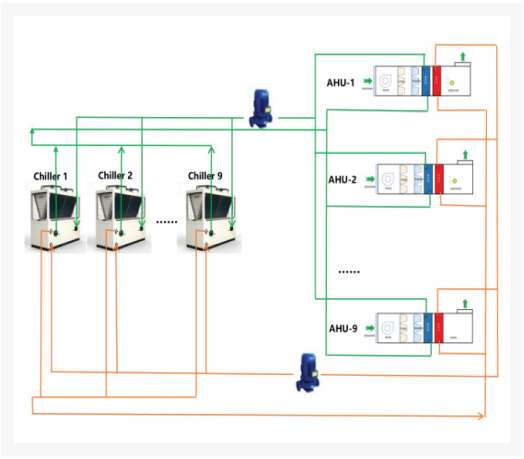
PRODUCT TICA®

TCA-XHF Series
TAS-BHF Series

MULTIPLE-FUNCTION MODULAR HEAT PUMP

The 4-pipe modular air-cooled heat pump produces cooling only, heating only, and cooling heat recovery operations. It is widely applied in places with precise control of temperature and humidity, such as hospitals, art galleries, and equipment rooms. When cold water is used for dehumidification, re-heating is obtained free of charge. The 4-pipe unit can also be applied in buildings which require both cooling and heating, to greatly save operating cost and initial investment in equipment. Without the need for a dedicated equipment room and cooling tower, the 4-pipe modular air-cooled chiller (heat pump) unit is the best choice in prosperous areas and the water shortage areas.

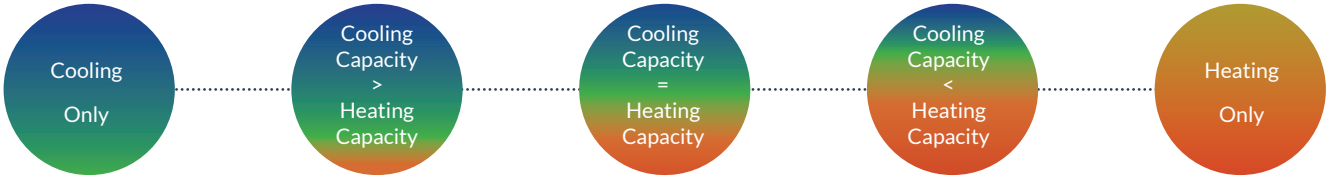


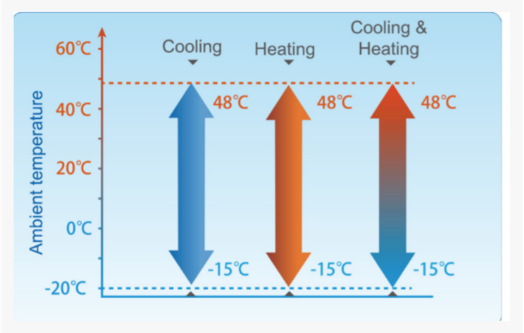
MAXIMIZED ENERGY UTILISATION

In applications where both cooling and heating are required, a multi-function 4-pipe heat pump provides the most energy-efficient solution compared to separate dedicated cooling and heating plants. During the operation of the 4-pipe heat pump, the waste heat emitted in the cooling process can be recovered to produce heating hot water.

AUTO BALANCE OF COOLING AND HEATING

With the flexible modular design and self-adapting balancing technologies, the heat pump can self-adjust cooling and heating output based on demand, then swiftly switch operating mode, to achieve continuously system balancing.





WIDE OPERATION RANGE

The modular heat pump unit can operate within a wide range of ambient temperature between -15°C and 48°C. The unit is equipped with high-efficiency multi-speed fans, ensuing smart control of air flow and minimum operation noise.

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TECHNICAL DATA

Model		TCA201XHF	TAS460BHF
Cooling only mode	Nominal cooling capacity	66 kW	460 kW
	Rated input power for cooling	20 kW	141.9 kW
	Water flow	11.4 m^3/h	79.1 m^3/h
	COP	3.3	3.2
Heating only mode	Nominal heating capacity	70 kW	475 kW
	Rated input power for heating	20 kW	20 kW
	Water flow	13.9 m^3/h	142.6 m^3/h
Cooling and heating mode	Nominal cooling capacity	63 kW	97.5 kW
	Nominal heating capacity	81 kW	440 kW
	Total nominal power	18.5 kW	567 kW
	Water flow (Chilled water side)	11.4 m^3/h	127.4 m^3/h
	Water flow (heating hot water side)	13.9 m^3/h	79.1 m^3/h
Power supply		400 V/3Ph/50Hz	400 V/3Ph/50Hz
Pressure Drop	Chilled water side	40 kPa	40 kPa
	Heating hot water side	60 kPa	60 kPa
Water inlet/outlet pipe diameter	Chilled water side	DN65	DN125
	Heating hot water side	DN65	DN125
Fan	Type	Low-noise axial	Low-noise axial
	Qty	2	8
	Air flow	26,000 m^3/h	16,400 m^3/h
Compressor	Type	Hermetic scroll	Hermetic scroll
	Qty	1	4
Refrigerant	Type	R410A	R410A
Shipping/Operating Weight (kg)		650 kg / 710 kg	4,850kg / 5,450 kg
Dimension (Length x Width x Height, mm)		2200 x 860 x 1980 mm	4700 x 2250 x 2520 mm

1. The nominal cooling capacity is tested under conditions: water outlet temperature of 7°C; ambient dry bulb temperature of 35°C.
2. The nominal heating capacity is tested under conditions: water outlet temperature of 45°C; ambient dry/wet bulb temperature of 7°C /6°C.
3. The nominal cooling + heating capacity is tested under conditions: chilled water outlet temperature of 7°C; Heating hot water outlet temperature of 45°C.
4. The operation range in cooling mode, heating mode, and cooling + heating mode is -15°C to +48°C.
5. About 6% of system loss is recommended to be factored for system pipelines, water pumps, valves, and soiling for the cooling (heating) capacity in design/applications.
6. Parameters listed in above table are for a single module. Up to 16 modules can be used in parallel.
7. The specifications are subject to change due to product improvement without prior notice.
8. The control accessory box needs to be purchased separately, which contains the wired controller, wired controller communication cable, user manual, temperature sensor, e c. The box contents may change. Please refer to the actual factory configurations.

CAPACITY OF COMBINED MODULAR UNITS

Model and Quantity (TCA201XHF)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cooling only	Cooling capacity (kW)	66	132	198	264	330	396	462	528	594	660	726	792	858	924	990	1056
	Water flow at cold water side (m3/h)	11	23	34	46	57	68	80	91	103	114	125	137	148	160	171	182
Heating only	Heating capacity (kW)	70	140	210	280	350	420	490	560	630	700	770	840	910	980	1050	1120
	Water flow at hot water side (m3/h)	14	28	42	56	70	83	97	111	125	139	153	167	181	195	209	222
Cooling and Heating	Cooling capacity (kW)	63	126	189	252	315	378	441	504	657	630	693	756	819	882	945	1008
	Heating capacity (kW)	81	162	243	324	405	486	567	648	729	810	891	972	1053	1134	1215	1296