

# Standard Blowers For HVAC Applications

Catalogue 02/2005



# AC centrifugal blowers

Dual inlet, sizes 097 to 250



Standard design, dual inlet forward curved blowers.

**Material:** scroll housing and impeller made of galvanised sheet steel.

**Mounting:** either SAL (standard external-rotor) motor mounted via brackets on one side of the scroll housing, or, EW-motor anti-vibration mounted on both sides.

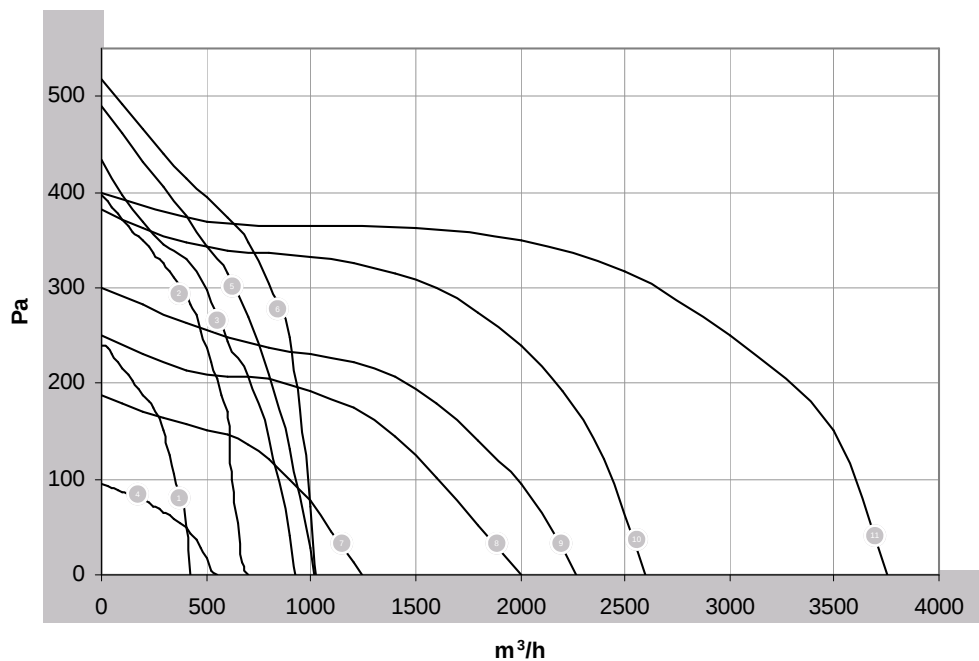
**Availability:** all units available from stock.

**Specification:** all units supplied pre-wired into terminal block including motor start capacitors. all units supplied with outlet flange for easy mounting.

ebm-papst UK

| Nominal data   |          |   | Voltage | Frequency | Airflow | Speed/rpm         | Power Input | Current Draw | Ingress Protection | Max. Ambient | Mass | Capacitor Size | Insulation Class | Min. back pressure |
|----------------|----------|---|---------|-----------|---------|-------------------|-------------|--------------|--------------------|--------------|------|----------------|------------------|--------------------|
|                |          |   | VAC     | Hz        | m³/h    | Min <sup>-1</sup> | W           | A            | IP                 | °C           | kg   | uF             | Ins.             | Pa                 |
| D2E097-BI56-50 | M2E052CA | Ⓐ | 230     | 50/60     | 435     | 1950              | 87          | 0.39         | IP20               | 40           | 1.5  | 2uF            | B                | 0                  |
| D2E133-CI33-87 | M2E068CF | Ⓑ | 230     | 50/60     | 700     | 1700              | 175         | 0.77         | IP44               | 40           | 3.3  | 4uF            | B                | 50                 |
| D2E133-DM27-D8 | M2E068CF | Ⓒ | 230     | 50/60     | 925     | 1700              | 200         | 0.88         | IP44               | 40           | 4.4  | 5uF            | B                | 0                  |
| D4E133-AA01-57 | M4E068BF | Ⓓ | 230     | 50/60     | 535     | 1170              | 66          | 0.29         | IP44               | 40           | 2.6  | 2uF            | B                | 0                  |
| D2E146-AP43-62 | M2E068EC | Ⓔ | 230     | 50/60     | 935     | 1650              | 245         | 1.08         | IP44               | 40           | 4.2  | 6uF            | B                | 100                |
| D2E146-AP47-75 | M2E068EC | Ⓕ | 230     | 50/60     | 970     | 2050              | 300         | 1.31         | IP44               | 40           | 4.2  | 8uF            | B                | 200                |
| D4E160-EG06-11 | M4E068EC | Ⓖ | 230     | 50/60     | 1240    | 1300              | 180         | 0.79         | IP44               | 40           | 4.6  | 5uF            | B                | 0                  |
| D4E180-BA02-25 | M4E068LA | Ⓗ | 230     | 50/60     | 1900    | 1250              | 360         | 1.58         | IP54               | 40           | 11.0 | 10uF           | B                | 0                  |
| D4E200-BA05-50 | M4E068LA | Ⓙ | 230     | 50        | 2260    | 1060              | 420         | 1.8          | IP54               | 40           | 11.9 | 8uF            | B                | 0                  |
| D4E225-BC01-36 | M4E074LA | ⓫ | 230     | 50        | 2600    | 1100              | 700         | 3.05         | IP22               | 40           | 12.1 | 25uF           | B                | 0                  |
| D4E250-BA01-12 | M4E094LA | ⓬ | 230     | 50/60     | 3730    | 1210              | 1240        | 6.0          | IP20               | 40           | 16.3 | 14uF           | F                | 0                  |

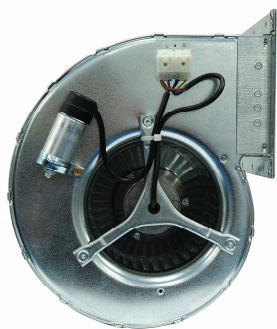
## Characteristics



- ① D2E097-BI56-50
- ② D2E133-CI33-87
- ③ D2E133-DM27-D8
- ④ D4E133-AA01-57
- ⑤ D2E146-AP43-62
- ⑥ D2E146-AP47-75
- ⑦ D4E160-EG06-11
- ⑧ D4E180-BA02-25
- ⑨ D4E200-BA05-50
- ⑩ D4E225-BC01-36
- ⑪ D4E250-BA01-12

# AC centrifugal blowers

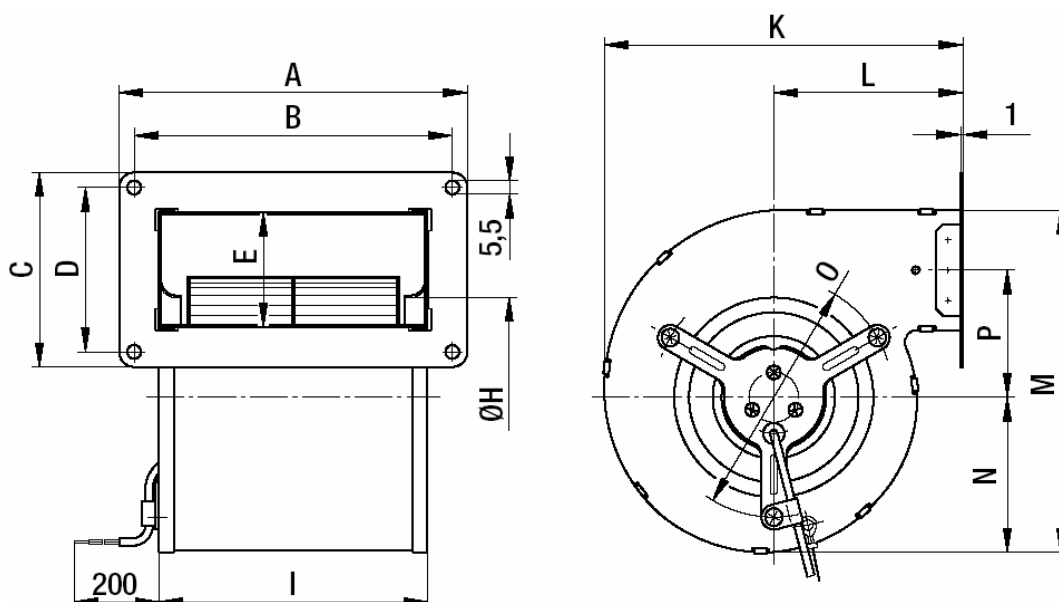
Dual inlet, sizes 097 to 250



## Dimensions

| Type           |   | A   | B   | C   | D   | E   | H    | I   | K     | L   | M   | N     | O   | P     | R   |
|----------------|---|-----|-----|-----|-----|-----|------|-----|-------|-----|-----|-------|-----|-------|-----|
| D2E097-BI56-50 | ① | 180 | 168 | 100 | 88  | 67  | 79.5 | 146 | 162   | 86  | 165 | 68    | 114 | 62.5  | 5.5 |
| D2E133-CI33-87 | ② | 206 | 190 | 142 | 126 | 102 | 112  | 168 | 204   | 97  | 213 | 93.5  | 145 | 67.5  | 5.5 |
| D2E133-DM27-D8 | ③ | 270 | 254 | 142 | 126 | 102 | 112  | 232 | 204   | 97  | 213 | 98    | 145 | 67.5  | 5.5 |
| D4E133-AA01-57 | ④ | 254 | 238 | 108 | 92  | 69  | 112  | 215 | 171.5 | 88  | 180 | 76    | 145 | 66    | 5.5 |
| D2E146-AP43-62 | ⑤ | 270 | 254 | 142 | 126 | 102 | 117  | 232 | 206   | 97  | 219 | 98    | 145 | 69    | 5.5 |
| D2E146-AP47-75 | ⑥ | 270 | 254 | 142 | 126 | 102 | 117  | 232 | 206   | 97  | 219 | 98    | 145 | 69    | 5.5 |
| D4E160-EG06-11 | ⑦ | 270 | 254 | 145 | 129 | 107 | 130  | 232 | 225   | 102 | 241 | 100.5 | 175 | 87    | 5.5 |
| D4E180-BA02-25 | ⑧ | 309 | 289 | 188 | 168 | 134 | 149  | 225 | 296   | 133 | 333 | 136   | 192 | 130   | 7   |
| D4E200-BA05-50 | ⑨ | 341 | 321 | 200 | 180 | 146 | 167  | 287 | 327   | 146 | 371 | 151   | 213 | 147   | 7   |
| D4E225-BC01-36 | ⑩ | 341 | 321 | 200 | 180 | 146 | 194  | 287 | 327   | 158 | 370 | 151   | 242 | 146   | 7   |
| D4E250-BA01-12 | ⑪ | 349 | 328 | 218 | 190 | 167 | 200  | 298 | 387   | 194 | 392 | 173   | 275 | 135.5 | 7   |

Detail Drawing for indication purposes only.



# AC centrifugal blowers

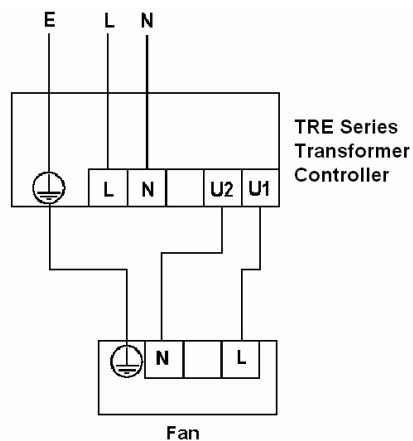
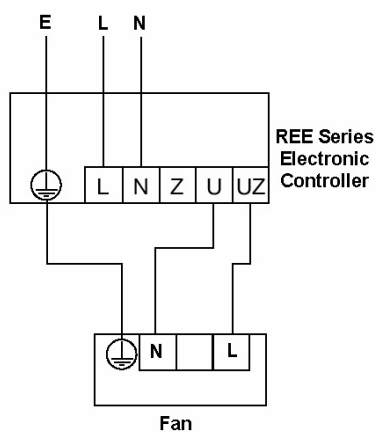
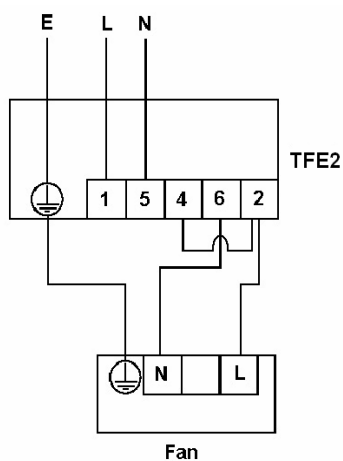
Dual inlet, sizes 097 to 250



## Acoustic Data (Hz)

| Type           |   | 125  | 250  | 500  | 1k   | 2k   | 4k   | 8k   | 16k  | Max dB(A) |
|----------------|---|------|------|------|------|------|------|------|------|-----------|
| D2E097-BI56-50 | ● | 27.6 | 39.4 | 43.7 | 47.3 | 47.1 | 43.6 | 41.0 | 30.6 | 58.3      |
| D2E133-CI33-87 | ● | 27.0 | 42.5 | 52.3 | 55.0 | 50.9 | 49.3 | 44.6 | 30.4 | 58.7      |
| D2E133-DM27-D8 | ● | 33.7 | 43.3 | 49.1 | 51.1 | 46.3 | 42.1 | 39.1 | 24.4 | 57.9      |
| D4E133-AA01-57 | ● | 18.3 | 34.4 | 52.7 | 49.4 | 46.1 | 42.9 | 37.0 | 19.5 | 55.1      |
| D2E146-AP43-62 | ● | 38.5 | 49.4 | 53.7 | 50.0 | 46.6 | 45.5 | 41.5 | 31   | 59.6      |
| D2E146-AP47-75 | ● | 41.8 | 55.4 | 57.5 | 52.8 | 50.4 | 47.0 | 43.7 | 34.4 | 62.8      |
| D4E160-EG06-11 | ● | 42.2 | 49.9 | 52.9 | 53.4 | 50.6 | 47.6 | 41.1 | 31.5 | 63.4      |
| D4E180-BA02-25 | ● | 42.7 | 57.3 | 59.4 | 60.6 | 57.4 | 53.9 | 49.2 | 34.0 | 65.3      |
| D4E200-BA05-50 | ● | 50.3 | 61.0 | 57.3 | 53.9 | 50.4 | 46.6 | 43.4 | 33.5 | 64.3      |
| D4E225-BC01-36 | ● | 42.8 | 58.1 | 61.8 | 61.7 | 58.7 | 55.3 | 50.4 | 36.0 | 66.8      |
| D4E250-BA01-12 | ● | 62.7 | 67.4 | 63.1 | 62.3 | 64.4 | 63.6 | 57.6 | 50.9 | 75.0      |

## Connection Diagrams



# Accessories

## Accessories

| Type           |   | Overload | Electronic | Transformer |
|----------------|---|----------|------------|-------------|
| D2E097-BI56-50 | ① | TFE2     | REE10      | TRE1.5      |
| D2E133-CI33-87 | ② | TFE2     | REE10      | TRE1.5      |
| D2E133-DM27-D8 | ③ | TFE2     | REE10      | TRE1.5      |
| D4E133-AA01-57 | ④ | TFE2     | REE10      | TRE1.5      |
| D2E146-AP43-62 | ⑤ | TFE2     | REE30      | TRE1.5      |
| D2E146-AP47-75 | ⑥ | TFE2     | REE30      | TRE1.5      |
| D4E160-EG06-11 | ⑦ | TFE2     | REE10      | TRE1.5      |
| D4E180-BA02-25 | ⑧ | TFE2     | REE30      | TRE2        |
| D4E200-BA05-50 | ⑨ | TFE2     | REE30      | TRE2        |
| D4E225-BC01-36 | ⑩ | TFE2     | REE50      | TRE4        |
| D4E250-BA01-12 | ⑪ | TFE2     | REE70      | TRE7.5      |

### Single Phase Motor Protection / Starter



**TFE2 (0.4 -10A, IP54)**  
-25°C - +40°C

The TFE2 is a 230 volt single phase, 10 amp starter and motor protection device. Start / Stop operation is via push button controls on the front of the unit. If the mains supply is interrupted the motor will restart when the power returns.

Motor protection operation will monitor the thermal overload device fitted to the motors and shut down if an over temperature situation arises. The unit will remain off until restarted manually.

Dimensions:  
TFE2, 80mm(W) x 150mm(H) x 97.5mm(D)

### Single Phase Electronic Speed Control



**REE10 (1A)**  
**REE30 (3A)**  
**REE50 (5A)**  
**REE70 (7A)**  
**REE100 (10A)**  
40°C Max

The REE range is a stepless electronic speed control for single phase fans (230 volt/50Hz). Start / stop and speed control operation is via switch and dial controls on the front of the unit. If the mains supply is interrupted the motor will restart when the power returns.

Separate motor protection devices will be required for each fan (TFE2). One unit may control several fans provided the maximum current rating of the controller is not exceeded.

Dimensions:  
REE10, 104mm(W) x 84mm(H) x 40mm(D)  
REE30, 131mm(W) x 101mm(H) x 50mm(D)  
REE50, 118mm(W) x 95mm(H) x 57mm(D)  
REE70, 120mm(W) x 95mm(H) x 73mm(D)  
REE100, 104mm(W) x 146mm(H) x 84mm(D)

### Single Phase Transformer Speed Control



**TRE1.5 (1.45A, IP54)**  
**TRE2 (2.1A, IP54)**  
**TRE4 (4A, IP54)**  
**TRE7.5 (7A, IP54)**  
40°C Max

The TRE range is a stepped transformer speed control for single phase fans (230 volt/50Hz). Start / stop and speed control operation is via a single selector switch control knob on the front of the unit. 5 set speed points are selectable from the control knob. If the mains supply is interrupted the motor will restart when the power returns.

Separate motor protection devices will be required for each fan (TFE2). One unit may control several fans provided the maximum current rating of the controller is not exceeded.

Dimensions:  
TRE1.5, 200mm(W) x 150mm(H) x 150mm(D)  
TRE2, 200mm(W) x 150mm(H) x 150mm(D)  
TRE4, 200mm(W) x 150mm(H) x 150mm(D)  
TRE7.5, 200mm(W) x 150mm(H) x 150mm(D)

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