

# PLATE HEAT EXCHANGER

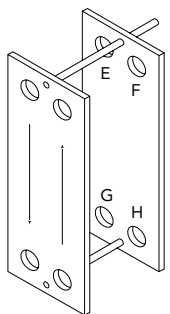
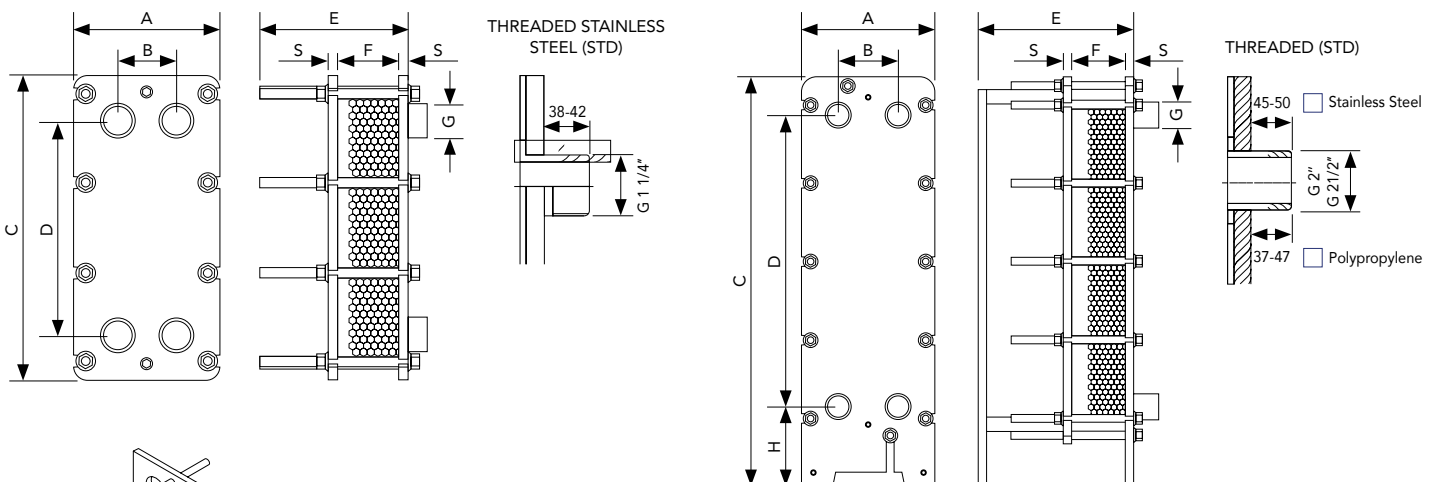
A cost-effective heat management solution for heating or cooling commercial pools. It's high efficiency saves energy, reduces costs and minimises environmental impact.



## FEATURES

- 19 models available, ranging from 30-kW to 819-kW (Other sizes available on request)
- High overall heat transfer coefficient
- Compact design gives maximum surface area to material volume without compromising mechanical robustness
- High performance with low hold-up volume
- Versatile, modular design
- Plate and gasket materials available to suit most fluid types
- Easy dismantling for rapid cleaning
- Short lead-time custom build service

## TECHNICAL DRAWINGS



Primary:  
**A → C**

Secondary:  
**D → B**

MATERIALS	
Frame	P 335 NH
Plates	Titanium
Gaskets	EPDM Max 150°C
Hot Side Connections	Stainless Steel
Cold Side Connections	Stainless Steel
Bolts N8 M12	A 193 B7

DESIGN DATA	
Temperature (°C)	-10/100
Pressure (Bar)	10
Test Pressure (Bar)	14.3

# SPECIFICATIONS

	PHE30-TI	PHE50-TI	PHE80-TI	PHE100-TI	PHE140-TI	PHE180-TI	PHE240-TI	PHE290-TI	PHE330-TI	PHE370-TI
<b>PROCESS DATA (HOT SIDE)</b>										
Temperature In (°C)	90	90	90	90	90	90	90	90	90	90
Temperature Out (°C)	70	70	70	70	70	70	70	70	70	70
Flow Rate (m³/h)	1.3	2.2	3.5	4.5	6.2	7.9	10.7	12.7	14.7	16.4
Pressure Drop (kPa)	11.8	17.71	20.17	22.11	25.54	24.50	25.04	26.62	25.55	27.18
<b>PROCESS DATA (COLD SIDE)</b>										
Temp In (°C)	20	20	20	20	20	20	20	20	20	20
Temp Out (°C)	35	35	35	35	35	35	35	35	35	35
Flow Rate (m³/h)	1.37	2.88	4.61	5.88	8.07	10.26	13.94	16.54	19.13	21.32
Pressure Drop (kPa)	23.08	34.62	39.37	42.19	48.65	46.48	47.13	49.91	47.51	50.36
Delta T Log. Mean (°C)	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46
Heat Exchanged (kW)	30	50	80	102	140	178	242	287	332	370
<b>CONSTRUCTION DATA</b>										
Heat Transfer Area (m²)	0.24	0.336	0.528	0.624	0.816	1.104	1.584	1.776	2.256	2.448
Oversurfacing (%)	230.23	213.69	218.89	121.48	118.57	126.71	133.98	128.42	139.15	136.47
Overall K Service (w/m² °C)	2381.54	2835.17	2886.72	3114.33	3268.79	3071.85	2910.78	3078.84	2803.80	2879.64
Fouling F (m² °C/kW)	0	0	0	0	0	0	0	0	0	0
Plate Thickness (mm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Overall K Clean (w/m² °C)	7864.68	8893.54	9205.40	6897.51	7144.68	6964.29	6810.72	7032.83	6705.26	6809.54
Weight Empty (kg)	23.65	24.04	24.82	29.00	30.00	32.00	35.00	36.00	39.00	40.00
Weight Full (kg)	24.26	24.85	26.04	31.00	32.00	34.00	37.00	38.00	41.00	42.00
Volume Hot Side (L)	0.306	0.408	0.612	0.714	0.918	1.224	1.734	1.938	2.448	2.652
Volume Cold Side (L)	0.306	0.408	0.612	0.714	0.918	1.224	1.734	1.938	2.448	2.652
No. Series Pass Hot Side	1	1	1	1	1	1	1	1	1	1
No. Series Pass Cold Side	1	1	1	1	1	1	1	1	1	1
No. Parallel Passes Hot Side	1	1	1	7	9	12	17	19	24	26
No. Parallel Passes Cold Side	1	1	1	7	9	12	17	19	24	26
<b>DIMENSIONS (mm)</b>										
A (Width)	204	204	204	204	204	204	204	204	204	204
B (Connection Interaxis)	86	86	86	86	86	86	86	86	86	86
C (Height)	490	490	490	490	490	490	490	490	490	490
D (Connection Interaxis)	381	381	381	381	381	381	381	381	381	381
E (Length For Std PN)	91	91	91	116	116	141	191	191	241	291
F (Tightening)	18.55	23.85	34.45	39.75	50.35	66.25	92.75	103.35	129.85	140.45
G (Connection Size)	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32
H (Height Connections)	0	0	0	0	0	0	0	0	0	0
S (Frames Plates THK)	14/12	14/12	14/12	14/12	14/12	14/12	14/12	14/12	14/12	14/12
	PHE410-TI	PHE450-TI	PHE500-TI	PHE550-TI	PHE610-TI	PHE670-TI	PHE730-TI	PHE780-TI	PHE820-TI	
<b>PROCESS DATA (HOT SIDE)</b>										
Temperature In (°C)	90	90	90	90	90	90	90	90	90	
Temperature Out (°C)	70	70	70	70	70	70	70	70	70	
Flow Rate (m³/h)	18.3	19.7	22.3	24.2	27.0	29.8	32.5	34.4	36.3	
Pressure Drop (kPa)	29.57	23.28	21.45	21.85	22.51	23.26	22.72	23.21	23.73	
<b>PROCESS DATA (COLD SIDE)</b>										
Temp In (°C)	20	20	20	20	20	20	20	20	20	
Temp Out (°C)	35	35	35	35	35	35	35	35	35	
Flow Rate (m³/h)	23.86	25.70	29.04	31.46	35.09	38.72	42.35	44.77	47.19	
Pressure Drop (kPa)	54.59	50.06	45.73	46.43	47.64	48.88	47.53	48.36	49.24	
Delta T Log. Mean (°C)	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46	
Heat Exchanged (kW)	414	446	504	546	609	672	735	777	819	
<b>CONSTRUCTION DATA</b>										
Heat Transfer Area (m²)	2.640	2.873	3.887	4.225	4.563	5.239	5.577	5.915	6.253	
Oversurfacing (%)	132.69	95.43	114.26	114.98	112.11	116.59	114.10	114.62	115.09	
Overall K Service (w/m² °C)	2987.76	2957.66	2470.38	2462.15	2542.82	2443.82	2510.93	2502.74	2495.42	
Fouling F (m² °C/kW)	0	0	0	0	0	0	0	0	0	
Plate Thickness (mm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Overall K Clean (w/m² °C)	6952.19	5780.09	5293.03	5293.03	5393.57	5293.03	5375.97	5371.40	5367.30	
Weight Empty (kg)	41.00	150.00	155.00	156.00	158.00	161.00	163.00	164.00	166.00	
Weight Full (kg)	43.00	154.00	159.00	160.00	162.00	165.00	167.00	168.00	170.00	
Volume Hot Side (L)	2.856	3.825	5.100	5.525	5.950	6.800	7.225	7.650	8.075	
Volume Cold Side (L)	2.856	3.825	5.100	5.525	5.950	6.800	7.225	7.650	8.075	
No. Series Pass Hot Side	1	1	1	1	1	1	1	1	1	
No. Series Pass Cold Side	1	1	1	1	1	1	1	1	1	
No. Parallel Passes Hot Side	28	9	12	13	14	16	17	18	19	
No. Parallel Passes Cold Side	28	9	12	13	14	16	17	18	19	
<b>DIMENSIONS (mm)</b>										
A (Width)	204	312	312	312	312	312	312	312	312	
B (Connection Interaxis)	86	140	140	140	140	140	140	140	140	
C (Height)	490	963	963	963	963	963	963	963	963	
D (Connection Interaxis)	381	690	690	690	690	690	690	690	690	
E (Length For Std PN)	291	447	447	447	447	447	447	447	447	
F (Tightening)	151.05	66.5	87.5	94.5	101.5	115.5	122.5	129.5	136.5	
G (Connection Size)	DN 32	DN 65	DN 65	DN 65	DN 65	DN 65	DN 65	DN 65	DN 65	
H (Height Connections)	0	185	185	185	185	185	185	185	185	
S (Frames Plates THK)	14/12	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	