



Absorption Chiller-Heaters

RTYF HT chiller-heater links
2 to 4 chillers with 1 to 4 heaters



Brief description

ROBUR's high efficiency HT chiller-heater links are comprised of multiple combinations of ACF60-00 HT chillers and AYF60-119 chillers-heaters. The chillers utilize an ammonia/water absorption cycle that is air-cooled; both unit types are designed for outdoor installation. The primary energy source for ROBUR RTYF HT links is natural or propane gas resulting in minimal, single-phase electrical service requirements. With no engines or mechanical compressors and only three moving parts in each sealed refrigeration cycle, ROBUR RTYF HT links are a reliable and durable source of chilled water down to 41.0 °F (5 °C) even in hot climate areas, with external ambient temperature up to 131 °F (55.0 °C) and hot water up to 185.0 °F (85 °C). These environmentally friendly, commercial grade appliances offer complete flexibility for light commercial and residential comfort air conditioning and heating applications.

Features

The RTYF HT links are composed by a minimum of 2 up to 4 chillers with 1 up to 4 boilers, already assembled and connected hydraulically and electrically on a single base made of steel beams, so as to comprise a single chilling-heating unit complete with hydraulic manifolds and general electric panel. The two or four hydraulic manifolds (alternate or contemporary cold and hot production) located under the units, extend over the entire length of the base: the connectors for the piping of the hydraulic plant are located on the right side of the appliance, but may also be located on the left side. Each single unit that forms part of the appliance has advanced technical, control and safety components; below some among the main ones:

Chiller modules:

- cooling circuit in steel, treated on the outside with epoxy paint;
- multigas pre-mixing burner equipped with ignition and flame detection device, managed by an electronic control unit;
- air-based heat exchanger with single position finned coil manufactured in steel tubing and aluminum fins;
- water based exchanger of the shell-and-tube type in titanium alloyed stainless steel, externally insulated;
- S61 electronic control board with microprocessor, Direct Digital Controller (DDC) with LCD display and encoder, pressure safety valve and other safety devices.

Heater modules:

- multigas pre-mixing burner with low NO_x and CO emissions;
- control and safety devices for external temperatures down to -4°F (-20 °C).

CHILLER-HEATERS

Technical data

RTYF HT TECHNICAL CHARACTERISTICS ⁽¹⁾			2- AND 4-PIPE TYPES				
		UNITS.	RTYF 120-119	RTYF 120-238	RTYF 180-119	RTYF 180-238	RTYF 180-357
OPERATING DATA							
OPERATION IN COOLING MODE							
GAS INPUT (HHV)	NOMINAL	kBtu/hr (kW)	189.8 55.6		284.7 83.4		
COOLING CAPACITIES ⁽²⁾	NOMINAL	kBtu/hr (kW)	116.8 (34.22)		175.2 (51.36)		
CHILLED WATER FLOW RATE	NOMINAL	GPM (l/hr)	23.6 (5,350)		35.4 (8,025)		
	MINIMUM		22.0 (5,000)		33.0 (7,500)		
	MAXIMUM		28.2 (6,400)		42.3 (9,600)		
SOUND RATING ⁽³⁾	MIN/MAX	dB(A)	50/58		52/60		
AMBIENT OPERATING TEMPERATURE	MINIMUM MAXIMUM	°F (°C)	32.0 (0) 131.0 (55.0)				
INLET (TO THE UNITS) WATER TEMPERATURE	MAXIMUM	°F (°C)	113.0 (45.0)				
OUTLET (TO THE PLANT) WATER TEMPERATURE	MINIMUM	°F (°C)	41.0 (5.0)				
OPERATION IN HEATING MODE							
GAS INPUT (HHV)	NOMINAL	kBtu/hr (kW)	129 (37.8)	258 (75.6)	129 (37.8)	258 (75.6)	387 (113.4)
HEATING CAPACITIES	NOMINAL	kBtu/hr (kW)	110.9 (32.5)	221.8 (65.0)	110.9 (32.5)	221.8 (65.0)	332.7 (97.5)
HOT WATER FLOW RATE (RTYF/2-PIPE)	NOMINAL	GPM (l/hr)	12.20 (2770)	24.40 (5540)	12.20 (2770)	24.40 (5540)	36.6 (8310)
	MINIMUM		11.01 (2500)	22.02 (5000)	11.01 (2500)	22.02 (5000)	33.03 (7500)
	MAXIMUM		14.09 (3200)	28.18 (6400)	14.09 (3200)	28.18 (6400)	42.27 (9600)
HOT WATER FLOW RATE (RTYF/4-PIPE)	NOMINAL	GPM (l/hr)	8.81 (2000)	17.62 (4000)	8.81 (2000)	17.62 (4000)	26.43 (6000)
	MINIMUM		6.60 (1500)	13.20 (3000)	6.60 (1500)	13.20 (3000)	19.80 (4500)
	MAXIMUM		14.09 (3200)	28.18 (6400)	14.09 (3200)	28.18 (6400)	42.27 (9600)
AMBIENT OPERATING TEMPERATURE	MINIMUM MAXIMUM	°F (°C)	-4 (-20) 113 (45)				
INLET WATER TEMP. TO UNITS	MAXIMUM	°F (°C)	167 (75)				
OUTLET WATER TEMP. FROM UNITS	MAXIMUM	°F (°C)	185 (85)				

Table 1 - Technical operating data: RTYF HT series 2- and 4-pipe types (Table 1 of 4)

Notes

1. All illustrations and specifications contained herein are based on the latest information available at the time of publication approval. Robur reserves the right to make changes at any time without notice, in materials, specifications, and models or to discontinue models.
2. Capacity at standard conditions of 95°F ambient temperature. Chilled water Outlet temperature 45°F, chilled water Inlet temperature 55°F. Capacity characteristics are shown in Table 5 on page 6. Interpolations between tabled values are permissible, but do not extrapolate. For capacities at ambient temperatures higher than in table, contact Robur or your authorized Robur representative.
3. Recorded 16 feet from unit in open space. When the ambient temperature is less than 91°F, there is a reduction in condenser fan speed.

		UNITS	RTYF 120-119	RTYF 120-238	RTYF 180-119	RTYF 180-238	RTYF 180-357
ELECTRICAL DATA ⁽⁴⁾							
REQUIRED VOLTAGE (60 Hz, single phase)		V	208 - 230				
MINIMUM CIRCUIT AMPACITY (MCA) Unit only		A	16.0		24.0		
MAXIMUM OVER CURRENT PROTECTION (MOCP)		A	21.8		32.7		
ELECTRICAL OPERATING COMPSUMPTION PER SINGLE CHILLER MODULE - COOLING MODE		kW	0.75				
ELECTRICAL OPERATING COMPSUMPTION PER SINGLE HEATER MODULE - HEATING MODE		kW	0.076				
HYDRAULIC CONNECTIONS							
DIAMETER OF WATER CONNECTIONS (OUTLET/INLET)		FPT	2"				
GAS CONNECTION DIAMETER RTYF/2-PIPE		FPT	1 ½"				
GAS CONNECTION DIAMETER RTYF/4-PIPE			2"				
INTERNAL PRESSURE DROP AT NOMINAL FLOW RATE ⁽⁵⁾		In _{wc} (bar _g)	16.92 (0.51)				
RTYF/2-PIPE			9.78 (0.29)				
RTYF/4-PIPE COOLING CIRCUIT HEATING CIRCUIT			8.97 (0.27)				
MAXIMUM OPERATING PRESSURE		PSI _g (bar _g)	43.5 (3.0)				
PHYSICAL DATA							
OPERATIONAL WEIGHT		lb (kg)	2469 (1120)	2712 (1230)	3494 (1585)	3737 (1695)	3979 (1805)
RTYF/2-PIPE			2579 (1170)	2822 (1280)	3715 (1685)	3957 (1795)	4200 (1905)
RTYF/4-PIPE							
WATER CONTENT OF APPLIANCE		gal (l)	5.3 (20)	6.0 (23)	7.4 (28)	8.2 (31)	9.0 (34)
RTYF/2-PIPE			4.7 (18)	5.0 (19)	6.9 (26)	7.1 (27)	7.4 (28)
RTYF/4-PIPE COOLING CIRCUIT HEATING CIRCUIT			2.9 (11)	5.5 (21)	2.9 (11)	5.5 (21)	8.2 (31)
DIAMETER OF HOT MODULE EXHAUST GAS DUCT OUTLET		Inches (mm)	5- ¹ / ₈ " (130)				
DIMENSIONS ⁽⁶⁾		Inches (mm)	142- ¹ / ₈ " (3610)		193- ¹ / ₈ " (4905)		
WIDTH			48- ¹ / ₂ " (1230)				
DEPTH HEIGHT			53- ¹ / ₄ " (1390)				

Table 2 - Technical operating data: RTYF HT series 2- and 4-pipe types (Table 2 of 4)

Notes

4. Electrical consumption may vary by ±10% as a function of both power supply and electrical motor input tolerance. Consumption does not include water circulating pump and air handler(s).
5. For conditions different from the nominal ones, please contact Robur Corp., see address on the back cover.
6. Space occupied without exhaust gas duct.

RTYF HT TECHNICAL CHARACTERISTICS ⁽¹⁾			2- AND 4-PIPE TYPES			
		UNITS.	RTYF 240-119	RTYF 240-238	RTYF 240-357	RTYF 240-476
OPERATING DATA						
OPERATION IN COOLING MODE						
GAS INPUT (HHV)	NOMINAL	kBtu/hr (kW)	379.6 (111.2)			
COOLING CAPACITIES ⁽²⁾	NOMINAL	kBtu/hr (kW)	233.6 (68.48)			
CHILLED WATER FLOW RATE	NOMINAL	GPM (l/hr)	47.2 (10,700)			
	MINIMUM		44.0 (10,000)			
	MAXIMUM		56.4 (12,800)			
SOUND RATING ⁽³⁾	MIN/MAX	dB(A)	53/61			
AMBIENT OPERATING TEMPERATURE	MINIMUM	°F (°C)	32.0 (0)			
	MAXIMUM		122.0 (50.0)			
INLET (TO THE UNITS) WATER TEMPERATURE	MAXIMUM	°F (°C)	113.0 (45.0)			
OUTLET (TO THE PLANT) WATER TEMPERATURE	MINIMUM	°F (°C)	41.0 (5.0)			
OPERATION IN HEATING MODE						
GAS INPUT (HHV)	NOMINAL	kBtu/hr (kW)	129 (37.8)	258 (75.6)	387 (113.4)	516 (151.2)
HEATING CAPACITIES	NOMINAL	kBtu/hr (kW)	110.9 (32.5)	221.8 (65.0)	332.7 (97.5)	443.6 (130.0)
HOT WATER FLOW RATE (RTYF/2-PIPE)	NOMINAL	GPM (l/hr)	12.20 (2,770)	24.40 (5,540)	36.60 (8,310)	48.80 (11,080)
	MINIMUM		11.01 (2,500)	22.02 (5,000)	33.03 (7,500)	44.04 (10,000)
	MAXIMUM		14.09 (3,200)	28.18 (6,400)	42.27 (9,600)	56.36 (12,800)
HOT WATER FLOW RATE (RTYF/4-PIPE)	NOMINAL	GPM (l/hr)	8.81 (2,000)	17.62 (4,000)	26.43 (6,000)	35.24 (8,000)
	MINIMUM		6.60 (1,500)	13.20 (3,000)	19.80 (4,500)	26.40 (6,000)
	MAXIMUM		14.09 (3,200)	28.18 (6,400)	42.27 (9,600)	56.36 (12,800)
AMBIENT OPERATING TEMPERATURE	MINIMUM	°F (°C)	-4 (-20)			
	MAXIMUM		113 (45)			
INLET WATER TEMP. TO UNITS	MAXIMUM	°F (°C)	167 (75)			
OUTLET WATER TEMP. FROM UNITS	MAXIMUM	°F (°C)	185 (85)			

Table 3 - Technical operating data: RTYF HT series 2- and 4-pipe types (Table 3 of 4)

Notes

- All illustrations and specifications contained herein are based on the latest information available at the time of publication approval. Robur reserves the right to make changes at any time without notice, in materials, specifications, and models or to discontinue models.
- Capacity at standard conditions of 95°F ambient temperature. Chilled water Outlet temperature 45°F, chilled water Inlet temperature 55°F. Capacity characteristics are shown in Table 5 on page 6. Interpolations between tabled values are permissible, but do not extrapolate. For capacities at ambient temperatures higher than in table, contact Robur Corp, see address on the back cover.
- Recorded 16 feet from unit in open space. When the ambient temperature is less than 91°F, there is a reduction in condenser fan speed.

		UNITS.	RTYF 240-119	RTYF 240-238	RTYF 240-357	RTYF 240-476
ELECTRICAL DATA ⁽⁴⁾						
REQUIRED VOLTAGE (60 Hz, single phase)		V	208 - 230			
MINIMUM CIRCUIT AMPACITY (MCA) Unit only		A	32.0			
MAXIMUM OVER CURRENT PROTECTION (MOCP)		A	43.6			
ELECTRICAL OPERATING COMPSUMPTION PER SINGLE CHILLER MODULE - COOLING MODE		kW	0.75			
ELECTRICAL OPERATING COMPSUMPTION PER SINGLE HEATER MODULE - HEATING MODE		kW	0.076			
HYDRAULIC CONNECTIONS						
DIAMETER OF WATER CONNECTIONS (OUTLET/INLET)		FPT	2"			
GAS CONNECTION DIAMETER RTYF/2-PIPE		FPT	1 ½"			
GAS CONNECTION DIAMETER RTYF/4-PIPE			2"			
INTERNAL PRESSURE DROP AT NOMINAL FLOW RATE ⁽⁵⁾		In _{wc} (bar _g)	16.92 (0.51)			
RTYF/2-PIPE			9.78 (0.29)			
RTYF/4-PIPE COOLING CIRCUIT HEATING CIRCUIT			8.97 (0.27)			
MAXIMUM OPERATING PRESSURE		PSI _g (bar _g)	43.5 (3.0)			
PHYSICAL DATA						
OPERATIONAL WEIGHT		lb (kg)	4564 (2070)	4806 (2180)	5049 (2290)	5302 (2405)
RTYF/2-PIPE			4894 (2220)	5137 (2330)	5379 (2440)	5633 (2555)
RTYF/4-PIPE						
WATER CONTENT OF APPLIANCE		gal (l)	9.51 (36)			
RTYF/2-PIPE			10.30 (39)			
RTYF/4-PIPE COOLING CIRCUIT RTYF/4-PIPE HEATING CIRCUIT			11.09 (42)			
			11.89 (45)			
			8.98 (34)			
			9.25 (35)			
			9.51 (36)			
			9.77 (37)			
			2.90 (11)			
			5.55 (21)			
			8.19 (31)			
			10.83 (41)			
DIAMETER OF HOT MODULE EXHAUST GAS DUCT OUTLET		Inches (mm)	5- ¹ / ₈ " (130)			
DIMENSIONS ⁽⁶⁾		Inches (mm)	255- ¹ / ₂ " (6490)			
			48- ¹ / ₂ " (1230)			
			53- ¹ / ₄ " (1390)			

Table 4 - Technical operating data: RTYF HT series 2- and 4-pipe types (Table 4 of 4)

Notes

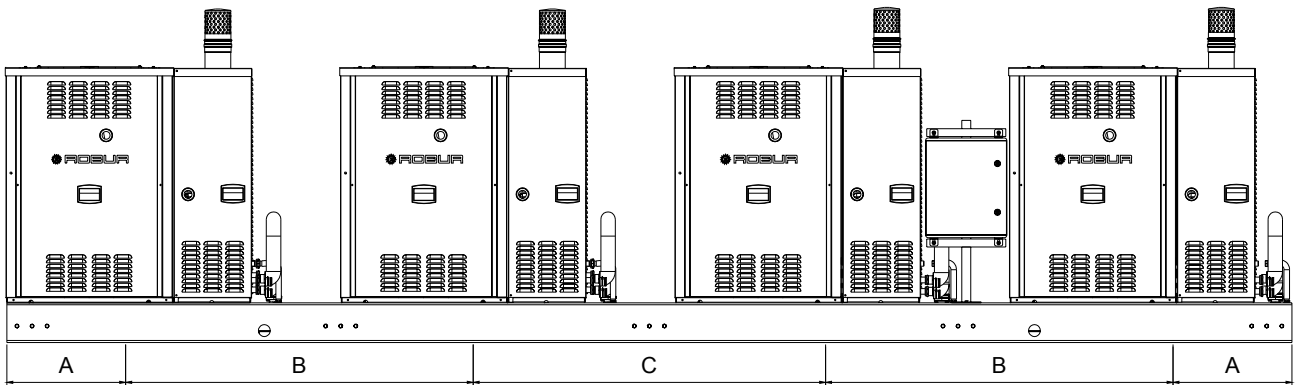
- 10. Electrical consumption may vary by ±10% as a function of both power supply and electrical motor input tolerance. Consumption does not include water circulating pump and air handler(s).
- 11. For conditions different from the nominal ones, please contact Robur Corp., see address on the back cover.
- 12. Space occupied without exhaust gas duct.

RTYF HT cooling capacities correction factors

AMBIENT AIR TEMPERATURE °F (°C)	OUTLET CHILLED WATER °F (°C)				
	41.0 (5.0)	44.6 (7.0)	50.0 (10.0)	54.5 (12.5)	57.2 (14.0)
32.0 (0)	1.02	1.02	1.02	1.02	1.03
35.6 (2.0)	1.02	1.02	1.02	1.02	1.03
39.2 (4.0)	1.02	1.02	1.02	1.02	1.03
42.8 (6.0)	1.02	1.02	1.02	1.02	1.03
46.4 (8.0)	1.02	1.02	1.02	1.02	1.03
50.0 (10.0)	1.02	1.02	1.02	1.02	1.03
53.6 (12.0)	1.02	1.02	1.02	1.02	1.03
57.2 (14.0)	1.02	1.02	1.02	1.02	1.03
60.8 (16.0)	1.02	1.02	1.02	1.02	1.03
64.4 (18.0)	1.02	1.02	1.02	1.02	1.03
68.0 (20.0)	1.02	1.02	1.02	1.02	1.03
71.6 (22.0)	1.02	1.02	1.02	1.02	1.03
75.2 (24.0)	1.02	1.02	1.02	1.02	1.03
78.8 (26.0)	1.01	1.02	1.02	1.02	1.03
82.4 (28.0)	1.01	1.02	1.02	1.02	1.03
86.0 (30.0)	1.01	1.02	1.02	1.02	1.03
89.6 (32.0)	0.99	1.02	1.02	1.02	1.03
93.2 (34.0)	0.96	1.01	1.01	1.01	1.02
95.0 (35.0)	0.94	1.00	1.00	1.01	1.02
96.8 (36.0)	0.92	0.99	1.00	1.00	1.02
100.4 (38.0)	0.87	0.97	0.99	0.99	1.01
104.0 (40.0)	0.82	0.93	0.97	0.98	1.00
107.6 (42.0)	-	0.88	0.94	0.97	0.99
111.2 (44.0)	-	0.82	0.91	0.95	0.97
114.8 (46.0)	-	-	0.86	0.92	0.95
118.4 (48.0)	-	-	0.80	0.87	0.91
131.0 (55.0)	-	-	-	0.81	0.86

Table 5 - Multiplicative cooling power correction factors for external ambient air and outlet chilled water temperatures that differ from nominal ones.

Dimensions and clearances



MODEL	A	B	C
RTYF HT 120-119	23- ⁵ / ₈ " (600)	47- ⁷ / ₁₆ " (1205)	-
RTYF HT 120-238	23- ⁵ / ₈ " (600)	47- ⁷ / ₁₆ " (1205)	-
RTYF HT 180-119	23- ⁵ / ₈ " (600)	72- ¹⁵ / ₁₆ " (1852.5)	-
RTYF HT 180-238	23- ⁵ / ₈ " (600)	72- ¹⁵ / ₁₆ " (1852.5)	-
RTYF HT 180-357	23- ⁵ / ₈ " (600)	72- ¹⁵ / ₁₆ " (1852.5)	-
RTYF HT 240-119	23- ⁵ / ₈ " (600)	69- ¹ / ₈ " (1755)	70" (1780)
RTYF HT 240-238	23- ⁵ / ₈ " (600)	69- ¹ / ₈ " (1755)	70" (1780)
RTYF HT 240-357	23- ⁵ / ₈ " (600)	69- ¹ / ₈ " (1755)	70" (1780)
RTYF HT 240-476	23- ⁵ / ₈ " (600)	69- ¹ / ₈ " (1755)	70" (1780)

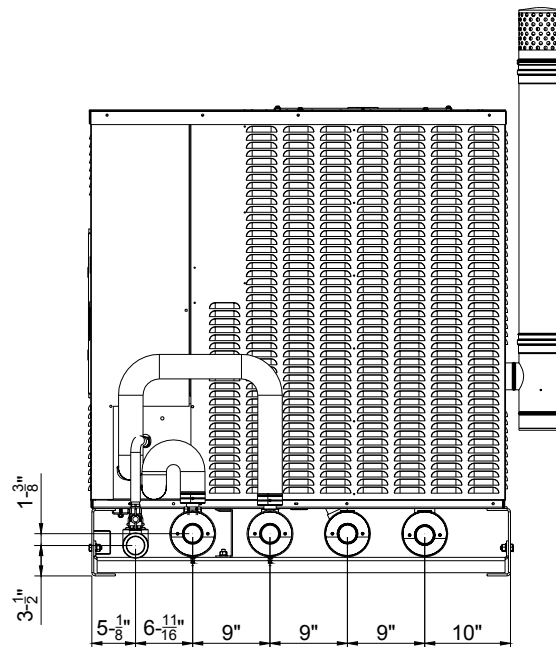


Figure 1 - RTYF HT anti-vibration supports positioning dimensions and piping specifications; dimensions in inches unless otherwise specified.

Lifting and positioning the appliance on site

The appliance must be kept in the same packing in which it left the factory while it is moved on the site; packing must only be removed upon final installation.

If the appliance has to be lifted, connect two cables to the holes provided on the base and use suspension and spacer bars to prevent the cables of the hoist from damaging the panels while the appliance is moved. See figure below:

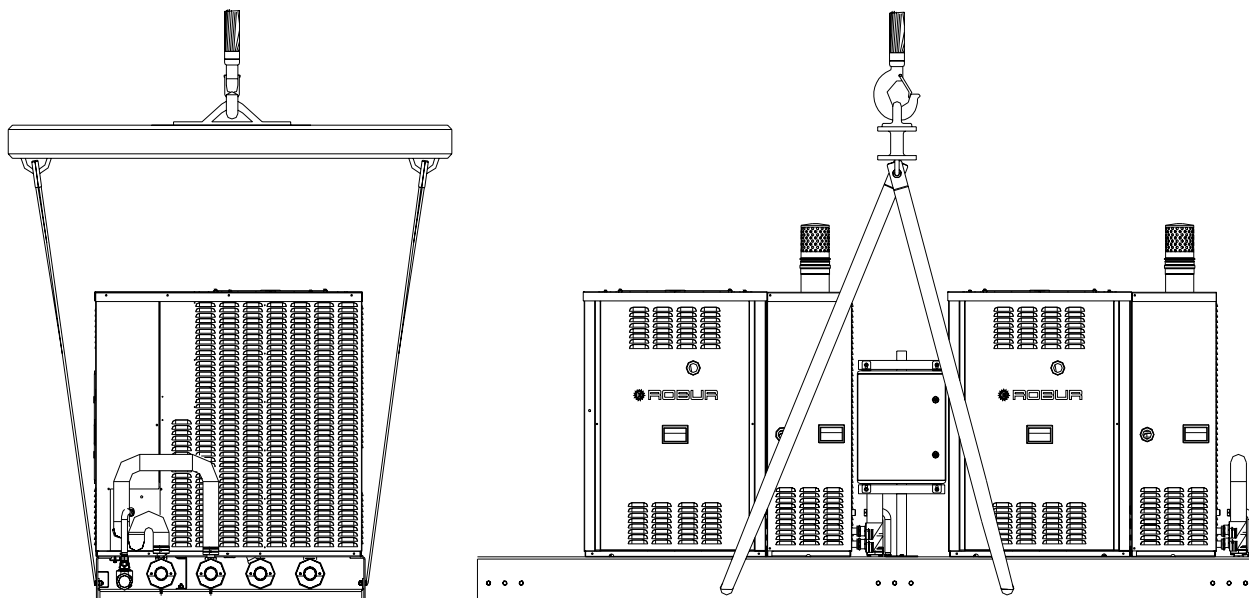


Figure 2 - Lifting the appliance. Example for a RTYF HT 120-238.



The hoist and all accessory equipment (braces, cables, bars) must be of adequate dimensions in relation to the load to be lifted. For the weight of the appliance, refer to paragraph “Technical data” on page 2.



When lifted, the appliance must be kept horizontal. Suitably adjust cables and bars to lift the unit in horizontal position.

The manufacturer cannot be held responsible for any damage that occurs during the setting up of the appliance.

The appliance can be installed at ground level, or on a terrace or roof if they are able to sustain its dimensions and weight.



The dimensions of the appliance are given in Table 2 and Table 4 on pages 3 and 5, and in Figure 1 on page 7.

SUPPORTING BASE

Always position the appliance on a flat level surface that is made of fireproof material and able to sustain the weight of the appliance itself.

In addition, provide a small containing step to prevent water from spilling over during winter defrosting operations.

Installation at ground level

If a horizontal base is not available (see also "SUPPORTS AND LEVELLING" - page 9), it is necessary to create a flat level base in concrete that is at least 4÷6" (100-150 mm) larger than the dimensions of the base of the appliance on each side.

The dimensions of the appliance are given in paragraph "Technical data" on page 2. Provide a small containing step and suitable drainage channel for the water.

Installation on terrace or roof

Position the appliance on a flat level surface that is made of fireproof material (see also "SUPPORTS AND LEVELLING" - page 9).

The structure of the building must be able to sustain the weight of the appliance added to that of the supporting base.

The weight of the appliance is given in paragraph "Technical data" on page 2.

Although the appliance produces only moderate vibrations, the use of anti-vibration supports (available as accessories) is especially recommended in cases in which the appliance is installed on a roof or terrace and therefore resonance phenomena may occur.

In addition, it is advisable to use flexible connections (anti-vibration joints) between the appliance and the hydraulic and gas supply pipes.



Avoid positioning the appliance directly above rest areas or other areas that require quiet.

SUPPORTS AND LEVELLING

The appliance must be correctly leveled by placing a level on the upper part of the appliance.

If necessary, level the appliance with metal spacers, placing them appropriately in relation to the mounts. Do not use wooden spacers as these degrade quickly.

CLEARANCES

Position the appliance so as to maintain **minimum clearances** from combustible surfaces, walls or other appliances, as illustrated in Figure 3 on the next page.



Minimum clearances are necessary in order to be able to carry out maintenance operations and to be able to guarantee the correct flow of air required for heat exchange with the finned coil.

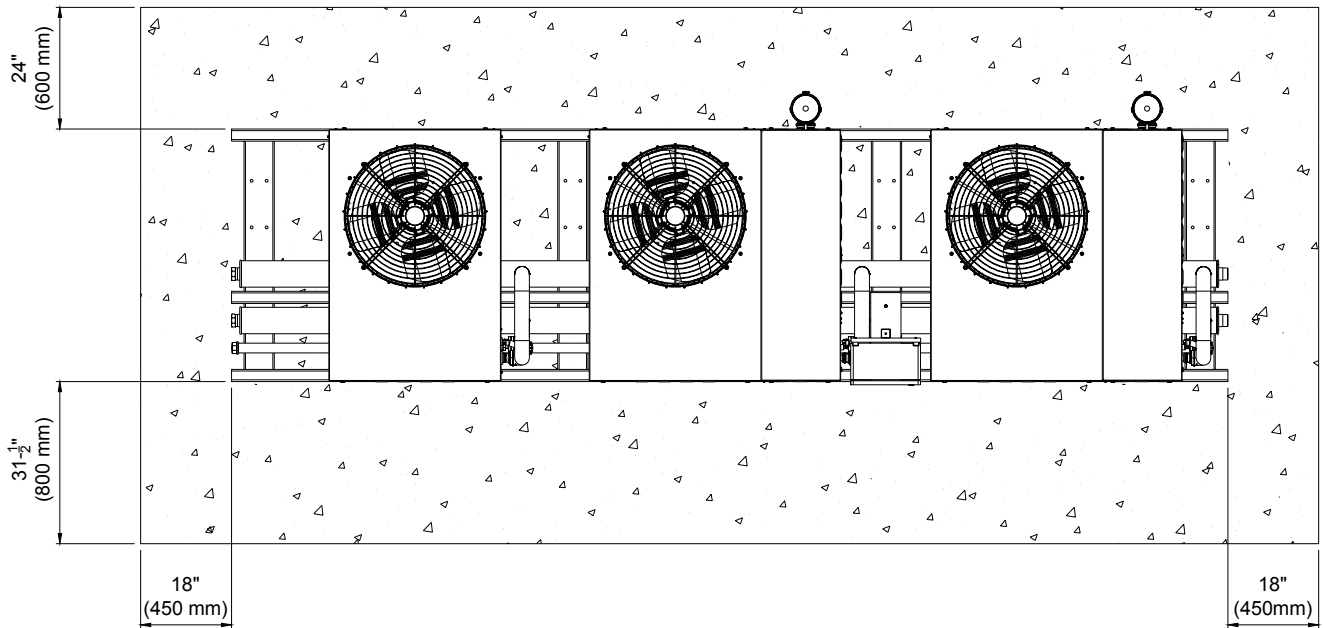


Figure 3 - Minimum clearances from obstacles, walls and combustible surfaces.

Position the appliance preferably out of range of rooms and/or environments where strict silence is required, such as bedrooms, meeting rooms, etc.

Evaluate the noise impact of the appliance in consideration of the installation site: avoid installing the appliance in positions (corners of buildings, etc.) that could amplify the noise (reverb effect).

Hydraulic and application information

The appliance is not equipped with an expansion tank: it is therefore necessary to install a suitable expansion tank, sized in relation to the maximum heat range and the maximum operating pressure of the water in the plant; an air bleed installed at the highest point in the water loop is also required.

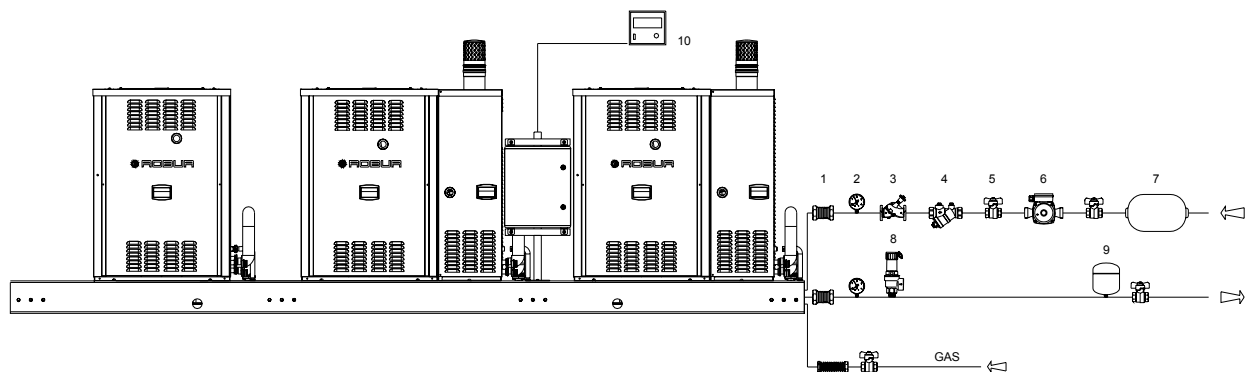
The appliance includes a system that starts the pumps and in case the heater module(s) if the temperature of the plant water drops down too much, to avoid water freezing. A concentration of permanent inhibited antifreeze/glycol should be added as well to the water loop to prevent freezing in your particular region. A minimum 20% concentration is suggested in all regions. Operating the unit with no antifreeze could result in freezing the water in the chiller modules' evaporator during mild weather or light cooling load conditions. This freezing condition would result in improper water flow through the unit and may ultimately damage the chiller modules' evaporators.

RTYF HT do not include water-circulating pump(s). Pump(s) must be sized and obtained locally for your particular application. Properly size the pump(s) according to the correct water flow and pressure drops of the appliance, see Technical data on page 9.

Also account for the additional pressure drop of the water piping, fittings, antifreeze concentration and coil(s) in the water loop when sizing the pump(s).

The installer must ensure that the water pump(s) and the appliance start at the same time. Also, the pump must continue to run during the units' cycle down time (600 seconds after the opening of the control switch). Contacts in the appliance control box may be used for this purpose if the pump's amp draw does not exceed 4 amps. Contact Robur Corp. for additional information, see address on the back cover.

Also, as indicated above, the water loop must contain a properly sized expansion tank and an air bleed must be installed at the highest point of the loop. In addition, water piping must include necessary fittings to properly fill the loop with a water/antifreeze mixture. Typical piping arrangements shown below:

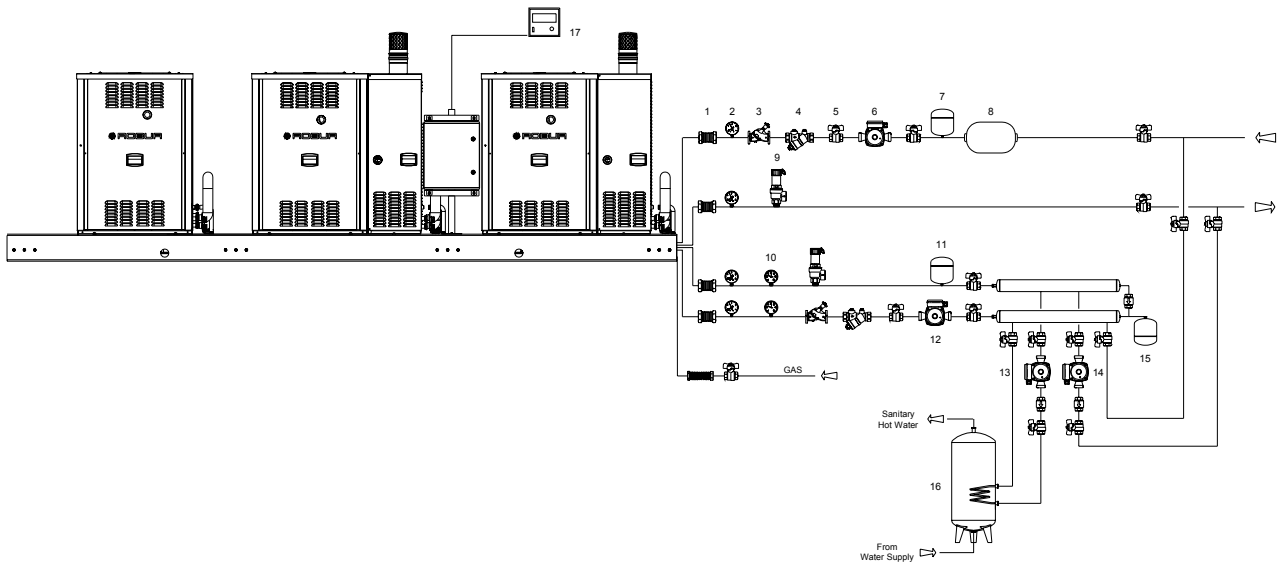


KEY

- | | |
|---|---|
| 1 ANTI-VIBRATION JOINTS | 2 MANOMETERS - gauge range 0-60 PSI _g (0-4 bar _g) |
| 3 FLOW ADJUSTMENT VALVE | 4 WATER FILTER - filter mesh: about 0.03" (from 0.7 to 1 mm MAX) |
| 5 ISOLATION VALVE | 6 PLANT WATER CIRCULATION PUMP |
| 7 INERTIAL OR ACCUMULATION TANK (required if plant contains less than 18.5 gal (70 l) of water for each unit) | 8 PLANT WATER SAFETY VALVES 45 PSI _g (3 bar _g) |
| 9 PLANT EXPANSION TANK | 10 DIRECT DIGITAL CONTROLLER (DDC, supplied as standard with the appliance) |

(*) For the RTYF240 appliance use pipes and hydraulic components with a diameter of \varnothing 2-1/2".

Figure 4 - Typical piping arrangement for a RTYF/2 HT.



KEY

- | | |
|---|---|
| 1 ANTI-VIBRATION JOINTS | 2 MANOMETERS - gauge range 0-60 PSI _g (0-4 bar _g) |
| 3 FLOW ADJUSTMENT VALVE | 4 WATER FILTER - filter mesh: about 0.03" (from 0.7 to 1 mm MAX) |
| 5 ISOLATION VALVE | 6 PRIMARY SIDE CHILLED WATER CIRCULATION PUMP |
| 7 PRIMARY SIDE CHILLED WATER EXPANSION TANK | 8 INERTIAL OR ACCUMULATION TANK (required if plant contains less than 18.5 gal (70 l) of water for each unit) |
| 9 45 PSI _g (3 bar _g) SAFETY VALVES | 10 THERMOMETERS |
| 11 PRIMARY SIDE HOT WATER EXPANSION TANK | 12 PRIMARY SIDE HOT WATER CIRCULATION PUMP |
| 13 SECONDARY SIDE SANITARY WATER CIRCULATION PUMP | 14 SECONDARY SIDE HEATING WATER CIRCULATION PUMP |
| 15 SECONDARY SIDE PLANT HOT WATER EXPANSION TANK | 16 SANITARY WATER BOILER |
| 17 DIRECT DIGITAL CONTROLLER (DDC, supplied as standard with the appliance) | |

(*) For the RTYF240 appliance use pipes and hydraulic components with a diameter of $\varnothing 2\text{-}\frac{1}{2}$ ".

Figure 5 - Typical piping arrangement for a RTYF/4 HT.

Contact Robur's Tech Service Department if additional application information or assistance is required.

ROBUR Corporation • 827 E Franklin Street • Evansville, IN 47711
812-424-1800 • Fax: 812-422-5117