



60Hz VENTILATION SOLUTIONS



NUAIRE. FOR THE COMPLETE VENTILATION SOLUTION



WITH A RECORD OF QUALITY WHICH IS THE ENVY OF THE INDUSTRY...

...Nuaire is a British company with a long history of innovation in a field of ventilation and air movement solutions, and its products are known across the world for their superb quality and efficiency.

Founded in 1966, Nuaire has a long and much-admired heritage in developing and manufacturing ventilation products. The company's products are 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 USA and Asia.





CAR PARK VENTILATION HOW IT WORKS

With jet fans available in both axial and centrifugal versions, Nuaire's car park ventilation system has a number of benefits. Not only does the low depth unit save space and money by eliminating the need for complicated and expensive ductwork, but it is also extremely energy efficient as it monitors the air quality and operates the system at its optimum level, reducing the running costs by up to 40%. Also, fewer fans are required as they distribute the air over such a large area.



One of the biggest hazards in the event of a fire is that of smoke inhalation. Nuaire smoke rated control systems provide a flexible directional flow to respond to any fire location, containing, channelling and removing the smoke to facilitate safe evacuation and more effective fire fighting access.

Units have a unique mounting bracket to allow for quick and easy installation in two simple stages and inlet and outlet silencers that ensure low noise levels. Most importantly, all equipment is safety tested to EN12101-3 at both 300°/400°C for 2 hours.

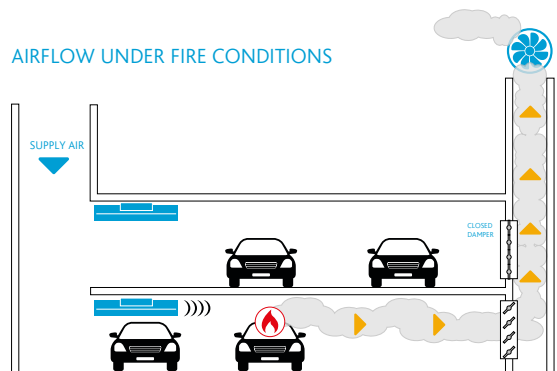
The carpark jet fan system is used to control and remove contaminants on a day to day basis, whilst ensuring that smoke is removed quickly and efficiently in the event of a fire. The system utilises a number of strategically positioned jet fans, mounted on the ceiling, that direct the fumes and smoke towards a designated point of exhaust.

This in effect creates a virtual smoke barrier ensuring quick and effective clearance whilst keeping the rest of the car park smoke free. This removes the need for complicated ductwork systems and optimises space.

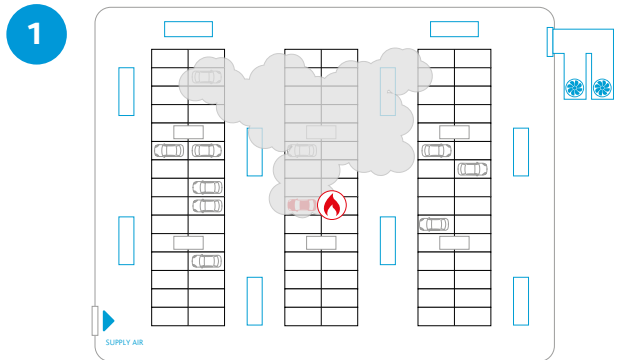
UNIQUE MOUNTING BRACKET



AIRFLOW UNDER FIRE CONDITIONS

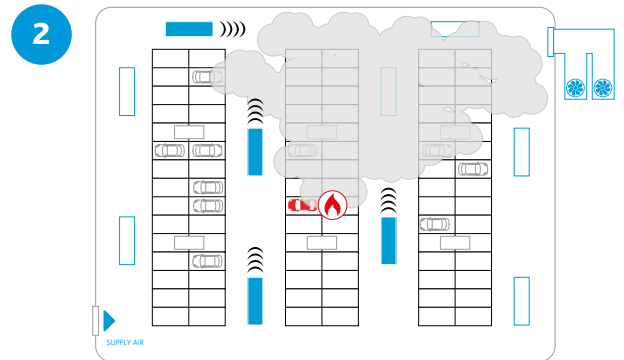


EXAMPLE OF JET FAN SYSTEM



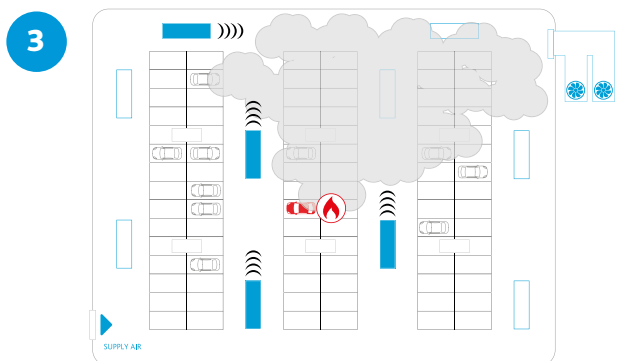
STAGE 1

In day-to-day operation the system runs in low speed ensuring carbon monoxide and other contaminants are within acceptable limits. Control is via strategically placed detectors. If a fire starts in one of the vehicles, and smoke spreads, the system starts.



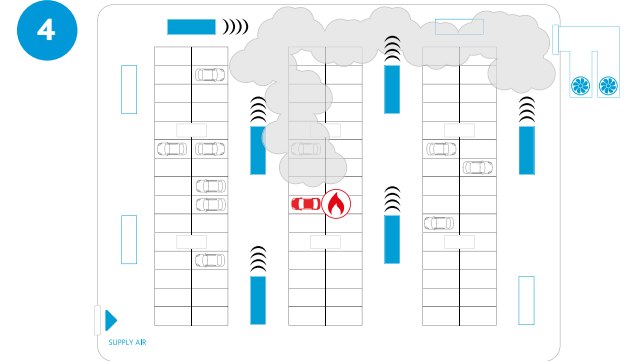
STAGE 2

The smoke detection system will identify the situation, activate the fire alarm system and then switch to smoke mode.



STAGE 3

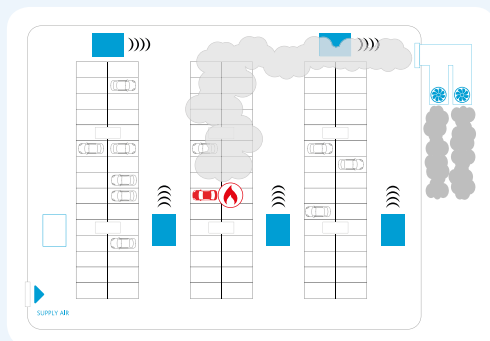
Smoke detectors throughout the car park identify the units which are located at the affected fire zone and increase their fan speed to maximum.



STAGE 4

The smoke is contained and directed towards the main exhaust unit, where it can be safely extracted into the atmosphere. This minimises the spread of smoke within the car park, keeping large areas clear and enabling the area to be quickly and safely evacuated.

WHY CHOOSE INDUCTION OVER IMPULSE?



INSTALLED COSTS

Reduced number of units, resulting in a reduced project installed cost.

BACKWARD CURVED IMPELLER

Suitable for high thrust and low noise applications.

LOW PROFILE

Ideal for reduced height area and can prove more suitable than a jet fan and ducted installations.

SUITABLE FOR HIGH CEILINGS

Draws the air upwards, providing a more effective method of extracting the smoke than a jet or axial installation.

THRUST

The induction range will provide a greater range of area (m²) coverage which can result in a lower number of units required to service the car park.



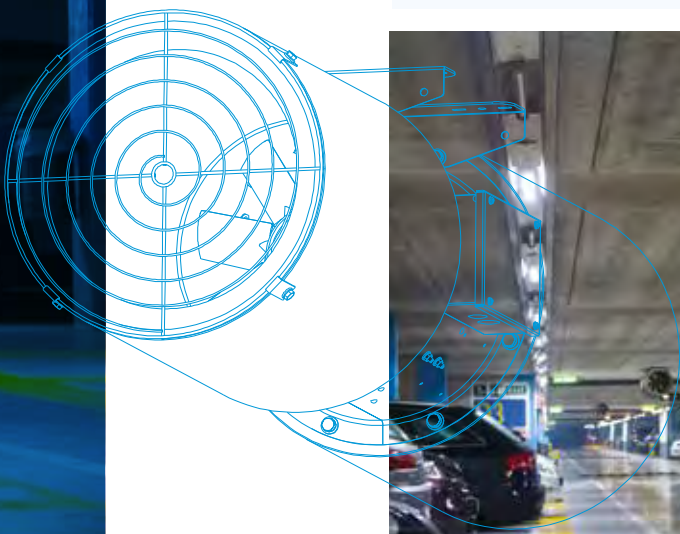
CAR PARK IMPULSE SYSTEM IFC & IFC8

Nuaire's Car Park Impulse Fan Configuration units are typically used as part of a car park ventilation system; with a low profile and flexibility in configuration to suit the project requirements.



KEY BENEFITS:

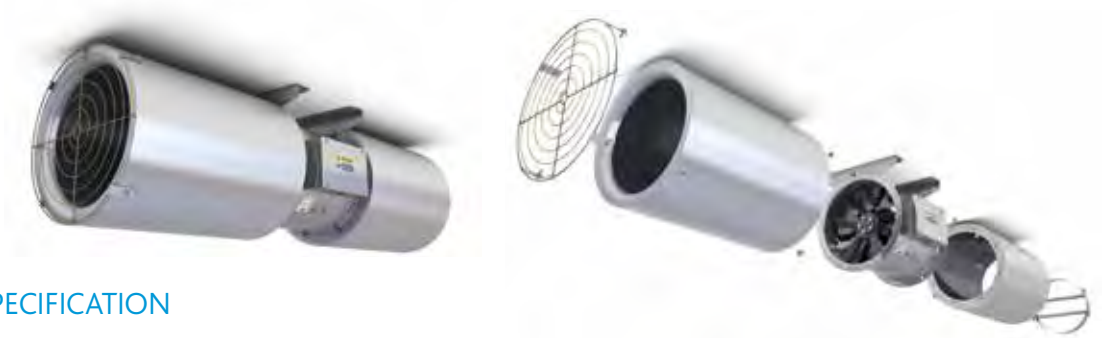
- ▶ **HIGH TEMPERATURE** - FANS ARE CERTIFIED TO EN12101-3:2015, 300°C & 400°C FOR 2 HOURS.
- ▶ **SPACE SAVING** - LOW DEPTH UNIT, MAXIMISING CAR PARK SPACE AVAILABILITY.
- ▶ **QUIET SYSTEMS** - UNIT INCORPORATES INLET AND OUTLET ATTENUATORS TO REDUCE NOISE LEVELS.
- ▶ **ENERGY EFFICIENT** - BY MONITORING THE AIR QUALITY AND OPERATING THE SYSTEM AT ITS OPTIMUM LEVEL THE OVERALL MOTOR POWER AND RUNNING COSTS CAN BE REDUCED BY UP TO 40%.
- ▶ **COST SAVINGS** - LESS DUCTWORK CAN TYPICALLY REDUCE COSTS BY UP TO 30%.
- ▶ **QUICK AND EASY INSTALLATION** - SINGLE STAGE, 'QUICK' INSTALLATION.
- ▶ **REVERSIBLE OPTIONS AVAILABLE.**
- ▶ **PAINTED OPTIONS AVAILABLE.**



50Hz

60Hz

300°C/
400°C



CONSULTANTS SPECIFICATION



CASING

Fan section manufactured from pre-galvanised steel incorporating integral guide vanes. The two attenuators are made from Aluzinc. The inlet silencer has a conical inlet, and the outlet silencer is standard execution. The axial case is fitted with integral guide vanes both made of pre-galvanised mild steel. The deflector on the outlet is manufactured from pre-galvanised steel and the inlet guard is zinc passivated.



MOTOR

Motors are pad mounted and totally enclosed and protected to IP55 with Class H insulation. Motors are available in two speed or single speed (with VSD operation).



CERTIFICATION AND OPERATING TEMPERATURE

Complete units are tested to BS EN 12101-3 for both 300°C and 400°C for two hours.



IMPELLER

Available in either aluminium for 300°C for 2 hours application or high-efficiency mild steel blades for 400°C for 2 hours application to optimise both air performance and sound to suit the project requirements.



INSTALLATION

The IFC units are designed for quick and easy installation and are supplied with a pre-wired IP55 terminal box. Mounted brackets are also supplied fitted for single step installation.



PERFORMANCE

The units are available in different thrust options.

- 300°C/2hrs
- 23/6N
- 35/9N
- 61/15N
- 400°C/2hrs
- 24/6N
- 38/9N
- 65/16N



AIRFLOW

Inlet guards are fitted for safety purposes and to prevent debris from entering the fan. The unit is fitted with a specifically designed airflow deflector to direct the Jetstream from the fan at the required angle sufficient to overcome the natural buoyancy effect of the smoke. Reversible options are available. Contact Nuairé for details.



SYSTEM DESIGN

The IFC units are typically used as part of a car park ventilation system to control and remove pollutants, such as carbon monoxide and in case of a fire scenario. The fans are strategically distributed throughout the car park in accordance with local regulations. Nuairé can provide a design for your project needs.



ANCILLARIES

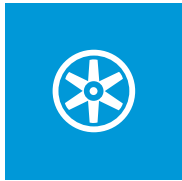
- Anti-vibration mounts



APPLICATIONS

TYPICAL APPLICATIONS

- Car parks
- Tunnels



CAR PARK IMPULSE SYSTEM IFC & IFC8

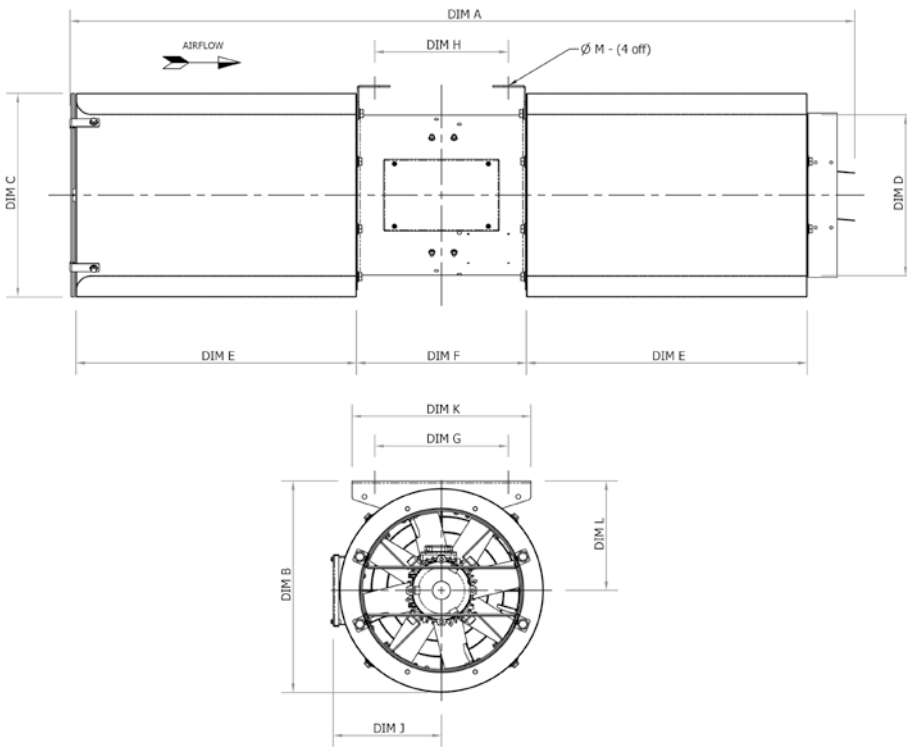
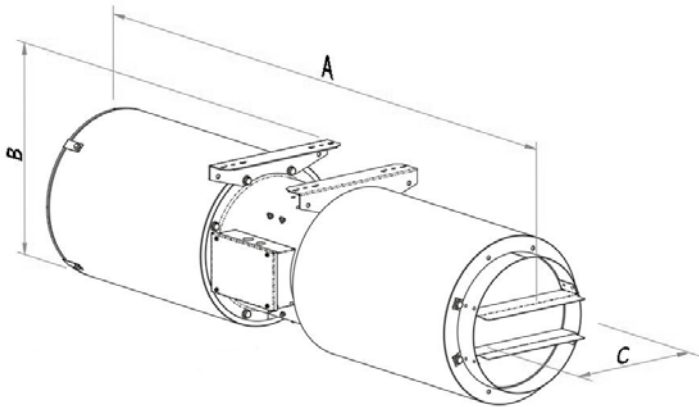
CODING IFC8-35AW-D

IFC 8 - 35 A W - D

1 2 3 4 5 6

SAMPLE CODING

1. IFC - Impulse fan configuration
2. No suffix - 300/2
8 - 400/2
3. Case size/performance range
4. Impeller reference
5. Blade angle
6. No Suffix - 50Hz
G - 460v 60Hz
J - 380v 60Hz



DIMENSIONS (MM) AND WEIGHT (KG)

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	WEIGHT
IFC-31	1741	419	417	314	628	365	260	284	221	360	210	11	43
IFC-35	1756	473	456	354	628	380	300	300	243	400	245	11	48
IFC-40	2279	531	502	405	860	440	350	359	270	450	280	11	58

300°C

TECHNICAL AND PERFORMANCE DATA

FAN REFERENCE	60Hz					
	IFC-31D-BG	IFC-35D-BG	IFC-40D-BG	IFC-31D-BJ	IFC-35D-BJ	IFC-40D-BJ
Thrust Newtons: Full/Half Speed	23/6	35/9	61/15	23/6	35/9	61/15
Motor Kw: Full/Half Speed	1.1/0.25	1.1/0.25	1.5/0.37	1.1/0.25	1.1/0.25	1.5/0.37
Protection Class	IP55	IP55	IP55	IP55	IP55	IP55
Insulation	H	H	H	H	H	H
Electrical Supply	460/3/60	460/3/60	460/3/60	380/3/60	380/3/60	380/3/60
Motor FLC amps: Full/Half Speed	2.3/0.73	2.3/0.73	3.2/1.11	2.78/0.88	2.78/0.88	3.87/1.34
Motor SC amps: DOL Full/Half Speed	16.6/3.4	16.6/3.4	24/5.33	20/4.15	20/4.15	29.1/6.45
Sound dBA @3m: Full/Half Speed	66/52	68/53	68/54	66/52	68/53	68/54
Material Finish:	Galv Steel	Galv Steel	Galv Steel	Galv Steel	Galv Steel	Galv Steel

400°C

TECHNICAL AND PERFORMANCE DATA

FAN REFERENCE	60Hz					
	IFC8-31AV-BG	IFC8-35AW-BG	IFC8-40AW-AG	IFC8-31AV-BJ	IFC8-35AW-BJ	IFC8-40AW-AJ
Thrust Newtons: Full/Half Speed	24/6	38/9	65/16	24/6	38/9	65/16
Motor Kw: Full/Half Speed	1.1/0.25	1.1/0.25	1.5/0.37	1.1/0.25	1.1/0.25	1.5/0.37
Protection Class	IP55	IP55	IP55	IP55	IP55	IP55
Insulation	H	H	H	H	H	H
Electrical Supply	460/3/60	460/3/60	460/3/60	380/3/60	380/3/60	380/3/60
Motor FLC amps: Full/Half Speed	2.3/0.73	2.3/0.73	3.58/1.23	2.78/0.88	2.78/0.88	4.33/1.49
Motor SC amps: DOL Full/Half Speed	16.6/3.43	16.6/3.43	24.1/5.39	20/4.15	20/4.15	29.1/6.53
Sound dBA @3m: Full/Half Speed	65/50	68/54	69/55	65/50	68/54	69/55
Material Finish:	Galv Steel	Galv Steel	Galv Steel	Galv Steel	Galv Steel	Galv Steel

AXJ - HIGH VARIABLE THRUST RANGE

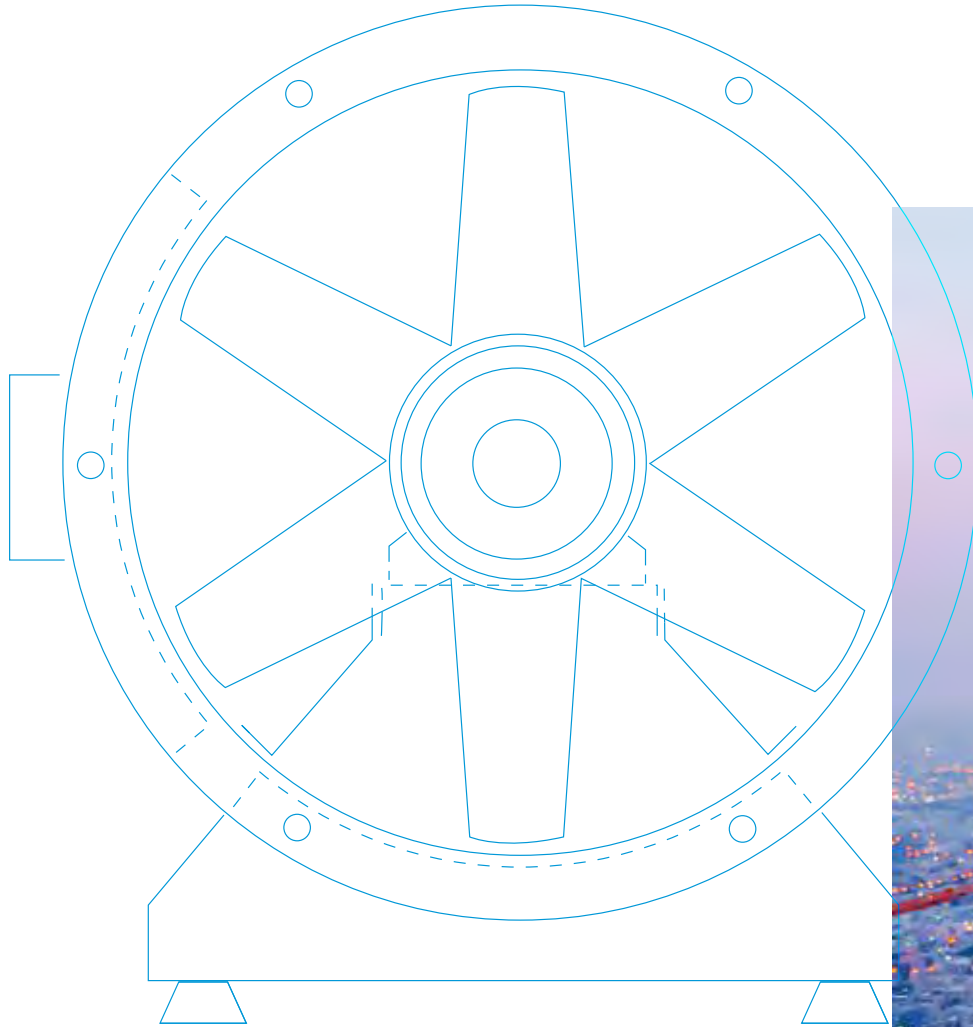
The AXJ range is composed of our High temperature axial fan in a bespoke Impulse Fan Configuration (AXJ).

The key benefits of this range are the virtually limitless choice of thrust values available, as well as many other configurable options to suit each project, with the benefit of the unit and all of the ancillaries EN 12101-3 2015 certified as a complete unit for assurances on site.

Nuaire's Axial Fan Configurator (AxCon) software includes a thrust calculator that enables selections of impulse fans from 10N up to 1300N thrust, and everything in between. Fan can alternatively be selected to achieve a specific airflow.

There is a large variety of parameters available enabling the customer to fix diameter/kW and high motor efficiency. Fans are available with smoke rating approved to EN 12101-3 2015 for both F300 and F400.

The AXJ range is typically used to meet thrust parameters, which are not available in the standard range. These can now be selected on AxCon or contact Nuaire for more information.



NUAIRE. FOR THE COMPLETE VENTILATION SOLUTION

T +44(0)29 2085 8484 E INTERNATIONAL@NUAIRE.CO.UK W NUAIRE.CO.UK [@NUAIREGROUP](https://twitter.com/NUAIREGROUP)

