

EcoPower® Hybrid Ventilator

Refer to product table below for applicable product codes covered by this document

Issue **G**

Product Type & Application

The Bradford EcoPower® Hybrid Ventilator is designed to exhaust heat and moisture from non-BAL commercial roofs (Class 2 to 9). The product incorporates a vertical vane turbine ventilator to allow it to operate under wind power or via its high efficiency electronically commutated (EC) motor.

Compliance with the NCC

For use in Australia, when correctly specified and installed, this product provides the following compliance:

NCC2022

- **Weatherproofing** - Meets the requirements of the NCC 2022 Volume 1 Amend. 2 Weatherproofing Performance Requirement F3P1 via Deemed-to-Satisfy (DtS) and performance solution pathways.

NCC2019

- **Weatherproofing** - Meets the requirements of the NCC 2019 Volume 1 Amend. 1 Weatherproofing Performance Requirement FP1.4 via Deemed-to-Satisfy (DtS) and performance solution pathways.

Evidence of Suitability

- Weatherproofing –
 - Excelo Consulting Engineers Performance Solution Report ECE24168 Commercial.

Limitations of Use

- **IMPORTANT** - Do Not Modify This Product: Compliance with the evidence of suitability data referenced in this document is only achieved by the product or configuration listed in this PTS.
- Do not use for exhausting hazardous, abrasive, acidic and alkaline vapour or areas containing explosive or corrosive materials.
- This product has not been tested for, and is not suitable for use in cyclonic wind regions C or D.
- This product is not suitable for use in Bush Fire BAL-12.5 to BAL-40 or BAL-FZ rated areas.
- The optional stainless-steel mesh available for use in this product as an insect guard does not comply with BAL requirements.
- Seek technical advice from Bradford Ventilation on application suitability if unsure.
- This product is not suitable for use within 500m of a saltwater body.

Specific Design or Installation Instructions

- Isolate power before installation.
- **Caution:** The turbine head of this product can rotate without warning (even during installation) – always keep body parts away from moving components.
- **Safety:** It is recommended to connect EcoPower® ventilators to a D-curve electrical circuit breaker.
- This is a general-purpose hybrid ventilation product, always refer to the installation guidance provided with the product prior to installation.
- The table below shows the minimum make-up air requirement per ventilator that should be provided in accordance with AS1668.2

| Product | Make-Up Air per ventilator - 100% open, evenly distributed open area |
|---------|--|
| EP400 | ≥ 0.3m² |
| EP600 | ≥ 0.5m² |
| EP900 | ≥ 0.9m² |

- Make-up air ingress should be provided via evenly distributed openings which are permanently open and positioned to help the ventilator work more effectively and efficiently (refer to the product installation guide for guidance).
- If make-up air is insufficient the ventilators will draw make-up air from each other. This will diminish the system effectiveness - air will be drawn inward through ventilators which are meant to be exhausting air. It will also increase the risk of drawing external water into the building during periods of rain. Further to this, it is recommended that ventilators of the same size are used together to prevent make-up air being drawing between ventilators of different sizes.
- The rotating head of this product must be installed horizontally to ensure correct operation – adjustment of the varipitch and base flashing is critical to achieve this orientation (refer to the installation guide for details).
- If the product is installed with a stainless-steel mesh, it should be periodically inspected to remove foreign objects and/or dust build-up to maintain airflow.
- This product requires specific areas to be sealed against water entry and other areas to be left unsealed to allow internal condensation drainage – refer to the installation guide for details.
- The size of the ventilator should be selected based upon the available roof area and required airflow performance.
- This product contains a fan which might be audible when in operation – avoid positioning the product directly over bedrooms, bedroom ensuites or on a roof area adjacent to, or overlooked by an upper storey level of the home where the fan noise may be heard.

For general installation guidance refer to the product installation guide at www.bradfordventilation.com.au

EcoPower® Hybrid Ventilator

Conditions of Storage, Use & Maintenance

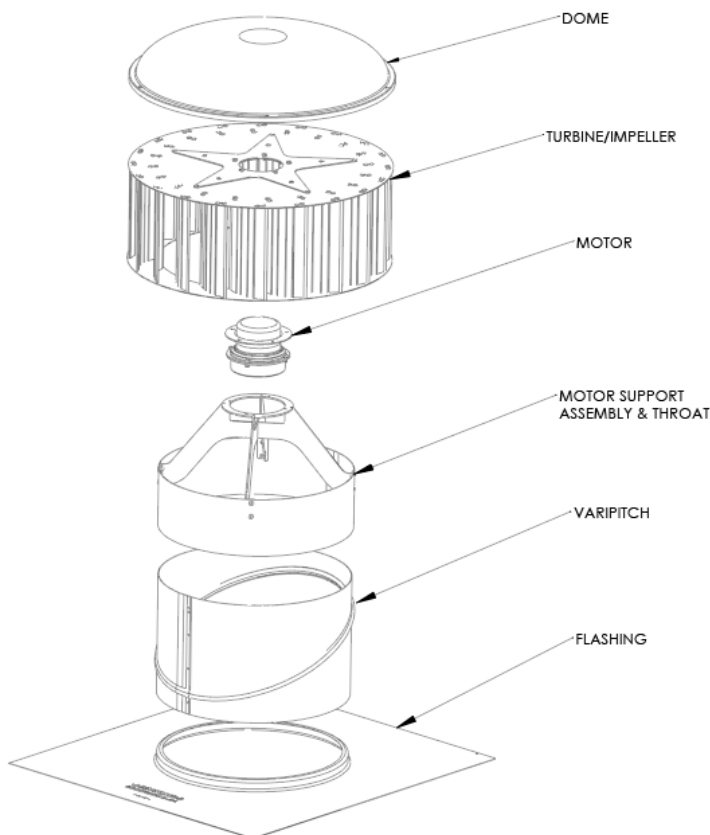
- Store in the original packaging in a cool and dry area.
- Do not attempt to repair – contact Bradford Ventilation for service advice.
- This product requires regular check for wear/tear.

Refer to the product warranty at bradfordventilation.com.au for more information.

Applicable Product Codes (SKU) – EcoPower® 400

| Variant | Material Code |
|---------------------------|---------------|
| EcoPower® 400 Mill Finish | 167410 |
| EcoPower® 400 Special | 600678 |

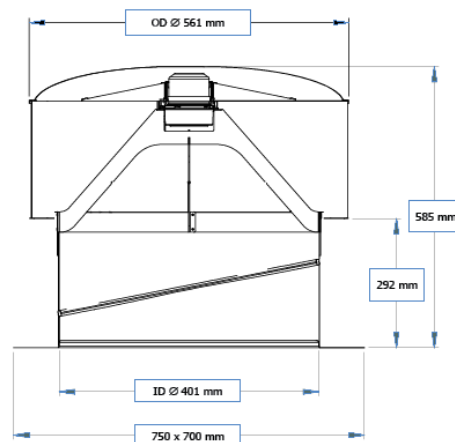
Product Specifications (in exploded view) – EcoPower® 400



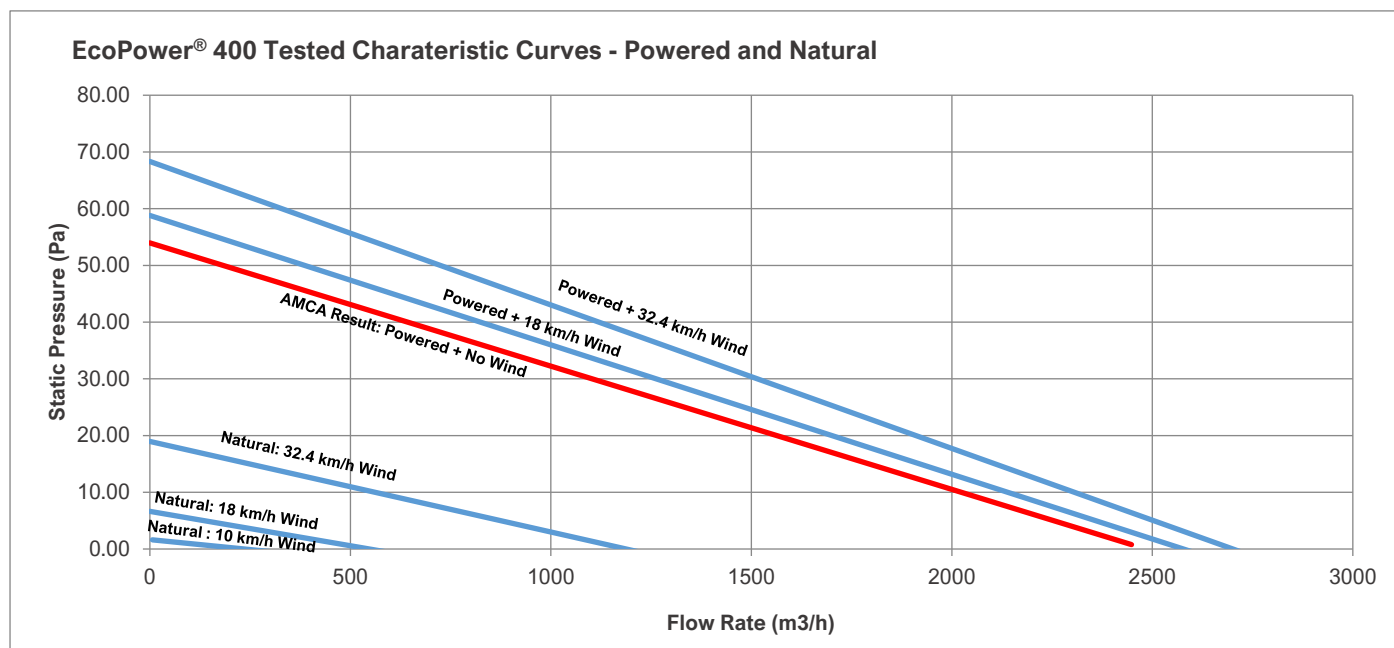
EcoPower® Hybrid Ventilator

Product Information Summary – EcoPower® 400

| Electrical/General | |
|----------------------------|---------|
| Voltage (V) | 220-240 |
| Frequency (Hz) | 50-60 |
| Pmax (W) | 59.2 |
| I _{max} (A) | 0.55 |
| Roof Opening Diameter (mm) | 400 |
| Weight (kg) | 9.42 |
| Max. Ambient Temp (°C) | 60 |
| Motor Protection Class | IP54 |

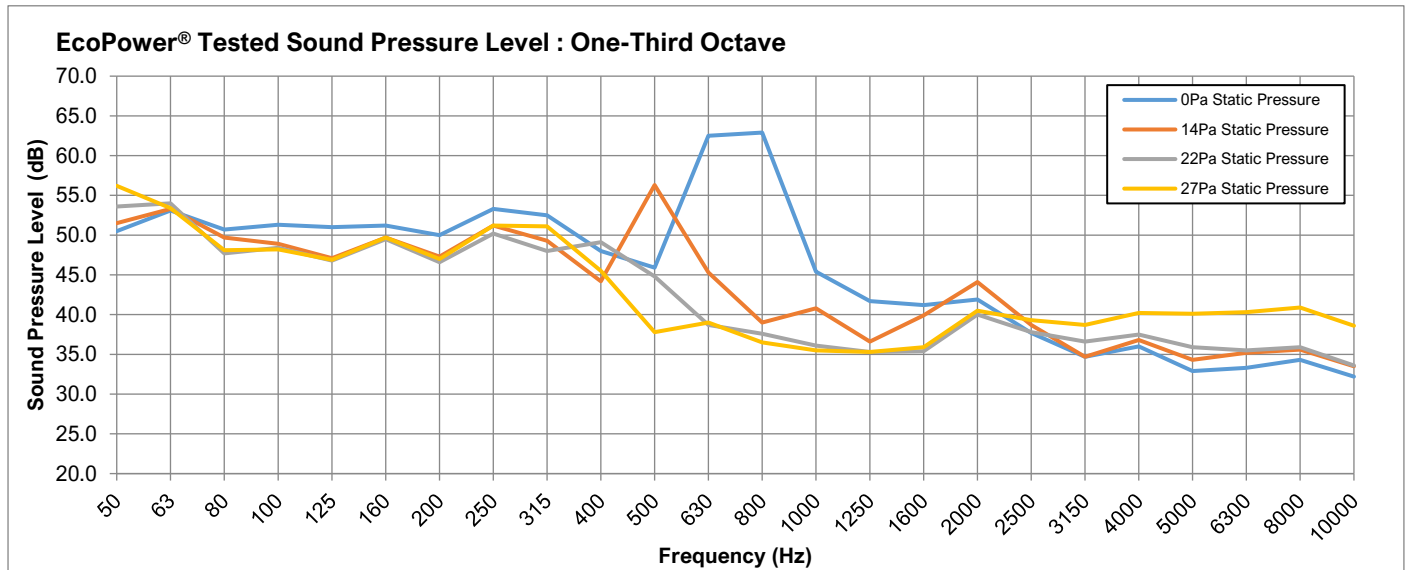


| Performance Data – EcoPower® 400 | | | | |
|----------------------------------|----------------------|------|------|------|
| | Static Pressure (Pa) | | | |
| | 0 | 14 | 22 | 27 |
| RPM | 344 | 1165 | 865 | 720 |
| Flow Rate without Wind (m³/hr) | 2484 | 1980 | 1476 | 1224 |
| Power (W) | 57 | 59 | 57 | 56 |
| Sones | 5.3 | 3.5 | 2.9 | 3.4 |
| L _{wA} (dB) | 65 | 56 | 52 | 52 |



Airflow rates are tested by AMCA in accordance with ISO5801, equivalent to AMCA Standard 210. Natural performance and wind assisted data is tested as per ISO5801 with an external wind source providing a constant source of wind across the specimen. Wind assisted tests performed by Edmonds on Edmonds in house test equipment. Wind assisted performance testing is outside the scope of AMCA's test standards.

EcoPower® Hybrid Ventilator



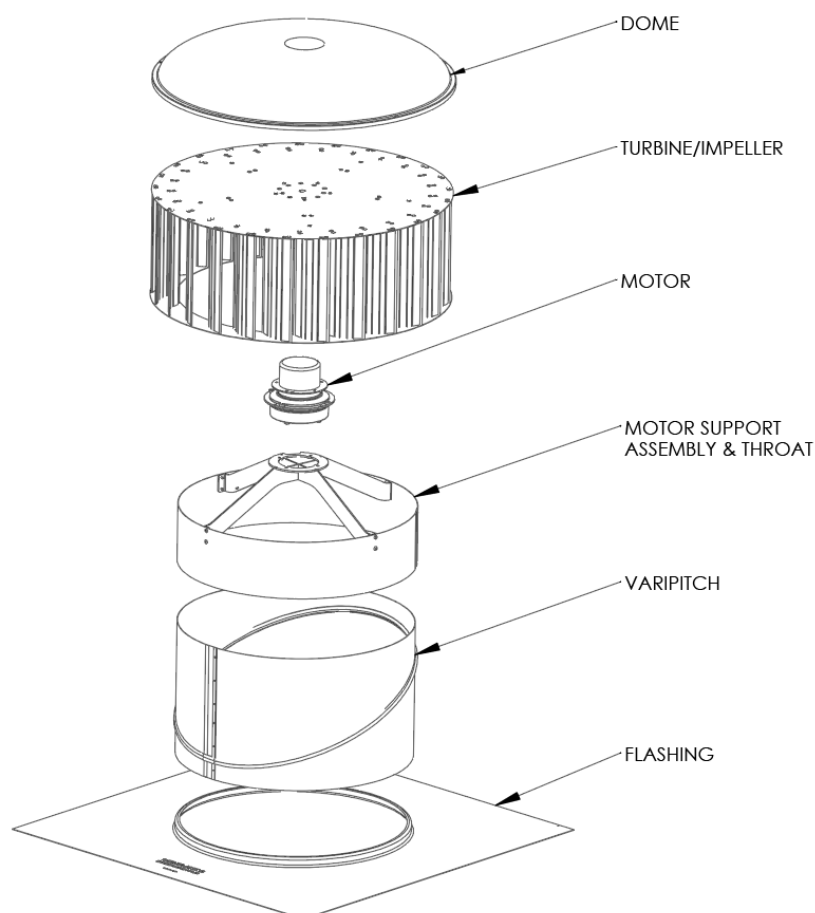
Testing was conducted by AMCA International. Product tested to AMCA Standard 300, Figure 2 Setup, Installation Type A, equivalent to ISO 13347.

EcoPower® Hybrid Ventilator

Applicable Product Codes (SKU) – EcoPower® 600

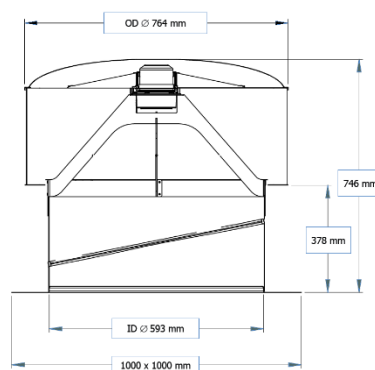
| Variant | Material Code |
|---------------------------|---------------|
| EcoPower® 600 Mill Finish | 474966 |
| EcoPower® 600 Special | 600679 |

Product Specifications (in exploded view) – EcoPower® 600



Product Information Summary – EcoPower® 600

| Electrical/General | |
|----------------------------|---------|
| Voltage (V) | 220-240 |
| Frequency (Hz) | 50-60 |
| Pmax (W) | 98.8 |
| I _{max} (A) | 0.71 |
| Roof Opening Diameter (mm) | 600 |
| Weight (kg) | 18.14 |
| Max. Ambient Temp (°C) | 50 |
| Motor Protection Class | IP54 |

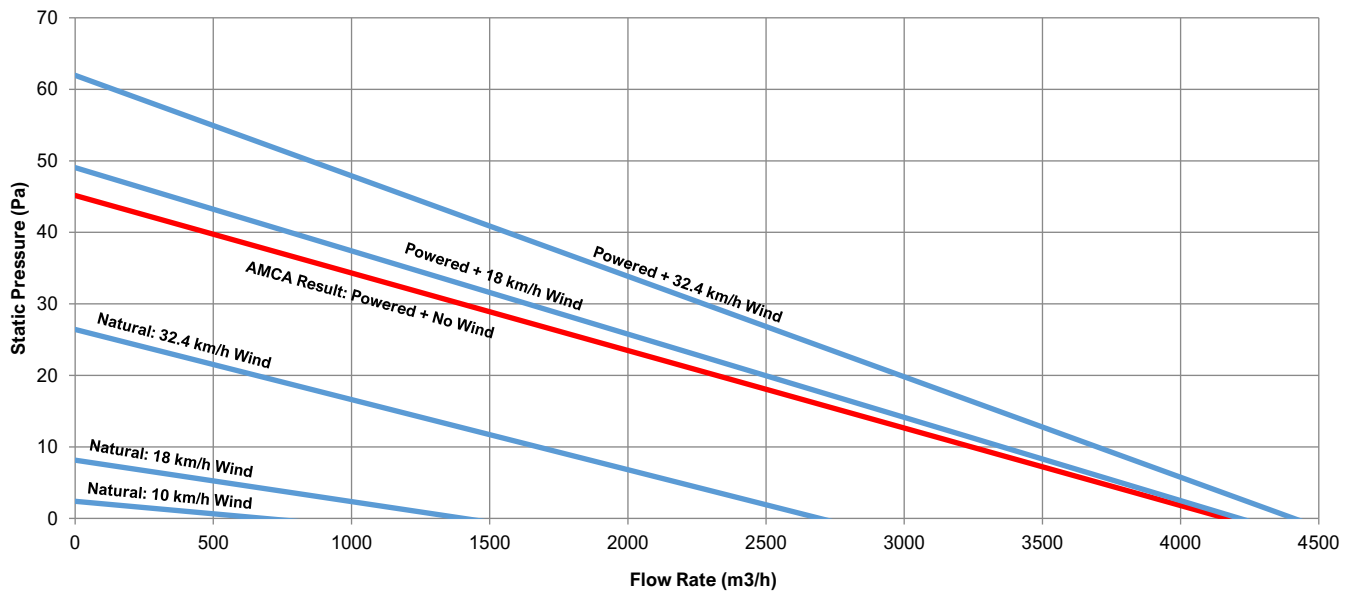


EcoPower® Hybrid Ventilator

Performance Data – EcoPower® 600

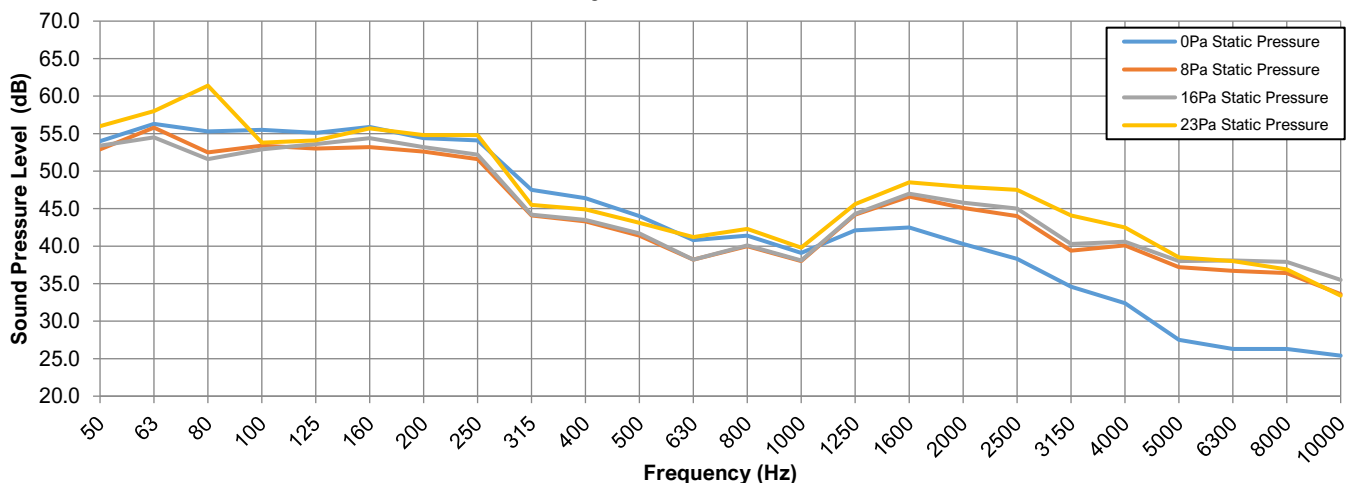
| | Static Pressure (Pa) | | | |
|---|----------------------|------|------|------|
| | 0 | 14 | 22 | 27 |
| RPM | 235 | 230 | 232 | 251 |
| Flow Rate without Wind (m ³ /hr) | 4356 | 3492 | 2592 | 1728 |
| Power (W) | 96.9 | 98.8 | 97.1 | 89.6 |
| Sones | 3.2 | 3.6 | 3.8 | 4.3 |
| LwA (dB) | 54 | 55 | 55 | 57 |

EcoPower® 600 Tested Characteristic Curves - Powered and Natural



Airflow rates are tested by AMCA in accordance with ISO5801, equivalent to AMCA Standard 210. Natural performance and wind assisted data is tested as per ISO5801 with an external wind source providing a constant source of wind across the specimen. Wind assisted tests performed by Edmonds on Edmonds in house test equipment. Wind assisted performance testing is outside the scope of AMCA's test standards.

EP600 Test sound one-third octave band analysis



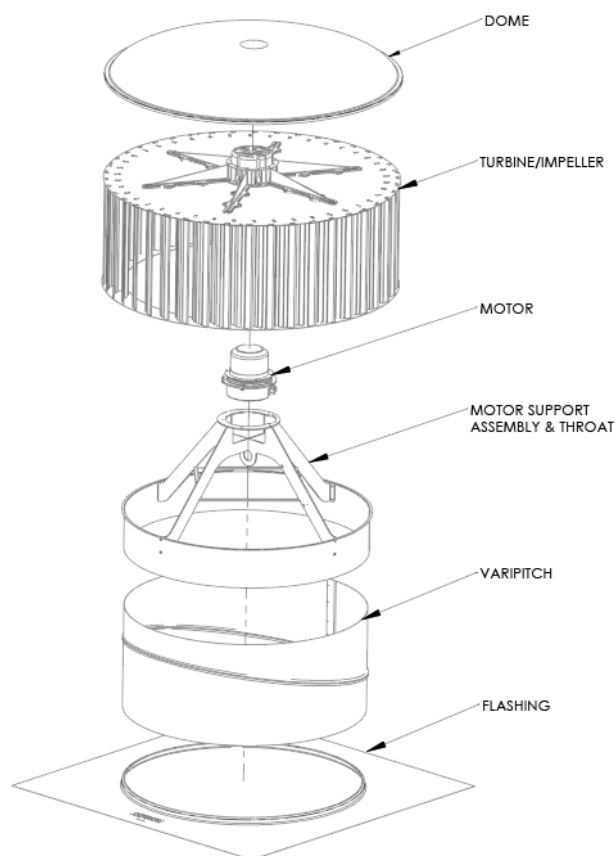
Testing was conducted by AMCA International. Product tested to AMCA Standard 300, Figure 2 Setup, Installation Type A, equivalent to ISO 13347.

EcoPower® Hybrid Ventilator

Applicable Product Codes (SKU) – EcoPower® 900

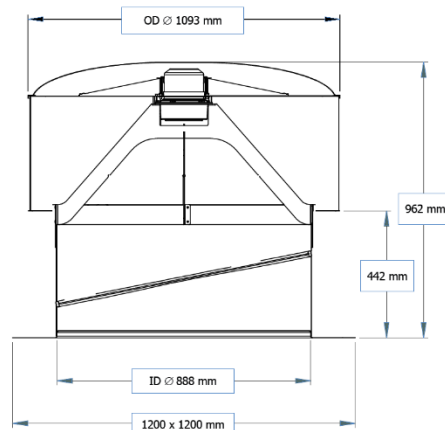
| Variant | Material Code |
|---------------------------|---------------|
| EcoPower® 900 Mill Finish | 74967 |
| EcoPower® 900 Special | 600680 |

Product Specifications (in exploded view) – EcoPower® 900



Product Information Summary – EcoPower® 900

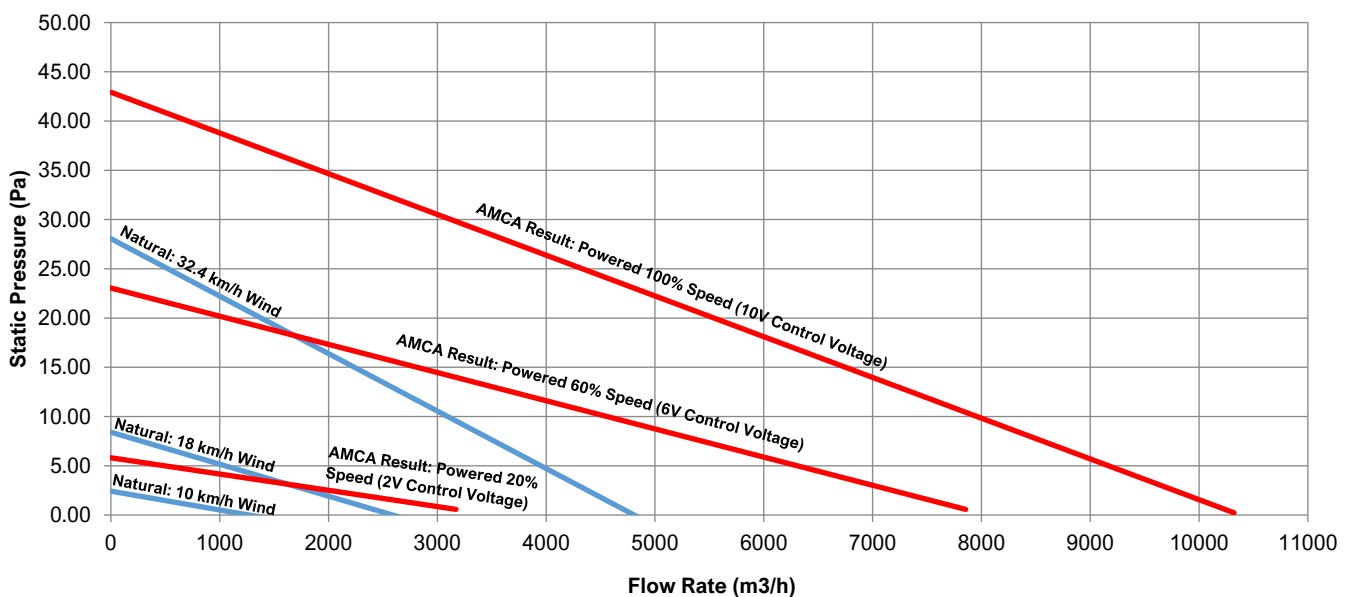
| Electrical/General | |
|----------------------------|---------|
| Voltage (V) | 220-240 |
| Frequency (Hz) | 50-60 |
| Pmax (W) | 212 |
| I _{max} (A) | 0.904 |
| Roof Opening Diameter (mm) | 900 |
| Weight (kg) | 36 |
| Max. Ambient Temp (°C) | 60 |
| Motor Protection Class | IP54 |



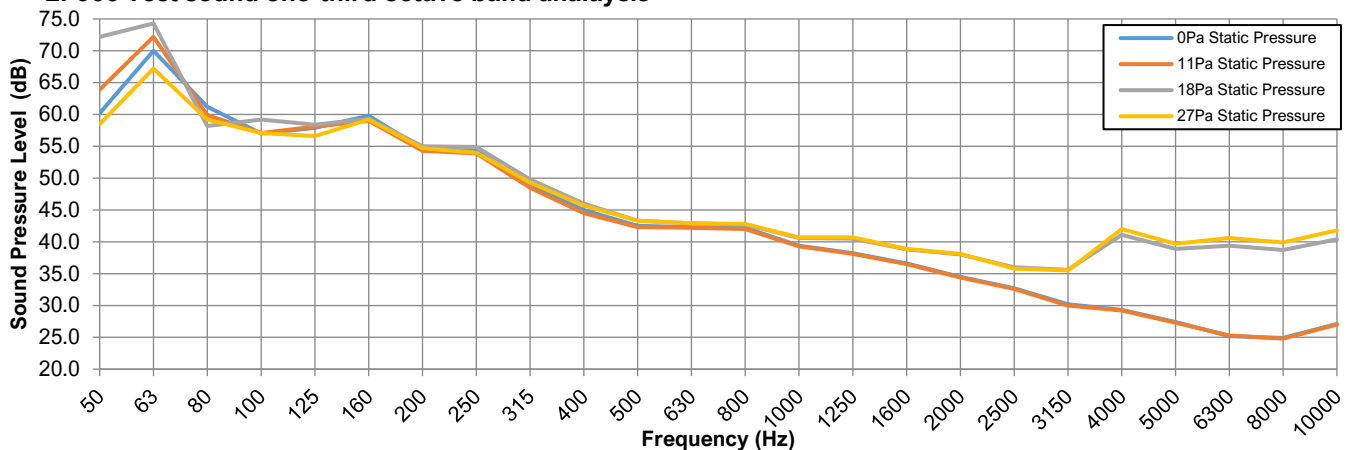
EcoPower® Hybrid Ventilator

Performance Data – EcoPower® 900

| | Static Pressure (Pa) | | | |
|--------------------------------|----------------------|------|------|------|
| | 0 | 14 | 22 | 27 |
| RPM | 168 | 168 | 170 | 189 |
| Flow Rate without Wind (m³/hr) | 10321 | 8272 | 6112 | 3650 |
| Power (W) | 204 | 212 | 207 | 172 |
| Sones | 3.4 | 3.6 | 4.9 | 4.2 |
| LwA (dB) | 54 | 54 | 56 | 55 |

EcoPower® 900 Tested Characteristic Curves - Powered and Natural


Airflow rates are tested by AMCA in accordance with ISO5801, equivalent to AMCA Standard 210. Natural performance and wind assisted data is tested as per ISO5801 with an external wind source providing a constant source of wind across the specimen. Wind assisted tests performed by Edmonds on Edmonds in house test equipment. Wind assisted performance testing is outside the scope of AMCA's test standards. *Standard fixed speed EP900 operates at 10V. **2V and 6V curves only applicable if EP900 0-10V variable speed is optioned.

EP900 Test sound one-third octave band analysis


Testing was conducted by AMCA International. Product tested to AMCA Standard 300, Figure 2 Setup, Installation Type A, equivalent to ISO 13347.