

GA Line RTYF Models

2 or 4 pipe Gas Absorption Chiller-Heater Links

Cooling and Heating

Natural gas/LPG cooling and heating: a perfect answer to every need.

Robur high efficiency chiller-heaters use an air-cooled water-ammonia absorption cycle combined with a high efficiency low pressure boiler integrated into one single outdoor system. Their primary energy source is

natural gas or propane gas resulting in minimal electrical service requirements. These environmentally friendly, commercial grade chiller-heaters offer complete flexibility for residential and light commercial comfort cooling and heating: they are available in a four-pipe version for

simultaneous production of hot and chilled water or in a two-pipe version for alternate production.



Use Hydronic air conditioning and heating systems

Type Air cooled

Heat transfer fluid Water
Cooling Capacity (BTU/h) / Outlet Water Temperature

Standard (ST): from 121,000 to 242,000 / 37.4 °F

HT: from 116,800 to 233,600 / 41 °F

TK: from 121,000 to 242,000 / 37.4 °F

Heating Capacity (BTU/h) / Outlet Water Temperature

ST, HT, TK: from 110,900 to 443,600 / 185 °F

Main Advantage One integrated unit to supply chilled or hot water

Additional Advantages

- **Single Phase Power.**
- **Remote management** and staging by a Direct Digital Controller (DDC) is a popular

option. One DDC can manage up to 16 units on a common hydronic loop.

- Using gas as the primary energy source, **the need of electric power is reduced by approximately 87%** as compared with electric compression units.
- **Smaller Generator Requirements** for those applications requiring off grid power or emergency cooling and heating.
- **High Reliability** due to few moving parts inside the units.
- **Easy Maintenance**, similar to gas fired boilers.
- **No Water Consumption.** No cooling tower and related water treatment and maintenance.

Features

- **Patented absorption cycle.**
- **Refrigerant circuit** made of low carbon steel and completely sealed.
- **Evaporator** tube and shell tower geometry made of stainless steel.
- **Variable speed condenser fan** for optimal performance and efficiency.
- **Optional Direct Digital Controller (DDC).**
- **Microprocessor Control.** Printed resin electronic circuit with LED display. Ensures optimum operation of the absorption cooling process while allowing easy access of unit data for preventative maintenance and diagnostics.
- **Built-in safety and control devices.**

Specialty Chiller-Heaters

- **TK - Nominal 5 Tons.**
For Industrial & Commercial applications requiring heavy cooling use on a year round basis. This unit's refrigerant charge and accumulator allow for extended running periods and operation at low ambient conditions down to 10 °F.
- **HT - Nominal 5 Tons.**
For installation in climates with design temperatures over 104 °F. The HT is designed for use in high ambient climate areas or in those applications where excessive heat may be generated artificially, such as reflective white rooftops.

STANDARD VERSION Cooling Performance Ratings ⁽¹⁾			RTYF	RTYF	RTYF	RTYF	RTYF	RTYF	RTYF	RTYF	
			120-119 ST	120-238 ST	180-119 ST	180-238 ST	180-357 ST	240-119 ST	240-238 ST	240-357 ST	240-476 ST
Cooling capacity ⁽²⁾		BTU/h	121,000	121,000	181,500	181,500	181,500	242,000	242,000	242,000	242,000
Gas input		BTU/h	189,800	189,800	284,700	284,700	284,700	379,600	379,600	379,600	379,600
Ambient operating temperature	maximum	°F	120	120	120	120	120	120	120	120	120
	minimum	°F	32	32	32	32	32	32	32	32	32
Chilled water temperature	maximum inlet (to unit)	°F	113	113	113	113	113	113	113	113	113
	minimum outlet (to hydronic system)	°F	37,4	37,4	37,4	37,4	37,4	37,4	37,4	37,4	37,4

STANDARD VERSION Heating Performance Ratings ⁽¹⁾			ST	ST	ST	ST	ST	ST	ST	ST	
Heating capacity	nominal	BTU/h	110,900	221,800	110,900	221,800	332,700	110,900	221,800	332,700	443,600
Gas input	nominal	BTU/h	129,00	258,000	129,000	258,000	387,000	129,000	258,000	387,00	516,000
Ambient operating temperature	maximum	°F	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6
	minimum	°F	-20	-20	-20	-20	-20	-20	-20	-20	-20
Hot water temperature	maximum inlet (to unit)	°F	167	167	167	167	167	167	167	167	167
	maximum outlet (to hydronic system)	°F	185	185	185	185	185	185	185	185	185

HT VERSION Cooling Performance Ratings ⁽¹⁾			HT	HT	HT	HT	HT	HT	HT	HT	
Cooling capacity ⁽²⁾		BTU/h	116,800	116,800	175,200	175,200	175,200	233,600	233,600	233,600	233,600
Gas input		BTU/h	189,800	189,800	284,700	284,700	284,700	379,600	379,600	379,600	379,600
Ambient operating temperature	maximum	°F	131	131	131	131	131	131	131	131	131
	minimum	°F	32	32	32	32	32	32	32	32	32
Chilled water temperature	maximum inlet (to unit)	°F	113	113	113	113	113	113	113	113	113
	minimum outlet (to hydronic system)	°F	41	41	41	41	41	41	41	41	41

HT VERSION Heating Performance Ratings ⁽¹⁾			HT	HT	HT	HT	HT	HT	HT	HT	
Heating capacity	nominal	BTU/h	110,900	221,800	110,900	221,800	332,700	110,900	221,800	332,700	443,600
Gas input	nominal	BTU/h	129,00	258,000	129,000	258,000	387,000	129,000	258,000	387,00	516,000
Ambient operating temperature	maximum	°F	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6
	minimum	°F	-20	-20	-20	-20	-20	-20	-20	-20	-20
Hot water temperature	maximum inlet (to unit)	°F	167	167	167	167	167	167	167	167	167
	maximum outlet (to hydronic system)	°F	185	185	185	185	185	185	185	185	185

TK VERSION Cooling Performance Ratings ⁽¹⁾			TK	TK	TK	TK	TK	TK	TK	TK	
Cooling capacity ⁽²⁾		BTU/h	121,000	121,000	181,500	181,500	181,500	242,000	242,000	242,000	242,000
Gas input		BTU/h	189,800	189,800	284,700	284,700	284,700	379,600	379,600	379,600	379,600
Ambient operating temperature	maximum	°F	120	120	120	120	120	120	120	120	120
	minimum	°F	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
Chilled water temperature	maximum inlet (to unit)	°F	113	113	113	113	113	113	113	113	113
	minimum outlet (to hydronic system)	°F	37,4	37,4	37,4	37,4	37,4	37,4	37,4	37,4	37,4

TK VERSION Heating Performance Ratings ⁽¹⁾			TK	TK	TK	TK	TK	TK	TK	TK	
Heating capacity	nominal	BTU/h	110,900	221,800	110,900	221,800	332,700	110,900	221,800	332,700	443,600
Gas input	nominal	BTU/h	129,00	258,000	129,000	258,000	387,000	129,000	258,000	387,00	516,000
Ambient operating temperature	maximum	°F	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6	116.6
	minimum	°F	-20	-20	-20	-20	-20	-20	-20	-20	-20
Hot water temperature	maximum inlet (to unit)	°F	167	167	167	167	167	167	167	167	167
	maximum outlet (to hydronic system)	°F	185	185	185	185	185	185	185	185	185

ELECTRICAL RATINGS

Required voltage, 60 Hz, single phase ⁽³⁾	V	208 - 230
Operating consumption per single chiller / heater ⁽⁴⁾	kW	0.75 / 0.076

PHISICAL DATA

Please contact Robur Corporation for equipment Dimensions

⁽¹⁾ All illustrations and specifications contained herein are based on the latest information available at the time of publication.
⁽²⁾ Cooling capacity at standard conditions of 95 °F ambient temperature. Chilled water outlet temperature 45 °F, chilled water inlet temperature 55 °F.

⁽³⁾ Units are factory-wired for 208-230 volts operation.
⁽⁴⁾ May vary by ± 10% as function of both power supply and electrical motor input tolerance.
Due to continuous product innovation and development, Robur reserves the right to change product specifications without prior notice.