

Industrial Fans Range

Heavy Duty

A wide range of industrial centrifugal and axial fans with robust mechanical construction, offering superior performance in heavy duty, industrial & general ventilation applications including EC, material handling, high temperature and ATEX certified fans suitable for use within potentially hazardous atmospheres.



Who Are Axair Fans?

We're UK industrial fan suppliers with a solid goal: To help you.

Revolutionary fan selection and technical integration advice that revolves around you and your system. With over 30 years experience in the UK fan market, we revolutionise the way our customers do business, that's why we're fast becoming the independent fan supplier of choice in the UK market.

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, drying, explosion protection and corrosion management.

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

Mortuary & Autopsy where formaldehyde is present and corrosive gas ventilation is required.

ATEX Applications to prevent explosions in potentially hazardous Zone 1, 2 gas or 21, 22 dust applications. ATEX fans are certified in line with the ATEX Directive 2014/34/EU.



Hazardous Area Class

HAC's or hazardous area classifications are used to identify places where, because of the potential for explosive atmospheres, special precautions over sources of ignition are needed to prevent explosions. Hazardous area classifications should only be done by responsible and certified personnel; equipment manufacturers should not decide the classification and the onus should be on the end user to determine the correct zone and class of the area to determine where an explosive atmosphere is present, if it may occasionally occur or if it will only exist in abnormal conditions.

Gas Group IIC Certified

Our entire range of ATEX certified fans are suitable for Gas Group IIC or IIB + hydrogen applications for effective hydrogen exhaust. Our industrial team can assist in providing an ATEX quote to your specified gas and dust zone. Email sales@axair-fans.co.uk or call 01782 349 430.

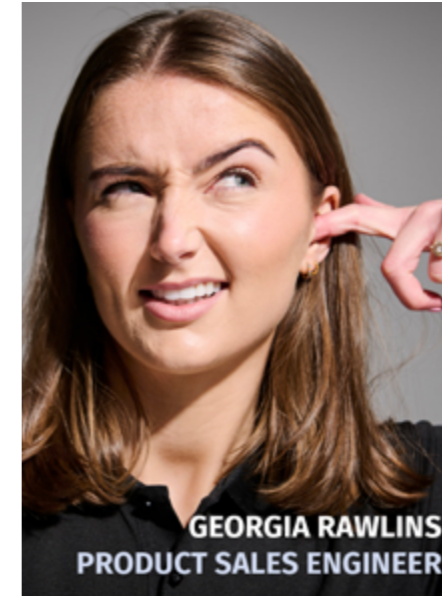
We're Revolting!

You heard us right, we're revolting - we're changing the rules of the industrial fan game, breaking the mould Response times that take some companies days, take us minutes. Pre-sales advice and after sales support is built around you, because our job is to empower you to make the right fan selection for your application.



Michael Hambleton
Head of Qualifications

When your enquiry comes into Axair you'll speak to Michael and his team of qualification engineers. They'll work with you to figure out what would be best for your application. From here they'll pass you to our product engineers for fan selections.



Georgia Rawlins
Industrial Product Engineer

Following your enquiry qualification, our departmental product engineers will produce a detailed quotation and provide datasheets for you to sign off. Each engineer has a specialist niche, Georgia for example, is extensively DSEAR and ATEX trained.



Andrew Jones
Technical Director

Sometimes your enquiry needs a little more technical TLC, that's where our heavy technical guys step in. AJ leads from the front on all ATEX, net zero, hydrogen and emerging technologies, and helps our customers with the tricky side of fan integration.

Important Information Regarding ATEX Fan Selection

The Axair team have undertaken extensive training in ATEX regulations but have a duty of care to ensure we supply a suitable fan based upon a customer's correct ATEX coding specifications. ATEX has to be understood as an ever evolving subject requiring competence and training that is now provided by UK notified bodies and consultancies. We advise that if anyone requires additional training in ATEX that they contact an independent body for assistance. Axair can supply fans suitable for ATEX applications within zone 1 & 2 for gas and Zone 21 & 22 for dust, manufactured from either metal, or corrosion resistant polypropylene depending on the specification.

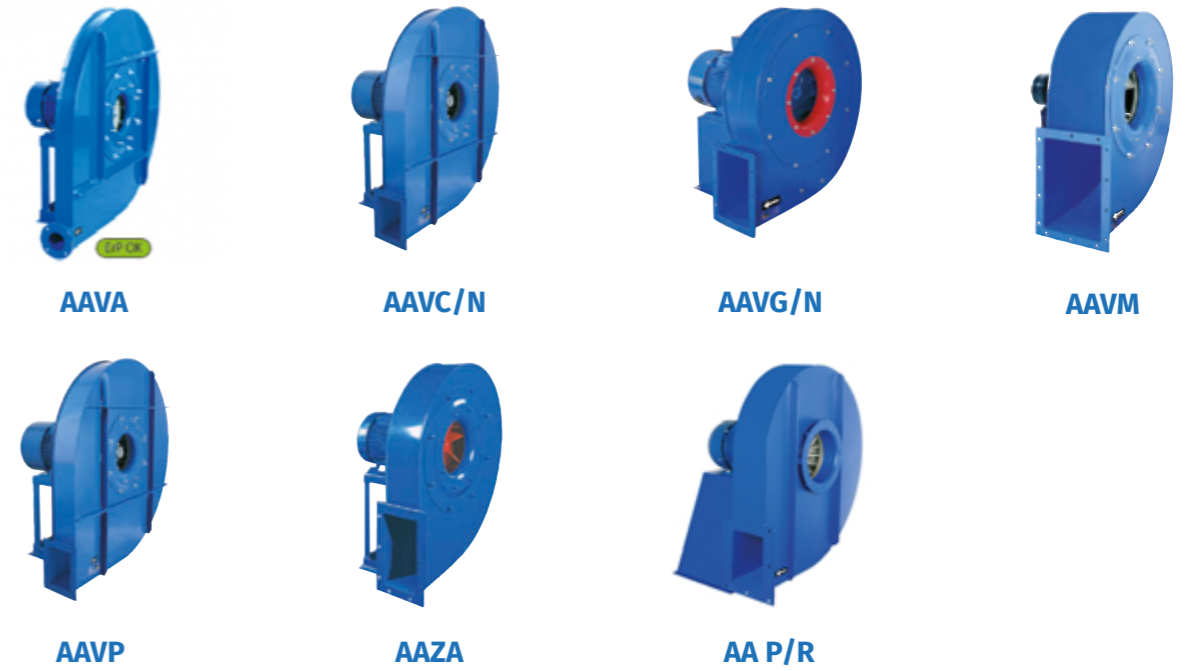
Centrifugal Fans

Heavy duty centrifugal fans manufactured by industrial fan experts, Casals, offer superior air movement, high durability and enhanced corrosive resistance. All fan components are constructed in adherence to legislation dictating their use in UK markets and sensitive applications including ATEX environments.

Medium & High Pressure ATEX Certified Fans



High Pressure Centrifugal Fans (Non-ATEX)



Medium Pressure Centrifugal Fans (Non-ATEX)



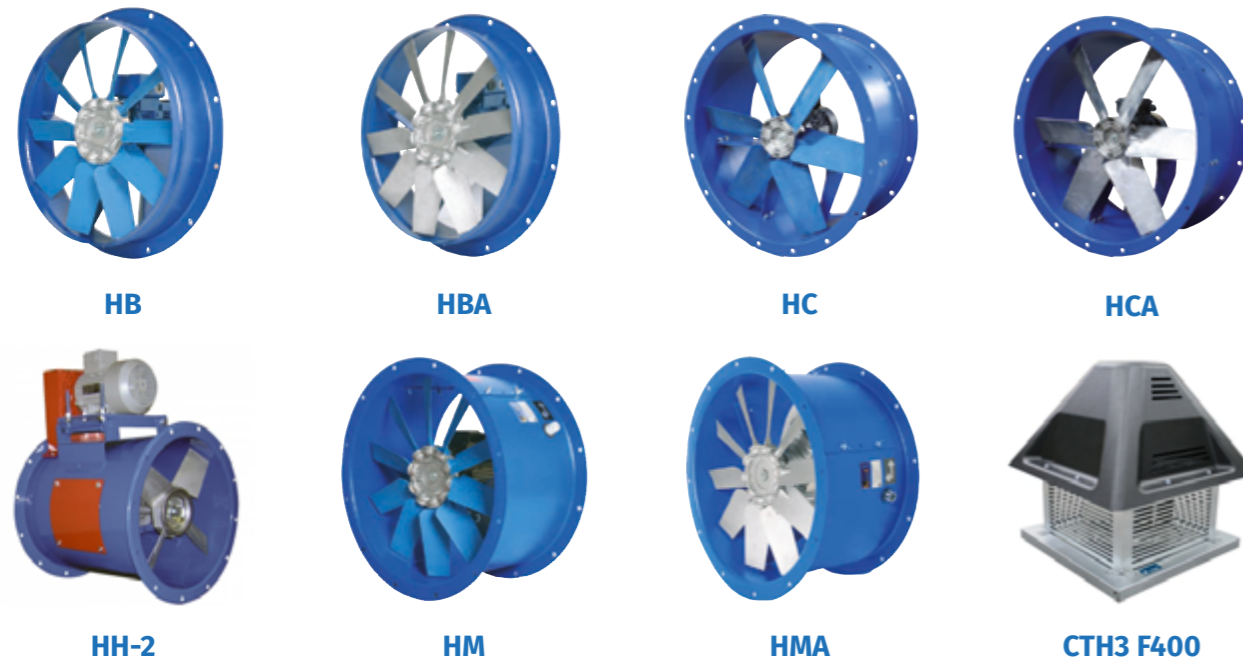
Axial & Roof Fans

A comprehensive range of high efficiency and high performance standard and ATEX compliant axial and roof fans, suitable for high system airflows, high pressure applications, those with EC motors for energy efficient lines, high power fans, and ATEX certified for use in hazardous environments.

ATEX Certified Axial Fans



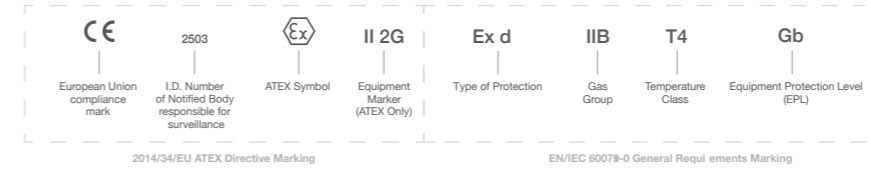
Axial & Roof Fans (Non-ATEX)



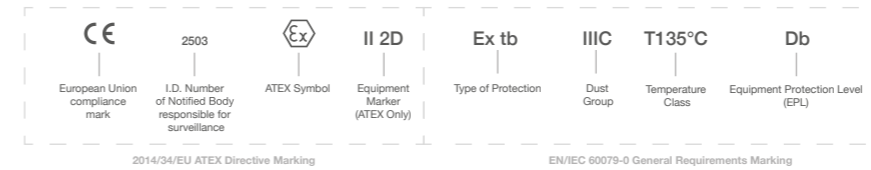
Hazardous Area Guide

It is strictly the responsibility of the end user to perform a DSEAR risk assessment to ensure that flameproof zones are properly defined in terms recognised by ATEX 2014/34/EU. The below guide is intended for guidance only.

Typical Equipment Marking for Gas Atmospheres



Typical Equipment Marking for Dust Atmospheres



Gas Zones				
Gas Zones	Definition	ATEX Category	EPL	Required Protection
Methane	Mines with methane and dust. Equipment remains energised in explosive atmosphere	M1	Ma	Two Faults
Methane	Mines with methane and dust. Equipment is de-energised in explosive atmosphere	M2	Mb	Severe Normal Operation
Zone 0	Explosive atmosphere present continuously or for long periods, frequently	1G	Ga	Two Faults
Zone 1	Explosive atmosphere is likely to occur under normal conditions, occasionally	2G	Gb	One Fault
Zone 2	Explosive atmosphere is unlikely to occur under normal conditions, short periods	3G	Gc	Normal Operation

Dust Zones				
Dust Zones	Definition	ATEX Category	EPL	Required Protection
Zone 20	Explosive atmosphere present continuously or for long periods, frequently	1D	Da	Two Faults
Zone 21	Explosive atmosphere is likely to occur under normal conditions, occasionally	2D	Db	One Fault
Zone 22	Explosive atmosphere is unlikely to occur under normal conditions, short periods	3D	Dc	Normal Operation

Enclosure Ingress Protection (IP) Level	
Enclosure Ingress Protection (IP) Level: To EN/IEC 60529	
First Number (Solid objects / dust)	Second Number (Water)
0 No protection	0 No protection
1 Objects > Ø50 mm	1 Vertically dripping water
2 Objects > Ø12.5 mm	2 Vertically dripping water with enclosure tilted by 15°
3 Objects > Ø2.5 mm	3 Sprayed water up to 60° from the vertical
4 Objects > Ø1.0 mm	4 Sprayed water from all directions
5 Dust protected	5 Water jets
6 Dust tight	6 Powered water jets
-	7 Temporary submersion < 1m depth
-	8 Extended submersion > 1m depth

Ambient Temperature Range (T amb)	
T amb =	Temperature relating to the immediate surroundings of the equipment (assumed to be -20°C to +40°C, unless stated)

Protection Concept - Electrical - Gas	
Type of Protection (electrical - gas)	Reference
General Requirements	EN/IEC 60079-0
Flameproof - Ex d / da / db / dc	EN/IEC 60079-1
Purge/Pressurised - Ex p / pxb / pyb / pzc	IEC 60079-2
Quartz/Sand Filled - Ex q / qb / qc	EN/IEC 60079-5
Oil Immersion - Ex o / ob / oc	EN/IEC 60079-6
Increased Safety - Ex e / eb / ec	EN/IEC 60079-7
Intrinsic Safety - Ex i / ia / ib / ic	EN/IEC 60079-11
Non Sparking - Ex nA / nC / nL	EN/IEC 60079-15
Encapsulation - Ex m / ma / mb / mc	EN/IEC 60079-18
Optical Radiation - Ex op / osh / opr	EN/IEC 60079-28
Trace Heating Systems - Ex e / Ex 60079-30-1	EN/IEC 60079-30-1
Special Protection Ex s	EN/IEC 60079-33
Caplights	EN/IEC 60079-35-1
Controlled Spark Duration Power-i	TS 60079-39
Process Sealing	TS 60079-40
Flame Arresters	EN 16852
Diesel Engines	EN 1834-1,2,3

Protection Concept - Electrical - Dust	
Type of Protection (electrical - dust)	Reference
General Requirements	EN/IEC 60079-0
Enclosure - ta / tb / tc	EN/IEC 60079-31
Purge/Pressurised - Ex p / pxb / pyb / pzc	EN/IEC 60079-2
Intrinsic Safety - Ex i / ia / ib / ic	EN/IEC 60079-11
Encapsulation - Ex m / ma / mb / mc	EN/IEC 60079-18

Protection Concept - Non Electrical		
Type of Protection (non-electrical) (gas & dust)	Reference (ATEX only)	IECEX
General Requirements	EN 80079-36	IEC / ISO 80079-36
Flow Restricting Enclosure - fr	EN 13463-2	-
Flameproof - d	EN 13463-3	-
Constructional Safety - c / h	EN 80079-37	IEC / ISO 80079-37
Control of Ignition - b / h	EN 80079-37	IEC / ISO 80079-37
Pressurisation - p	EN 60079-2	-
Liquid Immersion - k / h	EN 80079-37	IEC / ISO 80079-37

Gas Groups	
Gas Groups	Gases are classified according to the ignitability of the gas/air mixture as defined in EN/IEC 60079-20-1
IIA	Acetic Acid, Acetone, Ammonia, Butane, Cyclohexane, Propane, Gasoline (petrol), Methane (natural gas, non-mining), Toluene, Xylene, Methanol (methyl alcohol), Propane-2-ol (iso-propyl alcohol)
IIB	Group IIA gases plus, Di-ethyl ether, Ethylene, Ethanol Methyl ethyl ketone (MEK), Propane-1-ol (n-propyl alcohol)
IIC	Group IIA and IIB gases plus, Acetylene, Hydrogen

Dust Groups	
Dust Groups	Dusts are classified by the types of material that make up the dust
IIIA	Combustible Fibres and Flying
IIIB	Group IIIA dusts plus, Non-Conductive Dusts
IIIC	Group IIIA and IIIB dusts plus, Conductive Dusts

Equipment Group	
Equipment Group	Definition
Group I	Electrical equipment intended for use in mines susceptible to fire damp
Group II	Electrical equipment intended for use in explosive gas atmospheres
Group III	Electrical equipment intended for use in explosive dust atmospheres

Temperature Class (T Class)	
Temperature Class	Highest temperature achieved under the most adverse equipment rating and heating conditions. (Flashpoint temperature of some gases)
T1: 450°C	Ammonia (830°C), Hydrogen (560°C), Methane (537°C), Propane (470°C)
T2: 300°C	Ethylene (425°C), Butane (372°C), Acetylene (905°C)
T3: 200°C	Cyclohexane (259°C), Kerosene (210°C)
T4: 135°C	Di-ethyl Ether (160°C)
T5: 100°C	-
T6: 85°C	Carbon Disulphate (85°C)

ATEX Gas & Dust Zones

If an explosive atmosphere of flammable substances is specified, the following zones may exist:

ATEX Category	ATEX Zone (Gas & Vapour)	ATEX Zone (Dust)	Presence	ATEX Description
Category 2	Zone 1	Zone 21*	Present Intermittently	An explosive mixture may be present occasionally in normal operation
Category 3	Zone 2	Zone 22*	Present Abnormally	An explosive mixture is not expected to be present in normal operation or will only be present for a short time

Zone 22 dust fans available on request

Suitable for Zone 0, 1 & 2:
ATEX Group & Category: II 1G
IECEX Equipment Protection Level: Ga
Types of protection (electrical): ia, da, ma, op is
Types of protection (non-electrical, ATEX): c, b, p, k, h
Types of protection (non-electrical, IECEX): h

Suitable for Zone 1 & 2:
ATEX Group & Category: II 2G
IECEX Equipment Protection Level: Gb
Types of protection (electrical): db, eb, lb, mb, ob, pxb, pyb, qb, op is, op pr, op sh
Types of protection (non-electrical, ATEX): d, c, b, p, k, h
Types of protection (non-electrical, IECEX): d, p, h

Suitable for Zone 2 only:
ATEX Group & Category: II 3G
IECEX Equipment Protection Level: Gc
Types of protection (electrical): dc, ec, lc, mc, nA, nC, nR, oc, pzc, qc
Types of protection (non-electrical, ATEX): fr, d, c, b, p, k, h
Types of protection (non-electrical, IECEX): fr, d, p, h

Zones of Use
Explosive Atmospheres

Suitable for Zone 20, 21 & 22:
ATEX Group & Category: II 1D
IECEX Equipment Protection Level: Da
Types of protection (electrical): ta, ia
Types of protection (non-electrical, ATEX): c, b, k, h
Types of protection (non-electrical, IECEX): fr, d, p, h

Suitable for Zone 21 & 22:
ATEX Group & Category: II 2D
IECEX Equipment Protection Level: Db
Types of protection (electrical): tb, lb, mb
Types of protection (non-electrical, ATEX): d, c, b, p, k, h
Types of protection (non-electrical, IECEX): d, h

Suitable for Zone 22 only:
ATEX Group & Category: II 3D
IECEX Equipment Protection Level: Dc
Types of protection (electrical): tc, lc, mc
Types of protection (non-electrical, ATEX): fr, d, c, b, p, k, h
Types of protection (non-electrical, IECEX): h

All About Axair Fans

Back in 1983, our passionate managing director set up Axair in a spare room with a solid goal: *to provide air movement and fan components that create better systems, systems that help our customers to be more successful.*

Today the growing family business retains these values at its core. Through thoughtful selection of employees and solid leadership, the company has become a mature and well developed UK industrial fan supplier with a unique approach to fan selection, customer support, technical fan integration and resourcefulness.



We Challenge the Status Quo

We provide alternative ideas that challenge existing procedures and thinking, so that we can improve and develop new solutions for our customers.

We Leverage Collective Genius

We focus on utilising our combined knowledge for best results each time. This means our customers get the most efficient solution every single time.

We're Resourceful & Solution Led

Our resourcefulness enables us to find ways to speedily overcome difficulties and achieve customer goals smartly

Revolutionary Fan Expertise

We advise and help to integrate the best industrial fan solutions that increase efficiency, improve performance, and solve a problem. We're a united team dedicated to your success, and we're excited to demonstrate how working with us can revolutionise the way you do business with your fan component supplier.



GEOFF EDWARDS
BUSINESS DEV DIRECTOR



FABIEN CARBONELL
KEY ACCOUNTS MANAGER



JAMES KEELING
PRODUCT ENGINEER

WE'RE REVOLTING!

We're Revolutionising An Antiquated Industry.

We understand that in today's fast paced business environment, time is of the essence, that's why we've enhanced our enquiry efficiency by integrating a singular technical team to handle your enquiries from start to finish. With this streamlined approach, we guarantee **no continuous team handovers**, rapid response times and highly accurate solutions that propel your success.

If you're looking for technical support on a fan we've supplied, we'll be with you in no time. Work with a fan supplier who works hard to improve the inefficiencies our customers experience in the UK fan industry.

www.axair-fans.co.uk



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

