

EcoPower® Data Catalogue



ROOFING & PROFILES (AU) LTD

HYBRID VENTILATION TECHNOLOGY

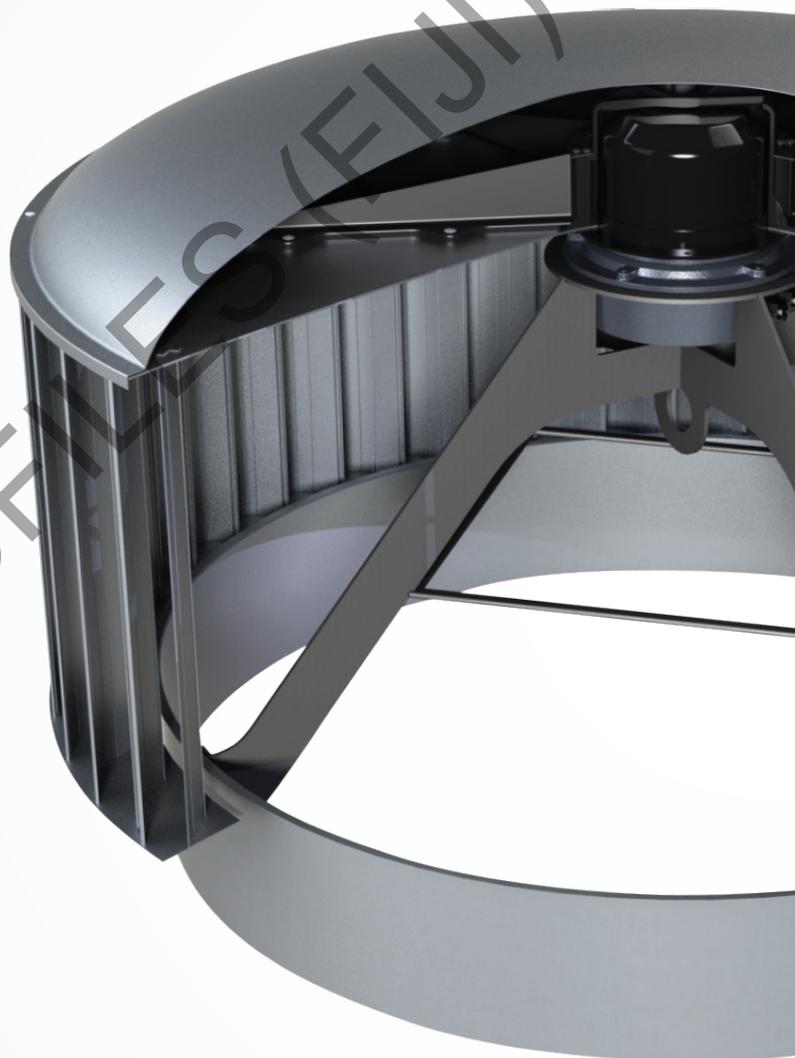
EcoPower®

PRODUCT OVERVIEW

The EcoPower® incorporates Australian-engineered hybrid patented ventilation technology. This design is an innovative combination of natural ventilation and efficient mechanical ventilation and operates in either natural mode, power mode, or both modes simultaneously.

FEATURES & BENEFITS

- Low energy consumption of only 1.89×10^{-5} kW/(m³/hr) or 3.21×10^{-5} kW/CFM for EP900.
- Patented hybrid ventilator design that enables an open throat to improve airflow performance.
- Reliable ventilation available when required through power mode.
- Virtually inaudible from typical background sound pressures of 55.9 dB(A) @1.5m for EP900, even in power mode.
- No scheduled maintenance required for the life of the product.
- Hybrid design eliminates potential air back-drafting.
- Can be utilised to drive an economiser system when conditions permit.
- Lightweight aluminium construction for ease of installation and minimal roof loading.
- Efficient EC motors directly connect to AC mains with single phase power input.
- Large Input voltage range of 200-277 VAC and 50-60 Hz.



CSR Building Products Ltd T/A CSR Edmonds certifies that the EcoPower hybrid ventilators shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of AMCA Certified Ratings Program.



Note:

- Image for illustrative purposes only. Image of EP900 shown.



ROOFING & PROFILING (FIJI) LTD

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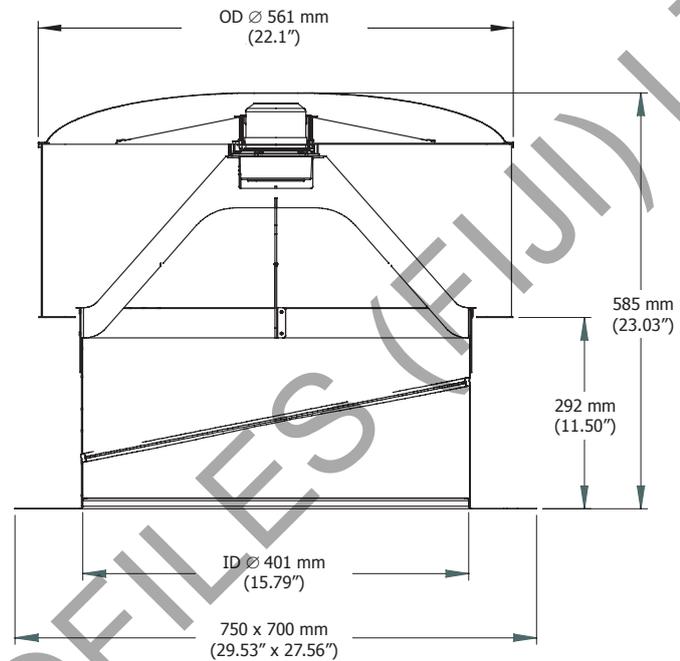
PRODUCT DIMENSION & WEIGHT

Model EP400

Turbine, Varipitch and Flashing

Product information

Voltage [V]	200 - 277
Frequency [Hz]	50 - 60
Pmax [kW]	0.0592
I _{max} [A]	0.55
Roof Opening Diameter (mm)	400
Roof Opening Diameter (")	15.75
Weight [kg]	9.42
Weight [lbs]	20.8
Max Amb. Temp [°C]	60
Max Amb. Temp (°F)	140



*Tolerance is within
+/- 5mm and +/- 0.5 kgs +/- 0.2 inches and +/- 1.1 Lbs

Performance Data

Test at nominal value of 230V, 50Hz, and 360RPM

EP400		Static Pressure (Pa)			
		0Pa 0.004 in.H ₂ O	14Pa 0.056 in.H ₂ O	22Pa 0.088 in.H ₂ O	27Pa 0.108 in.H ₂ O
RPM		344	334	334	337
Flow Rate @ no wind	CFM	1 462	1 165	869	720
	m ³ /hr	2 484	1 980	1 476	1 224
Power	BHP	0.076	0.079	0.076	0.075
	Motor Input Watt (kW)	0.057	0.059	0.057	0.056
Sones		5.3	3.5	2.9	3.4
LwA (dB)		65	56	52	52

Performance ratings do not include the effects of appurtenances (accessories). Performance certified is for installation type A – Free inlet, Free outlet. Values shown are for inlet LWiA sound power levels for Installation Type A: free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for Installation Type A: free inlet hemispherical sone levels.



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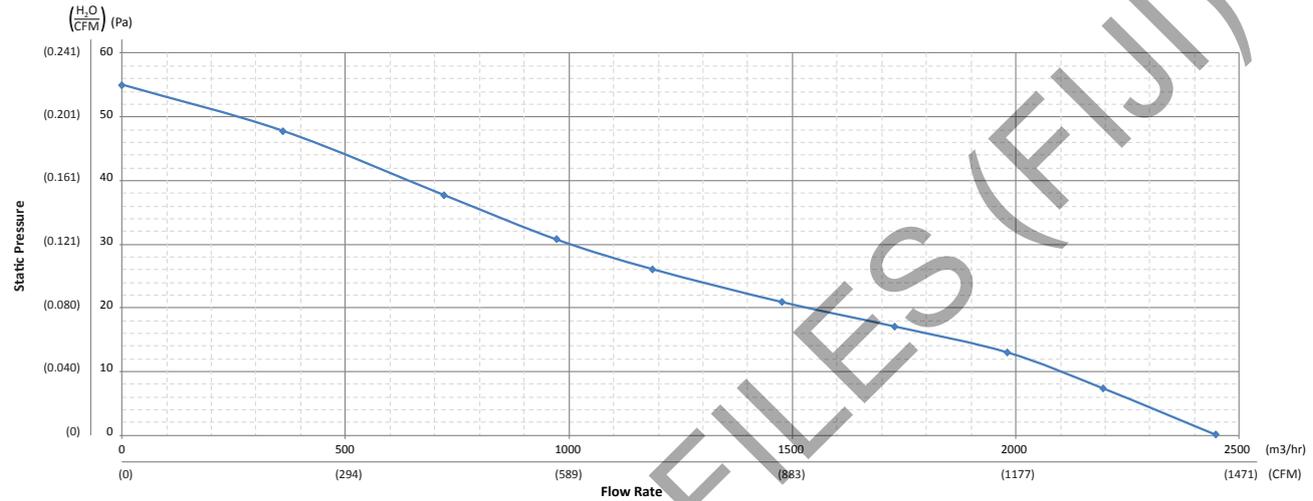


PERFORMANCE DATA

Model EP400

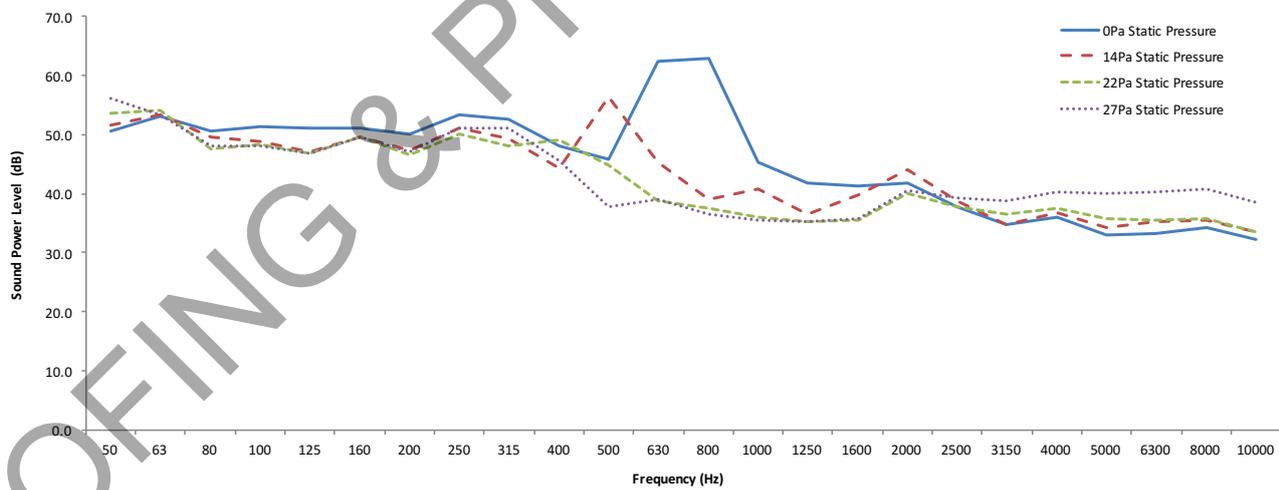
Tested Characteristic Curves : Static Pressure vs flow rate

Tested at motor input 230V, 60W, 50Hz, and 360RPM



Speed of 360RPM shown is nominal. Performance is based on actual speed of test. Testing was conducted by AMCA. Performance certified is for installation type A: Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Performance ratings do not include the effects of appurtenances (accessories).

EP400 Tested Sound Power Level : One - third octave



Testing was conducted by AMCA. Performance certified is for installation type A - Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Values shown are for sound inlet LWi power levels for: Installation Type A: free inlet, free outlet. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301. Performance ratings do not include the effects of appurtenances (accessories).

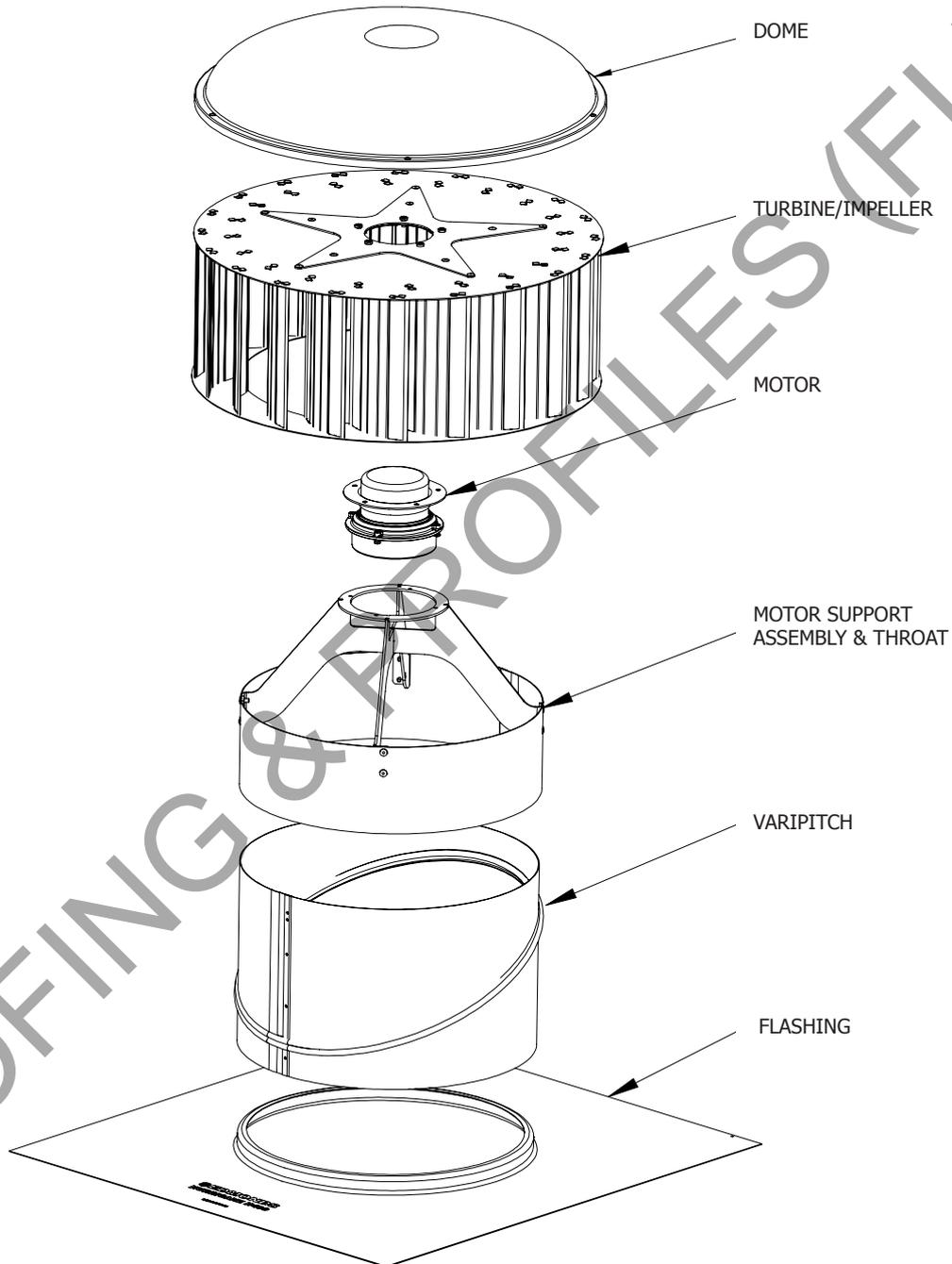


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EXPLODED VIEW

Model EP400



DESIGN SPECIFICATIONS

Model EP400

PERFORMANCE

Roof mounted ventilator shall be EP400. Ventilator air flow performance shall be tested in accordance with ISO5801, equivalent to ANSI / AMCA standard 210-07, figure 15 setup, installation type A. Fan sound performance shall be tested and stated in accordance to AMCA standard 300-08, figure 2 setup, installation type A. Noise must be less than or equal to 64.8dB(A) @1.5m with max power consumption at 60W or better.

OPEN THROAT

The hybrid ventilator shall incorporate an open throat design. This design improves air flow rates by eliminating the need for a separate axial fan.

DRIVE ASSEMBLY

The ventilator shall use a direct drive centrifugal design where the bearing system of the motor functions as the bearing system of the ventilator. This means the vent can be free spinning under wind load and/or power activated as conditions require.

MOTOR

The hybrid ventilator shall use a high efficiency single phase Electronic Commutation (EC) motor.

CONSTRUCTION

Ventilator shall be constructed with high quality engineering materials:

- Dome, turbine and throat shall be made of aluminium.
- The brackets shall be powder coated or polyolefin mild steel.
- Support arms and motor housing shall be glass reinforced Nylon 6.
- Available in a range of colours upon request.

ACCESSORIES

When specified, accessories such as manual damper, electric damper, EC damper grilles, and special bases (spigot, square to round and ex base) are available upon request.

WARRANTY

CSR Building Products Limited ABN 55 008 631 356 T/A Edmonds ("Edmonds") warrants from the date of purchase, for a period of TWO (2) YEARS that the Electronic Commutating Motor and for a period of TEN (10) YEARS that the Turbine Body of the Edmonds EcoPower[®] Hybrid Ventilator will retain its performance characteristics and be free from faulty materials and workmanship on the condition that the vent is installed in accordance to the installation instructions. Please refer to Warranty Document on edmonds.com.au for full details.



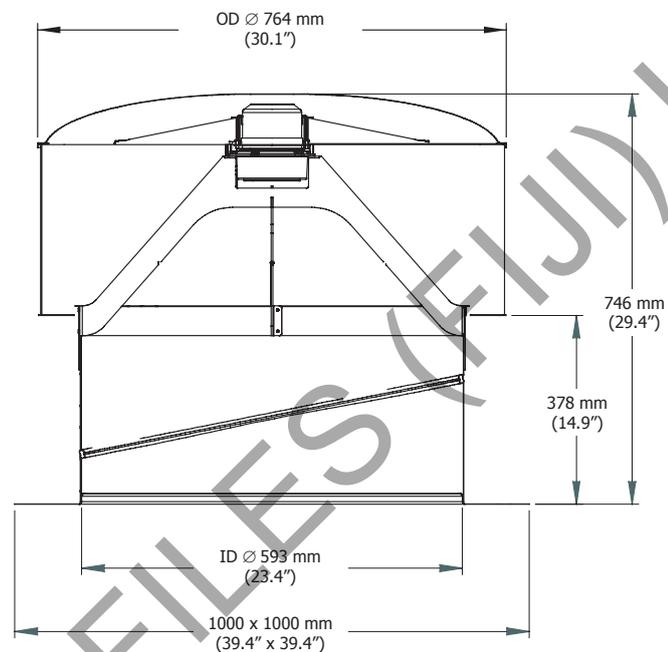
PRODUCT DIMENSION & WEIGHT

Model EP600

Turbine, Varipitch and Flashing

Product information

Voltage [V]	200 - 277
Frequency [Hz]	50 - 60
Pmax [kW]	0.099
Imax [A]	0.71
Roof Opening Diameter (mm)	600
Roof Opening Diameter (")	23.62
Weight [kg]	18.14
Weight [lbs]	40
Max Amb. Temp [°C]	50
Max Amb. Temp (°F)	122



*Tolerance is within
+/- 5mm and +/- 0.5 kgs +/- 0.2 inches and +/- 1.1 Lbs

Performance Data

Test at nominal value of 230V, 50Hz, and 250RPM

EP600		Static Pressure (Pa)			
		0Pa 0.004 in.H ₂ O	8Pa 0.032 in.H ₂ O	16Pa 0.064 in.H ₂ O	23Pa 0.092 in.H ₂ O
RPM		235	230	232	251
Flow Rate @ no wind	CFM	2 564	2 055	1 526	1 017
	m ³ /hr	4356	3492	2592	1728
Power	BHP	0.130	0.133	0.130	0.121
	Motor Input Watt (kW)	0.097	0.099	0.097	0.090
Sones		3.2	3.6	3.8	4.3
LwA (dB)		54	55	55	57

Performance ratings do not include the effects of appurtenances (accessories). Performance certified is for installation type A – Free inlet, Free outlet. Values shown are for inlet LWiA sound power levels for Installation Type A: free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for Installation Type A: free inlet hemispherical sone levels.



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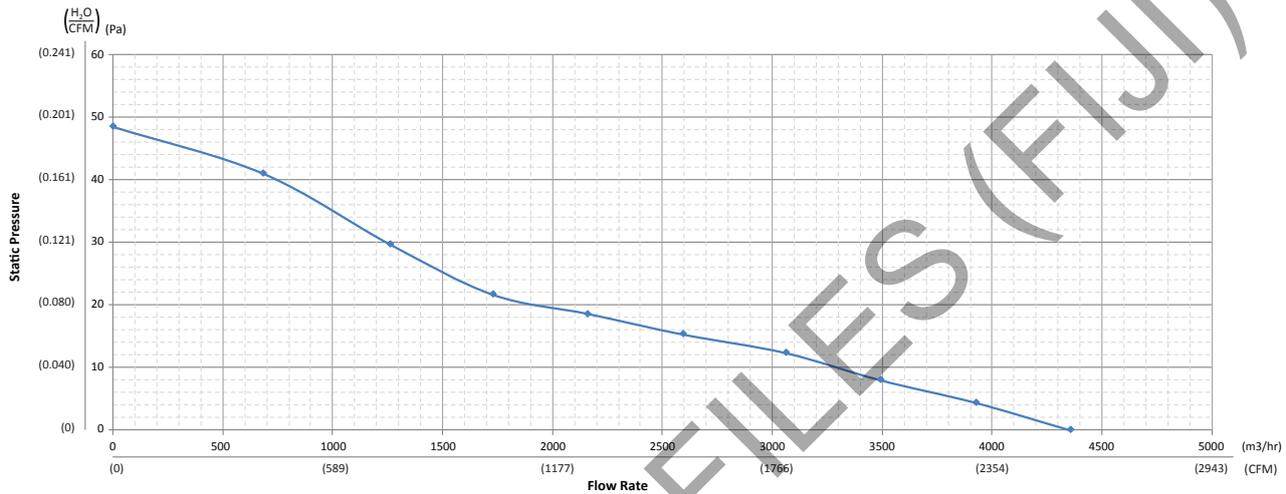
PERFORMANCE DATA

EP 600

Model EP600

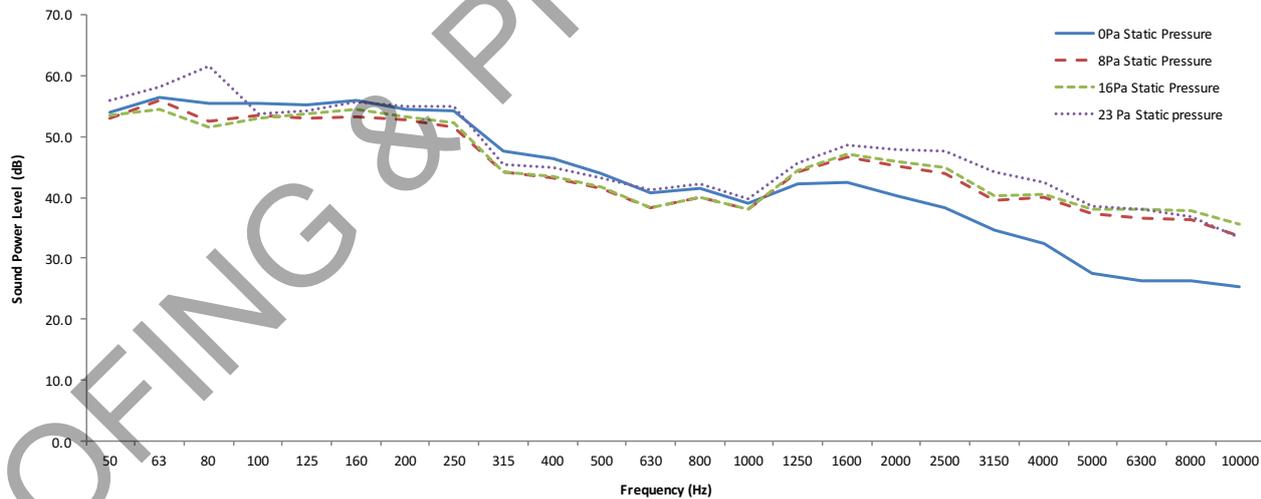
Tested Characteristic Curves : Static Pressure vs flow rate

Tested at motor input 230V, 99W, 50Hz, and 250RPM



Speed of 250RPM shown is nominal. Performance is based on actual speed of test. Testing was conducted by AMCA. Performance certified is for installation type A: Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Performance ratings do not include the effects of appurtenances (accessories).

EP600 Tested Sound Power Level : One - third octave



Testing was conducted by AMCA. Performance certified is for installation type A - Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Values shown are for sound inlet LWi power levels for: Installation Type A: free inlet, free outlet. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301. Performance ratings do not include the effects of appurtenances (accessories).

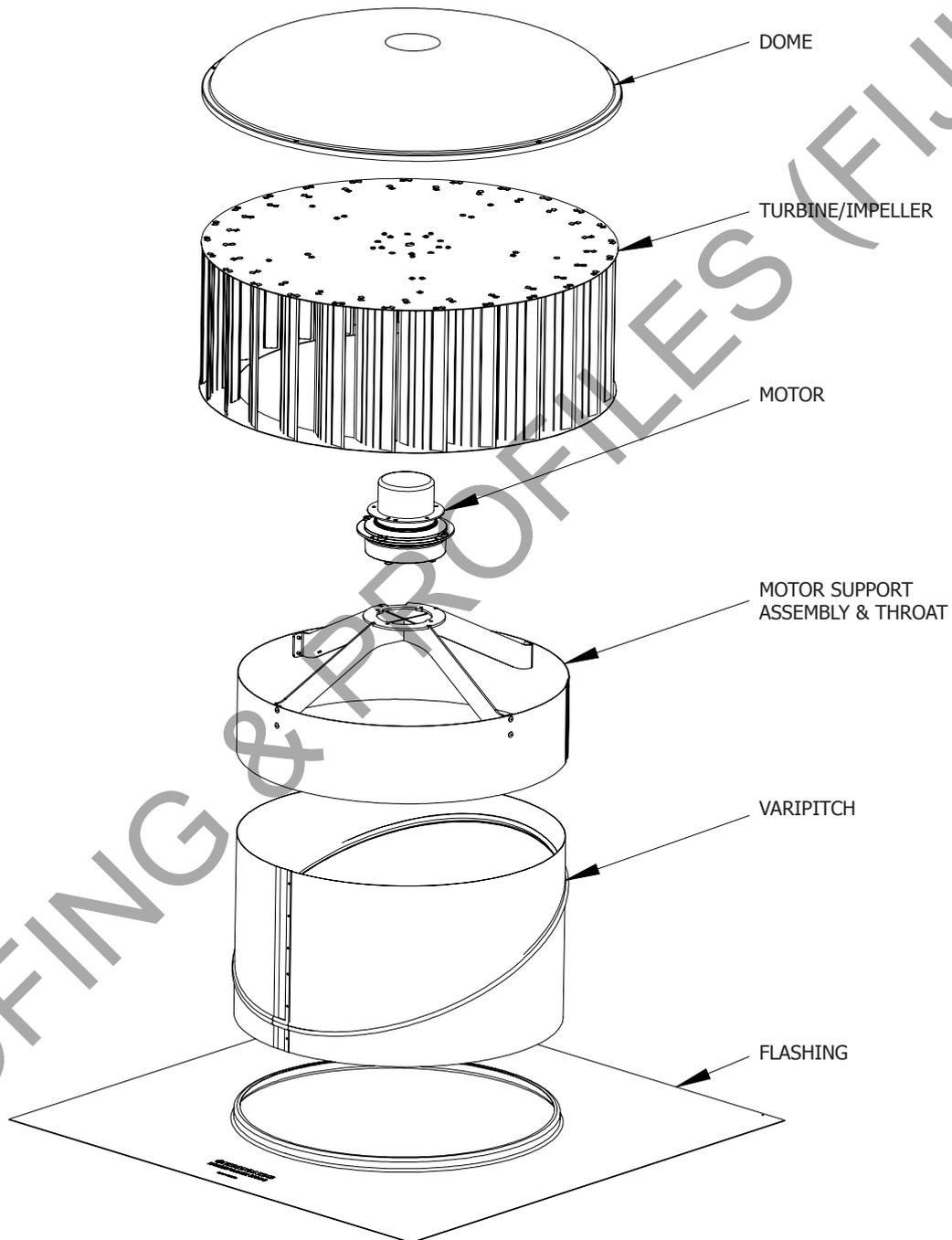


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EXPLODED VIEW

Model EP600



DESIGN SPECIFICATIONS

EP 600

Model EP600

PERFORMANCE

Roof mounted ventilator shall be EP600. Ventilator air flow performance shall be tested in accordance with ISO5801, equivalent to ANSI / AMCA standard 210-07, figure 15 setup, installation type A. Fan sound performance shall be tested and stated in accordance to AMCA standard 300-08, figure 2 setup, installation type A. Noise must be less than or equal to 57.2dB(A) @1.5m with max power consumption at 98.8W or better.

OPEN THROAT

The hybrid ventilator shall incorporate an open throat design. This design improves air flow rates by eliminating the need for a separate axial fan.

DRIVE ASSEMBLY

The ventilator shall use a direct drive centrifugal design where the bearing system of the motor functions as the bearing system of the ventilator. This means the vent can be free spinning under wind load and/or power activated as conditions require.

MOTOR

The hybrid ventilator shall use a high efficiency single phase Electronic Commutation (EC) motor.

CONSTRUCTION

Ventilator shall be constructed with high quality engineering materials:

- Dome, turbine and throat shall be made of aluminium.
- The brackets shall be powder coated or polyolefin mild steel.
- Support arms and motor housing shall be glass reinforced Nylon 6.
- Available in a range of colours upon request.

ACCESSORIES

When specified, accessories such as manual damper, electric damper, EC damper grilles, and special bases (spigot, square to round and ex base) are available upon request.

WARRANTY

CSR Building Products Limited ABN 55 008 631 356 T/A Edmonds ("Edmonds") warrants from the date of purchase, for a period of TWO (2) YEARS that the Electronic Commutating Motor and for a period of TEN (10) YEARS that the Turbine Body of the Edmonds EcoPower® Hybrid Ventilator will retain its performance characteristics and be free from faulty materials and workmanship on the condition that the vent is installed in accordance to the installation instructions. Please refer to Warranty Document on edmonds.com.au for full details.



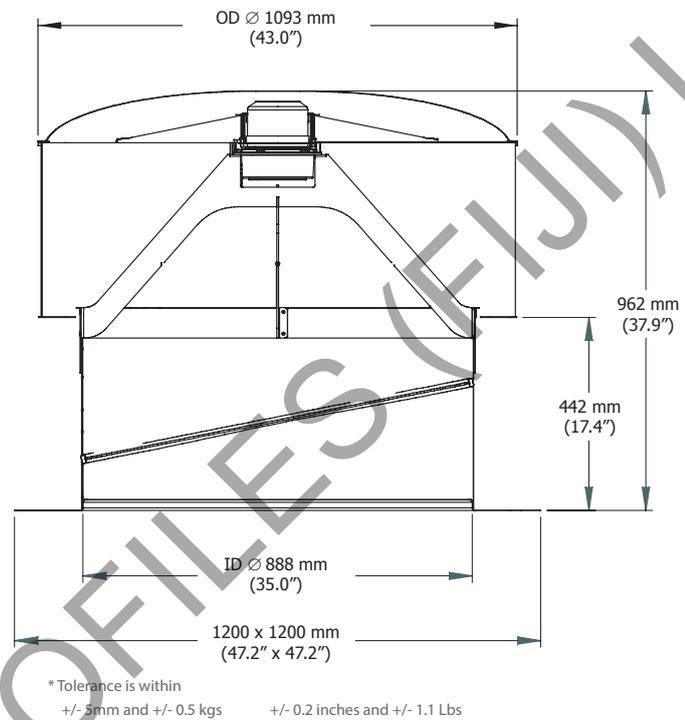
PRODUCT DIMENSION & WEIGHT

Model EP900

Variable speed and fixed speed model available
Turbine, Varipitch and Flashing

Product information

Voltage [V]	200 - 277
Frequency [Hz]	50 - 60
Pmax [kW]	0.212
I _{max} [A]	0.904
Roof Opening Diameter (mm)	900
Roof Opening Diameter (")	35.43
Weight [kg]	36
Weight [lbs]	79.4
Max Amb. Temp [°C]	60
Max Amb. Temp (°F)	140



Performance Data

Test at nominal value of 230V, 50Hz, and 180RPM with 10VDC control voltage

EP900		Static Pressure (Pa)			
		0Pa 0.004 in.H ₂ O	14Pa 0.056 in.H ₂ O	22Pa 0.088 in.H ₂ O	27Pa 0.108 in.H ₂ O
RPM		168	168	170	189
Flow Rate @ no wind	CFM	6 074	4 869	3 597	2 418
	m ³ /hr	10321	8272	6112	3650
Power	BHP	0.271	0.284	0.278	0.231
	Motor Input Watt (kW)	0.204	0.212	0.207	0.172
Sones		3.4	3.6	4.9	4.2
LwA (dB)		54	54	56	55

Performance ratings do not include the effects of appurtenances (accessories). Performance certified is for installation type A – Free inlet, Free outlet. Values shown are for inlet LWiA sound power levels for Installation Type A: free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for Installation Type A: free inlet hemispherical sone levels.



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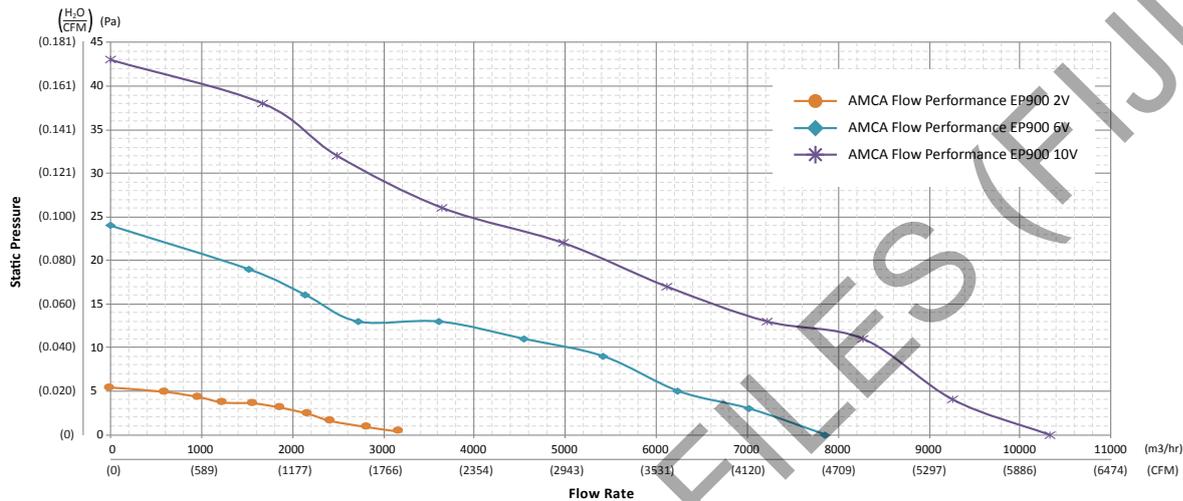


PERFORMANCE DATA

Model EP900

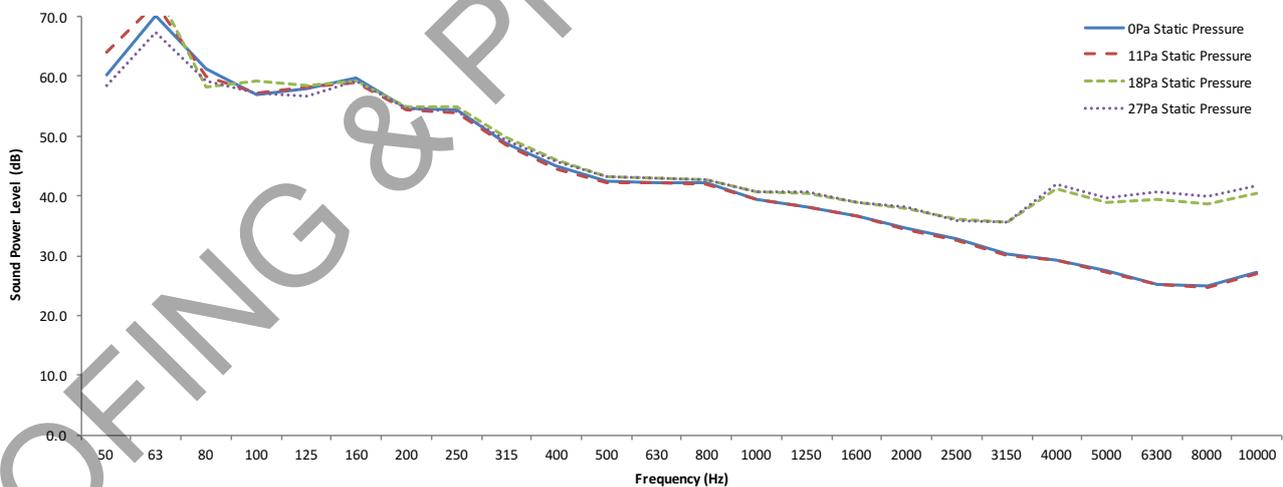
Tested Characteristic Curves : Static Pressure vs flow rate

Tested at motor input 230V, 50Hz, 185W and 67-80RPM with 2VDC. Tested at motor input 230V, 50Hz, 185W and 129-166RPM with 6VDC. Tested at motor input 230V, 50Hz, 220W and 166-225RPM with 10VDC control voltage



Performance is based on actual speed of test. Testing was conducted by AMCA. Performance certified for installation type A: Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Performance ratings do not include the effects of appurtenances (accessories).

EP900 Tested Sound Power Level : One - third octave



Testing was conducted by AMCA. Performance certified for installation type A - Free inlet, Free outlet. Rating method F (Direct Drive, As Run Speed, High Slip Motor). Values shown are for sound inlet LWi power levels for: Installation Type A: free inlet, free outlet. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301. Performance ratings do not include the effects of appurtenances (accessories).



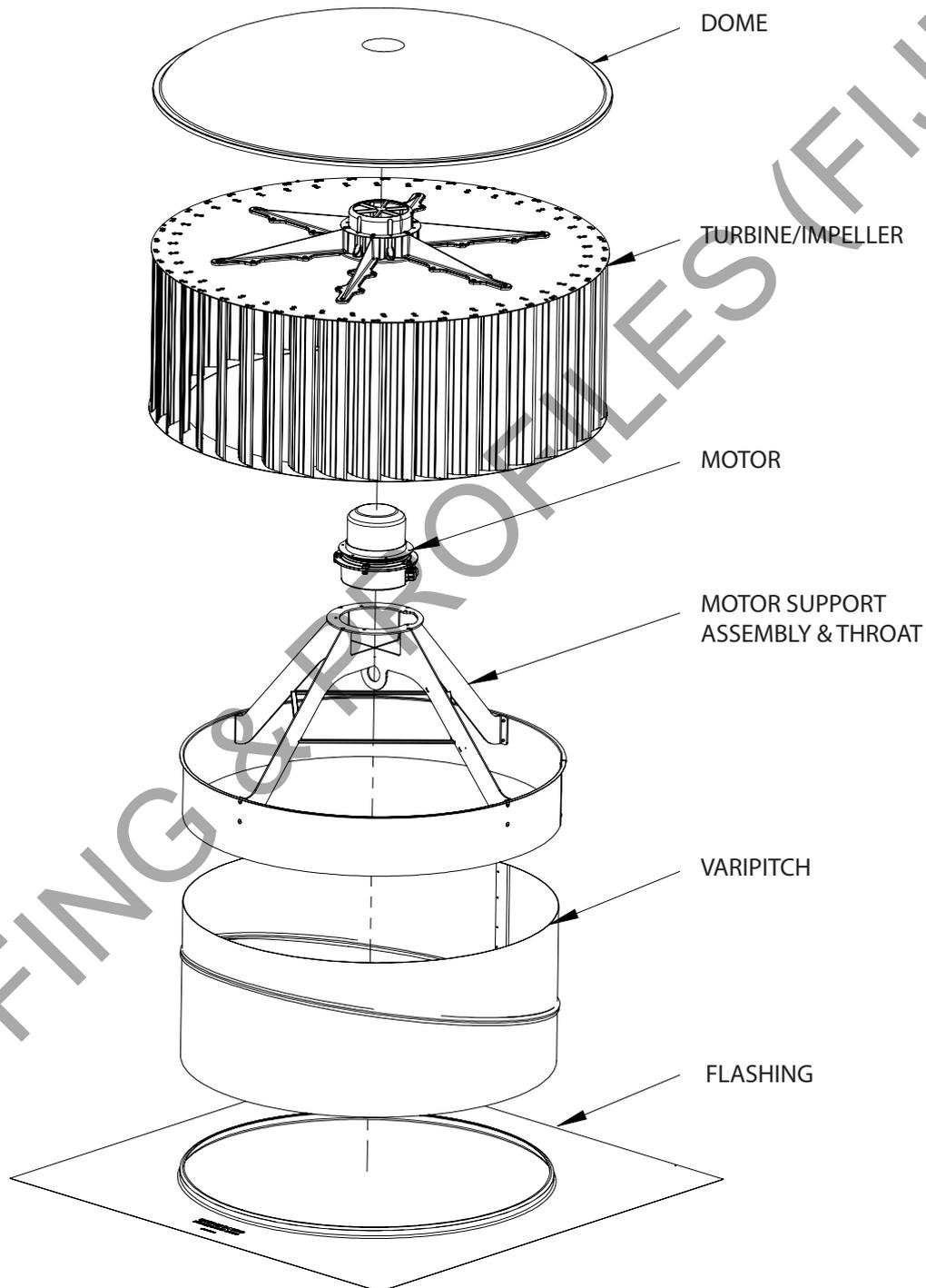
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EP 900

EXPLODED VIEW

Model EP900



DESIGN SPECIFICATIONS

Model EP900

PERFORMANCE

Roof mounted ventilator shall be EP900. Ventilator air flow performance shall be tested in accordance with ISO5801, equivalent to ANSI / AMCA standard 210-07, figure 15 setup, installation type A. Fan sound performance shall be tested and stated in accordance to AMCA standard 300-08, figure 2 setup, installation type A. Noise must be less than or equal to 55.9dB(A) @1.5m with max power consumption at 212W or better.

OPEN THROAT

The hybrid ventilator shall incorporate an open throat design. This design improves air flow rates by eliminating the need for a separate axial fan.

DRIVE ASSEMBLY

The ventilator shall use a direct drive centrifugal design where the bearing system of the motor functions as the bearing system of the ventilator. This means the vent can be free spinning under wind load and/or power activated as conditions require.

MOTOR

The hybrid ventilator shall use a high efficiency single phase Electronic Commutation (EC) motor.

CONSTRUCTION

Ventilator shall be constructed with high quality engineering materials:

- Dome, turbine and throat shall be made of aluminium.
- The brackets shall be powder coated or polyolefin mild steel.
- Support arms and motor housing shall be glass reinforced Nylon 6.
- Available in a range of colours upon request.

ACCESSORIES

When specified, accessories such as manual damper, electric damper, EC damper grilles, and special bases (spigot, square to round and ex base) are available upon request.

WARRANTY

CSR Building Products Limited ABN 55 008 631 356 T/A Edmonds ("Edmonds") warrants from the date of purchase, for a period of TWO (2) YEARS that the Electronic Commutating Motor and for a period of TEN (10) YEARS that the Turbine Body of the Edmonds EcoPower® Hybrid Ventilator will retain its performance characteristics and be free from faulty materials and workmanship on the condition that the vent is installed in accordance to the installation instructions. Please refer to Warranty Document on edmonds.com.au for full details.

EP 900





Established in 1934, Edmonds is a pioneer in home, commercial and industrial ventilation solutions in Australia as well as across the globe.

Edmonds is passionate about delivering superior comfort and performance whilst reducing its impact on the environment. It is this vision of a 'sustainable future' which has resulted in the design and development of many energy efficient innovations. These include passive, wind-driven; hybrid and turbine ventilation technology.

Regarded as a leading industry innovator, Edmonds ventilation products are engineered and manufactured at its ISO9001 accredited facility in Seven Hills, Australia. Edmonds was awarded the AIRAH Excellence in Sustainability Award in 2013 and Achiever Award in 2008. It was also recognised with a Good Design Award at the 2013 Australian International Design Awards and Master Builders Australia 2012 National Export Award. In 2016 Edmonds' EcoPower Hybrid Ventilator won the MEP Services Category in The Big 5 Gaia Awards.

With strong synergies between insulation and ventilation in the built environment, Edmonds was acquired by CSR Building Products Limited in 2005. Its vision remains to create Technologies for a Sustainable Future.

1300 858 674

www.edmonds.com.au

CSR Edmonds.

PO Box 231, Seven Hills, NSW 1730, Australia

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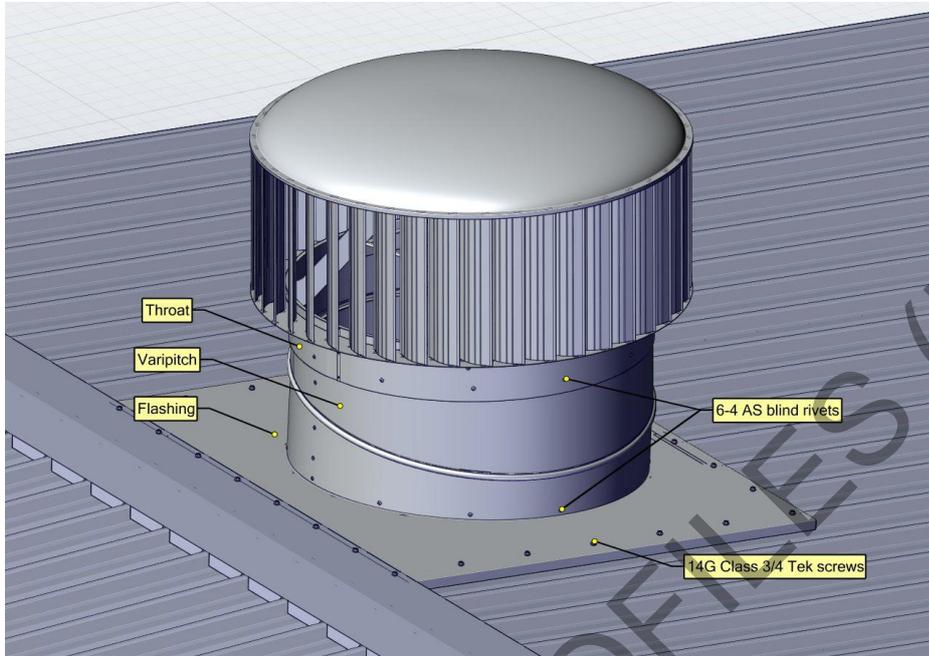


INSTALLATION INSTRUCTION

EP900/H900 Cyclone Strap Fixing Details

These installation instructions are to be used as a supplement to the relevant *ecopower* or Hurricane standard installation instructions. Specific fixing details provided in this installation instruction should be used in lieu of those in the standard installation instruction.

External fixing detail

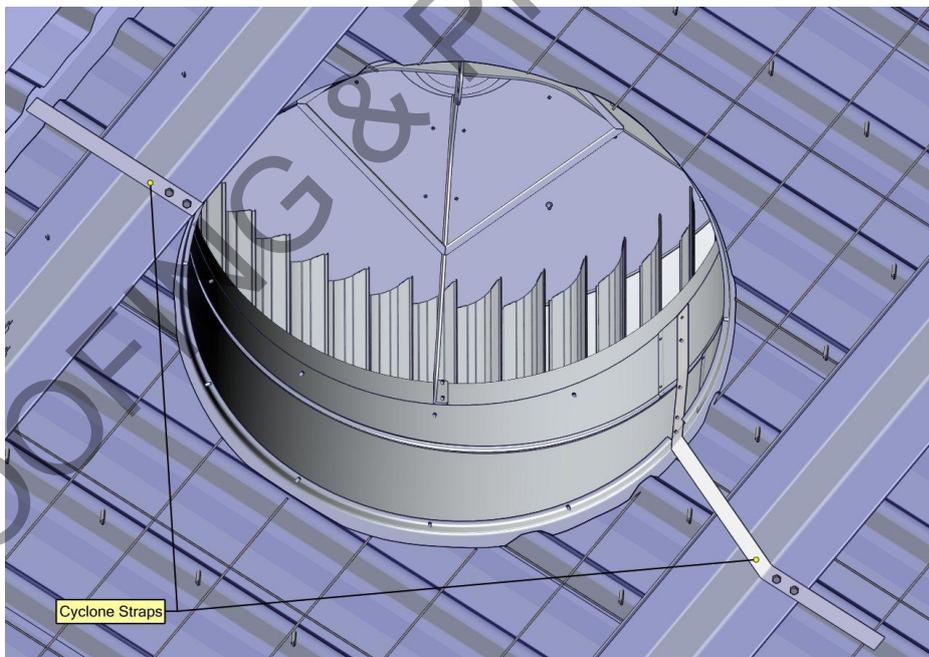


Fix Flashing to roof with 14G Class 3 or 4 Tek screws. Locate 4 close to varipitch and 26 around the 4 sides of the flashing

Fix Varipitch to Flashing with 12 x 6-4 AS blind rivets. Seal with silicone if unsealed rivets are used.

Fix Throat to Varipitch with 12 x 6-4 AS blind rivets. Seal with silicone if unsealed rivets are used.

Cyclone Strap fixing detail

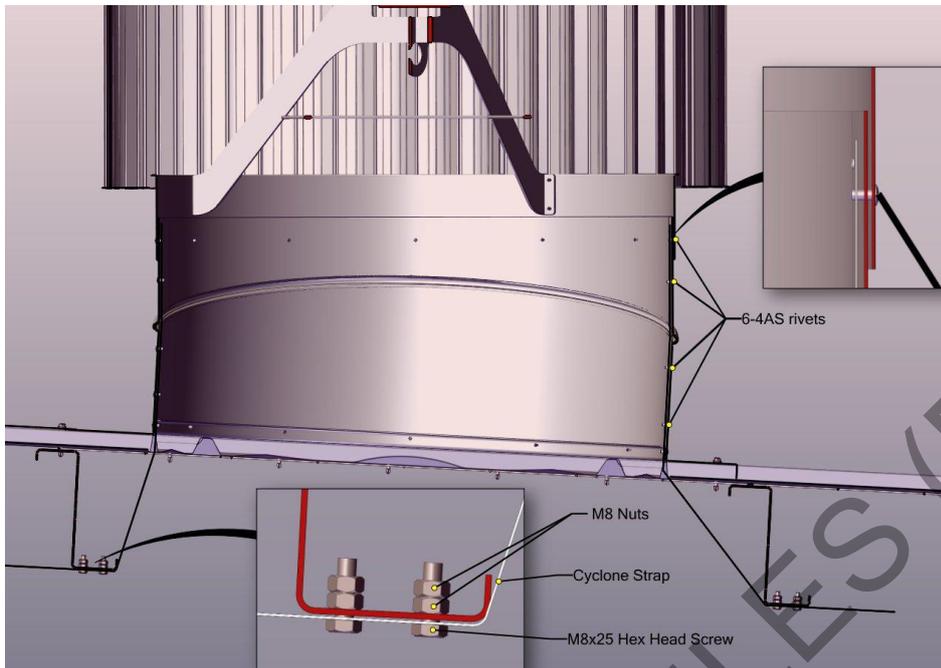


Bend the 30x0.8x950mm long Cyclone Straps to reach from inside the top edge of the varipitch, down to the underside of a roof purlin as shown.

INSTALLATION INSTRUCTION

EP900/H900 Cyclone Strap Fixing Details

Cyclone Strap fixing detail (section view)



Fix each cyclone fixing strap to the inside of the varipitch with at least 4 x 6-4 AS rivets. Two rivets must be located above the varipitch seam with one through the throat, varipitch and strap.

Fix the lower end of the strap to the purlin with M8 hex head screws (minimum class 4.6) and two M8 nuts per screw to securely lock.

ROOFING & PROFILES LIMITED