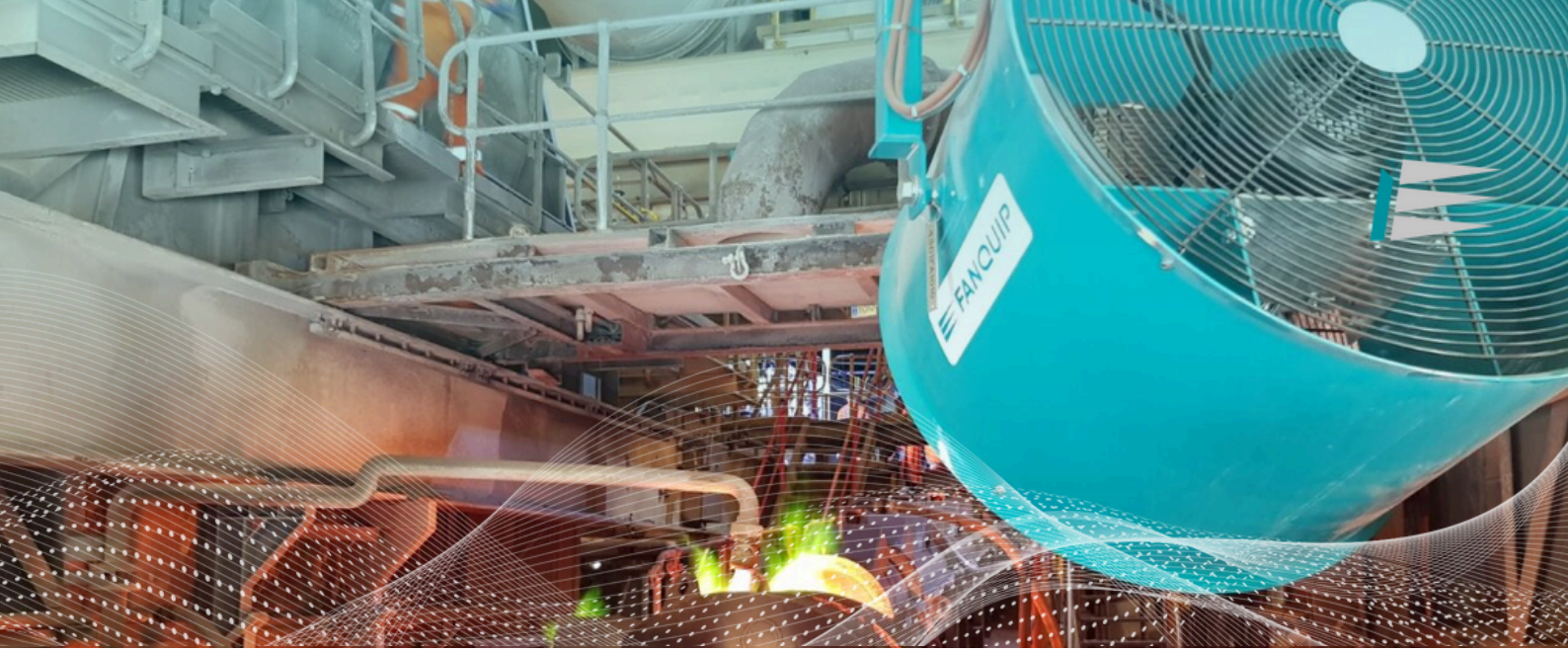
Mancooler.

Delivers directional cooling, blowing straight or oscillating to evenly distribute cool air.

Application: Airflow

Wall Mount Air Circulator.

In pair with a Mancooler, this fan efficiently distributes cool air across the power panel and throughout the area.



Heat buildup and inconsistent temperatures.

In manufacturing, regardless of geographic location, high operating temperatures pose a significant challenge. Heat buildup and temperature variations can greatly impact both worker comfort and operational efficiency. Machineries operating in hot climates are particularly susceptible to temperature-induced damage. Heat buildup, often stemming from industrial processes, can result in discomfort, fatigue, and heat-related illnesses among workers. Moreover, temperature discrepancies across a manufacturing facility can compromise product integrity. Of utmost concern is the gradual and often unnoticed nature of heat damage, which may occur even when systems appear to operate optimally under ideal temperature conditions.

Recommended cooling fans.



Mancoolers.

Variations: Mobile Mancooler, Mini Mancooler.

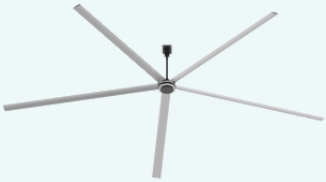
These fans deliver a continuous flow of cool air, significantly lowering energy expenses. They are adept at directly cooling heat-generating machinery, preventing equipment from overheating and stopping the dispersal of warm air. Additionally, they provide comfort to employees by keeping the working environment cool.



Air Circulators.

Variations: Utility Air Circulator, Wall Plate Air Circulator, Pedestal Air Circulator.

These fans are designed to circulate air within any space effectively. They work seamlessly alongside Mancoolers to distribute chilled air throughout the premises and partner with Exhaust fans to expel indoor air to the outside, directing it towards the exhaust units for optimal airflow management.



Giant Fans.

Variations: Giant Fans.

This fan is a solution for effective and whisper-quiet cooling in expansive areas, guaranteeing a uniform temperature spread throughout, thus fostering a uniformly comfortable setting for all.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

These fans are designed to expel warm air from the premises, ensuring the interior remains comfortably cool. Furthermore, they play a crucial role in enhancing the quality of indoor air by eliminating pollutants that might linger within.

Airborne contaminants and fumes produced by manufacturing activities.

Manufacturing processes release a range of airborne pollutants, such as dust, chemical vapours, metal particles, gases, and biological agents, all of which pose serious threats to the health of employees and the safety of the environment. Some processes, like coating and working with fibreglass materials, involve hazardous substances such as resins, gelcoats, and fibreglass, which emit fumes during application and processing. Additionally, the type of paint and its chemical composition can influence the nature and amount of fumes released during this phase. Proper ventilation is essential to control and remove these contaminants, to mitigate respiratory hazards, maintain air quality, and comply with regulatory standards, thereby safeguarding the well-being of workers and optimising operational efficiency in manufacturing facilities.

Recommended air quality control fans.



Mobile Fume Extractor.

Variations: Mobile Fume Extractor.

Designed to capture fumes and airborne contaminants directly at their source, these fans boast a comprehensive two-stage filtration system. This system includes both a pre-filter and a HEPA filter, ensuring air purification efficiency.



Portable Blower Extractor.

Variations: Portable Blower Extractor.

Widely utilised in industrial settings, these fans serve as a crucial source for both air supply and extraction. They offer an efficient, lightweight, and portable option, perfect for clearing dust and fumes from tight spaces, ensuring a clean and safe environment.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

Remove polluted air from the premises, simultaneously introducing fresh air inside. Additionally, they play a crucial role in lowering the humidity levels throughout the structure. Exhaust fans are useful in spaces lacking adequate ventilation yet are predominant in manufacturing activities known for generating particulate matter.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan

Engineered to dispel heat, steam, dust, smoke, and volatile gases that accumulate near the ceiling. Durable, these fans can endure the most severe temperatures, the harshest weather conditions, and prolonged exposure to brutal environments.



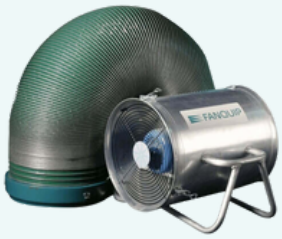
Axial Fans.

Variations: Direct Drive Axial Flow Fan, Belt Drive Axial Flow Fan.

Designed for efficiently moving large volumes of air over long distances, ideal for industrial settings like factories and mines. Their straight airflow design is key for ventilation and air purification, removing contaminants such as dust and emissions.

Airborne contaminants and fumes produced by manufacturing activities.

Recommended air quality control fans.



Purging Fans.

Variations: Portable Purging Fan, VAT Purging Fan.

Remove impurities, pollutants, gases, and toxins to maintain pure air in interior environments. Ideal for compact areas, including grain storage units and silos, purging fans offer versatile applications. These fans excel in evacuating substantial amounts of hazardous air or fumes while infusing spaces with fresh, clean air.



Centrifugal Fans.

Variations: Centrifugal Fan.

Perfect for applications requiring higher pressures, often used in dust collection systems. It has a high-speed rotating impeller encased in a spiral-shaped casing to accelerate the air and discharge it in a radial direction. These fans handle large volumes of contaminated air, enhancing air quality and ensuring a safer work environment. Built to withstand harsh conditions and continuous operation, they offer reliable, low-maintenance performance, making them a cost-effective solution.

Application: Extraction.

Wall Plate Exhaust Fan.

Promotes air circulation by removing airborne pollutants and introducing fresh air.

Accumulation of dust and particulate matter.

In manufacturing facilities, the buildup of dust and particulate matter is mainly a result of machinery and materials handling. This leads to a variety of complications, from health risks for employees to potential damage to equipment, all of which can substantially reduce productivity. Certain ventilation systems are designed to efficiently capture and eliminate these airborne particles, ensuring they do not settle on surfaces. This not only safeguards workers from respiratory issues and other health-related concerns but also cuts down on the time and expense linked to equipment maintenance.

Recommended fans.



Filter Fan.

Variations: Filter Fan.

Deliver consistent flows of fresh, filtered air to areas housing delicate machinery, minimising both maintenance needs and operational pauses. Effortlessly eliminate dust and tiny pollutants from your environment while benefiting from enhanced cooling capabilities that also reduce energy use.



Negative Air Units.

Variations: Negative Air Unit.

These fans are best placed in more constricted areas to help remove even the most microscopic of contaminants from the air. Through the negative air-pressure vacuum they produce, they are able to bring in air to pass through a filter and this then is how contaminants are removed from the air. These are helpful in workshops, mould or asbestos treatment sessions, and other activities that naturally cause invisible, harmful contaminants to linger in the air.



Portable Blowe Extractor.

Variations: Portable Blower Extractor.

As mentioned in another section, Portable Blow Extractors play a crucial role in purifying the air within confined spaces. They are designed to efficiently eliminate hazardous particles right at their origin, preventing their accumulation in the facility.



Application: Filtration.

Filter Fan.

Providing reliable rates of fresh filtered air to rooms with sensitive equipment, reducing maintenance and shut down times.

Odour from chemicals, solvents and other toxic materials.

Odours in manufacturing often stem from chemicals, solvents, and other process materials, through the release of volatile organic compounds (VOCs) during handling, processing, and storage. Other sources include chemical reactions, heating, waste disposal and improper material management, which can all allow odours to escape and build up. Biological processes like microbial growth or decomposition can also add to the issue. Implementing effective odour control through proper ventilation, containment, and handling is crucial for maintaining a safe, healthy work environment.

Recommended extraction fans.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

The range of industrial extraction wall fans, engineered to efficiently eliminate large amounts of heat, odour, dust, and steam from manufacturing plants and production facilities. Boasting exceptional versatility, these fans operate quietly and are durably constructed to endure any weather conditions.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan

Mounted atop buildings, these ventilation systems leverage the natural convection process to efficiently expel odours, excess heat, and airborne pollutants, thus ensuring the indoor air remains clean and healthful. Depending on the architecture of the roof and specific needs such as air purification and filtration, we recommend a variety of models including Profile-Based Roof Fans, Curb-Based Roof Fans, Vertical Discharge Fans, and Filter Roof Supply Fans.



Purging Fans.

Variations: Portable Purging Fan, VAT Purging Fan.

Purge harmful gases and toxins to maintain pristine air quality in indoor environments. Ideal for compact areas, Purging Fans offer versatility in application, efficiently removing substantial amounts of noxious air and replenishing interiors with fresh, clean air.



Axial Fans.

Variations: Direct Drive Axial Flow Fan, Belt Drive Axial Flow Fan.

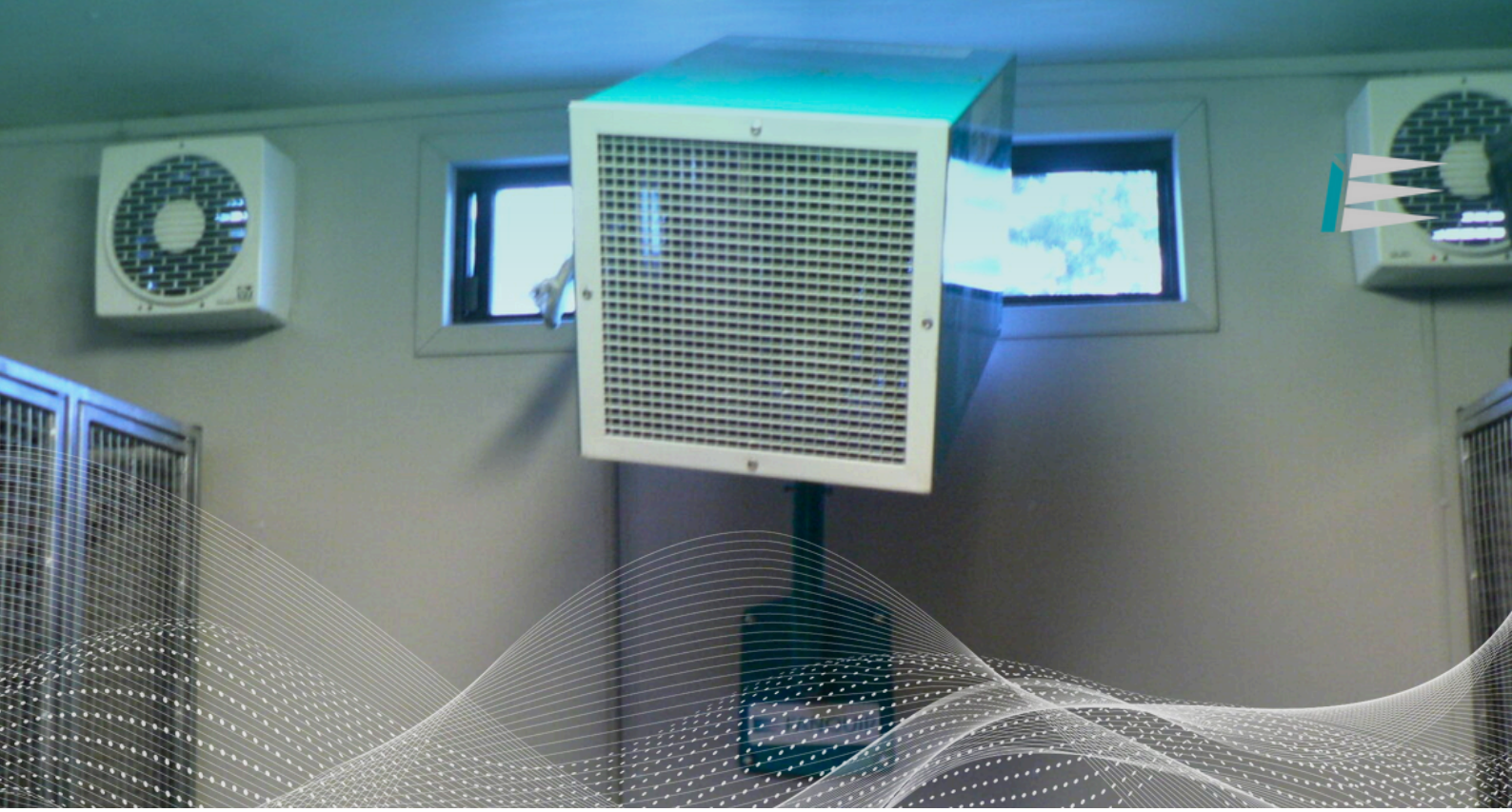
These fans excel in circulating and venting vast volumes of air, typically installed to eliminate hazardous gases and smells from manufacturing sites or facilities involved in coating processes.



Centrifugal Fans.

Variations: Centrifugal Fan.

These fans can be used for filter flushing, gas boosting, and aeration. Centrifugal fans are also very efficient at conveying gas or other materials, which is why they are often used in air conveyor systems or other materials handling processes. Customisable, they can become a part o the existing ducting system in your facility.



Processes requiring heat and warmth distribution.

In industrial environments, sufficient heating and warmth go beyond employee comfort to optimise operational efficiency and safety. Consistent warmth is vital for curing coatings, adhesives, and paints, ensuring product durability and adherence to substrates, while also expediting drying processes to minimise downtime. In manufacturing facilities, this is equally crucial, supporting streamlined production cycles and product quality. Additionally, controlled heating regulates the viscosity and volatility of substances like adhesives and solvents, enhancing safety and efficiency.

Recommended heater fans.



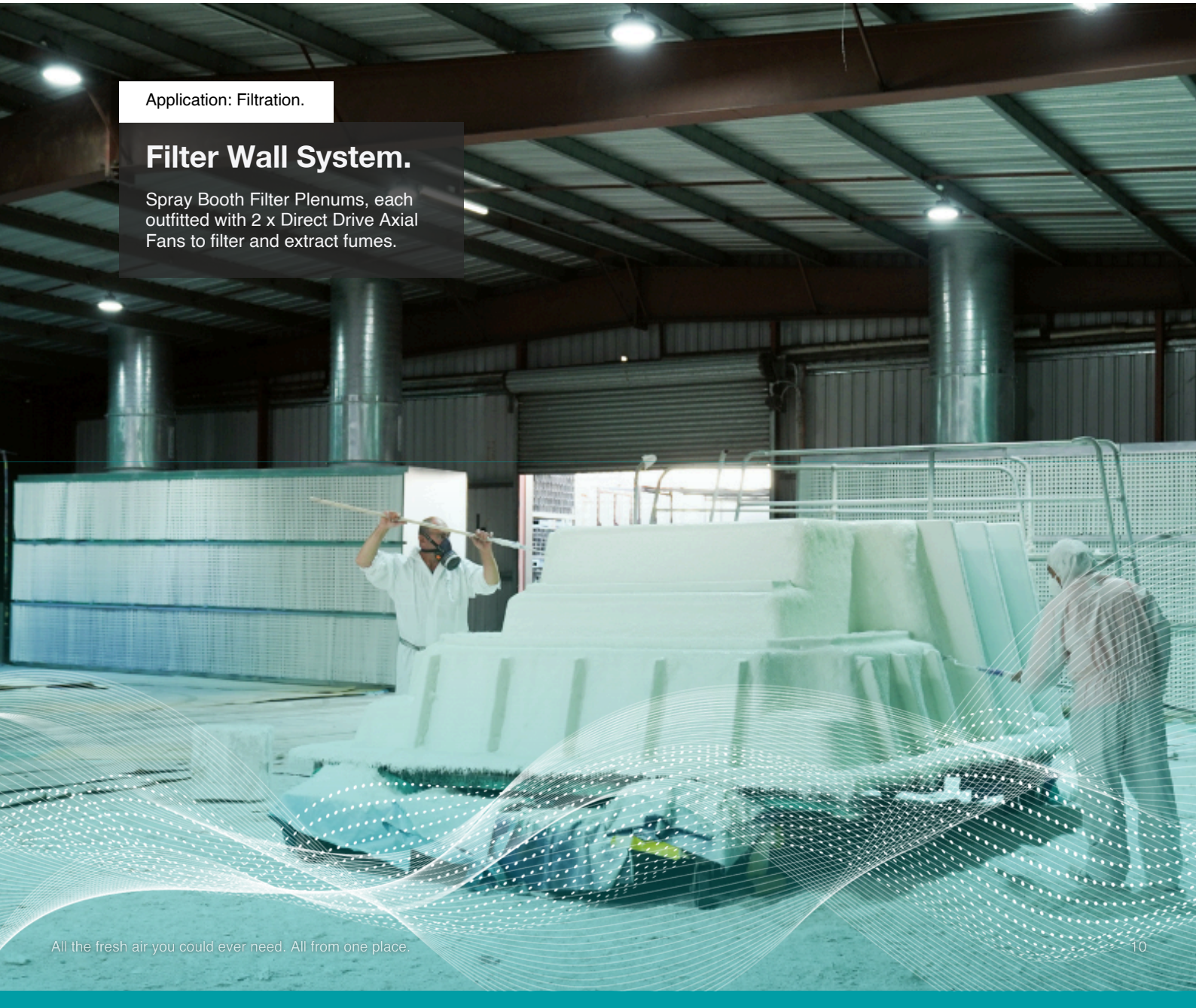
Heater Fans.

Variations: Trolley Mount Heater Fan, Wall Mount Heater Fan.

Delivering effective heating and drying without naked flames. These units boast sturdy construction with a steel galvanised casing coated in industrial enamel, along with safety grilles covering the outlet and inlet. Trolley mount models feature wheels for easy mobility and side mount pivot points for customisable airflow direction. Wall mount models come with a heavy-duty pipe mount and bottom wall bracket. Typically paired with a fan for optimal air circulation - opt for either the Giant fan or Air Circulator.

Ventilation for specific requirements.

Certain manufacturing facilities demand specialised ventilation to manage hazardous airborne contaminants, maintain cleanroom conditions, and ensure product integrity. These facilities may require ventilation systems with high-efficiency filtration, chemical-resistant materials, and precise airflow control to meet stringent regulatory standards and industry-specific requirements. Additionally, manufacturing environments handling combustible dust, such as wood or metal fabrication, mandate explosion-proof ventilation to mitigate fire and explosion risks. Explore our selection of fans designed for key areas in the manufacturing sector.



Application: Filtration.

Filter Wall System.

Spray Booth Filter Plenums, each outfitted with 2 x Direct Drive Axial Fans to filter and extract fumes.

Chemical processing and pharmaceutical manufacturing ventilation.

In pharmaceutical and other industries related to chemicals processing, where combustible dusts, flammable gases, mists, and vapours are commonplace, the risk of explosion is ever-present, necessitating the containment of such hazardous environments and the implementation of effective ventilation strategies. Workers within this industry encounter various health hazards, from exposure to hazardous powders and chemical agents to airborne pathogens and biological dust. To mitigate these risks effectively, modern dust and fume extraction systems are indispensable, ensuring a safe and healthy working environment for all.

Recommended ventilation.



Axial Fans.

Variations: Direct Drive Axial Flow Fan, Belt Drive Axial Flow Fan.

These fans use blades to push air directly ahead, making it very efficient at moving air in a straight line. Ideal for large spaces, these fans can extract and disperse contaminated air from processes producing steam, dust, or harmful emissions and fumes.



Centrifugal Fans.

Variations: Centrifugal Fan.

Effective for removing chemical fumes in pharmaceutical facilities due to their high efficiency, durability, and ability to handle corrosive gases. These fans are commonly used in applications requiring high pressure, making them ideal for air filtration systems where air needs to be pushed through ductwork or against resistance.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

They are highly versatile with numerous applications including an exhaust or air supply fan. Wall exhaust fans provide efficient ventilation, expelling hazardous fumes and maintaining air quality.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan.

These fans expel hot air and pollutants that rise to the ceiling, maintaining a comfortable and safe indoor environment by allowing cool air circulation and reducing humidity levels.



Application: Filtration.

Negative Air Units.

Remove even the most microscopic of contaminants from the air.

Woodwork and carpentry facilities ventilation.

In woodworking and carpentry facilities, wood dust poses significant hazards, ranging from health issues for workers to increased fire risks. The fine particles of wood dust can lead to dermatitis, eye irritation, allergies, respiratory irritation and even cancer upon exposure. To mitigate these risks, industrial ventilation systems play a crucial role in controlling dust, fumes, and other airborne contaminants generated during various operations. These systems encompass collection systems to capture wood dust, local exhaust ventilation to eliminate contaminants at their source, and enclosed workspaces with filtration to uphold clean and safe working environments.

Recommended fans.



Centrifugal Fans.

Variations: Centrifugal Fan.

Efficiently remove wood dust, particles, and odours, enhancing air quality and worker safety. They ensure consistent airflow, preventing the build-up of harmful fumes and maintaining a comfortable working environment. Designed for durability, these fans can handle the harsh conditions typical of a carpentry workshop, providing a reliable and robust ventilation solution.



Axial Fans.

Variations: Direct Drive Axial Flow Fan, Belt Drive Axial Flow Fan.

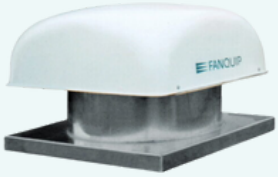
They provide powerful airflow, quickly expelling wood dust and fumes, which improves air quality and worker safety. These fans are energy-efficient and can handle high-volume air movement, making them ideal for large spaces. Additionally, their compact design allows for easy installation in various locations within the facility.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

These fans efficiently expel wood dust, fumes, and odours capturing entire workspace an improving air quality and worker safety. Easy to install on walls, these fans provide targeted ventilation, ensuring consistent airflow and preventing the build-up of harmful particulates.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan.

Quieter than other methods, Roof fans effectively remove airborne debris like wood dust, sawdust, and wood shavings from the premises, ensuring these particles don't settle on work surfaces. These fans are robust and designed to withstand the demands of carpentry environment.

Metal works and welding fumes ventilation.

Effective ventilation is essential in metal works and welding processes due to the release of dangerous fumes and particulates. These fumes contain toxic substances like chromium and nickel, posing serious health risks such as respiratory issues and neurological disorders upon inhalation. Without proper ventilation, these fumes accumulate, leading to poor indoor air quality, discomfort, and regulatory non-compliance. Ventilation systems not only remove welding fumes promptly, ensuring worker safety and productivity, but also help in maintaining a safe working environment by minimising the risk of fire or explosion.

Recommended ventilation.



Mobile Fume Extractor.

Variations: Mobile Fume Extractor.

This extraction fan stands as the premier solution for directly capturing welding fumes and airborne particles at their source. It includes a dual-stage filtration system, incorporating both a pre-filter and a HEPA filter, to deliver unparalleled air purification. Crafted with a robust powder-coated finish, this extractor is designed to endure the rigorous demands of industrial environments, offering sustained performance and reliability.



Portable Blower Extractor.

Variations: Portable Blower Extractor.

This fan finds widespread use in industrial settings, particularly within the metalworking sector, serving both as a source for air supply and extraction. Excelling in confined spaces, it effectively removes dust and various fumes, including those from welding and painting activities.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

Installing these fans is a must for every steel working facility to ensure a breathable environment. Wall exhaust fans are used to ventilate the space by efficiently removing fumes and hot air.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan.

Together with hot air that rises to the ceiling, contaminated air is exhausted outside through the roof fan system. Roof fans create negative pressure within the facility, drawing out unwanted odours and fumes and replacing them with fresh, clean air from outside. Continuous air exchange helps to maintain a more hygienic and comfortable environment while also ensuring compliance with safety and regulatory standards.

Spray booth and paint fume ventilation.

The application of paint and surface coatings is a common process in manufacturing and often involves the use of chemicals that can emit hazardous fumes into the work environment. These chemicals, such as volatile organic compounds (VOCs) and solvents, pose significant health risks to workers if inhaled in high concentrations. The absence of ventilation in areas with paint fumes can lead to significant health hazards, including respiratory irritation and headaches, due to the inhalation of fumes. Additionally, without proper airflow, flammable paint vapours may accumulate, increasing the risk of fire or explosion, indicating the importance of explosion-proof fans.

Recommended fans.



Axial Fans.

Variations: Filter Fan.

In paint spray booths or areas where paint application occurs, axial fans work by drawing air through the fan blades and expelling it in a straight line parallel to the fan shaft. This directional airflow is particularly beneficial for creating a consistent and uniform airflow pattern within paint spray booths, ensuring effective capture and removal of paint fumes and overspray.



Centrifugal Fans.

Variations: Centrifugal Fan.

In applications such as paint spray booths or paint mixing rooms, centrifugal fans, unlike axial fans that generate airflow parallel to the fan shaft, centrifugal fans generate airflow perpendicular to the fan shaft, allowing for greater flexibility in directing airflow within the ventilation system. This characteristic makes centrifugal fans particularly effective in applications where ductwork or airflow redirection is necessary to efficiently capture and exhaust paint fumes.



Wall Exhaust Fans.

Variations: Wall Plate Exhaust Fans, End Wall Exhaust Fans, Side Wall Exhaust Fans.

Installed on walls, these fans efficiently remove contaminated air, improving air quality and minimising fire hazards. Wall exhaust fans can be equipped with filters or other purification systems to further enhance air quality by capturing particulates and neutralizing odours before they are expelled.



Roof Fans.

Variations: Profile Base Roof Fan, Curb Base Roof Fan, Vertical Discharge Fan, Filtered Roof Supply Fan

Strategically positioned at the ceiling level, roof fans effectively capture and extract paint fumes and air pollutants, preventing them from lingering in the production environment. Roof fans create negative pressure within the facility, drawing out unwanted odours and fumes and replacing them with fresh, clean air from outside.



Application: Extraction

Vertical Discharge Roof Fan.

Maintain air quality by expelling heat and airborne contaminants.

Fanquip service.

At Fanquip, we begin our process by arranging a discovery meeting to fully understand your specific system requirements, the layout of your facilities, any existing solutions, and their capabilities, as well as any additional concerns you may have.

Once we have thoroughly discussed your needs, our team of skilled design engineers will create a personalised solution tailored to your short-term and long-term objectives. We carefully select products for your system based on your budget and goals, ensuring a seamless integration that delivers optimal performance levels.

Your custom design will include detailed drawings, a comprehensive list of recommended products, and a clear plan for how they will be interconnected. We firmly believe the most effective solutions are those custom designed to meet your individual requirements.

Once your system design is finalised, we will conduct a thorough review of pricing, capabilities, return on investment (ROI), and make any necessary adjustments. We are more than happy to accommodate any requested modifications, providing you with a final design that awaits your approval.

Installation and maintenance.

Regular maintenance and assessments are crucial to ensure they operate efficiently and safely. Here are some indications that your industrial fan may require assessment and repair:

- Unusual sounds or vibrations - If you detect peculiar noises or vibrations emanating from your fan during operation, it could be a sign that the fan belt or components need to be replaced.
- Reduced performance - If you observe a significant decrease in your fan's efficiency, it may need repairs to restore its optimal functioning.
- Overheating - Inadequate cooling or motor malfunctions can lead to further damage and potentially cause your fan to overheat. It is crucial to have your fan checked by a professional promptly if it is experiencing overheating issues.

At Fanquip, we offer a comprehensive repair and overhaul service for fans, impellers, motors, and related products. Our goal is to minimise downtime and ensure long-lasting performance for your equipment. Our range of services includes:

- Repairs for fan casings
- Repairs or replacements for impellers
- Repairs or replacements for motors
- Blasting, painting, and powder coating services



Haven’t found a solution for your challenge?

While there may be common issues, certain cases require individual approach. If you are still searching for a solution to your ventilation challenge, reach out to us today to discuss your unique requirements. With our expertise, we can offer tailored recommendations to meet your specific needs and guarantee optimal performance and safety in your facility.

Contact us.

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Warehouse & Manufacturing Facility
23 Ash Road, Prestons NSW 2170

*To access comprehensive details including size, dimensions, motors, and more for each ventilation solution, kindly inquire about our product datasheets. These datasheets can also be found on the Resource page of fanquip.com.au.



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