



# Odyssey

## Product Description

The Edmonds Odyssey home ventilation system provides energy efficient ventilation to cool and freshen homes and similar buildings. It consists of a hybrid (natural and electrically powered) roof ventilator, a roof space mounted flow diverter valve and a ceiling grille for living space air removal.

The system is automatically controlled by the valve mounted intelligent controller which constantly monitors environmental data gathered by its three sensors.

Odyssey monitors the environmental conditions and determines what the optimal ventilation solution is for the building at any given time. The user is simply required to set a desired living space temperature via the set point on the panel, and open or close windows as required.

## Applications

Odyssey is suitable for use in residential homes and small commercial buildings, such as schools.

The primary requirement for Odyssey to be suitable is that the building must have a roof space (i.e. not a cathedral ceiling).

## Benefits

Odyssey utilises the natural differences between internal and external temperatures to effectively cool, dry and freshen a building with minimal energy costs.

During the warmer months this functionality allows Odyssey to rapidly cool and remove energy from a building mass throughout the night. This creates a more comfortable environment for the next day as the building is now capable of absorbing more energy before becoming uncomfortably hot.

During the colder months, Odyssey maximises the ventilation throughout the building, which greatly reduces moisture levels and therefore the chance of condensation from occurring. This reduces the likelihood of mould growth, and creates a dry fresh building environment.

## Specification

“The ventilation system shall be Edmonds Odyssey, controlled free-air cooling system. It shall consist of a parallel roof-mounted hybrid ventilator, 2 way diverter valve, magnetically detachable grille and control system with colour touch screen interface panel. Each ventilator shall provide a minimum flow rate of 2100m<sup>3</sup>/hr and maximum power consumption of 55W. The control system shall use living space, roof space and outdoor temperature sensors to determine the optimum operating mode with diverter valve allowing for air to be exhausted from the roof or living space.”

## SKU Table

Odyssey Ventilation	Material Code	Carton Size (L x W x H)
Headland	116756	830 x 715 x 470 mm
Night Sky	116757	830 x 715 x 470 mm
Surfmist	116758	830 x 715 x 470 mm
Woodland Grey	116759	830 x 715 x 470 mm
Odyssey Valve/Grille	Material Code	Carton Size (L x W x H)
Valve & Ceiling Grille	134237	565 x 560 x 615 mm
Odyssey Electronics Kit	Material Code	Carton Size (L x W x H)
Interface Panel & Sensors	134236	480 x 245 x 80 mm
Odyssey Extension Collar	Material Code	Carton Size (L x W x H)
For Installations with 450mm Rafter Spacing	118141	435 x 375 x 300 mm
Odyssey Sensor Shield	Material Code	Carton Size (L x W x H)
For Installations With No Eaves	125257	240 x 240 x 240 mm

## Installation Requirements

Roof Slope Installation Range	3° to 35°
<b>Homes with 600mm Rafter Spacing (standard unit)</b>	
Roof Space Minimum Height	0.7m
Roof Space Maximum Height	2.4m
<b>Homes with 450mm Rafter Spacing (requires extension collar)</b>	
Roof Space Minimum Height	0.85m
Roof Space Maximum Height	2.55m

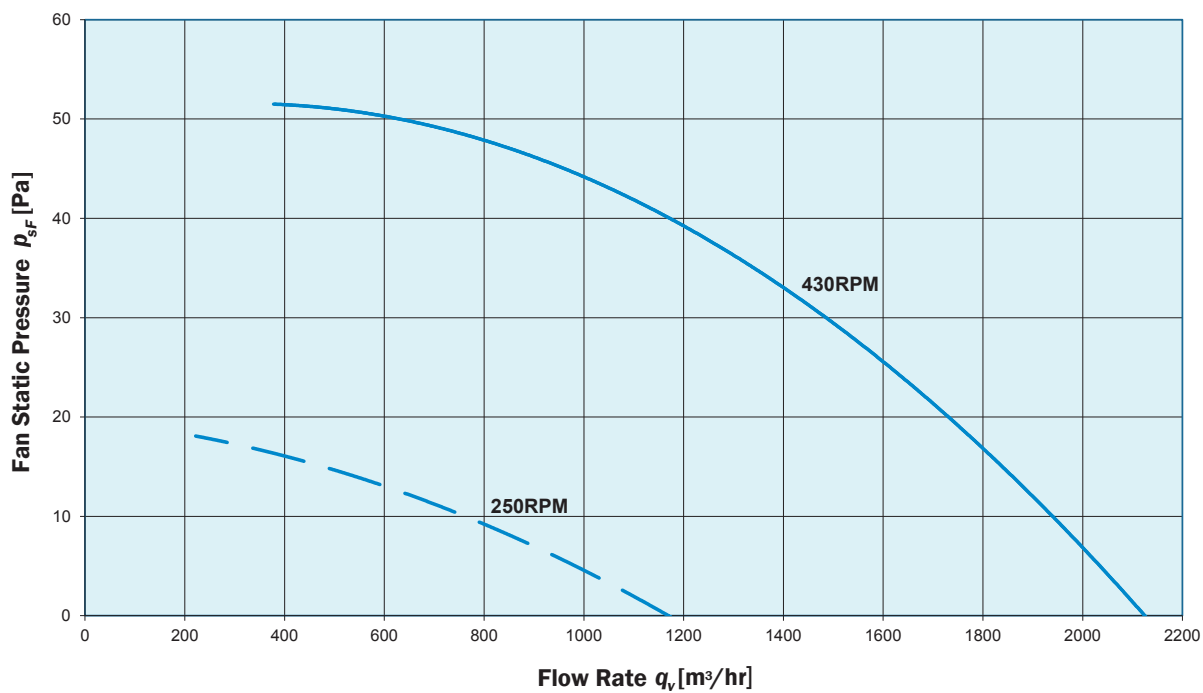
## Product Specifications

<b>Ventilation System</b>		
Type:	Free air cooling, heating & ventilation system	
Nominal system diameter:	400 mm	
Model Number	ODY400-D	
Electrical	240 VAC 50 Hz Max. 55W	
<b>Ventilator</b>		
Type	Hybrid (natural & powered) backward curved centrifugal	
Inlet Throat nominal diameter	400 mm	
Turbine/Impeller diameter	500 mm	
Turbine/Impeller Speed (Cooling)	430RPM	
Turbine/Impeller Speed (Heating)	250RPM	
Flow Rate (430RPM) @ $\Delta p_{sf}=0$	2100 m <sup>3</sup> /hr	583 l/s
Specific Flow Rate (430RPM)@ $\Delta p_{sf}=0$	54 m <sup>3</sup> /hr/W	15 l/s/W
Flow Rate (250RPM) @ $\Delta p_{sf}=0$	1150 m <sup>3</sup> /hr	319 l/s
Specific Flow Rate (250RPM)@ $\Delta p_{sf}=0$	50 m <sup>3</sup> /hr/W	14 l/s/W
Noise SPL (430RPM) @ 2m	30 dB(A)	
Motor	Electronic Commutating (EC) brushless motor	
Motor Voltage	240 VAC 50 Hz	
Materials		
Housing & Rotor	Plastic (ASA & PPS-GF40)	
Flashing & Collar	Soft Aluminium - Powdercoated	
Screws	Stainless Steel (304) & Class 4 Coated Steel	
Rivets	Aluminium & Steel Z/P	
Weight	9.21 kg	
<b>Diverter Valve</b>		
Type	2 way, 2 position air source diverter valve	
Inlet/outlet nominal diameter	400 mm	
Actuator Voltage	24 VDC	
Materials		
Housing & Flaps	Plastic (ASA)	
Linkages	Plastic (PA6-GF30)	
Screws	Steel Z/P	
Weight	2.97 kg	

Ducting	
Type	Flexible metallised polyester film with helix wire support.
Diameter	400 mm
Length	2 m
Colour	Black internal, reflective foil external
Ceiling Grille	
Type	Return air grille with magnetically coupled removable grille
Diameter	400 mm
Materials	
Grille & Grille Frame	Plastic (ASA)
Ceiling Clips	Plastic (PA6-GF30)
Screws	Steel Z/P
Weight	1.06 kg
User Interface Panel	
Type	8.9 cm (3.5") colour touch screen
Cable Length	15 m
Temperature Sensors	
Type	Temperature & Relative Humidity Sensor
Accuracy (Temperature)	±0.4 °C
Accuracy (Relative Humidity)	±3%
Cable Length	10 m

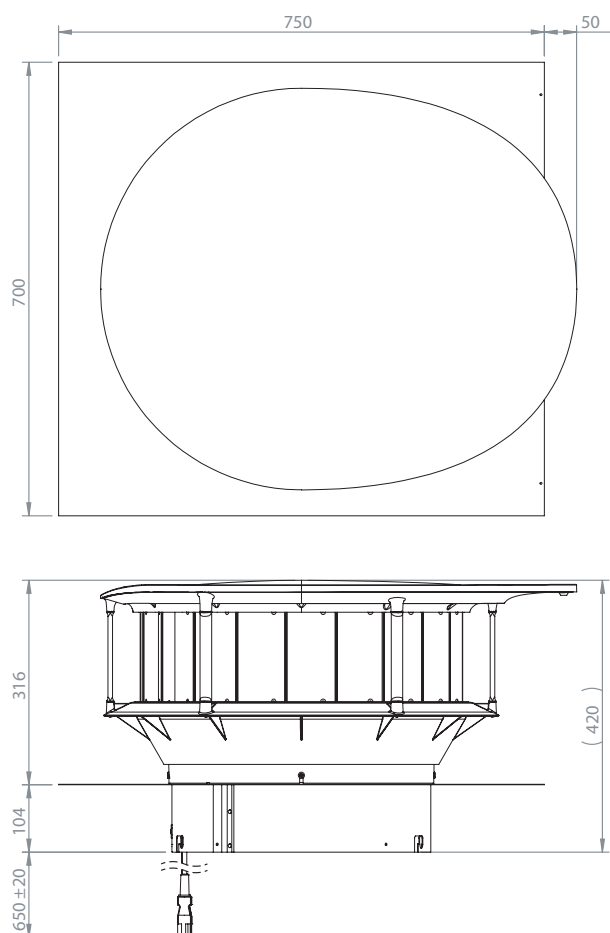
## Performance

Characteristic Curve

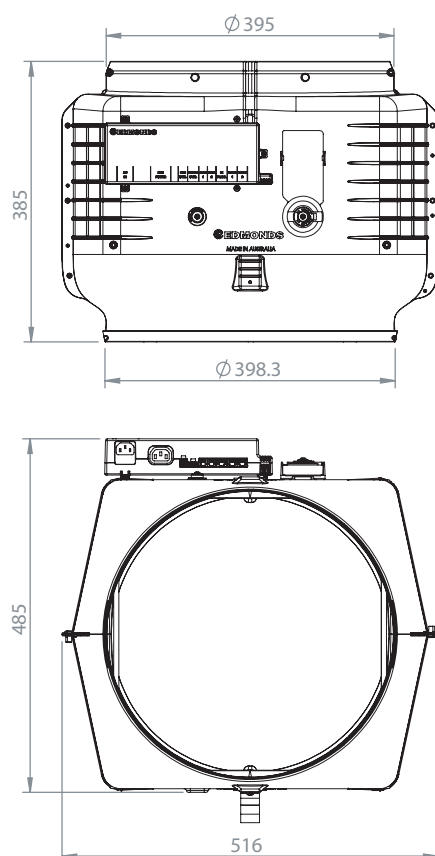


## Drawings

### Ventilator



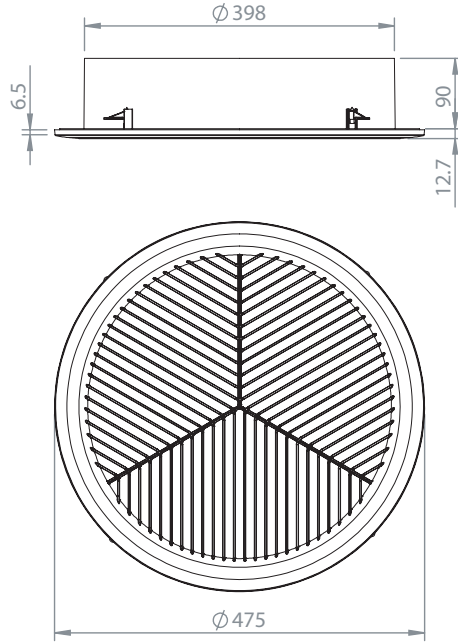
### Valve & Controller



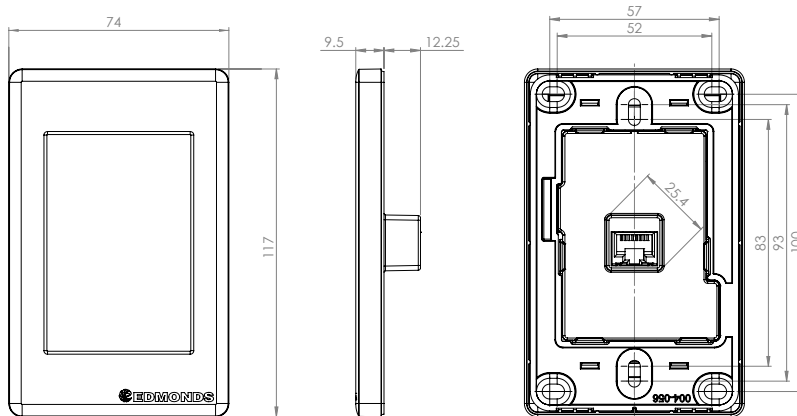
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## Drawings

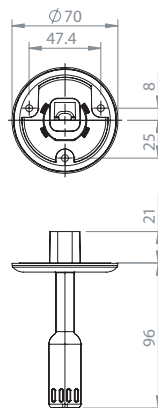
Ceiling Grille



User Interface Panel



Temperature Sensor



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Odyssey – DATA SHEET

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