

Products & Application



Agenda

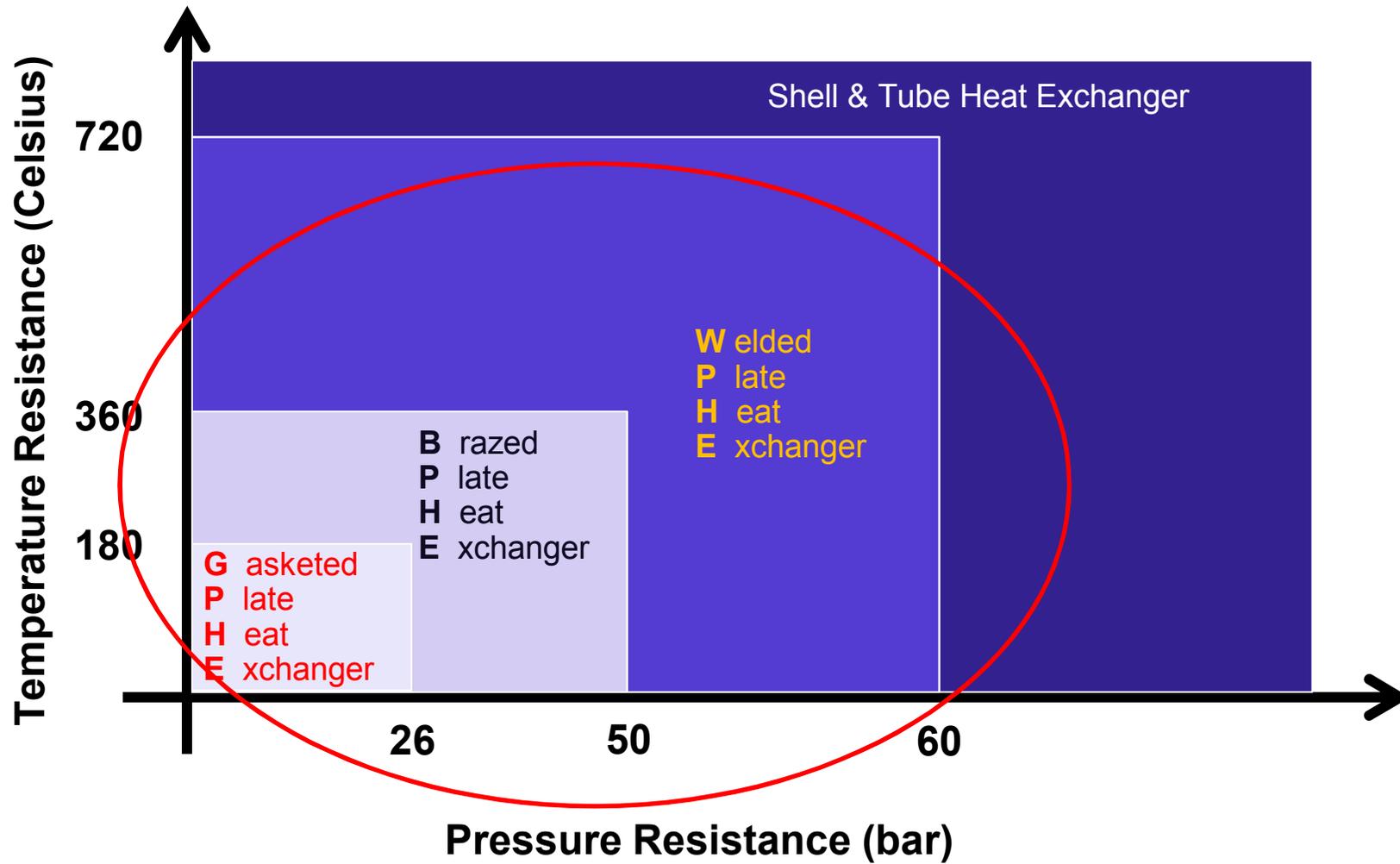


- ◆●
1. Gasketed Plate Heat Exchanger
- ◆●
2. Wide Gap Plate Heat Exchanger
- ◆●
3. Semi-Welded Plate Heat Exchanger
- ◆●
4. LHEBloc (Welded PHE)
- ◆●
5. Spiral Heat Exchanger
- ◆●
6. Plate & Shell Heat Exchanger
- ◆●
7. Plate Coil Heat Exchanger



1. Gasketed Plate Heat Exchanger

Physical Limit by H/X Types



PHE Applications



Power Plant



Shipbuilding/Offshore

Petrochemical & Chemical



Food



Nuclear



Oil & Gas

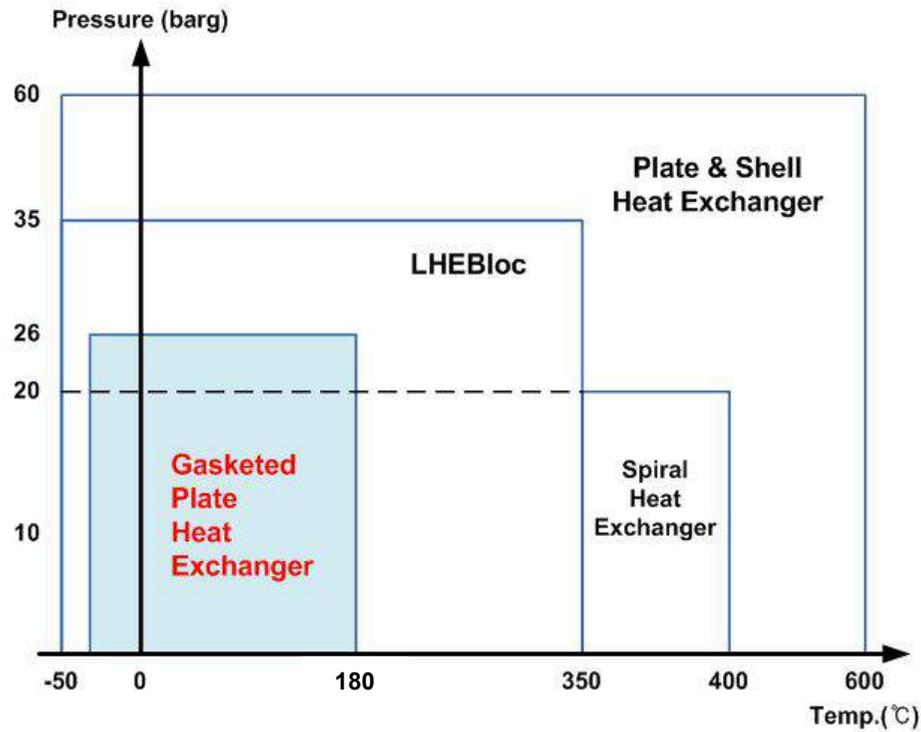


HVAC



Medicine

Plate Heat Exchanger



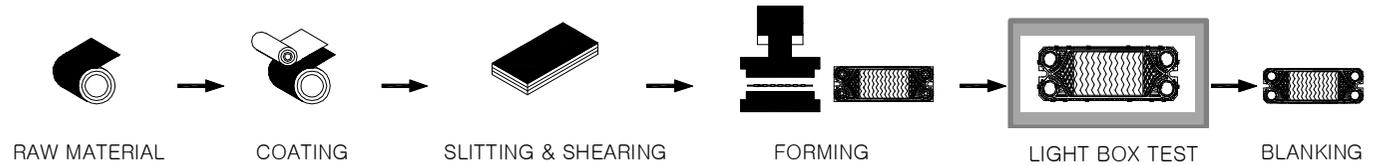
Pressure and temperature limits

Application	Materials
Plate	Stainless Steel : SS304, SS316L, 254SMO, 904L, 317L Nickel : Ni.200 Nickel alloy : C-276, 825, 625, Incoloy, Hastelloy Titanium : Ti.Gr.1, Ti. Gr. 11
Gasket	NBR, EPDM, Neoprene, IIR, Butyls, Silicone, Teflon, Envelop(Special)

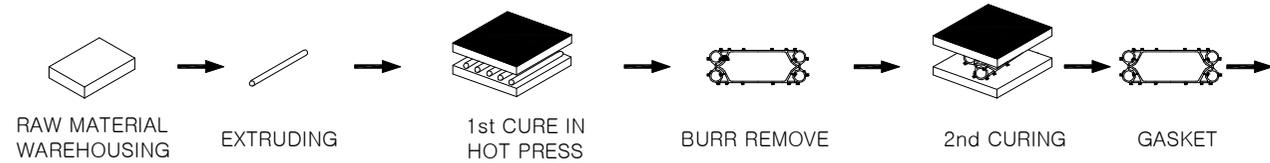
PHE Fabrication Process



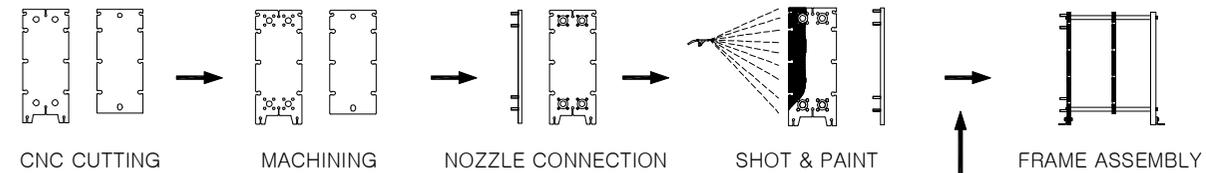
Heat Plate



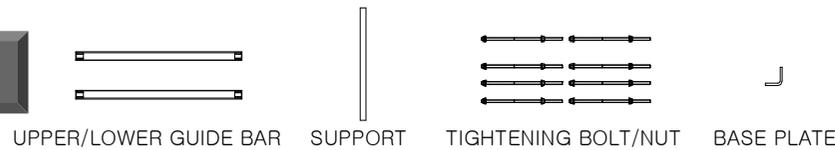
Gasket



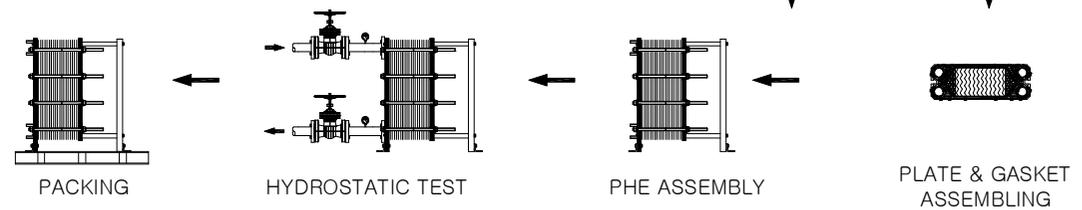
Frame



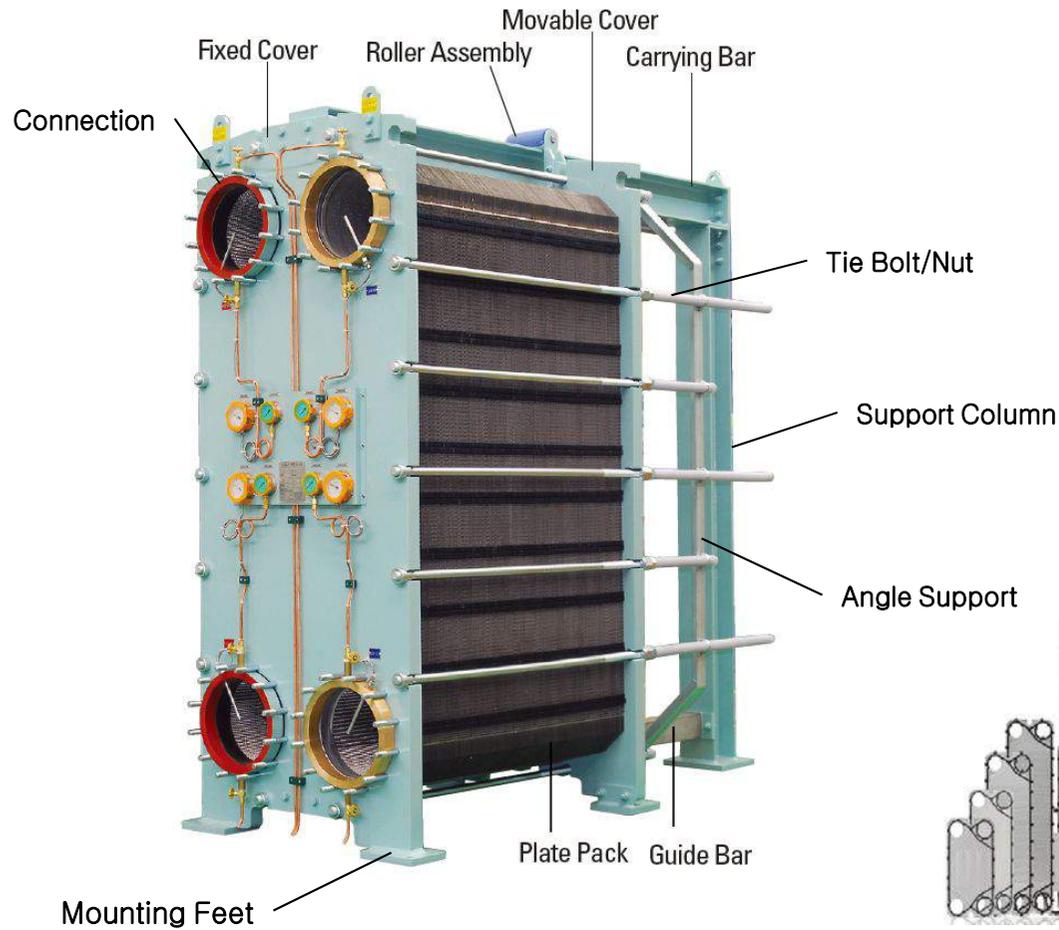
Accessory



Assembly



PHE Structure & Heat Transfer Plates





Standard materials and typical uses

SS 304

- Clean water to water duties
- Example, up to 50 ppm chlorides at 50°C

SS 316L

- Water to water duties
- Example, up to 250 ppm chlorides at 50°C

254 SMO (high-alloy stainless steel)

- High chloride water to water duties
- Example, up to 6000 ppm chlorides at 50°C

Titanium

- Sea water (3.5% chlorides)

Titanium Palladium

- Sea water at high temperature (>130°C)
- High concentrated chloride brines at high temperature

Nickel 200/201

- Sodium hydroxide production

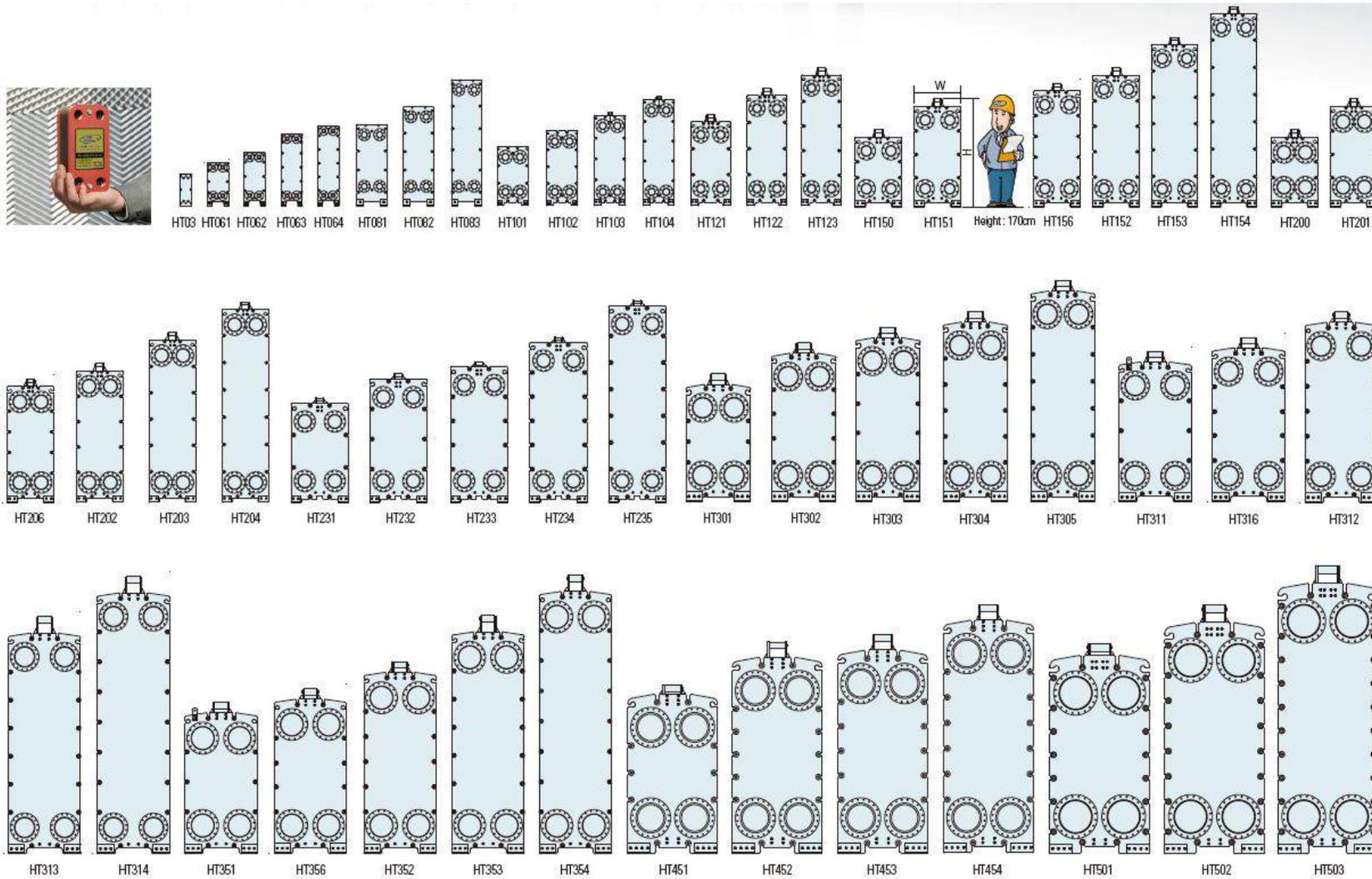
Alloy C-276 (Nickel alloy)

- Typically for concentrated sulphuric acid up to 90°C

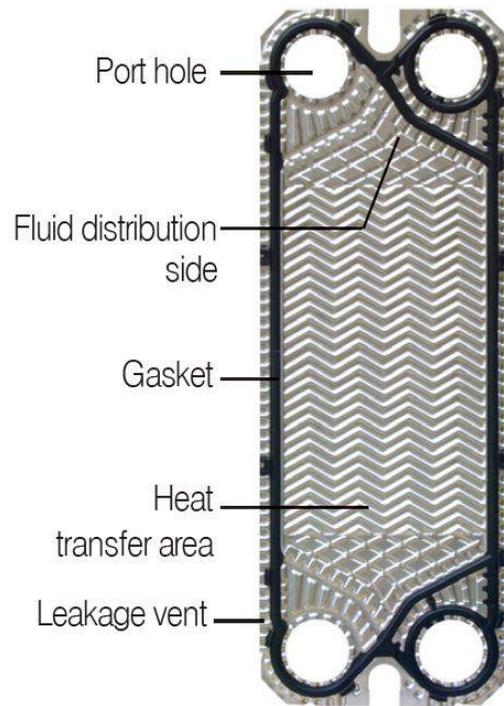
Alloy G-30

- Sulphuric acid application (scrubber)

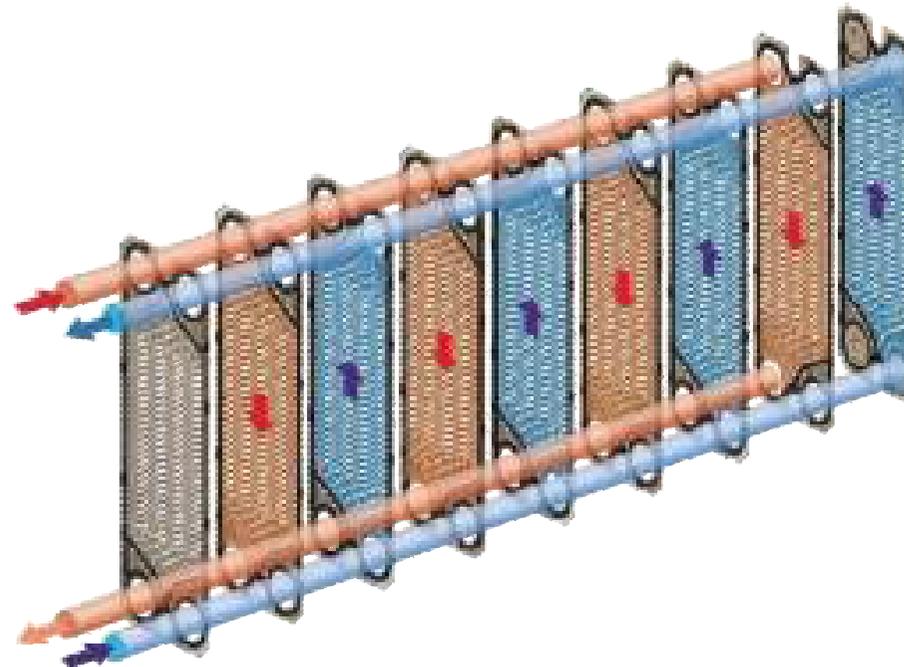
LHE PHE Models



Structure & Principle



Heat Transfer Plate



Flowing diagram of fluid

Strength & Application



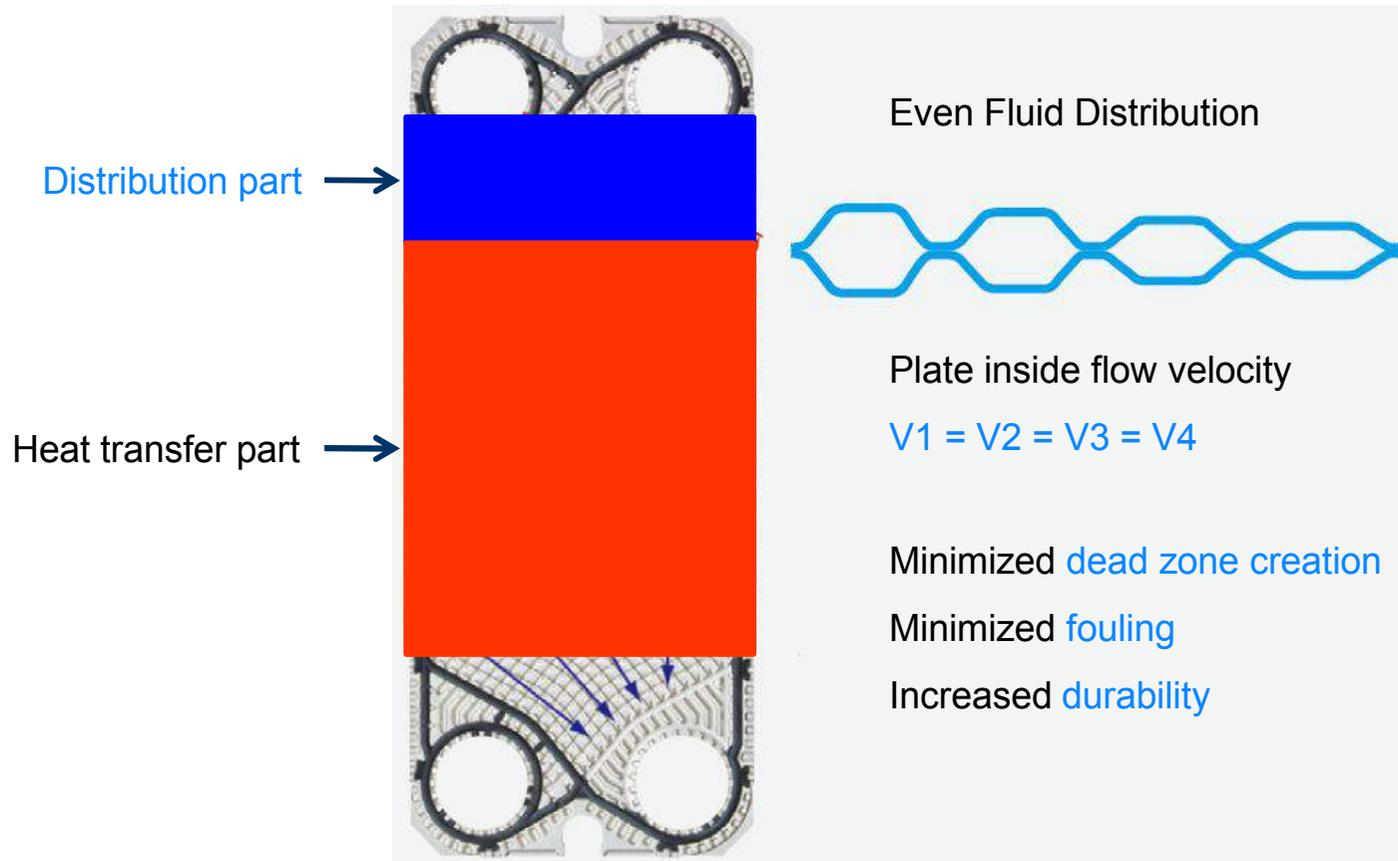
Strength

- Minimum Space for Installation
- High Efficiency
- Low Fouling
- Diversity of Flow Channel
- Minimum Heat Loss
- Temperature Approach
- Easy Disassembly and Assembly

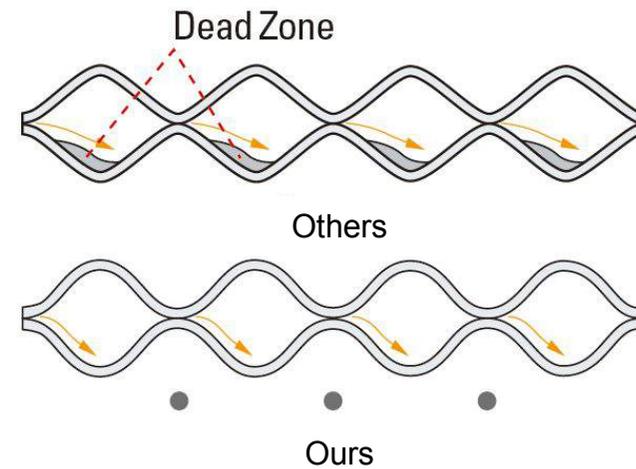
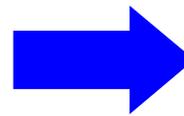
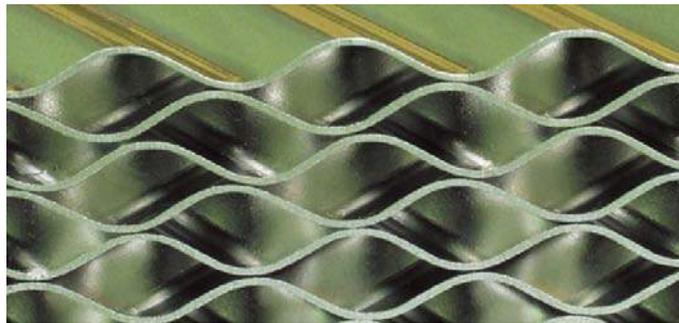
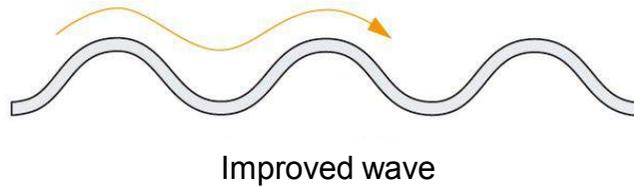
Application

- Marine, Chemical Industry, Power plant
- Architecture Industry, Steel Industry, Mechanical Industry
- Food, Paper, Textile

Features of LHE Plate



Features of LHE Plate



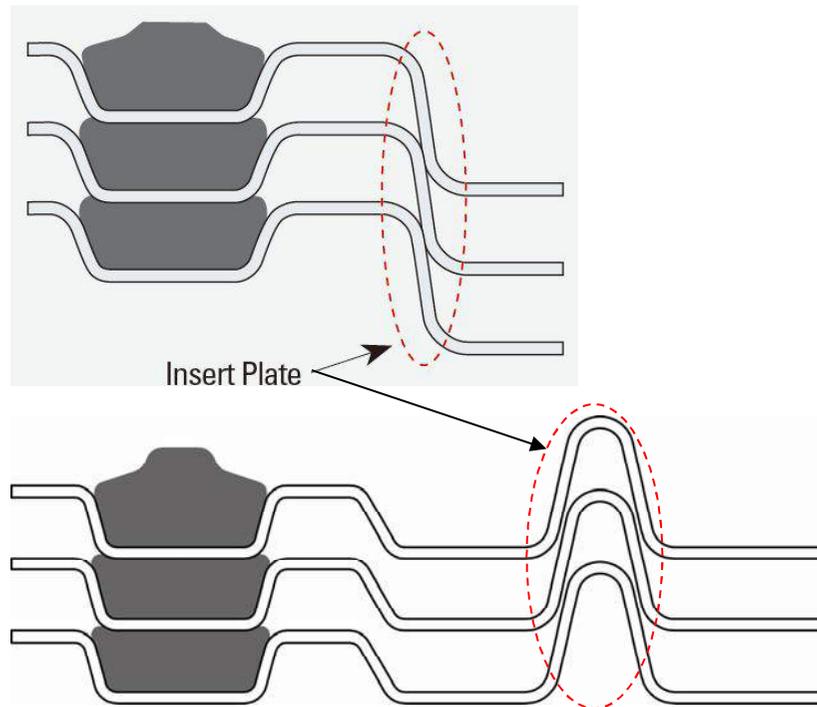
Contact Area Comparison

Improved wave → **Minimized DEAD ZONE**

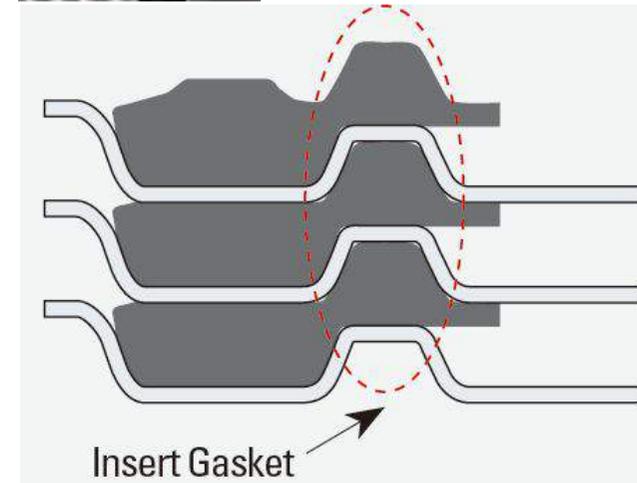
Wide contact area

- Increased Strength of Structure
- Minimized Fatigue stress
- Improved Durability and Anti-corrosion
 - ▶ Improvement of Durability
 - ▶ Anti-Corrosion

Features of LHE Plate



Easy Plate Arrangement



Good Sealing Performance

Features of LHE Gasket

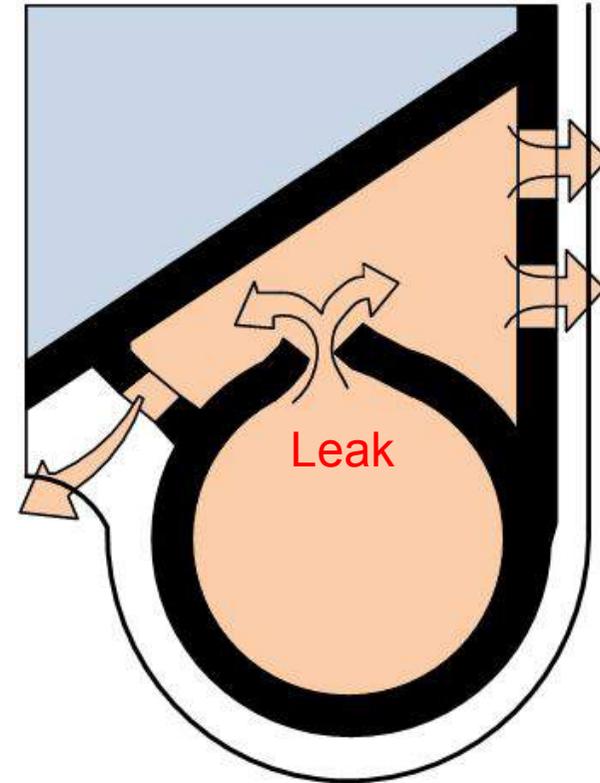
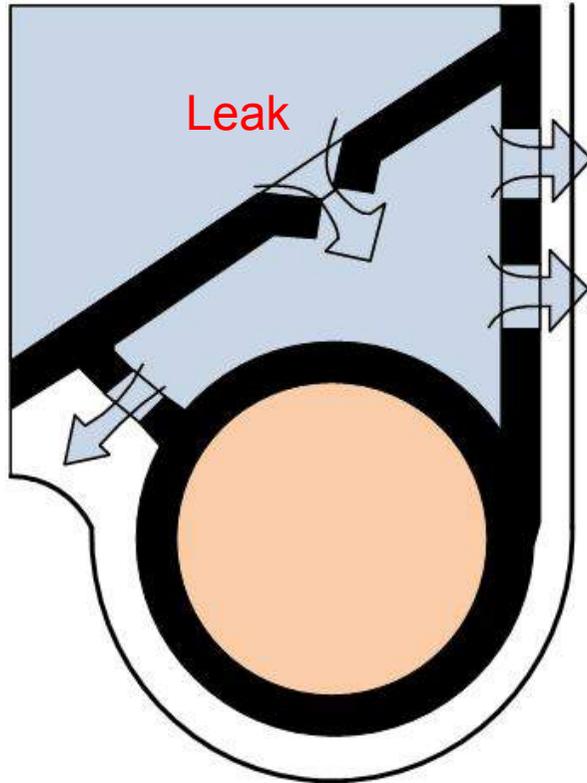


LHE Clip-on type gasket



No Slip in assembling
No Misassembling

Features of LHE Gasket



Prevention of intermixing of the media in the corner areas

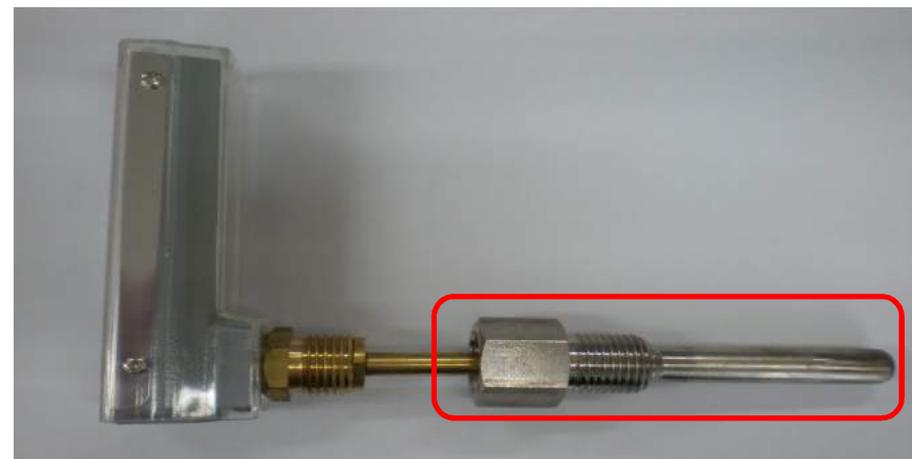
Special Features



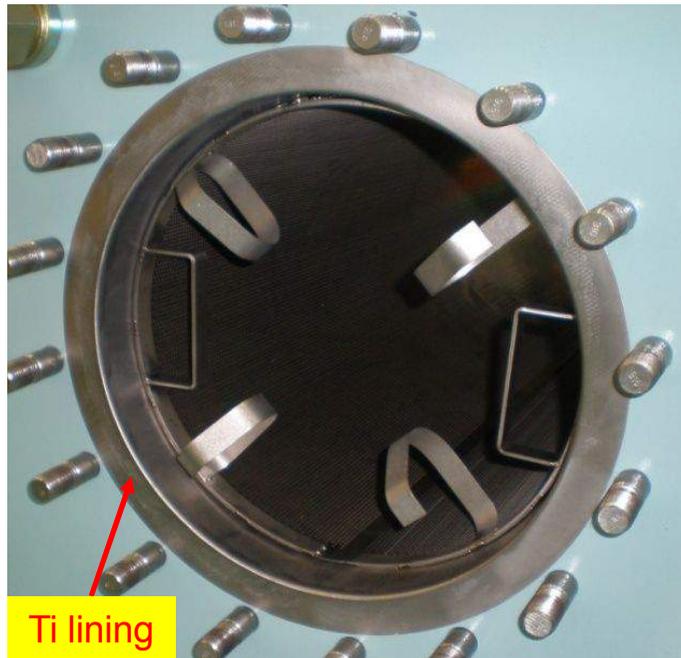
Tie bolt (tightening bolt)
Adding of Bichromate treat (anti-corrosion)



Thermo well
Sea Water : 316LSS, Brass → **Titanium**



Special Features



Titanium Inline Lining



Titanium Inline Filter

Special Features



Rubberized Instrument Flange



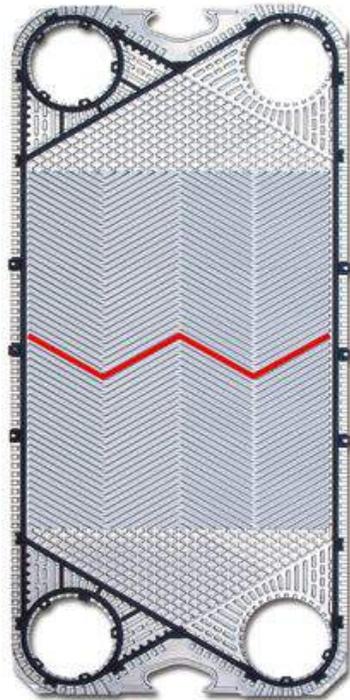
2. Wide Gap Plate Heat Exchanger

Wide Gap PHE

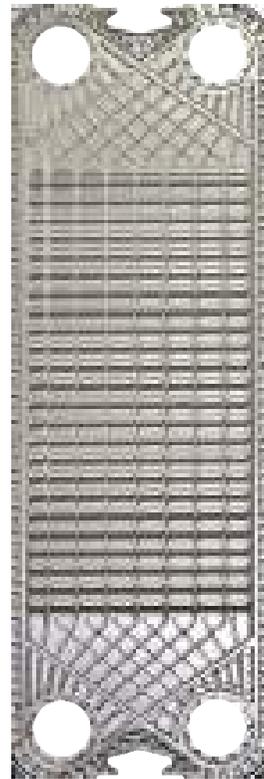


- Same principle as the normal PHE
- Significantly wider flow cross section between the plates
- Minimize the number of contact points
- Efficiently handle fluids with
 - Fruit juices containing fibers and pulps,
 - Waste water in the paper and pulp,
 - Textile, Sugar industries
 - Highly viscous products

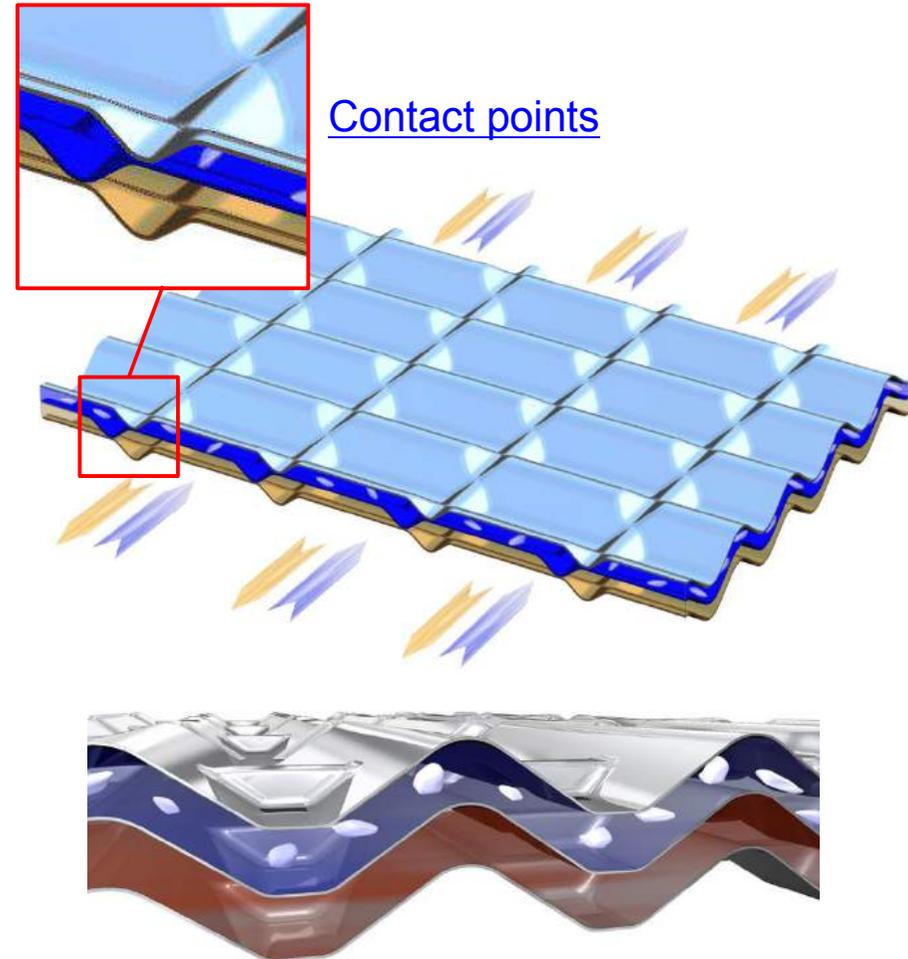
Differences Between Each PHE



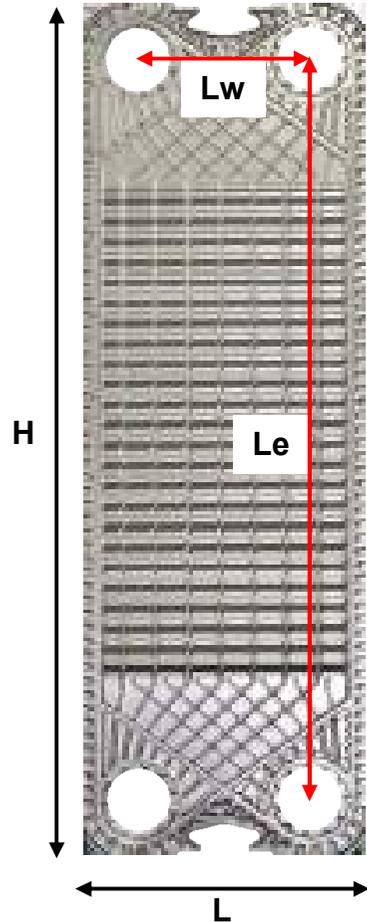
Normal PHE



Wide Gap PHE
(LHE)



Heat Plate Dimension



MODEL		Port Dia. (mm)	H (mm)	L (mm)	Le (mm)	Lw (mm)	Depth(mm)
HW100 Series	HW101	Φ100	1,096	493	879	295	5
	HW102		1,419	493	1,311	295	5
	HW103		1,938	493	1,743	295	5
HW230 Series	HW232	Φ230	1,884	750	1,540	465	6
	HW234		2,316	750	1,972	465	6
	HW235		2,892	750	2,548	465	6
HW330 Series	HW331	Φ330	2,100	1,000	1,668	550	6
	HW332		2,480	1,000	2,100	550	6
	HW333		2,964	1,000	2,464	550	6



3. Semi-Welded Plate Heat Exchanger

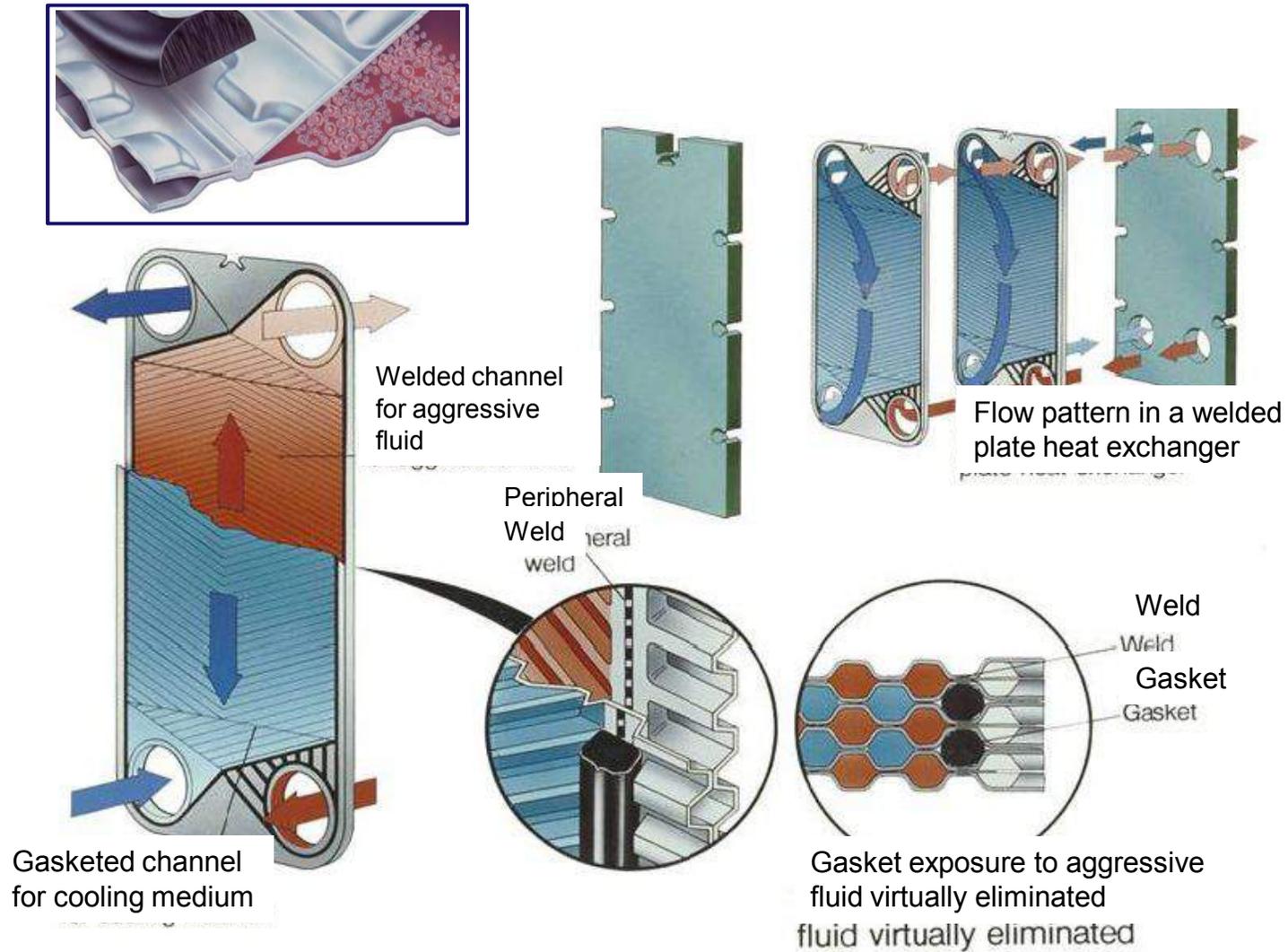
Semi-Welded PHE



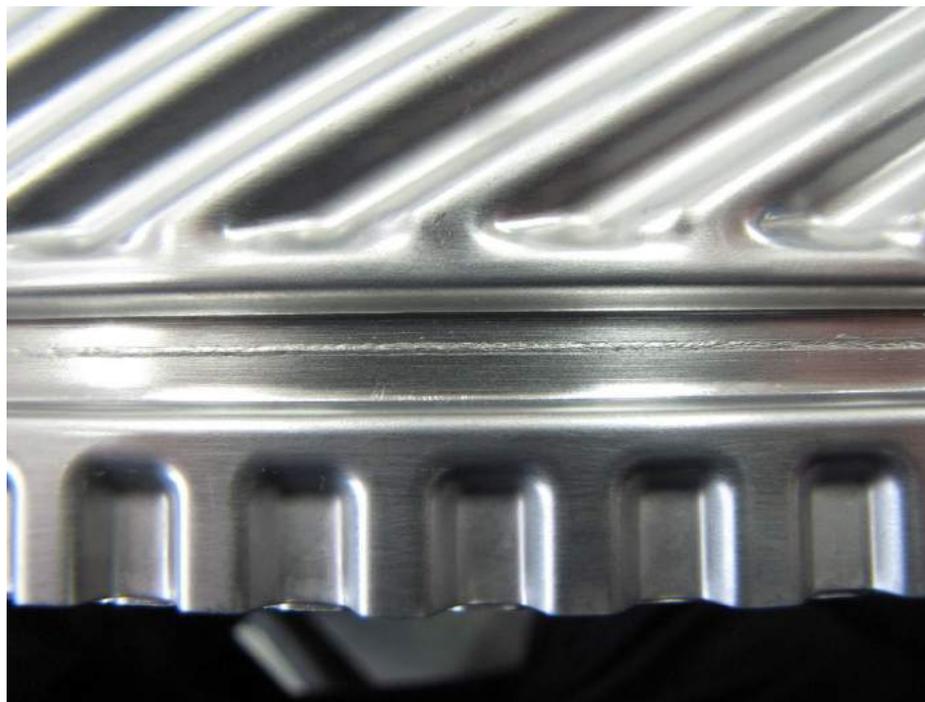
Semi-Welded PHE : **Widely used for refrigerants** like ammonia and freon, chemical and general process duties

- Alternation of welded channels and gasketed channels
 - The refrigerant : in welded channels
 - The secondary medium : in gasketed channels
- ※ The gaskets in contact with the refrigerant :
two circular porthole gaskets between the welded plate pairs

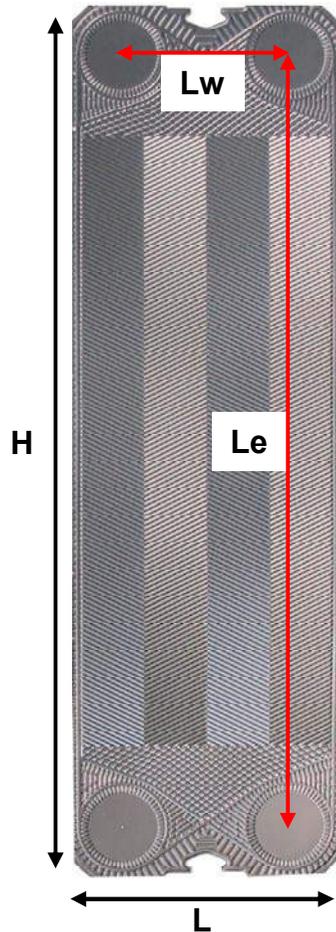
Feature of Semi-Welded PHE



Laser Welding



Heat Plate Dimension

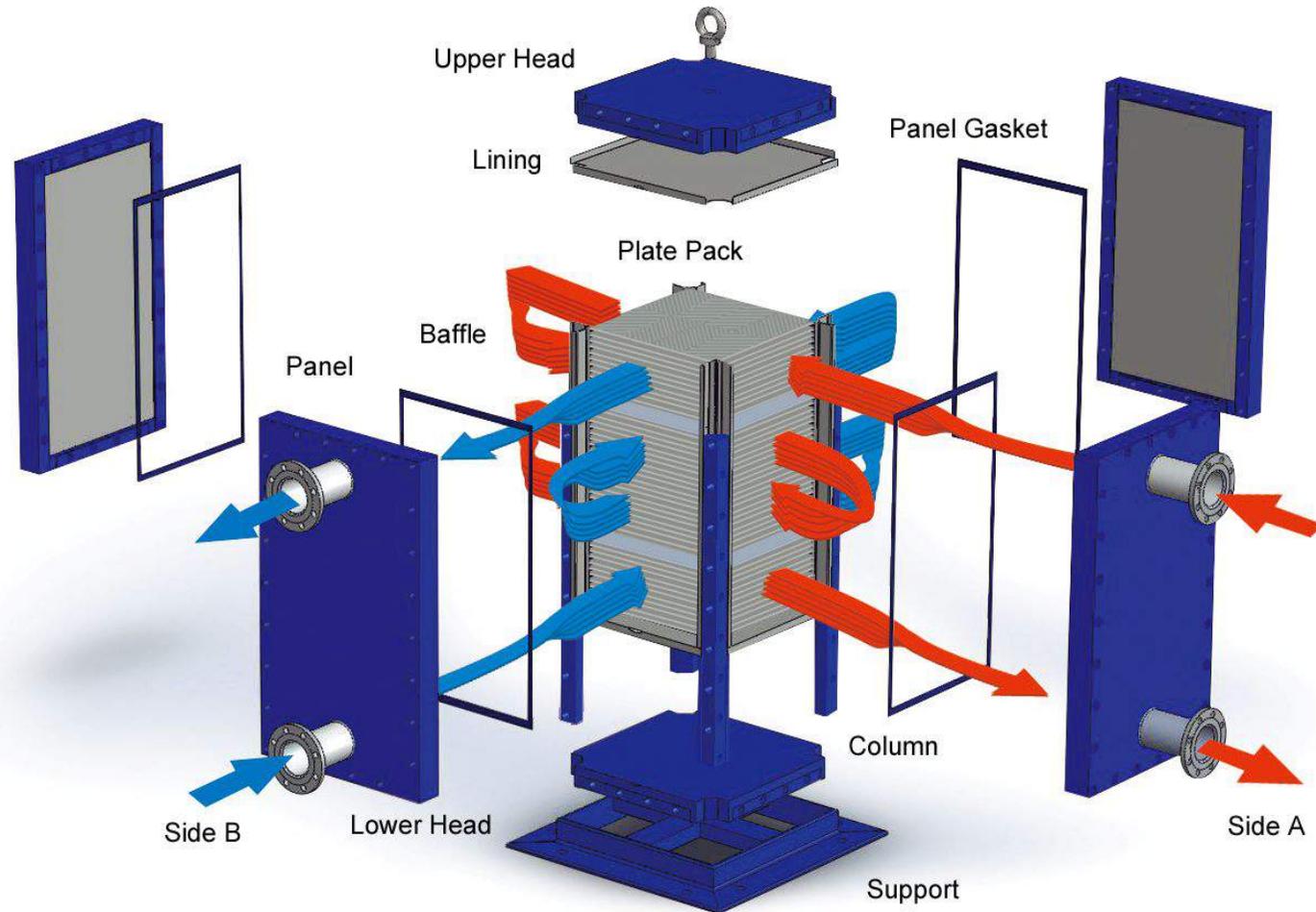


MODEL		Port Dia. (mm)	H (mm)	L (mm)	Le (mm)	Lw (mm)
HW100 Series	HW101	Φ100	925	493	743	310
	HW102		1405	493	1223	310
	HW103		1885	493	1703	310
HW230 Series	HW232	Φ230	1700	750	1416	465
	HW234		2420	750	2136	465
	HW235		2900	750	2616	465
HW330 Series	HW331	Φ330	2000	1000	1584	580
	HW332		2480	1000	2064	580
	HW333		2960	1000	2544	580

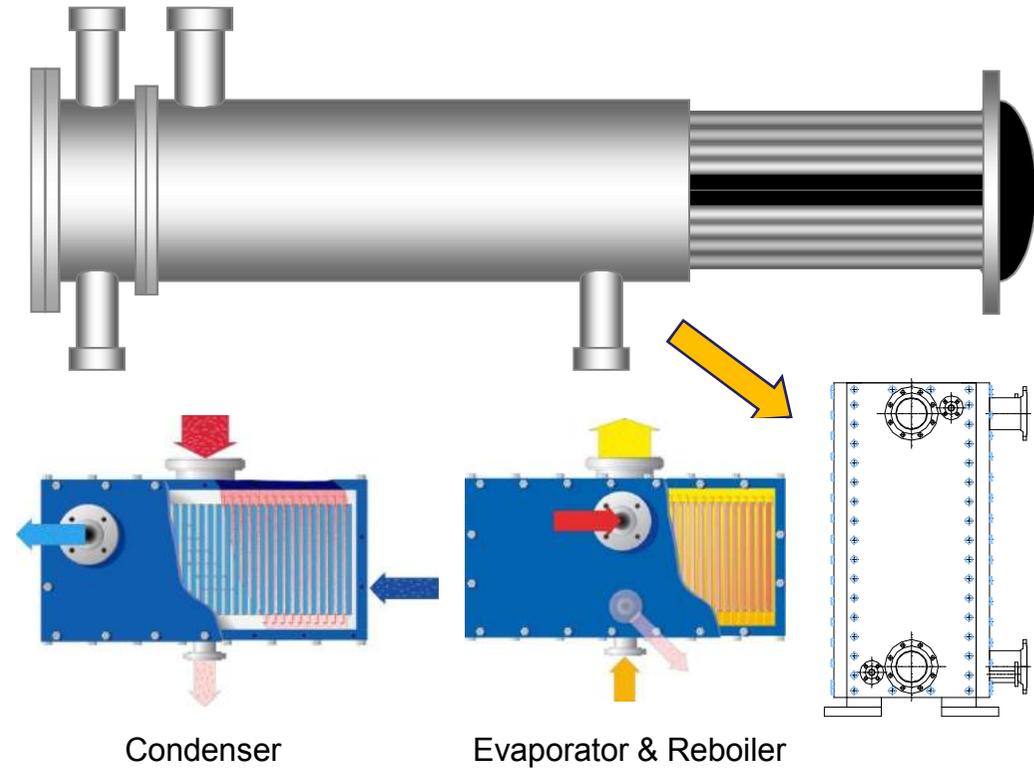
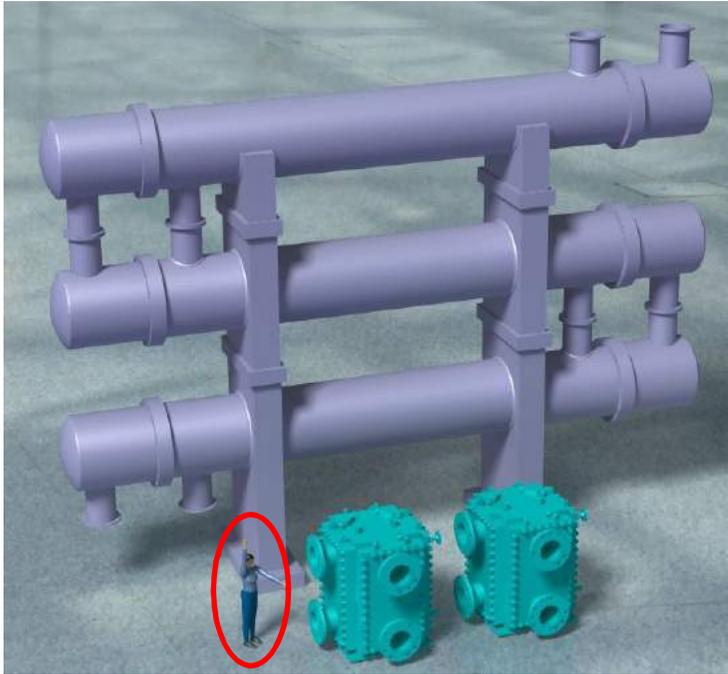


4. LHEBloc (Welded Plate Heat Exchanger)

Basic Structure of LHEBloc

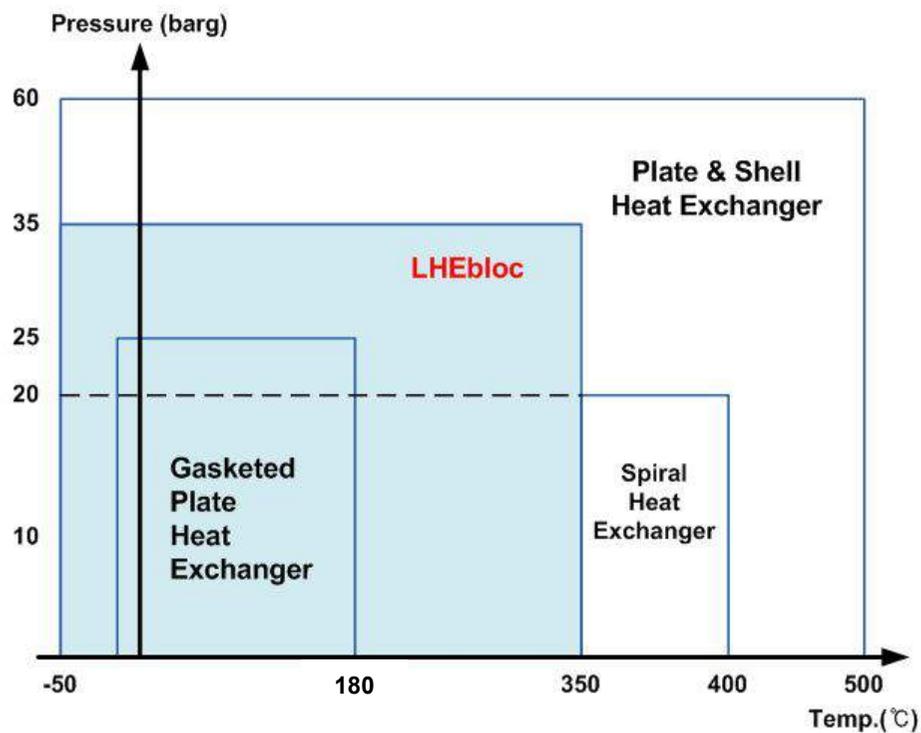


Advantages for LHEBloc



The LHEBloc requires less space!

LHEBloc



Pressure and temperature limits



	Minimum	Maximum
Heat Transfer Area(m ² /set)	0.62	320
Design Temperature(°C)	- 50	350
Design Pressure(bar)	Full Vacuum	35
Application Code	ASME, KS, JIS, BS, PED	
Plate Material	- Stainless Steel : SS304, SS316L, 254SMO - Nickel : Ni.200 - Nickel alloy : C-276, 825, 625, Incoloy, Hastelloy - Titanium : Ti.Gr.1, Ti.Gr.11	

NEP(New Excellent Product) Certificate



신제품인증서

제품명 블록타입 관형 열교환기 (300, 500, 750, 1000, 1200mm)

회사명 (주)엘에치이

대표자 남상돈

소재지 경남 김해시 한림면 장방리 1089번지

인증번호 NEP-MKE-2012-041

유효기간 2012. 12. 27 ~ 2015. 12. 26

위 제품을 「산업기술혁신 촉진법」 제16조에
따른 신제품으로 인증합니다.

2012년 12월 27일

 **MKE 지식경제부 장관** 

Cleaning of LHEBloc



Easy Cleaning & Quick Repair

References & Customers



No.	Plant Name	Contractor	Country	Model	Quantity	Delivered time	Design specification					Services
							Fluid (Hot/Cold)	Flow Rate (kg/h)	Design Temp (°C)	Design Pressure (bar)	Cert.	
1	HPPO	SKC	KOREA	HCB50-6P6-150	1	09-Oct	E-2521A	44,700	186	14.5	Government	2nd MeOH Column Hot Water Cooler
				Water	39,100		186	14.5				
				Hot water	166,000		186	34.7	FF Evaporator Pre-heater			
				E-2630	89,740		186	34.7				
HCB50-1P10-300	1	MPG,AIR,H ₂ O	147,000	186	14.5	PG Column Condenser						
Water	70,000	186	14.5									
2	LG Bohai.	LG Bohai.	China	HCB30-5P-60	1	09-Dec	Water	30,000	105	5.0	-	Heat Exchanger
							Water	25,000	80	5.0		
3	Nirou Chlor Co	-	Iran	HCB30-1P6-80	1	10-Jan	Wet Chlorine Gas	1,514	95	1.0	-	Wet Chlorine Gas Cooler
							Water	21,880	65	6.0		
4	Waste Water Recovery	SKC	Korea	HCB75-3P4-220	1	10-Mar	E-2513	10,340	186	14.5	Government	Heat Exchanger
							E-2513	183,200	186	14.5		
5	Turkmengas	Aker Solution	Turkmenistan	HCB75-6P1-250	2	11-Jan	Lean	13,233	230	10.2	ASME U	Rich/Lean Solvent Exchanger
							Rich TEG	13,613	150	10.2		
6	KEP	KEP	Korea	HCB30-10P5-100	1	11-Jun	T240 Reflux	8,000	110	5.1	Government	T240 Heat Exchanger
				T280 Feed	20,000		110	5.1				
				T240 Bottom Liquid	10,290		170	6.5	T240 Heat Exchanger			
				T240 Feed Liquid	16,000		170	6.5				
				HCB50-1P-150	2		Steam	2,462	175	7.0		Re-boiler
Water	8,066	175	4.1									
7	ST&TJ	KOSGEA	Korea	HCB30-2P-60	1	11-Jun	Waste Water	18,650	145	10.3	-	Waste Water Heat Exchanger
				Waste Water	16,710		145	10.3				
				HCB30-6P2-100	1		Waste Water	10,730	100	10.3		
				Water	22,290		100	10.3				
8	Methanol Distillation Column	SKC	Korea	HCB50-8P16-300	1	11-Jul	Propane, Propylene+N ₂	10,730	186	34.7	Government	Reactor Offgas Cooler
				Cooling Water	22,290		186	7.0				
				HCB50-1P4-250	1		MeOH,PO,Propane,H ₂ O	16,650	186	6.2		Pre-Separator Condenser
				MeOH,PO,Propane,H ₂ O	98,630		186	11.8				
				HCB75-2P4-200	2		MeOH, Ethanol,H ₂ O	3,861	186	14.5		1st MEOH-Column Condenser
				Hot Water	57,000		186	14.5				
				HCB30-5P7-230	1		MeOH, Ethanol,H ₂ O	52,640	186	14.5		2nd MEOH- Column Condenser
				Hot Water	57,000		186	4.5				
HCB30-2P2-100	1	MeOH, Ethanol,H ₂ O	4,648	100	10.6	MEOH-Column O/H Trim Condenser						
Cooling Water	111,700	100	7.0									

References & Customers



No.	Plant Name	Contractor	Country	Model	Quantity	Delivered time	Design specification					Services	
							Fluid (Hot/Cold)	Flow Rate (kg/h)	Design Temp (°C)	Design Pressure (bar)	Cert.		
9	BAPCO (Waste Water Treatment Plant)	GS E&C	Bahrain	HCB75-3P1-250	4	11-Oct	Cooling water	5,009,475	65	5.0	ASME U	1st Influent Cooler	
							Waste water	999,198	65	5.0			
				HCB-50-1P-100	2		Softened chilled water	479,998	65	5.0			2nd Influent Cooler
							Waste water	999,999	65	5.0			
10	Black Gold P.J.T.	GS E&C	Canada	HCB50-4P8-150	1	11-Nov	Recovered Oil	2,700	160	12	ASME U & ABSA (Alberta Boilers Safety Association)	Glycol Exchanger	
							Eth.Glycol 50%	1,800	160	14			
				HCB50-5P-200	1		SALES OIL	68,850	185	10.9			Dru Feed Preheater
							DIL-BIT	73,970	160	14			
				HCB50-5P-150	1		SALES OIL	70,250	185	25.4			Sales Oil Cooler
							BFW	12,390	241	33			
				HCB75-7P-450	2		SALES OIL	34,420	185	10.8			Sales Oil Trim Cooler
							ETH.GLYCOL 50%	24,930	160	14			
				HCB75-6P-150	1		PRODUCED GAS BFW	10,650	241	33			Produced Gas/ BFW Exchanger
							PRODUCED GAS	2,258	225	18.2			Produced Gas Trim Cooler
		ETH.GLYCOL 50%	2,250	160	14								
11	-	SKC	Korea	HCB30-3P6-160	2	12-Apr	Polyol Water	30,000 / 79,330	130 / 60	5.0 / 5.0	Government	Polyol RX Cooler	
12	-	KOLON	Korea	HCB30-6P6-60	1	12-Apr	Light Oil 30% E.G	2,500 / 2,192	70 / 30	10.0 / 10.0	Government	Light Oil Cooler	
13	-	KOLON	Korea	HCB30-2P2-100	1	12-Apr	1,3-Butadiene 32% E.G	1,700 / 14,740	60 / 60	10.0 / 10.0	Government	Butadiene Condenser	
14	-	AEKYUNG	Korea	HCB30-1P2-160	5	12-May	O.A + Water	6,000 / 143,000	210 / 70	3.1 / 5.0	Government	Condenser	
15	-	KOLON	Korea	HCB30-6P6-60	1	12-Jun	Hot Oil Brine	2,400 / 15,160	150 / 150	3.5 / 4.5	Government	Heavy Oil Cooler	
16	-	KOLON	Korea	HCB30-6P2-60	1	12-Jun	F-TCG CCW	2,400 / 9,377	230 / 70	10.0 / 10.0	-	Oligomer Cooler	

References & Customers



No.	Plant Name	Contractor	Country	Model	Quantity	Delivered time	Design specification					Services
							Fluid (Hot/Cold)	Flow Rate (kg/h)	Design Temp (°C)	Design Pressure (bar)	Cert.	
17	K2Q	K.E.P	Korea	HCB30-4P6-130	1	12-Dec	T-240Q Bottom Sol.	10,290	170	4.5	-	T-240Q Feed Preheater
							T-240Q Feed Sol.	16,000	170	6.5		
			Korea	HCB75-2P1-350	1	12-Dec	5kg Steam	17,300	180	7.0	Government	T-240Q Reboiler
							T-240Q Bottom	56,630	175	4.1		
			Korea	HCB75-2P1-200	1	12-Sep	T-240Q Distillate Vapor	10,620	150	5.0	Government	Reboiler
							T-280Q Bottom	25,770	150	5.0		
			Korea	HCB30-10P5-100	1	12-Dec	T-240Q Distillate Vapor	8,000	120	6.5	-	T-280Q Feed Preheater
							T-280Q Feed Sol.	20,000	100	4.5		
			Korea	HCB50-1P4-300	1	12-Dec	T-280Q Distillate Vapor	17,390	230	10.0	-	T-280Q Condenser
							C.W	333,500	70	10.0		
Korea	HCB75-2P1-500	1	12-Dec	T-240Q Distillate Vapor	7,645	230	10.0	Government	T-360Q Reboiler			
				T-360Q Bottom	60,520	70	10.0					
Korea	HCB30-6P5-100	1	12-Dec	Hot Water	9,053	100	7.0	-	T-360Q Feed Preheater			
				T-360Q Feed Sol.	16,600	95	5.5					
Korea	HCB30-6P5-100	1	12-Dec	Hot Water	17,240	100	7.0	-	T-360Q Reflux Preheater			
				T-360Q Reflux	28,010	95	5.5					
Korea	HCB30-1P1-100	1	12-Dec	5kg Steam	1,255	180	7.0	Government	T-380Q Reboiler			
				T-380Q Bottom	9,840	140	1.0					
18	-	LHE ENGINEERING	Russia	HCB75-4P4-350	1	12-Dec	Lean Solution	120,000	150	25.0	-	P1280
							Rich Solution	111,400	150	25.0		
19	MA'ADEN STEAM PLANT	SECL	KSA	HCB75-18P18-500	9	13-Jan	Cold Condensate	847,350	241.0	35	ASME U	Cold Heat Recovery Heat Exchanger
							Deaerator Feed Water	947,835	146.0	15.4		
				HCB75-4P2-200	3	13-Jan	Hot Condensate	567,000	241	35		Hot Heat Recovery Heat Exchanger
							Deaerator Feed Water	947,835	160	15.4		
20	-	LHE ENGINEERING	Russia	HCB30-7P7-160	1	13-Jan	H2SO4	45,990	200	6.0	-	Cooler of Acid
							Water	26,090	200	6.0		



5. Spiral Heat Exchanger

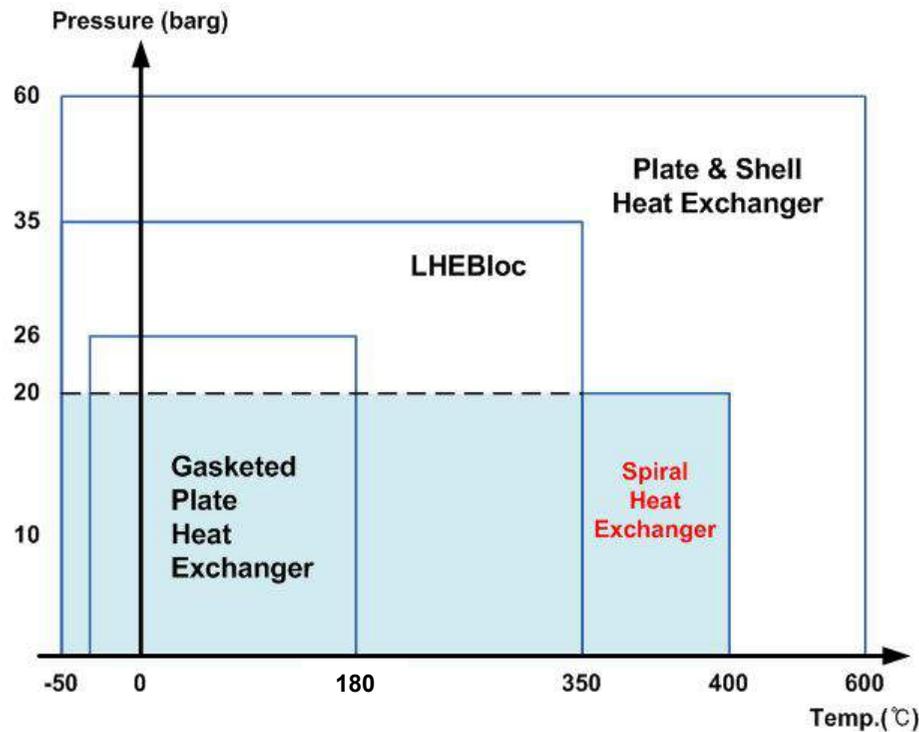
Applications



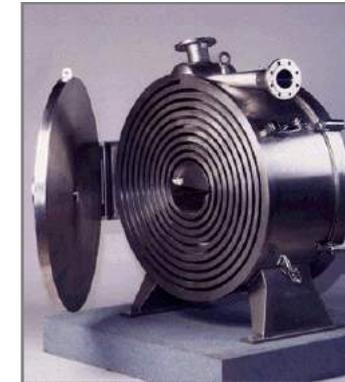
The perfect solution from dirty fluids to high vacuum condensation

Fluid	<ul style="list-style-type: none">• Fouling liquids : containing solids, fiber, liquors, slurries and sludge• Gases : pure vapor and mixtures with inert gases
Duty	<ul style="list-style-type: none">• Liquid / Liquid : Preheating, Heating, cooling, Interchanging, Heat recovery• Vapor / Liquid : Top condenser, Reflux condenser, Vacuum condenser Vent condenser, Reboiler, Gas cooler
Industry	<ul style="list-style-type: none">• Petrochemical• Refinery• Steel making• Pulp and paper• Metal/ore processing• Wastewater treatment• Pharmaceutical• Vegetable oil processing• Distillery

Spiral Heat Exchanger



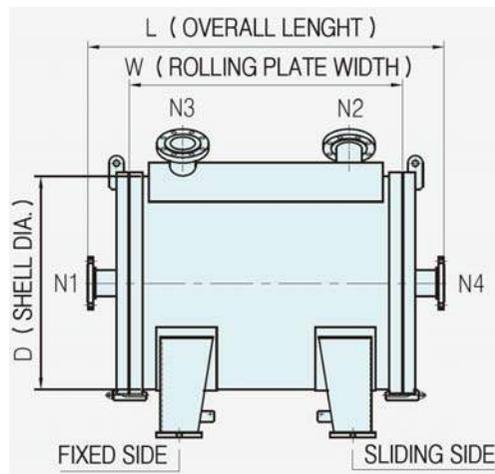
Pressure and temperature limits



	Minimum	Maximum
Heat Transfer Area(m ²)	5	600
Design Temperature(°C)	-50	400
Design Pressure(bar)	Full Vacuum	20
Application Code	ASME, KS, JIS, BS, PED	
Plate Material	- Carbon steel - Stainless Steel : SS304, SS316L, 254SMO, 904L - Nickel : Ni.200 - Nickel alloy : C-276, 825, 625, Incoloy, Hastelloy - Titanium : Ti.Gr.1, Ti.Gr.11	

To meet requirements for a range of sizes and specifications

→ **Customized Products**

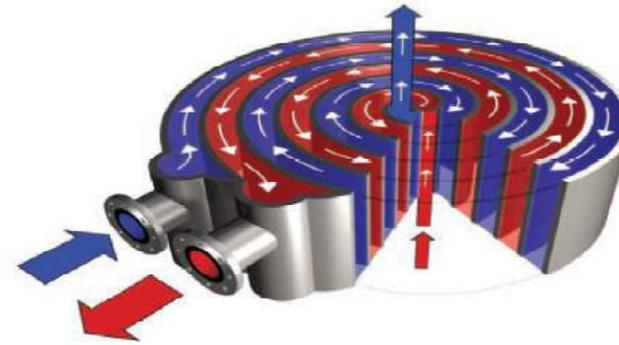


D : Max. Φ 2200 mm
W : Max. 2000 mm

Applications for Spiral Heat Exchanger



Waste Cooler

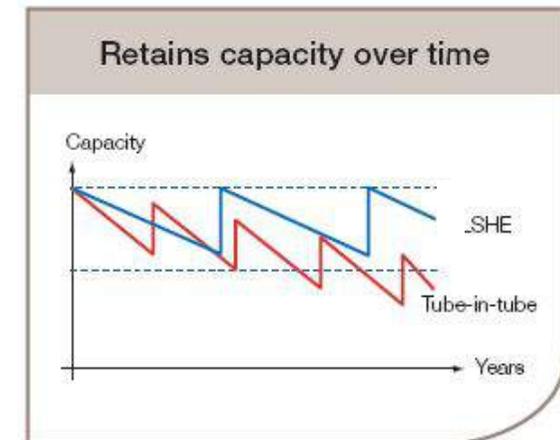
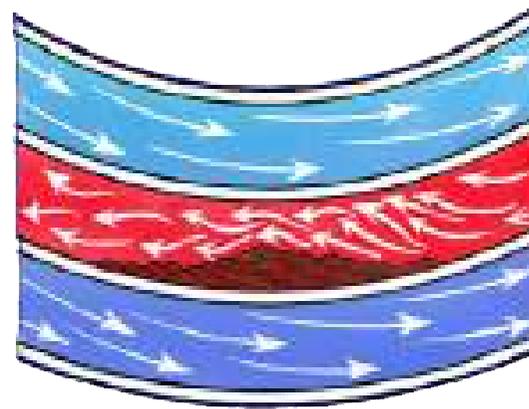


PVC Slurry Heat Exchanger



PCW Cooler

Advantages of Spiral Heat Exchanger



Single-channel  Self-cleaning

- Easy Cleaning (quick repair)
- Gaskets : Using 2 packing gaskets for girth flanges

References & Customers



- Client : Korea Engineering plastic
- S&T Heat Exchanger Replacement PJT
- Vapor condenser



- Client : The Japan Steel Work
- PCW Cooler



References & Customers



- Client : LG MMA
- YM-2 PJT
- Heater & Cooler



- Client : LG MMA
- YM-3 PJT
- Heater & Cooler



References & Customers



- Client : LG Chemical
- PVC Slurry Heat Exchanger



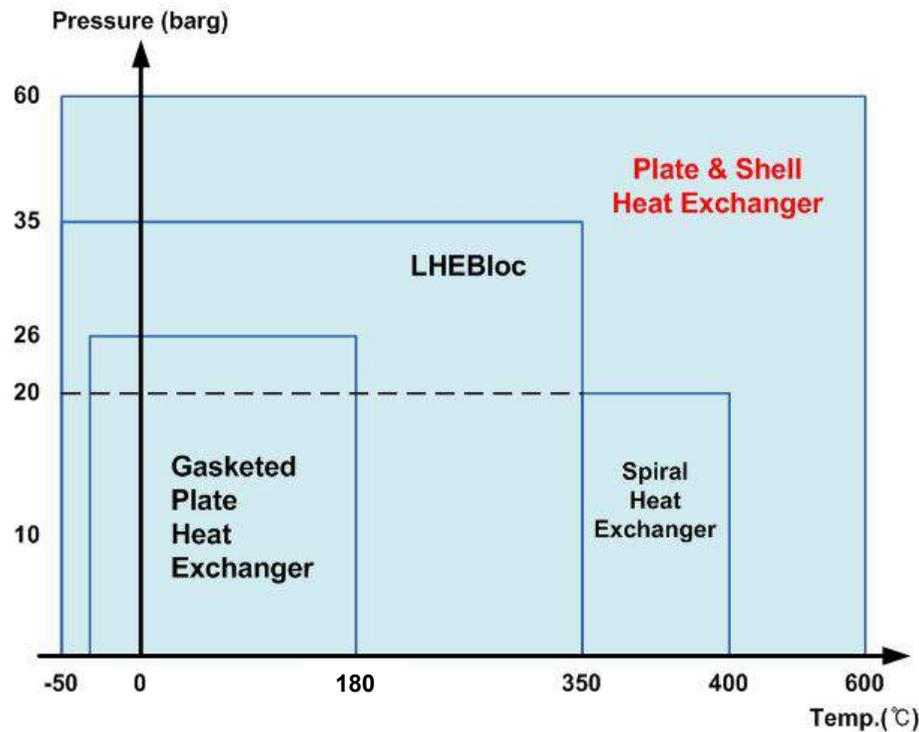
- Client : Hyundai Steel
- Cokes Oven Gas Refinery Plant PJT
- Cooler - 29 sets





6. Plate & Shell Heat Exchanger

Plate & Shell Heat Exchanger

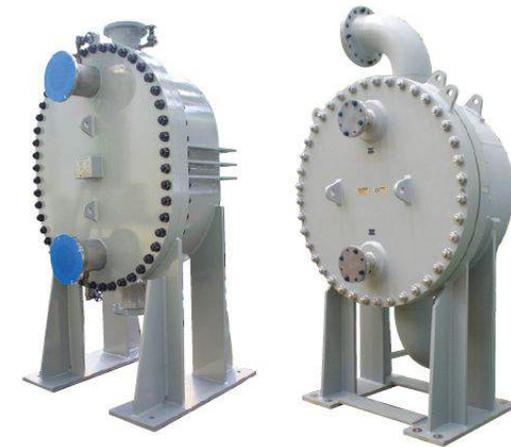


Pressure and temperature limits

Evaporator



LP Suction Cooler



	Minimum	Maximum
Heat Transfer Area(m ²)	0.3	1500
Design Temperature(°C)	-50	500
Design Pressure(bar)	Full Vacuum	60
Application Code	ASME, KS, JIS, BS, PED	
Plate Material	- Stainless Steel : SS304, SS316L, 254SMO - Nickel : Ni.200 - Nickel alloy : C-276, 825, 625, Incoloy, Hastelloy - Titanium : Ti.Gr.1, Ti.Gr.11	

Plate & Shell Heat Exchanger

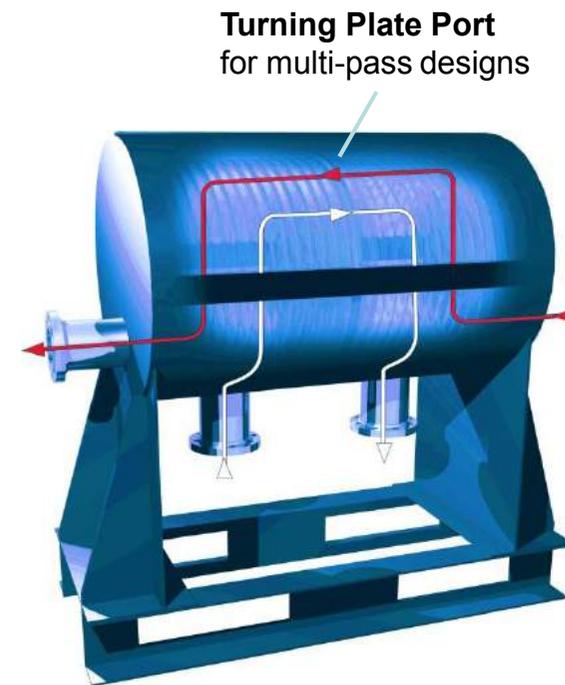
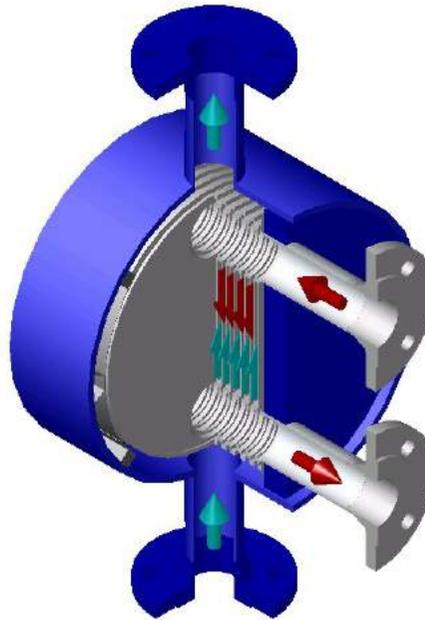
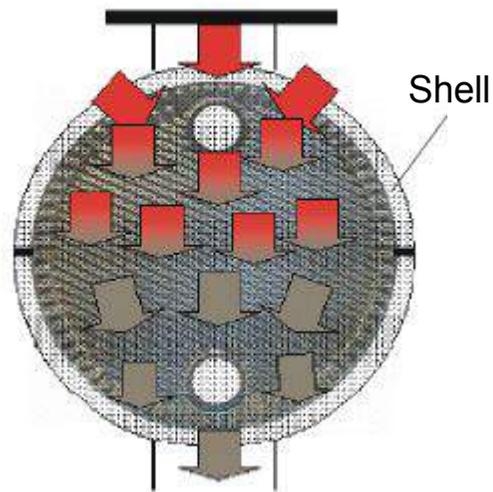


Plate & Shell Heat Exchanger



Model		2A	2B	2B0	3A	3B	3B0	6A	6B	6C	6A1	6B1
F	Flat Length of Flange [mm]	0	192	192	0	303	303	0	278	555	0	278
G	Flange Length [mm]	330	522	522	490	793	793	795	1073	1350	795	1073
H	Distance between Con. 1 [mm]	400	620	620	650	950	950	1000	1250	1550	1000	1250
I	Distance between Con. 2 [mm]	0	192	192	0	303	303	0	278	555	0	278
J	Flange Thickness [mm] (at 10bar.g / 20bar.g)	22 / 30	30 / 40	30 / 40	26 / 40	35 / 50	35 / 50	32 / 54	45 / 70	50 / 75	32 / 54	45 / 70
K	Heat Exchanger Length [mm] (Max. of Plate Number)	450	450	450	600	600	600	800	800	800	800	800
Model		6C1	6B2	6C2	10A	10B	10C	10A1	10B1	10C1	10B2	10C2
F	Flat Length of Flange [mm]	555	278	555	0	322	644	0	322	644	322	644
G	Flange Length [mm]	1350	1073	1350	1260	1582	1904	1260	1582	1904	1582	1904
H	Distance between Con. 1 [mm]	1550	1250	1550	1500	1800	2150	1500	1800	2150	1800	2150
I	Distance between Con. 2 [mm]	555	278	555	0	322	644	0	322	644	322	644
J	Flange Thickness [mm] (at 10bar.g / 20bar.g)	50 / 75	45 / 70	50 / 75	45 / 70	60 / 90	70 / 105	45 / 70	60 / 90	70 / 105	60 / 90	70 / 105
K	Heat Exchanger Length [mm] (Max. of Plate Number)	800	800	800	1200	1200	1200	1200	1200	1200	1200	1200



Refinery heat exchangers

- Heaters, Coolers
- Condensers, Evaporators
- Cascade evaporators

Petrochemical plant heat exchangers

- Heaters, Coolers
- Condensers, Evaporators
- Economizers



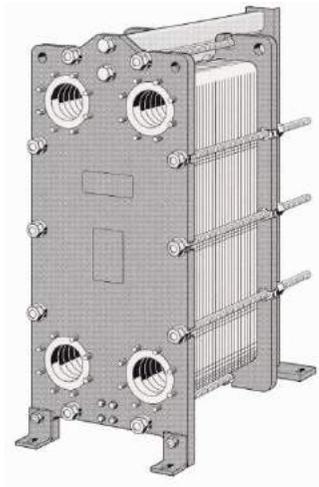
Oil and gas production heat exchangers

- Crude oil coolers and heaters
- Gas coolers and heaters
- Amine coolers
- Heat exchangers for dehydration packages
- Refrigeration applications

Oil and gas handling and transportation heat exchangers

- Oil heaters and coolers
- LPG coolers and heaters
- LPG condensers
- Heat exchangers for gas treatment facilities in gas terminals

Advantages of Plate & Shell Hx.



- + Compact
- + Low Fouling
- + Close Approach Temperature

- Low Pressure
- Low Temperature
- Gaskets



- + High Pressure
- + High Temperature
- + No Gaskets

- Large size / Weight
- High Fouling



- + High Pressure
- + High Temperature
- + No Gaskets
- + Compact
- + Low Fouling
- + Close Approach Temperatures

Advantages of Plate & Shell Hx.

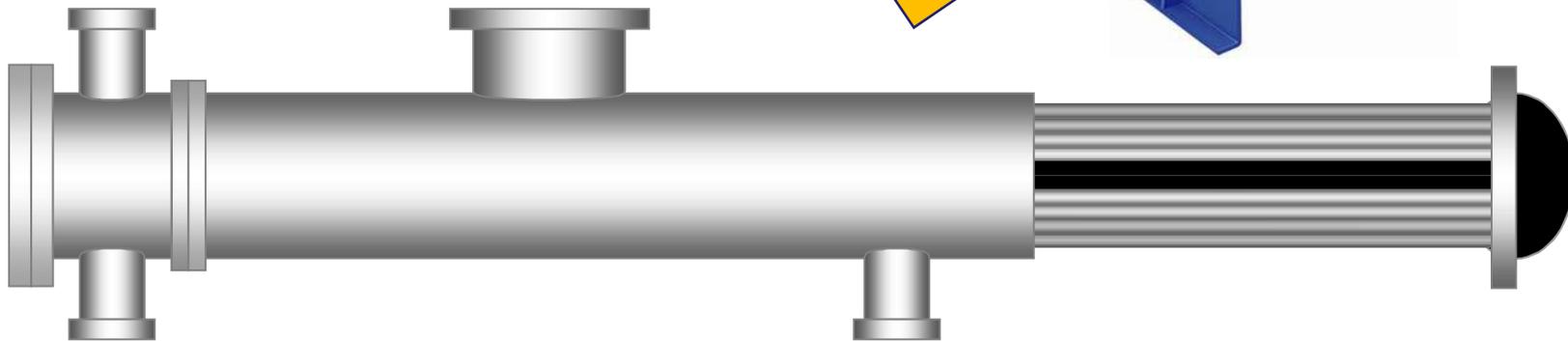
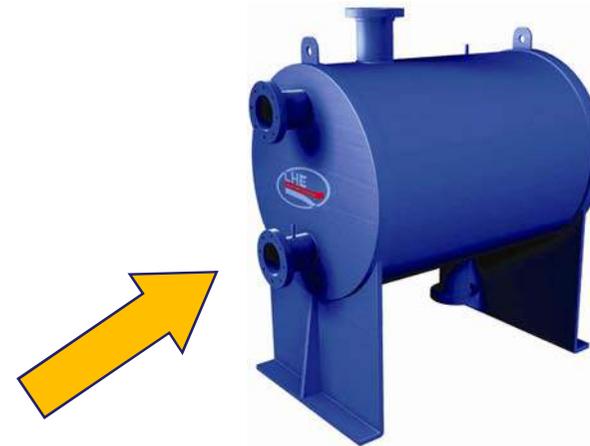
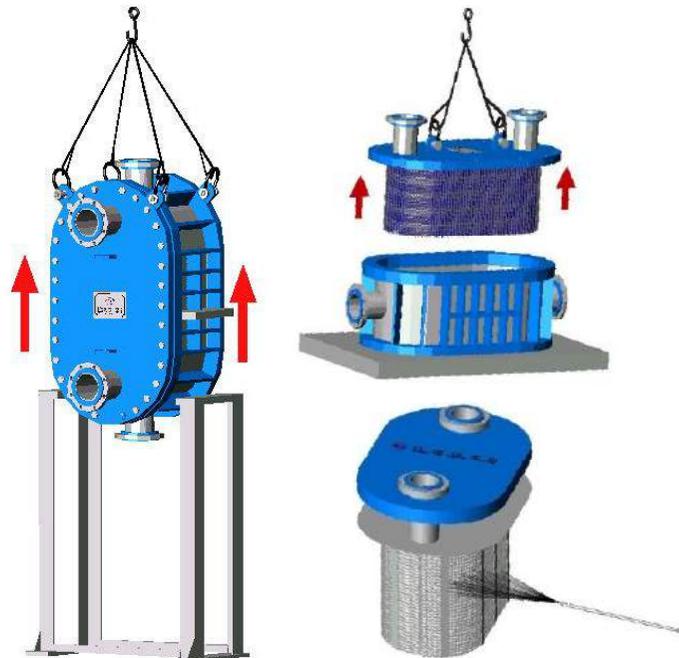


Plate & Shell Exchanger requires less space!

Advantages of Plate & Shell Hx.



Shell side

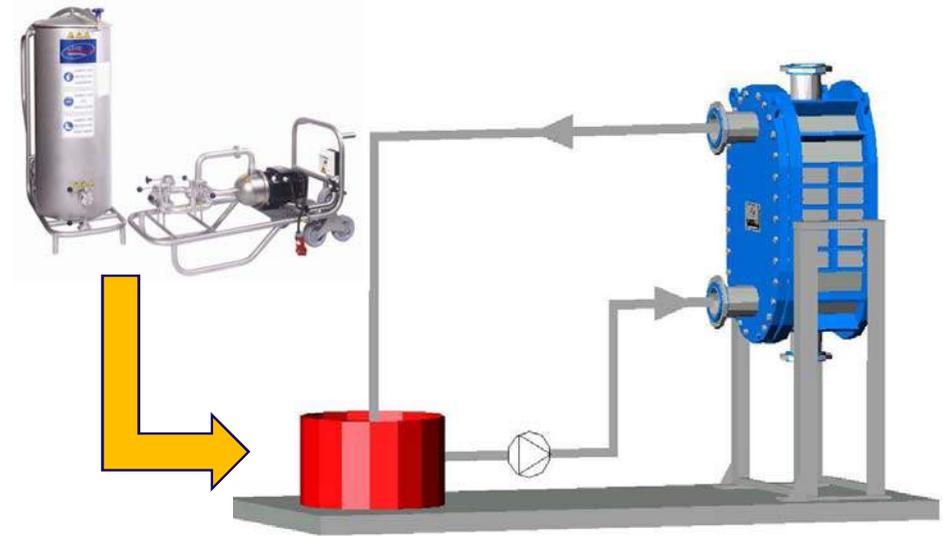


Plate side

- Easy Cleaning (quick repair)
- Gaskets : Using 1 packing gaskets for girth flanges

References & Customers



- Client : Korea District Heating Corp.
- S&T Heat Exchanger Replacement PJT
- Combined Heat and Power Generation



- Client : LG Chem. Daesan
- Water Heater (Duty : 4,418 MW)
- Model : OBPS-10B-1P1-144



References & Customers



- Client : Kolon Chem.
- Vent Condenser(Duty : 6 × 3000 kW)
- Model : OBPS-6C-1P1-160



- Client : Korea District Heating Corp.
- Steam Condenser (3 x 31 MW)
- Model : OBPS-10A1-1P1-246





7. Plate Coil Heat Exchanger

Plate Coil Heat Exchanger



Jacket Panel Heater

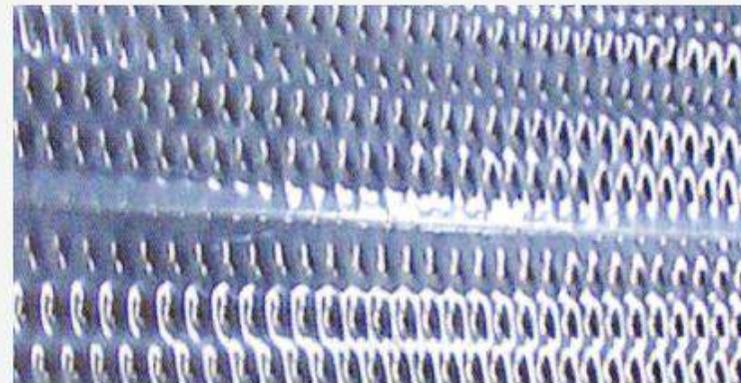


Crystallizer Heater & Cooler

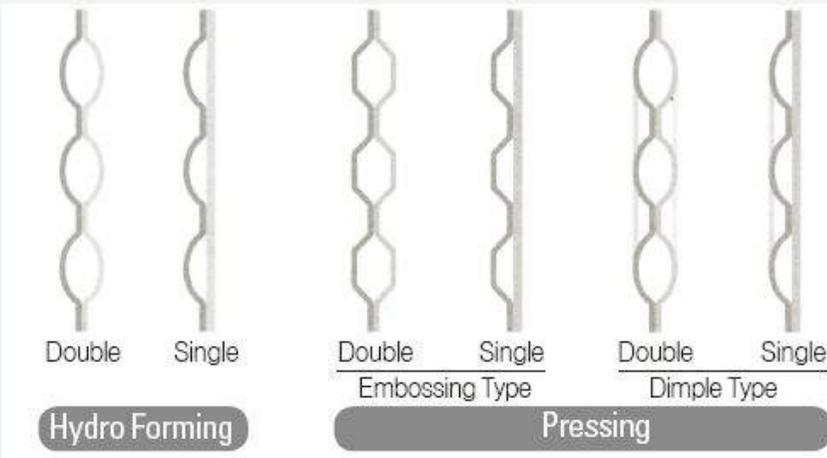
Plate Coil Heat Exchanger



■ Pressing Type Heating Panel



■ Hydro Forming Type Heating Panel



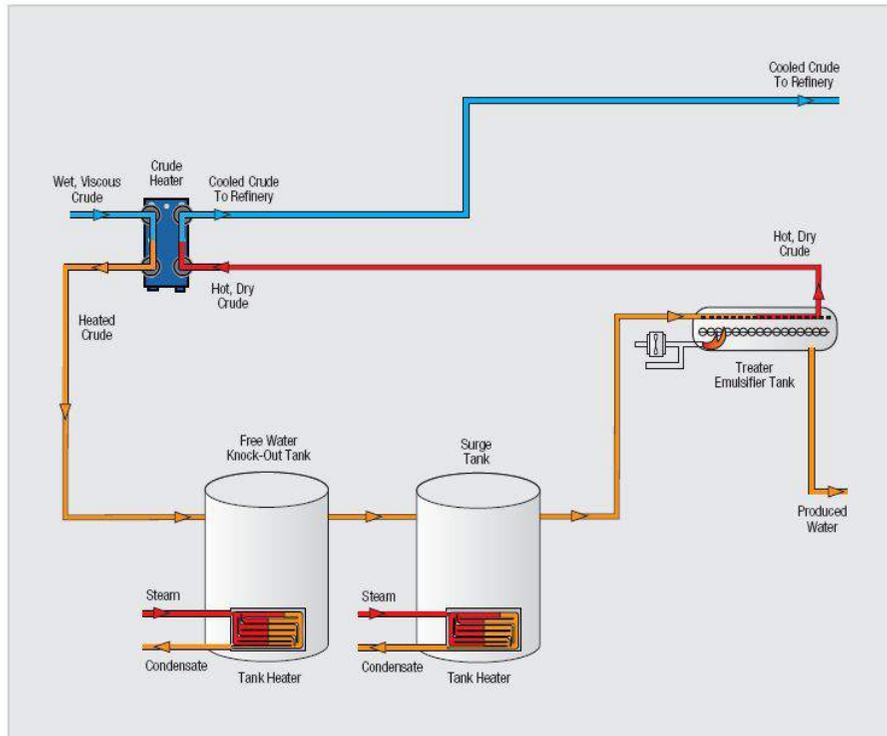
Double Type

As being embossed on both sides, easy to assemble independently or inside vessels.

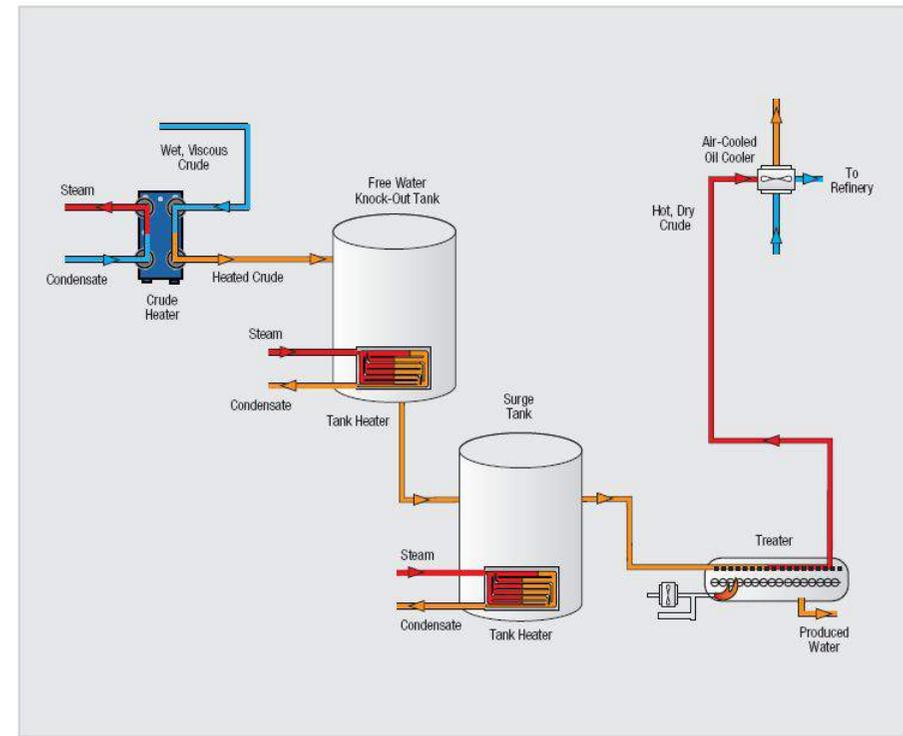
Single Type

As being embossed on one side, easy to assemble outside vessels.

Applications for Plate Coil Heat Exchanger

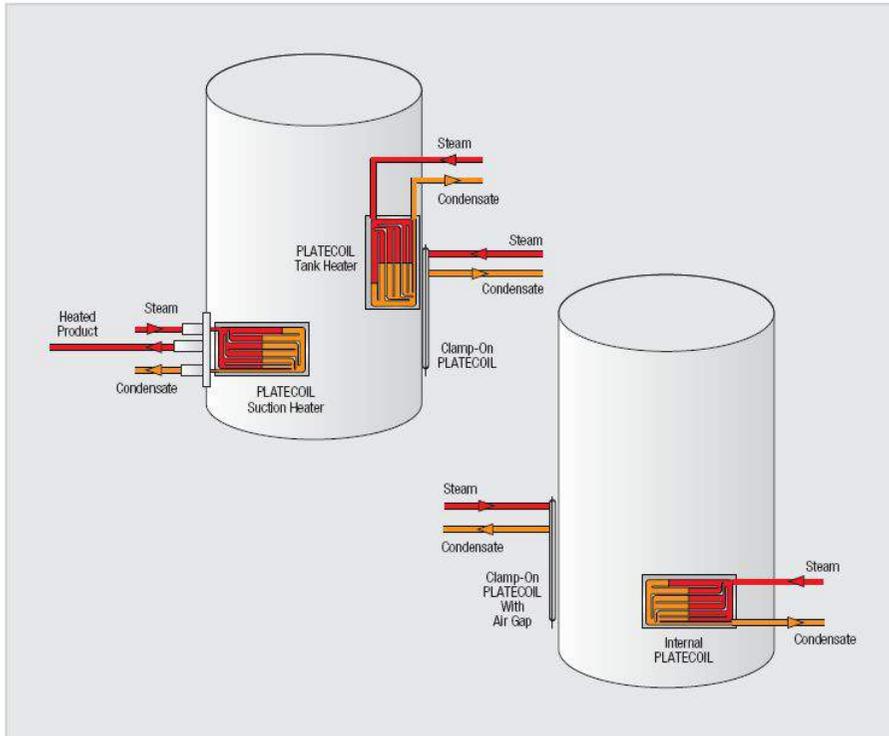


Heat Recovery From Dry Crude To Preheat Wet Crude

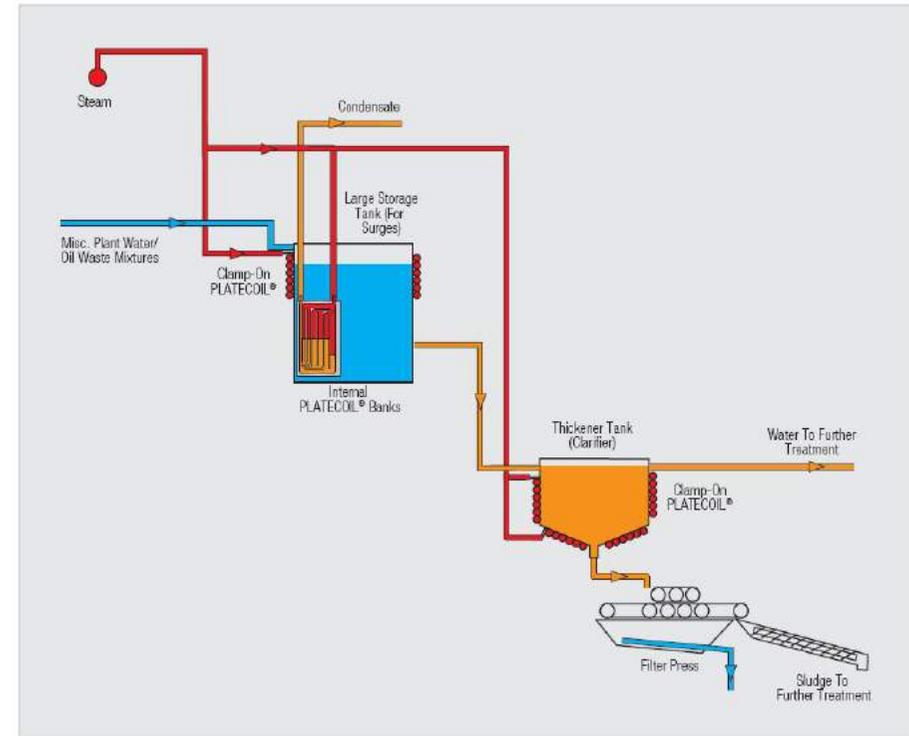


Heating Crude Oil To Remove Sand And Water

Applications for Plate Coil Heat Exchanger



Storage Tank Heating



Downstream Processing - Waste Liquids Heating

References & Customers

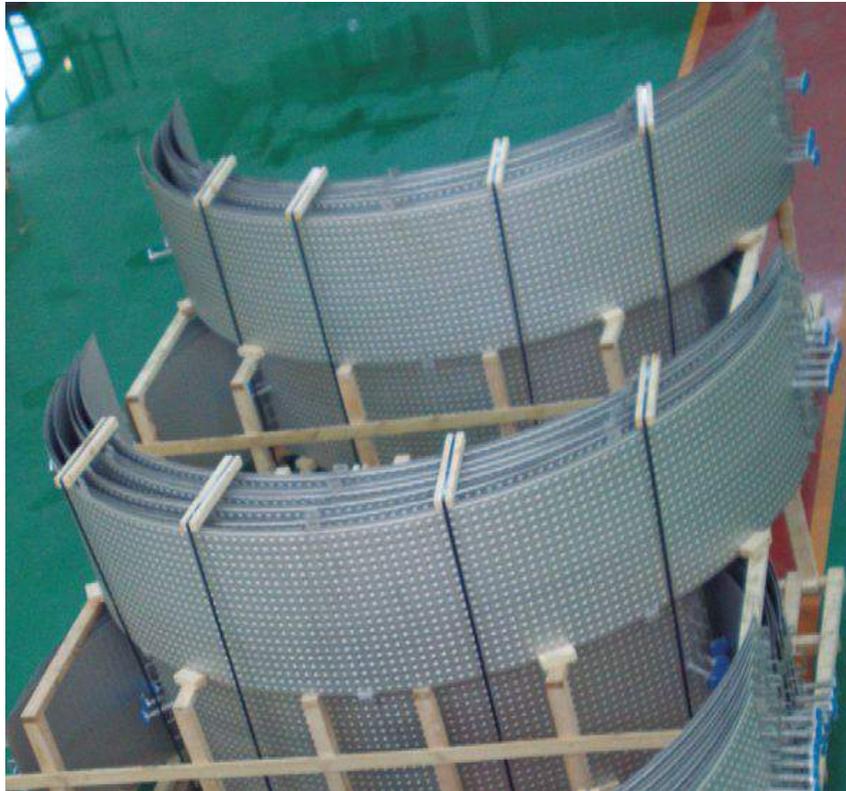


PVC Dryer Heating Panel
Client : LG Chemical, Korea



Panel Heater

References & Customers



Storage Tank Heater



Quenching Water Cooler



EPS Slurry Cooler

Please Test LHE !!



Innovative Solution Provider - LHE