



**ROBUR**<sup>®</sup>  
COSCIENZA ECOLOGICA

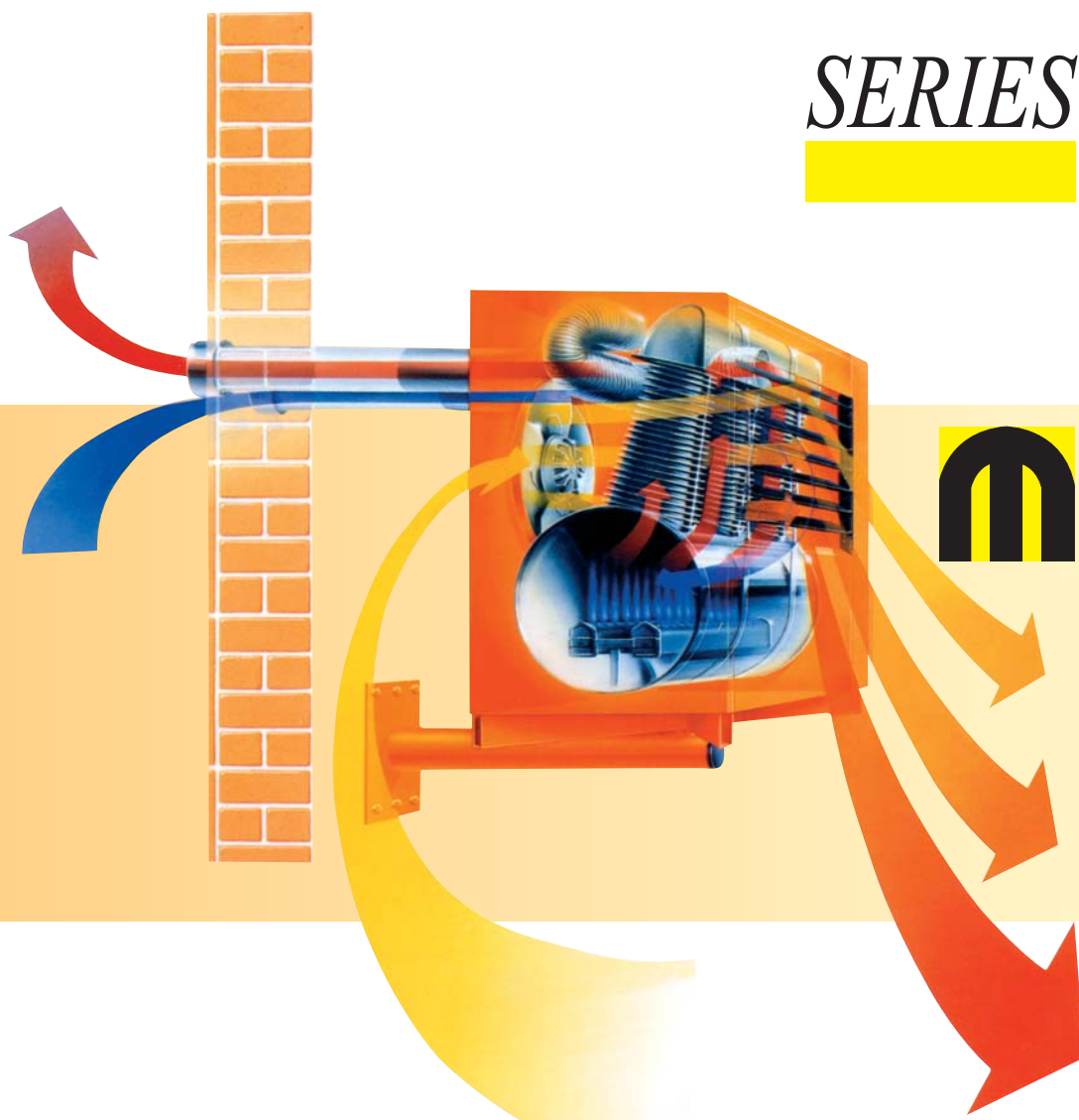
## **GAS FIRED UNIT HEATERS**



**19 models with outputs from 12.8 to 63.8 kW also  
available with a 2 stage burner, 2 speed fan  
and stainless steel panels**



# SERIES



## FOR MAXIMUM

**MAXIMUM** range of products. The **m** range consists of 19 models for virtually all applications with outputs ranging from 12.8 kW to 63.8 kW.

**m** range heaters comply with all European standards and are all **CE** approved.

## OPERATION

The Robur **air to air heat exchanger** ensures extremely high efficiency and extremely low CO<sub>2</sub>, CO, and NO<sub>x</sub> emissions. Routine maintenance is minimal.

## SAFETY IN OPERATION

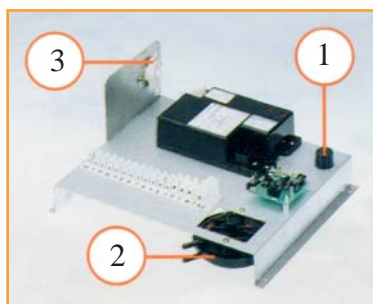
When installed in the balanced flue mode optimum safety is achieved by only taking fresh combustion air in to the appliance, thus ensuring no reduction in oxygen levels in the area being heated.

Also all products of combustion are exhausted outdoors.

### Safety controls in compliance with EN 1020.

The Robur units protect the end user by three further safety devices:

- 1 **A HIGH TEMPERATURE LIMIT THERMOSTAT** protecting the unit against overheating;
- 2 **AN AIR PROVING SWITCH** to shut down the heaters in the event of loss of combustion air or blockage of the appliance flueways;
- 3 **A CONTROL PANEL PROTECTION THERMOSTAT** to shut down the heater in the event of the controls overheating.



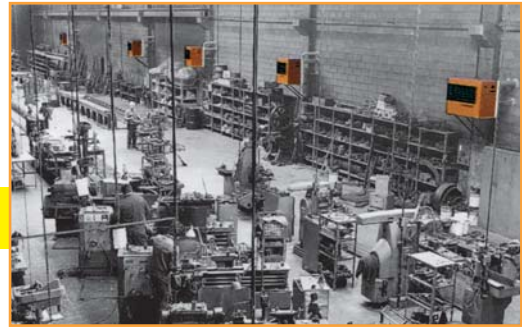
## RELIABILITY

A high level of reliability is achieved by two exclusive technical features:

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

# THE

# ROBUR “SYSTEM”



## MODULAR INSTALLATION

As stand alone heat generators Robur heaters are eminently suitable for modular installation. Each heater also has a summer/winter switch to allow air circulation only during summer months.

## DESTRATIFICATION: “GROUND EFFECT”

Stratification which causes warm air to circulate upwards into the roof space of high buildings can cause the working area to remain cool. Thanks to the unique design of the Robur heat exchanger it has been found that Robur heaters do in fact create the so called “Ground Effect”.

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 following savings are typical:

Room height	Energy saving
5 m	12 %
6 m	14 %
7 m	16 %
8 m	19 %
9 m	22 %

## EASE OF INSTALLATION

Building work being minimal:

- no central heating plant;
- no water pipeline.

Installation time and cost are kept very low. Each unit is supplied with an installation template which greatly simplifies the units installation. Also given the suspended nature of the installation precious floor area is kept free.

*SERIES*



## HEAT EXCHANGER



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 results in **the lower, hotter air being kept down by the higher, cooler air**. Thus the different temperatures within the air-throw

ensure a complete air mixing, thus reducing the temperature gradient between floor and ceiling.

This “**GROUND EFFECT**” is another exclusive advantage of

Robur gas fired unit heaters.

The performance data for Robur installations all over Europe are available upon request.



## BURNERS

The Robur manufactured and patented atmospheric burner is manufactured from high grade stainless steel and is assembled with two seamed joints to allow for expansion and to prevent surface cracking.

Also the flame pattern is designed to reduce the surface temperature of the burner thus optimising heat distribution and to guarantee constant performances overtime.



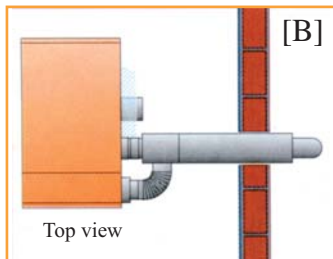
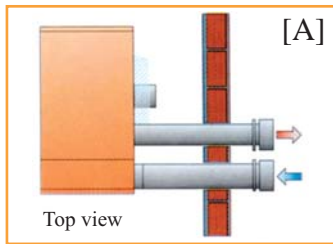


# CERTIFICATION

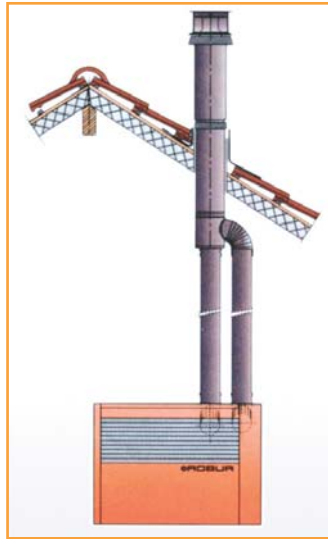
Following the most recent upgrading of European standards, gas appliances are classified accordingly to the design of the flue gas exhaust system and the design of the air intake ducts.

**M** series heaters are certified for the following types of installations:

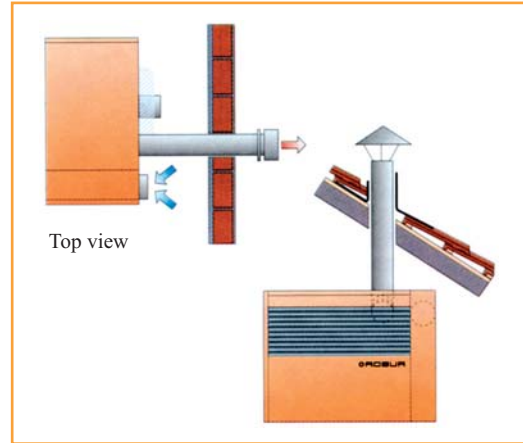
**C12:** Room sealed combustion circuit appliance with inlet air supply and outlet of exhausted gas, either concentric or separated ducts on the same WALL.



**C32:** Room sealed combustion circuit appliance with inlet air supply and outlet of exhausted gas, either concentric or separated ducts on the ROOF.



**B22:** This appliance must be connected to a flue which draws the exhausted gas to the outside (on the WALL or on the ROOF) of the room containing the appliance.



Robur **M** series heaters are the ideal solution for all types of plants.



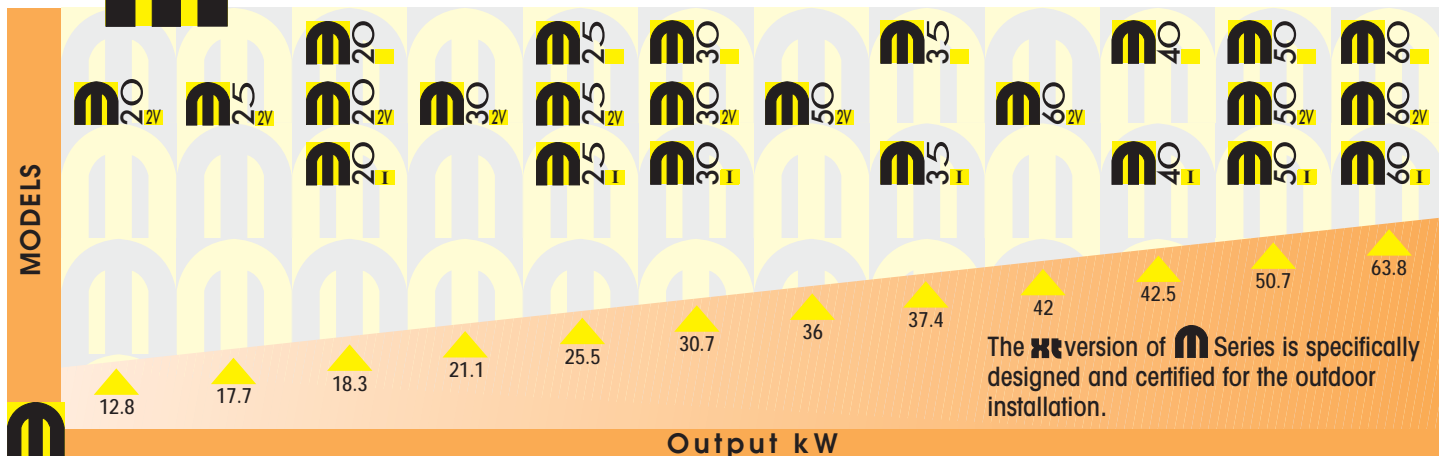
**M** like **MAXIMUM**.  
19 models with outputs from 12.8 kW to 63.8 kW, to satisfy all needs.  
The **M2v** with a 2 stage burner are also equipped with a 2 speed fan, ideal for low noise level applications.

On request it is available also the inox version, particularly qualified for installations in greenhouses, cattle-breeding farms, food transformation and conservation storehouses and in all the environments with high levels of air acidity and humidity.

**M** and **M INOX** models are supplied with remote controls with lockout warning lamp and reset button.

**M2v** models are also supplied with summer/winter switch and speed change controller (see accessories).

## THE RANGE



## TECHNICAL CHARACTERISTICS

# SERIES



MODEL

		20*	25*	30*	35*	40*	50*	60*	20 2V	25 2V	30 2V	50 2V	60 2V	
Nominal heat input	kW	20.6	28.8	34.8	42.2	48.2	57.3	72.5	20.6	28.8	34.8	57.3	72.5	
Nominal heat output	kW	18.3	25.5	30.7	37.4	42.5	50.7	63.8	18.3	25.5	30.7	50.7	63.8	
Heat output at 2 <sup>nd</sup> speed	kW	–	–	–	–	–	–	–	12.8	17.7	21.1	36	42	
Efficiency	%	88.8	88.5	88.2	88.6	88.2	88.5	88	88.8	88.5	88.2	88.5	88	
Air flow <sup>(1)</sup>	m <sup>3</sup> /h	1700	2350	3000	3400	3750	4700	6200	1700	2350	3000	4700	6200	
Reduced air flow <sup>(1)</sup>	m <sup>3</sup> /h	–	–	–	–	–	–	–	1300	1800	2300	3500	4600	
Temperature rise	K	32	32	30.3	32.6	33.6	32	30.5	32	32	30.3	32	30.5	
Gas Rate <sup>(2)</sup>	Natural gas	m <sup>3</sup> /h	2.18	3.04	3.68	4.46	5.10	6.06	7.67	2.18	3.04	3.68	6.06	7.67
	LPG	kg/h	1.62	2.27	2.74	3.32	3.80	4.52	5.72	1.62	2.27	2.74	4.52	5.72
Total electrical load	W	340	340	340	340	400	620	620	340	340	340	620	620	
Electrical supply	230 V - 50 Hz single phase													
Throw <sup>(3)</sup>														
(residual air speed > 1 m/s)	m	12	15	18	20	21	23	25	12	15	18	23	25	
Installation height	m	2.5	2.5/3	2.5/3	2.5/3	2.5/3	2.5/3	3/3.5	2.5	2.5/3	2.5/3	2.5/3	3/3.5	
Noise level at 6 m														
open field	dB(A)	41	43	44	44	45	45	47	41	43	44	45	47	
typical installation	dB(A)	53	55	56	56	57	58	59	53	55	56	58	59	
Noise level at 6 m (2 <sup>nd</sup> speed)														
typical installation	dB(A)	–	–	–	–	–	–	–	44	45	47	47	49	
Gas connection	”	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1/2	1/2	1/2	3/4	3/4	
Air inlet pipe diameter <sup>(4)</sup>	mm	130	130	130	130	130	130	130	130	130	130	130	130	
Flue diameter <sup>(4)</sup>	mm	110	110	110	110	110	110	110	110	110	110	110	110	
Dimensions	Width	mm	630	630	770	880	880	1070	1270	630	630	770	1070	1270
	Height	mm	800	800	800	800	800	800	800	800	800	800	800	800
	Depth	mm	640	640	670	670	700	640	670	640	640	670	640	670
Weight	kg	55	59	68	80	80	90	108	55	59	68	90	108	

\* The same values apply to the stainless steel version.

(1) At 20° C –1013 mbar. (2) At 15° C –1013 mbar.

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

(4) Nominal diameter of rigid pipe for insertion in the relevant stub pipe.

All models include electronic ignition and summer ventilation.

Data complies with standards EN 1020.

Due to continuous products innovation and development, Robur reserves the right to change product specification without prior notice.

## CERTIFICATION

CE marking guarantees a high quality product fully complying with standard EEC No. 90/396.

CE certification covers installation types C12, C32, B22.



Certificate No. 51AQ453 issued by **IMQ**



Certificate No. 51AR895 issued by **IMQ**

## ACCESSORIES



### (1) VERTICAL LOUVRES

These allow for left and/or right adjustment of the airflow from the front of the unit according to the site conditions and the customers requirements.




### (2) STAINLESS STEEL OUTDOOR WIND PROTECTION TERMINAL

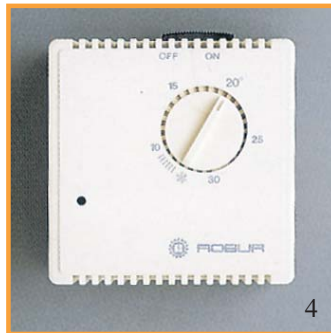
Approved by several European authorities for safety and reliability in use in bad weather conditions.



## REMOTE CONTROLS

### (3) REMOTE CONTROL

All Robur  unit heaters can be supplied with a remote control box, lock-out light, reset and summer/winter switches.



### (4) ROOM THERMOSTAT

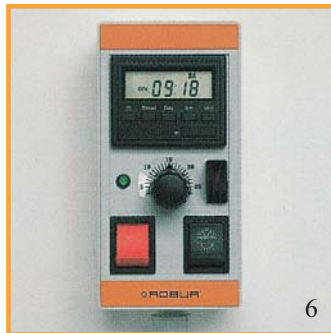
This option is a mechanical type thermostat with on-off switch.



### (5) ANALOG PROGRAMMABLE TIMER

This has an electronic thermostat with two independent control temperatures, allowing weekly programming of heater operation.

The timer has a quartz movement and mechanical summer-winter switch.



### (6) DIGITAL PROGRAMMABLE TIMER

This accessory incorporates in a single device all programming and control functions of the gas unit heater, both daily and weekly.



### (7) ROOF AND WALL CONCENTRIC FLUE TERMINALS

This allows for exit from the roof or wall via one hole instead of two. This kit includes external terminal and all other parts required for installation.



### (8) TUBULAR WALL BRACKETS

Very easy to install, it fits to all models and it is supplied with tie-rods, both and washers to anchor to the wall.

### (9) REVOLVING WALL SUPPORT BRACKETS

This allows for an easy and correct installation of the gas unit heater.



**ALL ACCESSORIES REQUIRED TO CREATE VERTICAL OR HORIZONTAL PIPING ARE AVAILABLE UPON REQUEST.**

**POLYETHYLENE PIP**

**CONNECTIONS TO THE POLYETHYLENE PIPES**

ROBUR ALSO MANUFACTURES:

# ROBUR

M I S S I O N



- > Air cooled gas fired absorption heat pump for heating.
- > Reversible air cooled gas fired absorption heat pump for heating and cooling.
- > Water cooled gas fired absorption pump to provide simultaneously hot and chilled water.

Gas fired absorption chillers and chiller-heaters for air-conditioning, refrigeration, and process applications. Ideal for commercial and industrial applications.



Split system for cooling in summer and heating in winter ideal for industrial and commercial premises.

Combi gas heating system. This split system heater provides rapid solutions to countless heating requirements.

Forced draught room gas heaters perfect for small rooms.

Air barriers to decrease heat loss due to frequent opening of the industrial doors.

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