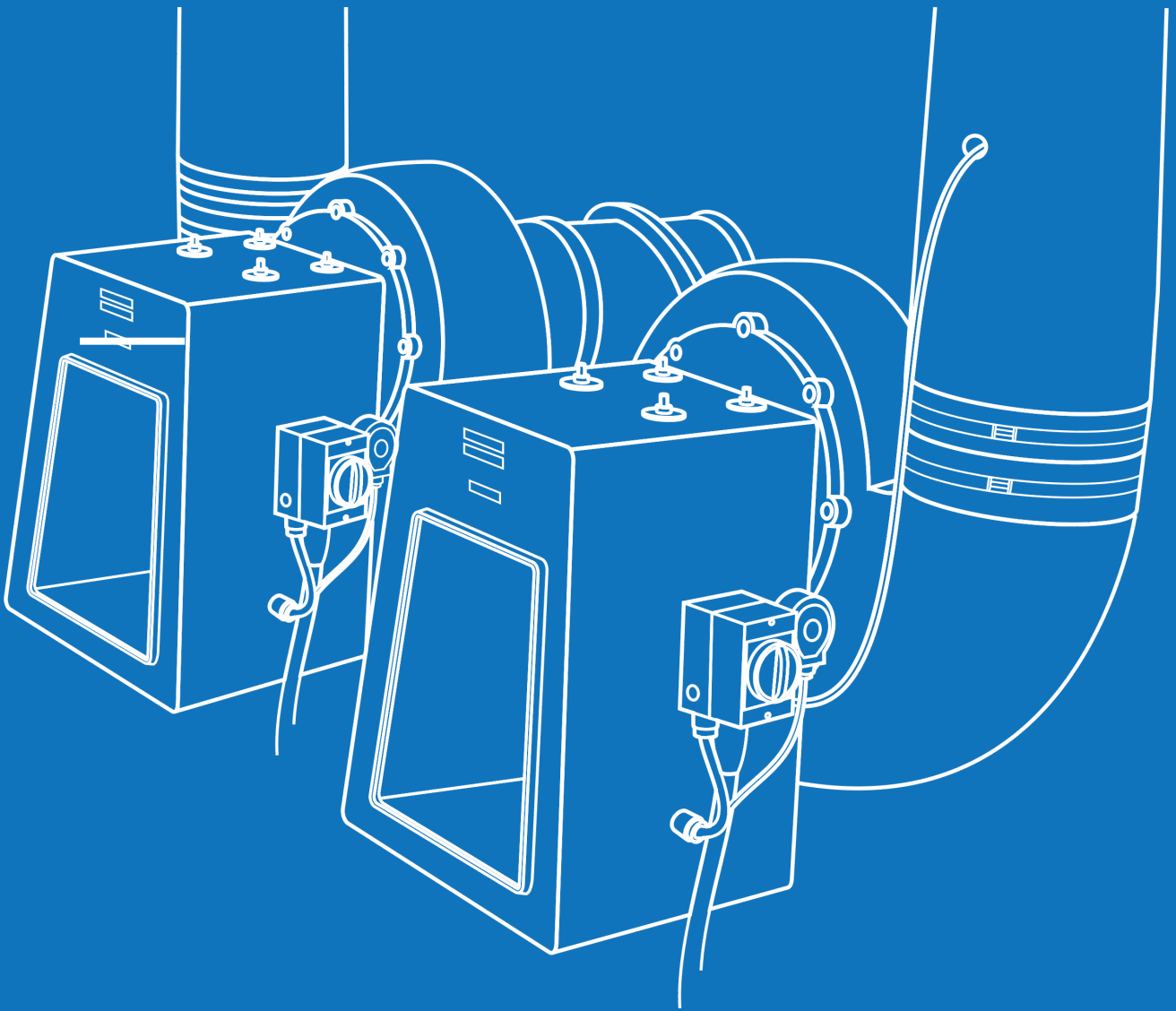


Corrosion Resistant Fans for Anaerobic Digestion

Polypropylene fans designed to extract and resist the widest range of corrosive and hazardous fumes in chemical and industrial extraction from the UK's leading independent fan integration specialists.



About Us

Axair are an independent UK distributor of industrial fans. In addition to supply, we pride ourselves on our fan integration specialisms that ensure we provide a full service solution to our wide customer base across varied market sectors.

Our industrial applications

Chemical Storage Ventilation where ammonia, hydrogen and other corrosive fumes are present.

Fume Cupboards whether in laboratory, educational settings, extract arms, dust or fume extraction.

Environmental Fume Extraction for anaerobic and aerobic digestion plants and other toxic environments.

Biomass, Biofuel & Renewables for combustion, material handling, grain drying and distribution of air.

Sewage & Waste Water Treatment for sludge drying, toxic fume removals and eliminating hazardous gases.

Mortuary & Autopsy where formaldehyde is present and corrosive gas ventilation in down draught benches.

ATEX Applications to prevent explosions in potentially hazardous Zone 1 or 2 applications.

SEAT Ventilation

SEAT is the leading EU manufacturer of plastic fans and has more than 35 years experience in their field.

As the exclusive UK distributor for SEAT, Axair are proud to work closely with the fan manufacturer to deliver superior corrosive fume, chemical, ATEX and specially designed fan components to the UK market.

Certifications & Groups

Axair are a carbon zero ISO 9001 approved company. We are proud active members of the fan manufacturers and smoke control associations. Download a copy of our certifications at www.axair-fans.co.uk.

Our Industrial Team

Our industrial team combine over 25 years of experience in air movement, construction and fan engineering to deliver exceptional product knowledge, fan integration expertise and a thorough knowledge of corrosive and explosive ATEX environments.



Faye Brophy
Head of Industrial

With a background in construction and engineering, Faye heads our industrial division with exceptional customer service and organisation.



Andrew Jones
Sales Director

As director of our well established business, Andrew leads technical projects and continues to provide support to our wide customer base.

Anaerobic Digestion

“Aggressive chemicals produced during the anaerobic digestion process attack steel and corrosion can set in very quickly.”

The risk of explosion or corrosion from toxic gases and moist air respectively, means that the systems components in AD plants must be corrosion resistant and manufactured from suitable materials that can handle this type of environment.

Aggressive chemicals produced during the anaerobic digestion process attack steel and corrosion can set in very quickly. If a fan for example starts to develop signs of rusting, processes such as welding are out of the question due to the high concentrations of combustible methane and carbon dioxide gases that can be readily ignited by a simple welding spark.

The fermentation and oxidation processes used by these digestors whether concrete or steel, create the perfect environment for corrosion both at the liquid and gas stage, while sludge tanks face similar challenges.

Waste management industries such as AD require corrosion management strategies that extend their lifetime, as well as maintenance free periods. Non metallic solutions and components, as mentioned previously and high-performance coatings, are well positioned to deliver benefits to the asset owners and AD operators.

Whatever your position in specifying a suitable fan for any form of water treatment ventilation or fume extraction project, we understand your application and we’re here for you when you need us.

Contact our industrial team on 01782 349 430 or email sales@axair-fans.co.uk.

Faye Brophy
Head of Industrial



Effective Ventilation in Biogas Plants

An anaerobic digester refers to an airtight tank where anaerobic bacteria, or those that thrive in the absence of oxygen, are used to breakdown organic wastes into smaller molecular compounds for use elsewhere.

These anaerobic bacteria generate both **methane (CH4)** and **carbon dioxide (CO2) gases** in near equal volumes as they digest the waste material. In modern AD this biogas is captured and converted into energy to provide heat, power and sanitation. Biogas is composed of methane at a relatively high percentage (50-75%), carbon dioxide, hydrogen sulfide, water vapour and trace amounts of other gas.

The risk of explosion is particularly high close to digesters and gas reservoirs. It can occur because of a gas leak, creation of an explosive zone, welding, clogged or frozen pipes or others. Methane, (CH4) is combustible with air at concentrations between 5 percent and 15 percent, known as the lower explosive limit and the upper explosive limit, respectively. Biogas systems typically produce CH4 concentrations in the range of 45 percent to 70 percent and introducing air into the biogas handling system could bring the CH4 concentrations into the explosive range, presenting risk of an explosion in the presence of an ignition source. H2S is a toxic gas that can cause severe health effects or death. An example of the risk of death occurs in maintenance.

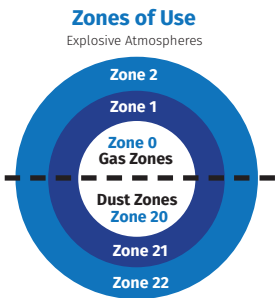
Empty digestors will be low in oxygen and some residual gases may still be present even though the digestate and slurry has been removed. These gases must be mechanically exhausted out to ensure it is safe for maintenance staff to occupy. Corrosion, the risk of explosion and ventilation are key aspects to consider.

Our polypropylene fans range are resistant to corrosion and provide protection to zone 2 in hazardous areas.

“Corrosion, the potential risk of explosion and ventilation are key aspects to manage in anaerobic digestion mechanical processes.”

 **ATEX Note:**

If there is a possibility the installation needs to be ATEX rated, then an expert needs to determine the ATEX gas and dust zone classification for the area. The information they provide will cover the size of the zoned area and the standard of equipment to be used in the zone.



Corrosion Resistant Polypropylene Fans

We offer a comprehensive range of fans specifically designed to offer the maximum protection against chemicals and corrosion. Constructed from polypropylene, a thermal plastic, to provide corrosion, chlorine, UV & humidity resistance.

Corrosion Resistant Polypropylene

IP55 Single inlet corrosion resistant UV treated polypropylene scrolls with forward curved impellers and direct drive polypropylene turbine that is balanced dynamically and electronically. Scrolls are available in 2 directions of rotation according to the positioning of the suction and discharged (LG/ RD), with the exception of S35 which is available in LG handing only. Scrolls and motors can be mounted onto a metal pedestal or an outdoor weatherproof pedestal for additional motor ingress protection (IP).

Energy Efficiency in Fume Extraction

As the market demands more energy efficient systems, the introduction of our EC range of fans in 2021 allows fume and chemical extraction systems to reduce their fan energy consumption without affecting performance.

Minimum power consumption and better efficiency, the IE5 motor reduces consumption by up to 20% more than the previous type.

We assemble fans to order from stock components and create the perfect mechanical and electrical solution for your fume extraction installation.

Mechanical Options

- Choice of handing
- Choice of metal or weather proof pedestal
- Anti-Vibration mounts
- Flexible connectors
- Flange pairs
- Manual dampers
- Drain hose connectors
- ATEX carbon polypropylene fans

Electrical Options

- 230V 1~ motor
- 230/400V 3~ DOL or inverter supplied motor
- 400/690V 3~ motor in larger sizes
- Pre-wired electrical isolators
- Motor starters
- Inverter drives
- Fume cupboard alarms
- ATEX motors
- EC energy efficient motors



ATEX Zone 2 Fans



Our ATEX SA and STA range are molded carbon loaded polypropylene to prevent static discharges. Available in category 3G zone 2 applications in accordance with ATEX Directive 94/9/CE and can be supplied with EEx nA (non-incendive) or EEx d (explosion proof) motors to order. ATEX declaration of conformity available on request.



Polypropylene Fans

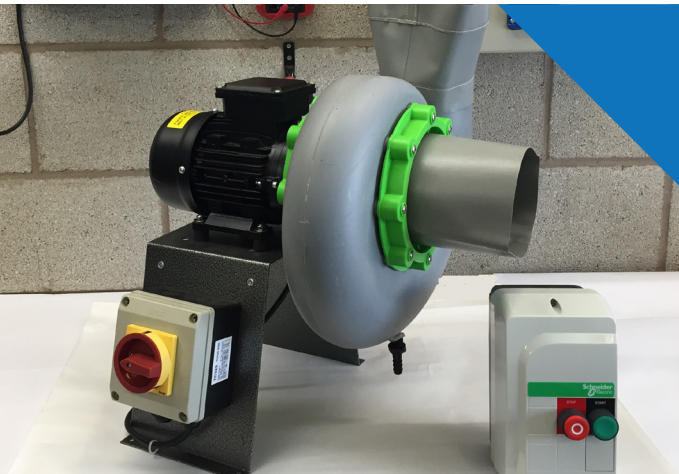
We offer two ranges of standard polypropylene fans; S range for medium airflow applications and the ST range for high pressure applications. The range consists of 10 basic sizes with a single piece molded high density polypropylene casing and feature a compact design, industry standard round spigots, easy assembly and direct drive motors.



EC Energy Efficient Fans



Our impressive range of energy efficient corrosion resistant fans with IE5 B34 type EC motors reduce fan energy consumption by up to 20% without affecting performance in fume extraction systems. Available in single or three phase. **View datasheets by scanning the QR code opposite.**



School Fume Fan Packs

The school fume fan pack is an easy solution for schools that require new or refurbished fume cupboard systems. The pack contains the fume extraction fan suited to your duty in addition to all other necessary components for a simple build that is more cost effective than buying the fan and components seperately; fan, controller, isolator, AV mounts, flexi connectors and scroll drill.

Recent Projects

We've been working with corrosive air applications for over 25 years. We understand the key ventilation issues in industrial fume extraction and we're here to support you when you need us.

Our project portfolio shows how our products are designed specifically for fume extraction applications.

“

We understand the key ventilation issues in industrial fume extraction and we're here to support you when you need us.”



Indoor Application

S30 Polypropylene

The S30 range of polypropylene fans provide the optimal solution for larger fume extraction systems. They are both light weight and flexible providing ease of installation for outdoor and indoor applications and can easily be transported through doors.

The polypropylene material of the fan and ducting ensures the whole system is suitable for handling air that is potentially corrosive. Polypropylene offers several additional benefits over GRP and stainless steel.



Outdoor Application

S25 Polypropylene, Metal Pedestal & Cowl

In this application our S25 polypropylene fans are situated outdoors on metal pedestals providing an efficient solution to extracting toxic and potentially explosive methane gas. When situating a corrosion resistant fan with a standard motor outside of the airstream in an outdoor installation, it is important to protect the motor from adverse weather conditions. As pictured the weatherproof cowl provides that added security and eliminates the risk of costly damage to the motor in the future.



Outdoor Application

S25 & Outdoor Pedestal

Outdoor corrosive fume applications may require a higher ingress protection rating for standard IP rated motors. Our S25 polypropylene fans can be seen in this outdoor installation correctly using the outdoor weather pedestal which offers a more enclosed casing for outdoor installations. The pedestal totally covers the fan motor beyond the IP55 protection.



view our complete projects at:

Direct link:
www.axair-fans.co.uk

or you can scan this barcode



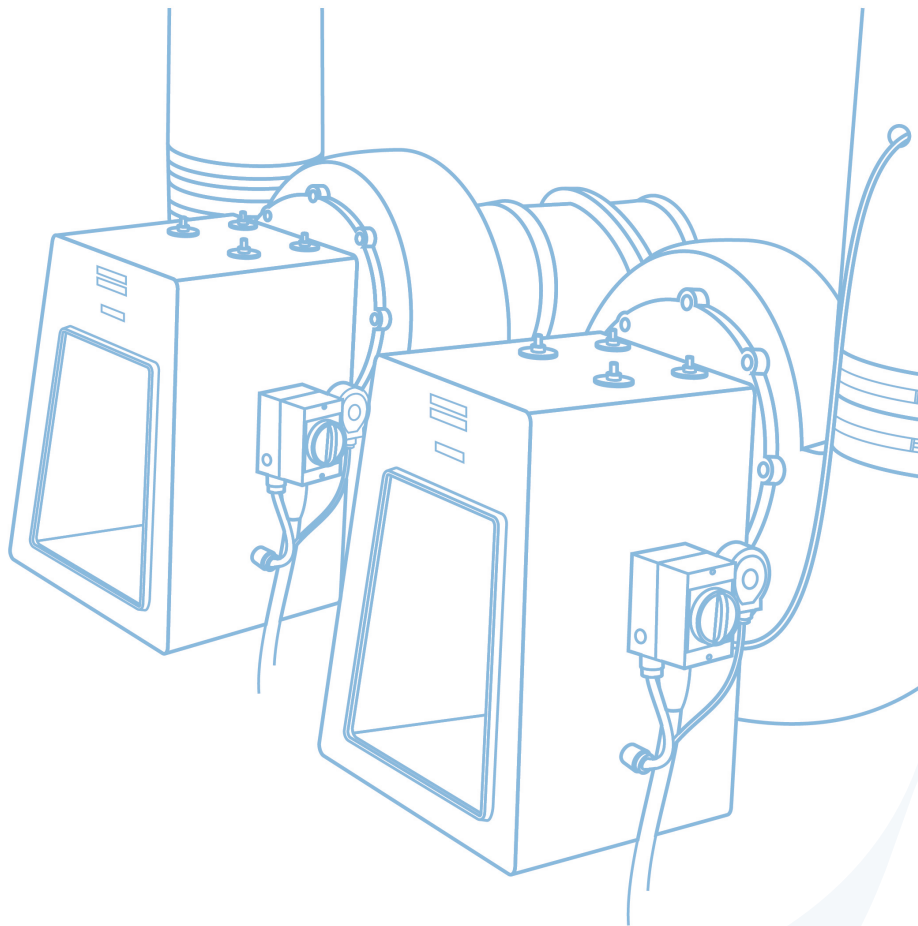
Our Stock Policy

In 2020 we extended our warehouse to enable us to increase our stock holding of our most popular industrial fans for the corrosive fume market.

This means we now carry stock of the all of our single and three phase polypropylene fans in with standard AC motors, energy efficient EC motors or ATEX configurations to enable us to service our UK customers.

Our customers benefit from short lead times and unrivalled stock availability on an extensive range of fume fans.

We're confident that our stock and logistics policy enables us to maintain a position that will provide continuity of business and a cost effective solution to industrial corrosion resistant fan procurement for our ever growing customer base.



Technical Understanding

We understand key influencing factors affecting the fume extraction and corrosive air market including fan energy consumption and calculating system resistance. We ensure we meet the total specification of your project.



Stocked Lines

We stock a wide range of single and three phase polypropylene fan variants in addition to an extensive range of other industrial fans for key UK market sectors. We pledge to ensure our stock levels are maintained for our customers.



Short Lead Times

With stock available for immediate despatch we can ensure short lead times on popular lines. Those with scheduled orders continue to rely on Axair to manage their delivery schedules. On non stocked lines our lead times are competitive.

Our Customers

We support a wide range of customers working in varied market sectors and job roles including dust and fume extraction, original equipment manufacturers, contractors, consultants, specifiers and distributors.

Some of Our Valued Customers





Contact Us

Whatever your issue, concern or question, contact our industrial team using the below contact details. Alternatively, visit our website and open a live chat to start discussions.

01782 349 430

sales@axair-fans.co.uk