



Gas absorption chiller for cooling.

ACF

- **Saving up to 86% of electricity** compared with a traditional electrical system, thanks to the prevalent use of natural gas.
 - Independent and modular, it ensures **continuity of service** for cooling only as and when needed.
 - Thanks to the use of an almost static refrigeration cycle, the **performance levels remain unchanged over time and regular refill and disposal of refrigerant is not required.**
- Applications**
- Cooling for commercial, accommodation and industrial use.
 - For **outdoor installation.**

-86% electricity demand

Modular



Find more <http://www.robur.com/products/pro-solutions/pro-ga-line-acf-rtcf-series/description.html>

COOLING OPERATION MODE ⁽¹⁾

Working point A35/W7	GUE (gas utilization efficiency)	%	71
	cooling capacity	kW	17.72
Nominal water flow rate ($\Delta T = 5.5 \text{ }^\circ\text{C}$)		m ³ /h	2.77
Nominal water pressure loss		kPa	29
Minimum outlet water temperature		°C	3
Inlet water temperature	max	°C	45
	min	°C	6
Ambient operating temperature	max	°C	45
	min	°C	0

BURNER CHARACTERISTICS

Thermal input (actual)		kW	25.0
Gas consumption (actual)	natural gas G20 ⁽²⁾	m ³ /h	2.65
	LPG G30/G31 ⁽³⁾	kg/h	1.94

ELECTRICAL CHARACTERISTICS

Voltage		230 V – 50 Hz	
Nominal electrical power ⁽⁴⁾⁽⁵⁾	standard version	kW	0.82
	low noise version	kW	0.87

INSTALLATION DETAILS

Operational Weight	standard version	kg	340
	low noise version	kg	360
Sound power L _w ⁽⁶⁾	standard version	dB(A)	82.1
	low noise version	dB (A)	76.1
Sound pressure L _p at 5 metres ⁽⁶⁾	standard version	dB(A)	60.1
	low noise version	dB (A)	54.1
Connections	water	"	1 1/4 F
	gas	" F	3/4
Electrical degree of protection		IP	X5D

⁽¹⁾ Operating point under nominal conditions according to EN 12309-2.

⁽²⁾ NCV 34.02 MJ/m³ (9.45 kWh/m³) at 15 °C - 1013 mbar.

⁽³⁾ NCV 46.34 MJ/kg (12.87 kWh/kg) at 15 °C - 1013 mbar.

⁽⁴⁾ A reduction in the fan revolutions (air flow) is envisaged for ambient operating temperatures of less than 33 °C. This leads to a further reduction in electricity consumption levels.

⁽⁵⁾ ± 10% depending on the power supply voltage and on the tolerance of the electrical motors power consumption.

⁽⁶⁾ Sound power values measured according to EN ISO 9614.

⁽⁶⁾ Free field, at the front, direction factor 2. The values refer to the maximum measured.

Solutions for cooling



with chillers

Model	Cooling capacity	Size	Weight
	kW	w/d/h mm	kg
ACF	17.72	850/1,230/1,290	340
RTCF	35.44	2,314/1,245/1,400	822
	53.16	3,610/1,245/1,400	1,232
	70.88	4,936/1,245/1,400	1,642
	88.60	6,490/1,245/1,400	2,062

• Data refer to standard version, 2 pipes version and without circulators. Available with or without circulators. Please contact Robur Sales Network.

Solutions for heating,
DHW production and cooling

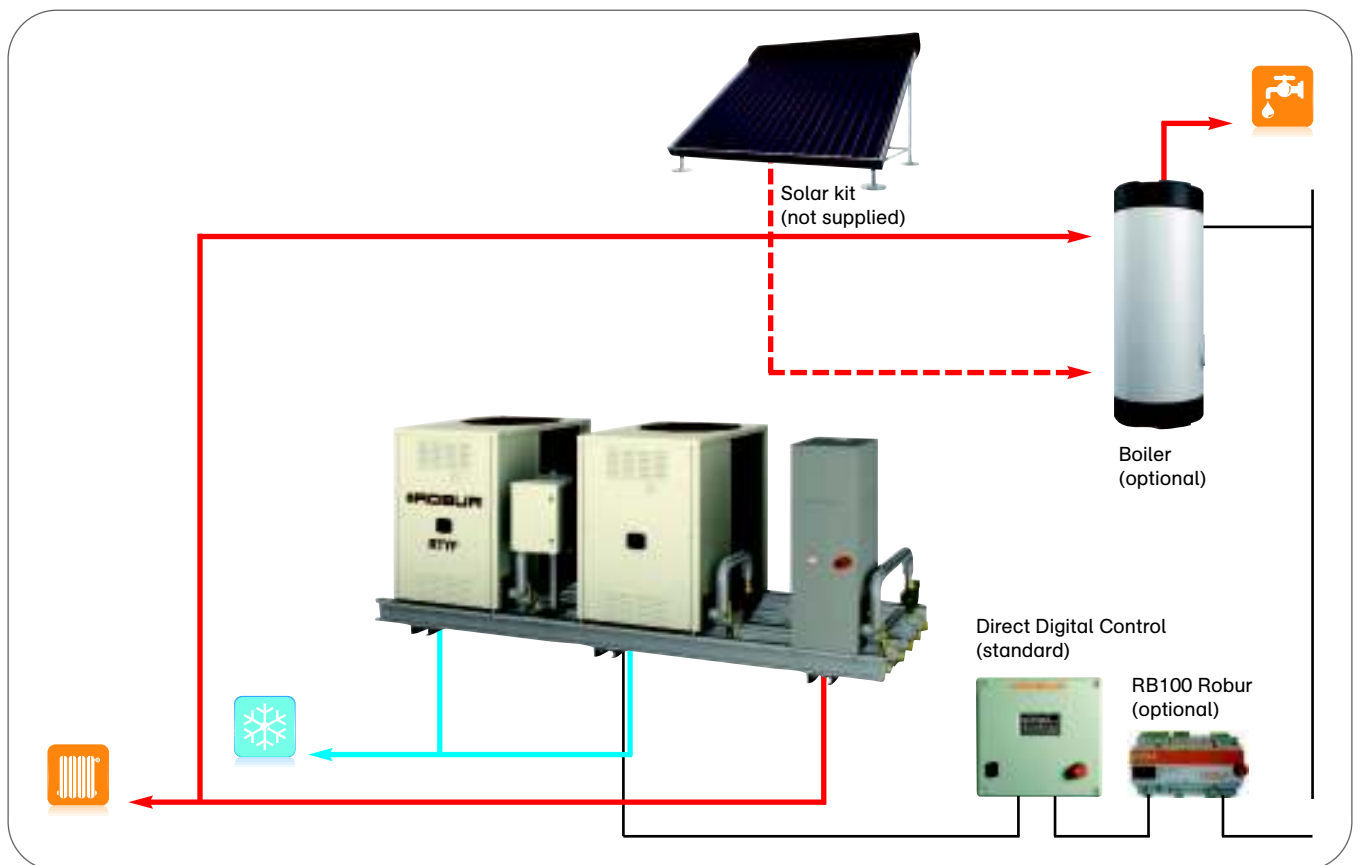


with chillers + condensing boilers



Model	Heating capacity heating/DHW kW	Cooling capacity kW	Size w/d/h mm	Weight kg
RTYF	34.40	17.72	2,314/1,245/1,400	571
	68.80	17.72	2,314/1,245/1,400	676
	103.20	17.72	3,382/1,245/1,400	828
	137.60	17.72	3,382/1,245/1,400	912
	34.40	35.44	3,382/1,245/1,400	973
	68.80	35.44	3,382/1,245/1,400	1,079
	103.20	35.44	4,936/1,245/1,400	1,245
	137.60	35.44	4,936/1,245/1,400	1,329
	34.40	53.16	4,936/1,245/1,400	1,391
	68.80	53.16	4,936/1,245/1,400	1,496
	103.20	53.16	4,936/1,245/1,400	1,596
	137.60	53.16	6,490/1,245/1,400	1,759
	34.40	70.88	6,490/1,245/1,400	1,811
	68.80	70.88	6,490/1,245/1,400	1,916
	103.20	70.88	6,490/1,245/1,400	2,026
	137.60	70.88	6,490/1,245/1,400	2,110

• Data refer to standard version, 4 pipes version and without circulators. Available with or without circulators, standard or low noise versions. Please contact Robur Sales Network.



Solutions combined with Robur absorption heat pumps powered by gas are also available, such as:

- **RTCR** (p.23): Heating or cooling.
- **RTRC** (p.24): Heating, cooling and DHW + renewable energy.



Gas absorption chiller
for cooling in process applications,
cooling in hot climates and refrigeration.

ACF Special Versions

- **Saving up to 86% of electricity** compared with a traditional electrical system, thanks to the prevalent use of natural gas.
- **Independent and modular**, it ensures **constant performance** for air conditioning only as and when needed.
- Thanks to the use of an almost static refrigeration cycle, the **performance levels remain unchanged over time** and regular refill and disposal of refrigerant is not required.

TK Version applications

- Cooling in process applications. (e.g. in greenhouses for the intensive cultivation of mushrooms, rooms used for medium/long-term maturing of cheese, etc).
- Cooling of controlled temperature rooms throughout the year (e.g. data reading rooms, computer rooms, laboratories).
- Cooling of rooms with high heat gains that require cooling even during cold seasons.

HT Version applications

- Cooling of residential, commercial and industrial environments with an external air temperature up to 50 °C.

LB Version applications

- Refrigeration of low temperature environments for the food industries, where it is necessary to maintain temperatures inside the room in compliance with health and hygiene regulations.
- Refrigeration of cold rooms and counters for food preservation.
- Process refrigeration in systems requiring negative fluid temperatures.
- Ice storage systems, for the storage of cooling energy during periods of low energy needs.

Process applications

Hot climates

Refrigeration



ACF TK ACF HT ACF LB

COOLING OPERATION MODE ⁽¹⁾

Working point A35/W7	GUE (gas utilization efficiency)	%	71	68	53
	cooling capacity	kW	17.72	17.12	13.30
Nominal water flow rate ($\Delta T = 5.5^\circ\text{C}$)		m ³ /h	2.77	2.67	2.60
Nominal water pressure loss		kPa	29	27	42
Minimum outlet water temperature		°C	3	5	-10
Inlet water temperature max/min		°C	45/6	45/8	45/-5
Ambient operating temperature max/min		°C	45/-12	50/0	45/0
Sound power L _w ⁽²⁾ - standard version		dB(A)	82.1	82.1	82.1
Sound pressure L _p at 5 metres ⁽³⁾ - standard version		dB(A)	60.1	60.1	60.1

BURNER CHARACTERISTICS

Thermal input (actual)		kW	25.0	25.0	25.0
Gas consumption (actual)	natural gas G20 ⁽³⁾	m ³ /h	2.65	2.65	2.65
	LPG G30/G31 ⁽⁴⁾	kg/h	1.94	1.94	1.94

ELECTRICAL CHARACTERISTICS

Voltage			230 V – 50 Hz		
Nominal electrical power ⁽⁵⁾⁽⁶⁾ - standard version		kW	0.90	0.90	0.90

⁽¹⁾ Operating point under nominal conditions according to EN 12309-2.⁽²⁾ Sound power values measured according to EN ISO 9614.⁽³⁾ Free field, at the front, direction factor 2. The values refer to the maximum measured.⁽⁴⁾ NCV 34.02 MJ/m³ (9.45 kWh/m³) at 15 °C - 1013 mbar.⁽⁵⁾ NCV 46.34 MJ/kg (12.87 kWh/kg) at 15 °C - 1013 mbar.⁽⁶⁾ A reduction in the fan revolutions (air flow) is envisaged for ambient operating temperatures of less than 33 °C. This leads to a further reduction in electricity consumption levels.⁽⁷⁾ ± 10% depending on the power supply voltage and on the tolerance of the electrical engines.**Chillers for cooling in process applications**

Model	Cooling capacity kW	Size w/d/h mm	Weight kg
ACF TK	17.72	850/1,230/1,290	350
RTCF TK	35.44	2,314/1,245/1,400	856
	53.16	3,610/1,245/1,400	1,283
	70.88	4,936/1,245/1,400	1,710
	88.60	6,490/1,245/1,400	2,147

Chillers for cooling in hot climates

Model	Cooling capacity kW	Size w/d/h mm	Weight kg
ACF HT	17.12	850/1,230/1,290	350
RTCF HT	34.24	2,314/1,245/1,400	856
	51.36	3,610/1,245/1,400	1,283
	68.48	4,936/1,245/1,400	1,710
	85.60	6,490/1,245/1,400	2,147

Chillers for refrigeration at negative temperatures

Model	Cooling capacity kW	Size w/d/h mm	Weight kg
ACF LB	13.30	850/1,230/1,290	350
RTCF LB	26.60	2,314/1,245/1,400	856
	39.90	3,610/1,245/1,400	1,283
	53.20	4,936/1,245/1,400	1,710
	66.50	6,490/1,245/1,400	2,147

* Data refer to standard version, without circulators. Available with or without circulators, standard or low noise versions. Please contact Robur Sales Network.