

**MULTI**Flow  
SMB



Square Cased  
**Mixed Flow Fans**

# Multiflow SMB – Square Cased Features & Benefits



**Multiflow SMB is a range of square cased mixed flow fans with a unique adjustable pitch mixed flow impeller, ideally suited for installation within ductwork and suitable for extract or supply for a broad range of industrial, commercial and residential applications.**

- **Unique adjustable pitch mixed flow impeller.**
- **9 standard case sizes from 350mm to 1000mm.**
- **Air volume flow rates of up to 7.88 m<sup>3</sup>/sec.**
- **Static pressures of up to 600 Pa.**
- **Wide operating range.**
- **Greater pressure capability than axial fans.**
- **Greater airflow capability than centrifugal fans.**
- **Non overloading power curve.**
- **Non-stall characteristic.**
- **Suitable for operating temperatures of up to 50° C.**
- **Motors are foot mounted totally enclosed metric type.**
- **Sealed for life ball bearings to operate at any angle.**
- **Motors weatherproofed to IP55 with Class 'F' insulation to EN 60034-5.**

## Features & Benefits

**Aerodynamic appeal** – The inherent aerodynamic benefits of good mixed flow impeller design provides marked advantages over axial and centrifugal air performance characteristics.

**Distinctive** – The unique design of Multiflow SMB fans enables the required performance to be attained from a smaller fan size than is normally achievable with typical conical style, fixed blade mixed flow fans.

**Material strength** – Multiflow SMB mixed flow fans have a robust casing design for added strength and durability. Casings are manufactured in pre-galvanised sheet steel which is suitably stiffened, with all motor supports hot dipped galvanised to BS 729 after manufacture.

**Quality Impellers** – Aluminium spinings and pressings in a natural finish, together with steel hubs which are suitably zinc plated and dynamically balanced to Grade G6.3 for maximum efficiency.

**Stock Availability** – The stocked range of SMB fans are available on 'Next day' delivery.

**Cost effective** – Multiflow SMB offers a cost effective alternative against two stage axial fans by its higher pressure development characteristics.

**Inspection access** – All units are supplied with an inspection hole which means the correct rotation of the impeller can be checked for ease of commissioning and general maintenance checks.

**Mounting** - Units can be fitted in-line or end of ductwork, either horizontally or vertically, into existing ductwork, or with a greater selection of airflows when designing into new ductwork systems.

**Better performance** – Mixed flow “non stall” airflow properties and a non overloading absorbed power curve allow a wide range of operating performance to be achieved.

**Fully speed controllable** – Both single and three phase SMB units can be adjusted on site for duty requirements.

**Blade settings** – Adjustable pitch mixed flow impellers have the blade angles factory set to meet the required duty.

**Square ducting** - Casings incorporate metric flange connections to suit industry standard duct sizes which means they can be installed quicker and easier.

**Ease of installation** – All motors are pre-wired to an integral IP55 terminal box so they are ready for customer installation.

**Tested to the very latest standards** – SMB units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) meaning accurate, up to date information on performance and noise data that can be relied upon.

**Quality assurance** – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

**Warranty** – Each Multiflow SMB has a 12 month warranty.

**Full accessory range** – Speed controllers, inverters, mounting brackets, anti-vibration mounts, flexible connectors and silencers.

## Applications

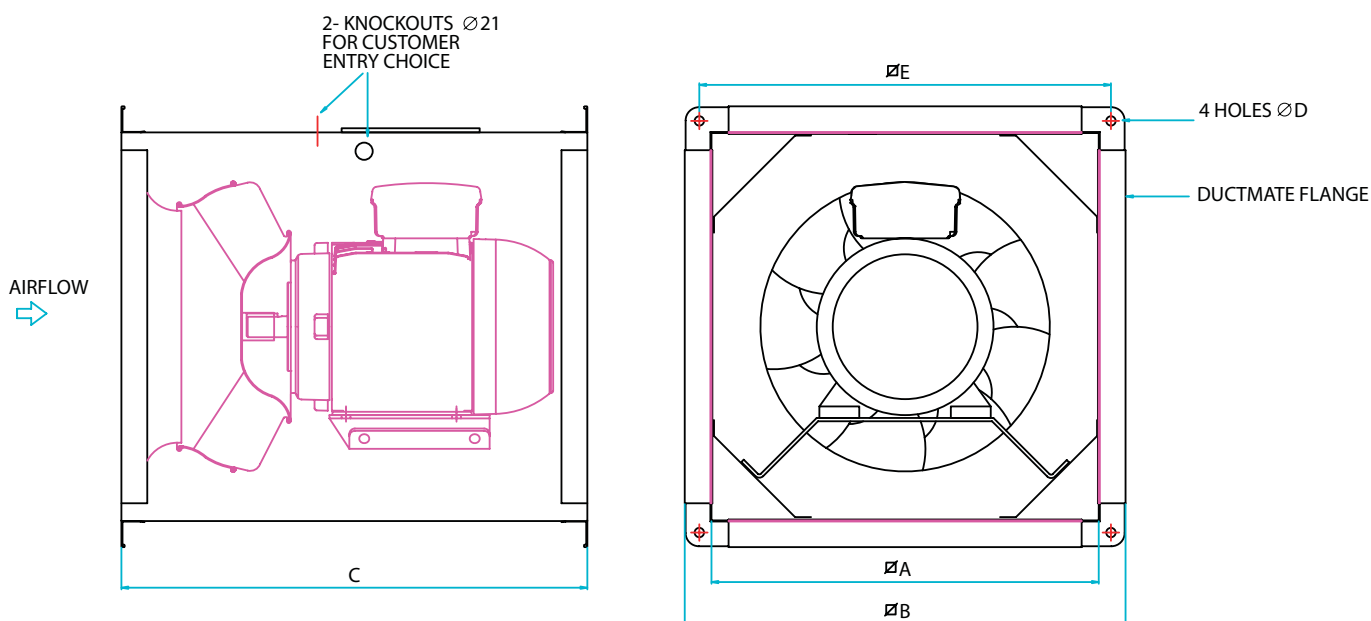
Where higher pressure developments are required such as in kitchen canopies, restaurants, lift motor rooms or general HVAC installations.

# Multiflow SMB - Square Cased

## Dimensional Data



MIXED FLOW



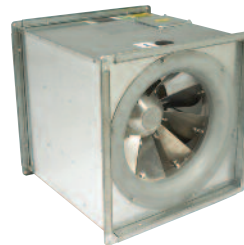
Product Code	A	B	C	D	E	Ductmate Flange	Impeller Dia	Weight kg
SMB350	350	400	420	9	375	25	250	22
SMB400	400	450	480	9	425	25	315	30
SMB450	450	500	470	9	475	25	350	26
SMB500	500	550	500	9	525	25	400	30
SMB550	550	620	550	11	585	35	450	44
SMB650	650	720	600	11	685	35	500	58
SMB700	700	770	650	11	735	35	560	63
SMB 800	800	870	700	11	835	35	630	79
SMB1000	1000	1070	800	11	1035	35	800	118

## Accessories



# Multiflow SMB - Square Cased

## Performance & Electrical Data



### SINGLE Phase - 220V-240V / 50Hz

Product Code	Speed r/min	Airflow m <sup>3</sup> /s @ Static Pressure Pa.										Motor Electrical Data			A.V. Mounts	Speed Control		dBA @ 3m
		0	50	100	150	200	250	300	400	500	600	FLC Amps	SC Amps	Output kW		Electr- onic	Trans- former	
SMB350/4-5-2	1300	0.34	0.28	0.14								1.09	2.30	0.12	S1G	EL31	TC12	43
SMB350/2-4-2	2750	0.66	0.63	0.60	0.58	0.54	0.50	0.46	0.36	0.21	0.08	2.55	7.00	0.37	S1G	EL31	TC14	60
SMB400/4-5-2	1300	0.72	0.64	0.53	0.39	0.12						1.51	3.69	0.18	S1G	EL31	TC12	50
SMB400/2-3-2	2750	1.20	1.16	1.14	1.10	1.07	1.03	1.00	0.90	0.78	0.66	6.15	22.7	1.0	S1G	-	TC112	68
SMB450/4-5-2	1350	1.18	1.09	0.97	0.80	0.57	0.29	0.10				2.56	5.93	0.37	S1G	EL31	TC14	54
SMB500/4-4-2	1350	1.60	1.48	1.36	1.24	1.08	0.88	0.60	0.05			3.70	11.9	0.55	S1G	EL61	TC18	58
SMB550/4-4-2	1350	2.43	2.30	2.15	1.95	1.76	1.53	1.25	0.38			6.28	16.4	1.0	S2B	EL101	TC110	62
SMB650/4-4-2	1350	2.93	2.81	2.72	2.60	2.46	2.30	2.11	1.60	0.70	0.05	10.1	25.9	1.5	S2B	-	TC112	68

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

### THREE Phase - 380V-415V / 50Hz

Product Code	Speed r/min	Airflow m <sup>3</sup> /s @ Static Pressure Pa.										Motor Electrical Data			A.V. Mounts	Speed Control	dBA @ 3m
		0	50	100	150	200	250	300	400	500	600	FLC Amps	SC Amps	Output kW		Trans- former	
SMB500/6-5-3	910	1.16	1.02	0.75	0.28							0.75	2.30	0.18	S1G	TC33	50
SMB500/4-5-3	1410	1.82	1.73	1.60	1.46	1.32	1.14	0.87				2.00	11.4	0.75	S1G	TC33	58
SMB550/6-5-3	920	1.63	1.49	1.27	0.88	0.13						1.27	4.70	0.37	S2B	TC33	55
SMB550/4-5-3	1410	2.51	2.43	2.33	2.20	2.03	1.83	1.60	0.84			2.90	15.4	1.1	S2B	TC33	62
SMB650/6-5-3	920	2.20	2.05	1.84	1.52	1.02	0.36					1.77	6.60	0.55	S2B	TC33	58
SMB650/4-4-3	1420	3.09	2.97	2.84	2.72	2.59	2.46	2.29	1.85	1.24	0.38	3.70	20.4	1.5	S2B	-	67
SMB700/6-4-3	920	2.84	2.65	2.38	2.10	1.73	1.26	0.65				2.12	8.70	0.75	S2B	TC35	59
SMB700/4-5-3	1415	4.65	4.51	4.40	4.27	4.10	3.92	3.73	3.34	2.76	1.98	6.78	47.5	3.0	S2B	-	68
SMB800/8-5-3	700	3.52	3.26	2.92	2.42	1.42	0.33					2.33	10.7	0.75	S2B	-	58
SMB800/6-4-3	940	4.35	4.17	3.98	3.75	3.47	3.13	2.64	0.87			4.30	22.3	1.5	S2B	-	60
SMB1000/8-4-3	710	6.83	6.53	6.2	5.81	5.35	4.78	3.98	0.93			5.31	32.9	2.2	S2G	-	61
SMB1000/6-3-3	940	7.88	7.68	7.46	7.24	6.99	6.73	6.43	5.74	4.78	3.21	8.95	47.5	4.0	S2G	-	67

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

### Silencer Data - SINGLE Phase

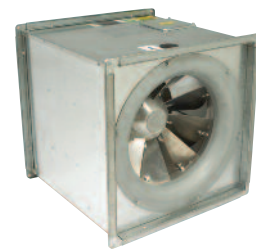
Product Code	dBA Attenuation	ΔP (Pa)
SMB350/4-5-2	-18	5
SMB350/2-4-2	-21	8
SMB400/4-5-2	-18	6
SMB400/2-3-2	-23	22
SMB450/4-5-2	-19	9
SMB500/4-4-2	-22	10
SMB550/4-4-2	-20	18
SMB650/4-4-2	-20	14

### Silencer Data - THREE Phase

Product Code	dBA Attenuation	ΔP (Pa)
SMB500/6-5-3	-23	7
SMB500/4-5-3	-22	19
SMB550/6-5-3	-18	9
SMB550/4-5-3	-20	24
SMB650/6-5-3	-19	9
SMB650/4-4-3	-20	16
SMB700/6-4-3	-18	10
SMB700/4-5-3	-20	32
SMB800/8-5-3	-20	5
SMB800/6-4-3	-22	11
SMB1000/8-4-3	-16	17
SMB1000/6-3-3	-18	25

# Multiflow SMB - Square Cased

## Sound Data



### SMB - SINGLE Phase

Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SMB350/2-4-2	80	75	77	77	75	75	70	63	60
SMB400/2-3-2	87	79	81	84	84	83	78	70	68
SMB350/4-5-2	66	65	64	61	59	58	51	42	43
SMB400/4-5-2	73	72	71	68	66	65	58	50	50
SMB450/4-5-2	78	76	74	72	69	69	63	54	54
SMB500/4-4-2	75	76	75	76	74	72	67	61	58
SMB550/4-4-2	80	78	80	79	79	76	73	64	62
SMB650/4-4-2	83	84	84	84	85	81	77	70	68

### SMB - THREE Phase

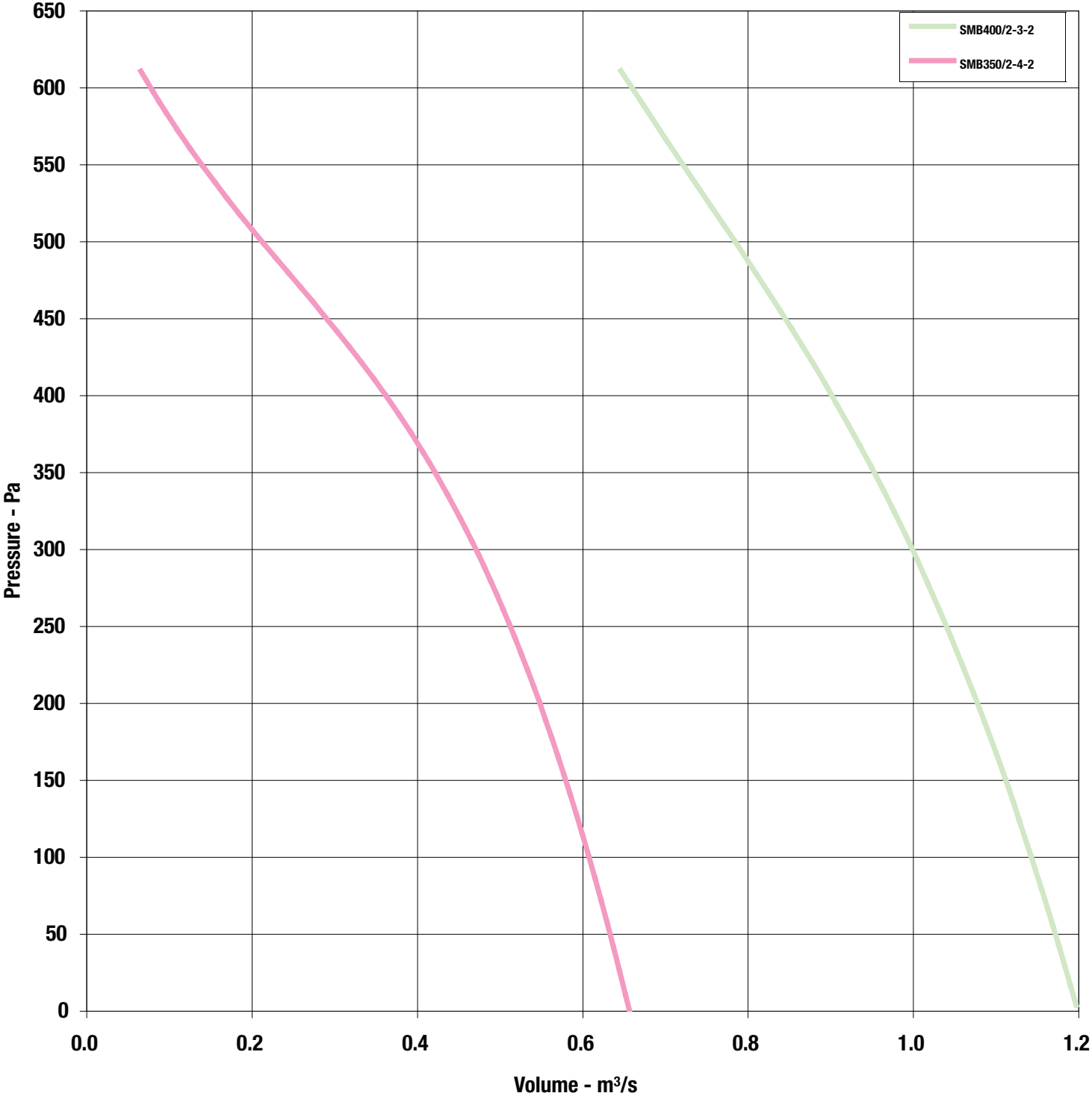
Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SMB500/4-5-3	75	76	75	76	74	72	67	61	58
SMB550/4-5-3	80	78	80	79	79	76	73	64	62
SMB650/4-4-3	82	83	83	83	84	80	76	69	67
SMB700/4-5-3	85	81	85	84	85	81	78	70	68
SMB500/6-5-3	66	68	64	69	69	59	55	46	50
SMB550/6-5-3	74	76	73	74	73	67	62	54	55
SMB650/6-5-3	78	79	78	75	75	71	67	59	58
SMB700/6-4-3	80	79	79	78	75	71	67	59	59
SMB800/6-4-3	82	80	76	81	75	70	62	54	60
SMB1000/6-3-3	90	89	86	86	83	79	70	63	67
SMB800/8-5-3	82	80	76	81	75	70	62	54	58
SMB1000/8-4-3	80	82	81	78	74	71	64	56	61

# Multiflow SMB - Square Cased

## Performance Curves



2 Pole 1Ph Range

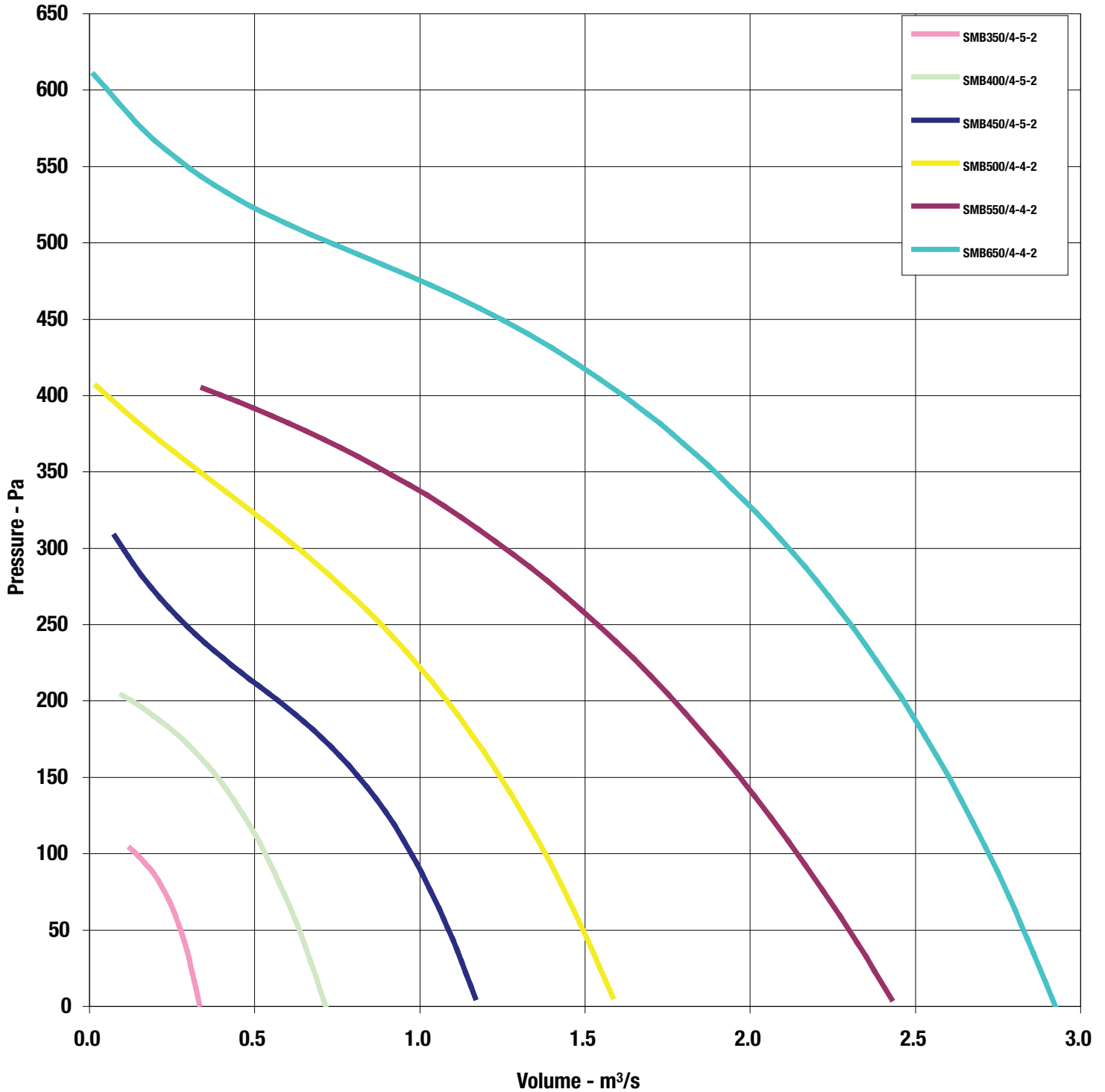


# Multiflow SMB - Square Cased

## Performance Curves



### 4 Pole 1Ph Range

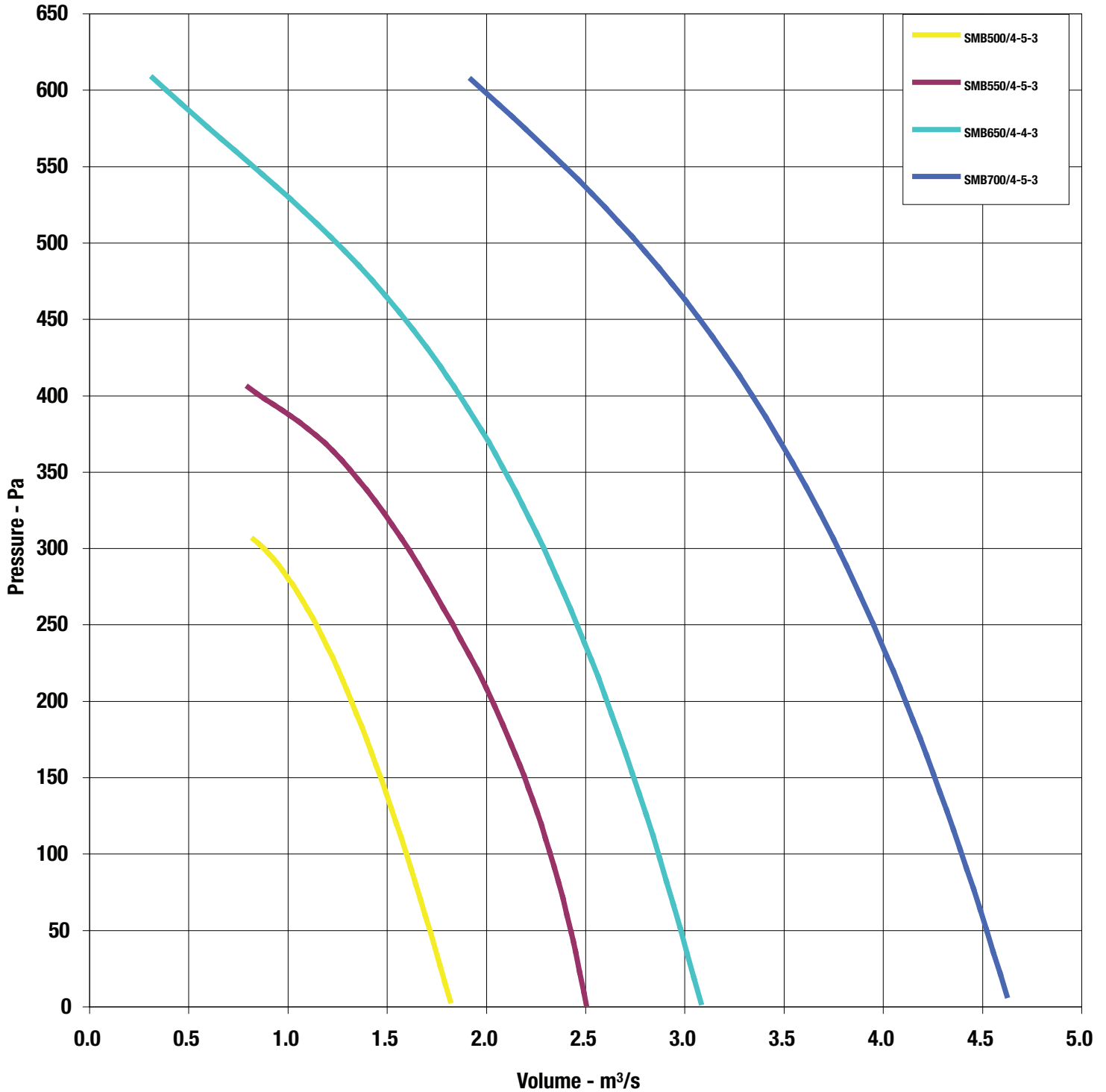


# Multiflow SMB - Square Cased

## Performance Curves



### 4 Pole 3Ph Range

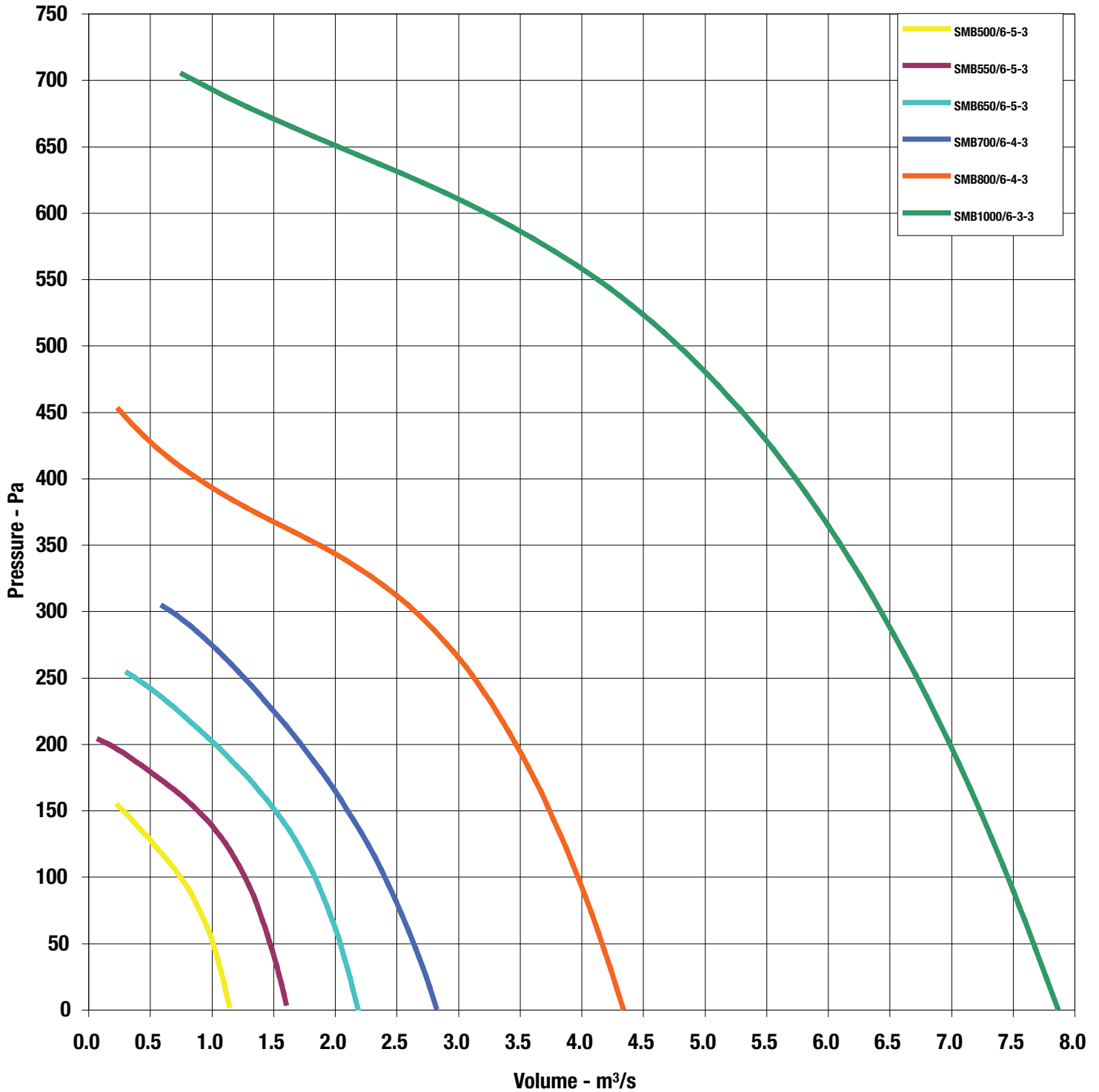


# Multiflow SMB - Square Cased

## Performance Curves



### 6 Pole 3Ph Range

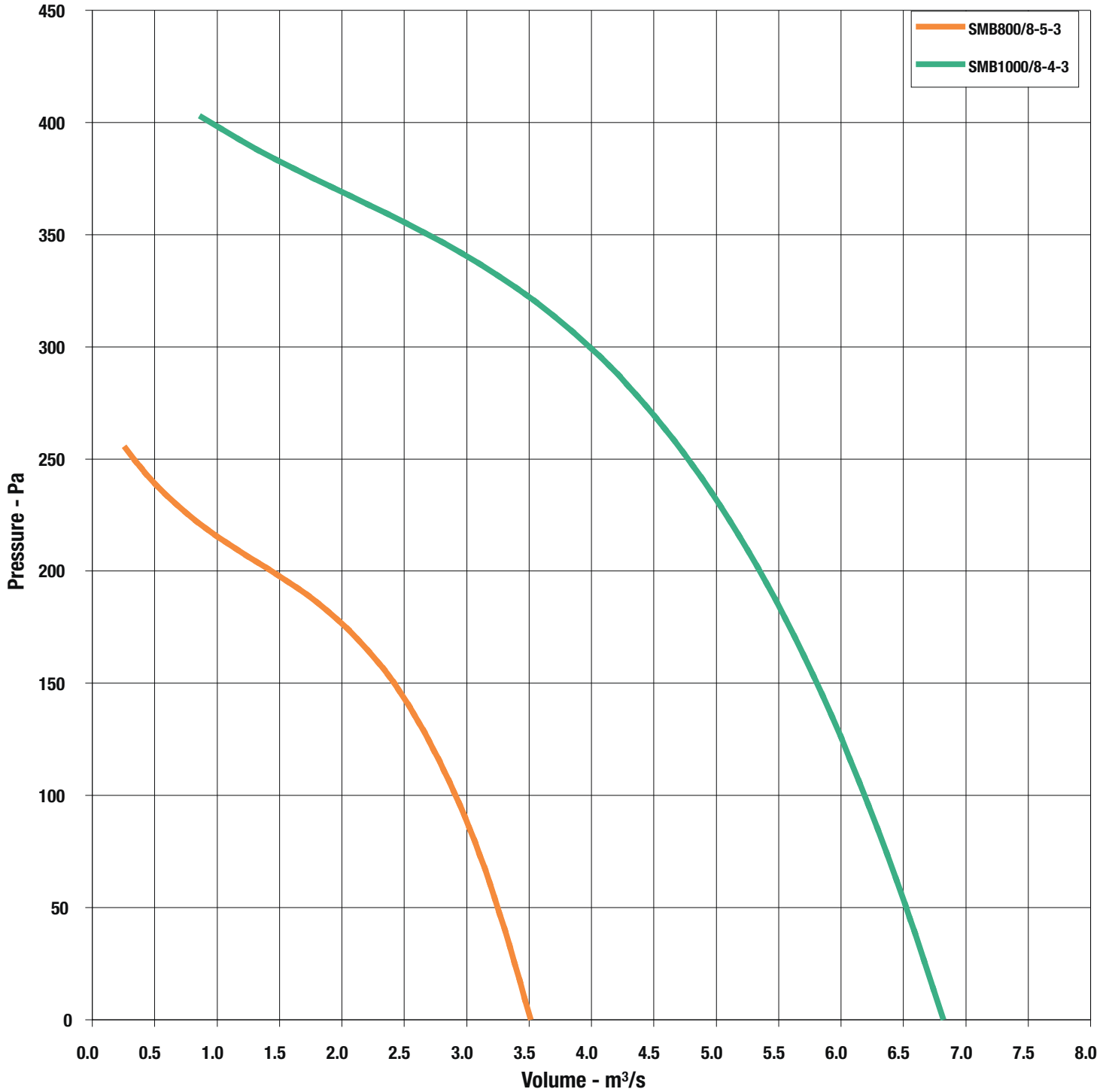


# Multiflow SMB - Square Cased

## Performance Curves



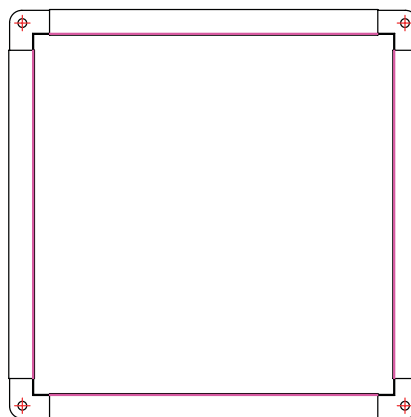
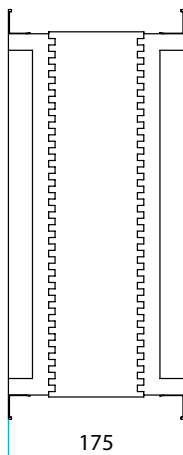
### 8 Pole 3Ph Range



# Multiflow SMB - Square Cased Accessories



## Flexible Connectors

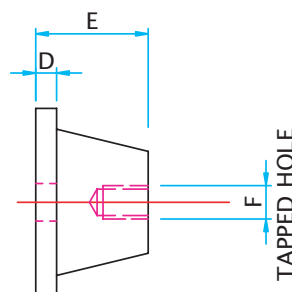
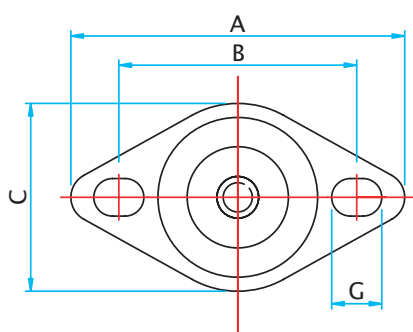


MIXED FLOW

Product Code	Fan Size	Weight kg
063-0350-MFB	350	2.3
063-0400-MFB	400	2.6
063-0450-MFB	450	2.9
063-0500-MFB	500	3.2
063-0550-MFB	550	4.6
063-0650-MFB	650	5.4
063-0700-MFB	700	5.8
063-0800-MFB	800	6.6
063-1000-MFB	1000	8.1

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

## Anti-Vibration Mounts



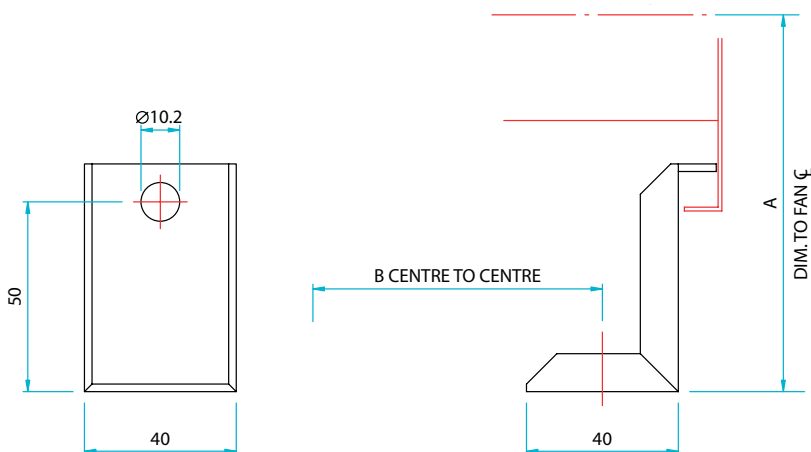
Product Code	A	B	C	D	E	F	G	Weight kg
062-S1G	64	50	43	5.5	20	M6	∅7	0.040
062-S2B	80	57	45	5	32	M8	12 x 9	0.100
062-S2G								0.102

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

# Multiflow SMB - Square Cased Accessories



## Mounting Feet

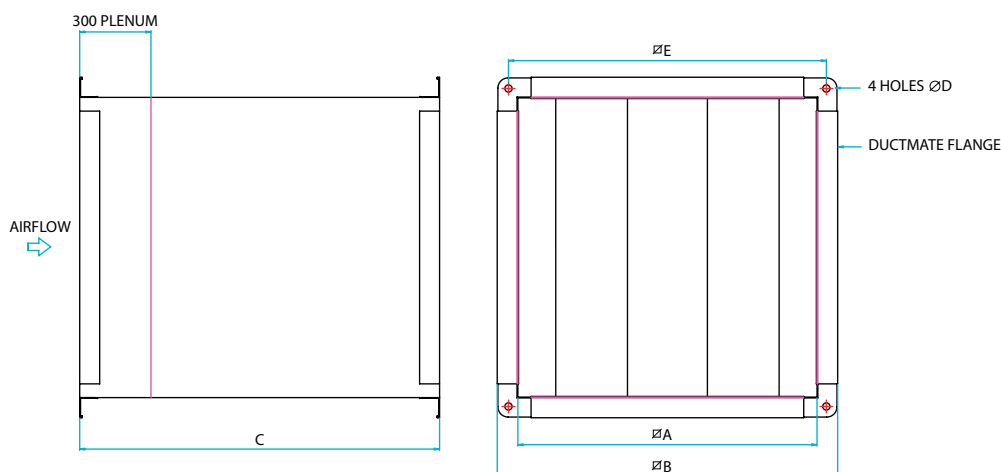


Product Code	Fan Size	A	B	Weight kg (Per Set)
060-MFB-01	350	238	364	0.22
060-MFB-01	400	263	424	0.22
060-MFB-01	450	288	414	0.22
060-MFB-01	500	313	444	0.22
060-MFB-01	550	343	494	0.22
060-MFB-01	650	393	544	0.22
060-MFB-01	700	418	594	0.22
060-MFB-01	800	468	644	0.22
060-MFB-01	1000	568	744	0.22

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

MIXED FLOW

## Silencers



Product Code	A	B	C	D	E	Ductmate Flange	Weight kg
068-0350-MFB	350	400	1200	9	375	25	24
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
068-0800-MFB	800	870	1800	11	835	35	117
068-1000-MFB	1000	1070	1800	11	1035	35	164

- Baffle type silencers
- Galvanised steel casing with perforated steel lining and baffles
- Infill is glass tissue faced high density mineral wool
- For more information on silencers and an explanation of the data see p107



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