TECHNICAL SUBMITTAL

Project:	Dixons Academy	**T.S No:**	FS0998-ABE-XX-XX-T-M-0012
A&B Contract No:	4031	**Date:**	28/02/2025
Engineer:	Joe Carter	**Rev:** C01	

F.T.A.O.	Name: James Matthie, Gareth Jones, Warwick Bolton & Joseph Cunliffe Organisation: Morgan Sindall / TACE
Copies To:	Name: Pete Wright & Dylan Strand Organisation: A&B Engineering

Plant Item:	Extract Fans.
Specified Manufacturer:	Not Applicable.
Proposed Manufacturer:	Combination of Vent Axia, Helios & Flaktwoods.
Model Type:	**<u>Medical Treatment Extract 01</u>** **Duty Requested – 0.078m3/s @ 115Pa** 1 x Vent-Axia SDX 150EC Inline Centrifugal Fan 1ph 1 x Vent-Axia Remote Speed Controller 2 x 150mm Fast Clamps 1 x 150mm Duct Mounted Air Operated Damper 1 x Remote Run on timer **<u>Toilet Extract 02 (Sports Hall Link)</u>** **Duty Requested – 0.313m3/s @ 278Pa** 1 x Helios ITEC-315 Inline Twin Mounted Extract Fan 1 x Helios Auto Change Over Panel 2 x 315mm Fast Clamps 1 x 315mm Duct Mounted Air Operated Damper **<u>Kitchen Extract 03</u>** **Duty Requested – 3.91m3/s @ 426Pa** 1 x Woods Estoc Targe (PowerBox) 102-630-3 Box Fan 4pole 3ph 6.00kW – 10.8Amps FLC – 3ph Motor out of the airstream Air discharges at 90-degrees from the inlet 1 x Woods Inverter EA901022 – 7.5kW – 15.5amps FLC 3ph Inverter **<u>Toilet Extract 04 (Main Roof)</u>** **Duty Requested – 0.171m3/s @ 276Pa** 1 x Helios ITEC-250 Inline Twin Mounted Extract Fan 1 x Helios Auto Change Over Panel 2 x 250mm Fast Clamps 1 x 250mm Duct Mounted Air Operated Damper

	<u>Server Room Extract 07</u> **Duty Requested – 0.046m3/s @ 148Pa** 1 x Vent-Axia SDX 150EC Inline Centrifugal Fan 1ph 1 x Vent-Axia Remote Speed Controller 2 x 150mm Fast Clamps 1 x 150mm Duct Mounted Air Operated Damper 1 x Remote Run on timer **<u>Kitchenettes</u>** **Duty Requested – 0.017m3/s @ 85Pa** 1 x Vent-Axia SDX 125EC Inline Centrifugal Fan 1ph 1 x Vent-Axia Remote Speed Control 2 x 125mm Fast Clamps 1 x 125mm Duct Mounted Air Operated Damper 1 x Remote Run on timer
Attachments:	• Fan Datasheets.
Status Code:	A4.

Approval Required By: A.S.A.P

<u>Response:</u> **Date:** **Signed:**

Northern Fan Supplies Ltd

Fan Selector - Technical Datasheet

Project : **Customer :** **Project Code :**

Quotation : **Date :** 23 October 2024



Estoc Targe - PowerBox GF

Estoc Targe (PowerBox)
102-630-3

PRODUCT

Model Code	Estoc Targe (PowerBox) 102-630-3
Fan Diameter	630-3-102 mm
Installation	Type D

PERFORMANCE

Requested Duty	3.91 m³/s @ 426 Pa (Static)
Outlet Dynamic Pressure	95 Pa
Velocity	12.55 m/s

MOTOR

Motor Rating	6.00 kW [Integral Frame]
Full Load Current	10.8 A
Starting Current	62.64 A
Electrical Supply	380 - 415 Volts 50 Hz 3 Phase
Motor Winding	Standard
Motor Type	Class F Insulation

EFFICIENCY GRADES

ErP [FMEG] Rating	ErP Exempt

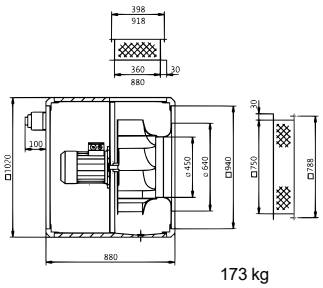
ENVIRONMENT

Air Density	1.2 kg/m³ / 20 °C / 0 m / 40% RH
Smoke Venting	No Smoke Venting
Operating Environment	Normal

RUNNING COSTS

Power from mains	3.60 KW
Energy Consumption	7,203.53 kWh (2,000.00 h/Year)
Running Cost / Year	£1,800.88
CO2 per Year	2,532.47 kgCO2e
SFP value	0.92 W/l/s @ Actual Duty

PRODUCT DIMENSIONS



173 kg

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

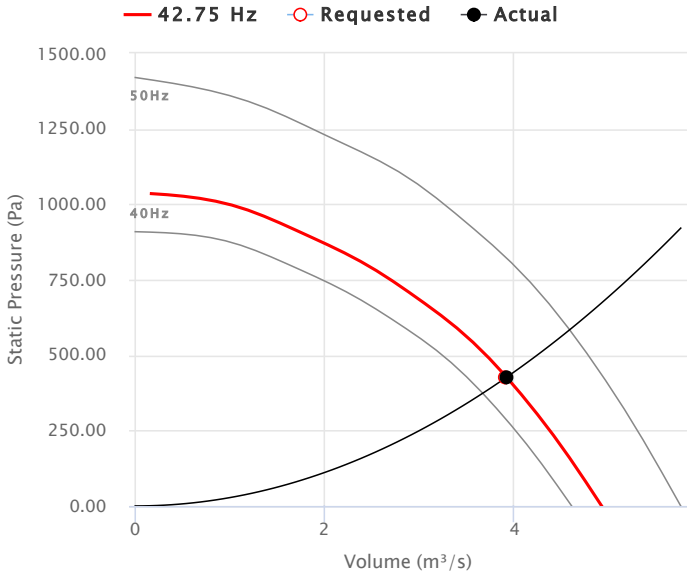
MECHANICAL

Operating Temperatures	0 °C to 75 °C (95% Max Relative Humidity)
Weight	173kg

COMMENTS

Lead time may vary based on stock availability at time of order. Please refresh the lead time in the project or reselect the fan before placing an order.

FAN PERFORMANCE CURVE



ACOUSTICS

	Sound Spectrum (Hz)								Overall		Distance (3 m)
	63	125	250	500	1k	2k	4k	8k	Lw*	LwA*	LpA @ 3 m **
Inlet	86	63	74	75	80	83	78	68	112	89	68
Outlet	89	71	77	81	84	84	80	68	115	92	71
Breakout	72	63	67	63	67	62	55	46	98	75	54

Sound Data At Requested Duty. * Lw dB re 10^{-12} W ** dBA re $2x10^{-5}$ Pa

FAN & ACCESSORIES

Item Description	Part Number	Qty
Estoc Targe (PowerBox) 102-630-3	GF163027	1

Axial Way
Colchester Essex CO4 5DZ
+44 (0) 1206 222 555
UK

E-mail:kyle@nfan.co.uk

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Domestic & Commercial
Sales Tel: 0844 856 0590
Tech Support Tel: 0844 856 0590

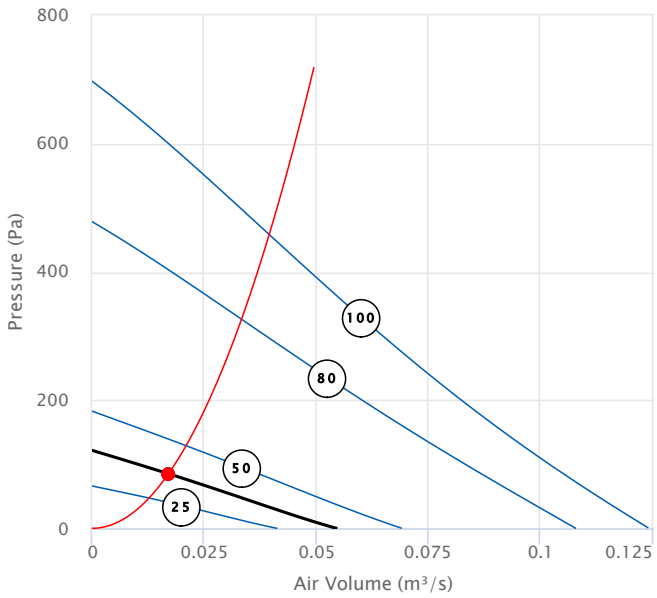
Industrial
Sales Tel: 0844 856 0594
Tech Support Tel: 0844 856 0595

Product Information

In-Line Tube Fans - Euroseries (SDX)



Performance Chart



Technical Information

Requested Duty	0.017 m³/s @ 85 Pa
Actual Duty	0.017 m³/s @ 85 Pa
Stock Reference	SDX125EC
Product Type	In-Line Tube Fans
Product Range	In-Line Tube Fans
Casing	Painted galvanised sheet steel
Airstream Temperature	-40 - 60°C
Specific Fan Power	0.5
dBA	15 dBA @ 3m
Warranty	2 years

Electrical Information

Motor Rating	0.01
Selection Power	0.01
Suppy Voltage	220-240V/1/50Hz
Full Load Current	0.75 A
Starting Current	0.00 A
Starting Method	
Motor Poles	-
Insulation	B
IP Rating	IPX2
S.T.O.P. Protection	
Speed Controllable	In Built
Integral Controller	

Sound Information at Duty Point

	63	125	250	500	1k	2k	4k	8k	Total	dbA @ 3m
Inlet	22	32	40	48	44	45	41	33	52	33
Outlet	19	27	35	43	39	40	36	28	47	25
Surrounding	15	20	26	35	28	30	25	19	38	15

Sound Power Level Spectra dB (re 10^{-12} Watts)
For ducted units, sound power is given as In Duct with end reflections added.
Stated dB(A) levels at 3m with spherical propagation at a reference level of 2 x 10^{-12} Pa

Optional Accessories

Part No	Description
10531125T1	HEAT.BATTERY+CONTROLS 125
426332	Wired manual 0-10V proportional/TSLC1 CONTROLLER BOXED ASSEMBLY TURBO/SLIMPACK/
83012030	012-030 SONEX ATTENUATOR
83012060	012-060 SONEX ATTENUATOR
83012090	012-090 SONEX ATTENUATOR

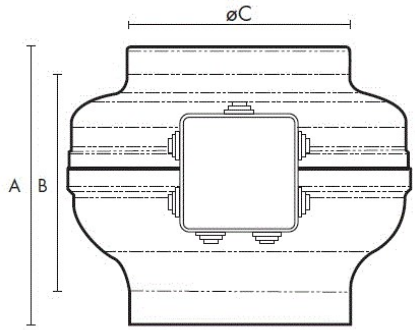
Part No	Description
LS250	RU LOUVRE TYPE WALL
QPF125A	Panel Filters
QPFB100A	Bag Filters
WB160	ROOF COWL,EPOXY FINISHED

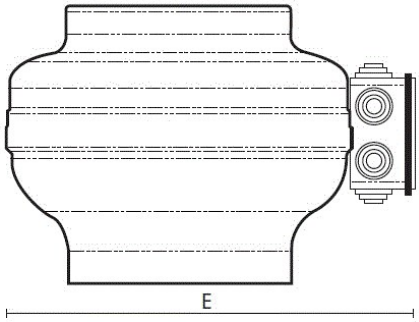
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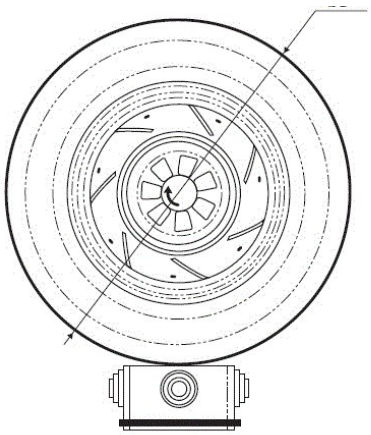
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Tech Support Tel: 0844 856 0595







A	B	CØ	DØ	E	kg
207	175	125	245	290	2.1

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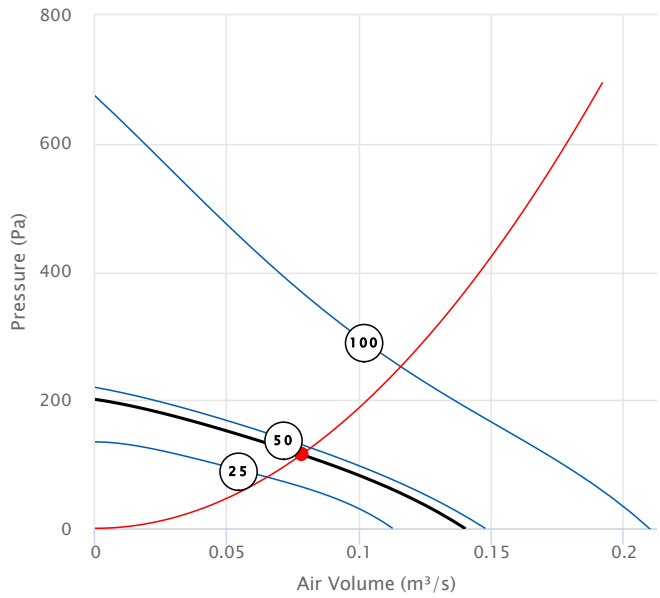
Industrial
Sales Tel: 0844 856 0594
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Product Information

In-Line Tube Fans - Euroseries (SDX)



Performance Chart



Technical Information

Requested Duty	0.078 m³/s @ 115 Pa
Actual Duty	0.078 m³/s @ 115 Pa
Stock Reference	SDX150EC
Product Type	In-Line Tube Fans
Product Range	In-Line Tube Fans
Casing	Painted galvanised sheet steel
Airstream Temperature	-40 - 60°C
Specific Fan Power	0.4
dBA	22 dBA @ 3m
Warranty	2 years

Electrical Information

Motor Rating	0.03
Selection Power	0.03
Suppy Voltage	220-240V/1/50Hz
Full Load Current	0.75 A
Starting Current	0.00 A
Starting Method	
Motor Poles	-
Insulation	B
IP Rating	IPX2
S.T.O.P. Protection	
Speed Controllable	In Built
Integral Controller	

Sound Information at Duty Point

	63	125	250	500	1k	2k	4k	8k	Total	dbA @ 3m
Inlet	25	36	42	53	48	49	41	35	56	37
Outlet	21	31	37	48	43	44	36	30	51	29
Surrounding	20	24	30	41	36	37	29	23	44	22

Sound Power Level Spectra dB (re 10^{-12} Watts)
For ducted units, sound power is given as In Duct with end reflections added.
Stated dB(A) levels at 3m with spherical propagation at a reference level of 2 x 10^{-12} Pa

Optional Accessories

Part No	Description
10531150T1	HEAT.BATTERY+CONTROLS 150
426332	Wired manual 0-10V proportional/TSLC1 CONTROLLER BOXED ASSEMBLY TURBO/SLIMPACK/
83015030	015-030 SONEX ATTENUATOR
83015060	015-060 SONEX ATTENUATOR
83015090	015-090 SONEX ATTENUATOR

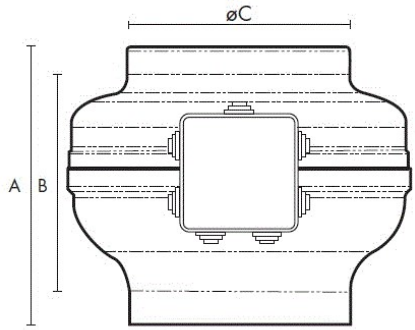
Part No	Description
LS250	RU LOUVRE TYPE WALL
QPF160A	Panel Filters
QPFB150A	Bag Filters
WB160	ROOF COWL,EPOXY FINISHED

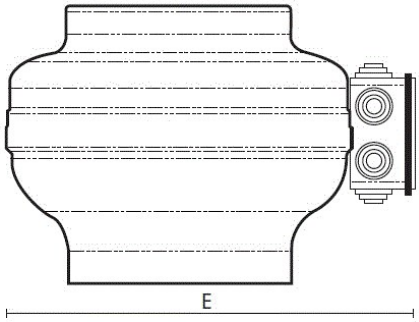
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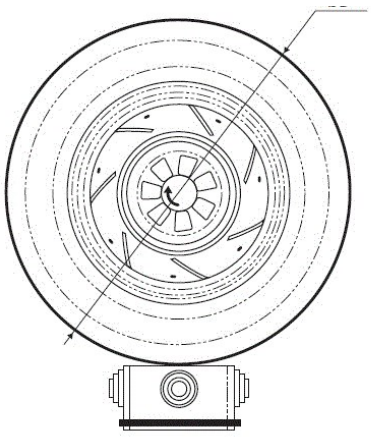
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Sales Tel: 0844 856 0594
Tech Support Tel: 0844 856 0595







A	B	C	D	E	wgt
222	172	150	344	386	3.1

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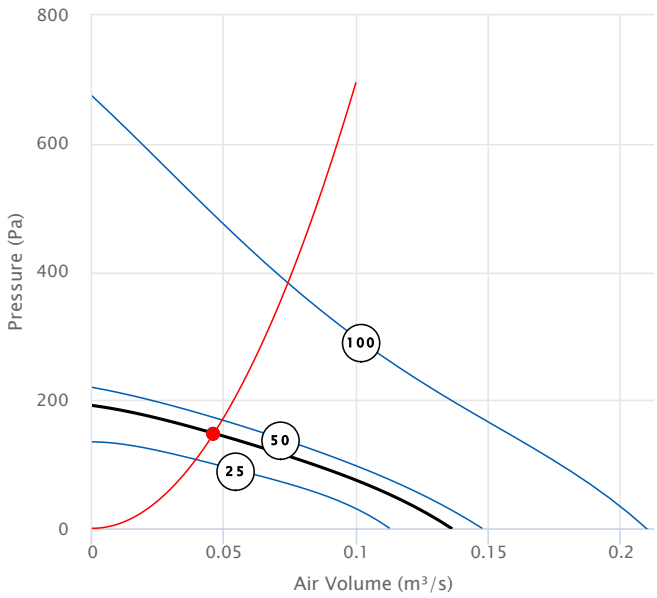
Industrial
Sales Tel: 0844 856 0594
Tech Support Tel: 0844 856 0595

Product Information

In-Line Tube Fans - Euroseries (SDX)



Performance Chart



Technical Information

Requested Duty	0.046 m³/s @ 148 Pa
Actual Duty	0.046 m³/s @ 148 Pa
Stock Reference	SDX150EC
Product Type	In-Line Tube Fans
Product Range	In-Line Tube Fans
Casing	Painted galvanised sheet steel
Airstream Temperature	-40 - 60°C
Specific Fan Power	0.5
dBA	21 dBA @ 3m
Warranty	2 years

Electrical Information

Motor Rating	0.02
Selection Power	0.02
Suppy Voltage	220-240V/1/50Hz
Full Load Current	0.75 A
Starting Current	0.00 A
Starting Method	
Motor Poles	-
Insulation	B
IP Rating	IPX2
S.T.O.P. Protection	
Speed Controllable	In Built
Integral Controller	

Sound Information at Duty Point

	63	125	250	500	1k	2k	4k	8k	Total	dbA @ 3m
Inlet	25	36	41	52	47	48	40	34	55	36
Outlet	21	31	36	47	42	43	35	29	50	28
Surrounding	19	24	29	40	35	36	28	22	43	21

Sound Power Level Spectra dB (re 10^{-12} Watts)
For ducted units, sound power is given as In Duct with end reflections added.
Stated dB(A) levels at 3m with spherical propagation at a reference level of 2 x 10^{-12} Pa

Optional Accessories

Part No	Description
10531150T1	HEAT.BATTERY+CONTROLS 150
426332	Wired manual 0-10V proportional/TSLC1 CONTROLLER BOXED ASSEMBLY TURBO/SLIMPACK/
83015030	015-030 SONEX ATTENUATOR
83015060	015-060 SONEX ATTENUATOR
83015090	015-090 SONEX ATTENUATOR

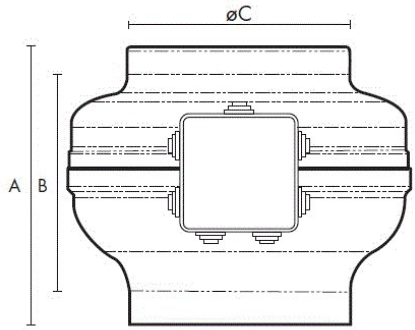
Part No	Description
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QPF160A	Panel Filters
QPFB150A	Bag Filters
WB160	ROOF COWL,EPOXY FINISHED

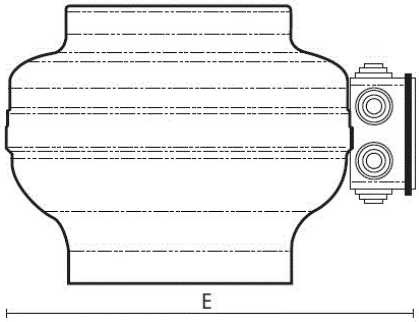
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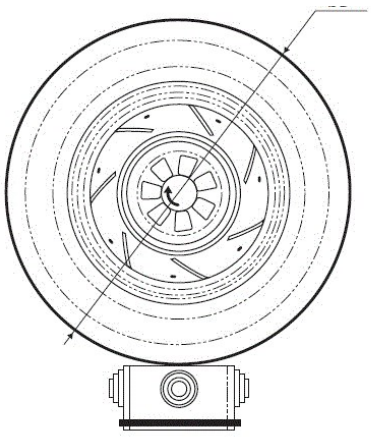
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A	B	C	D	E	wgt
222	172	150	344	386	3.1

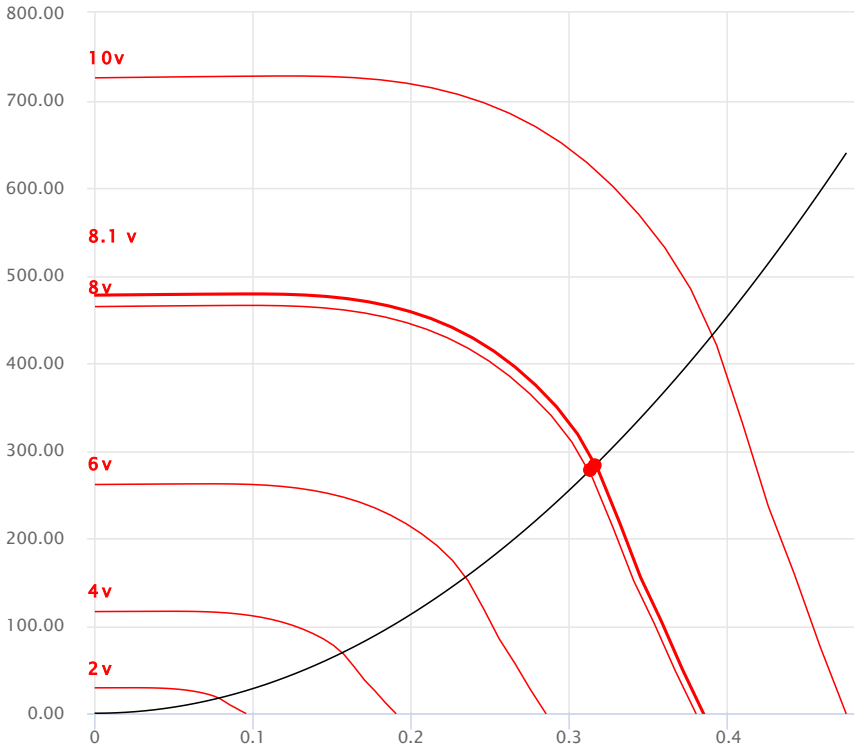
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Client:	Engineer:	
Quote Number:	Date:	29/10/2024
Item Reference:	Item Quantity:	1

ITEC-315 High Efficiency EC Twin Fan



High Efficiency EC Twin Fan for Convenient Fitting and Full Control Run and 100% stand-by. Robust corrosion resistant casing in galvanised steel. Access panel offers either top or bottom access on duct mounted units. All units are fitted with single inlet independent backwards curve centrifugal fans, powered by direct driven motors. IP 55 Terminal box fitted to casing providing connection to both fans. Standard side mounting rails for easy fitting.

Performance Chart



Product

Ref.No.	S1528
Model Code	ITEC-315
Fan Size	315 mm
Weight	44.0 kg

Performance

Requested Duty	0.313 m^3/s @ 278 Pa (Static)
Actual Duty	0.316 m^3/s @ 283 Pa (Static)
Outlet Dynamic Pressure	6.11 Pa
Velocity	3.18 m/s
Fan Nominal Speed	2850 rpm
Estimated Control Voltage	8.1 v
Specific Fan Power	0.32 W/l/s
Output Power	0.316 kW
Fan Efficiency	29 %

Motor

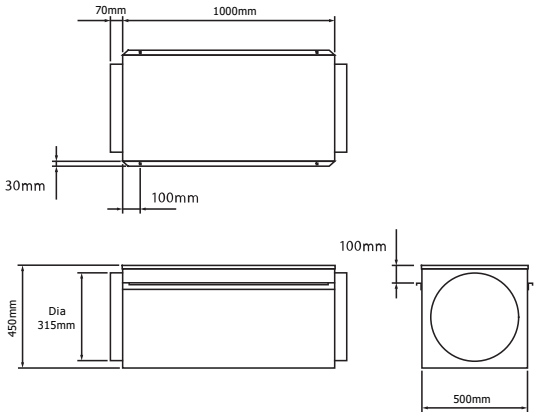
Rating	0.480 kW
Poles	2
Motor Input Power	0.102 kWh
Electrical Supply	230v/1Ph/50Hz
Full Load Current	2.8 A

Sound

Sound Pressure Level 27 dB(A) at 3m

Spectrum		Hz	Total	125	250	500	1k	2k	4k	8k
LwA	Intake	dB(A)	67	46	61	65	59	50	46	49
LwA	Breakout	dB(A)	48	38	44	44	34	27	19	20

Dimension and Drawing



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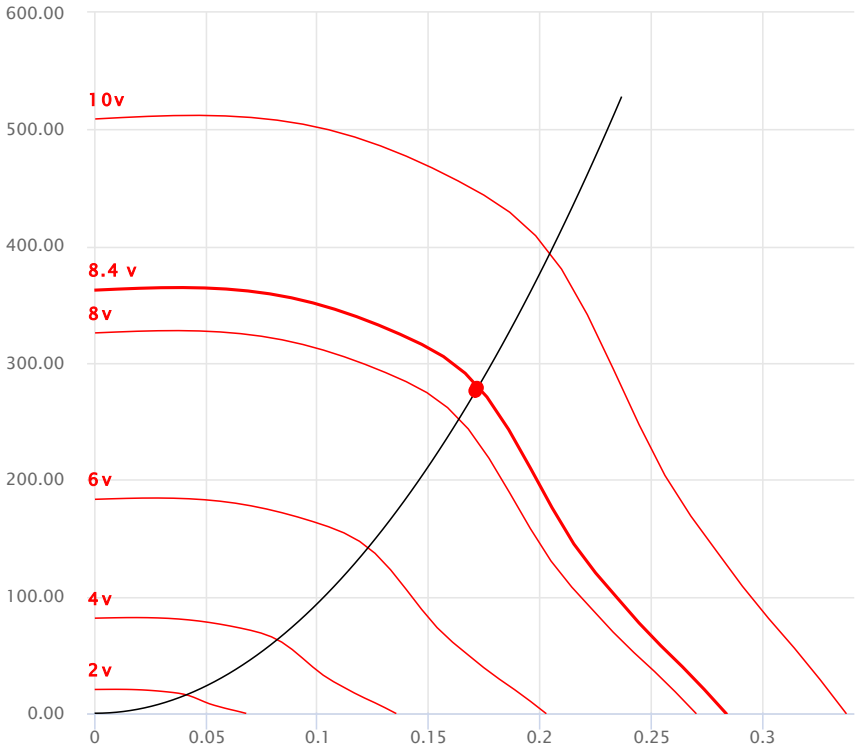
Project Name:		
Client:	Engineer:	
Quote Number:	Date:	29/10/2024
Item Reference:	Item Quantity:	1

ITEC-250 High Efficiency EC Twin Fan



High Efficiency EC Twin Fan for Convenient Fitting and Full Control Run and 100% stand-by. Robust corrosion resistant casing in galvanised steel. Access panel offers either top or bottom access on duct mounted units. All units are fitted with single inlet independent backwards curve centrifugal fans, powered by direct driven motors. IP 55 Terminal box fitted to casing providing connection to both fans. Standard side mounting rails for easy fitting.

Performance Chart



Product

Ref.No.	S1526
Model Code	ITEC-250
Fan Size	250 mm
Weight	20.0 kg

Performance

Requested Duty	0.171 m^3/s @ 276 Pa (Static)
Actual Duty	0.172 m^3/s @ 279 Pa (Static)
Outlet Dynamic Pressure	4.56 Pa
Velocity	2.75 m/s
Fan Nominal Speed	2780 rpm
Estimated Control Voltage	8.4 v
Specific Fan Power	0.36 W/l/s
Output Power	0.110 kW
Fan Efficiency	44.2 %

Motor

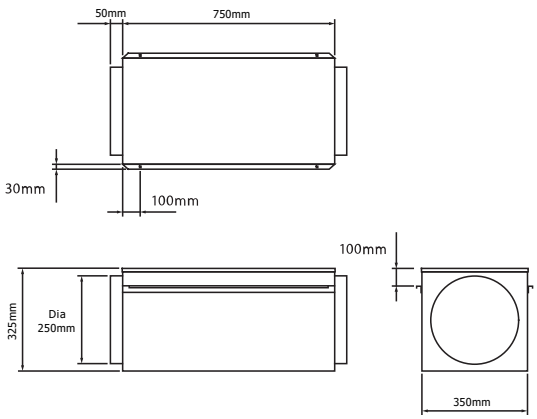
Rating	0.155 kW
Poles	2
Motor Input Power	0.063 kWh
Electrical Supply	230v/1Ph/50Hz
Full Load Current	1.25 A

Sound

Sound Pressure Level 27 dB(A) at 3m

Spectrum		Hz	Total	125	250	500	1k	2k	4k	8k
LwA	Intake	dB(A)	67	55	63	63	59	52	46	45
LwA	Breakout	dB(A)	48	43	45	41	34	28	19	14

Dimension and Drawing



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