

# Eco Mixed Flow (eMF)

- High efficiency Mixed Flow Fan with guide vanes
- Available in sizes 355 to 710mm dia.
- IP54 Fan rating (duct mounted)
- Operating temperatures up to 80°C (see technical specification)
- Maintenance free, long life bearings
- All units suitable for speed control
- Quality Assurance to BS EN ISO 9001:1994



## Energy Saver

The 'eMF' high efficiency in-line mixed flow duct fans are designed around a high efficiency, high pressure development mixed flow impeller, offering a very compact design with high performance and low sound levels.

The in-line fan is constructed from steel and incorporates an aerodynamically designed airflow guide vane to ensure maximum performance from the unit.

All models offer minimum space requirements for installation and are designed for simple installation into duct ventilation systems via the included mounting foot. All units are suitable for vertical or horizontal mounting.

The eMF range is available in 15 models, covering sizes 355, 400, 450, 500, 560, 630 & 710mm diameter. The range shall provide a performance from 0.06m<sup>3</sup>/s to 5.63m<sup>3</sup>/s with a maximum pressure development of up to 1200 Pa.

## Impellers

The impellers are aerodynamically designed high efficiency mixed flow type, manufactured from steel or polyamide. The motor and impeller is factory matched, statically and dynamically balanced to ISO 1940, Grade G 2.5.

## Motors

All sizes are protected to IP54 in accordance with BS EN 60529:1992. With motors suitable for operating temperatures up to 80°C (see technical data). The range incorporates maintenance free motors, fitted with sealed for life ball bearings, ideally suited for speed control. Single phase 230V units by auto transformer control, 3 phase 230V or 400V by frequency inverters.

Motor protection by means of a thermal contact switch incorporated within the windings is provided to prevent motor damage due to overloading/overheating.

## Terminal Box

All single phase units are supplied with an IP44 terminal box as standard. All three phase units are supplied with a 2m long flying lead.

## Performance

The fan performance is in accordance with tests to BS848 Part 1 1980, with the fan sound levels measured in a reverberant chamber in accordance with BS848 Part 2 1985.

## Quality Assurance

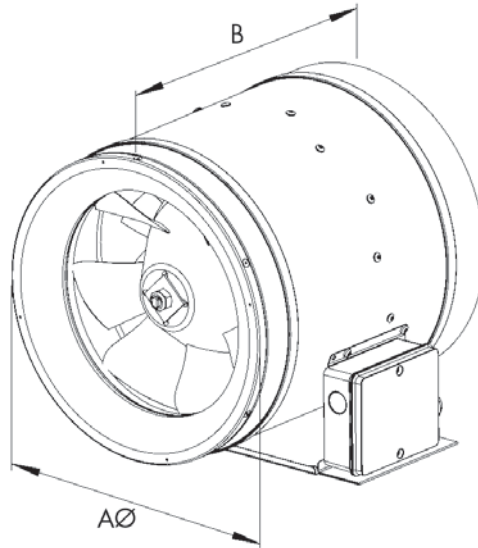
Design and manufacture is in accordance with the standard for quality management systems BS EN ISO 9001:1994.

## Accessories

A full range of accessories are available with the eMF in-line mixed flow duct fans such as:

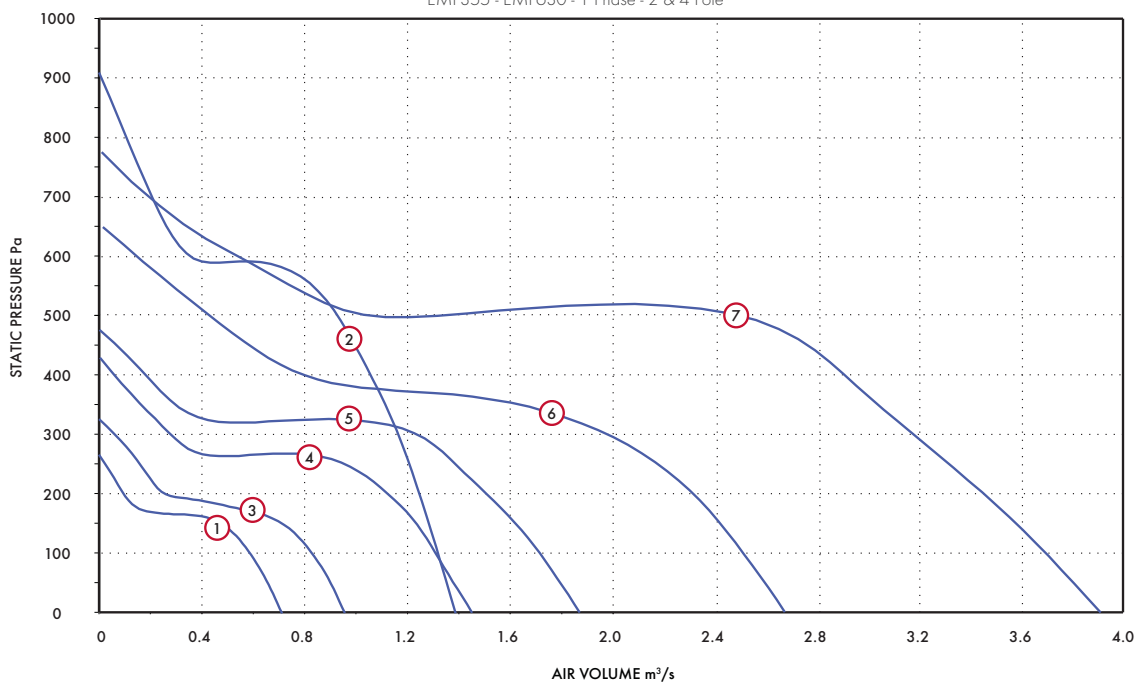
- Fast Clamps
- Auto Transformer Speed Controllers
- Frequency Inverters
- D.O.L. Starters and Overloads

## Fan Dimensions (mm)



Stock Ref	AØ	B	Weight kg
EMF35514	355	396	13.5
EMF35512	354	396	17.3
EMF40014	403	417	12.8
EMF45014	453	467	18.4
EMF50014	504	515	23.2
EMF56014	564	582	38.0
EMF63014	634	655	43.1
EMF35532	354	396	17.5
EMF40034	403	417	14.8
EMF45034	453	467	18.9
EMF50034	504	515	23.6
EMF40032	403	417	20.3
EMF56034	564	582	28.0
EMF63034	634	654	39.3
EMF71034	714	732	49.0

## Performance Curve



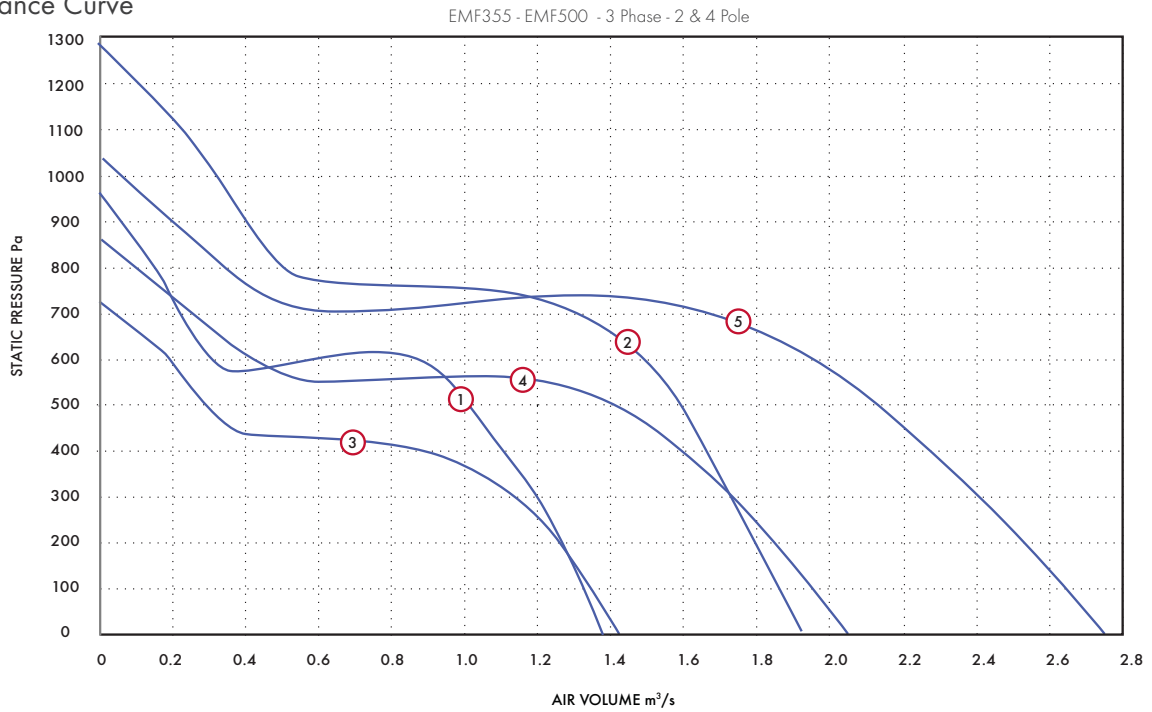
## Performance Guide

Stock Ref	Max rpm	Max Temp °C	Curve Ref	m³/s at Pa										Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				0	100	200	300	400	500	600	700	800	900				
EMF35514	1460	45	1	0.71	0.58	0.09								230V/1/50	150	3.0	1.2
EMF35512	2850	80	2	1.39	1.32	1.24	1.16	1.05	0.92	0.35	0.20	0.10	0.01	230V/1/50	950	13.5	5.4
EMF40014	1460	80	3	0.95	0.82	0.25	0.06							230V/1/50	210	3.8	1.5
EMF45014	1450	80	4	1.45	1.31	1.12	0.28	0.06						230V/1/50	450	7.8	3.1
EMF50014	1380	80	5	1.87	1.71	1.50	1.25	0.18						230V/1/50	1380	9.3	3.7
EMF56014	1430	80	6	2.67	2.51	2.31	1.97	0.78	0.42	0.12				230V/1/50	1110	19.0	7.6
EMF63014	1410	50	7	3.89	3.69	3.43	3.18	2.90	2.49	0.54	0.19			230V/1/50	2140	28.5	11.4

## Sound Data

Stock Ref		125	250	500	1k	2k	4k	8k	dBa @3m
EMF35512	INLET	49	72	74	79	78	77	71	40
	OUTLET	55	74	80	83	81	77	69	40
	BREAKOUT	49	56	60	61	59	58	49	40
EMF35514	INLET	51	57	61	62	63	63	48	26
	OUTLET	56	60	66	67	64	60	47	26
	BREAKOUT	42	41	43	46	43	46	29	26
EMF40014	INLET	57	60	70	68	69	64	53	35
	OUTLET	65	63	73	73	69	65	54	35
	BREAKOUT	50	46	59	59	53	52	41	35
EMF45014	INLET	64	66	69	71	74	69	57	42
	OUTLET	71	69	77	76	74	70	59	42
	BREAKOUT	57	69	67	65	61	57	43	42
EMF50014	INLET	69	69	72	73	73	69	57	41
	OUTLET	74	75	78	77	74	70	59	41
	BREAKOUT	54	66	65	64	61	59	42	41
EMF56014	INLET	72	77	79	79	78	74	63	49
	OUTLET	76	82	85	81	79	76	65	49
	BREAKOUT	70	77	75	69	68	63	52	49
EMF63014	INLET	74	78	82	82	80	78	66	50
	OUTLET	74	82	86	84	81	78	67	50
	BREAKOUT	70	74	76	72	70	65	53	50

## Performance Curve



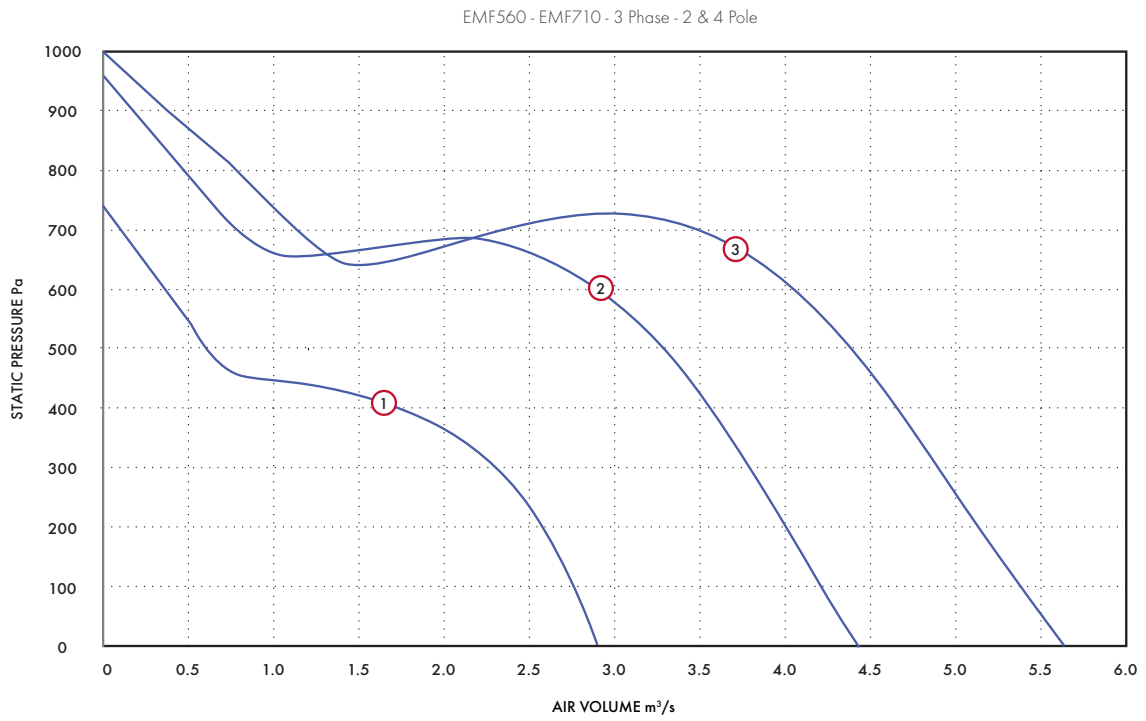
## Performance Guide

Stock Ref	rpm	Max Temp °C	Curve Ref	m <sup>3</sup> /s at Pa							Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				0	200	400	600	800	1000	1200				
EMF35532	2910	60	1	1.38	1.27	1.10	0.88	0.15			230V/3/50	910	8.0	3.2
EMF40032	2930	80	2	1.92	1.85	1.66	1.49	0.51	0.32	0.11	400V/3/50	1540	8.0	3.2
EMF40034	2200	80	3	1.43	1.26	0.88	0.19				230V/3/75	650	6.8	2.7
EMF45034	2150	80	4	2.04	1.84	1.60	0.42				230V/3/70	1200	11.0	4.4
EMF50034	2060	70	5	2.75	2.53	2.27	1.96	0.34			230V/3/70	1920	17.8	7.1

## Sound Data

Stock Ref		125	250	500	1K	2K	4K	8K	dBA @3m
EMF35532	INLET	52	75	77	79	78	77	74	43
	OUTLET	56	76	85	85	82	78	71	43
	BREAKOUT	52	60	66	64	60	61	53	43
EMF40032	INLET	73	88	84	84	85	82	80	55
	OUTLET	76	89	93	91	87	84	80	55
	BREAKOUT	72	88	81	75	71	69	62	55
EMF40034	INLET	68	82	77	77	77	74	66	43
	OUTLET	69	85	86	84	79	76	68	43
	BREAKOUT	59	59	68	66	62	60	51	43
EMF45034	INLET	72	84	81	79	78	77	69	46
	OUTLET	74	87	88	84	81	79	71	46
	BREAKOUT	65	69	72	68	63	62	52	46
EMF50034	INLET	61	81	82	83	81	79	72	53
	OUTLET	71	81	89	89	86	82	74	53
	BREAKOUT	77	77	79	75	70	68	61	53

## Performance Curve



## Performance Guide

Stock Ref	Max rpm	Max Temp °C	Curve Ref	m³/s at Pa					Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				0	200	400	600	800				
EMF56034	1570	80	1	2.90	2.57	1.73	0.37		400V/3/50	1360	7.0	2.8
EMF63034	1590	70	2	4.43	4.00	3.56	2.90	0.47	400V/3/50	2620	13.5	5.4
EMF71034	1440	55	3	5.63	5.13	4.66	4.05	0.78	400V/3/50	3610	19.3	7.7

## Sound Data

Stock Ref		125	250	500	1K	2K	4K	8K	dBa @3m
EMF56034	INLET	72	74	78	80	78	75	63	48
	OUTLET	74	84	83	82	80	76	65	48
	BREAKOUT	59	67	74	71	68	63	51	48
EMF63034	INLET	76	77	85	83	81	80	68	51
	OUTLET	76	83	88	85	83	80	69	51
	BREAKOUT	67	69	77	73	71	66	55	51
EMF71034	INLET	74	84	85	87	83	80	69	54
	OUTLET	75	87	90	89	86	81	71	54
	BREAKOUT	68	77	78	78	74	66	58	54

## Accessories



Fan



Auto Transformer



eDemand

Frequency Inverter



Fast Clamp

Stock Ref	Voltage/Hz	FLC	Stock Ref	Stock Ref	Stock Ref
EMF35512	230/1/50	5.4	10314107	-	VM355
EMF35514	230/1/50	1.2	10314103	-	VM355
EMF40014	230/1/50	1.5	10314103	-	VM400
EMF45014	230/1/50	3.1	10314105	-	VM450
EMF50014	230/1/50	3.7	10314105	-	VM500
EMF56014	230/1/50	7.6	10314113	-	VM560
EMF63014	230/1/50	11.4	10314113	-	VM630
*EMF35532	230/3/50	3.2	-	444177	VM355
EMF40032	400/3/50	3.2	-	444173	VM400
*EMF40034	230/3/75	2.7	-	444177	VM400
*EMF45034	230/3/70	4.4	-	444177	VM450
*EMF50034	230/3/70	7.1	-	-	VM500
EMF56034	400/3/50	2.8	-	444173	VM560
EMF63034	400/3/50	5.4	-	444174	VM630
EMF71034	400/3/50	7.7	-	444175	VM710

\*Item available to special order and must be operated with a single phase in three phase out inverter. Please enquire.