

YHAU CL

Single stage hot water driven absorption chiller

Cooling capacities from 105 kW to 6153 kW



Features

Flexible Operating Envelope

The **YORK YHAU-CL** Single Effect Hot Water absorption chiller provides efficiency and reliability through the use of innovative technology that is optimized to use low temperature waste heat – as low as 70°C where competitive offerings cannot operate. Common applications include comfort or industrial process cooling that use or recover waste heat from combined heat and power (CHP) systems, industrial process or other available heat sources. The **YHAU-CL** cooling capacity ranges from 105-6,153 kW / 30-1,750 TR.

The **YHAU-CL** has the unique ability to be used for applications where the

- Chilled water leaving temperature as low as 4C.
- Cooling water temperature entering temperature as high as 37C.
- Hot water temperature, driving heat source, entering temperature as low as 70C.

Refrigerant cycle

The **YORK YHAU CL** high efficiency single-stage absorption refrigeration cycle uses water as the refrigerant and lithium bromide as the absorbent. It is the strong affinity and ease of separation that these two substances have for each other that makes the cycle work. The entire process occurs in hermetic vessels in a near complete vacuum.

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Two Step Evaporator and Absorber Design

Efficiency, Reliability, Cost of Ownership

The innovative 2-step evaporator and absorber design is more efficient than a conventional cycle. This ingenious design splits the absorption process into two steps, similar to how a series-counter-flow arrangement splits the work between two chillers. The result of the design allows the **YHAU-CL** to perform the absorption function with lower solution concentrations than conventional designs, increasing efficiency and reliability, and decreasing cost of ownership.

Reliability is enhanced because the solution concentrations are lower leaving the absorber, which allows the entire cycle to operate at lower concentrations virtually eliminating the possibility of crystallization. Efficiency is enhanced because the **YHAU-CL** can take advantage of lower than normal hot water temperatures in the generator. This is because at lower concentrations the solution will boil at a lower temperature in the generator.

Lastly, total operating cost decreases because of the lower concentration of the solution entering the generator, a wider temperature range of hot water can be used, reducing pumping horsepower.

Full Automatic Purging System

As a standard feature, the unit has a fully automatic purging system comprising of electronic vacuum transmitter, solenoid valves and trending capability that ensures design performance and improves reliability. The operator does not have to worry about the sequence of purging for removing the non-condensable gases.

Chiller control

The **YHAU Control Center**, standard on each chiller, provides the ultimate in efficiency, monitoring, data recording, chiller protection and operating ease.

The LCD display allows graphic animated display of the chiller, chiller sub-systems and system parameters; this allows the presentation of several operating parameters at once. In addition, the operator may view a graphical representation of the historical operation of the chiller as well as the present operation. The panel is capable of communication with building management systems and is available in multiple languages.

Nominal capacity

YHAU CL Model	30EXE	40EXE	50EXE	65EXE	80EXE	100EXE	130EXE	160EXE	200EXE	255EXE	320EXE	400EXE	500EXE
Cooling Capacity kW	105	141	179	222	271	352	443	563	721	869	1125	1407	1758
COP (low temperature hot water)	0,78	0,78	0,78	0,78	0,78	0,76	0,78	0,78	0,78	0,78	0,78	0,78	0,78

YHAU CL Model	630EXW	700EXW	800EXW	900EXW	1000EXW	1120EXW	1250EXW	1400EXW	1500EXW	1600EXW	1680EXW	1800EXW	1900EXW	2000EXW
Cooling Capacity kW	1934	2110	2461	2708	3024	3411	3938	4431	4852	5134	5274	5626	5943	6153
COP (low temperature hot water)	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78

At 6°C leaving chilled water, 90°C entering generator water, and 27°C entering condenser water.

Technical data

YHAU CL Model		30EXE	40EXE	50EXE	65EXE	80EXE	100EXE	130EXE	160EXE	200EXE	255EXE	320EXE	400EXE	500EXE	
Dimensions	Length	mm	1900	2200	2500	3100	2200	2600	3200	3800	4600	3300	3900	4700	5700
	Width	mm	1500				1800				2200				
	Height	mm	2100				2500				3200				
Operating weight kg		2700	3100	3600	4200	4400	5100	6100	7200	8500	10300	12200	14400	17400	

YHAU CL Model		630EXW	700EXW	800EXW	900EXW	1000EXW	1120EXW	1250EXW	1400EXW	1500EXW	1600EXW	1680EXW	1800EXW	1900EXW	2000EXW	
Dimensions	Length	mm	5500	6000	6700	7300	8000	6700	7300	8000	8500	9000	9500	10000	10500	11000
	Width	mm	2650				3300									
	Height	mm	3300				3900									
Operating weight kg		25800	27600	29500	32300	34700	43900	46400	49000	51200	53500	55800	58600	61300	64100	



Manufacturer reserves the rights to change specifications without prior notice.

YORK® absorption chillers and heat pumps

With innovative 2-step evaporation and absorption-cycle technology

DRIVING HEAT SOURCE	MODEL AND DESCRIPTION	
HOT WATER	Single Effect Hot Water Model: YHAU-CL Capacity: 105 - 6,153 kW / 30 - 1,750 TR Application: Combined heat and power (CHP), commercial cooling, industrial process cooling	
LOW PRESSURE STEAM	Single Effect Steam Fired Model: YHAU-C Capacity: 422 - 5,275 kW / 120 - 1,500 TR Application: Combined heat and power (CHP), commercial cooling, industrial process cooling	
MEDIUM PRESSURE STEAM	Double Effect Steam Fired Model: YHAU-CW Capacity: 422 - 14,065 kW / 120 - 4,000 TR Application: Combined heat and power (CHP), commercial cooling, industrial process cooling	
DIRECT FIRED	Small Double Effect Natural Gas or Light Oil * Model: YHAU-F Capacity: 105 - 352 kW / 30 - 100 TR Application: Commercial cooling	
DIRECT FIRED	Large Double Effect Natural Gas or Light Oil Model: YHAU-CG Capacity: 422 - 4,395 kW / 120 - 1,250 TR Application: Commercial cooling, industrial process cooling	
EXHAUST GAS	Double Effect Direct Exhaust Gas Model: YHAU-CE Capacity: 527 - 3,516 kW / 150 - 1,000 TR Application: Combined heat and power (CHP)	

* Utilizes standard cycle

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With innovative 2-step evaporation and absorption-cycle technology

DRIVING HEAT SOURCE	MODEL AND DESCRIPTION	
EXHAUST GAS AND LOW TEMPERATURE HOT WATER	<p>Multi Energy Model: YHAU-CE-J Capacity: 527 - 3,516 kW / 150 - 1,000 TR Application: Combined heat and power (CHP)</p>	
EXHAUST GAS AND LOW TEMPERATURE HOT WATER AND DIRECT FIRED	<p>Multi Energy Model: YHAU-CGE-J Capacity: Custom Application: Combined heat and power (CHP), commercial cooling</p>	
NATURAL GAS AND LOW TEMPERATURE HOT WATER	<p>Gas Gene-Link Model: YHAU-CG-J Capacity: 422 - 4,395 kW / 120 - 1,250 TR Application: Combined heat and power (CHP), commercial cooling</p>	
MEDIUM PRESSURE STEAM AND LOW TEMPERATURE HOT WATER	<p>Steam Gene-Link Model: YHAU-CW-J Capacity: 422 - 14,065 kW / 120 - 4,000 TR Application: Combined heat and power (CHP), industrial process cooling</p>	
MEDIUM PRESSURE STEAM, DIRECT FIRED, HIGH TEMPERATURE HOT WATER	<p>Double Effect Low Temperature (-5°C) Model: YHAU-C-L Capacity: 176 - 1,758 kW / 50 - 500 TR Application: Industrial process cooling (food & beverage)</p>	
LOW PRESSURE STEAM, MEDIUM PRESSURE STEAM, DIRECT FIRED	<p>Single Effect Absorption Heat Pump (Up to 90°C) Model: YHAP-C Capacity: 900 - 40,000 kW Application: District heating, industrial process heating</p>	