



caring for the environment

*The easiest and
the most cost-effective heating*



Gas fired unit heaters

*The ideal solution for
space heating integration*



Gas convectors

www.robur.com
export@robur.it

Always close to our Customers

Robur Pre-Sales Service

T +39 (0)35 888 111 presales@robur.it

Robur Technical Support

T +39 (0)35 888 111 cst@robur.it



• Company, corporate values, awards and certifications

p. 4



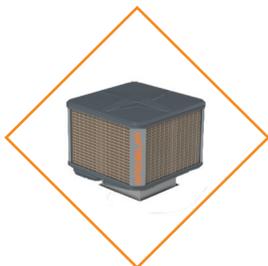
• Gas fired unit heaters, also with condensing technology
• Accessories of gas fired unit heaters

p. 8
p. 20



• Gas convectors

p. 22



• Air barrier with centrifugal fan
• Evaporative cooler

p. 25
p. 26

ROBUR VALUES

Mission

Robur is dedicated to dynamic progression in research, development and promotion of safe, environmentally-friendly, and energy-efficient products, through the commitment and care of its employees and partners

Vision

Robur turns THE LOVE FOR BEAUTY AND WELL-MADE THINGS into innovative heating and cooling systems that are especially designed and developed to answer the specific needs of Man

7 pillars

Sharing values
Training
Quality
Innovation
Service
Social responsibility
Testimony

The right choice can make the difference

A responsible purchase behaviour may have a great influence on our way of life.

Consider that a product consumes tons of oil during its whole life cycle, generating pollution that the forest cannot rebalance. That's why, when choosing a product, we take a great responsibility. Even the choice for the heating system may have a big impact.

To all who choose responsibly, Robur offers high efficiency heating systems with low environmental impact, and moreover concepts, data and facts to spread the culture of energy efficiency and environmental protection.

Benito Guerra - Robur Chairman



ROBUR AWARDS AND CERTIFICATIONS

- 1995 - ISO 9001 Certification
- 2000 - First Prize Italian Quality Award
- 2001 - Robur is the first ISO 9001:2000 (Vision 2000) certified company in Europe in HVAC sector
- 2003 - Special Prize Winner of “European Quality Award”
- Robur, with its reversible Gas Absorption Heat Pump (GAHP), won the Technological Innovation Award
- 2004 - Benito Guerra, chairman of Robur, received a nomination as finalist in the "Quality of life" category of the National Businessman of the Year Award, promoted by Ernst&Young
- 2005 - ISO 14001: 2004 Certification
- CSA Certification (USA)
- 2006 - Honourable mention at AHR Expo Innovation Award sponsored by ASHRAE (American Society of Heating, Refrigerating and Air- Conditioning Engineers - USA)
- 2007 - Mentioned as best product category for GAHP as part of the “Impresa Ambiente” Prize
- Special mention in Enterprise Prize for Innovation promoted by Confindustria (Italian Industry Association)
- 2008 - ROBUR Test Laboratories accredited by California Energy Commission - CEC
- GAHP performances are tested by VDE and DVGW-Forschungsstelle
- 2009 - Special mention in the category Energy Efficiency Development Prize 2009 by the Foundation Sustainable Development and Ecomondo
- 2011 - It is supported by European Commission under the EU’s Seventh Framework Programme for Research and Technological Development
- 2012 - GAHPs are tested by Engler-Bunte-Institut (EBI) of the Karlsruher Institut fuer Technologie (KIT)
- 2013 - GAHPs are tested by the Cetiat Laboratory in Lyon (EN ISO 17025)
- 2014 - The air-source GAHP has been presented at the European Parliament as one of the most innovative heating technologies during the Gas Week 2014
- 2016 - The GAHP is awarded as the Best Energy Efficient Product at SEAI 2016 in Dublin
- The company Robur is awarded with the Positive Business Award by the Business School Palo Alto

GAS UNIT HEATERS: THE MOST EFFICIENT AND COST-EFFECTIVE HEATING

More than 200,000 Robur gas heaters have been installed in Europe.



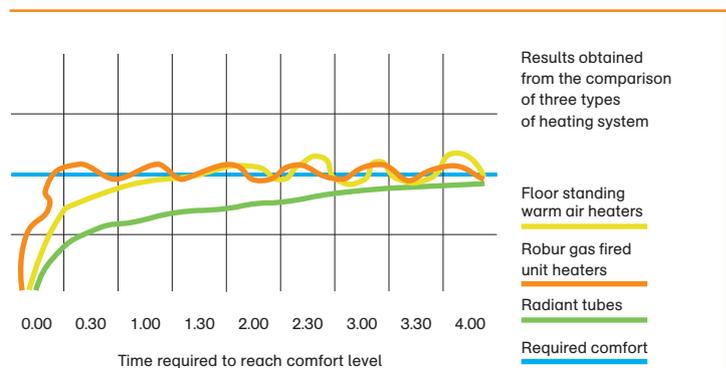
Modularity and autonomy: heat only when and where needed

Each Robur heater is a separate, independent heating unit with the dual function of generating and diffusing heat. The heaters adapt to the variable heat requirements of different buildings, thus allowing the number of appliances to install to be chosen, according to different requirements. Robur heaters are particularly suited to locations where the modifications or expansion of the existing plant are foreseen. Finally, the Robur system guarantees constant heat even in the event of failure of one appliance.

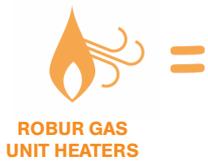
High efficiency without thermal inertia

The Robur air to air heat exchanger ensures extremely high efficiency. The Robur system avoids the need to install costly water pipeline which is not only expensive to install, but is also a source of heat loss. With a modular Robur installation, within 30 minutes even the largest spaces are warmed. The tests, carried out at the Robur Research and Development Center and at installations all over Europe, have demonstrated that given

equal energy consumption Robur heaters give higher efficiency and environmental comfort than alternative systems. The figure shows the results obtained by comparing the Robur system with two other types of heating systems. The first system, with a traditional floor standing warm air heater, requires one and a half hours to achieve the same ambient conditions. The second system, based on radiant tubes, even after four hours is not able to reach the same level of comfort.



GAS UNIT HEATERS



The Robur Ground Effect: energy savings guaranteed

The Heat Exchanger is designed with double vertical and horizontal finning, increasing internal and external heat exchanger surface. Made out of a special aluminium die-cast alloy (its high thermal conductivity is 10 times higher than steel) it allows a more homogeneous temperature on exchanger surfaces with optimal distribution. The large heat exchanger surface and the absence of high temperature areas avoid the carbonization of atmospheric dust, ensuring a perfect environmental comfort. Robur heaters allow users to reduce consumption and heat stratification problems. Its secret is the heat exchanger - the real heart of Robur unit heaters - which splits the air flow into different layers having different temperatures: lower temperature in the higher levels and vice versa higher temperature in the lower levels.

Uniform temperatures, comfort and saving: the facts speak for themselves.

Tests conducted at Robur's Research and Development Centre upon various gas-based heating systems (see graph below) have shown that for systems with floor standing warm air heaters and with radiant tubes the difference in air temperature, at 1 metre and 6 metres from the ground, is approximately 9 °C, whereas with Robur heaters the temperature difference is only 1.5 °C.

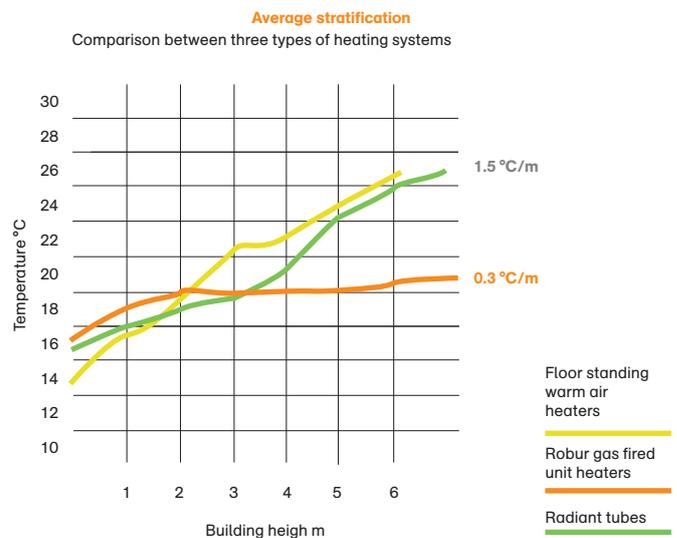
In addition, the ambient comfort produced by the exclusive heat exchanger guarantees a homogeneous temperature in a short time and ensures that the air is already perfectly mixed at just 4 metres (40 metres and upwards) from the heater.

No central heating plant, and lower installation costs

Robur heaters are installed directly in the room to be heated and do not require a central heating plant or any other additional building costs. Also given the suspended nature of the installation, precious floor area is kept free.

Ease of installation

Each unit is supplied with installation template which greatly simplifies the units installation. The three simple steps: a hole in the wall for the inlet air supply and outlet of exhausted gas, connection to the gas supply and to the electricity supply.



The smart choice can help you save money

	ROBUR GAS UNIT HEATERS	Radiant tubes	Floor standing warm air heaters
Time required to reach comfort level	30 min	Min. 4 hours. Turning the heat off can reduce comfort perception	2 hours and half
Delta T/m	0.3 °C/m	1.5 °C/m	1.8 °C/m



For heating with the best cost-benefit ratio thanks to the condensing technology.

Condensing and modulating wall mounted gas fired unit heater

G gas unit heater

Advantages

- Up to 25% of cost savings thanks to high efficiency higher than 105%. 30 minutes is all that it needs to warm up even the largest spaces.
- It is eligible for national and local incentive programs all over Europe.
- High comfort thanks to the perfect modulation of the heating output and ventilation.
- CO and NOx emissions practically nil. The control of the total premix combustion permits also to avoid problems on the exhaust flue system.

Applications

- Small and medium sized workshops and factories.
- Indoor installation.

Standard equipment

- Digital chronothermostat offers a series of regulation and control functions.
- Natural gas - LPG conversion kit.
- Condensate discharge.



efficiency
105%

up to
25%
saving

high
modulating
comfort

ELIGIBLE

for national and local incentive programs all over Europe

More: http://www.robur.com/products/condensing_gas_heater_g_series

G GAS UNIT HEATER

			G30	G45	G60	G100
Heat input	nominal	kW	30.0	45.0	58.0	93.0
	min.	kW	15.0	15.0	19.3	31.7
Heat output	nominal	kW	29.2	43.3	56.2	90.2
	reduced	kW	15.8	15.6	20.2	33.5
Efficiency	nominal	%	97.3	96.5	97.0	97.0
	min.	%	105.3	104.3	104.6	105.7
Gas consumption ⁽¹⁾	natural gas	m ³ /h	3.17	4.76	6.14	9.84
	LPG	kg/h	2.33	3.50	4.5	7.22
Airflow rate ⁽²⁾	max. speed	m ³ /h	2,700	4,000	5,350	8,250
	min. speed	m ³ /h	2,300	2,340	3,310	5,200
Temperature rise	max. speed	K	31.8	31.8	30.8	32.1
	min. speed ⁽³⁾	K	16.1	19.6	17.9	18.9
Gas connection		"F	3/4			
Air inlet pipe diameter		mm	80			
Exhaust flue pipe diameter		mm	80			
Electrical supply			230 V 1N - 50 Hz			
Installed wattage		W	350	450	750	900
Air throw at maximum speed in free field ⁽⁴⁾		m	18	25	31	40
Recommended height of installation		m	2.5	2.5/3	3/3.5	3/4
Operating temperature range ⁽⁵⁾		°C	0/35			
Sound pressure level at the max speed at 6 meters distance	in open field	dB(A)	47	48	50	54
	in typical installation	dB(A)	59	60	61.5	65.5
Sound pressure level at the min speed at 6 meters distance	in open field	dB(A)	42	43	45	49
	in typical installation	dB(A)	55	55	56	60.5
Size	width	mm	656	706	796	1,296
	depth	mm	735	735	760	740
	height	mm	800	800	800	800
Weight		kg	55	65	75	120

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Temperature rise of the air which permits to maintain the outlet air flow at a higher temperature than the one of the human body for a better comfort.

⁽⁴⁾ Throw for guidance only. Throw depends on height of building, mounting height to heater, room temperature and louvre setting.

⁽⁵⁾ Indoor temperature of the installation location 0 °C/35 °C. The unit's internal components have been tested from 0 °C/60 °C.





For heating with the best comfort thanks to the continuous modulation of the heating output and ventilation.

Modulating wall mounted gas fired unit heater

K gas unit heater

Advantages

- Energy savings and seasonal efficiency. K Series heaters have been designed to provide high thermal efficiency under all operational range. In fact, for most of the winter season, heat requirements are less than the maximum specified in the project and it is in these conditions that Robur gas fired unit heaters perform at their best. Their efficiency, already a remarkable 92% at maximum heat output, rises by 4 percentage points to 96% (see

graph below). Furthermore, the modulation allows the amounts of on and off to be reduced and therefore increasing the efficiency of the overall system.

- Comfort without competitors. Supply of heating output and ventilation is in proportion to the requirements of indoor space (see chart B). The graphic below shows this particular capacity to keep comfort comparing the indoor temperature of a room heated with an ON-OFF heater and

with a K Series heater when the heat request is reduced.

Thanks to the heat and the fan modulation and to an electronic system with a digital chronothermostat, the temperature is kept almost constant.

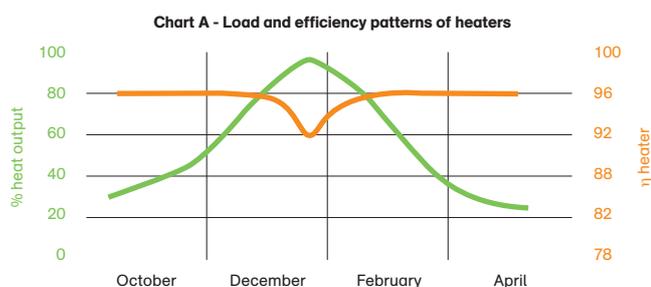
- Reduced size and weight, for faster and safer installation.

Applications

- Small and medium sized workshops and factories.
- Indoor installation.

Standard equipment

- Digital chronothermostat offers a series of regulation and control functions.
- LPG/gas exchange kit



More: http://www.robur.com/products/modulating_gas_heater_k_series

K GAS UNIT HEATER

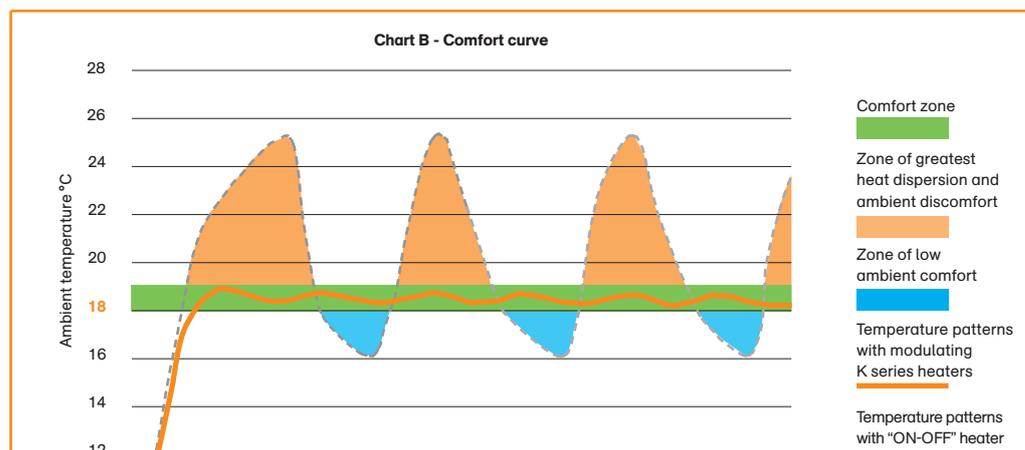
			K 32	K 45	K 60	K 100
Heat input	max.	kW	32.0	45.0	60.0	100.0
	min.	kW	18.6	27.0	34.5	56.0
Nominal heat output	max.	kW	29.6	41.6	55.2	92.0
	min.	kW	17.7	25.8	33.0	53.9
Efficiency at heat input	max.	%	92.5	92.4	92.0	92.0
	min.	%	95.0	95.5	95.6	96.2
Gas consumption ⁽¹⁾	natural gas	m ³ /h	3.39	4.76	6.35	10.58
	LPG G30	kg/h	2.52	3.55	4.73	7.88
	LPG G31	kg/h	2.49	3.50	4.66	7.77
Air flow rate ⁽²⁾	max. speed	m ³ /h	2,700	4,000	5,350	8,250
	min. speed	m ³ /h	2,300	2,600	3,670	5,775
Temperature rise	max. speed	K	32.0	30.8	30.6	33.0
	min. speed	K	23.0	29.4	26.7	27.7
Gas connection		"F	3/4			
Air inlet pipe diameter		mm	80			
Exhaust air pipe diameter		mm	80			
Electrical supply			230 V 1N - 50 Hz			
Installed wattage		W	350	450	750	900
Air throw ⁽³⁾		m	18	25	31	40
Recommended height of installation		m	2.5/3	2.5/3	3/3.5	3/4
Operating temperature range ⁽⁴⁾		°C	0/35			
Sound pressure level at 6 metres	at max. speed in open field	dB(A)	47	48	50	54
	at max. speed in typical installation	dB(A)	59.0	60.0	61.5	65.5
	at min. speed in typical installation	dB(A)	56.0	55.0	56.0	60.5
Size	width	mm	656	706	796	1,296
	depth	mm	735	735	770	770
	height	mm	800	800	800	800
Weight		kg	55	65.0	75.0	113

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Throw for guidance only. Throw depends on height of building, mounting height to heater, room temperature and louvre setting.

⁽⁴⁾ Indoor temperature of the installation location. The unit's internal components have been tested from 0 °C to 60 °C.





Efficient and cost-effective heating system.

Wall mounted gas fired unit heater
available also with centrifugal fan

F and F C gas unit heater

Advantages

- Heating efficiency of 91% under every operation condition.
- Low NOx emissions.
- Available in wall mounted or in vertical downflow.

Applications

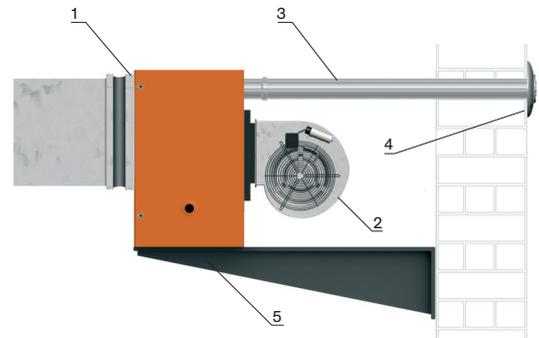
- For heating industrial buildings, workshops and commercial buildings.
- Gas unit heater F C with duct system is ideal for heating several rooms with a single unit.
- Indoor installation.

Standard equipment

- Remote control box with lock-out light, reset switch and summer/winter switch.
- Natural gas - LPG conversion kit.
- Flange duct connection (F C).



F C gas unit heater



- 1 Anti-vibration joint
- 2 Centrifugal fan
- 3 Air intake and exhaust pipes Ø 80 mm

- 4 External wall terminal
- 5 Wall support bracket



More: http://www.robur.com/products/low_nox_emissions_gas_heater_f_series

F and F C GAS UNIT HEATER

			F1 21	F1 31	F1 41	F1 51
Nominal heat input		kW	23.08	30.77	37.15	48.35
Nominal heat output		kW	21.0	28.0	33.8	44.0
Efficiency		%	91.0	91.0	91.0	91.0
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	2.43	3.25	3.93	5.11
	LPG G30	kg/h	1.80	2.42	2.93	3.81
	LPG G31	kg/h	1.78	2.38	2.87	3.74
Nominal air flow ⁽²⁾		m ³ /h	2,120	2,860	4,180	5,100
Temperature rise		K	31.1	30.7	29.5	31.0
Gas connection		"F	3/4			
Air inlet pipe diameter		mm	80			
Exhaust air pipe diameter		mm	80			
Electrical voltage			230V 1N - 50Hz			
Installed wattage		W	250	300	350	410
Air throw ⁽³⁾		m	14	16	20	22
Recommended installation height		m	2.5/3	2.5/3	2.5/3	2.5/3
Operating temperature range ⁽⁴⁾		°C	0/35			
Sound pressure level at 6 metres	in open field	dB(A)	41	43	44	46
	in typical installation	dB(A)	53	55	56	57
Size	width	mm	630	630	770	880
	depth	mm	640	640	670	700
	height	mm	800	800	800	800
Weight		kg	52	60	63.5	70

			F1 21C	F1 41C	F1 51C
Nominal heat input		kW	23.08	37.15	48.35
Nominal heat output		kW	21.0	33.8	44.0
Efficiency		%	91.0	91.0	91
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	2.43	3.93	5.12
	LPG G30	kg/h	1.80	2.93	3.81
	LPG G31	kg/h	1.78	2.87	3.73
Nominal air flow ⁽²⁾	with free outlet	m ³ /h	2,300	2,900	4,000
	at maximum admissible pressure drop	m ³ /h	2,000	2,600	2,800
Max. available pressure head (without air filters)		Pa	110	120	180
Gas connection		"F	3/4		
Air inlet pipe diameter		mm	80		
Air Exhaust air pipe diameter		mm	80		
Electrical supply			230 V 1N - 50 Hz		
Installed wattage		W	510	650	1,100
Size	width	mm	630	770	770
	depth	mm	920	970	1,020
	height	mm	800	800	800
Weight		kg	68	85	87

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Throw for guidance only. Throw depends on height of building, mounting height to heater, room temperature and louvre setting.

⁽⁴⁾ Indoor temperature of the installation location. The unit's internal components have been tested from 0 °C to 60 °C.



For heating in accomplishment with regulations mandating higher efficiency.

Wall mounted gas fired unit heater for small-medium sized spaces

B 15 gas unit heater

Advantages

- Heating efficiency of 92%.
- Easy installation: the heater, equipped with its own bracket, can be installed in horizontal, inclined or vertical position according to the requirements.
- Low sound pressure.
- Reduced size and weight.

Applications

- For heating industrial buildings, workshops and commercial buildings.
- Indoor installation.

Standard equipment

- Remote control box with lock-out light, reset switch and summer/winter switch.



More: http://www.robur.com/products/small_medium_size_premises_gas_heater_b15_series

B 15 GAS UNIT HEATER

			B 15
Nominal heat input		kW	15
Nominal heat output		kW	13.8
Efficiency		%	92
Nominal gas consumption (natural gas) ⁽¹⁾		m ³ /h	1.59
Nominal air flow ⁽²⁾		m ³ /h	2,170
Temperature rise		K	21.3
Gas connection		"F	3/4
Air inlet pipe diameter		mm	80
Exhaust flue pipe diameter		mm	80
Electrical supply		230 V 1N - 50 Hz	
Installed wattage		W	160
Operating temperature range ⁽³⁾		°C	0 - 35
Air throw ⁽⁴⁾		m	12
Sound pressure level at 6 m	in open field	dB(A)	40
	in typical installation	dB(A)	52
Size	width	mm	681
	depth	mm	516
	height	mm	480
Weight		kg	30

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Indoor temperature of the installation location. The unit's internal components have been tested from 0 °C to 60 °C.

⁽⁴⁾ Throw for guidance only. Throw depends on height of building, mounting height to heater, room temperature and louvre setting.



Cost-effective heating system. Also with ductwork.

Wall mounted gas fired unit heater
available also with centrifugal fan

M and M C gas unit heater

Advantages

- 30 minutes only to heat even the largest room. The Robur heat exchanger allows a more homogeneous temperature on exchanger surfaces with optimal distribution.
- Independent installation, it can be easily increased and moved.

Applications

- For heating industrial buildings, workshops and commercial buildings.
- Gas unit heater M C with duct system is ideal for heating several rooms with a single unit.
- Indoor installation.

Standard equipment

- Remote control box with lock-out light, reset switch and summer/winter switch.
- Natural gas - LPG conversion kit.
- Flange duct connection (M C).



More: http://www.robur.com/products/atmospheric_burner_gas_heater_m_series

M and M C GAS UNIT HEATER

		M 20	M 25	M 30	M 35	M 40	M 50	M 60	
Nominal heat input	kW	20.6	28.8	34.8	42.2	48.2	57.3	72.5	
Nominal heat output	kW	18.3	25.5	30.7	37.4	42.5	50.7	63.8	
Gas consumption	natural gas	m ³ /h	2.18	3.04	3.68	4.46	5.10	6.06	7.67
	LPG G30/G31	kg/h	1.62	2.27	2.74	3.32	3.80	4.52	5.72
Air flow rate ⁽²⁾	m ³ /h	2,630	2,800	4,100	3,900	4,530	5,200	7,140	
Temperature rise	K	32.0	32.0	30.3	32.6	33.6	32.0	30.5	
Gas connection	"M	1/2	1/2	1/2	1/2	1/2	3/4	3/4	
Air inlet pipe diameter ⁽³⁾	mm	130							
Exhaust air pipe diameter ⁽³⁾	mm	110							
Electrical supply	230 V 1N - 50 Hz								
Installed wattage	W	250	250	350	350	400	500	620	
Air throw ⁽⁴⁾	m	12	15	18	20	21	23	25	
Recommended installation height	m	2.5	2.5/3	2.5/3	2.5/3	2.5/3	2.5/3	3/3.5	
Operating temperature range ⁽⁵⁾	°C	0/35							
Sound pressure at 6 metres	in open field	dB(A)	41	43	44	44	45	45	47
	in typical installation	dB(A)	53	55	56	56	57	58	59
Size	width	mm	630	630	770	880	880	1,070	1,270
	height	mm	640	640	670	670	700	640	670
	depth	mm	800	800	800	800	800	800	800
Weight	kg	50	55	61.5	67.2	70.2	83.5	97	

		M 20C	M 30C	M 60C	
Nominal heat input	kW	20.6	34.8	72.5	
Nominal heat output	kW	18.3	30.7	63.8	
Gas consumption ⁽¹⁾	natural gas	m ³ /h	2.18	3.68	7.67
	LPG G30/G31	kg/h	1.62	2.72	5.72
Air flow rate ⁽²⁾	with free outlet	m ³ /h	2,900	4,300	7,600
	at maximum admissible pressure drop	m ³ /h	1,600	3,100	5,800
Temperature rise	with free outlet	K	19	21	24.5
	at maximum admissible pressure drop	K	34	29	32
Available pressure head	Pa	110			
Gas connection	"M	1/2	1/2	3/4	
Air inlet pipe diameter ⁽³⁾	mm	130			
Exhaust air pipe diameter ⁽³⁾	mm	110			
Electrical supply	230 V 1N - 50 Hz				
Installed wattage	W	600	620	920	
Operating temperature range ⁽⁵⁾	°C	0/35			
Size	width	mm	630	770	1,270
	height	mm	920	970	970
	depth	mm	800	800	800
Weight	kg	67	81	132	

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Nominal diameter of rigid pipe to be inserted into specific cylindrical housing.

⁽⁴⁾ Values measured in free field; in actual installation heat flow may reach significantly

greater distances than the value declared above (depending on height, installation environment and thermal insulation of the area covered).

⁽⁵⁾ Indoor temperature of the installation location. The unit's internal components have been tested from 0 °C to 60 °C.



For heating in accomplishment with regulations mandating. Outdoor installation.

Gas unit heaters with atmospheric burner

M xt

Advantages

- Heaters for outdoor installation, available in 3 models of heat output from 42.5 to 63.8 kW.
- External installation of the appliance allows air to be wholly or partially drawn from the outside.
- Automatic modulation of the flow of warm air into the heated environment, depending on air intake temperature, lowering it so that temperature is reduced.

Applications

- The externally-installed M xt heaters are suitable for heating rooms that need a constant ventilation (specific processes, public rooms etc.) or where indoor installation is not permitted by norm (places of public entertainment or rooms where flames may form), such as repair shops, painting shops and joiner's shops.
- Outdoor installation.



outdoor
installation

automatic
modulation

More: http://www.robur.com/products/atmospheric_burner_gas_heater_m_series

M xt GAS UNIT HEATER

			M 40xt	M 50xt	M 60xt
Nominal heat input		kW	48.2	57.3	72.5
Nominal heat output		kW	42.5	50.7	63.8
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	5.10	6.06	7.67
	LPG G30 / LPG G31	kg/h	3.80	4.52	5.72
Air flow ⁽²⁾	nominal	m ³ /h	4,200	5,200	7,800
	at maximum available pressure head	m ³ /h	2,710	3,350	4,800
	reduced with unobstructed intake	m ³ /h	2,940	3,640	5,460
Maximum available pressure head		Pa	70	80	80
Temperature rise	nominal	K	28.4	27.3	23.0
	at maximum available pressure head	K	46.5	45	39.4
Gas connection		"M	1/2	3/4	3/4
Air inlet pipe diameter ⁽³⁾		mm	130		
Exhaust air pipe diameter ⁽³⁾		mm	110		
Electrical supply			230 V 1N - 50 Hz		
Installed wattage		W	400	640	900
Operating temperature range ⁽⁴⁾		°C	-15/35		
Sound pressure level at 6 metres in free field at maximum airflow rate		dB(A)	46	46	48
Weight		kg	98	110	130

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

⁽³⁾ Nominal diameter of rigid pipe to be inserted into specific cylindrical housing.

⁽⁴⁾ The unit's internal components have been tested from -15 °C to 60 °C.

Gas unit heaters accessories

SUPPORT BRACKETS

Accessory	Description	G	K	F FC	B 15	M MC M xt
	Tubular support bracket - Extremely easy to install, it is suitable for all models and is supplied with ties-rods, bolts and washers to anchor to the wall.	•	•	F only	•	M only
	Revolving wall support bracket. This allows for an easy and correct installation of the gas unit heater. Complete with external counterplate.	•	•	F only	•	M only
	External support bracket kit. Manufactured specifically to be weather-resistant, it allows extremely easy installation of the appliance on the outside wall.			F C only		M C only
	Revolving wall support bracket. It allows for an easy installation. The heater can be positioned in horizontal, inclined or vertical position. The bracket permits also to install the heater in a non parallel position respect to the wall.				•	

DUCT ACCESSORIES FOR EXHAUST AIR OUTLET AND AIR INLET PIPES

Accessory	Description	G	K	F FC	B 15	M MC M xt
	Ducts for separate exhaust outlet. Additional flue and combustion air pipes may be added and are all available on request. Max. length depends on the version type.	•	•	•	•	•
	Aluminium alloy stainless steel double external terminals - The new external terminal for 80 mm diameter (separate) inlet and outlet ducts is a Robur personalized accessory. 80, 110 and 130 mm diameter (inlet and discharge).	•	•	•	•	•
	Roof and wall concentric flue terminal kits - A concentric terminal must be used for balanced flue applications. These are available foreither roof or wall outlet.	•	•	•	•	•

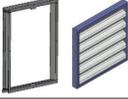
VERTICAL LOUVRES

Accessory	Description	G	K	F FC	B 15	M MC M xt
	Vertical adjustable louvres. The louvres allow the airflow to be diffused in the desired direction, extending the air throw zone of the appliance, and also obstacles (such as columns, machine tools, etc.), for which direct heating is not appropriate, to be avoided.	•	•	•		•

REGULATION AND CONTROL SYSTEMS

Accessory	Description	G	K	F F C	B 15	M M C M xt
	Room thermostat - Electromechanical thermostat with ON-OFF switch. Available also in IP 55 waterproof version.			•	•	•
	Remote control - Remote control with the following function: lock-out warning lamp; reset button; summer/winter switch.			supplied as standard	supplied as standard	•
	Digital chronothermostat - with a digital display, it can manage up to 3 temperature levels. Battery powered.			•	•	•

AIR DUCT ACCESSORIES

Accessory	Component	G	K	F F C	B 15	M M C M xt
	Mixing chamber kit - for the new air exchange thanks to the adjustable louvres.			•		•
	Regulation damper			•		•
	Air filter and filter holder kit (G3 class)			•		•
	Air intake filter In synthetic netting, washable on the mounting frame.					M xt only



Integrating space heating. High-efficiency and independent gas convectors ideal for occasional use, refurbishment and holiday homes.

Gas convectors

Calorio® M, Supercromo and TS 2000

Advantages

- Independent and modular systems that allow for different rooms to be heated to different temperatures, optimizing the heating by autonomously regulating the temperature of each single zone. 30% savings compared to a central heating system.
- Quick to install thanks to the easy installation of the support bracket and the position of the gas and electrical connections (external of the cover). Just one small hole through the wall for a coaxial pipe is needed.

Applications

- Ideal for integrating space heating. High-efficiency and independent gas convectors ideal for occasional use, refurbishment and holiday homes.

Standard equipment

- Wall support bracket
- 50 cm coaxial pipe.
- external flue terminal in aluminium alloy.
- Electrical 3-phase connection (Calorio M).
- Natural gas - LPG conversion kit.



TS 2000: no need for electrical power supply.

Wide range to meet every customer's comfort requirement!

	Calorio® M	Supercromo	TS2000
Heat output	Automatic modulation to keep constant temperature	ON-OFF switch according to set temperature	ON-OFF switch according to set temperature
Programming and temperature regulation	Manual or programmed through electronic backlit user interface (management of 3 temperature levels and days/hour/ °C programming)	Manual or with digital time switch (day/hour programming supplied as standard with 3002)	Manual
Indoor ventilation	Automatic modulation	ON-OFF	--
Accessories for perfect comfort	Yes	--	--
Electric supply	Yes	Yes	Not required
Colors	White (RAL 9003)	White (RAL 9003)	White (RAL 9003)

More: <http://www.robur.com/products/radiators-line/>

CALORIO[®] M

Modulating independent gas fired convector

Advantages

- Homogeneous temperature, comfort and energy saving, thanks to the modulation of the heat output and ventilation.
- Low heat stratification thanks to the regular and continuous operation.
- Easy to use programmable thermostat with backlight as a simple interface.

- Customize your comfort with exclusive accessories: food warmer and towel warmer.



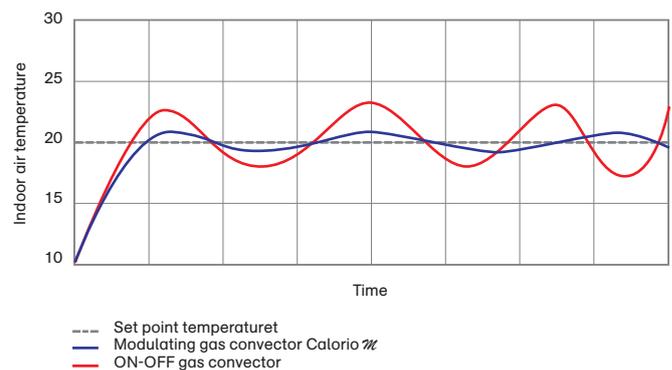
Unique accessories to maximize your comfort

Advantages for installers

- Easy to connect, both to the gas and supply grid, without disassembling the unit. Moreover Calor M does not require hydraulic system nor chimney
- Easy to install, provided with paper template, wall bracket, air/flue coaxial pipe.



ADVANTAGES OF AUTOMATIC MODULATION



		CALORIO		
			42M	52M
TECHNICAL CHARACTERISTICS				
Heat input	nominal	W	3.620	5.230
	reduced	W	2.510	3.600
Heat output	nominal	W	3.260	4.710
	reduced	W	2.260	3.180
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	0,383	0,553
	LPG	kg/h	0,285	0,412
Air flow ⁽²⁾	max	m ³ /h	120	220
	min	m ³ /h	80	160
Gas pipe diameter		"M	1/2	1/2
Pipe diameter	air inlet pipe	mm	49	49
	flue pipe	mm	35	35
Wall hole diameter (for coaxial pipes)		mm	50	50
Power supply			230 V - 50 Hz	
Wattage		W	45	86
Weight		kg	25	26
Size	length	mm	553	553
	height	mm	715	715
	depth	mm	215	215

		Supercromo			
			3001	3002	TS 2000
TECHNICAL CHARACTERISTICS					
Heat input	nominal	W	2.580	2.580	1.970
	reduced	W	--	--	1.335
Heat output	nominal	W	2.320	2.320	1.690
	reduced	W	--	--	1.120
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	0,273	0,273	0,200
	LPG	kg/h	0,203	0,203	0,150
Air flow ⁽²⁾		m ³ /h	100	100	--
Gas pipe diameter		"	3/8	3/8	3/8
Pipe diameter	air inlet pipe	mm	49	49	100
	flue pipe	mm	35	35	60
Wall hole diameter (for coaxial pipes)		mm	50	50	105
Power supply			230 V - 50 Hz		--
Wattage		W	45	45	--
Weight		kg	17,0	17,0	16
Size	length	mm	478	478	478
	height	mm	577	577	577
	depth	mm	173	173	173

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

For preventing cold air to enter into industrial and commercial buildings where doors are frequently opened.

Air barrier with centrifugal fan

R4S

Advantages

- The R4S operation is as simple as it is ingenious. It consists of a powerful fan, which can be set to operate each time the door is opened. It takes air from the upper area and blows it down over the door opening at high speeds through its long thin nozzle. This action promotes two fundamental effects. It helps to eliminate heated internal air from escaping to outside and also re-uses the hotter air from the higher area by blowing it back down to the lower working level where it is needed.

- Simple installation – maximum versatility. The installation of a R4S Robur air barrier is easy. The powerful centrifugal fan requires a single-phase (230 V) electrical supply. The multipositional wall-fixing bracket allows for different nozzle angles to suit the characteristics of the door it is covering. By installing several R4S air barriers all door widths can be catered for. The R4S air barrier is fitted with a speed regulator allowing the airflow duty to be altered depending on the units mounting height. The lower the door opening then the lower the airflow duty and thus, the lower the energy consumption.

Applications

- Factories with large frequently opened doors.
- Building neighbouring aisles and non heated areas.

Standard equipment

- Speed fan.



		R4S
Nominal air flow ⁽²⁾	m ³ /h	3,200
Installed wattage	W	1,000
Weight	kg	46

More: http://www.robur.com/products/air_barrier_r4s



Natural and simple cooling medium large spaces.

Natural evaporative cooler

AD

Advantages

- Low energy consumption: the management cost is less than 2€ per day.
- Modular and adaptable system. Each unit can operate independently or can be integrated with other units, even afterwards.
- Available with remote control ECO or EVO for the best comfort regulation.
- Available in down (supplied as standard), side or top discharge versions.
- No specialized maintenance. The only maintenance needed is the cleaning of the filters of the evaporative pads.

Applications

- Industrial buildings and warehouses.
- Commercial buildings, shops and showrooms.
- Fitness centres.

Standard

equipment

- ECO Digital remote control with on-off, cooling/ventilation, fan speed selector (3 levels), diagnostic alarms.
- EVO Digital remote control with automatic/manual selector, cooling/ventilation, fan speed selector, thermostat, humidistat, diagnostic alarms.



Accessories

- 4 or 6-way air diffusers.
- Winter cover.



More: http://www.robur.com/products/evaporative_cooler_ad_14

AD EVAPORATIVE COOLER



**ROBUR GAS
UNIT HEATERS**



MODULAR



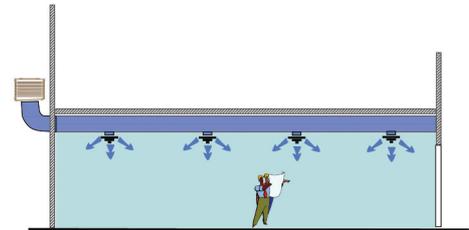
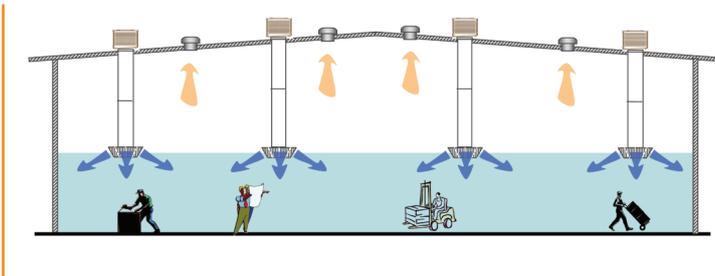
**COST
SAVING**



**EASY
INSTALLATION**

AIR CHANGES/HOUR

Offices and Shops	8/10
Light manufacturing e.g. Warehouse, packing area	10/15
Normal manufacturing e.g. Machine shop, assembly area	15/20
Heavy manufacturing e.g. Injection moulding, welding shop	20/30
Extreme conditions e.g. Bakery, forge	30/40



			AD14	AD20
Air flow	max.	m ³ /h	13,000	20,000
	average	m ³ /h	9,700	15,000
	min.	m ³ /h	6,500	10,000
Available pressure head		Pa	80	80
Water supply pressure	max.	bar	6	6
	min.	bar	1	1
Average water consumption ⁽¹⁾		l/h	43	64
Voltage		230 V - 50 Hz		
Water supply connection		"M	3/8	3/8
Water discharge connection		mm	60	60
Ducting connection		mm	600x600	600x1,500
Electrical power		kW	1.1	1.8
Sound pressure at 3 m	max. speed	dB(A)	66	70
	min. speed	dB(A)	50	50
Weight	without water	kg	67	120
	with water	kg	88	146
Size	width	mm	1,150	1,650
	length	mm	1,150	1,150
	height	mm	1,050	1,050

⁽¹⁾ At 33 °C - R.H. 60%.

ROBUR

wants to be a place of work:
Driven by the Progress
Moved by the Passion
Trusted by the Humanity
Led by the Justice
Guaranteed by the Quality
Inspired by the Beauty

Code: X-DPL189 - REV.07 11/2016



Robur S.p.A.
advanced heating and cooling
technologies
Via Parigi 4/6
24040 Verdellino/Zingonia (BG) Italy
T +39 035 888111 F +39 035 884165
www.robur.com export@robur.it