

Mixed Flow Roof Fans (RMH)

- Motors protected to IP44
- Motor insulation Class 'B'
- Maximum operating temperature 40°C
- Standard Thermal Overload Protection
- IP65 service isolator
- Bird guard included as standard
- Speed controllable
- Performance tested to BS 848 parts 1 & 2
- Manufacture controlled to BS EN ISO 9001
- 2 Year Guarantee



Specially designed for use when medium pressure characteristics are required, the Vent-Axia Mixed Flow Roof range is delivered on-site fully assembled and ready for installation. To meet COSHH requirements, a service isolator is fitted and pre-wired as standard. Equally suitable for flat or inclined roofs, the range is suitable for kerb or purlin box mounting and boasts a wide range of accessories to suit many different industrial applications. There are five sizes available with duties ranging from 0.606m³/s to 3.63m³/s (2182m³/h to 13068m³/h) with pressure development available up to 600 Pa.

The mounting plate is moulded with a fixed integral bellmouth to ensure optimum efficiency and precise alignment. The weather-cowl is also moulded to produce a smooth, internal surface and a tough, stable UV resistant finish. Colour: BS 10A07. Alternative colours available on request.

Vent-Axia mixed flow roof fans are designed for either kerb or inclined fixing (maximum angle 30°).

Electrical

Single phase 220-240V 50 Hz. Capacitor start and run. Three phase 380-415V 50Hz. A service isolator switch is provided for local isolation and the enclosure is protected to IP65 according to BS EN 60529. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.), which for three phase fans should be wired into all controller circuits and into starter contactors. Most models are available with 4 and 6 pole motors.

Motors

The Mixed Flow roof range features a proven external rotor motor and backward curved mixed flow glass reinforced polyamide impeller selected for performance and non-overloading characteristics. The assembly is dynamically balanced to VDI 2060. The motors in this range are rated IP44 according to BS EN 60529. Ball bearings are greased for life and



are designed to run at any angle. Insulation is Class 'B' (from -30°C to +40°C). Manufacture is controlled to BS EN ISO 9001 standards.

Sound Levels

Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10⁻¹² Watts (1 pico-watt).

Performance

Tested to BS 848 Parts 1 & 2.

Accessories

Purlin boxes

Available in sizes to suit all models and should be used to support the fan in conjunction with a soaker flange sheet.

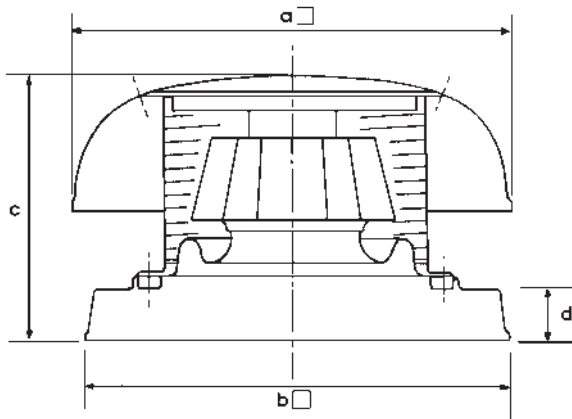
Roof attenuators

Available in all sizes to cover the range of Mixed Flow Roof fans in three lengths: 600, 900 or 1200mm according to the attenuation required.

Shutters

Robust construction, designed to fit beneath the fan using the fittings provided. Airflow operated, manual or motorised shutter. A minimum distance of half the attenuator width is required between an airflow shutter and a roof attenuator for satisfactory operation.

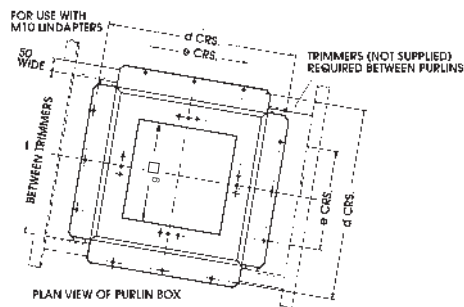
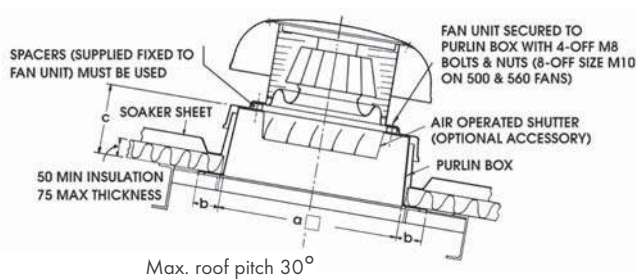
Fan Dimensions (mm)



Fan size	a □	b □	c	d	Weight Kg
250	500	500	280	90	16
315	700	680	410	83	16
355 / 400	800	780	480	83	24/27
450	950	930	575	103	45
500 / 560	1230	1055	630	103	48 / 64

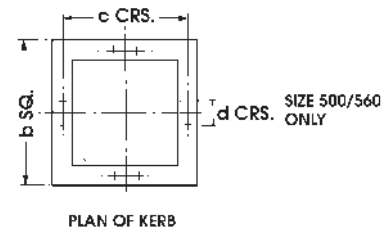
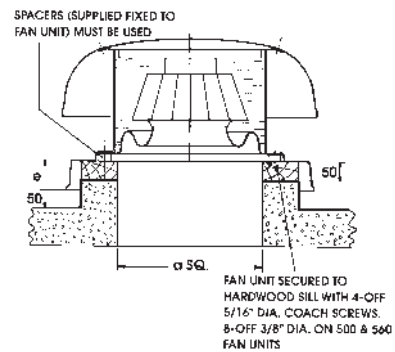
Details for Purlin Mounting

(Manufactured from 1.5mm pre-galv. mild steel).



Fan size	a □	b	c	d	e	f	g □
315	625	90	240	765	400	653	400
355 / 400	725	90	240	865	500	753	500
450	890	70	250	990	650	878	650
500 / 560	1030	75	250	1140	760	1028	790

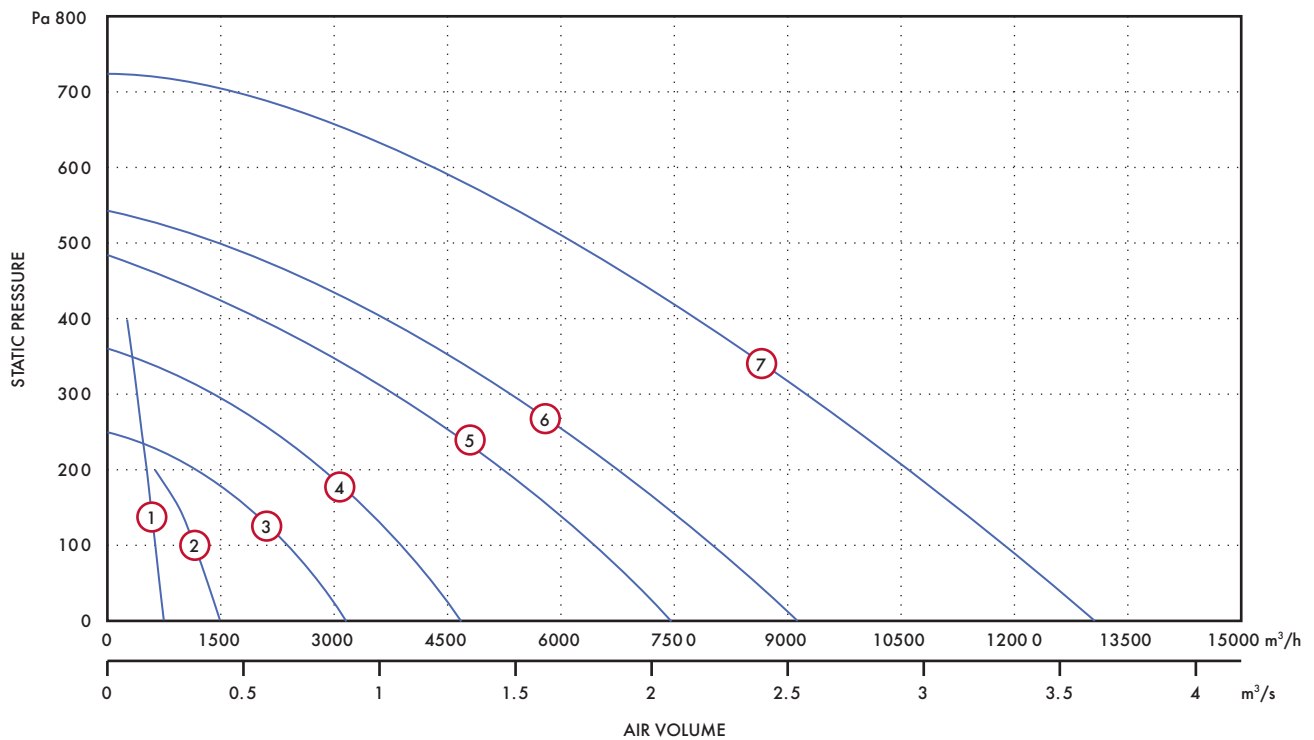
Details for Kerb Mounting



Fan size	a □	b □	c	d	e
250	500	500	280	90	16
315	700	680	410	83	16
355 / 400	500	700	570	-	83
450	650	850	690	-	103
500 / 560	790	990	842	100	103

Performance Curve

250 - 560 dia - 4 Pole - 1 & 3 Phase



Performance Guide

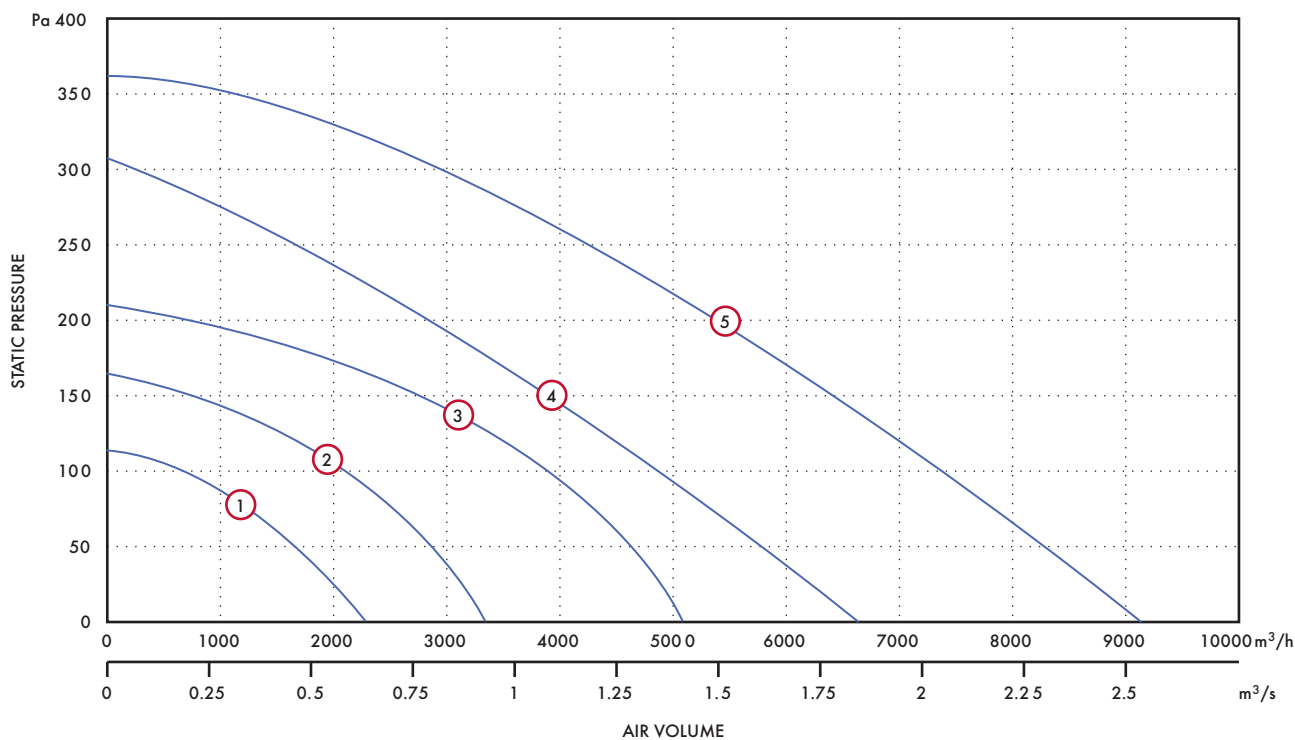
Phase	Stock	Curve	m³/s at Pa												Motor	S.C.	F.L.C.	dBA
Dia.	Model	Ref	Pole	rpm	Ref	0	50	100	150	200	250	300	350	400	kW	Amps	Amps	@ 3m
250	1	RMH25012	2	2720	1	0.25	0.23	0.21	0.19	0.17	0.15	0.13	0.11	0.09	0.16	2.1	0.7	62
315	1	RMH31514	4	1400	2	0.49	0.44	0.38	0.31	0.21					0.17	1.4	0.8	52
355	1	RMH35514	4	1410	3	0.87	0.77	0.65	0.51	0.33					0.31	4	1.45	56
400	1	RMH40014	4	1340	4	1.30	1.19	1.07	0.95	0.80	0.60	0.37			0.52	6	2.4	58
400	3	RMH40034	4	1340	4	1.30	1.19	1.07	0.95	0.80	0.60	0.37			0.54	4.2	1.05	58
450	1	RMH45014	4	1380	5	2.05	1.92	1.77	1.62	1.45	1.26	1.05	0.82	0.57	0.96	10.5	4.7	64
450	3	RMH45034	4	1380	5	2.05	1.92	1.77	1.62	1.45	1.26	1.05	0.82	0.57	0.89	5.9	1.65	64
500	1	RMH50014	4	1370	6	2.51	2.35	2.18	2.02	1.83	1.64	1.44	1.22	0.99	1.45	16	6.6	69
500	3	RMH50034	4	1370	6	2.51	2.18	2.02	1.83	1.64	1.44	1.22	0.99		1.35	10	2.4	69
560	3	RMH56034	4	1380	7	3.63	3.46	3.31	3.13	3.00	2.82	2.59	2.45	2.24	2.4	22	4.7	70

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Diameter	Pole	63	125	250	500	1k	2k	4k	8k
250	2	69	75	80	78	76	74	73	66
315	4	64	75	77	70	60	63	63	51
355	4	65	68	75	73	73	70	59	53
400	4	66	73	79	77	73	72	68	61
450	4	71	76	84	83	83	80	77	65
500	4	73	82	87	84	84	82	76	68
560	4	75	83	90	87	85	85	82	73

Performance Curve

355 - 560 dia - 6 Pole - 1 & 3 Phase



Performance Guide

Phase	Stock				Curve	m³/s at Pa						Motor	S.C.	F.L.C.	dBA
Dia.	Model	Ref	Pole	rpm	Ref	0	25	50	100	150	200	kW	Amps	Amps	@ 3m
355	1	RMH35516	6	920	1	0.61	0.55	0.47	0.16			0.09	1.1	0.44	47
355	3	RMH35536	6	920	1	0.61	0.55	0.47	0.16			0.1	0.57	0.25	47
400	3	RMH40036	6	910	2	0.92	0.86	0.79	0.59	0.20		0.39	1.4	0.67	49
450	1	RMH45016	6	920	3	1.42	1.35	1.29	1.07	0.73	0.15	0.4	5.1	2.3	55
450	3	RMH45036	6	920	3	1.42	1.35	1.29	1.07	0.73	0.15	0.59	2	0.96	55
500	1	RMH50016	6	910	4	1.83	1.72	1.60	1.34	1.05	0.73	0.43	4.1	2.1	60
500	3	RMH50036	6	910	4	1.83	1.72	1.60	1.34	1.05	0.73	0.88	4.4	1.45	60
560	1	RMH56016	6	870	5	2.56	2.43	2.32	2.07	1.82	1.54	0.68	7.1	3.3	61
560	3	RMH56036	6	870	5	2.56	2.43	2.32	2.07	1.82	1.54	0.67	4.1	1.55	61

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Diameter	Pole	63	125	250	500	1k	2k	4k	8k
355	6	59	60	66	63	63	61	50	46
400	6	60	63	69	77	64	62	59	52
450	6	65	67	75	73	72	70	68	55
500	6	67	73	77	75	75	72	67	59
560	6	68	73	80	78	76	75	73	64