

GBM Series – Brazed Plate Heat Exchangers

Designed to work under pressure

PHE Systems' GBM series of brazed plate heat exchangers are precision made right down to the smallest detail. Using advanced CAD/CAM technology we design and produce the plates and pressing tools ourselves. Plates are pressed and stacked on automated press-lines and computer controlled furnaces closely monitor the brazing process. All units are subjected to rigorous pressure and leak testing before leaving the factory and we aim for shortest delivery times on all orders.

Our brazed plate heat exchangers are used in a variety of applications:

- heating and hot water production
- radiant floor heating
- snow melting equipment
- refrigerant evaporators
- sub-coolers and condensers
- oil coolers plus many other refrigerant-to-liquid, liquid-to-liquid and air-to-liquid applications. In short – they Are precision-made to work under pressure



Features and benefits



Safety Chamber™

Our patented Safety Chamber™ absorbs the stress from thermal shock and pressure pulsations that would damage other brazed plate heat exchangers. When overloaded, encapsulated contact points around the ports take up the forces and stretch, protecting against internal leaks and premature failure. A PHE Systems exclusive safety feature.



Expansion Metering Distributor™

PHE Systems provides a well proven direct Expansion Metering Distributor™ essential for evaporator, heat pump and subcooler applications. The distributor provides precise metering of refrigerant to the channel plates over a wide range of operating conditions while assuring complete evaporation and optimum oil return. Our solutions are factory integrated into the stainless steel heat-transfer plate pack for superior performance.



Robust Plate Design

This special plate design by PHE Systems, the Rolled Edge Lock System™, guarantees a consistent braze joint at the plate overlap and results in a stronger and more leak-proof heat exchanger. The contact points, extended and larger in design, provide stronger braze joints between the plates, thus guaranteeing high heat exchanger strength.



Full-Flow System™

Originally developed by PHE Systems, every new plate design is now equipped with the Full-Flow System™. This unique flow system insures continuous flow around the port area to prevent freezing and also feeds the working fluid equally over the channel to guarantee maximum use of the heat transfer area. Additional protection and performance from PHE Systems.

GBM Series: Technical data

Plate material: Stainless steel AISI 316L (1.4401)

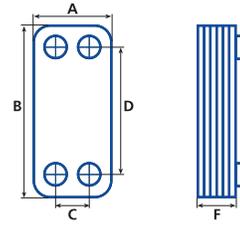
Brazing material: Copper

Performance: up to 450 psig at 350°F (31 bar at 176°C)

Third party approval: UL listed

optional ASME, CRN, CSA, PED (CE), KHK, others on request

Features:



Model	STANDARD DIMENSIONS									
	A		B		C		D		F	
	in	mm	in	mm	in	mm	in	mm	in	mm
GBM 108	3.3	84	7.8	198	1.5	39	6.0	153	0.31 + (0.093xN)	7.8+(2.36xN)
GBM 200	3.4	86	8.9	226	1.7	43	7.2	183	0.40 + (0.087xN)	10.2+(2.21xN)
GBM 220	3.4	86	12.7	323	1.7	43	11.0	279	0.40 + (0.087xN)	10.2+(2.21xN)
GBM 240	3.4	86	18.0	457	1.7	43	16.3	414	0.40 + (0.087xN)	10.2+(2.21xN)
GBM 400	5.1	130	13.3	338	2.9	74	11.1	282	0.40 + (0.088xN)	10.2+(2.23xN)
GBM 412	4.9	124	12.2	310	2.7	69	10.0	253	0.36 + (0.093xN)	9.1+(2.36xN)
GBM 500	5.1	130	21.0	533	2.9	74	18.8	478	0.40 + (0.088xN)	10.2+(2.23xN)
GBM 520	5.0	127	20.3	516	2.8	72	18.1	460	0.36 + (0.093xN)	9.1+(2.36xN)
GBM 720	9.8	249	20.3	516	6.5	165	17.0	432	0.36 + (0.093xN)	9.1+(2.36xN)
GBM 757	11.1	282	21.4	544	7.8	198	18.1	460	0.45 + (0.104xN)	11.4+(2.36xN)
GBM 760	10.1	257	20.4	519	5.4	138	16.4	416	0.53 + (0.140xN)	13.5+(3.45xN)
GBM 910	12.3	313	30.6	778	8.9	225	27.2	690	0.43 + (0.096xN)	11.0+(2.46xN)
GBM 1000	15.2	386	34.5	875	9.3	237	28.5	723	0.91 + (0.093xN)	23.0+(2.36xN)

Model	TECHNICAL DATA						
	Net Weight		Volume		Max Std Flow Rate		Max
	lbs	kg	gal/ch	l/ch	gpm	m³/h	Plates
GBM 108	1.20 + (0.14xN)	0.54+(0.06xN)	0.007	0.025	15	4	50
GBM 200	1.74 + (0.12xN)	0.79+(0.05xN)	0.008	0.030	25	6	50
GBM 220	2.34 + (0.18xN)	1.06+(0.08xN)	0.012	0.046	25	6	50
GBM 240	3.16 + (0.26xN)	1.43+(0.12xN)	0.019	0.070	25	6	50
GBM 400	3.56 + (0.30xN)	1.61+(0.14xN)	0.017	0.065	70	20	120
GBM 412	2.62 + (0.32xN)	1.19+(0.15xN)	0.017	0.065	70	20	120
GBM 500	6.00 + (0.48xN)	2.72+(0.22xN)	0.026	0.100	70	20	120
GBM 520	4.18 + (0.56xN)	1.90+(0.25xN)	0.026	0.100	70	20	120
GBM 720	11.60 + (1.02xN)	5.26+(0.46xN)	0.061	0.230	200	50	220
GBM 757	29.04 + (1.10xN)	13.17+(0.50xN)	0.073	0.276	200	50	200
GBM 760	27.7 + (0.88xN)	12.56+(0.40xN)	0.061	0.411	300	70	200
GBM 910	34.3 + (1.90xN)	15.6+(0.86xN)	0.105	0.399	260	60	200
GBM 1000	87.10 + (2.80xN)	39.50 + (1.25xN)	0.159	0.600	600	140	360

Notes: N = number of plates
ch = channel

Mass flow rate is based on water 16ft/s (5m/s)

The specifications contained in this printing are intended only to serve the nonbinding description of our products and services are not subject to guarantee. Binding specifications, especially pertaining to performance data and suitability for specific operating purposes, are dependent upon the individual circumstances at the operation location and can, therefore, only be made in terms of precise requests.

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