

## AIRE-VOLVE INTERNAL & EXTERNAL TWIN FANS



## NUAIRE'S PEDIGREE

### NUAIRE'S MISSION

TO DELIVER EXCELLENCE IN EVERYTHING  
WE DO AND TO ALWAYS EXCEED  
CUSTOMER EXPECTATIONS.



Nuaire is a world leader in the development and manufacture of ventilation products and solutions. With roots stretching back to the 1930s and a tradition of excellence in ventilation since 1963, the Nuaire name has been at the forefront of the industry for more than 40 years.

Nuaire is renowned worldwide for its expertise, commitment to innovation and the outstanding quality of its products and customer service. People are at the heart of Nuaire, and the company has over 450 highly committed staff dedicated to customer satisfaction. These include leading experts who are constantly setting new standards for the industry by developing new, innovative products in the company's research and development department – the largest and most advanced in the UK.



● Nuaire was the first fan manufacturer in the world to achieve the quality standard ISO 9001, and its commitment to quality remains embedded in all aspects of its operations.

With its roots in fans and mechanical ventilation products, Nuaire has progressively expanded its range and extended its capabilities to encompass all technologies and levels of ventilation solutions. Nuaire are the only company able to deliver the total ventilation solution for the built environment.

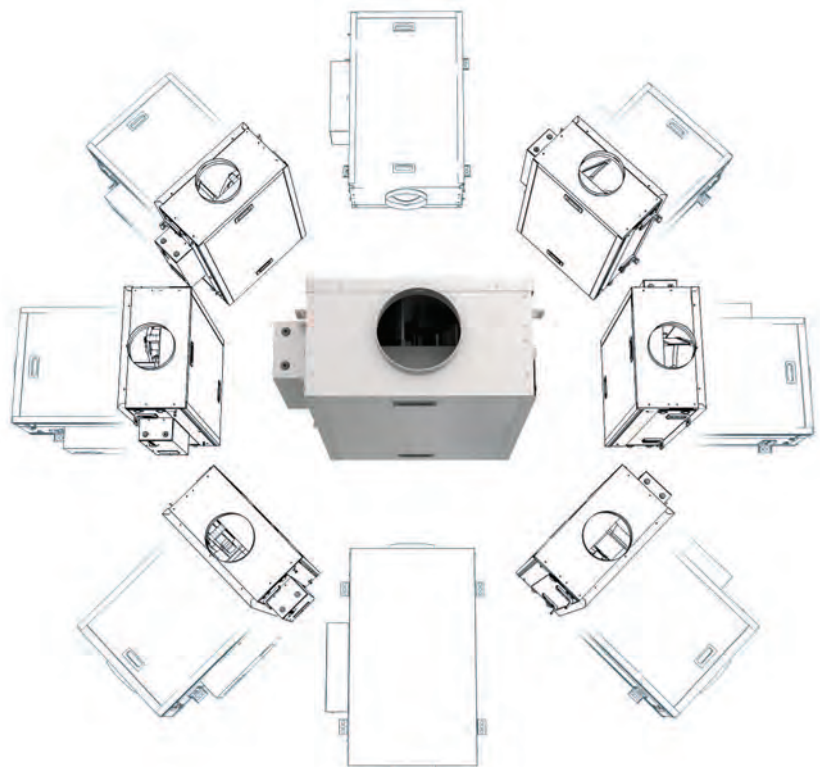


## AIRE-VOLVE TWIN FANS A UNIQUE INNOVATION IN FAN DESIGN

As the inventor and market leader in twin fans, Nuaire's experience and expertise has ensured the very best solution is provided.

**Aire-Volve Twin Fans represent Nuaire's latest innovation:**

- PATENTED IN-LINE FAN ASSEMBLY
- OPTIMUM PERFORMANCE AND LOW NOISE
- LOWEST CASE SIZE BY DUTY
- MEETS LATEST LEGISLATION & BUILDING REGULATIONS



## 40 YEARS OF TWIN FANS

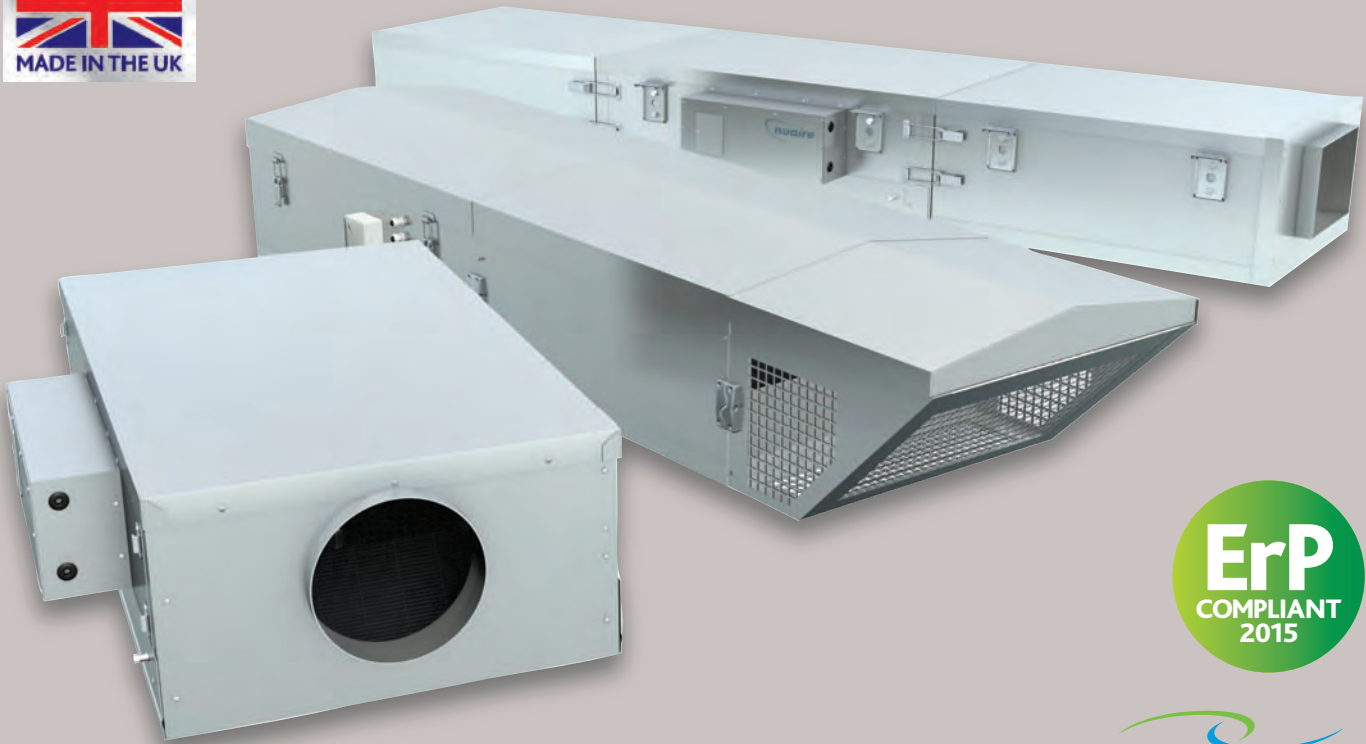
Twin Fans have been the leading product of Nuaire throughout and have been manufactured in a variety of forms both in direct and belt driven versions, 3Ph and 1Ph.

NOTE: Only internal fans can be mounted in any orientation.



## AIRE-VOLVE TWIN FANS

FEATURES & BENEFITS - ENSURES BEST PRACTICE DESIGN



### ACHIEVES 2010 BUILDING REGS

#### LATEST EC MOTOR TECHNOLOGY

Guarantees longer life and lower SFPs.

#### BUILT IN ECOSMART CONTROLS

Energy efficient demand control ventilation solution.

#### CONSTANT PRESSURE OPTION

Improves the energy performance of the overall building and guarantees lower energy costs for end users.

#### MEETS CURRENT LEGISLATION AND BUILDING REGULATIONS

Lower energy consumption and better SBEM score.

### LOWER NOISE

#### DOUBLE WALLED PANEL WITH 35MM ACOUSTIC LINING

Ensures lowest breakout.

Note: External units 'X' and 'R' are not fully acoustic lined as standard.

#### MANUFACTURED FROM CORROSION RESISTANT ALUZINC

Longer life expectancy than other materials.

#### FULLY ENCLOSED FAN SPIGOT

Fan and matching silencer system reduces breakout and guarantees a superior acoustic solution.

#### CLASS L2 LEAKAGE

Units are tested to meet Class L2 leakage. (BS EN 1886 : 2007).

### UNIQUE INTELLIGENT DESIGN PRACTICE

#### INNOVATIVE NEW FAN DESIGN

In-line fan assembly provides optimum performance in a minimum space.

#### 12 HOUR AUTO CHANGEOVER

Guarantees ventilation 24/7 in event of fan/motor failure and extends life of fan.

#### ECOSMART PRE-PROGRAMMED SOFT START FUNCTION

Helps prevent electrical overloading and minimises mechanical wear.

#### ALL UNITS ARE DESIGNED & MANUFACTURED WITH PROCEDURES AS DEFINED IN BS EN ISO 9001 2000

Quality and reliability guaranteed.

#### SUPPLY & EXTRACT

Supply unit can be interlinked with a twin fan to provide a controllable cost effective solution.





INSTALL IN ANY ORIENTATION WITH UMBILICAL KIT\*



EXTERNAL VERSION WITH OR WITHOUT CONSTANT PRESSURE CONTROL



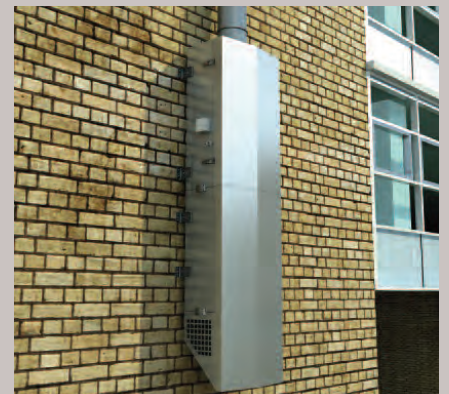
HINGED ROOF ON EXTERNAL RANGE ('X' & 'R' VERSIONS)



MATCHED SILENCERS (EXTERNAL SILENCERS HAVE PITCHED ROOF)



FULLY RETAINED BOTTOM ACCESS PANEL (INTERNAL RANGE ONLY)



'R' MODULE CAN BE ORDERED SEPARATELY AND MOUNTED IN ANY ORIENTATION\*

### SMALLEST CASE SIZE BY DUTY

#### UNIQUE PATENTED INLINE FAN DESIGN

Lower profile and reduced width.

#### RETAINED ACCESS PANEL

Lowers and slides under matched silencers where applicable. (Internal units only).

#### MOST COMPACT 'SIZE FOR DUTY' CASE AVAILABLE ON THE MARKET

Ideal for applications with restricted ceiling voids and bottom access is required.

#### RE-MOUNTABLE CONTROL BOX

Control can be mounted on either side of unit or to save space mounted remotely. (Internal units only).

#### UNIQUE TOP ACCESS PANEL

External units have hinged roof for quick and easy access.

\*To mount vertically refer to AVT-VK kit installation and maintenance document.  
Aire-Volve blowers are compliant to EC/327/2011.

### SAVES TIMES AND MONEY ON SITE

#### UNIQUE PATENTED DAMPER ARRANGEMENT

Fans to be installed horizontally, vertically, at any angle or mounted vertically downward if required.

#### EASY FIT MATCHING SILENCERS WITH QUICK FIT CLAMP BRACKETS

Can be easily incorporated into existing drop rod supporting systems.

#### FULL LENGTH ACCESS PANEL WITH SAFETY RETAINING FEATURES

Easy access to motor and blower assemblies ensures quick installation, commissioning and maintenance. (Internal units only).

#### REMOVABLE UNIT END PANEL

Can be attached to matched silencer prior to connection to ducting system.

#### EXTERNAL ROOF MODEL

Inline (X) and grille outlet options (R).

### MAKES LIFE EASIER

#### WIDE DIRECT DUTY RANGE

Available up to 1.9m<sup>3</sup>/s.

#### ALUZINC FINISH

Has 5 times longer life than galvanised steel and provides higher wear resistance.

#### ECOSMART ENERGY EFFICIENCY CONTROL

Up to 80% controllability allowing the duty to be adjusted if ductwork installation changes during construction on site.

#### PLUG IN ECOSMART CONTROL

Integrated BMS interface as standard.

#### FULL ACCESSORY RANGE

Includes optional end panel with rectangular or circular spigot, remote cable for mounting of control box, matched silencers and dampers.

#### 5 YEAR WARRANTY

Peace of mind.

## ENERGY SAVING ECOSMART CONTROLS

THE MOST FLEXIBLE ENERGY SAVING VENTILATION CONTROL SYSTEM ON THE MARKET WITH FULL BMS INTERFACE



### BENEFITS

#### SIMPLE TO INSTALL

All controls are pre-assembled, configured and installed directly into the fan or air handling unit, this includes 3-port motorised valves and actuators, pipework, off coil thermostats and sensors, frost protection, etc. Site time kept to a minimum, quality and efficiency maintained.

#### SIMPLER SYSTEMS

No need for main VCD, no wasted energy or noise generation because the air volume can be precisely set via the integrated speed control, minimum and maximum speeds easily adjusted via Ecosmart commissioning panel.

#### SIMPLE, PRECISE COMMISSIONING

As recommended in Part L, Ecosmart enables the system to be accurately commissioned via an integrated speed control, minimum and maximum speeds easily adjusted via commissioning panel integral to the control.

#### QUIETER SYSTEMS

With Ecosmart your system is only at maximum design duty when absolutely necessary. The noise levels within your systems are lower because the fans or air handling units are rarely at full speed.

#### PLUG IN CONTROLS

Simple low voltage sensors complete with pre-plugged cable means that any control function is easily achieved. You decide which conditions to monitor and the system will operate at the optimum speed.

#### BMS INTERFACE

Integrated BMS features enable any central system to control and monitor the fan or air handling unit via 0-10V signal. This enables full speed control and heating or cooling enable if installed and volt free status indication as standard.

#### PEACE OF MIND

Ecosmart has a 5 year warranty.

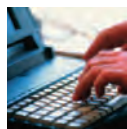
For further details contact Nuair.



## ECOSMART CONTROLS & ANCILLARIES

STYLISH AND SIMPLE TO OPERATE USER CONTROL FACILITATES WITH MANUAL OPERATION WHERE DESIRED

Simple SELV wired, plug-in 'enablers' start and stop the fan, when activated from either start-up or trickle ventilation mode. These 'enablers' include time clocks, infra-red detectors, switch live contacts, humidistats, thermostats and BMS contacts. All systems must include at least one enabler. (NB. When used, BMS control and time clocks take over all other enablers). Integrated speed control (inverter or electronic) is included with all Ecosmart controlled fans and air handlers. ES-ISC are external to some fans and need to be hard wired eg. SQF, Airmover. Once the fan is activated the sensor takes over. They will maintain comfort/design conditions by automatically adjusting fan speed up and down and power or flows through elements or heating/cooling coils. The sensors include temperature, relative humidity, CO<sub>2</sub> or as determined by the BMS.



**BMS**  
0-10V dc signal to activate the system and modulate fan speed. Select/Deselect H&C. Note: this will override any other devices (eg. ES-UCF) fitted (except in Constant Pressure fans).

### ECOSMART ENABLERS & DETECTORS



**ES-PIR2 (PASSIVE INFRA-RED)**  
Detects movement and activates system. Incorporates a system status LED, overrun timer and timer adjustment.



**ES-LCD**  
Touch screen user control in white incorporating time clock facility. This can control the function of the fan by manual setting or using a set of timed programs.



**ES-LCDM**  
Touch screen user control in metal incorporating time clock facility. This can control the function of the fan by manual setting or using a set of timed programs.



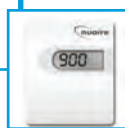
**ES-HUMIDISTAT2**  
Activates the system when the RH level is above set point. Incorporates two system status LEDs (Green = OK, Red = Failure) and RH set point level adjustment.



**ES-THERMOSTAT2**  
Activates the system when the temperature is above set point. Incorporates two system status LEDs (Green = OK, Red = Failure) and temperature set point level adjustment.



**ES-AV12**  
When fan failure occurs the AV1 will flash a warning. Supplied with pre-plugged 10m length of communication cable.



**ES-CO2RM / ES-CO2RMPP**  
Surface mounted room carbon dioxide (CO<sub>2</sub>) sensors which incorporate a temperature sensor. RM = SELV option, RMPP complete with SELV AC powers supply.



**ES-HTCSIG**  
Signal conditioning circuit for humidity, temperature and CO<sub>2</sub> sensors.

### ECOSMART SPEED CONTROLLING SENSORS



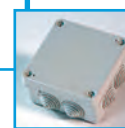
**ES-TEMP2 TEMPERATURE SENSOR**  
Modulate fan speed based on room temperature. Incorporates two system status LEDs (Green = OK, Red = Failure) and temperature set point level adjustment.



**ES-RH2 RELATIVE HUMIDITY SENSOR**  
Modulate fan speed based on RH level. Incorporates two system status LEDs (Green = OK, Red = Failure) and RH set point level adjustment.



**ES-UCF MANUAL USER CONTROL**  
Manual 'on' and 'off' system user/speed control. Incorporates two system status LEDs (Green = OK, Red = Failure).



**ES-CI SEMI-AUTOMATIC USER CONTROL**  
Fan, heating & cooling selected by external volt free switch, speed selected by 0-10V signal.



**ES-JB JUNCTION BOX**  
Designed to be compatible with Ecosmart System this unit is supplied with a pre-plugged 10 metre length of communications cable and has 8 further ports.



**ES-CO2 SENSOR**  
Duct mounted sensor to modulate fan speed based on CO<sub>2</sub> levels. Connect to fan directly. Pre-wired with 2m cable (not adjustable).



**SWITCHED LIVE BY OTHERS**  
Any mains voltage signal connected to the switched live terminal (S/L) in the unit. This affects the connected fan only.

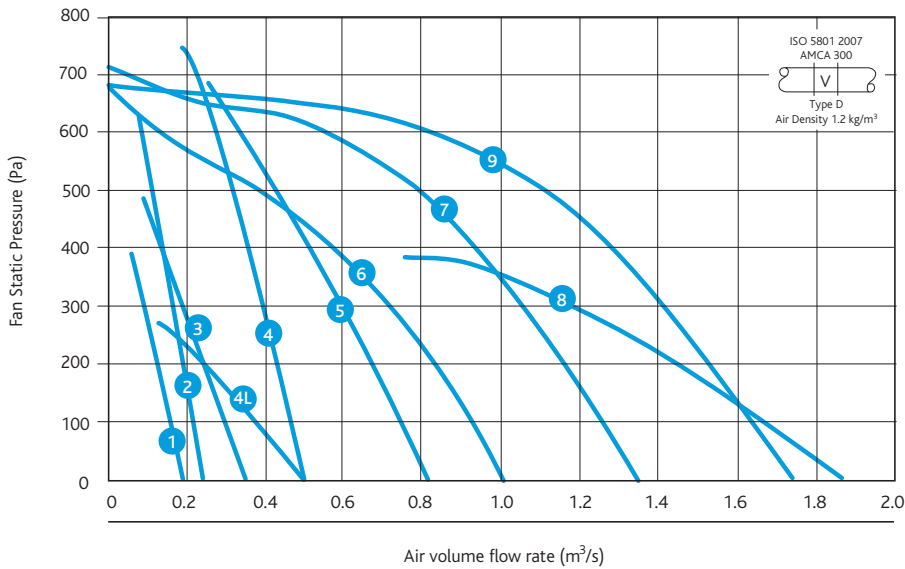
### SIMPLE PLUG-IN SYSTEM



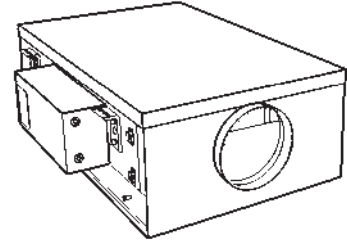
## AIRE-VOLVE TWIN FANS

### TECHNICAL INFORMATION

#### PERFORMANCE - AIRE-VOLVE INTERNAL TWIN FANS



#### Casing



AVT Internal In-line Twin Fans.

#### Code descriptions

**AVT1**  
|||  
1 2 3

1. Aire-Volve range
2. Twin Fan
3. Case size 1-9

#### PERFORMANCE - AIRE-VOLVE INTERNAL TWIN FANS AVT 1-9

#### ELECTRICAL & SOUND

1. Unweighted induct inlet octave band Sound Power level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |    |
| AVT1           | 200           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 73  | 69  | 63  | 63 | 60 | 56 | 52 | 50   | 20 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 71  | 63  | 63 | 63 | 59 | 53 | 51   |    |
|                |               |                                |               |              |                          |                        | 3              | 61  | 53  | 43  | 34 | 25 | 21 | 23 | 17   |    |
| AVT2           | 200           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 79  | 74  | 68  | 69 | 65 | 62 | 58 | 56   | 26 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 69  | 69 | 65 | 65 | 59 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 49  | 40 | 31 | 27 | 29 | 23   |    |
| AVT3           | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 77  | 74  | 79  | 67 | 63 | 59 | 53 | 51   | 31 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 78  | 74 | 69 | 68 | 58 | 58   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 58  | 45 | 31 | 30 | 28 | 24   |    |
| AVT4           | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 83  | 79  | 80  | 82 | 78 | 74 | 70 | 67   | 36 |
|                |               |                                |               |              |                          |                        | 2              | 87  | 83  | 80  | 84 | 83 | 80 | 75 | 68   |    |
|                |               |                                |               |              |                          |                        | 3              | 73  | 65  | 60  | 55 | 45 | 42 | 45 | 34   |    |
| AVT4L**        | 315           | 230/50/1                       | 1.1           | 1.1          | 160                      | 1700                   | 1              | 72  | 67  | 67  | 66 | 60 | 57 | 53 | 48   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 74  | 69  | 69  | 70 | 69 | 62 | 58 | 52   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 57  | 55  | 45 | 37 | 30 | 32 | 22   |    |
| AVT5           | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 74  | 71  | 69  | 68 | 62 | 61 | 57 | 52   | 25 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 73  | 71  | 72 | 71 | 66 | 62 | 56   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 55  | 51  | 43 | 33 | 28 | 32 | 22   |    |
| AVT6           | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 77  | 80  | 74  | 72 | 66 | 65 | 61 | 54   | 30 |
|                |               |                                |               |              |                          |                        | 2              | 80  | 82  | 74  | 73 | 67 | 66 | 63 | 56   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 64  | 54  | 44 | 29 | 28 | 33 | 22   |    |
| AVT7           | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 78  | 76  | 73  | 73 | 67 | 65 | 62 | 57   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 74  | 75 | 74 | 71 | 67 | 61   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 54  | 46 | 36 | 33 | 37 | 27   |    |
| AVT8           | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 74  | 76  | 71  | 66 | 62 | 64 | 60 | 54   | 27 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 78  | 73  | 71 | 71 | 69 | 64 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 60  | 53  | 42 | 33 | 31 | 34 | 23   |    |
| AVT9           | 500           | 400/50/3                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 79  | 77  | 76  | 73 | 66 | 66 | 66 | 58   | 32 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 78  | 79  | 78 | 76 | 72 | 70 | 61   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 60  | 59  | 49 | 38 | 34 | 40 | 27   |    |

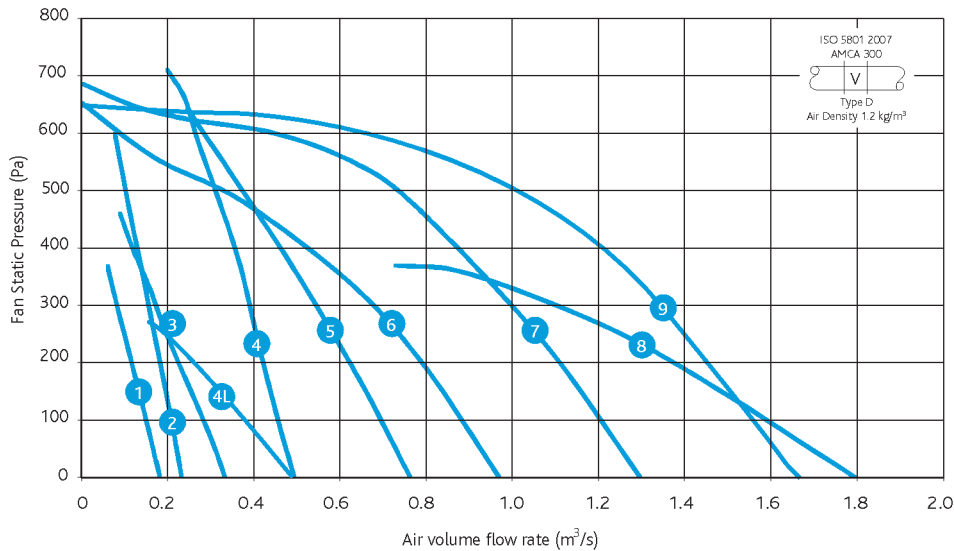
\*Break out fan only. \*\*Available end of July 2012.



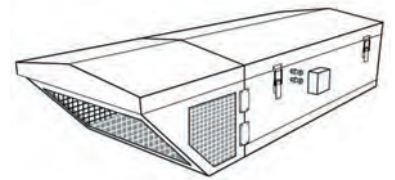
## AIRE-VOLVE TWIN FANS

### TECHNICAL INFORMATION

#### PERFORMANCE - AIRE-VOLVE EXTERNAL TWIN FANS



#### Casing



AVT-R External In-line Twin Fan with grille outlet.

#### Code descriptions

**AVT2 - R**  
 | | | |  
 1 2 3 4

1. Aire-Volve range
2. Twin Fan
3. Case size 1-9
4. Grille outlet external unit

#### PERFORMANCE - AIRE-VOLVE EXTERNAL TWIN FANS AVT 1-9 - R

##### AVT 'R' UNIT - ELECTRICAL & SOUND

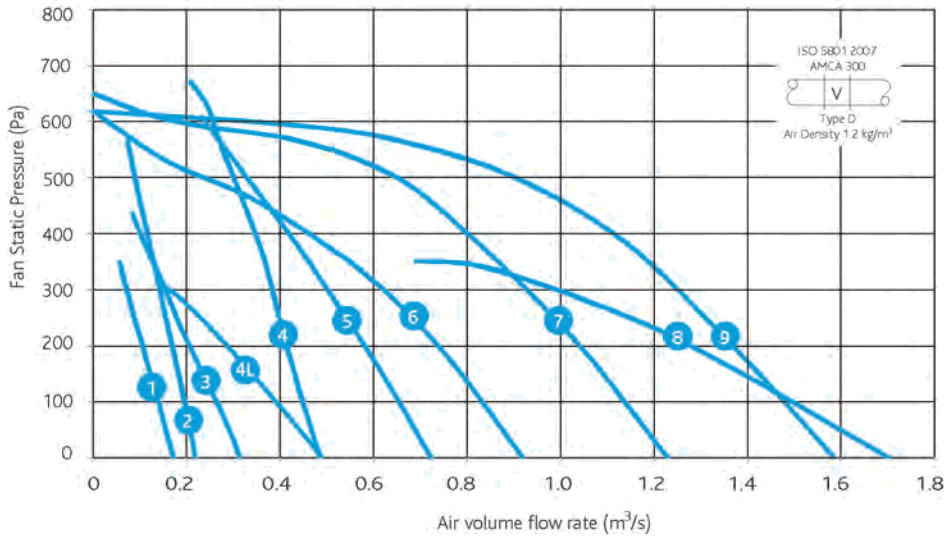
1. Unweighted induct inlet octave band Sound Power Level - dB re 1pW
2. Unweighted open outlet octave band Sound Power Level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | Outlet Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|---|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |   |    |
| AVT1-R         | 250           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 75  | 69  | 64  | 65 | 61 | 57 | 53 | 51  | 54 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 70  | 68  | 71 | 71 | 66 | 60 | 56  |    |
| AVT2-R         | 250           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 81  | 75  | 70  | 71 | 67 | 63 | 59 | 57  | 60 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 76  | 74  | 77 | 77 | 72 | 66 | 62  |    |
| AVT3-R         | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 79  | 75  | 81  | 69 | 65 | 60 | 54 | 52  | 59 |
|                |               |                                |               |              |                          |                        | 2              | 79  | 76  | 85  | 75 | 75 | 69 | 61 | 57  |    |
| AVT4-R         | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 85  | 80  | 82  | 84 | 80 | 75 | 71 | 68  | 72 |
|                |               |                                |               |              |                          |                        | 2              | 85  | 81  | 86  | 90 | 90 | 84 | 78 | 73  |    |
| AVT4L-R        | 315           | 230/50/1                       | 1.1           | 1.1          | 160                      | 1700                   | 1              | 72  | 67  | 67  | 66 | 60 | 57 | 53 | 48  | 54 |
|                |               |                                |               |              |                          |                        | 2              | 72  | 68  | 71  | 72 | 70 | 66 | 60 | 53  |    |
| AVT5-R         | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 76  | 72  | 71  | 70 | 64 | 62 | 58 | 53  | 58 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 73  | 75  | 76 | 74 | 71 | 65 | 58  |    |
| AVT6-R         | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 79  | 81  | 76  | 74 | 68 | 66 | 62 | 55  | 62 |
|                |               |                                |               |              |                          |                        | 2              | 79  | 82  | 80  | 80 | 78 | 75 | 69 | 60  |    |
| AVT7-R         | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 80  | 77  | 75  | 75 | 69 | 66 | 63 | 58  | 63 |
|                |               |                                |               |              |                          |                        | 2              | 80  | 78  | 79  | 81 | 79 | 75 | 70 | 63  |    |
| AVT8-R         | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 76  | 77  | 73  | 68 | 64 | 65 | 61 | 55  | 59 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 78  | 77  | 74 | 74 | 74 | 68 | 60  |    |
| AVT9-R         | 500           | 400/50/1                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 81  | 78  | 78  | 75 | 68 | 67 | 67 | 59  | 63 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 79  | 82  | 81 | 78 | 76 | 74 | 64  |    |

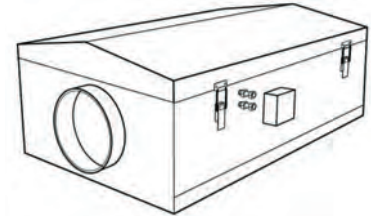
## AIRE-VOLVE TWIN FANS

### TECHNICAL INFORMATION

#### PERFORMANCE - AIRE-VOLVE EXTERNAL TWIN FANS



#### Casing



AVT-X External In-line Twin Fan.

#### Code descriptions

**AVT2 - X**  
| | | |  
1 2 3 4

1. Aire-Volve range
2. Twin Fan
3. Case size 1-9
4. Inline external unit

#### PERFORMANCE - AIRE-VOLVE EXTERNAL TWIN FANS AVT 1-9 - X

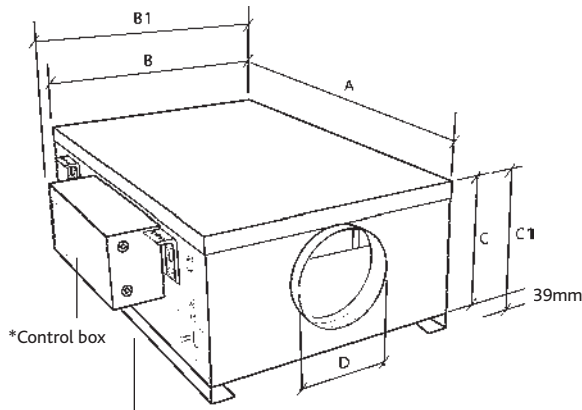
##### AVT 'X' UNIT - ELECTRICAL & SOUND

1. Unweighted induct inlet octave band Sound Power Level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power Level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |    |
| AVT1-X         | 250           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 75  | 69  | 64  | 65 | 61 | 57 | 53 | 51   | 25 |
|                |               |                                |               |              |                          |                        | 2              | 77  | 72  | 65  | 65 | 60 | 54 | 52 |  |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 57  | 48  | 38 | 30 | 25 | 26 | 20   |    |
| AVT2-X         | 250           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 81  | 75  | 70  | 71 | 67 | 63 | 59 | 57   | 31 |
|                |               |                                |               |              |                          |                        | 2              | 83  | 78  | 71  | 71 | 66 | 60 | 58 |  |    |
|                |               |                                |               |              |                          |                        | 3              | 72  | 63  | 54  | 44 | 36 | 31 | 32 | 26   |    |
| AVT3-X         | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 79  | 75  | 81  | 69 | 65 | 60 | 54 | 52   | 35 |
|                |               |                                |               |              |                          |                        | 2              | 83  | 78  | 80  | 76 | 71 | 69 | 59 | 59   |    |
|                |               |                                |               |              |                          |                        | 3              | 72  | 63  | 63  | 49 | 36 | 34 | 31 | 27   |    |
| AVT4-X         | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 85  | 80  | 82  | 84 | 80 | 75 | 71 | 68   | 41 |
|                |               |                                |               |              |                          |                        | 2              | 89  | 84  | 82  | 86 | 85 | 81 | 76 | 69   |    |
|                |               |                                |               |              |                          |                        | 3              | 78  | 69  | 65  | 59 | 50 | 46 | 48 | 37   |    |
| AVT4L-X        | 315           | 230/50/1                       | 1.1           | 1.1          | 160                      | 1700                   | 1              | 72  | 67  | 67  | 66 | 60 | 57 | 53 | 48   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 74  | 69  | 69  | 70 | 69 | 62 | 58 | 52   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 57  | 55  | 45 | 37 | 30 | 32 | 22   |    |
| AVT5-X         | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 76  | 72  | 71  | 70 | 64 | 62 | 58 | 53   | 30 |
|                |               |                                |               |              |                          |                        | 2              | 78  | 74  | 73  | 74 | 73 | 67 | 63 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 56  | 47 | 38 | 32 | 35 | 25   |    |
| AVT6-X         | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 79  | 81  | 76  | 74 | 68 | 66 | 62 | 55   | 34 |
|                |               |                                |               |              |                          |                        | 2              | 82  | 83  | 76  | 75 | 69 | 67 | 64 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 71  | 68  | 59  | 48 | 34 | 32 | 36 | 25   |    |
| AVT7-X         | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 80  | 77  | 75  | 75 | 69 | 66 | 63 | 58   | 34 |
|                |               |                                |               |              |                          |                        | 2              | 83  | 78  | 76  | 77 | 76 | 72 | 68 | 62   |    |
|                |               |                                |               |              |                          |                        | 3              | 72  | 63  | 59  | 50 | 41 | 37 | 40 | 30   |    |
| AVT8-X         | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 76  | 77  | 73  | 68 | 64 | 65 | 61 | 55   | 32 |
|                |               |                                |               |              |                          |                        | 2              | 78  | 79  | 75  | 73 | 73 | 70 | 65 | 58   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 64  | 58  | 46 | 38 | 35 | 37 | 26   |    |
| AVT9-X         | 500           | 400/50/3                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 81  | 78  | 78  | 75 | 68 | 67 | 67 | 59   | 37 |
|                |               |                                |               |              |                          |                        | 2              | 83  | 79  | 81  | 80 | 78 | 73 | 71 | 62   |    |
|                |               |                                |               |              |                          |                        | 3              | 72  | 64  | 64  | 53 | 43 | 38 | 43 | 30   |    |

\*Break out fan only.

### DIMENSIONS - AIRE-VOLVE INTERNAL TWIN FANS AVT1-9



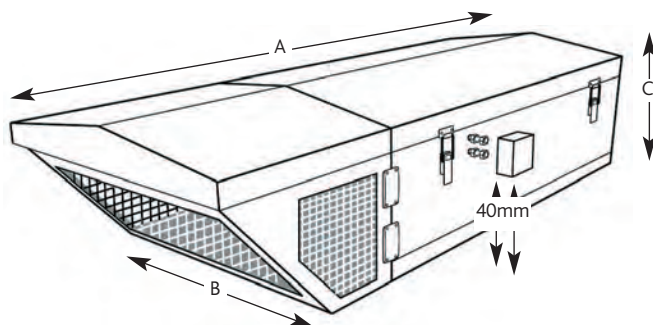
Lowered access bracket to allow panel to slide under matched silencers  
 \*Control box can be mounted on either side of the Twin Fan or remotely using the AVT Control Kit (AVTCK).  
 Refer to I&M document for fixing details.

#### DIMENSIONS (mm)

| Fan Code | A    | Dim A +Spigot Length (inc.100mm) B | Dim B1 +Control (inc.108mm) C | C1*  | Spigot D (dia) | Weight (Kg) |     |
|----------|------|------------------------------------|-------------------------------|------|----------------|-------------|-----|
| AVT1     | 931  | 1031                               | 544                           | 652  | 250            | 289         | 46  |
| AVT2     | 968  | 1068                               | 543                           | 652  | 285            | 324         | 48  |
| AVT3     | 1186 | 1286                               | 681                           | 789  | 334            | 373         | 67  |
| AVT4     | 1229 | 1329                               | 681                           | 789  | 376            | 415         | 68  |
| AVT4L    | 1531 | 1631                               | 827                           | 931  | 401            | 440         | 100 |
| AVT5     | 1531 | 1631                               | 827                           | 935  | 433            | 472         | 102 |
| AVT6     | 1729 | 1829                               | 921                           | 1029 | 545            | 584         | 153 |
| AVT7     | 1892 | 1992                               | 1019                          | 1127 | 575            | 614         | 179 |
| AVT8     | 2238 | 2338                               | 1244                          | 1352 | 615            | 654         | 267 |
| AVT9     | 2238 | 2338                               | 1244                          | 1352 | 615            | 654         | 244 |

Bottom access on sizes AVT1-9 as standard.  
 Unit sizes 7-9 have a split bottom access panel.  
 AVT1-9 are available with top access, ie = AVT6TA.

### DIMENSIONS - AIRE-VOLVE EXTERNAL TWIN FANS AVT1-9 - R

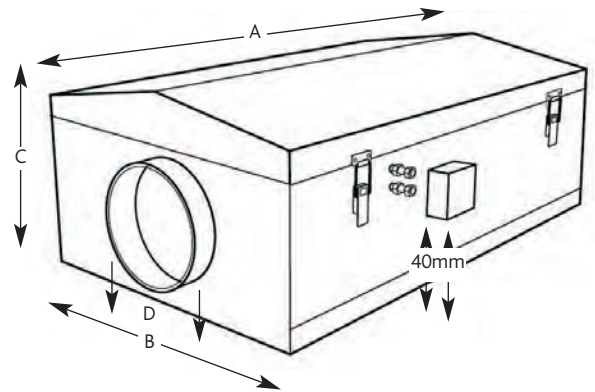


#### DIMENSIONS (mm)

| Case Size | B Width | A Length | Height C | Spigot Diameter D | Weight (Kg) |
|-----------|---------|----------|----------|-------------------|-------------|
| AVT1-R    | 716     | 1620     | 393      | 250               | 64          |
| AVT2-R    | 716     | 1620     | 393      | 250               | 65          |
| AVT3-R    | 716     | 1620     | 393      | 250               | 66          |
| AVT4-R    | 857     | 2066     | 502      | 315               | 111         |
| AVT4L-R   | 857     | 2066     | 502      | 315               | 110         |
| AVT5-R    | 857     | 2066     | 502      | 315               | 115         |
| AVT6-R    | 1045    | 2575     | 656      | 400               | 161         |
| AVT7-R    | 1045    | 2575     | 656      | 400               | 164         |
| AVT8-R    | 1278    | 2956     | 709      | 500               | 262         |
| AVT9-R    | 1278    | 2956     | 709      | 500               | 229         |

Note: Dim 'A' - add 50mm to include spigot.

### DIMENSIONS - AIRE-VOLVE EXTERNAL TWIN FANS AVT1-9 - X



#### DIMENSIONS (mm)

| Fan Code | A end panel (inc.5mm) | Dim A +Spigot Length (inc.50mm) | B    | Dim B1 +Control (inc.40mm) | C   | Spigot D (dia) | Weight (Kg) |
|----------|-----------------------|---------------------------------|------|----------------------------|-----|----------------|-------------|
| AVT1-X   | 1120                  | 1220                            | 716  | 756                        | 393 | 250            | 56          |
| AVT2-X   | 1120                  | 1220                            | 716  | 756                        | 393 | 250            | 56          |
| AVT3-X   | 1120                  | 1220                            | 716  | 756                        | 393 | 250            | 57          |
| AVT4-X   | 1466                  | 1566                            | 857  | 897                        | 502 | 315            | 99          |
| AVT4L-X  | 1466                  | 1566                            | 857  | 897                        | 502 | 315            | 99          |
| AVT5-X   | 1466                  | 1566                            | 857  | 897                        | 502 | 315            | 103         |
| AVT6-X   | 1831                  | 1931                            | 1045 | 1085                       | 656 | 400            | 145         |
| AVT7-X   | 1831                  | 1931                            | 1045 | 1085                       | 656 | 400            | 148         |
| AVT8-X   | 2172                  | 2272                            | 1278 | 1318                       | 709 | 500            | 236         |
| AVT9-X   | 2172                  | 2272                            | 1278 | 1318                       | 709 | 500            | 205         |

Note: External silencers have pitched roofs.

#### TWIN FAN QUICK SELECTION GUIDE

| Size | AV Mounts | Flexible Connector | Acoustic Flexible Connector | Vertical Support Bracket (4 pack) | End Panel With Rectangular Spigot | 'R' Grille Outlet Model (External only) |
|------|-----------|--------------------|-----------------------------|-----------------------------------|-----------------------------------|---|
| 1    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT1-RS                           | AVT1-R-MOD                              |
| 2    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT2-RS                           | AVT2-R-MOD                              |
| 3    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT3-RS                           | AVT3-R-MOD                              |
| 4    | NAV2      | CFC31              | ACFXRD315                   | AVT-SB4                           | AVT4-RS                           | AVT4-R-MOD                              |
| 5    | NAV5      | CFC31              | ACFXRD315                   | AVT-SB4                           | AVT5-RS                           | AVT5-R-MOD                              |
| 6    | NAV3      | CFC40              | ACFXRD400                   | AVT-SB4                           | AVT6-RS                           | AVT6-R-MOD                              |
| 7    | NAV3      | CFC40              | ACFXRD250                   | AVT-SB4                           | AVT7-RS                           | AVT7-R-MOD                              |
| 8    | NAV6      | CFC50              | ACFXRD500                   | AVT-SB4                           | AVT8-RS                           | AVT8-R-MOD                              |
| 9    | NAV6      | CFC50              | ACFXRD500                   | AVT-SB4                           | AVT9-RS                           | AVT9-R-MOD                              |

Note: If isolator is required code is AVT-ISO.

#### MATCHED SILENCERS CODES & DIMENSIONS (mm)

| Fan Code | Size     | Silencer Code | L    | W    | H   | H1  | Weight (Kg) |
|----------|----------|---------------|------|------|-----|-----|-------------|
| AVT1     | Standard | AVT1-MSS      | 1000 | 544  | 250 | 393 | 32          |
| AVT1     | Long     | AVT1-MSL      | 1500 | 544  | 250 | 393 | 46          |
| AVT2     | Standard | AVT2-MSS      | 1000 | 543  | 285 | 393 | 32          |
| AVT2     | Long     | AVT2-MSL      | 1500 | 543  | 285 | 393 | 46          |
| AVT3     | Standard | AVT3-MSS      | 1000 | 681  | 334 | 393 | 39          |
| AVT3     | Long     | AVT3-MSL      | 1500 | 681  | 334 | 393 | 56          |
| AVT4     | Standard | AVT4-MSS      | 1000 | 681  | 376 | 502 | 39          |
| AVT4     | Long     | AVT4-MSL      | 1500 | 681  | 376 | 502 | 56          |
| AVT4L    | Standard | AVT4L-MSS     | 1000 | 681  | 376 | 502 | 39          |
| AVT4L    | Long     | AVT4L-MSL     | 1500 | 681  | 376 | 502 | 56          |
| AVT5     | Standard | AVT5-MSS      | 1000 | 827  | 433 | 502 | 44          |
| AVT5     | Long     | AVT5-MSL      | 1500 | 827  | 433 | 502 | 65          |
| AVT6     | Standard | AVT6-MSS      | 1000 | 921  | 545 | 656 | 64          |
| AVT6     | Long     | AVT6-MSL      | 1500 | 921  | 545 | 656 | 89          |
| AVT7     | Standard | AVT7-MSS      | 1000 | 1019 | 575 | 656 | 41          |
| AVT7     | Long     | AVT7-MSL      | 1500 | 1019 | 575 | 656 | 98          |
| AVT8     | Standard | AVT8-MSS      | 1000 | 1244 | 615 | 709 | 83          |
| AVT8     | Long     | AVT8-MSL      | 1500 | 1244 | 615 | 709 | 114         |
| AVT9     | Standard | AVT9-MSS      | 1000 | 1244 | 615 | 709 | 92          |
| AVT9     | Long     | AVT9-MSL      | 1500 | 1244 | 615 | 709 | 125         |

H = AVT Height, H1 = AVT-R + AVT-X Height. (H1 includes pitched roof).

## AIRE-VOLVE SILENCER SYSTEMS

### TECHNICAL INFORMATION



**NEW**

EXTERNAL ROOF UNIT (AVT4-R)



INTERNAL UNIT  
(AVT3-SYSTEM 1)



### FEATURES & BENEFITS

#### QUIETEST SYSTEM

Construction is double walled with 35mm acoustic infill.

#### DESIGNED SOLUTION

Matched attenuators acoustically designed to work in conjunction with Aire-Volve twin fans.

#### COMPLETELY ENCLOSED SPIGOT

Therefore no noise breakout between fan and silencer.

#### LONG LIFE

Aluzinc provides longer life expectancy than other materials and is aesthetically pleasing for exposed sites.

#### QUICK & EASY TO INSTALL

Integral mounting brackets allow for attenuators to be easily incorporated into existing drop rod suspension system. Quick fit clamping arrangement and tight seal to fan unit.

#### FLEXIBLE SOLUTION

Available in 2 lengths (1000mm standard and 1500mm long) with matching flange. Contact Nu-aire for details on the 500mm silencers.

#### PROTECTED SURFACE

Aire-Volve silencers are manufactured from Aluzinc which retains its resistance to corrosion.

#### QUALITY ASSURANCE

Research designed, tested and manufactured to provide the best system solution.

#### LOWER PROFILE

Compact attenuators, ideal for restricted ceiling void application.

#### ANCILLARIES

Optional end panel with rectangular spigot.

#### WARRANTY

5 year warranty.



## AIRE-VOLVE SILENCER SYSTEMS

### TECHNICAL INFORMATION



#### Code descriptions

**AVTCP1 - SYS1 - X**

| | | | | |  
 1 2 3 4 5 6

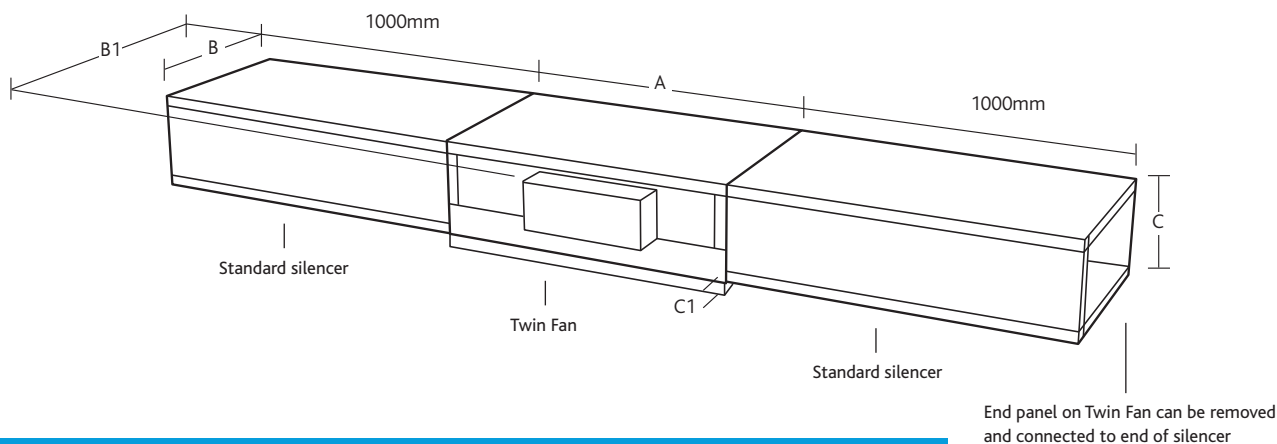
1. Aire-Volve range
2. Twin Fan
3. CP = Constant Pressure control if required
4. Case size 1-9
5. System 1 = Fan unit & 2 standard silencers  
 System 2 = Fan unit & 2 long silencers  
 System 3 = Fan unit, 1 long & 1 standard silencer
6. X = External system with inline unit  
 R = External system with grille outlet unit\*



\*To discuss systems in detail call Nuair.

Note: All external silencers have a pitched roof.

## AIRE-VOLVE SILENCER SYSTEM 1



### DIMENSIONS (mm)

| Unit Size | Code      | Description                                       | A    | B    | B1<br>+Control<br>(108mm) | C   | C1<br>(39mm) | Weight<br>(Kg) |
|-----------|-----------|---|------|------|---------------------------|-----|--------------|----------------|
| 1         | AVT1-SYS1 | Size 1 twin fan with 2 standard matched silencers | 2931 | 544  | 652                       | 250 | 289          | 110            |
| 2         | AVT2-SYS1 | Size 2 twin fan with 2 standard matched silencers | 2968 | 543  | 652                       | 285 | 324          | 112            |
| 3         | AVT3-SYS1 | Size 3 twin fan with 2 standard matched silencers | 3186 | 681  | 789                       | 334 | 373          | 145            |
| 4         | AVT4-SYS1 | Size 4 twin fan with 2 standard matched silencers | 3229 | 681  | 789                       | 376 | 415          | 146            |
| 5         | AVT5-SYS1 | Size 5 twin fan with 2 standard matched silencers | 3531 | 827  | 935                       | 433 | 472          | 190            |
| 6         | AVT6-SYS1 | Size 6 twin fan with 2 standard matched silencers | 3729 | 921  | 1029                      | 545 | 584          | 281            |
| 7         | AVT7-SYS1 | Size 7 twin fan with 2 standard matched silencers | 3892 | 1019 | 1127                      | 575 | 614          | 261            |
| 8         | AVT8-SYS1 | Size 8 twin fan with 2 standard matched silencers | 4238 | 1244 | 1352                      | 615 | 669          | 433            |
| 9         | AVT9-SYS1 | Size 9 twin fan with 2 standard matched silencers | 4238 | 1244 | 1352                      | 615 | 669          | 425            |

The above dimensions and weights are guides only. Contact Nuair for further details. C1 = maximum depth of unit with access panel lowered. For external systems contact Nuair.

## PERFORMANCE - AIRE-VOLVE INDOOR TWIN FANS AVT 1-9

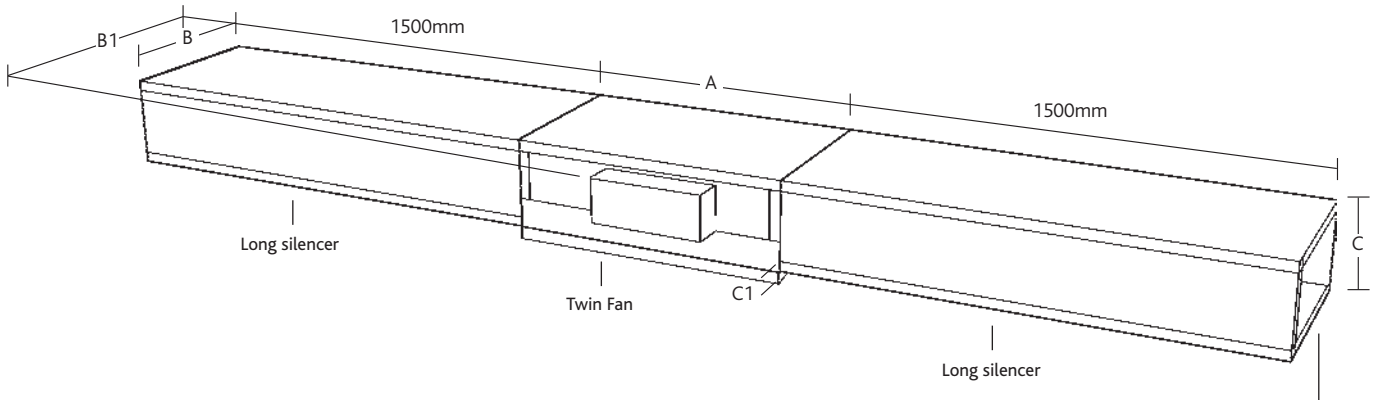
### AVT SYSTEM 1 - ELECTRICAL & SOUND - c/w SHORT ATTENUATORS ACOUSTIC PERFORMANCE (PROVISIONAL)

1. Unweighted induct inlet octave band Sound Power level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |    |
| AVT1-SYS1      | 200           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 70  | 61  | 51  | 43 | 38 | 38 | 34 | 36   | 20 |
|                |               |                                |               |              |                          |                        | 2              | 72  | 63  | 51  | 43 | 41 | 41 | 35 | 37   |    |
|                |               |                                |               |              |                          |                        | 3              | 61  | 53  | 43  | 34 | 25 | 21 | 23 | 17   |    |
| AVT2-SYS1      | 200           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 76  | 67  | 57  | 49 | 44 | 44 | 40 | 43   | 26 |
|                |               |                                |               |              |                          |                        | 2              | 78  | 69  | 57  | 49 | 47 | 47 | 41 | 44   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 49  | 40 | 31 | 27 | 29 | 23   |    |
| AVT3-SYS1      | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 75  | 66  | 67  | 45 | 41 | 35 | 32 | 36   | 31 |
|                |               |                                |               |              |                          |                        | 2              | 79  | 69  | 67  | 52 | 47 | 44 | 37 | 43   |    |
|                |               |                                |               |              |                          |                        | 3              | 68  | 59  | 59  | 45 | 31 | 30 | 28 | 24   |    |
| AVT4-SYS1      | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 80  | 76  | 70  | 62 | 60 | 57 | 54 | 50   | 36 |
|                |               |                                |               |              |                          |                        | 2              | 83  | 80  | 69  | 63 | 66 | 63 | 58 | 51   |    |
|                |               |                                |               |              |                          |                        | 3              | 73  | 66  | 60  | 55 | 46 | 43 | 45 | 34   |    |
| AVT5-SYS1      | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 69  | 64  | 58  | 49 | 41 | 44 | 45 | 40   | 25 |
|                |               |                                |               |              |                          |                        | 2              | 71  | 66  | 60  | 53 | 50 | 49 | 50 | 44   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 55  | 51  | 43 | 33 | 28 | 32 | 22   |    |
| AVT6-SYS1      | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 72  | 74  | 61  | 55 | 45 | 49 | 46 | 43   | 30 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 76  | 61  | 56 | 46 | 50 | 48 | 45   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 64  | 54  | 44 | 29 | 28 | 33 | 22   |    |
| AVT7-SYS1      | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 74  | 68  | 62  | 54 | 47 | 49 | 48 | 45   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 77  | 69  | 63  | 56 | 54 | 55 | 53 | 49   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 54  | 46 | 36 | 33 | 37 | 27   |    |
| AVT8-SYS1      | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 69  | 69  | 58  | 46 | 41 | 49 | 46 | 42   | 27 |
|                |               |                                |               |              |                          |                        | 2              | 71  | 71  | 60  | 51 | 50 | 54 | 50 | 45   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 60  | 53  | 42 | 33 | 31 | 34 | 23   |    |
| AVT9-SYS1      | 500           | 400/50/3                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 74  | 70  | 63  | 54 | 45 | 49 | 51 | 45   | 32 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 71  | 66  | 59 | 55 | 55 | 55 | 48   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 60  | 59  | 49 | 38 | 34 | 40 | 27   |    |

\*Break out fan only.

## AIRE-VOLVE SILENCER SYSTEM 2



### DIMENSIONS (mm)

| Unit Size | Code      | Description                                   | A    | B    | B1<br>+Control<br>(108mm) | C   | C1<br>+<br>(39mm) | Weight<br>(Kg) |
|-----------|-----------|---|------|------|---------------------------|-----|-------------------|----------------|
| 1         | AVT1-SYS2 | Size 1 twin fan with 2 long matched silencers | 3931 | 544  | 652                       | 250 | 289               | 138            |
| 2         | AVT2-SYS2 | Size 2 twin fan with 2 long matched silencers | 3968 | 544  | 652                       | 285 | 324               | 140            |
| 3         | AVT3-SYS2 | Size 3 twin fan with 2 long matched silencers | 4186 | 681  | 789                       | 334 | 373               | 179            |
| 4         | AVT4-SYS2 | Size 4 twin fan with 2 long matched silencers | 4229 | 681  | 789                       | 376 | 415               | 180            |
| 5         | AVT5-SYS2 | Size 5 twin fan with 2 long matched silencers | 4531 | 827  | 935                       | 433 | 472               | 232            |
| 6         | AVT6-SYS2 | Size 6 twin fan with 2 long matched silencers | 4729 | 921  | 1029                      | 545 | 584               | 331            |
| 7         | AVT7-SYS2 | Size 7 twin fan with 2 long matched silencers | 4892 | 1019 | 1127                      | 575 | 614               | 375            |
| 8         | AVT8-SYS2 | Size 8 twin fan with 2 long matched silencers | 5238 | 1244 | 1352                      | 615 | 669               | 495            |
| 9         | AVT9-SYS2 | Size 9 twin fan with 2 long matched silencers | 5238 | 1244 | 1352                      | 615 | 669               | 494            |

End panel on Twin Fan can be removed and connected to end of silencer

The above dimensions and weights are guides only. Contact Nuaire for further details. C1 = maximum depth of unit with access panel lowered. For external systems contact Nuaire.

## PERFORMANCE - AIRE-VOLVE INDOOR TWIN FANS AVT 1-9

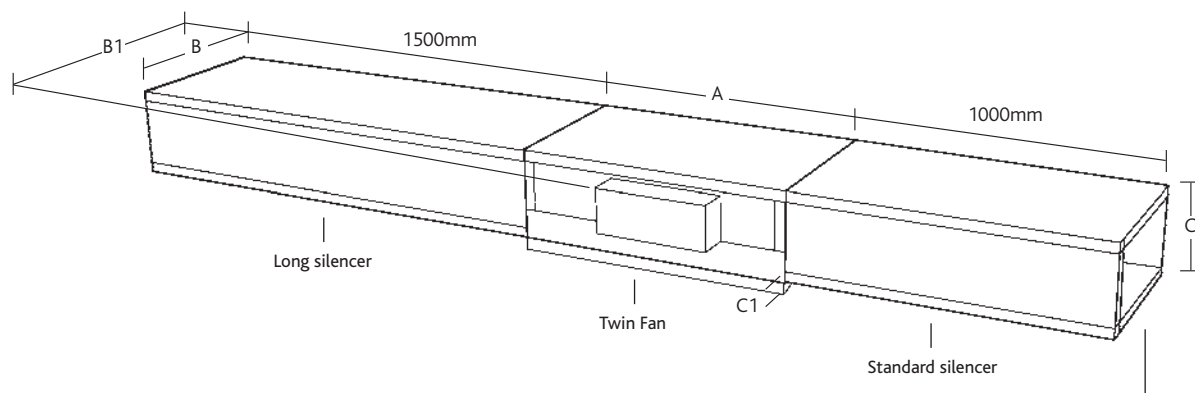
### AVT SYSTEM 2 - ELECTRICAL & SOUND - c/w LONG ATTENUATORS ACOUSTIC PERFORMANCE (PROVISIONAL)

1. Unweighted induct inlet octave band Sound Power level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |    |
| AVT1-SYS2      | 200           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 67  | 61  | 48  | 36 | 31 | 32 | 30 | 33   | 20 |
|                |               |                                |               |              |                          |                        | 2              | 69  | 63  | 48  | 36 | 34 | 35 | 31 | 34   |    |
|                |               |                                |               |              |                          |                        | 3              | 61  | 53  | 43  | 34 | 25 | 21 | 23 | 17   |    |
| AVT2-SYS2      | 200           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 73  | 65  | 54  | 44 | 40 | 37 | 36 | 39   | 26 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 67  | 54  | 44 | 43 | 40 | 37 | 40   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 49  | 40 | 31 | 27 | 29 | 23   |    |
| AVT3-SYS2      | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 72  | 64  | 62  | 40 | 34 | 32 | 30 | 32   | 31 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 67  | 62  | 47 | 40 | 41 | 35 | 39   |    |
|                |               |                                |               |              |                          |                        | 3              | 68  | 59  | 59  | 45 | 31 | 30 | 28 | 24   |    |
| AVT4-SYS2      | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 79  | 73  | 64  | 56 | 53 | 51 | 49 | 47   | 36 |
|                |               |                                |               |              |                          |                        | 2              | 82  | 77  | 63  | 57 | 59 | 57 | 53 | 48   |    |
|                |               |                                |               |              |                          |                        | 3              | 73  | 66  | 60  | 55 | 46 | 43 | 45 | 34   |    |
| AVT5-SYS2      | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 69  | 64  | 53  | 42 | 35 | 38 | 35 | 32   | 25 |
|                |               |                                |               |              |                          |                        | 2              | 71  | 66  | 55  | 46 | 44 | 43 | 40 | 36   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 55  | 51  | 43 | 33 | 28 | 32 | 22   |    |
| AVT6-SYS2      | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 72  | 73  | 57  | 45 | 41 | 44 | 40 | 37   | 30 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 75  | 57  | 46 | 42 | 45 | 42 | 39   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 64  | 54  | 44 | 29 | 28 | 33 | 22   |    |
| AVT7-SYS2      | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 73  | 69  | 56  | 46 | 42 | 43 | 39 | 40   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 70  | 57  | 48 | 49 | 49 | 44 | 44   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 54  | 46 | 36 | 33 | 37 | 27   |    |
| AVT8-SYS2      | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 69  | 69  | 54  | 39 | 37 | 43 | 38 | 35   | 27 |
|                |               |                                |               |              |                          |                        | 2              | 71  | 71  | 56  | 44 | 46 | 48 | 42 | 38   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 60  | 53  | 42 | 33 | 31 | 34 | 23   |    |
| AVT9-SYS2      | 500           | 400/50/3                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 74  | 70  | 59  | 46 | 41 | 44 | 44 | 38   | 32 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 71  | 62  | 51 | 51 | 50 | 48 | 41   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 60  | 59  | 49 | 38 | 34 | 40 | 27   |    |

\*Break out fan only.

## AIRE-VOLVE SILENCER SYSTEM 3



### DIMENSIONS (mm)

| Unit Size | Code      | Description   | A    | B    | B1<br>+Control<br>(108mm) | C   | C1<br>+<br>(39mm) | Weight<br>(Kg) |
|-----------|-----------|---|------|------|---------------------------|-----|-------------------|----------------|
| 1         | AVT1-SYS3 | Size 1 twin fan with 1 long/1 standard matched silencer | 3431 | 544  | 652                       | 250 | 289               | 124            |
| 2         | AVT2-SYS3 | Size 2 twin fan with 1 long/1 standard matched silencer | 3468 | 544  | 652                       | 285 | 324               | 126            |
| 3         | AVT3-SYS3 | Size 3 twin fan with 1 long/1 standard matched silencer | 3686 | 681  | 789                       | 334 | 373               | 162            |
| 4         | AVT4-SYS3 | Size 4 twin fan with 1 long/1 standard matched silencer | 4729 | 681  | 789                       | 376 | 415               | 163            |
| 5         | AVT5-SYS3 | Size 5 twin fan with 1 long/1 standard matched silencer | 4031 | 827  | 935                       | 433 | 472               | 211            |
| 6         | AVT6-SYS3 | Size 6 twin fan with 1 long/1 standard matched silencer | 4229 | 921  | 1029                      | 545 | 584               | 306            |
| 7         | AVT7-SYS3 | Size 7 twin fan with 1 long/1 standard matched silencer | 4392 | 1019 | 1127                      | 575 | 614               | 318            |
| 8         | AVT8-SYS3 | Size 8 twin fan with 1 long/1 standard matched silencer | 4738 | 1244 | 1352                      | 615 | 669               | 464            |
| 9         | AVT9-SYS3 | Size 9 twin fan with 1 long/1 standard matched silencer | 4738 | 1244 | 1352                      | 615 | 669               | 461            |

End panel on Twin Fan can be removed and connected to end of silencer

The above dimensions and weights are guides only. Contact Nuairé for further details. C1 = maximum depth of unit with access panel lowered. For external systems contact Nuairé.

## PERFORMANCE - AIRE-VOLVE INDOOR TWIN FANS AVT 1-9

### AVT SYSTEM 1 - ELECTRICAL & SOUND - c/w LONG ATTENUATOR ON ROOM SIDE / SHORT ATTENUATOR ON ATMOSPHERE SIDE ACOUSTIC PERFORMANCE (PROVISIONAL)

1. Unweighted induct inlet octave band Sound Power level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply               |      | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |
|----------------|---------------|----------------------|------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|
|                |               | (V/Freq<br>Hz/Phase) |      |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |
| AVT1-SYS3      | 200           | 230/50/1             | 0.75 | 0.75          | 85           | 3300                     | 1                      | 67             | 61  | 48  | 36  | 31 | 32 | 30 | 33 | 20   |
|                |               |                      |      |               |              |                          | 2                      | 72             | 63  | 51  | 43  | 41 | 41 | 35 | 37 |  |
|                |               |                      |      |               |              |                          | 3                      | 61             | 53  | 43  | 34  | 25 | 21 | 23 | 17 |  |
| AVT2-SYS3      | 200           | 230/50/1             | 1.4  | 1.4           | 170          | 4000                     | 1                      | 73             | 65  | 54  | 44  | 40 | 37 | 36 | 39 | 26   |
|                |               |                      |      |               |              |                          | 2                      | 78             | 69  | 57  | 49  | 47 | 47 | 41 | 44 |  |
|                |               |                      |      |               |              |                          | 3                      | 67             | 59  | 49  | 40  | 31 | 27 | 29 | 23 |  |
| AVT3-SYS3      | 250           | 230/50/1             | 1.35 | 1.35          | 170          | 2500                     | 1                      | 72             | 64  | 62  | 40  | 34 | 32 | 30 | 32 | 31   |
|                |               |                      |      |               |              |                          | 2                      | 79             | 69  | 67  | 52  | 47 | 44 | 37 | 43 |  |
|                |               |                      |      |               |              |                          | 3                      | 68             | 59  | 59  | 45  | 31 | 30 | 28 | 24 |  |
| AVT4-SYS3      | 315           | 230/50/1             | 3.1  | 3.1           | 500          | 3400                     | 1                      | 79             | 73  | 64  | 56  | 53 | 51 | 49 | 47 | 36   |
|                |               |                      |      |               |              |                          | 2                      | 83             | 80  | 69  | 63  | 66 | 63 | 58 | 51 |  |
|                |               |                      |      |               |              |                          | 3                      | 73             | 66  | 60  | 55  | 46 | 43 | 45 | 34 |  |
| AVT5-SYS3      | 315           | 230/50/1             | 3.5  | 3.5           | 550          | 2400                     | 1                      | 69             | 64  | 53  | 42  | 35 | 38 | 35 | 32 | 25   |
|                |               |                      |      |               |              |                          | 2                      | 71             | 66  | 60  | 53  | 50 | 49 | 50 | 44 |  |
|                |               |                      |      |               |              |                          | 3                      | 62             | 55  | 51  | 43  | 33 | 28 | 32 | 22 |  |
| AVT6-SYS3      | 400           | 230/50/1             | 2.9  | 2.9           | 450          | 1700                     | 1                      | 72             | 73  | 57  | 45  | 41 | 44 | 40 | 37 | 30   |
|                |               |                      |      |               |              |                          | 2                      | 75             | 76  | 61  | 56  | 46 | 50 | 48 | 45 |  |
|                |               |                      |      |               |              |                          | 3                      | 66             | 64  | 54  | 44  | 29 | 28 | 33 | 22 |  |
| AVT7-SYS3      | 400           | 230/50/1             | 3.5  | 3.5           | 790          | 1700                     | 1                      | 73             | 69  | 56  | 46  | 42 | 43 | 39 | 40 | 29   |
|                |               |                      |      |               |              |                          | 2                      | 77             | 69  | 63  | 56  | 54 | 55 | 53 | 49 |  |
|                |               |                      |      |               |              |                          | 3                      | 67             | 59  | 54  | 46  | 36 | 33 | 37 | 27 |  |
| AVT8-SYS3      | 500           | 230/50/1             | 3.2  | 3.2           | 710          | 1100                     | 1                      | 69             | 69  | 54  | 39  | 37 | 43 | 38 | 35 | 27   |
|                |               |                      |      |               |              |                          | 2                      | 71             | 71  | 60  | 51  | 50 | 54 | 50 | 45 |  |
|                |               |                      |      |               |              |                          | 3                      | 62             | 60  | 53  | 42  | 33 | 31 | 34 | 23 |  |
| AVT9-SYS3      | 500           | 400/50/3             | 1.85 | 1.85          | 1000         | 1500                     | 1                      | 74             | 70  | 59  | 46  | 41 | 44 | 44 | 38 | 32   |
|                |               |                      |      |               |              |                          | 2                      | 76             | 71  | 66  | 59  | 55 | 55 | 55 | 48 |  |
|                |               |                      |      |               |              |                          | 3                      | 67             | 60  | 59  | 49  | 38 | 34 | 40 | 27 |  |

\*Break out fan only.





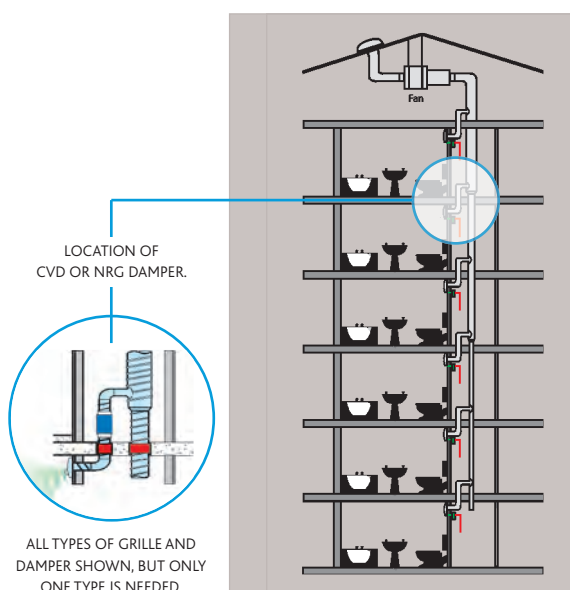
Twin fan - high performance extract.  
Typical applications include Schools, Hotels, Apartments & Nursing Homes.

## “On demand ventilation when you need it most.”

Nuaire Ecosmart Constant Pressure systems are designed for continuous ventilation and because they feature Ecosmart on demand control, costs are kept low.

When a room is occupied, a PIR or switch triggers the damper, which immediately operates as required, returning to background ventilation when the room is vacated. The Constant Pressure Twin Fan offers up to 70% savings over conventionally controlled central systems and should the primary fan or motor fail, the automatic change over guarantees uninterrupted ventilation because it works at reduced duty the unit consumes less power and is very quiet. This energy efficient ventilation solution is extremely cost effective to run and simple to install as all components are delivered assembled, wired and tested. Specify Nuaire Ecosmart Constant Pressure and blow away your client's energy bills.

**Nuaire.** For the complete ventilation solution.



## AIRE-VOLVE CONSTANT PRESSURE TWIN FANS

### BENEFITS

#### PRECISE VENTILATION

The only multi-room ventilation system to provide local 'on demand' control.

#### GUARANTEED VENTILATION

'Hall effect' airflow sensor provides 12 hour automatic changer in the event of fan/motor failure, guaranteeing ventilation 24/7.

#### QUIET OPERATION

Does not generate noise by throttling back on balancing dampers required in conventional systems.

#### TRUE DEMAND VENTILATION

Only the areas requiring ventilation receive ventilation.

#### SAVES ENERGY

Up to 70% saving over conventionally controlled central systems.

- Not needlessly extracting conditioned air
- Fan speed/motor power dictated by demand requirement.

#### UNIQUE DIRECT ACTING

##### MULTI-POSITION DAMPER NRG GRILLE

Ensures operation only when room occupied with integrated PIR.

#### PRE-WIRED

All components assembled, wired and tested at the Nuaire manufacturing facility.

- Simply plug and go. No wiring required between fan and dampers.

#### MATCHED SILENCER OPTIONS

Double walled Aluzinc construction and 35mm infill acoustic lining providing the best acoustic solution.

Note: External units are not fully acoustic lined as standard.

#### DUCT MOUNTED CVD DAMPER

For unobtrusive flexibility.

#### INTERNAL OR EXTERNAL

Twin fan options are available in internal or external up to 1.9m<sup>3</sup>/s. For larger duties contact Nuaire.

#### LESS POWER CONSUMPTION

System works at reduced duty therefore consumes less power and is very quiet.

#### WARRANTY

Ecosmart Constant Pressure has a 5 year warranty.

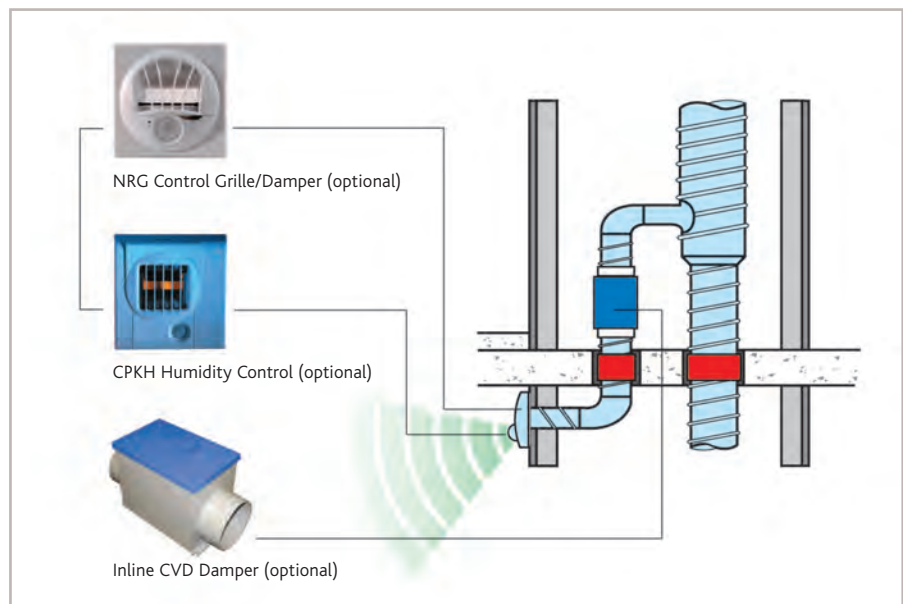
Note: These units have the pressure sensor configured for extract application. For supply applications please contact Nuaire.

Note: External fans and silencers have pitched roofs.

Note: For further details on Constant Pressure single fan options, please contact Nuaire.

#### WHAT IS CONSTANT PRESSURE?

Constant Pressure Variable Volume systems (CPVV) are systems of fans, controls & sensors installed in a multi-room ducted system. The system is intended to provide continuous background ventilation when the served spaces are unoccupied and will automatically increase the ventilation rate when any room is occupied to the design requirements. Only the room requiring the increased ventilation will receive the ventilation.



## AIRE-VOLVE CONSTANT PRESSURE TWIN FANS

### TECHNICAL INFORMATION

#### HOW DOES CONSTANT PRESSURE WORK?

Independent extract grilles are installed at duct termination points in each of the spaces served, the grilles (for the benefit of this exercise we will consider our NRG grilles) are set to provide one of four boost ventilation rates. They are connected independently to a 230V AC supply via 230/12V transformers.

The grilles have in built occupancy sensors (PIR) and when the PIR detects movement the grille is driven open, when a grille opens the system pressure falls, the fan control detects the change and adjusts the motor speed to maintain the target pressure.

Grilles will stay open for approximately twenty minutes after the last movement has been seen and when it closes the control again compensates for the change in system pressure by adjusting fan speed.

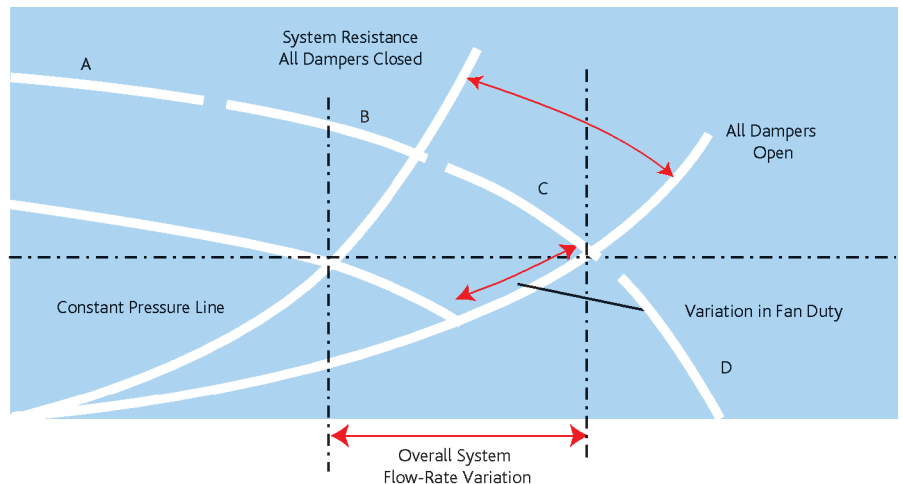
By opening the grilles the pressure in the system will fall. The control system in the fan senses this and automatically speeds up to provide the higher volume and equalise the system pressure. This works in reverse with the grille closing, increasing the system pressure, automatically reducing the fan speed and again equalising the system pressure. Hence a constant pressure variable volume system. There is no inter-connection between grille/damper and fan.



#### WHAT ARE NRG GRILLES?

A motorised two-position grille offered by Nuair to compliment the range of constant pressure fans. They have:

- A connecting spigot to suit 125mm duct opening.
- Four settable positions for boost vent rate, Positions 1, 2, 3 & 4 are indicated on the grille by the appropriate number of dots. The grille is pre-set at 5mm open to guarantee the trickle ventilation rate and the other positions are set via a trigger on the front of the grille.



- An integral occupancy sensor (PIR) which is not adjustable.
- They are 12V-AC operating and are supplied with 230/12V AC transformers for installation local to the grille. For ease of installation the transformer can be connected to an independent spur or ring main.
- Integrated run on timer providing approx. twenty minutes overrun, which is non-adjustable.
- Grille resistance is dependent upon the air volume passing through it, see the resistance charts.
- There is no interconnecting wiring between damper/grille & fan.



#### CVD DAMPER

The CVD damper will work in the same way as the NRG but is mounted in-line and will be 230v operated responding to external switching devices such as humidistat, remote PIR, light switch, door switch etc. The in-line version has an in built motorised volume control damper to regulate the maximum flow through the branch connection. It has an airflow sensor that continuously monitors the airflow and adjusts the damper position

#### THE INTEGRATED CONTROL PACKAGE

Is mounted in the fan chamber and consists of the EST package including:

- The inverter, which is the mechanism that varies the speed of the motors
- A Ecosmart control printed circuit board which converts the data from the pressure transducer to an input signal to the inverter.
- Terminals to connect the incoming mains supply and remote status indicators.

#### THE PRESSURE TRANSDUCER

Is precisely calibrated and mounted in the fan chamber and is connected to the Ecosmart control board. It continually monitors system pressure, compares the actual to the target allowing the control board to convert the data to an input signal to the inverter, thereby adjusting the motor speed to compensate for the system change.

#### THE SET-UP BOX

Is mounted on the external face of the unit case, it is connected to the control pack by a low voltage lead and includes

- A potentiometer to set the target pressure.

All achieved whilst fan is running without re-accessing the fan chamber.

## TWIN FANS CONSTANT PRESSURE

### TECHNICAL INFORMATION

#### PERFORMANCE - CVD DAMPER

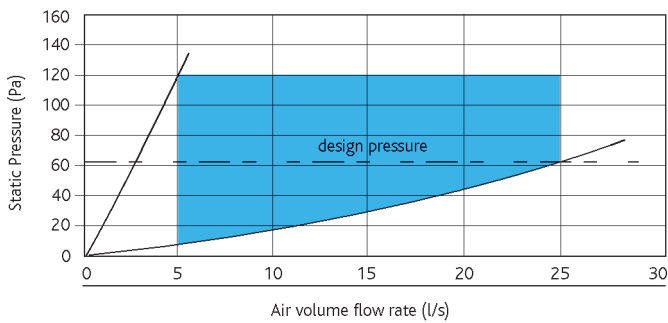
A nominal pressure drop must be allowed in order to ensure adequate airflow through the damper. To ensure the airflow pattern through the damper produces consistent readings; the pressure drop across the damper should not exceed the recommended value. Recommended values are listed in the table below and shown in the performance envelope of each damper.

\*Recommended maximum operating pressure to ensure the damper would work within calibration limits. Keep the duct velocity as low as possible to ensure the system produces the lowest energy usage, preferably below 5m/s.

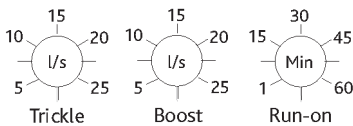
\*\*Allow 90Pa for duties below 100l/s and 150Pa for duties between 100l/s and 125l/s.

| Code   | Nominal Design Pressure Drop | Maximum Pressure Across Damper* |
|--------|------------------------------|---------------------------------|
| CVD100 | 60Pa                         | 120Pa                           |
| CVD125 | 70Pa                         | 140Pa                           |
| CVD150 | 80Pa                         | 160Pa                           |
| CVD200 | 90Pa**                       | 200Pa                           |

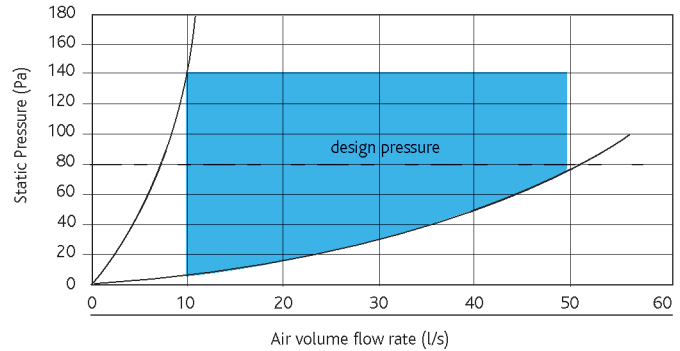
Performance envelope for CVD100



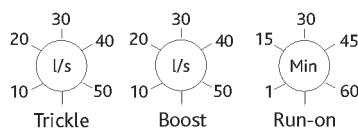
CVD100 Settings



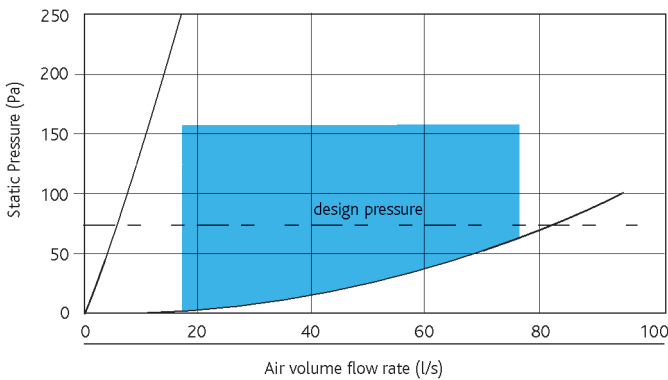
Performance envelope for CVD125



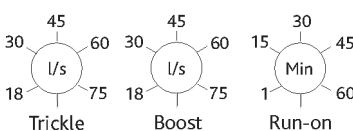
Dial calibration for CVD125



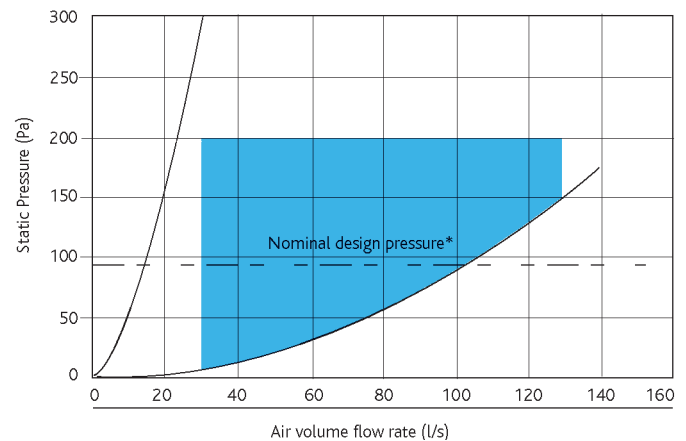
Performance envelope for CVD150



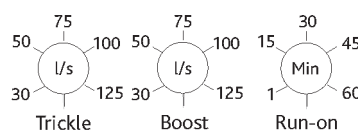
Dial calibration for CVD150



Performance envelope for CVD200



Dial calibration for CVD200

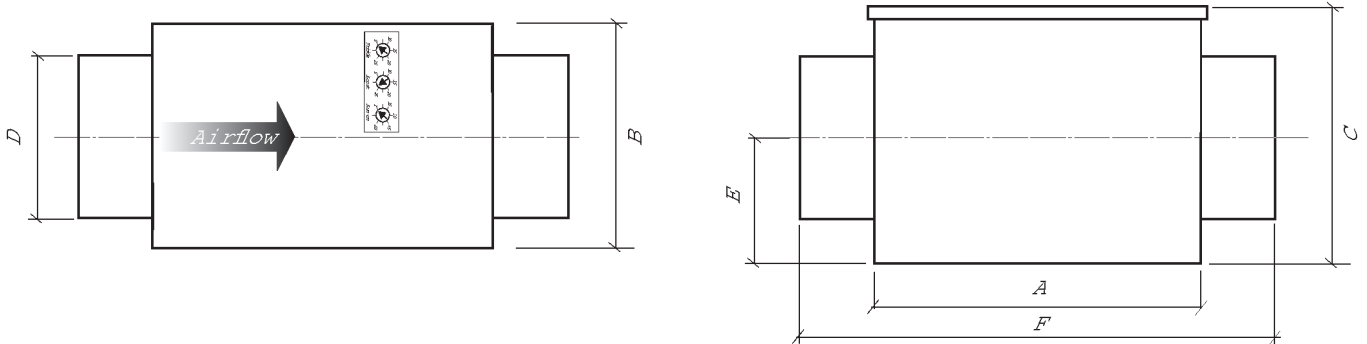




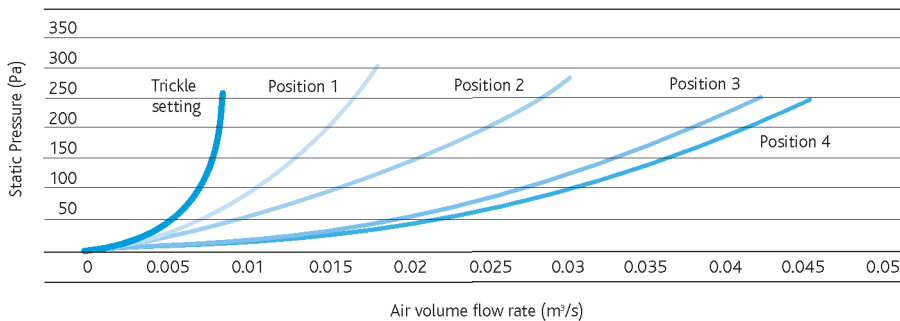


### DIMENSIONS (MM) CVD DAMPERS

| Code   | A   | B   | C   | D   | E   | F   | Weight (Kg) |
|--------|-----|-----|-----|-----|-----|-----|-------------|
| CVD100 | 221 | 128 | 165 | 100 | 69  | 295 | 2           |
| CVD125 | 300 | 180 | 195 | 125 | 75  | 400 | 3.5         |
| CVD150 | 300 | 200 | 220 | 150 | 90  | 400 | 3.7         |
| CVD200 | 300 | 230 | 275 | 200 | 115 | 400 | 4           |



### PERFORMANCE - NRG MOTORISED GRILLE/DAMPER



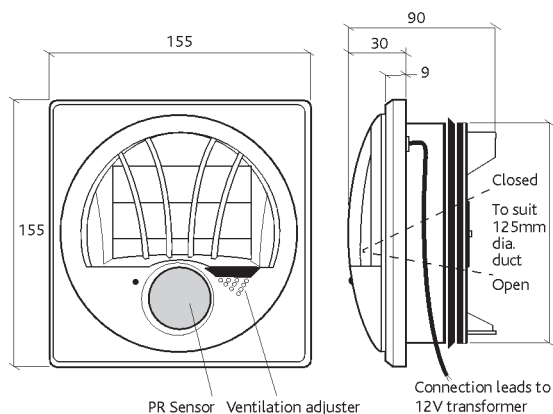
### WHAT ARE NRG GRILLES?

A motorised two-position grille offered by Nuairé to compliment the range of constant pressure fans.

They have:

- A connecting spigot to suit 125mm duct opening.
- Four settable positions for boost vent rate, Positions 1, 2, 3 & 4 are indicated on the grille by the appropriate number of dots. The grille is preset at 5mm open to guarantee the trickle ventilation rate and the other positions are set via a trigger on the front of the grille.

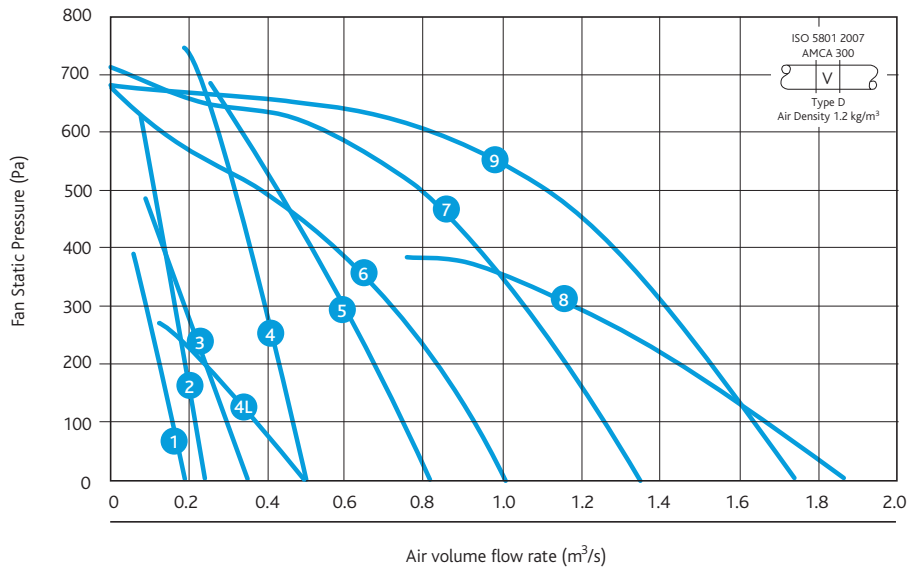
### DIMENSIONS (MM) NRG GRILLE/DAMPER



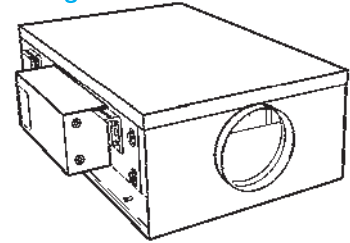
## AIRE-VOLVE CONSTANT PRESSURE

### TECHNICAL INFORMATION

#### PERFORMANCE - AIRE-VOLVE INTERNAL TWIN FANS



#### Casing



AVT Internal In-line Twin Fans.  
NOTE: External range has pitched roof.

#### Code descriptions

### AVTCP1

1 2 3 4

1. Aire-Volve range
2. Twin Fan
3. Constant pressure control options
4. Case size 1-9

For external performance curves  
(ie. 'X' & 'R' refer to pages 9 & 10).

#### PERFORMANCE - AIRE-VOLVE INTERNAL CONSTANT PRESSURE TWIN FANS AVTCP 1-9

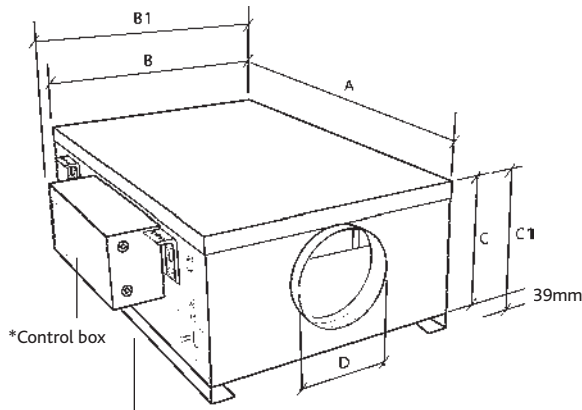
#### ELECTRICAL & SOUND

1. Unweighted induct inlet octave band Sound Power level - dB re 1pW
2. Unweighted induct outlet octave band Sound Power level - dB re 1pW
3. Casing radiated octave band Sound Power level - dB re 1pW

| Curve/<br>Code | Duct<br>conn. | Supply<br>(V/Freq<br>Hz/Phase) | FLC<br>(amps) | SC<br>(amps) | Input Power<br>(Max) (W) | Fan Speed<br>(Nominal) | Frequency (Hz) |     |     |     |    |    |    |    | *Casing Radiated Free<br>Field dBA @ 3m<br>(Spherical Radiation) |    |
|----------------|---------------|--------------------------------|---------------|--------------|--------------------------|------------------------|----------------|-----|-----|-----|----|----|----|----|--|----|
|                |               |                                |               |              |                          |                        | 63             | 125 | 250 | 500 | 1K | 2K | 4K | 8K |  |    |
| AVTCP1         | 200           | 230/50/1                       | 0.75          | 0.75         | 85                       | 3300                   | 1              | 73  | 69  | 63  | 63 | 60 | 56 | 52 | 50   | 20 |
|                |               |                                |               |              |                          |                        | 2              | 75  | 71  | 63  | 63 | 63 | 59 | 53 | 51   |    |
|                |               |                                |               |              |                          |                        | 3              | 61  | 53  | 43  | 34 | 25 | 21 | 23 | 17   |    |
| AVTCP2         | 200           | 230/50/1                       | 1.4           | 1.4          | 170                      | 4000                   | 1              | 79  | 74  | 68  | 69 | 65 | 62 | 58 | 56   | 26 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 69  | 69 | 69 | 65 | 59 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 49  | 40 | 31 | 27 | 29 | 23   |    |
| AVTCP3         | 250           | 230/50/1                       | 1.35          | 1.35         | 170                      | 2500                   | 1              | 77  | 74  | 79  | 67 | 63 | 59 | 53 | 51   | 31 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 78  | 74 | 69 | 68 | 58 | 58   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 58  | 45 | 31 | 30 | 28 | 24   |    |
| AVTCP4         | 315           | 230/50/1                       | 3.1           | 3.1          | 500                      | 3400                   | 1              | 83  | 79  | 80  | 82 | 78 | 74 | 70 | 67   | 36 |
|                |               |                                |               |              |                          |                        | 2              | 87  | 83  | 80  | 84 | 83 | 80 | 75 | 68   |    |
|                |               |                                |               |              |                          |                        | 3              | 73  | 65  | 60  | 55 | 45 | 42 | 45 | 34   |    |
| AVTCP4L**      | 315           | 230/50/1                       | 1.1           | 1.1          | 160                      | 1700                   | 1              | 72  | 67  | 67  | 66 | 60 | 57 | 53 | 48   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 74  | 69  | 69  | 70 | 69 | 62 | 55 | 52   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 57  | 55  | 45 | 37 | 30 | 32 | 22   |    |
| AVTCP5         | 315           | 230/50/1                       | 3.5           | 3.5          | 550                      | 2400                   | 1              | 74  | 71  | 69  | 68 | 62 | 61 | 57 | 52   | 25 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 73  | 71  | 72 | 71 | 66 | 62 | 56   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 55  | 51  | 43 | 33 | 28 | 32 | 22   |    |
| AVTCP6         | 400           | 230/50/1                       | 2.9           | 2.9          | 450                      | 1700                   | 1              | 77  | 80  | 74  | 72 | 66 | 65 | 61 | 54   | 30 |
|                |               |                                |               |              |                          |                        | 2              | 80  | 82  | 74  | 73 | 67 | 66 | 63 | 56   |    |
|                |               |                                |               |              |                          |                        | 3              | 66  | 64  | 54  | 44 | 29 | 28 | 33 | 22   |    |
| AVTCP7         | 400           | 230/50/1                       | 3.5           | 3.5          | 790                      | 1700                   | 1              | 78  | 76  | 73  | 73 | 67 | 65 | 62 | 57   | 29 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 77  | 74  | 75 | 74 | 71 | 67 | 61   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 59  | 54  | 46 | 36 | 33 | 37 | 27   |    |
| AVTCP8         | 500           | 230/50/1                       | 3.2           | 3.2          | 710                      | 1100                   | 1              | 74  | 76  | 71  | 66 | 62 | 64 | 60 | 54   | 27 |
|                |               |                                |               |              |                          |                        | 2              | 76  | 78  | 73  | 71 | 71 | 69 | 64 | 57   |    |
|                |               |                                |               |              |                          |                        | 3              | 62  | 60  | 53  | 42 | 33 | 31 | 34 | 23   |    |
| AVTCP9         | 500           | 400/50/3                       | 1.85          | 1.85         | 1000                     | 1500                   | 1              | 79  | 77  | 76  | 73 | 66 | 66 | 66 | 58   | 32 |
|                |               |                                |               |              |                          |                        | 2              | 81  | 78  | 79  | 78 | 76 | 72 | 70 | 61   |    |
|                |               |                                |               |              |                          |                        | 3              | 67  | 60  | 59  | 49 | 38 | 34 | 40 | 27   |    |

\*Break out fan only. For electrical and sound data for 'X' and 'R' refer to page 9 & 10. \*\*Available end of July 2012.

### DIMENSIONS - AIRE-VOLVE INTERNAL TWIN FANS AVTCP1-9



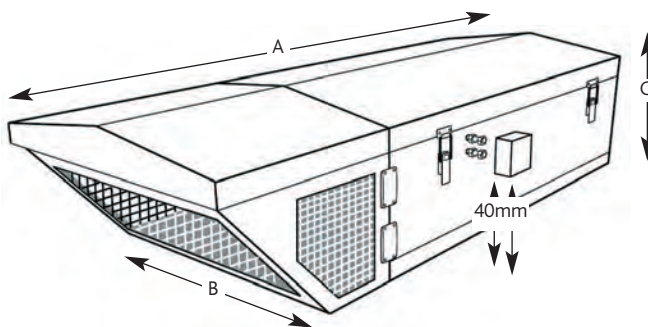
Lowered access bracket to allow panel to slide under matched silencers  
 \*Control box can be mounted on either side of the Twin Fan or remotely using the AVT Control Kit (AVTCK).  
 Refer to I&M document for fixing details.

#### DIMENSIONS (mm)

| Fan Code | A    | Dim A +Spigot Length (inc.100mm) B | Dim B1 +Control (inc.108mm) C | C1*  | Spigot D (dia) | Weight (Kg) |     |     |
|----------|------|------------------------------------|-------------------------------|------|----------------|-------------|-----|-----|
| AVTCP1   | 931  | 1031                               | 544                           | 652  | 250            | 289         | 200 | 46  |
| AVTCP2   | 968  | 1068                               | 543                           | 652  | 285            | 324         | 200 | 48  |
| AVTCP3   | 1186 | 1286                               | 681                           | 789  | 334            | 373         | 250 | 67  |
| AVTCP4   | 1229 | 1329                               | 681                           | 789  | 376            | 415         | 315 | 68  |
| AVTCP4L  | 1531 | 1631                               | 827                           | 931  | 401            | 440         | 315 | 100 |
| AVTCP5   | 1531 | 1631                               | 827                           | 935  | 433            | 472         | 315 | 102 |
| AVTCP6   | 1729 | 1829                               | 921                           | 1029 | 545            | 584         | 400 | 153 |
| AVTCP7   | 1892 | 1992                               | 1019                          | 1127 | 575            | 614         | 400 | 179 |
| AVTCP8   | 2238 | 2338                               | 1244                          | 1352 | 615            | 654         | 500 | 267 |
| AVTCP9   | 2238 | 2338                               | 1244                          | 1352 | 615            | 654         | 500 | 244 |

Bottom access on sizes AVTCP1-9 as standard.  
 Unit sizes 7-9 have a split bottom access panel.  
 AVTCP1-9 are available with top access, ie = AVTCP6TA.

### DIMENSIONS - AIRE-VOLVE EXTERNAL TWIN FANS AVTCP1-9 - R

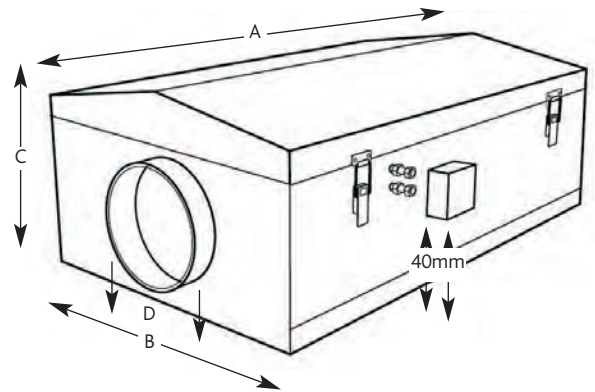


#### DIMENSIONS (mm)

| Case Size | B Width | A Length | Height C | Spigot Diameter D | Weight (Kg) |
|-----------|---------|----------|----------|-------------------|-------------|
| AVTCP1-R  | 716     | 1620     | 393      | 250               | 64          |
| AVTCP2-R  | 716     | 1620     | 393      | 250               | 65          |
| AVTCP3-R  | 716     | 1620     | 393      | 250               | 66          |
| AVTCP4-R  | 857     | 2066     | 502      | 315               | 111         |
| AVTCP4L-R | 857     | 2066     | 502      | 315               | 110         |
| AVTCP5-R  | 857     | 2066     | 502      | 315               | 115         |
| AVTCP6-R  | 1045    | 2575     | 656      | 400               | 161         |
| AVTCP7-R  | 1045    | 2575     | 656      | 400               | 164         |
| AVTCP8-R  | 1278    | 2956     | 709      | 500               | 262         |
| AVTCP9-R  | 1278    | 2956     | 709      | 500               | 229         |

Note: Dim 'A' - add 50mm to include spigot.

### DIMENSIONS - AIRE-VOLVE EXTERNAL TWIN FANS AVTCP1-9 - X



#### DIMENSIONS (mm)

| Fan Code  | A end panel (inc.5mm) B | Dim A +Spigot Length (inc.50mm) C | Dim B1 +Control (inc.40mm) D | Spigot D (dia) | Weight (Kg) |     |     |
|-----------|-------------------------|-----------------------------------|------------------------------|----------------|-------------|-----|-----|
| AVTCP1-X  | 1120                    | 1220                              | 716                          | 756            | 393         | 250 | 56  |
| AVTCP2-X  | 1120                    | 1220                              | 716                          | 756            | 393         | 250 | 56  |
| AVTCP3-X  | 1120                    | 1220                              | 716                          | 756            | 393         | 250 | 57  |
| AVTCP4-X  | 1466                    | 1566                              | 857                          | 897            | 502         | 315 | 99  |
| AVTCP4L-X | 1466                    | 1566                              | 857                          | 897            | 502         | 315 | 99  |
| AVTCP5-X  | 1466                    | 1566                              | 857                          | 897            | 502         | 315 | 103 |
| AVTCP6-X  | 1831                    | 1931                              | 1045                         | 1085           | 656         | 400 | 145 |
| AVTCP7-X  | 1831                    | 1931                              | 1045                         | 1085           | 656         | 400 | 148 |
| AVTCP8-X  | 2172                    | 2272                              | 1278                         | 1318           | 709         | 500 | 236 |
| AVTCP9-X  | 2172                    | 2272                              | 1278                         | 1318           | 709         | 500 | 205 |

Note: External silencers have pitched roofs.

#### TWIN FAN QUICK SELECTION GUIDE

| Size | AV Mounts | Flexible Connector | Acoustic Flexible Connector | Vertical Support Bracket (4 pack) | End Panel With Rectangular Spigot | 'R' Grille Outlet Model (External only) |
|------|-----------|--------------------|-----------------------------|-----------------------------------|-----------------------------------|---|
| 1    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT1-RS                           | AVT1-R-MOD                              |
| 2    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT2-RS                           | AVT2-R-MOD                              |
| 3    | NAV2      | CFC25              | ACFXRD250                   | AVT-SB4                           | AVT3-RS                           | AVT3-R-MOD                              |
| 4    | NAV2      | CFC31              | ACFXRD315                   | AVT-SB4                           | AVT4-RS                           | AVT4-R-MOD                              |
| 5    | NAV5      | CFC31              | ACFXRD315                   | AVT-SB4                           | AVT5-RS                           | AVT5-R-MOD                              |
| 6    | NAV3      | CFC40              | ACFXRD400                   | AVT-SB4                           | AVT6-RS                           | AVT6-R-MOD                              |
| 7    | NAV3      | CFC40              | ACFXRD400                   | AVT-SB4                           | AVT7-RS                           | AVT7-R-MOD                              |
| 8    | NAV6      | CFC50              | ACFXRD500                   | AVT-SB4                           | AVT8-RS                           | AVT8-R-MOD                              |
| 9    | NAV6      | CFC50              | ACFXRD500                   | AVT-SB4                           | AVT9-RS                           | AVT9-R-MOD                              |

Note: If isolator is required code is AVT-ISO.

#### MATCHED SILENCERS CODES & DIMENSIONS (mm)

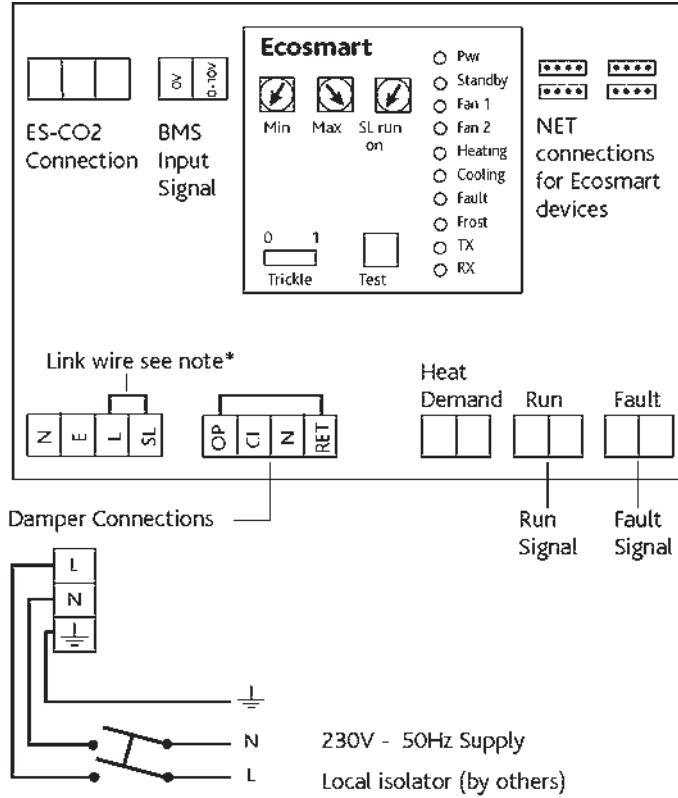
| Fan Code | Size     | Silencer Code | L    | W    | H   | H1  | Weight (Kg) |
|----------|----------|---------------|------|------|-----|-----|-------------|
| AVT1     | Standard | AVT1-MSS      | 1000 | 544  | 250 | 393 | 32          |
| AVT1     | Long     | AVT1-MSL      | 1500 | 544  | 250 | 393 | 46          |
| AVT2     | Standard | AVT2-MSS      | 1000 | 543  | 285 | 393 | 32          |
| AVT2     | Long     | AVT2-MSL      | 1500 | 543  | 285 | 393 | 46          |
| AVT3     | Standard | AVT3-MSS      | 1000 | 681  | 334 | 393 | 39          |
| AVT3     | Long     | AVT3-MSL      | 1500 | 681  | 334 | 393 | 56          |
| AVT4     | Standard | AVT4-MSS      | 1000 | 681  | 376 | 502 | 39          |
| AVT4     | Long     | AVT4-MSL      | 1500 | 681  | 376 | 502 | 56          |
| AVT4L    | Standard | AVT4L-MSS     | 1000 | 681  | 376 | 502 | 39          |
| AVT4L    | Long     | AVT4L-MSL     | 1500 | 681  | 376 | 502 | 56          |
| AVT5     | Standard | AVT5-MSS      | 1000 | 827  | 433 | 502 | 44          |
| AVT5     | Long     | AVT5-MSL      | 1500 | 827  | 433 | 502 | 65          |
| AVT6     | Standard | AVT6-MSS      | 1000 | 921  | 545 | 656 | 64          |
| AVT6     | Long     | AVT6-MSL      | 1500 | 921  | 545 | 656 | 89          |
| AVT7     | Standard | AVT7-MSS      | 1000 | 1019 | 575 | 656 | 41          |
| AVT7     | Long     | AVT7-MSL      | 1500 | 1019 | 575 | 656 | 98          |
| AVT8     | Standard | AVT8-MSS      | 1000 | 1244 | 615 | 709 | 83          |
| AVT8     | Long     | AVT8-MSL      | 1500 | 1244 | 615 | 709 | 114         |
| AVT9     | Standard | AVT9-MSS      | 1000 | 1244 | 615 | 709 | 92          |
| AVT9     | Long     | AVT9-MSL      | 1500 | 1244 | 615 | 709 | 125         |

H = AVT Height, H1 = AVT-R + AVT-X Height. (Includes pitched roof).

## WIRING - AIRE-VOLVE TWIN FANS (INTERNAL & EXTERNAL)

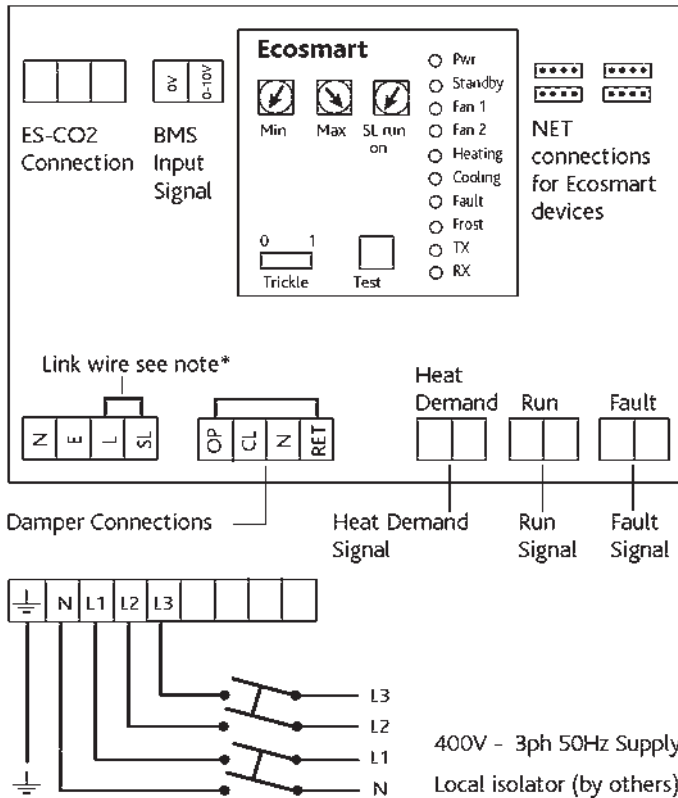
### Wiring for single phase units sizes 1-8.

All inter-connections between circuit boards, blowers and sensors are made at the factory. This diagram only shows the essential field wiring points for clarity. \*Remove link wire if switched live signal, an enabler or BMS signal is connected.



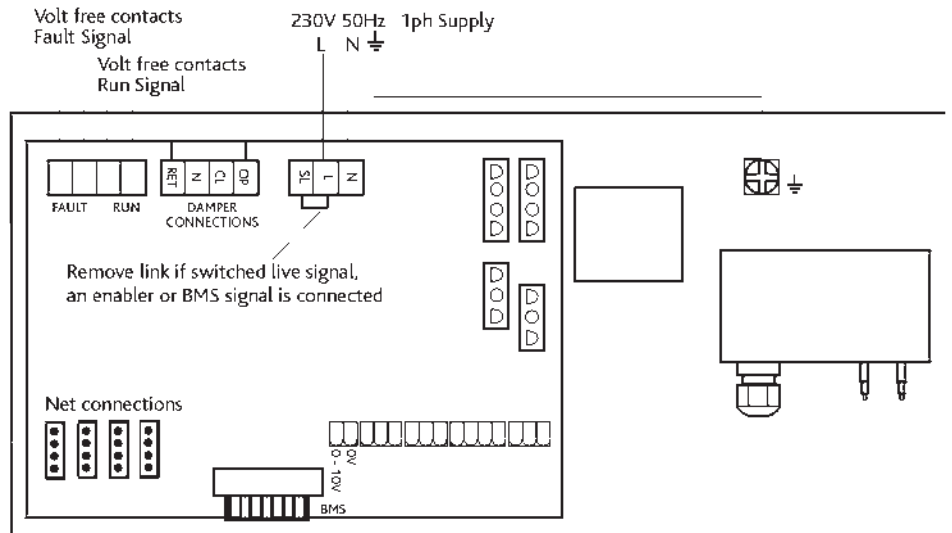
### Wiring for three phase unit sizes 9.

All inter-connections between circuit boards, blowers and sensors are made at the factory. This diagram only shows the essential field wiring points for clarity. \*Remove link wire if switched live signal, an enabler or BMS signal is connected.



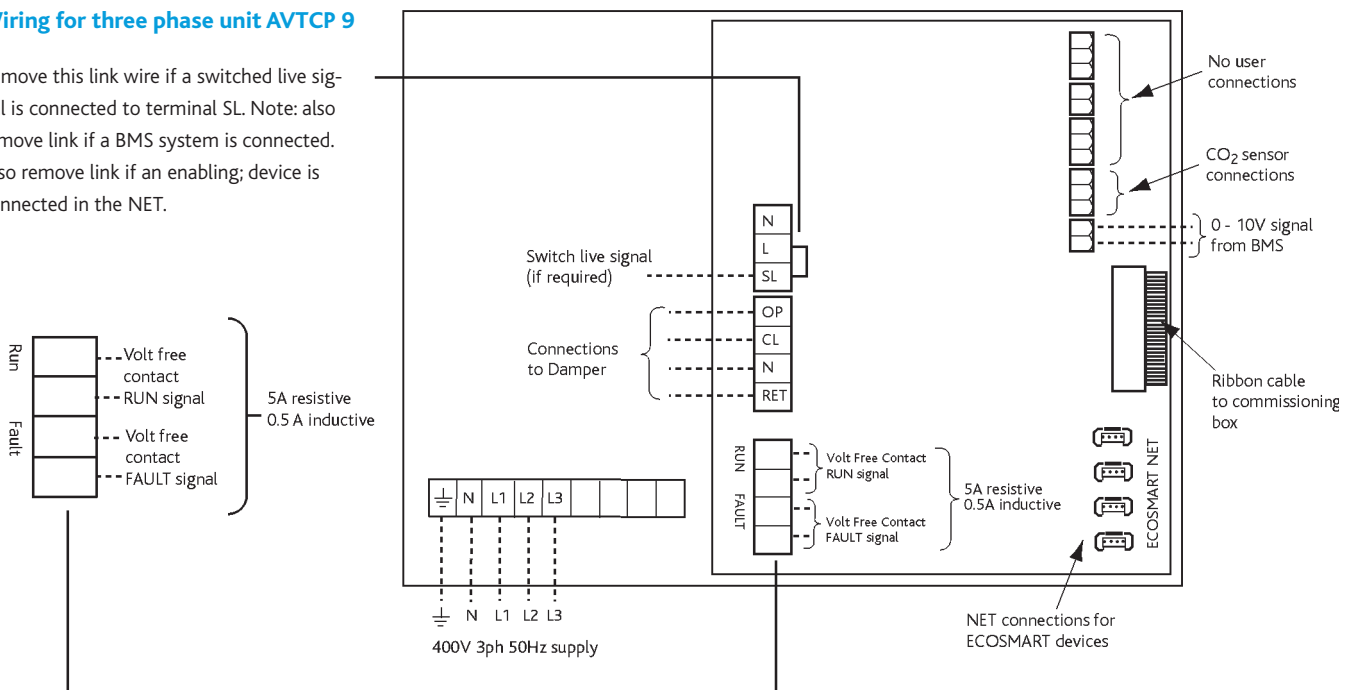
## WIRING - AIRE-VOLVE CONSTANT PRESSURE TWIN FANS (INTERNAL & EXTERNAL)

### Wiring for single phase units AVTCP 1-8



### Wiring for three phase unit AVTCP 9

Remove this link wire if a switched live signal is connected to terminal SL. Note: also remove link if a BMS system is connected. Also remove link if an enabling device is connected in the NET.

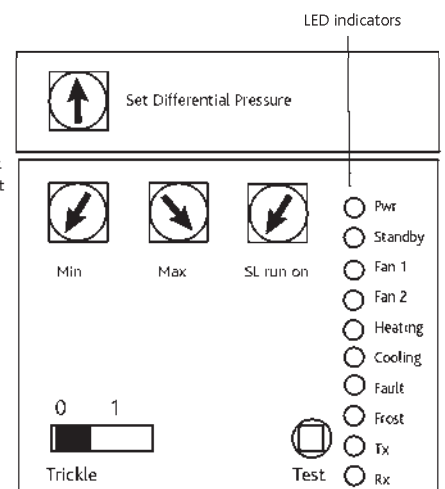


### Set Up/Commissioning box (Twin & Constant Pressure models)

#### LED Indication

- PWR GREEN: Power on & OK,
- Standby LED on when fan is not running.
- Fan 1 GREEN: Fan 1 is running, RED: Fan 1 faulty.
- Fan 2 GREEN: Fan 2 is running, RED: Fan 2 faulty.
- Heating\* Not applicable. See note.
- Cooling\* Not applicable. See note.
- Fault LED on when a fault is present on unit.
- Frost\* Not applicable. See note.
- Tx LED on when the controller is transmitting data.
- Rx LED on when the controller is receiving data.

- MIN = Minimum speed adjustment
- MAX = Maximum speed adjustment
- SL Run on = Switched Live Run-On Timer adjustment
- TRICKLE = Selects trickle running: 0 = off, 1 = selected
- TEST = Test button



Please refer to our commissioning guide 671565 for more info on Constant Pressure Systems.

\*Note that the control panel is common to all the Ecosmart products and will have indicators for functions that are not available in this particular fan. However these indicators will not be illuminated.



## AIRE-VOLVE TWIN FANS (INLINE INTERNAL)

### CONSULTANTS SPECIFICATION

#### VENTILATION SYSTEM DESCRIPTION

The main extract twin fan shall be as indicated on the drawings and in accordance with the relevant fan schedule. The stale air shall be extracted from the space using an energy efficient demand ventilation principle; the system shall have its volume flow rate of air varied by a range of low voltage sensors and enablers.

#### FAN DESCRIPTION

The unit shall be double skinned with 35mm infill panels and shall be manufactured from heavy gauge, corrosion resistant Aluzinc steel, internally lined with acoustic material. Fully detachable panels for maintenance/service.

Note: External units do not have 35mm acoustic infill as standard. If infill is required contact Nuair.

The fan should be with an 'inline assembly', positioned in series for optimum performance.

Run and standby fan assemblies to incorporate fan impeller and EC motors selected to provide the most energy efficient solution conforming to part L regulations. Units shall be direct drive with high efficiency motors as standard. EN60034-30 motors fitted with 'hall effect' air flow failure monitoring, units suitable for operation in ambient temperatures of 40°C.

The Fan unit shall have a 5 year warranty.

The unit and ancillaries shall be of the Aire-Volve type with Ecosmart controls as manufactured by Nuair Ltd.

#### INSTALLATION REQUIREMENTS

The mechanical contractor shall ensure that all necessary ancillaries are included eg. AV mounts, flexible connections, attenuators, etc.

The contractor shall allow for all necessary ductwork transformations to and from the fan unit and any associated components in accordance with the manufacturer's recommendations, DW 144 and general good practice.

#### SYSTEM OPERATION

The extract fan shall automatically vary its speed as it receives signals from one of the interconnected sensors. When the signal is received the fan shall either increase speed gradually until the required level is achieved or it will work on a trickle and boost principle. This will then move the fan duty point from trickle/background ventilation rate to the required boost ventilation rate.

Both the trickle and boost rates are infinitely variable, easy to adjust and remove the need of a main balancing damper in accordance with Part L.

#### FAN CONTROL DESCRIPTION

The acoustically lined low noise twin fan shall be controlled by an integrated Ecosmart control panel mounted adjacent to the fan unit.

The Ecosmart control enables the fan's speed to be varied automatically as conditions in the ventilated space change by linking low voltage sensors or as the low voltage user control is adjusted. It also enables multiple fans to be directly interlinked.

The fans shall have the following energy saving and operational functions integrally installed within it, all components will be pre-wired and fitted by the manufacturer:

- Auto change-over on fan failure
- Auto duty share every 12 hours of run time
- Integral frequency inverter/speed controller
- Integral adjustable run-on timer
- Maximum and minimum speed adjustment/setting (trickle and boost)
- Volt free run & failure/status indication
- 0-10V BMS interface for remote operation
- Low voltage interface with second fan or supply fan
- Multiple low voltage sockets for interconnection of sensors or fans
- Background ventilation/trickle enable switch.

Fan, Ecosmart controls and associated sensors/controllers shall be manufactured by Nuair Ltd.

#### INSTALLATION

By the appointed contractor.

The Aire-Volve twin fan can be mounted in any orientation (internal units only). To mount vertically, specifically designed brackets are available from Nuair. There is also an option to mount the unit vertically downwards.

Mechanical installation requires mounting of the extract unit in the designated position and connection to the associated duct work.

A retained, full length sliding access panel (internal units only) allows for quick and easy installation and maintenance. External units have a flush top or bottom access panel.

Electrical installation requires the provision and connection of single or three phase electrical supply at the fan.

The user control (ES-LCD) can be re-positioned (internal units only) to the opposite side of the unit or remotely mounted using the AVT-CK (Control Kit).

The user control and low voltage sensor are supplied complete with a 10m length of low voltage, pre-plugged cable.

#### COMMISSIONING

By the appointed qualified commissioning engineer in accordance with CIBSE commissioning Code A: Air Distribution Systems.

The systems should be commissioned in the way described in the aforementioned document and the minimum and maximum speed adjustment with the Ecosmart control panel should be set to provide the required ventilation rates. These should be adjusted until the required air volume flow rate is achieved on the approved measuring device.

The manufacturer's recommendations should be observed at all times.

Nuair's blowers are compliant to EC/327/2011.

## AIRE-VOLVE CONSTANT PRESSURE TWIN FANS

### CONSULTANTS SPECIFICATION

#### CONSTANT PRESSURE EXTRACT SYSTEM

The main extract fan shall be as indicated on the drawings and in accordance with the relevant fan schedule. The vitiated air shall be extracted from the space using an energy efficient constant pressure principle via a variable air volume motorised damper/grille installed in each area, as detailed in the schedule.

Fan description as opposite.

#### SYSTEM OPERATION

The extract fan shall automatically vary its speed as the system pressure varies; the variation in pressure is caused by the opening and closing of the Nuair inline CVD or surface mounted NRG damper. The damper is autonomous of the fan and requires no field wiring connecting it to the fan. The damper positions are open (boost) and closed (trickle). The inline damper has an integrated airflow sensor which continuously monitors and controls the amount of air being moved. (The air volume is adjusted via minimum and maximum potentiometers on the side of the CVD damper and a run on timer).

The damper/grille shall be as manufactured by Nuair Ltd.

The duct mounted damper CVD requires a 230V connection/power supply. Signal from 230V switch live ie. light switch, PIR, humidistat etc.

(If the NRG grille is installed it shall be connected to a 12V ac supply via the inclusive 230V transformer unit and has an integral PIR, two position damper and overrun timer).

Once commissioned and set to work, the fan will maintain the preset pressure by varying its speed as the ventilation requirement within each area varies ie. as dampers open and close. If the requirement exceeds the maximum or minimum limit, the fan will remain at the design/ limiting speed.

#### FAN CONTROL DESCRIPTION

The acoustically lined low noise twin fan shall be controlled by an integrated Ecosmart control panel mounted adjacent to the fan unit. The Ecosmart control enables the fan's speed to be varied automatically as conditions in the ventilated space change by linking low voltage sensors or as the low voltage user control is adjusted. It also enables multiple fans to be directly interlinked.

The fans shall have the following energy saving and operational functions integrally installed within it, all components will be pre-wired and fitted by the manufacturer:

- Auto change-over on fan failure
- Auto duty share every 12 hours of run time
- Integral frequency inverter/speed controller
- Integral adjustable run-on timer
- Maximum and minimum speed adjustment/ setting (trickle and boost)
- Volt free run & failure/status indication
- 0-10V BMS interface for remote operation
- Low voltage interface with second fan or supply fan
- Multiple low voltage sockets for interconnection of sensors or fans
- Background ventilation/trickle enable switch.

Fan, Ecosmart controls and associated sensors/controllers shall be manufactured by Nuair Ltd.

#### CVD FEATURES

- Trickle/boost flow rate.
- Run on timer.
- Externally adjusted settings.
- CVD acts as a balancing damper.
- MEMS (air flow sensor) provide precise measurements and control of flow rate.

The Fan unit shall have a 5 year warranty, first year parts and labour the remainder parts only.

#### INSTALLATION

By the appointed contractor.

The Aire-Volve twin fan can be mounted in any orientation (internal units only). To mount vertically, specifically designed brackets are available from Nuair. There is also an option to mount the unit vertically downwards.

Mechanical installation requires mounting of the extract unit in the designated position and connection to the associated duct work.

A retained, full length sliding access panel (internal units only) allows for quick and easy installation and maintenance. External units have a flush top or bottom access panel.

Electrical installation requires the provision and connection of single or three phase electrical supply at the fan.

The user control can be re-positioned (internal units only) to the opposite side of the unit or remotely mounted using the AVT-CK (Control Kit).

The user control and low voltage sensor are supplied complete with a 10m length of low voltage, pre-plugged cable.

#### COMMISSIONING

By the appointed qualified commissioning engineer in accordance with CIBSE commissioning Code A: Air Distribution Systems.

The systems should be commissioned in the way described in the aforementioned document and the minimum and maximum speed adjustment with the Ecosmart control panel should be set to provide the required ventilation rates. These should be adjusted until the required air volume flow rate is achieved on the approved measuring device.

NOTE: NRG & CVD should not be mixed on same system.

The manufacturer's recommendations must be observed at all times.

**THE COMPLETE VENTILATION SOLUTION** WHATEVER YOUR VENTILATION STRATEGY, WE OFFER THE TOTAL VENTILATION SOLUTION

All buildings have their own unique requirements for ventilation. With the new government guidelines on energy efficiency it is more difficult to maintain a comfortable, healthy environment whilst providing an energy efficient solution. Nuair has over 40,000 product lines to select from whatever your requirements, we have the solution from a small extract fan to large air handling units.

**AIR HANDLING UNITS**

**MECHANICAL EXTRACT FOR OFFICES & COMMUNAL AREAS**

Extract fans are the simplest form of ventilation for office and communal environments. Whether duct, wall, window or ceiling mounted these fans will extract moisture from wet rooms and offices to provide continuous fresh air.

**STAIRWELL PRESSURISATION & SMOKE EXTRACT FOR MULTI-FLOOR REQUIREMENTS**

Nuair have manufactured smoke and car park ventilation for over 30 years including smoke pressurisation and extract fans (duct or roof mounted) for 300/400°C for 1 & 2 hours, certified to EN12101-3 2002.

**CAR PARK EXTRACT**

The comprehensive range of AXUS smoke fans together with the Impulse car park fan meets the ever increasing need to provide smoke extract for car parks.

**BOXER BESPOKE AHUs**

Covering airflow infinite range up to 20m<sup>3</sup>/s.

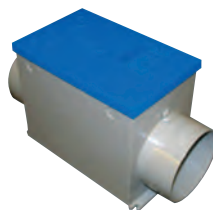


**MULTI-ROOM VENTILATION**



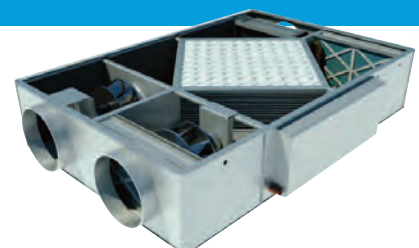
**CONSTANT PRESSURE VARIABLE VOLUME**

Twin fan and single fan - high performance extract up to 2.65m<sup>3</sup>/s.



**CONSTANT PRESSURE VOLUME**

Control damper - energy efficient volume damper for use with constant pressure twin fan.



**XBOXER PACKAGED HEAT RECOVERY**

Low depth, high performance range up to 5m<sup>3</sup>/s.



**Aire-Volve Twin Fans** Nuaire's latest innovation: patented in-line fan assembly providing optimum performance, lowest noise, and lowest overall product envelope size.



## SMOKE SOLUTIONS

### CAR PARK EXTRACT OPTIONS



### IMPULSE HIGH TEMPERATURE EXTRACT

Powerful impulse fan certified to EN12101-3 (300°C for 2 hours).

### STAIRWELL PRESSURISATION & SMOKE EXTRACT APPLICATIONS



### AXUS SMOKE & AXT

High temperature & ambient axial extract fans up to 85m<sup>3</sup>/s.

## MECHANICAL EXTRACT FOR OFFICES AND COMMUNAL AREAS

### AIRE-VOLVE

Low profile new Single Fan and Twin Fan up to 1.9m<sup>3</sup>/s. Low SFP and noise.

### ES-OPUSDC

Energy efficient range of inline, surface and recessed fans up to 115l/s.

### ECOSMART SQRUBO

Energy efficient make up air supply and extract units up to 0.5m<sup>3</sup>/s.

### XTRACTOR

High efficiency centrifugal fan up to 6.2m<sup>3</sup>/s.

### TERMINATOR

Horizontal discharge roof extract fan.

### XBOXER THERMAL WHEELS

Available in 6 sizes up to 10m<sup>3</sup>/s.

### XS RANGE

Wall, window, ceiling and roof extract fans (up to 530l/s).

### SQUIF RANGE

Run and standby units ideal for 'out of airstream' applications such as commercial kitchens. Twin fan option.

### MRXBOX95 WALL & LOFT HEAT RECOVERY

High efficiency up to 95% efficient.



# AIRE-VOLVE

## SINGLE EXTRACT FANS



LOW SPECIFIC FAN POWER

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LOW NOISE

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SMALLER CASE SIZE

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MEETS LATEST LEGISLATION AND BUILDING REGULATIONS

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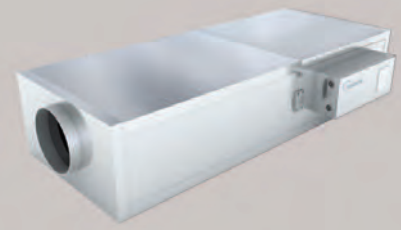
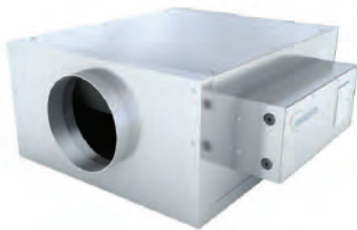
INDOOR RANGES

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## AIRE-VOLVE SINGLE EXTRACT FANS

FEATURES & BENEFITS - ENSURES BEST PRACTICE DESIGN

NEW - AIRE-VOLVE RANGE

COMPACT - IDEAL FOR CEILING VOIDS

MATCHED SILENCERS

### FEATURES & BENEFITS

#### LATEST EC MOTOR TECHNOLOGY

Guarantees longer life and lower SFPs.

#### DOUBLE WALLED PANEL WITH 35MM ACOUSTIC LINING

Ensures lowest breakout.

#### BUILT IN ECOSMART CONTROL

Energy efficient demand control ventilation solution with 80% controllability allowing the duty to be adjusted if ductwork installation changes during construction on site.

#### CONSTANT PRESSURE OPTION

Improves the energy performance of the overall building and guarantees lower energy costs for end users.

#### FULLY ENCLOSED FAN SPIGOT

Fan and matching silencer system reduces breakout and guarantees a superior acoustic solution.

#### MOST COMPACT 'SIZE FOR DUTY' CASE AVAILABLE ON THE MARKET

Ideal for applications with restricted ceiling voids.

#### FLEXIBLE ACCESS

Range offers either top or bottom access as standard.

#### REMOVABLE UNIT END PANEL

Can be attached to matched silencers prior to connection to ducting system.

#### CLASS L2 LEAKAGE

Units are tested to meet Class L2 leakage. (BS EN 1886 : 2007).

#### WIDE DIRECT DUTY RANGE

Available up to 1.9m<sup>3</sup>/s.

#### MANUFACTURED FROM CORROSION RESISTANT HEAVY GAUGE ALUZINC

Has 5 times longer life than galvanised steel and provides higher wear resistance.

#### FULL ACCESSORY RANGE

Includes matched silencers and dampers.

#### 5 YEAR WARRANTY

Peace of mind.

**FOR MORE INFORMATION**

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