AIR CROSS Heat exchanger

Gas-to-liquid plate heat exchanger

Introduction

BAODE AIR CROSS gas-to-liquid heat exchangers are a flexible solution that maximize efficiency while minimizing pressure drop with gas media.

Applications

- Exhaust gas heat recovery
- Compressed air cooling
- Charge air cooling
- Condenser

Benefits

- Compact
- Easy to install
- Low level of service and maintenance required
- All units are pressure and leak tested

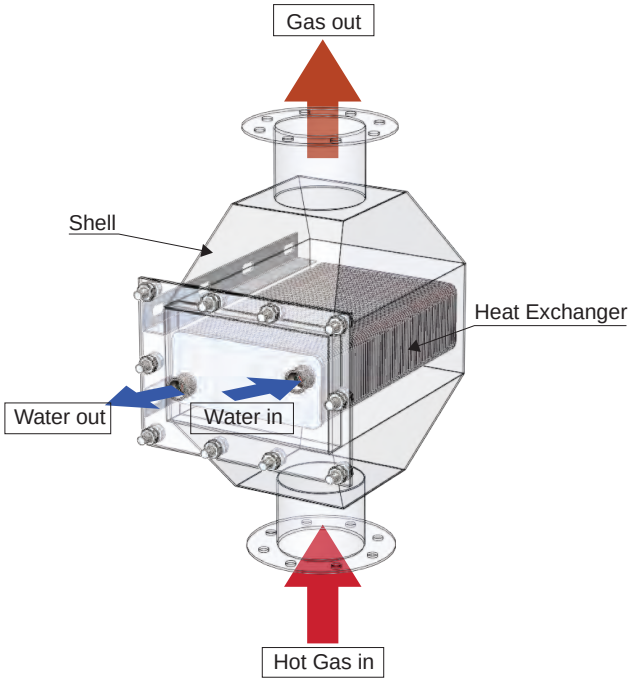
Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Asymmetric channels provide optimal efficiency in the most compact design. This results in very low pressure drop on the gas side.

Cross-flow arrangement with open inlets/outlets on the low-pressure side ensures the lowest possible pressure drop when working with gas media.

The Air Cross heat exchanger can be built in modular systems, creating the ability to handle larger gas volume extending the performance efficiency to larger systems.



Flow instruction of Air Cross HEX

Technical Data

Standard materials

Cover plate	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper / Nickle

Dimensions and weight

A measure (mm)	6 + (3.28 * n)
A measure (inches)	0.24 + (0.13 * n)
Weight (kg)	1.506 + (0.10 * n)
Weight (lb)	3.32 + (0.22 * n)

[1]n = number of plates.

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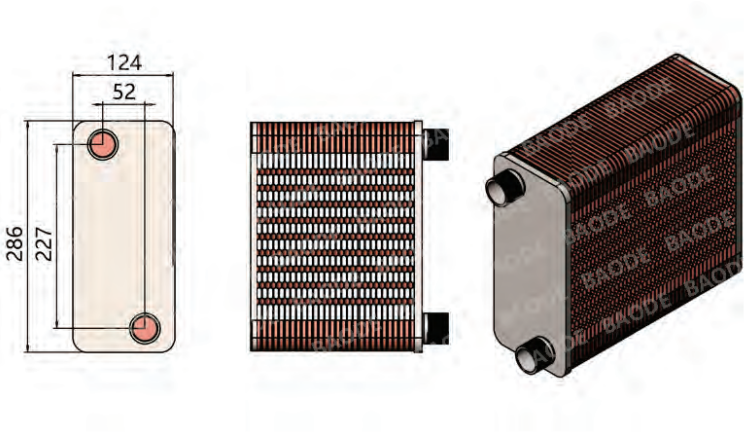
Standard data

Volume per channel, litres (gal)	(D2–D4): 0.117 (0.0309)
Max. particle size, mm (inch)	1 (0.039)
Flow direction	Parallel
Min. number of plates	20
Max. number of plates	140

Dimensional drawing

Measurements in mm



Application		Medium	Pressure bar	Mass Flow kg/s	Pressure Loss mbar	Inlet Temp C°	Outlet Temp C°	Effciency	Capacity KW	Remarks
Boiler	Liquid	Water	1	2.100	90	29.6	33.3	3	32.5	24.3L/h
	Gas	Heating Gas	1	0.135	0.45	158	58	78		condensate
District Heating plant	Liquid	Water/ Glycol	1	0.570	110	80	85	1	10	
	Gas	Flue Gas	1	0.024	2.1	460	90	97		
Steam	Liquid	Steam	4	0.010	-	144	99	48	22	Condensation
	Gas	Air	1	0.269	1.5	50	130	85		
Biogas	Liquid	Biogas	8	0.250	300	130	35	79	35	
	Gas	Air	1	1.400	7	10	35	21		
Compressed Air	Liquid	Water	1	1.000	50	30	80	38	210	
	Gas	Air	3.5	1.650	42	160	35	96		
Diesel engine	Liquid	Water	1	2.000	205	65	95	6	250	Sound Attenuation
	Gas	Exhaust Gas	1	0.500	4.1	550	125	88		8dB
Mixture radiator	Liquid	Water	1	4.800	145	40.2	42.2	3	40	2 Stage
	Gas	Gas	2	0.663	4	108	50	86		
Moist exhaust air	Liquid	Water	1	0.700		9	80	93	210	Approx 300L/h
	Gas	Air	1	0.830	3.1	85	70	20		condensate