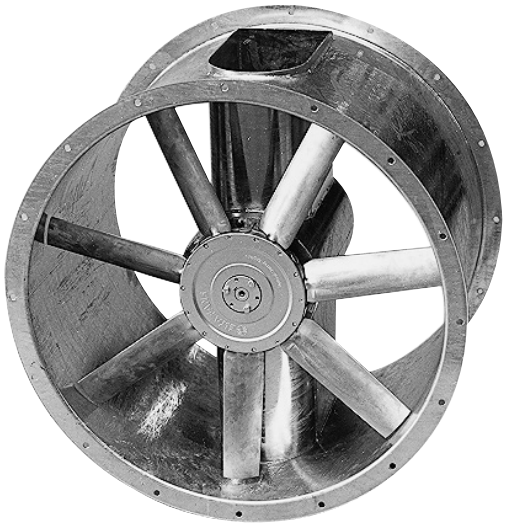
# ADJUSTABLE PITCH AXIAL FLOW FANS - AC







## DESCRIPTION

The AP Series of axial flow fans is available in an extensive range of variants and air flow performance. They can be manufactured to handle most conditions from ambient air to hot, corrosive or explosive gases and can be ordered in 13 sizes extending from 315 to 2000mm diameter.

### Typical Applications

Commercial and industrial supply or exhaust air applications such as shopping centres, office buildings and car parks, through to industrial processes and equipment ventilation.

### Smoke-Spill Applications

The APS Series has been tested to meet the air performance and high temperature test requirements of Standards AS/NZS1668.1:2015 and AS4429:1999; both tests are mandatory.

For advice on smoke-spill wiring requirements refer to the above Standards.

*See page C-8* for details of the smoke-spill range available.

### Hazardous Fume Applications

AP Series fans can be made to accommodate requirements for corrosive fume and explosion risk applications. Special coatings and alternative materials, such as stainless steel, are available as well as increased safety motors and anti-static impellers. Our sales engineers are able to assist with requirements, which must be specified at time of quotation.

### Features

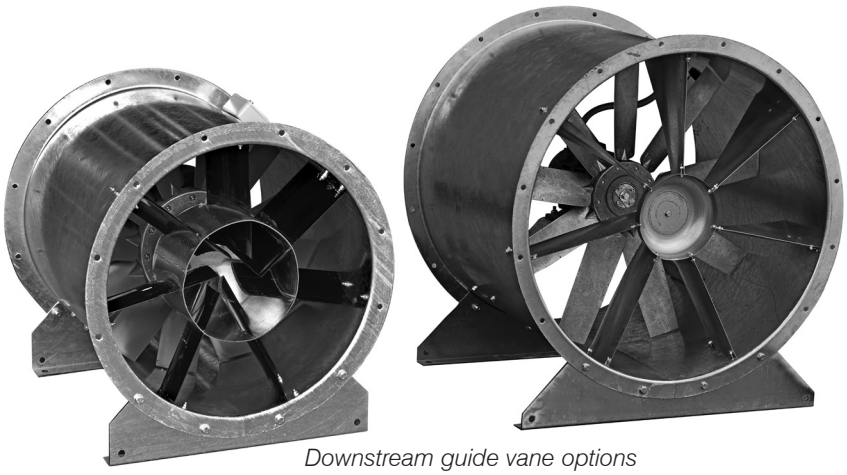
- Standard casings are made of durable hot-dipped galvanised steel or pre-galvanised steel.
- Casings with special coatings such as epoxy paint can be supplied.
- Casings of stainless steel or other materials can be supplied.
- Ability to select a fan with a specific impeller pitch angle ensures selections can be made accurately to the specification.
- All impellers are adjustable pitch aerofoil section.
- Impeller materials range from GRP (standard), aluminium, nylon and anti-static.
- Casing designs for direct-drive, belt-drive, smoke-spill and bifurcated applications are available.
- Can be supplied with motors to meet Ex e, Ex d, Ex nA and Ex tD Standards.
- Available in the following variants:
  - AP Series - direct-drive
  - APH Series - direct-drive horizontal hangers
  - APV Series - direct-drive vertical mounted
  - APS Series - direct-drive smoke-spill
  - APCR Series - direct-drive contra-rotating
  - APGV Series - direct-drive with down stream guide vane
  - APB Series - belt drive
  - BFA Series - bifurcated direct-drive



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*Adjustable Pitch EC Axial Fan*



*Downstream guide vane options*

## DESCRIPTION

In addition to traditional AC motor driven axial flow fans, Fantech offer a range of Permanent Magnet (PM) and Electronically Commutated (EC) shaft motor options in the AP series of axials.

The **APPM Magnetite Series** of adjustable pitch fans utilises next generation, permanent magnet motor technology to increase energy efficiency, lower noise output and reduce overall unit weight. The Magnetite is supplied with a pre-configured Danfoss variable speed drive for fast on-site installation and commissioning.

The **APEC ECOtronic Series** of adjustable pitch axial fans incorporates an Electronically Commutated (EC) shaft motor delivering ultra energy efficient operation with the benefit of in-built variable speed control. Via a range of common control signals, the ECOtronic can be easily designed into a Demand Control Ventilation system without the need for a VSD and motor overload protection. The ECOtronic EC fans are a simple “plug and play” system which means installers do not need to have specialised control programming knowledge.

Optional guide vanes can further improve fan efficiency and increase pressure development which can lead to high air flow performance.

### Typical Applications

The PM & EC range of axial fans are most efficient in applications where conditions vary during the course of the day such as supply or exhaust systems for exhibition centres, schools, universities, offices and health facilities.

### Features APPM

Aerofoil section impellers and brushless motor technology ensures quiet operation.

Superior energy efficiency at all speeds.

Up to 25% lighter than standard AP axial fans making them easier to manoeuvre on-site.

Supplied with a pre-configured Danfoss variable speed drive for fast on-site installation and commissioning.

Available in the following variants:
- APPM Series - direct-drive PM motor
- APPMGV Series - direct-drive PM motor with down stream guide vane

### Features APEC

Can be run as an independent ventilation source or integrated into most building management systems.

Can be remote speed controlled with the following input signals: 2-10V, 4-20mA, or frequency duty cycle 10-95% (80Hz, 10-24Vpk)

Maximum operating speed can be limited.

Integrated “Fire Mode” function forces motor to continue working under adverse conditions (at set speed).

ECOtronic fans are not designed for hazardous or high temperature conditions.

Available in the following variants:
- APEC Series - direct-drive EC motor
- APECGV Series - direct-drive EC motor with down stream guide vane

### Guide Vane Description

The AP Series of axial flow fans are available with a range of downstream guide vane options that can further improve fan efficiency and increase pressure development by up to 10-25%. The VPower series is of metal construction while the BladeVane series utilises plastic vanes.

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## Construction

Casings are hot-dip galvanised mild steel, or pre-galvanised steel.

Impellers can be GRP (standard) or aluminium. Anti-static blades for hazardous applications up to 1400mm diameter are also available.

## AC Motors

Type - squirrel cage, induction motors to suit virtually any application.

Electricity supply - Three-phase to suit a wide range of voltages and frequencies.

Bearings - ball.

See *Section O* for details on motors.

Motors to meet Ex e, Ex d, Ex nA and Ex tD Standards can be fitted.

## EC Motors

Type - electronic commutated (EC) motor.

Electricity supply - Single-phase and Three-phase to suit a wide range of voltages and frequencies.

Bearings - sealed-for-life, ball.

IP55 rating.

## PM Motors

Type - permanent magnet (PM) motor.

Electricity supply - Three-phase to suit a wide range of voltages and frequencies (via variable speed drive)

Bearings - sealed-for-life, ball.

IP55 rating.

## Internal thermal Protection

AC Motors - Can be provided as an optional extra

EC & PM Motors - Supplied as standard

## Testing

Air flow - 315 - 1000mm diameter - BS848:Part 1, 1980
1250 - 2000mm diameter - ISO5801:1997

Noise tests - BS848:Part 2, 1985

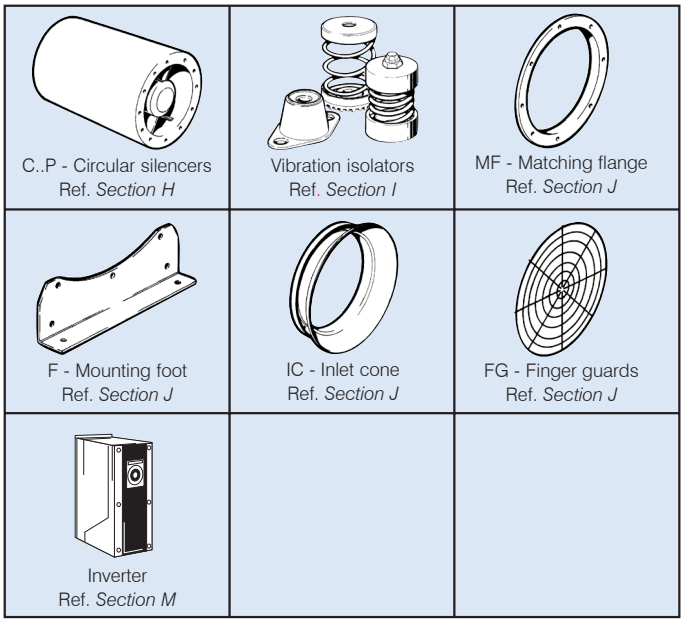
## Wiring Diagram

See pages *N-6/7,* diagrams *DD 1, 2, 3, 6, 7, 9*.

## Weights

See pages *C-28/29* for details of weights.

## ANCILLARY EQUIPMENT




## DIMENSIONS

See pages *C-26/27* for details

## HOW TO ORDER

The quick selection curves on the next 2 pages are designed to assist users to determine the fan diameter, speed, approximate noise level and dimensions of the fan to meet the specified duty.

Please note they exclude additional guide vane performance.

Refer to section C for more selection information details.

**Details including the number of blades, power absorbed, noise levels, and additional guide vane performance is available from the Fans by Fantech Product Selection Program.**



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**Pages *C-2/8* provide detailed information on these products. An example of how to use the curves is shown on page *C-10/11*.**

**The dimensions for all fans are on pages *C-26/27*. Weights can be determined from details on pages *C-28/29*.**

## Model Numbers

- AP Series - direct-drive; 315 to 2000mm diameter
- APH Series - direct-drive; 315 to 1600mm diameter
- APV Series - direct-drive; 315 to 2000mm diameter
- APS Series - direct-drive; 315 to 2000mm diameter
- APCR Series - direct-drive; 315 to 2000mm diameter
- APGV Series - direct-drive; 315 to 2000mm diameter
- APB Series - belt drive; 315 to 2000mm diameter
- BFA Series - bifurcated; 400 to 1250mm diameter
- APPM Series - direct-drive; 315 to 1400mm diameter
- APEC Series - direct-drive; 315 to 1000mm diameter

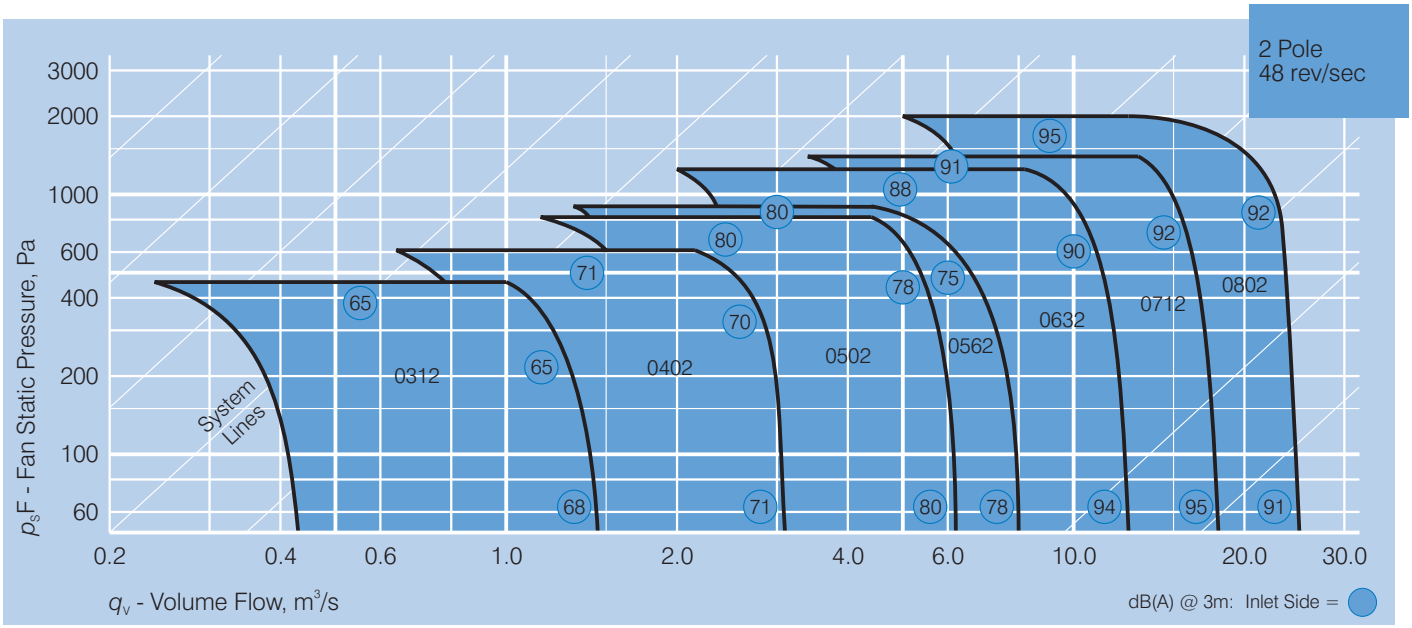
## SUGGESTED SPECIFICATION

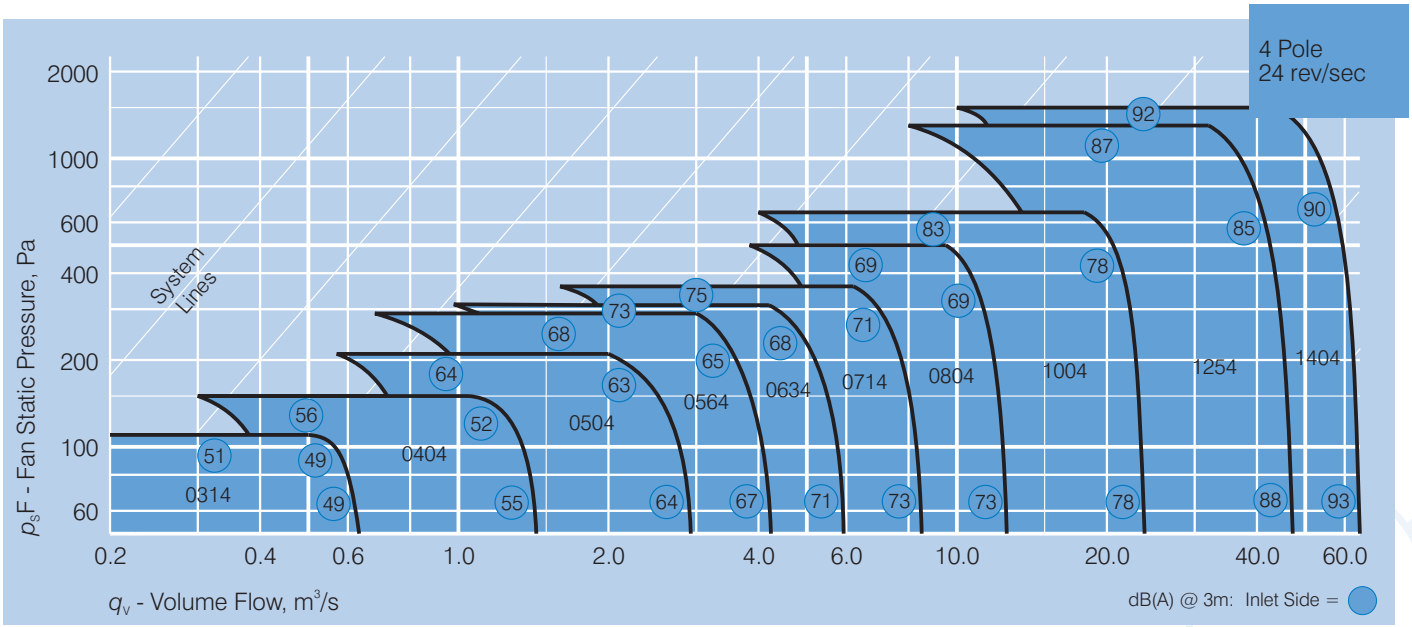
The axial flow fans shall be of the AP/APH/APV/APS/APCR/APGC/APB/BFA/APPM/APEC series as designed and manufactured by Fantech Pty Ltd. and be of the model numbers shown on the schedule/drawings.

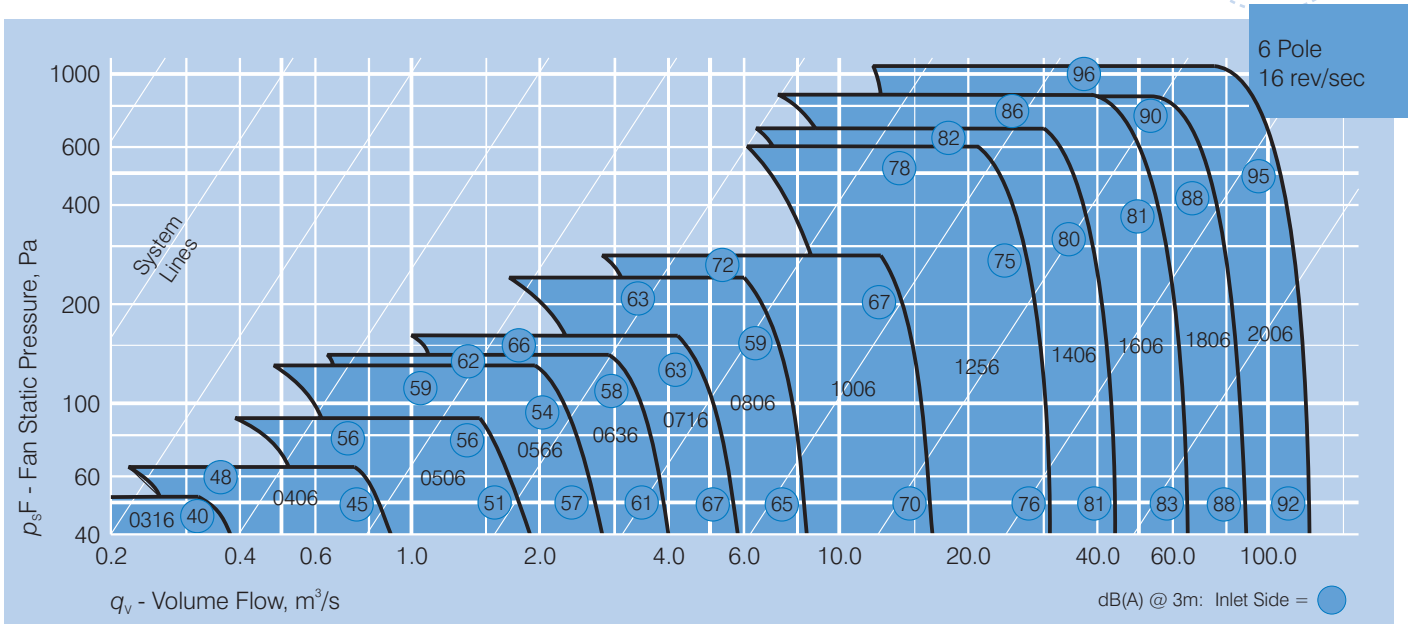
Fan casings shall be of hot-dip galvanised steel or pre-galvanised steel. Impellers shall be of GRP (unless nominated otherwise), adjustable pitch and aerofoil section.

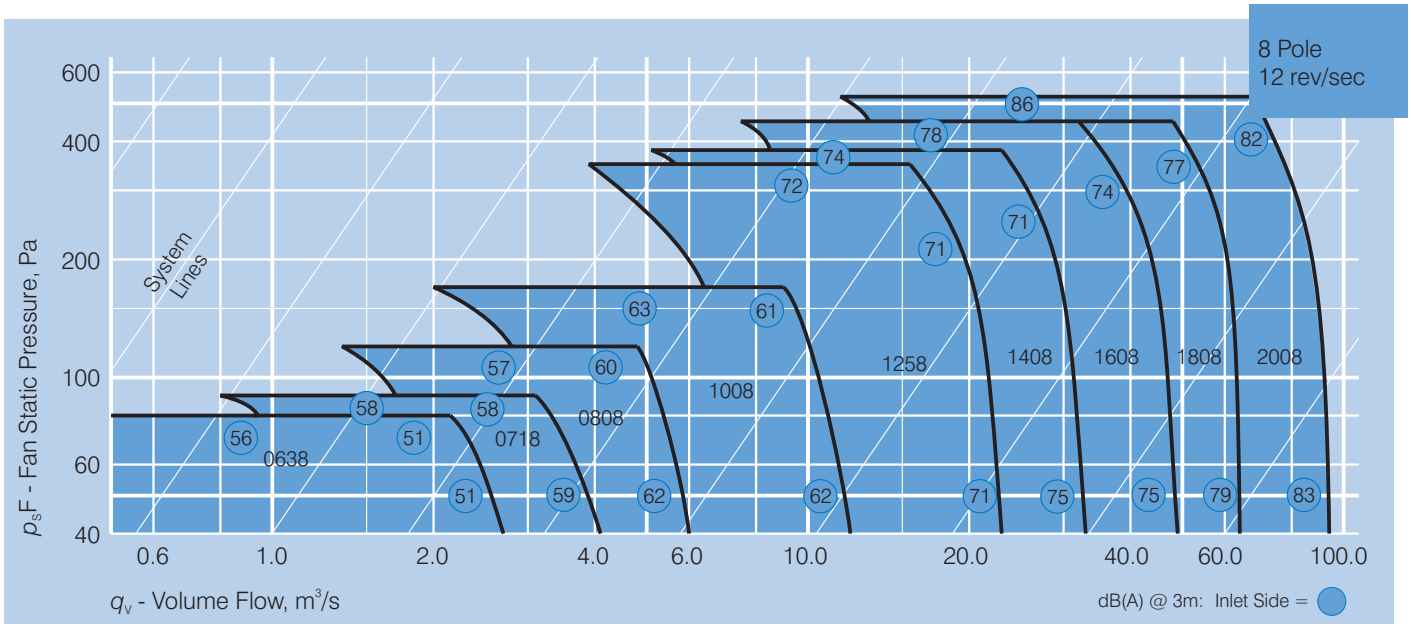
All models shall be fully tested for air flow to BS848:Part 1, 1980 or ISO5801:1997 and noise to BS848:Part 2, 1985.

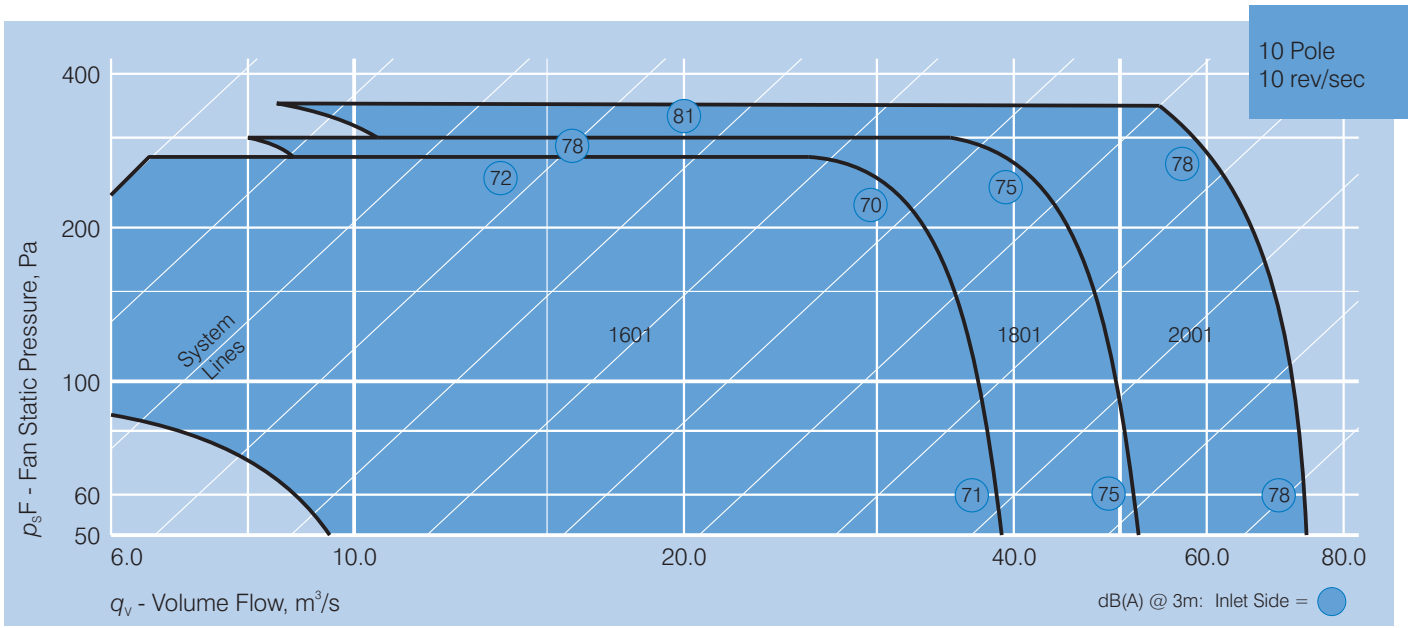
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