

SWAN Projects

38 Stanway Road
Whitefield
MANCHESTER
M45 8FX

GREEN LAB NOISE DATA

2 x Midea MOU-36FN8QD0 AC condensing units, 56 dBA (max speed)

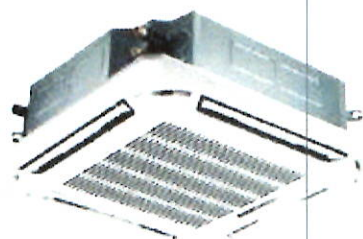
1 x Daikin VAM1000 HRV unit 36 dBA with 2D silencers, reducing to below 30 dBA

1 x Flakt Woods Kitchen extract fan, outlet 61 dBA with 2D silencer, reducing to between 48 - 51 dBA

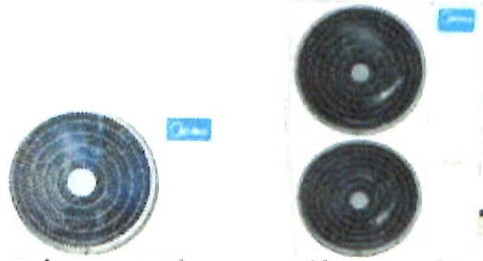
1 x Flakt Woods WC & Changing extract fan, outlet 42 dBA with 2D silencer, reducing to between 29 - 32 dBA

Midea MOU-36FN8QD0

SUPER SLIM ROUND FLOW CASSETTE RANGE



Indoor unit



Outdoor unit



Remote control



INDOOR			MCD-18FNXD0	MCD-24FNXD0	MCD-36FNXD0	MCD-48FNXD0	MCD-55FNXD0
OUTDOOR			MOU-18FN8 QD0	MOU-24FN8 QD0	MOU-36FN8 (Q/R)D0	MOU-48FN8 RD0	MOU-55FN8 RD0
Nominal Cooling Capacity (min-max)		kW	5.28(1.26-6.15)	7.03(2.23-8.21)	10.55(2.64-12.02)	14.0(4.76-16.12)	15.8(5.28-18.46)
Nominal Heating Capacity (min-max)		kW	5.57(1.76-7.03)	7.62(2.43-8.65)	11.14(2.93-13.19)	16.1(3.93-17.59)	18.2(4.4-20.51)
UK Total Cooling Capacity		kW	5.8	7.78	11.39	15.28	17.22
Seasonal Efficiency SEER/Class		W/W	6.3/A++	6.1/A++	6.1/A++	6.1/A++	6.1/A++
Seasonal Efficiency SCOP/Class		W/W	4/A+	4/A+	4/A+	4/A+	4/A+
Power supply (Indoor)		V- Ph-Hz	220-240-1-50	220-240-1-50	220-240-1-50	220-240-1-50	220-240-1-50
Power supply (Outdoor)		V- Ph-Hz	220-240-1-50	220-240-1-50	220-240-1-50 380-415-3-50	380-415-3-50	380-415-3-50
Cooling Current (min-max)		A	7.1(1.2-9.3)	9.5(2.1-12.4)	16.3(2.9-19.6)/7.2(1.2-8.2)	8.3(1.8-9.26)	9.80(1.8-11)
Heating Current (min-max)		A	6.5(1.4-9.5)	8.9(2.2-12.5)	12.9(2.8-19.8)/5.5(1.2-8.3)	8.2(1.56-8.83)	9.9(1.6-10.6)
Max. Current		A	10.0	13.5	21.5/10	11.2	14.0
Recommended Fuse Size (Indoor)		A	5.0*	5.0*	5.0*	5.0*	5.0*
Recommended Fuse Size (Outdoor)		A	16	20.0	32 16	16	16
Interconnecting Wiring		No.	2 Core 1mm² Screened	2 Core 1mm² Screened	2 Core 1mm² Screened	2 Core 1mm² Screened	2 Core 1mm² Screened
Indoor air flow (Hi/Mi/Lo)		m3/h	1036/867/763	1378/1200/1032	1775/1620/1438	1715/1568/1381	1970/1737/1537
Indoor sound pressure level (Hi/Mi/Lo)		dB(A)	41/37/33	41/38/35	47/45/42	49/46/43	47/44/41
Indoor unit	Dimension (WxDxH) (body)	mm	840x840x205	840x840x205	840x840x245	840x840x287	840x840x287
	Packing (WxDxH) (body)	mm	900x900x225	900x900x225	900x900x265	900x900x292	900x900x292
	Dimension (WxDxH) (panel)	mm	950x950x55	950x950x55	950x950x55	950x950x55	950x950x55
	Packing (WxDxH) (panel)	mm	1035x1035x90	1035x1035x90	1035x1035x90	1035x1035x90	1035x1035x90
	Net/Gross weight (body)	Kg	21.4/25.1	23/27	27.5/31	29/32.7	29.7/33.4
	Net/Gross weight (panel)	Kg	5/8	5/8	5/8	5/8	5/8
Drainage water pipe dia.		mm	ØDΦ32	ØDΦ32	ØDΦ32	ØDΦ32	ØDΦ32
Outdoor air flow		m3/h	2100	2700	4000	7500	7500
Outdoor sound pressure level		dB(A)	51.0	55.0	56	59	56.0
Outdoor unit	Dimension (WxDxH)	mm	800x333x554	845x363x702	946x410x810	952x415x1333	952x415x1333
	Packing (WxDxH)	mm	920x390x615	965x395x765	1090x500x875	1095x495x1480	1095x495x1480
	Net/Gross weight	Kg	35.6/38.5	66.8/72.6	66.8/73.4 81.5/87.0	106.7/119.9	111.3/124.3
Refrigerant	Type		R32	R32	R32	R32	R32
	GWP		675	675	675	675	675
	Charged quantity	Kg	1.35	1.5	2.4	2.8	2.95
	Additional Charge	g/m	12	24	24	24	24
Refrigerant piping	Liquid side/ Gas side	mm(inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")
	Max. pipe length	m	30	50	65	65	65
	Max. height difference	m	20	25	30	30	30
Operating temperature	Indoor (Cooling/Heating)	°C	17~32/0~32	17~32/0~33	17~32/0~34	17~32/0~35	17~32/0~36
	Outdoor (Cooling/Heating)	°C	-15~50/-15~26	-15~50/-15~27	-15~50/-15~28	-15~50/-15~29	-15~50/-15~30

Nominal Conditions: Cooling: indoor 27°C DB, 19°C WB, outdoor 35°C DB, 24°C WB.
Nominal Conditions: Heating: indoor 20°C DB, outdoor 7°C DB, 6°C WB.

UK Conditions: Summer: indoor 21°C DB, 15°C WB, outdoor 27°C DB.
Sound Pressure is measured 1.5m below the air-outlet at Nominal Conditions.

*Option for power via Outdoor also available.

2 Specifications

Daikin VAM1000 HRV unit

2-1 Technical Specifications					VAM150F C	VAM250F C	VAM350F C	VAM500F C	VAM650F C	VAM800F C	VAM1000 FC	VAM1500 FC	VAM2000 FC	
Power input - 50Hz	Heat exchange mode	Nom.	Ultra high	kW	0.132	0.161	0.071 (1)	0.147 (1)	0.188 (1)	0.320 (1)	0.360 (1)	0.617 (1)	0.685 (1)	
			High	kW	0.111	0.079	0.057 (1)	0.101 (1)	0.114 (1)	0.241 (1)	0.309 (1)	0.463 (1)	0.575 (1)	
			Low	kW	0.058	0.064	0.020 (1)	0.049 (1)	0.063 (1)	0.185 (1)	0.198 (1)	0.353 (1)	0.295 (1)	
	Bypass mode	Nom.	Ultra high	kW	0.132	0.161	0.071 (1)	0.147 (1)	0.188 (1)	0.320 (1)	0.360 (1)	0.617 (1)	0.685 (1)	
			High	kW	0.111	0.079	0.057 (1)	0.101 (1)	0.114 (1)	0.241 (1)	0.309 (1)	0.463 (1)	0.575 (1)	
			Low	kW	0.058	0.064	0.020 (1)	0.049 (1)	0.063 (1)	0.185 (1)	0.198 (1)	0.353 (1)	0.295 (1)	
Temperature exchange efficiency - 50Hz	Ultra high			%	77.0 (2) / 72.0 (3)	74.9 (2) / 69.5 (3)	78.0 (2) / 71.6 (3)	77.0 (2) / 70.2 (3)	77.0 (2) / 69.8 (3)	77.0 (2) / 67.8 (3)	78.0 (2) / 70.2 (3)	78.0 (2) / 69.5 (3)	78.0 (2) / 70.2 (3)	
	High			%	78.3 (2) / 72.3 (3)	76.0 (2) / 70.0 (3)	79.3 (2) / 71.9 (3)	78.8 (2) / 70.7 (3)	79.1 (2) / 71.2 (3)	78.2 (2) / 68.8 (3)	78.6 (2) / 71.1 (3)	79.6 (2) / 70.3 (3)	79.6 (2) / 71.3 (3)	
	Low			%	82.8 (2) / 73.2 (3)	80.1 (2) / 72.0 (3)	84.1 (2) / 73.0 (3)	80.9 (2) / 71.3 (3)	81.1 (2) / 72.9 (3)	79.1 (2) / 69.6 (3)	80.2 (2) / 73.4 (3)	80.8 (2) / 71.0 (3)	80.6 (2) / 74.6 (3)	
Enthalpy exchange efficiency - 50Hz	Cooling	Ultra high		%	60.3 (2)		63.4 (2)		60.3 (2)		62.4 (2)		63.4 (2)	
		High		%	61.9 (2)		61.2 (2)		65.0 (2)		63.4 (2)		64.0 (2)	
		Low		%	67.3 (2)		64.5 (2)		70.7 (2)		66.9 (2)		67.3 (2)	
	Heating	Ultra high		%	66.6 (2)		67.6 (2)		64.5 (2)		65.5 (2)		67.6 (2)	
		High		%	67.9 (2)		67.4 (2)		68.9 (2)		67.6 (2)		67.7 (2)	
		Low		%	72.4 (2)		70.7 (2)		73.7 (2)		71.1 (2)		69.7 (2)	
Operation mode					Heat exchange mode, bypass mode, fresh-up mode									
Heat exchange system					Air to air cross flow total heat (sensible + latent heat) exchange									
Heat exchange element					Specially processed non-flammable paper									
Dimensions	Unit	Height		mm	285		301		364		726			
		Width		mm	776		828		1,000		1,510			
		Depth		mm	525		816		868		1,160	868	1,160	
				kg	24.0		33.0		51.0	54.0	63.0	128	145	
Casing	Material				Galvanised steel plate									
Fan	Type				Sirocco fan									
	Air flow rate - 50Hz	Heat exchan ge mode	Ultra high	m³/h	150 (4)	250 (4)	350 (1)	500 (1)	650 (1)	800 (1)	1,000 (1)	1,500 (1)	2,000 (1)	
			High	m³/h	140 (4)	230 (4)	320 (1)	410 (1)	545 (1)	725 (1)	950 (1)	1,350 (1)	1,880 (1)	
			Low	m³/h	105 (4)	155 (4)	210 (1)	310 (1)	450 (1)	665 (1)	820 (1)	1,230 (1)	1,500 (1)	
		Bypass mode	Ultra high	m³/h	150 (4)	250 (4)	350 (1)	500 (1)	650 (1)	800 (1)	1,000 (1)	1,500 (1)	2,000 (1)	
			High	m³/h	140 (4)	230 (4)	320 (1)	410 (1)	545 (1)	725 (1)	950 (1)	1,350 (1)	1,880 (1)	
			Low	m³/h	105 (4)	155 (4)	210 (1)	310 (1)	450 (1)	665 (1)	820 (1)	1,230 (1)	1,500 (1)	
	External static pressure - 50Hz	Ultra high		Pa	90 (4)	70 (4)	103 (1)	83 (1)	100 (1)	109 (1)	147 (1)	116 (1)	132 (1)	
		High		Pa	87 (4)	63 (4)	93 (1)	57 (1)	73 (1)	94 (1)	135 (1)	97 (1)	118 (1)	
		Low		Pa	40 (4)	25 (4)	51 (1)	35 (1)	49 (1)	78 (1)	100 (1)	80 (1)	77 (1)	
Fan motor	Quantity				2									
	Output	50 Hz	W		30		80		106		210			
Air filter	Type				Multidirectional fibrous fleeces									
Sound pressure level - 50Hz	Heat exchange mode	Ultra high		dBA	27.0	28.0	32.0	33.0	34.5	36.0		39.5	40.0	
		High		dBA	26.0		31.5		33.0		34.5	35.0	38.0	
		Low		dBA	20.5	21.0	23.5	24.5	27.0	31.0		34.0	35.0	
	Bypass mode	Ultra high		dBA	27.0	28.0	32.0	33.5	34.5	36.0		40.5	40.0	
		High		dBA	26.5	27.0	31.0	32.5	34.0	34.5		35.5	38.0	
		Low		dBA	20.5	21.0	24.5	25.5	27.0	31.0		33.5	35.0	
Operation range	Min.			°CDB	-15									
	Max.			°CDB	50									
	Relative humidity			%	80% or less									
	On coil temperature	Cooling	Max.	°CDB	-									
Heating		Min.	°CDB	-										
Connection duct diameter					mm	100	150		200		250		350	
Insulation material					Self-extinguishable urethane foam									



Northern Fan Supplies Ltd

Technical Data Sheet

Estoc Targe - Powerbox GF

Flakt Woods Kitchen extract fan



Quotation Number	: KP62680	Project Code	:
Project Name	: Green Lab	Customer	: Swan Projects
Item Reference:	: KITCHEN EXTRACT FAN	Date:	: Thursday, August 27, 2020

Fan Code	Estoc Targe (PowerBox) 67-450-1
Fan Diameter / Size	450
Velocity	8.8 m/s
Form of Running	B (Horizontal)

Requested Duty (238.3V)	1.4m³/s @ 250 Pa (static)
Control Adjustment	238.3V
Outlet Dynamic Pressure	46 Pa

Duty Shaft Power	1.09 kW
Max Shaft Power	1.00 kW

Motor Frame	Integral [Class F]
Motor Rating	1.00 kW
Full Load Current	5.38 A
Starting Current	11.96 A
Electrical Supply	220-240 Volts 50 Hz 1 Phase
Start Type	Enquire
Motor Winding	Standard

ErP [FMEG] Rating	Not in Scope
-------------------	--------------

SFP value	0.78 W/(l/s) @ Requested Duty
Power from mains	1.09 kW
Energy Consumption	3262 kWh (3000 h/year)
Running Cost / Year	£391

Air Density	1.2 kg/m³ / 20 °C / 0 m / 50% RH
Smoke Venting	Non Smoke Venting
Product Number	GF674501

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*	101	76	71	68	70	70	64	55	101	58
Outlet*	104	81	75	71	74	72	69	58	104	61
Breakout*	89	75	65	57	55	52	49	43	90	46

* Lw dB re 10⁻¹² W

** dBA re 2x10⁻⁵ Pa

Sound data at requested duty.

Description	Qty
Fan GF674501 - Estoc Targe (PowerBox) 67-450-1 Accessories	1

Unit E1 Longford trading Estate
 Thomas Street, Stretford, Manchester, M32 0JT
 Tel: 0161 864 1777 Fax: 0161 864 2777

Website: www.nfan.co.uk
 Email: kyle@nfan.co.uk
 Copyright Fläkt Group 2003 - 2020



Northern Fan Supplies Ltd

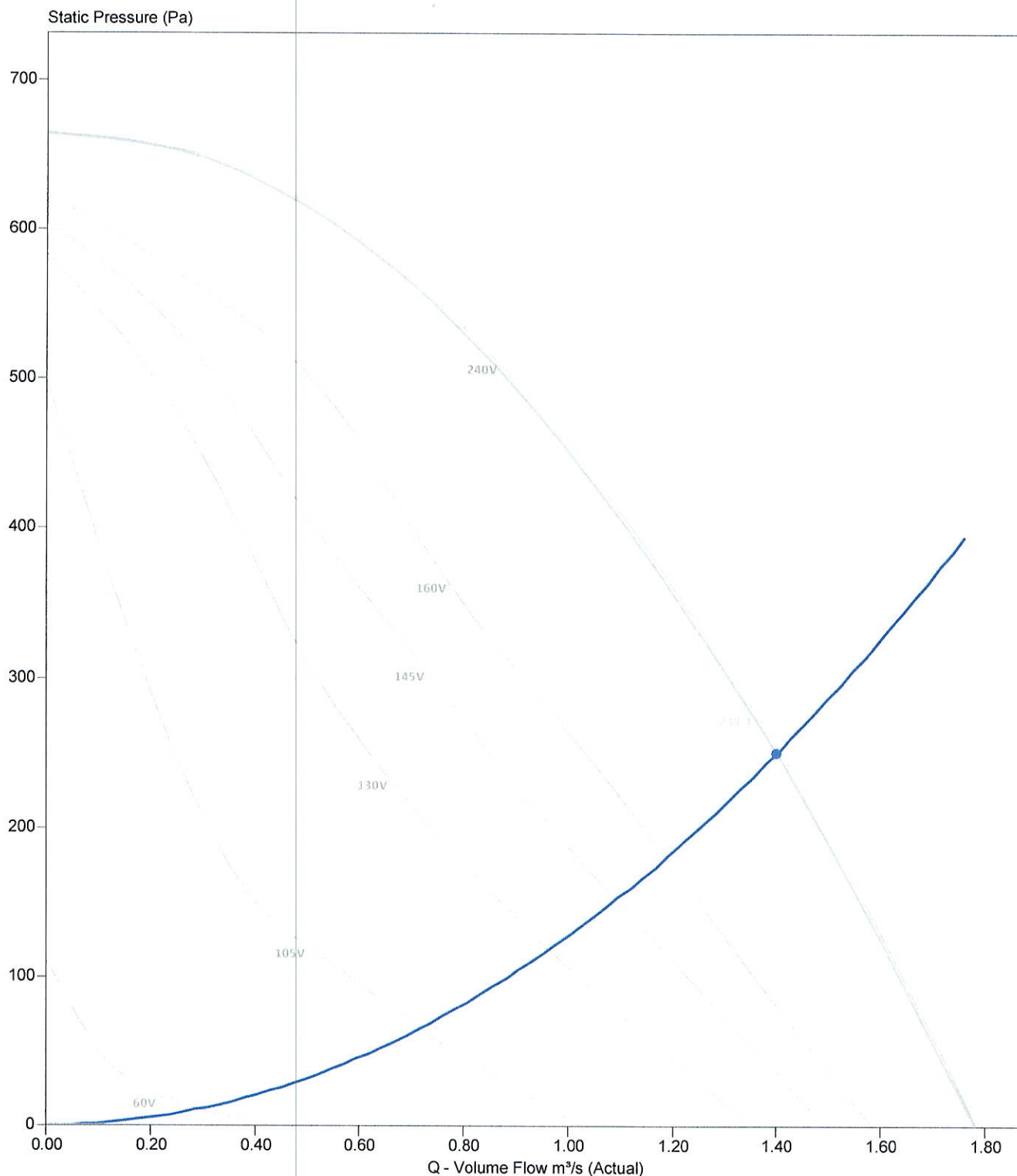
Performance Chart

Estoc Targe - Powerbox GF



Quotation Number : KP62680
Project Name : Green Lab
Item Reference: :

Project Code :
Customer : Swan Projects
Date: : Thursday, August 27, 2020
Fan Code : Estoc Targe (PowerBox) 67-450-1





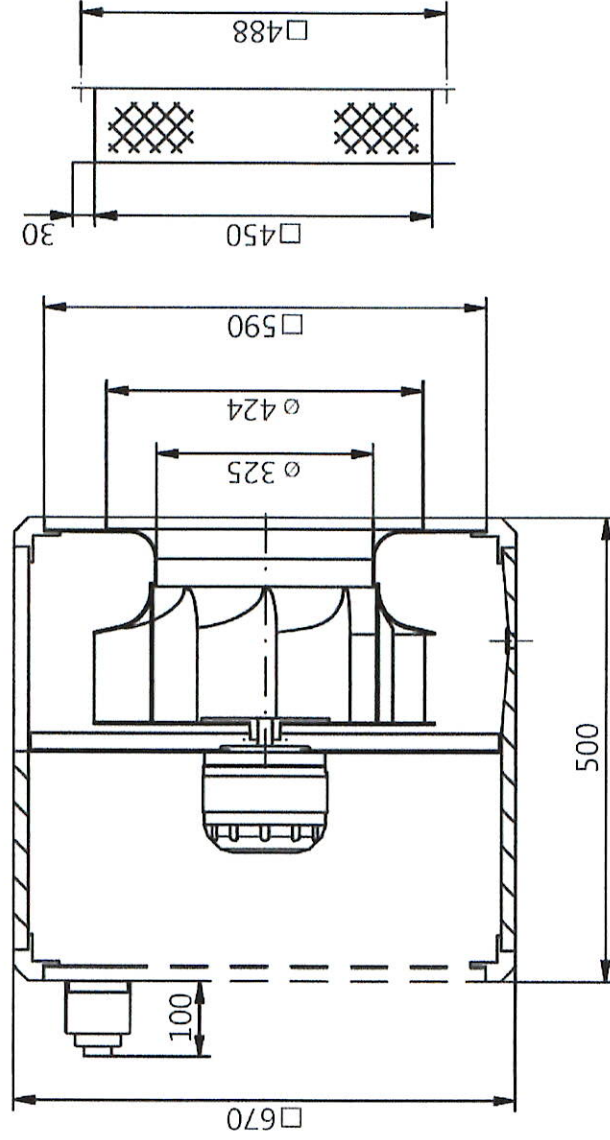
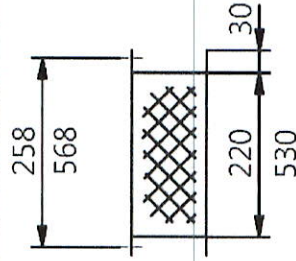
Northern Fan Supplies Ltd
Drawing and Dimensions
Estoc Targe - Powerbox GF



Quotation Number : KP62680
Project Name : Green Lab
Item Reference :

Fan Code : Estoc Targe (PowerBox) 67-450-1
Customer : Swan Projects
Date: : Thursday, August 27, 2020

Max Weight (kg) 62



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, Manchester,, M32 0JT

Tel: 0161 864 1777 Fax: 0161 864 2777

Website: www.nfan.co.uk

Email: kyle@nfan.co.uk

Copyright Fläkt Group 2003 - 2020

Selection Engine: 3.1.3.40a

Printed on 27 August 2020

Page 3 of 3

Quotation Number	: KP62612	Project Code	:
Project Name	: Green Lab	Customer	: Swan Projects
Item Reference:	: WC# CHANGE EXTRACT FAN	Date:	: Tuesday, August 25, 2020

Fan Code	ePowerBox 50-355-1-4 (5FA)
Fan Diameter / Size	355
Velocity	4.9 m/s
Form of Running	B (Horizontal)

Requested Duty (159V)	0.48m³/s @ 220 Pa (static)
Control Adjustment	159V
Outlet Dynamic Pressure	14 Pa

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

Duty Shaft Power	0.253 kW
Max Shaft Power	0.282 kW

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.

Motor Frame	Integral [Class F]
Motor Rating	0.282 kW
Full Load Current	1.35 A
Starting Current	4.46 A
Electrical Supply	220-240 Volts 50 Hz 1 Phase
Start Type	Enquire
Motor Winding	Standard

Regulation 1253/2014	
UVU Efficiency	48.7%
UVU Target Efficiency	34.1%
Nominal Flow Rate	0.54 m³/s @ 256 Pa
Effective Input Power	0.280 kW
Nominal RPM	1410 rpm

SFP value	0.53 W/(l/s) @ Requested Duty
Power from mains	0.25 kW
Energy Consumption	759 kWh (3000 h/year)
Running Cost / Year	£91

Air Density	1.2 kg/m ³ / 20 °C / 0 m / 50% RH
Smoke Venting	Non Smoke Venting
Product Number	BE355017

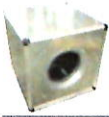
	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	47	51	56	55	48	46	42	39	60	35
Outlet*	55	59	66	62	55	49	42	40	68	42
Breakout*	53	53	49	34	25	<20	<20	<20	57	22

* Lw dB re 10^{-12} W

** dBA re 2×10^{-5} Pa

Sound data at requested duty.

Description		Qty
Fan BE355017 - ePowerBox 50-355-1-4 (5FA) Accessories		1



Northern Fan Supplies Ltd

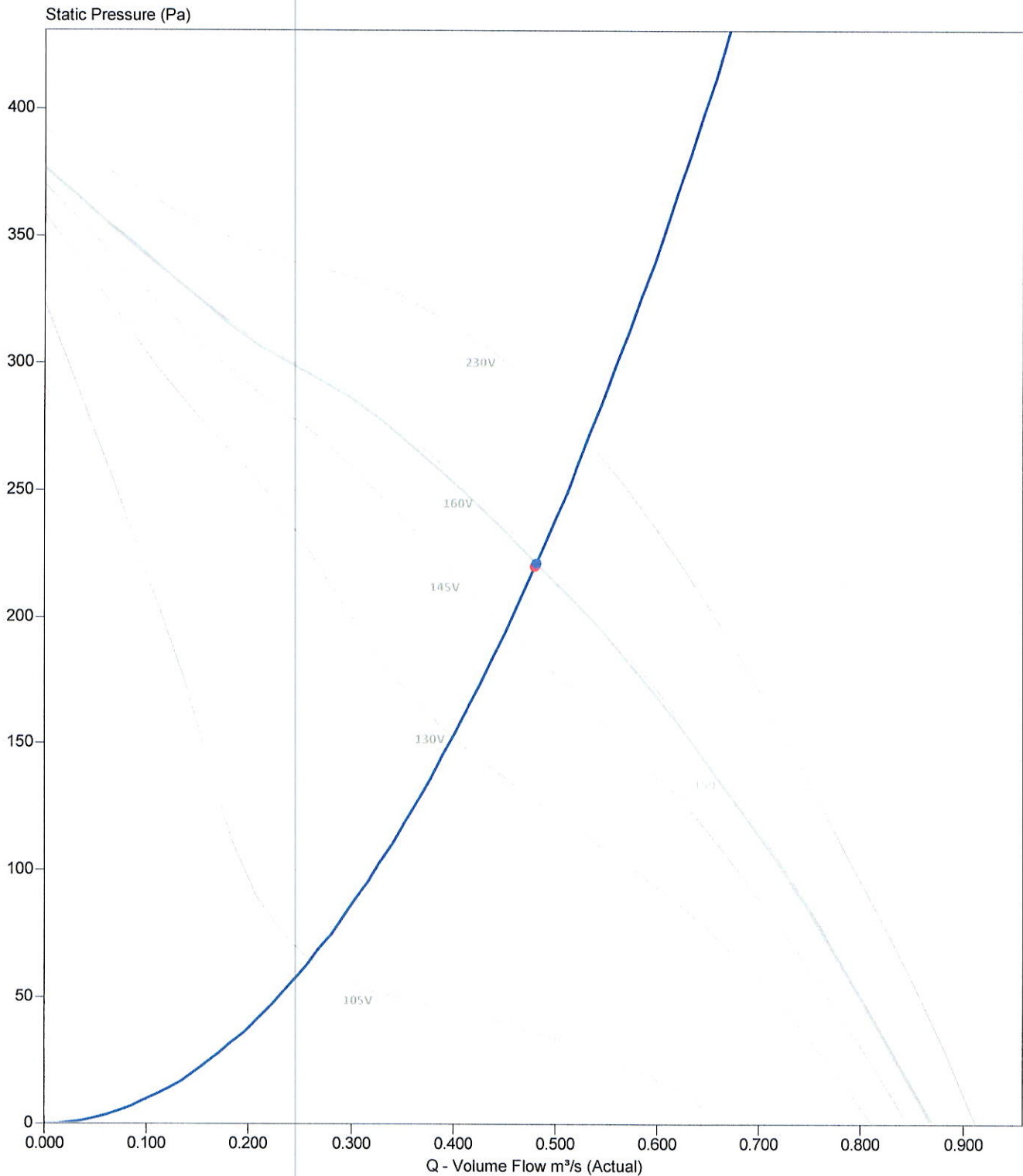
Performance Chart

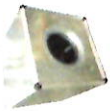
ePowerBox AC



Quotation Number : KP62612
Project Name : Green Lab
Item Reference: :

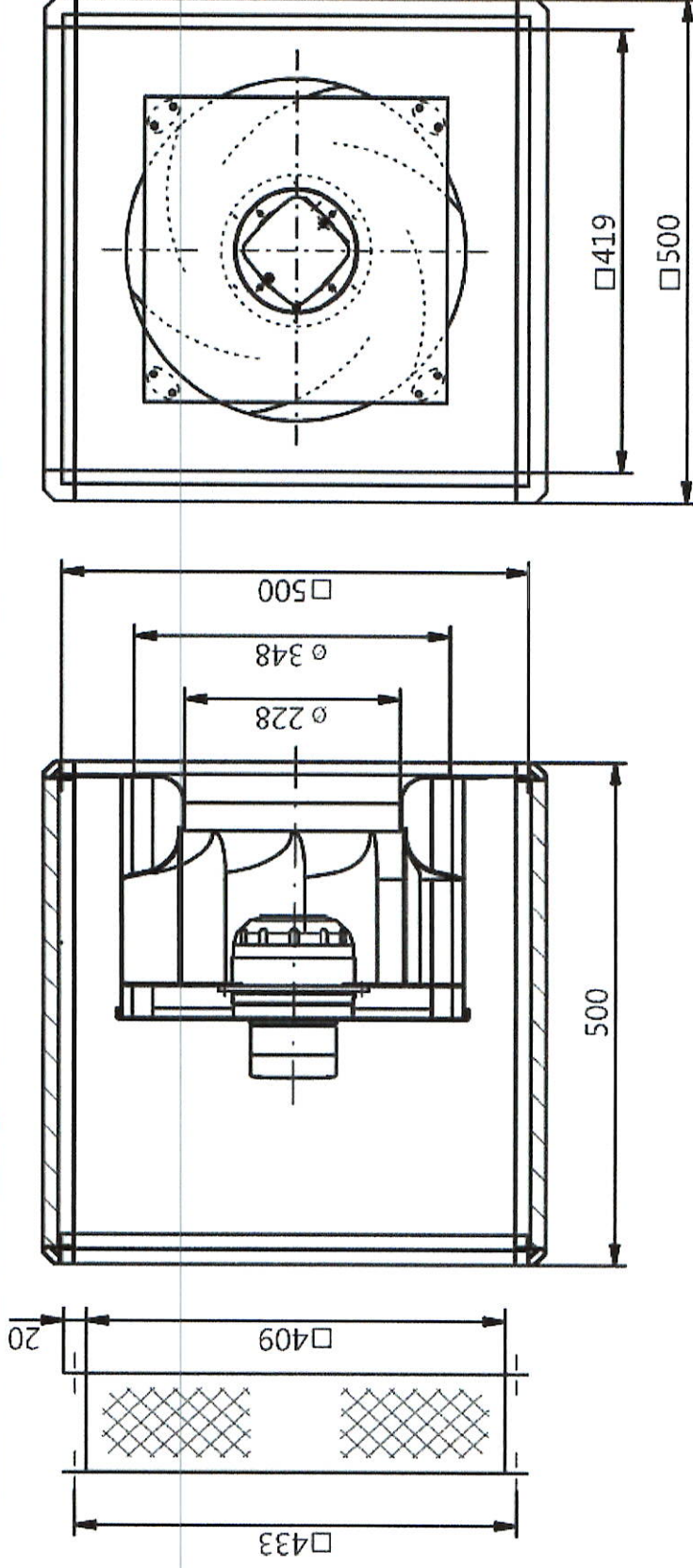
Project Code :
Customer : Swan Projects
Date: : Tuesday, August 25, 2020
Fan Code : ePowerBox 50-355-1-4 (5FA)





Quotation Number : KP62612
Project Name : Green Lab
Item Reference: :

Fan Code : ePowerBox 50-355-1-4 (5FA)
Customer : Swan Projects
Date: : Tuesday, August 25, 2020



Notes : Dimensions shown in mm / Weight in kg

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

Unit E1 Longford trading Estate

Thomas Street, Stretford, Manchester, M32 0JT

Tel: 0161 864 1777 Fax: 0161 864 2777

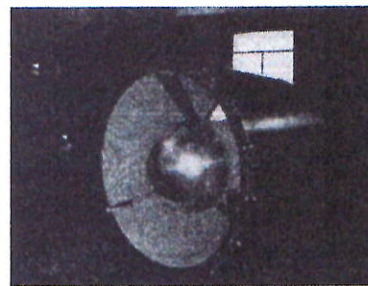
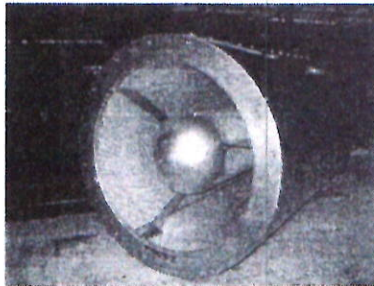
Website: www.nfan.co.uk

Email: kyle@nfan.co.uk

Copyright Fläkt Group 2003 - 2020

Selection Engine: 3.1.3.40a

2D silencer



STANDARD CIRCULAR SILENCER INSERTION LOSS DATA

@ +20oC and 5m/sec FACE VELOCITY

SILENCER SIZE	CODE	P.A	OCTAVE BAND CENTRE FREQUENCIES (Hz)							
			63	125	250	500	1K	2K	4K	8K
200-550 dia	CDA.1D	ALL	2	4	6	10	14	10	7	8
	CDA.2D	A	4	8	13	17	23	17	12	11
		B	4	8	12	17	23	17	12	10
		C	4	7	10	15	19	16	12	9
	CDAP.1D	A	4	6	8	12	21	21	18	15
		B	4	6	8	11	18	19	17	14
		C	4	6	8	11	14	16	11	10
	CDAP.2D	A	7	10	12	24	29	29	27	23
		B	7	10	12	21	26	26	24	22
		C	7	10	11	18	21	20	17	15
	CDA.1D	ALL	3	4	9	15	15	8	7	6
	CDA.2D	A	6	8	13	22	23	14	13	9
600-800 dia		B	6	8	13	22	22	13	12	9
		C	6	8	12	20	18	13	11	9
	CDAP.1D	A	4	6	8	17	25	21	18	11
		B	4	6	8	17	23	20	18	10
		C	4	6	8	16	18	16	13	10
	CDAP.2D	A	8	11	16	30	35	31	29	22
		B	8	11	16	27	32	31	29	19
		C	8	11	16	24	23	22	21	17
	CDA.1D	ALL	3	4	9	14	13	7	7	6
	CDA.2D	A	6	8	14	22	20	13	12	9
		B	6	8	13	21	18	12	11	9
		C	6	8	12	19	16	11	10	7
1000-1500 dia	CDAP.1D	A	4	6	11	21	20	16	13	11
		B	4	6	11	20	18	15	13	11
		C	4	6	11	17	16	14	12	10
	CDAP.2D	A	8	11	18	30	32	30	24	16
		B	8	11	18	26	27	26	22	16
		C	8	11	18	21	20	22	20	16
	CDA.1D	ALL	4	5	10	14	11	6	6	5
	CDA.2D	A	8	9	14	19	18	12	11	9
		B	8	9	14	19	17	11	10	9
		C	8	9	13	18	14	10	9	8
	CDAP.1D	A	5	7	12	21	20	13	12	9
		B	5	7	12	19	18	13	11	9
		C	5	7	12	15	16	12	10	8
1600-2000 dia	CDAP.2D	A	10	14	21	26	29	28	18	15
		B	10	14	21	25	27	25	16	14
		C	10	14	21	21	20	20	15	14

P.A = Fan Impeller Pitch Angle.

A = upto 12 degrees

B = upto 20 degrees

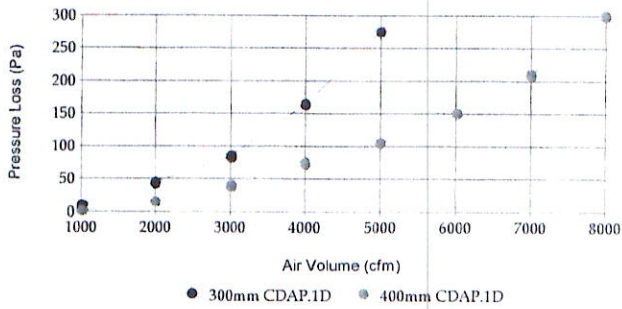
C = upto 45 degrees

The Above Data Is Offered As Being Indicative Only

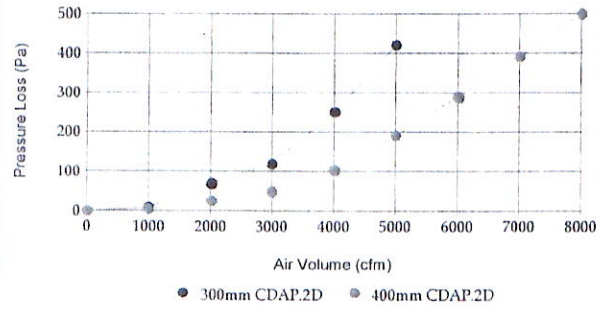
For Guaranteed Data (when applicable) Please Consult With (DBA) Technical Services Ltd.

CDAP Type Silencer Flow Resistance's

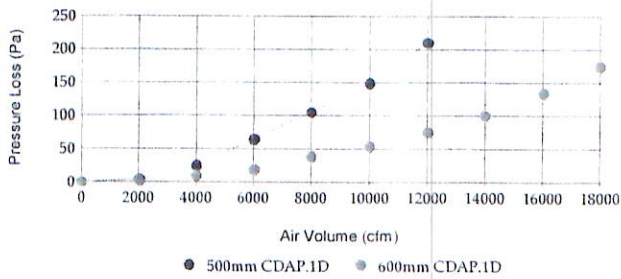
300mm/400mm CDAP.1D Pressure Loss's
@ 20oC With Uniform Airflow



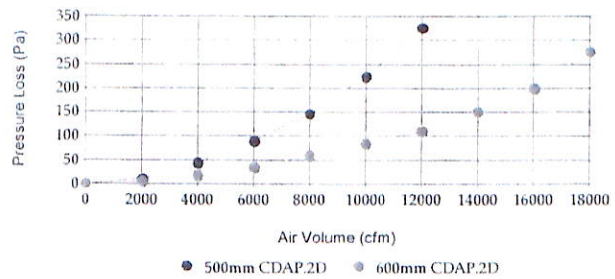
300mm/400mm CDAP.2D Pressure Loss's
@ 20oC With Uniform Airflow



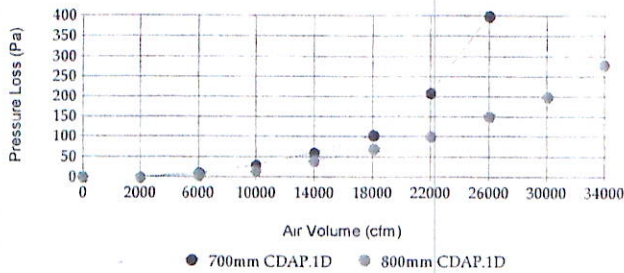
500mm/600mm CDAP.1D Pressure Loss's
@ 20oC With Uniform Airflow



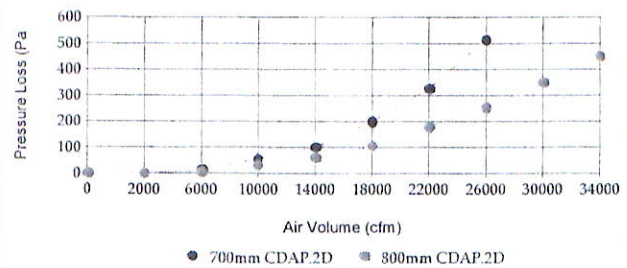
500mm/600mm CDAP.2D Pressure Loss's
@ 20oC With Uniform Airflow



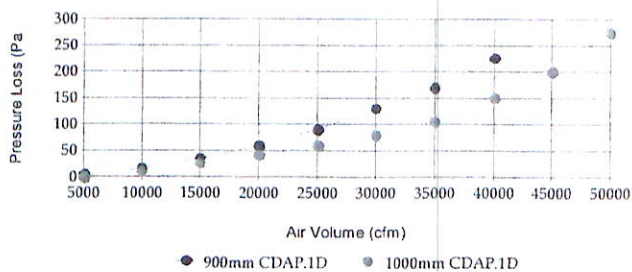
700mm/800mm CDAP.1D Pressure Loss's
@ 20oC With Uniform Airflow



700mm/800mm CDAP.2D Pressure Loss's
@ 20oC With Uniform Airflow



900mm/1000mm CDAP.1D Pressure Loss's
@ 20oC With Uniform Airflow



900mm/1000mm CDAP.2D Pressure Loss's
@ 20oC With Uniform Airflow

