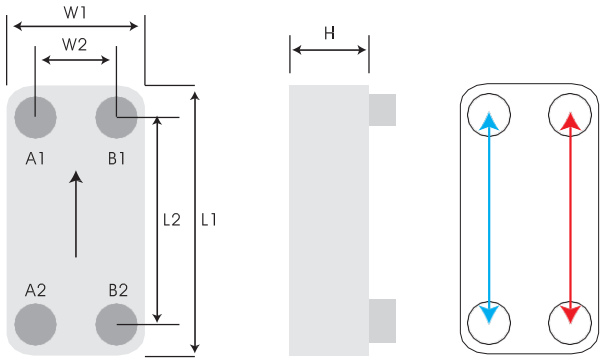
HTGKC Series- CO_2 Super High Pressure Brazed Plate Heat Exchanger

The HTGKC series is a patented solution specially designed for Gas coolers, Condensers, Evaporators and Economizers in R744 (CO_2) Heat pumps and Refrigeration Systems. Different designs with a max. working pressure of 2030.5 psi, 1450.4 psi and 1015.3 psi are available for Supercritical, Transcritical and Subcritical CO_2 heating and cooling systems.

Compact size, outstanding heat transfer performance and low pressure drop are the three key features. The quality and the durability of the HTGKC series is proven by thorough inspection, achieving a burst test pressure up to 2074 psi and cycle test over 100,000 cycles.

Brazing Material		Copper		
Model HTGKC-		020,040 095,200	021,041 096,201	022,042 097,202
		(A1,A2/B1,B2)		
Max. Working Pressure	(psi)	1015.3/435.1*	1450.4/435.1*	2030.5/435.1*
Min. Test Pressure	(psi)	1450.4/623.7*	2074.0/623.7*	2900.8/623.7*
Max. Working Temperature(°F)		392°F		



* For higher working pressure request on B1/B2, please contact **HTG** representative.

Model	L1 (inch)	L2 (inch)	W1 (inch)	W2 (inch)	H Thickness (inch)	Weight*(kg) (Without Connection)	Heat Transfer Area/ plate (ft^2)	Total Heat Transfer Area (ft^2)	Volume/ Channel (gal)	Total Volume (gal)
HTGKC020	7.52	6.06	3.03	1.57	0.374+0.043*N	2.469+0.093*N	0.119	(N-2)*0.119	0.002	(N-1)*0.002
HTGKC040	12.36	10.83	2.99	1.57	0.512+0.079*N	3.836+0.320*N	0.208	(N-2)*0.208	0.008	(N-1)*0.008
HTGKC095	20.63	18.35	4.25	1.97	0.520+0.085*N	12.170+0.705*N	0.511	(N-2)*0.511	0.019	(N-1)*0.019
HTGKC200	24.25	20.43	7.44	3.62	0.551+0.085*N	27.315+1.329*N	1.023	(N-2)*1.023	0.041	(N-1)*0.041

Model	L1 (inch)	L2 (inch)	W1 (inch)	W2 (inch)	H Thickness (inch)	Weight*(kg) (Without Connection)	Heat Transfer Area/ plate (ft^2)	Total Heat Transfer Area (ft^2)	Volume/ Channel (gal)	Total Volume (gal)
HTGKC021	7.52	6.06	3.03	1.57	0.374+0.043*N	2.513+0.093*N	0.119	(N-2)*0.119	0.002	(N-1)*0.002
HTGKC041	12.36	10.83	2.99	1.57	0.512+0.079*N	4.034+0.320*N	0.208	(N-2)*0.208	0.008	(N-1)*0.008
HTGKC096	20.63	18.35	4.25	1.97	0.520+0.085*N	12.522+0.705*N	0.511	(N-2)*0.511	0.019	(N-1)*0.019
HTGKC201	24.25	20.43	7.44	3.62	0.551+0.085*N	27.690+1.391*N	1.023	(N-2)*1.023	0.041	(N-1)*0.041

Model	L1 (inch)	L2 (inch)	W1 (inch)	W2 (inch)	H Thickness (inch)	Weight*(kg) (Without Connection)	Heat Transfer Area/ plate (ft^2)	Total Heat Transfer Area (ft^2)	Volume/ Channel (gal)	Total Volume (gal)
HTGKC022	7.52	6.06	3.03	1.57	0.374+0.043*N	2.482+0.093*N	0.119	(N-6)*0.119	0.002	(N-5)*0.002
HTGKC042	12.36	10.83	2.99	1.57	0.512+0.079*N	3.858+0.335*N	0.208	(N-2)*0.208	0.008	(N-1)*0.008
HTGKC097	20.63	18.35	4.25	1.97	0.520+0.085*N	13.007+0.763*N	0.511	(N-2)*0.511	0.019	(N-1)*0.019
HTGKC202	24.25	20.43	7.44	3.62	0.551+0.085*N	27.359+1.664*N	1.023	(N-2)*1.023	0.041	(N-1)*0.041

N: number of plates

Model Selection Chart

R744 vs. Water Gas Cooler (Max. Working Pressure : 2030.5 psi)

RT	kW	BTU/H	HTGKC020/021/022	HTGKC040/041/042	HTGKC095/096/097	HTGKC200/201/202
1	3.52	12000	**HTGK**C022x36 (4 Pass)	**HTGK**C042x24 (4 Pass)		
1.5	5.27	18000	**HTGK**C022x44 (4 Pass)	**HTGK**C042x32 (4 Pass)		
2	7.03	24000	**HTGK**C022x52 (4 Pass)	**HTGK**C042x40 (4 Pass)	**HTGK**C097x24 (4 Pass)	
3	10.55	36000			**HTGK**C097x24 (4 Pass)	
4	14.06	48000			**HTGK**C097x32 (4 Pass)	
5	17.58	60000			**HTGK**C097x40 (4 Pass)	**HTGK**C0202x24 (3 Pass)
7.5	26.37	90000			**HTGK**C097x48 (4 Pass)	**HTGK**C0202x30 (3 Pass)
10	35.16	120000			**HTGK**C097x64 (4 Pass)	**HTGK**C0202x36 (3 Pass)
12.5	43.95	150000			**HTGK**C097x72 (4 Pass)	**HTGK**C0202x48 (3 Pass)
15	52.74	180000			**HTGK**C097x88 (4 Pass)	**HTGK**C0202x54 (3 Pass)
20	70.32	240000				**HTGK**C0202x66 (3 Pass)
25	87.90	300000				**HTGK**C0202x84 (3 Pass)
30	105.48	360000				**HTGK**C0202x102 (3 Pass)
35	123.06	420000				**HTGK**C0202x114 (3 Pass)
40	140.64	480000				**HTGK**C0202x132 (3 Pass)

The above information is for reference only; the data will be different under various working conditions and specifications.

CO_2 Heat Pump System