



# MULTIFLOW SMB

Mixed Flow Box Fan

# MULTIFLOW SMB

## Product Overview

- 6 standard sizes from 400mm to 700mm
- Air volume flow rates up to 4.07 m<sup>3</sup>/s
- Static pressures up to 796 Pa
- Suitable for operating temperatures up to +60°C
- Available in **AC**



**The unique and new blade geometry in this square, duct mounted, mixed flow fan offers increased airflow with smaller diameters.**

### Easy Installation

Lightweight construction with Ductmate flanges allowing easy installation.

### Efficient Performance

High volume flow rates, high efficiency, low acoustic emissions due to special three-dimensional blade geometry with diagonal air discharge, reduced rotational tone.

### Controllability

A range of transformer voltage controllers can be used to provide five speed step control of single phase or three phase motors.

### Energy saving

Backward-curved, aerofoil section blades provide high volume flow rates and high efficiencies.

### Warranty

Each SMB has a 12 month warranty.

### Construction

Manufactured using pre-galvanised sheet steel suitably stiffened. Casings incorporate Ductmate flange connections at each end. Motor supports are constructed from steel sheet, hot-dip galvanised to BS EN ISO 1461:2009 after manufacture and have an aerodynamic profile.

### Motor

The motor contains sealed for life bearings and have a Thermal Class of to THCL 130 or 155 dependent on size. All motors are suitable for use in ambient air conditions up to +60°C.

### Impeller

Made from high-performance composite material with 7 backward-curved, aerofoil section blades.

### Typical Applications

- Kitchen Canopies
- Restaurants
- Lift Motor Rooms
- General HVAC installations

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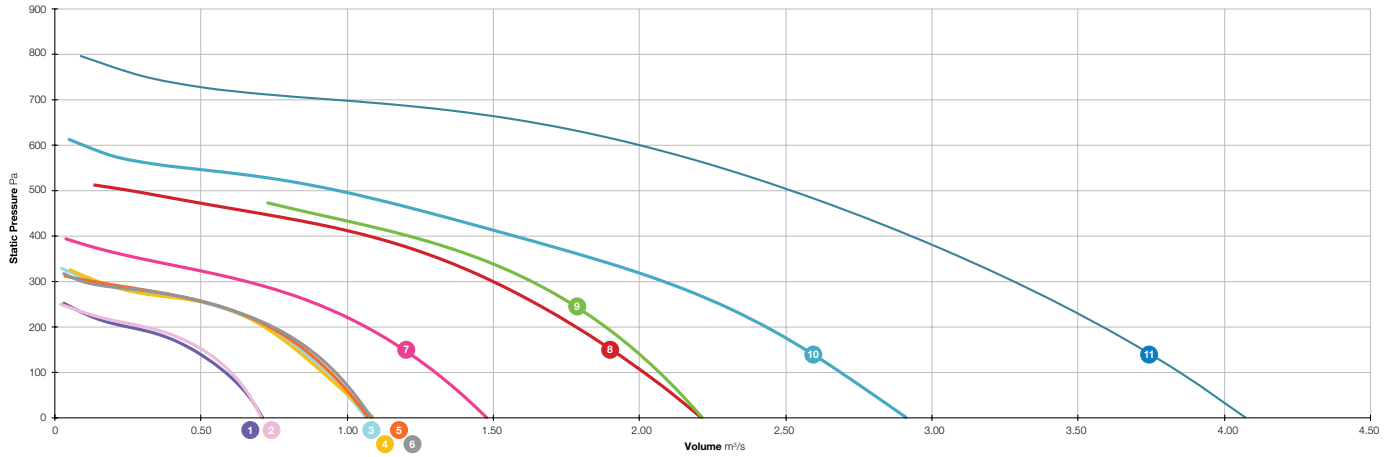
### Product Coding

Code	Reference
<b>SMB</b>	Product Range
<b>400</b>	Diameter (400/450/500...)
/	
<b>4</b>	Number of Poles (2/4/6)
-	
<b>1</b>	Voltage Supply (Single Phase / Three Phase)
<b>AC</b>	Motor Type (AC/EC)
<b>A - Z</b>	Additional Coding (A - Z) Product Variants
e.g.	<b>SMB400 / 4 - 1AC</b>

# MULTIFLOW SMB



## Performance Range Curves



- 1 SMB400 / 4-1AC
- 2 SMB400 / 4-3AC
- 3 SMB450 / 4-1AC
- 4 SMB450 / 4-3AC

- 5 SMB500 / 4-1AC
- 6 SMB500 / 4-3AC
- 7 SMB550 / 4-1AC
- 8 SMB550 / 4-3AC

- 9 SMB650 / 4-1AC
- 10 SMB650 / 4-3AC
- 11 SMB700 / 4-3AC

# MULTIFLOW SMB



## Performance, SFP & Electrical Data

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min	Airflow SFP	Airflow m <sup>3</sup> /s @ Static Pressure Pa											At Best Efficiency Point		Electrical Data		dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	Overall Eff %	Input kW	Peak Amps			
SMB400/4-1AC	1370	m <sup>3</sup> /s	<b>0.709</b>	<b>0.686</b>	<b>0.658</b>	<b>0.624</b>	<b>0.581</b>	<b>0.470</b>	<b>0.248</b>	<b>0.036</b>	-	-	-	34.2	0.212	1.09	Inlet	46	
		W/(L/s)	0.29	0.31	0.33	0.36	0.38	0.46	0.74	3.73	-	-	-				Outlet	49	
SMB450/4-1AC	1385	m <sup>3</sup> /s	<b>1.064</b>	<b>1.033</b>	<b>1.000</b>	<b>0.965</b>	<b>0.927</b>	<b>0.838</b>	<b>0.721</b>	<b>0.529</b>	<b>0.144</b>	-	-	38.4	0.391	2.05	Inlet	43	
		W/(L/s)	0.35	0.37	0.38	0.40	0.43	0.48	0.55	0.70	1.92	-	-				Outlet	47	
SMB500/4-1AC	1385	m <sup>3</sup> /s	<b>1.071</b>	<b>1.043</b>	<b>1.012</b>	<b>0.978</b>	<b>0.941</b>	<b>0.853</b>	<b>0.735</b>	<b>0.541</b>	<b>0.135</b>	-	-	38.2	0.386	1.99	Inlet	48	
		W/(L/s)	0.34	0.36	0.37	0.39	0.41	0.46	0.53	0.69	1.98	-	-				Outlet	52	
SMB550/4-1AC	1280	m <sup>3</sup> /s	<b>1.476</b>	<b>1.436</b>	<b>1.393</b>	<b>1.348</b>	<b>1.300</b>	<b>1.192</b>	<b>1.063</b>	<b>0.897</b>	<b>0.657</b>	<b>0.299</b>	-	39.0	0.574	2.67	Inlet	55	
		W/(L/s)	0.37	0.38	0.40	0.42	0.44	0.49	0.55	0.64	0.82	1.40	-				Outlet	58	
SMB650/4-1AC	1380	m <sup>3</sup> /s	<b>2.215</b>	<b>2.181</b>	<b>2.145</b>	<b>2.107</b>	<b>2.068</b>	<b>1.982</b>	<b>1.885</b>	<b>1.771</b>	<b>1.634</b>	<b>1.458</b>	<b>1.217</b>	44.6	1.143	5.28	Inlet	58	
		W/(L/s)	0.48	0.49	0.50	0.52	0.54	0.57	0.60	0.65	0.71	0.79	0.92				Outlet	61	

Data provided is at standard air density of 1.2 kg/m<sup>3</sup>.

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

Peak Amps @ 230V / 1PH / 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.

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## 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		Motor Electrical Data		dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	Input kW	Peak Amps	Δ / Y		
SMB400/4-3AC	1390	m³/s	<b>0.707</b>	<b>0.687</b>	<b>0.664</b>	<b>0.636</b>	<b>0.601</b>	<b>0.502</b>	<b>0.301</b>	-	-	-	-	-	37.5	0.208	0.52	Y	Inlet	46
		W/(L/s)	0.29	0.31	0.32	0.34	0.36	0.42	0.61	-	-	-	-	-					Outlet	50
SMB450/4-3AC	1375	m³/s	<b>1.089</b>	<b>1.045</b>	<b>1.001</b>	<b>0.958</b>	<b>0.914</b>	<b>0.823</b>	<b>0.716</b>	<b>0.536</b>	<b>0.148</b>	-	-	-	39.5	0.378	0.88	Y	Inlet	42
		W/(L/s)	0.33	0.35	0.37	0.39	0.42	0.47	0.54	0.67	1.67	-	-	-					Outlet	46
SMB500/4-3AC	1380	m³/s	<b>1.080</b>	<b>1.054</b>	<b>1.025</b>	<b>0.993</b>	<b>0.957</b>	<b>0.870</b>	<b>0.744</b>	<b>0.538</b>	<b>0.096</b>	-	-	-	38.6	0.386	0.88	Y	Inlet	49
		W/(L/s)	0.33	0.35	0.36	0.38	0.40	0.45	0.53	0.68	2.37	-	-	-					Outlet	52
SMB550/4-3AC	1385	m³/s	<b>2.209</b>	<b>2.163</b>	<b>2.115</b>	<b>2.064</b>	<b>2.012</b>	<b>1.901</b>	<b>1.780</b>	<b>1.647</b>	<b>1.496</b>	<b>1.314</b>	<b>1.071</b>	<b>0.254</b>	42.9	1.064	2.33	Y	Inlet	51
		W/(L/s)	0.48	0.49	0.50	0.51	0.53	0.57	0.61	0.66	0.73	0.82	0.95	2.47					Outlet	55
SMB650/4-3AC	1320	m³/s	<b>2.911</b>	<b>2.855</b>	<b>2.799</b>	<b>2.743</b>	<b>2.686</b>	<b>2.566</b>	<b>2.432</b>	<b>2.275</b>	<b>2.082</b>	<b>1.845</b>	<b>1.574</b>	<b>0.973</b>	44.3	1.433	2.89	Y	Inlet	57
		W/(L/s)	0.47	0.49	0.51	0.52	0.54	0.57	0.61	0.66	0.72	0.80	0.90	1.23					Outlet	61
SMB700/4-3AC	1350	m³/s	<b>4.070</b>	<b>4.017</b>	<b>3.962</b>	<b>3.904</b>	<b>3.844</b>	<b>3.718</b>	<b>3.582</b>	<b>3.435</b>	<b>3.278</b>	<b>3.108</b>	<b>2.927</b>	<b>2.517</b>	48.0	2.621	4.93	Y	Inlet	56
		W/(L/s)	0.61	0.62	0.63	0.64	0.66	0.69	0.72	0.76	0.80	0.85	0.91	1.05					Outlet	61

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

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

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.

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## Sound Data

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SMB400/4-1AC	1370	Inlet	72	71	64	61	59	60	58	52	75
		Outlet	74	71	64	65	63	65	60	55	77
SMB450/4-1AC	1385	Inlet	68	68	64	59	56	57	56	50	72
		Outlet	68	70	66	61	62	61	59	53	74
SMB500/4-1AC	1385	Inlet	71	72	67	65	60	62	62	56	76
		Outlet	72	71	67	67	68	66	64	58	77
SMB550/4-1AC	1280	Inlet	76	77	81	68	66	66	64	58	84
		Outlet	79	76	82	74	73	70	66	59	85
SMB650/4-1AC	1380	Inlet	86	83	79	73	72	71	67	63	89
		Outlet	90	85	81	76	78	74	70	62	92

Data provided at standard air density of 1.2 kg/m<sup>3</sup>.  
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.

# MULTIFLOW SMB



## 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	
SMB400/4-3AC	1390	Inlet	71	70	64	62	60	60	59	53	75
		Outlet	74	71	64	65	64	66	61	56	77
SMB450/4-3AC	1375	Inlet	65	68	61	58	54	56	55	49	71
		Outlet	66	67	61	60	62	60	58	52	72
SMB500/4-3AC	1380	Inlet	69	73	66	66	60	63	62	56	76
		Outlet	71	71	66	67	68	67	64	58	77
SMB550/4-3AC	1385	Inlet	73	75	70	67	64	65	63	58	79
		Outlet	78	74	72	71	71	68	65	59	81
SMB650/4-3AC	1320	Inlet	78	82	77	72	71	70	67	62	85
		Outlet	86	82	83	74	77	73	68	61	89
SMB700/4-3AC	1350	Inlet	78	79	76	73	71	70	67	63	84
		Outlet	82	79	78	78	78	73	70	63	87

Data provided at standard air density of 1.2 Kg/m<sup>3</sup>.  
 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.

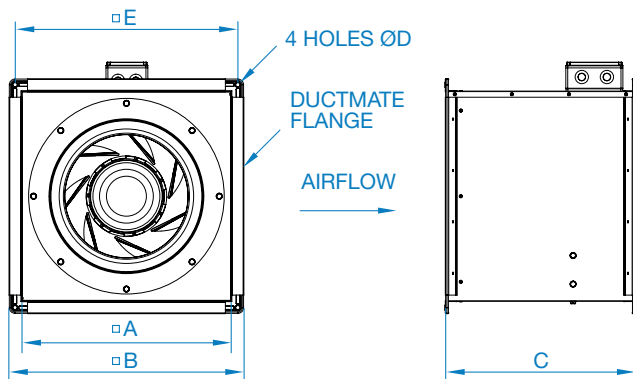
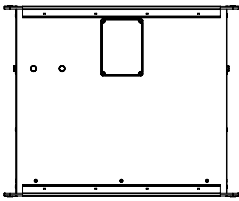
# MULTIFLOW SMB



## Dimensional Data

### Single & Three Phase

Product Code	A	B	C	D	E	Flange	Weight kg
SMB400	400	440	300	9	422	20	16
SMB450	450	490	400	9	472	20	23
SMB500	500	540	400	9	522	20	27
SMB550	550	617	500	11	586	35	41
SMB650	650	717	500	11	686	35	47
SMB700	700	768	500	11	736	35	55



Dimensions are in mm.



# MULTIFLOW SMB

## EcoDesign 1253/2014 - Information Requirements

REV1 26/07/2016

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	<b>SMB400/4-1AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.43	0.212	n/a	2.69	162	n/a	34.2	<5	n/a	n/a	46	www.eltafans.com
Elta Fans Ltd	<b>SMB450/4-1AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.67	0.391	n/a	3.31	218	n/a	38.4	<5	n/a	n/a	43	www.eltafans.com
Elta Fans Ltd	<b>SMB500/4-1AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.67	0.386	n/a	2.72	220	n/a	38.2	<5	n/a	n/a	48	www.eltafans.com
Elta Fans Ltd	<b>SMB550/4-1AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.87	0.574	n/a	3.66	256	n/a	39	<5	n/a	n/a	55	www.eltafans.com
Elta Fans Ltd	<b>SMB650/4-1AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	1.41	1.143	n/a	3.56	362	n/a	44.6	<5	n/a	n/a	58	www.eltafans.com
Elta Fans Ltd	<b>SMB400/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.45	0.208	n/a	2.81	167	n/a	37.5	<5	n/a	n/a	46	www.eltafans.com
Elta Fans Ltd	<b>SMB450/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.65	0.378	n/a	3.21	225	n/a	39.5	<5	n/a	n/a	42	www.eltafans.com
Elta Fans Ltd	<b>SMB500/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	0.68	0.386	n/a	2.76	219	n/a	38.6	<5	n/a	n/a	49	www.eltafans.com
Elta Fans Ltd	<b>SMB550/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	1.25	1.064	n/a	4.01	365	n/a	42.9	<5	n/a	n/a	51	www.eltafans.com
Elta Fans Ltd	<b>SMB650/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	1.62	1.433	n/a	4.09	392	n/a	44.3	<5	n/a	n/a	57	www.eltafans.com
Elta Fans Ltd	<b>SMB700/4-3AC</b>	NRVU	UVU	2018	Multi-Speed	None	n/a	2.31	2.621	n/a	4.6	543	n/a	48	<5	n/a	n/a	56	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 (m<sup>3</sup>/s)
- H** Effective Electrical Power Input (kW)
- I** SFP Int (W/m<sup>3</sup>/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

# MULTIFLOW SMB



## Accessories

### Single Phase

Product Code	AV Mounts (set of 4)	Mounting Brackets (each)	Splitter Silencer	Square Flexible Connectors (each)	Transformer Controller	Wiring Diagram
<a href="#">SMB400/4-1AC</a>	062-002	060-MFB-01	068-0400-MFB	063-0400-MFB	149-TC14	152-104A
<a href="#">SMB450/4-1AC</a>	062-002	060-MFB-01	068-0450-MFB	063-0450-MFB	149-TC14	152-104A
<a href="#">SMB500/4-1AC</a>	062-002	060-MFB-01	068-0500-MFB	063-0500-MFB	149-TC14	152-104A
<a href="#">SMB550/4-1AC</a>	062-003	060-MFB-01	068-0550-MFB	063-0550-MFB	149-TC14	152-104A
<a href="#">SMB650/4-1AC</a>	062-003	060-MFB-01	068-0650-MFB	063-0650-MFB	149-TC110	152-104A

### Three Phase

Product Code	AV Mounts (set of 4)	Mounting Brackets (each)	Splitter Silencer	Square Flexible Connectors (each)	Transformer Controller	Wiring Diagram
<a href="#">SMB400/4-3AC</a>	062-002	060-MFB-01	068-0400-MFB	063-0400-MFB	149-TC33	152-106A
<a href="#">SMB450/4-3AC</a>	062-002	060-MFB-01	068-0450-MFB	063-0450-MFB	149-TC33	152-106A
<a href="#">SMB500/4-3AC</a>	062-002	060-MFB-01	068-0500-MFB	063-0500-MFB	149-TC33	152-106A
<a href="#">SMB550/4-3AC</a>	062-003	060-MFB-01	068-0550-MFB	063-0550-MFB	149-TC310	152-106A
<a href="#">SMB650/4-3AC</a>	062-003	060-MFB-01	068-0650-MFB	063-0650-MFB	149-TC310	152-106A
<a href="#">SMB700/4-3AC</a>	062-003	060-MFB-01	068-0700-MFB	063-0700-MFB	149-TC310	152-106A

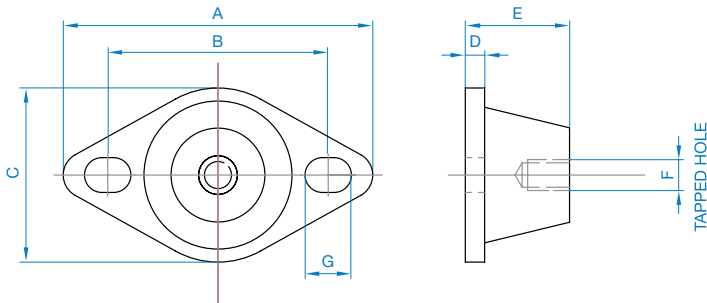
# AV MOUNTS

## Accessories



- Fits directly to mounting feet
- Rubber with steel insert
- Supplied as set of 4, complete with fixings

Product Code	A	B	C	D	E	F	G	Weight kg
062-002	64	50	43	5.5	20	M6	Ø7	0.040
062-003	80	57	45	5	32	M8	12 x 9	0.102



Dimensions are in mm.

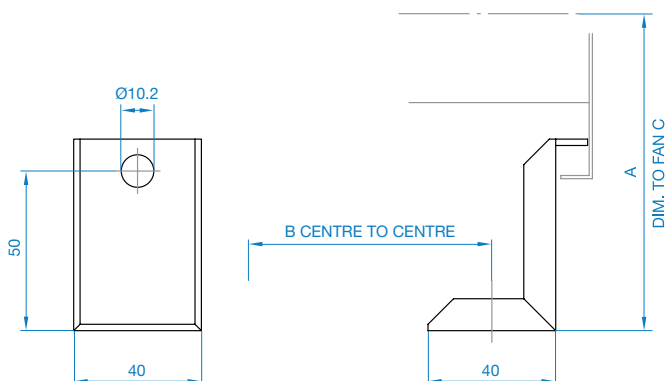
# MOUNTING BRACKETS

## Accessories



- For free standing mount of for use with ant-vibration mounts
- Fix directly to flange
- Supplied in sets of 4 (less fixings)
- Folded galvanised steel

Product Code	Fan Dia.	A	B	Weight kg
060-MFB-01	400	263	424	0.22
060-MFB-01	450	288	414	0.22
060-MFB-01	500	313	444	0.22
060-MFB-01	550	343	494	0.22
060-MFB-01	650	393	544	0.22
060-MFB-01	700	418	594	0.22



Dimensions are in mm.

# SPLITTER SILENCER

## Accessories

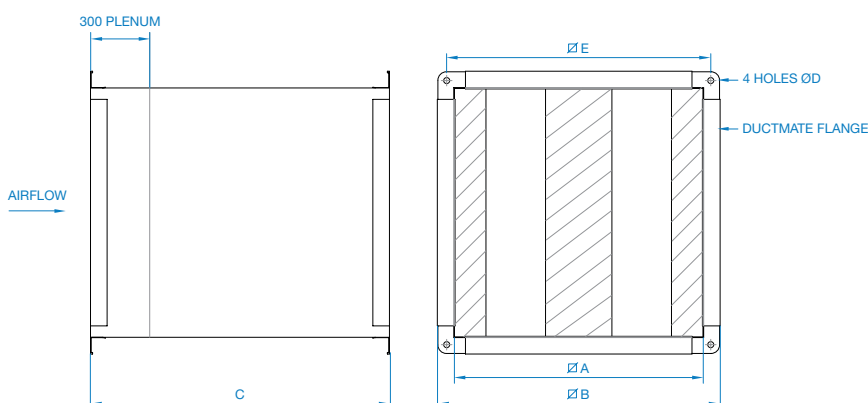


- Baffle type silencers
- Galvanised steel casing with perforated steel lining and baffles
- Infill is glass tissue faced high density mineral wool

Product Code	Insertion Loss @ Octave band							
	63	125	250	500	1K	2K	4K	8K
068-0400-MFB	-4	-6	-14	-23	-30	-29	-20	-14
068-0450-MFB	-4	-9	-13	-25	-31	-30	-22	-15
068-0500-MFB	-4	-9	-14	-24	-30	-30	-23	-16
068-0550-MFB	-4	-6	-11	-22	-28	-27	-18	-14
068-0650-MFB	-4	-7	-13	-24	-26	-25	-17	-12
068-0700-MFB	-4	-7	-13	-24	-26	-25	-17	-12

## Dimensional Data

Product Code	A	B	C	D	E	Ductmate Flange	Weight kg
068-0400-MFB	400	450	1200	9	425	25	31
068-0450-MFB	450	500	1200	9	475	25	38
068-0500-MFB	500	550	1200	9	525	25	42
068-0550-MFB	550	620	1200	11	585	35	49
068-0650-MFB	650	720	1500	11	685	35	74
068-0700-MFB	700	770	1500	11	735	35	81



Dimensions are in mm.

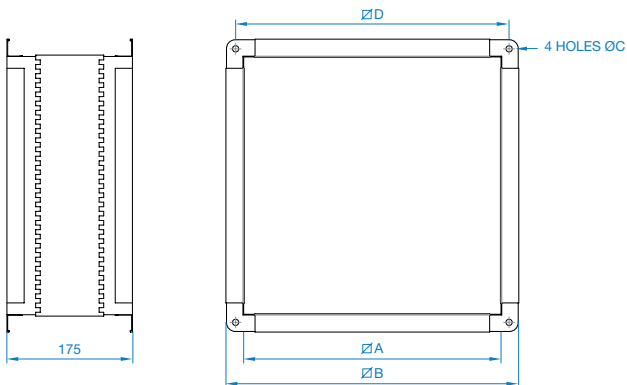
# SQUARE FLEXIBLE CONNECTOR

## Accessories

- Provides easy flexible connection with any matched ducting
- Supplied as an assembly (less fixing)
- Grey elastomer coated fibreglass material to galvanised steel flanges



Product Code	Fan Dia.	A	B	C	D	Weight kg
<a href="#">063-0400-MFB</a>	400	400	450	9	425	2.6
<a href="#">063-0450-MFB</a>	450	450	500	9	475	2.9
<a href="#">063-0500-MFB</a>	500	500	550	9	525	3.2
<a href="#">063-0550-MFB</a>	550	550	620	11	585	4.6
<a href="#">063-0650-MFB</a>	650	650	720	11	685	5.4
<a href="#">063-0700-MFB</a>	700	700	770	11	735	5.8



Dimensions are in mm.

# TRANSFORMER CONTROLLER

## Accessories

- IP40 enclosure
- Five speed stepped control
- Illuminated on/off switch (single phase units only)
- Fitted Motor Protection type D MCB (single phase units only)
- Suitable for operating temperatures up to 40°C
- Ideal for environments where noise is a primary consideration as these controls do not create magnetic hum associated with some step-less forms of speed control



### Features & Benefits

A range of transformer voltage controllers used to provide five speed step control of single phase or three phase motors where the peak current of the motor does not exceed the rating of the controller. Speed control is via selector switch. Single phase units are complete with illuminated on/off switch.

### Single Phase 220V to 240V / 50Hz

Product Code	Max Peak Current Amps	Weight kg	IP Rating
<a href="#">149-TC14</a>	4	4	IP40
<a href="#">149-TC110</a>	10	7	IP40

### Three Phase 380V to 415V / 50Hz

Product Code	Max Peak Current Amps	Weight kg	IP Rating
<a href="#">149-TC33</a>	3	12	IP40
<a href="#">149-TC310</a>	10	25	IP40

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