Panasonic

heating & cooling solutions

Advanced ERV ZY Series

Panasonic energy recovery ventilator (ERV) recovers up to 83% heat exchange efficiency, providing balanced, energy-efficient ventilation.

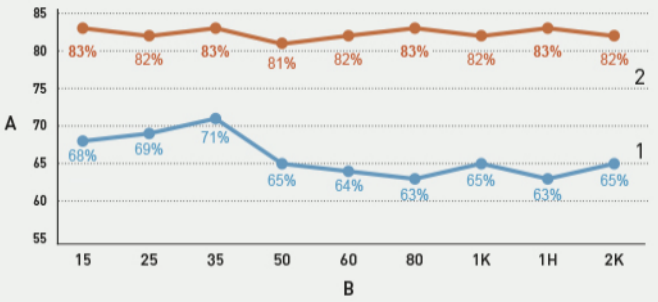
- Extended 9 model line-up including 2000m³/h model
- DC motors
- ESP up to 150Pa
- F7 grade filter built-in as a standard
- Intuitive remote controller as standard
- BMS integration with RS485

Advanced energy recovery ventilation

Energy recovery ventilation

Indoor air quality (IAQ) is a key consideration for any business owner looking to create a healthy and comfortable environment.

An energy recovery ventilator (ERV) provides balanced, energy-efficient ventilation by transferring heat and moisture between incoming fresh filtered air and outgoing stale air. In the winter, an ERV keeps heat and maintains humidity inside the building. During hot, humid summer months, it maintains cool, dry indoor air.



Recovers up to 83% of the heat in the outgoing air

ZY Series achieves more than 80% of heat exchange efficiency in all the line-up[1)].

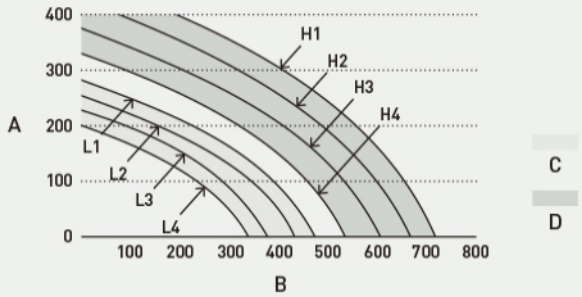
The high recovery rate optimizes operation cost and can be considered as a sustainable solution.

1) Heating operation, H1 speed setting.

A: Heat exchange efficiency (%). B: Reference FV-ZY1G**
1: Cooling. 2: Heating

The extended 9 model line-up, including 2000m^3/h and a high static pressure up to 150Pa, offers design flexibility

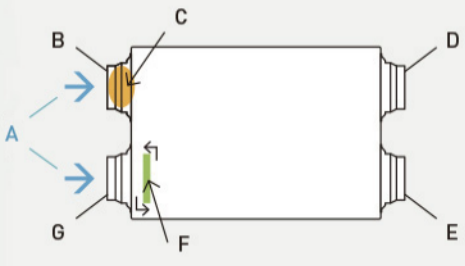
· Rated air flow rate from 150m^3/h to 2000m^3/h.
· Maximum external status pressure (model): 100Pa (15ZY1G), 120Pa (25ZY1G), 140Pa (35ZY1G), 130Pa (50ZY1G, 1HZY1G, 2KZY1G), 150Pa (80ZY1G, 1KZY1G).



Easy adjust for air volume balance

DC motors are equipped with independent control settings for air supply and exhaust. Air volume balance can be easily adjusted with 4 speeds settings for each Hi / Low operation.

Ventilation volume setting PQ curve example.
A: Static pressure (Pa) - B: Air flow (m^3/h) - c: Low setting - d: Hi setting



Backdraft shutters equipped as standard

A backdraft shutter prevents air flowing in the wrong direction when the ERV system is not in operation.

The shutter at outside air intake side (B) is inter-locked with ON / OFF switch.

The shutter at exhaust air outlet side (C) opens with the pressure generated by air stream then closes automatically.

A. Backdraft. B. Exhaust air. C. Wind pressure shutter. D. Room air. E. Supply air. F. Electrical shutter. G. Outside air.

Advanced energy recovery ventilation

Highly efficient filter for improved air supply

An effective EN F7 grade filter is built-in as a standard.
The expected cleaning maintenance cycle is once per month, with an average replacement interval of 4-6 months in high-demand environments.
Replacement filters are available as optional accessories.

Replacement high efficiency filter

Reference	Compatible models
FV-FP15ZY1G	FV-15ZY1G
FV-FP25ZY1G	FV-25ZY1G
FV-FP35ZY1G	FV-35ZY1G
FV-FP50ZY1G	FV-50ZY1G
FV-FP65ZY1G	FV-65ZY1G
FV-FP80ZY1G	FV-80ZY1G and FV-1HZY1G*
FV-FP1KZY1G	FV-1KZY1G and FV-2KZY1G*

* 2 sets of filters required for those models.

Intuitive remote controller with RS485 connection

· Simple and clean screen with white back light panel
· RS485 terminal equipped to integrate with Building Management Systems
· Metal switch box is included in the package

The ERV ZY series provides various control options, including group control and BMS integration, meeting a variety of commercial project requirements

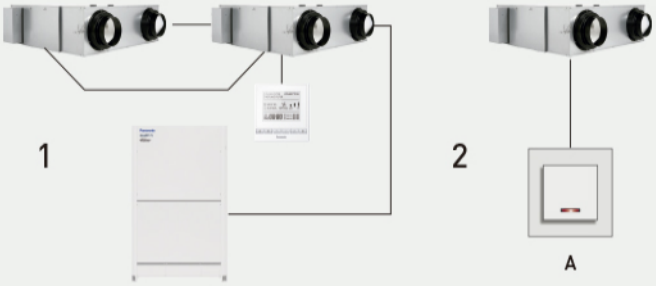
Control option 1

Group control with max. 2 ERV systems

Control option 2

Direct connection to field supply switch

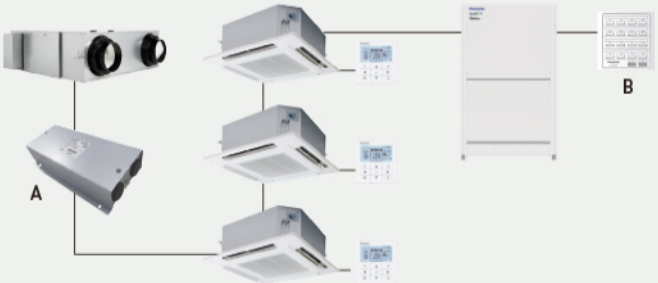
A: Field supply switch
* The use of the ERV remote controller is not necessary



Control option 3

ERV operation in cooperation with heating and cooling systems

A: ON / OFF control adapter (CZ-CAPC3). B: ON / OFF control (CZ-ANC3).
* The use of the ERV remote controller is not necessary



Control option 4

BMS integrated control

RS485 and Modbus RTU protocol available

Available operation:
1. Operating condition / mode. 2. Air volume. 3. Alarm notification. 4. OA (Outside Air). 5. Filter replacement time remaining. 6. ON/OFF timer. 7. Network time

A. Building Management System (BMS)

Advanced ERV ZY Series

Advanced ERV ZY Series		SINGLE PHASE								
		150 m³/h	250 m³/h	350 m³/h	500 m³/h	650 m³/h	800 m³/h	1.000 m³/h	1.500 m³/h	2.000 m³/h
Indoor unit		FV-15ZY1G (1)	FV-25ZY1G (1)	FV-35ZY1G (1)	FV-50ZY1G (1)	FV-65ZY1G (1)	FV-80ZY1G (1)	FV-1KZY1G (1)	FV-1HZY1G (1)	FV-2KZY1G (1)
Power supply (Voltage)	V	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240
Power supply (Phase)		1φ	1φ	1φ	1φ	1φ	1φ	1φ	1φ	1φ
Power supply (Frequency)	Hz	50	50	50	50	50	50	50	50	50
Motor type		DC	DC	DC	DC	DC	DC	DC	DC	DC
ERV - Air flow (Max)	m³/h	150	250	350	500	650	800	1.000	1.500	2.000
ERV - External static pressure (Max)	Pa	100	120	140	130	150	150	150	130	130
ERV - Sound power (Max) (2)	dB(A)	37	38	39	43	45	45	46	49	51
ERV - Input power (Max)	W	76 ~ 84	106 ~ 117	141 ~ 155,5	180 ~ 198	420 ~ 462	470 ~ 517	550 ~ 605	940 ~ 1.034	1.100 ~ 1.210
Heat exchange efficiency - Cooling (Max) (3)	%	68,0	69,0	71,0	65,0	64,0	63,0	65,0	63,0	65,0
Heat exchange efficiency - Heating (Max) (3)	%	83,0	82,0	83,0	81,0	82,0	83,0	82,0	83,0	82,0
Enthalpy exchange efficiency - Cooling (Max)	%	66,0	66,0	67,0	62,5	62,5	63,5	63,0	63,5	63,0
Enthalpy exchange efficiency - Heating (Max)	%	76,0	74,0	75,0	73,0	72,0	73,0	74,0	73,0	74,0
Adapter diameter	mm	100	150	150	200	200	250	250	250	250
Dimension (Height)	mm	289	289	331	331	404	404	404	808	808
Dimension (Width)	mm	610	735	874	1.016	954	1.004	1.231	1.004	1.231
Dimension (Depth)	mm	860	860	968	968	1.008	1.224	1.224	1.224	1.224
Net weight	kg	23	27	37	40	48	60	64	119	142