

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 9001:2015



Energy Saver

The 'eMF' high efficiency in-line mixed flow duct fans are designed around a high efficiency, high pressure development mixed flow impellor, 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 0.06m³/s to 5.63m³/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

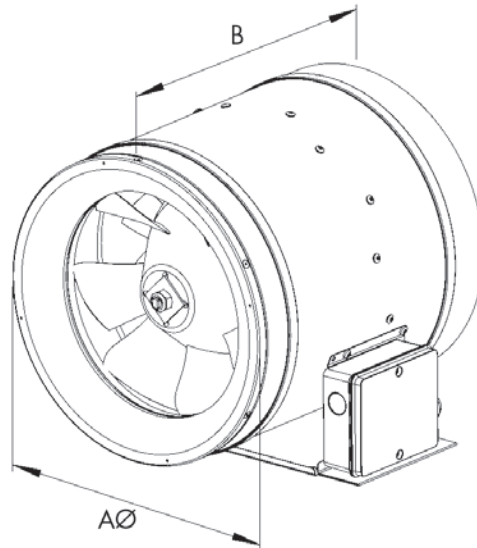
Design and manufacture is in accordance with the standard for quality management systems BS EN ISO 9001:2015.

Accessories

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

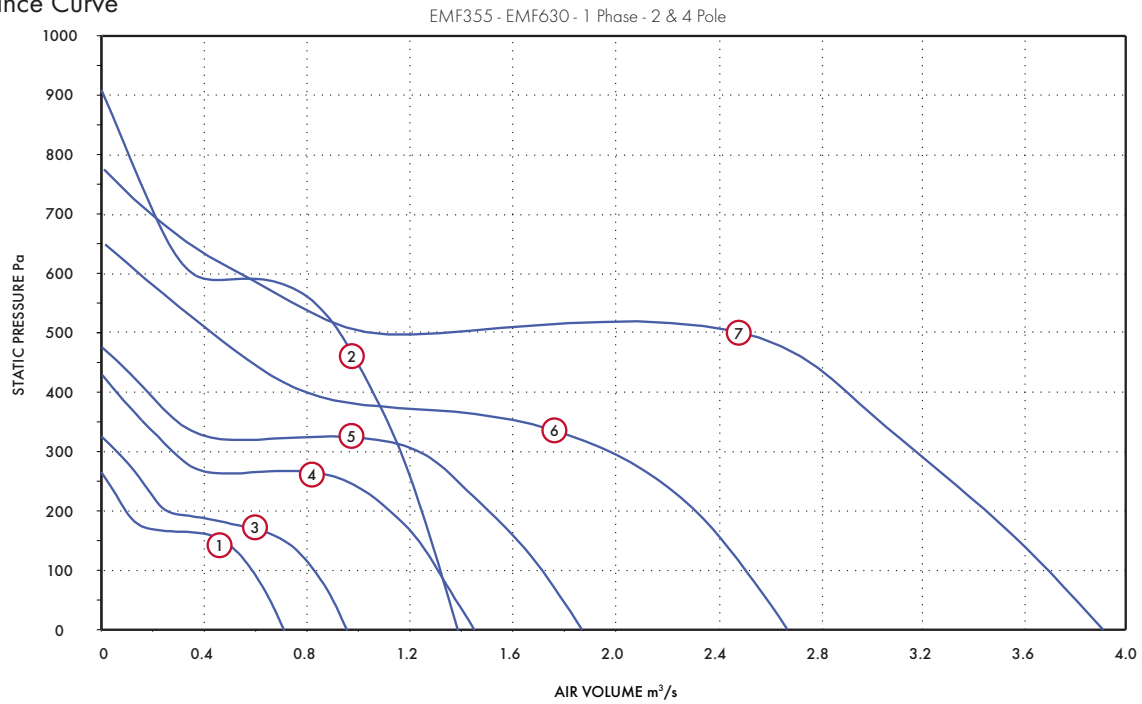
- Fast Clamps
- Auto Transformer Speed Controllers
- Frequency Inverters
- D.O.L. Starters and Overloads

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

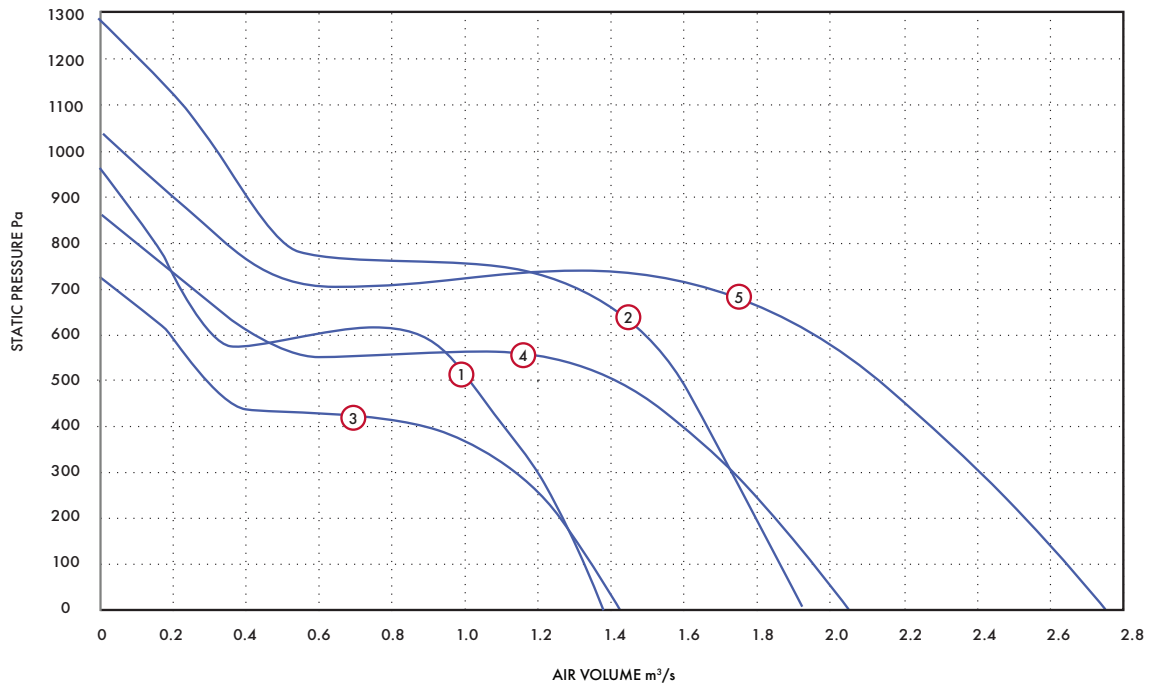
| Stock Ref | rpm | Max Temp °C | Curve Ref | m³/s at Pa | | | | | | | | | | Voltage | Max Watts | S.C. Amps | F.L.C. Amps |
|-----------|------|-------------|-----------|------------|------|------|------|------|------|------|------|------|------|-----------|-----------|-----------|-------------|
| | | | | 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

EMF355 - EMF500 - 3 Phase - 2 & 4 Pole



Performance Guide

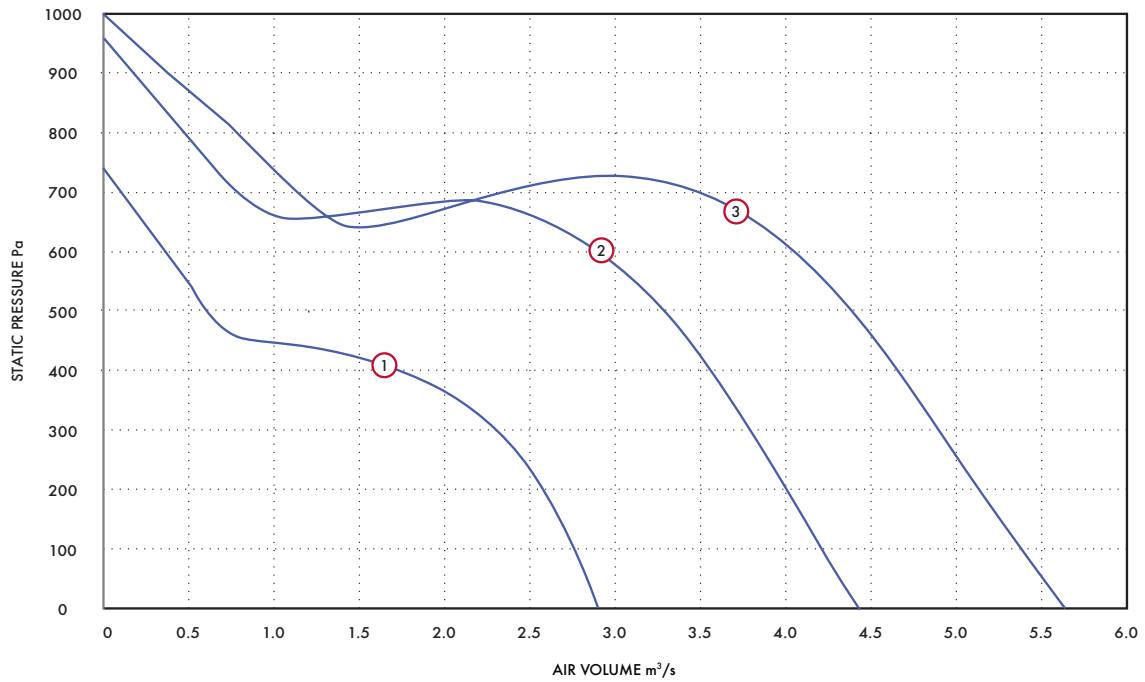
| Stock Ref | rpm | Max Temp °C | Curve Ref | m ³ /s at Pa | | | | | | | Voltage | Max Watts | S.C. Amps | F.L.C. Amps |
|-----------|------|-------------|-----------|-------------------------|------|------|------|------|------|------|-----------|-----------|-----------|-------------|
| | | | | 0 | 200 | 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

EMF560 - EMF710 - 3 Phase - 2 & 4 Pole



Performance Guide

| Stock Ref | 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 | |
|-----------|------------|------|------------------|-----------|
| Stock Ref | Voltage/Hz | FLC | 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 | - | VM355 |
| EMF40032 | 400/3/50 | 3.2 | - | VM400 |
| *EMF40034 | 230/3/75 | 2.7 | - | VM400 |
| *EMF45034 | 230/3/70 | 4.4 | - | VM450 |
| *EMF50034 | 230/3/70 | 7.1 | - | VM500 |
| EMF56034 | 400/3/50 | 2.8 | - | VM560 |
| EMF63034 | 400/3/50 | 5.4 | - | VM630 |
| EMF71034 | 400/3/50 | 7.7 | - | VM710 |

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