-THE HEAT TRANSFER EXPERTS-

PLATE HEAT EXCHANGER

For HVAC

PRODUCT GUIDE

JungsangE&T
THE HEAT TRANSFER EXPERTS
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PLATE HEAT EXCHANGER
For HVAC

SUMMARY

Our air-to-air plate heat exchangers, made of corrosion resistant aluminum, are installed within air handling units and ventilators to recover heat energy.

Its airtight structure prevents cross-contamination of air, making it ideal for providing clean and safe HVAC in buildings such as medical facilities,laboratories,cleanrooms, and swimming pools. All models are made in korea.

STRUCTURE

The plate heat exchanger consists of an exchanger housing and recovery cube is made of aluminium foil fins,0.2mm,for heat transfer,corner sections,a bottom and a cover made of galvanized,painted or stainless steel, sts 304,sheet metal. The fins are shaped so that when individual pieces ar positioned upon each other, a set of mutually perpendicular and air-tight separate channel is formed. The block formed is then inserted between the bottom and the cover,mutually interconnected in the corners by corner section. Standard sealing is ensured by a polymer-based cement. The exchanger cube can be fitted with a control valve changing the amount of air passing through the exchanger.

OPERATING TEMPERATURES

- The standard version of the plate heat exchanger is designed for operation at ambient temperatures from -40°C to +90°C.
- The high tempetature version of the plate heat exchanger is designed for operation at ambient temperatures about +200°C.

OPERATING SPEED AND PRESSURE DROP

Under standard conditions the speed of air flow in the exchanger varies from 2 to 10m/s.

We recommend setting up the unit so that the pressure gradient runs from the supply to the exhaust air.

FEATURES

- Heat recovery efficiency of 65% and above.
- Cross-contamination free : complete airtightness.
- Saltwater spray tested aluminum material.
- Epoxy coated plate. It is optional.

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SPECIFICATION

PLATE METERIAL : ALUMINU - 0.2T / EPOXY COATED ALUMINUM - 0.2T (OPTION)

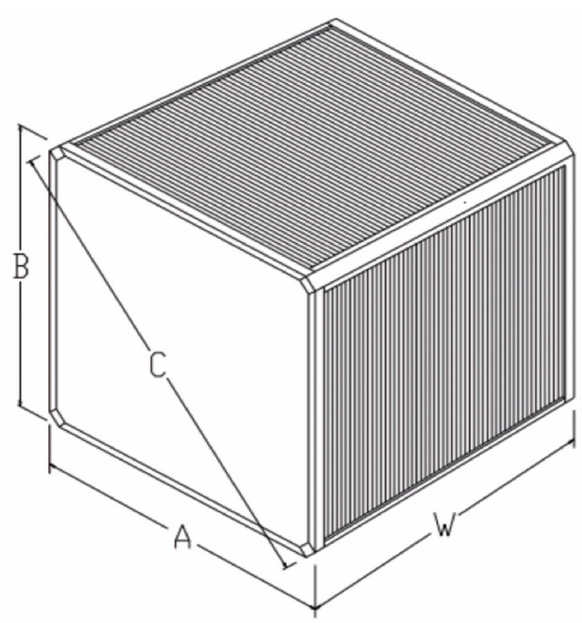
CASING : ALUMINUM-ZINC COATED STEEL - 1.2T / STAINLESS STEEL STS 304 - 1.2T (OPTION)

SEALANT : MAX 90°C FOR HAVC, MAX 200°C FOR HIGH TEMPERATURE

SEALING : INTAKE-FLOW EDGES ARE FOLDED 5 TIMES

* Refer to the Selection data.

DIMENSION



Standard Series	A(mm)	B(mm)	C(mm)	W(mm) *	PITCH
HRP-500	500	500	677	500 mm (Basic standard length)	5.5
HRP-600	600	600	819		6.5
HRP-700	700	700	960		7.0
HRP-800	800	800	1101		8.0
HRP-900	900	900	1243		9.0

* W : 500mm is the basic standard length and you can connect one with another as many as you want.

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SELECTION DATA SHEET (CASE STUDY)

MODEL : S1600-W3400-P9.0-EC

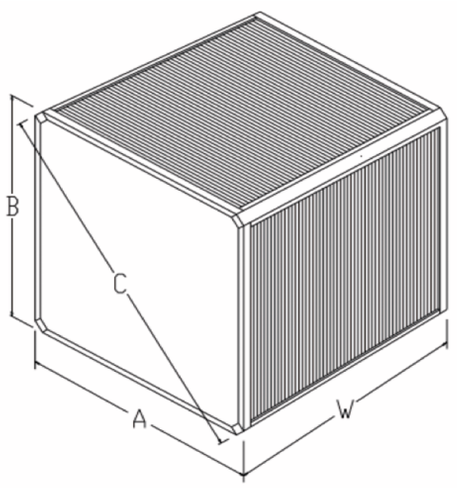
SIZE(A*B*C*W) : 1600*1600*2233*3400

WEIGHT : 796 Kg

MATERIAL : Epoxy Coated Aluminum, 0.2T

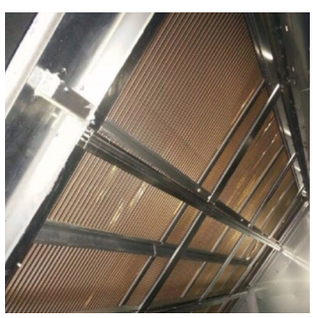
CASING : Stainless Steel STS304, 1.2T

SEALANT : MAX 90 °C(For HVAC)



		Fresh Air	Returned Air
Standard air flow rate		50,000 Nm^3 / hr	50,000 Nm^3 / hr
Entering	Dry Bulb	0.5 °C	35.1°C
	Relative Humidity	60.0 %RH	35.0 %RH
	Absolute Humidity	2.3 g/kg	12.4 g/kg
	Enthalpy	6.4 KJ/Kg	67.1 KJ/Kg
Leaving	Dry Bulb	22.5 °C	21.3 °C
	Relative Humidity	14.0 %RH	58.0 %RH
	Absolute Humidity	2.3 g/kg	9.1 g/kg
	Enthalpy	28.6 KJ/Kg	44.6 KJ/Kg
Velocity		2.4 m/s	2.7 m/s
Pressure Drop		204 Pa	232 Pa
Efficiency (exclude condensed cal)		60.0 %	
Efficiency (included condensed cal)		64.0 %	
Recovery Calorie (exclude condensed cal)		348.6 kw	
Recovery Calorie (inclcluded condensed cal)		370.2 kw	
Condensed Water Emisson		192 kg/hr	

INASTALATION PHOTO



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