



QUBE SQU

Centrifugal Box Fan

QUBE SQU

Product Overview



- 4 physical sizes with 5 models from 315mm to 710mm
- Air volume flow rates up to 3.9 m³/s
- Static pressures up to 928 Pa
- Suitable for operating temperatures up to +50°C.
- Inverter speed controllable via 1Ph and 3Ph supply
- Interchangeable double skinned panels
- Available in **AC**

A multi-discharge, double skinned fan unit incorporating a high performance backward curved impeller. Supplied for straight through airflow with the outlet panel positioned directly opposite the inlet panel. The outlet panel can be easily exchanged on-site to provide 90° airflow if required.

Intelligent Design

Movable panels allow the outlet position to be altered on site to suit installation.

Low Noise

Unit is constructed from double insulated panels filled with 25mm fibreglass acoustic insulation.

Controllability

The Eltadrive range of inverters has been designed encompassing the latest technology and combine robustness with reliability. Using an inverter to control fans via sensors to reduce fan speed can provide significant cost savings through lower energy consumption.

Warranty

Each SQU has a 12 month warranty.

Construction

Constructed from self supporting corrosion-resistant extruded aluminium section. The inlet and outlet panels incorporate circular spigots. Assembled with shock resistant fibreglass reinforced Polyamide PA6 corners, and 25mm thick double skinned removable panel. Manufactured from pre-galvanised steel, in-filled with a non flammable mineral wool, 60kg/m³ which minimises breakout noise.

Motor

Three phase multi-voltage IP55 TEFC Foot / Flange mounted IEC frame motors, wound for either (Delta) 230V/3Ph/50Hz or (Star) at 400V/3Ph/50Hz connection. They are suitable for speed control when used with the Eltadrive VSD range of frequency inverter controls.

Impeller

A high efficiency centrifugal welded steel impeller with a non-overloading power characteristic. A backward curved impeller prevents the accumulation of dirt. Finished with a powder coating to RAL 5002 for greater surface protection and dynamically balanced to G2.5 / G6.3 according to ISO1940 part 1.

Typical Applications

- Kitchens
- Restaurants
- Schools
- Colleges
- Shops
- Sports Halls
- Shower Rooms
- Factories
- Industrial Units
- Warehousing

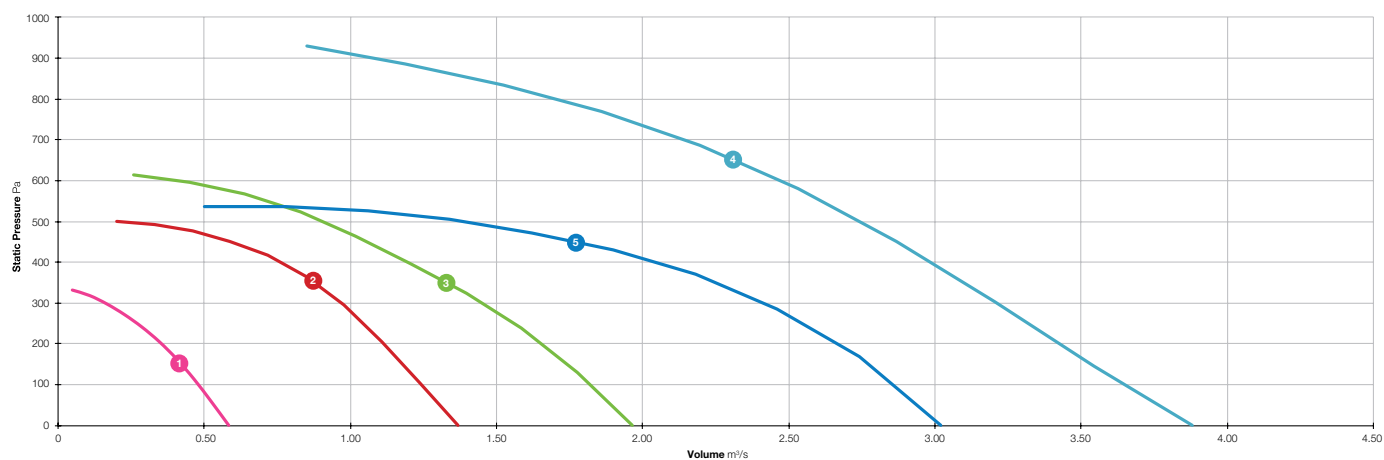
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Product Coding

Code	Reference
SQU	Product Range
1	Diameter (1/2/3...)
/	
4	Number of Poles (2/4/6)
-	
3	Voltage Supply (Single Phase / Three Phase)
AC	Motor Type (AC/EC)
A - Z	Additional Coding (A - Z) Product Variants
e.g.	SQU1 / 4 - 3AC

Performance Range Curves



1 SQU1 / 4-3
2 SQU2 / 4-3

3 SQU3 / 4-3
4 SQU4 / 4-3

5 SQU4 / 6-3

Performance, SFP & Electrical Data

Three Phase 380V to 415V / 50Hz

Product Code	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa												At Best Efficiency Point			Electrical Data		dBA @ 3m	
			0	100	200	250	300	350	400	500	600	700	800	900	Overall Eff %	Input kW	Peak Amps	FLC* Amps	FLC# Amps		
SQU1/4-3	1450	m³/s	0.581	0.481	0.353	0.264	0.163	-	-	-	-	-	-	-	35.5	0.250	0.81	2.30	1.02	Inlet	51
		W/(L/s)	0.32	0.45	0.74	1.00	1.31	-	-	-	-	-	-	-						Outlet	53
																				Breakout	36
SQU2/4-3	1420	m³/s	1.366	1.243	1.115	1.045	0.967	0.877	0.764	0.185	-	-	-	-	55.6	0.550	1.42	5.30	2.05	Inlet	57
		W/(L/s)	0.31	0.42	0.53	0.59	0.66	0.74	0.84	-	-	-	-	-						Outlet	59
																				Breakout	44
SQU3/4-3	1469	m³/s	1.964	1.822	1.657	1.560	1.451	1.329	1.197	0.904	0.410	-	-	-	44.4	1.077	2.40	8.50	3.17	Inlet	60
		W/(L/s)	0.39	0.49	0.60	0.66	0.73	0.81	0.90	1.13	1.86	-	-	-						Outlet	62
																				Breakout	47
SQU4/4-3	1447	m³/s	3.878	3.640	3.424	3.317	3.210	3.102	2.989	2.749	2.476	2.143	1.707	1.089	52.2	3.000	6.50	-	6.20	Inlet	66
		W/(L/s)	0.49	0.61	0.71	0.77	0.82	0.87	0.93	1.04	1.18	1.25	1.34	1.45						Outlet	68
																				Breakout	48
SQU4/6-3	910	m³/s	3.019	2.863	2.672	2.556	2.420	2.255	2.047	1.388	-	-	-	-	60.3	1.500	3.90	7.60	2.80	Inlet	59
		W/(L/s)	0.36	0.41	0.47	0.51	0.55	0.60	0.67	0.90	-	-	-	-						Outlet	61
																				Breakout	46

FLC* Amps at 230V / 1Ph / 50Hz input before a 1Ph to 3Ph Variable Speed Drive.

FLC# Amps at 400V / 3Ph / 50Hz input before a 3Ph to 3Ph Variable Speed Drive.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: D.

A variable speed drive (Eltadrive) must be installed with this fan.

Data provided is at standard air density of 1.2 kg/m³.

Peak Amps @ 400V / 3PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

Sound Data

Three Phase 380V to 415V / 50Hz

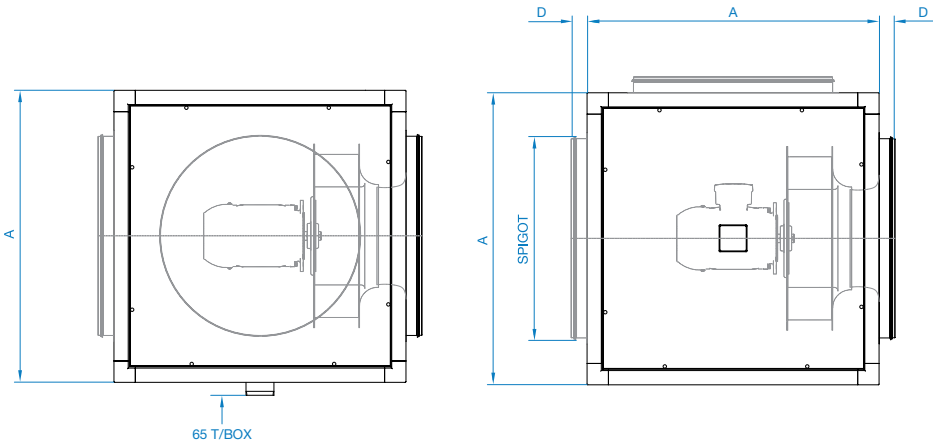
Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SQU1/4-3	1450	Inlet	62	66	70	70	66	62	57	53	75
		Outlet	64	68	72	72	68	64	59	55	77
		Breakout	61	63	61	55	45	35	24	18	67
SQU2/4-3	1420	Inlet	68	72	76	76	72	68	63	59	81
		Outlet	70	74	78	78	74	70	65	61	83
		Breakout	69	71	69	63	54	44	36	33	75
SQU3/4-3	1469	Inlet	72	76	79	79	75	71	67	62	84
		Outlet	74	78	81	81	77	73	69	64	86
		Breakout	73	75	72	66	58	52	43	38	79
SQU4/4-3	1447	Inlet	78	82	86	85	81	77	73	68	91
		Outlet	80	84	88	87	83	79	75	70	93
		Breakout	77	76	73	68	59	52	41	33	81
SQU4/6-3	910	Inlet	73	76	79	78	74	70	65	61	84
		Outlet	75	78	81	80	76	72	67	63	86
		Breakout	74	75	72	65	56	49	42	31	79

Data provided at standard air density of 1.2 kg/m³.
Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
The Sound Power Level Spectra are in dB re-1pW.

Dimensional Data

Three Phase

Product Code	A	D	SPIGOT Ø	Weight kg
SQU1/4-3	500	63	315	38
SQU2/4-3	670	80	500	66
SQU3/4-3	820	80	560	99
SQU4/4-3	1020	99	710	165
SQU4/6-3	1020	99	710	178



*Weight does not include mounting feet.
Dimensions are in mm.

EcoDesign 1253/2014 - Information Requirements

REV2 01/05/2018

A	B	C*			D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S
		C.1	C.2	C.3															
Elta Fans Ltd	SQU1/4-3	NRVU	UVU	2018	Variable-Speed	None	n/a	0.42	0.18	n/a	5.39	152	n/a	35.5	TBC	n/a	n/a	51	www.eltafans.com
Elta Fans Ltd	SQU2/4-3	NRVU	UVU	2018	Variable-Speed	None	n/a	0.85	0.55	n/a	4.33	360	n/a	55.6	TBC	n/a	n/a	57	www.eltafans.com
Elta Fans Ltd	SQU3/4-3	NRVU	UVU	2018	Variable-Speed	None	n/a	1.21	1.077	n/a	4.91	396	n/a	44.4	TBC	n/a	n/a	60	www.eltafans.com
Elta Fans Ltd	SQU4/4-3	NRVU	UVU	2018	Variable-Speed	None	n/a	2.274	2.888	n/a	5.74	663	n/a	52.2	TBC	n/a	n/a	65	www.eltafans.com
Elta Fans Ltd	SQU4/6-3	NRVU	UVU	2018	Variable-Speed	None	n/a	1.904	1.352	n/a	4.81	428	n/a	60.3	TBC	n/a	n/a	59	www.eltafans.com

- A** Manufacturer's Name
- B** Model Identifier
- C.1** RVU or NRVU
- C.2** UVU or BVU
- C.3** ErP Compliance
- D** Type of Drive (MSD or VSD)
- E** Type of HRS (Run Around or Other or None)
- F** Thermal Efficiency (% or N/A)
- G** Nominal Flow Rate (m³/s)
- H** Effective Electrical Power Input (kW)
- I** SFP Int (W/m³/s)
- J** Face Velocity (m/s)
- K** Nominal External Pressure (Pa)
- L** Internal Pressure Drop of Ventilation Components (Pa)
- N** Static Efficiency of Fan Used 327/2011
- O** Maximum External Leakage Rate (%)
- P** Energy Classification of Filters
- Q** Description of Visual Filter warning
- R** Casing Sound Power Level (LWA)
- S** Website for Disassembly Instructions

* Declared Typology C

Three Phase

Product Code	Circular Weather Hood	Eltadrive Variable Speed Drive 1PH-3PH IP66	Eltadrive Variable Speed Drive 1PH-3PH IP20	Eltadrive Variable Speed Drive 3PH-3PH IP66	Eltadrive Variable Speed Drive 3PH-3PH IP20
SQU1/4-3	064-SQU1-WHC	149-ODE3-12037-1KB1Y	149-ODE3-12037-1KB12	149-ODE3-14075-3KA1Y	149-ODE3-14075-3KA12
SQU2/4-3	064-SQU2-WHC	149-ODE3-12075-1KB1Y	149-ODE3-12075-1KB12	149-ODE3-14075-3KA1Y	149-ODE3-14075-3KA12
SQU3/4-3	064-SQU3-WHC	149-ODE3-12150-1KB1Y	149-ODE3-12150-1KB12	149-ODE3-14150-3KA1Y	149-ODE3-14150-3KA12
SQU4/4-3	064-SQU4-WHC	-	-	149-ODE3-24400-3KA4Y	149-ODE3-24400-3KA42
SQU4/6-3	064-SQU4-WHC	149-ODE3-22220-1KB4Y	149-ODE3-22220-1KB42	149-ODE3-24220-3KA4Y	149-ODE3-24220-3KA42

Product Code	Flanged Silencer 1D Unpodded	Flanged Silencer 2D Unpodded	Matching Flanges (each)	Standard Ambient Flexible Connectors (each)	Wiring Diagram
SQU1/4-3	068-0315-1DENP	068-0315-2DENP	061B-0315	063-0315-MAN150	152-611
SQU2/4-3	068-0500-1DENP	068-0500-2DENP	061B-0500	063-0500-MAN150	152-611
SQU3/4-3	068-0560-1DENP	068-0560-2DENP	061B-0560	063-0560-MAN150	152-611
SQU4/4-3	068-0710-1DENP	068-0710-2DENP	061B-0710	063-0710-MAN200	152-611
SQU4/6-3	068-0710-1DENP	068-0710-2DENP	061B-0710	063-0710-MAN200	152-611

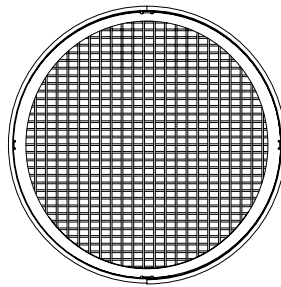
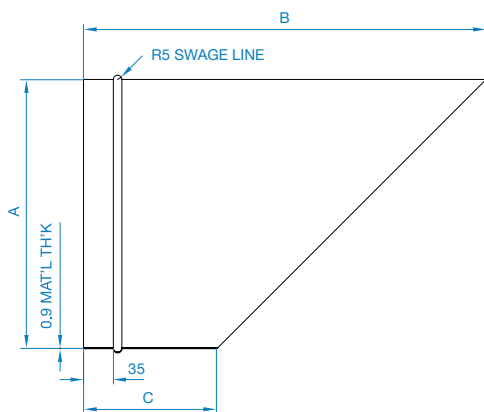
CIRCULAR WEATHER HOOD

Accessories



- For use with SQU range
- External Weather Hood for outdoor applications
- Pre-fitted birdguard
- 0.9mm galvanised steel

Product Code	ØA (Nominal)	B	C	Weight kg
064-SQU1-WHC	315	473	155	3
064-SQU2-WHC	500	750	248	7
064-SQU3-WHC	560	840	278	9
064-SQU4-WHC	710	1065	353	14



For controllers with TK function add suffix TK, EL21, EL41 and EL101 are not available with this option.
Dimensions are in mm.

ELTADRIVE VARIABLE SPEED DRIVES

IP20

- Up to 22kW
- Built in PI control, EMC filter (C1) & brake chopper
- Application macros for industrial fan operation
- Bluetooth® connectivity
- Controls multiple motor types: IE2, 3, 4, IM, PM, BLDC and SynRM
- Operates up to 50°C



Overview

Compact, robust and reliable general purpose drive for panel mounting.

Simply Power Up

Eltadrive E3 provides precise motor control and energy savings using the factory settings. Simply power up and the drive can immediately deliver energy savings. 14 basic parameters allow simple adjustment for your application if required, with up to 50 parameters available in total for a highly flexible performance.

Power Supply

Connects at top.

Fast Connection

5mm rising clamp terminals with captive screws.

Quick Reference

Integrated help card.

Modbus RTS & CANopen

On board as standard.

SmartStart

Rapid parameter cloning and Bluetooth® PC interface.

Motor Supply

Connects at base.

Dimensional Data

Model	Size	Height	Width	Depth	Weight kg	Fixings
IP20	1	173	83	123	1.0	4 x M5
	2	221	110	150	1.7	4 x M5
	3	261	131	175	3.2	4 x M5
	4	420	171	212	9.1	4 x M8

Dimensions in mm.

ELTADRIVE VARIABLE SPEED DRIVES

IP66

- Up to 7.5kW
- Conformal coating as standard
- Switched or Non-Switched

Overview

Enclosed drives for direct machine mounting, dust-tight and ready for washdown duty.

Dust Tight Design

Install directly on your processing equipment and be sure of protection from dust and contaminants.

Washdown Ready

With a sealed ABS enclosure and corrosion resistant heatsink, the Eltadrive E3 IP66 is ideal for high-pressure washdown applications.

Eltadrive E3 IP66 Switched

Simply wire up the drive, turn the inbuilt potentiometer and the motor will start running - allowing immediate energy savings.

Coated Heatsink as Standard

Ideal for hygiene based operations requiring washdown such as food & beverage.

Fanless Heatsink

For reliable, cost effective operation.

Local Speed Potentiometer

Run Reverse / Off / Run Forward Switch

Lockable Mains

Disconnect / Isolator.

Dimensional Data

Model	Size	Height	Width	Depth	Weight kg	Fixings
IP66	1	232	161	179	3.1	4 x M4
	2	257	188	187	4.1	4 x M4
	3	310	211	252	7.6	4 x M4

Dimensions in mm.



FLANGED SILENCER

Accessories



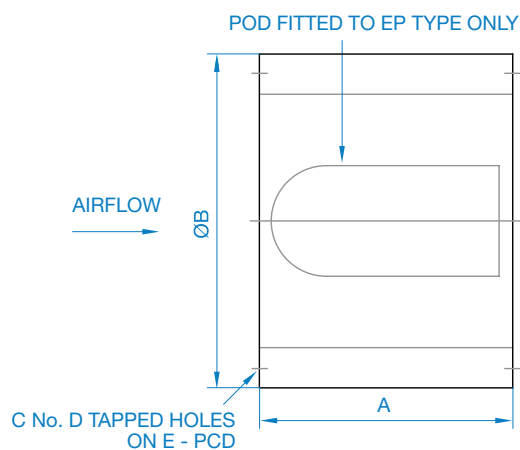
- Ideal for bolting directly to fan flange
- Ideal for all axial fans
- Ideal for cross talk elimination
- Ideal for flexible or spiral ducting

Silencer 1D Unpodded

Product Code	Fan Dia	A	B	C	D	E	Weight kg
068-0315-1DENP	315	315	416	8	M8	355	9
068-0500-1DENP	500	500	657	12	M10	560	18
068-0560-1DENP	560	560	714	12	M10	620	22
068-0710-1DENP	710	710	864	16	M10	770	32

Silencer 2D Unpodded

Product Code	Fan Dia	A	B	C	D	E	Weight kg
068-0315-2DENP	315	630	416	8	M8	355	15
068-0500-2DENP	500	1000	657	12	M10	560	32
068-0560-2DENP	560	1120	714	12	M10	620	39
068-0710-2DENP	710	1420	864	16	M10	770	59

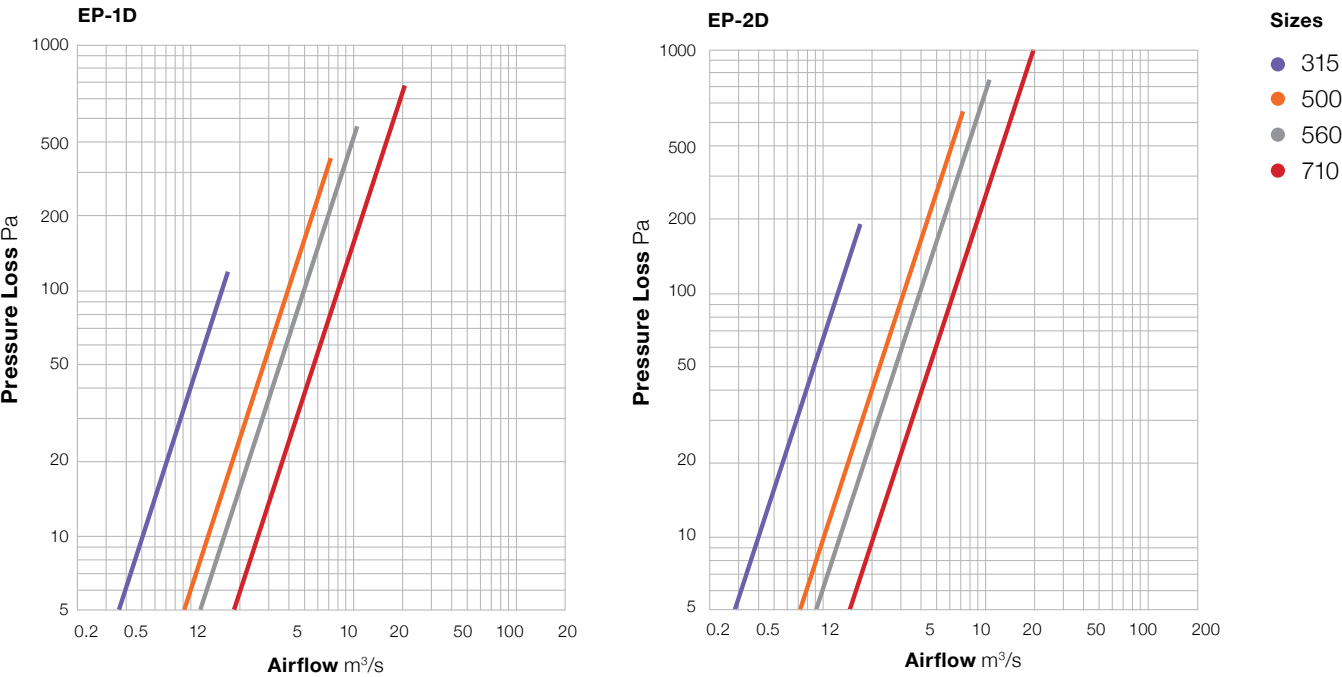


FLANGED SILENCER

Dynamic Insertion Loss

Fan Size	Silencer Length	Silencer Type	Insertion Loss @ Octave Band (Hz)							
			63	125	250	500	1k	2k	4k	8k
0315-0560	1D	ENP	-2	-5	-6	-9	-13	-11	-6	-6
		EP	-4	-6	-8	-11	-18	-19	-17	-14
	2D	ENP	-4	-8	-12	-17	-23	-17	-12	-10
		EP	-7	-10	-12	-21	-26	-26	-24	-22
0710	1D	ENP	-3	-4	-9	-15	-15	-8	-7	-6
		EP	-4	-6	-8	-17	-23	-20	-18	-10
	2D	ENP	-6	-8	-13	-22	-22	-13	-12	-9
		EP	-8	-11	-16	-27	-32	-31	-29	-19

Pressure Graphs



For Ø250 podded pressure losses, please contact Elta Fans.

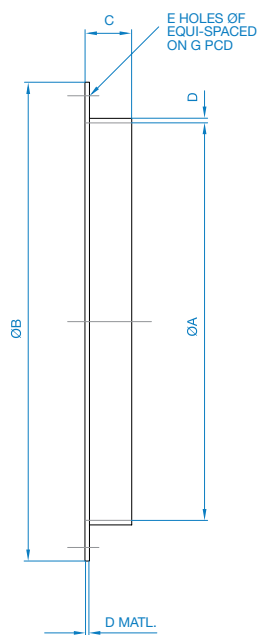
MATCHING FLANGES

Accessories

- Fits directly to fan case flange
- Provides easy connection to flexible connector or ducting
- Hot dip galvanised steel



Product Code	Fan Dia. A	B	C	D	E	F	G	Weight kg
061B-0315	315	375	30	1.5	8	10	355	0.7
061B-0500	500	585	45	2.0	12	12	560	2.6
061B-0560	560	645	45	2.0	12	12	620	3.0
061B-0710	710	795	45	2.0	16	12	770	3.7



Dimensions are in mm.

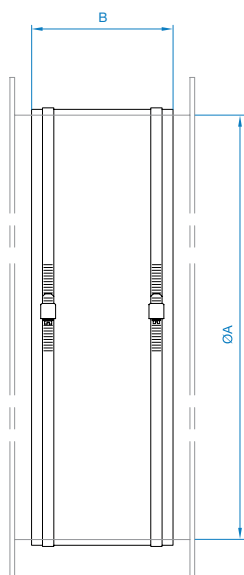
STANDARD AMBIENT FLEXIBLE CONNECTOR

Accessories

- Fit to matching flanges to provide flexible connection
- PVC coating polyester
- Supplied with plated steel band fixings
- Alternative material available to order
- Suitable for temperatures between -30°C and +70°C



Product Code	Fan Dia. A	B	Weight kg
063-0315-MAN150	315	150	0.6
063-0500-MAN150	500	150	1.2
063-0560-MAN150	560	150	1.3
063-0710-MAN200	710	200	2.0



Dimensions are in mm.

Building Services

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