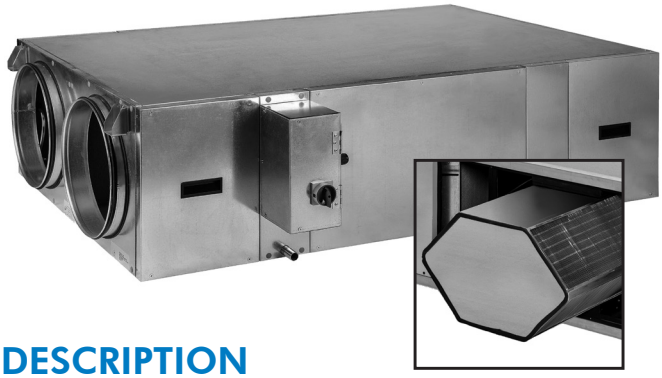
CAD-COMPACT IN-CEILING HRV, EC SERIES



DESCRIPTION

The CAD-Compact is a commercial, horizontal heat recovery unit that fits into false ceiling voids between 380mm to 600mm in 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.

There are two options for controlling the CAD-Compact. The base ECO model is suited for those who prefer managing all the functions externally, either through a BMS or via simple fixed-speed operation. The ADV (Advanced) model with wall-mounted controller provides advanced control options such as Constant Air Volume (CAV), Constant Operating Pressure (COP), and Variable Air Volume (VAV), when used with appropriate sensors.

Typical Applications

Extracts heat energy, which would have otherwise been lost through the normal exhaust processes in commercial settings. The captured heat energy is transferred to the fresh, filtered supply air which is drawn in from outside.

Features

- Counterflow plate heat exchanger that recovers up to 88% of sensible heat.
- Industry leading airtight construction.
- Nominal air flow from 0 to 1.25 m³/s
- Exchanger can be easily removed via the side panel for cleaning.
- ADV (Advanced) model includes a wall-mounted controller
- EC motors for increased energy efficiency, stepless speed control and backward curved impeller.
- All models are single-phase, except for the CAD-COMP4500 which is three-phase.
- Low pressure drop F7 filters (ePM1, 70%) for the air supply, and M5 filters (ePM10 50%) for air extraction.
- Filters can be easily accessed via the side panels when filter replacement is required.
- Fresh air bypass can be used during the warmer months and controlled via the BMS.
- Support points for hang mount installations in false ceilings.

Construction

Galvanised steel double-walled 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.

Internal thermal Protection

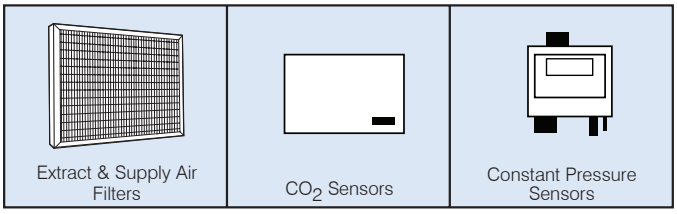
Integral electronic overload protection is supplied as standard.

Testing

Air flow tests to ISO5801: 2007

Noise tests to ISO13347-3 2004

ANCILLARY EQUIPMENT



SUGGESTED SPECIFICATION

The heat recovery ventilation units shall be of the CAD-Compact HRV, EC Series as designed and manufactured by Fantech Pty Ltd and be of the model numbers shown on the schedule/drawings.

They shall use a high efficiency, counterflow plate heat exchanger that recovers up to 88% of heat and be Eurovent certified.

The housing shall be double walled, galvanised steel and use an internal thermo-acoustic fireproof insulation made from mineral wool.

They shall be driven by a single-phase EC motor and use electronic overload protection. The plug fans will have an IP44, Class B rating and a backward curved impeller.

All models shall be fully tested as a complete assembled unit to ISO5801: 2007 for air flow and ISO 13347-3 2004 for noise.

Wiring Diagram

Multiple options, refer to manual

Motors

Type - electronic commutated (EC) motor.

Electricity supply:

Models (CAD-COMP900 to 3200) - 230V single-phase, 50/60Hz

Model (CAD-COMP4500) - 400V three-phase, 50/60Hz

Bearings - sealed-for-life, ball.

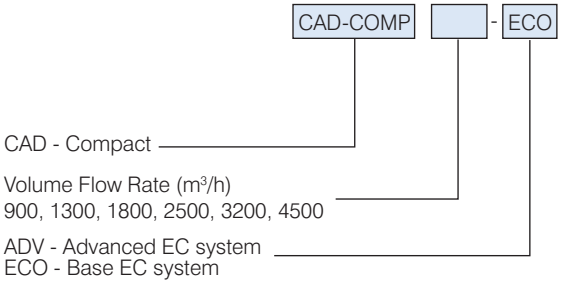
See page O-7 for details on motors.

IP44 rating, Class B rating.

Special Note

EC motors should be directly connected to their appropriate AC supply. EC motors should not be regularly power cycled.

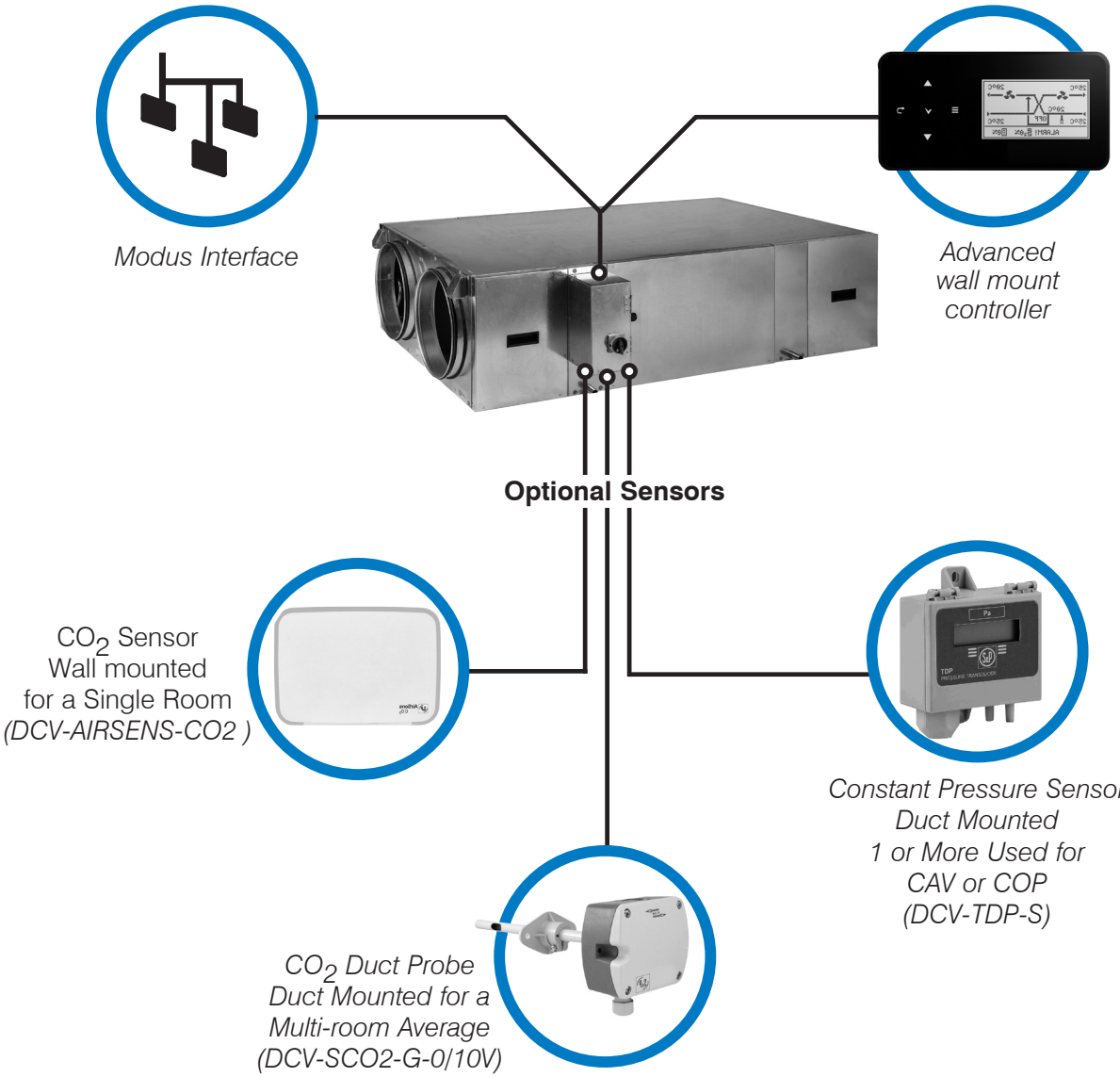
HOW TO ORDER



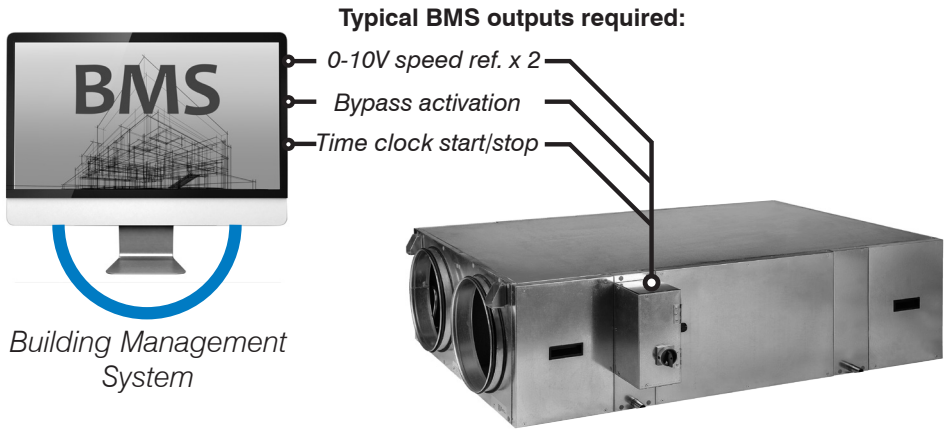
Scan the QR code to view more information online.

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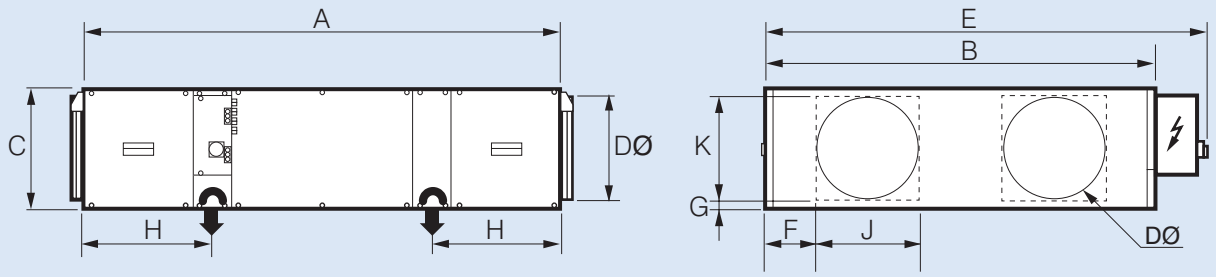
CAD-COMPACT ADV SYSTEM



CAD-COMPACT ECO SYSTEM



DIMENSIONS



Model Number CAD-COMP...-ECO/ADV	Dimensions, mm A	B	C	DØ*	E	F	G	H	J**	K**	Weight, kg
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

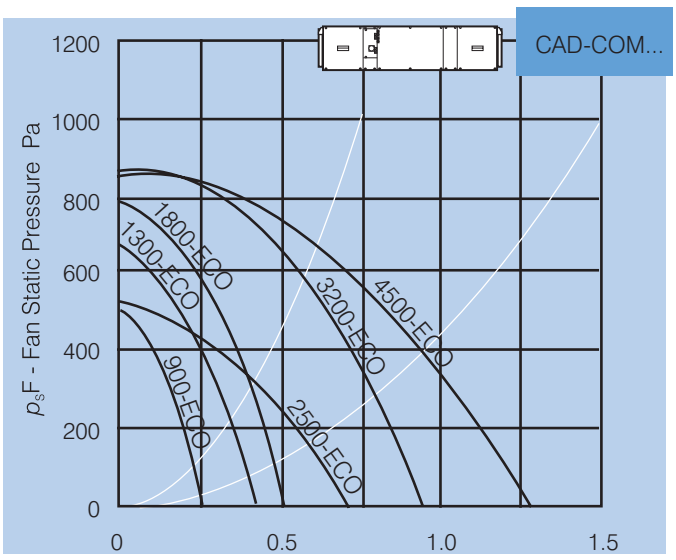
* DØ - dimensions for circular duct connections (900 & 1800 models)
** J & K - dimensions for rectangular duct connections (2500, 3200 & 4500 models)

TECHNICAL DATA

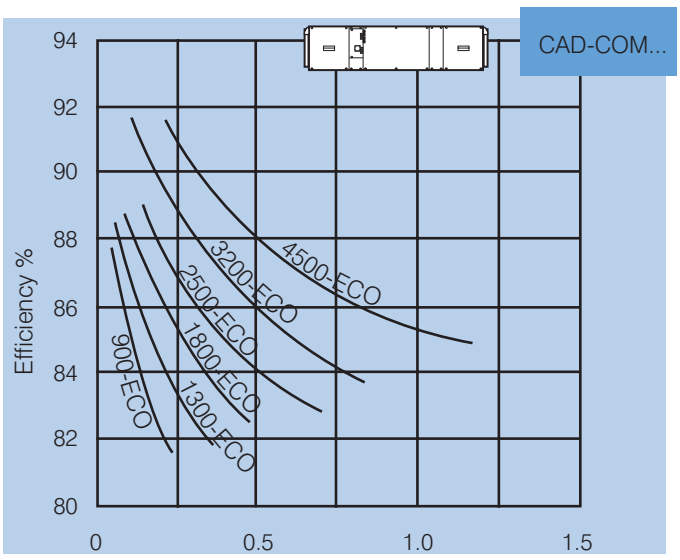
Model Number CAD-COMP...-ECO/ADV	Air connection Diameter/ Rectangular, mm	Nominal (m³/s)	Sensible Efficiency* %	Max. power** kW	Max. Current** Amps
900	Ø 315	0.22	82.0	0.45	3.0
1300	Ø 315	0.38	82.3	0.88	3.9
1800	Ø 355	0.46	82.7	1.02	4.3
2500	□570x375	0.59	83.5	0.92	3.9
3200	□470x450	0.89	83.7	2.0	8.3
4500	□700x440	1.16	84.6	2.6	10.4

* Wet efficiency refers to nominal air flow, outdoor (-5°C/80% RH) and indoor conditions (20°C/50%RH).
** Sum of both fans
Internal & external air leakage measured in accordance with EN 13141-7

PERFORMANCE CURVES



RECOVERY EFFICIENCY CURVES

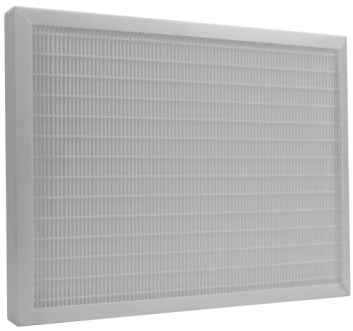


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NOISE DATA

Model Number CAD-COMP..-ECO/ADV	Nominal air flow @ 150Pa m³/s	Type	dB(A) @ 3m	Sound Power Levels, Lw dB re 1pW 63	125	250	500	1k	2k	4k	8k
900	0.22	Outside Air	34	31	42	53	51	51	45	38	33
		Supply Air	54	43	56	64	64	68	70	66	62
		Extract Air	33	31	42	53	50	51	44	37	33
		Exhaust Air	54	43	56	64	64	68	70	66	62
		Breakout	32	38	46	56	51	44	41	40	31
1300	0.38	Outside Air	49	35	52	56	60	60	66	61	50
		Supply Air	57	41	62	66	71	73	73	69	57
		Extract Air	49	35	52	56	60	60	67	61	50
		Exhaust Air	58	41	62	66	71	73	74	69	57
		Breakout	46	41	55	59	57	62	62	57	46
1800	0.46	Outside Air	52	38	55	58	63	63	69	64	53
		Supply Air	60	44	65	68	74	76	76	72	60
		Extract Air	52	37	55	58	62	63	69	64	53
		Exhaust Air	60	43	65	68	73	76	76	72	60
		Breakout	49	44	58	61	60	65	64	60	49
2500	0.59	Outside Air	48	34	51	54	59	59	65	60	49
		Supply Air	58	42	63	66	72	74	74	70	58
		Extract Air	48	33	51	54	58	59	65	60	49
		Exhaust Air	58	41	63	66	71	74	74	70	58
		Breakout	47	41	56	59	57	63	62	58	47
3200	0.89	Outside Air	43	53	53	52	64	59	54	50	32
		Supply Air	61	56	59	63	73	79	76	70	62
		Extract Air	43	54	54	53	64	59	54	50	32
		Exhaust Air	61	56	59	63	74	79	76	70	62
		Breakout	49	59	55	60	70	64	58	54	36
4500	1.16	Outside Air	46	42	44	60	63	62	61	53	35
		Supply Air	68	49	55	79	76	84	83	79	73
		Extract Air	46	42	44	59	63	62	60	53	35
		Exhaust Air	67	48	54	78	75	84	83	78	72
		Breakout	59	49	60	75	65	73	75	74	56

REPLACEMENT FILTERS FOR THE CAD-COMPACT



Description

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.

Model Number	Rating	Type	Suited capacity m³/h
CAD-COMP900-M5	M5	Extract	900
CAD-COMP900-F7	F7	Supply	900
CAD-COMP1300-M5	M5	Extract	1300
CAD-COMP1300-F7	F7	Supply	1300
CAD-COMP1800-M5	M5	Extract	1800
CAD-COMP1800-F7	F7	Supply	1800
CAD-COMP2500-M5	M5	Extract	2500
CAD-COMP2500-F7	F7	Supply	2500
CAD-COMP3200-M5	M5	Extract	3200
CAD-COMP3200-F7	F7	Supply	3200
CAD-COMP4500-M5	M5	Extract	4500
CAD-COMP4500-F7	F7	Supply	4500

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