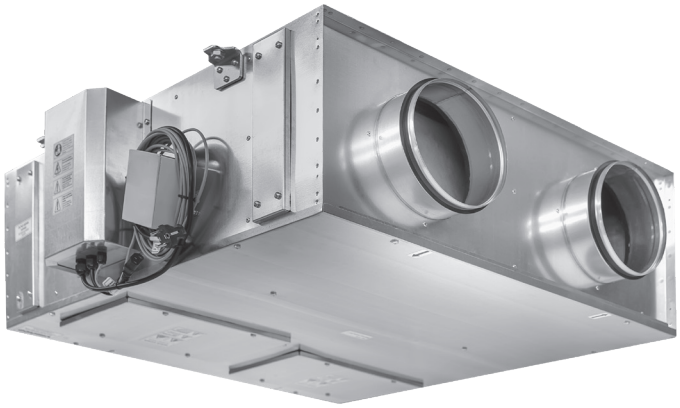


DESCRIPTION

The Air Design ERU EC Series is a range of compact, horizontal Energy Recovery Units designed to fit seamlessly into false ceiling voids between 300mm and 690mm in height. Equipped with a high-efficiency cross-flow heat exchanger, the system recovers thermal energy that would otherwise be lost through exhaust air and transfers it to the incoming fresh, filtered supply air.

The range includes two variants tailored to different climate conditions: one featuring a sensible heat exchanger (HRV) and the other an enthalpy exchanger (ERV).

Typical Applications

In cooler climates, units equipped with sensible heat exchangers transfer only thermal energy, pre-warming or pre-cooling the incoming air without altering humidity. This boosts comfort while reducing the demand on heating and cooling systems.

In warm, humid climates, Air Design units fitted with enthalpy heat exchangers provide high-efficiency transfer of both heat and moisture between the supply and exhaust air streams. This enhances pre-cooling efficiency while helping to maintain balanced indoor humidity levels.

Features

- HRV models are available in 150, 250, 300, 420, 500, 700, 950, 1300 and 1700 L/s capacities.
- ERV models are available in 250, 300, 420, 500, 700, 950 and 1300 L/s capacities.
- High-efficiency, low-noise EC plug fans, with backward curved impeller
- User-friendly design for easy installation and maintenance
- Enhanced indoor air quality and extended service life with G4 panel filter
- Efficient noise and heat insulation provided by 14mm rubber lining on all internal surfaces
- A range of wall-mounted controller options with configurable modes and functions

Construction

Galvanised metal enclosure with internal acoustic 14 mm thick rubber insulation.

Internal thermal Protection

Thermal Overload Relay.

Testing

Specific Fan Power tests to EN 13779

Heat Recovery Efficiency tests to EN 308

Wiring

Multiple options, refer to manual

Motors

Type - Electronic Commutated (EC) motor.

Electricity supply:
Models (ERU150.. to 1300) - 230V single-phase, 50/60Hz.
Model (ERU1700EC-HRV) - 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

ERU [ ] EC - [ ]

ERU - Energy Recovery Unit

150 - 150 L/s* nominal airflow
250 - 250 L/s nominal airflow
300 - 300 L/s nominal airflow
420 - 420 L/s nominal airflow
500 - 500 L/s nominal airflow
700 - 700 L/s nominal airflow
950 - 950 L/s nominal airflow
1300 - 1300 L/s nominal airflow
1700 - 1700 L/s* nominal airflow

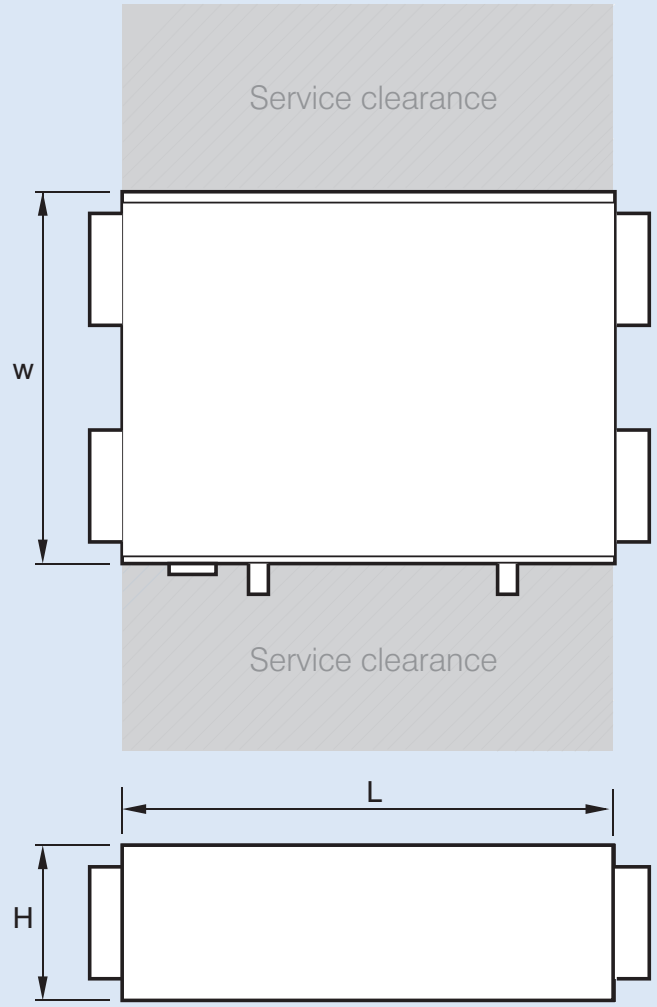
EC - Electronically Commutated Motors

HRV - Heat Recovery Ventilation
ERV - Enthalpy Recovery Ventilation

**The 150 L/s and 1700L/s capacities are not available in the ERV series*

Scan the QR code to view more information online.

DIMENSIONS



Model Number	ERU150EC -HRV	ERU250EC..	ERU300EC..	ERU420EC..	ERU500EC..	ERU700EC..	ERU950EC..	ERU1300EC..	ERU1700EC-HRV
Length, L (mm)	805	905	940	1155	1155	1285	1310	1325	1430
Width, W (mm)	725	855	1005	1025	1025	1325	1310	1505	1570
Height, H (mm)	300	330	445	435	435	435	590	685	690
Duct Connection, Ø (mm)	160	200	250	300	300	355	400	400	500
Service Clearance (mm) (space on each side)	400	525	600	625	625	675	695	695	905
Weight (Kg)	28.5	39	61	67	67	102	146	172	210

Model numbers above ending with two dots denote either -HRV or -ERV

B

TECHNICAL DATA

Model Number	ERU150EC-HRV	ERU250EC..	ERU300EC..	ERU420EC..	ERU500EC..	ERU700EC..	ERU950EC..	ERU1300EC..	ERU1700EC-HRV
Airflow 150 Pa* (m^3/s)	0.17	0.24	0.29	0.42	0.50	0.69	0.94	1.30	1.78
Heat Recovery Efficiency#	Efficiency up to 70%, depending on working conditions								
Electrical Data	230 Volt / 50 – 60 Hz / 1~								400 Volt / 50 – 60 Hz/ 3~
	2×85 W	2×170 W	2×170 W	2×270 W	2×500 W	2×500 W	2×780 W	2×1300 W	2 x 1500 W
Specific Fan Power SFP (kWs/m^3)**	1.02	1.40	1.16	1.29	2	1.48	1.67	2	1.69
Working Temperature Limits	-25/+60 °C	-25/+60 °C	-25/+55 °C	-25/+45 °C	-25/+60 °C	-25/+60 °C	-25/+60 °C	-25/+55 °C	-25/+55 °C
Air Filter	F4 Panel Filters for Fresh and Exhaust Air								

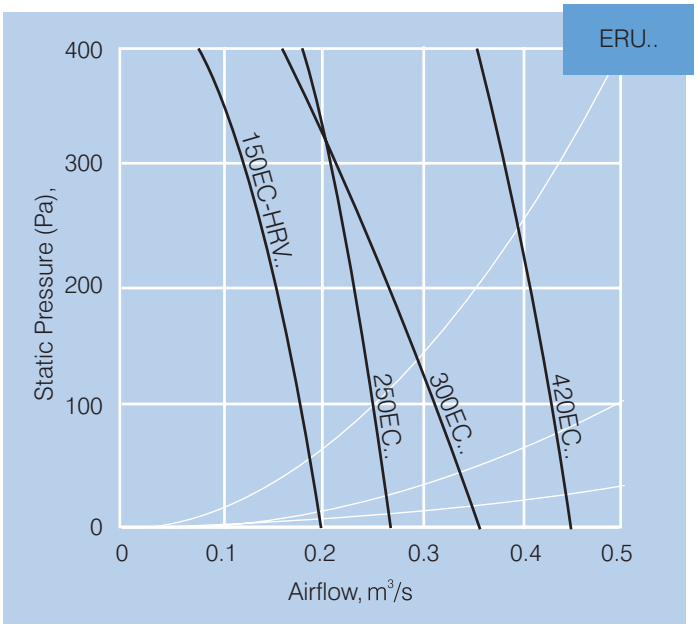
* External static pressure

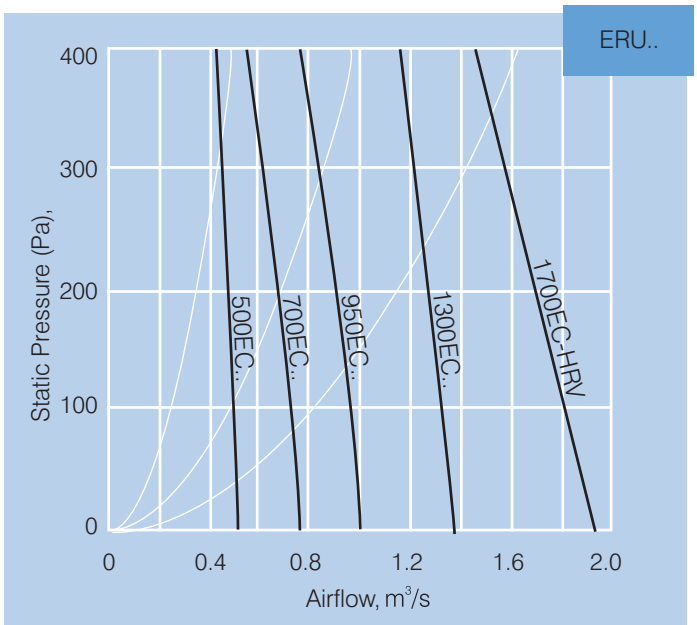
** According to EN 13779 at 150 Pa operating point

According to EN 308 at 150 Pa operating point

Model numbers above ending with two dots denote either -HRV or -ERV

PERFORMANCE CURVES





Model numbers above ending with two dots denote either -HRV or -ERV

NOISE DATA

Model Number	Nominal airflow @ 150Pa m³/s	Type	dB(A) @ 3m	Sound Power Levels, Lw dB re 1pW 125	250	500	1k	2k	4k	8k
ERU150EC-HRV	0.17	Inlet	33	37	44	56	40	29	26	26
		Outlet	27	36	44	50	37	32	27	23
ERU250EC..	0.24	Inlet	37	33	44	50	51	51	52	49
		Outlet	41	34	45	50	55	57	54	51
ERU300EC..	0.29	Inlet	39	46	51	55	55	53	51	45
		Outlet	44	46	52	57	59	61	55	49
ERU420EC..	0.42	Inlet	41	47	53	62	52	53	48	40
		Outlet	51	48	59	65	65	68	60	49
ERU500EC..	0.50	Inlet	41	47	53	62	52	53	48	40
		Outlet	51	48	59	65	65	68	60	49
ERU700EC..	0.69	Inlet	44	50	61	61	58	58	56	48
		Outlet	53	58	67	66	69	69	63	56
ERU950EC..	0.94	Inlet	48	42	62	65	63	63	60	53
		Outlet	47	47	66	69	74	72	66	61
ERU1300EC..	1.30	Inlet	52	57	66	65	64	69	64	57
		Outlet	59	57	68	77	75	72	68	61
ERU1700EC-HRV	1.78	Inlet	54	64	69	71	70	67	64	60
		Outlet	60	65	66	73	79	72	69	64