

6. Extract Ventilation & Odour Control Equipment details

Main Kitchen Extract Fan will be Flakt Woods Estoc Targe (powerBox 67-400-1)

Data sheet enclosed, however system pressure estimated at 340pa, and will be re-calculated once final installation drawing completed.

Sound attenuators will as manufactured by Northern Fans Ltd, and will be the equivalent to 2 x Diameter, (no internal pod) and indicated in the red box on enclosed data sheets.

ESP3000 modules (2 off) in a 'double pass' configuration, will be manufactured by Purified Air Ltd,

Data sheet enclosed

Carbon Filter Module will be manufactured by Purified Air Ltd, and each 600mm x 600mm x 600mm cube will comprise 3 x 200 x 600 x 600 site safe carbons

2 x carbon cubes in total

Data sheet enclosed

Pizza Oven Extract Fan will be Flakt Woods Estoc Targe (powerBox 50-355-1)

Data sheet enclosed, however system pressure estimated at 340pa, and will be re-calculated once final installation drawing completed.

Sound attenuators will as manufactured by Northern Fans Ltd, and will be the equivalent to 2 x Diameter, (no internal pod) and indicated in the red box on enclosed data sheets.



Northern Fan Supplies Ltd

Technical Data Sheet
Estoc Targe - Powerbox GF



Quotation Number : **C661**
Project Name :
Item Reference : **MAIN KITCHEN EXT FAN**

Project Code : BA-21622-2
Customer :
Date : Thursday, October 14, 2021

Fan Code : Estoc Targe (PowerBox) 67-400-1
Fan Diameter / Size : 400
Velocity : 4.0 m/s
Form of Running : B (Horizontal)

Requested Duty (212.4V) : 0.5m³/s @ 340 Pa (static)
Control Adjustment : 212.4V
Outlet Dynamic Pressure : 10 Pa

Duty Shaft Power : 0.477 kW
Max Shaft Power : 0.530 kW

Motor Frame : Integral [Class F]
Motor Rating : 0.530 kW
Full Load Current : 2.24 A
Starting Current : 4.84 A
Electrical Supply : 220-240 Volts 50 Hz 1 Phase
Start Type : Enquire
Motor Winding : Standard

ErP [FMEG] Rating : Not in Scope

SFP value : 0.95 W/(l/s) @ Requested Duty
Power from mains : 0.48 kW
Energy Consumption : 1432 kWh (3000 h/year)
Running Cost / Year : £129

Air Density : 1.2 kg/m³ / 20 °C / 0 m / 50% RH
Smoke Venting : Non Smoke Venting
Product Number : GF674001

Acoustic figures for adjusted running speeds have been interpolated and are for reference only.

This Offer is made subject to the latest version of our A100-19 Terms and Conditions, a copy of which can be made available on request.

	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	-	72	66	64	66	66	60	51	75	50
Outlet*	-	76	69	66	69	67	64	53	78	53
Breakout*	-	70	59	52	50	47	44	38	70	37
* Lw dB re 10 ⁻¹² W									** dBA re 2x10 ⁻⁵ Pa	
Sound data at requested duty.										

Description	Qty
Fan GF674001 - Estoc Targe (PowerBox) 67-400-1 Accessories	1
Optional Controllers & Sensors	Optional Accessories

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Email: kylejr@nfan.co.uk

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Northern Fan Supplies Ltd
Combination Data Sheet
Estoc Targe - Powerbox GF



Quotation Number : Project Code : BA-21622-2
Project Name : Customer :
Item Reference : Date: Thursday, October 14, 2021

Fan Code Estoc Targe (PowerBox) 67-400-1
Fan Diameter / Size 400
Velocity 4.0 m/s
Form of Running B (Horizontal)

Requested Duty (212.4V) 0.5m³/s @ 340 Pa (static)
Control Adjustment 212.4V
Outlet Dynamic Pressure 10 Pa

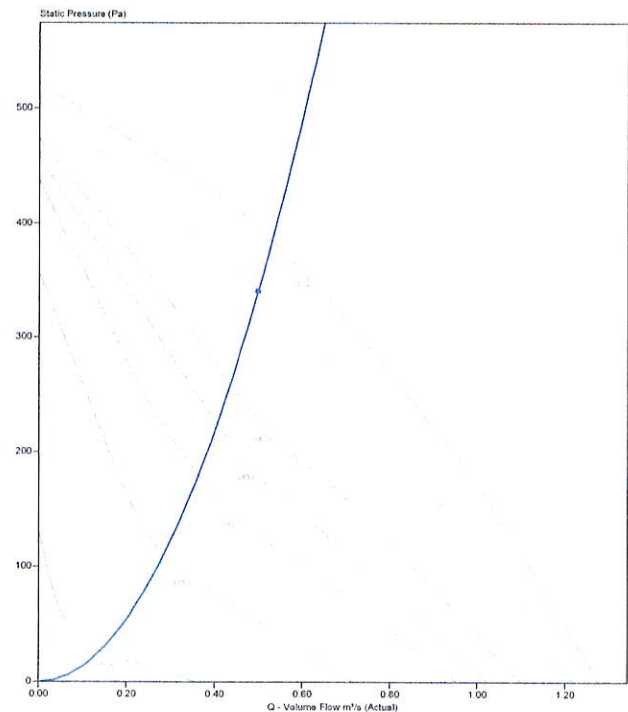
Duty Shaft Power 0.477 kW
Max Shaft Power 0.530 kW

Motor Frame Integral [Class F]
Motor Rating 0.530 kW
Full Load Current 2.24 A
Starting Current 4.84 A
Electrical Supply 220-240 Volts 50 Hz 1 Phase
Start Type Enquire
Motor Winding Standard

ErP [FMEG] Rating Not in Scope

SFP value 0.95 W/(l/s) @ Requested Duty
Power from mains 0.48 kW
Energy Consumption 1432 kWh (3000 h/year)
Running Cost / Year £129

Air Density 1.2 kg/m³ / 20 °C / 0 m / 50% RH
Smoke Venting Non Smoke Venting
Product Number GF674001



	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	-	72	66	64	66	66	60	51	75	50
Outlet*	-	76	69	66	69	67	64	53	78	53
Breakout*	-	70	59	52	50	47	44	38	70	37

* Lw dB re 10⁻¹² W ** dBA re 2x10⁻⁵ Pa
Sound data at requested duty.

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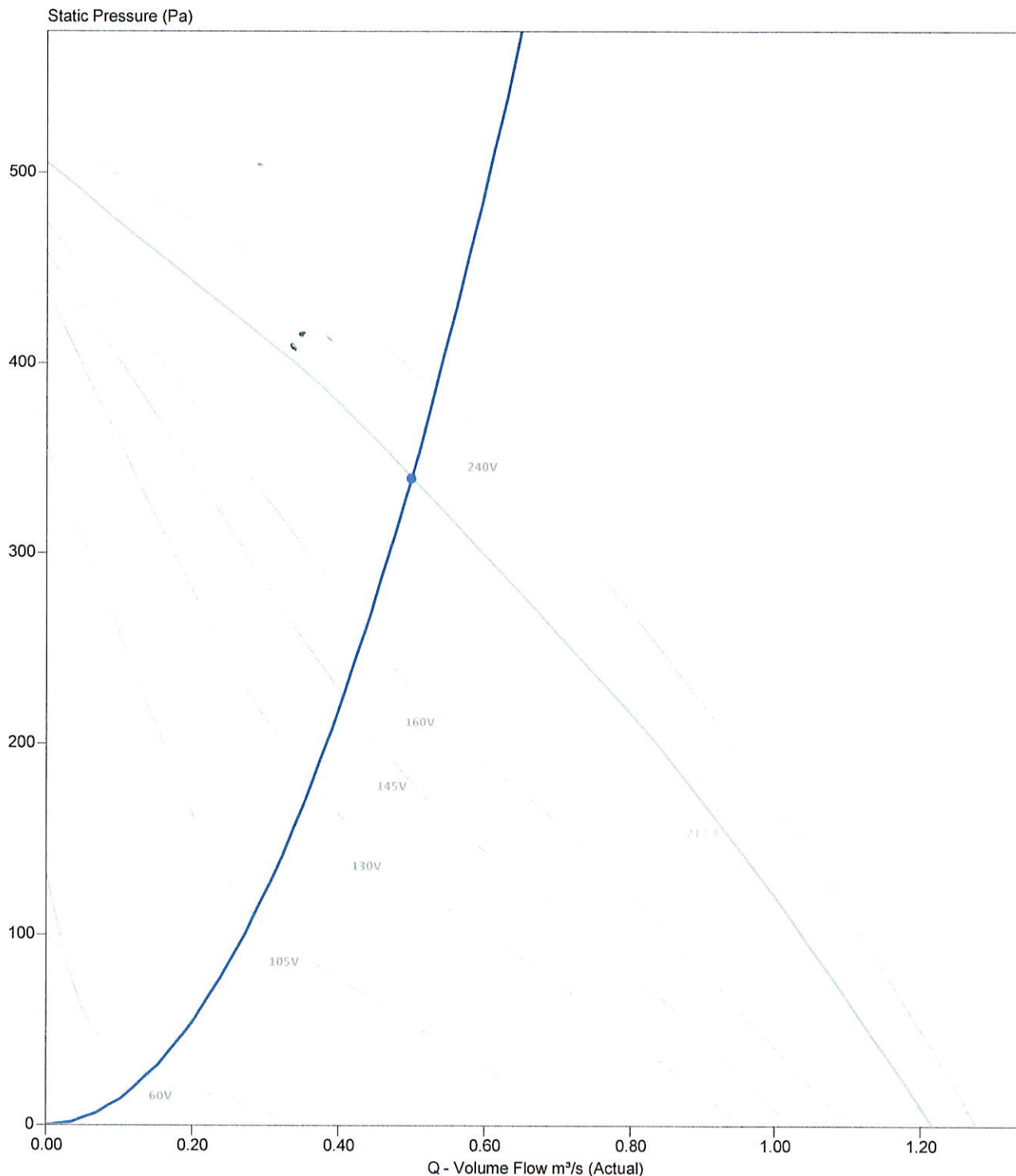
Description		Qty
Fan GF674001 - Estoc Targe (PowerBox) 67-400-1		1
Accessories		
Optional Controllers & Sensors	Optional Accessories	



Northern Fan Supplies Ltd
Performance Chart
Estoc Targe - Powerbox GF



Quotation Number	:	Project Code	:	BA-21622-2
Project Name	:	Customer	:	
Item Reference:	:	Date:	:	Thursday, October 14, 2021
		Fan Code	:	Estoc Targe (PowerBox) 67-400-1



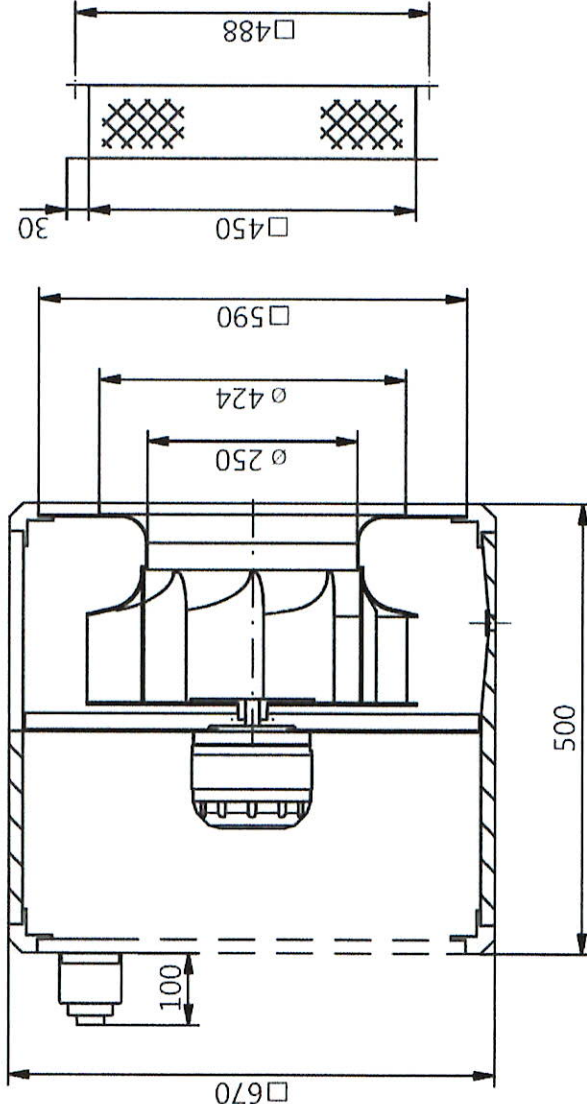
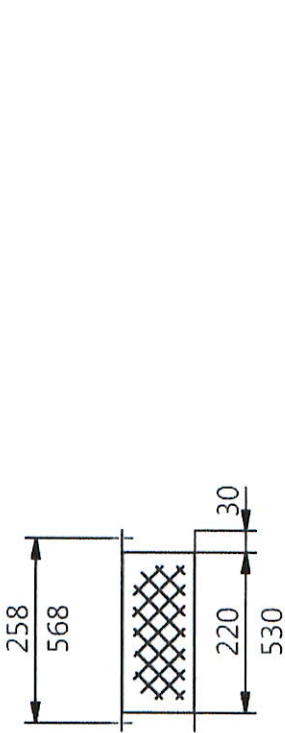


Northern Fan Supplies Ltd
Drawing and Dimensions
Estoc Targe - Powerbox GF

FläktWoods

Quotation Number	:	Estoc Targe (PowerBox) 67-400-1
Project Name	:	Customer
Item Reference:	:	Date: Thursday, October 14, 2021

Max Weight (kg) 55



Notes : Dim in mm / Weight in kg / * Outlet dim

This drawing shows dimensions that should be used as a guide only and are subject to change. Certified drawings are available on request.

Reference :Catalogue drawing

Unit E1 Longford Trading Estate Thomas Street, Stretford, M320JT Tel: 01618641777 Fax: 01618642777	Website: http://www.nfan.co.uk/ Email: kylejr@nfan.co.uk Copyright Fläkt Group 2003 - 2020 Selection Engine: 3.1.3.49p
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Northern Fan Supplies Ltd

Technical Data Sheet
Estoc Targe - Powerbox GF



Quotation Number : **C661**
Project Name :
Item Reference : **P122A OVEN EXT. FAN**

Project Code : BA-21622-1
Customer :
Date : Thursday, October 14, 2021

Fan Code : Estoc Targe (PowerBox) 50-355-1
Fan Diameter / Size : 355
Velocity : 1.6 m/s
Form of Running : B (Horizontal)

Requested Duty (199.9V) : 0.16m³/s @ 340 Pa (static)
Control Adjustment : 199.9V
Outlet Dynamic Pressure : 2 Pa

Duty Shaft Power : 0.216 kW
Max Shaft Power : 0.310 kW

Motor Frame : Integral [Class F]
Motor Rating : 0.310 kW
Full Load Current : 1.64 A
Starting Current : 3.5 A
Electrical Supply : 220-240 Volts 50 Hz 1 Phase
Start Type : Enquire
Motor Winding : Standard

ErP [FMEG] Rating : Not in Scope

SFP value : 1.35 W/(l/s) @ Requested Duty
Power from mains : 0.22 kW
Energy Consumption : 649 kWh (3000 h/year)
Running Cost / Year : £58

Air Density : 1.2 kg/m³ / 20 °C / 0 m / 50% RH
Smoke Venting : Non Smoke Venting
Product Number : GF503551

Acoustic figures for adjusted running speeds have been interpolated and are for reference only.

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	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	-	69	67	64	59	59	54	47	72	46
Outlet*	-	69	69	65	63	61	53	48	73	48
Breakout*	-	62	58	50	44	40	37	37	63	33

* Lw dB re 10⁻¹² W
Sound data at requested duty.

** dBA re 2x10⁻⁵ Pa

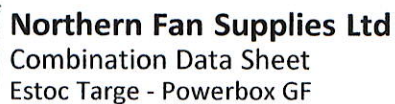
Description	Qty
Fan GF503551 - Estoc Targe (PowerBox) 50-355-1 Accessories	1
Optional Controllers & Sensors	Optional Accessories

Unit E1 Longford Trading Estate
Thomas Street, Stretford, M320JT
Tel: 01618641777 Fax: 01618642777

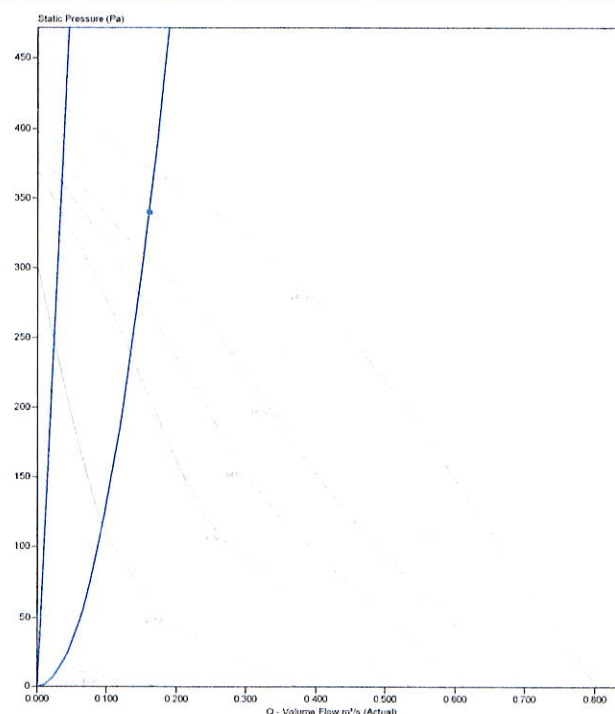
Website: <http://www.nfan.co.uk/>

Email: kylejr@nfan.co.uk

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Air Density	1.2 kg/m ³ / 20 °C / 0 m / 50% RH
Smoke Venting	Non Smoke Venting
Product Number	GF503551



	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	-	69	67	64	59	59	54	47	72	46
Outlet*	-	69	69	65	63	61	53	48	73	48
Breakout*	-	62	58	50	44	40	37	37	63	33

* Lw dB re 10⁻¹² W
 ** dBA re 2x10⁻⁵ Pa

Sound data at requested duty.

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Description		Qty
Fan GF503551 - Estoc Targe (PowerBox) 50-355-1		1
Accessories		
Optional Controllers & Sensors	Optional Accessories	

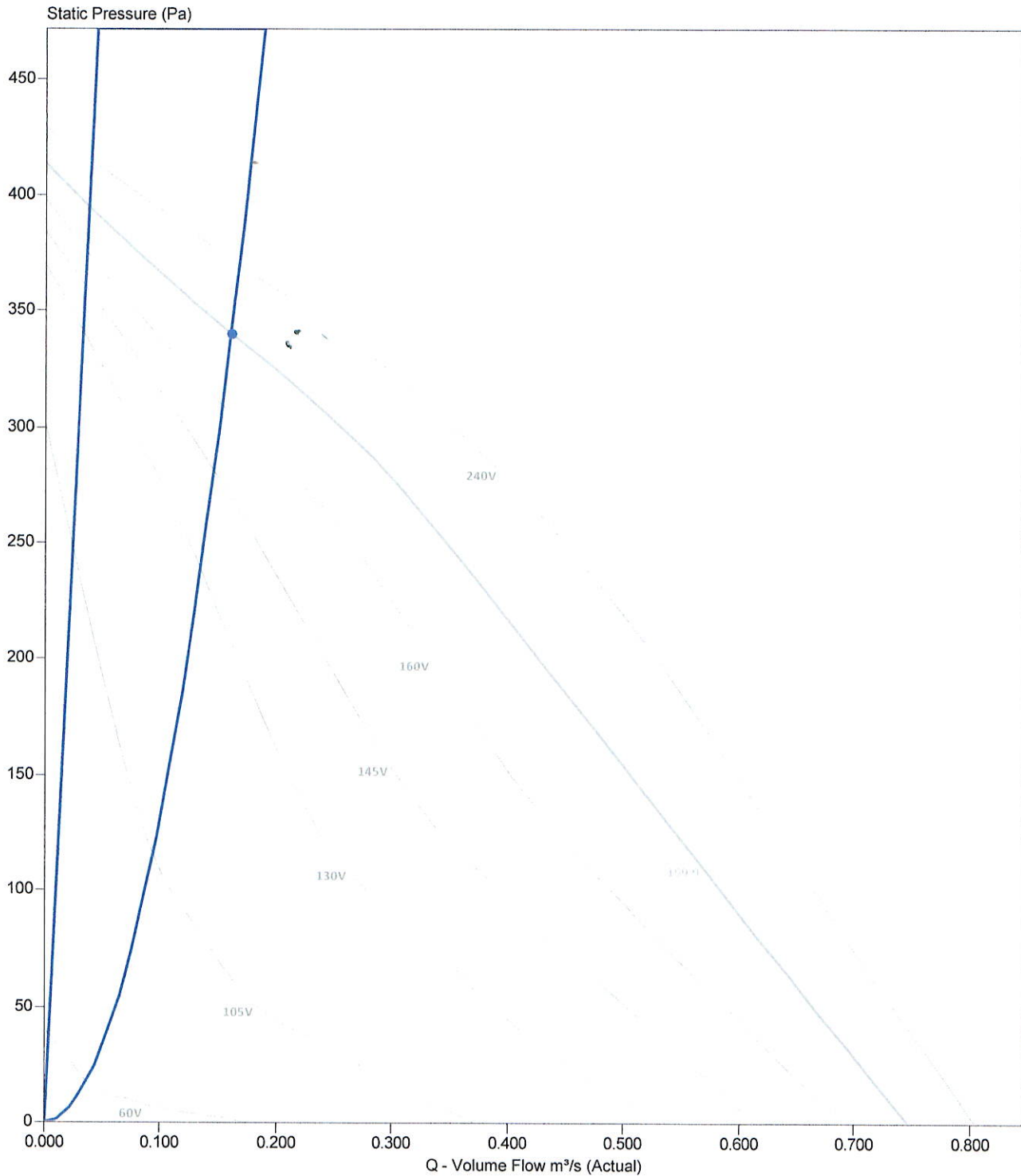


Northern Fan Supplies Ltd

Performance Chart
Estoc Targe - Powerbox GF



Quotation Number	:	Project Code	:	BA-21622-1
Project Name	:	Customer	:	
Item Reference:	:	Date:	:	Thursday, October 14, 2021
		Fan Code	:	Estoc Targe (PowerBox) 50-355-1



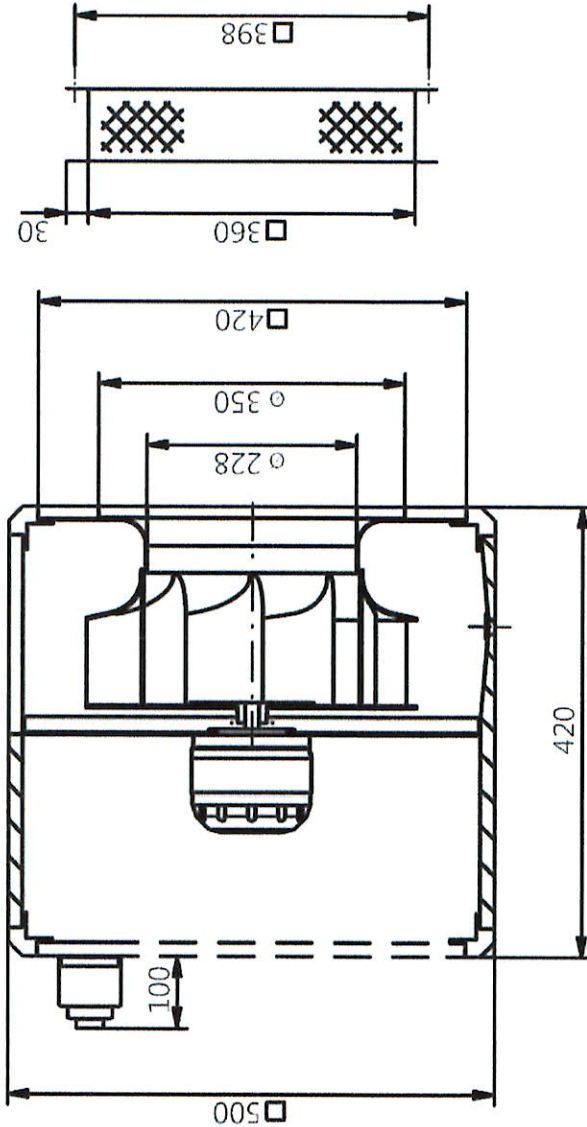
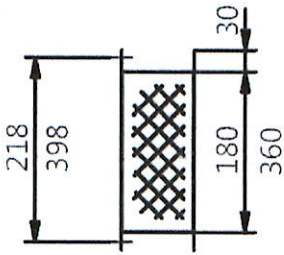


Northern Fan Supplies Ltd
Drawing and Dimensions
Estoc Targe - Powerbox GF

FläktWoods

Quotation Number	:	Estoc Targe (PowerBox) 50-355-1
Project Name	:	
Item Reference:	:	Thursday, October 14, 2021

Max Weight (kg) 36



Notes : Dim in mm / Weight in kg / * Outlet dim

This drawing shows dimensions that should be used as a guide only and are subject to change. Certified drawings are available on request.

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Selection Engine: 3.1.3.49p

Our ESP Range

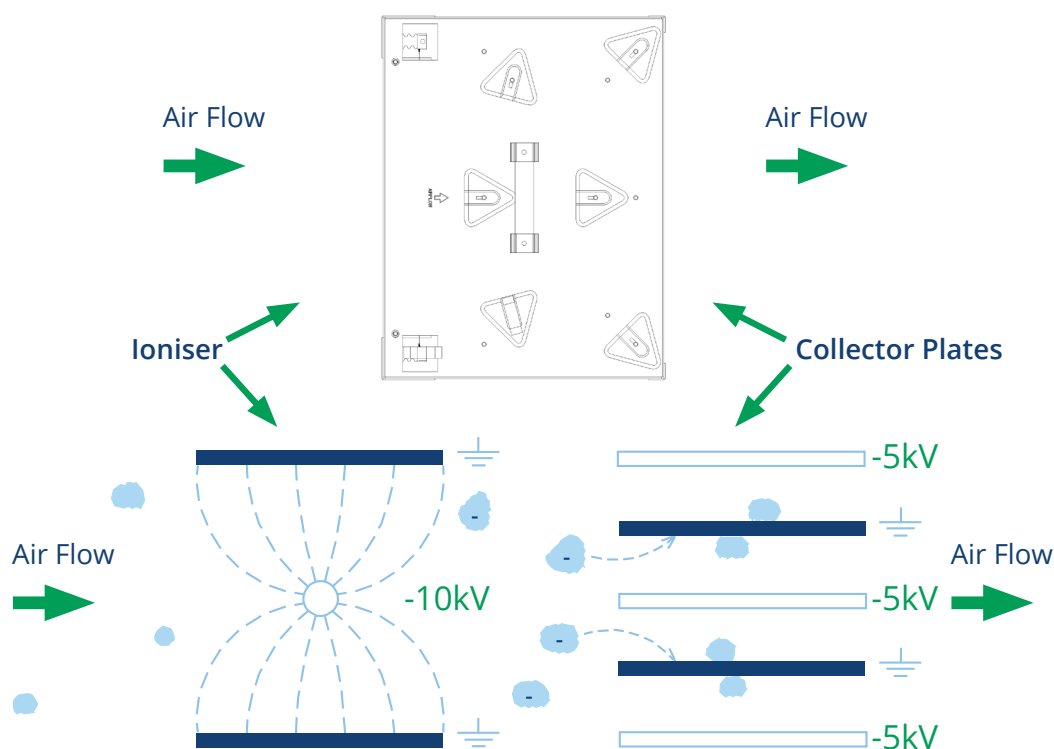


ESP 4500

- ESP 1500E which can handle up to 0.7m³/sec of air flow
- ESP 3000E which can handle up to 1.4m³/sec of air flow
- ESP 4500E which can handle up to 2.1m³/sec of air flow
- ESP 6000E which can handle up to 2.8m³/sec of air flow

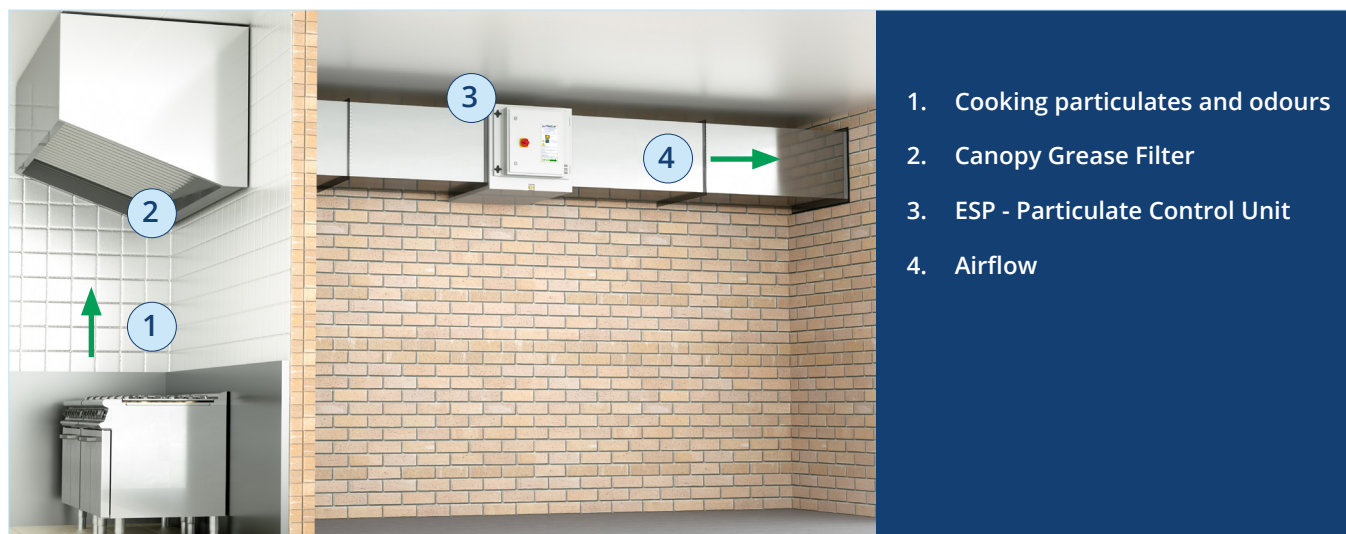
Our ESP's have been specifically designed for kitchen extract systems; they have integral sumps to collect the oil, grease and smoke particles filtered out of the exhaust. This not only simplifies servicing but eradicates potentially dangerous spillage from the bottom of the units and greatly cuts down on build-ups of grease within the ducting.

The ionisation voltage has been designed to run at a negative potential which enhances the ionisation of particles and also produces more ozone which is helpful in reducing cooking odours.



The above diagram shows, in a basic visual, how an electrostatic precipitator works. As air passes into the combined ioniser / collector cell, the particulates in the air stream are polarised to a negative potential. As they continue through the ioniser and between the collector cell plates, the polarised particulates are repelled away from the negatively charged plates and attracted to the earthed plates where they stick and so are filtered out of the air flow.

Our ESP units fit in-line with the kitchen ducting and can be configured modularly to cope with all extract volume requirements.



KEY FEATURES

- Eliminates up to 98% of oil, grease and smoke particles
- Filters particles down to sub-micron levels
- Produces Ozone to help reduce malodours
- Designed with an integral sump
- Modular in design
- Specifically designed for commercial kitchen application
- Energy efficient: - uses no more than 50W
- Greatly reduces grease build-up within the duct run



3 ESP Units Stacked in modular formation



4 ESP Units Stacked in modular formation with a double pass

Technical Specification

	ESP 1500E	ESP 3000E	ESP 4500E	ESP 6000E
Electrical Supply	220/240V 50Hz	220/240V 50Hz	220/240V 50Hz	220/240V 50Hz
Power Consumption	20 Watts	30 Watts	40 Watts	50 Watts
Max Air Volume	up to 0.7m ³ /sec	up to 1.4m ³ /sec	up to 2.1m ³ /sec	up to 2.8m ³ /sec
Dimensions W/H/D	450mm/630mm/ 640mm	900mm/630mm/ 640mm	1350mm/630mm/ 640mm	1800mm/630mm/ 640mm
Weight	55Kg	85Kg	118Kg	153Kg

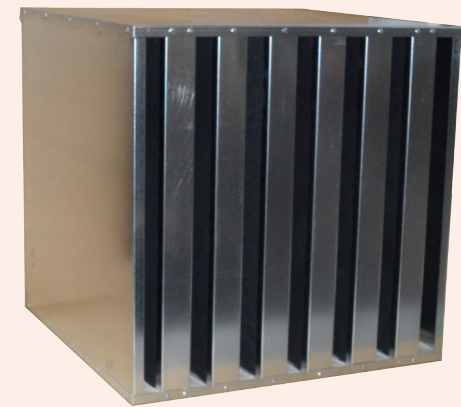
Sitesafe Carbon Filters

We manufacture Sitesafe carbon filters, these innovative carbon units measure 594x196x597mm, three combining to 594x594x597mm, directly replacing our original carbon blocks whilst providing exactly the same filter performance as an existing full size cell.

Their advantage is that they only weigh 18kg each against the 68kg of our original blocks. This takes the strain out of fitting and servicing, allowing only one engineer to complete the task where two had been previously required.

Our Sitesafe carbon filters use panels of activated carbon to remove the malodorous gases within the commercial kitchen extract duct through the process of chemical adsorption. By installing our ESP units before our Sitesafe filters, the carbon life span is greatly increased, allowing it to nullify malodours at optimum efficiency for much longer.

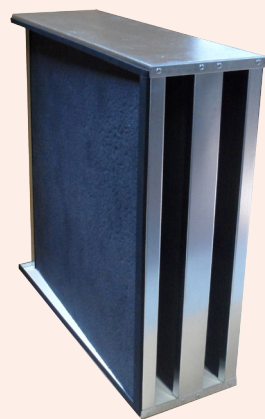
Will require two people plus lifting gear to carry and install.



Carbon PA242424

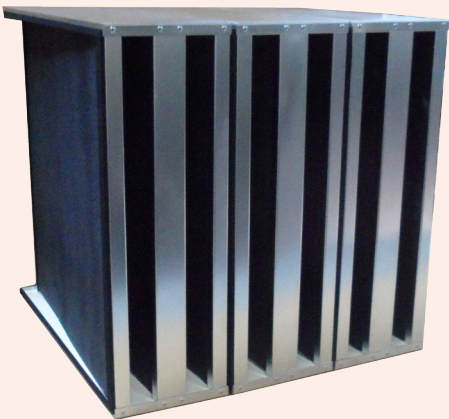
Size 594x594x597
Gross Weight 68.20kg
Carbon Weight 50.00kg
Rated Airflow 3600m³/hr*
Pressure Drop 120Pa

Safe for one person to carry. No special lifting gear required.



Sitesafe PA240824

Size 594x196x597
Gross Weight 17.95kg
Carbon Weight 16.6kg
Rated Airflow 1200m³/hr*
Pressure Drop 120Pa



Sitesafe 3 x PA240824

Size 594x594x597
Gross Weight 53.85kg
Carbon Weight 50.00kg
Rated Airflow 3600m³/hr*
Pressure Drop 120Pa



Please see below for the recommended minimum dwell times required for different applications and scale up accordingly.

It should be noted that filtration performance will be improved by increasing the dwell times applied.

Application	Recommended Dwell Time	Grade
Cooking - Low Odour, Tea Shop, Canteens	0.1 to 0.2 Seconds	Carbon grade Enhanced for improved performance for light catering odours
Cooking - Moderate Odour. Pizza, Steak House, French, Italian, Pubs, Chinese, Japanese, Cantonese	0.2 to 0.4 Seconds	Enhanced Carbon grade suitable for many applications 65% Minimum CTC
Cooking High Odour, Indian, Thai, Vietnamese, Kebab	0.4-0.6 Seconds	Enhanced Carbon grade suitable for many applications 65% Minimum CTC
Cooking Very High Odour. Fried Chicken, Pubs with large fried food turnover, Fish and Chip Shops, Fast Food / Burgers	0.4-0.8 Seconds	Enhanced Carbon grade suitable for many applications 65% Minimum CTC
Reduction of Kerosene Exhaust fumes	0.1 to 0.2 Seconds	General Purpose Activated Carbon
Reduction of Ozone	0.1 to 0.2 Seconds	General Purpose Activated Carbon
Reduction of Diesel Fumes, including H ₂ S, SO ₂ , NO _x , HCl	0.2 Seconds	Carbon Museum,Archive, Café Directive: SO ₂ SO _x NO ₂ NO _x Removal
Museum and Archives	0.2 Seconds	Carbon Museum,Archive, Café Directive: SO ₂ SO _x NO ₂ NO _x Removal

The cooking odour classes above are as classified by DEFRA in **Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, PB10527**