

Total Heat Exchange Element

A special-thin paper membrane made with papermaking technology, enables both ventilation and ECO!

Total heat
exchanger



Efficiency

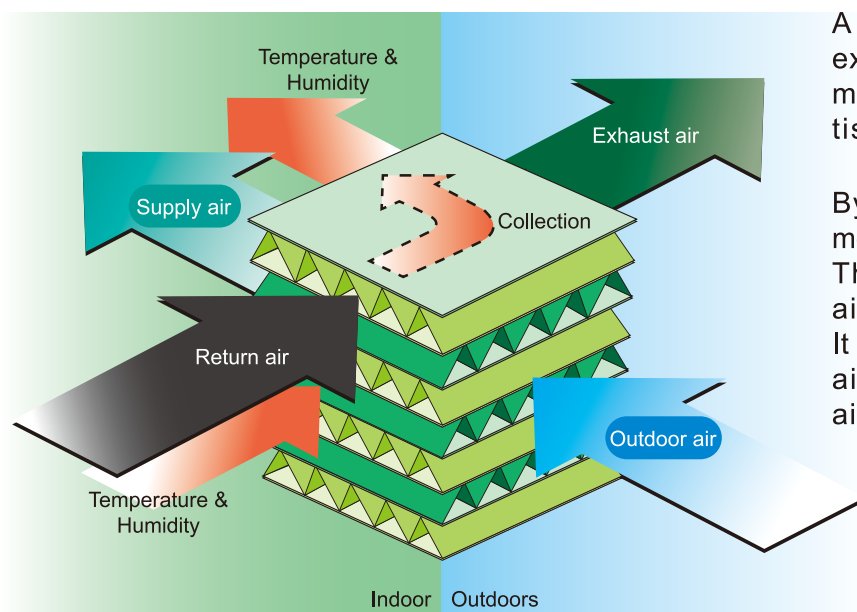


Ecology

USE

- Energy recovery ventilator

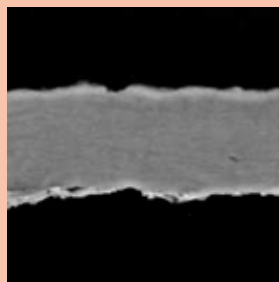
Features



A total heat (temperature and humidity) exchange element with special thin paper membrane, that is made with our unique tissue papermaking technology.

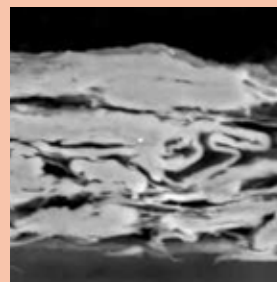
By its characteristic of special thin paper membrane (Gas barrier, Moisture permeability, Thin membrane), exhaust air and supply air will not be mixed. It enables to collect the energy from return air (temperature and humidity) to supply air effectively.

Our total heat exchange paper (0.04mm)



- Since this is the thin paper membrane with moisture permeability, temperature and humidity exchange efficiency is high.
- The fine structure will prevent to mix the exhaust air and supply air. (Dirty return air does not go through membrane.)

Conventional total heat exchange paper (0.07mm)

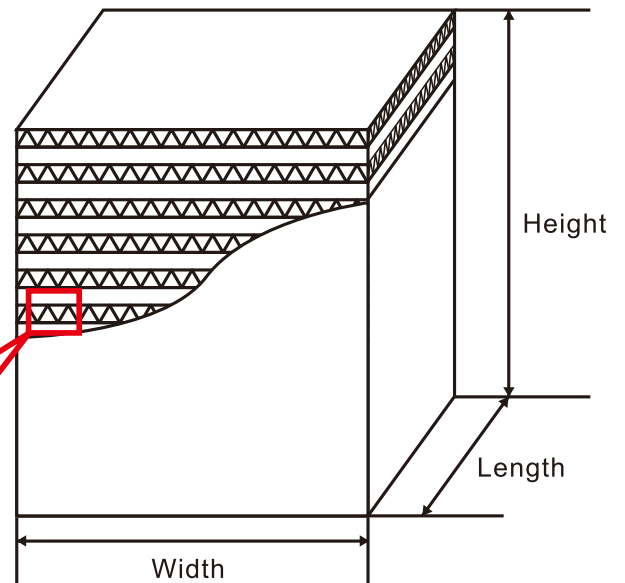
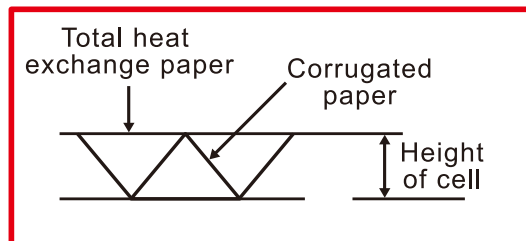


- Since the paper is thick, temperature cannot be exchanged effectively.
- The structure with many pores cause a mixing of exhaust air and supply air. (Dirty return air go through membrane and mix with supply air.)

Sample Data

Product specification, Element dimension

Size: Width, Length 150~620mm
 Height 70mm~800mm
 Shape: Cross flow type
 Performance: Various performance depending on the paper type



Paper data

Paper type	—	ER-03E (Normal model)	ER-03D1 (High-end model)
Basis weight	g/m ²	36.3	48.7
Thickness	μm	39	47
Moisture permeability	g/m ² ·24h	200	940
Air permeability	sec	840,000	1,700,000
Flame retardance	—	Conformable with UL-94 VTM-0	

※This data is measured after controlling humidity under 23°C50%RH.

Core data

Dimension		mm	L280×W280×H320			L280×W280×H320		
Paper type		—	ER-03E(Normal model)			ER-03D1(High-end model)		
Height of cell		mm	2.0			2.0		
Air volume		m ³ /h	100	200	400	100	200	400
Pressure drop		Pa	47	115	324	35	75	184
Temperature exchange efficiency	Cooling	%	82	75	67	91	83	71
	Heating	%	80	76	67	90	82	71
Total heat exchange efficiency	Cooling	%	59	47	37	77	65	52
	Heating	%	71	62	52	74	66	56

※Evaluation standard: Complies with JIS B 8626 test method for total heat exchange equipment

※This is sample data for reference and will not guarantee the quality. Performance can be changed by its use condition.