

# Commercial Heat Recovery Systems for In-Ceiling Spaces



The **CAD-Compact** is a new series of in-ceiling heat recovery ventilation units with market leading performance and air tightness levels. These HRV units are suited to commercial buildings and include a high efficiency counterflow sensible heat exchanger.



**FANTECH**  
Intelligent Ventilation

# Bypass (Economy) Damper

When outdoor temperatures are appropriate, CAD Compact bypass mode (also known as economy mode) can be activated to supply outside air directly into the building. This provides two benefits. Firstly, it prevents an increase in cooling energy usage that would occur if the only ventilation option was to continue recovering unwanted heat. Secondly, it reduces fan power consumption since air flows around the higher pressure drop heat exchanger.

## Features

### High-Efficiency Filters

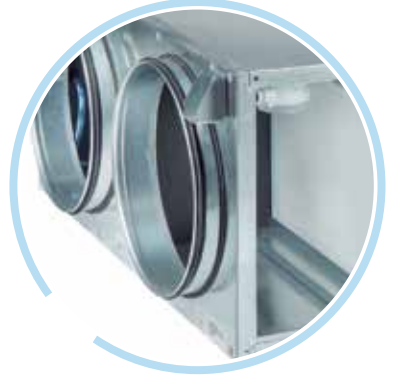
Low pressure drop F7 filters (ePM1, 70%) for the air supply, and M5 filters (ePM10 50%) for air extraction.

The filters can be accessed via the side panels when filter replacement is required.



### Construction

Galvanised steel double-skin enclosure with internal thermo-acoustic fireproof insulation. 25 mm thick mineral wool in models 900 to 2500, and 30 mm in models 3200 and 4500.



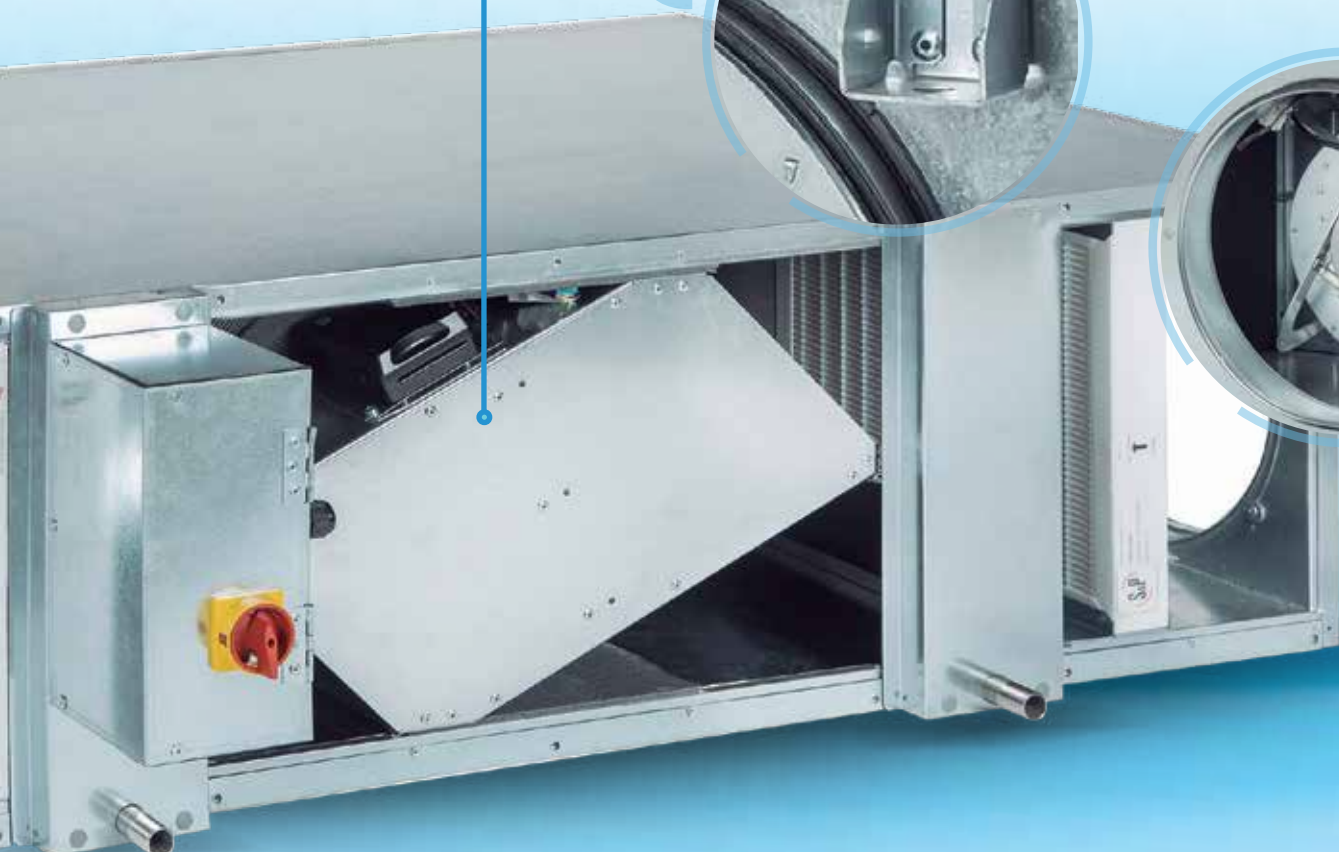
### Support Mounts

Support points for horizontal hanging.



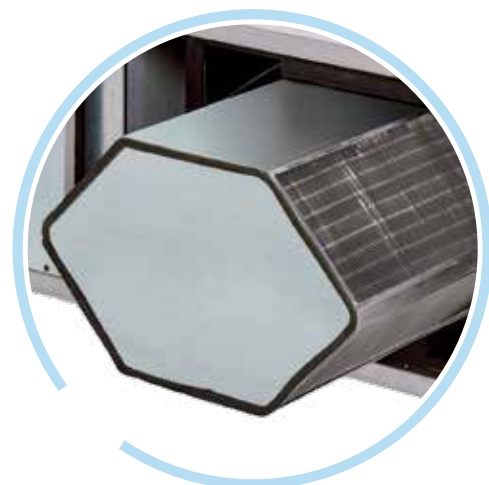
### EC Plug Fan

Single phase EC motors for increased energy efficiency, stepless speed control and backward curved impeller. (CAD-Compact 4500 supplied with 3 phase EC motor.)



# Eurovent Certified Counterflow Heat Exchanger

Eurovent Certification offers assurance that dependable heat recovery levels will be attained. The calculation of efficiency is based on actual air conditions in the locality, rather than relying on custom lab conditions that may optimise reported efficiency data. The heat exchangers are removable and can be periodically cleaned which is a crucial requirement often overlooked in HRV units, to ensure optimal performance and maintain efficiency.



## Airtightness Tested

Airtightness is one of the most important factors that affects the performance of HRV units. Any air leakage inside or outside the unit can lead to a loss of up to 50% of the heat recovery efficiency, as well as contamination of the supply air with exhaust air. At present there are very few HRV units available in Australia are tested for airtightness. However, the CAD Compact has undergone this test and is now considered a benchmark for reliable installed efficiency and IAQ outcomes.



Manage CO<sub>2</sub>  
Levels



Energy  
Efficient



Quiet  
Operation



Demand Control  
Ventilation

# An Efficient, Eurovent Certified, Heat Recovery System

The CAD-Compact is a commercial, horizontal thermal recovery unit that fits into false ceiling spaces with a minimum requirement of 380mm height. It takes advantage of the latest technologies with a high efficiency counterflow plate heat exchanger that recovers up to 88% of sensible heat and is Eurovent certified.

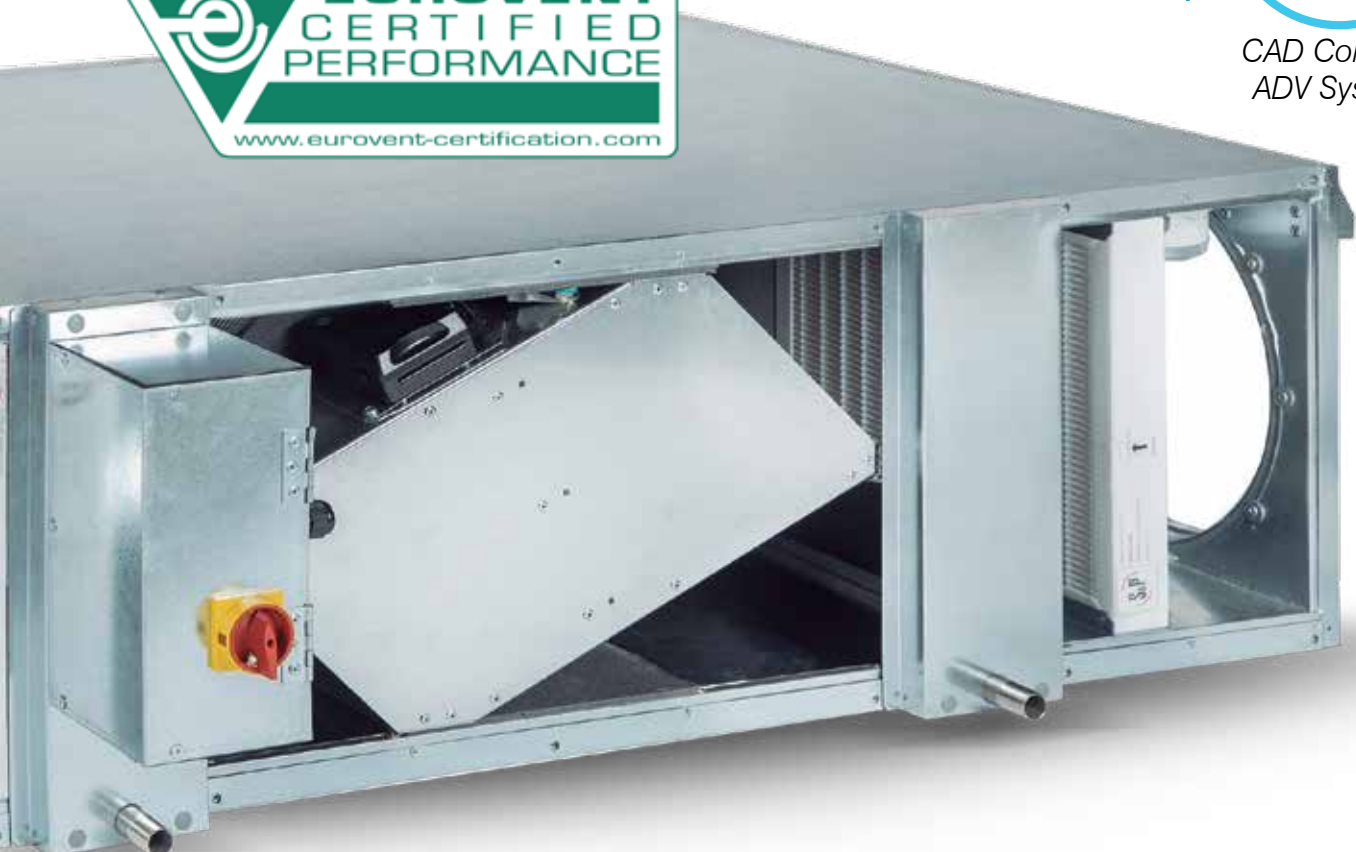
Contractors have two options for managing the CAD Compact. The ECO model is suitable for external function management through a BMS, while the ADV (Advanced) model uses a wall-mount controller and can be connected to a Modbus Interface.



*CAD Compact  
ECO System*



*CAD Compact  
ADV System*



# ECO & ADV Control Options

There are two options for controlling the CAD Compact. The ECO model is perfect for those who prefer managing all the functions externally, either through a BMS or via simple fixed-speed operation.

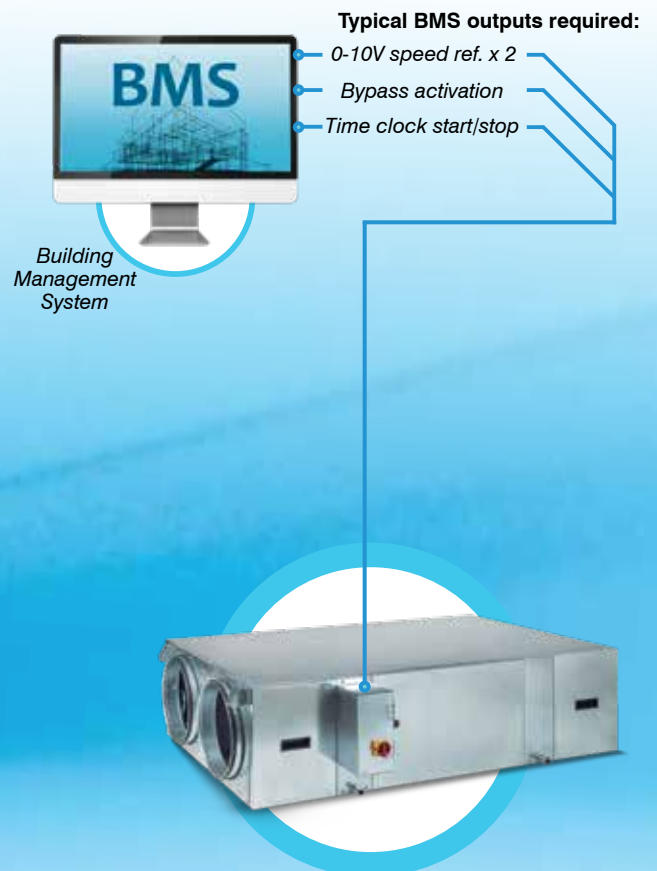
Alternatively, the ADV (Advanced) model with a wall-mounted controller is a cost-effective upgrade that provides advanced control options such as Constant Air Volume (CAV), Constant Operating Pressure (COP), and Variable Air Volume (VAV), when used with appropriate sensors. The ADV version of bypass operation is managed entirely by the unit, and the user only needs to set the desired temperature for comfort. A built-in time clock allows for scheduling ability, including start and stop times as well as stepped ventilation rates.



## CAD Compact ADV System



## CAD Compact ECO System

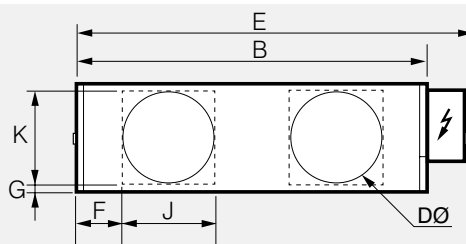
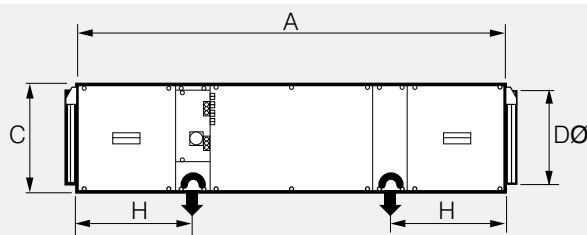
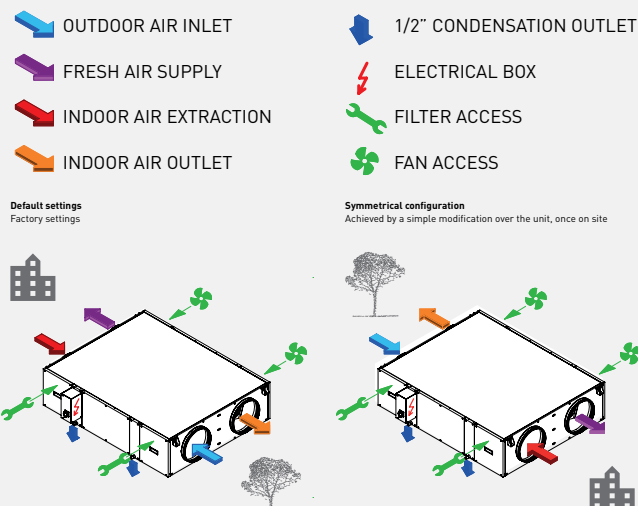
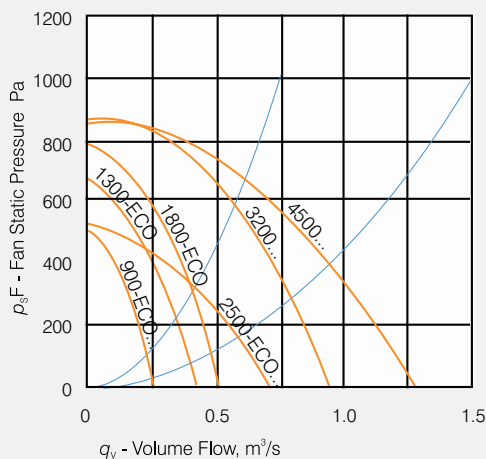


Model Number CAD-COMP... -ECO/ADV#	Nominal air flow @ 150Pa m <sup>3</sup> /s	Type	dB(A) @ 3m	Air connection Diameter/ Rectangular, mm	Sensible Efficiency* %	Max. Power* kW	Max. Current** Amps
900	0.22	Supply Air	54	Ø 315	82.0	0.45	3.0
		Extract Air	33				
		Breakout	32				
1300	0.38	Supply Air	57	Ø 315	82.3	0.88	3.9
		Extract Air	49				
		Breakout	46				
1800	0.46	Supply Air	60	Ø 355	82.7	1.02	4.3
		Extract Air	52				
		Breakout	49				
2500	0.59	Supply Air	58	□ 570x375	83.5	0.92	3.9
		Extract Air	48				
		Breakout	47				
3200	0.89	Supply Air	61	□ 470x450	83.7	2.0	8.3
		Extract Air	43				
		Breakout	49				
4500	1.16	Supply Air	68	□ 700x440	84.6	2.6	10.4
		Extract Air	46				
		Breakout	59				

\* The ECO model uses an on-site BMS, while the ADV model has a standalone controller.

\*\* Sum of both fans

Wet efficiency refers to nominal air flow, outdoor (-5°C/80% RH) and indoor conditions (20°C/50%RH).



Model Number CAD-COMP...-ECO/ADV#	Dimensions, mm										Weight, kg
	A	B	C	DØ*	E	F	G	H	J**	K**	
900	1345	843	376	315	1007	68	33	328	-	-	86
1300	1495	1218	376	315	1382	161	33	403	-	-	137
1800	1580	1083	453	355	1247	108	51	393	-	-	145
2500	1845	1495	453	-	1670	127	41	385	570	375	200
3200	2038	1325	541	-	1489	113	43	552	470	450	235
4500	2207	1993	598	-	2156	165	79	594	700	440	336

The ECO model uses an on-site BMS, while the ADV model has a standalone advanced controller.

\* DØ - dimensions for circular duct connections (900 & 1800 models)

\*\* J & K - dimensions for rectangular duct connections (2500, 3200 & 4500 models)



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