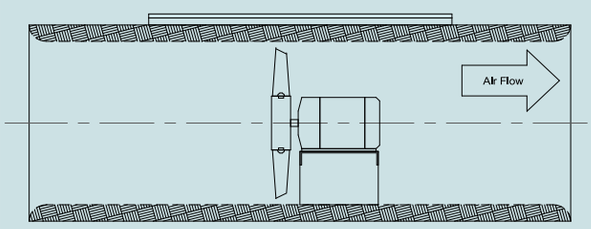
AFCP-3G 315-129-8-40°

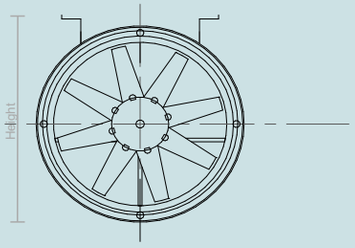
AIR FLOW

An ISO 9001:2008 Company

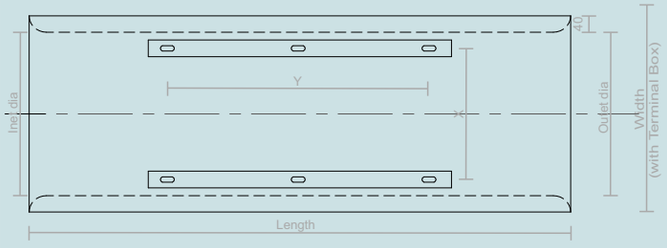
AFPL:A57: C25 July 2020



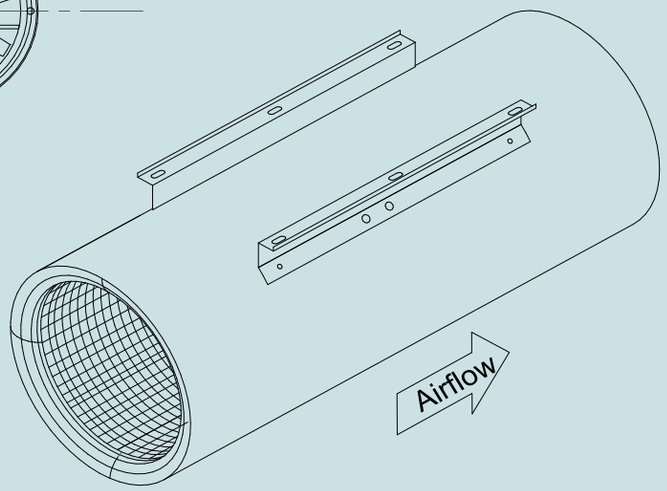
Sectional Front View



Side View



Top View



Fan Model	Inlet (ϕ) & Outlet (ϕ) Dia	Length	Width	Height	# blades	Fixing X x Y
AFCP-3G 315-129-8-40º	317mm	1250	450	425	8	323 x 477

Company Profile

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We "Efforts combined with a sincere selfless commitment and continuous pursuance of excellence Translate into Success;''

At Air Flow, these 4 decades of existence have been an endless process of attaining 'Success' with enhancing capabilities, consolidating commitment and cementing faith in quality and innovation. Right from the inception in 1973, we have been leaders in manufacturing , Exporting and importing Air Terminal Products, Air Distribution Products, Smoke/Fire Damper, Jet Fans Axial Flow Fans, Centrifugal Fans, Flexible Duct Connectors, Jet Nozzles and Louvers through this long duration of time. The way we're empowering our product line and winning laurels from our clients world over by continuously improving upon our existing set on skills, technology, and range, we are poised to set more and more landmarks globally in the future.

Being in the good books of architects, consultants, contractors and builders is one of the key assets we cherish from the core of our heart. Yet again, it's the idea of giving this best and always raising the bar of standards high that propel us towards accomplishing what many think impossible. AMCA Certification for Fans, Fire Rating for Axial Flow Fans, truly stands the acknowledgment of the most powerful characteristic of the Company as ever.

Not only did we set new benchmarks in achieving the Exova and AMCA Certification for our Axial Flow Fans, we happen to be the sole manufacturers of the one of a kind UL Listed Axial Flow fans in the Aisa Certified by Underwriters Laboratories in accordance with UL-705. Now-a-days, the UL Fans has become important part of basement ventilation.

Air Flow has a team of hard core professionals who believe in ' just make it happen' Our tremendous growth over the year speaks volumes about our professional integrity and never-say–die spirit. Surely, at Air Flow we understand the importance of staying self-motivated and determined to make a difference through what we do'

Introduction

AFCP-3G 315-129-8-40° within sound attenuator of length 1250mm, Covers a wide range of volumetric flow at Free discharge and different pressure conditions. Fans are Aluminum alloy impellers with adjustable blade.

Features

a) High efficiency
b) Quality raw materials
c) Versatile construction
d) Long life finish

Typical application

a) Car Parking & basement ventilation
b) Tunnel ventilation
c) Industrial processes Ventilation
d) Spot Cooling

Advantages for Air Flow Fans

a) Product reliability : Fire Rating for these fans ascertain the building occupants, that in case of fire with smoke, Air flow Fans would continuously extract 300Deg C of heat and smoke for atleast 120min, in accordance with BSEN: 12101-3:2015 standard
b) Simple project Design : Can Eliminates need to perform huge and costly duct design
c) Fast Installation : Easy installation Fast project execution and saves client cost
d) Indoor Air Quality : Project designed at lower rpm to maintain healthy IAQ level, Fans can integrate with CO sensors to maintain well ventilated space and saves energy
e) Low Maintenanece : These Fans are easily accessible and easy for maintenance

- FAN MODEL : AFCP-3G 315-129-8-40º

Fan outlet and Inlet area: 0.079 sq. mtr.

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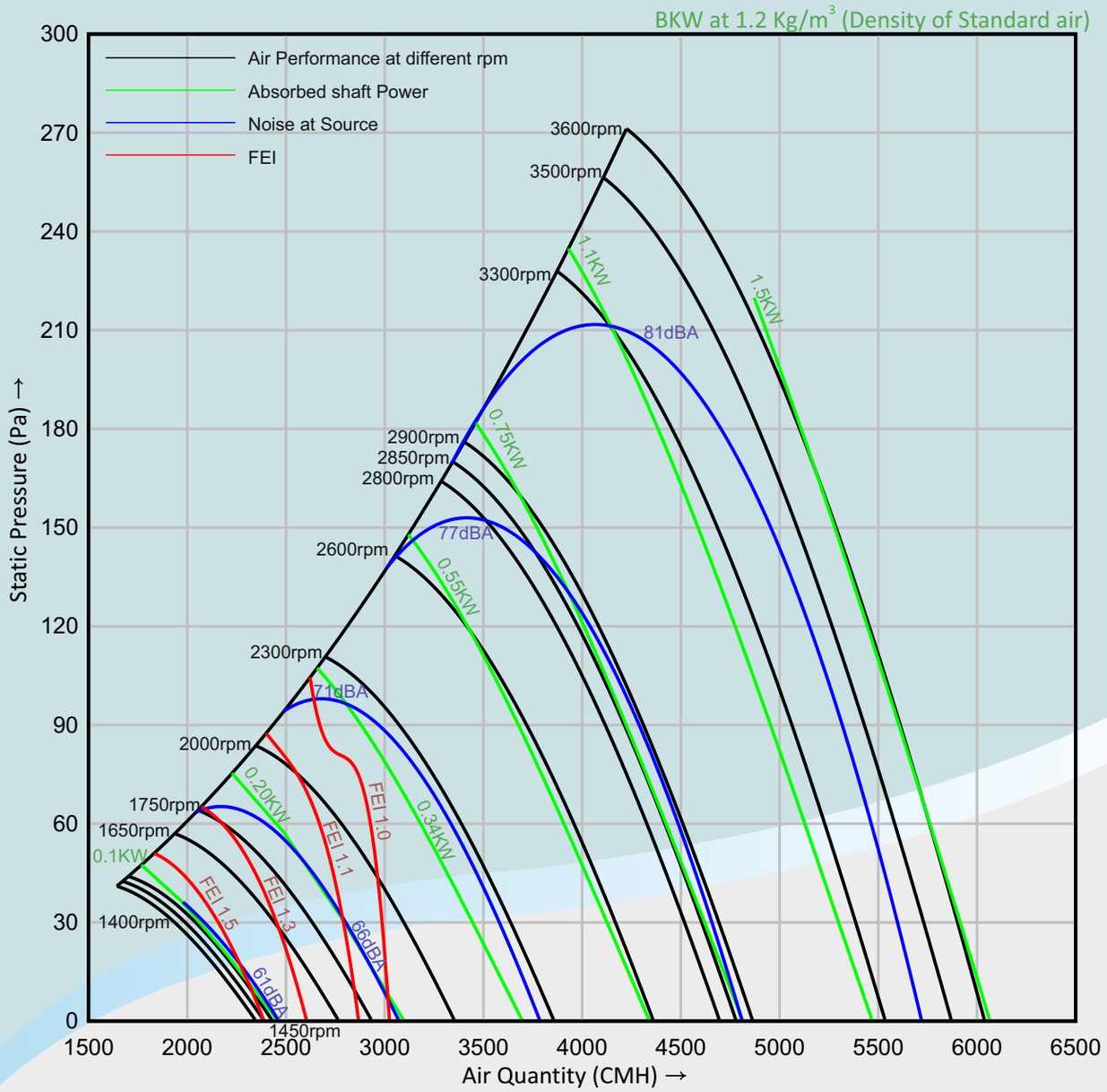


Air Flow Pvt. Ltd. certifies that the AFCP-3G 315-129-8-40º shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation Type A - Free inlet, Free Outlet.
The AMCA certified ratings seal applies to the FEI for model AFCP-3G 315-129-8-40º

Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi and inlet LwiA sound power levels for Installation Type A: Free inlet, Free outlet.
The sound power level ratings shown are in decibels, referred to 10^{-12} watts, calculated per AMCA International Standard 301.

CMH	St. Pr. mmWG	RPM	BKW	Sound Power Levels Lwi(dB)								Overall LwiA (dBA)	At 1.15Kg/m³ density (BKW)	
				63	125	250	500	1000	2000	4000	8000			
4780	0.0	2850	0.734	75	76	72	70	68	67	70	66	75	0.704	
2390	0.0	1425	0.092	61	57	55	53	52	54	51	47	59	0.089	
5870	0.0	3500	1.360	79	80	78	75	73	71	73	71	80	1.304	
2935	0.0	1750	0.170	67	65	60	60	57	60	58	53	64	0.163	

Ductless System

Chapter 16, ASHRAE Hanbook 2019, Parking Garages

Like some tunnel ventilation systems designs, ductless designs use jet fans to dilute and remove contaminants and control smoke. Ductless ventilation systems are considered acceptable to many global AHJs (authorities having jurisdiction) and continued to grow in popularity. However, the corresponding design methodologies and requirement vary substantially across the globe.

There are several basic components required in a ductless system:

(1) A supply and exhaust fan system

(2) jet fans used to mix the air and eliminate any dead spots in the system (but do not impact the air changes per hour); and

(3) control panels combined with contaminant sensors to save energy by controlling the contaminant levels only as needed (demand based).

Design Consideration for Ducted System

(4) Appropriate duct sizing to ensure proper supply and exhaust throughout the space.

(5) Clearance height requirements to allow traffic flow underneath Duct.

(6) Distribution strategy through parking garage to keep cost at minimum.

(7) Areas of higher contaminant injection that may require a nonuniform exhaust.

Design Consideration for Ductless System

(8) When conducting the CFD analysis, it is important to identify appropriate contaminant levels, and ensure that simulation accurately represent the space. This requires a three-dimensional model of area. Parameters should be evaluated carefully when comparing different simulations.

(9) Height clearance requirements must be evaluated to ensure traffic can safely pass beneath the equipment.

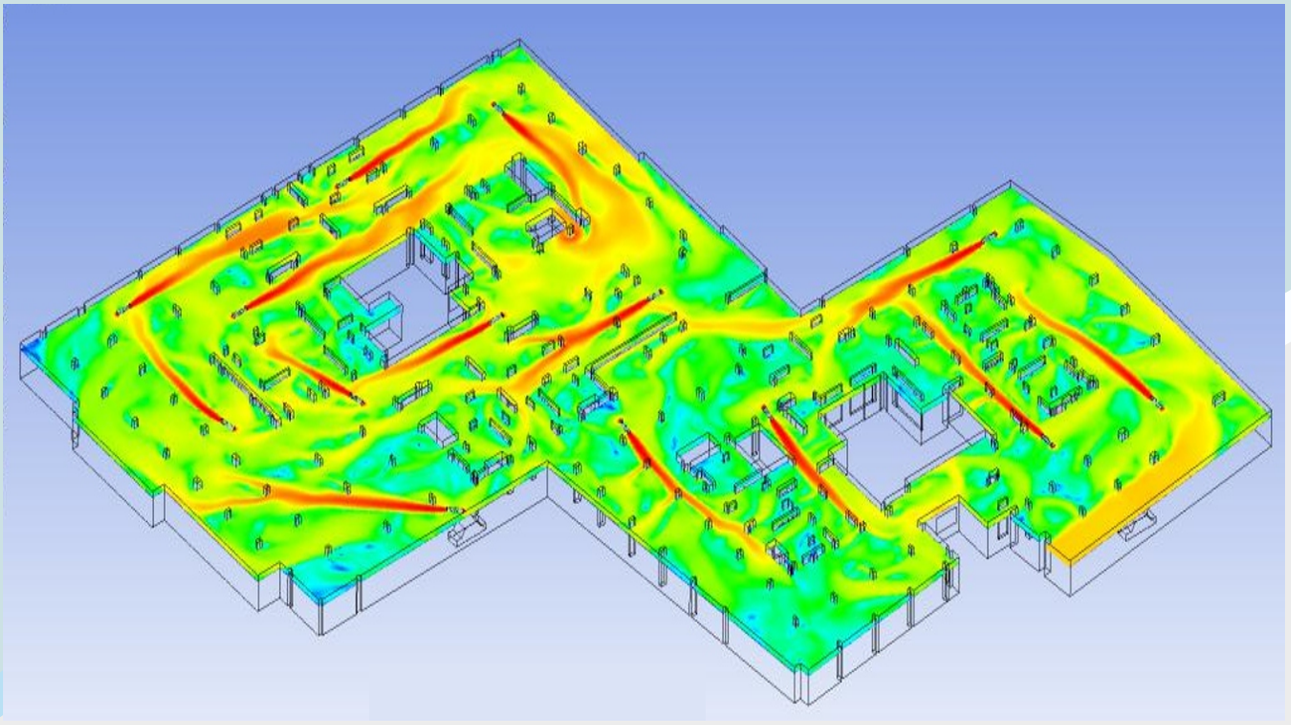
(10) If designing a demand-based system, the designer must consider where the sensors are placed, along with which sensors correspond to which jet fans.

(11) When designing for smoke control, the designer must consider how fan placement directs smoke away from pedestrian exits.

CFD Analysis of Car Parking

The use of Computational Fluid Dynamics (CFD) is most effectively used at early design stage: 'prevention is better than cure', but can be used as a tool for solving existing problems.

- It is used to model and analyze airflow in complex systems such as car-parking, mining, tunnel and so on.
- It is able to calculate solutions for velocity, pressure, temperature and contaminants.
- CFD analysis of a car park design is an effective way of ensuring that the distribution of air is sufficient to effectively ventilate the car park.
- It can be used to model both the general ventilation (pollution) and emergency ventilation (smoke) cases.
- Rather than simply complying with regulations CFD offers the opportunity to provide an engineered solution to car park ventilation.



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Catalouge reference - AFPL:A57: C25 July 2020