



Absorption Chiller

ABS-H (SERIES)
ABS-S (SERIES)



LITHIUM BROMIDE ABSORPTION CHILLER

COOLING CAPACITY : 35 - 1056 kW

SINGLE EFFECT HOT WATER TYPE (H-SERIES)

SINGEL EFFECT STEAM TYPE (S-SERIES)

Feature and Benefit

Environmentally Friendly Chiller

The Unit using water and lithium bromide which are natural as refrigerant fluids, no CFCs; Few moving parts enable quiet and vibration-free operation.

Cost-effective cooling alternative-energy chiller

The Units offers an alternative to avoid the high operating costs associated with electric-driven chillers. Fired by low pressure steam or hot water or waste heat, Units not only reduces or eliminates electric demand , but also allows the owner to take advantage of rebates and incentive programs offered by many utility companies.

Automatic motor less purge system extends machine life, ensures optimum efficiency and performance

The pump motor less purge system protects against the potential hazards caused by non-condensable gas produced continuously during machine operation, ensures long machine life and efficient operation.

Anti-crystallization controls maintain proper solution concentration

The Units automatically limits solution concentration in several ways to avoid both crystallization and over-dilution to provide dependable, trouble-free operation.

Leak-proof hermetic pumps cut maintenance costs

Our solution and refrigerant pumps are leak-proof, completely self-contained, and hermetically sealed. The hermetic design eliminates the need for a separate, complicated, and possibly leak-prone seal water system, while providing leak tightness and longer machine life.

Superior corrosion protection

The Unit incorporates a highly effective corrosion Lithium Molybdate inhibitor to provide an extra margin of protection against internal corrosion.

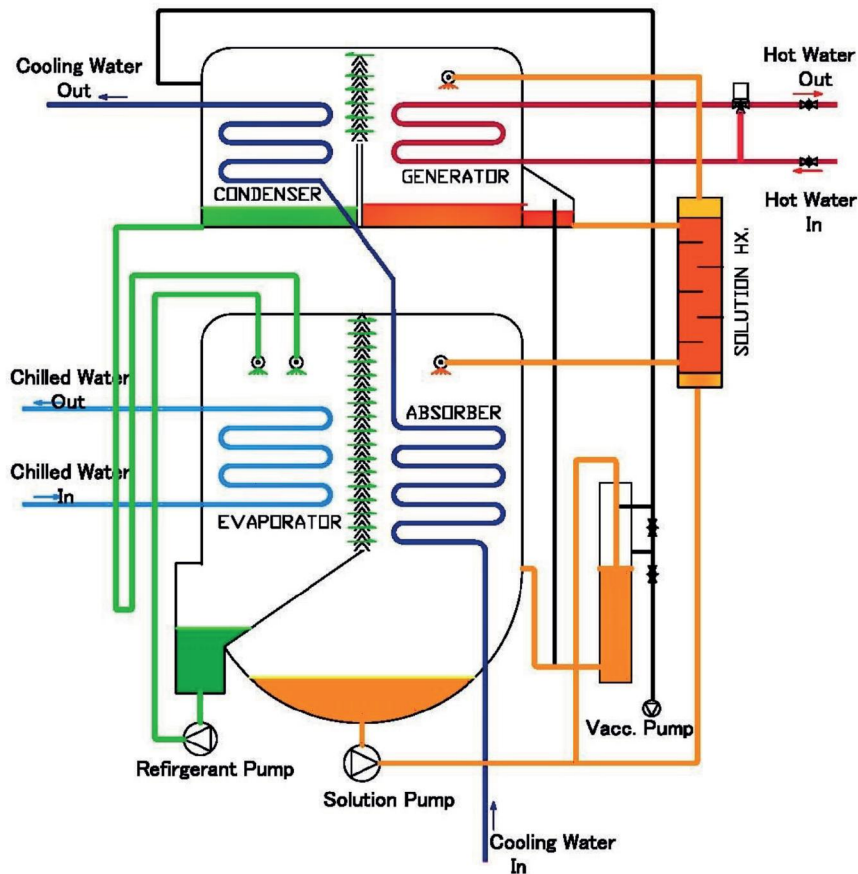
Rugged machine construction

Non-clogging, Not used spray nozzles ensure against both corrosion and possible blockage for continuous, reliable operation. The Unit is built to withstand the most rigorous duty, whether it is used for comfort cooling or light process applications.

Single point electrical connection

All unit mounted electrical items are factory-wired to the chiller control center and require only a single point electrical connection to the machine from the building's electrical service.

Single Effect Cooling



The Unit consists of evaporator, absorber, condenser, generator, solution heat exchanger, solution pump, refrigerant pump, control system and other auxiliary system, etc. The operating principle of the chiller is: In highly vacuum state, refrigerant water evaporate at a low temperature (4.4°C), which cool down chilled water circulating in evaporator tube. Refrigerant vapor generated in evaporator is absorbed by lithium bromide solution in absorber, which makes the solution become dilute. Such dilute solution is fed into heat exchanger by solution pump, where the temperature rises. After that, it enters generator, in which it is further heated and concentrated by steam or hot water. The concentrated solution returns to the absorber after passing through heat exchanger for repeated use. In absorber and evaporator, lithium bromide solution and refrigerant water spray onto tubes of the heat exchangers to enhance heat exchange effect.

Heat Source and Usage

Operating steam: gauge pressure $0.04\sim 0.098\text{MPa}$
(pressure after steam valve).

Operating hot water: Max. temperature 130°C ,
Min. temperature 85°C

Physical and Performance Data

ABS-H (Hot Water Temp (Inlet / Outlet : 95 C / 80 C)

	Model	ABS-	H010	H021	H023	H031	H033	H035	H041	H051
	Capacity	RT		10	20	30	60	80	100	150
		kW	35.2	70.4	105.6	211.2	281.6	352	528	1056
Chilled Water	Inlet/Outlet Temp	°C	12/7			12/7				
	Flow rate	m ³ /h	6.1	12.1	18.2	36.4	48.5	60.6	90.9	181.9
	Press Drop	mH ₂ O	5.3	5.8	6.2	4.5	5.1	5.7	4.4	5.1
		kPa	52.0	56.9	60.8	44.1	50.0	55.9	43.1	50.0
	Connection size	mm	25	50	50	80	80	100	125	150
Cooled Water	Inlet/Outlet Temp	°C	30/38			30/38				
	Flow rate	m ³ /h	9.6	19.3	28.9	57.8	77.0	96.3	144.4	288.8
	Press Drop	mH ₂ O	6.5	7.2	8.2	5.8	6.4	5.5	6.7	7.3
		kPa	63.7	70.6	80.4	56.9	62.8	53.9	65.7	71.6
	Connection size	mm	50	80	80	100	100	125	150	200
Hot Water	Inlet/Outlet Temp	°C	95/80							
	Flow rate	m ³ /h	3.1	6.2	9.3	18.7	24.9	31.1	46.6	93.3
	Press Drop	mH ₂ O	6.5	7.2	8.2	5.8	6.4	5.5	6.7	7.3
		kPa	63.7	70.6	80.4	56.9	62.8	53.9	65.7	71.6
	Connection size	mm	25	50	50	80	80	100	100	125
Electrical	Power Supply	V	3phase - 380V - 50Hz							
	Refrigerant Pump	kW	0.4	0.4	0.4	0.4	0.4	0.4	1.5	1.5
	Solution Pump	kW	0.4	0.4	0.4	1.5	1.5	1.5	3.0	3.0
	Total	kW	0.8	0.8	0.8	1.9	1.9	1.9	4.5	4.5
	Dimension	Length	mm	1850	2410	2410	3750	3750	3750	4770
Width		mm	750	1000	1000	1520	1520	1520	1600	2050
Height		mm	1850	2136	2136	2640	2640	2640	2803	3480
Net Weight		Ton	0.8	1.5	3.0	3.5	4.0	5.5	7.0	15.0
Operating Weight		Ton	1.2	1.6	3.2	3.9	4.6	9.2	10.0	20.0

Physical and Performance Data

ABS-S (Steam Pressure : 0.098 MPa)

	Model	ABS-	S010B	S021B	S023B	S031B	S033B	S035B	S041B	S051B
	Capacity	RT		10	20	30	60	80	100	150
		kW	35.2	70.4	105.6	211.2	281.6	352	528	1056
Chilled Water	Inlet/Outlet Temp	°C	12/7			12/7				
	Flow rate	m ³ /h	6.1	12.1	18.2	36.4	48.5	60.6	90.9	181.9
	Press Drop	mH ₂ O	5.3	5.8	6.2	4.5	5.1	5.7	4.4	5.1
		kPa	52.0	56.9	60.8	44.1	50.0	55.9	43.1	50.0
	Connection size	mm	25	50	50	80	80	100	125	150
Cooled Water	Inlet/Outlet Temp	°C	30/38			30/38				
	Flow rate	m ³ /h	9.6	19.3	28.9	57.8	77.0	96.3	144.4	288.8
	Press Drop	mH ₂ O	6.5	7.2	8.2	5.8	6.4	5.5	6.7	7.3
		kPa	63.7	70.6	80.4	56.9	62.8	53.9	65.7	71.6
	Connection size	mm	50	80	80	100	100	125	150	200
Steam	Inlet Pressure	Mpa	0.098							
	Consumption	kg/h	76.4	152.8	229.2	458.3	611.1	763.8	1145.8	2291.5
	Steam Pipe sized	mm	50	65	65	80	80	100	125	150
	Drain Pipe sized	mm	25	25	25	32	32	40	40	50
	Electrical	Power Supply	V	3phase - 380V - 50Hz						
Refrigerant Pump		kW	0.4	0.4	0.4	0.4	0.4	0.4	1.5	1.5
Solution Pump		kW	0.4	0.4	0.4	1.5	1.5	1.5	3.0	3.0
Total		kW	0.8	0.8	0.8	1.9	1.9	1.9	4.5	4.5
Dimension		Length	mm	1850	2410	2410	3750	3750	3750	4770
	Width	mm	750	1000	1000	1520	1520	1520	1600	2050
	Height	mm	1850	2136	2136	2640	2640	2640	2803	3480
	Net Weight	Ton	0.8	1.5	3.0	3.5	4.0	5.5	7.0	15.0
	Operating Weight	Ton	1.2	1.6	3.2	3.9	4.6	9.2	10.0	20.0