www.finevent.com

Fine-X-Vent

ERV & HRV CORE

BETTER ENVIRONMENT
BEST INDOOR AIR QUALITY

TAESUNG

Fine-X-Vent
means Healthy & Energy savings.
Save your money during ventilation with
Fine-X-Vent.

FEATURE AND BENEFITS

The world best membranes used for ERV and HRV.

- World's best thermal performance.
- Prolonged durability and stability.
- Flammability qualified with UL 94.
- Eco-friendly materials used.

Specialized fine cutting process.

- Low pressure drop with enhanced performance.
- Fitted with special aluminum frames.
- Easy installations with precise dimension.

Technical advantages.

- Designed using in-house thermal prediction software.
- Accumulated test data and pre-certification test.
- Technical support including size optimization and unit design.

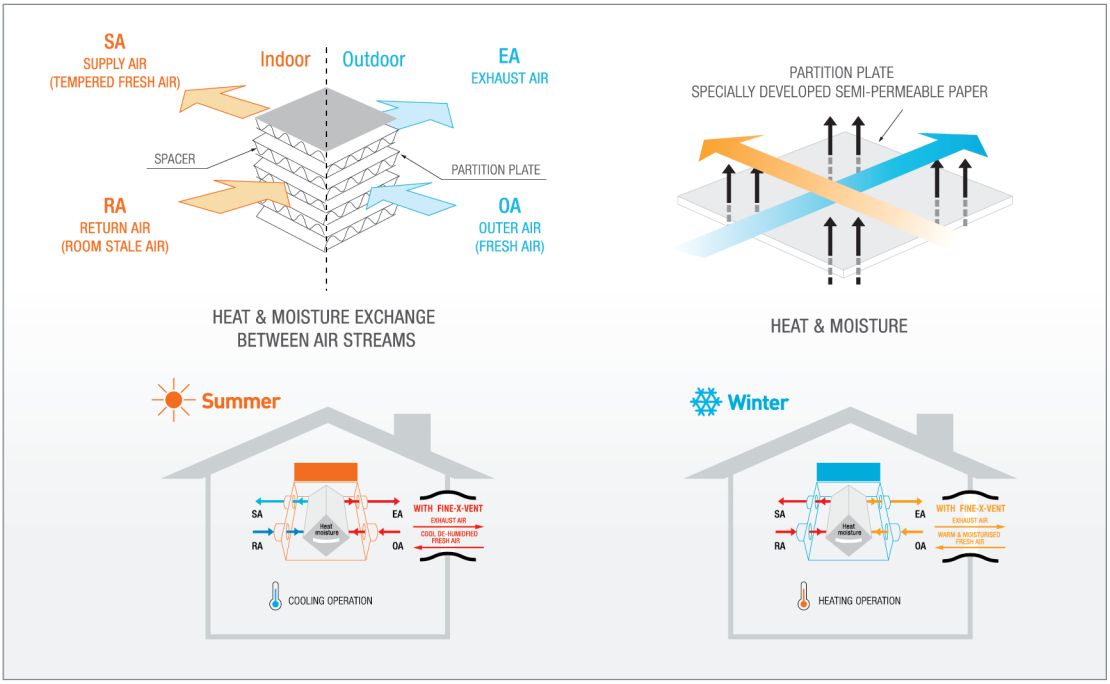
Fine-X-Vent ERV & HRV CORE

Fine-X-Vent

FINE-X-VENT** is the world best performance **ERV & HRV CORE

ENERGY / HEAT RECOVERY VENTILATOR ?

An Energy Recovery Ventilator (ERV) / Heat Recovery Ventilator (HRV) is an equipment that transfers heat (and moisture) between intake and exhaust air streams in a building's ventilation system. The key component of an ERV / HRV system is the heat exchanger core which exchanges heat (sensible energy) and moisture (latent energy). By transferring heat (and moisture) from incoming air to exhaust air during the summer, an ERV / HRV system can reduce the load on the air conditioning system dramatically. During the winter, the same system will transfer heat (and moisture) from the exhaust air into the coming stream to reduce the load on the furnace or heating system.



FINE-X-VENT TYPE

		AIR PERMEABILITY(Seconds)	WATER PERMEABILITY (g/m² day)	THICKNESS(㎛)
ERV	Type-EP (Paper)	5,000 ↑	4,500 ↑	35~45
	Type-EM (Polymer)	5,000 ↑	4,500 ↑	60~100
HRV	Type-HP (PP)	∞	-	35~80

Water Permeability @ 30°C, 80% RH

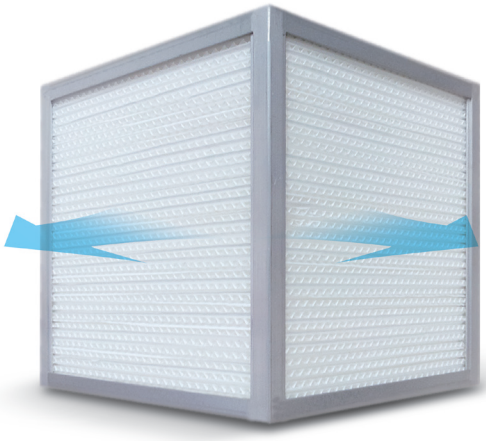
BENEFITs OF FINE-X-VENT ERV cORE

Recover Heat and Moisture with Fine-X-Vent	
Raw Materials	Specialized materials for ERV and HRV cores. Environment friendly materials
Quality	Reliable durability & stability Quality Specialized fine cutting process Low pressure drop
Cost Saving	Trouble free operation ← No moving parts.
	Rapid payback ← high level of effectiveness
Certification	RoHS UL94 KS F2819 ASTM G-21 Hazardous Flammability Ignitability Anti-fungus All Qualified

Air to Air Total Heat Exchanger

MODEL **EX** (High Efficiency)

PAPER TYPE ERV cORE



Best solution to TOP-MOUNT ERV.

Optimum performance with low price.

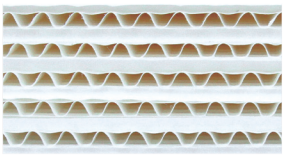
Square Type Fine-X-Vent

Typical applications

- Energy recovery for ventilation
- Circuit air cooling.

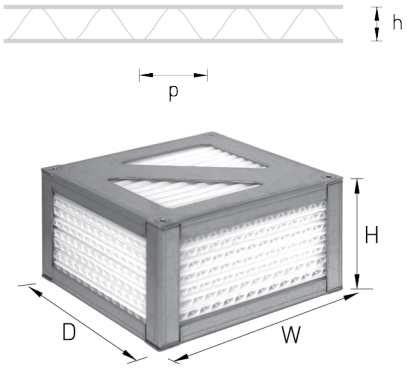
Typical features

- World best performance ERV core
- Raw materials developed in Korea
- Precise performance expectation and design proposal
- Certification(Hazardous, Flammability, Ignitability)
- Flexible in size



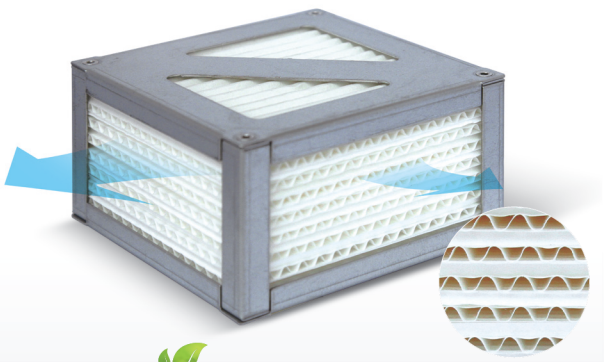
A single pass exchanger can provide an efficiency of 65 - 85%.

specification



h (mm)	p (mm)	Paper	Polymer	PP
1.8	4.8	O	-	-
2.0	4.8	O	-	-
2.0	4.8	O	O	O
2.6	5.6	O	-	-
3.0	7.0	O	O	O
4.0	9.6	O	O	O
6.0	13.5	O	O	O

Dimension(mm)	Paper	Polymer	PP
W	1,000	800	800
D	1,000	800	800
H	1,500	1,500	1,500



Fine-X-Vent
All materials are qualified with

RoHS	Hazardous	KS F2819	Ignitability
UL94	Flammability	ASTM G-21	Anti-Fungus

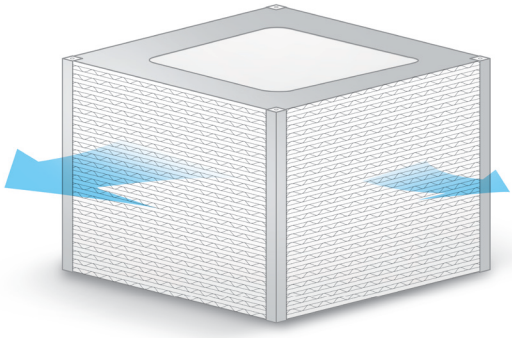
Typical features

- World best performance ERV core
  Using specially developed paper our performance is the best in the world.
- Korean raw materials
  All the technologies applied to our ERV core is the pure in-house technologies. And best solution for humid climate.
- Precise performance expectation and design proposal.
  Using our massive test data and performance prediction software, we could propose perfect size and performance.

Air to Air Total Heat Exchanger

MODEL EX (High Efficiency)

PAPER TYPE ERV cORE



Best solution to TOP-MOUNT ERV.

Maximum performance with reasonable price.

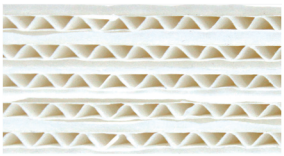
Diamond Type Fine-X-Vent

Typical applications

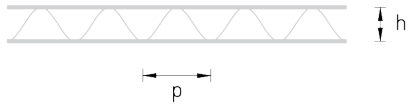
- Energy recovery for ventilation
- Circuit air cooling.

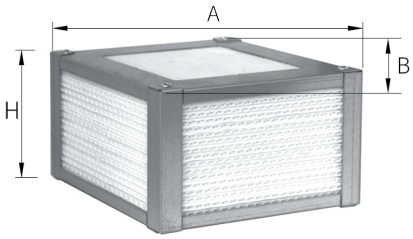
Typical features

- World best performance ERV core
- Raw materials developed in Korea
- Precise performance expectation and design proposal
- Certification(Hazardous, Flammability, Ignitability)
- Flexible in size



A single pass exchanger can provide an efficiency of 65 - 85%.





specification

h (mm)	p (mm)	Paper	Polymer	PP
1.8	4.8	O	-	-
2.0	4.8	O	-	-
2.0	4.8	O	O	O
2.6	5.6	O	-	-
3.0	7.0	O	O	O
4.0	9.6	O	O	O
6.0	13.5	O	O	O

Dimension(mm)	Paper	Polymer	PP
A	1,300	900	900
B	750	520	520
H	1,500	1,500	1,500

Model EX Range

Model	Measure (mm)			Plate distance (mm)
	A	B	c	
200	200	100~1000	284	2.0 / 2.6
300	300	200~1000	424	2.0 / 2.6
500	500	300~1000	707	2.0 / 2.6
800	800	400~1200	1131	2.0 / 2.6
1000	1000	500~1200	1414	2.0 / 2.6

Material

Plate : Paper (made in korea)

spacer : Paper (made in korea)

Frame material

Corner profiles in aluzinc and end-plates in aluzinc.

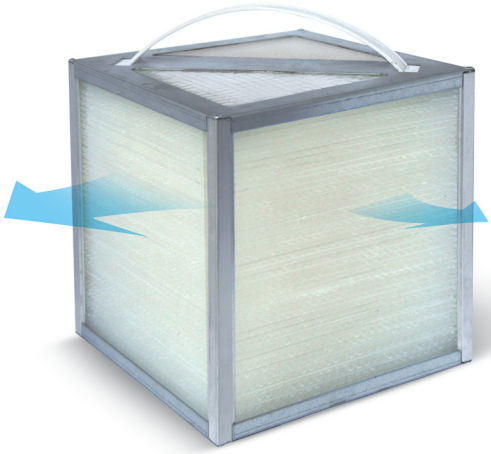
sealing

Siliconfree (-50°C ~ 90°C)

Air to Air Total Heat Exchanger

MODEL **PHX**

FINE-X-VENT HRV cORE



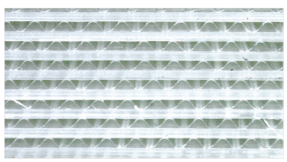
Polymer Type Fine-X-Vent

Typical applications

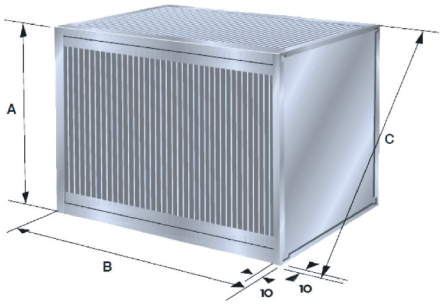
- Heat recovery for ventilation
- Condensation drying
- Circuit air cooling.

Typical features

- **Flexible in size.**
  Not like conventional HRV cores, our Type-HP could meet your request in millimeter range.
- **competitiveness of price.**
  Compare to metallic HRV cores, Type-HP is economical.
- **Great durability.**
  Type-HP is durable not only for their structures but also for their resistances to water condensate, corrosion, salt and chemicals.
- **Make your system more special.**
  Our Type-HP provide premium characteristic to your products. Make your system more special with Fine-X-Vent.



A single pass exchanger can provide an efficiency of 55 - 70%.



Model PEX Range

Model	Measure (mm)			Plate distance (mm)
	A	B	c	
500	500	250~1200	707	2.0 / 2.6 / 4.0
750	750	300~1200	1061	2.0 / 2.6 / 4.0
1000	1000	350~1200	1414	2.0 / 2.6 / 4.0
1500	1500	350~1200	2122	2.0 / 2.6 / 4.0
2000	2000	350~1200	2828	2.0 / 2.6 / 4.0

Fine-X-Vent
All materials are qualified with

RoHS	Hazardous
UL94	Flammability
KS F2819	Ignitability
ASTM G-21	Anti-Fungus

Material

Plate : Paper (made in korea)
spacer : Paper (made in korea)

Frame material

Corner profiles in aluzinc and end-plates in aluzinc.

sealing

Siliconfree (-50°C ~ 90°C)

Air to Air Total Heat Exchanger

MODEL **PDX**

Sensible heat exchangers have air flow channels formed with injection molding which enable two gases to flow in the opposite direction with each other while transferring heat.

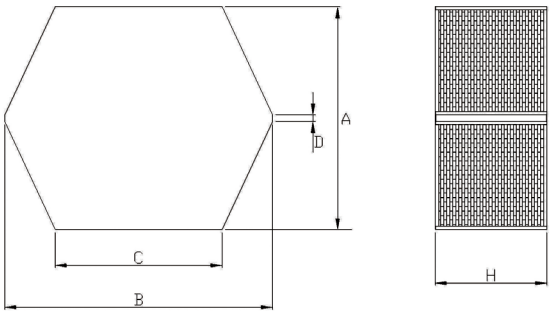
composition

- Cell type heat exchanger
- Liner : PS(Polystyrene, Thickness 250㎛)
- Spacer : PS(Polystyrene, Thickness 250㎛)

Cell Type Fine-X-Vent

Typical features

- **Excellent sensible heat exchange efficiency**
  High efficient sensible heat exchange occurs because it has three times bigger heat transfer area than existing exchangers by using cellular method. Also, the thickness in counter flow region is lower than 100㎛.
- **Excellent sensible heat exchange efficiency when used for the residential air to air heat exchangers**
  High sensible heat exchange efficiency in the environment of -20℃~50℃
- **Possible design with various flow rate and various target efficiencies**
  Possible design for various flow rates from 50CMH to 500CMH and heat exchange efficiency over 95%
- **Easy Maintenance**
  Wash with water when it is contaminated
- **Flexibility in**
  The stacking height can be requested by customers in accordance with their needs



Dimension & specification

(unit : mm)

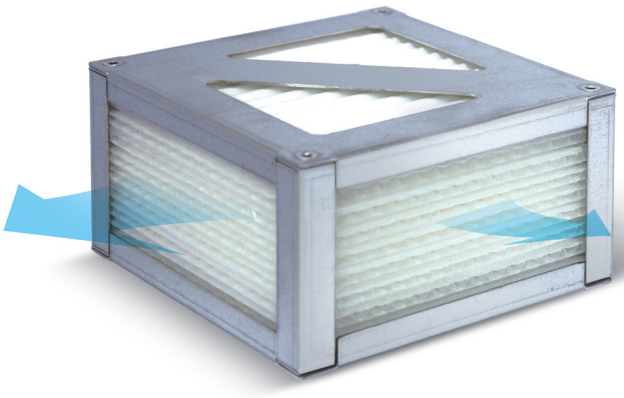
	PDX-1	PDX-2	PDX-3	PDX-4	PDX-5
A	150	366	366	600	1000
B	339	366	366	800	1200
C	187	194	194	530	748
D	0	10	10	25	30
H	100-400	100-500	100-500	300-800	600-1000
h	2.5	3	5	10	10

h : Nominal plate distance

Total(sensible + latent) heat recovery

MODEL **TEX**

POLYMER TYPE ERV cORE

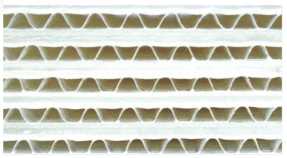


Polymer Square Flow Type

Fine-X-Vent

Typical applications

- Energy recovery for ventilation
- Circuit air cooling.



A single pass exchanger
can provide an efficiency

Best solution to TOP-MOUNT ERV.

Optimum performance with low price.

Fine-X-Vent
All materials are qualified with

RoHS	Hazardous
UL94	Flammability
KS F2819	Ignitability
ASTM G-21	Anti-Fungus

Typical features

- **No limitation for climate conditions.**
  Type-EM is highly adaptable ERV cores that can be used in extreme weather conditions like high latitudes area (such as Northern Europe and Northern North America area) and tropical regions.

- **Easy maintenance and long life time.**
  Comparing to paper cores, Type-EM cores are more durable and it could be washed with water.

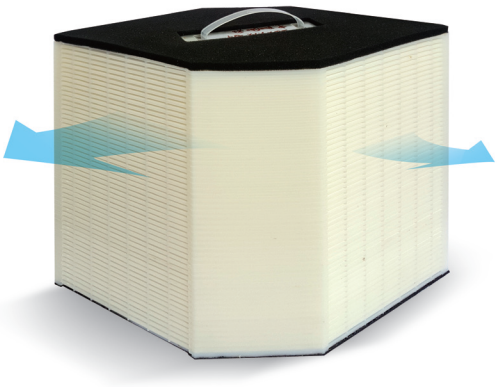
- **Replacement of HRV cores.**
  Our Type-EM ERV cores can be an alternative solution of HRV system with better energy recovery performance.

- **Make your system more special.**
  Our Type-EM provide premium characteristic to your products. Make your system more special with Fine-X-Vent.

Total(sensible + latent) heat recovery

MODEL TEX

POLYMER TYPE ERV cORE



Polymer Counter Flow Type

Fine-X-Vent

Typical applications

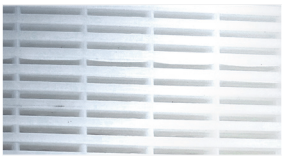
- Energy recovery for ventilation
- Condensation drying
- Circuit air cooling.

Typical features

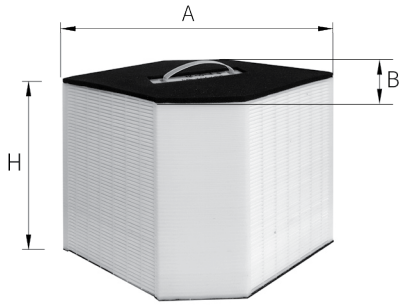
- No limitation for climate conditions
- Exceptional Durability
- Replacement of ERV cores
- Easy Maintenance
- Long lifetime
- Flexible in size

Best solution to TOP-MOUNT ERV.

Maximum performance with reasonable price.



A single pass exchanger can provide an efficiency of 65 - 85%.



Model TEX Range

Model	Measure (mm)			Plate distance (mm)
	A	B	c	
500	500	250~1200	707	2.0 / 2.6 / 4.0
750	750	300~1200	1061	2.0 / 2.6 / 4.0
1000	1000	350~1200	1414	2.0 / 2.6 / 4.0
1500	1500	350~1200	2122	2.0 / 2.6 / 4.0
2000	2000	350~1200	2828	2.0 / 2.6 / 4.0

special Product

Dimension(mm)	Measure (mm)	Plate distance (mm)
A	1,100	2.0
B	630	2.6
H	1,500	4.0

Material

Plate : Inorganic polymer

spacer : Polyethylene

Frame material

Corner profiles in aluzinc and end-plates in aluzinc.

sealing

Siliconfree (-50°C ~ 90°C)

Metric / Imperial counter Flow core

MODEL **K**

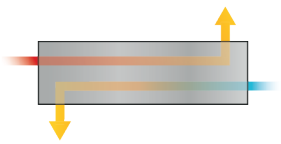
Slim Type MODEL K

A single pass exchanger
can provide an efficiency

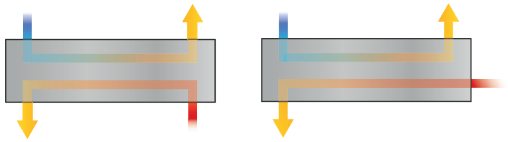
Typical features

- Model K is a true counter flow plate heat exchanger with **high thermal effciency**.
- Specially designed for the demanding requirements of the telecommunications and electrical enclosure industry, the Heatex **Model K exchanger combines slim, effective counter flow design** with Heatex' unique turbulent flow plate configuration.
- Heatex' proprietary-WINHeat software, along with Model K's wide range of sizes and configurations, **ensures an optimal solution for virtually any application**.
- Custom integration solutions are available for ease of installation and **faster end product delivery**.

Air Flow configurations



L + L
Most effective/recommended.



U + U U + L
Altermative for special flow path requirements.

Model K Range

Model	Measure (mm)			Plate distance (mm)
	A	B	c	
400 x 140	400	140	100-600	2.0 / 2.6 / 4.0
500 x 140	500	140	100-600	2.0 / 2.6 / 4.0
600 x 140	600	140	100-600	2.0 / 2.6 / 4.0
500 x 190	500	190	100-600	2.0 / 2.6 / 4.0
600 x 190	600	190	100-600	2.0 / 2.6 / 4.0
700 x 190	700	190	100-600	2.0 / 2.6 / 4.0
800 x 190	800	190	100-600	2.0 / 2.6 / 4.0
600 x 235	600	235	100-700	2.0 / 2.6 / 4.0
700 x 235	700	235	100-700	2.0 / 2.6 / 4.0
800 x 235	800	235	100-700	2.0 / 2.6 / 4.0
900 x 235	900	235	100-700	2.0 / 2.6 / 4.0
1000 x 235	1000	235	100-700	2.0 / 2.6 / 4.0

Plate Material

Aluminum is standard. Epoxy coated aluminum available for improved corrosion protection.

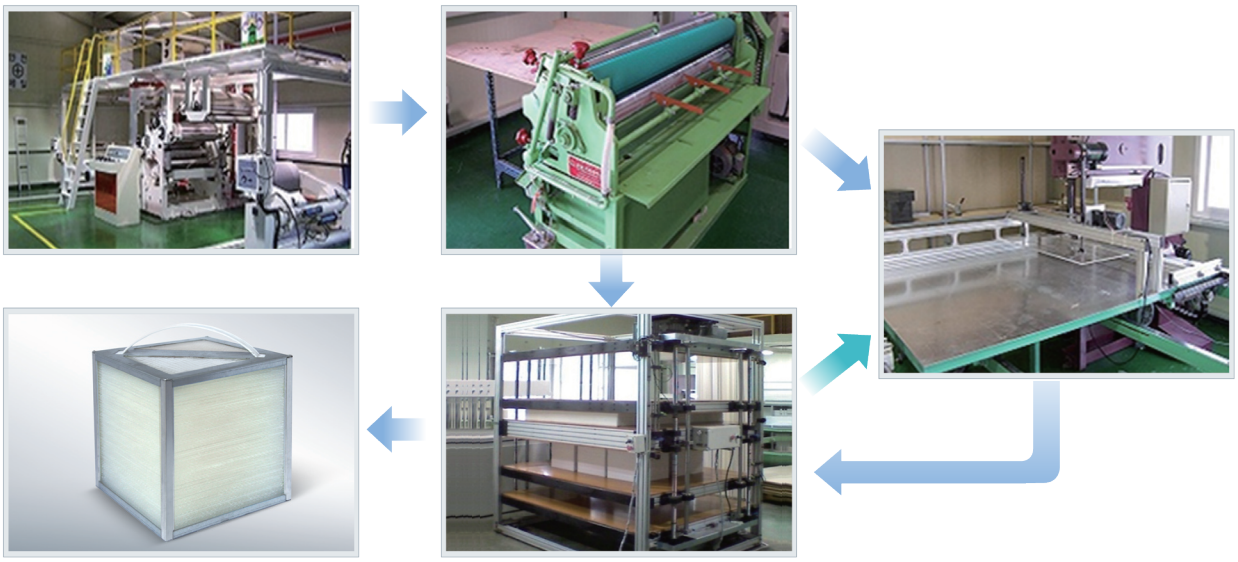
case Material

Aluzinc.
Custom material and design upon request.

Producing **Facility**

Specialized material and production process.

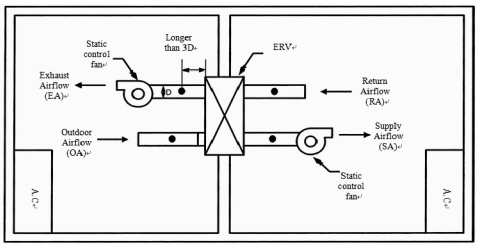
New developed process by TAESUNG (Only part of the process shown for proprietary reasons)

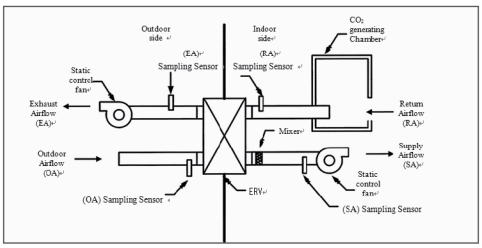


Efficiency Test of **ERV CORE**

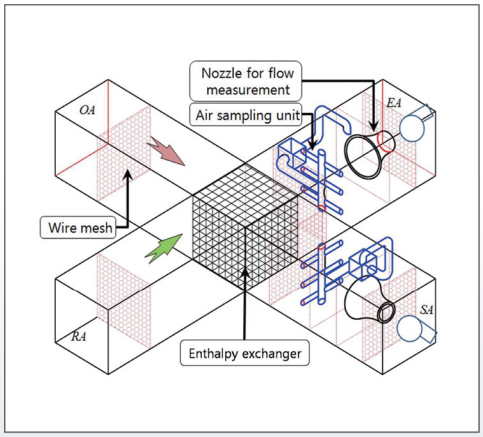
TEsT METHOD

Korea, JIS (Actual performance including fan motor heat)
AHRI (Only Heat exchanger efficiency excluding fan motor heat)

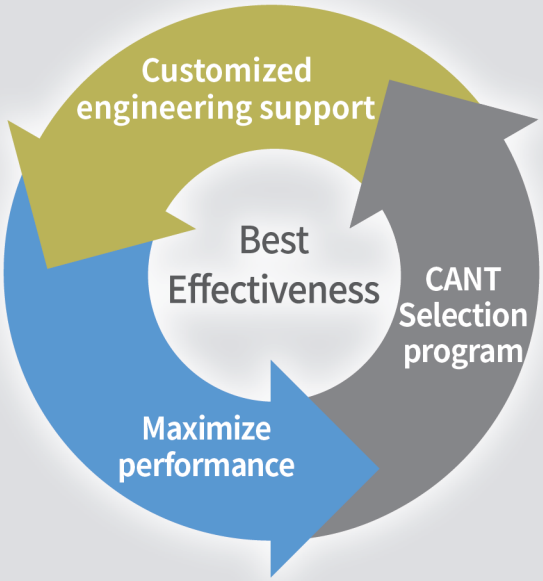




ERV-HRV TEsT



Best Effectiveness with *TAESUNG*



New Technology

Active introduction of developed new technology and new technique

Quality

Customer satisfaction with the excellent quality

Cost reduction

Realization of Customer surprise with cost reduction and on-time delivery

TAESUNG

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