JANGHAN Engineers, Inc.

Compact Heat Exchanger

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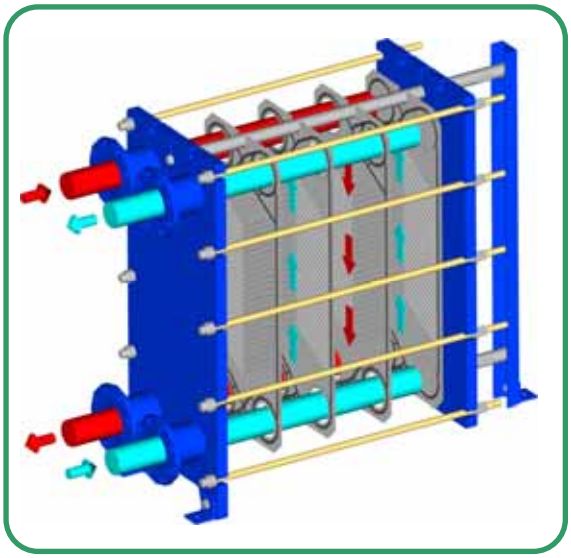
ENGINEERS, INCORPORATED.

Compact Heat Exchanger

Compact Plate Heat Exchanger



High quality JANGHAN's compact plate heat exchangers are designed with easy access for regular servicing and for a long, low maintenance lifetime with low life-cycle cost. Our compact plate heat exchangers offer may advantages over commodity-oriented conventional plate heat exchangers.

The plate heat exchanger consists of a series of corrugated plates that are gasketed depending on the liquids passing through. The plates are then compressed together in a rigid frame to create an arrangement of parallel flow channels. One fluid travels in the odd numbered channels, the other in the even.

The plate heat exchanger shall be fixed the frame with the plate-pact using tightening bolt. The plate-pact arranged in plate and gasket order. Between plate and plate made up channel**.** The plate-pact have put between fixed frame and movable frame. It's tightening up bolts.

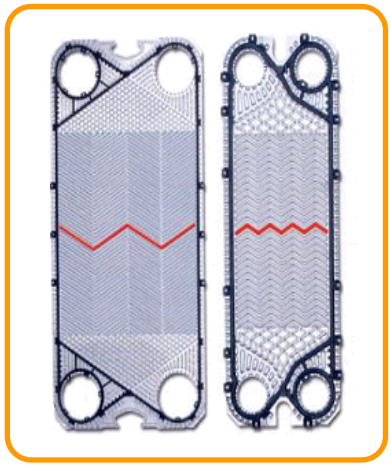
The bottom carrying bar support and the plate-pack and the top carrying bar guide the plat-pack. Both the carrying bar have supported to the supporting column.

We have two plates with clip-on gaskets in use, the one with metallic contact between the supporting points.

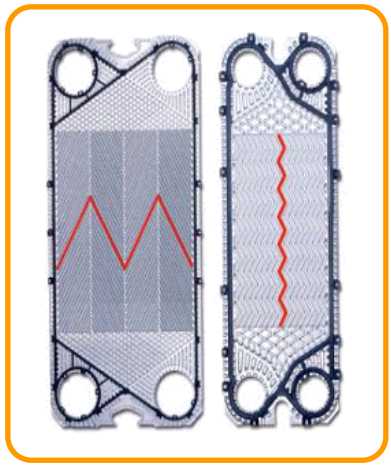
High and low theta plates

The plate heat exchangers have two different plate types. They differ on the shape of the chevron pattern of the corrugation as high and low theta plates. Owing to difference in plate pattern, the flow distribution and the pressure drop (at equal flow rate) in channels is not the same.

At equal flow rates low theta plates has lower pressure drop than high theta plates. High theta plates has effected turblent flow than low theta plates and has higher heat transfer.



High theta plates



Low theta plates

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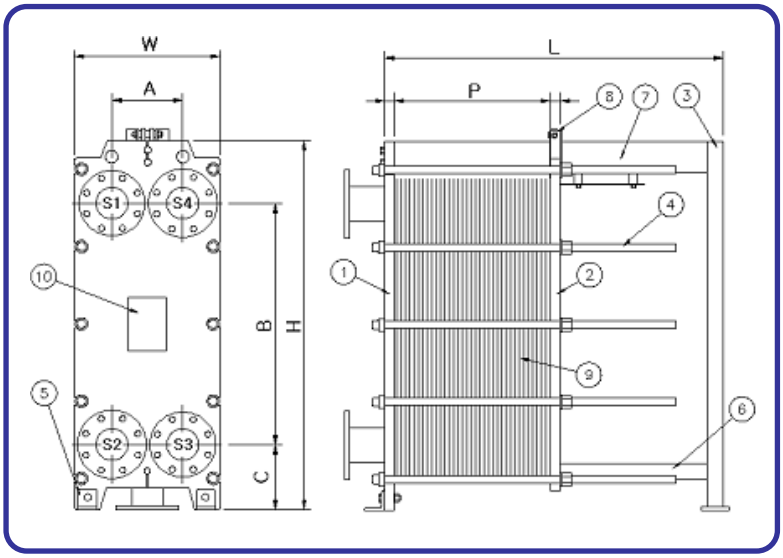
Dimension



No	Description
1	Frame plate
2	Pressure plate
3	Column
4	Tightening bolt
5	Foot
6	Lower carrying bar
7	Upper guiding bar
8	Roller
9	Heat transfer plate
10	Name plate
S1	Inlet of primary side
S2	Outlet of primary side
S3	Inlet of secondary side
S4	Outlet of secondary side

GK-Series

Model	Heat Transfer Area (m^2)	Pipe size (A)	Weight of plates (kg)	volume (liter /channel)	Weight of flame** (kg)	Dimension (mm)						
						L	W	H	P	A	B	C
GK-08	0.08	65	0.74	0.27	90	P+300	328	646.5	NP*x3.7	135	440	145
GK-12	0.12	65	0.91	0.36	110	P+300	328	720	NP*x3.7	135	591.5	145
GK-14	0.13	65	0.97	0.40	115	P+300	328	846.5	NP*x3.7	135	640	145
GK-23	0.23	65	1.38	0.62	160	P+300	328	1198	NP*x3.7	135	991.5	145
GK-16	0.16	100	1.18	0.61	250	P+550	464	880	NP*x4.0	226	539	210
GK-26	0.26	100	1.62	0.89	320	P+550	464	1120	NP*x4.0	226	779	210
GK-36	0.36	100	2.06	1.16	390	P+550	464	1360	NP*x4.0	226	1019	210
GK-46	0.46	100	2.49	1.44	460	P+550	464	1600	NP*x4.0	226	1259	210
GK-25	0.25	150	2.49	1.44	460	P+1100	720	1126	NPx3.6	380	582.6	300
GK-55	0.55	150	2.8	1.42	870	P+1100	720	1607.5	NPx3.6	380	1056.5	300
GK-85	0.85	150	3.8	2.19	1130	P+1100	720	2082	NPx3.6	380	1530.6	300
GK-115	1.15	150	5.0	2.96	1400	P+1100	720	2556	NPx3.6	380	2004.6	300
GK-145	1.45	150	6.1	3.74	1660	P+1100	720	3030	NPx3.6	380	2478.6	300
GK-60	0.60	200	3.3	1.97	1430	P+1250	875	1570	NPx3.8	465	915	300
GK-93	0.93	200	4.5	2.86	1790	P+1250	875	1945	NPx3.8	465	1290	300
GK-108	1.08	200	5.0	3.32	1970	P+1250	875	2132	NPx3.8	465	1477	300
GK-140	1.4	200	6.2	4.09	2325	P+1250	875	2507	NPx3.8	465	1852	300
GK-185	1.85	200	8.0	5.26	2865	P+1250	875	3070	NPx3.8	465	2415	300
GK-109	1.09	350	6.1	4.19	2990	P+1400	1080	2152	NPx4.1	570	1340	360
GK-175	1.75	350	8.9	6.07	3930	P+1400	1080	2772	NPx4.1	570	1960	360
GK-245	2.45	350	11.7	8	4870	P+1400	1080	3392	NPx4.1	570	2580	360
GK-315	3.15	350	16.6	9.9	5813	P+1400	1080	4012	NPx4.1	570	3200	360
GK-385	3.85	350	19.5	11.8	6753	P+1400	1080	4632	NPx4.1	570	3820	360

* : Number of Plates, ** : designed at 16bar

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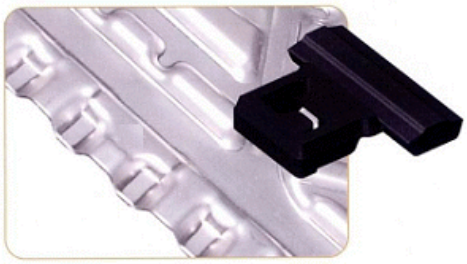
JANGHAN PHE's Feature

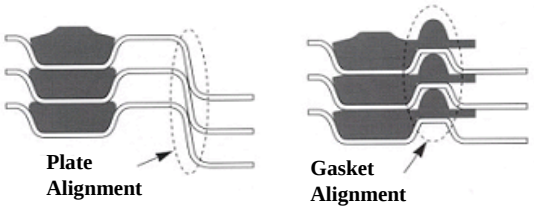
Clip type Gasket

We have two plates with clip-on gaskets in use (Non glue type). The clip type gaskets get improved durability and work efficiency



Easy to enlargement and maintenance

The plate heat exchanger are gasketed depending on the liquids passing through and on whether it is practical to be able to subsequently separate the plates, for enlargement and maintenance.

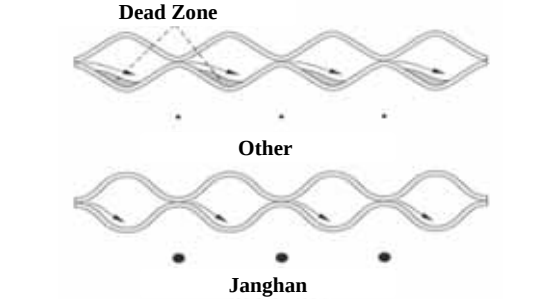


Improved wave

Uniformly a point of contact in all area of plates, metal to metal, be able to bear high pressure though thin plate.

Widely contact surface

Improved wave have not dead zone of fluid flow then the least pressure drop



Compact Heat Exchanger

ViEX compact heat exchanger

ViEX Compact Heat Exchangers Quality without Compromise

The efficient heat transfer capability, smaller size, lighter weight, lower cost and greater flexibility of compact heat exchanger makes them the logical choice for most uses in today's process industries.
ViEX's fill range of compact heat exchangers are designed for single and multi-phase liquid heat transfer. They are manufactured in materials that include stainless steels and nickel alloys, titanium, duplex and alloys that can be pressed and welded

Viexcoil

Plate coil heat exchanger : Resistance and/or laser welding and tightly controlled uniform corrugations ensure optimum design heat transfer efficiency and pressure drop, and s smooth heat transfer surface which is exceptionally resistant to fouling

Viexbox

The Viexbox wide gap welded plate heat exchanger utilized pressure plate technology for high-fouling services. The process fluid side of the Viexbox is completely accessible for mechanical cleaning and inspection. It ha no inter-plate gaskets. A wide gap between plates and smooth corrugations minimize fouling

Viexbloc

A unique pressure plate technology product. Viexbloc is compact and efficient with no inter-plate gaskets but fully accessible on both sides. Viexbloc is available in proprietary corrugations of chevron, dimple and flat plates

Viexshell

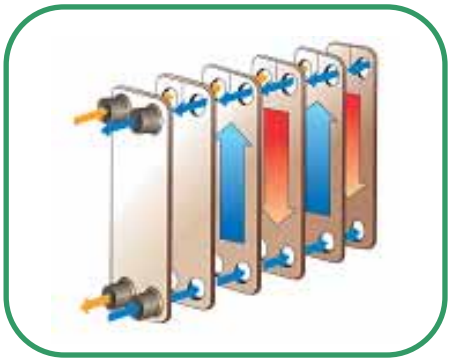
Welded heat exchanger, is technologically advanced, compact and very efficient. Fully welded frame plate exchanger, is totally accessible on shell side, and combines high performance, safety, maintenance and economy

Compact Heat Exchanger

Brazed compact heat exchanger

Feature

- Compact designed heat exchanger then low cost in shipping and all things (small than shell & tube as about 1/7)
- No need refrigerant-separator in conventional cooling cycle because efficiency evaporation.
- Brazed compact heat exchanger have small inner volume, that little necessary volume of fluid (refrigerant)
- Resist freezing as lattice shaped
- Identical and large capacity manufacturing by modular production method
- Low cost, high economical efficiency

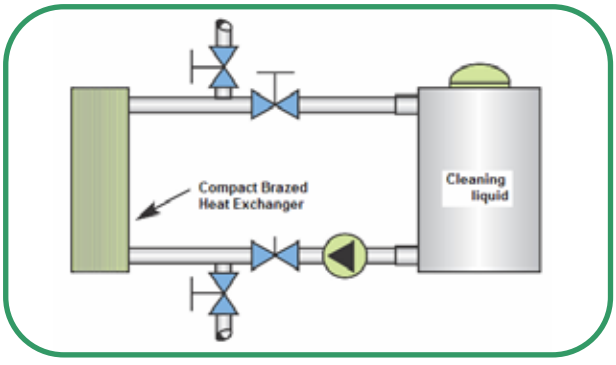


Specification

■ Material
: Heat plate STS 316L / STS 304
: Filler metal Copper (99%)
■ Operation range
: Max. Pressure 30 bar
: Temperature range -195 ºC ~ 185 ºC
■ Port size
: changeable as customer request
■ Allowed fluid
: Refrigerant except ammonia, brine, water, oil, air etc

Cleaning

Clean with detergents for fatty deposits. For heavier fouling use chemicals compatible with copper like formic, citric, vinegar or other organic acids.
JANGHAN provide a Cleaning-In-Place(CIP) equipment as shown, including suitable cleaning chemicals. Never wait until the unit is heavily fouled before cleaning



Application

Heat Pump	Refrigerator	Air Conditioner
Heat Recovery	Intercooler	Super-heater
Oil Cooler	Overheat-preventer	Water cooler
Air Dryer	Chiller	Condenser
Economizer	Evaporator	Super-cooler

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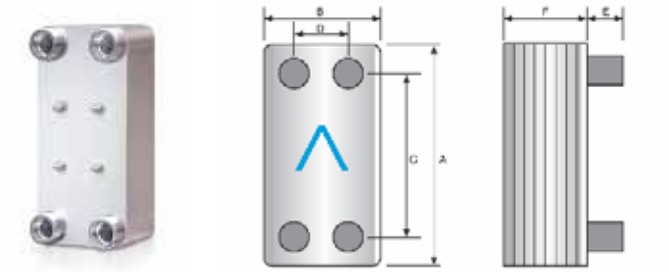
Dimension



1st side (Primary side) : Refrigerant
2nd side (Secondary side) : Water

BC - Model

Model	Chiller (HP)	Weight (kg)	Dimension						1st side (inch)		2nd side (inch)
			A	B	C	D	E	F	Inlet	Outlet	
■ Boiler or Chiller (light)											
BC10-010C	1	3.8	300	110	256	71	28	28	1	1	1
BC10-020C	2	5.4	300	110	256	71	28	48	1	1	1
BC10-030C	3	7	300	110	256	71	28	68	1	1	1
BC10-050C	5	10.2	300	110	256	71	28	108	1	1	1
■ Evaporator											
BC25-016EC	3	6.2	524	117	479	72	20	47	7/8	7/8	3/4
BC25-030EC	5	9.5	524	117	479	72	20	81	7/8	7/8	1-1/4
BC25-038EC	7.5	11.4	524	117	479	72	20	100	7/8	7/8	1-1/4
BC25-058EC	10	16.1	524	117	479	72	20	148	7/8	7/8	1-1/4
BC45-040EC	15	26.1	534	252	456	174	38	106	7/8	1-1/8	1-5/8
BC45-060EC	20	34.6	534	252	456	174	38	154	1-1/8	1-3/8	1-5/8
BC50-110EC	30	60.4	524	242	441	159	45	279	1-1/8	2-1/8	2-1/2
BC50-140EC	40	73.3	524	242	441	159	45	351	1-1/8	2-1/8	2-1/2
BC50-160EC	50	82.0	524	242	441	159	45	400	1-1/8	2-1/8	2-1/2
BC50-200EC	60	99.2	524	242	441	159	45	495	1-1/8	2-1/8	2-1/2
■ Condenser											
BC25-016CC	3	6.2	524	117	479	72	20	47	7/8	1/2	3/4
BC25-030CC	5	9.5	524	117	479	72	20	81	1-1/8	1-1/8	1-1/4
BC25-038CC	7.5	11.4	524	117	479	72	20	100	1-1/8	1-1/8	1-1/4
BC25-058CC	10	16.1	524	117	479	72	20	148	1-1/8	1-1/8	1-1/4
BC45-030CC	15	21.8	534	252	456	174	38	82	1-1/8	7/8	1-5/8
BC45-040CC	20	26.1	534	252	456	174	38	106	1-1/8	7/8	1-5/8
BC50-090CC	30	51.8	524	242	441	159	45	231	1-5/8	1-1/8	2-1/2
BC50-110CC	40	60.4	524	242	441	159	45	279	1-5/8	1-1/8	2-1/2
BC50-140CC	50	73.3	524	242	441	159	45	351	2-1/8	1-1/8	2-1/2
BC50-160CC	60	82.0	524	242	441	159	45	400	2-1/8	1-1/8	2-1/2
■ Air Dryer											
BC52-043AC	650	30.1	522	258	420	140	27	159	3	3	3
BC52-063AC	900	39.9	522	258	420	140	27	229	3	3	3
BC52-093AC	1200	54.6	522	258	420	140	27	334	3	3	3
BC52-109AC	1400	62.4	522	258	420	140	27	390	3	3	3

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Engineered by JANGHAN

JANGHAN provides all customers with top quality products and services, intelligent solutions and the most dependable and flexible heat transfer vendor resource in the world

JANGHAN
From the start of our business in 1987,
We devoted ourselves to develop the innovative system & products for hydronics, pumping system, heat exchangers, thermal energy storage, water filtration and environmental protection equipment
,with the challenging spirit of creating new industry standards.
,with the quality products from state-of-the-art production technology.
,with the experienced knowledge to provide solutions and O&M supports.
We are endeavoring to satisfy the customer's requirements and always opening the ears to hear of all your criticism for continuing improvement of our services.

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