radiant ceiling panels
The sun does not heat up the air; air temperature at the height of 9,000 meters is less than -50°C. The air is heated through contact or convection with the surface of the earth, heated by the sun through irradiation. In the same way, using Messana ceiling system:

• Depending on the season, the ceiling works to absorb or release heat from/unto people, structures, and furnishings in the environment;
• The environment’s air is heated or cooled down by convection or contact with the irradiated surfaces and at a different temperature.

The advantages are:

• heating, cooling, ventilation and photovoltaic-absorption integrated into one single product
• energy-efficiency and savings
• greater comfort
• no maintenance
• natural, high-quality materials
• custom aesthetic and architectural freedom.
10,000 m² of Vega Office radiant ceilings for the humid continental climate of Beijing.

Tsinghua University, Faculty of Architecture in Beijing - China
Arch. Mario Cucinella
The Vega Office chilled ceiling is an elegant and practical solution. The load-bearing exposed structure has variable width and can accommodate vents, lamps, and sensors, in addition to serving as a base for the move-able walls. Even the swing down panels are connected to the structure. The dimensions, surface finishes and perforations are customizable to suit the room.
Summer and winter thermal capacity in accordance with the standard EN 14240 and EN 14037

Cooling capacity in accordance with EN 14240
Specific cooling capacity on field application (max +11%)

Heating capacity in accordance with EN 14037
Specific heating capacity on field application (max +18%)

The radiant panels installation follow a detailed project.

The capacity of radiant sails are higher than those of a radiant ceiling because of the greater convective effect.

Tsinghua University, Faculty of Architecture in Beijing - China
Arch. Mario Cucinella
Radiant islands, in comparison to continuous ceilings, create movement in open spaces.

Tsinghua University, Faculty of Architecture in Beijing - China
Arch. Mario Cucinella
The Vega Radial trapezoidal panels follow the round facade of the building.

Le Meridiane, Lecco - Italy Arch. Renzo Piano
On the round facades make use of Vega Radial high-performance radiant panels which provide easy access to the ceiling void.

It is possible to combine metal and plasterboard radiant ceilings in the same room in order to obtain the desired aesthetic effect.
The Vega radiant metal ceilings facilitate a strong integration with other technical components such as suspended or recessed lights, air diffusers and different kind of sensors.
Comfort means physical and mental wellbeing. A comfortable office is an ‘ideal’ place to work and be more productive.

Hygrothermal stability is essential for the consistency of production in laboratories with precision machinery. Integrating thermoregulation in a larger building automation system capable of controlling also lighting, sun protection, security, fire protection, information technology, and communications, accessible from any device, allows you to get the best from your building.

The thermoregulatory system is the brain of the climate system and provides the ideal temperature, humidity and air quality every day. It also optimizes energy consumption by taking consideration factors such as system inertia, outside temperature, and the exposure of rooms. Integrating thermoregulation in a larger building automation system capable of controlling also lighting, sun protection, security, fire protection, information technology, and communications, accessible from any device, allows you to get the best from your building.
Vega Office chilled ceilings are enjoying something of a boom at the moment thanks to growing awareness among end users of the low ownership costs and aesthetic benefits. This technology is the most space efficient and environmentally friendly method of cooling a building. As well as cutting energy consumption, they improve comfort levels by reducing draughts and cut out the obtrusive noise and aesthetic problems associated with more ‘obvious’ services such as mechanical ventilation and conventional air conditioning systems.
The Vega Executive system is composed of large square or rectangular panels surrounded by the bearing structure. This radiant ceiling is suitable for large areas such as lobby, exhibition or meeting halls. As with all Vega series systems, the panels of the opening system swing down to allow full access to the ceiling void.

The radiant ceilings naturally compensate for the solar irradiation in buildings with glass facades.

The size of the radiant panels and bearing structures vary according to the facade module.
The surfaces of workplaces are usually made with hard and durable materials for easy cleaning and maintenance. This means that they reflect the sound. The sound absorption factor of the false ceiling is very important in achieving good acoustic comfort. The Messana radiant panels can be perforated in design with open percentages and hole size on request. Furthermore, the panels can be equipped with high-performance acoustic veils and high-density acoustic insulation.

Values refer to a steel Vega Executive radiant ceiling with 2.5 mm hole size, 16% open area, 400 mm cavity, insulated with nonwoven polyester fiber thickness 20 mm density 20 kg/m³.
The Kappa system is characterized by the totally or partially hidden bearing structure placed above the ceiling panels. The panels are attached to the structure with harmonic steel springs that allow easy opening of the ceiling panels and complete inspection. Depending on the destination, technical requirements and the desired aesthetic finish, several variants are available.

Michele De Lucchi, with Angelo Micheli, Giovanni Battista Mercurio and Laura Parolin - Interior of Fondazione Carive, Fondazione Venezia, Dorsoduro, Venezia - Italy
Ph. Mario Carrieri
The active or passive chilled beams provide an effective integration of power in areas with high heat loads. Moreover, using fluids at the same temperature of the radiant ceiling means they will also share the water supply.
The movable walls can be freely positioned because the panels are anchored to the bearing structure from below and cannot be lifted.

Bologna Unindustria headquarter, Bologna - Italy
25 | The radiant ceilings can be made with custom paints and surface finishes.

26 | The shadow gap between the panels of the Kappa Office ceiling is variable between 1 and 5 mm.
The Kappa Plafone execution uses panels of varying size that can be mounted individually or combined to create islands or designs at will. The panel is below the plane of the upper ceiling and is connected with elastic springs to the hidden bearing structure.

The combination of monolithic plasterboard ceilings and the metal panel Kappa Plafone allows for the creation of ceiling zones, easily accessible for inspection and maintenance.
The maintenance of the plants inside the false ceiling can be done while the system is running.

More natural light with high reflection coating improves comfort and reduces energy consumption.
31 | The bearing structure, brackets and bracings of Kappa Hospital radiant ceilings are tested to minimize the impact of the seismic action.

32 - 33 | The radiant ceilings can include binaries for the lifting and physiotherapy of patients, or lanes for suspension of medical instrumentation.
Kappa Hospital radiant ceilings have been modified and adapted to meet the needs of healthcare sector installations. The main aspects that have been improved are:

**Hygiene** • The entire Kappa Hospital ceiling is dustproof. Furthermore, the post antibacterial coating of the panels increases the level of environmental health. The panels can be cleaned with warm water or non-abrasive detergent without altering the bactericidal effect.

**Safety** • with the appropriate brackets, false ceilings are safe from potential damage caused by seismic action which could otherwise render buildings temporarily non-operational. Moreover, the panels have springs coupled with restraint and safety locks to prevent the fall of the panel, even in the opening phase.

**Maintenance** • the panels are locked to the bearing structure and can be cleaned from the floor without being lifted off or becoming un-hooked from the structure. During inspections, panels will hang open on self-supported by coated steel cables. When closed the self-centering clues always guarantee a perfect alignment.
Messana QMn radiant ceiling is a Clip-in solution with concealed grid. This cost-efficient system makes it possible to obtain a partial inspection of the ceiling void. The appearance of the radiant ceiling can be customized with the insertion of a shadow gap between panel and panel (10 mm) or with design perforations.
The radiant panels can be integrated into a plasterboard ceiling or a metal ceiling of any kind.

In educational buildings, radiant ceilings are often the only surfaces capable of noise absorption.

School, Torbole - Italy
40 - 41 | The installation height of the radiant ceiling has little effect on the thermal capacity.

42 | The construction of radiant islands facilitates the hiding and integration of other plant systems.

Winter Olympics press
Headquarters, Turin - Italy
Using model QMv 248, it is possible to construct an airtight radiant ceiling at pressures of up to 50 Pascal. To ensure a perfect seal over time, a semi-permanent adhesive seal is laid on the T-bar and a plasterboard panel is placed above the radiant panel as a counterweight.

The Messana QMv radiant ceiling is installed on T-bar structures width 24 mm. The modularity of the structure is dependent on the pitch (600/625 mm) and can support panels’ length from 600 to 1,800 mm. The radiant panels can be smooth or perforated according to the need.
The Modul M cooling element can be laid in every steel ceiling panel both to activate an existing one or for a new installation. The contact between the two metal sheets of the system is guaranteed by magnetic strips placed above the Modul M.
Summer and winter thermal capacity in accordance with the standard EN 14240 and EN 14037

Independent island ceiling panels

Piano M radiant ceiling is formed by large self-supporting panels. The suspended installation creates a multilayer ceiling in which the upper part can be a plasterboard ceiling or the bare ceiling itself.
Values refer to a steel Piano M radiant ceiling with 1.8 mm hole size, 20% open area, suspended at 400 mm from the ceiling, insulated with acoustic fleece thickness 0.27 mm d. 230 kg/m³ and non-woven polyester fiber thickness 4 cm density 30 kg/m³.

Piano M

Piano M Acoustic
There is no visible difference between a radiant GKM 500 ceiling and a common plasterboard ceiling.

With the GKM 500 cooling elements the temperature can be set differently in every room.

The GKM 500 cooling elements are completely independent from the bearing structure and the plasterboard finishing. They consist of an aluminum panel activated with a copper pipe heat exchanger, insulated in the upper part. GKM 500 panels are connected together with push-fitting flexible hoses which guarantee a perfect seal over time.
The radiant panels inserted between the beams, in addition to cooling and heating the room, cancel the upwards heating loss thanks to the insulation applied on the top of the panel.

The GKM 500 cooling elements can be inserted between the ceiling beams. The width of the panel can be modified if necessary to the different pitches.
With GKM 500 cooling elements you can build independent radiant islands that improve the comfort and the acoustic performance of the room.

The radiant islands can be tailored to a desired shape and size, and can accommodate lights, speakers or other technical accessories.

The GKM cooling elements are available with different insulating materials according to the needs of each installation. As an alternative to the standard polystyrene insulation there are acoustic solutions with non-woven polyester fiber or glass fiber insulations with double aluminum veil and fire reaction A1.
The capacity of a radiant ceiling depends on the percentage of active surface; that is to say, the surface of the ceiling which is covered by GKM modules. The active surface area does not correspond to the entire ceiling surface, thus it is possible to dispose freely of the GKM models in order to leave free space for other equipment. Another component that influences the performance is the thermal resistance of plasterboard that is used as coating. The GKM Plus version uses plasterboard products specifically designed for radiant ceilings that can increase performance by up to +10 / 15%.

GKM panels are supplied ready for installation, complete with thermal and acoustic insulation. Depending on requirements, it is possible to choose between different materials such as polystyrene, polyester fiber coupled with non-woven acoustic fleece, or glass fiber coated with aluminium foil for the class A1 of fire reaction.
The use of the GKM cooling elements does not change the normal operations of laying, jointing and sanding of plasterboard sheets that are performed as per the manufacturer's instructions.

The layout of the GKM cooling elements is extremely flexible and does not interfere or restrict the installation and positioning of the other technical equipment in the ceiling.
In environments that require a high sound absorption coefficient, you can use the GKM Acoustic cooling elements in conjunction with any kind of perforated plasterboard. Also, the GKM Acoustic cooling elements are perforated with an open area of 20% as not to obstruct the holes in the plasterboard panels and nullify the sound absorption. The radiant modules are painted black and are not visible through the holes.
Values refer to a radiant ceiling GKM Acoustic coated with regular perforated plasterboard 6 mm, open area 9%, cavity 300 mm, acoustic fleece thickness 0.27 mm d. 230 kg/m² and non-woven polyester fiber thickness 30 mm d. 30 kg/m².
The radiant ceilings Dekor M are available with various wooden choices and perforations.

Even with the radiant wooden ceilings you can keep the access of the ceiling void.

Dekor M is a cooling element for radiant panels veneered with natural wood. With this system you get a sophisticated ceiling with excellent acoustic performance combined with a good class of fire reaction.
Have chosen Messana ceiling system

HEALTH FACILITIES
Ospedale Bellaria - San Lazzaro di Savena
Ospedale Maggiore - Bologna
Ospedale Maggiore - Parma
Ospedale Santa Maria delle Croci, DEA - Ravenna
Ospedale Civile Pietro Cosma - Camposampiero
Ospedale Le Molinette - Torino
R.S.A. Il Trifoglio - Torino
Casa di cura Santa Maria de’ Zairo - Zero Branco Casa di cura “Città di Lecce Hospital”
Ospedale Civile - Ragusa
Ospedale San Luca / Apuanie - Lucca e Massa Centro riabilitazione St. Pierre - St.Pierre Aosta Ospedale S. Maria Regina degli Angeli - Adria Ospedale S. Maria dei Battuti - San Vito al Tagliamento