

# KAORI Brazed Plate Heat Exchanger Double Wall Heat Exchanger

A Visible Safety Solution



ASME  
Certified



KHK  
Japan

KRAIA  
Korea

CRN  
Certified

[www.kaori-bphe.com](http://www.kaori-bphe.com)

## General Information

To prevent two different kinds of fluid from intermixing caused by internal leakage, KAORI precisely designed D Series solution with the double-stacked plates, eliminating the possibility of cross contamination.

The unique air gap is created between the two plates. Once internal leakage occurs, the 2nd plate becomes a shield to keep fluid stay and flow on the same channel through the air gap. Meanwhile, vent holes outside the plate will seep out fluid as an indication of leakage.

The patented plate design construction can greatly raise and enforce the safety to use KAORI D Series, especially for Residential and Industries where require high and strict safety standard; a visible safety solution.

## Applications

Hydronic Heating, District Heating, Radiant Floor Heating, Gas Boiler, Solar Domestic Hot Water Systems, Snow Melting, Domestic and Potable Water Heating System, Heat Pump, Food Industry, Pharmaceutical Industry, Chillers, Transformer Oil Cooling, Lubricating Oil Cooling

## Benefits

- A Visible Safety Solution
- Prevent Fluid Contamination
- Quick & Easy Leakage Indication
- Extra Strength
- Patented Design

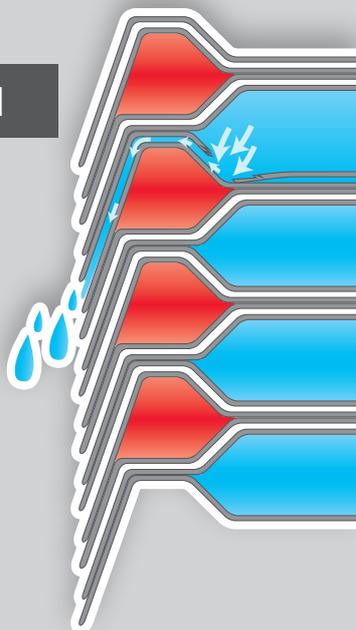


## Principle

Once a leakage occurs, liquid will seep throughout the air gap to the atmosphere as indication of internal leakage

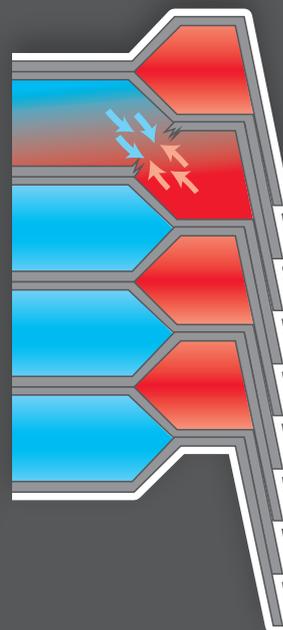
### KAORI Double Wall

The cracks on plates doesn't lead to internal leakage between fluids, which can be distinguished from outer appearance.

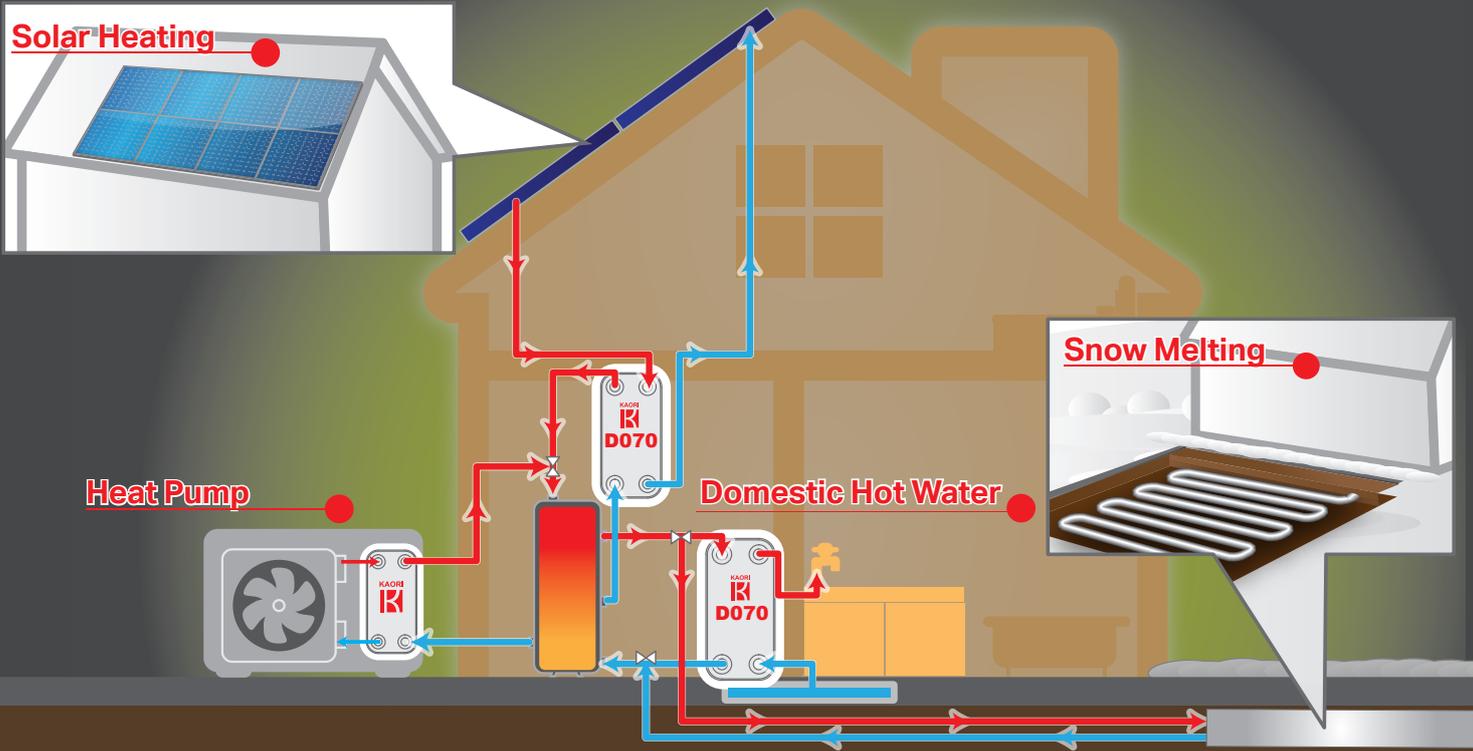


### Regular BPHE

The cracks on plates result in internal leakage between fluids, which can't be distinguished from outer surface

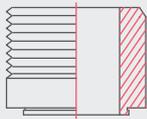


## Diagram of Residential Heating Application

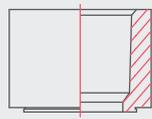


## Specification

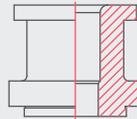
Male Thread



Female thread



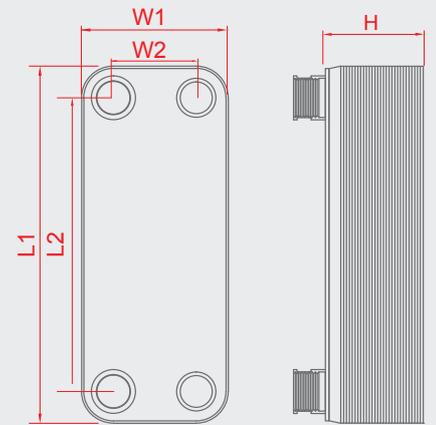
Soldering



### Standard Materials

Connections	Stainless Steel					
Plates	Stainless Steel					
Brazing Material	99.9% Pure Copper					
Model	D030	D045	D070	D031	D046	D071
Max. Working Pressure (bar)	30/30	30/30	30/30	45/45	45/45	40/30
Min. Test Pressure (bar)	43/43	43/43	43/43	65/65	65/65	58/43
Max. Working Temperature (°C)	200					

\* D045/ D046: diagonal design.



### Technical Data

Model	L1 (mm)	L2 (mm)	W1 (mm)	W2 (mm)	H Thickness (mm)	Weight*(kg) (Without Connection)	Heat Transfer Area/ plate (m <sup>2</sup> )	Total Heat Transfer Area (m <sup>2</sup> )	Volume/ Channel (liter)	Total Volume (liter)
D030	202	156	92	46	8.0+2.40*N	0.45+0.104*N	0.013	(N-2)*0.013	0.027	(N-1)*0.027
D045	363	320	82	40	8.3+2.02*N	1.00+0.166*N	0.024	(N-2)*0.024	0.030	(N-1)*0.030
D070	306	250	126	70	9.3+2.60*N	1.53+0.203*N	0.030	(N-2)*0.030	0.059	(N-1)*0.059
D031	202	156	92	46	9.0+2.40*N	0.71+0.104*N	0.013	(N-2)*0.013	0.027	(N-1)*0.027
D046	363	320	82	40	8.3+2.02*N	1.18+0.166*N	0.024	(N-2)*0.024	0.030	(N-1)*0.030
D071	306	250	126	70	11.3+2.60*N	2.65+0.218*N	0.030	(N-2)*0.030	0.059	(N-1)*0.059

\* N: Number of Plates

This information is intended to serve as a reference and is not subject to guarantee. Precise inquiries are necessary for accurate information regarding performance specifications and suitability under specific working conditions. Responsibility rests on purchasers to decide whether products are appropriate for use before purchasing. Kaori is not liable for corrosion of products and/or other equipment from use of products. Kaori reserves the right to make changes to this information without prior notice.

KAORI



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