

PLATEMASTER

AXIAL FLOW FANS

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, grub screws and endbolts etc. Remove any build up of dirt or dust with a brush.

NUAIRE

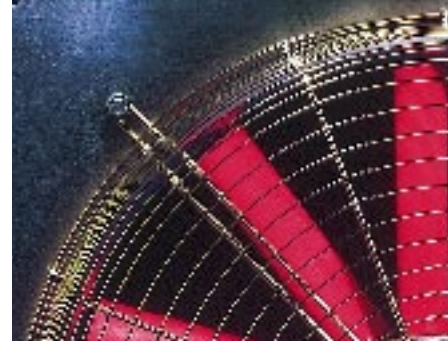
The NuAire Group, Western Industrial Estate, Caerphilly,
Mid-Glamorgan, United Kingdom. CF83 1XH
Tel: 01222 885911 Fax: 01222 887033

P - PLATEMASTER

This versatile range of plate axial fans is simple to install and particularly suited for wall applications. It utilises motors rated to class F and IP55 for operation up to 70°C, high performance and reliability

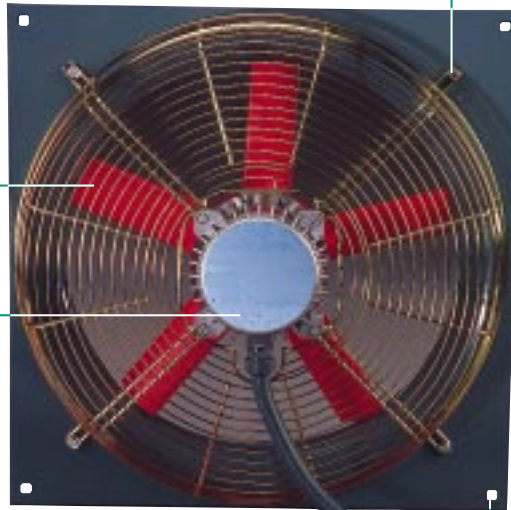
Available in diameters from 315 to 630mm, duties to 4.9 m³/s and 350Pa.

Robust, all hot dipped galvanised steel manufacture with the venturi spun directly into the plate ensures the strength and reliability you have come to expect from NuAire.



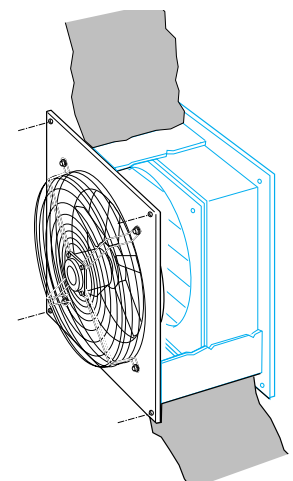
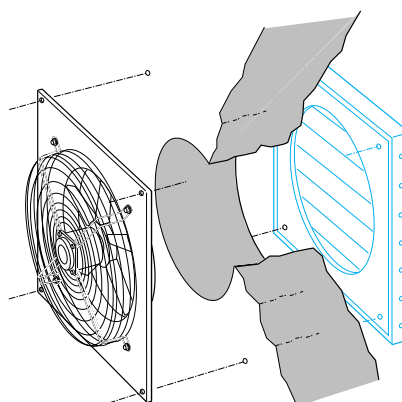
Integral motor side fan guard to BS848 Part 5, acid zinc plated for corrosion resistance and easy cleaning, provides absolutely safe operation.

The latest DuctMaster blade technology designed for high performance at very competitive prices.



Easy four bolt fixing, flying lead and terminal box and fixing kits make Platemaster easy to install anywhere.

Speed controllable and reversible motors, GRP or die cast aluminium impellers and operation in ambient temperatures up to 70°C to suit your applications.



*Platemaster Wall Fixing Kit
Ref: P *** WK*

P - PLATEMASTER

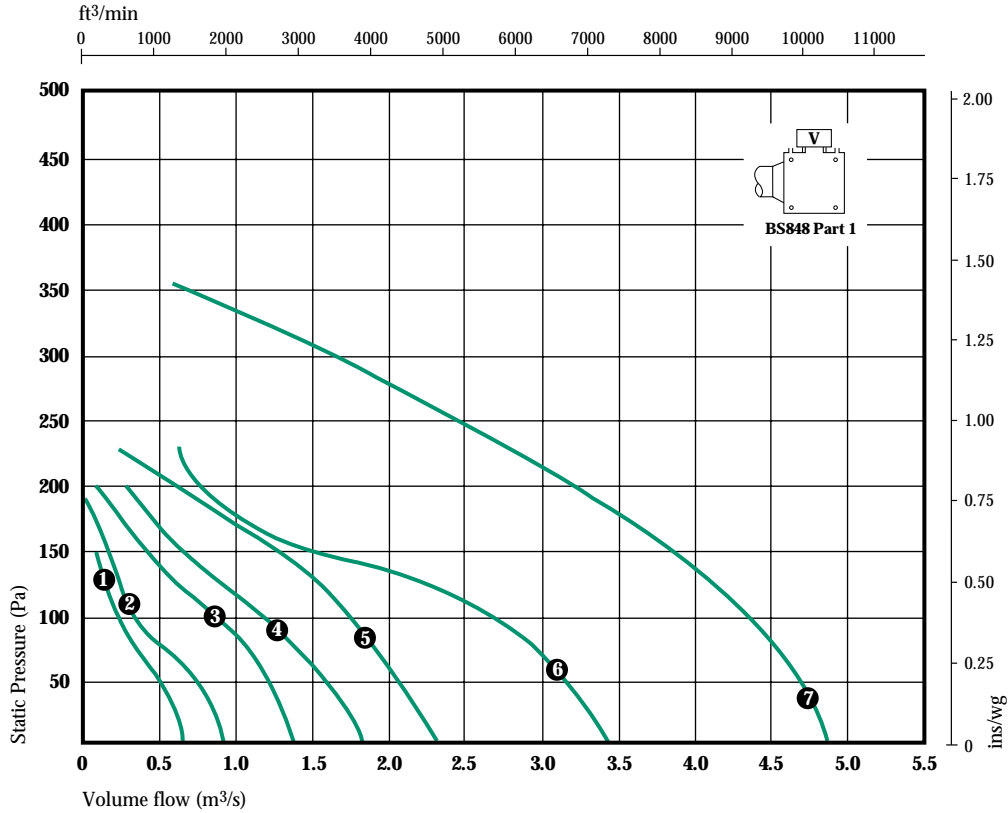
FAN CODING: P 450 - 11

Platemaster _____
Impeller Dia. in mm _____

Electrical Supply (Phases) _____
Performance Curve Number _____

P 315 - 630 Approx 1440 rpm (4 Pole)

PERFORMANCE



ELECTRICAL / NOISE

General

Curve Nos	Unit Code	Speed rpm
1	P315-11	1350
	P315-13	1350
2	P350-21	1350
	P350-23	1350
3	P400-31	1350
	P400-33	1350
4	P450-41	1350
	P450-43	1350
5	P500-51	1350
	P500-53	1350
6	P560-61	1350
	P560-63	1350
7	P630-73	1350

Electrical

1 Phase (230V)			3 Phase (400V)		
Power kw	flc (amps)	sc* (amps)	Power kw	flc (amps)	sc* (amps)
0.09	1.2	1.45	0.12	0.45	1.15
0.09	1.2	1.45	0.12	0.45	1.15
0.25	1.8	3.6	0.37	1.4	4.5
0.25	1.8	3.6	0.37	1.4	4.5
0.55	3.6	10.8	0.55	1.7	6.0
0.75	6.0	15.0	0.75	2.3	8.7
1.5	4.4	17.7	1.5	4.4	17.7

Noise Level

Open inlet sound power levels dB re 1pw						dB (See Below)	
Octave band mid frequency Hz							
63	125	250	500	1k	2k	4k	8k
62	62	66	61	61	62	62	54
61	67	69	63	64	64	63	55
69	73	76	74	72	72	69	63
69	74	77	76	74	72	70	62
69	79	80	77	75	74	73	67
77	78	83	80	78	78	77	72
78	80	87	86	86	82	80	76

KIT RESISTANCE TO AIRFLOW

Kit Code	Resistance Pa @ m³/s				
	0.25	0.50	1.0	2.0	3.0
P315WK	12	70	N/A	N/A	N/A
P350WK	0	40	N/A	N/A	N/A
P400WK	0	25	95	N/A	N/A
P450WK	0	10	65	N/A	N/A
P500WK	0	0	47	N/A	N/A
P560WK	0	0	30	125	N/A
P630WK	0	0	27	100	N/A

NOTE : NOISE LEVELS

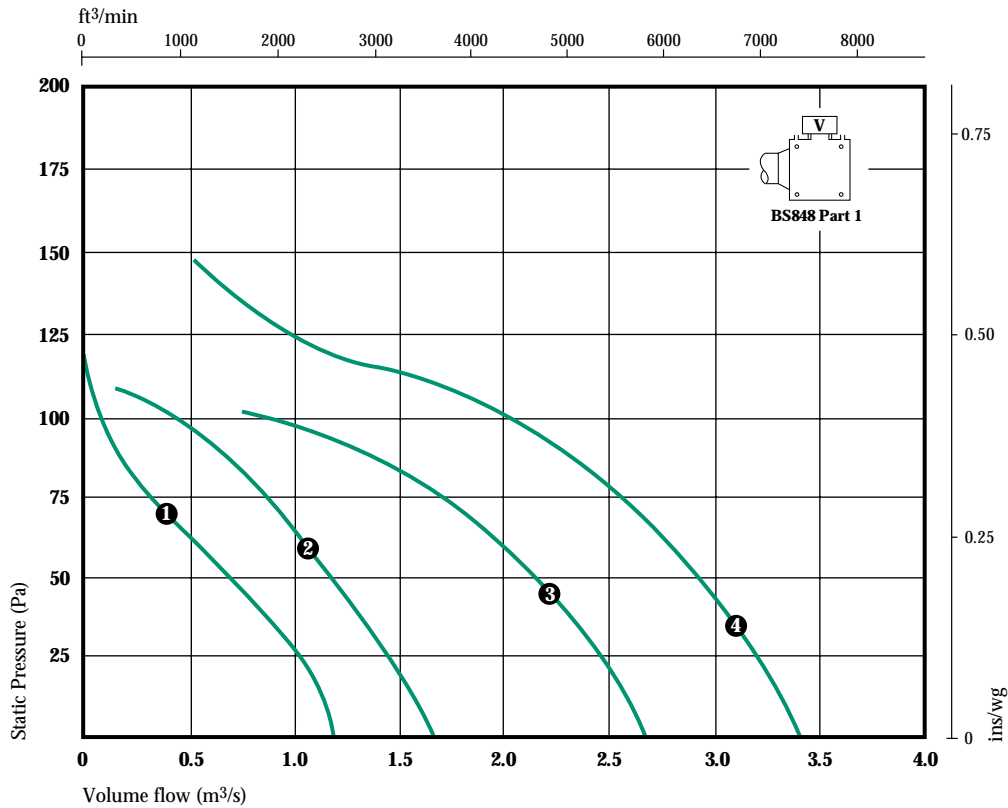
dB : Noise measured at approx 25% of maximum working pressure (Pa).

*NOTE: Starting currents are nominal and for D.O.L. Starting.

AXIAL FAN RANGE

P 450 - 630 Approx 960 rpm (6 Pole)

PERFORMANCE



ELECTRICAL / NOISE

General

Curve Nos	Unit Code	Speed rpm
1	P450-11	850
	P450-13	850

2	P500-21	850
	P500-23	850

3	P560-31	850
	P560-33	850

4	P630-41	850
	P630-43	850

Electrical

Power kw	flc (amps)	sc* (amps)
1 Phase (230V)		
3 Phase (400V)		

0.12	1.0	2.0
0.18	0.67	1.5

0.18	1.55	3.5
0.25	0.95	2.4

0.25	2.1	5.0
0.25	0.95	2.4

0.55	5.4	14.8
0.55	2.1	5.8

Noise Level

Open inlet sound power levels dB re 1 μ w

dB
(See Below)

Octave band mid frequency Hz							
63	125	250	500	1k	2k	4k	8k
67	64	67	66	64	64	60	52
69	70	70	69	67	66	63	57
70	72	73	72	69	69	67	62
72	73	77	76	73	72	70	66

KIT RESISTANCE TO AIRFLOW

Kit Code	Resistance Pa @ m³/s				
	0.25	0.50	1.0	2.0	3.0
P450WK	0	10	65	N/A	N/A
P500WK	0	0	47	N/A	N/A
P560WK	0	0	30	125	N/A
P630WK	0	0	27	100	N/A

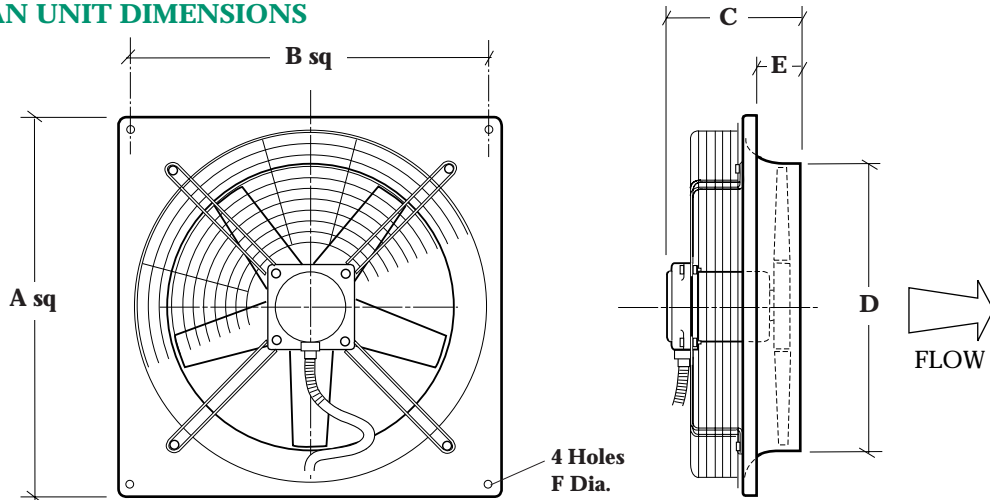
NOTE : NOISE LEVELS

dB : Noise measured at approx 25% of maximum working pressure (Pa).

*NOTE: Starting currents are nominal and for D.O.L. Starting.

Fan Unit Details

FAN UNIT DIMENSIONS



Dimensions (mm)

Unit Code	A	B	C	D	E	F Dia.	Unit Weight (kg)
P315	430	380	170	321	50	9	10
P350	485	435	165	356	45	9	11
P400	540	490	175	407	33	9	16
P450	575	535	175	457	53	11	17
P500	655	615	235	507	45	11	22
P560	725	670	235	568	45	11	25
P630	805	750	235	638	40	11	29

FAN SPECIFICATIONS

Casing

Fan plate/casing and integral venturi pressed and spun from a single sheet of heavy gauge galvanised steel resulting in smooth contours for excellent aerodynamics and strength. Non rusting fixings are used throughout.

Impeller

Blades are of a special aerofoil section to offer excellent performance and low noise characteristics. The hub is manufactured from pressure die cast aluminium alloy fitted with injection moulded chemically coupled glass reinforced polypropylene blades for high resistance to impurities. All impellers are assembled using plated set screws and self locking nuts.

(Aluminium alloy impeller blades optional).

Motor

Totally enclosed motor protected to IP55. Motors comply with relevant portions of BS5000. Standard motors have class F insulation, sealed for life bearings and 'Heatseeker' thermal overload protection. Drain holes can be provided for motors subjected to relative humidity in excess of 95%.

Wiring

Motors are pre-wired to an external terminal box through a 600mm long flexible conduit.

Application

All units are suitable for internal use only, external use models are available to special order.

Motor Side Fan Guard

Manufactured in acid zinc plated steel to guarding standard BS848 part 5 and above.

Operating temperatures

Are restricted to the maximum of the motor which is 70°C ambient. (630 units 55°C ambient)

Finish

Standard finish of the unit is natural galvanised steel. Special colour finishes are available, please specify BS or RAL ref required.

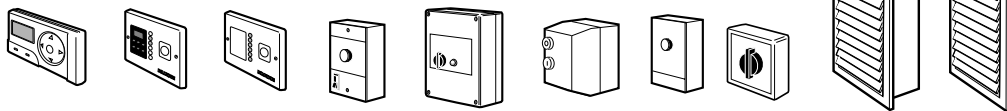
Impeller Reversal

Air flow can be reversed. The fan performance will be reduced by a maximum of 60% and cannot be guaranteed.

Warranty

3 Years, from delivery, when installed and maintained in accordance with installation and maintenance instructions.

INSTALLATION ANCILLARIES (see following pages for details)



Fan Controls

Netlink Control

Microsave Starter

Microsave Speed Control

Electronic Speed Control

Transformer Speed Control

Starter D.O.L.

Reversing Switch

Isolator

Installation Ancillaries

Wall Installation Kit

Shutter Only

(See pages 92 & 93)

MSTAR

MSCON

SCELEC

SPCON

STAR

PRS

ISOL

P***WK

P***BS

Ancillaries Details

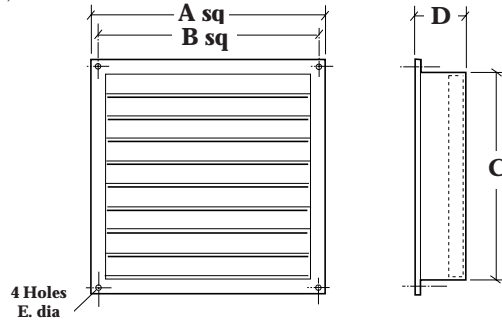
Wall Fixing Kit

Supplied assembled, the kit consists of three main parts; an external weather louvre c/w bird screen, a gravity operated backdraught shutter and a wall sleeve. The louvre is high grade aluminium alloy, natural finish (BS or RAL colours available). The shutter is manufactured from polypropylene, stabilised against ultra-violet light, finished in grey.

The wall sleeve combines the components ready for installation into a wall opening (*prepared by others*). The Kit is suitable for vertical mounting only. (see pages 82 and 83 for resistance to airflow)

Wall Kit Dimensions (mm)

Unit Code	A	B	C	D	E.dia
P315WK	390	375	360	200	9
P350WK	440	425	410	200	9
P400WK	500	485	470	200	9
P450WK	545	530	515	200	11
P500WK	590	575	560	225	11
P560WK	650	635	620	225	11
P630WK	730	715	700	225	11



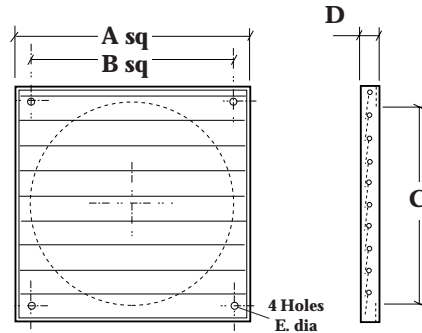
Gravity Backdraft Shutter

The unit offers negligible resistance and is manufactured from impact resistant polypropylene, stabilised against ultra-violet light, finished in grey. Fixing to the wall is by four screws.

Louvres are contained inside the raised edge of the casing, reducing flapping to a minimum. A circular hole is cut in the rear of the frame.

Shutter Dimensions (mm)

Unit Code	A	B	C	D	E.dia
P315BS	347	276	310	26	9
P350BS	397	310	360	26	9
P400BS	459	364	420	26	9
P450BS	501	395	460	26	11
P500BS	549	445	510	31	11
P560BS	604	522	565	31	11
P630BS	697	628	657	31	11



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



S.E.L.V. Safe Extra Low Voltage Starters and Speed Controls. Tested for EMC.

Transformer Speed Controls



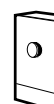
Either 5 or 3 speed. Preferred for applications which are noise sensitive. Tested for EMC. IP40.

Isolators



Local isolator, see electrical regulations. IP65.

Reversing Switch (Platemaster Only)



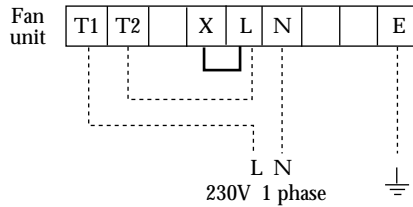
An approved switch for impeller reversal. IP65.

Code: PRS

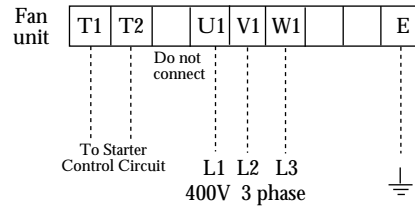
	Electronic Speed Controls: SCELEC							Transformer Speed Controls: SPCON							Starters, Isolators: STAR, ISOL	Microsave			
	SCELEC0/1	SCELEC1/1	SCELEC2/1	SCELEC3/1	3SCELEC1/2	3SCELEC2/2	3SCELEC3/2	SPCON4	SPCON5	SPCON6	SPCON7	3SPCON1	3SPCONA	3SPCON2	3SPCON4	3SPCON7	STAR (All Units)	ISOL (All Units)	Microsave Interface Control Panel for starters & Speed Controls (All Units)
Depth	47	47	47	107	90	162	162	75	105	105	110	110	110	110	135	135	47	90	37
Height	148	148	148	220	223	232	232	140	185	185	255	253	253	253	309	309	148	135	87
Width	88	88	88	168	212	212	212	315	315	315	190	188	188	188	262	262	88	95	147

P - Platemaster Plate Axial

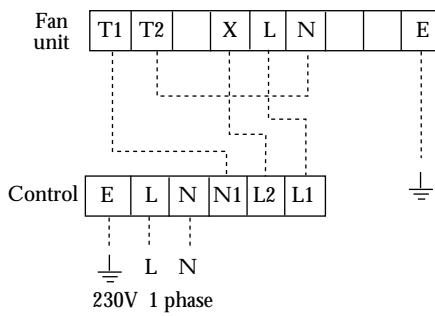
Single Speed 1 phase



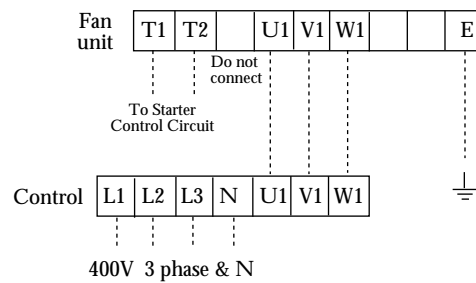
Single Speed 3 phase



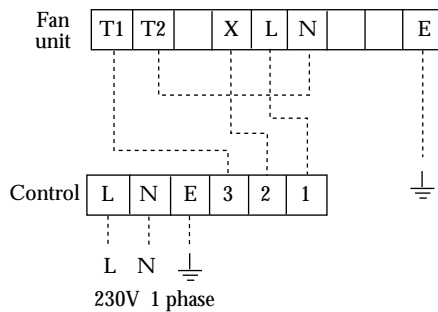
Speed Control, ELECTRONIC 1 phase



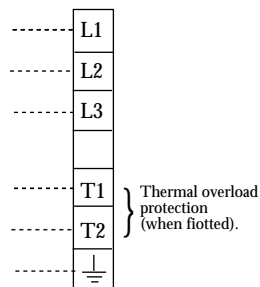
Speed Control, TRANSFORMER 3 phase



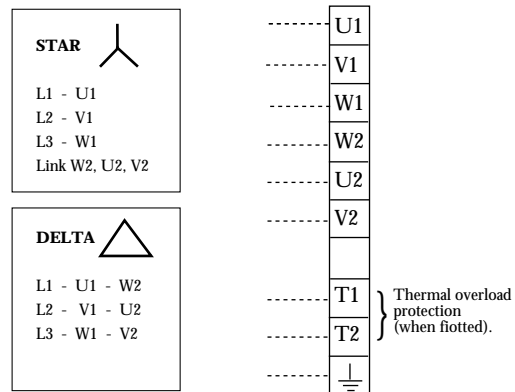
Speed Control, TRANSFORMER 1 phase



3 phase D.O.L. STARTING single speed up to and including 5.5kW motors.



3 phase for STAR /DELTA STARTING



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