



## AIRE-VOLVE INTERNAL & EXTERNAL TWIN FANS





## NUAIRE'S PEDIGREE

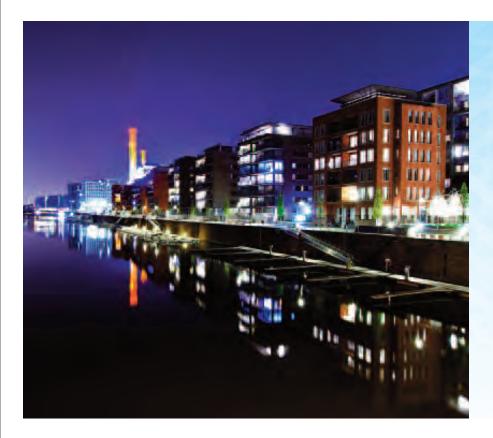
#### NUAIRE'S MISSION

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.

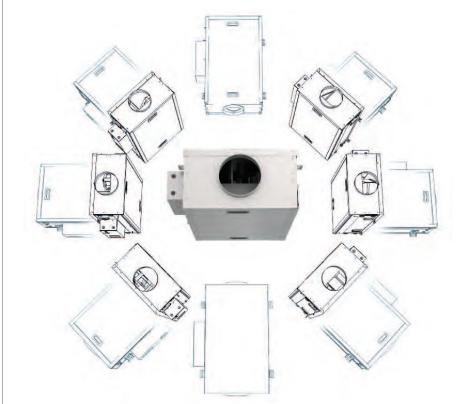


## AIRE-VOLVE TWIN FANS A UNIQUE INNOVATION IN FAN DESIGN

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.



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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)

#### 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.

FULLY RETAINED BOTTOM ACCESS PANEL (INTERNAL RANGE ONLY)

#### 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



## 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 preplugged 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 Nuaire.





## **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, CO2 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** 

**FS-ICD** 

programs

FS-I CDM



#### **ES-PIR2 (PASSIVE INFRA-RED)**

Detects movement and activates system. Incorporates a system status LED, overrun timer and timer adjustment.

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

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

#### SIMPLE PLUG-IN **SYSTEM**



## 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-AVI2

900

When fan failure occurs the AVI 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.

#### **FS-HTCSIG**

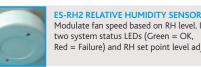
Signal conditioning circuit for humidity, temperature and CO2 sensors.

#### 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.



#### 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 CO2 levels. Connect to fan directly. Pre-wired with 2m cable (not adjustable).

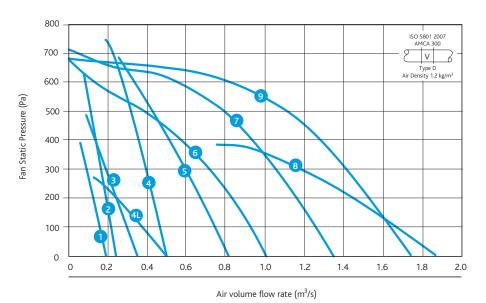


## SWITCHED LIVE BY OTHERS

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

TECHNICAL INFORMATION

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



AVT Internal In-line Twin Fans.

#### **Code descriptions**

**AVT1** ||| 1 2 3

Casing

Aire-Volve range
 Twin Fan
 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

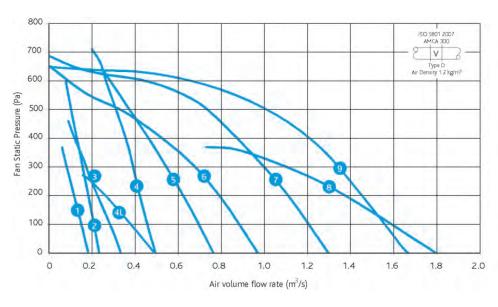
		Supply					5. Casing radiated octave band sound Power level - db re Tpw							e ipw	*Casing Radiated Free	
Curve/	Duct	(V/Freq	FLC	SC	Input Power	Fan Speed	Frequency (Hz)								Field dBA @ 3m	
Code	conn.	Hz/Phase)	(amps)	(amps)	(Max) (W)	(Nominal)		63 ່	125	250	500	1K	2K	4K	8K	(Spherical Radiation)
AVT1	200	230/50/1	0.75	0.75	85	3300	1	73	69	63	63	60	56	52	50	
							2	75	71	63	63	63	59	53	51	
							3	61	53	43	34	25	21	23	17	20
AVT2	200	230/50/1	1.4	1.4	170	4000	1	79	74	68	69	65	62	58	56	
							2	81	77	69	69	69	65	59	57	
							3	67	59	49	40	31	27	29	23	26
AVT3	250	230/50/1	1.35	1.35	170	2500	1	77	74	79	67	63	59	53	51	
							2	81	77	78	74	69	68	58	58	
							3	67	59	58	45	31	30	28	24	31
AVT4	315	230/50/1	3.1	3.1	500	3400	1	83	79	80	82	78	74	70	67	
							2	87	83	80	84	83	80	75	68	
							3	73	65	60	55	45	42	45	34	36
AVT4L**	315	230/50/1	1.1	1.1	160	1700	1	72	67	67	66	60	57	53	48	
							2	74	69	69	70	69	62	58	52	
							3	66	57	55	45	37	30	32	22	29
AVT5	315	230/50/1	3.5	3.5	550	2400	1	74	71	69	68	62	61	57	52	
							2	76	73	71	72	71	66	62	56	
							3	62	55	51	43	33	28	32	22	25
AVT6	400	230/50/1	2.9	2.9	450	1700	1	77	80	74	72	66	65	61	54	
							2	80	82	74	73	67	66	63	56	
							3	66	64	54	44	29	28	33	22	30
AVT7	400	230/50/1	3.5	3.5	790	1700	1	78	76	73	73	67	65	62	57	
							2	81	77	74	75	74	71	67	61	
11/70	500	222/52/4	2.2	2.2	740	4400	3	67	59	54	46	36	33	37	27	29
AVT8	500	230/50/1	3.2	3.2	710	1100	1	74	76 70	71	66	62	64	60	54	
							2	76	78	73	71	71	69	64	57	27
	500	100/50/2	1.05	1.05	1000	1500	3	62	60	53	42	33	31	34	23	27
AVT9	500	400/50/3	1.85	1.85	1000	1500	•	79	77	76	73	66	66	66	58	
							2	81	78	79	78	76	72	70	61	22
							3	67	60	59	49	38	34	40	27	32

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

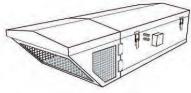


**TECHNICAL INFORMATION** 

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



Casing



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

#### **Code descriptions**

AV	Т	2	-	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

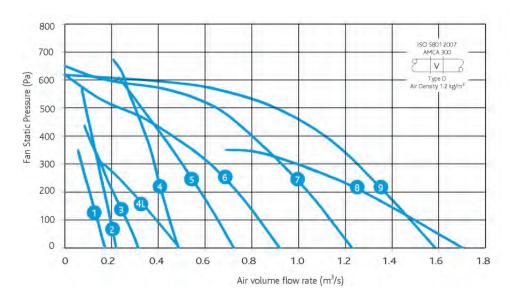
AVT 'R' UNIT - ELECTRICAL & SOUND

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

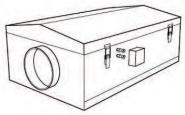
Curve/			FLC	sc	Input Power	Fan Speed			iency (F							Outlet Radiated Free Field dBA @ 3m
Code	conn.	Hz/Phase)	(amps)	(amps)	(Max) (W)	(Nominal)		63	125	250	500	1K	2K	4K	8K	(Spherical Radiation)
AVT1-R	250	230/50/1	0.75	0.75	85	3300	1	75	69	64	65	61	57	53	51	
							2	75	70	68	71	71	66	60	56	54
AVT2-R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

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

- 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

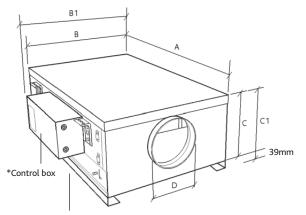
							3. Casing radiated octave band Sound Power level - dB re 1pW									
Curve/ Code		Supply (V/Freq Hz/Phase)	FLC (amps)	SC (amps)	Input Power (Max) (W)	Fan Speed (Nominal)		Frequ 63	iency (H 125	lz) 250	500	1K	2K	4K	8K	*Casing Radiated Free Field dBA @ 3m (Spherical Radiation)
AVT1-X	250	230/50/1	0.75	0.75	85	3300	1	75	69	64	65	61	57	53	51	
							2	77	72	65	65	65	60	54	52	
							3	66	57	48	38	30	25	26	20	25
AVT2-X	250	230/50/1	1.4	1.4	170	4000	1	81	75	70	71	67	63	59	57	
							2	83	78	71	71	71	66	60	58	
							3	72	63	54	44	36	31	32	26	31
AVT3-X	250	230/50/1	1.35	1.35	170	2500	1	79	75	81	69	65	60	54	52	
							2	83	78	80	76	71	69	59	59	
							3	72	63	63	49	36	34	31	27	35
AVT4-X	315	230/50/1	3.1	3.1	500	3400	1	85	80	82	84	80	75	71	68	
							2	89	84	82	86	85	81	76	69	
							3	78	69	65	59	50	46	48	37	41
AVT4L-X	315	230/50/1	1.1	1.1	160	1700	1	72	67	67	66	60	57	53	48	
							2	74	69	69	70	69	62	58	52	
							3	66	57	55	45	37	30	32	22	29
AVT5-X	315	230/50/1	3.5	3.5	550	2400	1	76	72	71	70	64	62	58	53	
							2	78	74	73	74	73	67	63	57	
							3	67	59	56	47	38	32	35	25	30
AVT6-X	400	230/50/1	2.9	2.9	450	1700	1	79	81	76	74	68	66	62	55	
							2	82	83	76	75	69	67	64	57	
							3	71	68	59	48	34	32	36	25	34
AVT7-X	400	230/50/1	3.5	3.5	790	1700	1	80	77	75	75	69	66	63	58	
							2	83	78	76	77	76	72	68	62	
							3	72	63	59	50	41	37	40	30	34
AVT8-X	500	230/50/1	3.2	3.2	710	1100	1	76	77	73	68	64	65	61	55	
							2	78	79	75	73	73	70	65	58	22
	500	400/50/2	1.05	1.05	1000	1500	3	67	64	58	46	38	35	37	26	32
AVT9-X	500	400/50/3	1.85	1.85	1000	1500	1	81	78	78	75	68	67	67	59	
							2	83	79	81	80	78	73	71	62	27
							3	72	64	64	53	43	38	43	30	37

\*Break out fan only.

<sup>2.</sup> Twin Fan



#### **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)

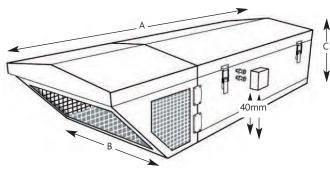
	131011	J (1111)						
Fan Code	A	Dim A +Spigot Length (inc.100mm)	в	Dim B1 +Control (inc.108mm)	с	C1*	Spigot D (dia)	Weight (Kg)
AVT1	931	1031	544	652	250	289	200	46
AVT2	968	1068	543	652	285	324	200	48
AVT3	1186	1286	681	789	334	373	250	67
AVT4	1229	1329	681	789	376	415	315	68
AVT4L	1531	1631	827	931	401	440	315	100
AVT5	1531	1631	827	935	433	472	315	102
AVT6	1729	1829	921	1029	545	584	400	153
AVT7	1892	1992	1019	1127	575	614	400	179
AVT8	2238	2338	1244	1352	615	654	500	267
AVT9	2238	2338	1244	1352	615	654	500	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**

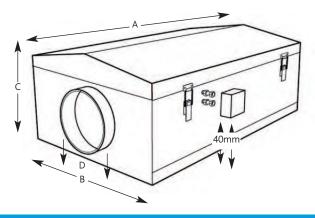


#### DIMENSIONS (mm)

	· · · ·				
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)	В	Dim B1 +Control (inc.40mm)	с	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	Note: If isolator is required code is AVT-ISO.										

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

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

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

## **AIRE-VOLVE SILENCER SYSTEMS**

**TECHNICAL INFORMATION** 



#### **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 Nuaire 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**

AV	Т	СР	1	- SYS1	- X
1	2	3	4	5	6

1. Aire-Volve range

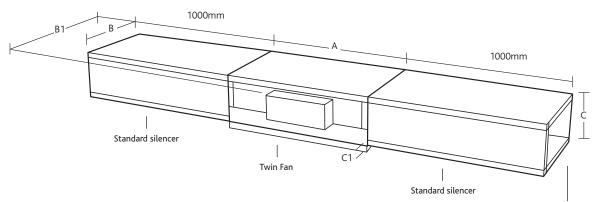
2. Twin Fan

- 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
  - $\mathsf{R}=\mathsf{External}$  system with grille outlet unit\*



\*To discuss systems in detail call Nuaire. Note: All external silencers have a pitched roof.

## **AIRE-VOLVE SILENCER SYSTEM 1**



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

DIME	NSIONS (m	m)						
Unit Size	Code	Description	A	В	B1 +Contro (108mm		C1 + (39mn	Weight (Kg) n)
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 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 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

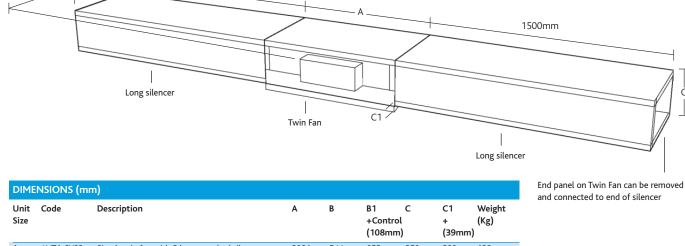
		Supply					5. Casing radiated octave band Sound Power level - db re ip							eipw	*Casing Radiated Free	
Curve/ Code		(V/Freq Hz/Phase)	FLC (amps)	SC (amps)	Input Power (Max) (W)	Fan Speed (Nominal)		Frequ 63	uency (H 125	lz) 250	500	1K	2K	4K	8K	Field dBA @ 3m (Spherical Radiation)
AVT1-SYS1	200	230/50/1	0.75	0.75	85	3300	1	70	61	51	43	38	38	34	36	
							2	72	63	51	43	41	41	35	37	
							3	61	53	43	34	25	21	23	17	20
AVT2-SYS1	200	230/50/1	1.4	1.4	170	4000	1	76	67	57	49	44	44	40	43	
							2	78	69	57	49	47	47	41	44	
							3	67	59	49	40	31	27	29	23	26
AVT3-SYS1	250	230/50/1	1.35	1.35	170	2500	1	75	66	67	45	41	35	32	36	
							2	79	69	67	52	47	44	37	43	
							3	68	59	59	45	31	30	28	24	31
AVT4-SYS1	315	230/50/1	3.1	3.1	500	3400	1	80	76	70	62	60	57	54	50	
							2	83	80	69	63	66	63	58	51	
							3	73	66	60	55	46	43	45	34	36
AVT5-SYS1	315	230/50/1	3.5	3.5	550	2400	1	69	64	58	49	41	44	45	40	
							2	71	66	60	53	50	49	50	44	
							3	62	55	51	43	33	28	32	22	25
AVT6-SYS1	400	230/50/1	2.9	2.9	450	1700	1	72	74	61	55	45	49	46	43	
							2	75	76	61	56	46	50	48	45	
1) (77 0) (04	10.0	220/50/4	2.5		700	4700	3	66	64	54	44	29	28	33	22	30
AVT7-SYS1	400	230/50/1	3.5	3.5	790	1700	1	74	68	62	54	47	49	48	45	
							2	77	69	63	56	54	55	53	49 27	20
AVT8-SYS1	500	220/50/1	2.2	2.2	710	1100	3	67	59	54	46	36	33	37	27	29
AA19-2121	500	230/50/1	3.2	3.2	710	1100	2	69 71	69 71	58 60	46 51	41 50	49 54	46 50	42 45	
							2	62	60	53	42	50 33	54 31	50 34	45 23	27
AVT9-SYS1	500	400/50/3	1.85	1.85	1000	1500	5	74	70	63	42 54	55 45	49	54	45	L1
AV15-3131	500	-100/30/3	1.05	1.05	1000	1500	2	76	70	66	59	55	49 55	55	43	
							2	67	60	59	49	38	34	40	27	32
							5	07	00	22	49	50	54	40	21	52

\*Break out fan only.

## **AIRE-VOLVE SILENCER SYSTEM 2**

.B1

1500mm



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			
The a	The above dimensions and weights are guides only. Contact Nuaire for further details C1 = maximum denth of unit with access panel lowered										

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.

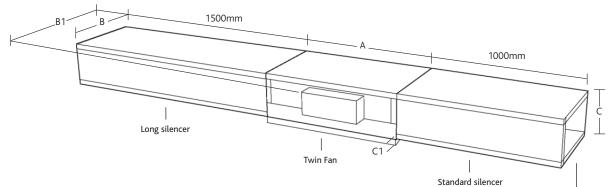
#### **PERFORMANCE - AIRE-VOLVE INDOOR TWIN FANS AVT 1-9**

#### 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

							3. Casing radiated octave band Sound Power level - dB re 1pW									
Curve/	Duct	Supply (V/Freq	FLC	SC	Input Power	Fan Speed		Frequ	uency (H	Hz)						*Casing Radiated Free Field dBA @ 3m
Code	conn.	Hz/Phase)	(amps)	(amps)	(Max) (W)	(Nominal)		63	125	250	500	1K	2K	4K	8K	(Spherical Radiation)
AVT1-SYS2	200	230/50/1	0.75	0.75	85	3300	1	67	61	48	36	31	32	30	33	
							2	69	63	48	36	34	35	31	34	
							3	61	53	43	34	25	21	23	17	20
AVT2-SYS2	200	230/50/1	1.4	1.4	170	4000	1	73	65	54	44	40	37	36	39	
							2	75	67	54	44	43	40	37	40	
							3	67	59	49	40	31	27	29	23	26
AVT3-SYS2	250	230/50/1	1.35	1.35	170	2500	1	72	64	62	40	34	32	30	32	
							2	76	67	62	47	40	41	35	39	
N/T ( 0)/00	045	222/52/4	2.4	2.4	500	2.400	3	68	59	59	45	31	30	28	24	31
AVT4-SYS2	315	230/50/1	3.1	3.1	500	3400	1	79	73	64	56	53	51	49	47	
							2 3	82 73	77 66	63 60	57 55	59 46	57 43	53 45	48 34	36
AVT5-SYS2	315	230/50/1	3.5	3.5	550	2400	3	69	64	53	42	46 35	43 38	45 35	34	30
AV15-5152	515	230/30/1	5.5	5.5	330	2400	2	71	66	55	46	33 44	43	40	36	
							3	62	55	51	43	33	28	32	22	25
AVT6-SYS2	400	230/50/1	2.9	2.9	450	1700	1	72	73	57	45	41	44	40	37	25
1110 5152		230, 30, 1	2.0	2.0	150		2	75	75	57	46	42	45	42	39	
							3	66	64	54	44	29	28	33	22	30
AVT7-SYS2	400	230/50/1	3.5	3.5	790	1700	1	73	69	56	46	42	43	39	40	
							2	76	70	57	48	49	49	44	44	
							3	67	59	54	46	36	33	37	27	29
AVT8-SYS2	500	230/50/1	3.2	3.2	710	1100	1	69	69	54	39	37	43	38	35	
							2	71	71	56	44	46	48	42	38	
							3	62	60	53	42	33	31	34	23	27
AVT9-SYS2	500	400/50/3	1.85	1.85	1000	1500	1	74	70	59	46	41	44	44	38	
							2	76	71	62	51	51	50	48	41	
							3	67	60	59	49	38	34	40	27	32

#### **AIRE-VOLVE SILENCER SYSTEM 3**



DIM	DIMENSIONS (mm)												
Unit Size	Code	Description	A	В	B1 +Control (108mm)		C1 + (39mi	Weight (Kg) m)					
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					
-		ons and weights are guides only. Contact Nuaire for further de											

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 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

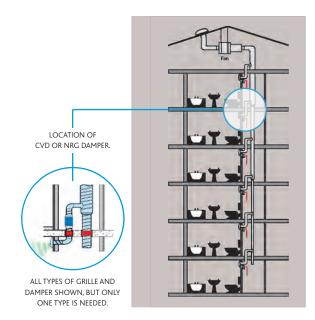
							si cushig rudiated octave band sound rower teret ab re ipw									
Curve/ Code		Supply (V/Freq Hz/Phase)	FLC (amps)	SC (amps)	Input Power (Max) (W)	Fan Speed (Nominal)		Frequ 63	uency (H 125	Hz) 250	500	1K	2K	4K	8K	*Casing Radiated Free Field dBA @ 3m (Spherical Radiation)
AVT1-SYS3	200	230/50/1	0.75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

\*Break out fan only.





## "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.

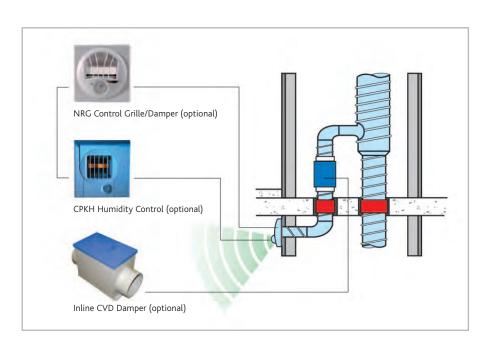
#### WARRANTY

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.

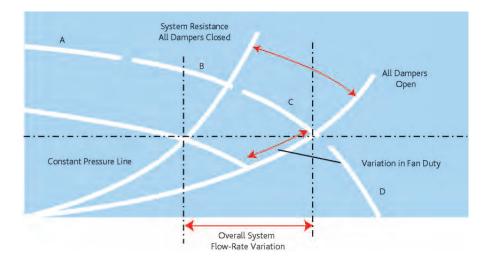
By opening the grilles the pressure in the system will fall. The control system in the fan senses this and automatically speeds up to provide the higher volume and equalise the system pressure. This works in reverse with the grille closing, increasing the system pressure, automatically reducing the fan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



#### WHAT ARE NRG GRILLES?

A motorised two-position grille offered by Nuaire 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 nonadjustable.
- 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**

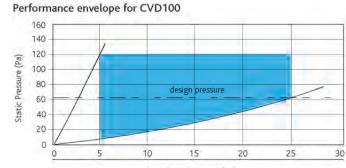
**TECHNICAL INFORMATION** 

#### PERFORMANCE - CVD DAMPER

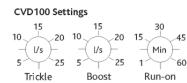
A nominal pressure drop must be allowed in order to ensure adequate airflow through the damper. To ensure the airflow pattern through the damper produces consistent readings; the pressure drop across the damper should not exceed the recommended value. Recommended values are listed in the table below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

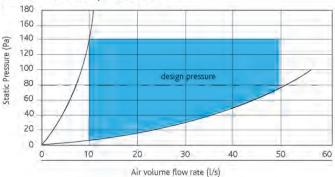
Code	Nominal Design Pressure Drop	Maximum Pressure Across Damper*
CVD100	60Pa	120Pa
CVD125	70Pa	140Pa
CVD150	80Pa	160Pa
CVD200	90Pa**	200Pa

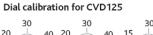


Air volume flow rate (l/s)

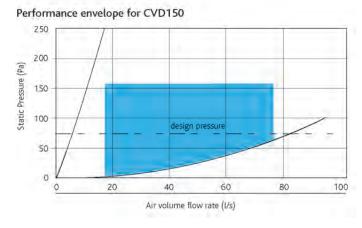


Performance envelope for CVD125

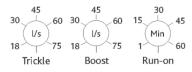




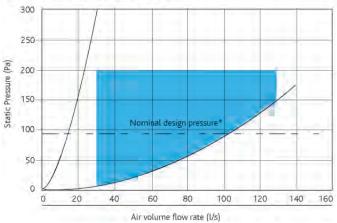










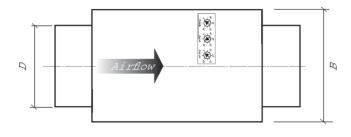


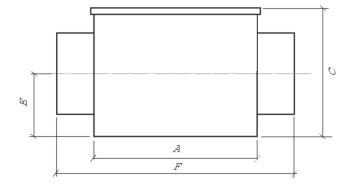




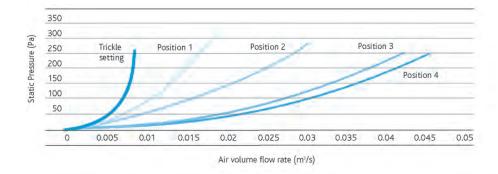
#### **DIMENSIONS (MM) CVD DAMPERS**

Code	А	В	с	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

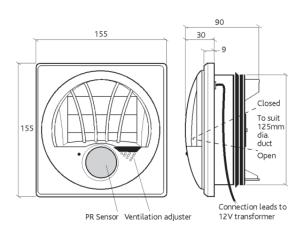


#### WHAT ARE NRG GRILLES?

A motorised two-position grille offered by Nuaire 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.

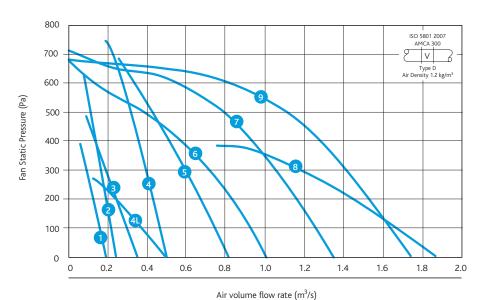
#### DIMENSIONS (MM) NRG GRILLE/DAMPER



## **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

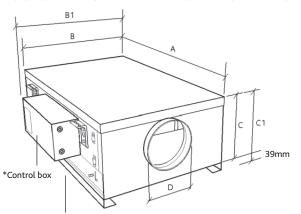
3. Casing radiated octave band Sound Power level - dB re 1pW

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

\*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)

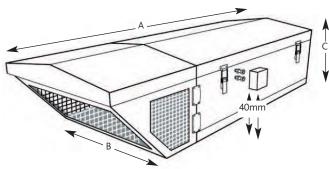
Fan Code	A	Dim A +Spigot Length (inc.100mm)	в	Dim B1 +Control (inc.108mm)	с	C1*	Spigot D (dia)	Weight (Kg)
AVTCP1	931	1031	544	652	250	289	200	46
AVTCP2	968	1068	543	652	285	324	200	48
AVTCP3	1186	1286	681	789	334	373	250	67
AVTCP4	1229	1329	681	789	376	415	315	68
AVTCP4L	1531	1631	827	931	401	440	315	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)

B

Fan Code	A end panel (inc.5mm)	Dim A +Spigot Length (inc.50mm)	в	Dim B1 +Control (inc.40mm)	с	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

				Vertical	End Panel	
Size	AV Mounts	Flexible Connector	Acoustic Flexible Connector	Support Bracket (4 pack)	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	н	H1	Weight (Kg)
AVT1	Standard	AVT1-MSS	1000	544	250	393	32
	Long	AVT1-MSL	1500	544	250	393	46
AVT2	Standard	AVT2-MSS	1000	543	285	393	32
	Long	AVT2-MSL	1500	543	285	393	46
AVT3	Standard	AVT3-MSS	1000	681	334	393	39
	Long	AVT3-MSL	1500	681	334	393	56
AVT4	Standard	AVT4-MSS	1000	681	376	502	39
	Long	AVT4-MSL	1500	681	376	502	56
AVT4L	Standard	AVT4L-MSS	1000	681	376	502	39
	Long	AVT4L-MSL	1500	681	376	502	56
AVT5	Standard	AVT5-MSS	1000	827	433	502	44
	Long	AVT5-MSL	1500	827	433	502	65
AVT6	Standard	AVT6-MSS	1000	921	545	656	64
	Long	AVT6-MSL	1500	921	545	656	89
AVT7	Standard	AVT7-MSS	1000	1019	575	656	41
	Long	AVT7-MSL	1500	1019	575	656	98
AVT8	Standard Long	AVT8-MSS AVT8-MSL	1000 1500	1244 1244		709 709	83 114
AVT9	Standard Long	AVT9-MSS AVT9-MSL	1000 1500	1244 1244		709 709	92 125

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

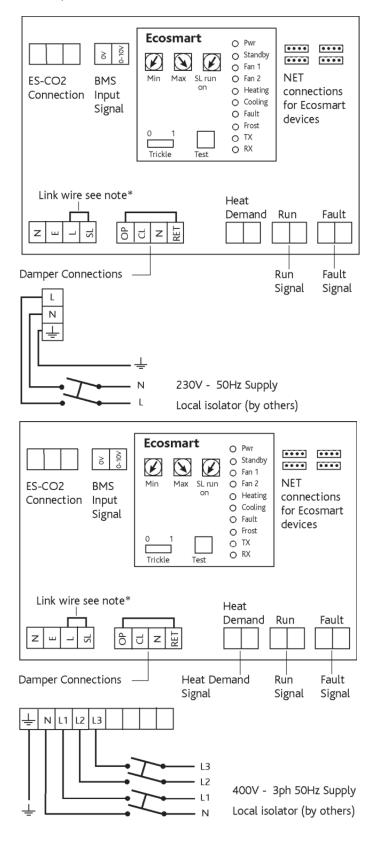
#### WIRING - AIRE-VOLVE TWIN FANS (INTERNAL & EXTERNAL)

#### 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.

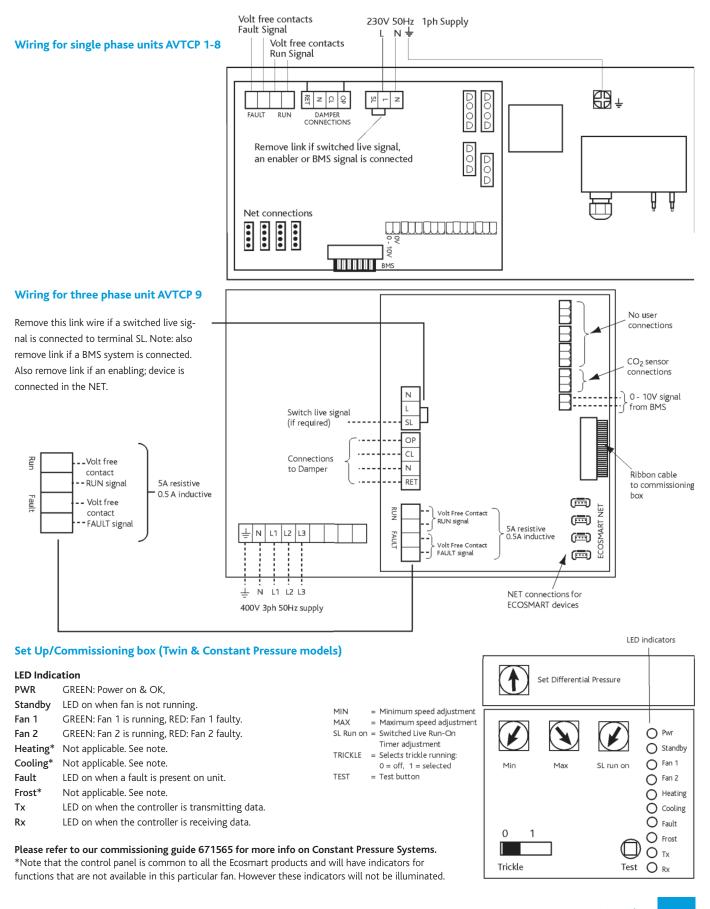
#### Wiring for three phase unit sizes 9.

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)



## 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 infil as standard. If infil is required contact Nuaire.

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 Nuaire 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
- O-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 Nuaire 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 Nuaire. 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.

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



## **AIRE-VOLVE TWIN FANS (INLINE INTERNAL)**

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 Nuaire 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 Nuaire 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 Nuaire 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 Nuaire. 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. Nuaire 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**

#### BOXER BESPOKE AHUs

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

#### 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

Nuaire 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.

#### **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**





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



**APPLICATIONS** 

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



#### AIRE-VOLVE

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

#### ES-OPUSDC

**XTRACTOR** 

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

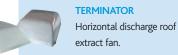


#### **ECOSMART SOURBO**

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



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





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





ecosmart

029 2085 8200

**SMALLER CASE SIZE** 

LOW SPECIFIC FAN POWER

MEETS LATEST LEGISLATION AND BUILDING REGULATIONS

**INDOOR RANGES** 

LOW NOISE



## **AIRE-VOLVE SINGLE EXTRACT FANS**

FEATURES & BENEFITS - ENSURES BEST PRACTICE DESIGN





#### **NEW - AIRE-VOLVE RANGE**

#### **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.



COMPACT - IDEAL FOR CEILING VOIDS

#### 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.



#### MATCHED SILENCERS

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 www.nuaire.co.uk

COMMERCIAL www.nuaire.co.uk/commercial

AIR HANDLING UNITS www.nuaire.co.uk/boxerahu

RESIDENTIAL www.nuaire.co.uk/residential

FAN SELECTOR www.nuaire.co.uk/fanselector



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As part of our policy of continuous product development Nuaire reserves the right to alter specifications without prior notice. Telephone calls may be recorded for quality and training purposes.

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