

Industrial Brazed Plate Heat Exchangers

Get More From Your Industrial Processes

When it comes to brazed plate heat exchangers, GEA PHE Systems offers the largest variety with a wide range of applications for Industrial Processes. We produce a full line of brazed plate heat exchangers for gas to fluid, gas heat recovery and fluid to fluid process, as well as oil coolers for marine, engine, transmission and hydraulic applications, plus refrigeration chillers (evaporators), condensers and compressed gas driers. Construction materials include 316 Stainless Steel plates, Molybdenum grade Stainless Steel plates, Copper brazed or Nickel-Chromium brazed. Single and Double Wall Vented constructions are available.



Robust Product Design

GEA PHE Systems special Industrial Brazed Plate Heat Exchanger products have a number of embedded design features optimized for heavy duty. The heavier plate material combined with the Rolled Edge Lock System™ and contact points, extended and larger in design, result in consistent and stronger braze joints, thus guaranteeing high heat exchanger strength, leak-proof operation and long life.

Compact

Low profile and short length combine to produce a versatile yet rugged heat exchanger able to fit easily into tight enclosures and OEM packages.

High Performance

High effectiveness is possible with optimized balance between heat transfer and pressure drop. Corrugated plate design provides full heat transfer surface utilization, low pressure drop and low fouling.

Reliability

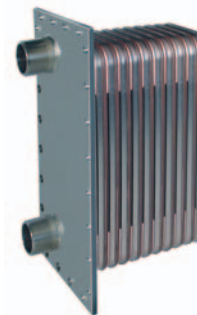
Our Industrial Product Series has been performance tested by a nationally recognized laboratory. This means that predicted performance by GEA PHE Systems is reliable, accurate, and meets your design requirements.



Process Equipment Division
GEA PHE Systems NA, Inc.

GP Series – Braze Plate Heat Exchangers

Gas to Fluid



For OEM packages and special processes, GEA PHE Systems offers the most advanced and cost effective heat exchanger for gas heat recovery applications. High performance and very compact, the GP Series can be mounted in customer's special ducts and pressure vessels for a wide range of applications. Each GP Series product uses 316 Stainless steel plates & fins and is available in Nickel-Chrome brazed (GPN) or Copper brazed (GPC), depending upon the gas inlet temperature and gas content. GPN models are rated at 300psig on the liquid side. GPC models are rated for 450psig on the liquid side. All GP Series models have optional ASME, UL, Canadian CRN and European PED (CE) code approvals.

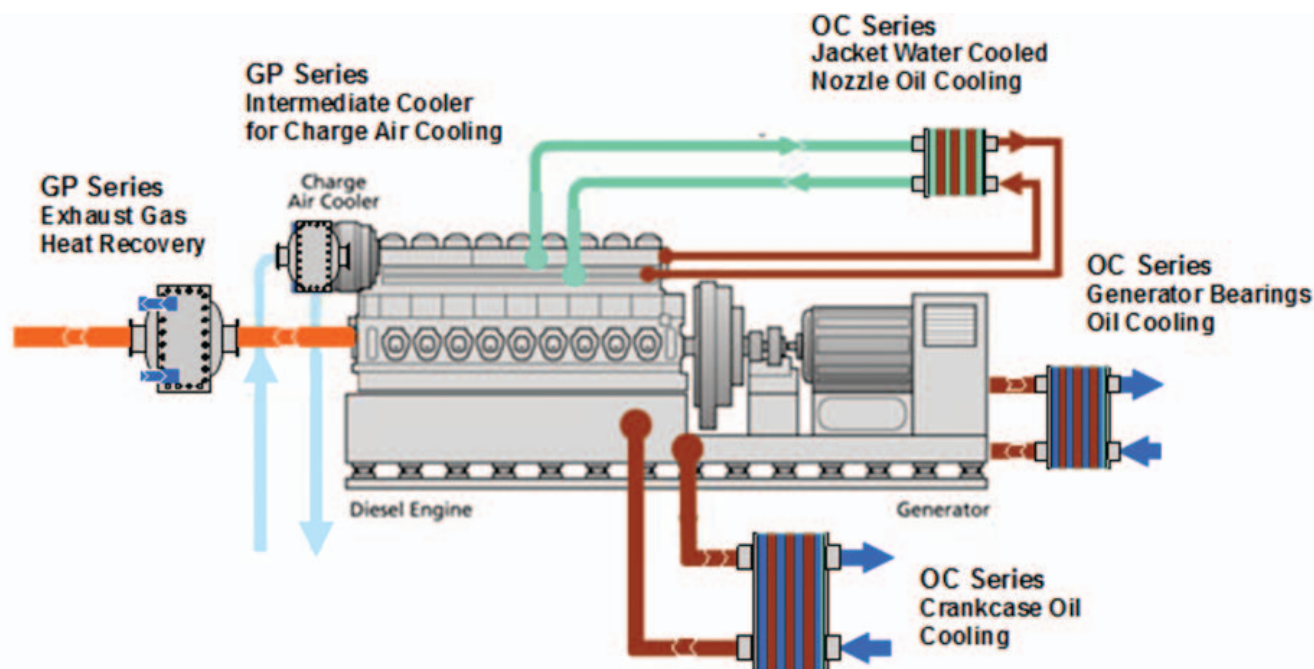
Quick Selection Guide – (High Temperature Exhaust Gas - up to 2 MBH

Actual Flow		GAS SIDE				CAPACITY		FLUID (WATER) SIDE				SELECTION GP Series Size	DIMENSIONS			
		Standard Flow	Pressure Drop					Flow	Pressure Drop				Net Weight	Depth		
aCFM	aM ³ /min	sCFM	nM ³ /min	in. WG	Pa	Recovered Water	H	gpm	lpm	psi	kPa		lbs	kg	in	mm
100	2.8	32	0.9	0.1	25	9.1	30.9	3.1	11.7	0.6	4.1	GPN5x12-18	30	14	5.5	139
200	5.7	65	1.8	0.1	25	18.6	62.8	6.3	23.9	0.8	5.5	GPN5x12-38	68	31	11.7	298
200	5.7	65	1.8	0.7	174	18.6	62.8	6.3	23.9	0.6	4.1	GPN10X20L-12	118	54	4.0	102
300	8.5	97	2.7	1.2	298	27.7	93.8	9.4	35.6	1.3	8.9	GPN10X20L-12	118	54	4.0	102
400	11.3	130	3.7	0.9	224	37.1	127	12.7	48.1	1.0	6.9	GPN10X20L-18	161	73	5.9	149
500	14.2	162	4.6	1.3	323	46.2	158	15.8	59.9	1.5	10.3	GPN10X20L-18	161	73	5.9	149
750	21.2	243	6.9	1.5	373	69.3	236	23.7	89.8	1.9	13.1	GPN10X20L-24	204	93	7.8	197
1000	28.3	324	9.2	1.6	398	92.5	316	31.7	120	2.1	14.4	GPN10X20L-30	247	112	9.6	245
1500	42.5	486	13.8	1.5	373	139	473	47.4	180	2.1	14.4	GPN10X20L-46	332	151	14.6	372
2000	56.6	648	18.3	1.8	447	185	631	63.2	239	2.9	19.9	GPN10X20L-56	418	190	17.8	451
2500	70.8	810	22.9	1.8	447	231	788	79.0	299	3.1	21.3	GPN10X20L-66	537	244	0.9	530
3000	84.9	972	27.5	1.7	423	277	948	95.0	360	3.4	23.4	GPN10X20L-82	623	283	25.9	657
3500	99.1	1,134	32.1	4.3	1,069	324	1,104	111	420	1.3	8.9	2x GPN10X20L-82	1246	566	51.8	1315
4000	113	1,296	36.7	5.3	1,318	370	1,263	127	481	1.6	11.0	2x GPN10X20L-82	1246	566	51.8	1315
4500	127	1,458	41.3	6.3	1,566	416	1,422	143	542	2.0	13.8	2x GPN10X20L-82	1246	566	51.8	1315
5000	142	1,620	45.8	7.4	1,840	462	1,581	159	602	2.5	17.2	2x GPN10X20L-82	1246	566	51.8	1315
5500	156	1,782	50.4	8.5	2,113	509	1,736	174	659	2.9	19.9	2x GPN10X20L-82	1246	566	51.8	1315

Gas inlet 1170F (632C), outlet 270F (132C). Water inlet 180F (82C), outlet 200F (93C).

'2x' = two GPN mounted in Series (Gas Stream).

Illustration of Capabilities



OC Series – Braze Plate Heat Exchangers

Oil to Fluid



Extremely reliable and field proven, GEA PHE Systems OC Series are very cost efficient oil coolers for all industrial applications. Supplied with customized oil connections of your chosen type and size.

Typically, fluid connections on front, oil connections on back. Equipped with 1/2" oil drain on front, stud bolts for easy mounting and optional floor mount brackets. Copper brazed 316L Stainless steel plates. OC Series models are rated for 450psig. All OC Series models are UL listed and have optional ASME, Canadian CRN and European PED (CE) code approvals.

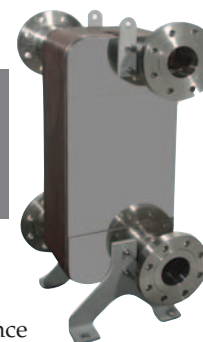
Quick Selection Guide – (up to 360 gpm and 3 MBH)

OIL SIDE				CAPACITY		FLUID (WATER) SIDE				SELECTION			DIMENSIONS			
Flow Rate		Pressure Drop				Flow Rate		Pressure Drop					Net Weight		Depth	
gpm	lpm	psi	kPa	Btu/h	kW	gpm	lpm	psi	kPa	OC Series	gal	liter	lbs	kg	in	mm
										Size						
10	38	23.0	159	79,000	23	5	19	2.9	20	OC5x20-12	0.2	0.6	11	5	1.3	32
20	76	26.2	181	152,000	45	10	38	4.2	29	OC5x20-20	0.3	1.1	15	7	2.0	51
40	152	25.2	174	312,000	91	20	76	4.4	30	OC5x20-40	0.6	2.3	27	12	3.9	98
60	227	25.9	179	471,000	138	30	114	4.7	32	OC5x20-60	0.9	3.5	38	17	5.7	146
80	303	26.6	183	635,000	186	40	152	4.9	34	OC5x20-82	1.3	4.8	50	23	7.8	198
100	379	26.7	184	817,500	240	50	190	5.0	34	OC5x20-110	1.7	6.5	66	30	10.4	264
116	440	26.2	181	1,000,000	293	58	220	5.0	34	OC5x20-140	2.2	8.3	83	38	13.2	335
80	303	24.6	170	625,000	183	40	152	4.2	29	OC10x20-40	0.6	2.3	52	24	3.9	98
120	455	24.5	169	948,000	278	60	227	4.3	30	OC10x20-60	0.9	3.5	73	33	5.7	146
160	606	25.0	172	1,260,000	369	80	303	4.5	31	OC10x20-80	1.2	4.7	93	42	7.6	193
200	758	25.7	177	1,580,000	463	100	379	4.7	32	OC10x20-100	1.6	5.9	114	52	9.5	240
240	910	26.7	184	1,915,000	561	120	455	5.0	34	OC10x20-120	1.9	7.1	134	61	11.3	287
280	1061	26.4	182	2,289,000	671	140	531	5.0	34	OC10x20-148	2.3	8.8	163	74	13.9	353
320	1213	26.5	183	2,679,000	785	160	606	5.0	34	OC10x20-178	2.8	10.6	193	88	16.7	424
360	1364	26.1	180	3,134,000	918	180	682	5.0	34	OC10x20-218	3.4	13.0	234	106	20.4	519

Design conditions for SAE30 outlet 140F, Water inlet 95F, Flow oil/water 2:1.

FP Series – Braze Plate Heat Exchangers

Fluid to Fluid



GEA PHE Systems FP Series is designed specifically for Industrial Processes, Boiler applications, Hydronic heating, Fluid to Fluid applications, new construction or Shell&Tube replacements and other uses where a reliable, efficient and compact fluid to fluid heat transfer is required. The FP Series is rugged and reliable, yet very compact, representing the latest technology in high performance heat exchangers with low fouling heat transfer surfaces. Copper brazed 316L Stainless steel plates. Flange connections and floor mount brackets are standard. Other connections are available upon request. All our products are 100% factory tested before shipment. All FP Series models are UL listed and have optional ASME, Canadian CRN and European PED (CE) code approvals.

Quick Selection Guide – (up to 440 gpm and 4 MBH)

GLYCOL SIDE				CAPACITY		FLUID (WATER) SIDE				SELECTION		DIMENSIONS				
Flow Rate		Pressure Drop				Flow Rate		Pressure Drop				FP Series		Volume		Net Weight
gpm	lpm	psi	kPa	Btu/h	kW	gpm	lpm	psi	kPa	Size	gal	liter	lbs	kg	in	mm
47.7	181	2.1	14	584,500	171	60	227	2.5	17	FP15x34-50 (3" FLG)	4.0	15.1	227	103	5.6	142
65.3	247	3.8	26	779,300	228	80	303	4.3	30	FP15x34-50 (3" F LG)	4.0	15.1	227	103	5.6	142
98.3	373	4.2	29	1,169,000	343	120	455	5.0	34	FP15x34-70 (3" FLG)	5.7	21.5	283	129	7.4	188
130.1	493	3.7	26	1,558,600	457	160	606	4.4	30	FP15x34-100 (4" FLG)	8.2	31.0	367	167	10.2	259
163.2	619	4.0	28	1,948,000	571	200	758	4.9	34	FP15x34-120 (4" FLG)	9.8	37.1	423	192	12.1	307
195.1	739	3.7	26	2,338,000	685	240	910	4.6	32	FP15x34-150 (4" FLG)	12.2	46.2	507	230	14.9	378
227.8	863	4.0	28	2,727,700	799	280	1061	4.9	34	FP15x34-170 (4" FLG)	13.8	52.2	563	256	16.7	424
259.7	984	3.9	27	3,117,300	914	320	1213	4.8	33	FP15x34-200 (4" FLG)	16.3	61.7	647	294	19.5	495
290.6	1101	3.5	24	3,507,000	1028	360	1364	4.5	31	FP15x34-240 (4" FLG)	19.5	73.8	759	345	23.2	589
323.5	1226	3.8	26	3,896,000	1142	400	1516	4.8	33	FP15x34-260 (4" FLG)	21.2	80.3	815	370	25.1	638
353.9	1341	3.6	25	4,286,300	1256	440	1668	4.6	32	FP15x34-300 (4" FLG)	24.4	92.4	927	421	28.8	732

Design conditions for EG (50%) inlet 200F, Water inlet/outlet 170F/190F.

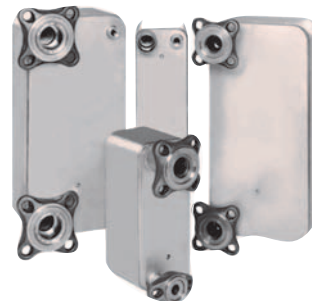
GEA PHE Systems – Industrial Brazen Plate Heat Exchangers

Other Product Series

MPN Series

MPN Series is designed specifically for multi-purpose Steam, Process and Swimming Pool applications, where chlorine, salt, biological elements, low acid concentrations or chemical treatments are present. The MPN Series is rugged, yet very compact, representing the latest technology in heavy duty plate heat exchangers. The Nickel-Chrome brazed, high Molybdenum grade stainless steel plates offer significant improvements in reliability over traditional stainless steel materials with high efficiency heat transfer for applications up to 60 gpm per unit.

All MPN Series models have male pipe thread connections and mounting stud bolts. Other connections are available upon request. MPN Series models are available for 300psi rating.



MCN Series - Industrial Refrigeration Condensers

Designed for brackish water, chlorinated and swimming pool water or fluids with corrosion potential or micro-biological elements, MCN models are compact work horses for Condenser applications up to 80 tons. All models are fabricated from Nickel-Chrome brazed high Molybdenum grade stainless steel with stainless steel sweat connections on the refrigerant side (front) and female pipe thread connections on the fluid side (rear). A zinc anode and anode fitting are included.



SEP Series - Gas Dryer With Integral Separator

Designed as a critical component in Refrigerated Air Dryers and Gas Drying systems, the SEP Series sets the standards for performance, versatility and small size. We have taken three of the essential components of a gas drying system - Dryer, Separator and Recuperator - and combined them into one brazed product. Based on years of heat exchanger experience, and using field proven designs of GEA PHE Systems' advanced industrial heat transfer plates, the SEP Series is a work horse for Air Dryers and special gas drying systems up to 2,000 sCFM (3400 Nm³/hr).



DW Series - Double Wall Vented

GEA PHE Systems DW Series represents the most advanced technology to get the job done where local and national plumbing codes and health codes require, or where extra safety to prevent cross-contamination of fluids is needed, Double Wall Vented is the perfect choice. The DW Series is a hybrid plate heat exchanger that has significant advantages over shell&tube and other methods of double wall vented designs, where size, weight, performance and cost are important issues. Double Separation in Food Process glycol to water, make-up water, special fluids and gases are all typical industrial process applications for heating and cooling with the DW Series.

Contact details at:

www.geaphena.com

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