



# 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).

\*HR2100 ONLY

## 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 H1800 - manually controlled home ventilation system

Odyssey H1800 Ventilation System	Material Code	Carton Size (L x W x H)
Headland	157191	980 x 715 x 570 mm
Night Sky	157192	980 x 715 x 570 mm
Surfmist	157193	980 x 715 x 570 mm
Woodland Grey	157194	980 x 715 x 570 mm
Odyssey H1800 Options	Material Code	Carton Size (L x W x H)
2m Duct Extension Kit	124838	365 x 435 x 295 mm

## SKU Table Odyssey HR2100 - fully automated home ventilation system

Odyssey HR2100 Ventilation Top	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 HR2100 Valve/Grille	Material Code	Carton Size (L x W x H)
Valve & Ceiling Grille	134237	565 x 560 x 615 mm
Odyssey HR2100 Electronics Kit	Material Code	Carton Size (L x W x H)
Interface Panel & Sensors	134236	480 x 245 x 80 mm
Odyssey HR2100 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 HR2100 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

	Odyssey H1800	Odyssey HR2100
Roof Slope Installation Range	3° to 35°	
<b>Homes with 600mm Rafter Spacing (standard unit)</b>		
Roof Space Minimum Height	0.25m	0.7m
Roof Space Maximum Height	2.25m	2.4m
<b>Homes with 450mm Rafter Spacing (requires extension collar)</b>		
Roof Space Minimum Height	0.25m (extension not required)	0.85m

## Product Specifications

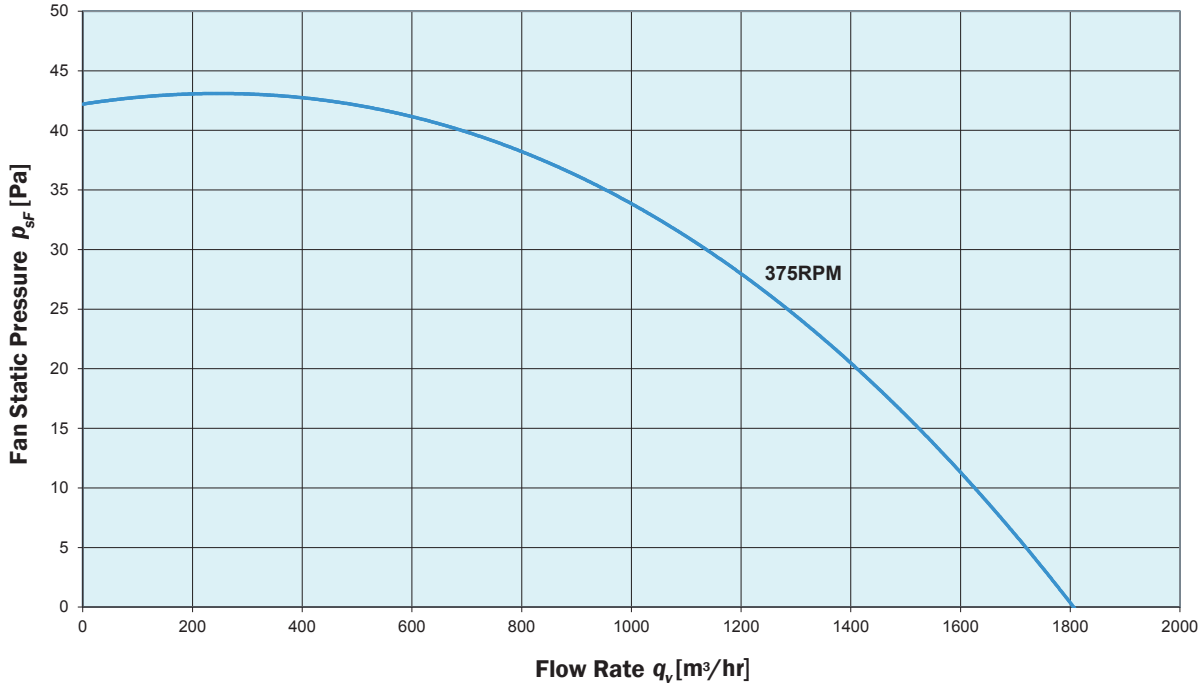
Ventilation System	Odyssey H1800	Odyssey HR2100
Type:	Free air cooling, heating & ventilation system	
Nominal system diameter:	400 mm	
Model Number	ODY400-D-H1800	ODY400-D
Electrical	240 VAC 50 Hz Max. 55W	
Target Ventilation Zones	Living Space	Living Space & Roof Space
Ventilator	Odyssey H1800	Odyssey HR2100
Type	Hybrid (natural & powered) backward curved centrifugal	
Inlet Throat nominal diameter	400 mm	
Turbine/Impeller diameter	500 mm	
Turbine/Impeller Speed (Full Speed)	375RPM	430RPM
Turbine/Impeller Speed (Half Speed)	-	250RPM
Flow Rate (Full Speed) @ $\Delta p_{sf}=0$	1800 m <sup>3</sup> /hr   500 l/s	2100 m <sup>3</sup> /hr   583 l/s
Specific Flow Rate (Full Speed)@ $\Delta p_{sf}=0$	58 m <sup>3</sup> /hr/W   16.1 l/s/W	54 m <sup>3</sup> /hr/W   15 l/s/W
Flow Rate (Half Speed) @ $\Delta p_{sf}=0$	-	1150 m <sup>3</sup> /hr   319 l/s
Specific Flow Rate (Half Speed)@ $\Delta p_{sf}=0$	-	50 m <sup>3</sup> /hr/W   14 l/s/W
Noise SPL (Full Speed) @ 2m from grille	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	
Diverter Valve	Odyssey H1800	Odyssey HR2100
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

## Product Specifications (Continued)

Ducting	Odyssey H1800	Odyssey HR2100
Type	Flexible metallised polyester film with helix wire support.	
Diameter	400 mm	
Length	2 m	
Colour	Black internal, reflective foil external	
Ceiling Grille	Odyssey H1800	Odyssey HR2100
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	
Control System	Odyssey H1800	Odyssey HR2100
Type	Wall Switch	8.9 cm (3.5") colour touch screen
Cable Length	10 m	15 m
Control Type	Mechanical Switch Fixed Speed / Standby	Intelligent ventilation based of environmental sensors and user settings. Standby/Automatic/Boost
Control Strategy	-	3 User Selectable Strategies Heating & Cooling   Cooling Only   Heating Only
Ventilation Modes	User Controlled Living Space Ventilation Standby	Living Space Cooling Ventilation Living Space Heating Ventilation Living Space Air Circulation Living Space Boost Ventilation (Manual Override) Roof Space Natural Ventilation Roof Space Powered Ventilation Roof Space Moisture Control Standby
Control System SetPoints (Target Temperatures)	-	Living Space   18 °C - 28 °C (default 23 °C) Roof Space   35 °C - 50 °C (default 45 °C)
Data Logging	-	Temperature - 2 Years
Environment Sensors	Odyssey H1800	Odyssey HR2100
Type	-	Temperature & Relative Humidity Sensor
Accuracy (Temperature)	-	±0.4 °C
Accuracy (Relative Humidity)	-	±3%
Cable Length	-	10 m
Sensor Locations	-	Roof Space External (Ambient) Internal (Living Space)

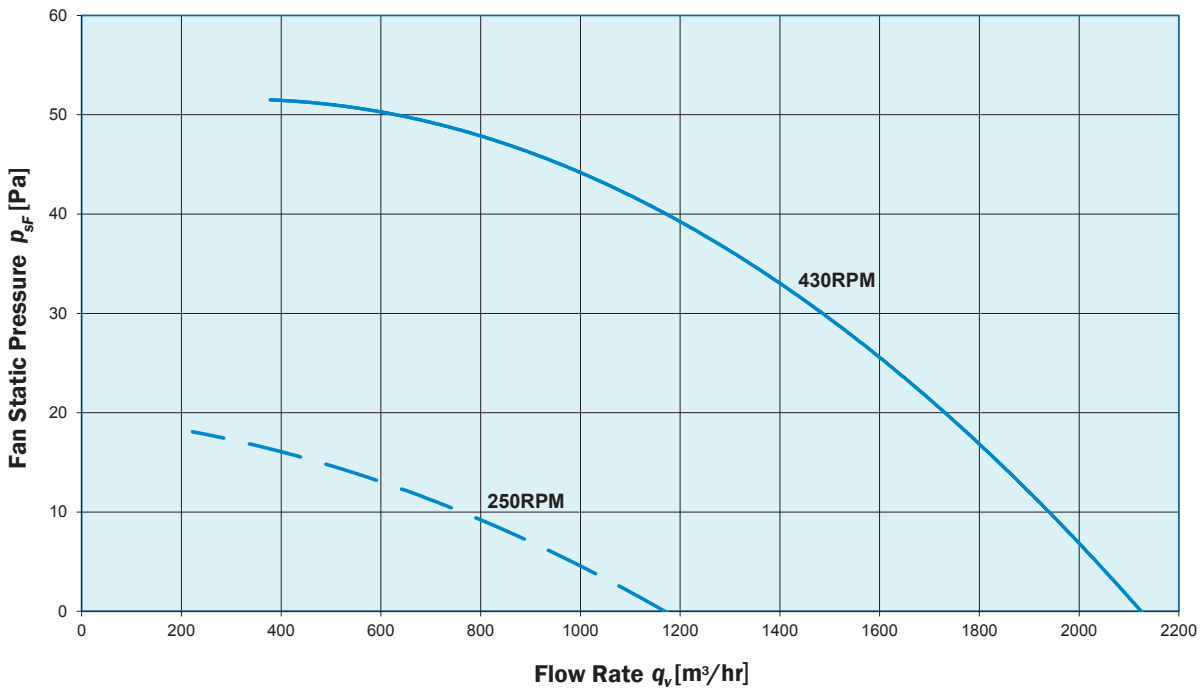
## Performance H1800

Characteristic Curve



## Performance HR2100

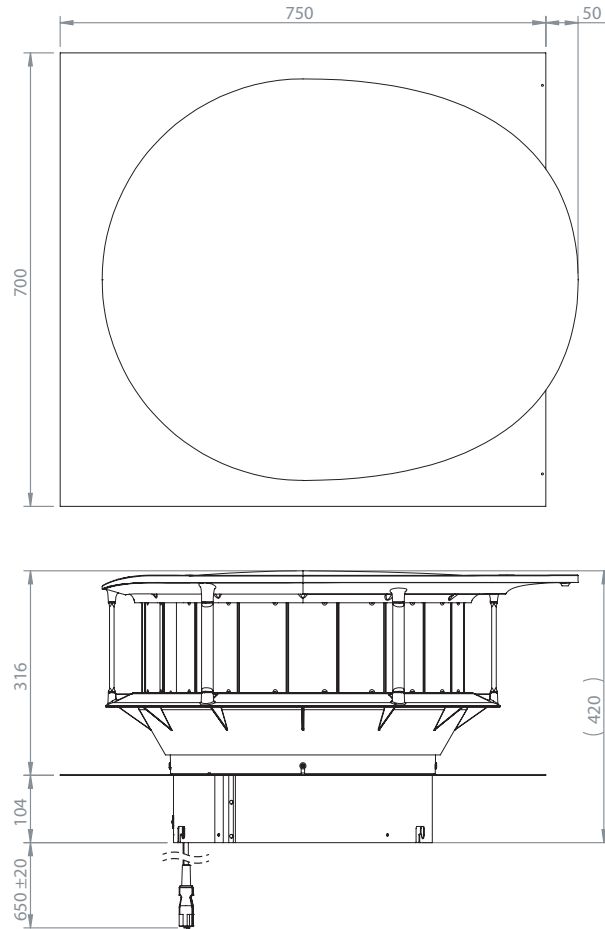
Characteristic Curve



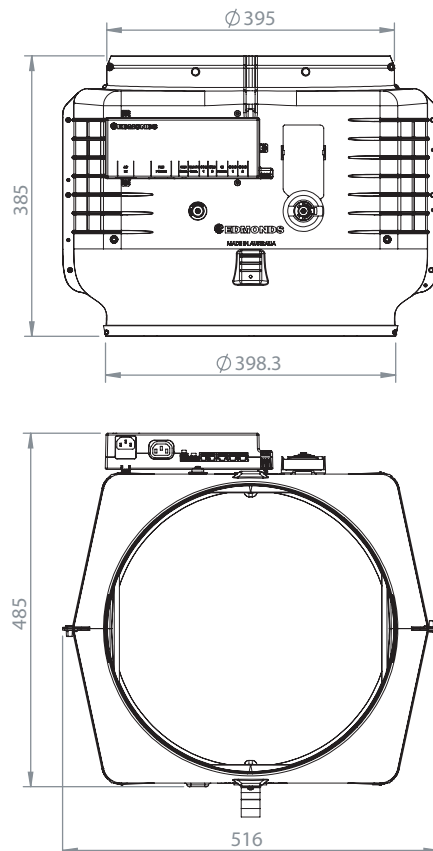
# Odyssey

## Drawings

Ventilator



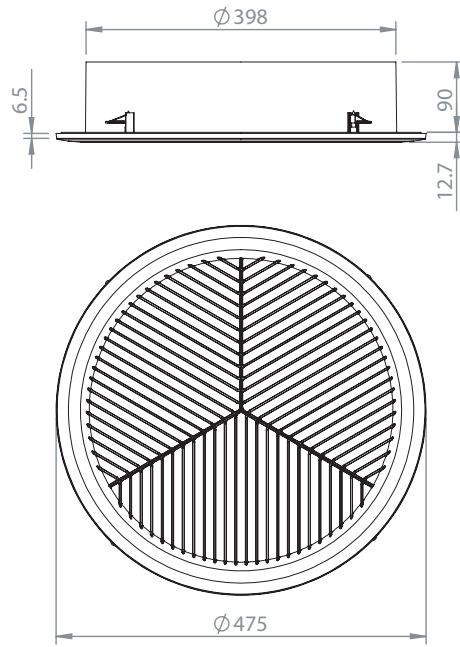
Valve & Controller HR2100



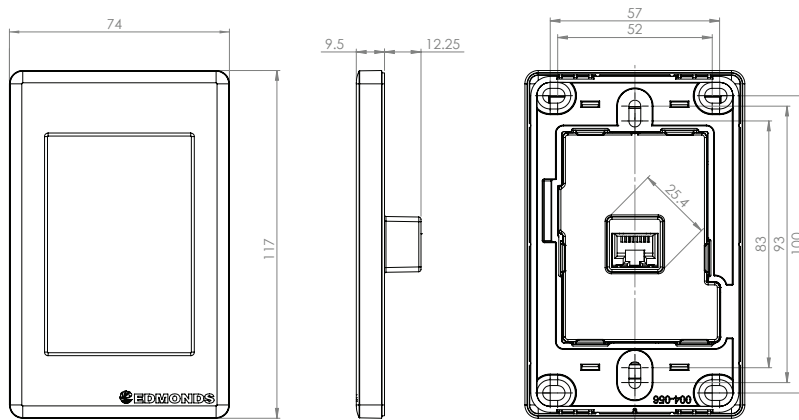
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## Drawings

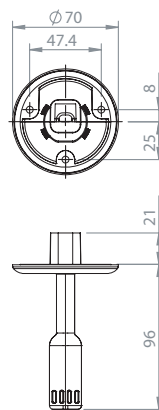
Ceiling Grille



User Interface Panel HR2100



Temperature & Humidity Sensor HR2100



CSR Edmonds  
10 Stanton Road, Seven Hills NSW 2147 Australia.  
Telephone 1300 858 674

[www.edmonds.com.au](http://www.edmonds.com.au)

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