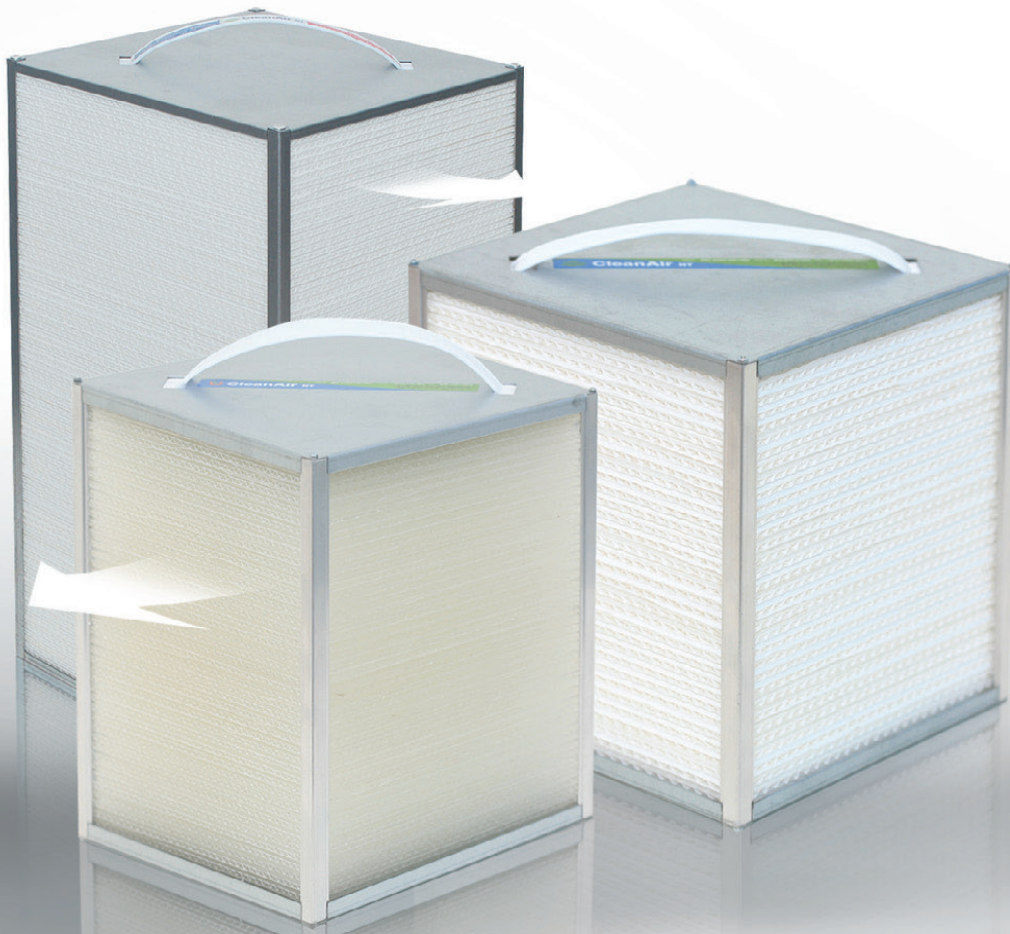


BETTER ENVIRONMENT | BEST INDOOR AIR QUALITY

DUO-CLEAN™ **ERV & HRV CORE**



DUO

HEAT & MOISTURE
ENERGY & ENVIRONMENT



DUO-CLEAN

means Healthy & Energy savings.
Save your money during ventilation
with DUO-CLEAN



The Best Choice for Health and Energy Conservation

DUO-CLEAN™

DUO-CLEAN ERV CORE is THE WORLD BEST PERFORMANCE ERV CORE

The DUO-CLEAN device considers health first.

All materials satisfy the RoHS (Human Hazard) test and are harmless to the human body. The main material is a healthy product with antibacterial properties. Both sensible and latent heat efficiency perform well in any environment. Maximize energy recovery. Clean working surfaces minimize pressure drop and reduce power consumption.

■ The world best membranes used for ERV and HRV.

- World's best thermal performance.
- Prolonged durability and stability.
- Flammability qualified with UL 723.
- Eco-friendly materials used.

■ Specialized fine cutting process.

- A precise, clean appearance improves assembly and minimizes loss of air volume

■ Technical advantages.

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

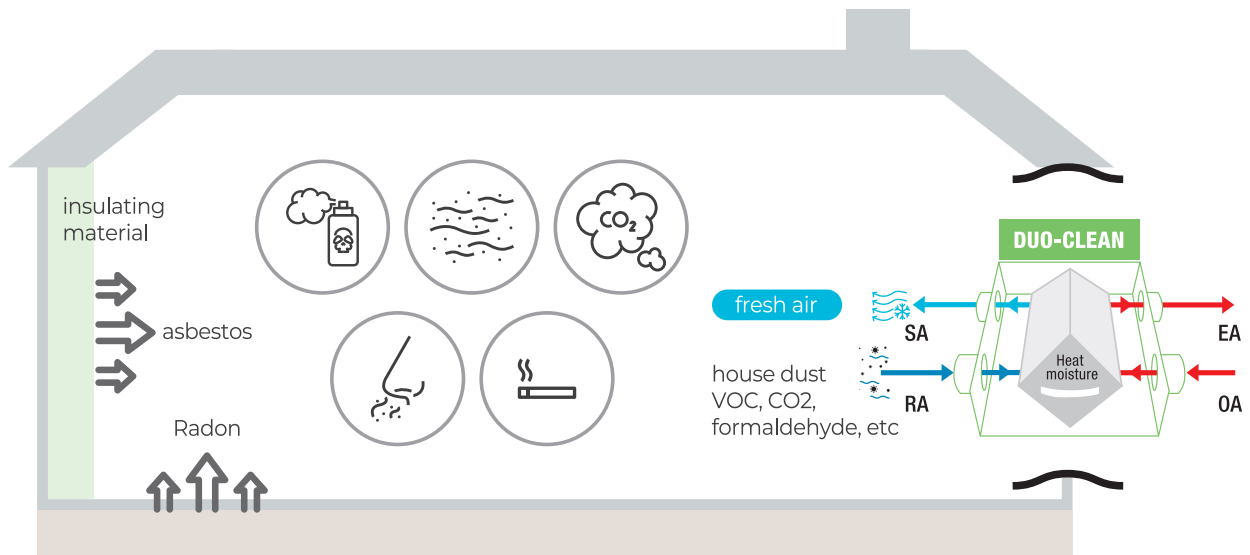
Energy / Heat Recovery Ventilator?



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.

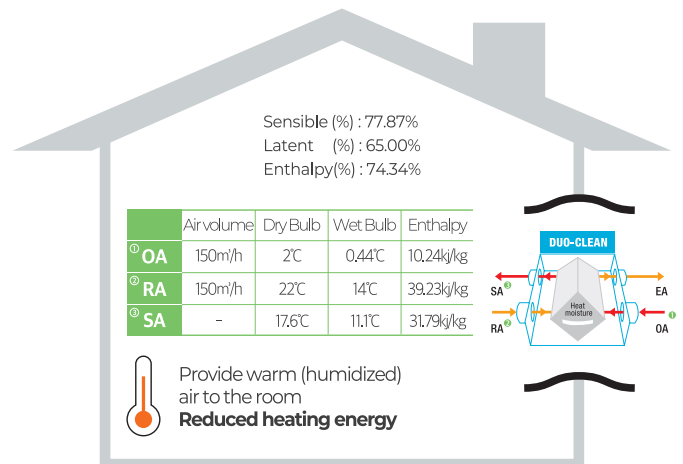
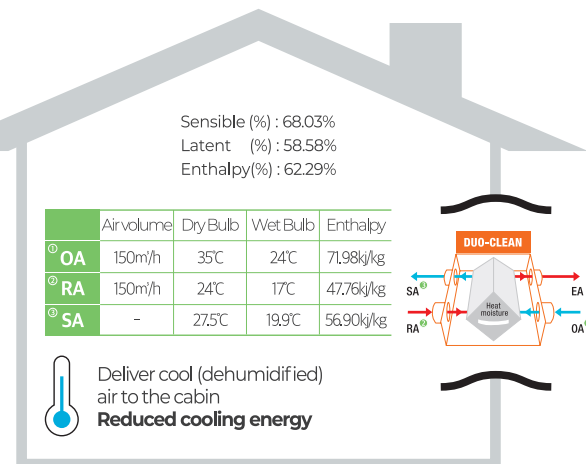
Indoor Air Quality

1. Exhausting contaminated materials in indoor air
2. Supplying fresh air from outdoor into indoor after purifying by air filters.



Energy Saving

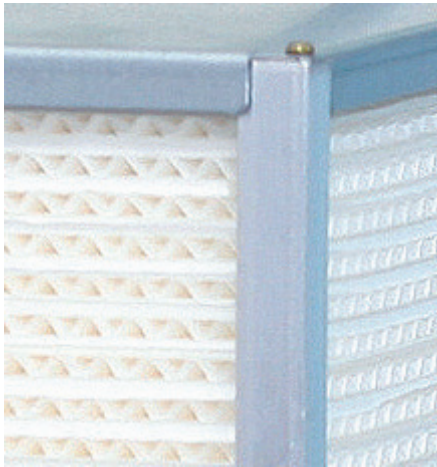
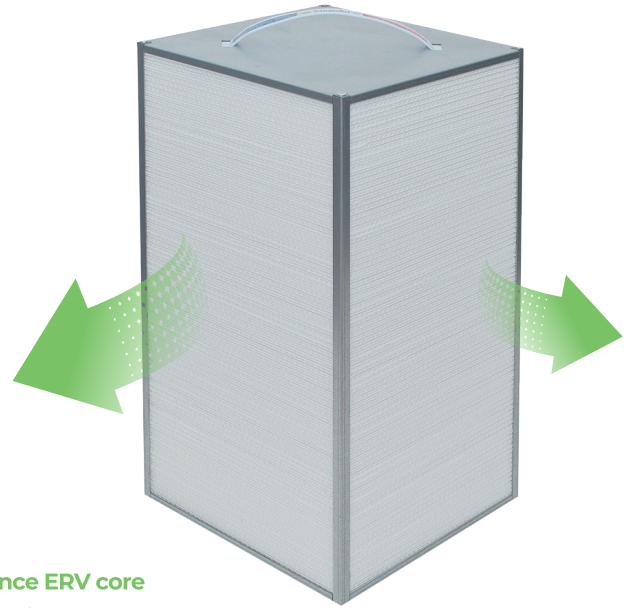
1. Heat and moisture recovering through the heat exchanger.
2. Enthalpy efficiency for summer is more than 50% and 70% for winter.



DUO-CLEAN ERV CORE

DUO-CLEAN™ Type-EP

Paper Type ERV Core



· **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.

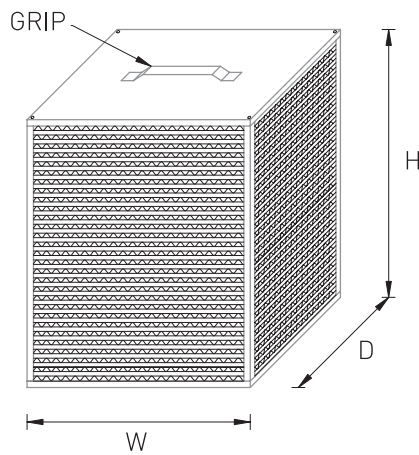
Benifits of DUO-CLEAN ERV CORE

Recover Heat and Moisture with DUO-CLEAN

Raw Materials	Specialized materials for ERV and HRV cores. Environment friendly materials	
Quality	Reliable durability & stability Specialized fine cutting process Low pressure drop	
Cost Saving	Trouble free operation ←No moving parts. Rapid payback ←high level of effectiveness	
report card and Certificates	RoHS UL723 KS F2819 ASTM G-21	Hazardous Flammability Ignitability Aiti-fungus

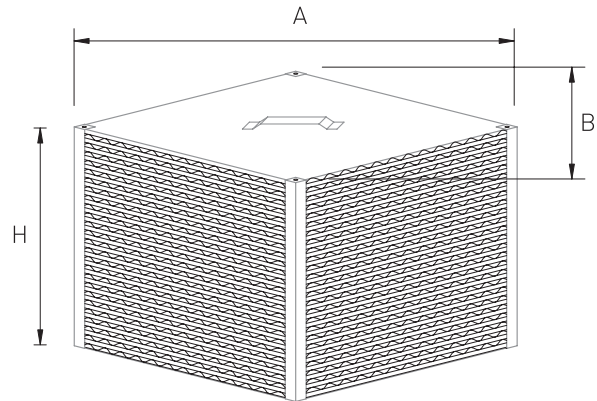
Features & Specification of DUO-CLEAN ERV & HRV CORE

■ Square Type DUO-CLEAN™



- Best solution to TOP-MOUNT ERV.
- Optimum performance with low price.

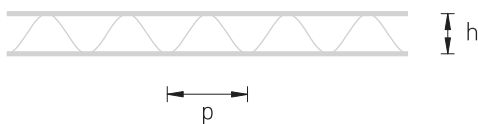
■ Diamond Type DUO-CLEAN™



- Best Solution to SIDE-MOUNT ERV.
- Maximum performance with reasonable price

DUO-CLEAN ERV & HRV CORE

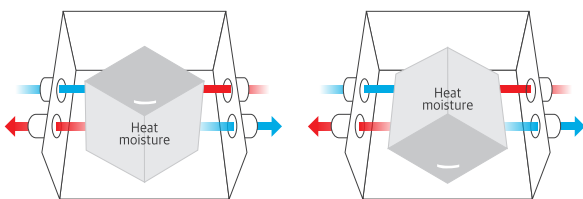
Channel Structure



h (mm)	P (mm)	Type		
		EP	EM	HP
1.8	4.8	○	-	-
2.0	4.8	○	-	-
2.6	5.6	○	-	-
4.0	9.6	○	○	○

Top Mounted

Side Mounted

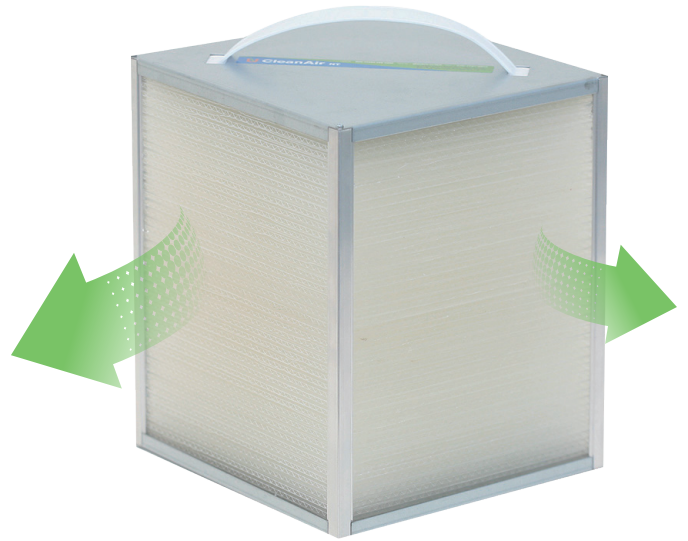


Content	Efficiency (%)	ERV		HRV
		EP	EM	HP
Cooling	Enthalpy	59.4	56.5	32.6
	Sensible	74.5	69.3	72.0
	Latent	46.4	45.4	-
Heating	Enthalpy	77.1	71.1	63.5
	Sensible	82.6	79.5	82.9
	Latent	64.3	51.5	-

DUO-CLEAN HRV CORE

DUO-CLEAN™ Type-HP

Polymer Type HRV Core



• **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.

• **Reduce costs with excellent energy recovery efficiency Maximize.**

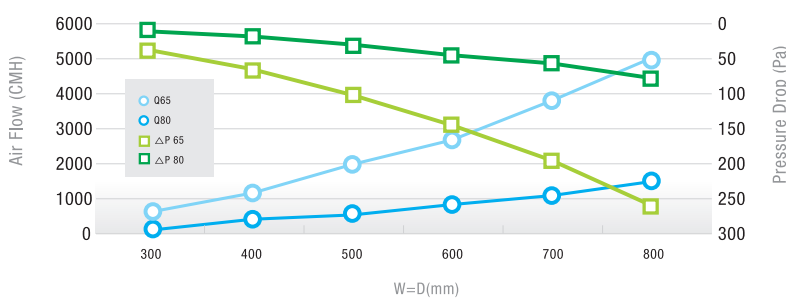
• **Great durability.**

Type-HP is durable not only for their structures but also for their resistances to water condensate, corrosion, salt and chemicals.

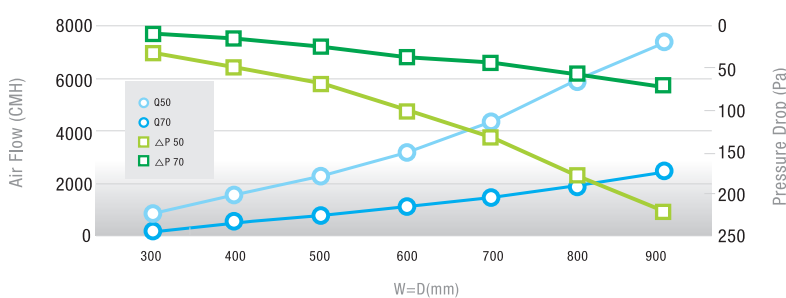
• **Make your system more special.**

Our Type-HP provide premium characteristic to your products. Make your system more special with DUO-CLEAN.

W=D Size (mm) @ p=3.0mm H=800mm



W=D Size (mm) @ p=4.0mm H=800mm



DUO-CLEAN

Healthy & Energy saving for us and earth.

Heat Exchangers (ERV, HRV cores) recuperate the heat and moisture between exhausting air and supplying air so reduce the energy loss while ventilating. It also helps to improve the IAQ through air-filters in it.

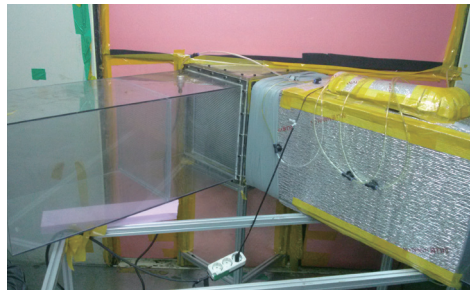
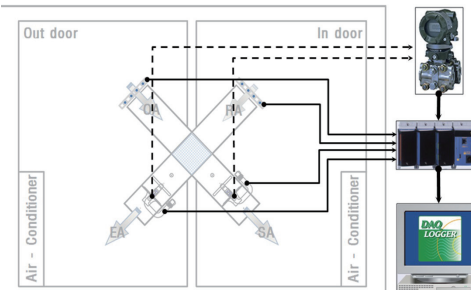
Maintain strict quality control of ERV core membrane



Air & Moisture Permeability Test



Air Leakage Test

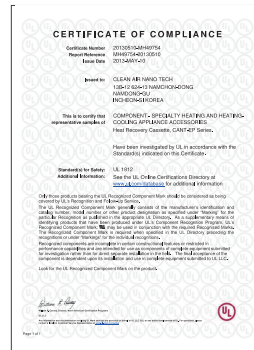


Efficiency Test



Estimated Performance Data

Item	Unit	Value	Unit	Value
Flow Rate	m³/h	100	Flow Rate	100
Pressure	Pa	100	Pressure	100
Efficiency	%	90	Efficiency	90



Certified of Product Ratings

Product	Model	Flow Rate (m³/h)	Pressure (Pa)	Efficiency (%)	Power (W)
Duo-Clean ERV	DC-100	100	100	90	100
	DC-200	200	200	90	200
Duo-Clean HRV	HC-100	100	100	90	100
	HC-200	200	200	90	200

Certificated