



caring for the environment



Gas Unit Heaters

ROBUR

PRODUCT LITERATURE
The right choice can make all the difference

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 caring 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 all the difference

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

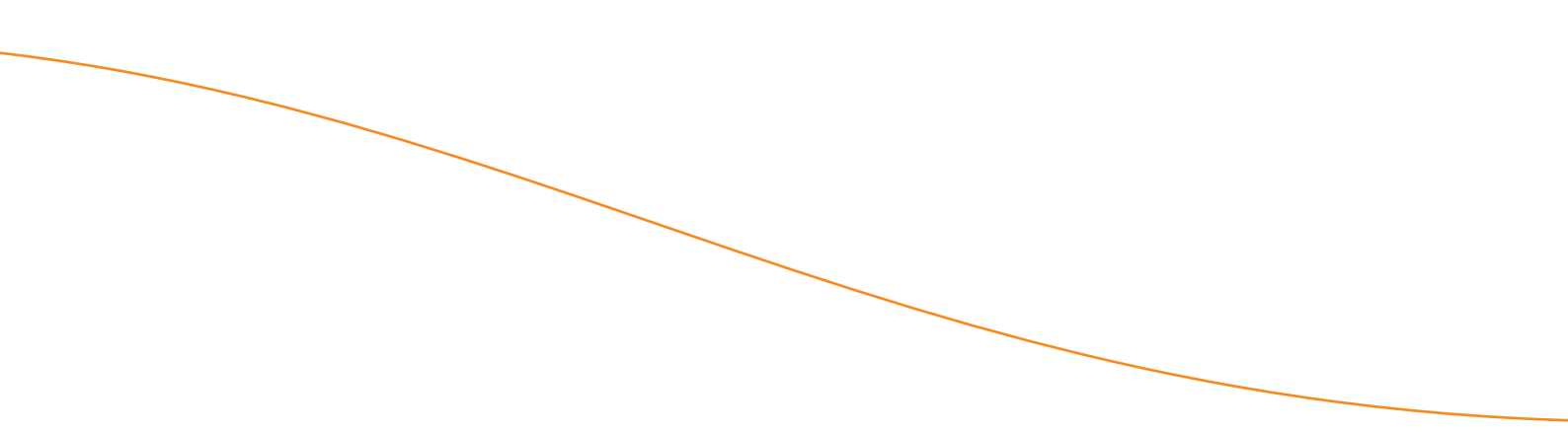
Consider that a product consumes tons of oil during its whole life cycle, generating pollution that the forest cannot rebalance. That's why, when choosing a product, we take a great responsibility. Even the choice for the heating system may have a big impact.

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 S.p.A. Chairman

ROBUR AWARDS AND CERTIFICATIONS

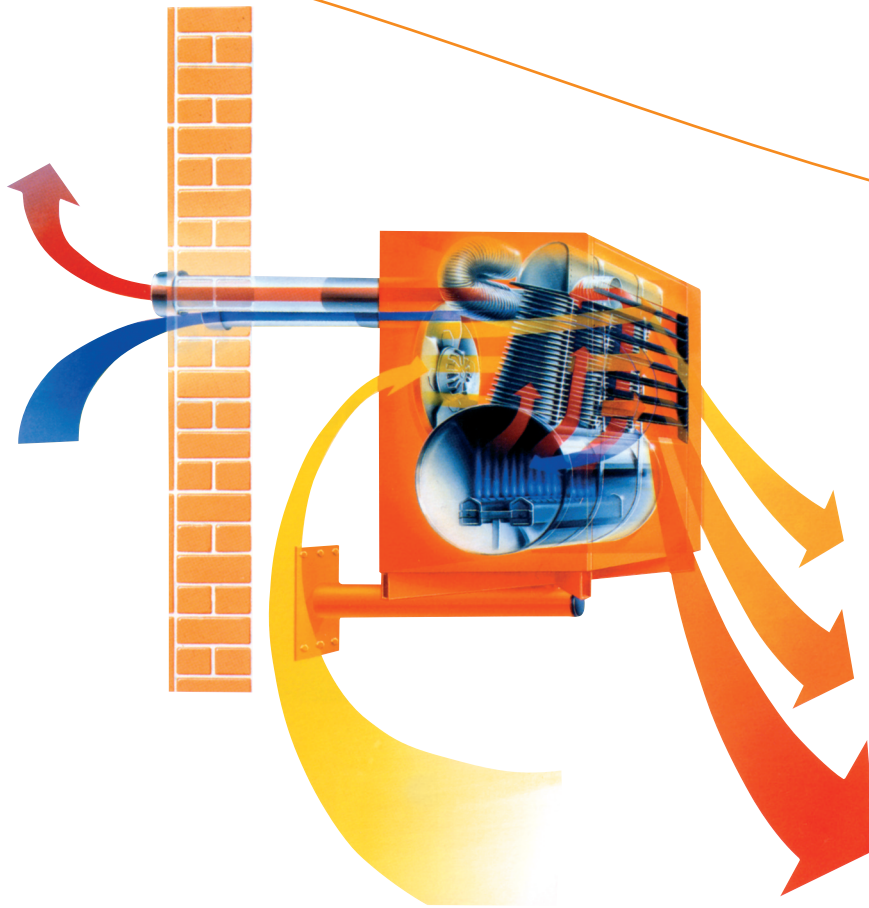
- 1995** - ISO 9001 Certification
- 2000** - First Prize Italian Quality Award
- 2001** - Robur is the first ISO 9001:2000 (Vision 2000) certified company in Europe in HVAC sector
- 2003** - Special Prize Winner of "European Quality Award"
 - Robur, with its reversible Gas Absorption Heat Pumps, won 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 gas-fired heat pumps as part of the "Impresa Ambiente" Prize
 - Special mention in Enterprise Prize for Innovation promoted by Confindustria
- 2008** - ROBUR Test Laboratories accredited by California Energy Commission - CEC
 - Gas Absorption Heat Pumps 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** - Robur is Coordinator of the HEAT4U Project (7th Framework Programme for Research and Technological Development promoted by European Commission). 14 among the most important European organizations in the energy, industrial, and research fields are involved. The challenge for this project, which shall continue through to 2014, is to implement the gas absorption heat pump technology, currently used for heating light commercial buildings, also in the area of single-family detached residential homes.
- 2012** - Gas Absorption Heat Pumps are tested by Engler-Bunte-Institut (EBI) of the Karlsruher Institut fuer Technologie (KIT)
- 2013** - Gas Absorption Heat Pumps are tested by the Cetiat Laboratory in Lyon (EN ISO 17025).





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More than 190,000 Robur gas heaters have been installed in Europe. They are ideal for industrial and commercial premises and workshops, gyms and fitness centres, warehouses and storage facilities, laboratories, commercial and trading areas, tennis courts, bowling alleys and greenhouses.

The winning features

High efficiency without thermal inertia

The Robur air to air heat exchanger ensures extremely high efficiency.

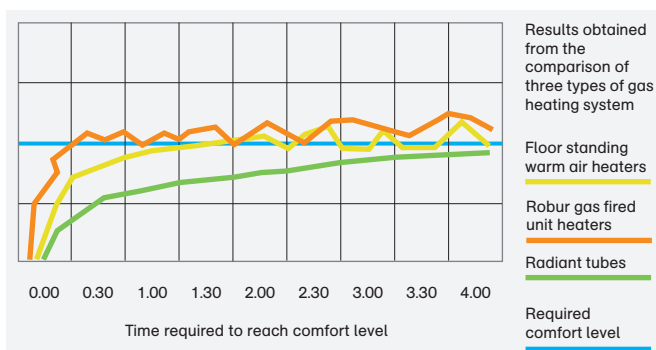
The Robur system avoids the need to install costly water pipeline which is not only expensive to install, but is also a source of heat loss.

With a modular Robur installation, within 30 minutes even the largest spaces are warmed.

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 below 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.



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. This result in the hotter lower air being kept down by the cooler higher air. Thus the different temperatures within the air-throw ensure a complete air mixing, thus reducing the temperature gradient between floor and ceiling. This exclusive Robur Ground Effect allows users to reduce consumption and heat stratification, with energy saving up to 22%.

Total safety in operation and reliability

The operating diagram on the right highlights the intrinsic safety of Robur heaters. When installed in the balanced flue mode optimum safety is achieved by only taking fresh combustion air into the appliance, thus ensuring no reduction in oxygen levels in the area being heated. Also all products of combustion are exhausted outdoors. A high level of reliability is achieved by two exclusive technical features:

- a completely weld free combustion chamber resulting in extremely low levels of mechanical stress;
- the use of only the highest quality components.

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.



Modularity and autonomy: heat only when and where needed

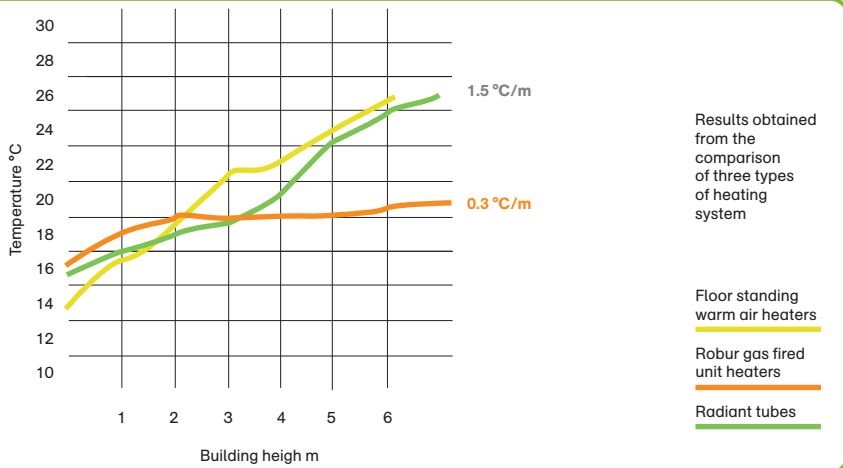
As stand alone gas fired heaters they are suitable for modular installation. Each Robur heater is a separate, independent heating unit with the dual function of generating and diffusing heat. The heaters adapt to the variable heat requirements of different buildings, thus allowing the number of appliances to install to be chosen, according to different requirements. Each appliance can operate

independently from the others that are installed, autonomously regulating the temperature of each single zone for the length of time desired and therefore adjusting fuel consumption to actual 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, thanks to the autonomy and independence of those remaining in operation.

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 from the appliance, maintaining these properties unchanged even at a great distance (40 metres and upwards) from the heater.



Condensing technology enters in the world of gas unit heaters offering higher efficiency and energy savings for better comfort thanks to the automatic modulation of the flame and ventilation.

G Series

- **High thermal efficiency and respect of the new norms about the heating installation system.** The choice of condensation for Gas Unit Heaters allows to obtain thermal efficiencies over 105% and consequently comparable with the best condensing boilers on the market. The remarkable advantage of Gas Unit Heaters is that the water distribution is not required, presenting a better global efficiency of the system.

- **Perfect modulation of the heating output.** The energy needed is granted by the heaters in a uniform and adequate mode for any single part of the premises. Each heater is able to give its own heating output proportioned to heating demand. In this way the modulation will support an average efficiency of functioning much more higher than the nominal value of the system and a constant ambient temperature in any functioning condition.

- **CO and NOx emissions practically nil.**

The control of the total premix combustion permits also to avoid problems on the exhaust flue system.

Ideal applications

- workshops and factories;
- all premises where high comfort and high efficiency are required;
- commercial buildings and show rooms;
- sports halls and fitness centres.

Efficiency up to **105%**

Savings up to **25%**

30 min. ... and the largest spaces are warmed!



More: <http://www.robur.com/products/heaters-line/g-series/description.html>

			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	15.6	15.6	20.2	33.5
Efficiency	nominal	%	97.3	96.3	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	4.53	7.26
Airflow rate ⁽²⁾	max.	m ³ /h	2,700	4,000	5,350	8,250
	min.	m ³ /h	2,300	2,340	3,310	5,200
Temperature rise	max.	K	31.1	31.8	30.8	32.1
	min. ⁽³⁾	K	16.3	19.6	17.9	18.9
Gas connection		"M	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	10	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)	54	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	66	76	122

⁽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 to 60°C.

Continuous modulation for maximal comfort.

Gas unit heaters with variable air flow rate and modulated heat input.

K Series

- **Modulation of heat output and ventilation** according to ambient requirements.
- **High efficiency up to 96%** for greater energy savings.
- **Reduced size and weight**, for faster and safer installation. K Series heaters have a lower size/heat output ratio than other warm air heaters currently available on the market.
- Digital chronothermostat supplied as standard, offers a series of important regulation and control functions, resulting in a more precise and economical use of the heating system.

Ideal applications

Modulation of heat output and air ventilation means that the K heaters can be used efficiently in all industrial and commercial premises as:

- workshops and factories, including large ones;
- commercial buildings and showrooms;
- laboratories and sports halls.

Efficiency
up to

96%

Modulation

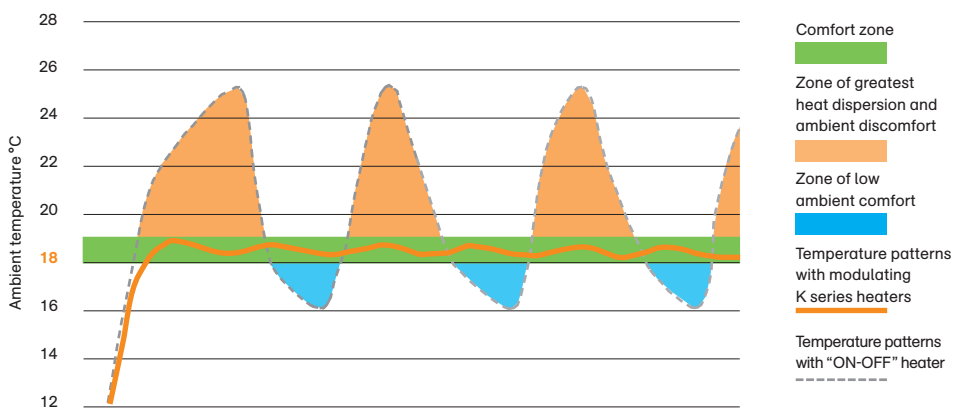


More: <http://www.robur.com/products/heaters-line/k-series/description.html>

• **Comfort without competitors.**

Supply of heating output and ventilation is in proportion to the requirements of indoor space. 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

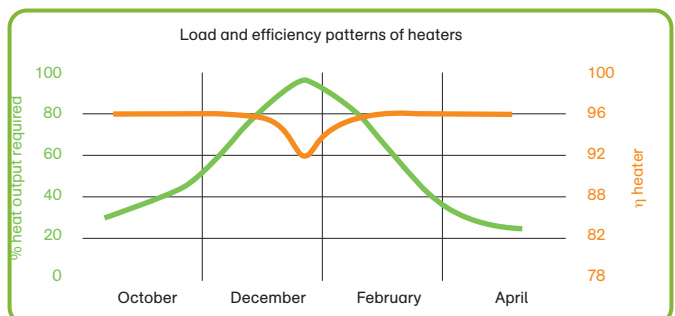
when the heat request is reduced. Thanks to the heat and the fan modulation and to an electronic system with a digital chronothermostat, the temperature is kept almost constant.



• **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.



			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	92.5	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.	m ³ /h	2,700	4,000	5,350	8,250
	min.	m ³ /h	2,300	2,600	3,670	5,775
Temperature rise	at maximum speed	K	31.0	30.8	30.6	33.0
	at minimum speed	K	29.9	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 maximum speed in open field	dB(A)	47	48	50	54
	at maximum speed in typical installation	dB(A)	59.0	60.0	61.5	65.5
	at minimum speed in typical installation	dB(A)	55.0	55.0	56.0	60.5
Size	width	mm	656	706	769	1,296
	depth	mm	722	722	722	722
	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⁾ 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.

Gas unit heaters for the heating of small and medium size premises.
It can be installed in horizontal or vertical position.

B15 Series

- **Efficiency 92%.**
- **Easy installation.** The heater, equipped with its own bracket, can be installed in horizontal, inclined or vertical position in order to divert the heat in the needed direction;
- **Reduced size and weight.**
- **Low noise emissions.**

Accessories included

- Remote control with lock out warning; reset button and summer/winter switch.

Ideal applications

- Direct exchange heating of:
- Small and medium size premises;
 - Shops and show rooms;
 - Laboratories and factories;
 - Fitness centres and sport halls.

Efficiency up to **92%**

Small size

Easy installation

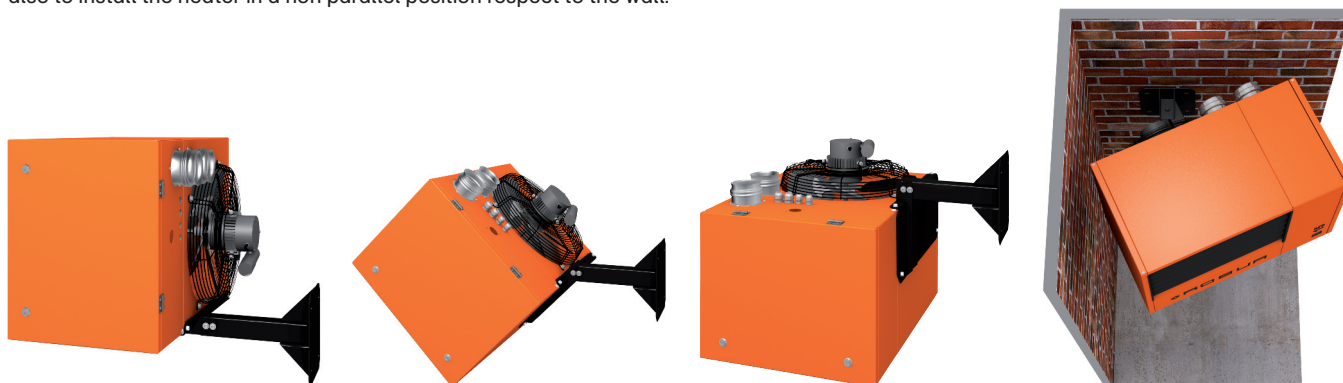


More: <http://www.robur.com/products/heaters-line/b15/description.html>

		B 15	
Nominal heat input		kW	15
Nominal heat output		kW	13.8
Efficiency		%	92
Nominal gas consumption (natural gas) ⁽¹⁾		m ³ /h	1.58
Nominal air flow ⁽²⁾		m ³ /h	2,170
Temperature rise		K	16.1
Gas connection		"M	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		°C	0 - 35
Air throw ⁽³⁾		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	28

The installation

Thanks to the designed support, 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.



⁽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.

High performance and low NOx emissions gas unit heaters.

F Series

- **Efficiency of 91%** under every operation condition.
- **Easy installation:** F Series is available also with vertical downflow that direct the warm air exactly where it is needed.
- External terminal with limited projection (4.3 cm from the wall) as Robur personalized accessory.
- Intake and exhaust ducts both only 80 mm in diameter, to make installation easier.

Ideal applications

- industrial premises and workshops;
- laboratories;
- warehouses and storage facilities;
- supermarkets and showrooms.

Efficiency up to **91%**

Easy installation



More: <http://www.robur.com/products/heaters-line/f-series/description.html>

			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	55	59	68	80

⁽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.

Gas unit heaters with centrifugal fan.

Duct system for heating several rooms with a single appliance.

F C Series



- **Efficiency up to 91%.**
- Burner with total air pre-mixing and **low NOx emissions.**
- Flange duct outlet suitable to be connected to an anti-vibration joint (optional). **Duct system** will be sized according to the available pressure head of the model of heater.

- Air intake and exhaust outlet pipes both 80 mm in diameter, ensuring quick and easy installation.

Ideal applications

- Ideal for duct system:
- Changing rooms.
 - Rooms used as offices, for meetings and for services.
 - Restaurants, bars and shops.

Efficiency up to **91%**

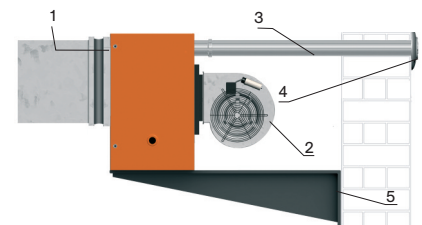
Duct system

		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	91	91
Nominal gas consumption ⁽¹⁾	natural gas	m ³ /h	2.43	3.93	5.12
	LPG G30/G31	kg/h	1.80/1.78	2.93/2.87	3.81/3.73
Air flow ⁽²⁾	with free outlet	m ³ /h	2,500	3,500	4,000
	at maximum admissible pressure drop	m ³ /h	2,000	2,600	2,800
Maximum available pressure head		Pa	110	120	180
Gas connection		"F	3/4		
Air inlet/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	66	82	87

⁽¹⁾ At 15 °C - 1013 mbar.

⁽²⁾ At 20 °C - 1013 mbar.

- 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/ heaters-line/f-c-series/description.html>

Gas unit heaters with atmospheric burner.
For heating commercial and industrial premises.

M Series



- The simplicity and reliability of M series heaters provide a **superior price/performance ratio** in comparison with other heating systems.
- **Reliable operation** unique components.

Ideal applications

- industrial premises and workshops;
- laboratories;
- warehouses and storage facilities;
- supermarkets and showrooms.
- greenhouses and livestock facilities.

Superior price/performance ratio

30 minutes ... and the largest spaces are warmed!

		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 / LPG 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	55	59	68	80	80	90	108	

⁽¹⁾ A 15 °C - 1013 mbar.

⁽²⁾ A 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.

More: <http://www.robur.com/products/ heaters-line/m-series/description.html>

Gas unit heaters for ducting and changing the air with an air-to-air system.



M C Series

• Centrifugal fan design for ducting applications. Designed to be equipped with a back intake chamber applied by a regulation damper and air filters.

Ideal applications

- heating of several rooms with one duct system only.
- heating of rooms where low speed air distribution is required.
- medium-large areas where complete or partial air renew is required;

Duct system

air **renew**

		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 / LPG 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 ⁽⁴⁾		°C	0/35		
Size	width	mm	630	770	1,270
	height	mm	920	970	970
	depth	mm	800	800	800
Weight		kg	66	82	133

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

⁽⁵⁾ External diameter.

More: <http://www.robur.com/products/heaters-line/m-c-series/description.html>

Gas unit heaters for outdoor installation with atmospheric burner.

For extra-European countries only.



M xt Series

- 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.

The externally-installed M xt heaters are suitable for heating rooms:

- that need a constant ventilation (specific processes, public rooms etc.);
- 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

Automatic modulation

		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.




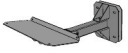
⁽⁴⁾ The unit's internal components have been tested from -15 °C to 60 °C.

More: <http://www.robur.com/products/heaters-line/mxt-series/description.html>




Gas Unit Heaters accessories

SUPPORT BRACKETS


Robur gas unit heaters can be supplied with support brackets, for easy and safe installation.

	<p>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.</p>
	<p>Revolving wall support bracket This allows for an easy and correct installation of the gas unit heater. Complete with external counterplate.</p>
	<p>External support bracket kit Manufactured specifically to be weather-resistant, it allows extremely easy installation of the appliance on the outside wall (F C and M C Series).</p>
	<p>Revolving wall support bracket (B 15 Series) 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.</p>




DUCT ACCESSORIES FOR EXHAUST AIR OUTLET AND AIR INLET PIPES

	<p>Ducts for separate exhaust outlet Additional flue and combustion air pipes may be added and are all available on request.</p>
	<p>Aluminium alloy and stainless steel double external terminals The new external terminal for 80mmdiameter (separate) inlet and outlet ducts is a Robur personalized accessory. In addition to its modern design, the extremely limited projection (4.3 cmfromthe wall) is another of its exclusive characteristics. The kit also includes the external terminal and fitting and fixing elements.</p>
	<p>Roof and wall concentric flue terminal kits A concentric terminalmust be used for balanced flue applications. These are available for either roof or wall outlet.</p>





VERTICAL LOUVRES

	<p>Vertical louvres (B 15 Series not included) 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.</p>
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REGULATION AND CONTROL SYSTEMS

	<p>Room thermostat Electromechanical thermostat with ON-OFF switch. Available also in IP 55 waterproof version.</p>
	<p>Remote control Remote control with the following function: lock-out warning lamp; reset button; summer/winter switch.</p>
	<p>Digital chronothermostat Supplied as standard, with a digital display, it can manage up to 3 temperature levels. Battery powered.</p>

AIR DUCT ACCESSORIES

	<p>Mixing chamber kit (M C and F C Series)</p>
	<p>Regulation damper</p>
	<p>Air filter and filter holder kit</p>
	<p>Air intake filter (M xt Series) In synthetic netting, washable on the mounting frame.</p>

THE VALUE OF EXPERIENCE

Robur Gas Unit Heaters

More than 190,000 Gas Unit Heaters installed all over Europe.



Always close to our Customers

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T 035 888 111 export@robur.it

Robur Technical Support

T 035 888 383 export@robur.it

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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

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