

Fig. 1. General view of unit.

### Contents

Page

<b>Introduction / General Description .....</b>	<b>1</b>
<b>Dimensions .....</b>	<b>2</b>
<b>Installation .....</b>	<b>3</b>
<b>Silencer Information .....</b>	<b>5</b>
<b>Ancillaries Information .....</b>	<b>6</b>
<b>Fixing Details .....</b>	<b>8</b>
<b>Wiring Details .....</b>	<b>10</b>
<b>Certification .....</b>	<b>12</b>
<b>Spares &amp; Service .....</b>	<b>16</b>

### Introduction

The NuAire DuctMaster range of Long Cased Axial Flow Fans are produced in ten case sizes from 315mm dia. to 1250mm dia. with duties from 0.5m<sup>3</sup>/s to 44m<sup>3</sup>/s. Impellers have been selected at 5 degree blade intervals matched to various motor speeds to provide a range of units that will suit your specific individual performance requirements.

Blades are adjustable and can be reset to suit final system resistances if necessary. However, we strongly recommend that you contact NuAire before any blade angle changes are undertaken. NuAire will not accept responsibility for damaged units when unauthorised personnel have altered blade angles.

Units are available for both single or three phase operation. Most units are suitable for speed control, however speed control should only be applied to units with blade angles set at highest angle for the 'matched' motor. Details of suitable speed controls are available on request from NuAire. DuctMasters have been tested to BS 848 in our BSI approved laboratories. This ensures that all technical data is accurate and that all units can be specified with confidence.

### General Description

The DuctMaster range of Long Cased Axial Flow Fans has been designed specifically for ease of installation into new or existing ductwork systems. Each fan is supplied complete with two matching flanges, self sealing clamping collars and four mounting feet with fixings. The fan casing incorporates two integral, opposed, mounting pads. Each pad has multiple fixing holes for the feet allowing installation in any mounting plane.

Anti-vibration Mounting kits are available on request. The case flanges mate with ductwork etc using single bolt quickfit clamping collars.

A full range of ancillaries is available including matching Silencers, Flexible Connectors, Flange Converters and Controls.

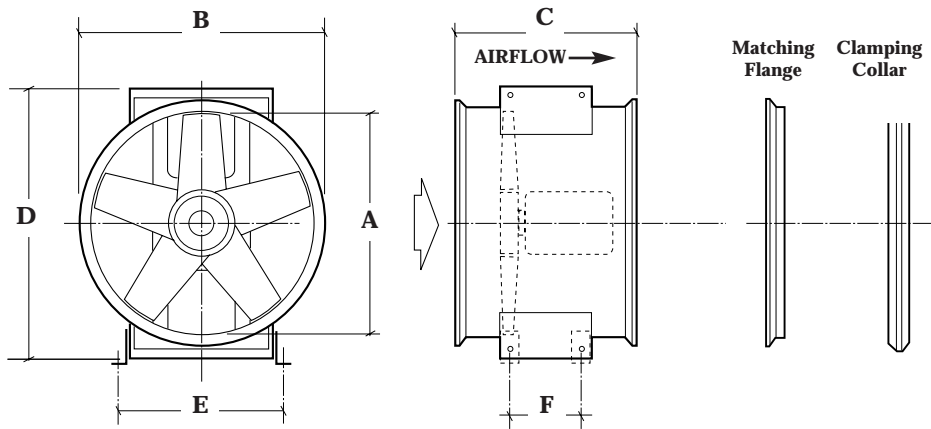
Many fans are fully compatible with Microsave and conventional controls (For Speed controls, Starters etc contact NuAire for full details).

Motors are wired into an external case mounted terminal box through flexible conduit.

DuctMaster models are also available polyester powder painted for external use.

### Fan unit Dimensions

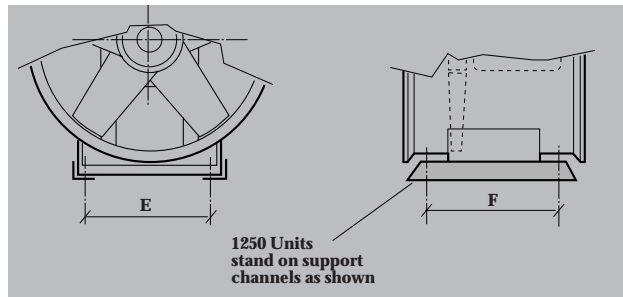
(Supplied complete with two matching flanges, two clamping collars and four mounting feet complete with fixings).



Two opposed mounting pads are incorporated into the casing. Each pad has multi position feet fixing points.

Four mounting feet are supplied with each unit or silencer, see main fixing drawings. M8 fixing screws are included.

Special mounting channels are fitted on 1250 size units



### Dimensions (mm)

Unit Code *See NOTE	A	B	C	D	E	F	Unit Weight (kg)	
							2 Pole	4 & 6 Pole
DC315	310	360	333	369	300	185	25	18
DC350	345	395	333	427	300	185	28	19
DC400	395	445	333	440	350	185	33	24
DC450	445	475	333	513	350	185	35	28
DC500 -4/6/21 -23 (24 -26)	493	545	333(450)	553	400	185	42(62)	36
DC560 -4/6/21 (22 -25)	553	605	333(450)	632	400	185	44(75)	40
DC630 -4/6 (21 -23)	622	674	333(450)	725	400	185	(64)	46
DC630 -24 (25 -27)	622	674	570(710)	725	400	185	86(150)	-
DC710 -4/6	704	750	450	800	566	185	-	85
DC800 -41 -43 /61 -66	790	845	450	938	635	185	-	80
DC800 -44 -46 (47)	790	845	570(710)	938	635	185	-	123(165)
DC1000 -41 /42 /61 -64	990	1060	590	1120	706	185	-	133
DC1000 -43/ -46/65 -66	990	1060	790	1120	706	185	-	267
DC1250 -41 -43	1240	1315	750	1450	875	525	-	320
DC1250 -61 -65	1240	1315	750	1450	875	525	-	280
DC1250 -44 -46/66	1240	1315	750	1450	875	525	-	700

\*NOTE: - Refer to NuAire Axial Fans Brochure. 4 = 4 Pole units, - 21 = 2 Pole unit performance curve 1, see unit coding.

### Handling

The DuctMaster fan impeller is carefully balanced prior to despatch. Care must be taken on site when handling the unit not to damage or distort the blades or alter the motor position. Do not pass lifting slings etc through the impeller. Always use the mounting pads (top or bottom) for sling attachments.

The fan is supplied with installation accessories i.e. two matching flanges, two clamping collars and four mounting feet attached. These items are fitted before delivery to ensure parts are not lost on site. If the optional flexible connectors are specified these will be fitted for delivery to the customer. However care must be taken when handling the unit assembly as the flexibles can be distorted or damaged.

### Installation

Prior to installation the impeller should be rotated by hand to check for smooth rotation and that no transit damage has occurred.

#### Horizontal on floor etc.

Before commencing work it will be necessary to remove the clamping collars and loose flanges. Simply unscrew the clamp nut using a suitable spanner.

Note: during installation, ensure that the flanges are mated together correctly before tightening the clamps.

The position of the shakeproof washers on the foot mountings is important as these washers are fitted to restrain any longitudinal movement of the feet. See 'Mounting Foot details' on page 6 noting that you have a choice of two holes when fitting the feet for floor mounting.

If the optional resilient mountings have been chosen these should be attached to the unit feet at this stage. See Resilient Mounting assembly (floor mtg) drawing on page 6.

Note that the large steel safety washers in the mounting kit are not required for floor mounting and can be discarded.

Details of resilient mounting kit selection is shown in the table on the same page.

If the optional wall support brackets are to be used they could be attached to the feet of the fan in order to determine the ducting centreline relative to the mounting plane.

(Foot fixing centres are shown on fixing details drawing which should allow the brackets to be pre fitted to the wall ready to accept the fan assembly).

Consider the position of the externally mounted electrical terminal box when choosing an installation position.

Assuming that the position for mounting has been chosen, and any wall brackets (if used) are already correctly located, stand or support the unit in place and check the unit is aligned with the ductwork in both horizontal and vertical planes. A degree of adjustment is provided on the feet but it may be necessary to pack up the height under the mounting feet. See fixing details on pages 8 & 9.

Mark on the floor / structure the fixing positions for the feet or resilient mountings and if necessary drill suitable holes to accept bolt or screw fixings (screws not supplied).

If matching silencers are to be installed, these should be fitted to the fan with any other accessories such as flexible connectors etc. before installation and the complete assembly mounted in position using the same procedure.

The matching flanges if required on the installation are fixed to the ductwork ends with rivets etc. Ensure the clamping collars have been placed onto the ducting before drawing the flanges together. Note: make sure the flange faces are properly mated before fitting and tightening the clamping collars.

#### Suspended horizontally or vertically

The only difference for suspension is in the positioning of the mounting feet which are now fixed to the sides of the mounting pads by the smaller single hole leg of the feet. See 'Mounting Foot Details' on pages 6.

If Resilient Mountings are to be included note that the rubber mountings **must** remain in compression - this involves fixing the rubber mounting upside down inside the foot. The large metal safety washers **must** be fitted under the studding nuts on each mounting. See Resilient Mounting assembly (suspended) drawing on page 6.

#### General.

Motors are totally enclosed and protected to IP55 (Dust and low pressure water jets). Motors may incorporate drain holes to allow any condensation to escape from the motor casing. **It is essential therefore that these drain holes are positioned at the lowest point of the fan motor when the unit is horizontally mounted.**

All bearings are pre-packed with grease and sealed for life.

### Connection details

Check that the voltage on the fan rating label is suitable for your supply. Full load / starting currents are also indicated.

The fan unit incorporates a terminal box on the casing exterior. Units for external use require weatherproof conduit and glands.

Motors up to and including 3kW are designed for Direct On Line starting. Motors with outputs of 4kW and above are suitable for Direct On Line or Star/Delta starting.

Flameproof motors are generally supplied for wiring and connection, direct to the motor terminals, on site by the installer (special wiring instructions will be provided by NuAire). Connections and fittings used must be in accordance with current BASEEFA approved standards and requirements.

Motor overload protection should be set to the full load current on the fan rating label. Supply fuses should be H.R.C. type.

### Motor Overload Protection

Internal Thermal Protection is fitted to all standard fan motors excluding the fan units referenced below. When fitted this protective device must be utilised. In the case of single phase units it is wired directly into the supply circuit as detailed on page 10 and for three phase units it is incorporated into the motor control circuit.

Units DC560F2323A  
DC630 2 pole  
DC710, 800 & 1000 4 pole, all 1250 units  
DC800 & 1000 6 pole\*

\* These units have motors not fitted with Internal Thermal Protection. This form of protection can be fitted as an extra and would be used as described above. If this option is not fitted; then in keeping with accepted practice, a contactor starter fitted with thermal overloads would be utilised in the motor control circuit.

### Start up procedure

When starting ensure that the impeller rotation follows the label arrow indicator on the casing. Should the direction be incorrect on three phase units, reverse any two of the supply leads. See wiring diagram page 10.

Equipment should be run for approximately 30 minutes to ensure correct operation. If any fault occurs, the equipment should be switched off. Do not re-start until the fault has been rectified.

### Accessory Installation

**Flexible Connections** - Care must be taken when installing flexible connections to ensure that duct misalignment is not corrected by the flexible connection. Both duct misalignment and slack connections cause unnecessary pressure losses in the system.

**Anti-Vibration Mountings** - Anti-vibration mounts cannot be fitted to a fan unless there are flexible connectors between the fan or fan silencer combination casing and the ducting. On combination fan/silencer installations only four foot mountings are used, see fixing details on pages 8 & 9.

Suspension mounts in particular should be adjusted on the drop rods to carry an equal proportion of the total fan weight when installed, as unevenly adjusted mountings could carry a load greater than the design condition.

**Anti-Backdraught Dampers** - Anti-Backdraught Damper should be checked for transit damage prior to installation. Damper blades should be open and closed to ensure smooth operation.

### Maintenance

NuAire recommends all products maintained in accordance with the HVCA "Standard Maintenance Specification for Mechanical Services in Buildings" - Volume II Ventilating and Air Conditioning.

### For guidance only

Due to the different periods of operation from the time of installation and conditions of use, no rigid inspection and maintenance periods can be recommended. We suggest, therefore that the inspection and if necessary cleaning / bearing check should be carried out at regular intervals of a maximum of six months.

For a routine inspection, check the tightness of all nuts, keys, grubscrews and endbolts etc. Remove any build up of dirt or dust with a brush.

## Silencer Dimensions & Weights

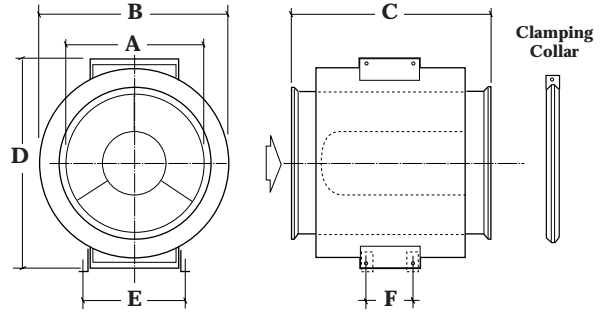
DCS315S to DCS710S.  
Short Un-podded.

DCS315L to DCS710L.  
Long Un-podded.

DCSP315S to DCSP710S.  
Short Podded.

DCSP315L to DCSP710L.  
Long Podded.

Note:  
Podded Silencer  
Illustrated



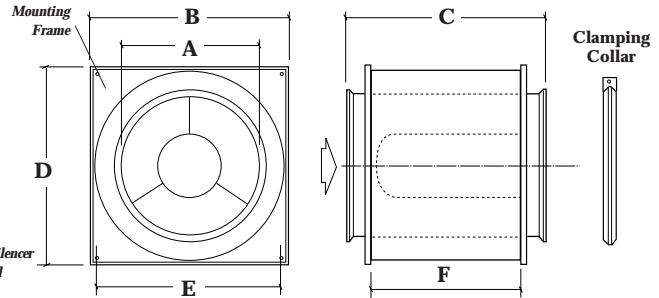
DCS800S & DCS1000S.  
Short Un-podded.

DCS800L & DCS1000L.  
Long Un-podded.

DCSP800S & DCSP1000S.  
Short Podded.

DCSP800L & DCSP1000L.  
Long Podded.

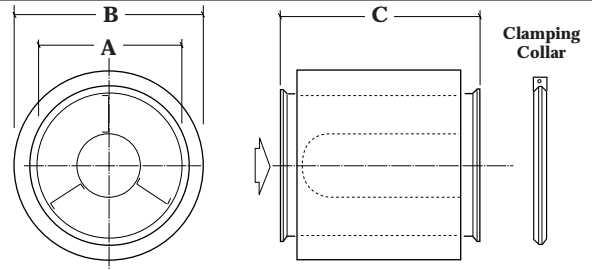
Note:  
Podded Silencer  
Illustrated



DCS1250L.  
Long Un-podded.

DCSP1250L.  
Long Podded.

Note:  
Podded Silencer  
Illustrated



### Dimensions (mm)

### Weight (kg)

Unit Code	A	B	C		D	E		F	F	Weight (kg)			
			Short	Long		Short Podded	Short No Pod			Long Podded	Long No Pod		
DCSIL 315	310	410	374	684	450	355	230	230	11.0	7.0	17.0	13.0	
DCSIL 350	345	445	409	754	510	355	230	230	14.0	10.0	24.0	17.0	
DCSIL 400	395	495	459	854	540	405	230	230	16.0	12.0	29.0	22.0	
DCSIL 450	445	545	509	954	600	405	230	230	23.0	19.0	37.0	30.0	
DCSIL 500	493	643	557	1050	666	502	230	230	29.0	25.0	45.0	37.0	
DCSIL 560	553	703	617	1170	726	565	230	230	32.0	29.0	47.0	40.0	
DCSIL 630	622	772	686	1308	795	630	230	230	36.0	34.0	58.0	52.0	
DCSIL 710	704	860	810	1520	906	805	199	199	46.0	36.0	86.0	64.0	
DCSIL 800	790	950	1048	1848	1000	1056	750	1550	56.0	43.0	101.0	79.0	
DCSIL 1000	990	1200	1248	2248	1120	1296	1060	2060	143.0	113.0	216.0	161.0	
DCSIL1250	1250	1450	1250	2500	1450	-	-	-	214.0	184.0	326.0	267.0	

### Construction

NuAire DuctMaster attenuators are manufactured with a rigidly constructed, cylindrical galvanised steel casing. The casing is lined internally with sound absorbent material which has excellent acoustic properties, is non-hygroscopic and also incombustible. The material is retained by a perforated aluminium liner.

Each silencer has two opposed mounting pads with multiple mounting feet fixing points.

Flanges are quickfit type to match the DuctMaster axial fans.

Four mounting feet, feet fixings and a clamping collar are supplied with each silencer.

When a pod is fitted it is constructed of perforated aluminium with an infill of the acoustic material.

### Silencer Types

Two types of cylindrical silencer are available:

**Unpodded : Ref = DC S**

**Podded : Ref = DC S P**

(The introduction of the pod considerably improves the attenuation but increases resistance to airflow).

Two standard lengths of silencers are available:

**Short : Ref = S**

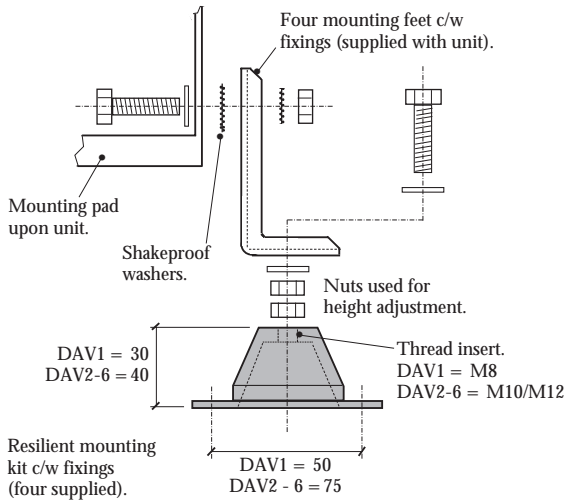
**Long : Ref = L**

Examples:

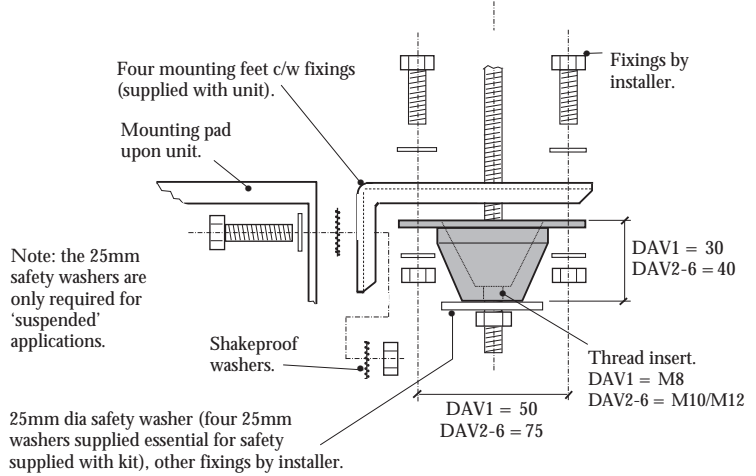
- DCS S 315 S is a short silencer with a pod.
- DC S 315 L is a long silencer without a pod.

## Ancillaries Dimensions & Weights

### Resilient Mounting 'Floor' fixing



### Resilient Mounting 'Suspended' fixing



### Resilient Mounts

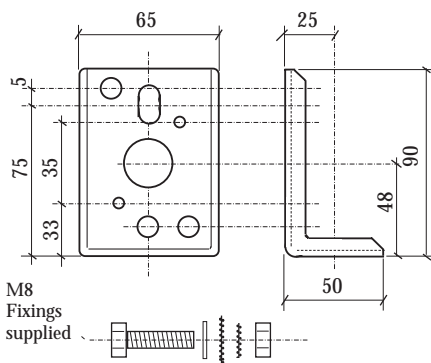
The above anti vibration mountings are available for the DuctMaster range of axial flow fans. See selection table opposite. Kits are supplied for unit or unit silencer combinations and comprise the requisite number of resilient mounts for 'floor' or 'suspension' use (see details above).

### Resilient mounting kit (selection)

Unit Code	Unit Motor Poles (kw)	Unit Only	Unit Plus One Short Silencer		Unit Plus Two Short Silencers		Unit Plus One long Silencer		Unit Plus Two long Silencers	
			Pod	No Pod	Pod	No Pod	Pod	No Pod	Pod	No Pod
DC315	2	DAV1	DAV2	DAV2	DAV2	DAV2	DAV2	DAV2	DAV5	DAV2
	4	DAV1	DAV1	DAV1	DAV2	DAV2	DAV2	DAV1	DAV2	DAV2
DC350	2	DAV1	DAV2	DAV2	DAV2	DAV2	DAV2	DAV2	DAV5	DAV5
	4	DAV1	DAV2	DAV2	DAV2	DAV2	DAV2	DAV2	DAV5	DAV2
DC400	2	DAV1	DAV2	DAV2	DAV5	DAV2	DAV5	DAV2	DAV5	DAV5
	4	DAV1	DAV2	DAV2	DAV5	DAV2	DAV5	DAV2	DAV5	DAV5
DC450	2	DAV1	DAV2	DAV2	DAV5	DAV2	DAV5	DAV2	DAV5	DAV5
	4 & 6	DAV1	DAV2	DAV2	DAV5	DAV5	DAV5	DAV2	DAV5	DAV5
DC500	21 to 23	DAV2	DAV5	DAV3	DAV5	DAV5	DAV5	DAV5	DAV3	DAV3
	24 to 2 6	DAV2	DAV5	DAV3	DAV5	DAV5	DAV5	DAV5	DAV3	DAV3
	4 & 6	DAV2	DAV5	DAV2	DAV5	DAV5	DAV5	DAV5	DAV3	DAV3
DC560	21	DAV2	DAV5	DAV5	DAV5	DAV5	DAV5	DAV5	DAV4	DAV3
	22 to 23	DAV2	DAV5	DAV5	DAV5	DAV5	DAV3	DAV3	DAV4	DAV4
	4 & 6	DAV2	DAV5	DAV5	DAV5	DAV5	DAV5	DAV5	DAV4	DAV4
DC630	21 to 23	DAV5	DAV3	DAV3	DAV4	DAV4	DAV3	DAV3	DAV6	DAV6
	24	DAV5	DAV13	DAV13	DAV23	DAV23	DAV14	DAV13	DAV26	DAV23
	25 to 27	DAV4	DAV10	DAV10	DAV19	DAV19	DAV12	DAV10	DAV21	DAV19
	4 & 6	DAV2	DAV5	DAV5	DAV3	DAV3	DAV3	DAV3	DAV4	DAV4
DC710	4 & 6	DAV5	DAV14	DAV14	DAV26	DAV26	DAV12	DAV8	DAV25	DAV24
DC800	41-43, 61-66	DAV5	DAV14	DAV14	DAV26	DAV26	DAV12	DAV8	DAV25	DAV24
	44 to 46, 67	DAV5	DAV15	DAV11	DAV22	DAV20	DAV15	DAV15	DAV22	DAV22
	47	DAV4	DAV15	DAV11	DAV22	DAV20	DAV15	DAV15	DAV22	DAV22
DC1000	41-42, 61-64	DAV4	DAV15	DAV11	DAV22	DAV20	DAV15	DAV15	DAV22	DAV22
	43-46, 65,66	DAV48	DAV50	DAV49	DAV251	DAV50	DAV50	DAV50	DAV53	DAV51
DC1250	41 to 43	DAV48								
	61 to 63	DAV48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	44 to 46, 66	DAV53								

\* Note: Larger units, silencers and combinations require more than one set of A.Vs. Kits listed for these sizes will include the required number of mountings, see fixing details pages 8 & 9

### Mounting Foot details



### Mounting Foot Notes

Four mounting feet are supplied with each unit or silencer, see main dimension drawings. M8 fixing screws are included.

Note: See fixing details, pages 8 & 9.

# Installation and Maintenance DUCTMASTER AXIAL FLOW FANS

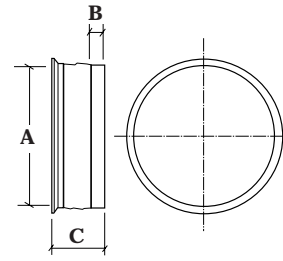
## Flexible Connectors

Circular with a single quickfit flange. Flexible duct material is flameproof resistant to heat up to 132°C, chemicals, ozone, oil and grease. The spigot is of light gauge galvanised steel. The connector is airtight, waterproof and tested to BS476 Part 7.

CODES: DCFX 315 (typical)

### Dimensions (mm)

Nom. Dia	A	B	C
315	310	50	168
350	345	50	168
400	395	50	168
450	445	50	168
500	493	50	168
560	553	50	168
630	622	50	168
710	702	50	168
800	790	50	168
1000	990	50	168
1250	1240	50	168



Flexible Connector

## Resilient Mountings

A set of AVs are matched to the unit or unit/silencer combination. The resilient mounts supplied for use with the DuctMaster range are suitable for use in floor mounted or hanging type applications.

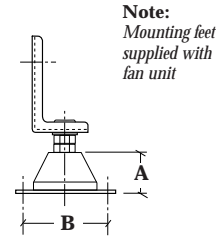
### Note:

1. A/V Kits DAV 7 and above are combinations of the above.
2. A/V's for 1250 units are spring type. (Contact NuAir for selection & details)

CODES: DAV (typical)

### Dimensions (mm)

Code	A	B
DAV 1	30	50
DAV 2	40	75
DAV 3	40	75
DAV 4	40	75
DAV 5	40	75
DAV 6	40	75



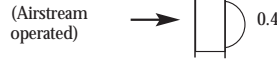
Note:  
Mounting feet  
supplied with  
fan unit

Resilient Mounting

## Backdraught Damper

Gravity operated damper to prevent back-draughts. Manufactured in heavy gauge galvanised steel with a pair of quickfit flanges

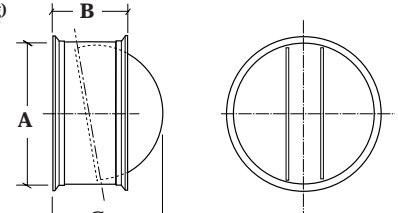
### Standard Accessory Losses (k)



CODES: DCBD 315 (typical)

### Dimensions (mm) & Weights

Dia.mm	A	B	C	Weight(Kg)
315	310	333	360	7.5
350	345	333	360	9.0
400	395	333	360	11.0
450	445	333	360	14.0
500	493	333	390	16.5
560	553	333	420	20.0
630	622	333	450	22.5
710	704	333	520	27.5
800	790	300	550	35.0
1000	990	350	720	66.5
1250	1240	350	830	88.0



Anti-Backdraught Damper

## Inlet Cones (Wire Guard Optional)

Manufactured in heavy gauge galvanised steel with a single quickfit flange.

### Standard Accessory Losses (k)

Low loss inlet cone → 0.38

Flat type Finger guard → 0.75

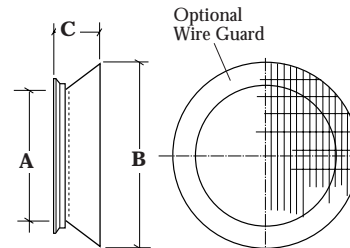
### CODES:

DCIC 315 (typical)

DCIG 315 (typical) with wire guard

### Dimensions (mm) & Weights

Dia.mm	A	B	C	Weight(Kg)
315	310	400	70	2
350	345	450	70	2
400	395	510	85	3
450	445	570	95	4
500	493	640	105	5
560	553	715	115	6
630	622	800	125	9
710	704	890	140	11
800	790	995	150	13
1000	990	1230	180	23
1250	1240	1525	245	40



Inlet Cone

## Wire Guards

Hot dipped galvanised for either inlet or outlet fixing. Fitted with a single quickfit flange.

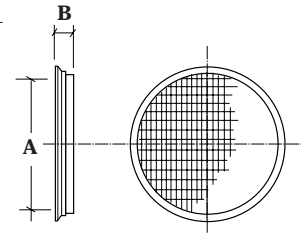
### Standard Accessory Losses (k)

Flat type Finger guard → 0.75

CODES: DCGD 315 (typical)

### Dimensions (mm) & Weights

Dia.mm	A	B	Weight(Kg)
315	310	30	0.5
350	345	30	0.9
400	395	40	1.5
450	445	45	1.7
500	493	45	2.3
560	553	45	2.8
630	622	45	3.2
710	704	45	3.7
800	790	45	4.0
1000	990	50	6.9
1250	1240	50	8.0



Wire Guard

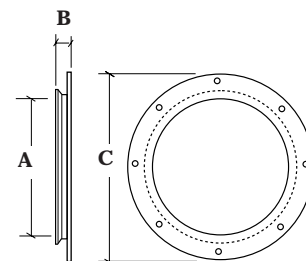
## Quick Fit to Bolted Flange Converter

To convert a quick fit flange to a bolted flange. Manufactured from heavy gauge galvanised steel.

CODES: DCQB315 (typical)

### Dimensions (mm) & Weights

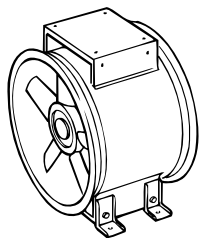
Dia.mm	A	B	C	Weight(Kg)
315	310	375	45	1.2
350	345	421	45	1.2
400	395	475	55	1.9
450	445	520	55	1.9
500	493	585	60	3.2
560	553	645	60	4.6
630	622	715	60	5.0
710	704	795	60	6.4
800	790	885	60	6.7
1000	990	1100	75	10.5
1250	1240	1350	75	15.7



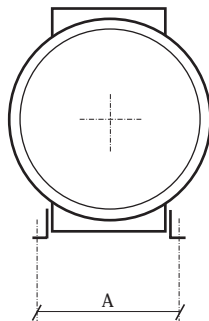
Quickfit to bolted flange converter

## Fixing Details

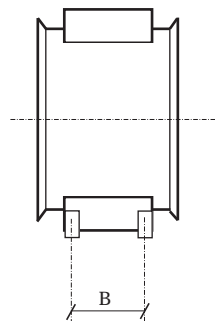
### Supported horizontally from floor.



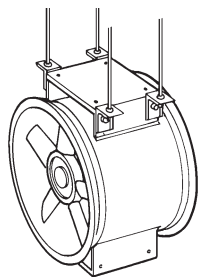
End view



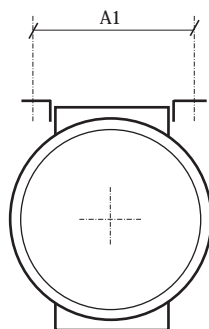
Side view



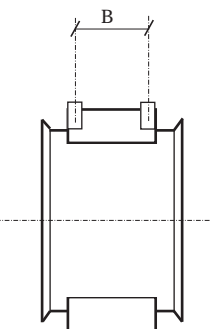
### Suspended horizontally from above.



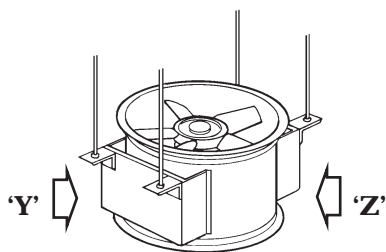
End view



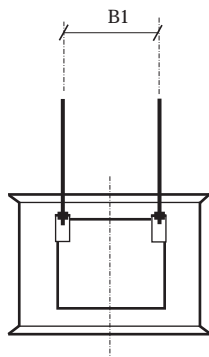
Side view



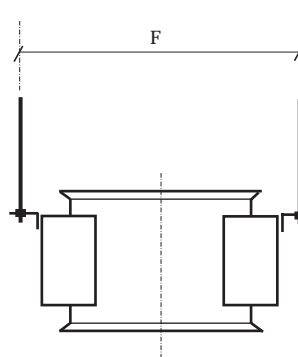
### Suspended vertically from above.



View on 'Y'



View on 'Z'

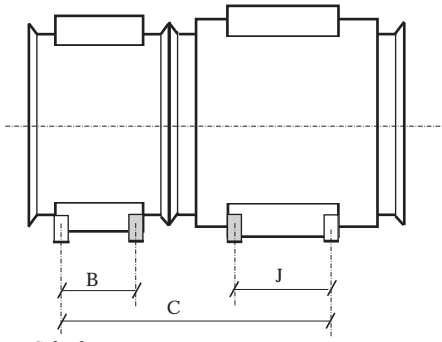


### Dimensions of fixing centres

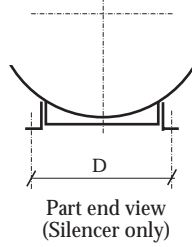
Unit Code	Dimensions (mm) between foot fixing hole centres															Drop rods and bolt sizes for AV mounts
	A	A1	B	B1	short silencer C	long silencer C	D	D1	short silencer E	long silencer E	F	G	H	short silencer J	long silencer J	
DC315 (all)	300	350	185	190	571	728	355	405	957	1271	469	483	243	230	230	M8/M10
DC350 (all)	300	350	185	190	589	761	355	405	1033	1337	527	518	243	230	230	M8/M10
DC400 (all)	350	400	185	240	619	792	405	455	1053	1399	540	568	293	230	230	M10
DC450 (all)	350	400	185	240	642	862	405	455	1099	1539	613	618	293	230	230	M10
DC500 (all)	400	450	185	290	672	913	502	552	1159	1641	653	716	393	230	230	M10
DC560 (4+ 6 pole)	400	450	185	290	703	973	565	615	1221	1761	732	776	453	230	230	M10
DC560 -22 -25	400	450	185	290	754	1024	565	615	1338	1878	732	776	453	230	230	M10
DC630 D&G (4 pole)	400	450	185	290	729	1011	630	680	1273	1837	825	845	523	230	230	M10
DC630G (4 + 6 pole)	400	450	185	290	776	1087	630	680	1366	1988	825	845	523	230	230	M10/M12
DC630 -21 -23	400	450	185	290	836	1147	630	680	1487	2109	825	845	523	230	230	M10
DC630 -24	400	450	185	290	906	1217	630	680	1627	2249	825	845	523	230	230	M10
DC630 -25 -27	400	450	185	290	906	1217	630	680	1627	2249	825	845	523	230	230	M10
DC710 (4+ 6 pole)	566	616	185	450	866	1222	805	855	1656	2158	900	1006	456	199	199	M10/M12
DC800 -41 -43	635	685	185	520	1215	2015	1056	1102	1965	3845	1036	850	850	750	1550	M10
DC800 -44 -46	635	685	185	520	1275	2075	1056	1102	2365	3965	1036	850	850	750	1550	M10
DC800 -47	635	685	185	520	1375	2175	1056	1102	2500	4065	1036	850	850	750	1550	M10
DC1000 -43 -46	706	756	185	590	1645	2645	1296	1342	3105	5105	1218	922	1040	1060	2060	M10/M12
DC1000 -41 -42	706	756	185	590	1545	2545	1296	1342	2905	4905	1218	922	1040	1060	2060	M10/M12
DC1250 -61 -62	750	750	550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



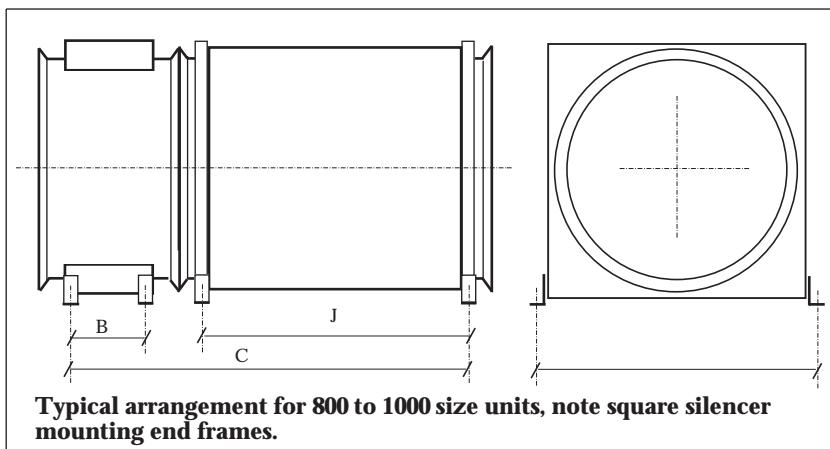
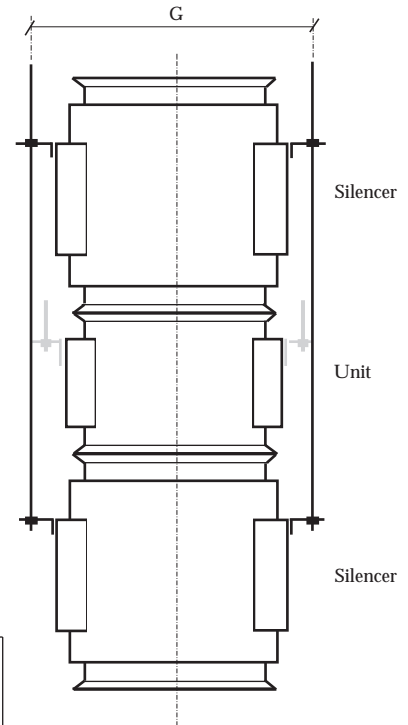
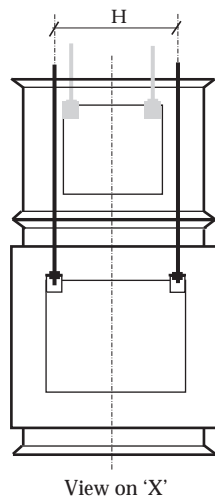
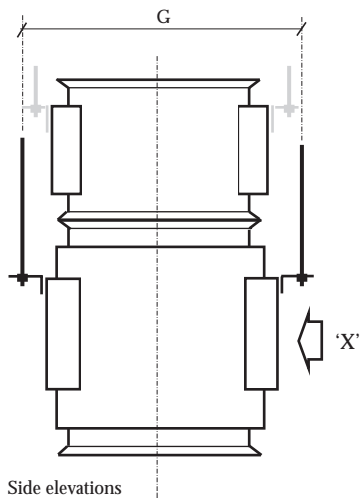
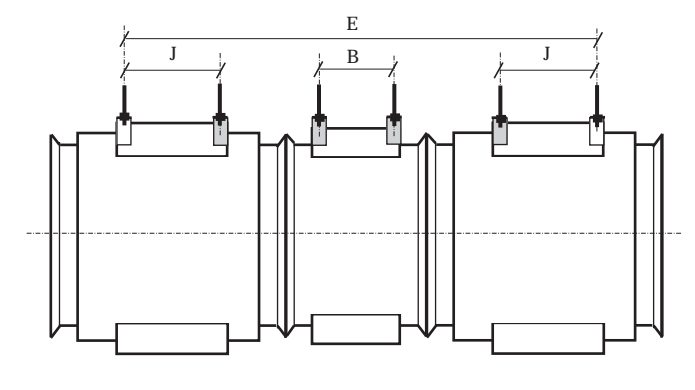
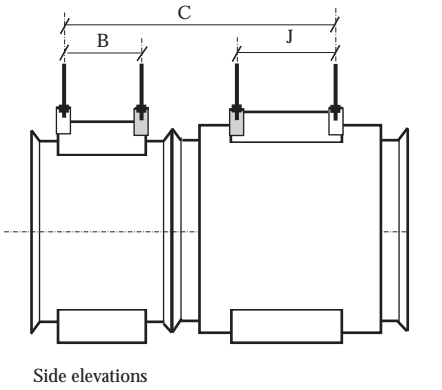
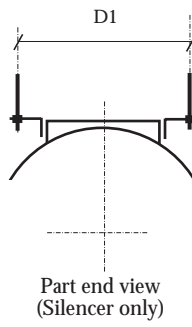
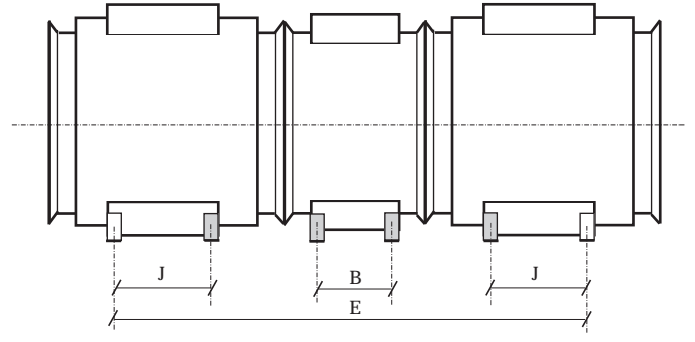
### Unit + one silencer



**NOTE:**  
Outer mountings only required on units up to 630. Additional mounts for heavier units shown shaded. Call NuAire for full details.



### Unit + two silencers



**NOTE:**  
4 Drop rods only required on units up to 630. Additional rod positions are shown shaded.

Call NuAire for full details on mounting heavier units.

## Wiring Details

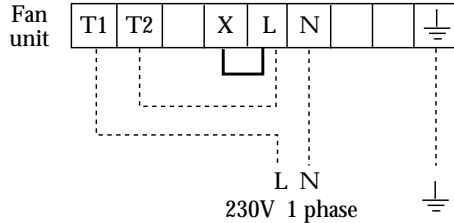
**REVERSE IMPELLER OPERATION  
NOT RECOMMENDED**

**REFER TO NUAIRE  
FOR  
2 SPEED AND  
FLAMEPROOF WIRING DETAILS**

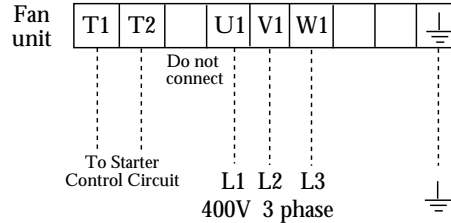
## MICROSAVE Controls

For Microsave wiring information please refer to :  
Microsave Starter controls Leaflet No. 670579  
Microsave Speed controls Leaflet No. 670578

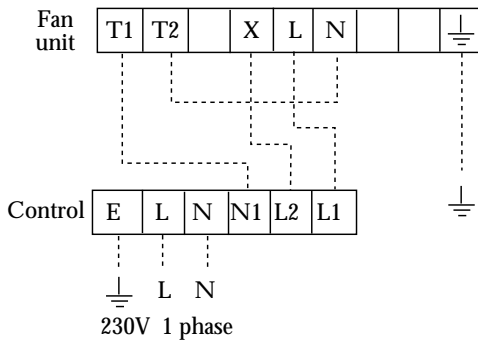
### Single Speed 1 phase



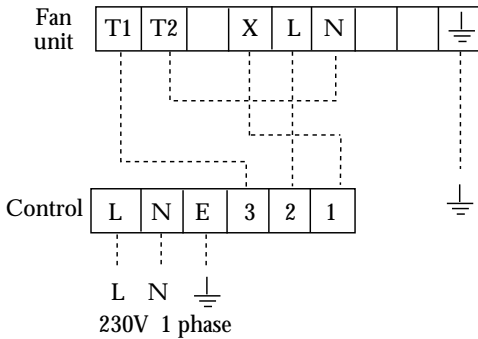
### Single Speed 3 phase



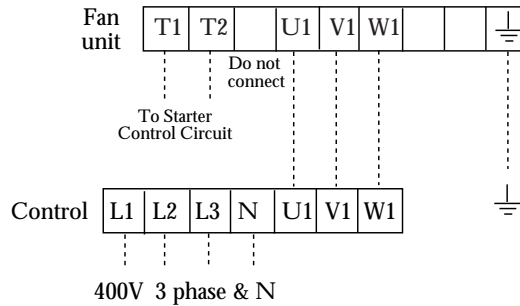
### Speed Control, ELECTRONIC 1 phase



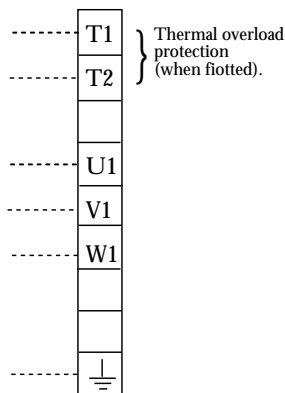
### Speed Control, TRANSFORMER 1 phase



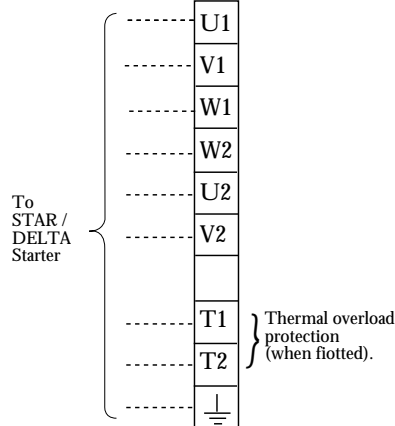
### Speed Control, TRANSFORMER 3 phase



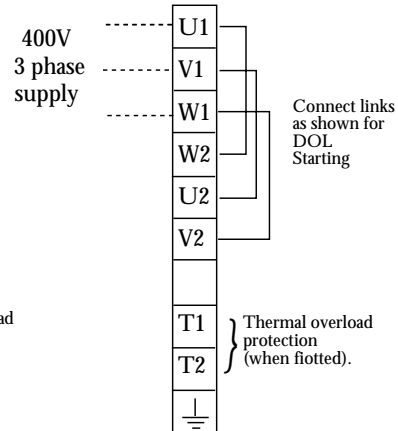
### 3 phase D.O.L. STARTING single speed up to and including 3 kW motors.



### 3 phase for STAR /DELTA STARTING



### 3 phase for DIRECT ON LINE STARTING (4kW & above)



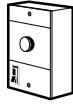
**Note:**  
For information only. For installation details see relevant  
Installation & Maintenance instructions.

**REFER TO NUAIRE  
FOR  
2 SPEED AND  
FLAMEPROOF WIRING DETAILS**

### **MICROSAVE Controls**

**For Microsave wiring information please refer to :  
Microsave Starter controls Leaflet No. 670579  
Microsave Speed controls Leaflet No. 670578**

#### **Controls (contact NuAire for selection)**



#### **Electronic Speed Controls**

Infinitely Variable Speed.  
Tested for EMC.  
IP40.



#### **Starters**

For D.O.L Starting  
only. IP40.



#### **Microsave Controls**

SELV. Safe Extra Low Voltage  
Starters and Speed Controls.  
Tested for EMC.



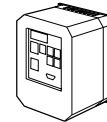
#### **Transformer Speed Controls**

Either 5 or 3 speed.  
Preferred for applications  
which are noise sensitive.  
Tested for EMC. IP40.



#### **Isolators**

Local isolator, see  
electrical regulations.  
IP65.



#### **Frequency Inverter Speed Control**

Inverter Speed Control.  
Matched to NuAire fans  
for internal use only. IP21.  
Code: **SC1NV**

#### **Speed Controls, Starters & Isolators Dimensions (mm)**

Unit type or code	Electronic speed controls			Transformer speed controls									Isolators	Starters	MicroSave controls
	ESC1 - 3A		ESC1 - 6A	SP CON 4	SP CON 5	SP CON 6	SP CON 7	3SP CON 1	3SP CON 1A	3SP CON 2	3SP CON 4	3SP CON 7	ISOL (all units)	STAR (all units)	Interface control panel for starters & Speed controls (all units).
Depth	47		47	75	105	105	110	110	110	110	135	135	90	47	37
Height	148		148	140	185	185	255	253	253	253	309	309	135	148	87
Width	88		88	315	315	315	190	188	188	188	262	262	95	88	147

# NUAIRE

## CE DECLARATION OF CONFORMITY

NuAire Limited,  
Western Industrial Estate,  
Caerphilly, Mid Glamorgan,  
CF83 1XH. United Kingdom.  
Telephone: 01222 885911  
Fax: 01222 887033  
Email: info @ nuaire.co.uk

Leaflet

OCTOBER 1998



*We declare that the machine named below conforms to the requirements of EC Council Directives relating to Electromagnetic Compatibility and Safety of Electrical Equipment.*

---

<b>Designation of machinery :-</b>	DUCTMASTER AXIAL FLOW FAN
<b>Machinery Types :-</b>	DC
<b>Relevant EC Council Directives :-</b>	89/336/EEC, 92/31/EEC (EMC) 73/23/EEC, 93/68/EEC (Low Voltage Directive)
<b>Applied Harmonised Standards :-</b>	E50081-1, EN50082-1, EN60204-1 EN60335-2-80
<b>Basis of Self Attestation :-</b>	Quality Assurance to BS EN ISO 9001 BSI Registered Firm Certificate No. FM 149

---

**Signature of manufacture representatives :-**

	<b>Name:</b>	<b>Position:</b>	<b>Date:</b>
1)	 C. Biggs	Technical Director	2. 4. 98
2)	 Michael J. Fussell	Manufacturing Director	2. 4. 98

## **DECLARATION OF INCORPORATION & INFORMATION FOR SAFE INSTALLATION, OPERATION & MAINTENANCE**

OCTOBER 1998

*We declare that the machinery named below is intended to be assembled with other components to constitute a system of machinery.*

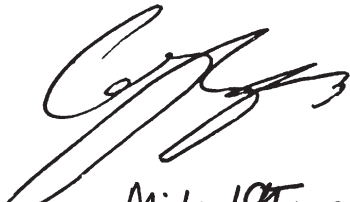

*The machinery shall not be put into service until the system has been declared to be in conformity with the provisions of the EC Council Machinery Directive.*

---

<b>Designation of machinery :-</b>	DUCTMASTER AXIAL FLOW FAN
<b>Machinery Types :-</b>	DC
<b>Relevant EC Council Directives :-</b>	89/392/EEC (Machinery Directive) 93/44/EEC (Amendment to the Machinery Directive)
<b>Applied Harmonised Standards :-</b>	EN292-1, EN292-2, EN294, EN29001
<b>Applied National Standards :-</b>	BS848 Parts One, Two and Five

---

### **Signature of manufacture representatives :-**

	<b>Name:</b>	<b>Position:</b>	<b>Date:</b>
1)	 C. Biggs	Technical Director	3.1.98
2)	 Michael J. Fussell	Manufacturing Director	3.1.98

# **INFORMATION FOR SAFE INSTALLATION, OPERATION AND MAINTENANCE OF NUAIRE VENTILATION EQUIPMENT**

**To comply with EC Council Directives 89/392/EEC Machinery Directive & 93/44/EEC Amendment to the Machinery Directive.**

*To be read in conjunction with the relevant Product Documentation (see 2.1)*

## **1.0 GENERAL**

- 1.1 The equipment referred to in this **Declaration of Incorporation** is supplied by NuAire to be assembled into a ventilation system which may or may not include additional components.  
The entire system must be considered for safety purposes and it is the responsibility of the installer to ensure that all of the equipment is installed in compliance with the manufacturers recommendations and with due regard to current legislation and codes of practice.

## **2.0 INFORMATION SUPPLIED WITH THE EQUIPMENT**

- 2.1 Each item of equipment is supplied with a set of documentation which provides the information required for the safe installation and maintenance of the equipment. This may be in the form of a Data sheet and/or Installation and Maintenance instruction.  
2.2 Each unit has a rating plate attached to its outer casing. The rating plate provides essential data relating to the equipment such as serial number, unit code and electrical data. Any further data that may be required will be found in the documentation. If any item is unclear or more information is required, please contact NuAire.  
2.3 Where warning labels or notices are attached to the unit the instructions given must be adhered to.

## **3.0 TRANSPORTATION, HANDLING AND STORAGE**

- 3.1 Care must be taken at all times to prevent damage to the equipment. Note in particular that shock to the unit may result in the balance of the impeller being affected.  
3.2 When handling the equipment, care should be taken with corners and edges and that the weight distribution within the unit is considered. Lifting gear such as slings or ropes must be arranged so as not to bear on the casing.  
3.3 Equipment stored on site prior to installation should be protected from the weather and steps taken to prevent ingress of contaminants.

## **4.0 OPERATIONAL LIMITS**

- 4.1 It is important that the specified operational limits for the equipment are adhered to *e.g. operational air temperature, air borne contaminants and unit orientation.*  
4.2 Where installation accessories are supplied with the specified equipment eg. wall mounting brackets. They are to be used to support the equipment only. Other system components must have separate provision for support.  
4.3 Flanges and connection spigots are provided for the purpose of joining to ductwork systems. They must not be used to support the ductwork.

## **5.0 INSTALLATION REQUIREMENTS**

- In addition to the particular requirements given for the individual product, the following general requirements should be noted.*  
5.1 Where access to any part of equipment which **moves**, or can become **electrically live** are not prevented by the equipment panels or by fixed installation detail (eg ducting), then guarding to the appropriate standard must be fitted.  
5.2 The electrical installation of the equipment must comply with the requirements of the relevant local electrical safety regulations.

## **6.0 COMMISSIONING REQUIREMENTS**

- 6.1 General pre-commissioning checks relevant to safe operation consist of the following -  
Ensure that no foreign bodies are present within the fan or casing  
Check electrical safety. *e.g. Insulation and earthing.*  
Check guarding of system.  
Check operation of Isolators/Controls.  
Check fastenings for security.  
6.2 Other commissioning requirements are given in the relevant product documentation.

## **7.0 OPERATIONAL REQUIREMENTS**

- 7.1 Equipment access panels must be in place at all times during operation of the unit, and must be secured with the original fastenings.  
7.2 If failure of the equipment occurs or is suspected then it should be taken out of service until a competent person can effect repair or examination. (Note that certain ranges of equipment are designed to detect and compensate for fan failure).

## **8.0 MAINTENANCE REQUIREMENTS**

- 8.1 Specific maintenance requirements are given in the relevant product documentation.  
8.2 It is important that the correct tools are used for the various tasks required.  
8.3 If the access panels are to be removed for any reason the electrical supply to the unit must be isolated.  
8.4 A minimum period of two minutes should be allowed after electrical disconnection before access panels are removed. This will allow the impeller to come to rest.  
*NB: Care should still be taken however since airflow generated at some other point in the system can cause the impeller to "windmill" even when power is not present.*  
8.5 Care should be taken when removing and storing access panels in windy conditions.



### Spares

In view of the fact that the product incorporates sealed for life bearings and utilises no consumables we would not recommend a stock holding of spares. In the unlikely event that a failure should occur contact our Regional Sales Teams and quote the fan rating label details.

### Service

As a manufacturer NuAire provides you with factory trained Service Engineers. Our Engineers are supported by a comprehensive range of spare parts 'off the shelf'. If you are an industrial or commercial user, you may be interested in details of NuAire's regular maintenance Service Contracts. This is a worthwhile service that helps you get the most from our products. Our Service Department will be happy to give you more information.

**01222 858254**

### Controls Application Service (CAS)

A team of Engineers and technicians is available to provide pre and post order support.

We are on hand to provide help and advice from the most basic use of any NuAire equipment to the more complex applications, maximising on the versatility of our SMART and NetLink control products.

**Telephone: 01222 858585**

**Facsimile: 01222 858586**

*Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.*

# NUAIRE

Western Industrial Estate, Caerphilly,  
Mid Glam CF8 1XH United Kingdom.  
Telephone: 01222 885911 Facsimile: 01222 887033,  
Telex: 497367 Nuair G

Leaflet No. 670631

### 3 YEAR WARRANTY

The three year warranty starts from the date of delivery and includes parts and labour for the first year.

The labour element is subject to full, free and safe access to the equipment as recommended by the CDM regulations.

The remaining two years covers replacement parts only.

#### NOTE:

**Installation & Maintenance of the equipment must be as directed in the instructions provided with the unit.**

### WARNING!

**1. DO NOT REVERSE IMPELLER DIRECTION FOR OPERATION AS THE PERFORMANCE OF THE UNIT IS DRASTICALLY REDUCED.**

**2. DO NOT ALTER THE BLADE ANGLE OF THE IMPELLER WITHOUT THE PERMISSION OF NUAIRE.**

**THE ABOVE MAY INVALIDATE YOUR WARRANTY**

NB

If you have any comments or queries on any of our products or services please write to the Marketing Services Manager at the main address opposite

GP30