

AIR MOVER SINGLE FANS

LOW NOISE FAN FOR HIGH PERFORMANCE APPLICATIONS.



BENEFITS

QUIETEST INSTALLATION

The high rigidity, double skinned construction produces the quietest noise to duty ratio unit in the industry, ensuring that your system requirements are easily met.

IDEAL FOR DUCTING

Units are constructed with a square case and mezz flange to suit ducted applications.

ROBUST PROTECTION

Strong aluzinc and pentapost construction provides long life and helps minimise onsite installation damage.

FLEXIBLE SOLUTION

Ideal for either internal or external applications.

EASE OF ACCESS

A panel provides quick and easy access reducing maintenance costs.

CONTROL-ABILITY AS STANDARD

All models have the flexibility to be speed controlled utilising a Nuaire Ecosmart control.

FAN TO SUIT ALL APPLICATIONS

2-speed options available. Class 'H' insulated motors are available. Contact Nuaire for details.

SAFETY TESTED

Motors are pre-wired to external IP55 rated terminal box for ease of installation.

'PERFECT MATCH' ATTENUATORS

Wide range of attenuators available to assist in meeting design criteria.

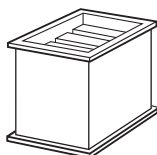
ECOSMART COMPATIBILITY

Units can be supplied with Ecosmart controls, providing a simple to install, easy to commission, energy efficient solution. Also facilitates the interconnection of a supply AHU.

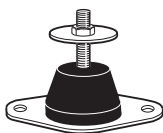
WARRANTY

Airmover has a 3 year warranty.
Ecosmart Airmover has a 5 year warranty.

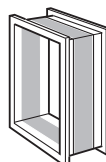
SQUIF ANCILLARIES



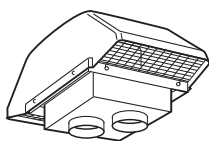
Splitter Attenuator.



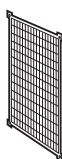
AV Mounts.



Flexible Connector.



Weatherproof Cowls.

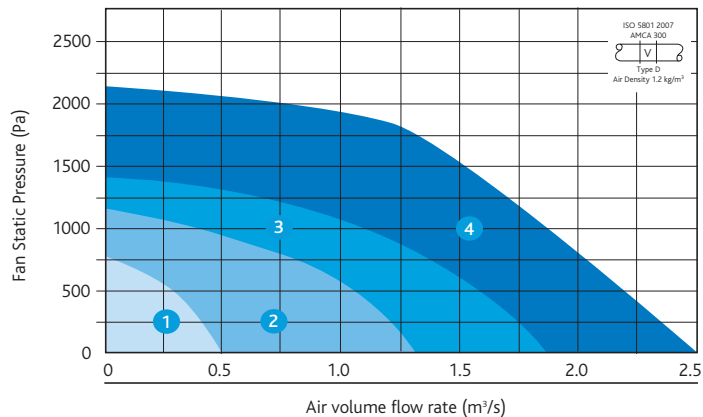


Guard for square units.

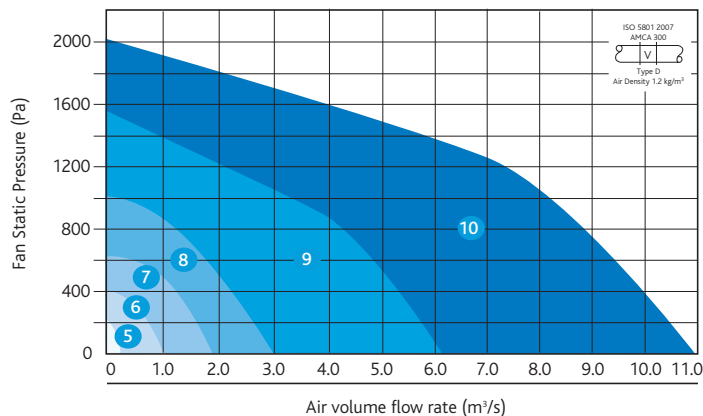


PERFORMANCE - AIRMOVER SINGLE FANS

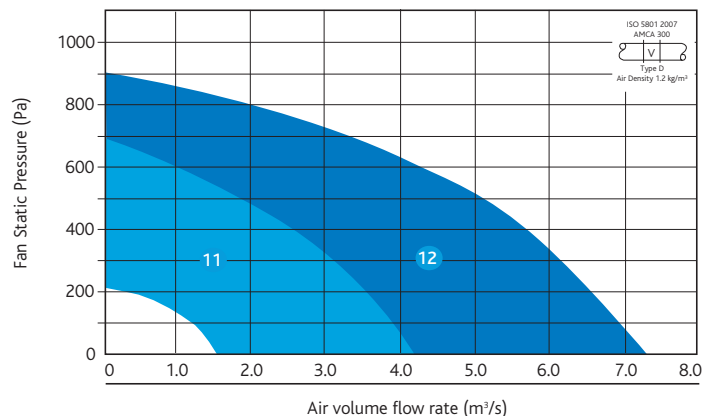
Airmover - 2 pole



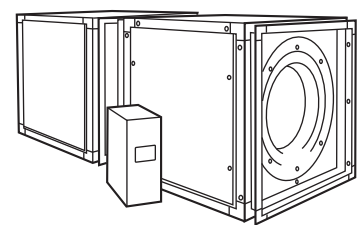
Airmover - 4 pole



Airmover - 6 pole



Casing



Code descriptions

AM 4 2 T - ES B C

1	2	3	4	5	6	7

- Airmover
- Pole (2, 4 or 6)
- Size
- Options
 - T = Two speed.
(Not available with Ecosmart control).
- ES = Full Ecosmart controls – BMS interfaces and commissioning controls (as 2 & 3 below) full compatibility with Ecosmart sensors.
- B = BMS interfaces 0-10V, volt free run and fail indication.
Commissioning/speed control built in
Adjustable trickle and boost if required.
- C = Commissioning/speed control built in.
Adjustable trickle and boost if required.
All the above control options are pre-programmed with a soft start function
The above control options are provided in a purpose made module, mounted remote from the unit.
Other controls to be specified separately please contact Nuair for details.

AIRMOVER EXTRACT UNITS

ELECTRICAL & SOUND

Curve	Code	Phase	RPM	Motor Power (kW)	FLC (amps)	SC (amps) (soft start)**	Data Type	Sound Power Levels (dB re 10 - 12 W)								Breakout dBA @ 3m
								Octave band mid frequency (Hz)								
								125	250	500	1K	2K	4K	8K		
1	AM 21	3	2820	0.37	1	1	I	81	84	69	67	68	68	71	42	
							O	81	80	70	71	71	70	68		
2	AM 22	3	2855	1.1	2.5	2.5	I	82	87	84	78	77	80	80	46	
							O	83	82	82	82	82	81	82		
3	AM 23	3	2875	2.2	4.2	4.2	I	86	92	87	80	82	83	83	50	
							O	87	87	85	84	87	84	85		
4	AM 24	3	2890	4	7.8	7.8	I	87	96	88	89	98	84	89	57	
							O	86	94	91	94	100	89	84		
5	AM 41	3	1430	0.25	0.8	0.8	I	71	63	53	51	56	58	45	25	
							O	71	59	53	56	59	60	42		
6	AM 42	3	1430	0.37	1.1	1.1	I	81	76	70	63	69	68	56	36	
							O	82	71	68	67	74	70	58		
7	AM 43	3	1445	1.1	2.5	2.5	I	88	85	81	73	76	76	68	45	
							O	86	83	84	78	79	80	63		
8	AM 44	3	1442	2.2	4.5	4.5	I	93	89	82	77	80	80	71	48	
							O	87	86	87	81	82	82	68		
9	AM 45	3	1455	7.5	15.8	15.8	I	103	92	86	86	85	86	83	54	
							O	92	90	91	89	87	87	81		
10	AM 46	3	1460	18.5	34.7	34.7	I	102	98	90	92	92	92	96	58	
							O	95	95	94	96	94	93	93		
11	AM 61	3	915	2.2	6.4	6.4	I	92	85	79	76	77	71	62	45	
							O	80	83	84	80	79	71	61		
12	AM 62	3	975	5.5	12.8	12.8	I	97	88	77	81	83	80	66	49	
							O	91	86	82	85	85	82	63		

The electrical and sound information in the table is nominal. Breakout dBA@3m is spherical, free field. Start currents (sc) are DOL other than for motors of 4 kW and above which is star delta.

* Motor electrical supply, 3=3phase (400V, 50Hz). ** Soft start - when using Ecosmart or inverter control.

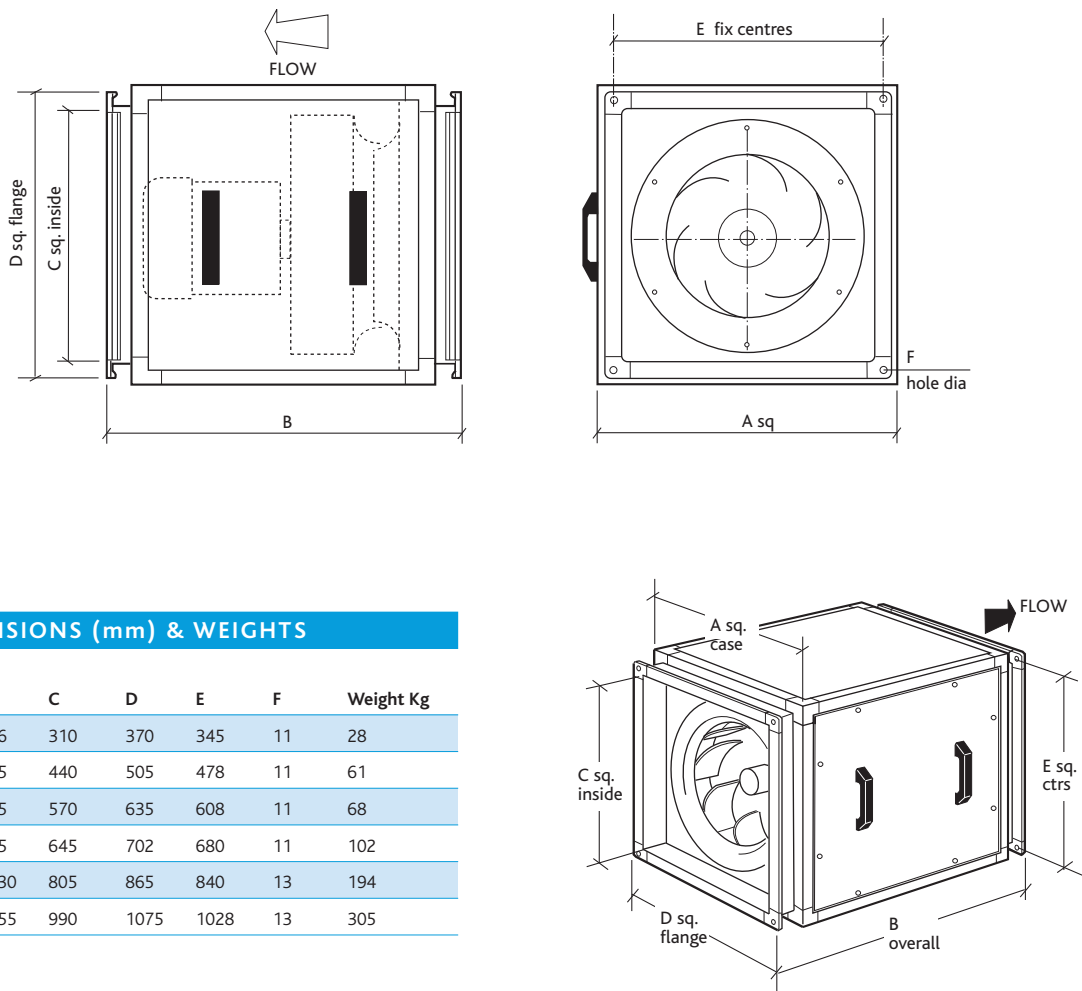
I - Induct Inlet O - Induct Outlet

QUICK SELECTION GUIDE

AIRMOVER

Fan unit	Frequency Inverter	Standard Silencers	Long Silencers	Flexible Connectors	Fan Guards	AV Mounts
AM21	3ISC1.2A	AMSIL1-S	AMSIL1-L	AMDF 1	AMGD 1	NAV3/A
AM22	3ISC3.0A	AMSIL2-S	AMSIL2-L	AMDF 2	AMGD 2	NAV3/A
AM23	3ISC5.9A	AMSIL2-S	AMSIL2-L	AMDF 2	AMGD 2	NAV3/A
AM24	3ISC10.2A	AMSIL3-S	AMSIL3-L	AMDF 3	AMGD 2	NAV3/A
AM41	3ISC1.2A	AMSIL1-S	AMSIL1-L	AMDF 1	AMGD 1	NAV3/A
AM42	3ISC1.2A	AMSIL2-S	AMSIL2-L	AMDF 2	AMGD 2	NAV3/A
AM43	3ISC3.0A	AMSIL3-S	AMSIL3-L	AMDF 3	AMGD 2	NAV3/A
AM44	3ISC5.9A	AMSIL4-S	AMSIL4-L	AMDF 4	AMGD 4	NAV3/A
AM45	3ISC18.4A	AMSIL5-S	AMSIL5-L	AMDF 5	AMGD 5	NAV3/A
AM46	3ISC38.0A	AMSIL6-S	AMSIL6-L	AMDF 6	AMGD 6	NAV6/A
AM61	3ISC7.7A	AMSIL5-S	AMSIL5-L	AMDF 5	AMGD 5	NAV3/A
AM62	3ISC13.2A	AMSIL6-S	AMSIL6-L	AMDF 6	AMGD 6	NAV6/A

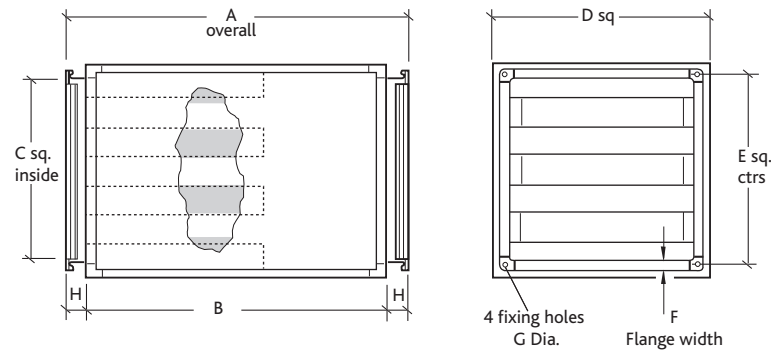
DIMENSIONS



AIRMOVER DIMENSIONS (mm) & WEIGHTS

Fan Unit	A	B	C	D	E	F	Weight Kg
AM21/41	376	486	310	370	345	11	28
AM22/23/42	510	615	440	505	478	11	61
AM43/24	642	705	570	635	608	11	68
AM44	712	775	645	702	680	11	102
AM45/61	892	1030	805	865	840	13	194
AM46/62	1082	1155	990	1075	1028	13	305

DIMENSIONS INLINE SQUARE ATTENUATORS



AIRMOVER SQUARE ATTENUATORS DIMENSIONS (mm) & WEIGHTS

Matching Unit	Attenuator Code	Attenuator Type	Static Attenuation							Dimensions & Weights									
			125	250	500	1K	2K	4K	8K	A	B	C	D	E	F	G	H	Weight Kg	Z
AM 21	AMSIL1-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	310	376	345	30	11	45	16	434
AM 22	AMSIL2-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	445	510	478	30	11	45	22	142
AM 23	AMSIL2-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	445	510	478	30	11	45	22	142
AM 24	AMSIL3-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	575	642	608	30	11	45	35	36.8
AM 41	AMSIL1-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	310	376	345	30	11	45	16	434
AM 42	AMSIL2-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	445	510	478	30	11	45	22	142
AM 43	AMSIL3-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	575	642	608	30	11	45	35	36.8
AM 44	AMSIL4-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	810	642	712	680	30	11	45	43	30.5
AM 45	AMSIL5-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	788	800	892	840	40	13	56	62	10.9
AM 46	AMSIL6-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	788	995	1082	1028	40	13	56	110	1.54
AM 61	AMSIL5-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	788	800	892	840	40	13	56	62	10.9
AM 62	AMSIL6-S	STANDARD	-4	-8	-18	-24	-19	-16	-11	900	788	995	1082	1028	40	13	56	110	1.54
AM 21	AMSIL1-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	310	376	345	30	11	45	22	434
AM 22	AMSIL2-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	445	510	478	30	11	45	33	142
AM 23	AMSIL2-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	445	510	478	30	11	45	33	142
AM 24	AMSIL3-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	575	642	608	30	11	45	56	36.8
AM 41	AMSIL1-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	310	376	345	30	11	45	22	434
AM 42	AMSIL2-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	445	510	478	30	11	45	33	142
AM 43	AMSIL3-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	575	642	608	30	11	45	56	36.8
AM 44	AMSIL4-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1110	642	712	680	30	11	45	63	30.5
AM 45	AMSIL5-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1088	800	892	840	40	13	56	88	10.9
AM 46	AMSIL6-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1088	995	1082	1028	40	13	56	170	1.54
AM 61	AMSIL5-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1088	800	892	840	40	13	56	88	10.9
AM 62	AMSIL6-L	LONG	-8	-12	-32	-42	-33	-32	-18	1200	1088	995	1082	1028	40	13	56	170	1.54

Note: Air Pressure Drop of Attenuator (Pa) = Z x Q² where Z = Factor listed in table above Q = Air Volume Flow Rate (m³/s).

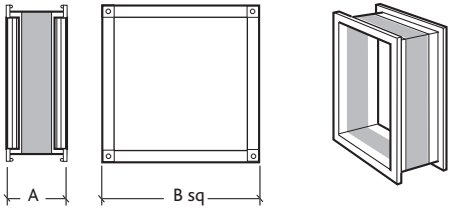
ANCILLARIES FOR AIRMOVER UNITS

DOUBLE FLANGED FLEXIBLE CONNECTOR (mm)

Square with a pair of propriety quickfit flanges. The flexible duct material is a sound barrier mat with wear resistant skin, designed to improve sound installation. The material is self extinguishing and suitable for operating temperatures between –30°C to +65°C.

Dimensions (mm)

Airmover	Code	A	B
AM 41/AM 21	AMDF 1	150	370
AM 42/AM 22/AM 23	AMDF 2	150	505
AM 43/AM 24	AMDF 3	150	635
AM 44	AMDF 4	150	702
AM 45/AM 61	AMDF 5	150	865
AM 46/AM 62	AMDF 6	150	1075

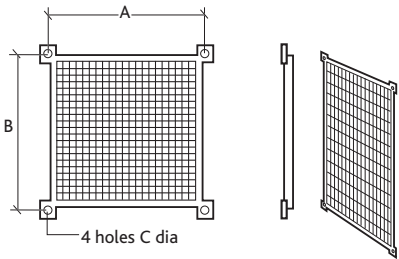


GUARD FOR SQUARE FANS (mm)

Manufactured from galvanised steel wire or polyester coated mild steel. Resistance to airflow is negligible.

Dimensions (mm)

Airmover	Code	A	B
AM 41/AM 21	AMGD 1	345	345
AM 42/AM 22/AM 23	AMGD 2	345	345
AM 43/AM 24	AMGD 3	608	608
AM 44	AMGD 4	680	680
AM 45/AM 61	AMGD 5	840	840
AM 46/AM 62	AMGD 6	1028	1028



ANCILLARIES FOR AIRMOVER UNITS CONT.

TERMINATOR COWLS DIMENSIONS (mm)

To provide a weatherproof route for supply & exhaust air to your ducted system.

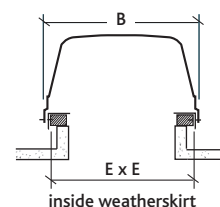
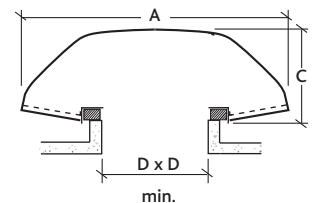
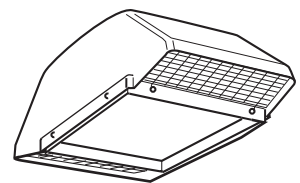
Cowls are manufactured from flame retardant polymer and can be supplied with gravity backdraught shutters, bird guards and hand guards. The terminal is finished in BS00A05 Grey as standard. All BS or RAL colours are available. The cowl will normally be fitted to the upstand by a roofing contractor or builder. The Cowl can be fitted without shutters on a 0-60 degree pitched roof with its longer side running down the roof slope. The Cowl can be fitted with its longer side running across a slope of less than 85 degrees from the horizontal. When fitted to a wall the longer side must run horizontal.

Typical code: TRTS-A Note: S = Shutters

Note: Air Pressure Drop of Attenuator (Pa) = $Z \times Q^2$

where Z = Factor listed in table below Q = Air Volume Flow Rate (m^3/s)

Code	A	B	C	D	E	Weight Kg	Discharge	Z Intake
TRTS-A	900	620	340	460	600	12.3	67	118
TRTS-B	1080	740	375	560	695	14.7	39	87
TRTS-C	1320	964	475	700	945	26.0	28	62
TRTS-D	1470	1076	490	800	1050	28.2	19	32
TRTS-E	1780	1170	485	900	1136	50.0	7	11.3
TRTS-F	2260	1476	600	1200	1452	88.0	2.5	3.6



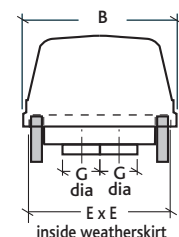
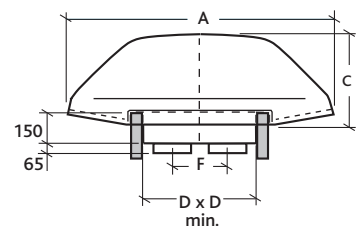
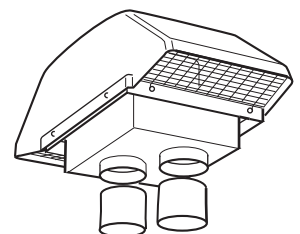
SUPPLY/EXTRACT COWLS DIMENSIONS (mm)

Supply/Extract Cowl: rigid flame retardant cowl, conforming with BS476 (Part 1 class 11) supplied in grey (BS 00 A 05) as standard (any BS or RAL colours available), fixing directly to the base using non-rusting sealed fixings. Air plenum is manufactured from galvanised steel incorporating supply & extract chambers. Rigid spigots are provided for connection of duct work. Supply & extract chamber is fitted with a bird guard.

Typical code: TRSE1

Code	A	B	C	D	E	F	G	Weight Kg
TRSE1	900	620	340	460	600	200	100	21.3
TRSE2	900	620	340	460	600	200	125	21.3
TRSE3	900	620	340	460	600	200	150	21.3
TRSE4	1320	964	475	700	945	345	200	41.4
TRSE5	1320	964	475	700	945	345	250	41.4
TRSE6	1320	964	475	700	945	345	315	41.4
TRSE7	1780	1170	489	900	1150	450	400	76.8

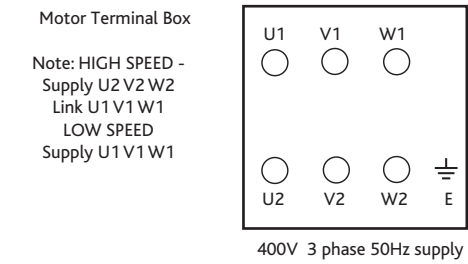
Resistance to airflow of this item is negligible.



WIRING - AIRMOVER

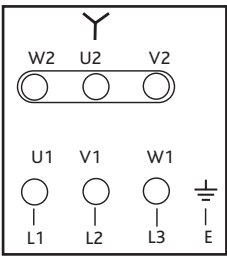
Two speed motors DOL starting on both speeds

Observe the motor plate and connection details.
3 phase two speed tap/pam wound motors require a three contactor control.
3 phase Dual wound motors require a two contactor control.

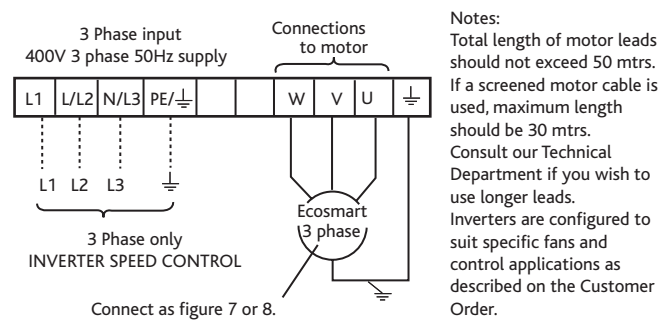


3 phase units up to 3KW

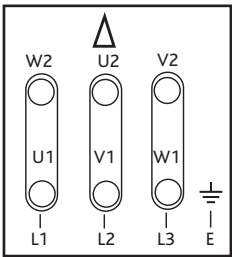
3 phase motors are connected directly to the Motor Terminal Box.



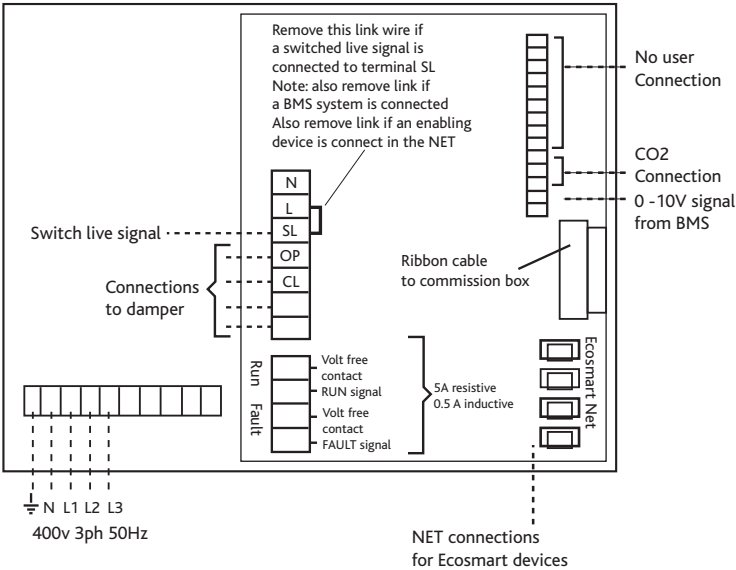
3 phase units with matched frequency inverter



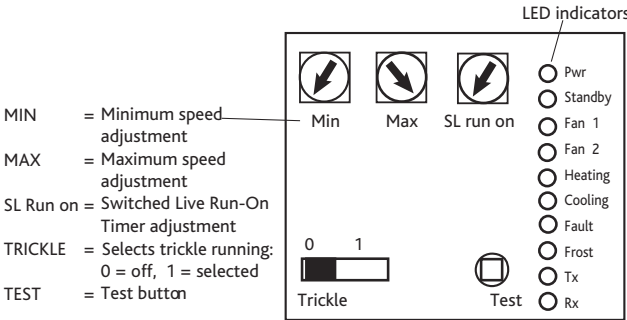
3 phase units 4KW and above



3 phase (Ecosmart)



Set up/Commissioning Box



CONSULTANTS SPECIFICATION

SYSTEM SPECIFICATION

The ventilation fan Unit shall be configured and arranged as detailed on the drawings and in accordance with the schedule of equipment and shall be of the Airmover type as manufactured by Nuaire. The units shall be manufactured from a highly rigid pentapost framework with 25mm double skinned infill panels. The panels shall contain inert high density infill. Panel materials are heavy gauge Aluzinc corrosion resistant steel. The units shall provide exceptional thermal and acoustic insertion. The very low breakout noise level through the unit casing must not be exceeded. The general construction is to class A leakage.

The fan impeller and motor shall be selected to provide the most energy efficient solution conforming to part L regulations and shall be direct drive with IE2 high efficiency motors to EN60034-30 as standard. The fan impeller shall be a high efficiency backward curved centrifugal design, manufactured in galvanised steel.

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

All other components shall be in accordance with the manufacturer's specification.

The unit and ancillaries shall be of the Airmover type as manufactured by Nuaire Ltd.

CONTROL SPECIFICATION

The fan unit shall be supplied with one of the following control options:-

1. ECOSMART CONTROLS

The compact Ecosmart control system complete with all necessary controls to facilitate the operation of the ventilation system. It shall be come complete with an integral factory fitted Ecosmart PCB which will control the fan unit within the desired design parameters and provide the interface between all external control devices and the unit itself.

The fan unit shall have the following energy saving components integrally mounted, pre-wired to interface with the purpose made PCB, all components pre-wired, configured and factory fitted by the manufacturer: -

- Integral Frequency inverter/speed controller.
- Integral maximum and minimum speed adjustment for commissioning.
- Integral adjustable run on timer.
- Integral BMS interfaces – 0-10V speed adjustment.
- Integral BMS interfaces – Volt free failure and status indication.
- Integral background ventilation switch (trickle switch).
- Multiple IDC sockets for interconnection of sensors or fans using pre-plugged 4-core low voltage cable.

The Ecosmart controls will enable the unit to 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.

2. BMS INTERFACES

The fan unit shall be provided with the following integrated BMS interfaces

- 0 - 10 volt contacts to provide a full BMS interface. This will enable the following functions:-
 - Switch the unit on/off.
 - Switch from low speed to high speed.
 - Full speed control facility.
- 2 No. Volt free contacts to provide fan run and failure indication to provide system status.
- An integrated commissioning/speed control to accurately commission the system, with minimum and maximum speeds easily adjusted via a miniature dial, as recommended in Part L. This will enable the unit to be configured to run between set parameters thus saving motor power and limiting noise.

3. COMMISSIONING SET UP

The fan unit shall be provided with an integrated commissioning/speed control to accurately commission the system, as recommended in Part L, minimum and maximum speeds easily adjusted via miniature dial. The commissioning set up facility directly controls the integrated speed control/frequency inverter.

4. STANDARD CONTROLS

The unit shall be provided with a standard speed control or starter in accordance with the manufacturer's recommendations.

The Fan unit shall have a 3 year warranty.
Ecosmart Airmover shall have a 5 year warranty.

All equipment shall be as manufactured by Nuaire Ltd.