



RANGE OF PRODUCTS AND SOLUTIONS FOR HEATING AND COOLING

For industry and for end user

October 2017

SYSTEMA S.p.A. THE COMPANY



Headquarter and manufacturing plants in Padua



ISO 9001:2008



Established in 1986, the Company is one of the leaders on the planning and production of industrial and civil heating systems.

Systema is ISO 9001 certified and is constantly looking at technology and evolution, this is the reason why it cooperates with Universities and other important Boards to improve the quality, the reliability and the safety of its products.

Its existing premises are 23.000 m², 7.000 m² covered area, dedicated to the manufacturing, warehouse, offices, laboratory, meeting/conference halls and show rooms.

Systema S.p.A. takes care about homologation approvals, R&D, trainings for designer as well as for Italian and foreign assistance centres too.

Another manufacturing site in Poland, with an independent and strategic R&D laboratory, represents an important base to facilitate the sales also in the East European countries.

The activity is structured with 3 divisions which deal each with a specific sector:

- **HEATING**, products for industrial radiant heating and warm air heating;
- **COOLING**, products for the air conditioning using the new technology based on absorption groups with thermal recovery;
- **GREEN ENERGY**, high energy saving products, thermal recovery, cogeneration and CCHP products, solar cooling applications with collectors and solar trackers.



Branch office and manufacturing plants in Polska

Gas, oil, hot water are the types of energy used by the heating products.

Whereas the cooling production is based on the new absorption technology, which does not involve too much electrical energy and use any kind of heating source produced by: gas, each type of solid or liquid fuel, hot water, fumes, steam, geothermal sources, solar energy.

SYSTEMA S.p.A. counts on a sales network of 26 agencies all over Italy and 28 distributors all over the world, supported by local after-sales service points.

Thanks to its internal organization the Company provides technical consulting, analysis, quotations, technical support for the equipment start-up and their maintenance.

The mission of the Company 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 Partners.




30th ANNIVERSARY
 **SYSTEMA**
1986 - 2016



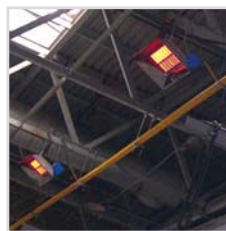
RADIANT HEATING



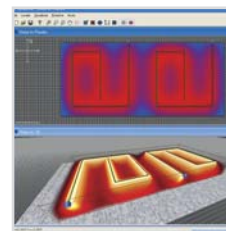
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SOFTWARE SYSTEMA
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HOT AIR HEATING



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COOLING AND AIR CONDITIONING



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The RENEWABLE ENERGY of SYSTEMA
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www.imq.it

CERTIFICATO N. **9190.SYTA**
CERTIFICATE N.

SI CERTIFICA CHE IL SISTEMA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

SYSTEMA SPA

VIA SAN MARTINO 17/23 - 35010 SANTA GIUSTINA IN COLLE (PD)

UNITA' OPERATIVE
OPERATIVE UNITS

VIA SAN MARTINO 17/23 - 35010 SANTA GIUSTINA IN COLLE (PD)

VIA CECCON 3 - 35010 LOREGGIA (PD)

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

ISO 9001:2008

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione, assistenza di sistemi di riscaldamento radianti, generatori d'aria calda e termoconvettori a gas; Commercializzazione di assorbitori a gas
Design, production and services of radiant heating systems, hot air generators and gas-convectors; selling of gas-fired absorption chillers

Riferirsi al manuale della qualità per l'applicabilità dei requisiti della norma ISO 9001:2008
Refer to quality manual for details of applications to ISO 9001:2008 requirements

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL
REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE

THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE
REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

DATE:	PRIMA CERTIFICAZIONE FIRST CERTIFICATION	EMISSIONE CORRENTE CURRENT ISSUE	SCADENZA EXPIRY
	2009-12-15	2015-12-01	2018-12-14

IMQ S.p.A. - VIA QUINTILIANO, 43 - 20138 MILANO ITALY

CISQ is a member of



www.iqnet-certification.com

IQNet, the association of the world's first class certification bodies, is the largest provider of management System Certification in the world. IQNet is composed of more than 30 bodies and counts over 150 subsidiaries all over the globe.



IAF: 18, 29

SGQ N°005A, SGA N°006D, SCR N°005F
SSI N°003G, FSM N°007I, SGE N°006M
EMAS N°003P, PRD N°005B, PRS N°080C,
ISP N°063E, LAB N°0121, LAT N°021
Member degli Accordi di Mutual Recognition EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

La validità del certificato è subordinata a sorveglianza annuale e riesame completo del Sistema di Gestione con periodicità triennale
The validity of the certificate is submitted to annual audit and a reassessment of the entire Management System within three years

CISQ è la Federazione Italiana di Organismi di Certificazione dei sistemi di gestione aziendale.

CISQ is the Italian Federation of management system Certification Bodies.



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OHA RHE with inverter

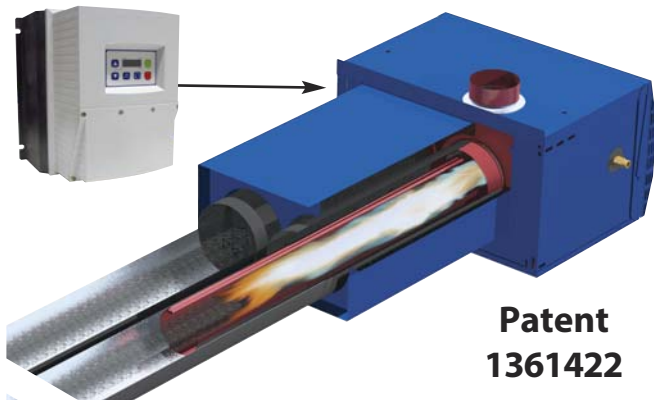
(Patented)

THE EVOLUTION OF THE RADIANT HEATING

OHA RHE "Radiant High Efficiency" WITH MODULATION AND INVERTER, represents the technological evolution of OHA combustion group.

The thermal power is delivered through a continuous modulation and is controlled by a software and a microprocessor. In this way the fume fan capacity is adjusted through an inverter, according to several parameters, such as fume temperature, outdoor and indoor temperature.

OHA RHE works using a fan with a partial recirculation of the fumes. This fan, controlled by the inverter, is equipped with an integrated protection in case of motor overload.



HOW DOES IT WORK?

A microprocessor calculates the power capacity of the motor needed by OHA RHE burner, in order to deliver the correct power able to satisfy the real thermal requirements of the building to be heated.

The inverter, included in the OHA RHE burner, modulates the electrical consumption of the fan, keeping the temperatures of the fumes constant and eliminating the overshooting.

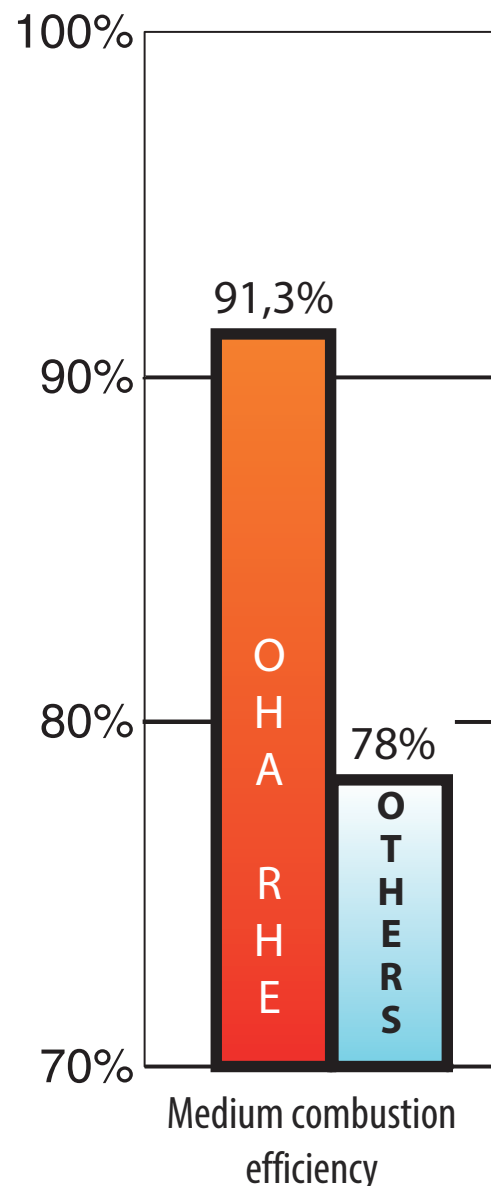
Thanks to the climatic regulation of **OHA RHE**, the **temperature of the fumes flows more smoothly**.

In this way the power excesses, which cause continuous ignitions and shutdowns of the burner (overshooting effect), are avoided and the consumptions are strongly reduced.

The indoor, outdoor and combustion fume probes allow the system to reach a **medium combustion efficiency of 91,3%**.

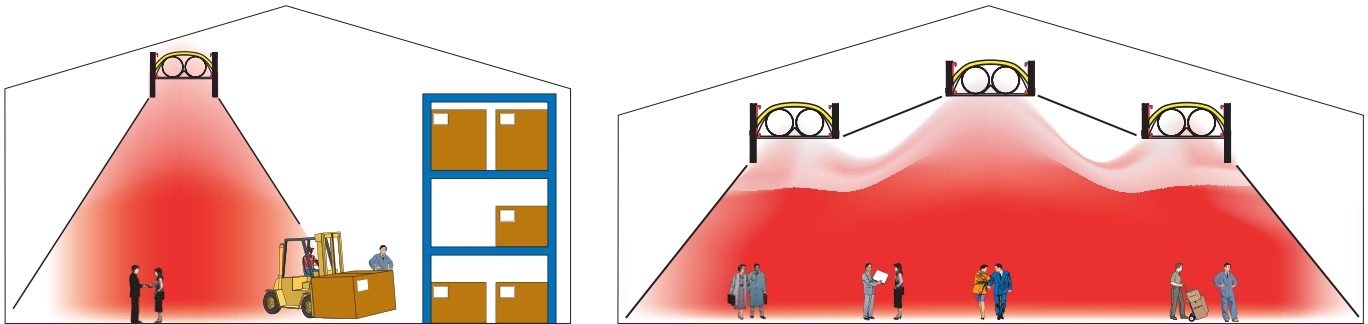
OHA RHE is range rated approved in order to set the real capacity needed by the radiant circuit.

Capacity range from 100 to 370 kW.



MANAGEABLE HEAT AND FLEXIBILITY OF USE

OHA radiant strips allow the **zone heating**, concentrating the heat towards the floor and only where it is necessary, in order to differentiate the temperatures among the several areas of the same environment. As a consequence there will be a **lower energy consumption** and a high thermal comfort. This kind of heating system does not cause air and dust movements, which is physiologically present in all the industrial plants.



OHA radiant strips are suitable to heat buildings with particular shape, thanks to the ducts that **can be joined and fitted to any architectural geometry**.



ADVANTAGES

- ☑ **RELEVANT REDUCTION OF ELECTRICAL AND GAS CONSUMPTIONS**
- ☑ **HIGH COMBUSTION PERFORMANCES, INDEPENDENTLY FROM THE LENGTH AND THE CONFIGURATION OF THE RADIANT CIRCUIT**

EFFICIENCY AND ENERGY SAVINGS

- ☑ **Constant combustion performance** also at low and medium temperatures
- ☑ **Modulation of the carrier fluid keeping constant the stoichiometric ratio**
- ☑ **Constant radiation** in the interested areas
- ☑ **Electronic control:**
 - **Electronic and progressive start up, managed by the inverter**
 - **High efficiency igniter** with EMC filter
 - **Constant control** of the start and set up timing
- ☑ Prearrangement of the external temperature probe in order to optimize the performances according to the real needs
- ☑ **High efficiency centrifugal fan**
- ☑ **Possibility of remote tele-management**

SAFETY

- ☑ Positive safety of the working thermostat:
 - Capillary probe installed inside the combustion group for the detection of the fume temperature and the working temperature
 - Stop of the burner in case that the temperature of the carrier fluid exceeds the rated allowed values of working
 - Safety switch when the door is opened

CERTIFICATIONS

- ☑ "RANGE RATED" **CE certificate** which allow the setting of the real capacity needed by the radiant circuit.
- ☑ The equipments has been **certified for external installation** with a global electrical protection degree **IP44**
- ☑ **Comply with the Community Directive EMC 89/336/CEE**
- ☑ **Comply with the Community Directive LOW VOLTAGE 73/23/CEE**
- ☑ **Low noise level according to the DIN-VDE-0530 regulations**

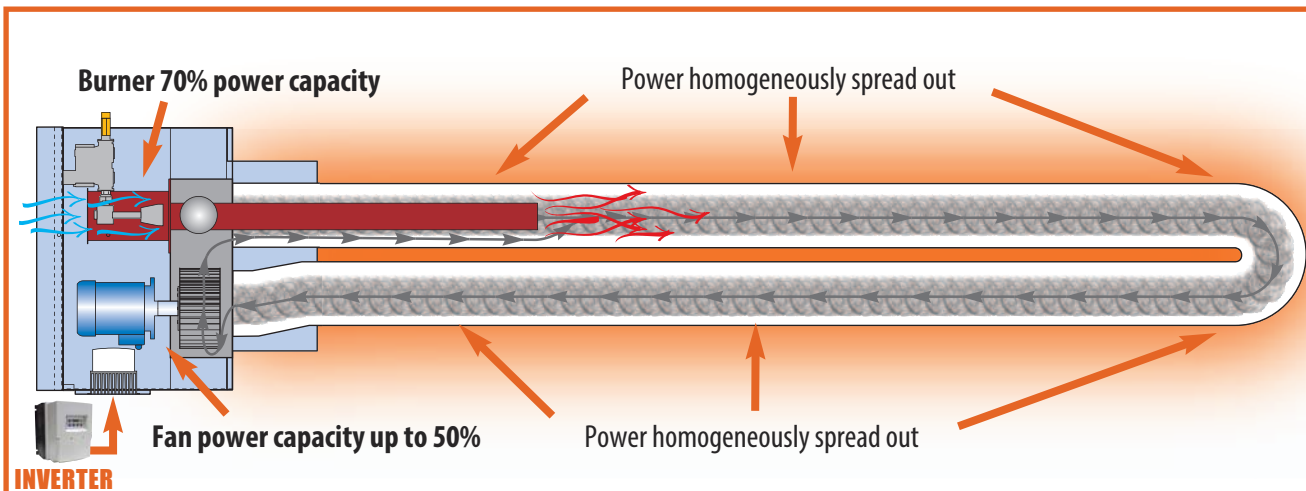
OHA RHE ADVANTAGES



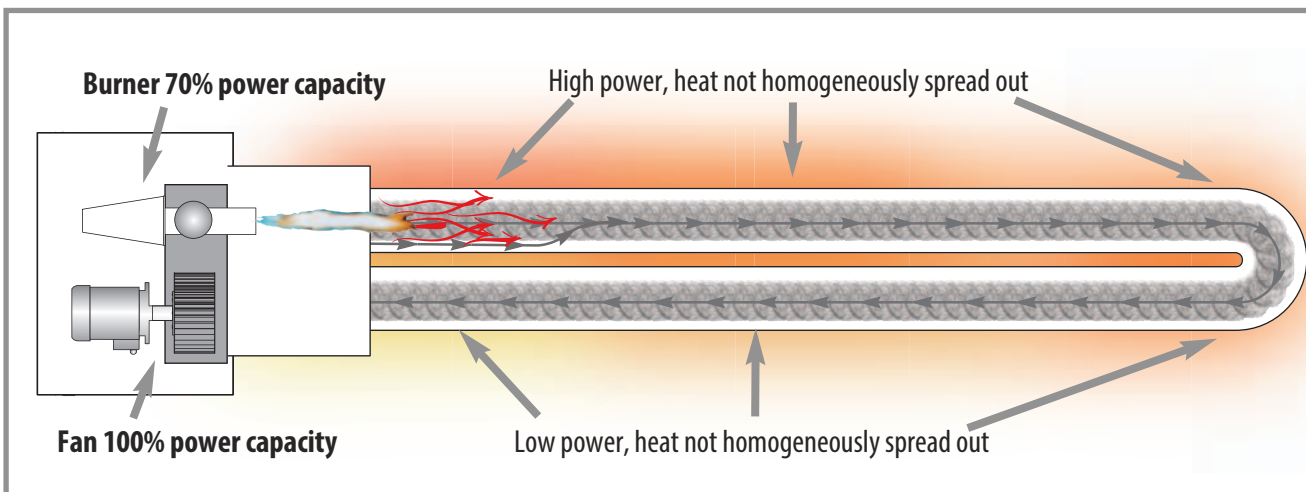
INVERTER

THE HEAT IS UNIFORM ALONG THE WHOLE RADIANT CIRCUIT AND THE ENVIRONMENT IS HOMOGENEOUSLY HEATED

FULLY RUNNING SYSTEM WITH OHA RHE = COMPLETE MODULATION



FULLY RUNNING SYSTEM WITH STANDARD MODULATING BURNER



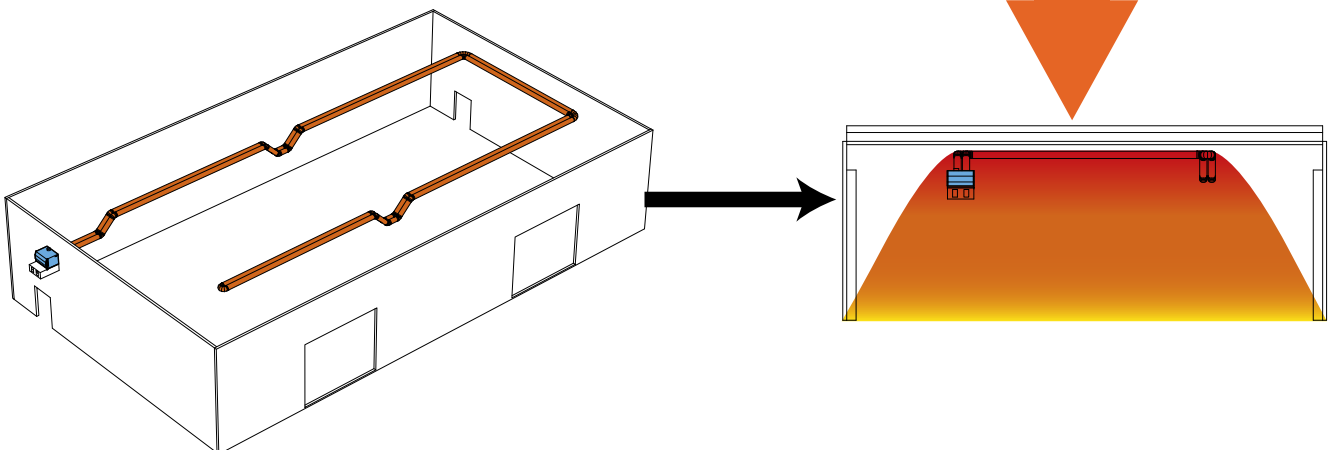
UP TO **15%** GAS SAVING

UP TO **30%** ELECTRICAL ENERGY SAVING

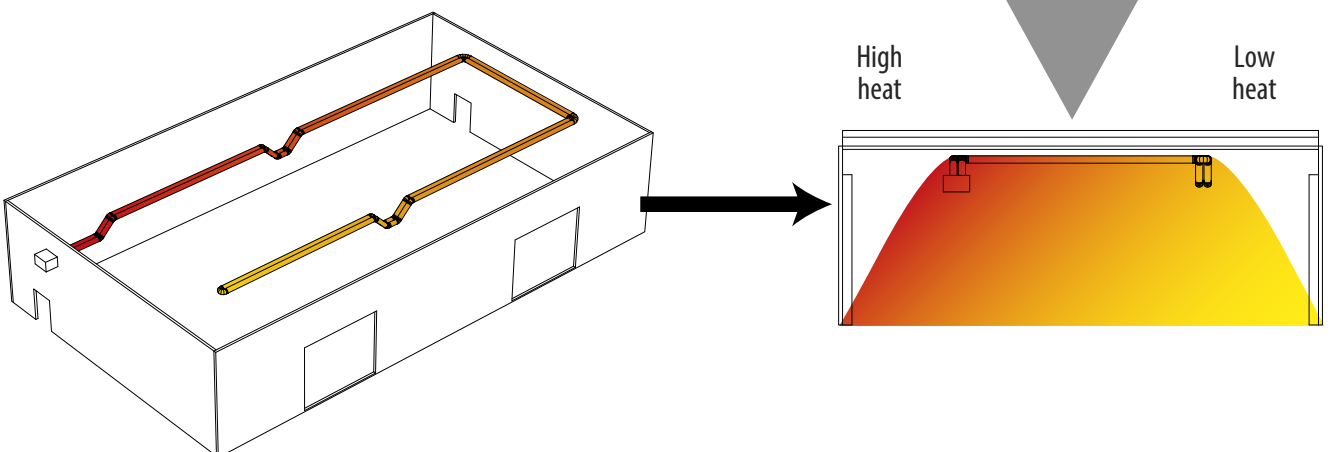
+ COMFORT WITH OHA RHE:

- ✓ **OHA RHE** technology allows to **uniform the heat along the whole radiant circuit**, heating homogeneously the environment.
- ✓ **High noiselessness** of the burner (according to DIN-VDE-0530 standards)
- ✓ Possibility of remote **tele-management**

HOMOGENEOUS HEAT = MAX PERFORMANCE



HEAT NOT HOMOGENEOUSLY SPREAD OUT = LOW PERFORMANCE



OHA WORKING:

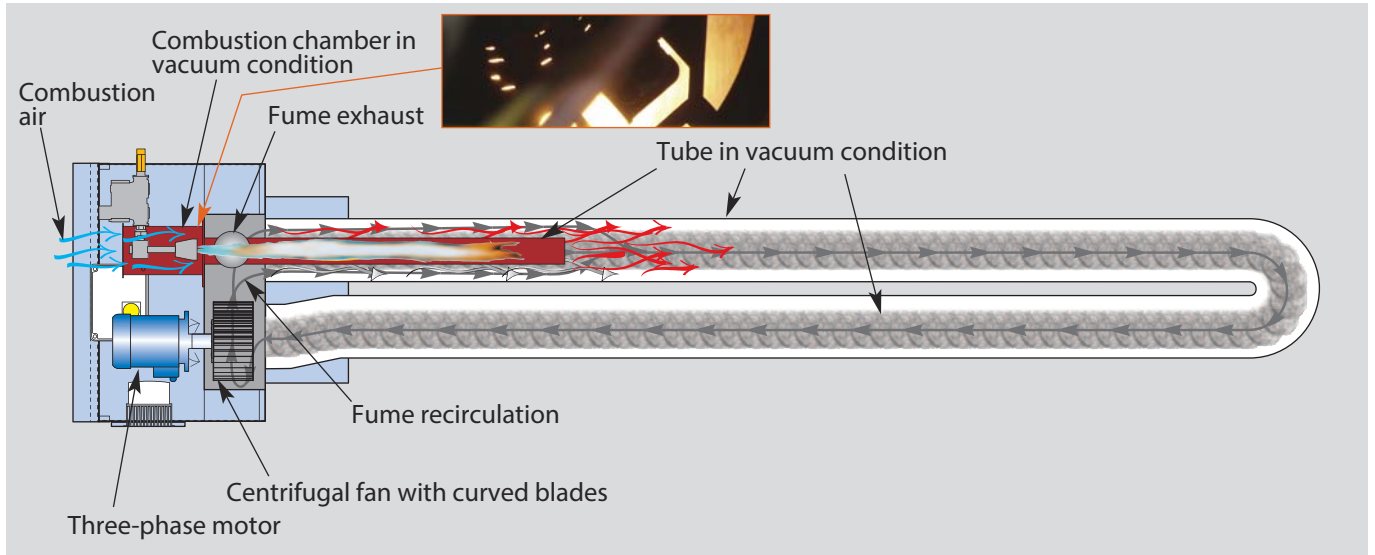
MAXIMUM SAFETY AND RELIABILITY

In order to guarantee the highest reliability of the system, **OHA** combustion group has been designed to work with radiant strips kept in **vacuum** conditions.

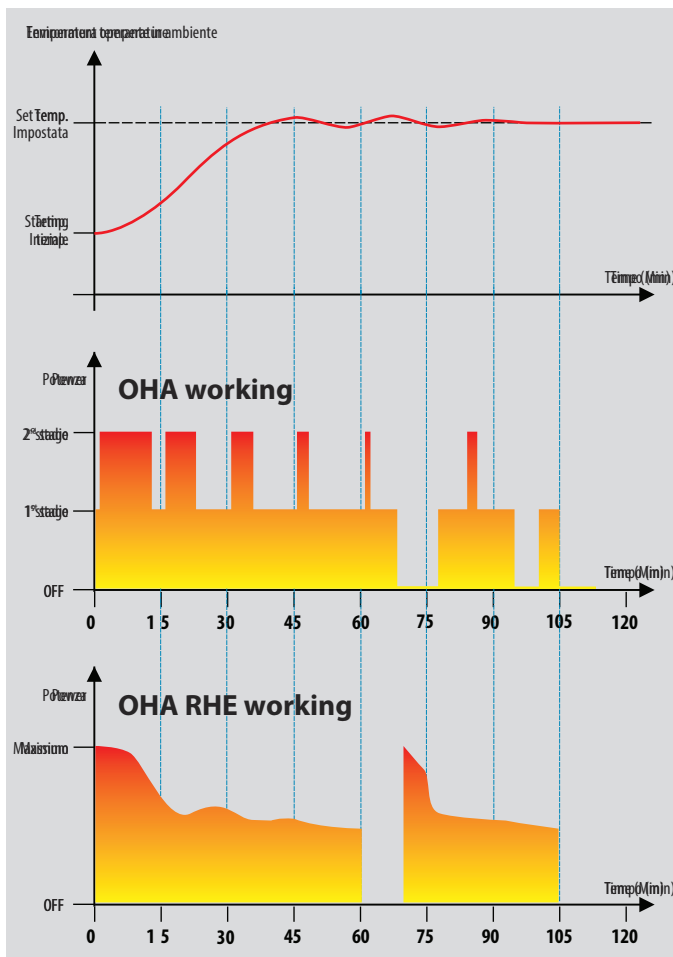
The product meets the safety requirements defined by the standards for the industrial buildings.

OHA burner runs according to the forced-air-intake principle, based on a laminar - turbulent flow with afterburning.

The system works at relatively low temperatures. Indeed, the temperature of the radiant strips is always less than 300°C.



TYPICAL TEMPERATURE AND POWER FLOW



The regulation is carried out through a microprocessor specifically designed for the control of radiant system installations.

Being the radiation intensity linked to the surface temperature of the issuing tube (T^4 Stefan-Boltzmann Law), it's not convenient reduce the power below a certain surface temperature, otherwise the efficiency of the emission (h-UNI 832) would drop considerably.

The shutdown of the burner at defined time breaks (OHA working) represents a more efficient solution.

The system which works with power modulation (OHA RHE working) keeps constant the temperatures of fumes and eliminate the over shooting effect, optimizing the performance of the installation.

OHA: SCIENCE AND TECHNOLOGY

Stefan-Boltzmann law

The Stefan-Boltzmann law describes the power radiated from a black body in terms of its temperature. Specifically, the Stefan-Boltzmann law states that the total energy radiated per unit surface area of a black body across all wavelengths per unit time, is directly proportional to the fourth power of the black body's thermodynamic temperature

Systema has always used materials and technologies able to take advantage of all the factors which regulate the heat emission of OHA heating system.

The Stefan-Boltzmann law describes the power "Q" radiated from a black surface "S" in terms of its temperature.

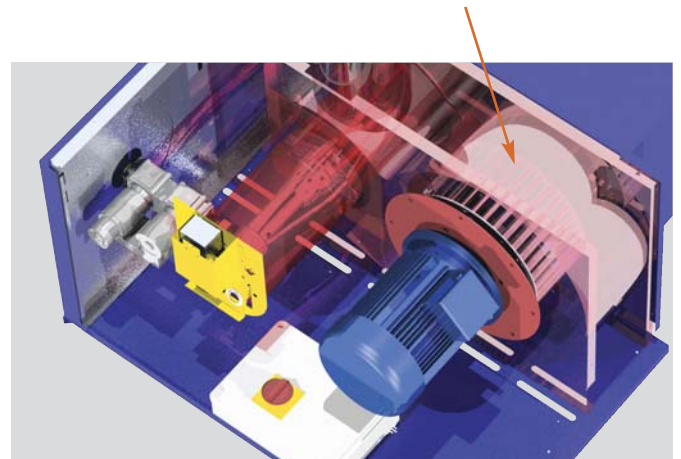
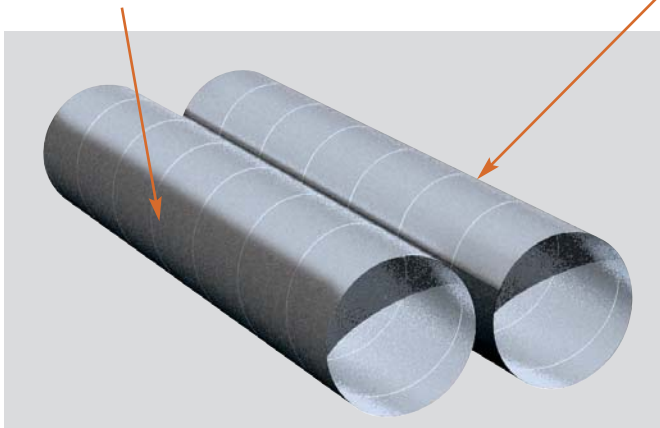
$$Q = \epsilon \sigma S T^4$$

ϵ Heat treatment (**patented**) of the radiant tubes in order to reach a high radiant coefficient

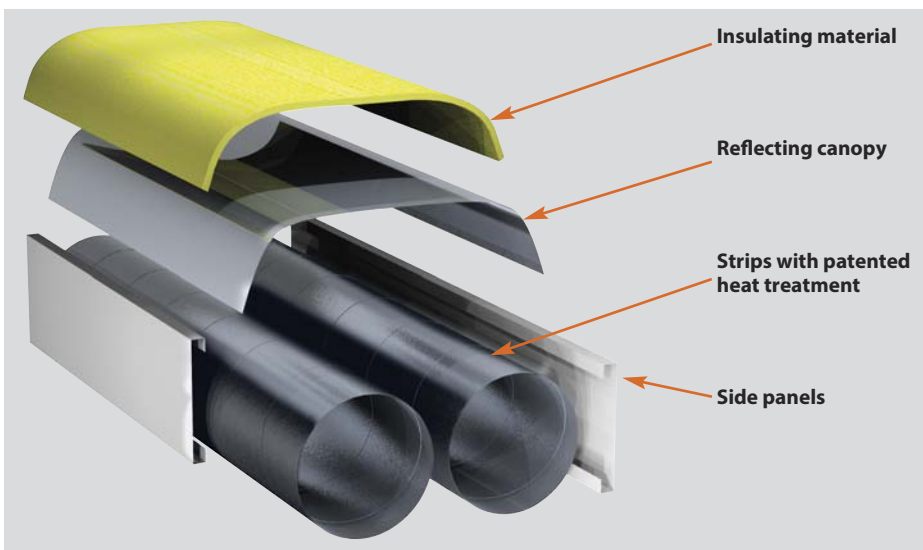
σ Stephan-Boltzmann constant

S Embossed material to increase the external surface (diameter of the tubes)

T^4 High pressure drop fan to obtain a high constant temperature along all the radiant circuit



STRUCTURE OF OHA RADIANT STRIP



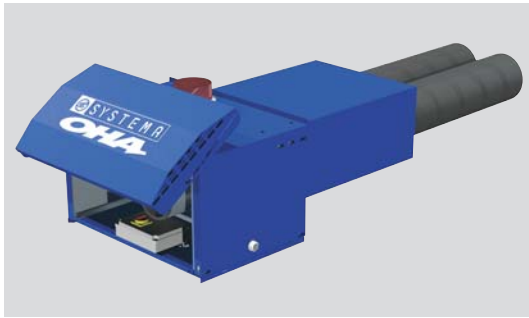
The matching between the single elements has been studied to guarantee the maximum thermal efficiency on the ground, reducing the heat losses in the environment.

PATENTED TECHNOLOGICAL SOLUTION

Since the beginning Systema **has worked with the academic world to share ideas and experiences which have allowed to use adequately the peculiarities of the radiant technology**, optimizing the performance of each component of OHA system. Nowadays Systema produces heating systems which are certified for their quality, efficiency, performance, reliability and safety reaching the highest market levels.

Indeed OHA radiant strips have obtained **new licences**, which have to be added to the historical patent referred to the radiant strips with recirculation (year 1990).

OHA combustion group



Realized specifically to be used on radiant systems, OHA burner (**which runs according to the forced air-intake principle***) works on a long and tight combustion chamber, guaranteeing a better quality of the combustion in comparison to a common burner usually combined to a large and short combustion chamber.

(*) It belongs to the group of forced draught burners single flame with a single nozzle.
(Studies realized by Polytechnic of Milan)

Patents of OHA combustion group

- ☑ Forced air-intake burner*, in vacuum and afterburning conditions
- ☑ Constant modulation of the thermal power, directed and proportionally linked to the vacuum condition and the temperature.
- ☑ Constant modulation of the fumes inside the radiant strips, thanks to the inverter technology, in order to optimize the energy balance between the maximum radiant performance on the ground and the electrical load of the fan.

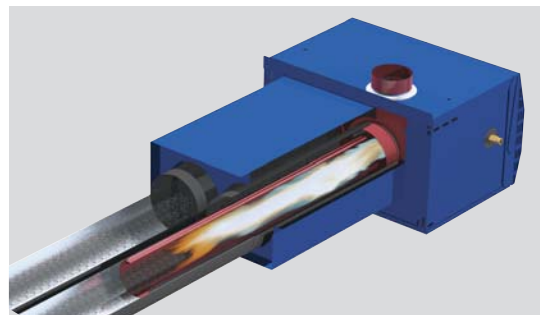
The combustion chamber

Radiant strips need combustion chamber with small circular sections. So the volume for the complete combustion process has to be obtained on the length of the strips.

The combustion chamber, realized completely **in stainless steel**, is **tight and long**, avoiding in this way that the flame licks the radiant strips.

The fan makes the fumes running inside the circuit, in this way they cool the combustion chamber.

Thanks to all these factors Systema is able to **guarantee the combustion chamber for 10 years**.



Electronic control and inverter: complete modulation



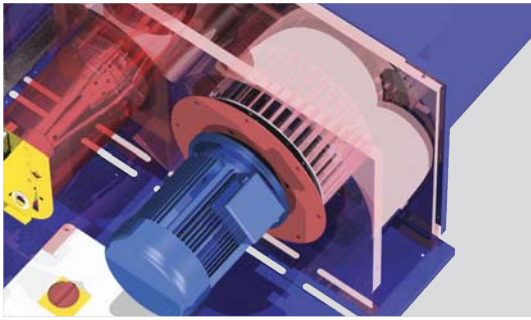
A microprocessor calculates in real time the necessary power produced by OHA RHE burner, supplying the power useful to satisfy the real thermal needs.

The inverter installed inside the burner modulates the speed, the fan electrical consumption and the gas capacity, keeping constant the fume temperature.

All these arrangements allow to avoid the overshooting effect, which causes continuous starting and stopping of the burner, reducing considerably gas and electrical consumptions.

At the same time the system analyze various parameters such as: fume temperature, external temperature, environment temperature.

The fan



In order to optimize the thermal exchange, OHA uses a system patented in 1990 which exploits the **fume recirculation**, thanks to a fan installed inside the combustion group. This fan has been realized to guarantee a uniform distribution of the temperature and a time reduction in making the system operative.

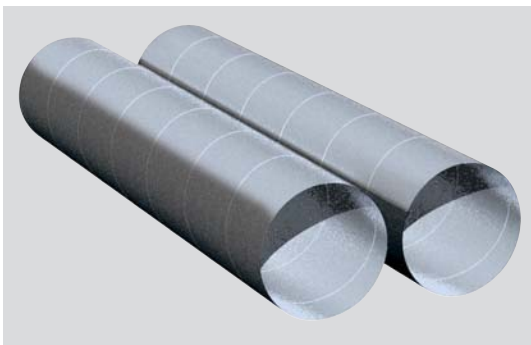
The electrical load necessary to guarantee an adequate fan capacity, has to be balanced by a **high increase of the emission efficiency to ensure a high performance of the whole installation.**

The radiant strips in treated aluminized steel

The radiant strips are composed essentially by **radiant tubes** which start from the combustion group, run along the environment to be heated, with a specific configuration according to the technical features of the building, in order to spread uniformly the heat.

The treatment of the tubes

The treatment, **original and patented**, realized on OHA tubes, consists in a specific process which involves the external lower part of the tube.



This covering is resistant to high temperatures and uses special water resin. **The surface becomes rough and in this way the thermal emission of the radiant strips raises considerably.**

In order to carry out this process, Systema has built a new structure ensuring a better uniformity of the treatment and improving the drying phase of the radiant circuits.

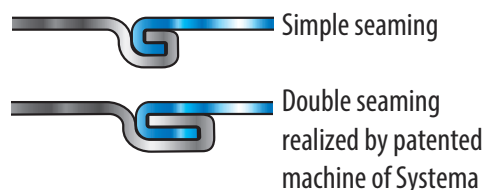
The black treatment increases the radiant emission in comparison to other colors.

Patent for the radiant strips

- ☑ OHA radiant strips are superficially treated through an exclusive use of a water solution, not polluting, which guarantees the absence of silicone steam in the environment.
- ☑ Maximum thermal discharge of the radiant tubes, with consequent increase of the emission efficiency.

Double seaming

The tube produces by Systema, using "Formidea" machine, has a double seaming able to increase the mechanical resistance of the tube and the air sealing, avoiding decrease of vacuum inside the radiant strips.

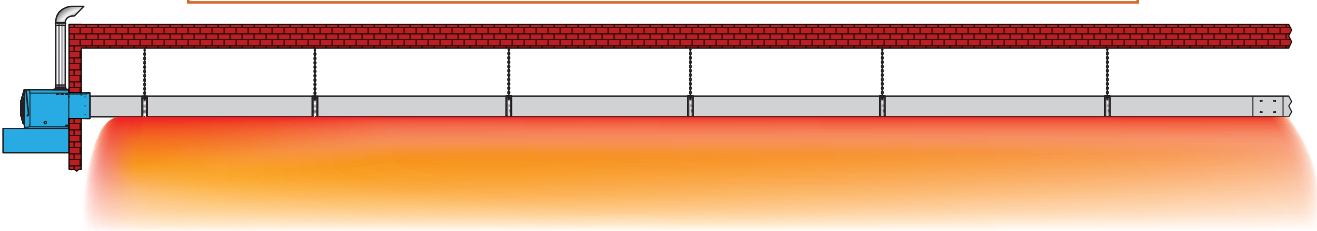


Licence on the machine which produces the radiant strips

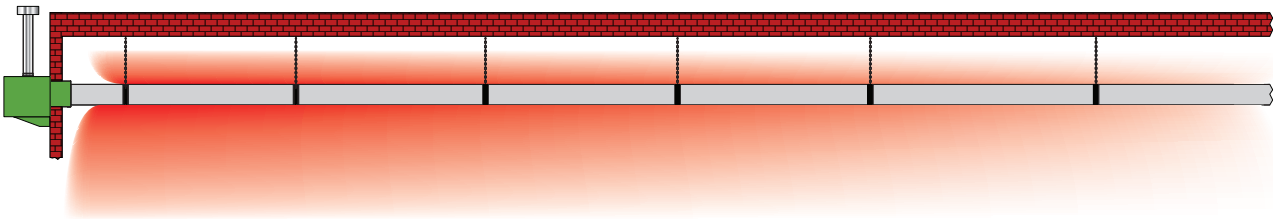
- ☑ Formidea, the special machine designed and realized by Systema, able to carry out a double seaming on the radiant strips.

THE IMPORTANCE RECIRCULATION CAPACITY ON THE EMISSION PERFORMANCE

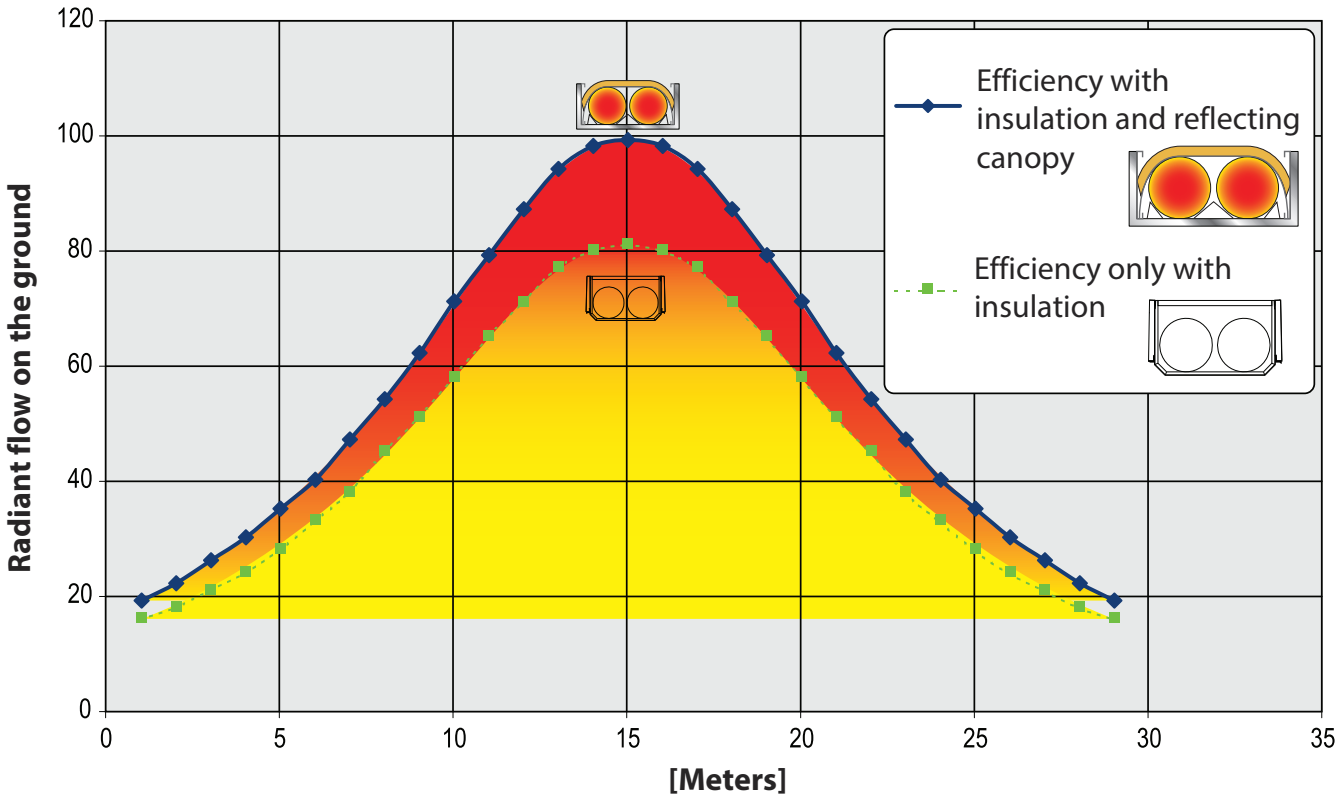
A and B - (OHA - OHA RHE) High capacity - η emission = 98%



C - (others) reduced capacity - η emission < 90%



THE HIGHER REFLECTING CANOPY INCREASES OF 21% THE THERMAL EFFICIENCY OF THE RADIANT STRIPS ON THE GROUND



OHA RHE TECHNICAL FEATURES

MODEL RHE STANDARD - RANGE RATED			OHA RHE 100-115	OHA RHE 100-150	OHA RHE 100-200 RANGE RATED **	OHA RHE 200-250	OHA RHE 200-300	OHA RHE 200-400 RANGE RATED **	
Thermal capacity	Max	kW (Hi)	115	150	200	250	300	370	
	Min	kW (Lo)	100	100	100	200	200	200	
Combustion performance *	Natural Gas G20		%	91,6	91,2	91,5	91	90,9	91
	LPG propane G31		%	91,8	91,7	91,6	91,9	91,9	92
Rated CONSUMPTION at 15°C and 1013,25 mbar	Natural Gas G20	Max	Nm ³ /h	11,67	15,58	21,13	25,13	30,44	37,42
		Min	Nm ³ /h	10,64	10,64	10,64	20,76	20,76	20,76
	LPG propane G31	Max	kg/h	7,77	10,57	14,78	17,11	19,96	25,32
		Min	kg/h	7	7	7	14,12	14,12	14,12
Electrical power supply			3/N/PE ~ 50Hz 400V						
Max electrical power absorbed		W	3700			6500			
Average electrical power supply used ⓘ		W	2600			4600			
Gas connection (male)		Inch	1"			1½"			
Equipment weight		kg	230			240			
Fume pipe diameter		mm	200			200			
Max length of the fumes exhaust piping		m	6			6			
Kind of equipment			B22	B22	B22	B22	B22	B22	

OHA STANDARD TECHNICAL FEATURES

MODEL			OHA100		OHA200			OHA400		
VERSION			OHA 100-50	OHA 100-100	OHA 200-115	OHA 200-150	OHA 200-180	OHA 400-200	OHA 400-250	OHA 400-300
Thermal capacity		kW (Hi)	50	100	115	150	180	200	250	300
Thermal power		kW (Hi)	45,5	93,0	105,2	138,0	165,6	183,0	230,0	276,0
Combustion performance *		%	90,6	90,8	91,5	88	91	88	88,1	91,3
Rated CONSUMPTION at 15°C and 1013,25 mbar	Natural Gas G20	Nm ³ /h	5,29	10,58	12,17	15,87	19,05	21,16	26,46	31,75
	LPG propane G31	kg/h	3,88	7,77	8,93	11,65	13,98	15,54	19,42	23,31
Electrical power supply			3/N/PE ~ 50Hz 400V							
Max electrical power absorbed		W	1350		3450		4450		5700	
Gas connection (male)		Inch	1"		1"			1"		1"
Equipment weight		kg	90		230		240		260	
Fume pipe diameter		mm	200		200			200		
Max length of the fumes exhaust piping		m	6		6			6		9
Kind of equipment			B22		B22			B22		

(*) **At full power in standard conditions**

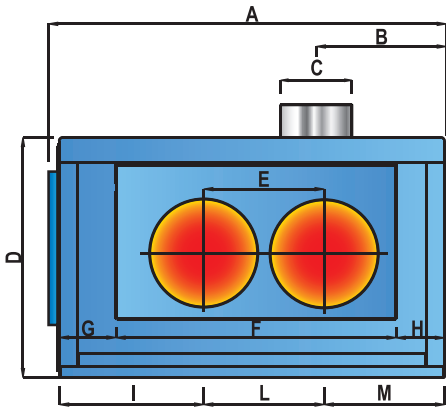
(**) **RANGE RATED** version allows the calibration of the burner at full power according with the real thermal load required by the radiant circuit.

(ⓘ) The values indicated are exclusively indicative, considering that they usually change according with the real design of the system and the final use.

ATTENTION:

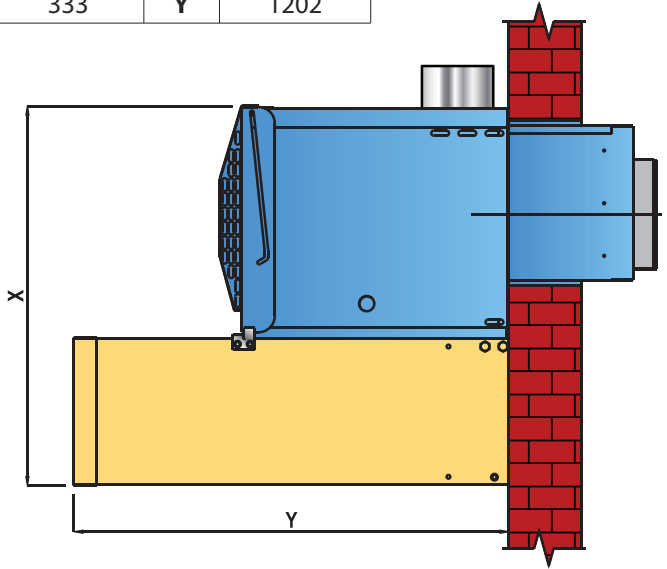
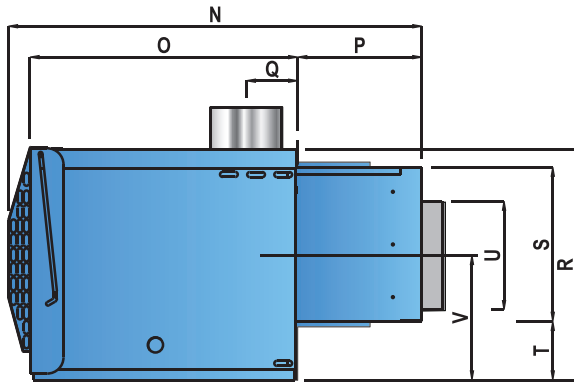
For a proper design of the heating system, please get in touch with the Technical Department of Systema S.p.A.

DIMENSIONS HEATING UNIT



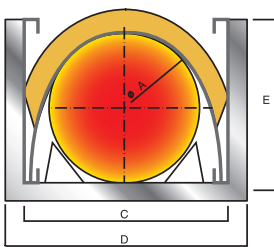
Dimension [mm]			
A**	1075 (1095)	N (*)	1142
B	359	O	740
C	200	P (*)	343
D	664	Q	142
E	333	R	637
F	774	S	426
G	157	T	162
H	134	U	300
I	398	V	344
L	333	X	1049
M	333	Y	1202

(*) In case of long plenum (only supplied if specifically required) the dimensions N and P are respectively 1802 and 1003 mm
 (**) Oha Standard= 1075
 Oha RHE= 1095

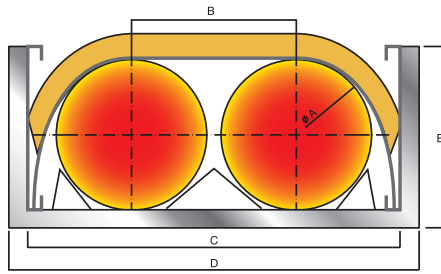


DIMENSIONS OF THE RADIANT CIRCUIT

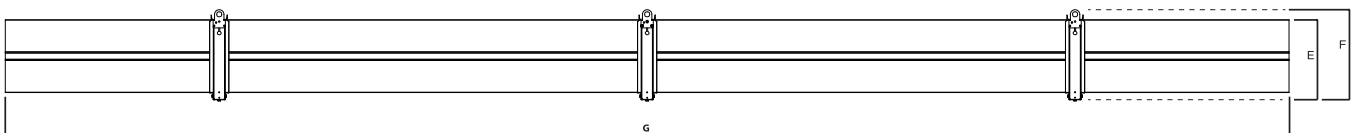
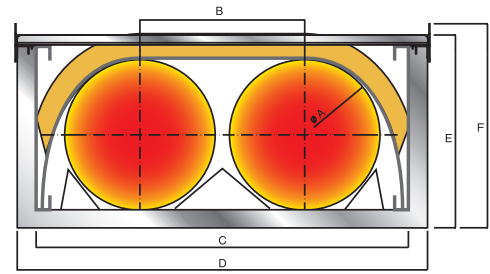
1 pipe Standard



2 pipes Standard



2 pipes Preassembled



Dimensions of the Standard Radiant circuit			
Height		1 pipe	2 pipes
A	Ø mm	Ø300	Ø 300
B	mm	-	335
C	mm	512	850
D	mm	580	918
E	mm	374	374
F	mm	-	-
G	mm	-	-
Weight	kg/m	19	28

Dimensions of the Preassembled Radiant circuit		
Height		2 pipes
A	Ø mm	Ø 300
B	mm	335
C	mm	850
D	mm	930
E	mm	396
F	mm	421
G	mm	6000
Weight	kg/m	28

OHA RHE and OHA: integrated functions

The electronic board installed inside the burner represents the brain of the equipment. It has been designed to guarantee flexibility, a wide range of functions and configurations for a competitive and innovative product.

These functions can be used profitably when the equipment is combined with Systema control panels.

Common functions of OHA RHE and OHA

3 working programs:

- 1) **Auto:** thermal power according to program and timer settings,
- 2) **Manual ON,** keeps the function set with comfort program
- 3) **Manual OFF:** keeps just the anti-frozen condition (if enabled)

OHA RHE with SYS850 or SYS 830 control panels

Total automatic modulation and high energy saving. Thanks to an external probe the temperature of the radiant circuit is kept constant. Functions:

- Minimum and maximum **thermal power modulation** according to the internal and external temperature
- **Fan speed modulation** with consequent decrease of the electrical consumption
- **Burner gas rate modulation**

Functions of OHA RHE devices:

- **Thermostat** with temperature program (comfort, economy, antifreeze)
- **Timer** with daily, weekly, holiday program
- **Monitoring and displaying in real time of working parameters,** such as:
 - > Environment temperature (can be set by the final user)
 - > Set-point temperatures of fume circuit, which vary automatically when the external probe is installed
 - > External temperature (when the external probe is installed)
 - > Fan speed from 0% to 100%
 - > Surface temperature of the radiant circuit (with optional probe)
 - > Inverter temperature
 - > Alarm signal
- **Antifreeze function**

OHA with SYS850 or SYS830, SLIM2 control panels

Working at 2 power levels with the following functions:

- **Thermostat** with temperature program (comfort, economy, antifreeze)
- **Timer** with daily, weekly, holiday program
- **Hour counter** (only with SLIM2)
- **Monitoring and displaying in real time of working parameters,** such as:
 - > Environment temperature (can be set by the final user)
 - > Surface temperature of the radiant circuit (with optional probe)
 - > External temperature (when the external probe is installed, only with SYS850 or SYS830 and SYS2)
 - > Alarm signal
- **Antifreeze function**



Master Panel SYS850 and SYS830, for the control of OHA RHE and OHA equipments: SYS850 conceived to manage up to 30 burners and SYS830 up to 16 burners.

SYS850 and SYS830 are available in 3 versions:

Quadro Master SYS850 o SYS830



☑ **SYS850 Basic** version - Code 05CEQU2715 – Control up to n°30 burners with 1 thermal zone per each burner, i.e. 30 independent thermal zones.

☑ **SYS830 Basic** version - Code 00CEQU2674 – Control up to 16 burners with n°1 thermal zone per each burner, i.e. 16 independent thermal zones.

☑ **SYS850 LAN** - Code 05CEQU2718

☑ **SYS830 LAN** - Code 00CEQU2675

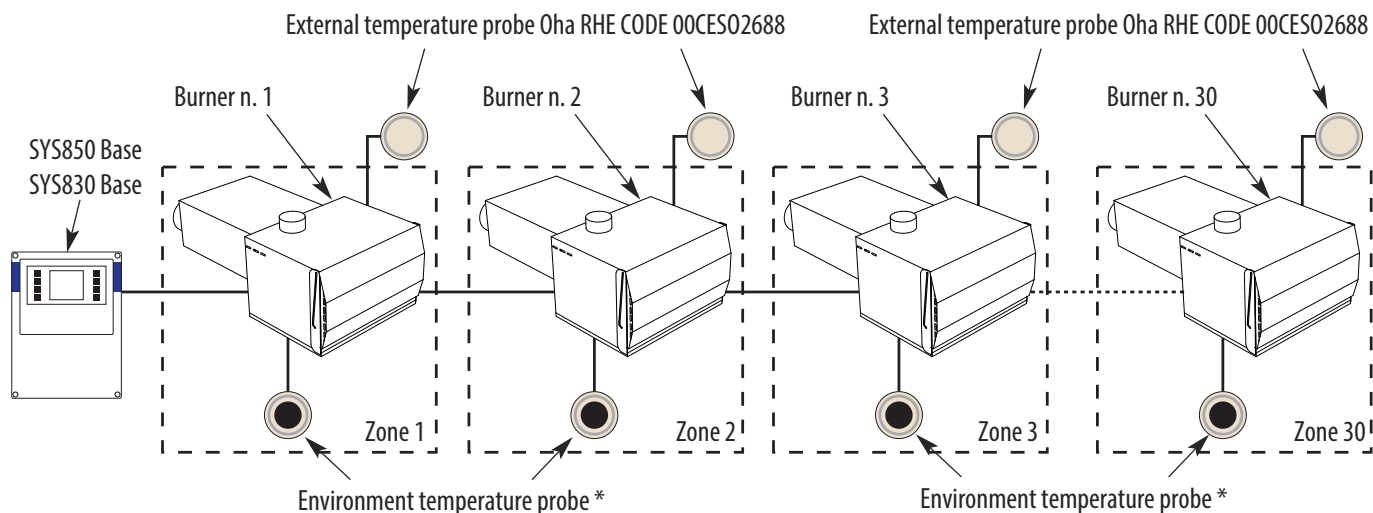
-> Besides the main functions of the Basic versions, **SYS850 LAN** and **SYS830 LAN** control panels are also equipped with **Ethernet LAN (TCP-IP)** door for the PC monitoring in a network and through the Internet via **EYE-LAN Software** in 3 versions (LITE, PLUS and ADVANCED), which can be activated in accordance with the specific needs of the user.

☑ **SYS850 ModBUS** - Code 05CEQU2721

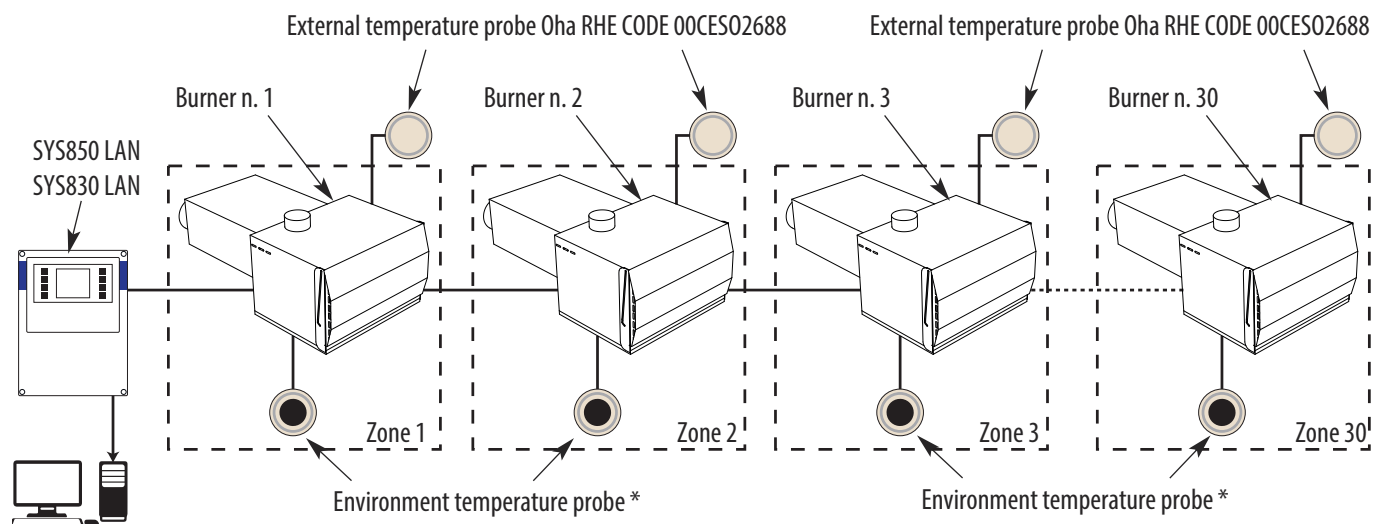
☑ **SYS830 ModBUS** - Code 00CEQU2676

-> Besides the main functions of the Basic versions, **SYS850 ModBUS** and **SYS830 ModBUS** control panels are equipped with a specific communication door necessary for the control through the **Modbus** communication system.

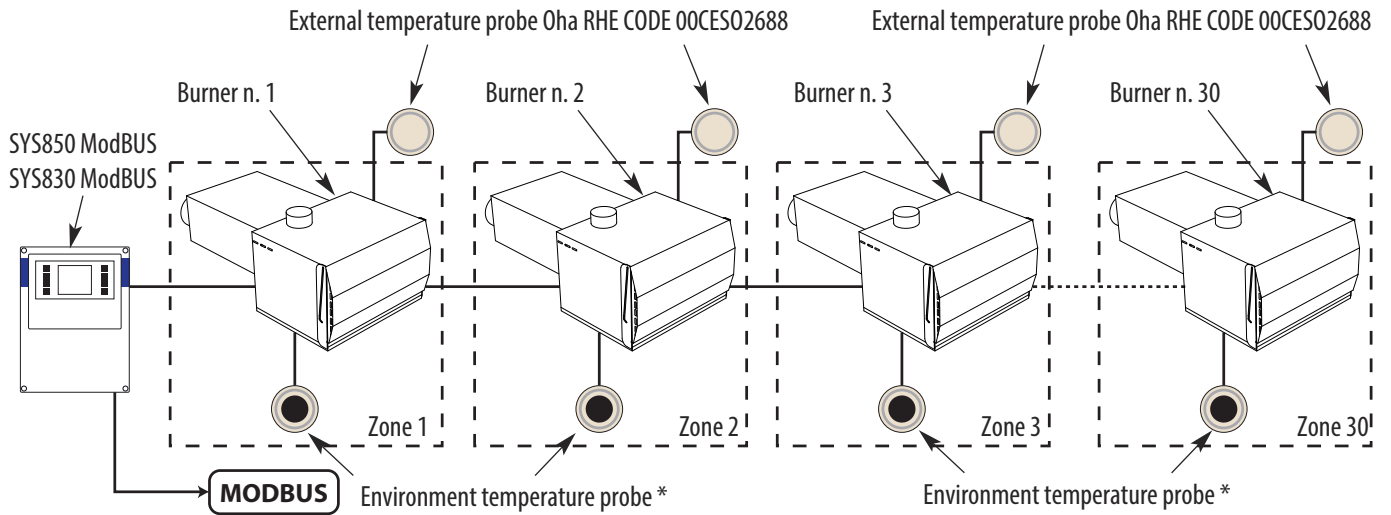
Example of an heating system with OHA RHE or OHA equipments controlled by SYS850 or SYS830 Basic



Example of an heating system with OHA RHE or OHA equipments controlled by SYS850 LAN or SYS830 LAN



Example of an heating system with OHA RHE or OHA equipments controlled by SYS850 or SYS830 ModBUS



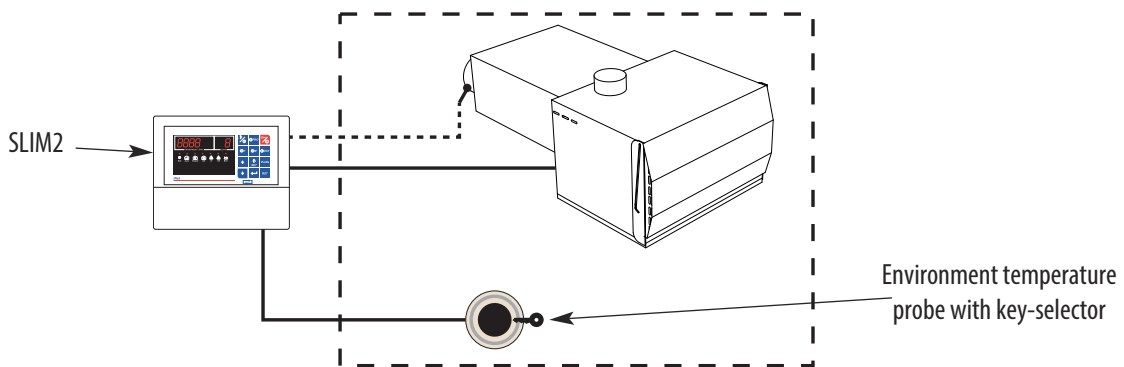
SLIM 2 master panel for the control of OHA burners

SLIM2 master panel



SLIM2 for OHA burners - code: 05CEQU2657
 Control of 1 OHA burner and 1 thermal zone and probe equipped with key-selector.
 It can be matched with PT1000 temperature probe.

Example of a thermal system with OHA controlled by SLIM2 Master control panel



PRE-ASSEMBLED RADIANT STRIPS

SIMPLE – CONVENIENT – INEXPENSIVE

- ✓ **Substantial reduction of assembly times** in all the buildings where it's possible to work with lifting systems.
- ✓ **Ease to disassemble:** the strips can be easily assembled or disassembled with the advantage to define the circuit according to the specific needs and in every moment. In this way it's not necessary to order special parts, saving costs on delivery and shipment of the goods.
- ✓ **The strips are complete and ready to be used:** the pre-assembled modules are supplied complete in all their parts and ready to be installed.
- ✓ **Tube joints:** the joints which connect the tubes are easy to be installed thanks to an adjustable clamp which allows an easy assembly or disassembly of the single module or of the whole system. A fiber-glass gasket, resistant to high temperatures, guarantees the seal without silicon or other addition agents.
- ✓ **Brackets with variable position:** the support brackets can be positioned according to the specific configuration of the circuit, guaranteeing the anchorage even if the distance between them is not always the same.
- ✓ **Easy to be installed:** the system is delivered with a specific bracket for the lifting of the 6 meter modules, which can be moved easily for the installation through a lifting machinery (such as crane, forklift, etc).
- ✓ **Ceiling installation:** the radiant strips can be installed near to the ceiling (even 5 cm from the ceiling), in case of reduced installation space or above the overhead crane, shed structures etc...
- ✓ **Less packaging:** the pre-assembled radiant strips are supplied with an essential packaging with consequent reduction of waste disposal costs and speed up of logistic procedures.

INSTALL THE RADIANT STRIPS IN 3 STEPS!

Phase 1: Unload the pallets



Phase 3: Assembly the strips modules

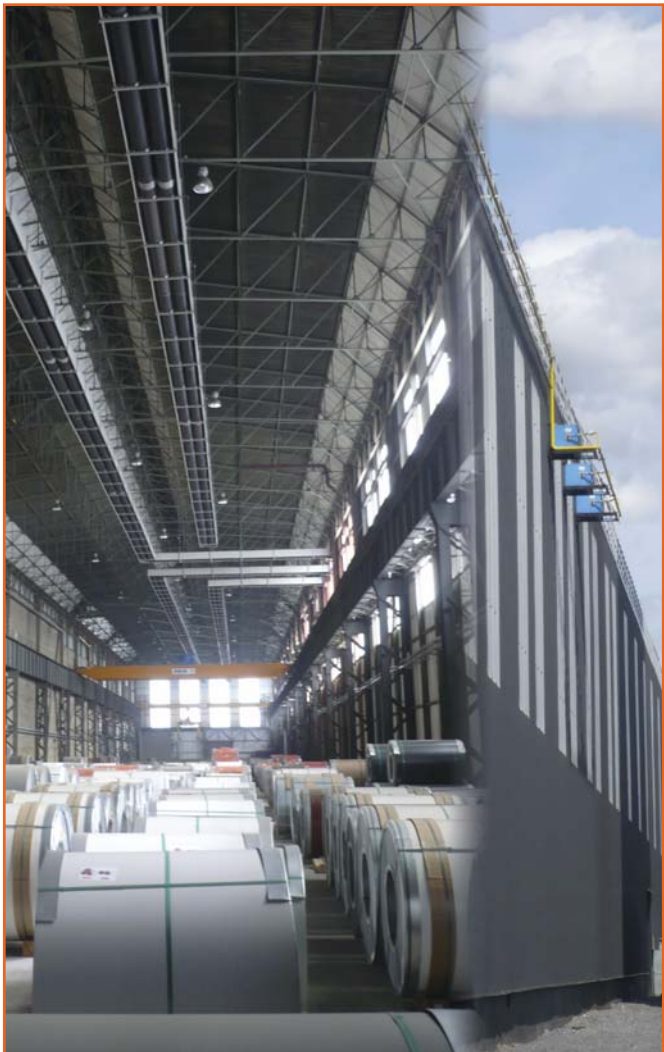


Phase 2: Position the radiant strips on the platform

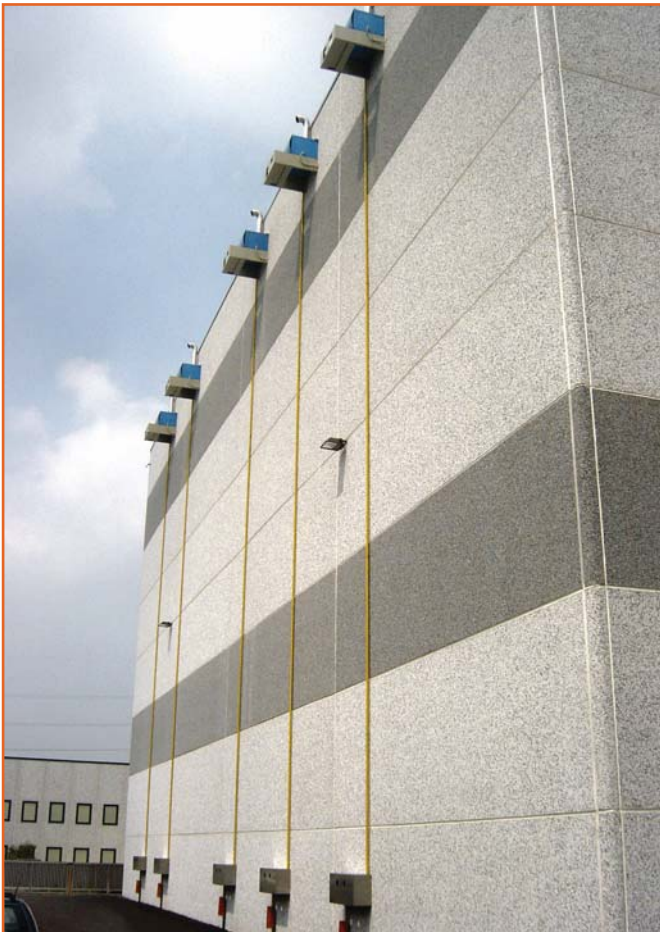


All the advantages of the Systema radiant strips and the convenience of a simple installation for save time and money!

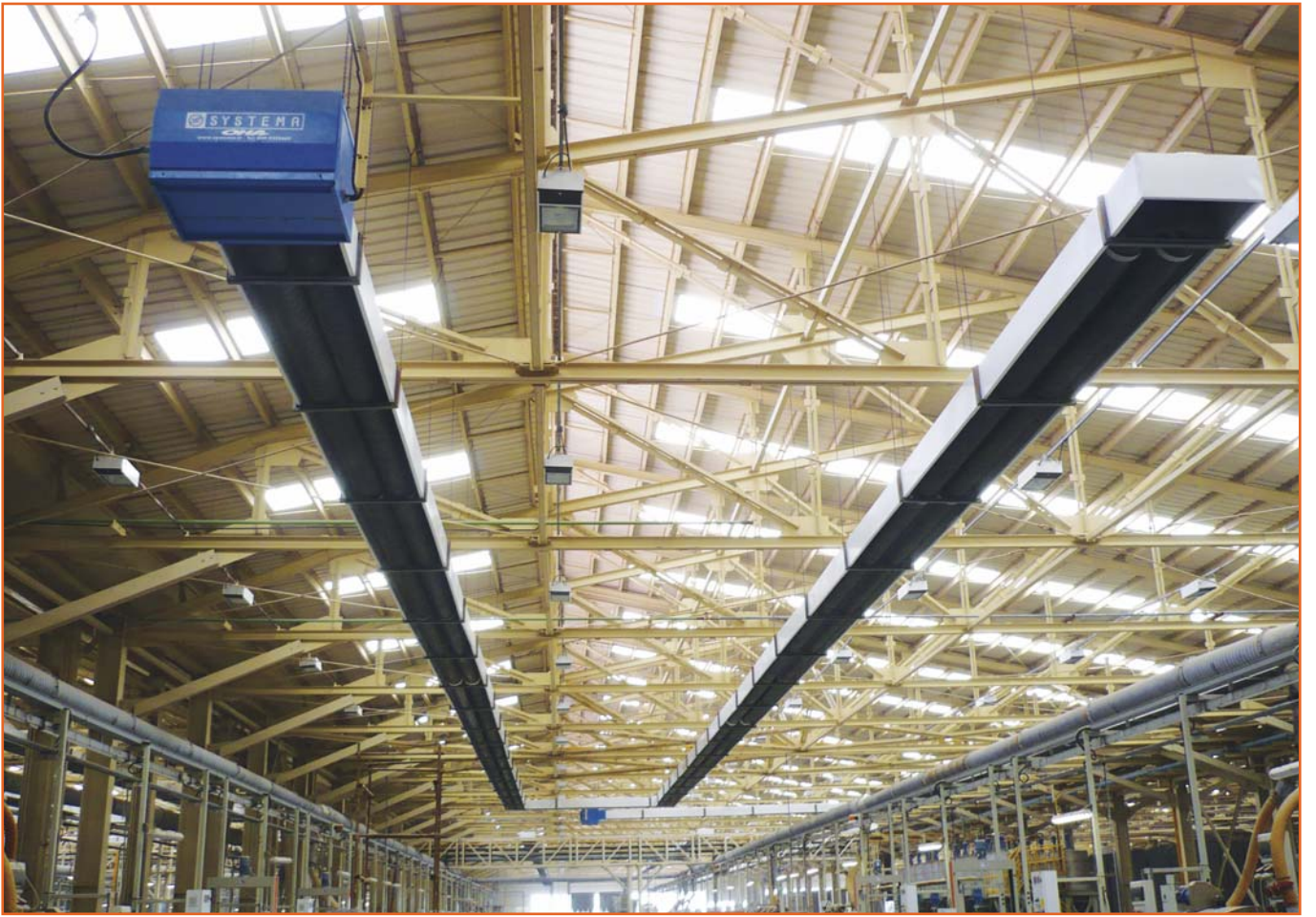
REFERENCES





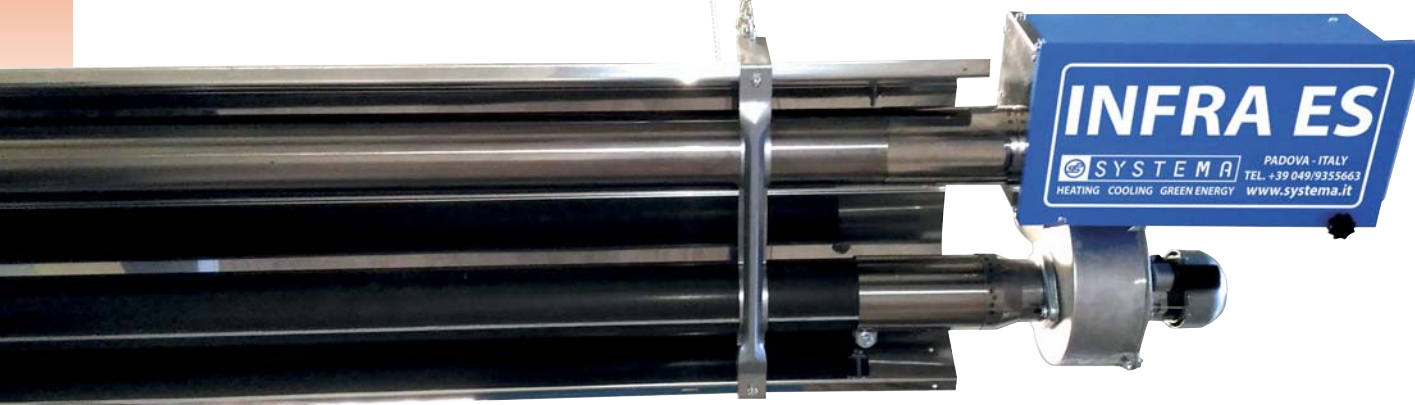








INFRA Energy Saving Radiant modules



THE ADVANTAGES OF RADIANT HEATING

- ✓ **HIGH EFFICIENCY**
- ✓ **HEAT CONCENTRATION ON THE FLOOR**
- ✓ **LIMITED AIR STRATIFICATION BETWEEN FLOOR AND CEILING**
- ✓ **ABSENCE OF AIR MOVEMENT**
- ✓ **ABSENCE OF DUST**
- ✓ **NOISELESS**
- ✓ **HEALTHY ENVIRONMENTS**
- ✓ **HIGH COMFORT**
- ✓ **POSSIBILITY TO APPLY HEATING TO SELECTED ZONES**
- ✓ **THERMAL POWER STATION NOT REQUIRED**

TECHNICAL FEATURES

INFRA radiant tube, designed and realized by Systema S.p.A., is composed by:

- ✓ **Sucked air BAF burner** with air-gas partial premix, caused by the fan which is positioned in a downstream watertight chamber. Power capacity from 28 kW up to 60 kW. It is made up of a multi-gas torch with stainless steel ionization flame stabilizer, electronic ignition, no pilot flame, ionization flame control, gas solenoid valve sealed with double coil, slow ignition adjustable with pressure stabilizer and gas filter, safety air pressure switch, airlock adjustable according to the thermal capacity of the equipment.
- ✓ **“U” radiant tube** composed by a long-life stainless steel combustion chamber (stainless steel in 9-12-15 meter models). The fumes inside the radiant tube heat the external surface increasing the temperature of the tube in order to send out infrared thermal waves. The tube are made of aluminized and calorized steel and produced through a particular high temperature thermal process. A turbolator has been positioned inside the return pipe in order to increase the thermal efficiency.
- ✓ **Electric-fan** with class “H” ventilated motor, C3 self-lubricating special bearings, 230V~50 Hz IP 44, with overload cut-out included.
- ✓ **Stainless steel specular reflecting canopies** with high reflection capacity able to converge the radiant heating towards the floor.
- ✓ **Support brackets** for radiant tube and the reflecting canopies.
- ✓ The equipment meets the LOW TENSION 73/23 CEE regulation
- ✓ The equipment meets the ELECTROMAGNETIC COMPATIBILITY ECM 89/336/CEE regulation
- ✓ **The equipment has been checked according to the European regulation: EN 416-2**
- ✓ CE certificate according to the 90/396 CEE regulation
- ✓ Sanitary considerations of Infra radiant tubes, realized by Dr. Giuseppe RAUSA of FERRARA UNIVERSITY - ISTITUTO DI IGIENE E MEDICINA PREVENTIVA.

Suitable for:

- **Medium and large environments**
- **High buildings**
- **Industrial and commercial premises, gymnasiums**

TECHNICAL FEATURES OF STANDARD VERSION

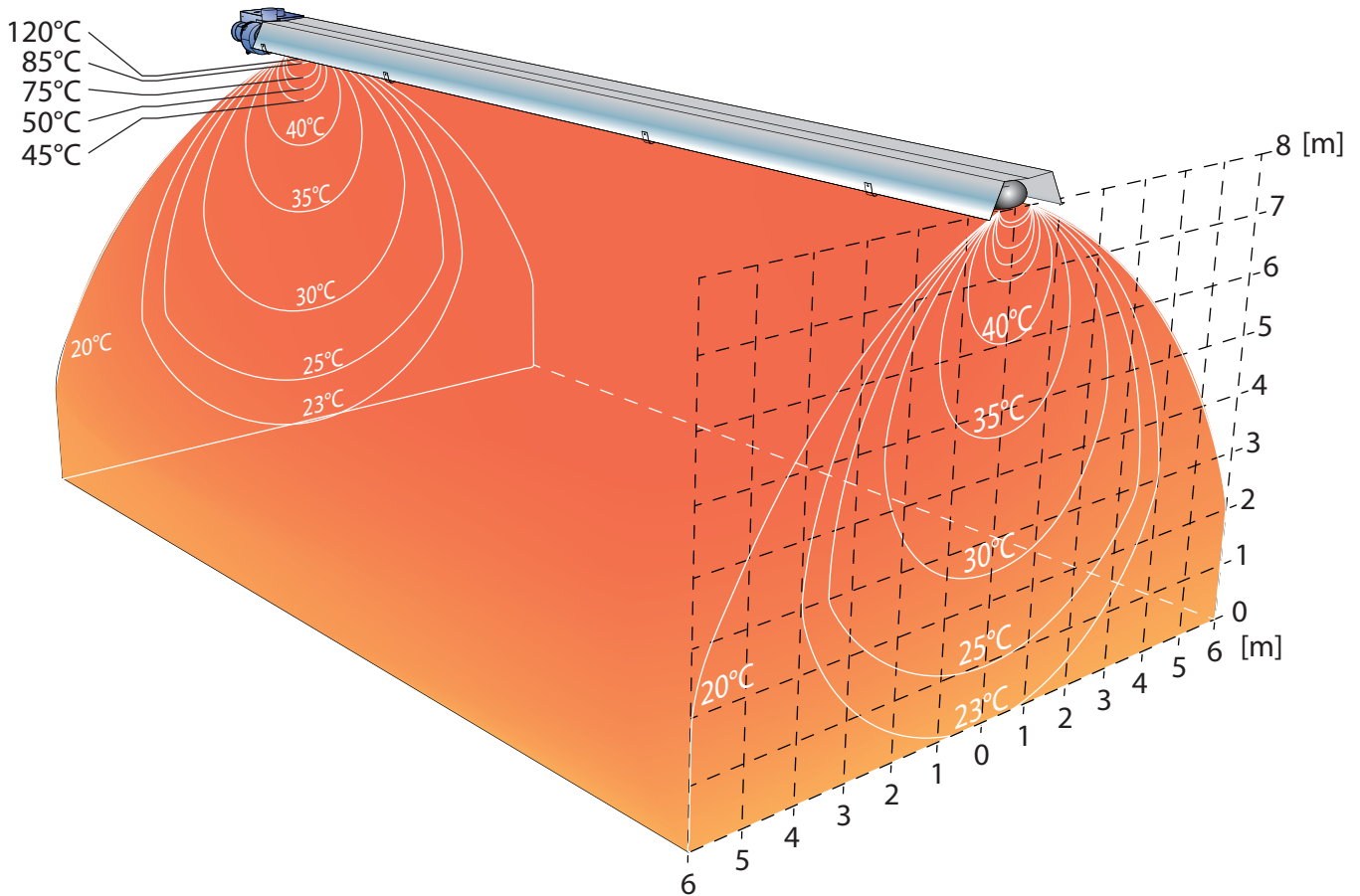
MODELS		INFRA 6 ES 28	INFRA 6 ES 35	INFRA 9 ES 45	INFRA 9 ES 53	INFRA 12 ES 45	INFRA 12 ES 60	INFRA 15 ES 60	
Thermal capacity	kW	28,0	35,0	45,0	53,0	45,0	60,0	60,0	
Thermal power	kW	25,70	31,96	40,95	48,39	40,95	54,6	54,9	
Combustion efficiency *	%	91,8	91,3	91,0	91,3	91,0	91,0	91,5	
Electrical power supply	V/Hz	230 V - 50/60 Hz							
Total electrical power	W	70	70	120	120	120	120	120	
Air pressure switch adjustment	Pa	60	30	30	44	60	44	60	
Fan power	W	55	55	100	100	100	100	100	
Type of fan	-	Standard					Increased		
Blade fan	Ø mm	102	102	133	145	145	145	145	
Gas connection (F)	Inches	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
Air connection (M)	Ø mm	100	100	100	100	100	100	100	
Fume connection (F)	Ø mm	100	100	100	100	100	100	100	
Fume diaphragm	mm	47	-	50	60	58	-	-	
Weight (standard version)	kg	86,5	86,5	139	139	176	176	208	
Weight (with RBT insulating canopies)	kg	105,5	105,5	167,5	167,5	214	214	246	
Nominal consumption at 15°C at 1013,25 mbar									
Natural gas G20	m³/h	2,96	3,70	4,76	5,61	4,76	6,35	6,35	
Natural gas G25	m³/h	3,99	4,98	6,41	7,54	6,41	8,54	8,54	
Natural gas G27	m³/h	3,61	4,52	5,81	6,84	5,81	7,74	7,74	
Natural gas G2.350	m³/h	4,12	5,14	6,61	7,79	6,61	8,82	8,82	
LPG butane G30	kg/h	2,21	2,76	3,55	4,18	3,55	4,73	4,73	
LPG propane G31	kg/h	2,18	2,72	3,50	4,12	3,50	4,66	4,66	

* Standard conditions

THERMAL MONITORING WITH INFRA 9 ES 45

CONDITION TEST: max surface temperature of the radiant tube: 450°C, type of heated material: wood-cartoon with a surface of 0.5 m² and a thickness of 5 mm, suspended in the air.

The temperatures are taken after 90 of thermal radiation, working temperature: 16°C and air speed <0,15 m/s



TECHNICAL FEATURES OF MODELS WITH FUME RECIRCULATION

INFRA ES-R, the exclusive radiant tube with fume recirculation has been specifically designed to reduce the Low NOx emissions in the atmosphere, to optimize the **RADIANT FACTOR** of the heat exchanger reaching a higher combustion efficiency up to 93%.

The heart of this new radiant module consists in an intake air gas burner with partial air-gas premix and a fume fan specifically dimensioned according to the power of the radiant tube.

The configuration of the fume recirculation collector is relevant for the optimal balance of flow-fume temperature and emitting exchanger temperature.

The combustion chamber, being the more stressed part, has been realized with stainless steel material in order to guarantee a long life of the equipment. Whereas the other elements of the heat exchanger have been realized with calorized aluminized steel.

The stainless steel canopy has got a high reflecting coefficient, the curve and the aluminized steel brackets complete the structure of the radiant tube.

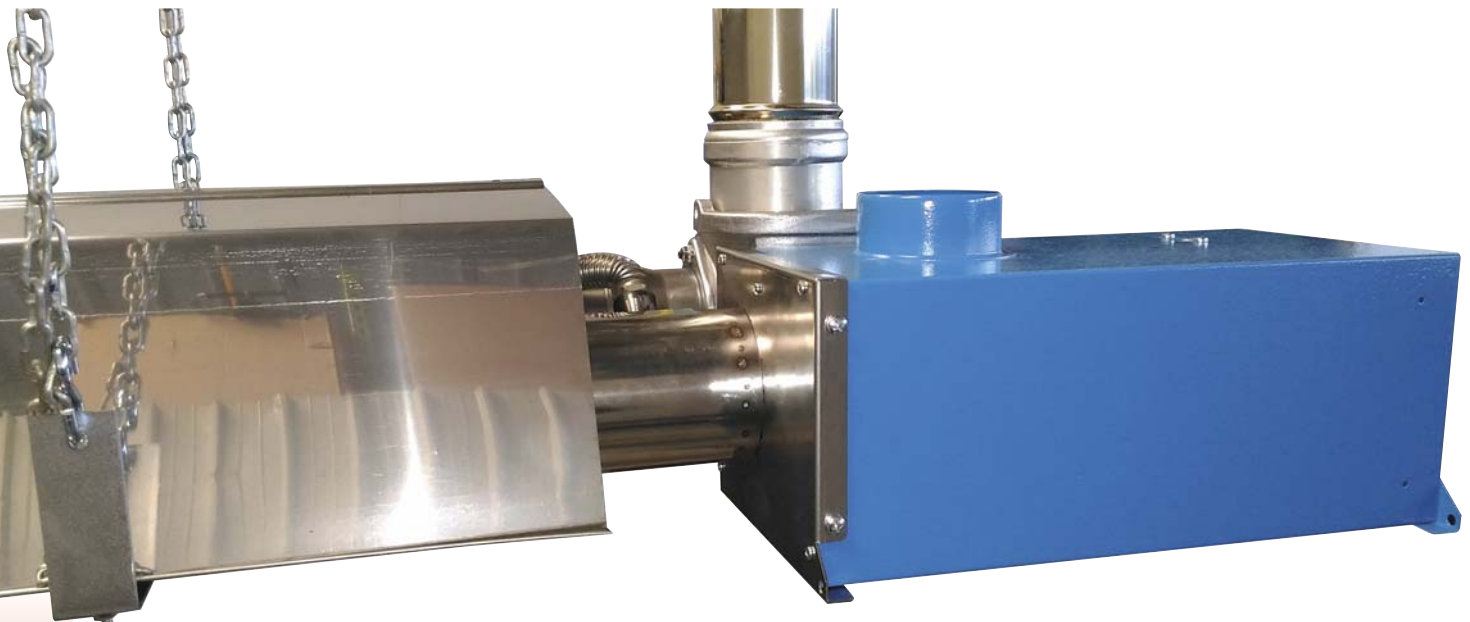
INFRA ES-R is available in two different models:

- **Infra 9 ES-R 53** with a length of 9 meters and a power capacity of 53 kW,
- **Infra 12 ES-R 60** with a length of 12 meters and a power capacity of 60 kW.

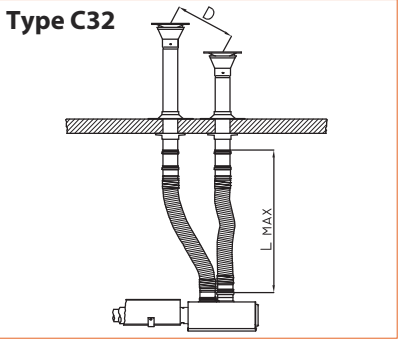
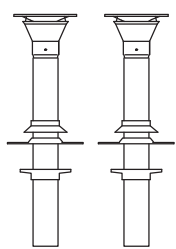
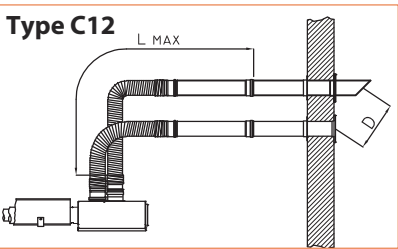
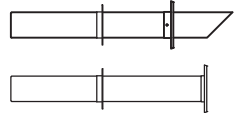
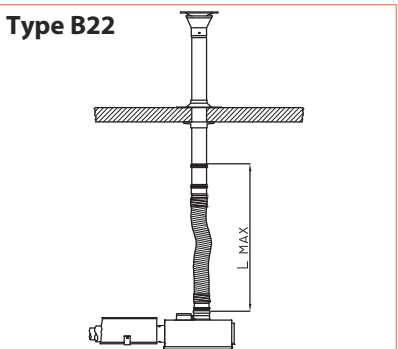
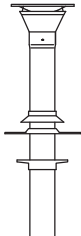
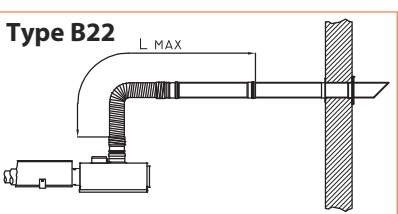

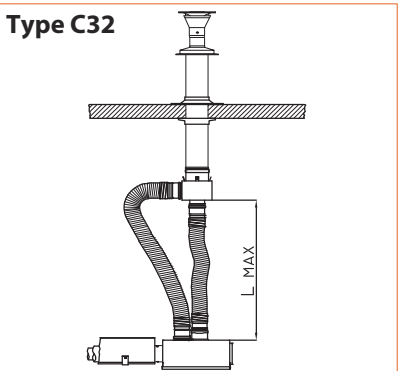
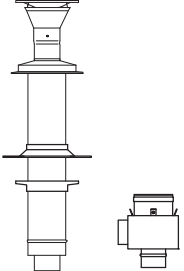
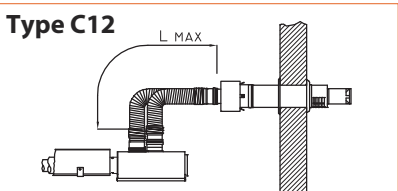
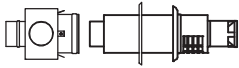
TECHNICAL FEATURES OF "R - FUME RECIRCULATION" VERSION

MODELS WITH RECIRCULATION		INFRA 9 ES-R 53	INFRA 12 ES-R 60
Thermal capacity	kW	53,0	60,0
Thermal power	kW	49,29	55,5
Combustion efficiency *	%	93,0	92,5
Electrical power supply	V/Hz	230 V - 50/60 Hz	
Total electrical power	W	120	120
Air pressure switch adjustment	Pa	44	44
Fan power	W	100	100
Type of fan	-	Standard	Increased
Blade fan	Ø mm	145	145
Gas connection (F)	Inches	1/2"	1/2"
Air connection (M)	Ø mm	100	100
Fume connection (F)	Ø mm	100	100
Fume diaphragm	mm	60	-
Weight (standard version)	kg	139	176
Weight (with RBT insulating canopies)	kg	167,5	214
Nominal consumption at 15°C at 1013,25 mbar			
Natural gas G20	m³/h	5,61	6,35
Natural gas G25	m³/h	7,54	8,54
Natural gas G27	m³/h	6,84	7,74
Natural gas G2.350	m³/h	7,79	8,82
LPG butane G30	kg/h	4,18	4,73
LPG propane G31	kg/h	4,12	4,66

* Standard conditions



TYPES OF INSTALLATION AIR/FUMES PIPES

Application	Types of installation	Max length												
Type C32 	 Air/Fumes KIT C32, roof-top separated terminals L=2 m CODE 01SA002000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> <th>D (mm)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>9</td> <td rowspan="4">≥ 500</td> </tr> <tr> <td>Infra 9 ES</td> <td>7</td> </tr> <tr> <td>Infra 12 ES</td> <td>7</td> </tr> <tr> <td>Infra 15 ES</td> <td>7</td> </tr> </tbody> </table>	Model	L MAX (m)	D (mm)	Infra 6 ES	9	≥ 500	Infra 9 ES	7	Infra 12 ES	7	Infra 15 ES	7
Model	L MAX (m)	D (mm)												
Infra 6 ES	9	≥ 500												
Infra 9 ES	7													
Infra 12 ES	7													
Infra 15 ES	7													
Type C12 	 Air/Fumes KIT C12, wall separated terminals L=2 m CODE 02SA002000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>9</td> </tr> <tr> <td>Infra 9 ES</td> <td>7</td> </tr> <tr> <td>Infra 12 ES</td> <td>7</td> </tr> <tr> <td>Infra 15 ES</td> <td>7</td> </tr> </tbody> </table>	Model	L MAX (m)	Infra 6 ES	9	Infra 9 ES	7	Infra 12 ES	7	Infra 15 ES	7		
Model	L MAX (m)													
Infra 6 ES	9													
Infra 9 ES	7													
Infra 12 ES	7													
Infra 15 ES	7													
Type B22 	 Fumes KIT B22, roof-top terminal L=2 m CODE 03SA002000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>15</td> </tr> <tr> <td>Infra 9 ES</td> <td>13</td> </tr> <tr> <td>Infra 12 ES</td> <td>13</td> </tr> <tr> <td>Infra 15 ES</td> <td>13</td> </tr> </tbody> </table>	Model	L MAX (m)	Infra 6 ES	15	Infra 9 ES	13	Infra 12 ES	13	Infra 15 ES	13		
Model	L MAX (m)													
Infra 6 ES	15													
Infra 9 ES	13													
Infra 12 ES	13													
Infra 15 ES	13													
Type B22 	 Fumes KIT B22, wall terminal L=2 m CODE 04SA002000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>15</td> </tr> <tr> <td>Infra 9 ES</td> <td>13</td> </tr> <tr> <td>Infra 12 ES</td> <td>13</td> </tr> <tr> <td>Infra 15 ES</td> <td>13</td> </tr> </tbody> </table>	Model	L MAX (m)	Infra 6 ES	15	Infra 9 ES	13	Infra 12 ES	13	Infra 15 ES	13		
Model	L MAX (m)													
Infra 6 ES	15													
Infra 9 ES	13													
Infra 12 ES	13													
Infra 15 ES	13													
Type C32 	 Air/Fumes KIT C32 roof-top concentric terminal L=2 m COD. 05SASD2000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>5</td> </tr> <tr> <td>Infra 9 ES</td> <td>3</td> </tr> <tr> <td>Infra 12 ES</td> <td>3</td> </tr> <tr> <td>Infra 15 ES</td> <td>3</td> </tr> </tbody> </table>	Model	L MAX (m)	Infra 6 ES	5	Infra 9 ES	3	Infra 12 ES	3	Infra 15 ES	3		
Model	L MAX (m)													
Infra 6 ES	5													
Infra 9 ES	3													
Infra 12 ES	3													
Infra 15 ES	3													
Type C12 	 Air/Fumes KIT C32 wall concentric terminal L=2 m COD. 06SASD2000	<table border="1"> <thead> <tr> <th>Model</th> <th>L MAX (m)</th> </tr> </thead> <tbody> <tr> <td>Infra 6 ES</td> <td>6</td> </tr> <tr> <td>Infra 9 ES</td> <td>4</td> </tr> <tr> <td>Infra 12 ES</td> <td>4</td> </tr> <tr> <td>Infra 15 ES</td> <td>4</td> </tr> </tbody> </table>	Model	L MAX (m)	Infra 6 ES	6	Infra 9 ES	4	Infra 12 ES	4	Infra 15 ES	4		
Model	L MAX (m)													
Infra 6 ES	6													
Infra 9 ES	4													
Infra 12 ES	4													
Infra 15 ES	4													

INFRA ES: functions and control panels

INFRA ES functions combined with INET control panel:



Automatic working according to the program and timer settings, for all the models:

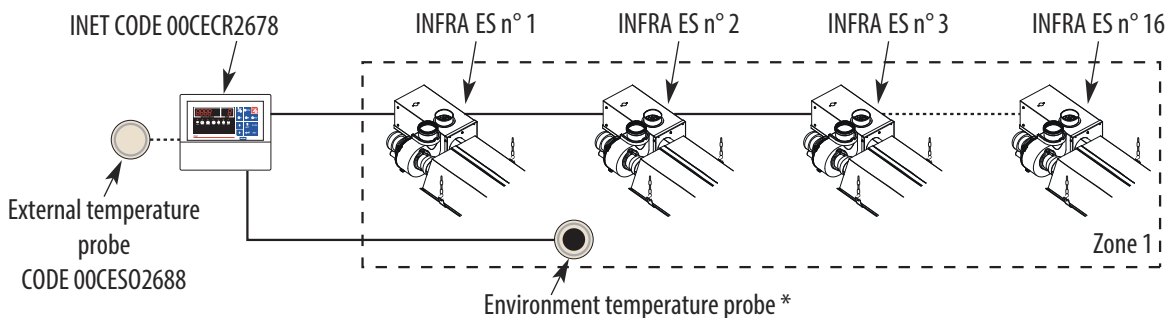
- **2 working temperature,**
- **Daily/weekly settings, Timer, hour counter** and holiday function
- Control by PC or ModBUS using SYS850 control panel and management software (optional)

INET control panel to manage 16 equipments:

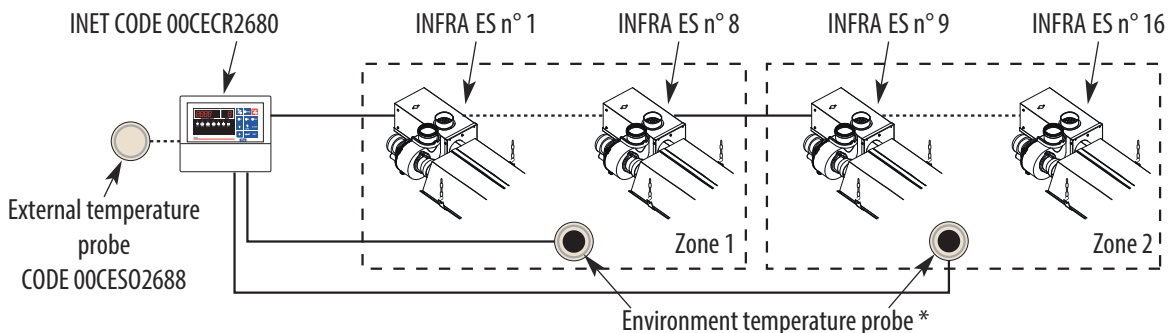
- **1 thermal zone** CODE 00CECR2678
- **2 thermal zones** CODE 00CECR2680
- **3 thermal zones** CODE 00CECR2682
- **4 thermal zones** CODE 00CECR2684

We invite you to contact our Technical Dept. to receive detailed information about PC connection or ModBUS and for installations of INFRA radiant tubes managed by SYS850 control panel.

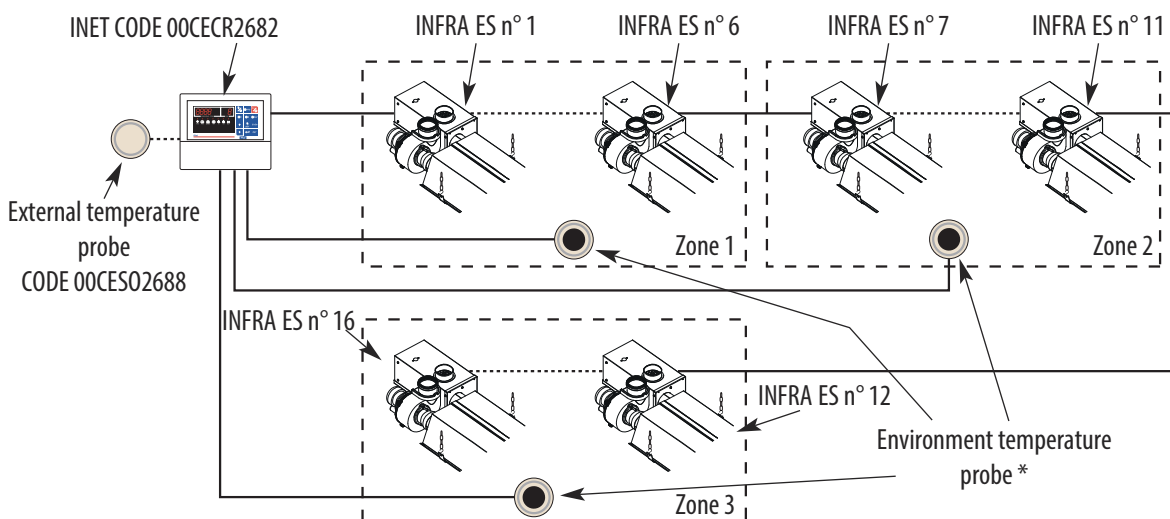
Example of an application with INFRA ES controlled by INET - 1 ZONE



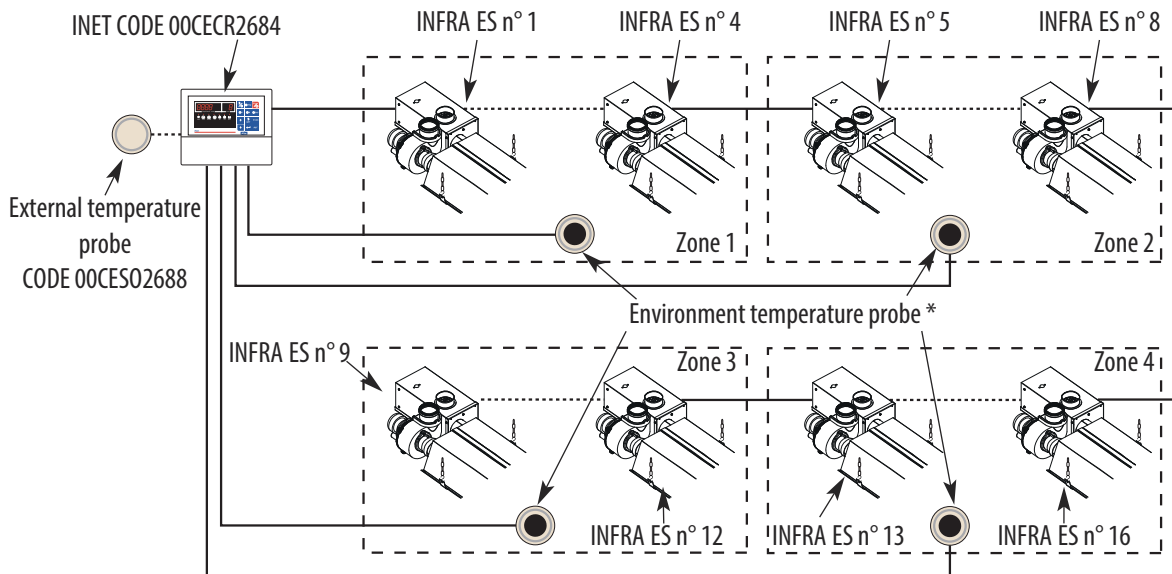
Example of an application with INFRA ES controlled by INET - 2 ZONES



Example of an application with INFRA ES controlled by INET - 3 ZONES



Example of an application with INFRA ES controlled by INET - 4 ZONES



- * **Install 1 temperature probe for each thermal zone:**
- Black bulb environment temperature probe, code 01CEGL3000
 - Black bulb environment temperature probe with key selector (automatic, manual, switched off), code 03CESO2621

ATTENTION:

INET control panels need 1 net board (code 00CECR2687) for each INFRA ES. At the order, please specify this configuration so that the net board will be automatically installed during the production phase.

INFRA ES combined with CE control panel

CE control panel with digital thermostat, remote temperature probe and ON/OFF function:

Standard versions and control of digital temperature:

- 1 thermal zone CODE 00CEQU1196/A
- 2 thermal zones CODE 00CEQU1198/A
- 3/4 thermal zones CODE 00CEQU1200/A

CE control panel, 1 thermal zone for 1 radiant tube



SLIM control panel, 1 thermal zone, with Chrono-thermostat and digital temperature control:

- 1 radiant tube CODE 00CEQU2667
- 2 radiant tubes CODE 00CEQU2668
- 3 radiant tubes CODE 00CEQU2669



Chrono-thermostat and daily/weekly setting, timer:

- 1 thermal zone CODE 00CEQU1197/A
- 2 thermal zones CODE 00CEQU1199/A
- 3/4 thermal zones CODE 00CEQU1201/A

CE control panel with Chrono-thermostat for 1 thermal zone and 3/4 radiant tubes



INFRANET or SYS850 controllers are available to manage more thermal zones (please contact the Technical Dept. of Systema)





SCR: Premix ceramic heaters with modulation

This range of modulating ceramic heaters represents an innovative project. There are two versions: **automatic premix with modulation** and **manual premix**. Both of them have the possibility to be completed with external air intake and filters.



TWO VERSIONS

SCR-A (AUTOMATIC MODULATION)

- Premix ceramic heater with **automatic modulation** of the thermal power
- Sliding radiant emission

SCR-M (MANUAL MODULATION)

- Premix ceramic heater with manual modulation of the thermal power

Heating power: 24 and 45 kW

SCR-OW "Over Wind"

This model has been designed specifically for the use in big opened areas.

In particular, it is used for the radiant heating of the stadium. For this reason the equipment has been realized to run continuously without being influenced by weather condition.

Some components are specific for this model, such as the canopies, the wind deflecting device and the ignition conveyor.

Heating power: 24 and 45 kW

TECHNICAL FEATURES

Model		SCR 25	SCR 45	
Maximum thermal power	kW	24	45	
Minimum thermal power	kW	12	24	
Nominal consumption (15°C 1013,25 mbar)	G20	Nm ³	2,54	5,03
		Nm ³	1,27	2,56
	G31	kg/h	1,86	3,97
		kg/h	0,93	1,96
	G30 50%	kg/h	1,83	3,66
	G31 50%	kg/h	0,91	1,82
Nozzle diameter	G20	mm	3,7	5,5
	G31	mm	3	4,3
	G30 50% G31 50%	mm	2,9	4,1
Electrical power supply	V/Hz	230/50	230/50	
Maximum electrical power	W	60	60	
Connection tube DN	mm	20	20	
Net weight (standard version)	kg	23	32	
Net weight (OW version)	kg	21	30	

COMPONENT FEATURES

- Premix modulating burner designed and realized by Systema S.p.A.
- High efficiency ceramic plate
- Stainless steel reflecting canopy (aluminized steel for SCR-OW models), specular big surface
- Watertight single unit
- Possibility to install air intake filters
- Possibility to take the combustion air from outside
- It can be installed in various positions

The ceramic heaters are delivered already assembled and commissioned.

Any calibration during the starting procedure is necessary. Every single heater is packed separately.

SCR-ECO: on/off ceramic heaters



SCR-ECO MAIN FEATURES

SCR-ECO ceramic heater is a radiant heating system that can be powered by natural gas or L.P.G.

It has been designed and realized to be placed in any kind of environment, thanks to its high installation flexibility.

The range of **SCR-ECO** includes models from 7,5 up to 55 kW.

SCR-CU: specific model realized to be installed in churches, this range includes models from 7,5 up to 21 kW.

TECHNICAL FEATURES

- ☑ **Specular stainless steel burner**
- ☑ **Treated steel venturi**
- ☑ **Radiant surface composed by micro-drilled ceramic plates**
- ☑ **Stainless steel specular reflector**
- ☑ **Ignition and safety electronic board with flame ionization**
- ☑ **Gas solenoid valve combined with double coil and gas stabilizer**

The radiant surface can reach temperatures of 1200°C, heating the environments through infrared rays.

ADVANTAGES

- ☑ **HIGH COMFORT WITH LOW AIR TEMPERATURE**
- ☑ **LOW THERMAL DISPERSION**
- ☑ **ABSENCE OF AIR MOVEMENT AND DUST**
- ☑ **LOW THERMIC INERTIA**
- ☑ **POSSIBILITY TO HEAT ZONES WITH DIFFERENT TEMPERATURES**
- ☑ **NOISELESS**
- ☑ **ENERGY SAVING**
- ☑ **ENVIRONMENTALLY FRIENDLY:**
 - Lower dispersions because of a lower air temperature and absence of thermal stratification
 - Possibility of heating zones with different temperatures, starting the machine only where necessary
 - Reduced working time thanks to the lower thermal inertia
 - Quick start up
 - Cheap maintenance

Modelli		SCR-ECO / SCR-CU				SCR-ECO			
		7/4	10/6	18/10	22/12	29/16	44 12+12	58 16+16	
Quantity of plates	n°	4	6	10	12	16	24	32	
Thermal capacity Hs (EN437)	kW	8,1	10,8	19	22,7	30,1	45,4	60,2	
Thermal capacity	kW	7,5	10	17,5	21	27,5	41	55	
Nozzle Ø	G20	mm	2,1	2,4	3,1	3,5	3,8	2 x 3,5	2 x 3,8
	G30/G31	mm	1,4	1,6	2,1	2,3	2,6	2 x 2,3	2 x 2,6
Net pressure	G20	mbar	20	20	20	20	20	20	20
	G30/G31	mbar	29/37	29/37	29/37	29/37	29/37	29/37	29/37
Nozzle pressure	G20	mbar	17	17	17	17	17	17	17
	G30	mbar	27,7	27,7	27,7	27,7	27,7	27,7	27,7
	G31	mbar	35,7	35,7	35,7	35,7	35,7	35,7	35,7
Consumption	G20	m³/h	0,77	1,03	1,81	2,17	2,87	4,33	5,74
	G30	kg/h	0,59	0,78	1,37	1,65	2,18	3,28	4,36
	G31	kg/h	0,58	0,77	1,35	1,62	2,14	3,23	4,28
Radiant surface	cm²	445	660	1125	1350	1780	2700	3560	
Length (L)	mm	580	755	1130	1320	1680	1320	1680	
Height (H)	mm	265	265	265	265	265	265	265	
Depth (P)	mm	378	378	378	378	378	615	615	
Weight	kg	7	8,5	11,5	13	16	24	30	
Electrical power supply		230 Vac – 50/60 Hz							
Minimum installation height at 0°	m	3,7	4,1	4,9	5,2	5,6	6,4	7	
Minimum installation height at 45°	m	3,4	3,7	4,4	4,6	5	5,7	6,2	

SCR-A: Functions and control panels

Functions of SCR-A combined with INET control panel:

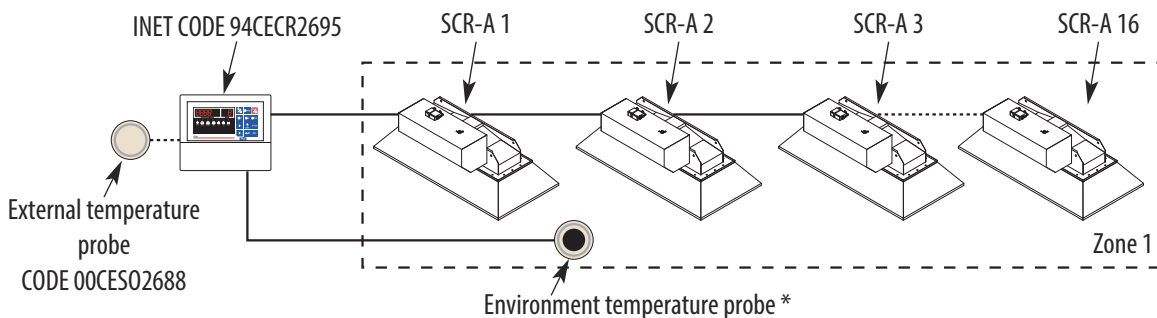


- **Automatic function** according to the program settings and timer, for all the models. Thermal power modulation according to the program settings.
- **2 working temperatures**
- **Daily/weekly settings, timer, hour-counter** and holiday function
- **Automatic modulation of the thermal power** according to the internal temperature
- **Summer ventilation**
- **Antifreeze function**

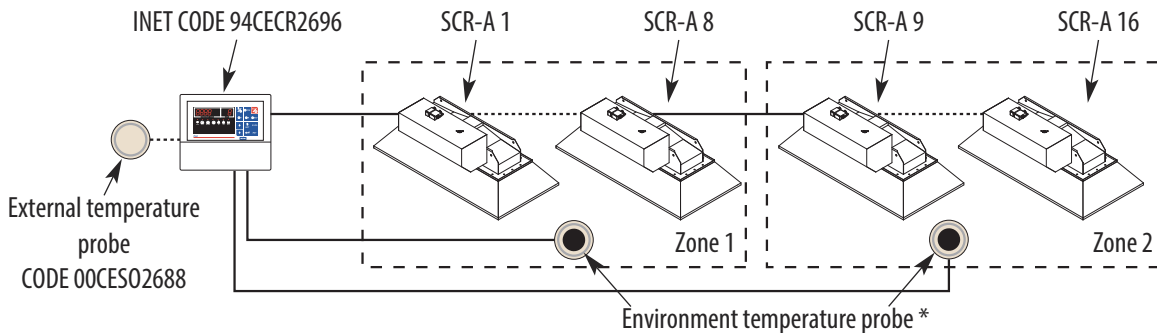
INET control panel for the manage up to 16 heaters:

- **1 thermal zone** CODE 94CECR2695
- **2 thermal zones** CODE 94CECR2696
- **3 thermal zones** CODE 94CECR2697
- **4 thermal zones** CODE 94CECR2698

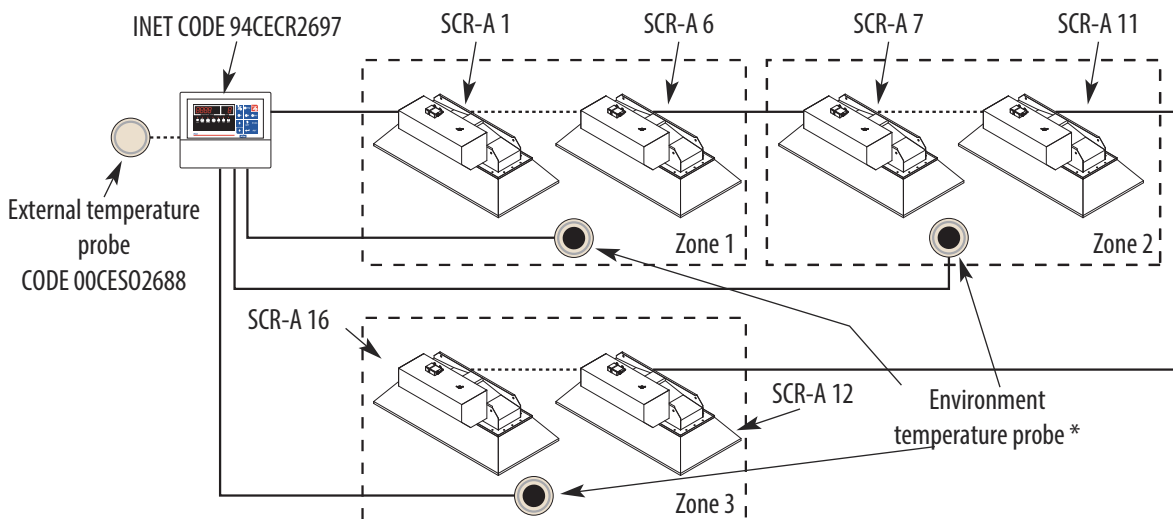
Example of a thermal system, 1 zone with SCR-A heaters controlled by INET



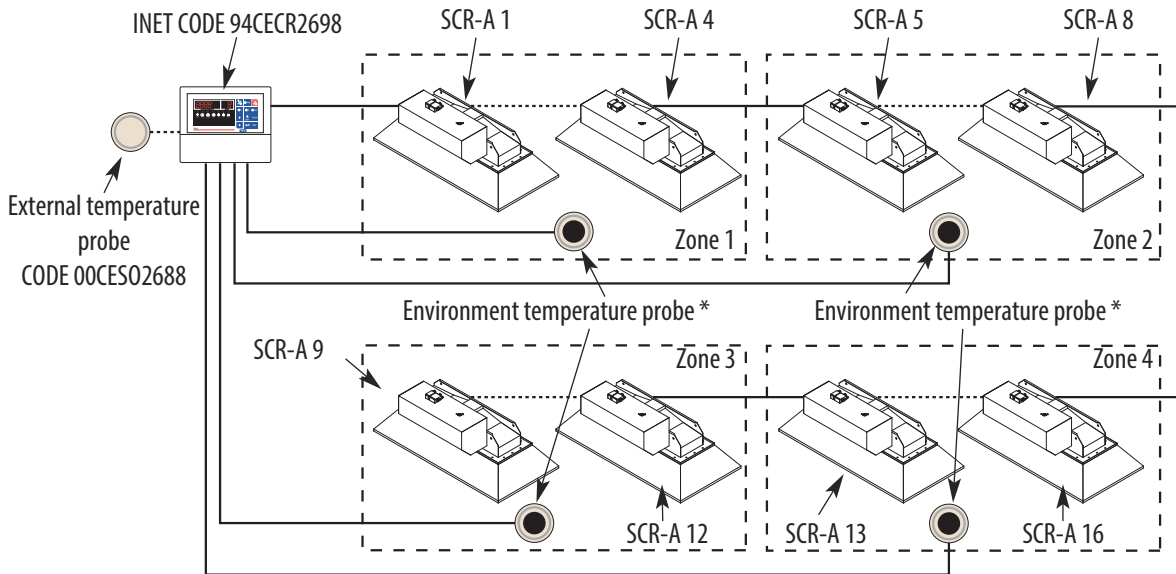
Example of a thermal system, 2 zones with SCR-A heaters controlled by INET



Example of a thermal system, 3 zones with SCR-A heaters controlled by INET



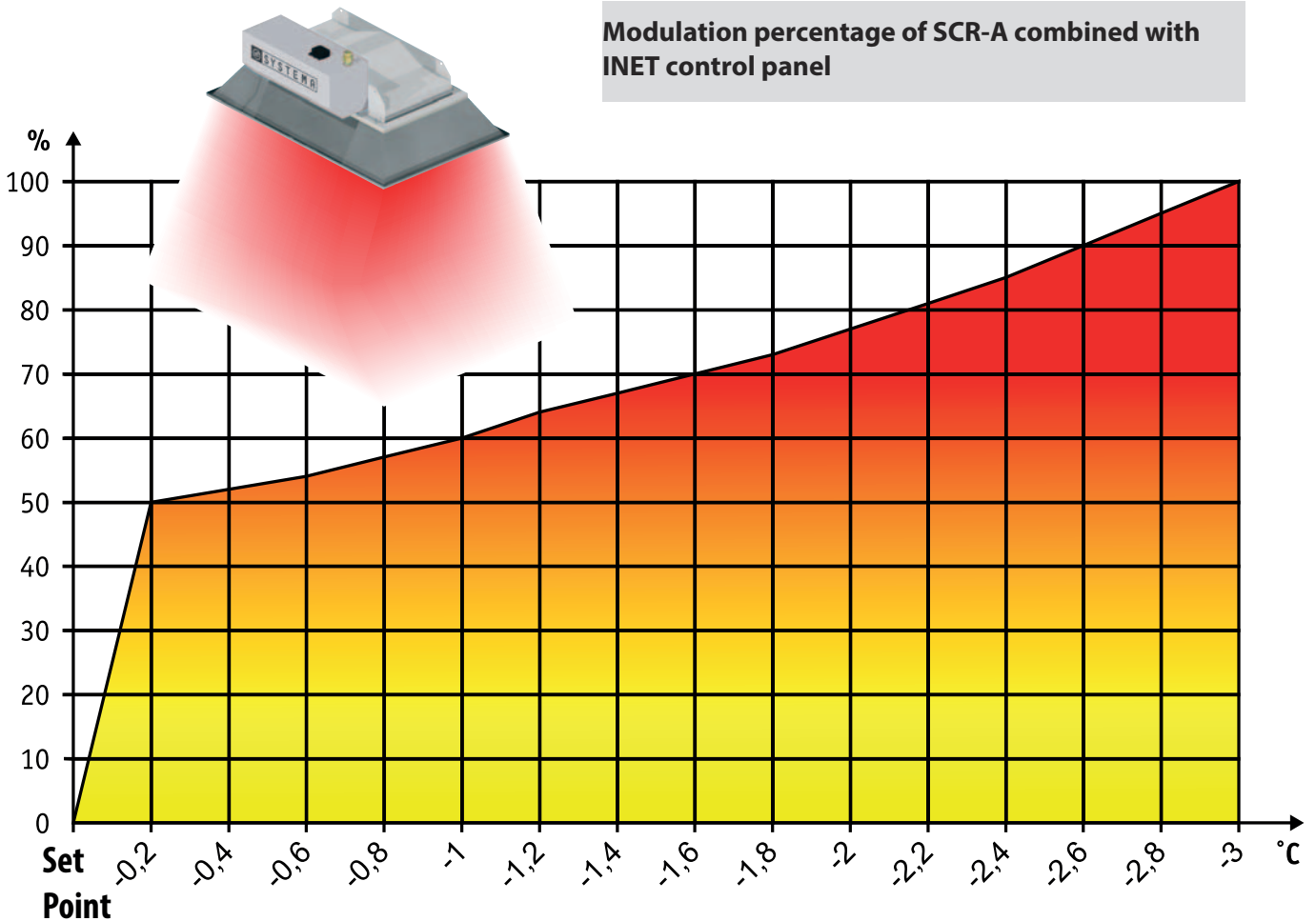
Example of a thermal system, 4 zones with SCR-A heaters controlled by INET



* It is necessary to install one room temperature probe for each thermal zone:

- Black-bulb probe, code 01CEGL3000
- Black-bulb probe with key selector (automatic/manual/off), code 03CESO2621

Modulation percentage of SCR-A combined with INET control panel



SCR-M and SCR-ECO: Functions and control panels

Functions of SCR-M and SCR-ECO combined with CE control panels

CE control panel with digital thermostat, environment temperature probe suitable to be managed by remote control panel, ON/OFF operation

Standard version and digital temperature control:

- 1 thermal zone CODE 00CEQU1196/A
- 2 thermal zones CODE 00CEQU1198/A
- 3/4 thermal zones CODE 00CEQU1200/A

Chrono-thermostat version and daily/weekly settings, timer:

- 1 thermal zone CODE 00CEQU1197/A
- 2 thermal zones CODE 00CEQU1199/A
- 3/4 thermal zones CODE 00CEQU1201/A

CE control panel, 1 thermal zone, 1 heater



CE control panel with Chrono-thermostat 1 thermal zone, 3/4 heaters



SLIM control panel for SCR-M or SCR-ECO, 1 thermal zone with Chrono-thermostat and digital temperature control:

- 1 heater CODE 00CEQU2667
- 2 heaters CODE 00CEQU2668
- 3 heaters CODE 00CEQU2669



Potentiometer for manual modulation (standard) for SCR-M CODE 94CNPO0009



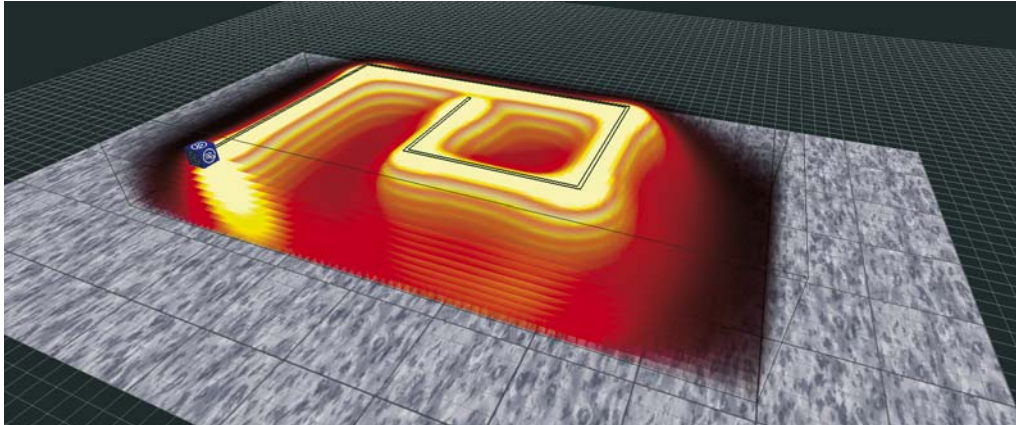
REFERENCES



SOFTWARE for the dimensioning of industrial heating systems

An exclusive tool for the planning of your heating solutions

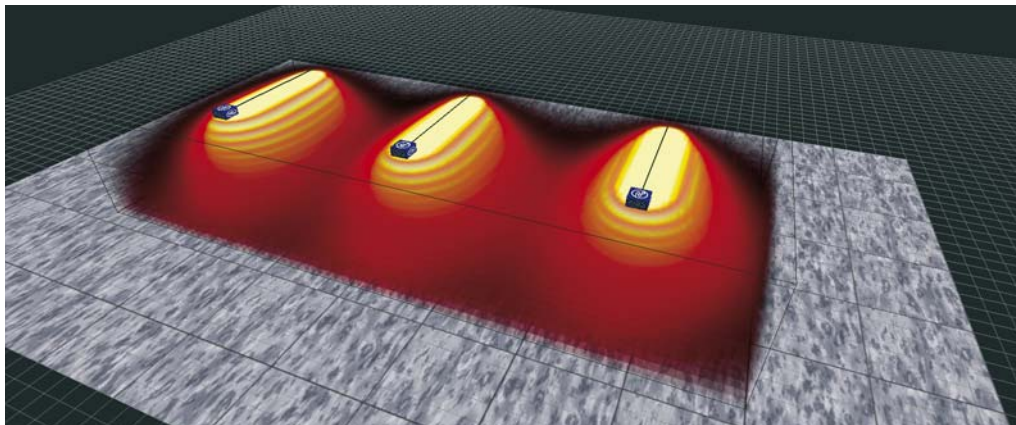
Thanks to this useful instrument Systema supports you in all the necessary steps for developing a heating system with INFRA, OHA, EOLO, SCR assuring high energy savings. Our software is provided with specific settings for all the types of product and is able to find out the best solution according to the real needs of the environment to be heated.



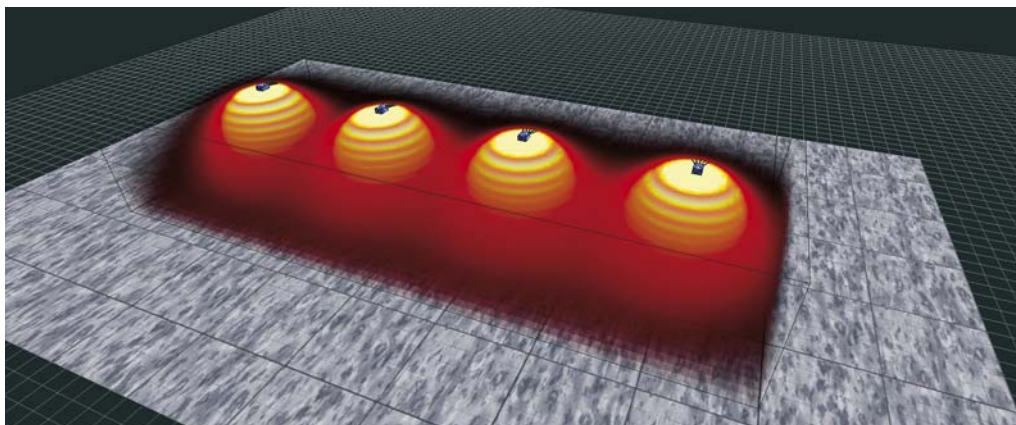
OHA

With our software you can change the type, the quantity, the power capacity and the positioning of the products to be installed keeping the dimensions of the building, and satisfy all the customer requirements.

If you modify the dimensions of the rooms to be heated, the software will change automatically the number and the power capacity of the products you have chosen in order to obtain the best thermal comfort.



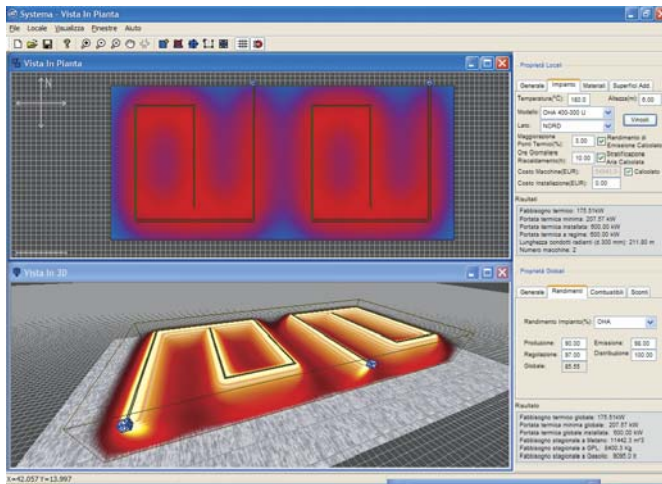
INFRA



SCR

AUTOMATIC DIMENSIONING

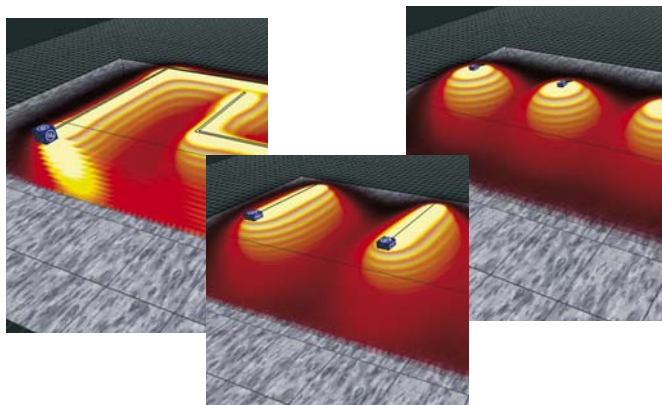
Our SOFTWARE: how does it work and what does it offer?



It allows an easy 3D dimensioning of buildings with several heights and to use at the same time the layout and a three-dimensional view of the building complex (we talk about complex when there is more than one building with different parallelepiped shapes)

Thanks to an internal database you can choose walls, ceilings, windows, etc with their respective thermal transmissions. It is also possible to add other elements in order to personalize your heating solution.

You can set the climatic data (internal temperature, external air exchanges, daily temperature, etc), the performance of the equipments (production efficiency, emission, regulation, distribution) and the type of gas.



This application draws automatically the necessary heating system (OHA, INFRA, SCR or EOLO) and calculates the thermal dispersions. For each environment you can choose the heating system you prefer according to your needs.

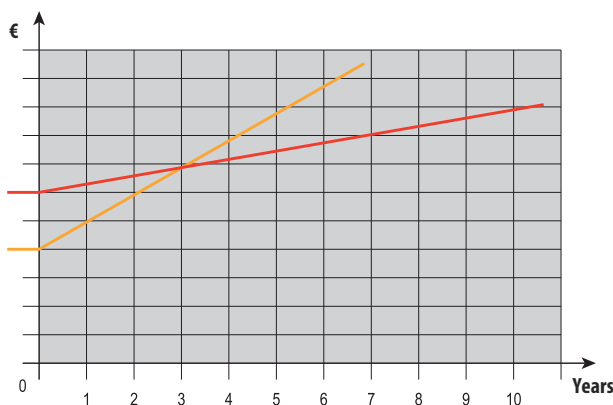
It calculates the consumptions and the annual total costs of the gas (natural gas, LPG, oil).

You can personalize the discounts according to the product (OHA, INFRA, SCR, EOLO) and the installation costs or indicate a net amount which includes the equipments and the installation.

You can create a pay-back analysis and compare for each solution (OHA, INFRA, SCR, EOLO) the global consumption and the respective investment costs. It gives you the possibility to calculate the pay-back in 15 years in order to enable you to choose the most convenient solution according to the type of gas you would like to use.

You can print the project with all its details or only with the ones you prefer: layout with the positioning of the equipments, climatic and morphologic data, performances, power capacity, hour consumptions, investment costs and pay-back.

You can save the drawing (and export to .DXF format) of the building in order to carry out all the modifications and the personalization you prefer.



EOLO VIP: VERY IMPORTANT PERFORMANCE



The new modulating and condensing suspended gas air heater



ADVANTAGES OF EOLO VIP

- ✓ 10 YEARS GUARANTEE on the heat exchanger and combustion chamber*
- ✓ AUTONOMOUS in its operation
- ✓ MODULATION of the thermal from 100% to 30%
- ✓ EASY to be installed
- ✓ SUITABLE for several types of application
- ✓ NOISELESS during its running
- ✓ High PERFORMANCE >105%
- ✓ Type of gas: Natural gas, LPG

TWO VERSIONS

VIP AE

- High performance gas air heater.
- Modulation of the thermal power from 100% to 30% **and automatic modulation of the ventilation.**

VIP AC

- High performance gas air heater.
- Automatic modulation of the thermal power from 100% to 30%.

Heating power from 22 to 105 kW

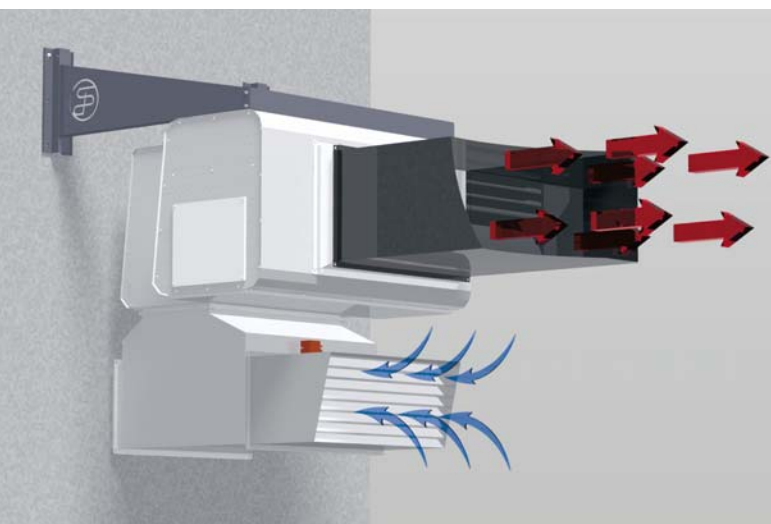
CE 1450BU0015 Certificate

TWO TYPES OF VENTILATION

AE Provided with axial fans for the heating of all types of environment



AC Provided with centrifugal fans for the heating of environments with canalization

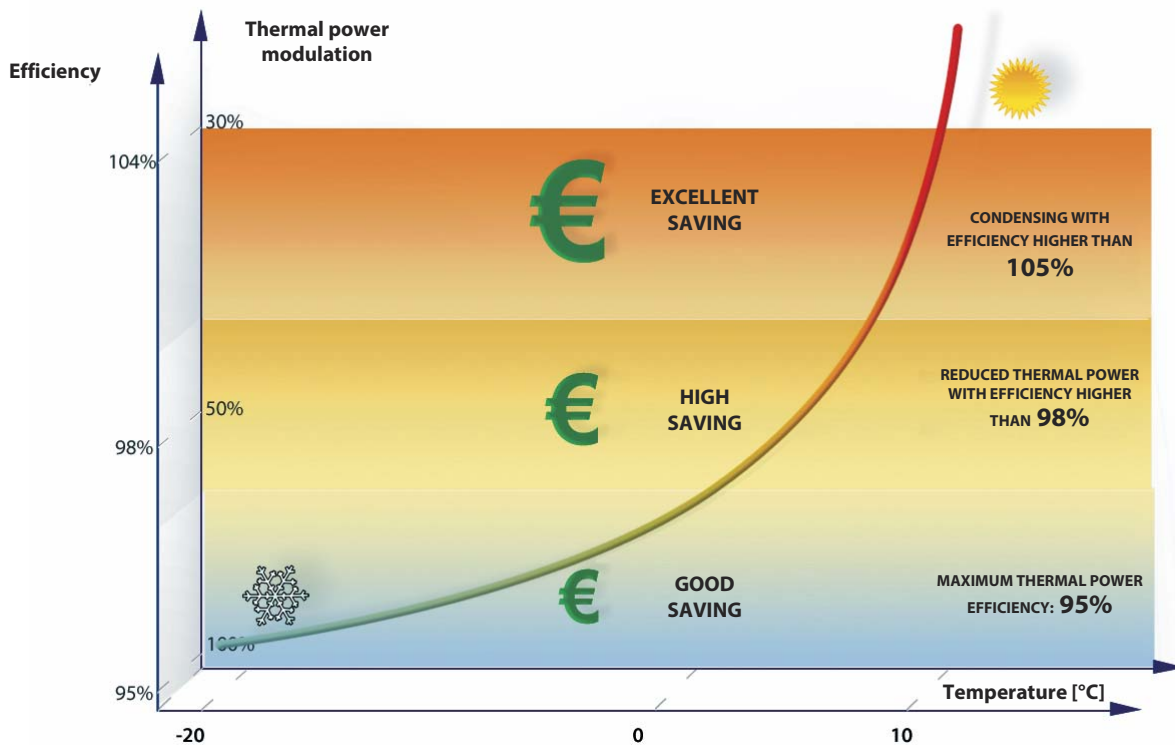


* The guarantee depends on a periodic maintenance of the equipment

EOLO VIP: High efficiency for greater energy savings

Eolo VIP represents the gas heater with the best cost-benefit ratio. It guarantees high efficiency for greater energy savings and it is suitable for various kind of applications.

The version EOLO VIP AE represents the best solution to obtain a high comfort and relevant energy savings.



HIGH EFFICIENCY

Thanks to the use of premix burners matched with new exchangers.

ENERGY SAVING

The high efficiency of the system and the modulation of the maximum thermal power of the burner allow to deliver the thermal power according to the specific requirements of the end user.

HIGH POLLUTING EMISSIONS WITH TRADITIONAL SYSTEMS



LOW POLLUTING EMISSIONS WITH EOLO VIP

NOx values are lower than 30 ppm and CO is almost absent. Thanks to the high performance of the equipment the gas consumptions are strongly reduced and, as a consequence, the CO₂ emissions decrease.



EOLO VIP: Features

High efficiency for all the types of natural gas and liquid gas used.

The premix burner and the electronic boards are positioned into two separated and sealed spaces (IP45 protection), easy to be checked.

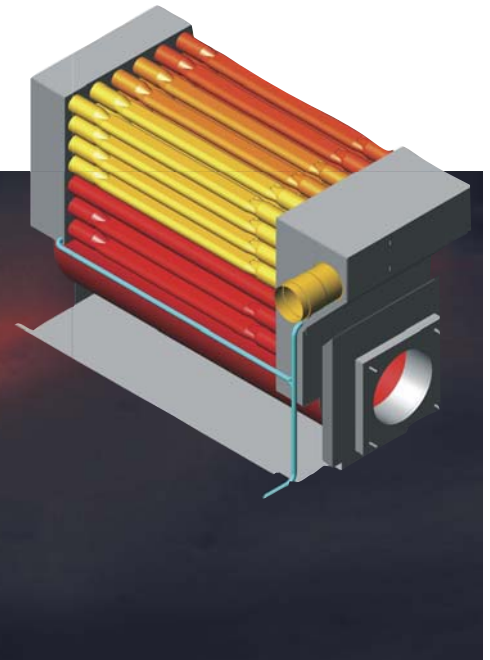
The premix burner (designed and realized by Systema S.p.A.) is positioned in the lower space and this allows easy and quick maintenance.

The new stainless steel combustion chamber, with bundle made of six tubes (where it is possible to install a water trap), is able to guarantee high performance and reduced load losses.

The dimensions of the heater have been reduced and it does not take so much space.

Thanks to its new design, this product can be installed anywhere.

EOLO VIP is CE certificated for Type C installation (external air intake and fume exhaust with airtight connections).



The thermal power can be manually or automatically modulated and it changes from 30% to 100%.

In the EOLO VIP AE version the ventilation can be modulated too.

Burner head with flame inversion.



Regulation of gas capacity with a proper nozzle according to the type of gas used.

Quick regulation of the burner.

Flame control board combined with the gas valve (DBC).

Control of the fan speed (PWM).

The electronic board which controls the heater is already integrated for the connection of Systema electrical panels.

Systema electrical control panel can control one or more heaters according to the type of control panel used and the configuration required.

EOLO BLULINE:

The new suspended gas air heater



ADVANTAGES OF EOLO BLULINE

- ✓ **10 YEARS GUARANTEE** on the exchanger and the combustion chamber **
- ✓ **AUTONOMOUS** in its operation
- ✓ **EASY** to be installed
- ✓ **SUITABLE** for various applications
- ✓ **NOISELESS** during its functioning
- ✓ **HIGH EFFICIENCY > 93%**
- ✓ **TYPE OF GAS:** Natural gas, LPG, OIL
- ✓ **Also available in the MODULATING version from 70 to 100% of power ***

EOLO BLULINE: Technical features

High efficiency with all the types of natural gas and liquid gas used.

The new stainless steel combustion chamber is able to guarantee high efficiency and reduced load losses.

The dimensions of the heater have been reduced and it does not take so much space. Thanks to its new design it is suitable for all the kinds of environments.

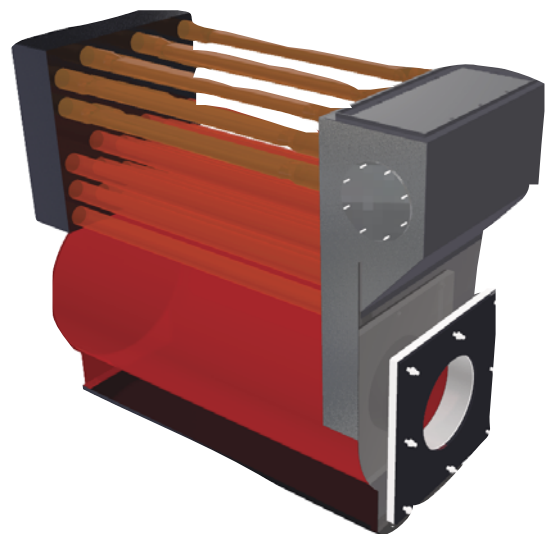
EOLO BLULINE is CE certificated for type C installation (external air intake and fume exhaust with airtight connections).

The premix burner and the electronic boards are positioned into two separated and sealed spaces (IP45 protection), easy to be inspected.

The burner and the exchangers have been designed and realized by Systema S.p.A. for the maximum efficiency.

The electronic board which controls the heater is already integrated for the connection of Systema electrical panels.

Systema electrical control panel can control one or more heaters according to the type of control panel used and the configuration required.



* **Modulation of the power only if combined with INET control panel**

** The guarantee depends on regular maintenance

"MIX" configuration for external installations of: Condensing EOLO VIP AC and EOLO BLULINE AC

All the advantages of EOLO VIP AC and EOLO BLULINE AC
for the external installation (MIX version)



Technical features of "MIX" version:

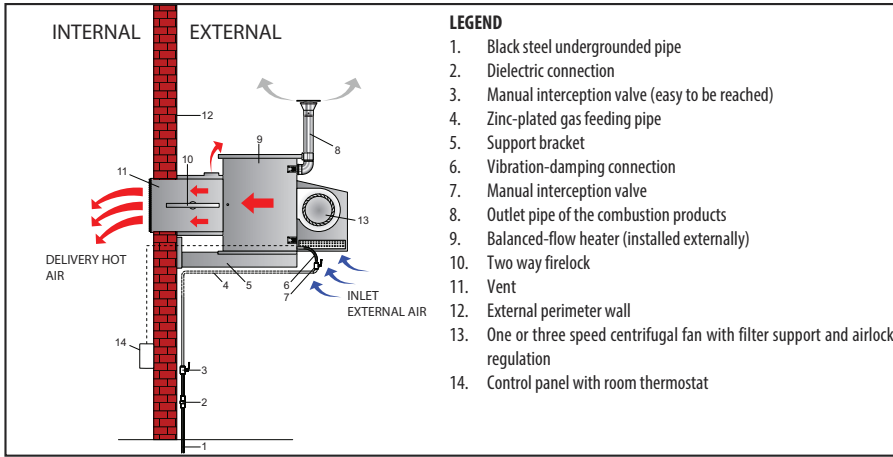
- **Painted steel coating** with a self-supporting structure complete of a double roof for a better protection from the atmospheric agents.
- **Centrifugal fans fitted inside the air intake plenum**, where it is possible to install a filter and add the duct for the external air intake and air recirculation.
- **Flange on the front side of the equipment to connect the air** distribution duct.
- **Stainless steel short terminal** for the fume exhaust positioned on the roof of the equipment. Air intake positioned in the lower part of the machine.
- It is possible to add several accessories (optional) such as: filter, fire dampers, support brackets, air intake duct, and control panels to satisfy the customer needs.

OPTIONAL of EOLO VIP MIX, like Eolo VIP AC

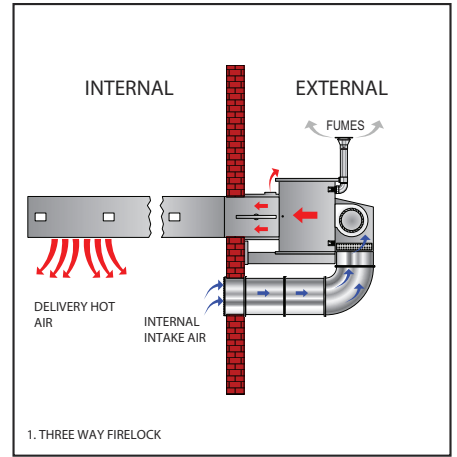
OPTIONAL of EOLO MIX BLULINE, like Eolo BLULINE AC



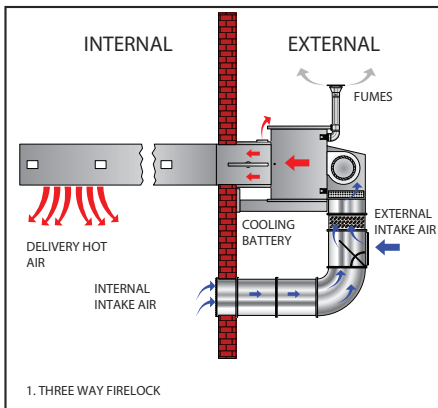
"EC" EOLO MIX TYPE



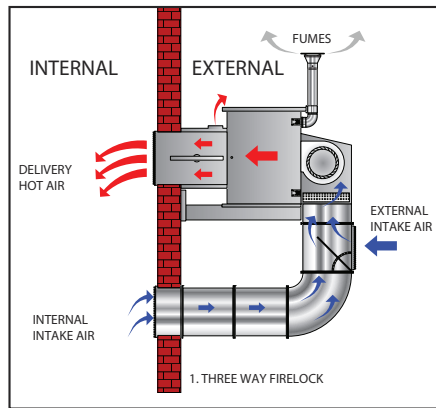
"ECR" EOLO MIX TYPE



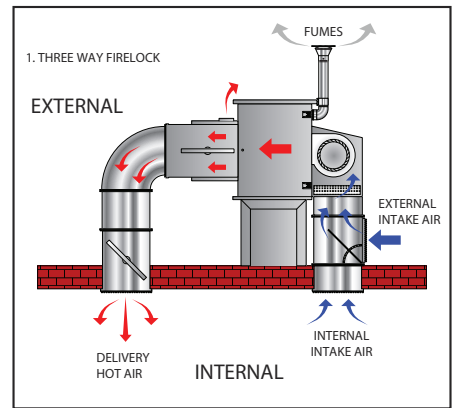
"ECRR" EOLO MIX TYPE



TIPO "ECRE" EOLO MIX



TIPO "ECRT" EOLO MIX (ROOF-TOP)



For all the types of applications here above described Sistema S.p.A. supplies only the main components such as the warm air generator with its standard vents, firelocks, filters, support brackets, fume pipes.

All the other components for the complete realization of the project such as air ducts, regulation airlocks, cooling battery, etc have to be identified by the installer according to the specific project.



Technical features

MODEL EOLO VIP									
			VIP 25	VIP 35	VIP 45	VIP 55	VIP 65	VIP 85	VIP 100
Max. thermal power capacity	kW (Hi)	--	22	32	43	52	63	86	105
	Efficiency % *	--	95	96	95	96	96	94	94
Min. thermal power capacity	kW (Hi)	--	12	17	22	28	32	42	52
	Efficiency % *	--	98	98	98	98	98	97	97
Min. thermal power capacity of condensation	kW (Hi)	--	8	11	15	18	22	28	32
	Efficiency % *	--	105	105	105	105	105	105	105
Electrical absorbed power - AE version	W	--	240	340	570	530	690	805	1190
Electrical absorbed power - AC version	W	--	540	580	1120	1140	1160	2260	2580
AE weight without accessories	kg	--	64	76	92	124	138	156	192
AC weight without accessories	kg	--	76	89	108	144	156	182	224

MODEL EOLO BLULINE										
			BL15	BL25	BL35	BL45	BL55	BL65	BL85	BL100
Max. thermal power capacity	kW (Hi)		16	22	32	43	52	63	86	105
	Efficiency % *		93,1	92,9	93,0	93,1	93,0	93,0	92,0	92,0
Min. thermal power capacity	kW (Hi)		10	15	20	28	34	42	56	71
	Efficiency % *		95,0	94,8	94,9	95,2	95,0	95,1	95,0	95,0
Electrical absorbed power - AE version	kW (Hi)		210	260	350	560	710	690	1120	1480
Electrical absorbed power - AC version	W		440	540	580	1120	1140	1160	2260	2580
AE weight without accessories	kg		60	62	74	89	118	128	148	186
AC weight without accessories	kg		73	75	86	102	136	148	172	212

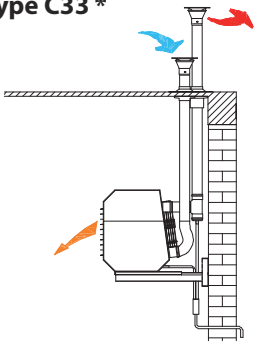
TECHNICAL DATA									
MODEL EOLO VIP		--	VIP 25	VIP 35	VIP 45	VIP 55	VIP 65	VIP 85	VIP 100
MODEL EOLO BLULINE		BL15	BL25	BL35	BL45	BL55	BL65	BL85	BL100
Electrical power supply	V	230	230	230	230	230	230	230	230
AE Air treated capacity	m ³ /h	1.900	2.900	3.600	4.500	5.800	7.000	9.000	11.000
AC Air treated capacity	m ³ /h	1.800	2.200	2.800	4.000	5.100	5.800	8.100	9.600
Q.ty of fans AE/AC	-	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2
Air throw - AE	m	10	13	17	19	23	27	27	30
Total pressure - AC	Pa	120/300							
Heating drop AE	min - max °C	15/30							
Heating drop AC	min - max °C	18/34							
Gas inlet diameter	inc.	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"
Fumes pipe diameter	mm	100	100	100	100	100	100	130	130
Suction pipe diameter	mm	100	100	100	100	100	100	130	130
Kind of equipment		B 23 - C 13 - C33 - C53							
Chimney pressure	Pa	80	80	90	110	110	120	130	130
Working temperature	min - max °C	0 (optional -20) / + 30							
Noise Level (at 5 m)	dB (A)	42	43	44	46	46	48	51	51
NOMINAL GAS CONSUMPTION (Hi) (15 °C - 1013,25 mbar)									
G20 Natural gas 20 mbar	m ³ /h	1,69	2,33	3,39	4,55	5,5	6,67	9,1	11,11
G30 Butane 29 mbar	kg/h	1,03	1,41	2,05	2,76	3,34	4,04	5,52	6,74
G31 Propane 37 mbar	kg/h	1,04	1,42	2,07	2,78	3,36	4,07	5,56	6,76

* Standard conditions

TYPES OF INSTALLATION AIR/FUMES DUCTS

Roof installation with 2 separated tubes

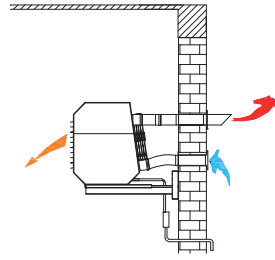
Type C33 *



Model	Ø [mm]	Lmax [m]
Eolo 15	100	12
Eolo 25	100	11
Eolo 35	100	10
Eolo 45	100	9
Eolo 55	100	14
Eolo 65	100	12
Eolo 85	130	12
Eolo 100	130	9

Wall installation with 2 separated tubes

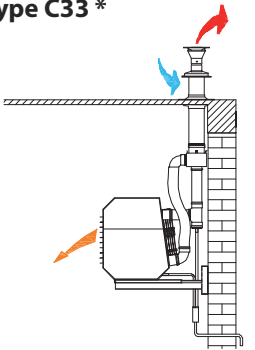
Type C13



Model	Ø [mm]	Lmax [m]
Eolo 15	100	14
Eolo 25	100	12
Eolo 35	100	11
Eolo 45	100	10
Eolo 55	100	15
Eolo 65	100	14
Eolo 85	130	17
Eolo 100	130	12

Coaxial roof installation

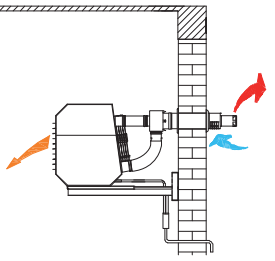
Type C33 *



Model	Ø [mm]	Lmax [m]
Eolo 15	100	11
Eolo 25	100	10
Eolo 35	100	6
Eolo 45	100	6
Eolo 55	100	9
Eolo 65	100	5
Eolo 85	-	-
Eolo 100	-	-

Coaxial wall installation

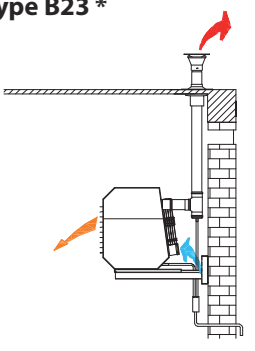
Type C13



Model	Ø [mm]	Lmax [m]
Eolo 15	100	12
Eolo 25	100	11
Eolo 35	100	7
Eolo 45	100	7
Eolo 55	100	10
Eolo 65	100	6
Eolo 85	-	-
Eolo 100	-	-

Roof installation with 1 tube

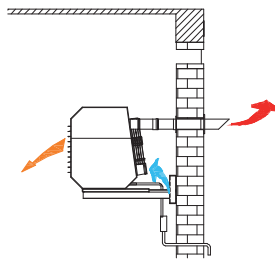
Type B23 *



Model	Ø [mm]	Lmax [m]
Eolo 15	100	25
Eolo 25	100	25
Eolo 35	100	21
Eolo 45	100	12
Eolo 55	100	20
Eolo 65	100	18
Eolo 85	130	25
Eolo 100	130	18

Wall installation with 1 tube

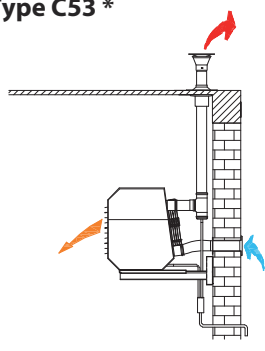
Type B23



Model	Ø [mm]	Lmax [m]
Eolo 15	100	25
Eolo 25	100	25
Eolo 35	100	24
Eolo 45	100	26
Eolo 55	100	24
Eolo 65	100	22
Eolo 85	130	28
Eolo 100	130	21

Mixed application

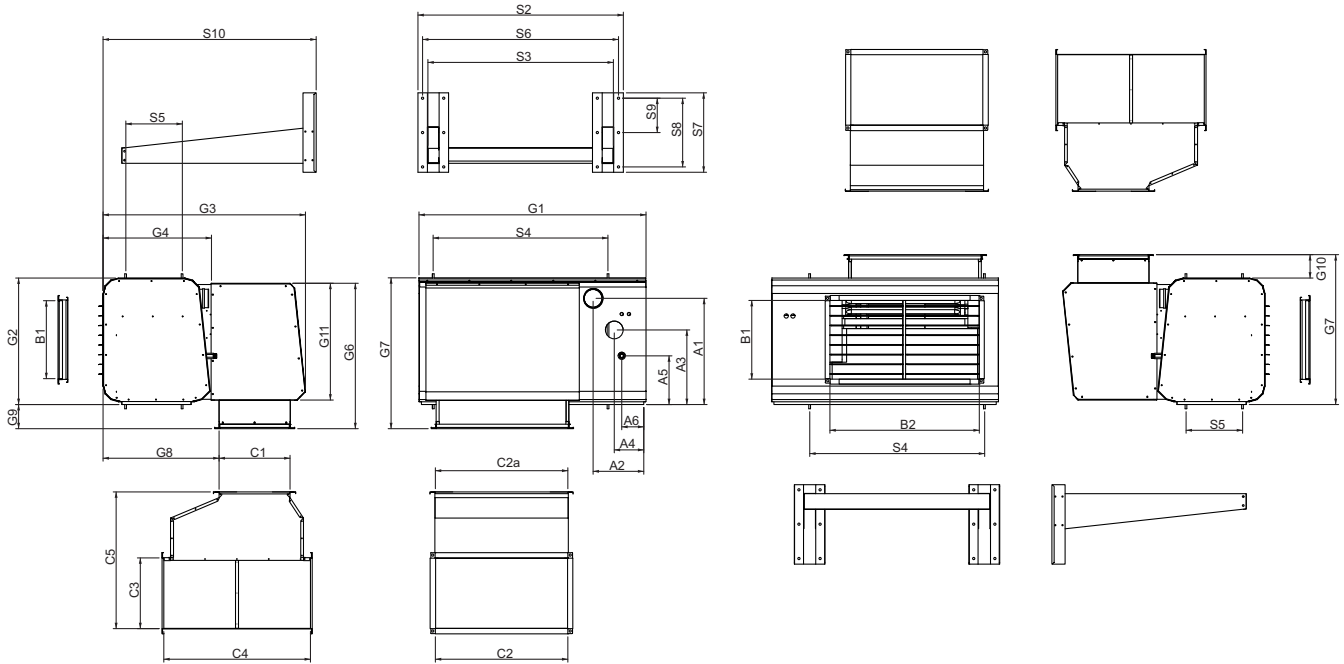
Type C53 *



Model	Ø [mm]	Lmax [m]
Eolo 15	100	16
Eolo 25	100	13
Eolo 35	100	10
Eolo 45	100	10
Eolo 55	100	15
Eolo 65	100	12
Eolo 85	130	15
Eolo 100	130	11

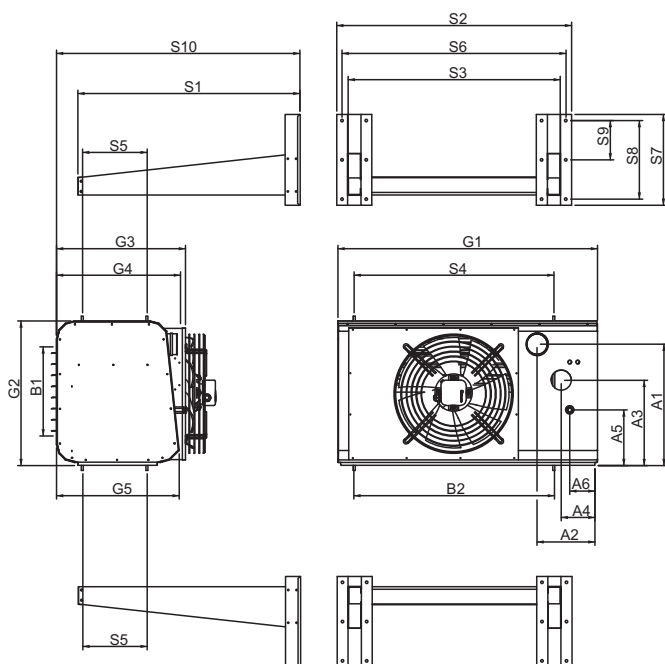
* For VIP condensing models, it is necessary to install a T element (condensing discharge) at the base of the vertical fume terminal.

DIMENSIONS OF AC VERSIONS (Centrifugal fans)



Mod.	A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C2a	C3	C4	C5	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
15 AC	475	240	150	120	255	133	350	450	350	400	550	350	800	630	854	600	1020	535	505	676	700	557	105	105	550	1000	822	714	648	232	768	450	390	195	1110
25 AC	475	240	150	120	255	133	350	450	350	400	550	350	800	630	854	600	1020	535	505	676	700	557	105	105	550	1000	822	714	648	232	768	450	390	195	1110
35 AC	475	240	150	120	255	133	350	700	350	650	650	350	800	630	1095	600	1020	535	505	676	700	557	105	105	550	1000	1061	953	887	232	1007	450	390	195	1110
45 AC	600	300	408	168	285	133	450	750	400	650	650	400	850	780	1145	715	1150	640	608	790	822	652	105	100	682	1100	1049	941	875	320	995	450	390	195	1207
55 AC	600	300	408	168	285	133	450	850	400	750	750	400	850	780	1285	715	1150	640	608	790	822	652	105	100	682	1100	1164	1056	990	320	1110	450	390	195	1207
65 AC	700	290	480	168	290	180	500	900	450	950	950	400	885	655	1440	820	1285	720	690	790	820	730	-	-	750	1300	1338	1230	1164	332	1284	450	390	195	1405
85 AC	700	290	480	168	335	160	500	1000	450	1050	1050	400	885	655	1600	820	1285	720	690	790	820	730	-	-	750	1300	1498	1390	1324	332	1444	450	390	195	1405
100 AC	700	290	480	168	335	160	500	1150	450	1150	1150	400	885	655	1750	820	1285	720	690	790	820	730	-	-	750	1300	1663	1555	1489	332	1609	450	390	195	1405

DIMENSIONS OF AE VERSIONS (Axial fans)



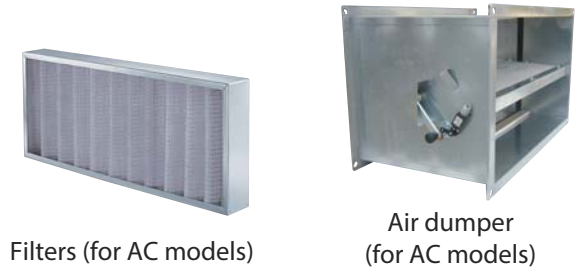
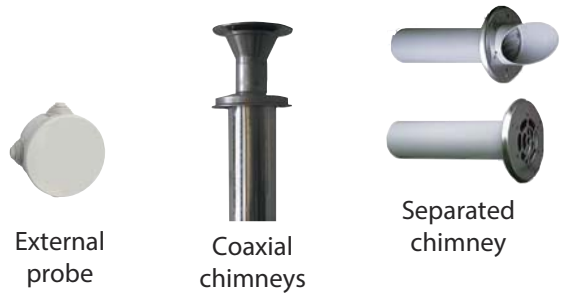
Mod.	A1	A2	A3	A4	A5	A6	B1	B2	C1	C2	C3	C4	C5	G1
15 AE	475	240	150	120	255	133	350	450	350	550	350	800	630	854
25 AE	475	240	150	120	255	133	350	450	350	550	350	800	630	854
35 AE	475	240	150	120	255	133	350	700	350	650	350	800	630	1095
45 AE	600	300	408	168	285	133	450	750	400	650	400	850	780	1145
55 AE	600	300	408	168	285	133	450	850	400	750	400	850	780	1285
65 AE	700	290	480	168	290	180	500	900	450	1050	450	885	655	1440
85 AE	700	290	480	168	335	160	500	1000	450	1150	450	885	655	1600
100 AE	700	290	480	168	335	160	500	1150	450	1250	450	885	655	1750

Mod.	G2	G3	G4	G5	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
15 AE	600	655	535	505	1000	822	714	648	232	768	500	390	195	1110
25 AE	600	655	535	505	1000	822	714	648	232	768	500	390	195	1110
35 AE	600	655	535	505	1000	1061	953	887	232	1007	500	390	195	1110
45 AE	716	760	640	608	1100	1049	941	875	320	995	500	390	195	1207
55 AE	716	760	640	608	1100	1164	1056	990	320	1110	500	390	195	1207
65 AE	820	840	720	690	1300	1338	1230	1164	332	1284	500	390	195	1405
85 AE	820	840	720	690	1300	1498	1390	1324	332	1444	500	390	195	1405
100 AE	820	850	720	690	1300	1663	1555	1489	332	1609	500	390	195	1405

Optionals

Control panels see page 63-67

- **Fans with speed and uprated head pressure** (for AC models)
- **Filters** (for AC models)
- **Manual/motorized 3 ways air intake duct (AC model)**
- **Separated and coaxial fume and air intake chimneys**
- **Vents, ducts**
- **Air dumper** (for AC models)
- **External probe** (to be matched to the specific control panel)
- **Rotating brackets**



Standard brackets



Rotating brackets



FUEL OIL HEATER "EOLO"



Suspended fuel oil air heater



TWO TYPES OF VENTILATION

GE Provided with axial fans for the heating of all types of environment

GC Provided with centrifugal fans for the heating of environments with canalization

ADVANTAGES OF EOLO BLULINE

- ✓ 10 YEARS GUARANTEE on the exchanger and the combustion chamber **
- ✓ AUTONOMOUS in its operation
- ✓ EASY to be installed
- ✓ SUITABLE for various applications
- ✓ NOISELESS during its functioning
- ✓ HIGH EFFICIENCY > 90%
- ✓ FUEL TYPE: Oil
- ✓ AVAILABLE TWO-STAGE VERSION for models EOLO GE/GC 85 and 100
- ✓ ACCESSORIES ARE THE SAME OF EOLO BL (control panels **, chimneys, support brackets, insulation type for external versions, etc.)
- ✓ OVERSIZED CAPACITY AND PRESSURE for the version GC (if required)

FUEL OIL HEATER "EOLO": Technical features

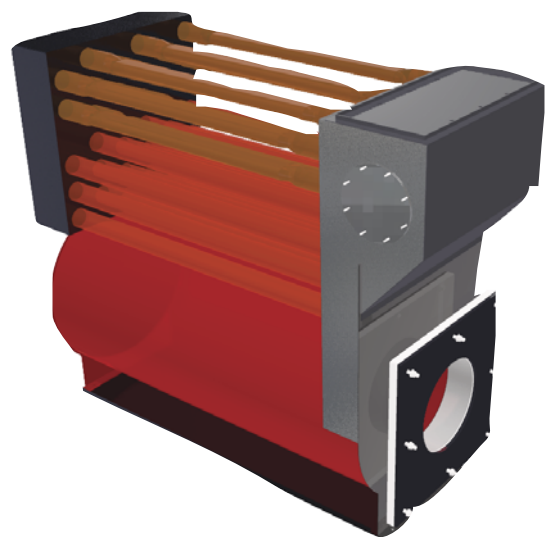
High efficiency operation > 90% with light diesel oils.

The new stainless steel combustion chamber is able to guarantee high efficiency and reduced load losses.

The dimensions of the heater have been reduced and it does not take so much space. Thanks to its new design it is suitable for all the kinds of environments.

The air heater is CE certificated for type C installation (external air intake and fume exhaust with airtight connections).

The oil burner is positioned in a separated housing, easy to be inspected, airtight, with IP45 electrical protection.



Exchanger designed and manufactured by SYSTEMA S.p.A.

* The guarantee depends on regular maintenance

** ON/OFF operation for all the diesel oil model, also if combined with INET control panel

Model		25 GE/GC	35 GE/GC	45 GE/GC	55 GE/GC	65 GE/GC	85 GE/GC	100 GE/GC	
Max. thermal power capacity	kW	22	32	42	50	62	80	101	
Min. thermal power capacity	kW	16	22	30	35	44	56	70	
Thermal capacity	kW	20	29,5	27,6	46	57	73,6	92,9	
Combustion Efficiency	%	91	92	92	92	92	92	92	
Fuel Type		OIL							
CO	Mg/kWh	30			25		20		
NOx	Mg/kWh	220			180		170		
Fuel connections diameter	inc.	1/2 + 1/2							
Electrical power supply	V/Hz	230/50							
Electrical power (GE models)	W	260	350	560	410	690	1.120	1.480	
Electrical power (GC models)	W	540	580	1.120	1.140	1.160	2.260	2.580	
GE Air treated capacity	m ³ /h	2.900	3.600	4.500	5.800	7.000	9.000	11.000	
GC Air treated capacity	m ³ /h	2.200	2.800	4.000	5.100	5.800	8.100	9.600	
Q.ty of fans GE/GC	Nr.	1/1	1/1	1/1	1/1	2/2	2/2	2/2	
Air throw - GE	m	13	17	19	23	25	27	30	
Total pressure - GC (standard)	Pa	80	90	110	110	120	130	130	
Heating drop (standard)	°C	30							
Fumes pipe / Suction pipe diameter	mm	100 / 100					130 / 130		
Installation type		B 23 - C13 - C33 - C53							
Working temperature	°C	0° / 30°							
Noise Level (at 5 m) (GE models)	dB	51	52	57	58	59	60	61	
Weight mod. GE	kg	69	75	89	118	128	192	212	
Weight mod. GC	kg	75	86	102	136	148	212	236	
BURNERS TECHNICAL FUTURES									
Oil burner single stage	Riello	RG 0.3		RG 1 NR			RG 2		
Electrical absorption of burner	A	0,85		0,9			0,9		
Rpm motor	RPM	2.750			2.750		2.720		
Calorific fuel power	kWh/kg	11,8							
Fuel density	kg/d ³	0,85							
Fuel viscosity at 20 °C max	mm ² /s	6							
Fuel flow rate min. / max	kg	1,8/3,2		1,7/5			4/10		
Pump working range	bar	8/15							
Two-stage oil burner	Riello	not available					RG 2 D		
Max. Thermal power 2 nd stage	kW	not available					85	105	
Min. Thermal power 1 st stage	kW	not available					56	70	



EOLO B: modulating and condensing floor-standing hot air heater

NEW!

EOLO B is the new floor-standing hot air heater produced by Systema S.p.A.

It can be installed inside or outside with a direct distribution of the air or through ventilation ducts.

The efficiency of this equipment is really high and reaches 108%, the structure is solid and its components guarantee quality, great design and a long-lasting resistance.



CE certificate 1450CO0002

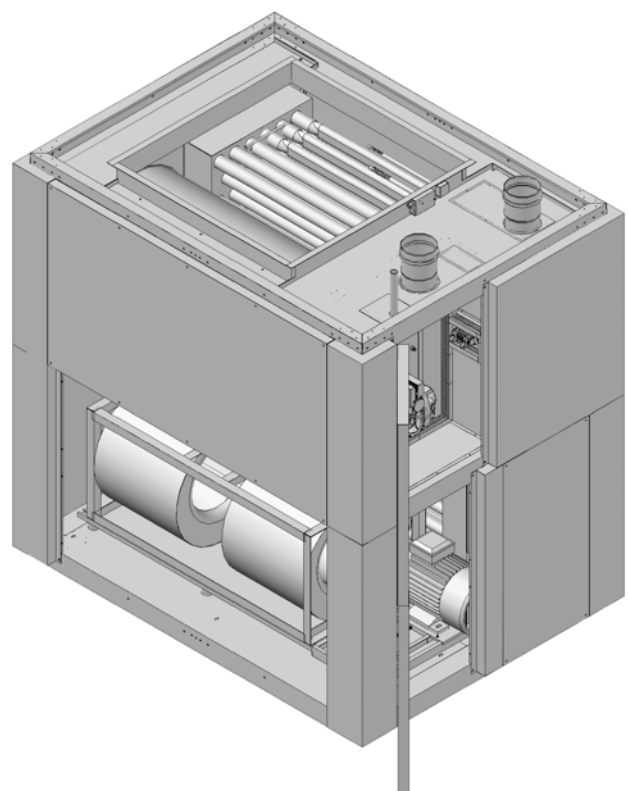
ADVANTAGES

- ✓ **HIGH EFFICIENCY up to 108%**
- ✓ **NOISELESS**
- ✓ **10 YEARS GUARANTEE ***
- ✓ **The airtight BURNER is INSTALLED INSIDE the UNIT**
- ✓ **INDOOR or OUTDOOR version**
- ✓ **EASY to be installed**
- ✓ **Available in 3 versions:**
 - **EOLO B BC = modulating and condensing**
 - **EOLO B BL = On/Off or modulating**



Technical features

- Centrifugal fans and air intake where it is possible to install the filter and the flange for the connection of the air intake duct
- Epoxy painted galvanized steel structure with insulation
- Reflecting and solid self-supporting structure
- Easy access to electrical cabling and burner casing
- High efficiency heat exchanger, "flue back" project with condensing discharge
- Outdoor installation with temperature up to -20°C using the specific low temperature kit (optional)



* The guarantee depends on regular maintenance

TWO VERSIONS OF FLOOR-STANDING HOT AIR HEATER

Power from 125 to 315 kW - Classe Nox 5

EOLO B BC

(Eolo Vip B)

- **Modulating and condensing version** with stainless steel exchanger and premix burner designed and realized by Systema S.p.A.
- Automatic modulation of the thermal power from **100% to 30%**.
- Combustion efficiency minimum power **108%**
- Combustion efficiency maximum power **98%**

EOLO B BL

(Eolo B Bluline)

- High efficiency **ON/OFF** or **modulating** version, with premix burner designed by Systema S.p.A.
- Automatic modulation of the thermal power from **100% to 70%**.
- Combustion efficiency minimum power **95%**
- Combustion efficiency maximum power **92%**

MORE CENTRIFUGAL FAN CONFIGURATIONS

200 Pa

Standard centrifugal fans

400 Pa

Optional centrifugal fans with higher performance up to 400 Pa

600 Pa

Optional centrifugal fans with high performances up to 600 Pa

1000 Pa

Optional centrifugal fans with very high performances up to 1000 Pa

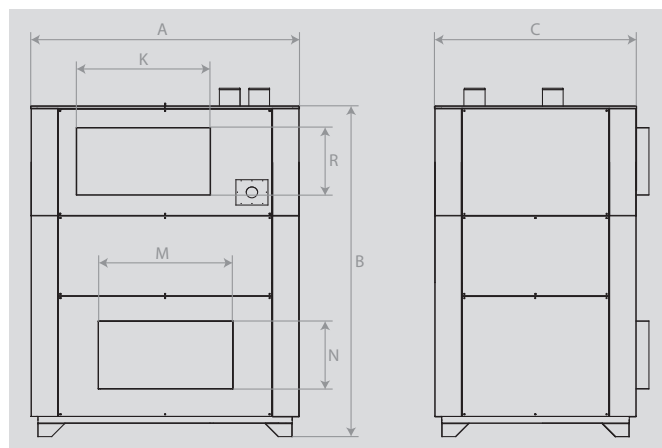
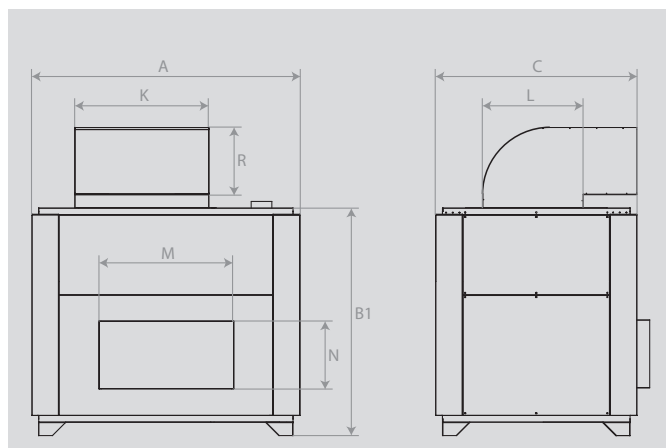
Performance according ERP 2015



DIMENSIONS

Standard version

Optional version

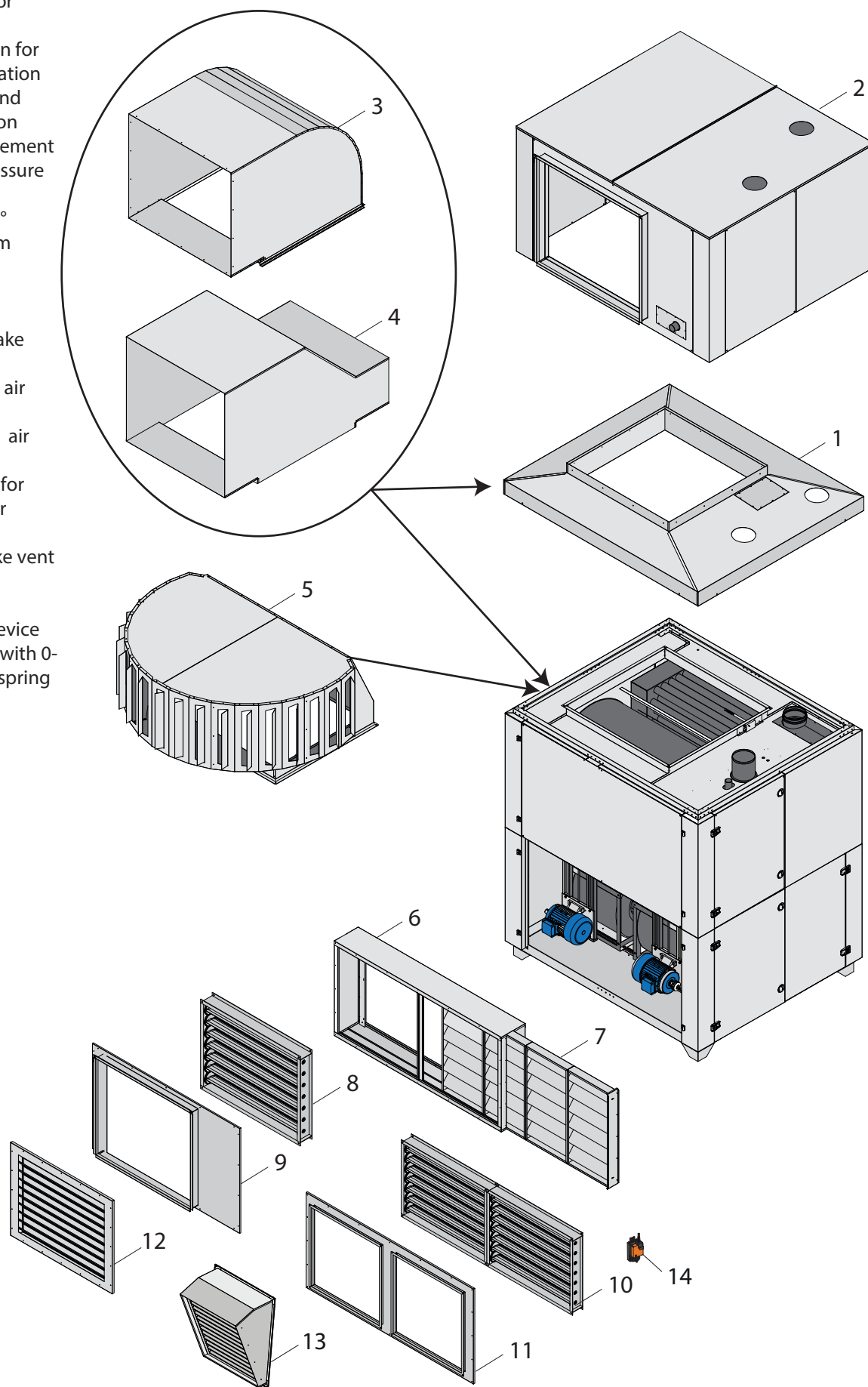


Model	A	B	B1	C	K	L	M	N	P	R
EOLO B 120	2010	2470	1700	1400	1000	500	1000	800	1000	500
EOLO B 150	2010	3170	2100	1500	1000	1000	1000	800	1000	800
EOLO B 200	2260	3170	2100	1500	1250	1000	1250	800	1250	800
EOLO B 250	2510	3170	2100	1500	1500	1000	1500	800	1500	800
EOLO B 300	2360	3880	2600	2000	1250	1200	1250	1100	1250	1100
EOLO B 400	2850	3880	2600	2000	1750	1200	1750	1100	1750	1100

Accessories

Control panels see page 63-67

- 1 Skirt for outdoor installation
- 2 Curve insulation for outdoor installation
- 3 90° delivery bend
- 4 Delivery junction with prearrangement for the overpressure air dumper
- 5 Adjustable 180° delivery plenum
- 6 Filter support
- 7 G3/G4 air filter
- 8 Air dumper
- 9 Flanged air intake panel
- 10 2 ways by-pass air dumper
- 11 2 ways flanged air intake panel
- 12 Air intake vent for outdoor/indoor installation
- 13 2 ways air intake vent for outdoor installation
- 14 Proportional device for air dumper with 0-10V control or spring back



Technical features

Modello EOLO B			120	150	200	250	300	400
Thermal capacity Min-Max	BC Versions	kW	35-125	46 - 155/180	65 -210	78 -260	95-315	126-420
	BL Versions	kW	70-125	115-155	140-210	180-260	210-315	294-420
Combustion Efficiency ** Min-Max	BC Versions	%	98-108					
	BL Versions	%	92-90	92-90	92-90	92-90	92-90	92-90
Nominal gas consumption (Hi) (15°C - 1013,25mbar)	G20 Natural gas	m³/h	12,17	16,4	22,22	27,51	33,33	44,44
	G30 Butane	kg/h	16,9	22,78	30,87	38,22	46,3	32,91
	G31 Propane	kg/h	14,84	20,01	27,11	33,56	40,66	32,63
Gas inlet diameter		Pollici	1"	1"1/2	1"1/2	2"	2"	2"
Electrical power supply		V	400/3L+NPE					
Thickness insulation panels (with external insulation)		mm	50	50	50	50	50	50
Air treated capacity	Standard (ΔT 34°C)	m³/h	11.500	13.500	16.000	20.000	24.000	33.000
	Optional (ΔT 30°C)	m³/h	15.000	18.000	20.000	25.000	29.000	38.000
Fans *	Number	n.	1	1	1	1	2	2
	Model *	-	ADH355 (2xADH355)	ADH400 (2xADH400)	ADH450 (2xADH355)	2 x ADH355	2 x ADH400	2 x ADH560
Electrical motor power capacity *	Standard 200 Pa	kW	4	4	2 x 3	2 x 4	2 x 5,5	2 x 5,5
	Optional 400 Pa	kW	5,5	5,5	7,5	2 x 5,5	2 x 7,5	2 x 7,5
	Optional 600 Pa	kW	7,5	7,5	11	2 x 7,5	2 x 11	2 x 11
	Optional 1000 Pa	kW	2 x 5,5	2 x 5,5	2 x 7,5	2 x 11	2 x 15	2 x 15
Noise Level (at 1 m)		dB (A)	63	65	66	67	67	67
Fumes exhaust Ø		mm	130/130	200/200	200/200	200/200	300/300	300/300
Ø condensing drain	BC Versions	Inc.	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Max Length fumex exhaust Type B		m	15	15	15	15	15	15
Max Length fumex exhaust Type C		m	6+6	6+6	6+6	6+6	6+6	6+6
Kind of equipment			B23, C13, C33, C53					
Working temperature	Standard	°C	0°/35°					
	Optional	°C	-20°/40°					
Weight	BC Versions	kg	580	640	710	780	890	990***
	BL Versions	kg	540	580	660	720	800	900***

(*) The electrical power and the models of fan can vary according to the efficiency and the prevalence.

(**) Standard condition

(***) The model of the fan and the electrical power of the motor can be different from the ones indicated in the technical sheet, according to the efficiency and the prevalence of the equipment.

For any further information we kindly ask you to get in touch with the Technical Department of Systema S.p.A.



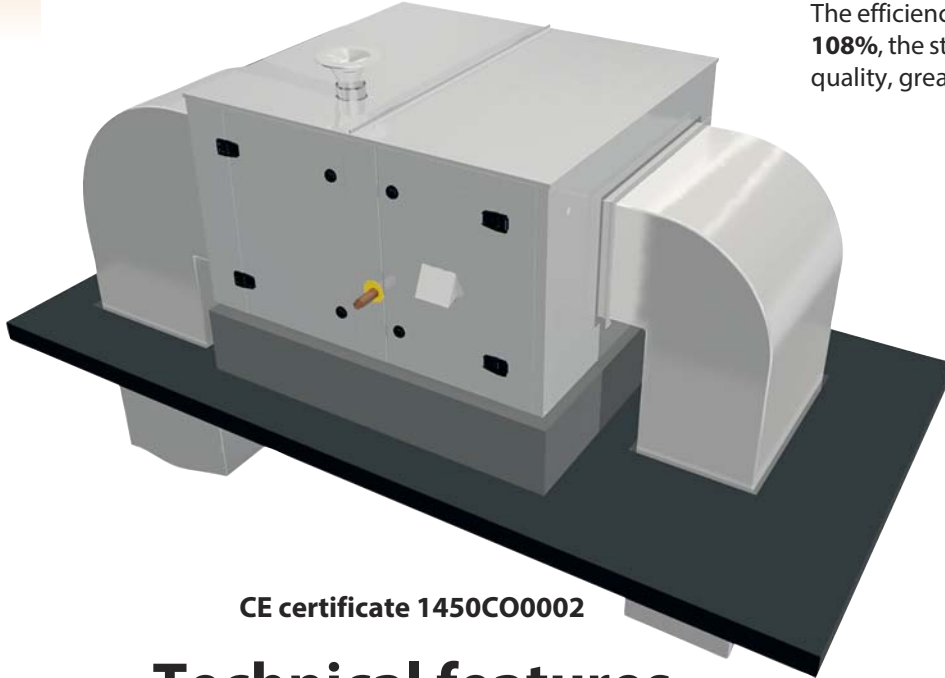
EOLO B RT: The new condensing and modulating ROOF-TOP gas air heater



EOLO B RT is the gas for roof-top installations, produced by Systema S.p.A..

This product is suitable for indoor and outdoor applications and can be fit with ventilation duct for air distribution.

The efficiency of this equipment is really high and reaches **108%**, the structure is solid and its components guarantee quality, great design and a long-lasting resistance.



CE certificate 1450CO0002

Technical features

- Centrifugal fans and air intake where it is possible to install the filter and the flange for the connection of the air intake duct
- Epoxy painted galvanized steel structure with insulation
- Reflecting and solid self-supporting structure
- Easy access to electrical cabling and burner casing
- High efficiency heat exchanger, "flue back" project with condensing discharge
- Outdoor installation with temperature up to -20°C using the specific low temperature kit (optional)
- * The guarantee depends on regular maintenance

ADVANTAGES

- ☑ **HIGH EFFICIENCY up to 108%**
- ☑ **NOISELESS**
- ☑ **10 YEARS GUARANTEE ***
- ☑ **The airtight BURNER is INSTALLED INSIDE the UNIT**
- ☑ **INDOOR or OUTDOOR version**
- ☑ **EASY to be installed**
- ☑ **Available in 3 versions:**
 - **EOLO B RT BC = modulating and condensing**
 - **EOLO B RT BL = On/Off or modulating**



**MODULATING
PREMIX BURNER
DESIGNED BY
SYSTEMA**



TWO VERSIONS OF ROOF-TOP HOT AIR HEATER

Power from 22 to 315 kW - Classe Nox 5

EOLO B RT BC

(Eolo Vip B RT)

- **Modulating and condensing version** with stainless steel exchanger and premix burner designed and realized by Systema S.p.A.
- Automatic modulation of the thermal power from **100% to 30%**.
- Combustion efficiency minimum power **108%**
- Combustion efficiency maximum power **98%**

EOLO B RT BL

(Eolo B RT Bluline)

- High efficiency **ON/OFF** or **modulating** version, with premix burner designed by Systema S.p.A.
- Automatic modulation of the thermal power from **100% to 70%**.
- Combustion efficiency minimum power **95%**
- Combustion efficiency maximum power **92%**

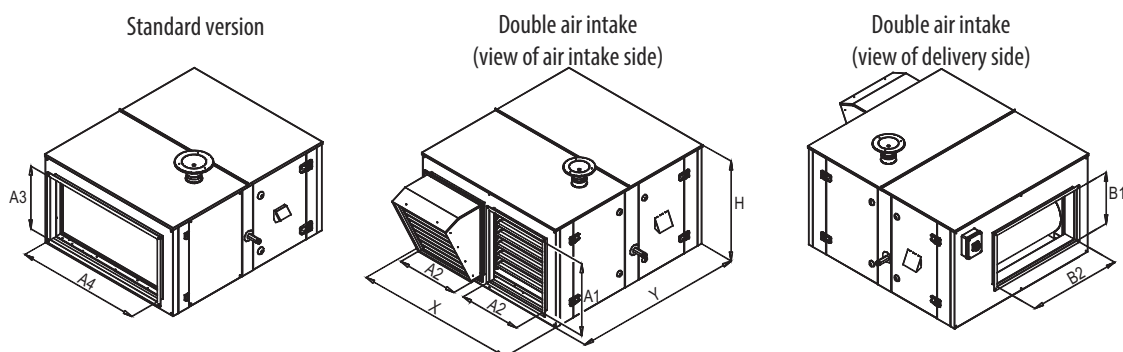
MORE CENTRIFUGAL FAN CONFIGURATIONS

- 200 Pa** Standard centrifugal fans
- 400 Pa** Optional centrifugal fans with higher performance up to 400 Pa
- 600 Pa** Optional centrifugal fans with high performances up to 600 Pa
- 1000 Pa** Optional centrifugal fans with very high performances up to 1000 Pa

Performance according ERP 2015



DIMENSIONS OF STANDARD VERSIONS



MODEL	X	Y	H	A1	A2	A3	A4	B1	B2
EOLO B 25 RT	1200	1400	790	500	450	400	700	400	700
EOLO B 35 RT									
EOLO B 45 RT	1500	1650	1010	700	600	500	900	500	900
EOLO B 55 RT									
EOLO B 65 RT									
EOLO B 85 RT	1900	2100	1170	900	700	800	1000	800	1000
EOLO B 100 RT									
EOLO B 120 RT									
EOLO B 150 RT	2000	2400	1500	1000	800	1000	1200	1000	1200
EOLO B 200 RT					900				
EOLO B 250 RT					1000				
EOLO B 300 RT	2500	2400	1500	1250	900	1250	1100	1250	1100
EOLO B 400 RT	2350	2700	2000	1250	900	1250	1100	1250	1100
EOLO B 400 RT	3000	2200	3200	Please, get in touch with the Technical Dep.					

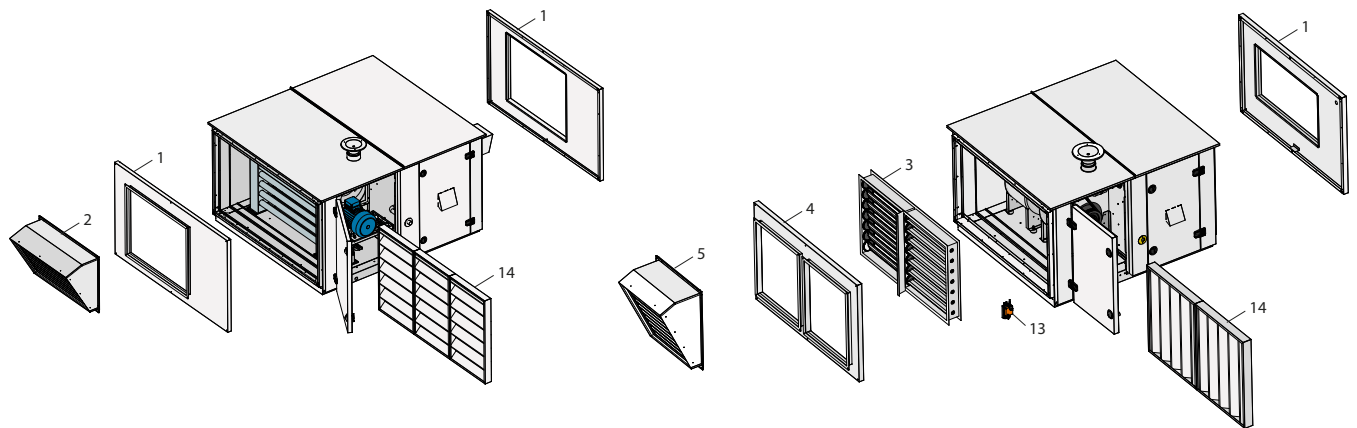
WARNING!

The dimensions of the ducts indicated in the sheet are referred to standard version. For special application they can be modified to satisfy the installation needs.

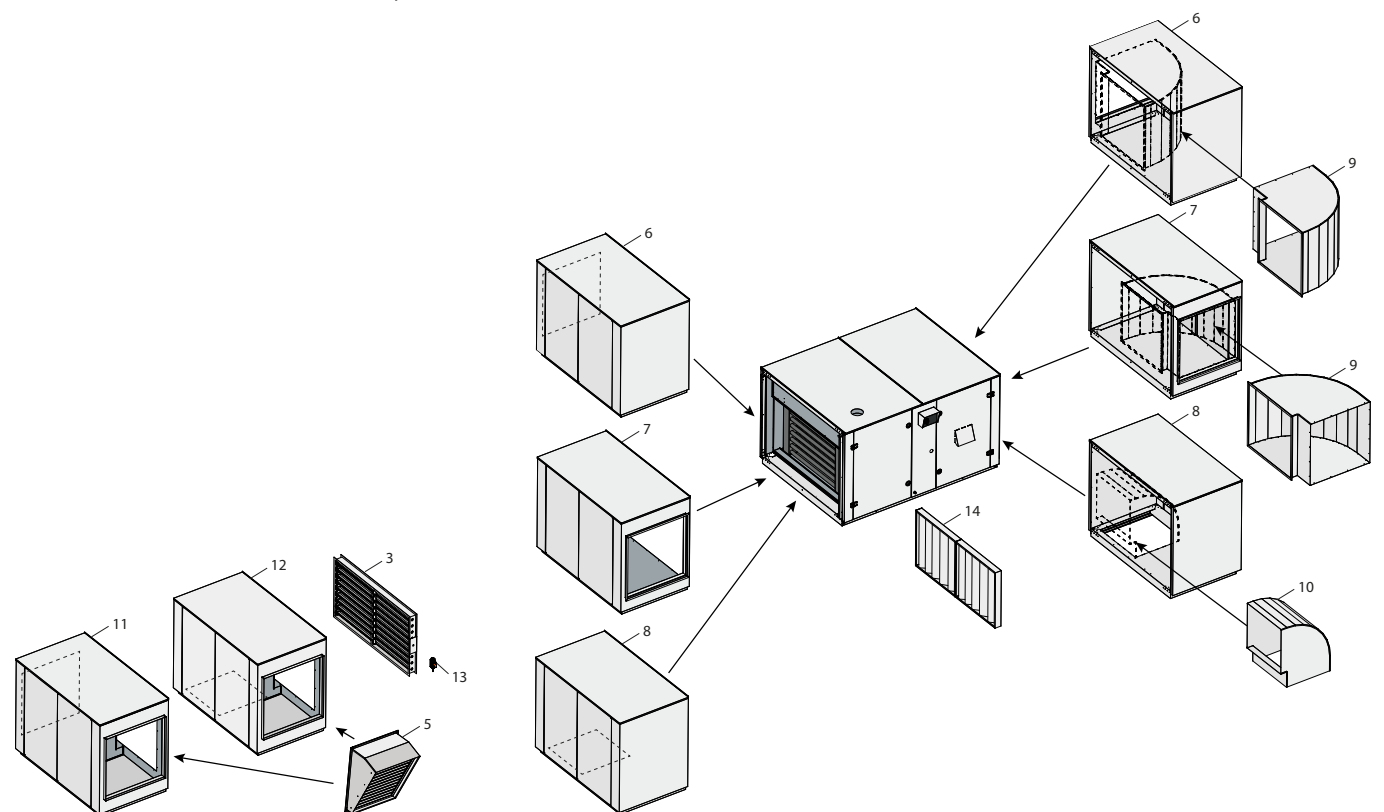
For the sizing of insulated ducting, please get in touch with the Technical Department.

Accessories

Control panels see page 63-67



- 1 Air intake/delivery panel
- 2 Air intake vent
- 3 Two-ways air dumper
- 4 Two-ways flanged air intake panel
- 5 Air intake vent for two-ways panel
- 6 Insulation cover for right delivery
- 7 Insulation cover for left delivery
- 8 Insulation cover for roof delivery
- 9 Left/right delivery bend
- 10 Roof delivery bend
- 11 Side mixing section
- 12 Roof mixing section
- 13 Belimo proportional device for air dumper with 0-10V control
- 14 G3/G4 air filter



Technical features

Models			25 RT	35 RT	45 RT	55 RT	65 RT	85 RT	100 RT	120 RT	150 RT	200 RT	250 RT	300 RT	400 RT	
Thermal capacity ver. BC		kW	8-22	10-32	15-43	18-52	21-63	23-84	34-103	40-125	46-155	65-210	78-260	95-315	126-420	
Combustion Efficiency BC **	Min	%	104,9	104,9	105,1	105,1	105	107,6	107,8	107,3	108	108	108	108	108	
	Max	%	94,6	94,4	95	95	94,9	98,1	98	98	98	98	98	98	98	
Thermal capacity ver. BL		kW	15-22	22-32	30-43	36-52	44-63	59-84	71-103	88-125	108-155	147-210	182-260	220-315	294-420	
Combustion Efficiency BL **	Min	%	95	95	95	95	95	95	95	95	92	92	92	92	93	
	Max	%	92,7	92,9	93	92,8	92,8	92,6	92,6	92,5	90	90	90	90	91	
Nominal gas consumption (Hi) (15°C - 1013,25mbar)	G20 Nat. gas 20 mbar	m³/h	2,33	3,39	4,55	5,5	6,67	8,89	10,9	13,23	16,4	22,22	27,51	33,33	44,44	
	G31 Propane 37 mbar	kg/h	1,71	2,49	3,34	4,04	4,9	6,53	8	9,71	12,04	16,32	20,2	24,48	32,63	
	G30 Butane 37 mbar	kg/h	1,72	2,51	3,37	4,08	4,94	6,58	8,07	9,8	12,15	16,46	20,38	24,69	32,91	
Gas inlet diameter		Inc.	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1,5"	1,5"	2"	2"	2"	
Electrical power sup.		V	230/L+NPE o 400/3L+NPE					400/3L+NPE								
Thickness insulation panels (with external insulation)		mm	50	50	50	50	50	50	50	50	50	50	50	50	50	
Air treated capacity	Standard (ΔT 32°C)	m³/h	2.200	3.500	4.600	5.800	6.800	8.500	10.000	11.500	13.500	16.000	20.000	24.000	33.000	
	Plus - optional	m³/h	3.200	4.500	5.800	6.800	8.800	11.000	13.000	15.000	18.000	20.000	25.000	29.000	38.000	
Fans *	Numb.	-	1	1	1	1	1	1	1	1	1	1	1	2	2	
	Model *	-	10_8	10_10	12_12	12_12 ADH315	12_12 ADH315	15_15 ADH355	15_15 ADH355	ADH355	ADH400	20/20 ADH450	ADH500	ADH560	ADH560	
Electrical motor power capacity *	Standard (200 Pa)	kW	0,55	0,75	1,1	1,5	2,2	3	3	4	4	5,5	7,5	7,5	7,5	
	Optional (400 Pa)	kW	1,1	1,5	2,2	2,2	3	4	4,0	5,5	5,5	7,5	11	11	11	
	Optional (600 Pa)	kW	1,5	2,2	2,2	3	4	5,5	5,5	7,5	7,5	11	11	15	15	
	Optional (1000 Pa)	kW	2,2	3	4	5,5	5,5	7,5	7,5	11	2x5,5	2x7,5	2x7,5	2x11	2x11	
Noise Level (at 1 m) Standard Version		dB (A)	56	57	57	58	59	61	62	63	65	66	67	67	67	
Ø condensing drain (ver. BC)		Inc.	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
Fumes exhaust Ø		mm	100	100	100	100	100	130	130	130	200	200	200	300	300	
Max Length fumex exhaust		m	8	8	8	8	8	8	8	8	8	8	8	8	8	
Working temperature		°C	-20/+40													
Weight ver. BL		kg	200	220	350	370	390	460	490	520	580	660	720	800	990***	
Weight ver. BC		kg	220	250	380	400	420	510	550	580	640	710	780	890	900***	

(*) The electrical power and the models of fan can vary according to the efficiency and the prevalence.

(**) Standard condition

(***) The model of the fan and the electrical power of the motor can be different from the ones indicated in the technical sheet, according to the efficiency and the prevalence of the equipment.

For any further information we kindly ask you to get in touch with the Technical Department of Systema S.p.A.

EOLO B AS: The new gas air heater without fans



EOLO B AS is the gas air heater without fans suitable to be installed in the ventilation ducts. The heat exchanger and the burners are the same of **EOLO B**.

This type of heater has been realized to be installed in duct systems and as gas modules in the ventilation plants.



CE certificate
1450CO0002

ADVANTAGES

- ✓ **HIGH EFFICIENCY up to 108%**
- ✓ **NOISELESS**
- ✓ **10 YEARS GUARANTEE ***
- ✓ **The airtight BURNER is INSTALLED INSIDE the UNIT**
- ✓ **INDOOR or OUTDOOR version**
- ✓ **EASY to be installed**
- ✓ **Available in 3 versions:**
 - **EOLO B AS BC = modulating and condensing**
 - **EOLO B AS BL = On/Off or modulating**



**MODULATING
PREMIX BURNER
DESIGNED BY
SYSTEMA**

EOLO B AS has been realized to be installed directly on the canalization or as independent thermal unit specifically adjusted. EOLO B AS has been realized in two versions: standard (BL) and condensing (BC).

** The guarantee depends on regular maintenance

EOLO B AS		BL25	BL35	BL45	BL55	BL65	BL85	BL100	BL120
Thermal capacity Max	kW (Hi)	22	32	43	52	63	84	103	125
	Efficiency % **	92,9	93	93,1	93	93	93	93	93
Thermal capacity Min	kW (Hi)	15	22	30	36	44	59	71	88
	Efficiency % **	94,8	94,9	95,2	95	95,1	95	95	95
TECHNICAL DATA									
Electrical power supply	V	230	230	230	230	230	230	230	230
Electrical power	W	90	90	90	155	155	210	210	210
Min air capacity	m ³ /h.	1.500	2.000	2.800	3.500	4.600	6.500	8.000	10.000
Max air capacity	m ³ /h.	3.500	4.400	5.500	6.500	8.000	11.000	13.000	15.000
Min/Max thermal gradient	°C	15/38	15/38	15/38	15/38	15/38	15/38	15/38	15/38
Max Pressure	Pa	900							
Load loss	Pa	110	120	130	140	150	150	150	150
Fume discharge Ø	mm	100	100	100	100	100	120	120	120
Gas inlet Ø	Inc.	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"
Chimney pressure	PA	80	90	110	110	120	130	130	130
Working temperature	°C min./max.	-20/+40							
Weight (internal model)	kg	62	74	89	115	128	162	184	210
Weight (external model)	kg	102	114	140	166	179	224	236	272
NOMINAL GAS CONSUMPTION (Hi) (15 °C - 1013,25 mbar)									
G20 Natural gas 20 mbar	m ³ /h	2,33	3,39	4,55	5,5	6,67	9,1	11,11	12,17
G30 Butane 37 mbar	kg/h	3,23	4,7	6,32	7,64	9,26	12,64	15,43	16,9
G31 Propane 37 mbar	kg/h	2,84	4,13	5,55	6,71	8,13	11,1	13,55	14,84

** Standard conditions

EOLO VIP, EOLO B BC, EOLO B BC RT: Integrated functions

The board installed inside the heater represents the electronic brain of the equipment. It has been designed to guarantee a huge range of functions, which can be set using our control panels. These functions can be used profitably when the equipment is combined with Systema control panels.

3 working programs:

- 1) **Manual OFF:** keeps just the anti-freeze condition (if enabled)
- 2) **Auto:** thermal power according to the set program and timer and also ventilation in the Eolo VIP AE models
- 3) **Manual ON:** keeps just the condition set by the comfort program

2 working modalities:

- 1) **Automatic modulation** of the minimum and maximum thermal power according to the internal and external temperature (with optional external probe)
- 2) **Automatic modulation of the thermal power** and constant air flow temperature

Functions:

- **Thermostat** with programmable temperatures (comfort and economy program)
- **Timer** with daily, weekly programming and holiday function
- **Summer ventilation function**
- **Air intake damper that can be regulated according to winter or summer function and ON/OFF modalities**, only with centrifugal fan models
- **Automatic modulation of the air capacity** in EOLO VIP AE models
- **Possibility to connect optional safety devices (up to 3):** minimum gas pressure switch, air filter pressure switch, other types of safety devices
- **Anti-freeze function (standard) and possibility to install low temperature kit (optional)** for temperatures up to -20°C – CODE 04CNAC0692

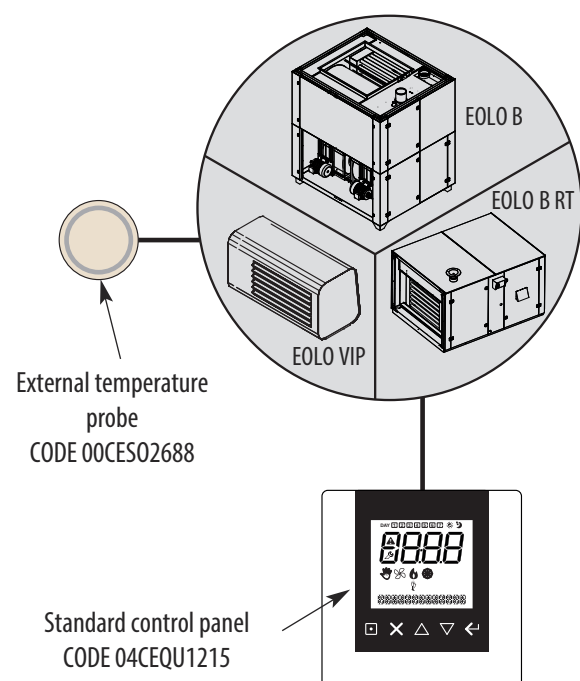
Standard Touch control panel for 1 hot air heater EOLO VIP, EOLO B BC, EOLO B BC RT



- ☑ **Control of all the functions of Eolo (Eolo vip, Eolo B, Eolo B RT) hot air heater. It can be connected directly to the equipment (1 for each heater) till a distance of 20 meters. COD. 04CEQU1215**

-> It is possible to use this panel to control a specific zone, its internal temperature probe can be set as environment temperature probe as well as zone probe once the heater has been connected to the **Master control panel SYS850, or SYS830.**

-> **We suggest the use of these type of control panels till 4 heaters, at maximum (4 control panels).** For more heaters it is better to use Master SYS850 or SYS830 control panel.



Master panel SYS850 and SYS830 for EOLO VIP, EOLO B BC, EOLO B BC RT

SYS850 conceived to manage up to 30 air heaters - SYS830 conceived to manage up to 16 air heaters

SYS850/SYS 830 Master control panel



SYS850 and SYS830 are available in 3 versions:

- ☑ **SYS850 Basic** version - Code 05CEQU2715 – Control up to 30 air heaters with 1 thermal zone per each burner, i.e. 30 independent thermal zones.
- ☑ **SYS830 Basic** version - Code 00CEQU2674 – Control up to 16 air heaters with n°1 thermal zone per each burner, i.e. 16 independent thermal zones.

☑ **SYS850 LAN** - Code 05CEQU2718

☑ **SYS830 LAN** - Code 00CEQU2675

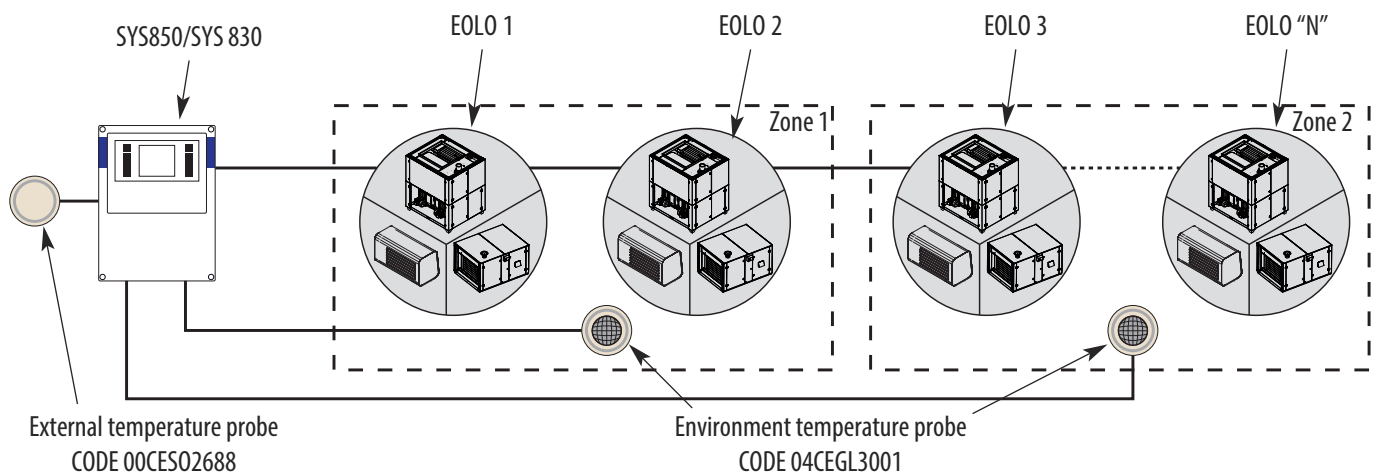
-> Besides the main functions of the Basic versions, **SYS850 LAN** and **SYS830 LAN** control panels are also equipped with **Ethernet LAN (TCP-IP)** door for the PC monitoring in a network and through the Internet via **EYE-LAN Software** in 3 versions (LITE, PLUS and ADVANCED), which can be activated in accordance with the specific needs of the user.

☑ **SYS850 ModBUS** - Code 05CEQU2721

☑ **SYS830 ModBUS** - Code 00CEQU2676

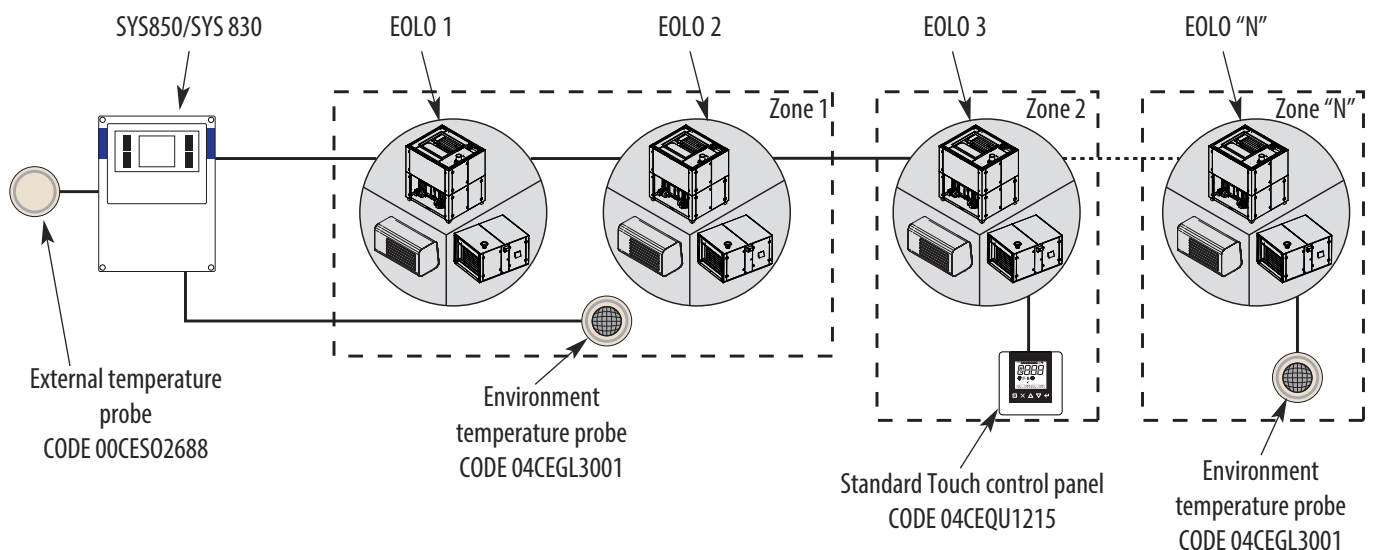
-> Besides the main functions of the Basic versions, **SYS850 ModBUS** and **SYS830 ModBUS** control panels are equipped with a specific communication port necessary for the control through the **Modbus** communication system.

Example of installation with 2 thermal zones and EOLO heaters controlled by SYS850 or SYS830



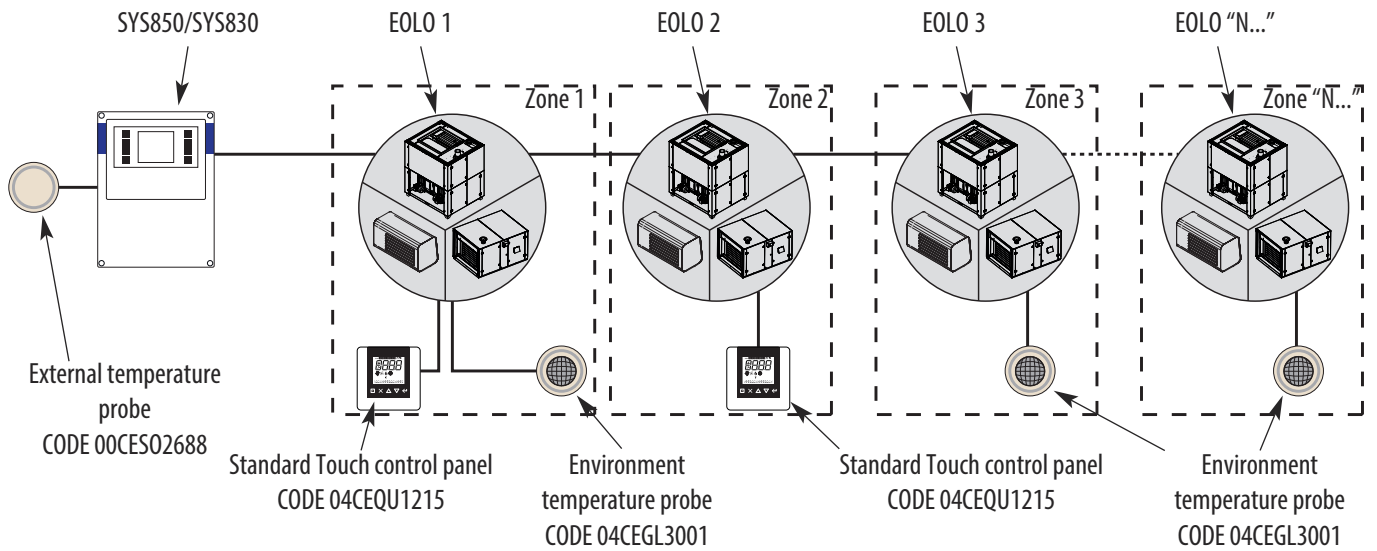
Example of installation with 3 or more zones and EOLO heaters controlled by SYS850 or SYS830

The heater EOLO 3 is also provided with local control using the Standard Touch control panel, featuring an integrated temperature probe into the control panel.



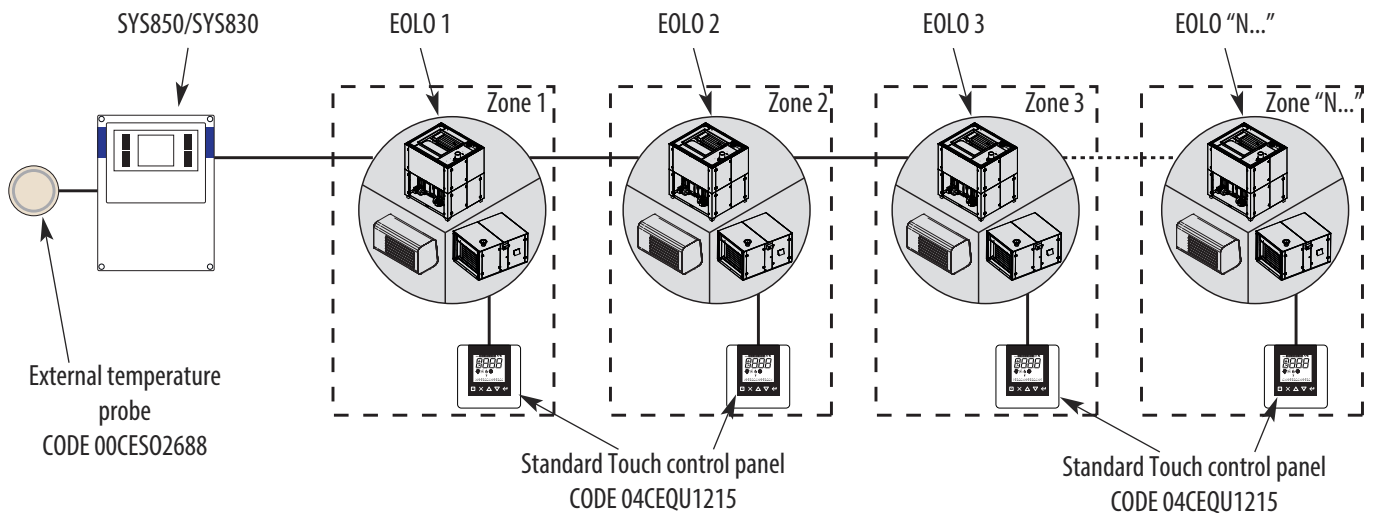
Example of installation with 4 or more zones and EOLO heaters controlled by SYS850 or SYS830

The heater EOLO 1 uses a remotable environment temperature probe and uses the local control by Standard Touch control panel, while the heater EOLO 2 is provided with local control using the standard control panel, featuring an integrated temperature probe into the control panel.



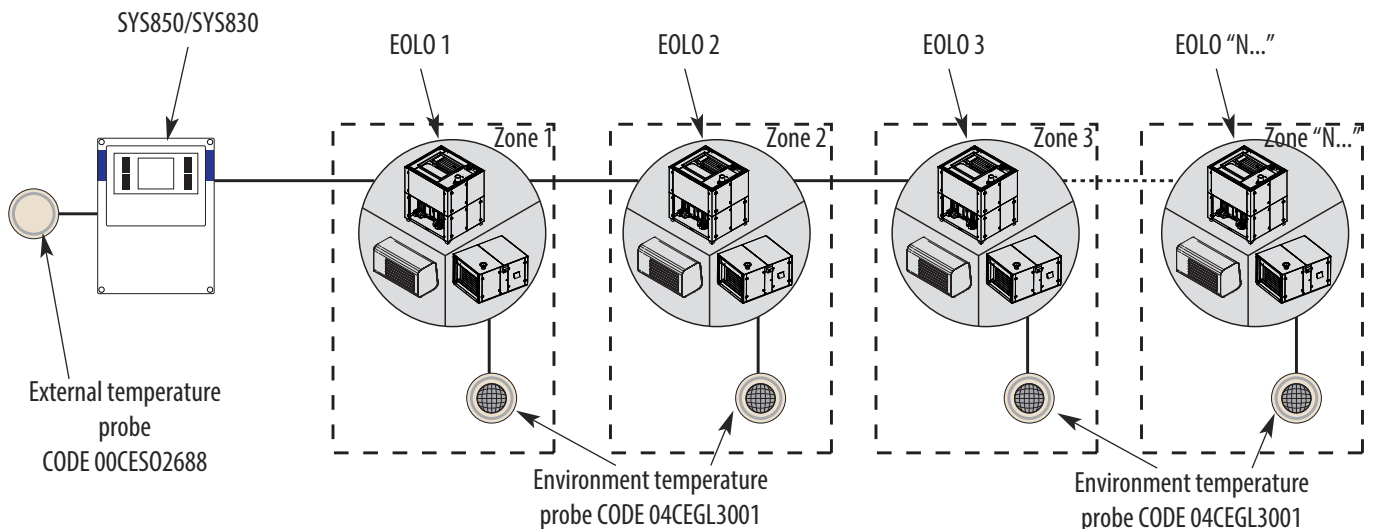
Example of installation with 4 or more zones and EOLO heaters controlled by SYS850 or SYS830

All heaters EOLO are equipped with local control using the Standard Touch control panel, featuring an integrated temperature probe into the control panel.



Example of installation with 4 or more zones and EOLO heaters controlled by SYS850 or SYS830

All heaters EOLO are equipped with environment temperature probe.



INET control panel for control up to 16 air heaters EOLO BLULINE, EOLO B BL, EOLO B BL RT

Functions of EOLO combined with INET control panel:

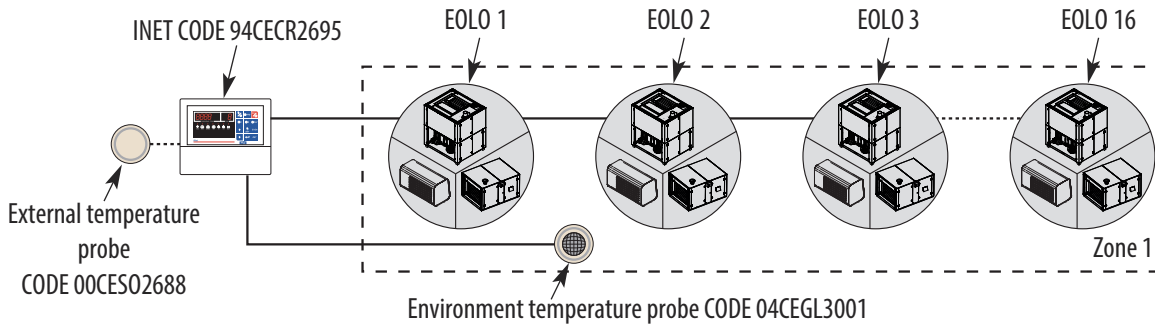


INET control panel up to 16 heaters:

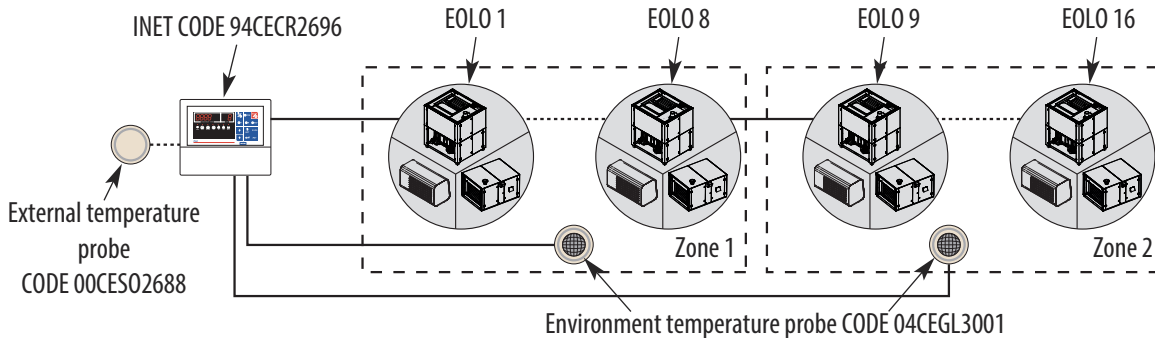
- 1 thermal zone CODE 94CECR2695
- 2 thermal zones CODE 94CECR2696
- 3 thermal zones CODE 94CECR2697
- 4 thermal zones CODE 94CECR2698

- **Automatic functioning** according to the set programs and timer, for all the models, and modulation of the thermal power according to the programs, in the modulating Eolo BL version
- **2 working temperatures,**
- **Daily/weekly temperature, timer, hour counter** and holiday function
- **Automatic modulation of the thermal power** according to the internal temperature (only for modulating EOLO BL)
- **Summer ventilation independent from the control panel connectable on request**
- **Anti-freeze function (standard) and possibility to install low temperature kit (optional)** for temperatures up to -20°C - CODE 04CNAC0692

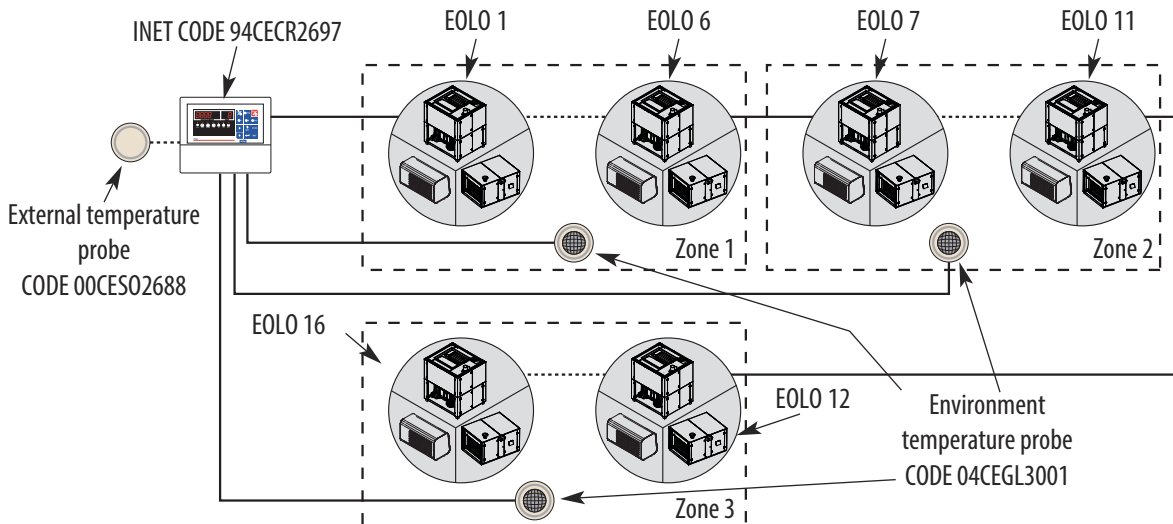
Example of installation with 1 zone and EOLO BLULINE, EOLO B BL, EOLO B BL RT controlled by INET



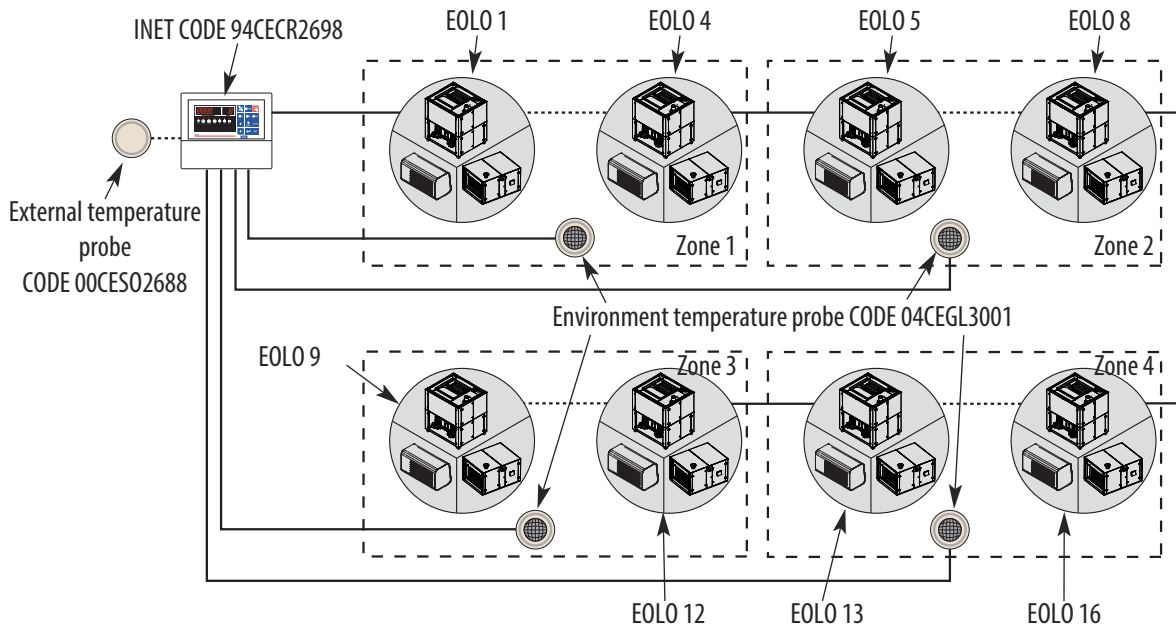
Example of installation with 2 zones and EOLO BLULINE, EOLO B BL, EOLO B BL RT controlled by INET



Example of installation with 3 zones and EOLO BLULINE, EOLO B BL, EOLO B BL RT controlled by INET



Example of installation with 4 zones and EOLO BLULINE, EOLO B BL, EOLO B BL RT heaters controlled by INET



EOLO BLULINE, EOLO B BL, EOLO B BL RT functions combined with CE control panel



ON/OFF CE control panel with thermostat and integrated environment probe, ON/OFF function for 1 heater. CODE 04CEQU1212



CE control panel with digital thermostat, remote environment probe and ON/OFF function:

- **Standard version, digital temperature control** for 1 heater CODE 04CEQU1202
- **Version with Chrono-thermostat with daily/weekly program and timer** for 1 heater CODE 04CEQU1203

Common functions of EOLO BLULINE, EOLO B BL, EOLO B BL RT combined with all of the CE control panels type:

- **Summer ventilation independently from the matched control panel**
- **Remote Reset button independently from the matched control panel**
- Double-stage function at 2 power levels by bithermostat (optional)
- Manual regulation of the thermal power by potentiometer (optional)
- Thermal power regulation by PLC (0-5Volt control) (optional)
- **Possibility to install low temperature kit (optional) for temperatures up to -20°C** - CODE 04CNAC0692

REFERENCES AND APPLICATIONS OF SUSPENDED EOLO HEATERS

STANDARD WITH AIR RECIRCULATION IN THE ENVIRONMENT



EXTERNAL AIR INTAKE ONLY



EXTERNAL AIR INTAKE ONLY



EXTERNAL-INTERNAL AIR RECIRCULATION WITH AIR DAMPER



EXTERNAL-INTERNAL AIR RECIRCULATION WITH AIR DAMPER



EXTERNAL-INTERNAL AIR RECIRCULATION WITH AIR DAMPER



EOLO B REFERENCES AND APPLICATIONS

INSTALLATION OF EOLO B WITH CANALIZATION



INSTALLATION OF EOLO B WITH 2 WAYS DUCT



INSTALLATION OF EOLO B WITH CANALIZATION



INSTALLATION OF EOLO B RT ON THE ROOF



ANEMOS: Floor standing hot air heater



AISI 430 stainless steel **COMBUSTION CHAMBER** with flame inversion, with large heat exchange surface and low thermal loads. The fume discharge is positioned opposite to the burner.

HEAT EXCHANGER with aluminized steel modular elements, provided with turbulence prints in order to obtain high thermal performances (up to 92,7%). Easy access for cleaning/maintenance.

Strong internal **SUPPORTING STRUCTURE**

SANDWICH CASING: internal galvanized plate + glass fiber + external white pre-painted plate, modern and

attractive, limited sizes, easy to be inspected.

VENTILATION GROUP made of 1,2 or 3 (according to the model) double-suction centrifugal fans with aluminum fan and curved blades. Installed on flexible supports and dampers. Fans are statically and dynamically balanced. Large diameter fans (= High air flows and high static pressures) low rpm fans (= noiseless).

- **Model: GHB 30 – GHB 40: 230V single phase motor directly matched to the fan:** 3 speeds equipped with thermal protection (Klixon), run capacitor permanently switched on, IP 42, B Class, electrical wires protected by a double insulation. Built in compliance with the international laws, 230V- 1 Ph- 50 Hz.
- **Model: GHB 60 – GHB 1000: 400 V three-phase motor and belt pulley,** 1 speed, IP 55, F Class, electrical wires protected by a double insulation. Built in compliance with the international laws, 400V- 3Ph- 50Hz. Fan/motor transmission through fix diameter pulley and trapezoidal belts (on demand pulleys with changeable diameter). The belt tension is easily obtained acting on the motor support slide.

BURNER GROUP: it is composed by a plate with a flame spy-hole, insulated with a rigid ceramic fiber panel. The standard unit is supplied without burner. It is compatible with blown gas burners of any brand: when you send us the order we strongly recommend you to indicate which burner (brand and model) will be installed, in order to guarantee the supply of the correct burner plate; in case this information is missing we will supply the standard burner plate.

CONTROL AND SAFETY THERMOSTATS

- Bi-thermostat "Fan" + "Limit" ("Fan" thermostat starts the fan when the internal temperature has reached 40°C; "Limit" thermostat shuts down the burner when the temperature exceeds 80°C)
- "Safety" thermostat (manual reset, shuts down the burner when the internal temperature reaches 120°C)

AIR SUCTION AND DELIVERY VENT (WITHOUT GRID/ PROTECTION)

All the standard units are supplied with the 2 suction vents (on 2 sides) and the upper delivery vent opened, without any grids/protections.

WARNING: it is forbidden to start the equipment if all the vents (suction and delivery) are not canalized or protected with grids or safety net, available as accessories: standard grids, grids with air filter, closure panels, plenum, etc.)

ELECTRICAL CONTROL PANEL

Control panel with ON/OFF general switch; burner switch; fuses, remote control switch and relay for each fan motor.

Optical signaling group with green lamp, which signs the electrical power supply presence.

ANEMOS: Motorizations (Optional)

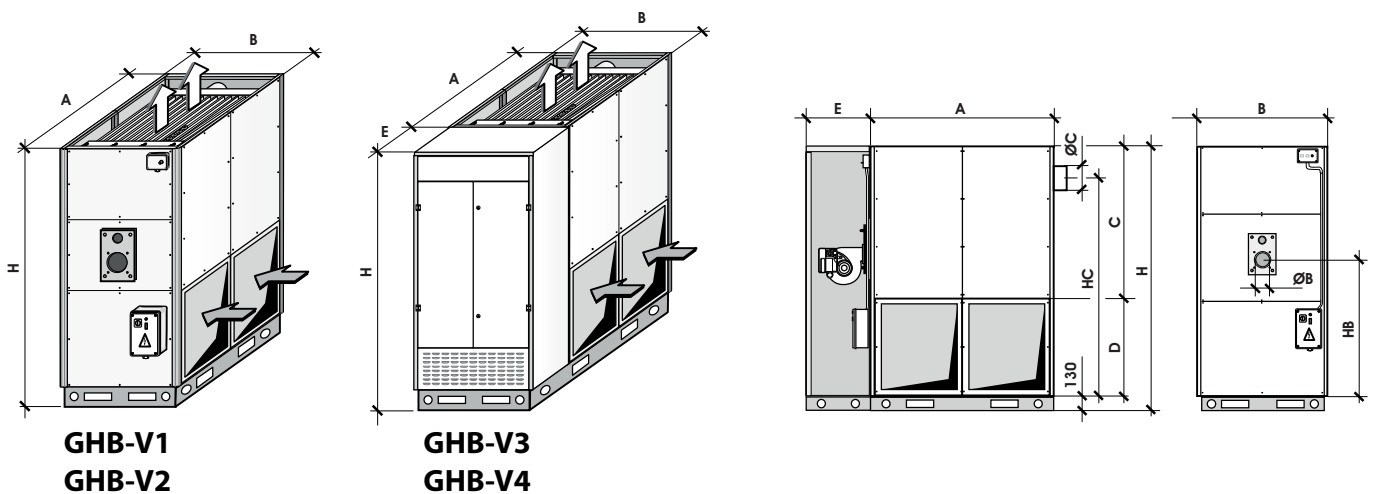
3 types of motorizations, according to the useful static pressures required by the installation:

- **SSP - Standard head:** installations with plenum or short ducts. In these cases it is enough a low number of fan turns, assuring a higher acoustic comfort (low noise) and lower management costs (lower electrical energy consumption).
- **MSP - Medium head:** for installations with standard ducts, that do not require special heads.
- **HSP - High head:** for installations with articulated distribution channels or with high air speed, that require special heads. Suitable for static pressure covers, tennis courts bearing covers (geodetic), gym, swimming pools and warehouses.

ANEMOS: Technical features

Models		GHB 30	GHB 40	GHB 60	GHB 80	GHB 110	GHB 130	GHB 160	GHB 200	GHB 250	GHB 300	GHB 350	GHB 400	GHB 450	GHB 520	GHB 580	GHB 650	GHB 750	GHB 850	GHB 1000	GHB 1200
Nominal thermal capacity	kW	34	46	69	93	127	151	186	232	290	348	407	465	522	603	672	754	870	986	1160	1400
Useful thermal power	kW	31,2	42,4	63,3	84,9	115,5	136,9	167,9	210,2	263,6	317,7	372,8	427,3	477,6	546,3	616,2	681,6	794,3	888,4	1053,3	1260
Thermal performance	%	91,7	92,2	91,8	91,3	91	90,7	90,3	90,6	90,9	91,3	91,6	91,9	91,5	90,6	91,7	90,4	91,3	90,1	90,8	90
Air capacity	m ³ /h	2.000	2.700	4.200	5.500	7.600	8.600	10.800	13.600	16.500	20.000	24.000	27.800	30.000	34.000	39.000	42.000	48.700	54.000	64.000	80.000
Useful static pressure	Pa	130	167	221	160	207	184	212	248	228	219	216	220	126	110	126	206	189	249	206	311
Noise Level	dB (A)	50	49	57	54	65	63	66	68	63	66	65	68	70	73	70	72	72	74	74	76
ΔT air inlet-outlet	°C	47	48	46	47	46	48	47	47	48	48	47	47	48	49	48	49	49	50	50	48
Electrical motor	kW	1x 0,25	1x 0,28	1x 0,74	1x 0,74	1x 1,5	1x 1,5	1x 2,2	1x 3,0	2x 1,5	2x 2,2	2x 2,2	2x 3,0	2x 3,0	2x 4,0	3x 3,0	3x 4,0	3x 4,0	3x 5,5	4x 5,5	4x 7,5
Electrical power supply		1-N-PE 230V-50Hz						3-N-PE 400V-50Hz													
Dimensions																					
Dimensions	(A) mm	750	900	1000	1400	1900	2100	2100	2600	3100	3700										
	(B) mm	500	650	850	1000	1150	1250	1300	1500	1600	1800										
	(H) mm	1.730	1.930	2.230	2.430	2.530	2.580	2.880	3.130	3.230	3.330										
Ventil/Module Sections	(C-D) mm	1.100-500	1.200-600	1.450-650	1.550-750	1.750-650	1.700-750	1.950-800	2.200-800	2.300-800	2.400-800										
Burner box	(E) mm	400	450	500	700	800	800	900	900	1000	1100										
Burner Flange (HB x ØB)	mm	760 x Ø110	930 x Ø110/140	1.095 x Ø140	1.155 x Ø160	1.155 x Ø180	1.235 x Ø200	1.350 x Ø200/220	1.570 x Ø220	1.570 x Ø240	1.550 x Ø240										
Fume discharge (HC x ØC)	mm	1.235 x Ø120	1.440 x Ø160	1.730 x Ø180	1.905 x Ø200	2.005 x Ø250	2.080 x Ø300	2.360 x Ø300	2.620 x Ø350	2.720 x Ø350	2.790 x Ø400										
Net weight	kg	115	130	170	190	260	300	420	470	580	620	730	800	950	1120	1470	1580	1770	2080	2320	2640
Burner selection																					
Nozzle length (Min-Max)	mm	100-210	100-210	100-220	100-280	110-340	120-310	120-310	120-380	140-490	140-590										
Nozzle diameter	mm	100	100	100	130	130	150	150	170	170	190	190	190	210	210	210	230	230	230	230	230
Counter pressure combustion chamber	Pa	15	18	20	25	28	32	40	43	52	60	75	80	90	100	105	115	107	118	110	120

The data on table are merely indicative according to the product's updating.
We kindly invite you to contact Systema's technical department for further information.



AIR BREEZE: INTERNAL AXIAL HEATER



AIR BREEZE heater

Technical features

AIR BREEZE is the internal heater with an *interesting design* which allows any kind of installation, both in industrial and commercial environments.

The frontal finned part has been realized to get a **higher air flow** in the upper battery in order to **reduce the air stratification** during its running.

These heaters are equipped with 1,2 or 3 fans which run at 900 and 1400 rpm (according to the model). They are noiseless keeping capacity and head necessary to guarantee an optimal thermal exchange.

Power range: 16, 32 and 64,8 kW.

Air Breeze has been designed also with the self-supporting structure (optional) for the installation of the air filters.

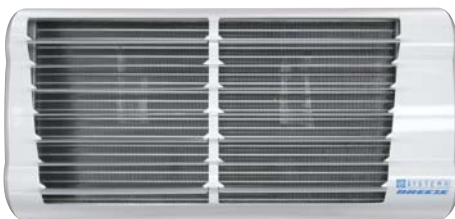
It can be installed on the ceiling and it is available in the optional version for air conditioning "**AIR BREEZE C**"

The rotating support bracket is supplied with AIR BREEZE 17 and 35; it allows to position correctly the heater once it has been installed.

INTERNAL AXIAL HEATER "AIR BREEZE" FROM 16 TO 64,6 kW



AIR BREEZE 70



AIR BREEZE 35



AIR BREEZE 17

AIR BREEZE TECHNICAL FEATURES (AXIAL)

AIR BREEZE Heating models			17	35	70
Thermal capacity		kW	16,0	32,0	64,6
Water temperature	inlet	°C	80	80	80
	outlet	°C	60	60	60
Air temperature	inlet	°C	15	15	15
	outlet	°C	35	34,8	37,4
Air treated capacity		m³/h	2300	4919	8181
Air speed		m/s	2,56	2,73	3,03
Air throw		m	18	16	30
Air pressure drop		Pa	24	28	37
Water flow rate		l/h	691	1470	2763
Water speed		m/s	0,7	1	1,1
Water pressure drop		mH ₂ O	0,63	1,24	1,29
Air filter (optional)		n°	2	2	2
Fan diameter / number		Ø/n°	400/1	400/2	420/3
Electrical protection			IP 54	IP 54	IP 54
Electrical power supply		V/Hz	230/50	230/50	230/50
Max electrical power		W	165	240	780
Hydraulic connections		"	3/4"	3/4"	1"
Dimensions: the body is already de- signed with filter holder	Length	mm	710	1200	1710
	Height	mm	615	615	615
	Depth	mm	470	470	470
Wight		kg	19	41	60

Accessories for AIR BREEZE

A complete set of accessories allows to optimize the planning and the management of each single installation.



Kit of vertical spot fins Code 22CNAC0058



Control panel 3-speeds + summer ventilation function

For AIR BREEZE 17 Code 22CNAC0201
For AIR BREEZE 35 Code 22CNAC0202
For AIR BREEZE 70 Code 22CNAC0203



Control panel 3-speeds + summer ventilation function + room thermostat

For AIR BREEZE 17 Code 22CNAC0083
For AIR BREEZE 35 Code 22CNAC0067
For AIR BREEZE 70 Code 22CNAC0064



Kit of air filter couple Code 22CNAC0059

REFERENCES



Mechanical industry in Milan (Italy)
Heating
Wall installation, height: 4 meters
n° 8 Air Breeze 35
Power: 256 kW (heating)



Mechanical industry in Parma (Italy)
Heating
13000 m² - ceiling installation, height: 9 m
n° 18 Air Breeze 70
n° 21 Air Breeze 35
Power: 1840 kW

AIRJET: Centrifugal unit heater with canalization

AIRJET is the centrifugal unit heater suitable for the air distribution through canalization.

Heating and cooling version is available too (**AIRJET C**).

The centrifugal fans positioned near to the suction fan optimize the yield, whereas the plenum inlet connection is flanged for an easy installation.

AIRJET can be installed on the wall or on the ceiling and has the possibility to add the pleated air filter (optional). Back flange can be connected to the air suction duct: upper, lower, back.

The heater is equipped with a pressure gauge to control the hydraulic pressure, it has IP55 electrical protection and high air capacity and a stainless steel skirt and ABS.

AIRJET 70 - 64,8 kW

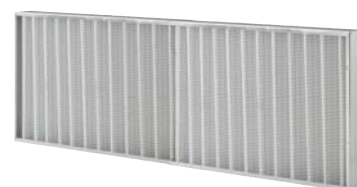


AIRJET 35 - 32,3 kW



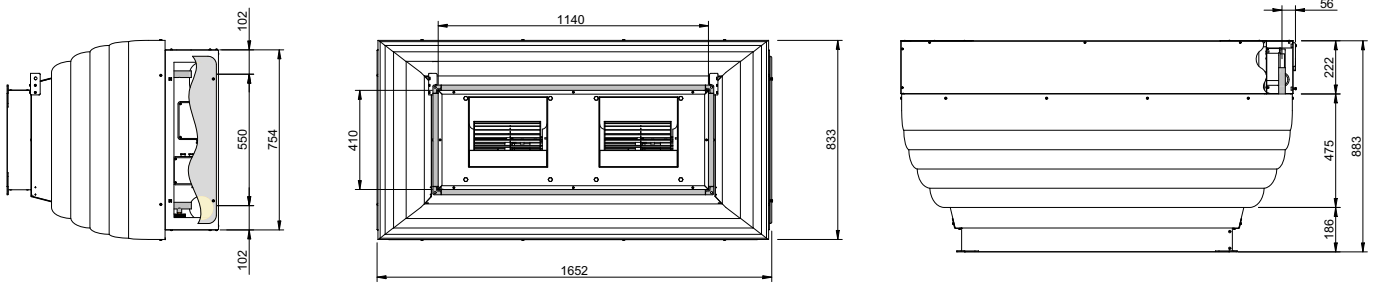
AIRJET TECHNICAL FEATURES (CENTRIFUGAL)

Models		AIRJET 35	AIRJET C 35	AIRJET 70	AIRJET C 70			
Functions		Heating	Heating	Cooling	Heating	Heating	Cooling	
Total heating capacity	Max Speed	kW	32,3	32,3	14,8	64,8	64,8	29,6
	Min Speed	kW	23,4	23,4	10,7	50	50	22,9
Sensible thermal power	Max Speed	kW	-	-	10,5	-	-	21,0
	Min Speed	kW	-	-	7,6	-	-	16,2
Dimensions	High	mm	735	735	735	833	833	833
	Lenght	mm	1.152	1.152	1.152	1.652	1.652	1.652
	Depth	mm	883	883	883	883	883	883
Delivery dimension	High	mm	410	410	410	410	410	410
	Lenght	mm	720	720	720	1.140	1.140	1.140
Fan number	n.	1	1	1	2	2		
Wight	kg	80	80	85	120	120	125	
Noise level	Max Speed	dB (A)	63	63	63	73	73	73
	Min Speed	dB (A)	58	58	58	65	65	65
Electrical protection		IP55	IP55	IP55	IP55	IP55	IP55	
Electrical power supply	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	
Max electrical power	W	400	400	400	800	800	800	
Electrical absorption	A	1,7	1,7	1,7	3,4	3,4	3,4	
Air treated capacity	Max Speed	m³/h	3.300	3.300	3.300	6.600	6.600	6.600
	Min Speed	m³/h	1.900	1.900	1.900	3.800	3.800	3.800
Air speed	Max Speed	m/s	3,11	3,11	3,11	3,92	3,92	3,92
	Min Speed	m/s	1,79	1,79	1,79	2,26	2,26	2,26
Inlet air temperature	°C	15	15	26	15	15	26	
Outlet air temperature	Max Speed	°C	43,1	43,1	15,5	43,1	43,1	15,6
	Min Speed	°C	50,3	50,3	12,8	52,7	52,7	13,7
Air pressure drop	Max Speed	mbar	0,3	0,3	0,3	0,32	0,32	0,32
	Min Speed	mbar	0,11	0,11	0,11	0,15	0,15	0,15
Useful residual pressure	Pa	110	110	110	120	120	120	
Relative air humidity	Inlet	%	-	-	50	-	-	80
	Max Speed	%	-	-	80	-	-	80
	Min Speed	%	-	-	92	-	-	92
Flow rate water circulating	l/h	1.210	1.210	2.540	2.770	2.770	5.090	
Inlet water temperature	°C	80	80	7	80	80	7	
Outlet water temperature	Max Speed	°C	57	57	12	60	60	12
	Min Speed	°C	63,4	63,4	10,6	64,4	64,4	10,9
Water pressure drop	mbar	50	50	130	90	90	384	
Hydraulic connections (In/Out - Male)	"	3/4"	3/4"	3/4"	1"	1"	1"	
Water capacity	l	4,3	4,3	4,3	9	9	9	

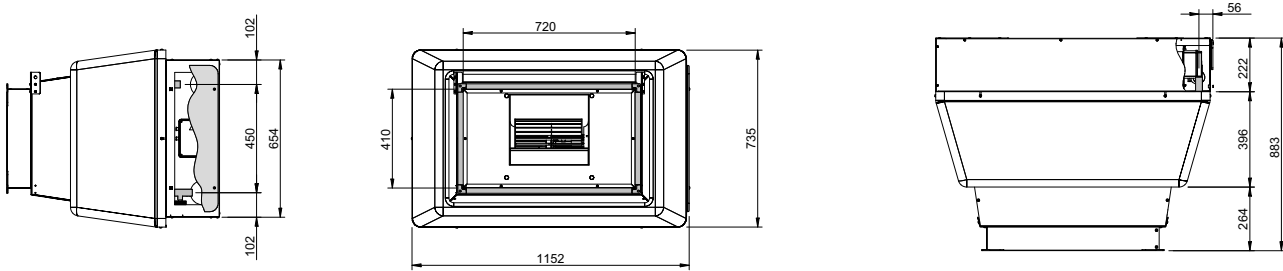


Pleated filter:
for AIRJET 35 Code 22CNFI0063
for AIRJET 70 Code 22CNFI0064

DIMENSIONS AIRJET 70 AND AIRJET C 70



DIMENSIONS AIRJET 35 AND AIRJET C 35



REFERENCES



Industry in Rovigo
Heating
Wall installation with canalization, height: 7 meters
n° 5 **AIR BREEZE 70/J**
Power **350 kW** (heating)

F-LUX: WATER UNIT HEATER



TECHNICAL FEATURES

The new range of F-LUX unit heater, produced by Systema, can be installed both horizontally and vertically, on the wall or on the ceiling.

They are equipped with heat exchanger with copper tubes and aluminum blade.

The water unit heater F-LUX represents a good solution for customers that need a high quality heating equipment with an attracting and modern design.

The components of F-LUX are realized with high quality materials and produced by well-known manufacturers.

FLEXIBILITY OF INSTALLATION

In various type of environments:

- Industrial premises,
- Warehouses,
- Car showrooms
- Churches
- Commercial buildings
- Supermarkets and commercial centers
- Sport structures
- Fair stands, halls

ADVANTAGES

- ✓ **FLEXIBLE thanks to the "3D MOUNTING BRACKETS" designed for vertical or horizontal installation:**
 - **60° horizontal free rotation**
 - **3 vertical regulations**
 - **Possibility of ceiling installation**
- ✓ **LONG-LIFE, STAINLESS STEEL version can be supplied (if required)**
- ✓ **NOISELESS**
- ✓ **10 YEARS guarantee ***
- ✓ **Vast range of accessories**

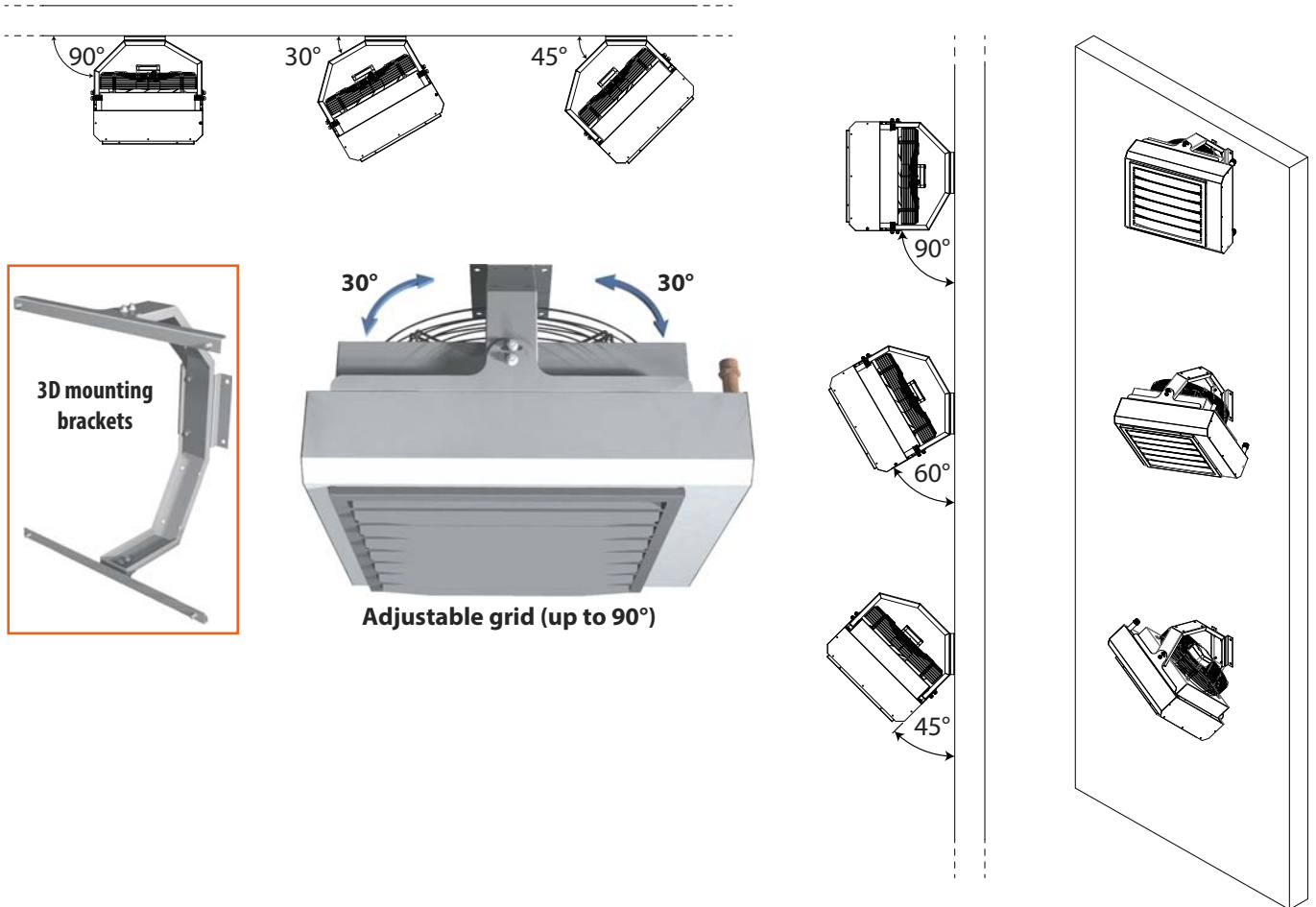
F-LUX: Technical features

Model		F-LUX 15	F-LUX 20	F-LUX 30	F-LUX 40	F-LUX 50	F-LUX 60
Air treated capacity	m ³ /h	1500	2100	2600	3600	3900	5900
Air throw (horizontal/vertical)	m	11 / 5	12 / 6	14 / 7	18 / 9	20 / 10	23 / 11
Electrical absorption	A	0,42	0,65	0,55	0,9	1,2	1,85
Electrical power	W	90	110	135	180	240	420
Noise level (at 5m)	dB	46	48	48	51	52	53
Wight with water	kg	14	14	21	21	26	27
Wight with mixing chamber	kg	41	41	48	48	53	54

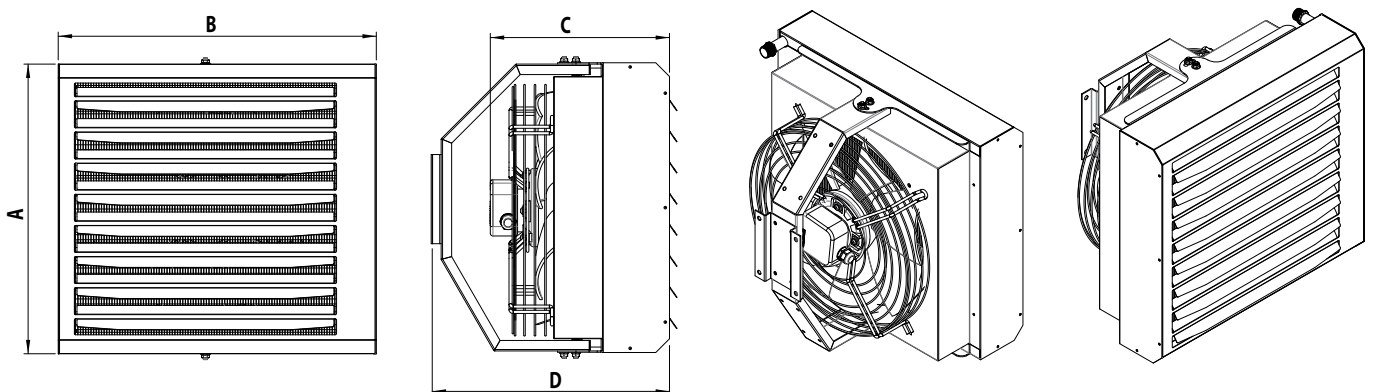
* The guarantee depends on regular maintenance

3D mounting brackets - designed for the vertical or horizontal installation

The unit heater is easy and quick to be installed, both on the wall or on the ceiling inside the environments to be heated. The support brackets allow to fix the heater to the wall or to the ceiling with 3 different installation degrees (30°-45°-90°). Furthermore it has been realized in order to allow the free horizontal rotation of the heater of 60°.



DIMENSIONS



	F-LUX 15	F-LUX 20	F-LUX 30	F-LUX 40	F-LUX 50	F-LUX 60
A	452	452	552	552	705	705
B	512	512	607	607	810	810
C	325	325	340	340	350	350
D	440	440	455	455	497	497

THERMAL PERFORMANCE

F-LUX 15																					
1500 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	18	16,6	15,3	14,1	12,8	15,4	14,1	12,8	11,6	10,3	12,8	11,6	10,3	9,07	7,8	10,3	9,02	7,8	6,57	5,36
ΔP water	kPa	13	11,3	9,7	8,26	6,94	9,93	8,45	7,09	5,86	4,76	7,23	5,97	4,83	3,82	2,93	4,9	3,86	2,95	2,16	1,48
Qw	l/h	792	734	676	620	564	675	618	562	507	452	559	504	449	395	342	445	391	338	285	232
Tp 2	°C	33,1	36,3	39,3	42,4	45,3	28,4	31,5	34,5	37,5	40,4	23,7	26,7	29,7	32,6	35,5	18,9	21,9	24,9	27,8	30,6
ΔT	°C	33,1	31,3	29,3	27,4	25,3	28,4	26,5	24,5	22,5	20,4	23,7	21,7	19,7	17,6	15,5	18,9	16,9	14,9	12,8	10,6

F-LUX 20																					
2100 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	20,7	19,1	17,6	16,1	14,6	17,5	16	14,5	13	11,6	14,4	13	11,5	10	8,6	11,3	9,9	8,45	7	5,6
ΔP water	kPa	3,39	2,94	2,52	2,13	1,78	2,55	2,15	1,79	1,47	1,18	1,8	1,47	1,18	0,92	0,69	1,18	0,91	0,68	0,49	0,32
Qw	l/h	910	842	775	688	643	769	702	637	572	508	630	565	501	437	375	492	429	367	305	244
Tp 2	°C	27,2	30,6	34	37,3	40,6	23,1	26,5	29,8	33,1	36,4	19	22,4	25,7	28,9	32,1	15	18,3	21,5	24,8	28
ΔT	°C	27,2	25,6	24	22,3	20,6	23,1	21,5	19,8	18,1	16,4	19	17,4	15,7	13,9	12,1	15	13,3	11,5	9,8	8

F-LUX 30																					
2600 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	33,4	31	28,6	26,2	23,8	28,7	26,3	23,9	21,6	19,2	23,9	21,6	19,2	16,9	14,7	19,2	16,9	14,6	12,3	10,1
ΔP water	kPa	10,8	9,39	8,08	6,87	5,78	8,29	7,04	5,91	4,89	3,97	6,04	4,99	4,04	3,19	2,45	4,1	3,23	2,47	1,81	1,25
Qw	l/h	1474	1366	1259	1154	1050	1258	1152	1048	945	844	1044	941	839	738	639	833	732	632	534	437
Tp 2	°C	35,6	38,6	41,5	44,4	47,2	30,5	33,5	36,4	39,2	42	25,5	28,4	31,2	34	36,7	20,4	23,3	26,1	28,8	31,5
ΔT	°C	35,6	33,6	31,5	29,4	27,2	30,5	28,5	26,4	24,2	22	25,5	23,4	21,2	19	16,7	20,4	18,3	16,1	13,8	11,5

F-LUX 40																					
3600 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	40,2	37,2	34,3	31,5	28,6	34,4	31,5	28,7	25,9	23,1	28,7	25,8	23	20,3	17,5	22,9	20,1	17,4	14,7	12
ΔP water	kPa	15,2	13,2	11,3	9,66	8,12	11,6	9,86	8,28	6,84	5,55	8,42	6,95	5,62	4,44	3,4	5,69	4,48	3,42	2,5	1,72
Qw	l/h	1770	1641	1513	1387	1263	1508	1382	1257	1134	1012	1250	1126	1004	884	764	995	874	754	636	519
Tp 2	°C	30,9	34,1	37,3	40,5	43,6	26,5	29,7	32,8	36	39	22	25,2	28,4	31,4	34,5	17,6	20,8	23,9	26,9	29,9
ΔT	°C	30,9	29,1	27,3	25,5	23,6	26,5	24,7	22,8	21	19	22	20,2	18,4	16,4	14,5	17,6	15,8	13,9	11,9	9,9

F-LUX 50																					
3900 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	51,6	47,7	43,9	40,2	36,5	44,1	40,3	36,6	32,9	29,3	36,6	32,9	29,2	25,6	22,1	29,1	25,5	21,9	18,4	14,9
ΔP water	kPa	6,38	5,52	4,73	4,01	3,35	4,83	4,09	3,41	2,81	2,26	3,47	2,84	2,29	1,79	1,36	2,3	1,8	1,36	0,98	0,67
Qw	l/h	2274	2104	1937	1772	1610	1923	1766	1603	1443	1285	1595	1433	1274	1118	963	1262	1104	949	797	645
Tp 2	°C	36,6	39,5	42,3	45,1	47,8	31,3	34,1	36,9	39,6	42,3	26	28,8	31,5	34,2	36,8	20,6	23,4	26,1	28,7	31,3
ΔT	°C	36,6	34,5	32,3	30,1	27,8	31,3	29,1	26,9	24,6	22,3	26	23,8	21,5	19,2	16,8	20,6	18,4	16,1	13,7	11,3

F-LUX 60																					
5900 m ³ /h		90 / 70 °C					80 / 60 °C					70 / 50 °C					60 / 40 °C				
Tp1	°C	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
Therm. P.	kW	65,3	60,4	55,6	50,9	46,3	55,7	46,2	50,9	41,6	37	46,1	41,4	36,8	32,3	27,8	36,5	31,9	27,4	22,9	18,5
ΔP water	kPa	9,9	8,57	7,35	6,23	5,21	15,8	11,2	13,4	4,33	3,49	11,3	9,21	7,39	5,77	4,36	7,38	5,75	4,32	3,1	2,08
Qw	l/h	2877	2663	2452	2244	2039	2240	2025	2231	1822	1622	2009	1805	1608	1406	1210	1583	1369	1189	995	804
Tp 2	°C	30,6	33,9	37	40,2	43,3	26,1	32,5	29,3	35,6	38,6	21,6	24,8	27,9	30,9	34	17,1	20,2	23,3	26,3	29,3
ΔT	°C	30,6	28,9	27	25,2	23,3	26,1	27,5	19,3	20,6	18,6	21,6	19,8	17,9	15,9	14	17,1	15,2	13,3	11,3	9,3

ACCESSORIES



PT 10 chronothermostat with timer, comfort/economy temperature, 2xAA battery, IP20 electrical protection degree



Siemens RAK-TW.5000S-H anti-freeze thermostat
 For F-LUX with internal/external air intake.



Regulator of position for wall installation 0...100% with mechanical stop and positioning indicator.



ARW 5 speeds fan control with integrated thermal switch.
 The choice depends on the model and the technical features of F-Lux.



ON/OFF actuator for BELIMO LF 230 airlock.
 For F-LUX with internal/external air intake.



Actuator for adjustable airlock 0-10 VDC which can be installed together with the positioning regulator.
 For F-LUX with internal/external air intake.

KING: CAST IRON GAS FIRED RADIATORS FROM 2 TO 5.3 KW

Systema S.p.A presents its range of KING gas fired radiators, with forced and balanced flow, which represents an affordable alternative to conventional heating in use until now.

10 years guarantee
on combustion chamber and burner

The combustion takes place in a airtight heat exchanger; the air needed for the combustion is taken from outside, by a specific pipe, and products of combustion are evacuated through a coaxial pipe.

It is realized in 18 versions, satisfying all potency, installation and dimensioning requests. On the forced models the pipes can be 5 meter long, with coaxial discharge and with right or left lateral discharge. The ventilated version can have 2 speeds or turned off with convective exchange. The forced models are complete with tank.

The King from 2 kW to 5.3 kW are made by cast iron, the most suitable, valuable and reliable material for the realization of the exchanger of these thermo-convectors as it is noiseless and gives a guarantee of duration (more than 10 years) and a high combustion efficiency.

It is stylish, refined and distinguishable thanks to its pleasant and functional rounded esthetic line, suitable for any type of environment, from modern to rustic. Thanks to its particular and unique upper front slots it guarantees a great comfort in a short time, a better thermal efficiency with heating by convection and radiation, ensuring effective heat distribution without causing the air stratification.

In compliance with UNI-CIG 7129 law devices of type C and B.



CONTROL PANEL

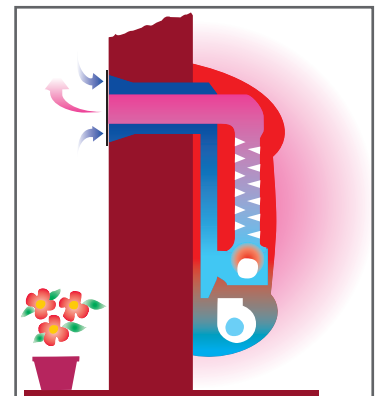


It is safe because the combustion cycle is completely sealed with respect to the environment to heat and the flame is controlled by a thermocouple or an electronic panel, according to the model, which stops the gas flow in case of flame switching off.

It allows greater energy saving in comparison with traditional systems (more or less 30/40%) as the set temperature is reached in a very short time.

As it is an autonomous gas radiator, it is easy and quick to be installed in different places.

COMBUSTION CYCLE



KING: STAINLESS STEEL GAS RADIATORS FROM 7 TO 8,2 KW

The stainless steel King is realized in 2 models from 7,2 kW to 8,2 kW. It is flexible in its applications (wall or ceiling) and the weight is low.

With king radiator you can choose to heat every single environment, programming the hourly and daily temperatures, according to the real needs.

The controls are simple and collected in a single panel, easy to be managed.

The centrifugal fan has 2 speeds.

The king radiator is supplied with exhaust and air intake tubes kit, fixing screws, kit of nozzles for gas change, assembly template, instruction manual and guarantee certificate.

In compliance with UNI-CIG 7129 laws devices of type C.

GARANZIA 10 anni
Su camera di combustione e bruciatore



STAINLESS STEEL EXCHANGER



CONTROL PANEL

OTHER APPLICATIONS KIT (OPTIONAL) CAST IRON KING

Installation	Code	Terminal	Models	Description
	02ACKT0700/A	Standard	K21FE - K28FE	LATERAL DISCHARGE KIT for cast iron king for wall installation with lateral coaxial discharge complete of lateral discharge connection, coaxial bend, 0,5 meter stainless steel windproof terminal.
	02ACKT0700/B	Wind proof		
	02ACKT0701/A	Standard	K40FE - K55FE	
	02ACKT0701/B	Wind proof		



STANDARD FOR CAST IRON KING:
STAINLESS STEEL AIR-FUMES WIND PROOF TERMINAL



OPTIONAL FOR STAINLESS STEEL KING:
WALL LEVEL EXTERNAL WIND PROOF AIR-FUMES TERMINAL

CAST IRON AIRTIGHT GAS CONVECTORS FROM 2 TO 5,3KW

PILOT FLAME THERMOCOUPLE SERIES MODELS BALANCED FLOW									
CE CERTIFICATES 0694BN4044 - 0694BN4045		NOT-VENTILATED				VENTILATED			
		K21	K28	K40	K55	K28V	K40V	K55V	
Rated heat flow	kW	2	2,5	4	4,6	2,5	4	4,6	
Working heat output	kW	1,8	2,2	3,5	4,1	2,2	3,6	4,1	
Combustion efficiency *	%	90,0	87,0	87,3	87,5	87,5	88,0	88,0	
Category efficiency		1	1	1	1	1	1	1	
Max fuel consumption (15°C-1013 mbar)	Nat. Gas G20	m³/h	0,21	0,26	0,42	0,49	0,26	0,42	0,49
	Butane G30	kg/h	0,158	0,197	0,315	0,363	0,197	0,315	0,363
	Propane G31	kg/h	0,155	0,194	0,311	0,357	0,194	0,311	0,357
Electrical power supply	V/Hz	--	--	--	--	230/50			
Electrical power (absorbed)	W	--	--	--	--	25	30	30	
Treated ambient air flow	m³/h	--	--	--	--	150	240	270	
Heated ambient volume	m³	36	44	70	82	48	78	88	
Fan speed number		--	--	--	--	2	2	2	
Dimensions	Width	mm	420	420	560	560	420	560	560
	Height	mm	615	615	615	615	615	615	615
	Depth	mm	225	225	225	225	225	225	225
Weight	kg	31	31	45	45	32	46	46	
Gas fitting diameter	inc. (")	3/8"-M							
Air-fume coaxial pipe diameters	Air	mm	120	120	160	160	120	160	160
	Fumes	mm	90	90	90	90	90	90	90
Air-fume max length (Coaxial pipes)	mm	500	500	500	500	500	500	500	
Type of equipment		C11				C11			

ELECTRONIC SERIES MODELS BALANCED FLOW						
NON VENTILATO				VENTILATED		
K21E	K28E	K40E	K55E	K28VE	K40VE	K55VE
2	2,5	4	4,6	2,5	4	4,6
1,8	2,3	3,6	4,1	2,3	3,6	4,1
89,8	90,0	88,0	88,0	90,0	88,0	88,0
1	1	1	1	1	1	1
0,21	0,26	0,42	0,49	0,26	0,42	0,49
0,158	0,197	0,315	0,363	0,197	0,315	0,363
0,155	0,194	0,311	0,357	0,194	0,311	0,357
230/50						
10	10	10	10	37	37	37
--	--	--	--	150	240	240
36	46	72	82	50	78	88
--	--	--	--	2	2	2
420	420	560	560	420	560	560
615	615	615	615	615	615	615
225	225	225	225	225	225	225
32	32	46	46	32	46	46
3/8"-F						
120	120	160	160	120	160	160
90	90	90	90	90	90	90
500	500	500	500	500	500	500
C11				C11		

ELECTRONIC SERIES MODELS FORCED VENTILATED			
FORCED FLOW AND VENTILATION			
K21FE	K28FE	K40FE	K55FE
2,4	3	4,3	5,3
2,2	2,7	3,8	4,6
88,5	88,0	88,3	85,0
1	1	1	1
0,25	0,32	0,46	0,56
0,189	0,237	0,339	0,418
0,186	0,233	0,334	0,412
230/50			
55	55	60	60
150	150	260	260
48	58	84	102
2	2	2	2
560	560	730	730
615	615	615	615
225	225	225	225
33	33	52	52
3/8"-F			
60	60	60	60
38	38	38	38
5000	5000	5000	3000
C13			

* Standard conditions

STAINLESS STEEL GAS FIRED CONVECTORS FROM 7 TO 8,2KW

KING WITH STAINLESS STEEL HEAT EXCHANGERS				
CE CERTIFICATE 0694BN4046		FORCED/ELECTRONIC FLOW		
		K70FE	K90FE	
RATED HEAT FLOW	kW (Hi)	7,2	8,2	
WORKING HEAT OUTPUT	kW (Hi)	6,8	7,7	
COMBUSTION EFFICIENCY *	%	93,7	93,3	
CATEGORY EFFICIENCY		1	1	
MAX FUEL CONSUMPTION (0°C-1013 mbar)	Natural Gas G20	m³/h	0,76	0,87
	LPG Butane G30	kg/h	0,568	0,647
	LPG Propane G31	kg/h	0,559	0,637
ELECTRICAL POWER SUPPLY	V	230		
	Hz	50		
ELECTRICAL POWER (absorbed)	W	85	85	
TREATED AMBIENT AIR FLOW	m³/h	470	470	
HEATED AMBIENT VOLUME	m³	154	174	
FAN SPEED NUMBER		2	2	
OVERALL DIMENSIONS	Width	mm	880	880
	Height	mm	710	710
	Depth	mm	330	330
WEIGHT	kg	44	44	
GAS FITTING DIAMETER	inc. (")	1/2" F		
AIR-FUME COAXIAL PIPE DIAMETERS	Air	mm	100	100
	Fumes	mm	60	60
AIR-FUME MAX LENGHT (Coaxial pipes)	mm	5000	5000	
TYPE OF EQUIPMENT		C13		

* Standard conditions

SV: Environment temperature air barrier



Le barriere d'aria "SV" permettono di creare barriere tra due spazi, esterno ed interno dell'ambiente, che hanno differenti temperature dell'aria.

Sono disponibili in **12 modelli**, con **portata aria da 6000 a 21000 m³/h**, per soddisfare tutte le scelte progettuali.

Il design modulare consente una facile installazione.

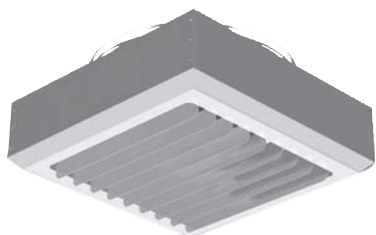
Le barriere d'aria **SV** limitano l'accesso d'aria fredda dall'esterno all'interno dell'ambiente e gli sbalzi di temperatura con conseguente **risparmio energetico del 30%**. Un altro vantaggio è l'effetto destratificante dell'aria ambiente che viene spostata dalla parte alta del capannone e convogliata verso il basso.

La resistente struttura di **SV** è costituita da: pannelli zincati e verniciati a polveri epossidiche, ventilatori con relativo cablaggio elettrico e griglia di protezione.

Optional: Regolatore di velocità a 5 gradini.

MODELLO		SV 14	SV 19	SV 21	SV 26	SV 28	SV 32	SV 35	SV 39	SV 42	SV 45	SV 49	SV 52
NUMERO DI MODULI	n°	2	3	3	4	4	5	5	6	6	7	7	7
PESO	kg	36	51	54	68	72	85	90	102	108	119	126	133
LARGHEZZA MODULI	m	0,7	0,65	0,7	0,65	0,7	0,65	0,7	0,65	0,7	0,65	0,7	0,75
LUNGHEZZA MODULI	m	1,4	1,95	2,1	2,6	2,8	3,25	3,5	3,9	4,2	4,55	4,9	5,25
ASSORBIMENTO	A	2,5	3,8	3,8	5	5	6,2	6,2	7,5	7,5	8,8	8,8	8,8
POTENZA	kW	0,5	0,75	0,75	1	1	1,25	1,25	1,5	1,5	1,75	1,75	1,75
ALIMENTAZIONE	V/Hz	230V / 50Hz											
FLUSSO ARIA	m ³ /h	6	9000	9000	12000	12000	15000	15000	18000	18000	21000	21000	21000
ALTEZZA DI POSA MAX	m	2,5 - 3	2,5 - 3,5	2,5 - 3,5	3 - 4,5	3 - 4,5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5

DS: Air Destratifier



The "DS" air destratifier can limit or solve the hot air stratification inside the industrial environments.

There are **4 models** available, with **airflow rates from 4400 to 8250 m³/h**, for the different project choices.

The use of the DS air destratifier allows to obtain an energy saving which can reach the 30%.

This product is composed by: a resistant structure made of painted with epoxy powders galvanized steel, an electric fan with the adequate flow rate and accident prevention support grill and the electrical wiring.

Optional:

- 5 step speed regulator
- differential thermostat contained in a PVC IP56 casing, complete of two air probes for ceiling and floor
- casing to draw the air from the upper part of the space where the air destratifier is intended to be installed.

MODEL		DS 400	DS 500	DS 600	DS 800
Airflow	m ³ /h	4400	5500	6050	8250
Height of installation	m	5 - 7	6 - 9	7 - 11	8 - 12
Power supply	V/Hz	230/50			
Electrical absorption	A	0,8	1,2	1,85	2,4
Electrical power	W	180	250	420	500
Dimensions L x H x P	mm	600	600	650	650
	mm	600	600	650	650
	mm	300	300	300	300
Weight	kg	12	13	15	17

FRESCO OK: Evaporative cooler



ZERO  **EMISSION**

ADVANTAGES

- ✓ **Competitive price**
- ✓ **It improves the worker health and the company productivity**
- ✓ **It keeps and stabilizes the environmental temperature protecting the perishable goods**
- ✓ **The air is exchanged up to 25 times per hour, improving the environmental hygiene and cleaning the air from bad smells, dusts, fumes and heat produced by machineries and production processes**
- ✓ **It cools and filters the environmental air**
- ✓ **It can be used only as ventilation when it is not so hot**
- ✓ **Noiseless**
- ✓ **Possibility to control more zones with different temperature**
- ✓ **Reduced energy costs**
- ✓ **Ecological product, no refrigerant gas used**
- ✓ **It can be used also as air extractor outwards**

The evaporative cooler "**FRESCO OK**" is a simple product, designed to cool the working environments of medium and big dimensions with low investments and reduced consumptions.

Thanks to this product the environment temperature is reduced, exchanged and filtered in large quantities.

It can be used in several sectors, industry, tertiary, commercial and farming.

It works on the basis of the air adiabatic saturation process.

The external air is sucked by a ventilator and goes through special cellulose alveolar panels. In this way the external air gives away part of its heat during the water evaporation process with the consequent drop of the temperature that goes out from the diffuser and cool the environment.

INSTALLATION

FRESCO OK can be easily installed outside the buildings to be cooled, on the roof, on the floor or on the wall. It needs electrical and hydraulic connections. For the distribution of the fresh air in the environment it can be connected to a duct equipped with a diffuser.



TECHNICAL FEATURES

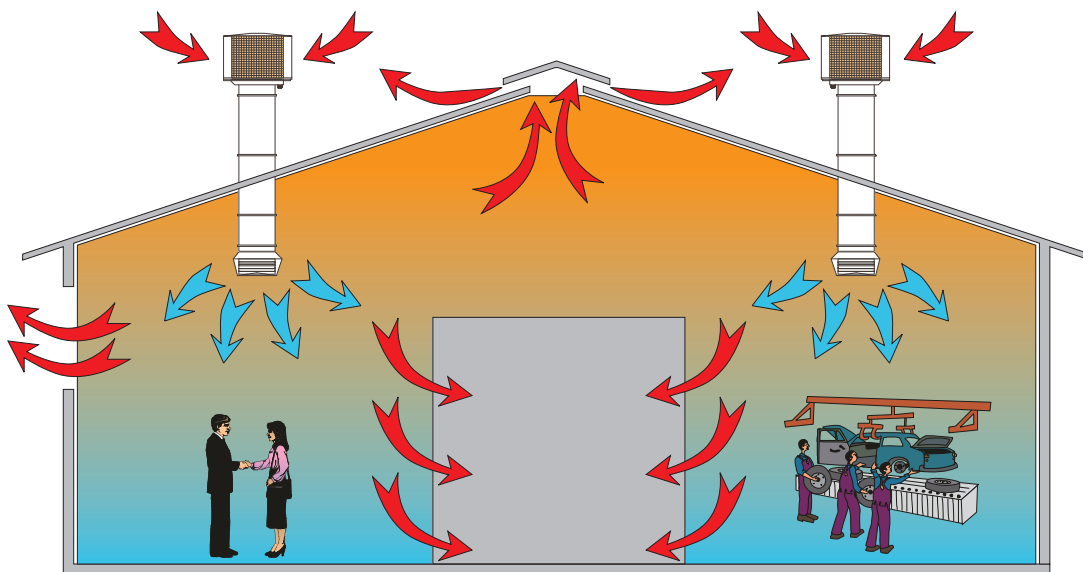
The external structure is ideal against the oxidation caused by bad weather conditions. Easy to be installed, this product is not so heavy and does not weigh down the roof.

The models are equipped with:

- Reversible low consumption electric fans with double function
- Hydraulic circuit with solenoid valve and level sensor
- Water distribution collectors with electric pump
- Cellulose alveolar panels with high saturation efficiency
- Automatic water discharge
- Periodic self-cleaning of the hydraulic circuit and the evaporating panels
- Brackets
- Control panel

MODELLI		FR 18	FR 30AP1 (1 velocità)
Air movement	m ³ /h	18.000	30.000
Type of fan		HELICAL	HELICAL
Electrical power supply	V/Hz	230/50	400/50
Electrical power	W	1.100	3.000
Average water consumption	l/h	10-15	20-30
Dimensions (LxPxH)	mm	1100 x 1100 x 950	1340 x 1340 x 1200
Empty-loaded weight	kg	78	110
Air outlet plenum (LxP)	mm	650 x 650	900 x 900

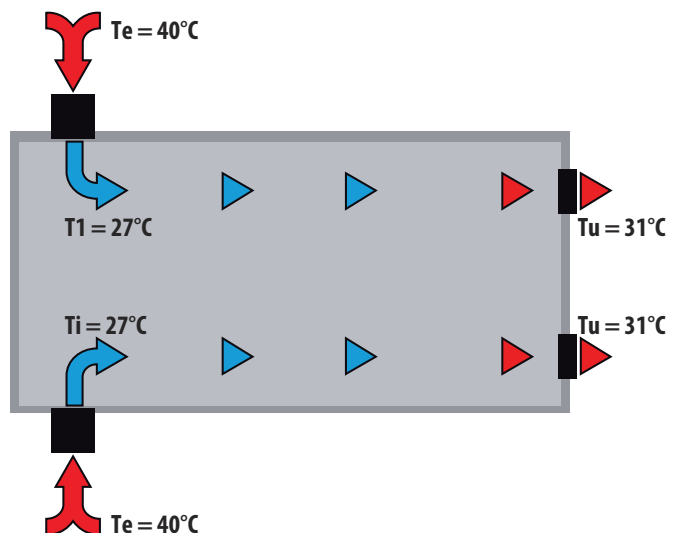
TEMPERATURE REDUCTION



Environment temperature °C	PERCENTAGE OF THE RELATIVE HUMIDITY %				
	30 %	40 %	50 %	60 %	70 %
30	19	21	23	24,5	26
35	22,5	25	27,5	29,5	31
40	26	29	31,5	33,5	35,5
45	30	32,5	35,5	38	40

APPLICATION FIELDS

- Ceramic industry
- Foundry and die-casting processes
- Textile industry
- Processes for plastic molding pressure
- Bookbinderies
- Stretched flexible structures
- Steel, aluminium, alloy production
- Warehouse and logistic points
- Farming
- Machine shops
- Chemical product production
- Industrial printing shops
- Industrial dyeing plants



ELECTRONIC CONTROL

All the vertical models are equipped with the new electronic control device that allows the automatic regulation of the temperature. Its features are as follows:

- From 20 to 100% settings of speed
- Timer up to 99 hours
- Adjustable cleaning cycles
- Digital display
- Automatic emptying at the end of the day
- Prewash: washes and moisturizes the filters before starting the fan
- It is provided also with the base functions of ventilation, cooling and extraction

Control panel for Fresco OK



Recommended in systems up to 4 coolers.

Control panel for Fresco OK - Code 13CEQU0034

Control of 1 cooler; low voltage supplied directly from the power board installed within the cooler.

Equipped with:

- Electronic humidity/temperature probe;
- Temperature setting timer;
- Humidity control;
- Water-draining system;
- Cleaning and drying of the cooling PAD;
- Setting and modulation of the air flowrate in cooling and ventilation mode.

Control panels SYS850 and SYS830:



Recommended in systems with more than 4 coolers.

SYS850 Base - Code 05CEQU2715

Conceived to manage up to 30 coolers, with 1 thermal zone per each cooler, i.e. 30 independent cooling zones.

SYS830 Base - Code 00CEQU2674

Conceived to manage up to 16 coolers, with 1 cooling zone per each cooler, i.e. 16 independent thermal zones.

Both the control panels are programmable in each zone with the following functions:

- Adjustable timer;
- Temperature control;
- Humidity control;
- Water-draining system;
- Cleaning and drying of the cooling PAD;
- Setting and modulation of the air flowrate in cooling and ventilation mode.



REFERENCES





THE RENEWABLE ENERGY OF SYSTEMA

**ENERGY SAVING
TO PRODUCE COOLING**

**ECOTECHNOLOGY
AND INNOVATION**

**GENERATE COOLING FROM
ANY HEAT SOURCE**

INNOVATION AND ENERGY-SAVING

The energy saving is increasingly important for humanity, with benefits for the environment's life, the economy, and for the investments made by the final customer.

The energy consumption for the air conditioning has now an important cost on the energy balance and in the management of a building.

Therefore, the selection of innovative technologies for the energy saving and the best choice of the energy source are today some of the main conditions to be observed during the design of the building.

The new proposals for what concerns the choice of the system and the energy to be used for the air conditioning are always more analytical, based on the initial investment and the costs of the average seasonal efficiency.

ADVANTAGES

1. **PACKAGE AND "SKID" versions**
2. **Use of clean energy produced by heat recovery**
3. **Respect of the environment, with ecological refrigerants**
4. **Continuous power modulation based on the thermal load through a "smart" control of an inverter**
5. **Strong reduction of the electricity demand**
6. **High efficiency**
7. **High reliability and low maintenance**
8. **Ease of installation with PACKAGE and "SKID" versions**
9. **Both indoor and outdoor installation**
10. **Low noise level and absence of vibrations**
11. **Profitable payback of the investments**
12. **Long product lifetime**

SYSTEMA ECO-ENERGY: PRODUCE COOLING FROM ANY HEAT SOURCE

For years our company has given to the market the opportunity of choosing an absorption system solution, manufactured according to the customer's requirements, compact, assembled with all the essential components, to work perfectly in the user's system. Our solution gives the customer the advantage of having just one supplier who guarantees operation, long life, all the spare parts and maintenance of the absorption chiller. This allows the customer to deal with just one partner who has experience and is qualified for the project engineer, for the user, or installer and just one party responsible for the absorption system, which ever more proves to be an outstanding engineering choice, always subject to correct dimensioning, management and maintenance.



Today Systema S.p.A. is the only company on the market capable of manufacturing, testing at its factory and delivering to the customer, in collaboration with its project engineer, this type of turnkey absorption system, configured to meet the different types of climate demands required by the user.

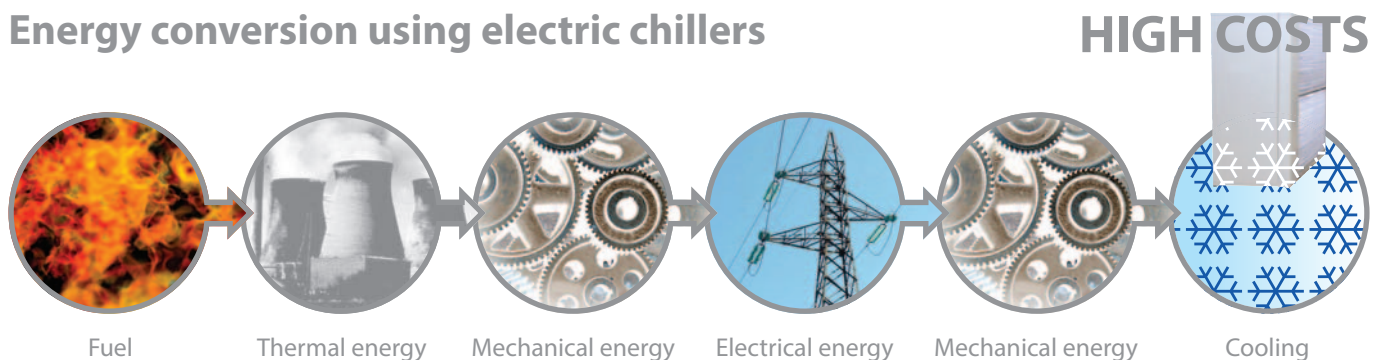
The high number of absorption systems installed by Systema S.p.A. in these years, the loyalty to the project engineers and companies, the constant supply to the same customers confirm the quality of this manufacturing choice and allows the acquisitions of new partners in Italy and abroad.

ECO-ADVANTAGES WHY IS SYSTEMA SYNONYM OF "ECO-ENERGY"?

Energy conversion through SYSTEMA's installations



Energy conversion using electric chillers



GENERATE COOLING FROM ANY HEAT SOURCE

Our references are the best proof of our experience!

Our know-how represents the solution for the project engineers, their customers and whoever wants to save energy!

ENERGY RECOVERY FROM: HOT WATER - OVERHEATED WATER - DIATHERMIC OIL

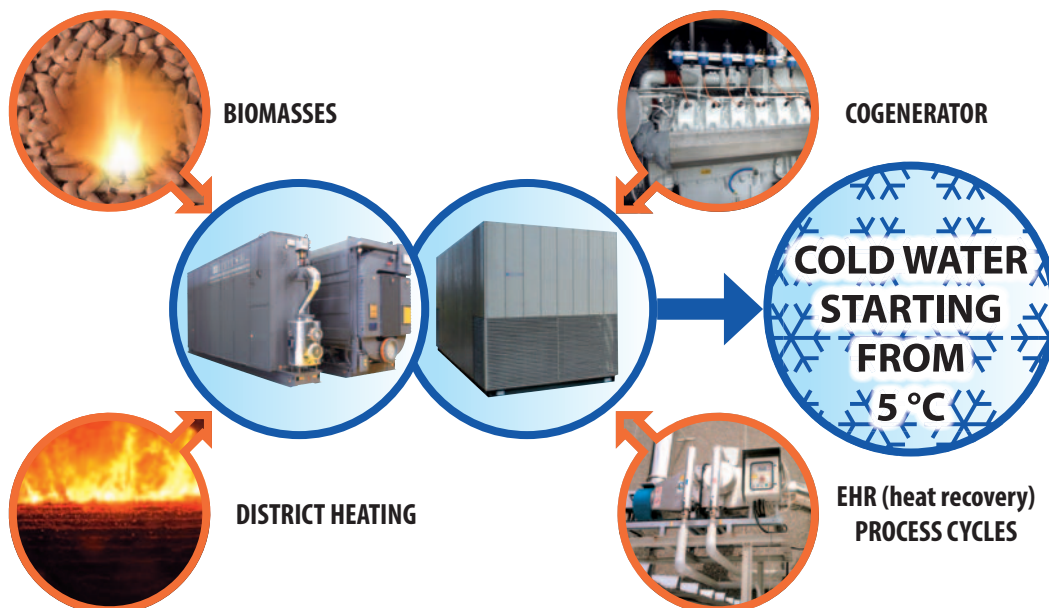
SUPPLY OF SINGLE EFFECT SYSTEMS:
HOT WATER AT 75~120°C

SUPPLY OF DOUBLE EFFECT SYSTEMS:
OVERHEATED WATER OR DIATHERMIC OIL
AT 140~200°C + BACKUP GAS BURNER

SOLAR COOLING WITH HOT WATER



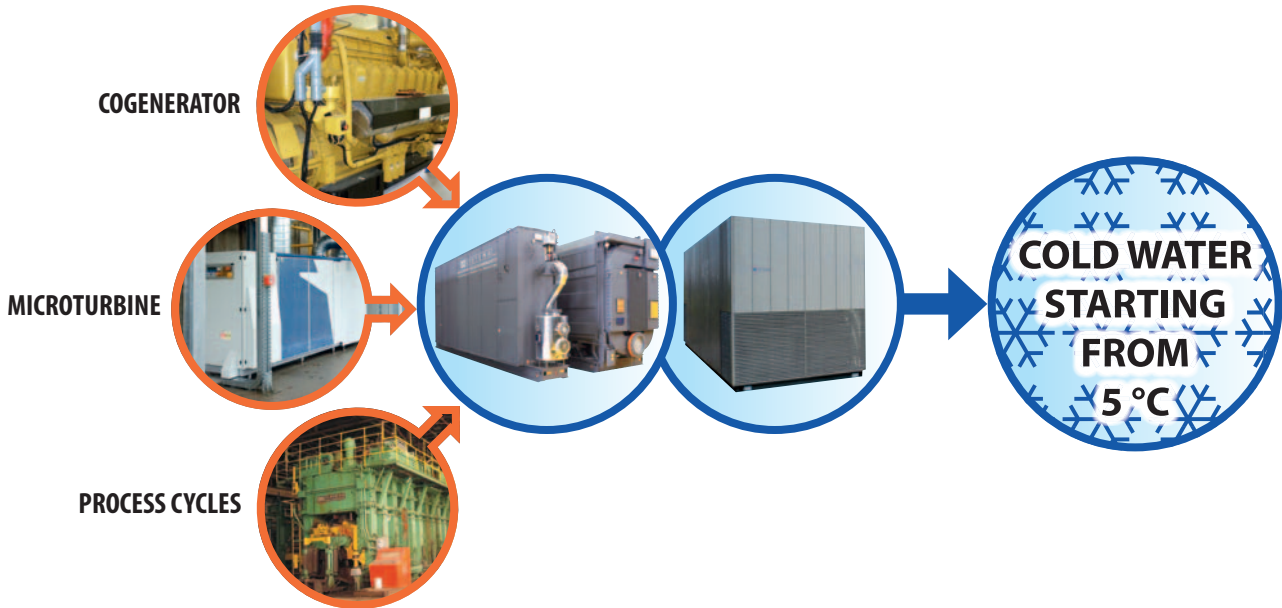
ENERGY RECOVERY FROM HOT WATER



ENERGY RECOVERY FROM: FUMES

SUPPLY OF SINGLE EFFECT SYSTEMS:
FUMES AT 230~350°C

SUPPLY OF DOUBLE EFFECT SYSTEMS:
FUMES ≥ 400°C + BACKUP GAS BURNER



ENERGY RECOVERY FROM: INDUSTRIAL STEAM

SUPPLY OF SINGLE EFFECT SYSTEMS:
STEAM ≤ 0,2 MPA

SUPPLY OF DOUBLE EFFECT SYSTEMS:
STEAM AT 0,3~0,9 MPA + BACKUP GAS BURNER



ENERGY CONVERSION FROM GAS

GAS



SINGLE EFFECT HOT WATER ABSORPTION CHILLERS "SKID" OR PACKAGE **11/930 kW**

HOT WATER models		SYDHL 11	SYDHL 23	SYDHL 35	SYDHL 58	SYDHL 115	SYDHL 175	SYDHH 233	SYDHH 350	SYDHH 470	SYDHH 580	SYDHH 700	SYDHH 810	SYDHH 930	
Cooling capacity	kW	11	23	35	58	115	175	233	350	470	580	700	810	930	
Hot Water	Flow rate	m ³ /h	2,9	5,8	8,6	14,3	28,5	42,8	25	37,5	50	62,5	75	87,5	100
	In/Out Temp.	°C	90 / 85						95 -> 85						
	In/Out Ø	mm	25	40	40	50	65	80	65	80	80	100	100	100	125
Cooled water	Flow rate	m ³ /h	2	4	6	10	20	30	40	60	80	100	120	140	160
	In/Out Temp.	°C	15 / 10 (12 / 7)						12 -> 7						
	In/Out Ø	mm	25	32	40	50	65	65	80	100	100	125	125	150	150
Cooling water	Flow rate	m ³ /h	5	10	15	25	50	75	75	112,5	150	187,5	225	262,5	300
	In/Out Temp.	°C	30						30 -> 36						
	In/Out Ø	mm	32	40	50	65	80	100	100	125	150	150	200	200	200
Dimensions	Width (W)	mm	1010	1010	1410	1800	2755	2305	3420	3460	3480	4000	4030	4737	4800
	Depth (D)	mm	785	785	785	920	970	1160	1360	1480	1655	1685	1780	1620	1790
	Height (H)	mm	1622	1622	1622	1820	1990	2280	2210	2290	2380	2540	2620	2700	2790
Electric features	Electric power	kW	0,15	0,3	0,3	0,3	0,37	0,9	2,8	2,8	2,8	2,8	3,2	3,2	3,2
	Power supply		3-phase/380V/50Hz												
Shipping weight	t	0,73	0,73	1,1	1,6	2,6	3,7	3,5	4,1	4,9	5,6	6,5	7,5	8,4	

DOUBLE EFFECT DIRECT FLAME ABSORPTION CHILLERS "SKID" OR PACKAGE **23/930 kW**

Direct Fire Models		SYZL 23	SYZL 35	SYZL 58	SYZL 115	SYZH 233	SYZH 350	SYZH 470	SYZH 580	SYZH 700	SYZH 810	SYZH 930	
Cooling capacity	kW	23	35	58	115	233	350	470	580	700	810	930	
Heating capacity	kW	23	35	58	115	198	291	395	488	582	686	779	
Natural Gas	Cool. Cons.	m ³ /h	2,5	3,7	5,8	11,5	14,7	22,1	29,4	36,8	44,1	51,5	58,8
	Heat. Cons.	m ³ /h	3	4,4	6,8	13,5	18,2	27,3	36,4	45,5	54,6	63,7	72,8
	Pressure	kPa	1,96 ~ 6,37				3,0-30	4,0-30	5,0-30	6,5-40	9,0-45	--	--
Cooled water	In/Out Temp.	°C	12/7				Cooled water 12-> 7						
	Flow rate	m ³ /h	4	6	10	20	40	60	80	100	120	140	160
	Pressure drop	kPa	30	30	40	50	55,4	55,7	55,4	85,1	85,4	52,3	52,3
	Inlet/Outlet Ø	mm	32	32	50	65	80	100	100	125	125	150	150
Electric features	Electric power	kW	1,8	3,2	5,2	7,2	3,2	3,4	3,6	3,6	4,6	4,6	5
	Power supply		3-phase/380V/50Hz										
Dimensions	Width (W)	mm	1600	1950	1950	5200	3420	3460	3480	4000	4030	4550	4750
	Depth (D)	mm	1600	1950	3000	2000	1900	1966	2080	2160	2265	2320	2410
	Height (H)	mm	2300	2300	2300	2300	1920	2030	2100	2100	2160	2160	2320
Shipping weight	t	0,85	1,5	2,2	3,5	3,7	5,2	6,6	8	9,3	10,6	11,9	

DOUBLE EFFECT FUMES ABSORPTION CHILLERS "SKID" OR PACKAGE **58/930 kW**

Fume models		SYEL 58	SYEL 115	SYEL 230	SYEL 350	SYEL 450	SYEH 580	SYEH 700	SYEH 810	SYEH 930	
Cooling capacity	kW	58	115	230	350	450	580	700	810	930	
Cooled water	Flow rate	m ³ /h	10	20	40	60	80	100	120	140	160
	In/Out Temp.	°C	12/7				Cooling 12 -> 7 / Heating 55 -> 60				
	Connection Ø	mm	50	65	80	100	125	--	125	150	150
Cooling water	Flow rate	m ³ /h	17,5	35	70	105	140	143	171	200	228
	In/Out Temp.	°C	32 / 37				30 -> 36				
	Connection Ø	mm	50	65	100	125	150	150	150	200	200
Fumes	Flow rate	kg/h	450	870	1698	2547	3396	4121	4945	5770	6593
	In/Out Temp.	°C	500 / 180				500 -> 170				
	Connection Ø	mm	120×250	180×250	250×400	350×550	350×600	450	500	500	550
Dimensions	Width (W)	mm	1450	1850	2700	2305	3150	2980	4030	4030	4030
	Depth (D)	mm	1150	1600	2100	2305	2305	2050	2055	2170	2280
	Height (H)	mm	1700	1900	2000	2280	2280	2100	2160	2180	2320
Electric features	Power supply		3 Phase 380V-50Hz								
	Electric power	kW	0,5	0,9	1,1	2,2	2,2	2,8	3,8	3,8	3,8
Shipping weight	t	2	2,9	4,7	6,7	8,5	7,7	9,1	10,4	10,6	

SINGLE EFFECT HOT WATER ABSORPTION CHILLERS "SKID" OR PACKAGE 1050/6980 kW

SYDHH 1050	SYDHH 1163	SYDHH 1450	SYDHH 1740	SYDHH 2040	SYDHH 2330	SYDHH 2620	SYDHH 2910	SYDHH 3490	SYDHH 4070	SYDHH 4650	SYDHH 5230	SYDHH 5820	SYDHH 6980
1050	1163	1450	1740	2040	2330	2620	2910	3490	4070	4650	5230	5820	6980
112,5	125	156,3	187,5	218,8	250	281,3	312,5	375	437,5	500	562,5	625	750
95 -> 85													
125	125	150	150	200	200	200	200	200	250	250	250	300	300
180	200	250	300	350	400	450	500	600	700	800	900	1000	1200
12 -> 7													
150	150	200	200	200	250	250	250	250	300	300	350	350	400
337,5	375	468,8	562,5	656,3	750	843,8	937,5	1125	1313	1500	1688	1875	2250
30 -> 36													
200	250	250	300	300	350	350	350	350	400	400	450	450	500
4850	4880	4920	5440	5460	6020	6060	6060	7100	7120	7150	8830	8830	8830
1980	2105	2210	2210	2420	2430	2630	3300	2720	2970	3120	3230	3300	3450
2865	2910	3050	3180	3320	3420	3540	3600	3790	3905	4010	4065	4100	4180
3,5	3,5	3,8	4,2	4,6	5,2	6,2	7,1	7,6	7,9	8,4	9,4	14,9	16,9
3-phase/380V/50Hz													
9,2	10,1	12,4	14,6	16,8	19	21,3	23,6	28	32,2	36,4	41	45,5	54,6

DOUBLE EFFECT DIRECT FLAME ABSORPTION CHILLERS "SKID" OR PACKAGE 1050/6980 kW

SYZH 1050	SYZH 1163	SYZH 1450	SYZH 1740	SYZH 2040	SYZH 2330	SYZH 2620	SYZH 2910	SYZH 3490	SYZH 4070	SYZH 4650	SYZH 5230	SYZH 5820	SYZH 6980
1050	1163	1450	1740	2040	2330	2620	2910	3490	4070	4650	5230	5820	6980
884	977	1221	1465	1710	1954	2198	2442	2931	3419	3908	4396	4885	5862
66,2	73,5	91,9	110	129	147	165	184	221	257	294	331	368	441
81,9	91	113,8	137	159	182	205	228	273	319	364	410	455	546
--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cooled water 12-> 7													
180	200	250	300	350	400	450	500	600	700	800	900	1000	1200
85,2	52,5	52,5	73,2	73	98,8	73,1	98,6	49,3	49,3	49,3	93,9	93,8	93,8
150	150	200	200	200	250	250	250	250	300	300	350	350	400
5,3	5,3	6,4	9,7	10,1	10,7	15,2	16,1	16,6	21,9	22,4	23,4	32,9	34,9
3-phase/380V/50Hz													
4250	4920	4960	5440	5500	6020	5560	6060	7080	7120	7150	8720	8750	8780
2530	2636	2710	2842	2900	3142	3277	3342	3567	3642	3767	4092	4270	4516
2480	2620	2640	2640	2920	3130	3320	3360	3380	3600	3810	3610	3840	3920
13,2	14,4	17,4	20,3	23,2	25,9	28,7	31,4	36,6	41,7	46,8	51,7	56,5	66

DOUBLE EFFECT FUMES ABSORPTION CHILLERS "SKID" OR PACKAGE 1050/6980 kW

SYEH 1050	SYEH 1163	SYEH 1450	SYEH 1740	SYEH 2040	SYEH 2330	SYEH 2620	SYEH 2910	SYEH 3490	SYEH 4070	SYEH 4650	SYEH 5230	SYEH 5820	SYEH 6980
1050	1163	1450	1740	2040	2330	2620	2910	3490	4070	4650	5230	5820	6980
180	200	250	300	350	400	450	500	600	700	800	900	1000	1200
Cooling 12 -> 7 / Heating 55 -> 60													
150	150	200	200	200	250	250	250	250	300	300	350	350	400
257	285	356	428	499	570	581	713	855	998	1140	1283	1425	1710
30 -> 36													
200	200	250	250	250	300	300	350	350	350	400	400	400	450
7418	8242	10302	12363	14422	16483	18544	20605	24725	28846	32966	37088	41208	49450
500 -> 170													
600	600	700	800	850	900	950	1000	1100	1200	1200	1400	1400	1500
4640	4640	4658	5740	5740	5770	5870	5920	6720	6720	6800	8900	9300	11230
2340	2520	2515	2580	2655	2810	2890	2975	3120	3530	4175	4240	4350	4580
2350	2438	2640	2640	2740	2890	3200	3360	3380	3600	3712	3740	3720	3745
3 Phase 380V-50Hz													
4,2	4,2	4,4	5,4	5,8	6,4	6,4	7,4	7,7	8,2	8,7	9,7	12,2	13,2
12,8	14,1	16,3	17,9	20,3	24,6	26,1	29,1	34	38,4	42,6	49,7	54,3	63,8







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