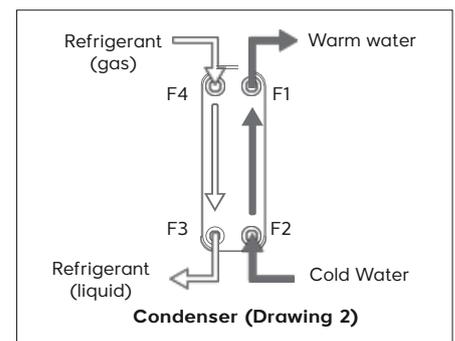
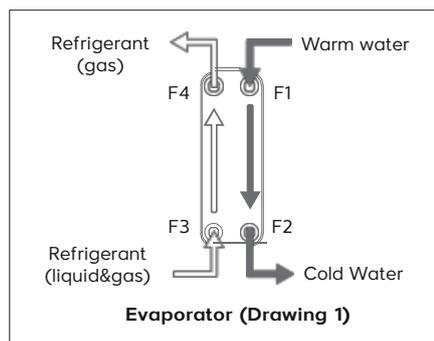
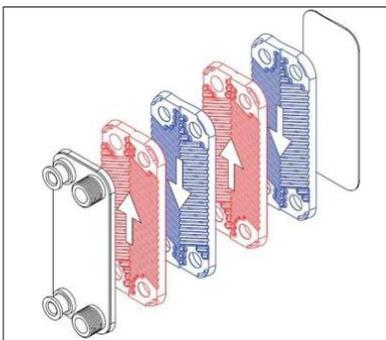


Introduction

- Brazed Plate Heat Exchanger (BPHE) consists of several corrugated plates with a brazing material between each plate. The space between two adjacent plates forms the channel in which the fluids flow. During the vacuum-brazing process the brazing material forms the joint at every contact point between the plates.
- The BPHE allows media at different temperatures to come into close proximity separated by channel plates that enable heat from one media to be transferred to the other with very high efficiency.

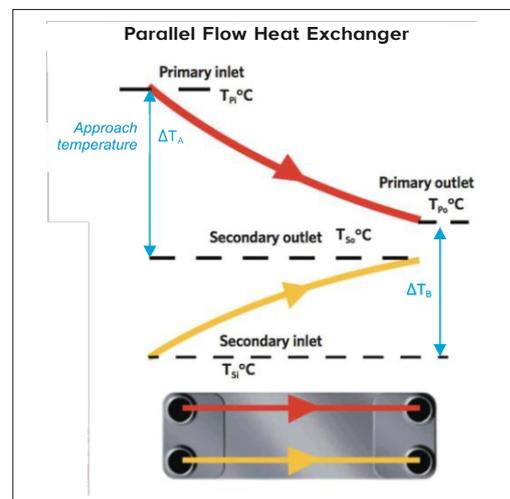
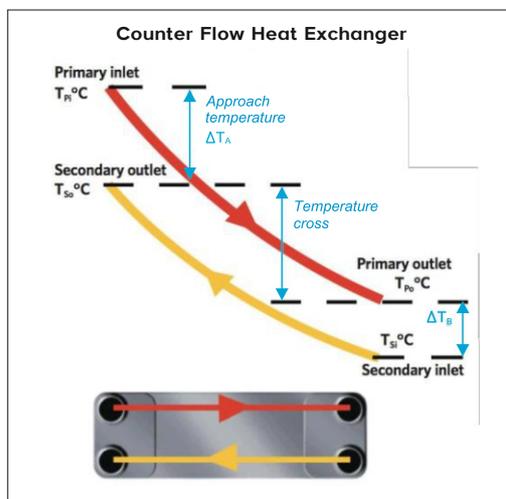
When used as Evaporator: The two phase refrigerant (vapor and liquid) enters the bottom of the exchanger. The water flows in opposite direction (counter flow) at top of the BPHE. (Refer Drawing 1)

When used as Condenser: The refrigerant enters at top of the exchanger as hot gas and the water flows in opposite direction (counter flow) at bottom of the BPHE. (Refer Drawing 2)



Flow arrangement

- The BPHE flow arrangement can be either counter flow or parallel flow. Counter flow is preferred, since it enables a closer approach temperature. Approach or pinch point temperature is temperature difference between the inlet of the primary and the outlet of the secondary flows, as well as a greater total heat exchange.



Brazed Plate Heat Exchanger

Key Features

- Highly Efficient Thermal Design - High Performance
- More Efficient Use of Materials – Cost Effective
- Mass Reduction in Size – Compact, Less Space, Less Weight
- Proven and Reliable Quality - Long Life Time Durability
- Flexible in Customizing – Increase Production Efficient

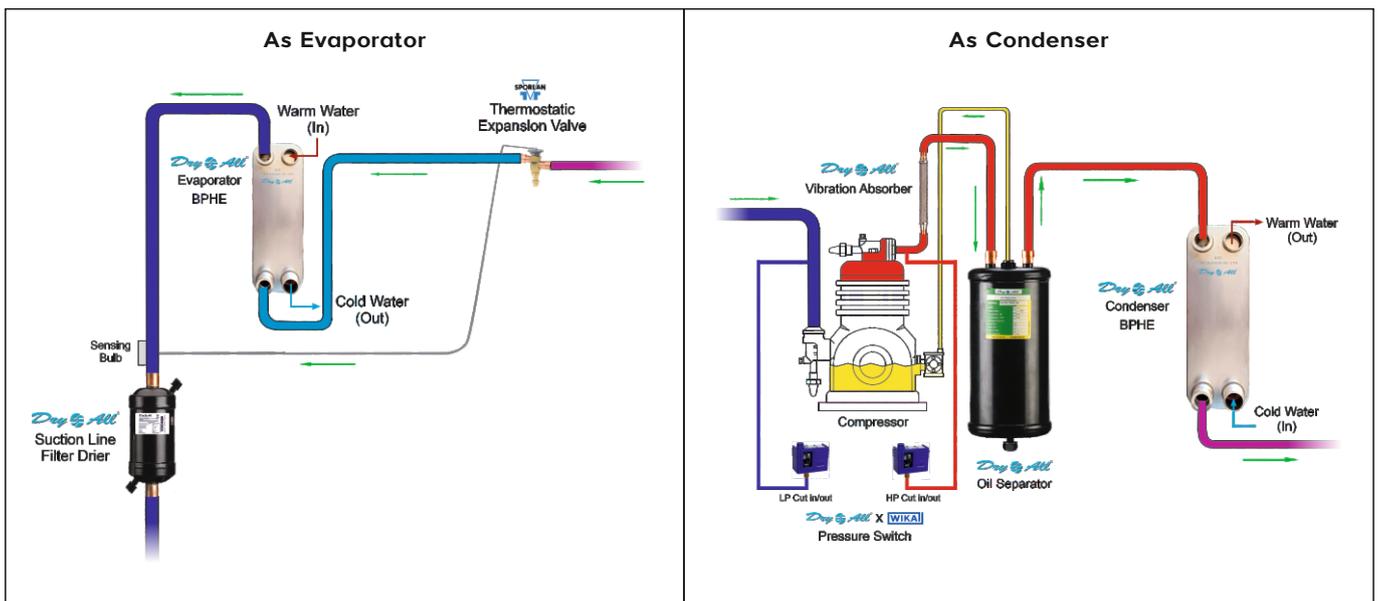
Applications

- Process Chillers
- Heat Pump
- Boilers
- Cold Storage & Ice-making Machines
- Chemical & Pharmaceutical Industry
- District Heating & Cooling System
- Battery Thermal Management System

In refrigeration cycle, BPHE are widely used as:

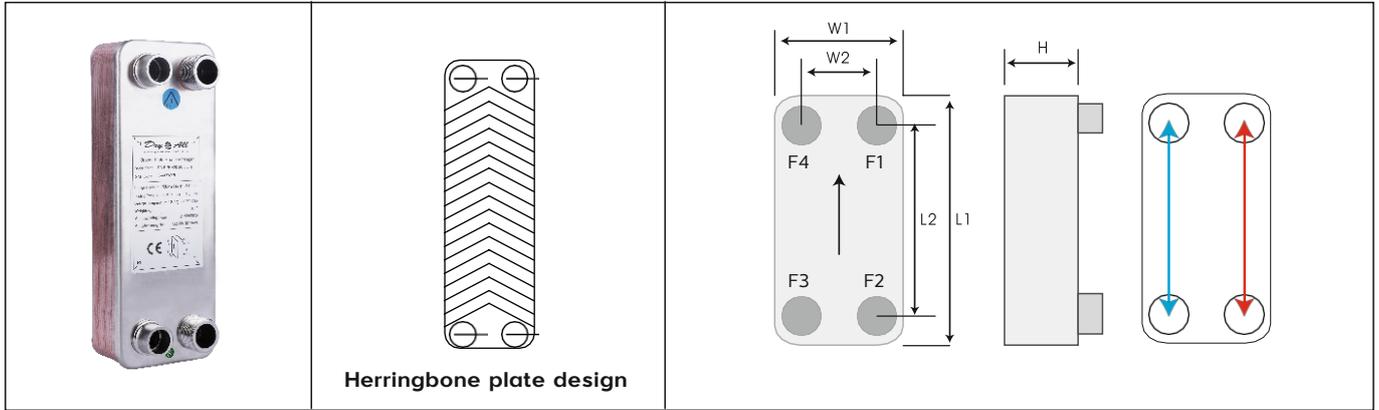
- Evaporator
- Condenser
- Sub cooler
- Economiser
- Pre-cooler

Product Installed in Refrigeration Cycle



Brazed Plate Heat Exchanger

IMAGE, DRAWINGS & MODELS AVAILABLE



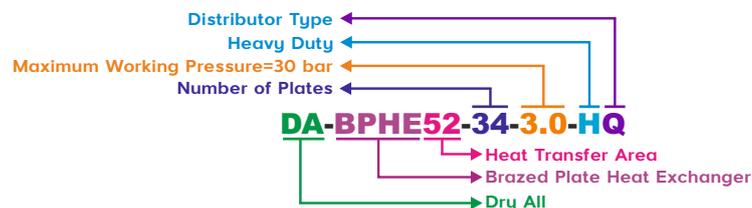
PERFORMANCE DATA

Sr. No	Model No.	Capacity in TR Evaporator	Capacity in TR Condenser	Capacity in KW Evaporator	Capacity in KW Condenser	No. of Plates (N)	Total Heat Transfer Area (m ²)	Volume (Ltr)	
								F1F2 Side	F3F4 Side
1	DA-BPHE28-14-3.0-H	1	1.3	3.5	4.38	14	0.34	0.35	0.30
2	DA-BPHE28-20-3.0-H	2	2.5	7	8.75	20	0.50	0.50	0.45
3	DA-BPHE28-30-3.0-H	3	3.8	10.5	13.13	30	0.78	0.75	0.70
4	DA-BPHE28-44-3.0-H	5	6.3	17.5	21.88	44	1.18	1.10	1.05
5	DA-BPHE52-34-3.0-HQ	7.5	9.4	26.25	32.81	34	1.66	1.6	1.50
6	DA-BPHE52-46-3.0-HQ	10	12.5	35	43.75	46	2.29	2.16	2.07
7	DA-BPHE52-70-3.0-HQ	12.5	15.6	43.75	54.69	70	3.54	3.29	3.20
8	DA-BPHE52-90-3.0-HQ	15	18.8	52.5	65.63	90	4.58	4.23	4.14
9	DA-BPHE52-100-3.0-HQ	17.5	21.9	61.25	76.56	100	5.10	4.7	4.61

DIMENSIONAL DATA

Sr. No	Model No	Capacity in TR	L1 (mm)	L2 (mm)	W1 (mm)	W2 (mm)	H Thickness (mm)	Weight (Kg)
1	DA-BPHE28-14-3.0-H	1	311	250	111	50	43	2.6
2	DA-BPHE28-20-3.0-H	2					56	3.17
3	DA-BPHE28-30-3.0-H	3					79	4.02
4	DA-BPHE28-44-3.0-H	5					111	5.21
5	DA-BPHE52-34-3.0-HQ	7.5	527	466	111	50	89	7.94
6	DA-BPHE52-46-3.0-HQ	10					116	9.86
7	DA-BPHE52-70-3.0-HQ	12.5					171	13.7
8	DA-BPHE52-90-3.0-HQ	15					216	16.9
9	DA-BPHE52-100-3.0-HQ	17.5					239	18.5

Nomenclature



Brazed Plate Heat Exchanger



CONNECTION SIZE					
Sr. No	Model No	Capacity in TR	Ref IN (F3) Soldered	Ref OUT (F4) Soldered	Water IN/OUT (F1/F2) PT Threaded
1	DA-BPHE28-14-3.0-H	1	7/8"	1/2"	G1"
2	DA-BPHE28-20-3.0-H	2		7/8"	
3	DA-BPHE28-30-3.0-H	3		7/8"	
4	DA-BPHE28-44-3.0-H	5		1-1/8"	G1-1/4"
5	DA-BPHE52-34-3.0-HQ	7.5		1-1/8"	
6	DA-BPHE52-46-3.0-HQ	10		1-1/8"	
7	DA-BPHE52-70-3.0-HQ	12.5		1-3/8"	
8	DA-BPHE52-90-3.0-HQ	15		1-3/8"	
9	DA-BPHE52-100-3.0-HQ	17.5		1-3/8"	

All Capacities are declared at following Working Conditions

Application : Evaporator	Application : Condenser
Refrigerant : R22	Refrigerant : R22
Evaporation Temperature : 2°C	Condensing Temperature : 40°C
Water Inlet Temperature : 12°C	Water Inlet Temperature : 30°C
Water Outlet Temperature : 7°C	Water Outlet Temperature : 35°C

TECHNICAL DATA	
Maximum working pressure at Refrigerant side (Bar)	30 Bar
Maximum working pressure at Water side (Bar)	30 Bar
Test Pressure (Bar)	45 Bar
Maximum Working Temperature (°C)	200°C
Brazing Material	Copper

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