



## COMPANY PROFILE

Kaori was founded in 1970, we have pursued the modernization of the heat treating technology as our goal. Our staffs have spared no efforts to improve our hardware and software, research & development, and acquire the latest technology. JIS marking and certificate from McDonnell Douglas were then awarded to Kaori in 1988 and 1994 respectively for Kaori's outstanding quality and performance. From time to time, Kaori grows in terms of financial assets, labor force, and experiences in the heat treatment field.

Based on the heat-treating and brazing experience, we began to manufacture sendzimir work rolls and industrial brazed heat exchanger in 1992. Kaori has again being awarded with certificate of qualification for ISO9001 : 2000, UL and CE; proving Kaori's manufacturing and management capability. By combining the technologies we have, we hope to step into thermal technical industry and clean room assembly parts.

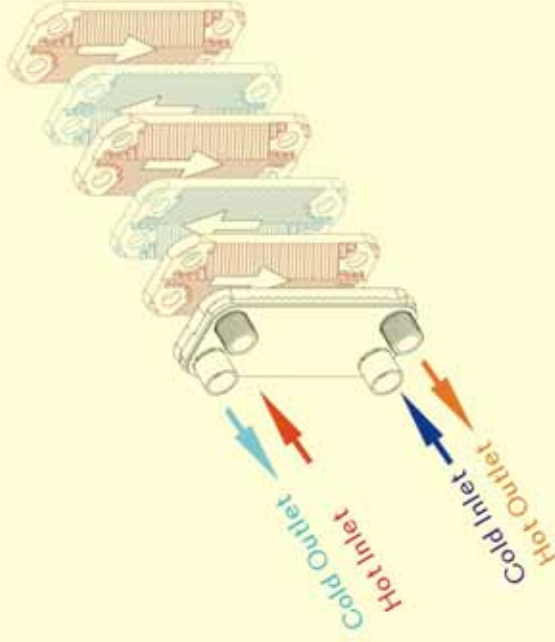
We are and will be focusing our business on the manufacturing of plate heat exchanger and its related components. With our well-equipped production plants in both Taiwan and China, we will be delivering outstanding products and services to meet the ongoing global demand.

## ISO · UL · CE



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## OUR PRODUCTS-BPHE

Kaori's brazed type heat exchanger consists a series of thin and corrugated stainless steel plates. These plates are compressed and brazed together with copper or nickel depending on the application. This creates flowing channels between plates, with one fluid in odd number channels and the other in the even number channels, thus reaching the purpose of heat exchanging.

Different from the gasket seal type, brazing type uses soldering material (copper or nickel depending on the application) to seal the exchanger. By applying high temperature in the vacuum environment at the manufacturing process, it melts down the soldering material to form the seal between each plate.

## ADVANTAGES ON THE BRAZED PLATE HEAT EXCHANGER

### 1. High corrosion resistant

All plates uses SUS316 material. Brazing materials are offered in copper or nickel. These materials offer high corrosion resistance against many kinds of fluids.

### 2. High pressure resistant

Thanks to the brazing process, plate heat exchangers are pressure resistant up to 45 bar.\*

### 3. High thermal efficiency

Carefully designed plate pattern of the corrugated plates easily achieve high thermal transfer rate in either counter flow or parallel flow arrangement.

### 4. High working temperature

BPHE's SUS316 material structure offers higher working temperature range up to 200°C.

### 5. Compactness

BPHE is much lighter and smaller in weight and size compare to shell tube exchangers; about 1/5 the size of the shell tube exchanger with the same capacity. This advantage makes BPHE easier to install and replace.

### 6. Low maintenance

The corrugated plates are designed to achieve turbulence flow at low flow rate, no need for frequent maintenance.

\* Maximum value. May vary with products. Please refer to the tables for particular type of exchanger.

## WHAT BPHE DO WE OFFER

	K025	K030	K050	K070
Cu Draining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mi Draining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat Transfer Area / Plate	0.0126m <sup>2</sup>	0.0172m <sup>2</sup>	0.0306m <sup>2</sup>	0.0725m <sup>2</sup>
Plate Material	SUS316	SUS316	SUS316	SUS316



Kaori Model Performance Range Diagram

	K025		K030		K050		K070		K215	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Capacity (kW)	0.72	5.7	1.76	17.58	10.55	43.95	35.16	105.49	35.10	140.05
Flow Rate (lpm)	2	16	5	50	30	125	100	300	100	400

### Model Code

K   \*

Kaori Model Type    Number of Plates    Connection Type    Mi-Mi Draining / Mi-Cu Draining    Special Model Notation

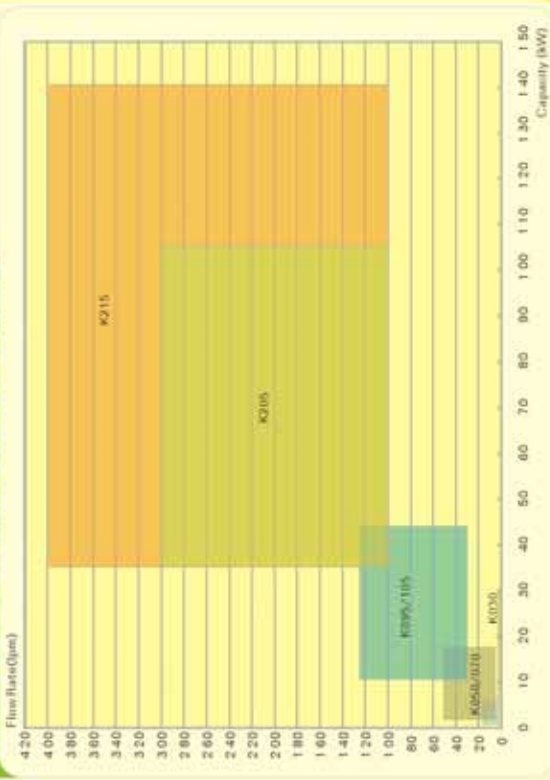
Ex: K095\*30B-TMK1

## KAORI

	K095	K105	K205	K210	K215
Cu Draining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mi Draining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat Transfer Area / Plate	0.0475m <sup>2</sup>	0.0531m <sup>2</sup>	0.1998m <sup>2</sup>	0.1836m <sup>2</sup>	0.1101m <sup>2</sup>
Plate Material	SUS316	SUS316	SUS316	SUS316	SUS316

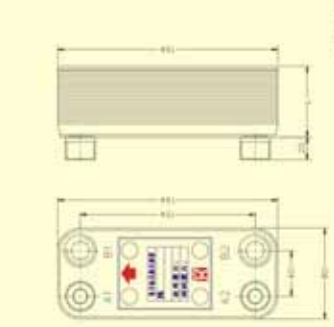
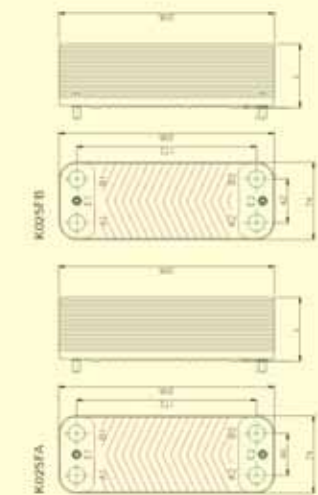


Kaori Model Performance Range Diagram



# K 025

# K 030



# LEGENDS

**V Distributor**  
Kaori "V" type BPHE implements a unique distributor design which ensures even allocation of refrigerant within flow channels.

**DW Double Wall**  
By using two SUS316 plates instead of one in separating two flow channels, Kaori "DW" type BPHE offers extra protection against mixing of fluids due to internal leakage.

**H Hydraulic**  
Kaori "H" type BPHE is designed to withstand repetitive high stresses when working in hydraulic related environment. Its muscular body structure shows off its strength.

**AD Air Dryer**  
A compact solution for air dryer application - Kaori offers air dryer unit in the form of BPHE, the easiest way to miniaturize your air dryer package.

**T Temperature Monitoring**  
Kaori "T" type BPHE is designed with two temperature sensor ports. These ports enable easy installation of temperature sensor and achieve accurate system control.

**S Extra Strength**  
When high working pressure is required (ex. B410 refrigeration systems), Kaori offers "S" type BPHE. Kaori "S" type BPHE is designed to withstand up to 45 bar of working pressure and is fitted with 65 bar of pressure.

**Ni+ Super Nickel**  
Kaori offers "Ni+" type BPHE for extreme Nickel BPHE applications. "Ni+" BPHE finds itself working comfortably at maximum 30 bar pressure and is tested with 43 bar pressure.

**D Dual Circuit**  
Kaori "D" type BPHE is designed to handle two compressors at the same time. This model further amplifies your already delicate design.

Unit(mm)

Model	Design Pressure/Best Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
K025T10			0.076m <sup>2</sup>	30mm	0.65kg	0.211L
K025T12			0.120m <sup>2</sup>	34mm	0.74kg	0.254L
K025T14			0.144m <sup>2</sup>	36mm	0.80kg	0.273L
K025T18			0.168m <sup>2</sup>	40mm	0.91kg	0.305L
K025T18			0.192m <sup>2</sup>	47mm	1.00kg	0.406L
K025T20			0.215m <sup>2</sup>	52mm	1.09kg	0.455L
K025T22			0.240m <sup>2</sup>	56mm	1.18kg	0.504L
K025T24			0.264m <sup>2</sup>	61mm	1.26kg	0.553L
K025T26			0.288m <sup>2</sup>	65mm	1.35kg	0.602L
K025T28			0.312m <sup>2</sup>	70mm	1.44kg	0.648L
K025T30			0.336m <sup>2</sup>	74mm	1.52kg	0.695L
K025T32			0.360m <sup>2</sup>	78mm	1.62kg	0.744L
K025T34			0.384m <sup>2</sup>	82mm	1.70kg	0.792L
K025T36			0.408m <sup>2</sup>	86mm	1.78kg	0.840L
K025T38			0.432m <sup>2</sup>	92mm	1.86kg	0.888L

Working Temp. : -10°C ~ 50°C  
Pressure : 10 bar / 10 bar

Unit(mm)

Model	Design Pressure/Best Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
K030T10			0.076m <sup>2</sup>	30mm	1.25kg	0.221L
K030T12			0.122m <sup>2</sup>	32mm	1.4kg	0.276L
K030T14			0.148m <sup>2</sup>	42mm	1.5kg	0.325L
K030T18			0.172m <sup>2</sup>	48mm	1.6kg	0.371L
K030T18			0.197m <sup>2</sup>	51mm	1.7kg	0.425L
K030T20			0.221m <sup>2</sup>	55mm	1.8kg	0.475L
K030T22			0.246m <sup>2</sup>	60mm	1.9kg	0.523L
K030T24			0.271m <sup>2</sup>	64mm	2.0kg	0.571L
K030T26			0.295m <sup>2</sup>	68mm	2.1kg	0.622L
K030T28			0.320m <sup>2</sup>	73mm	2.2kg	0.673L
K030T30			0.344m <sup>2</sup>	78mm	2.3kg	0.725L
K030T32			0.368m <sup>2</sup>	82mm	2.4kg	0.775L
K030T34			0.392m <sup>2</sup>	87mm	2.5kg	0.825L
K030T36			0.416m <sup>2</sup>	91mm	2.6kg	0.875L
K030T38			0.440m <sup>2</sup>	96mm	2.7kg	0.925L

Working Temp. : -160°C ~ 200°C  
Pressure : Cu Brazing - 30 bar / 43 bar  
Ni Brazing - 10 bar / 15 bar

**Thin End Connector**

PT / RPT / GB Male		PT / RPT / GB Female	
1/2"	3/4"	1"	1-1/4"
1-1/2"	1-1/2"	2"	2-1/2"
3"	3-1/2"	3"	3-1/2"
4"	4"	4"	4"

**Super Connector**

1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"
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**Dimension Drawing**



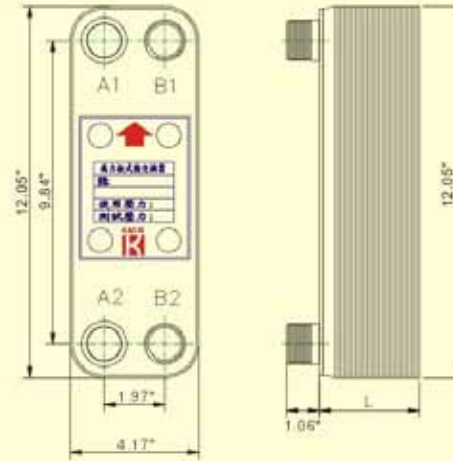
Model	Design Pressure/Best Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
K025T10			0.076m <sup>2</sup>	30mm	0.65kg	0.211L
K025T12			0.120m <sup>2</sup>	34mm	0.74kg	0.254L
K025T14			0.144m <sup>2</sup>	36mm	0.80kg	0.273L
K025T18			0.168m <sup>2</sup>	40mm	0.91kg	0.305L
K025T18			0.192m <sup>2</sup>	47mm	1.00kg	0.406L
K025T20			0.215m <sup>2</sup>	52mm	1.09kg	0.455L
K025T22			0.240m <sup>2</sup>	56mm	1.18kg	0.504L
K025T24			0.264m <sup>2</sup>	61mm	1.26kg	0.553L
K025T26			0.288m <sup>2</sup>	65mm	1.35kg	0.602L
K025T28			0.312m <sup>2</sup>	70mm	1.44kg	0.648L
K025T30			0.336m <sup>2</sup>	74mm	1.52kg	0.695L
K025T32			0.360m <sup>2</sup>	78mm	1.62kg	0.744L
K025T34			0.384m <sup>2</sup>	82mm	1.70kg	0.792L
K025T36			0.408m <sup>2</sup>	86mm	1.78kg	0.840L
K025T38			0.432m <sup>2</sup>	92mm	1.86kg	0.888L

**FEATURE DW H**

Please Refer to the Legends.

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8



Unit(in)

### Kaori K050 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K050*10 C/B	435psi / 624psi	-256°F ~ 392°F	2.20ft <sup>2</sup>	1.34in	6.17lb	0.133gal
	K050*14 C/B			3.29ft <sup>2</sup>	1.73in	7.28lb	0.192gal
	K050*20 C/B			4.94ft <sup>2</sup>	2.28in	9.26lb	0.281gal
	K050*24 C/B			6.04ft <sup>2</sup>	2.68in	10.36lb	0.340gal
	K050*34 C/B			8.78ft <sup>2</sup>	3.62in	13.23lb	0.488gal
	K050*50 C/B			13.18ft <sup>2</sup>	5.12in	18.08lb	0.725gal
	K050*70 C/B			18.66ft <sup>2</sup>	7.01in	24.03lb	1.021gal
Nickel Brazing	K050*10	145psi / 218psi 435psi / 624psi	-256°F ~ 392°F	2.20ft <sup>2</sup>	1.34in	6.17lb	0.133gal
	K050*20			4.94ft <sup>2</sup>	2.28in	9.26lb	0.281gal
	K050*30			7.69ft <sup>2</sup>	5.10in	12.13lb	0.429gal
	K050*40			10.43ft <sup>2</sup>	6.59in	15.21lb	0.577gal
	K050*50			13.18ft <sup>2</sup>	5.12in	18.08lb	0.725gal
	K050*60			15.92ft <sup>2</sup>	6.06in	21.16lb	0.873gal
	K050*70			18.66ft <sup>2</sup>	7.01in	24.03lb	1.021gal

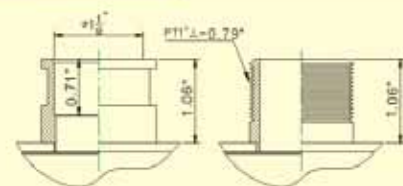
### Threaded Connector

PT/NPT/GB Male								PT/NPT/GB Female						
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
	※	※						※	※	※				

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
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### Connector Drawing



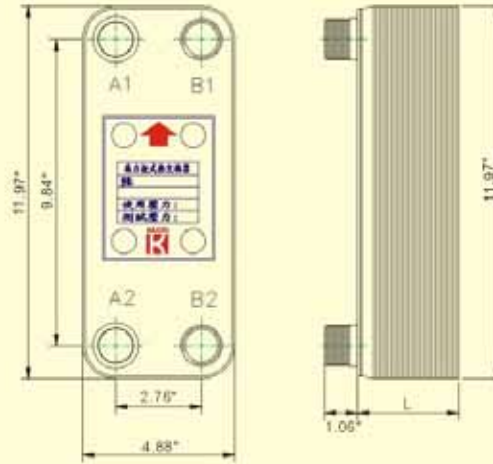
FEATURE

**S**

**Ni+**

**T**

※ Please Refer to the Legends.



Unit(in)

## Kaori K070 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K070*10 C/B	435psi / 624psi	-256°F ~ 392°F	2.58ft <sup>2</sup>	1.34in	6.83lb	0.159gal
	K070*14 C/B			3.88ft <sup>2</sup>	1.73in	8.16lb	0.230gal
	K070*20 C/B			5.81ft <sup>2</sup>	2.28in	10.14lb	0.336gal
	K070*24 C/B			7.10ft <sup>2</sup>	2.68in	11.46lb	0.407gal
	K070*34 C/B			10.33ft <sup>2</sup>	3.62in	14.77lb	0.584gal
	K070*50 C/B			15.50ft <sup>2</sup>	5.12in	20.06lb	0.867gal
	K070*70 C/B			21.96ft <sup>2</sup>	7.01in	26.68lb	1.221gal
Nickel Brazing	K070*10	145psi / 218psi	-256°F ~ 392°F	2.58ft <sup>2</sup>	1.34in	6.83lb	0.159gal
	K070*20			5.81ft <sup>2</sup>	2.28in	10.14lb	0.336gal
	K070*30			9.04ft <sup>2</sup>	3.23in	13.45lb	0.513gal
	K070*40			12.27ft <sup>2</sup>	4.17in	16.76lb	0.691gal
	K070*50			15.50ft <sup>2</sup>	5.12in	20.06lb	0.867gal
	K070*60			18.73ft <sup>2</sup>	6.06in	23.37lb	1.044gal
	K070*70			21.96ft <sup>2</sup>	7.01in	26.68lb	1.221gal

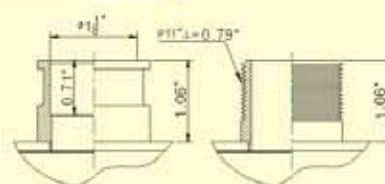
### Threaded Connector

PT/NPT/GB Male							PT/NPT/GB Female							
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
		※	※					※	※	※				

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
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### Connector Drawing



FEATURE

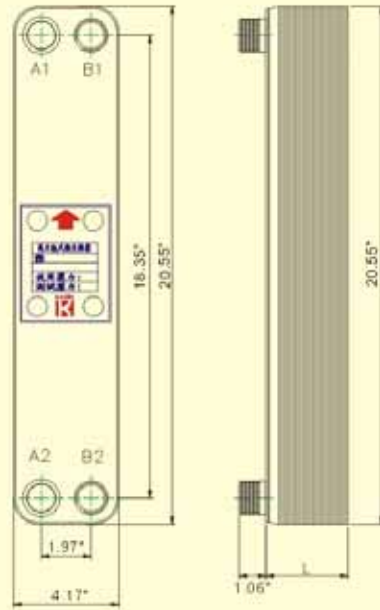
**H**

**AD**

**T**

**D**

※ Please Refer to the Legends.



Unit(in)

## Kaori K095 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K095*18 B/BV	435psi / 624psi	-256°F ~ 392°F	8.18ft <sup>2</sup>	2.09in	15.43lb	0.449gal
	K095*26 B/BV			12.27ft <sup>2</sup>	2.83in	19.40lb	0.660gal
	K095*30 B/BV			14.33ft <sup>2</sup>	3.23in	21.38lb	0.766gal
	K095*34 B/BV			16.37ft <sup>2</sup>	3.62in	23.15lb	0.872gal
	K095*40 B/BV			19.44ft <sup>2</sup>	4.17in	26.23lb	1.030gal
	K095*48 B/BV			23.53ft <sup>2</sup>	4.92in	29.98lb	1.241gal
	K095*60 B/BV			29.68ft <sup>2</sup>	6.06in	35.94lb	1.559gal
	K095*80 B/BV			39.90ft <sup>2</sup>	7.95in	45.64lb	2.087gal
Nickel Brazing	K095*18	145psi / 218psi	-256°F ~ 392°F	8.18ft <sup>2</sup>	2.09in	15.43lb	0.449gal
	K095*26			12.27ft <sup>2</sup>	2.83in	19.40lb	0.660gal
	K095*30			14.33ft <sup>2</sup>	3.23in	21.38lb	0.766gal
	K095*34			16.37ft <sup>2</sup>	3.62in	23.15lb	0.872gal
	K095*40			19.44ft <sup>2</sup>	4.17in	26.23lb	1.030gal
	K095*48			23.53ft <sup>2</sup>	4.92in	29.98lb	1.241gal
	K095*60			29.68ft <sup>2</sup>	6.06in	35.94lb	1.559gal
	K095*80			39.90ft <sup>2</sup>	7.95in	45.64lb	2.087gal

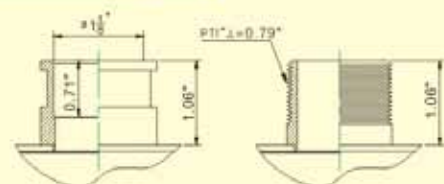
### Threaded Connector

PT/NPT/GB Male								PT/NPT/GB Female							
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	
		※						※							

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
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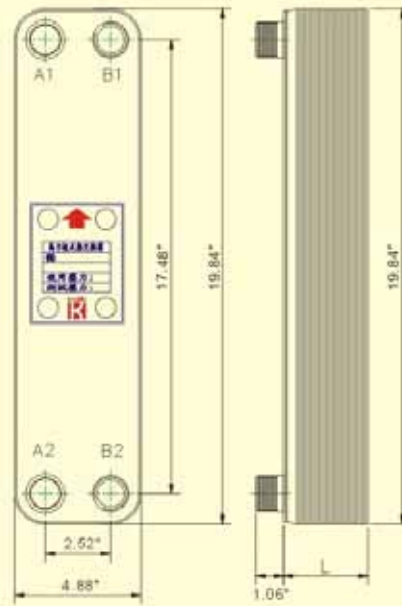
### Connector Drawing



FEATURE



※ Please Refer to the Legends.



Unit(in)

### Kaori K105 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K105*18 C/B/BV/CV	435psi / 624psi	-256°F ~ 392°F	9.17ft <sup>2</sup>	2.09in	17.19lb	0.503gal
	K105*26 C/B/BV/CV			13.77ft <sup>2</sup>	2.83in	21.38lb	0.740gal
	K105*30 C/B/BV/CV			16.06ft <sup>2</sup>	3.23in	23.59lb	0.858gal
	K105*34 C/B/BV/CV			18.35ft <sup>2</sup>	3.62in	25.57lb	0.976gal
	K105*40 C/B/BV/CV			21.80ft <sup>2</sup>	4.17in	28.88lb	1.154gal
	K105*48 C/B/BV/CV			26.38ft <sup>2</sup>	4.92in	33.07lb	1.391gal
	K105*60 C/B/BV/CV			33.26ft <sup>2</sup>	6.06in	39.46lb	1.746gal
	K105*80 C/B/BV/CV			44.73ft <sup>2</sup>	7.95in	50.04lb	2.337gal
Nickel Brazing	K105*18	145psi / 218psi	-256°F ~ 392°F	9.17ft <sup>2</sup>	2.09in	17.19lb	0.503gal
	K105*26			13.77ft <sup>2</sup>	2.83in	21.38lb	0.740gal
	K105*30			16.06ft <sup>2</sup>	3.23in	23.59lb	0.858gal
	K105*34			18.35ft <sup>2</sup>	3.62in	25.57lb	0.976gal
	K105*40			21.80ft <sup>2</sup>	4.17in	28.88lb	1.154gal
	K105*48			26.38ft <sup>2</sup>	4.92in	33.07lb	1.391gal
	K105*60			33.26ft <sup>2</sup>	6.06in	39.46lb	1.746gal
	K105*80			44.73ft <sup>2</sup>	7.95in	50.04lb	2.337gal

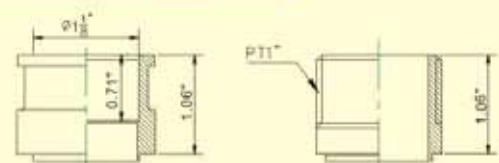
### Threaded Connector

PT/NPT/GB Male							PT/NPT/GB Female							
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
		※	※					※		※	※			

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
※	※	※	※	※	※	

### Connector Drawing



FEATURE

**H**

**V**

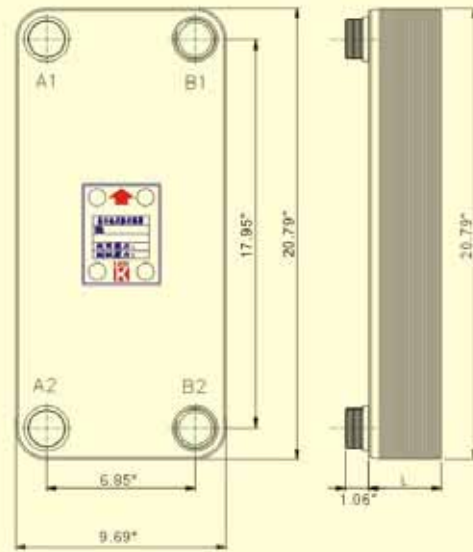
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※ Please Refer to the Legends.





Unit(in)

### Kaori K205 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K205*30 C/V	435psi / 624psi	-256°F – 392°F	33.12ft <sup>2</sup>	3.31in	50.27lb	1.79gal
	K205*34 C/V			37.86ft <sup>2</sup>	3.66in	54.67lb	2.04gal
	K205*40 C/V			44.95ft <sup>2</sup>	4.25in	61.73lb	2.41gal
	K205*60 C/V			68.61ft <sup>2</sup>	6.14in	84.66lb	3.65gal
	K205*80 C/V			92.27ft <sup>2</sup>	8.03in	107.59lb	4.88gal
	K205*100 C/V			115.93ft <sup>2</sup>	9.92in	130.51lb	6.12gal
Nickel Brazing	K205*30	145psi / 218psi	-256°F – 392°F	33.12ft <sup>2</sup>	3.31in	50.27lb	1.79gal
	K205*34			37.86ft <sup>2</sup>	3.66in	54.67lb	2.04gal
	K205*40			44.95ft <sup>2</sup>	4.25in	61.73lb	2.41gal
	K205*60			68.61ft <sup>2</sup>	6.14in	84.66lb	3.65gal
	K205*80			92.27ft <sup>2</sup>	8.03in	107.59lb	4.88gal
	K205*100			115.93ft <sup>2</sup>	9.92in	130.51lb	6.12gal

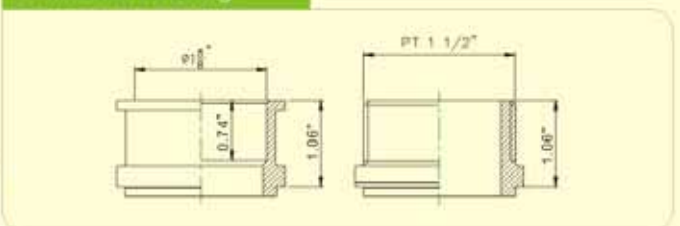
### Threaded Connector

PT/NPT/GB Male								PT/NPT/GB Female						
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
		※	※	※	※			※			※			

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
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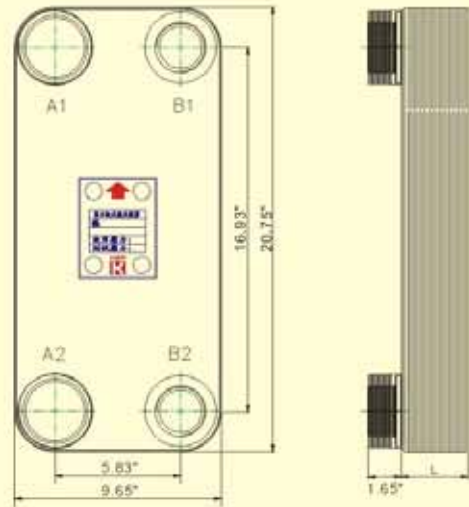
### Connector Drawing



FEATURE



※ Please Refer to the Legends.



Unit(in)

### Kaori K210 BPHE

Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
K210*30 M/F	232psi / 334psi	-256°F ~ 392°F	31.23ft <sup>2</sup>	3.82in	51.15lb	2.15gal
K210*40 M/F			42.38ft <sup>2</sup>	4.92in	61.95lb	2.88gal
K210*50 M/F			53.53ft <sup>2</sup>	6.06in	72.75lb	3.62gal
K210*60 M/F			64.68ft <sup>2</sup>	7.17in	83.56lb	4.36gal
K210*70 M/F			75.83ft <sup>2</sup>	8.31in	94.36lb	5.10gal
K210*80 M/F			86.98ft <sup>2</sup>	9.41in	105.16lb	5.84gal
K210*90 M/F			98.13ft <sup>2</sup>	10.55in	115.96lb	6.58gal
K210*100 M/F			109.29ft <sup>2</sup>	11.65in	126.77lb	7.32gal
K210*110 M/F			120.44ft <sup>2</sup>	12.80in	137.57lb	8.06gal
K210*120 M/F			131.59ft <sup>2</sup>	13.90in	148.37lb	8.80gal
K210*130 M/F			142.74ft <sup>2</sup>	15.04in	159.17lb	9.54gal
K210*140 M/F			153.89ft <sup>2</sup>	16.14in	169.98lb	10.28gal

Copper Brazing

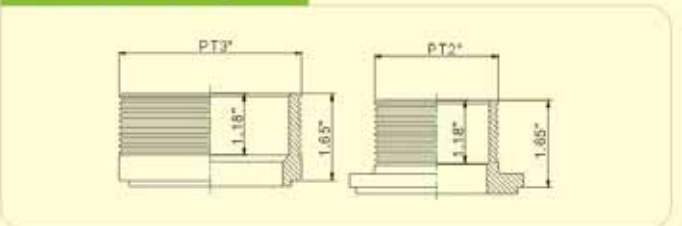
### Threaded Connector

PT/NPT/GB Male								PT/NPT/GB Female						
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
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### Solder Connector

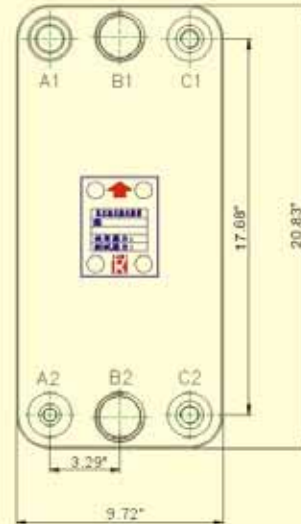
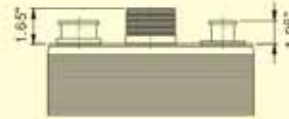
12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
					※	

### Connector Drawing



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※ Please Refer to the Legends.



Unit(in)

### Kaori K215 BPHE

	Model	Design Pressure/Test Pressure	Working Temp.	Total Heat Transfer Area	L	Weight	Total Volume
Copper Brazing	K215*18 D/DV	435psi / 624psi	-256°F ~ 392°F	18.79ft <sup>2</sup>	2.20in	36.4lb	0.99gal
	K215*30 D/DV			32.68ft <sup>2</sup>	3.31in	50.3lb	1.69gal
	K215*38 D/DV			42.28ft <sup>2</sup>	4.06in	59.3lb	2.15gal
	K215*58 D/DV			65.77ft <sup>2</sup>	5.91in	82.2lb	3.31gal
	K215*66 D/DV			75.15ft <sup>2</sup>	6.65in	91.5lb	3.78gal
	K215*78 D/DV			89.25ft <sup>2</sup>	7.76in	105.2lb	4.48gal
	K215*118 D/DV			136.23ft <sup>2</sup>	11.46in	151.0lb	6.80gal

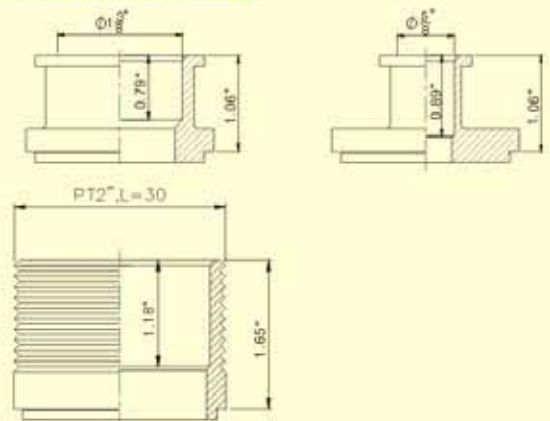
### Threaded Connector

PT/NPT/GB Male								PT/NPT/GB Female						
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
				※	※			※						

### Solder Connector

12.9mm	16.15mm	19.25mm	22.36mm	28.8mm	35.25mm	41.5mm
1/2"	5/8"	6/8"	7/8"	1-1/8"	1-3/8"	1-5/8"
	※				※	

### Connector Drawing



FEATURE



※ Please Refer to the Legends.

## HVAC (Evaporators/Condensers)

RT	Kcal/hr	KW	BTU/H	K050/070	K095/105	Eva. Only	K205	Eva. Only
0.5	1,512	1.76	6,000	K050/070*10C				
1	3,024	3.52	12,000	K050/070*14C				
1.5	4,536	5.27	18,000	K050/070*20C				
2	6,048	7.03	24,000	K050/070*24C				
3	9,072	10.55	36,000	K050/070*34C	K095/105*18B			
4	12,096	14.07	48,000	K050/070*50C	K095/105*26B			
5	15,120	17.58	60,000	K050/070*70C	K095/105*30B			
6	18,144	21.10	72,000		K095/105*34B			
7.5	22,680	26.37	90,000		K095/105*40B			
8	24,192	28.13	96,000		K095/105*48B			
10	30,240	35.16	120,000		K095/105*60B	*60BV	K205*30C	*30V
12.5	37,800	43.95	150,000		K095/105*80C	*80CV	K205*34C	*34V
15	45,360	52.74	180,000				K205*40C	*40V
20	60,480	70.33	240,000				K205*60C	*60V
25	75,600	87.91	300,000				K205*80C	*80V
30	90,720	105.49	360,000				K205*100C	*100V

## Dual Circuit

RT	Kcal/hr	kW	BTU/H	K215
3+3	18,144	21.1	72,000	K215*18D
5+5	30,240	35.16	120,000	K215*30D
7.5+7.5	45,360	52.74	180,000	K215*38D
10+10	60,480	70.33	240,000	K215*58D
12.5+12.5	75,600	87.91	300,000	K215*66D(V)
15+15	90,720	105.49	360,000	K215*78D(V)
20+20	120,960	140.65	480,000	K215*118D(V)

\* "V" type comes with built-in refrigerant distributor

## Test Condition: Water vs. R22

Condenser Test : ARI Standard-450 No4	The Inlet Saturated Temperature of Refrigerant Vapor : 100°F	The Inlet Temperature of Refrigerant Vapor: 200°F	The Inlet Temperature of Cooling Water: 84.9°F	The Outlet Temperature of Cooling Water: 92.8°F
Evaporator Test : ARI Standard-480 No1	The Inlet Temperature of Chiller Water: 53.9°F	The Outlet Temperature of Chiller Water: 44°F	The Outlet Saturated Temperature of Refrigerant : 35°F	The Temperature of Refrigerant Before Expansion Valve :100°F

\* The above model selection is based on the above test conditions.



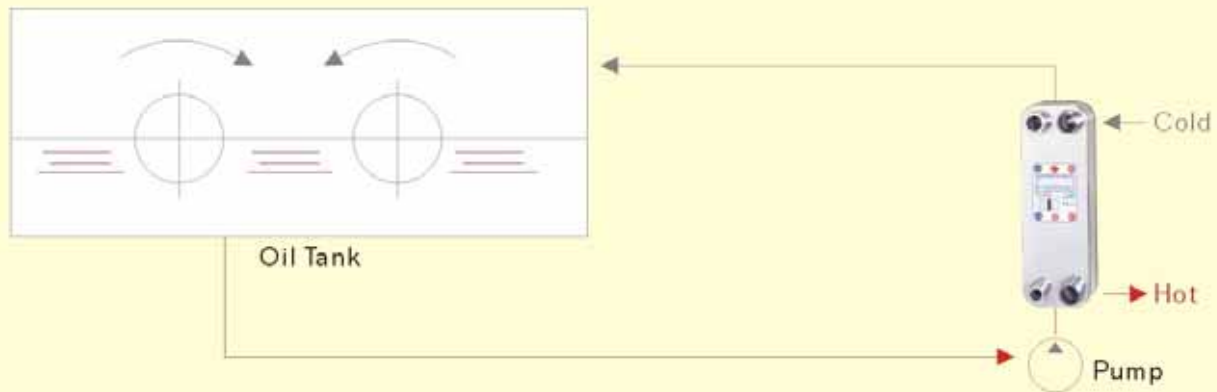
# COMBI BOILER



Model	Capacity (Btu/hr)	Primary Side			Secondary Side		
		Water Flow Rate (gpm)	Water Inlet Temp	Water Outlet Temp	Water Flow Rate (gpm)	Water Inlet Temp	Water Outlet Temp
K030E/025F*10	61,413	1.59	50°F	140°F	5.28	165°F	138°F
K030E/025F*12	81,883	1.88	50°F	140°F	5.28	165°F	133°F
K030E/025F*14	85,295	1.90	50°F	140°F	5.28	165°F	133°F
K030E/025F*16	92,118	2.03	50°F	140°F	5.28	165°F	129°F
K030E/025F*18	98,942	2.17	50°F	140°F	5.28	165°F	127°F
K030E/025F*20	102,354	2.27	50°F	140°F	5.28	165°F	126°F
K030E/025F*22	109,178	2.38	50°F	140°F	5.28	165°F	124°F
K030E/025F*24	112,589	2.54	50°F	140°F	5.28	165°F	120°F
K030E/025F*26	119,413	2.64	50°F	140°F	5.28	165°F	118°F
K030E/025F*28	122,825	2.72	50°F	140°F	5.28	165°F	118°F
K030E/025F*30	126,237	2.83	50°F	140°F	5.28	165°F	116°F
K030E/025F*32	129,649	2.91	50°F	140°F	5.28	165°F	115°F
K030E/025F*34	133,060	3.01	50°F	140°F	5.28	165°F	113°F
K030E/025F*36	136,472	3.06	50°F	140°F	5.28	165°F	111°F
K030E/025F*38	139,884	3.14	50°F	140°F	5.28	165°F	111°F



# OIL COOLER

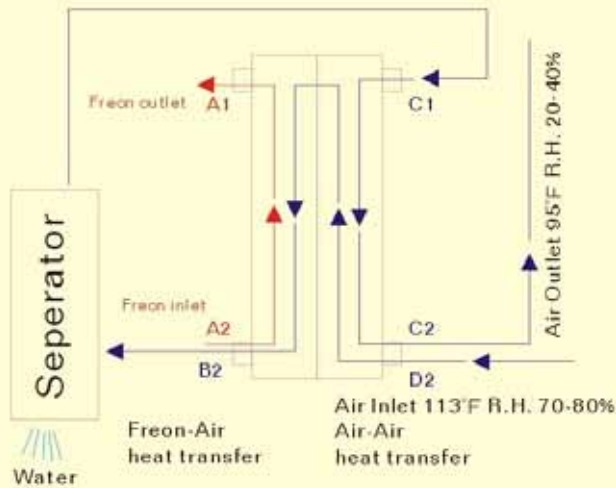


## Oil Cooler, for ISO VG68

Model	Capacity (Btu/hr)	Oil Flow Rate (gpm)	Water Flow Rate (gpm)	Oil Inlet Temperature (°F)	Water Inlet Temperature (°F)	Oil Pressure Drop (psi)	Water Pressure Drop (psi)
K030*12MH	10,235	3.17	1.59	140°F	68°F	< 7.25	< 1.45
K030*22MH	20,471	6.34	3.17	140°F	68°F	< 7.25	< 1.45
K030*32MH	34,118	12.68	6.34	140°F	68°F	< 7.25	< 1.45
K030*42MH	44,353	14.53	7.13	140°F	68°F	< 7.25	< 1.45
K030*52MH	51,177	16.11	7.93	140°F	68°F	< 7.25	< 1.45
K070*23MH	47,765	10.57	5.28	140°F	68°F	< 7.25	< 1.45
K070*33MH	61,412	13.21	6.60	140°F	68°F	< 7.25	< 1.45
K070*43MH	81,883	17.96	8.98	140°F	68°F	< 7.25	< 1.45
K070*53MH	95,531	21.13	10.57	140°F	68°F	< 7.25	< 1.45
K070*63MH	119,413	26.42	13.21	140°F	68°F	< 7.25	< 1.45
K070*73MH	153,531	34.34	17.17	140°F	68°F	< 7.25	< 1.45
K065*23MH	68,236	23.78	11.89	140°F	68°F	< 7.25	< 1.45
K065*33MH	98,942	33.02	16.38	140°F	68°F	< 7.25	< 1.45
K065*43MH	119,413	38.31	19.02	140°F	68°F	< 7.25	< 1.45
K065*53MH	146,707	46.23	22.98	140°F	68°F	< 7.25	< 1.45
K065*63MH	170,590	52.84	26.42	140°F	68°F	< 7.25	< 1.45
K065*73MH	211,532	66.04	33.02	140°F	68°F	< 7.25	< 1.45
K105*23MH	47,765	7.93	3.96	140°F	68°F	< 7.25	< 1.45
K105*33MH	64,824	10.57	5.29	140°F	68°F	< 7.25	< 1.45
K105*43MH	78,472	12.68	6.34	140°F	68°F	< 7.25	< 1.45
K105*53MH	95,531	14.79	7.40	140°F	68°F	< 7.25	< 1.45
K105*63MH	116,001	17.44	8.72	140°F	68°F	< 7.25	< 1.45
K105*73MH	139,884	21.13	10.57	140°F	68°F	< 7.25	< 1.45
K205*23MH	92,119	15.85	7.93	140°F	68°F	< 7.25	< 1.45
K205*33MH	150,120	23.78	11.89	140°F	68°F	< 7.25	< 1.45
K205*43MH	191,061	26.42	13.21	140°F	68°F	< 7.25	< 1.45
K205*53MH	211,532	29.06	14.53	140°F	68°F	< 7.25	< 1.45
K205*63MH	266,121	36.98	18.49	140°F	68°F	< 7.25	< 1.45
K205*73MH	313,886	44.91	22.46	140°F	68°F	< 7.25	< 1.45
K205*83MH	450,358	66.04	33.02	140°F	68°F	< 7.25	< 1.45



# AIR DRYER



## BPHE for Refrigerated Air Dryer

Model	Max. Air Flow Rate		Connections		
	Nm <sup>3</sup> /hr	scfm	Soldered		Air Inlet / Outlet Female
			Freon Inlet	Freon Outlet	
K030*10*6DC-K1	17	10	ϕ 1/2"	ϕ 1/2"	PT 1/2"
K030*12*8DC-K1	34	20	ϕ 1/2"	ϕ 1/2"	PT 1/2"
K030*16*12DC-K1	60	35	ϕ 1/2"	ϕ 1/2"	PT 1/2"
K030*20*16DC-K1	71	42	ϕ 1/2"	ϕ 1/2"	PT 1/2"
K070*16*12DC-K4	120	70	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*20*16DC-K4	144	85	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*24*20DC-K4	170	100	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*32*28DC-K4	242	142	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*34*30DC-K4	255	150	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*38*34DC-K4	290	170	ϕ 1/2"	ϕ 5/8"	PT 1"
K070*44*40DC-K4	340	200	ϕ 1/2"	ϕ 5/8"	PT 1"
K210*16*12DC-K1	425	250	ϕ 1/2"	ϕ 1-3/8"	PT 2"
K210*18*14DC-K1	510	300	ϕ 1/2"	ϕ 1-3/8"	PT 2"
K210*22*18DC-K1	612	360	ϕ 1/2"	ϕ 1-3/8"	PT 2"
K210*26*22DC-K2	680	400	ϕ 1/2"	ϕ 1-3/8"	PT 2-1/2"
K210*28*24DC-K2	850	500	ϕ 1/2"	ϕ 1-3/8"	PT 2-1/2"
K210*38*34DC-K2	1,020	600	ϕ 1/2"	ϕ 1-3/8"	PT 2-1/2"
K210*44*40DC-K2	1,275	750	ϕ 1/2"	ϕ 1-3/8"	PT 2-1/2"
K210*54*50DC-K2	1,400	820	ϕ 1/2"	ϕ 1-3/8"	PT 2-1/2"

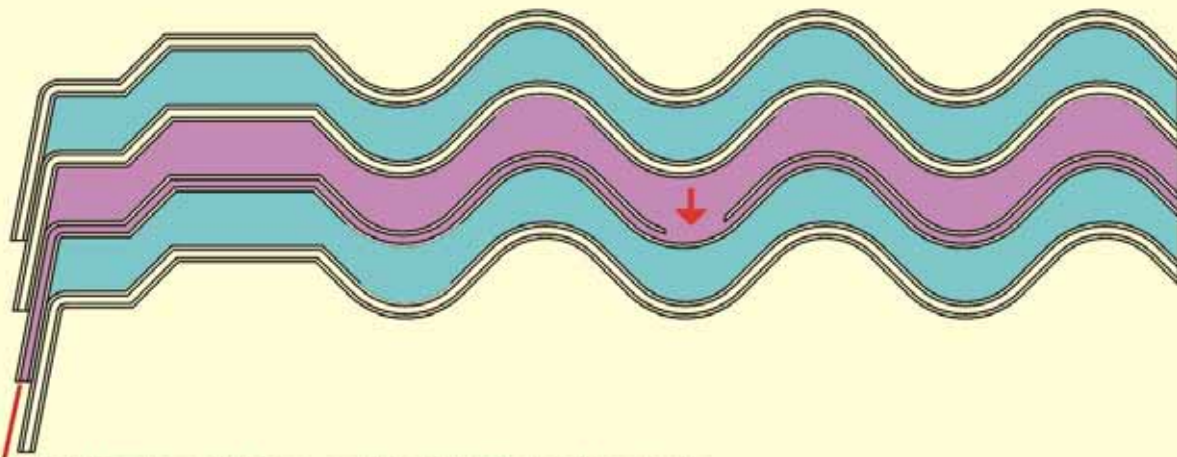


## DOUBLE WALL

This uniquely designed BPHE is available on the K030 series. It consists double layer stainless steel plates instead of traditional single layer. It offers safer conditions, avoids inter mixing, and it detects leakage as soon as leakage occurs. Therefore, it is suitable for 2 highly reactive fluids, and also suitable for several different kinds of industrial usages.

The application of this double wall concept includes,

- Acid heating/Cooling
- Potable water heat exchanger
- Lubrication oil coolers
- Transformer oil coolers
- Quench oil cooling
- Pharmaceutical usage
- Food process make-up water



Fluid leaks out here, early detection of leakage

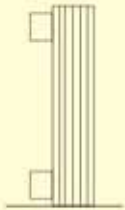
When there is a leakage, fluid leaks out from the sides. Not only inter mixing will not occur, but early leakage can be detected, and necessary cautions can be taken at early stage.



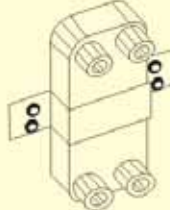
# BPHE INSTALLATION GUIDE

Mounting suggestions :  
For different ways to mount the BPHE

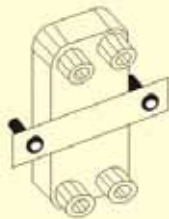
(a) Bottom support



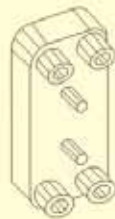
(b) Sheet metal bracket



(c) Crossbar & bolts



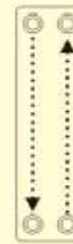
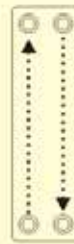
(d) Stud bolts



\* Install the BPHE in counter flow direction.  
To keep lower water volume below the connector.



\* Install the BPHE in counter flow direction.  
To achieve high thermal efficiency and high heat transfer rate.



Cleaning:

\*The solution used should be weak acid with concentration less than 5%, for example citric acid.

\*If the acid concentration is too high, the copper and stainless steel inside might be etched or corroded.

\*Flush the BPHE with large amounts of fresh water to purge any remaining acid solution before restarting the system.