



CATALOG 2018



AMA GROUP

The AMA international group develops around AMA spa, founded in 1967 from an idea by Luciano Malavolti (still today president of the group) to ensure the availability of accessories and spare parts to agricultural and garden machinery.

With 11 production plants, 14 distribution branches in the main European countries, over 1,000 employees in 20 different countries and over 100 thousand items proposed, today the AMA group is able to supply components and equipment for the preparation and maintenance of slow-moving vehicles, agricultural and green care machinery.

AMA includes Ama Composites - based in Campogalliano (MO) - born in 2004 to bring the “soft touch” product: a composite material used mainly in the internal lining of the automotive field, in the

world of slow-moving vehicles. Ama Composites offers a wide range of high-tech plastic technologies of outstanding quality, able to meet the most diverse needs of international customers.

Ama Composites stands as a “full service provider” embracing the entire development process of a vehicle (or part of it) taking into consideration all the variables: from environmental to the most appropriate marketing tools, from economic and productive constraints to the ergonomics aspects, choices regarding materials and technologies.

Designed to meet the increasingly demanding environmental regulations in the field of sustainable development and living well-being for the Building & Construction sector, Ama Composites has structured the Ama Nanotech division designing and producing a

range of nanotechnological insulation in Aerogel - in roll or panel - and air-reflecting paints based on Aerogel.

From the constant research and development of new products for environmental wellbeing, Ama Composites presents the AmaTherm division - so called from the name of the conducting tissue fulcrum of the system-: conductive fabrics and radiant panels capable of producing a diffused and homogeneous heat on large surfaces.



AMATHERM. The heating where and when you want.

Getting the best comfort and well-being in the place where we live or work is, of course, one of our primary needs.

This is why Ama Composites created the AmaTherm division - named after the name of the conducting tissue fulcrum of the system - developing a series of electric radiant appliances to be installed on the wall, to be placed on the ceiling and radiant floor systems.

Using the AmaTherm technology, maximum comfort can be achieved with the least waste of electricity, by heating a room or a work area, room by room, independently and with maximum safety. No more waste and no more heating where it's not needed!!!

A socket is sufficient to connect the radiant panel to obtain a homogeneous heat and no stratification of the air.

In traditional heating systems, in fact, the hot air rises to the top of the room. In this way, if at ground level we have a temperature of 17 ° C in the upper part of the room we will have a temperature of 25 ° / 28 ° C. Thanks to the radiant panels with AmaTherm technology, the comfort temperature will be homogeneous and localized where needed. Furthermore, AmaTherm electric radiant heating does not generate noise and is electromagnetic free (DPCM 08/07/2003).

How does AmaTherm® Technology work?

By being able to effectively exploit the long wave of infrared radiation. Irradiation is a heat exchange system that uses infrared waves as a transfer vector. Infrared waves affect everything around them, exchanging thermal energy between opaque solid bodies.

The advantages of this principle are many.

First of all, the homogeneity of the heat distributed over the entire radiant surface which, thanks to the conductive AmaTherm® fabric, allows a highly performing thermal radiation.

With AmaTherm® there is a total absence of electromagnetic emissions.

Furthermore, unlike traditional heating systems, there is no stratification of the air in the upper part of the heated environment, thus avoiding unnecessary waste of energy and heat.

Lastly, the AmaTherm electric radiant systems - which are very easy to install and re-position at will without problems - are powered by non-binding stresses: therefore, working far below the wear tolerance of the material, the radiating elements ensure a complete absence of maintenance and can work continuously for many years.

AMATHERM[®] FABRIC

It is a conductive fabric - available in various heights of standard fabrics with different electrical characteristics - designed to realize electrical resistances capable of producing a diffuse and homogeneous heat on large surfaces. It is made up of a continuous conductive metal wire and glass fibers with continuous non-textured yarn.

It can be used for a large number of applications, from 12 to 400V and, maintaining its characteristics of electrical insulation, withstands temperatures up to 250°C. The particularity of the product is that it can be used as a component of composite material (e.g. – integrating heating for molds), or in fields such as aeolian or aeronautics. Generally, it can be used in all defreezing applications and in thin film resistance applications (about 0,5 mm thickness). To ensure maximum electrical insulation, the copper wire is polished with a polyester-imide base layer and

a second polyamide imide layer. This coating treatment also guarantees a high resistance to high temperatures to chemical agents.

AmaTherm[®] is able to offer electrical insulation up to + 200° C for continuous use. These features make AmaTherm[®] extremely suitable for use even in the most demanding applications. AmaTherm[®] can be supplied as a simple fabric or it can be coupled with different materials to meet the different application needs. It can be laminated with silicone rubbers, EPDM or with insulating fabrics, thermal insulation, glass, metal, wood, ceramic, etc. Currently, products made from AmaTherm[®] fabric are divided into two large families: applications for environmental heating and industrial applications.

Among the products for industrial applications you will find:

- **RD panel for spray booths:** endothermic systems for drying car paint.
- **HT technology:** large panels for drying paint on leather, wood and other materials.

Panels for processing paper, drying food products, panels for cooking food.

Among the products for environmental heating you will find:

- **Thermo Cè, Thermo C-** - wall radiant panels,
- **J.E.S.S.** – floor heating system,
- **Black Sun** - radiant panels for rooms with very high ceilings, very open areas, points of passage to the outside,
- **Quadrotto** - the ceiling radiant panel (square panel),
- **Heating platforms** for work stations.

AMATHERM® PRODUCTS POSITIONING TABLE

APPLICATION	BLACK SUN	J.E.S.S.	PEDANE RISCALDANTI	QUADROTTO	THERMO C-	THERMO CÈ
Floor		X	X			
Wall					X	X
Ceiling	X	X*		X		

**Special application for outdoor living coupled with a ceiling curtain in a veranda*



Thermo Cè. IT HEATS, IT DECORATES, IT SAVES.

Con **Thermo Cè** today it is possible to obtain maximum comfort with the least waste of electricity, heating a home or a work place, room by room, independently and with maximum safety.

A socket is sufficient to connect the radiant panel to obtain a homogeneous heat and no stratification of the air. No more waste and no more where it's not needed!!! And all this with a further added value: to improve the design of homes, studios, offices, etc. The Thermo Cè radiant panel is characterized by a modern and elegant line.

The modularity and simplicity of use are such as to satisfy any technical-architectural need: homes, offices, hotels, schools, public places, libraries, canteens, beauty centers, etc.

Thanks to the AmaTherm® conductive fabric, designed to create electrical resistances capable of producing a diffused and homogeneous heat on large Thermo Cè surfaces, guaranteeing very low consumption and a high level of safety. The ideal product is to be installed in new buildings or under renovation or to integrate existing systems. Its smallest thickness, ease of installation, the absolute absence of electromagnetic emissions and any kind of maintenance, together with a surprising yield, make Thermo Cè an absolute must-have.

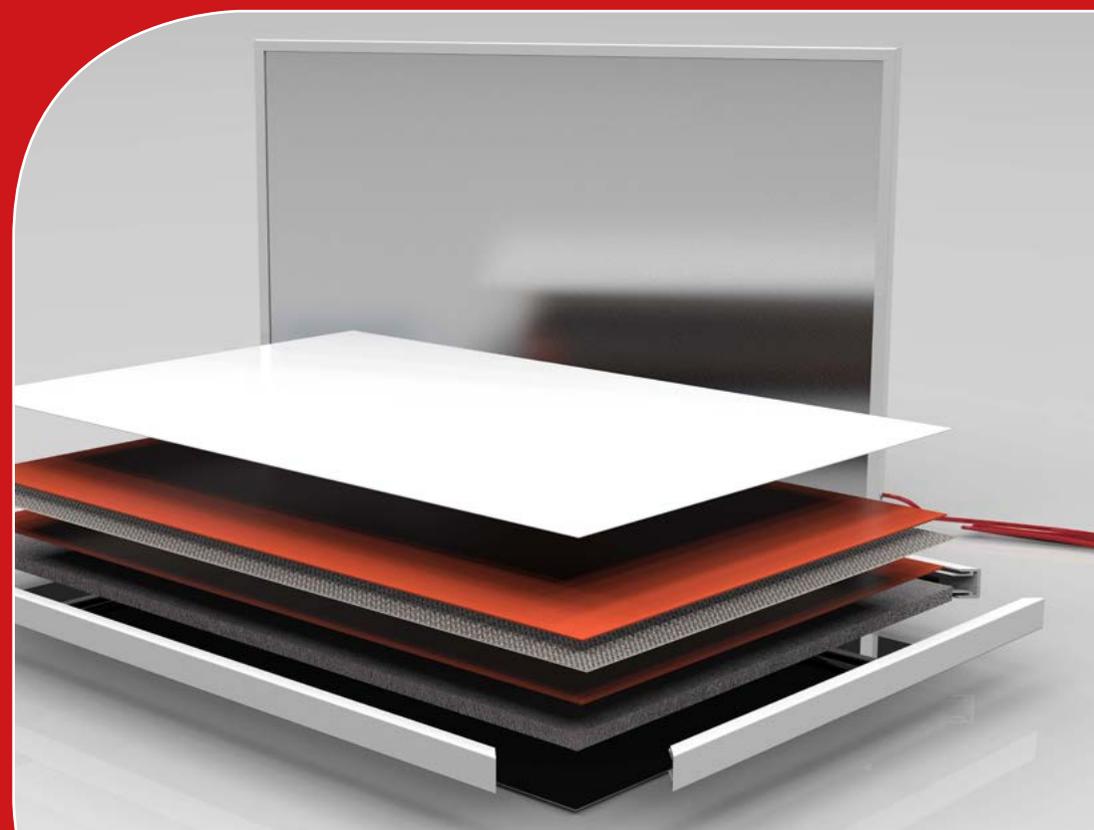
Thermo Cè panels are available with 300 Watt and 600Watt power depending on the two different sizes and all operate at 230Volt - 50 Hz.

MODELE	FEATURES				ACCESSORIES		HEATING AREA (sqm)	
	Dimensions cm	Thickness cm	Weight Kg	Power W	Cable and Plug	Thermostat	da*	a**
THERMO CE 013 Normal	30,6x100,6	2,7	2,5	300	Yes	No	3,5	10
THERMO CE 016 Normal	100,6x57,6	2,7	4	600	Yes	No	7	20
THERMO CE 013 Touch	33,2x100,6	2,7	2,5	300	Yes	Si	3,5	10
THERMO CE 016 Touch	100,6x57,6	2,7	4	600	Yes	Si	7	20

* Heating surface referred to a newly built building, equipped with good insulation according to the law ex 10/91 Housing located in the Pianura Padana area with an external design temperature of -5 ° C.

** Building CASACLIMA type class A / It is recommended not to cover the radiant surface of the panel to not affect the performance

Thermo Cè is made with a silver anodised aluminum edge and the white radiant surface (RAL 9010), and, can be positioned vertically or horizontally thanks to the practical fixing holes in the back side. Thermo Cè can be supplied in the “Touch” version, equipped with a latest generation digital thermostat mounted on the panel and a cable for connection to the mains or only with a connection cable: in this last case the panels can be managed by a common thermostat or chronothermostat available on the market.





THERMO C- . IT HEATS, IT DECORATES, IT SAVES.

With Thermo C- today you can achieve maximum comfort with the least waste of electricity, heating a home or a work place, room by room, independently and with maximum safety.

A socket is sufficient to connect the radiant panel to obtain a homogeneous heat and no stratification of the air. No more waste and no more heating where it's not needed!!! And all this with a further added value: to improve the design of homes, studios, offices, etc.

The Thermo C-radiant panel is characterized by a modern and elegant line.

The modularity and simplicity of use are such as to satisfy any technical-architectural requirement: homes, offices, hotels, schools, public places, libraries, dining halls, beauty centers, etc.

Thanks to the AmaTherm® conductive fabric, designed to create electrical resistances capable of producing a diffused and homogeneous heat on large Thermo Cè surfaces, guaranteeing very low consumption and a high level of safety.

The ideal product is to be installed in new buildings or under renovation or to integrate existing systems. Its smallest thickness, ease of installation, the absolute absence of electromagnetic emissions and any kind of maintenance, together with a surprising yield, make Thermo Cè an absolute must-have.

Thermo C- is available in 2 different finishes (Dark, White) and LED backlighting (with independent ON / OFF management) that diffuses a pleasant courtesy light.

MODEL	FEATURES				HEATING AREA (sqm)	
	Dimensions cm	Thickness cm	Weight Kg	Power W	from*	to**
THERMO C- 013	42x106,5	4	8	300	3,5	10
THERMO C- 016	112x63	4	16	600	7	20

* Heating area referred to a newly built building, equipped with good insulation according to the law ex 10/91 Home located in the Pianura Padana (lowland) area with an external design temperature of -5 ° C.

** Building CASACLIMA type in A class

In its subtle profile there is a practical and innovative “Touch” digital thermostat that allows you to regulate the desired temperature, a room probe and an internal probe guarantee comfort and safety.

The electronic control card is prepared for Fil Pilote management. An optional towel rail can be applied in case Thermo C- is used in the bathroom to replace or supplement the existing system.

The practical handle accessory can be positioned at will along the profile of the panel at the desired height.

It can be positioned vertically or horizontally thanks to the practical fixing holes in the back.





J.E.S.S. THE COMFORT YOU WISH THE MOST

JESS - Joule Electric Stripes System - is an innovative floor heating system, low consumption, able to ensure a high degree of environmental comfort in total autonomy: it is powered by a simple electric line!

With JESS - thanks to its ease of installation and use - it will be possible to heat not only our apartments, but shops, warehouses, public places until you reach the industrial warehouses. Moreover, this electric heating membrane is ideal for preventing the deposition of snow and ice on sidewalks, on docks, on access ramps to garages and on the roofs of buildings and factories.

By heating by irradiation JESS produces a natural heat and, not acting by convection and not causing air movements, eliminates the circulation of dust and mites.

A JESS radiant system does not need large thicknesses and can also be installed on an existing floor.

The JESS kit is composed of heating electric membranes of different length combined with toroidal transformers with varying powers depending on the energy needs of the area to be heated.

The heating membranes, laid on a layer of insulating material (not supplied in the kit), guarantee uniformity in heat distribution, speed in set-up and, above all, comfort and safety.

MODEL	FEATURES				HEATING AREA FROM/TO* (sqm)
	Length mt.	Watt	Power W/sqm	Volt	
JESS 20 L	20	280	35	12	4-10
		420	55	15	
		600	75	18	
JESS 30 L	30	440	35	18	6-12
		660	55	23	
		900	75	27	
JESS 40 L	40	560	35	24	8-20
		880	55	31	
		1200	75	36	
JESS 50 L	50	700	35	30	10-30
		1100	55	39	
		1500	75	45	

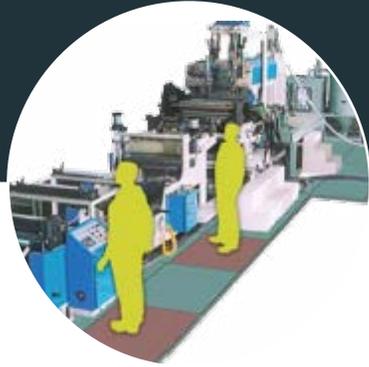
Composition of the JESS KIT: box to be walled to house the supply plate, supply plate with transformer (3 power levels), electronic board and heating membrane (room thermostat not included in the kit).

*** The heating area varies according to the degree of insulation of the building and the external design temperature.*

The JESS heating membrane consists of an aluminum conductive fabric coupled with several reinforcements, all protected by a polyester film.

The current circulates in the fabric and, due to the “joule” effect, is transformed into thermal energy. The membrane heats up and, by thermal conduction, releases the heat to the screed in which it is immersed.





HEATING PLATFORMS. For indoor and outdoor.

The Amatherm® heating platforms - through the production of electric heat radiation - are used wherever there is a need to heat the staging area, such as small offices or fixed workstations, without forgetting parking areas for small pets.

Thanks to the radiant platforms with Amatherm® technology, the comfort temperature will be localized only where it is needed. The heating platforms, in fact, have been designed to spread the heat upwards homogeneously and prevent the dispersion downwards, minimizing the loss of heat and allowing you to heat up cold places.

The platform is made of iron, powder coated painting, is available in black with fluorescent orange rim and comes complete with armored cable and Schuko plug. The thickness of the heating platforms is about 30mm.

The temperature of each heating platform is adjusted by a power adjuster incorporated on the plug body.

DIMENSIONS	cm 75x96x3
WEIGHT	23 kg
ELECTRIC POWER	from 160 to 200 W
POWER SUPPLY VOLTAGE	230V
SURFACE TEMPERATURE	from 40 to 50°C





CEILING SQUARE PANEL (QUADROTTO)

The Quadrotto electric radiant panel is the ideal solution for those who need to create a heating system in a false ceiling space with 60 x 60 modules.

With an absorption of only 250 watts, it reaches a surface temperature of 90° C and heats the area below.

Quadrotto is an electric radiant false-ceiling panel. It integrates perfectly into the false ceiling structure and allows to heat in a comfortable, silent and without generating stale air flows in the environment.

The panel is easy to assemble and can be moved quickly, it is unbeatable when it is necessary to adapt the heating system to a new arrangement of the desks and spaces inside an office.

Quadrotto can be connected to any available room thermostat on the market.

DIMENSIONS	cm 59,5x59,5x2,5
WEIGHT	2,5 kg
COLOR	White RAL9010
ELECTRIC POWER	250 W
POWER SUPPLY VOLTAGE	230V - 50 Hz
PROTECTION DEGREE	Class II - IP40
EQUIVALENT THERMAL EMISSION	529 kcal/h
SURFACE TEMPERATURE	90°C (average)

Average installation height from 2 to 4 meters.





BLACK SUN. THE HEAT OF THE SUN WHEN YOU WANT, WHERE YOU WANT.

The Black Sun TS200 series radiant panel is an environmental heating device characterized by high temperatures and high efficiency. The modularity and simplicity of use of the product are such as to satisfy any type of technical need.

Black Sun is ideal for heating rooms with very high ceilings, very open areas, points of passage to the outside: thanks to the high surface temperatures Black Sun allows to transmit highly concentrated thermal energy in specific areas thus creating real “heating islands”. Black Sun guarantees wellbeing and heating thanks to the principle of direct radiation, such as the sun.

Thanks to its great efficiency, it is possible to concentrate the heat in the desired areas only with considerable energy savings.

The Black Sun line has been designed to create “heat islands” and provides for the use of TS200 panels in a minimum configuration of 3 radiating elements and power unit for a power of 6.5 KW up to the maximum configuration of 14 radiating elements and control unit, for a power of 28 KW.

It is necessary to consider a further variable: the laying height of the panels.

The radiant elements reach a surface temperature of 390 ° C and can be installed above 5 meters in height or reach a temperature of 290 ° C and can be positioned below 5 meters in height. Available in different KITS for every need.

Kit Type	Electrical box	N. Panels three-phase power supply	Steady state power (kW)	Thickness cm	Temperature Max °C	Heating area
KIT-TS200/03	CE260N	3	400V	6,5	390°	100 mq (A)
KIT-TS200/04	CE260N	4	400V	6,5	290°	100 mq (B)
KIT-TS200/06	CE540N	6	400V	14	390°	200 mq (A)
KIT-TS200/07	CE540N	7	400V	14	290°	200 mq (B)
KIT-TS200/12	CE540P	12	400V	28	390°	400 mq (A)
KIT-TS200/14	CE540P	14	400V	28	290°	400 mq (B)

How to maximize the positive effects of Black Sun?

- Steady air in the place of installation.
- Position of the panels as close as possible to the area to be conditioned.
- Power adequate to the size of the area to be heated, at least 300W / sqm.

Centralized management of the Black Sun heat islands is possible. The management consists of a software installed on a company PC that, connected to the various control units, is able to program and record all the data necessary for the intelligent management of the system.

DIMENSIONS	cm 20x200x6
WEIGHT	6 kg
ELECTRIC POWER	from 1,6 to 2,2 kW
POWER SUPPLY VOLTAGE	from 70V to 90V
PROTECTION DEGREE	Class II - IP20
TEMPERATURA SUPERFICIALE	from 290 to 390 °C *

** the surface temperature of the panels varies depending on the configuration of the Black Sun Kit*

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