



INDUSTRIAL FAN SOLUTIONS



NUAIRE. FOR THE COMPLETE VENTILATION SOLUTION



NUAIRE IS A BRITISH COMPANY WITH A LONG HISTORY OF INNOVATION...

...in the field of **ventilation** and air movement **solutions**, and its **products** are known across the world for their superb **quality** and **efficiency**.



01 NUAIRE ORIGINALLY FOUNDED BY GEORGE AND ALFRED TACK 02 THE NUAIRE 41 FAN 03 ORIGINAL NUAIRE 'DRIMASTER' CONDENSATION UNIT 04 NUAIRE QUIET SCROLL TWIN FANS 05 OPUS FAN 06 MRXBOX95 HEAT RECOVERY 07 BOXER AHU 08 XBOXER XB55 HEAT RECOVERY 09 AIRE-VOLVE TWIN FANS

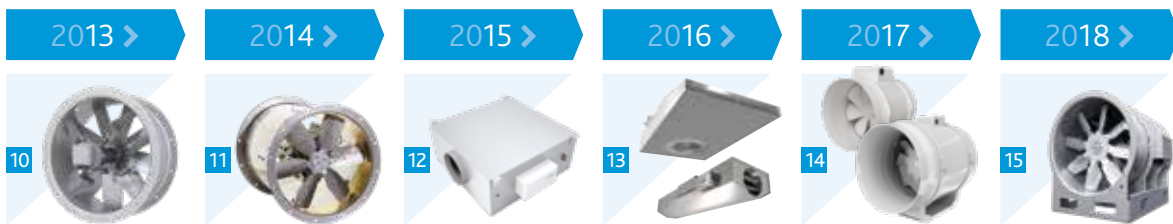


Founded in 1966, Nuaire has a long and much-admired heritage in developing and manufacturing ventilation products in the UK. The company's expertise is renowned worldwide, likewise their unrivalled customer service, and it is this combination which has ensured that Nuaire's products have been sold into more than 60 countries around the world, including in the Middle East, Europe, the US and Asia.

Nuaire's innovative product development team create multi-award winning ventilation products which are used in a wide range of applications – from food processing plants to oil rigs, shopping malls to hotels – and their systems are installed in some of the world's most iconic buildings, 'such as the [Dubai Mall extension](#) and [Al Khail Mall](#) in the UAE, the [Stade de France sports stadium](#) in Paris and the [Swiss Re bank building](#) – known as 'The Gherkin' – in London.

All Nuaire's products are manufactured in the UK, from their base in South Wales, to exceptionally high standards of quality. Ongoing investment into the manufacturing operation has meant Nuaire can produce state of the art ventilation solutions; in fact, Nuaire was the first fan manufacturer in the world to achieve the **ISO9001** quality standard, and its commitment to quality is enshrined in all aspects of its operations.

Nuaire's commitment to quality excellence extends to all parts of the organisation, including customer service. All 500 staff based in the UK, as well as its dedicated partners around the world, are committed to Nuaire's values of developing the best quality products for our customers and providing superb customer service, ensuring that the organisation is a trusted partner in thousands of construction projects across the globe.



10 ERP AXIAL 11 ATEX AXIAL 12 DAVE 13 F400/2, SVT & SVTC SMOKE FANS 14 ILM/ILM+ 15 HIGH PRESSURE AXIALS



AMCA APPROVED TEST FACILITIES



Nuaire's position at the forefront of the ventilation industry for 50 years has been achieved by constant innovation in product development. This has only been possible due to the company's state of the art in-house test facilities, which have the capability to test for aerodynamic and acoustic performance, and ensure that all products are tested to the latest industry and regional standards for their intended market sector and application.



The test house has been designed to ensure that customers benefit from the best ventilation solutions in the market today. The facilities have been designed to meet the latest industry standards and carry the appropriate approvals including those from the British Standards Institute (BS) and the Air Movement and Controls Association (AMCA).

Nuaire offer two different chambers to ensure the products are tested in accordance with the suitable application; whether this be a ducted or a non-ducted application. The facilities allow Nuaire to self certify for both aerodynamics and acoustic performance.

Rigorous testing is carried out to ensure all key performance factors are attained, including air volume and pressure as well as noise, power consumption, vibration and electromagnetic compatibility.

All products are tested throughout the process, in accordance with the latest industry and regional standards for their intended market sector and application. Regular audit testing is also carried out on a frequent basis.

The entire Smoke range offering from Nuaire has been independently tested.



ACCREDITATIONS & MEMBERSHIPS

Nuaire's reputation for quality has grown through a total commitment to continuous improvement. Nuaire has worked diligently to achieve recognition for both products and facilities. Nuaire is proud to have achieved the following standards and recognition for the efforts made by the entire Nuaire team and partnerships.

QUALITY STANDARDS

- PAS99: 2012
- OHSAS 18001:2007
- ISO 9001:2015 Quality management systems - requirements.
- ISO 14000:2015 Environmental management.

TEST STANDARDS

- BS EN ISO 5801: 2017 - Fans for General Purposes - performance testing using standardised airways.
- ISO 13350 - Fans for General Purposes - performance testing of jet fans.

INFORMATION STANDARD

- ISO 13348 - Industrial fans - tolerances, methods of conversion and technical data presentation.

HIGH TEMPERATURE TEST STANDARD

- EN 12101-3: 2015 - Smoke and Heat control systems - part 3. Specification for powered smoke and heat exhaust ventilators.

ACOUSTIC TEST STANDARDS

- AMCA300:2014 Reverberant Room Method for Sound Testing of Fans.
- ISO13347:2004 Determination of fan sound power levels under standardised laboratory conditions.
- ISO 3744 - Acoustics - determination of sound power levels of noise sources using sound pressure - engineering method in an essentially free field over a reflecting plane.

BALANCE AND VIBRATION STANDARDS

- ISO 1940-1 - Safety of machinery - basic concepts, general principles for design - part 1: basic terminology and methodology.
- ISO 10816-1 - Mechanical Vibration - evaluation of machine vibration by measurement of non-rotating parts - Part 1 general guidelines.
- ISO 14694 - Industrial fans - specifications for balance quality and vibration levels.

SAFETY (DECLARATION OF EC COMPLIANCE) STANDARDS

- EN ISO 12100-1 - Safety of machinery - basic concepts, general principles for design - part 1: basic terminology, methodology.

- EN ISO12100-2 - Safety of machinery - basic concepts, general principles for design - part 2 - technical principles.
- EN60204-1 - Safety of machinery, electrical equipment of machines - part 1: general requirements.
- EN 294 - Safety of machinery - safety distances to prevent danger zones from being reached by the upper limbs.
- EN13857 - Safety machinery - safety distances to prevent danger zones being reached by upper and lower limbs.
- ISO 12499 - Industrial fans - mechanical safety of fans - guarding.

DIRECTIVES

- 2006/42/CE - Machinery Directive
- 2014/30/EU - Low Voltage Directive
- 2014/35/EU - EMC Directive
- 305/2011 - Construction products directives (CPD).
- 2009/125/EC Framework for the setting of Ecodesign requirements for energy-related products.

REGULATIONS

- EU/1253/2014 Ecodesign requirements for ventilation units.
- EU/327/2011 Ecodesign requirements for fans driven by motors.

ATEX REGULATION

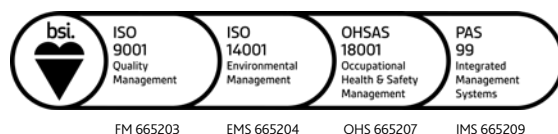
- ATEX 2014/34/EU - Equipment and protective systems intended for use in potentially explosive atmospheres.

ATEX STANDARDS

- EN 14986 - Design of fans working in potentially explosive atmospheres.
- EN 13463-1 - Non-electrical equipment for use in potentially explosive atmospheres - part 1: basic method and requirements.

As well as being accredited by the relevant international bodies, Nuaire is proud to be an active member of these globally-recognised bodies, and works with them to drive up ventilation industry standards worldwide.

MEMBERS OF:



FM 665203 EMS 665204 OHS 665207 IMS 665209



GLOBAL LOGISTICS



Nuaire is renowned for its attention to detail and has over 30 years of experience in delivering ventilation equipment from the UK to worldwide destinations. Nuaire work to ensure the highest standards demanded by the export market are met, ensuring that the shipment arrives on time and in pristine condition.

Nuaire uses a variety of expert logistical partners, covering countries and regions around the world, whilst providing a dedicated point of contact for overseas customers. This is a customer care delivery package, which has set a new standard for the ventilation industry.



All goods are expertly secured by a team of professional packers ensuring your equipment is received in perfect condition ready for installation.

The specialist export team is fully conversant with all documentation, ensuring a smooth, trouble free process from official order through to delivery on site.





OUR SERVICES



DEDICATED CUSTOMER SUPPORT

Nuaire is passionate about customer service and establishing long-term partnerships. To achieve this, there is a specialist team fully conversant with your project and application requirements ensuring you have a smooth and trouble free process.

To achieve the right commercial and economical solution for your project, Nuaire has a dedicated technical support team. The team will be there to support you in the best solution package for the application.

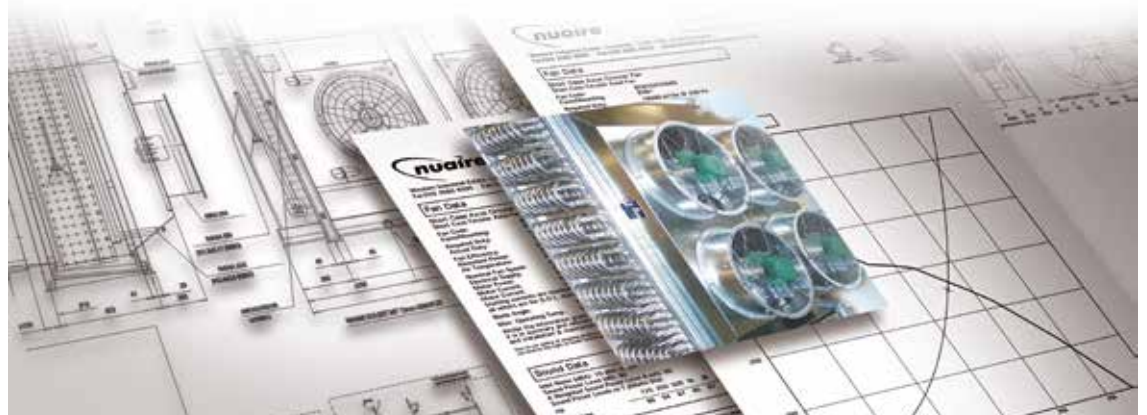
AXIAL CONFIGURATOR

Axial Configurator is a practical and extremely helpful tool to assist with the selection of products to meet your project requirements.

The software provides detailed datasheets comprising efficiency, performance, sounds, wiring, dimensional data and specification. The software allows all of the data to be exported to suit your needs.



Please contact Nuaire for selections specific to your applications and/or to request a copy of our Fan Selector Software.





RANGE SPECIFICATION

The short cased axial range has been designed, developed and tested to meet your demanding project and product requirements. Tested Type A to ISO 5801 for medium and high pressure applications.



NUAIRE'S ErP SPECIFICATION



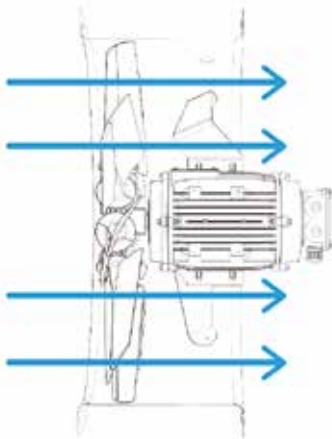
The standard range covers units from 450-1250mm

- ErP Compliant on 2, 4, 6 & 8 Pole Units
- IE3 Efficiency as standard
- Short/Medium Case with twist arm design for optimum efficiency
- -50/60°C Stop/Start operating temperatures
- IP56, Natural Aluminium finish Motor (No Paint)
- Tested for Air Performance & Sound for our application (Type A)
- PTO Thermostat fitted as standard
- Aerofoil & Sickle impeller options
- Impeller material options:
Aluminium, PAG, PPG, 304 & 316 stainless steel
- Case material options: HDG, Painted, 304 & 316L stainless steel

MOTORS WITH REAR MOUNTED TERMINAL BOX

MOTORS

- Efficiency: IE3 Premium Efficiency
- Execution: TENV (Totally Enclosed Non Ventilated)
- Temperature Range: -50 to +60°C, Stop / Start Temperatures
- Ingress protection: IP56
- Insulation: Class F
- Frequency/Voltage: 50Hz: 230/400 Volts & 60Hz: 380/460 Volts
- Construction: Aluminium case, A4 stainless steel fixings
- Finish: Anodised
- Standards: IEC. CSA US Approval
- Thermal Protection: PTO Thermostat
- AC heaters available (Optional)
- Capillary self draining plug

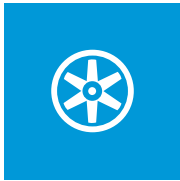


Nuair have relocated the terminal box out of the Air Stream to offer both improved performance and airflow through the fan.



- Capillary drain hole / plug as standard: Vertical & Horizontal.





AXIAL RANGE SPECIFICATION

IMPELLER

- **Type:** Aerofoil & Sickle
- **Material Options:** PAG, Aluminium, PPG
- **Air Flow:** Flow: A, B & Reversing

Additional range options

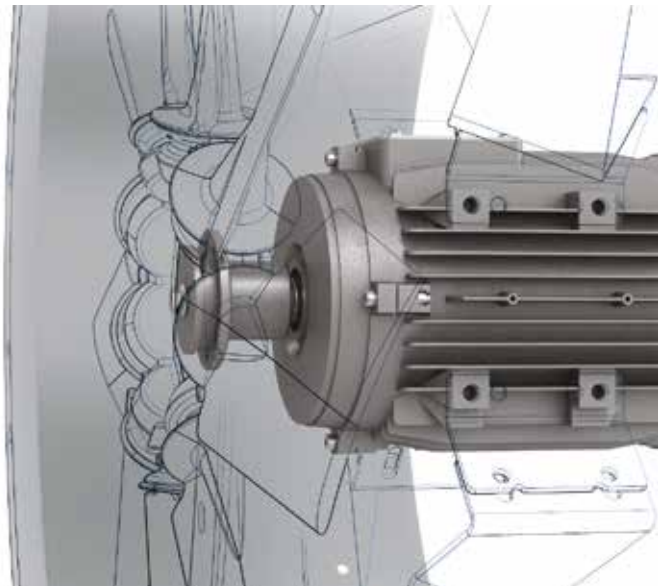
304, 316L & Anodised & Painted options.

CASE

- **Execution:** Short & Medium length cases (Eurovent)
- **Material:** Hot Dip Galvanised after manufacture
- Medium Case for Throw critical applications (**Max: 80 Meters**)

Additional range options

Bellmouth inlet, 304 & 316L stainless steel, Painted options.



TWIST ARM



Unique twist motor mounting support arm design, not only providing rigid motor support, but also ensuring optimum airflow efficiency and throw distribution.

FIXTURE & FITTINGS

GUARDS

- **Motor side** – Zinc Passivated
- **Impeller side** – Zinc Passivated

Additional range options

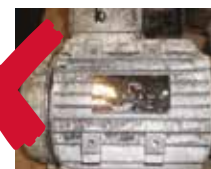
Basket guards, hot dipped galvanised, 304 & 316L stainless steel execution.



FINISH



Paint flaking.



Oxidised motor.

Motors are complete with an anodised surface treatment, eliminating the potential for paint flakes entering the process and prevention of oxidation. Painted options available.





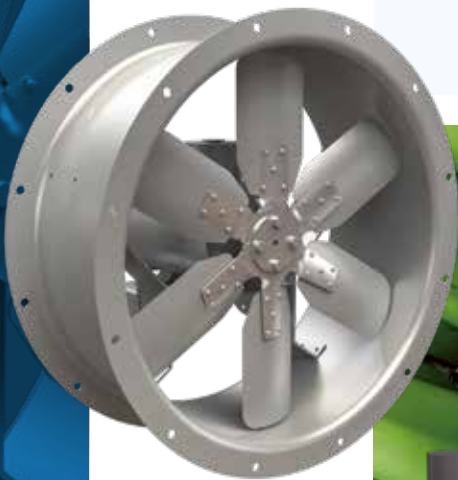
FOOD HYGIENE - STAINLESS STEEL

Nuair recognises the exceptional demand now placed on global food production coupled with the stringent hygiene and wash down requirements for food processing application. To address the demand, Nuair have developed a range of fully stainless steel construction.



KEY BENEFITS:

- ▶ DIAMETERS: 400-1250MM
- ▶ ERP2015 COMPLIANT
- ▶ CASE OPTIONS: STANDARD & BELL MOUTH INLET
- ▶ CASE MATERIAL OPTIONS: 304, 316L STAINLESS STEEL CASE & FIXINGS, PICKLED AND PASSIVATED
- ▶ MOTOR: IE1, IE2, IE3 304 STAINLESS STEEL (FULLY ENCAPSULATED OPTION)
- ▶ IMPELLER: 304 & 316L STAINLESS STEEL AEROFOIL & SICKLE IMPELLER OPTIONS
- ▶ IP OPTIONS: IP55, 56, & 66
- ▶ VOLTAGE/ FREQUENCY: 50/60HZ (380-690 VOLTS)





COLD STORAGE / THROW RANGE

Nuaire has developed an extensive range to meet most cold storage installations with the aim in providing optimum throw patterns by utilising its unique, patent protected twist motor mounting supports.

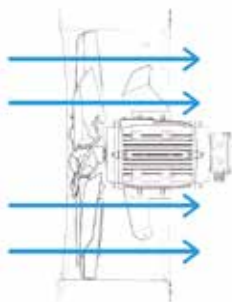


SPECIFICATION OVERVIEW:

- ERP COMPLIANT
- IE3, CSA.US APPROVED MOTORS AS STANDARD
- UNIQUE GUIDE ARM GEOMETRY

KEY BENEFITS:

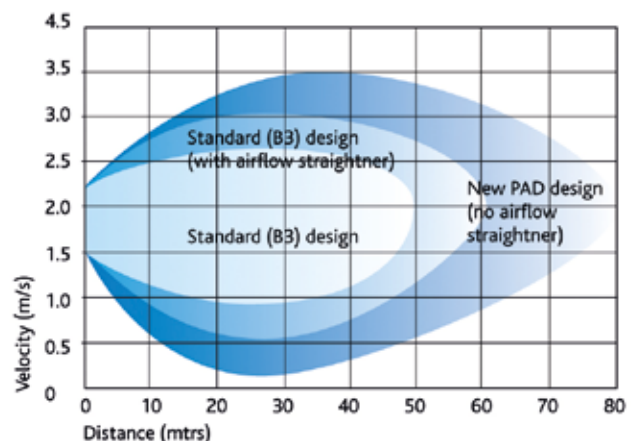
- THROW DISTANCES UP TO: 80 METERS WHILST MAINTAINING A MINIMUM AIR VELOCITY OF 1m/s (4 POLE) & 0.5m/s (6 POLE)
- DIAMETERS: 450-1250MM, SHORT AND MEDIUM CASE, FLOW B INSTALLATIONS (4 & 6 POLE)
- ELIMINATES REQUIREMENT FOR AIR FLOW STRAIGHTENER
- ENSURES THE MINIMUM NUMBER OF UNITS TO MAINTAIN OPTIMUM COOLING RATES AND AIR DISTRIBUTION



80M
WITHOUT
STRAIGHTENERS



THROW VELOCITY





BLAST FREEZING / REFRIGERATION

Nuaire prides itself in offering the right fan solution for the every application, this has never been more the case when it comes to low temperature applications, supported by many years of experience and know how supplying the right fan solution for such project applications.



KEY BENEFITS:

- ▶ RANGE ERP2015 COMPLIANT: CONSTANT & VARIABLE SPEED
- ▶ ROBUST CONSTRUCTION: HDG, 304 & 316L STAINLESS STEEL OPTIONS
- ▶ IE3, CSA.US APPROVED MOTOR
- ▶ FULLY TESTED FOR EFFICIENCY, AIR AND ACOUSTIC PERFORMANCE AT VARYING TEMPERATURES
- ▶ -50 TO +60°C (STOP/START TEMPERATURES) MAX 10 PER HOUR
- ▶ ANODISED MOTOR (NO PAINT)
- ▶ IP56 WITH THE OPTION OF A4 SELF-DRAINING CAPILLARY PLUGS
- ▶ PTO THERMAL OVERLOAD PROTECTION





HYBRID SOLUTIONS

To answer the continued trend towards Hybrid cooling solutions, Nuaire has developed a comprehensive range of high volume, medium to low pressure fan solutions with fan diameters ranging from 800 to 1800mm with range specification to address global project requirements. Designed & tested for your application.



KEY BENEFITS:

- ▶ DIAMETERS: 800-1800MM
- ▶ RANGE: ERP2015 COMPLIANT: 4, 6 & 8 POLE
- ▶ SPEEDS: 4, 6, 8 & 10 POLE
- ▶ VOLTAGE/FREQUENCY: 400V (50HZ) 460 & 380 (60HZ)
- ▶ CASE: SHORT: STANDARD & WITH BELLMOUTH INLET
- ▶ CASE MATERIAL: HDG, 304 & 316L STAINLESS STEEL
- ▶ IMPELLER RANGE: AEROFOIL & SICKLE, PAG, ALUMINIUM & STEEL
- ▶ MOTOR: INSULATION: CLASS F & H (-50 TO + 90°C)
- ▶ MOTORS: 4 & 6 POLE (IE3), 8 & 10 POLE (IE1)
- ▶ MOTOR PROTECTION: IP56, PTO/PTC THERMAL OVERLOAD





POWER GENERATION RANGE



To answer the continued trend towards electro mechanical cooling range, Nuaire has developed a comprehensive range of high volume, medium to low pressure fan solutions with fan diameters ranging from 500-1800mm with range specifications to address global project requirements. Each unit is designed and tested for your application.



KEY BENEFITS:

- DIAMETERS: 500-1800MM
- RANGE: ErP COMPLIANT: 4, 6, & 8 POLE
- SPEEDS: 4, 6, 8, & 10 POLE
- 50/60HZ DUAL FREQUENCY FOR GLOBAL APPLICATIONS
- ROBUST APPLICATION

MARINE SAFE AREA



Nuaire has developed a complete axial fan range for safe area, marine installations to compliment the ATEX Offshore range or indeed be utilised in isolation for such projects where non-hazardous gases are present.



KEY BENEFITS:

- COMPREHENSIVE RANGE OF SAFE AREA FANS
- HDG, 304, 316L STAINLESS STEEL
- DIAMETERS: 400 - 1600MM
- LONG & SHORT CASE EXECUTIONS
- LOW TO HIGH: VOLUME & PRESSURE
- TESTED FOR DUCTED & NON DUCTED INSTALLATIONS
- LLOYDS REGISTERED MOTORS AS STANDARD
- PAINT OPTIONS INCLUDE: C5-M, NORSOK PAINT, NACE INSPECTION, & MANY OTHER OPTIONS AVAILABLE UPON REQUEST
- AIR PERFORMANCE & SOUND TESTED
- PAINTED, ALUMINIUM, ST/ST IMPELLER OPTIONS





ATEX RANGE



ATEX RANGE

Nuaire has designed and developed a complete range of axial flow fans suitable for use in potentially explosive atmosphere in compliance with the ATEX Directive for onshore and offshore installations.

All ATEX projects are dealt with by our dedicated technical applications team who understand the detailed approach needed to succeed with these demanding projects.

A full range of motors are available for both hazardous GAS and DUST applications.



KEY BENEFITS:

- ▶ FULLY COMPLIANT WITH ATEX DIRECTIVE 2014/34/EU
- ▶ DIAMETERS: 400-1250MM, SHORT & LONG CASE (LARGER DIAMETER ON REQUEST)
- ▶ COMPREHENSIVE RANGE OF HAZARDOUS ZONE MOTORS TO MEET YOUR PROJECT REQUIREMENTS
- ▶ CASE OPTIONS: 316L STAINLESS STEEL & HDG WITH OFFSHORE FINISH (C5-M, NORSOK ETC)
- ▶ PRE-FITTED ANTI-SPARK TRACK
- ▶ IMPELLER MATERIAL OPTIONS: 316L STAINLESS STEEL, ALUMINIUM COMPLETE WITH A RANGE OF PAINT FINISHES AVAILABLE
- ▶ EXD, EXE, EXN, ZONE 1 & 2
- ▶ IMPELLER PROFILES: AEROFOIL & SICKLE, IN ALUMINIUM & STAINLESS STEEL



Fully tested for your Application in Accordance with the ATEX Directive 2014/34/EU.





ATEX RANGE (OFFSHORE RANGE)



OIL GAS AND MARINE APPLICATIONS (INCLUDING MARINE SAFE AREA)

Nuaire has designed and developed a complete range of axial flow fans suitable for use in potentially explosive atmospheres, Safe Area and ATEX marine applications. Nuaire's ATEX fan designs are underpinned by an in-depth knowledge of the stringent environmental guidelines and the hazardous conditions that the fans are required to service, or indeed to be utilised in isolation for non-hazardous environments.

The range has been designed and tested to address your varied installation requirements with a robust fan execution to withstand the extreme environmental conditions. Nuaire fans have been designed and built in accordance with the ATEX directive 2014/34/EU and can be fully tailored to your application and environmental requirements.



OIL, GAS AND MARINE APPLICATIONS

- Diameters: 400 - 1250mm
- Short & long case execution
- EXD, EXE, EXN
- ATEX Directive 2014/34/EU
- Offshore paint options C5-M, NORSOK
- Motor options: Siemens, ABB Motors, Cemp

OFFSHORE - MARINE SAFE AREA

- Case options: HDG, 304, 316L stainless steel
- Short & long cased execution
- Diameters: 400 - 1600mm
- Low to High: Volume & pressure
- Tested for ducted & free inlet installations (Type A & D)
- Lloyds Registered Motors as standard for safe area application
- C5-M, NORSOK paint, other options available on request
- Air performance & sound tested
- Impeller options: Aluminium & stainless steel





CUSTOM SOLUTIONS

Nuaire pride themselves on working closely with clients at every stage in their product development process. The latest manufacturing technology and accredited test facilities enables us to offer a flexible approach to the design and build of the right fan solution. Nuaire's focus is not only on the fan solution, but on its interface with the customer's equipment and manufacturing process, resulting in a reduction in assembly costs in most cases.



KEY BENEFITS:

- ▶ SPECIFIC CASE DESIGN
- ▶ BESPOKE SHEET METAL FABRICATION
- ▶ PRE-WIRING FOR INTERFACE WITH THE ORIGINAL EQUIPMENT
- ▶ A RANGE OF MATERIAL OPTIONS
- ▶ CLIENT SPECIFIC TESTING
- ▶ BESPOKE FAN SELECTION SOFTWARE



Please contact Nuaire for selections specific to your applications and/or to request a copy of our Fan Selector Software.

OPTIONAL CONFIGURATIONS:

- IE4
- 2 Speed
- 60Hz
- High Ambient Temperature 80°C
- Low temperature -70°C
- Special voltages
- Special case design
- Class H





HIGH TEMPERATURE AXIAL RANGE 300°C/2Hrs & 400°C/2Hrs

Nuaire offers a comprehensive range of high performance axial fans, from 250mm to 2000mm diameter that will suit applications up to 120m³/s duty range, including AXUS High Temperature Axials, Smoke Contra Axials and Smoke Run and Standby Axials.



KEY BENEFITS:

- ▶ **INDEPENDENTLY TESTED** - EN 12101-3:2015
- ▶ **HIGH PERFORMANCE** - UP TO 120M³/s
- ▶ **FLEXIBLE SOLUTION** - SUITABLE FOR INTERNAL & EXTERNAL APPLICATIONS
- ▶ **WIDE RANGE** - WITH THE WIDEST RANGE OF AXIAL SOLUTIONS CONFIGURED TO MEET YOUR PROJECT REQUIREMENTS, ENSURING OPTIMUM FAN EFFICIENCIES
- ▶ **ENERGY EFFICIENT** - RANGES DEVELOPMENT FOCUSED ON MEETING GLOBAL EFFICIENCY STANDARDS
- ▶ **GALVANISED STEEL CONSTRUCTION** - ENSURES STRENGTH, DURABILITY & PROTECTION
- ▶ **AMCA APPROVED LABS** - BOTH TYPE 'A' & 'D' LABORATORIES AT NUAIRE ARE ACCREDITED TO THE AMCA STANDARD
- ▶ **TESTED TO THE HIGHEST STANDARDS** - AIR PERFORMANCE TO ISO 5801 (PART 1) 2017 WITH ACOUSTIC PERFORMANCE TO AMCA 300 & ISO 13347





HIGH TEMPERATURE AND AMBIENT HIGH PRESSURE AXIAL RANGE

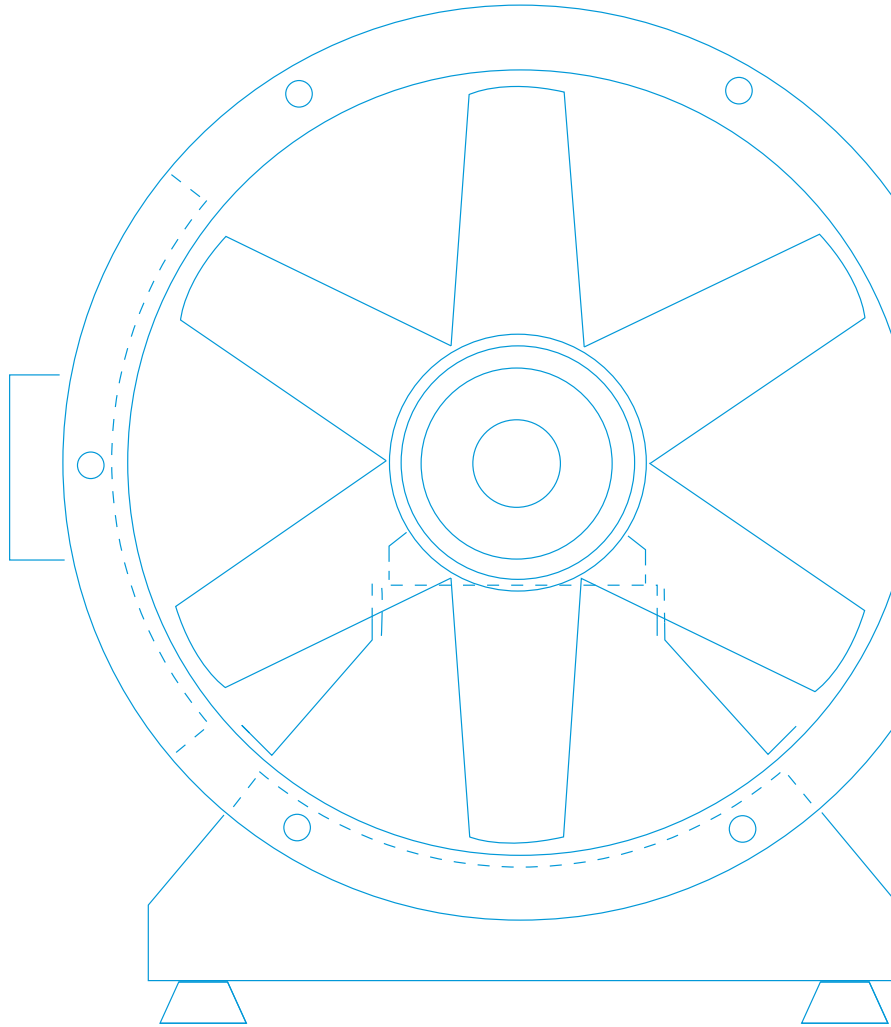
The AXUS high pressure range of axial flow fans are designed for 'in-duct' applications. Manufactured from mild steel and then galvanised, making the unit suitable for indoor and outdoor applications.



KEY BENEFITS:

- ▶ **HOT DIPPED GALVANISED STEEL CONSTRUCTION** - ENSURING STRENGTH, DURABILITY & PROTECTION
- ▶ **HIGH PERFORMANCE** - DUTY UP TO 25M³/S WITH PRESSURE UP TO 2000PA
- ▶ **HIGH TEMPERATURE** - INDEPENDENTLY TESTED TO EN12101-3
- ▶ **FLEXIBLE SOLUTION** - SUITABLE FOR INTERNAL & EXTERNAL APPLICATIONS, & VERTICALLY OR HORIZONTALLY
- ▶ **TESTED TO HIGHEST STANDARDS** - AIR PERFORMANCE TO ISO 5801 (PART 1) 2017
- ▶ **AMCA APPROVED LABS** - BOTH TYPE 'A' & 'D' LABORATORIES AT NUAIRE ARE ACCREDITED TO THE AMCA STANDARD





NUAIRE. FOR THE COMPLETE VENTILATION SOLUTION

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