GK Top PSN

Radiant Systems

Metal panels for suspended radiant ceilings

Datasheet
1037EN 12/2020

Panels GK Top PSN are designed for installation of suspended ceiling heating and cooling radiant systems for laying in hospitals and buildings with specific hygienic requirements.
The panels present a concealed structure and are fitted with springs to special C-shaped carrying elements.
The neoprenic gasket fitted between the panel and the carrying element limits the exchange of aeriform agents between the plenum and the room.
GK Top PSN panels are made by a galvanized steel sheet post-varnished through a special nanotechnological treatment, a cutting-edge ecofriendly procedure that is VOC-free. The panels feature a smooth finish.
Upon request: certified antimicrobial varnish and special coating tested for chemical-agent corrosion.
The thermal activation includes 4 anodized aluminum diffusers 75 mm wide and factory-glued to the panel, and a Ø 12mm copper pipe.
The thermal insulation can be provided using a K820 thermoacoustic pad.
The variety of panel profiles makes the system modular and flexible; inactive panels, with no hydraulic circuits, complete the radiant surfaces when combined to the adjoining structural elements and accessories (lights, diffusers and air diffusers).

Versions and product codes

SERIES	PRODUCT CODE	PANEL FINISH	COLOR	TYPE	ACTIVATION	MODULE DIMENSIONS [mm]	PANEL DIMENSIONS [mm]	EMPTY WEIGHT [kg]
GK Top PSN	K60LNX501	Smooth	White RAL 9010	Inactive	-	600 x 1200	596 x 1196	4,9
	K60LCNX501	Smooth	White RAL 9010	Active	Type C75 4 diffusers	600 x 1200	596 x 1196	8,3

NOTE. Dimensions and color are customizable based on the technical and architectural requirements of the system.
NOTE. Antibacterial varnish available on request.

GIACOMINI WATER E-MOTION

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Technical data

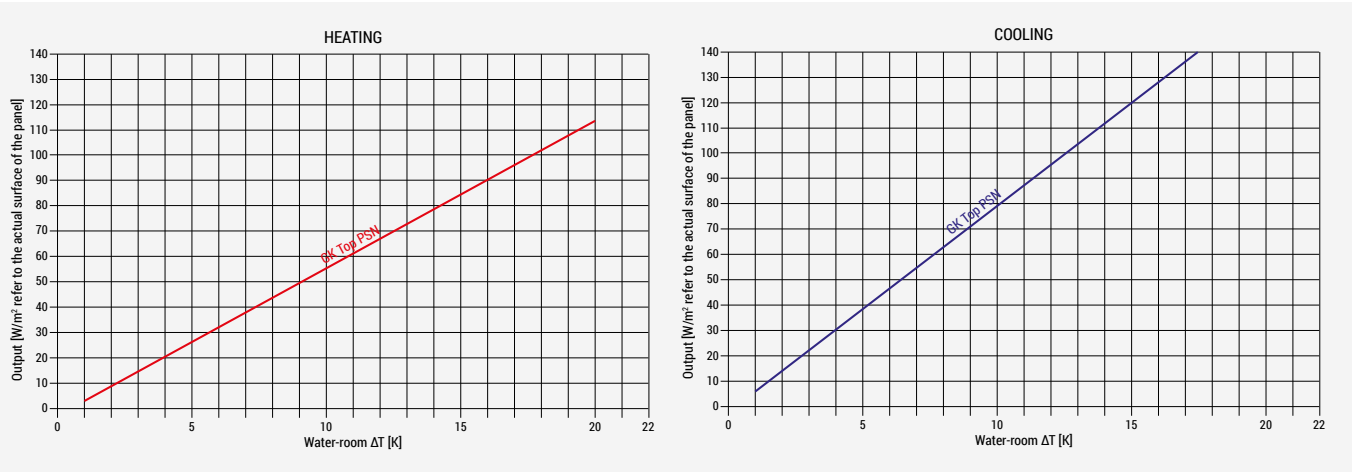
Technical characteristics

- Galvanized steel sheet panel, RAL 9010 post-varnishing, thickness 0,8 mm
- Activation type: C75 with 4 anodized aluminum thermal diffusers
- Copper pipe coil Ø 12 mm
- Anchoring to concealed suspension parallel structure with seal gasket
- Reaction to fire class: B-s1-d0
- Hydraulic circuit Kv: 0,86
- Panel water content: 0,29 l

Nominal outputs according to EN standards

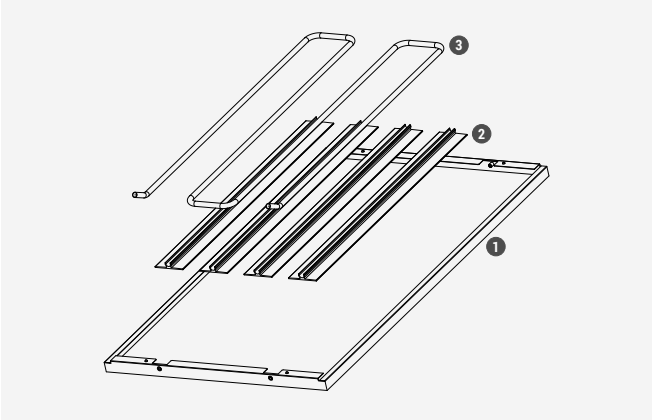
HEATING (ACCORDING TO EN14037)	COOLING (ACCORDING TO EN14240)
132 W/m² with water-room ΔT 15 K	97 W/m² with water-room ΔT 8 K

Nominal outputs referring to the actual surface of the panel



NOTE. Thermal outputs according to thermostatic chamber tests. The outputs refer to the actual surface of the panel.

Components



1	Galvanized steel panel
2	75x700 mm aluminum thermal diffusers
3	Copper pipe coil Ø 12 mm

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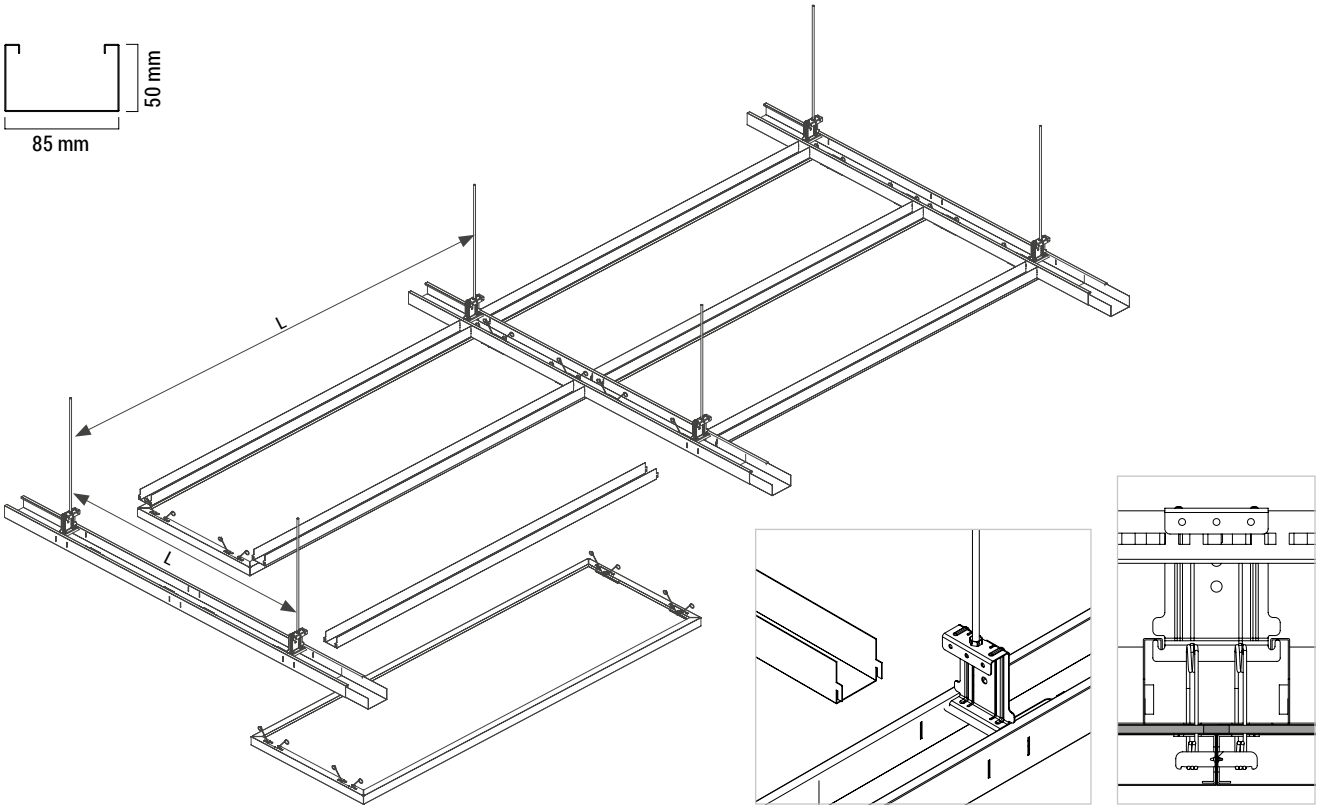
System with concealed sealed structure

The structure features C-shaped primary and secondary supports with mechanic cross-shaped joint.
The system is hung with brackets connected to the primary supports fitted to the ceiling through spring hangers and slotted or threaded bars.
The panels are connected to the primary supports through 4 springs (one for each corner) housed by special compartments.
The edge profile consists generally of a double-L profile with a sealing V-shaped spring and seal gasket to be fitted, during installation, on the edge frame and at the profile bases before connecting the panels.
The panels are connected to each other with K85RS flexible pipes featuring demountable quick-connection push-fittings.

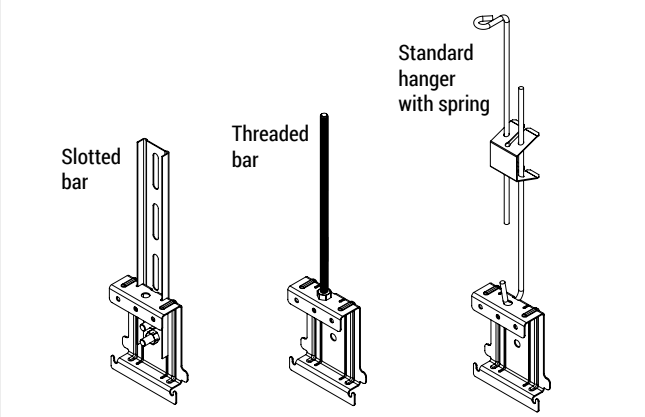


Components incidence

	DESCRIPTION	INCIDENCE*
1	GK Top PSN panel	1,40 pcs/m²
2	"Double-L" edge profile	- pcs/m²
3	Hanging system	1 pcs/m²
4	"V-shaped" springs	3 pcs/m
5	Primary support	0,85 m/m²
6	Secondary support	1,70 m/m²
7	Primary support connector	0,30 pcs/m²
8	Seal gasket	2,5 m/m²**

* Incidence of 600x1200mm module components ** The edge gasket incidence must be added to this value

Hanging system



Check the center distance and type of hanging system based on the project specific characteristics, the m² load and any aseismic report.
The connections should be verified according to the characteristics of the anchoring base and proper installation so as to not compromise the stability of the suspended ceiling system. Lighting elements, accessories and installations should not bear on the suspended ceiling and use an independent hanging system.

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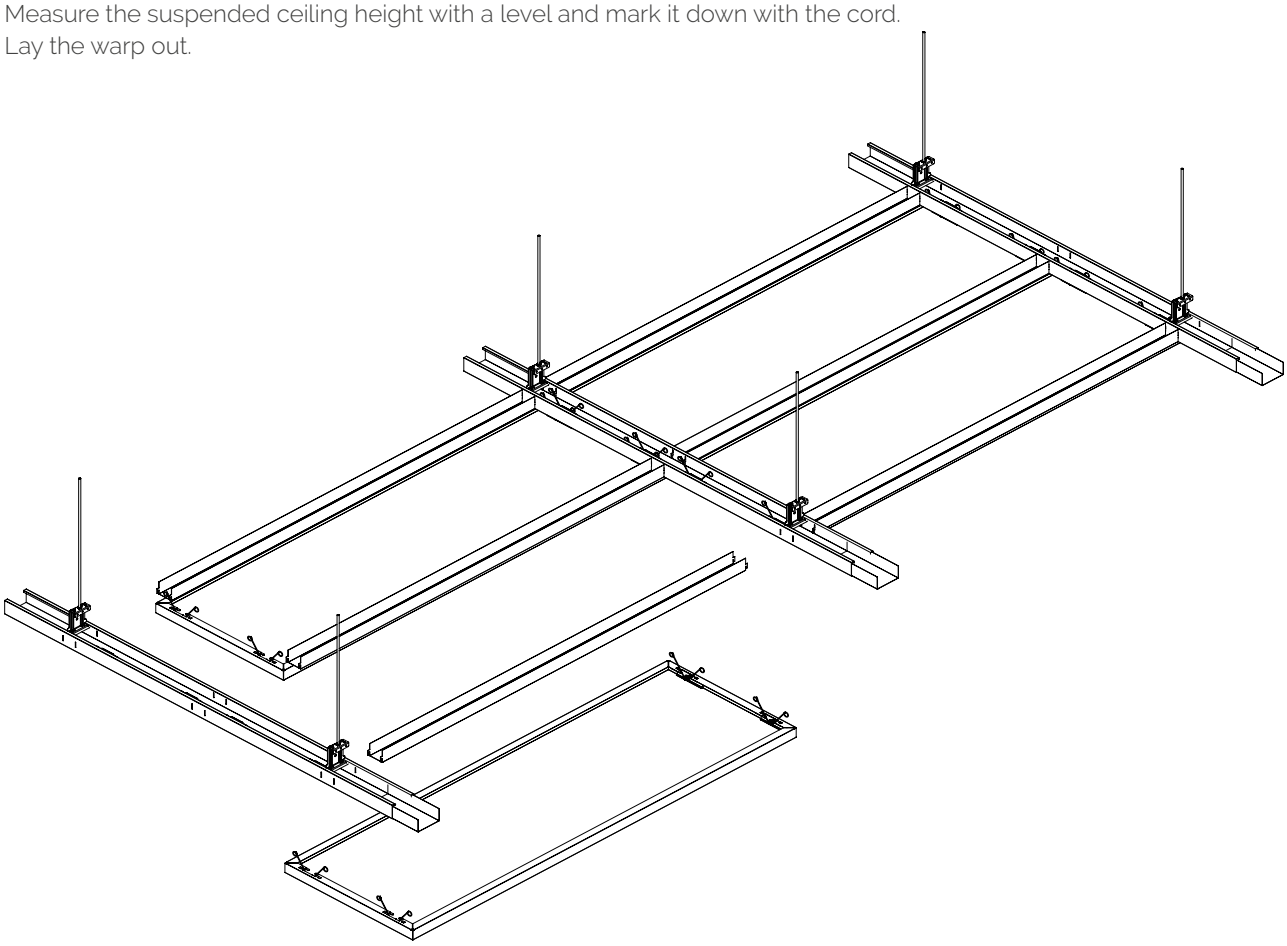
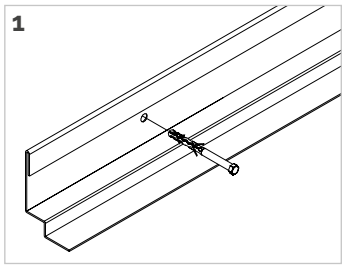
Installation

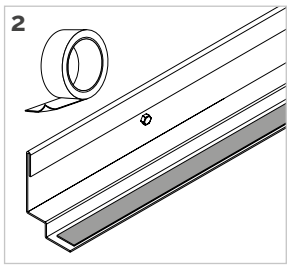
Trace out the edge frame.
Measure the suspended ceiling height with a level and mark it down with the cord.
Lay the warp out.

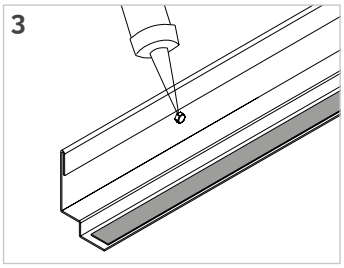


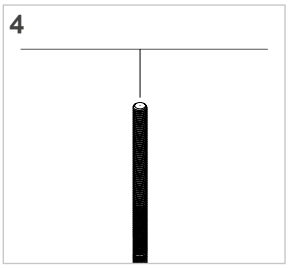
Warp laying

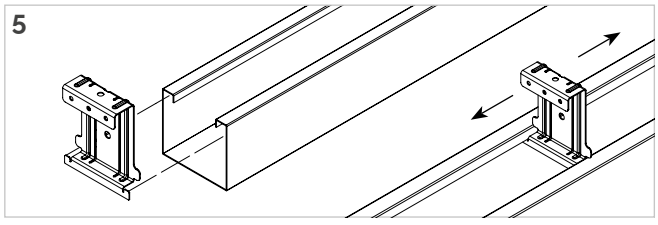
1) Install the edge frames with nails, screws and/or screw anchors suitable for the wall material.
2) Install the seal gasket on the edge profile.
3) Use non-acetic silicon to seal the screw holes.
4) Set up the hanging system.
5) Slide the suspension brackets on the primary supports according to the type of ceiling and checking the center distances based on the project loads and characteristics.











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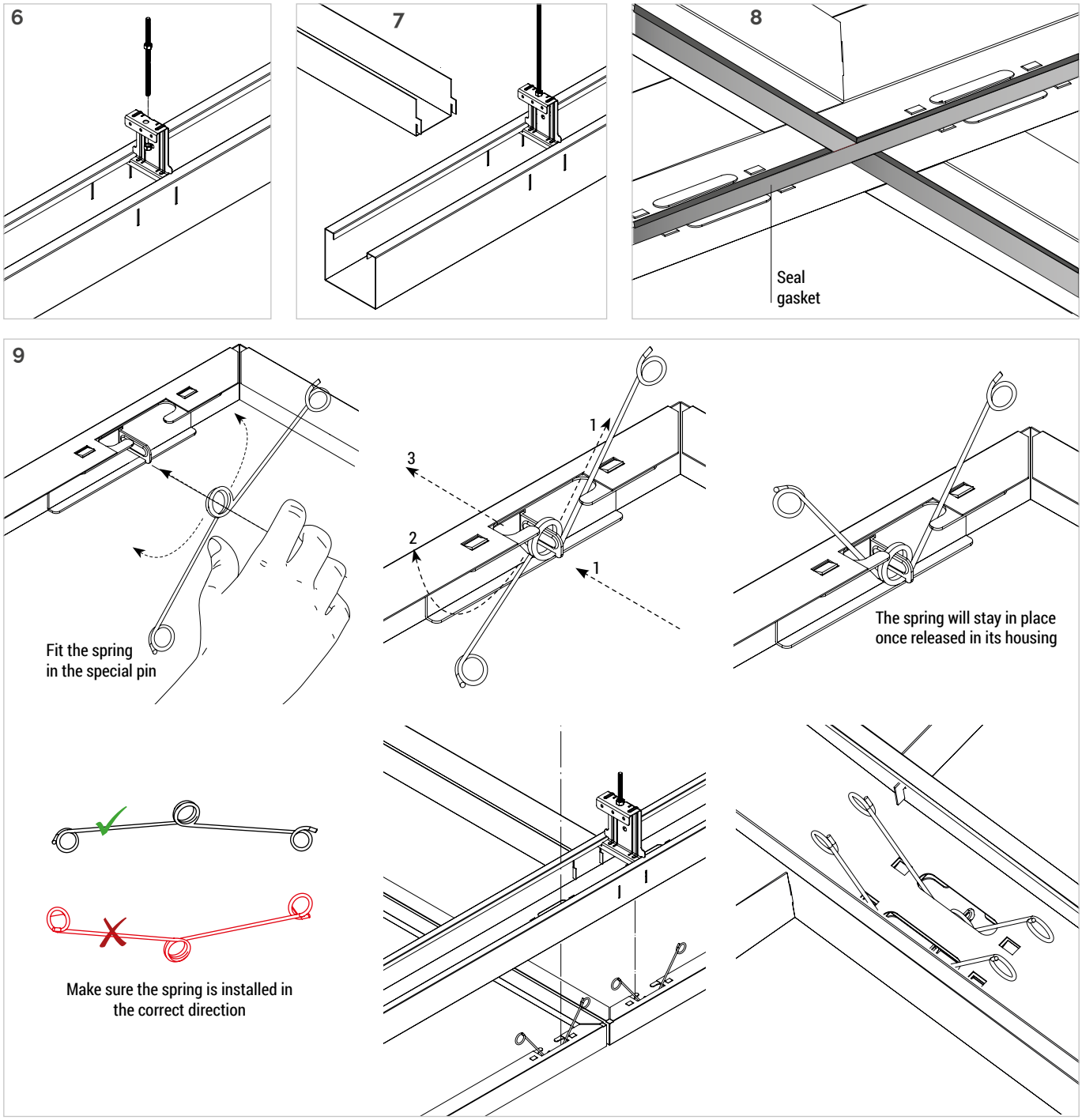
6) Hang the primary supports by connecting them to the suspension brackets.
7) Fit the secondary supports to the primary supports.
8) Fit the seal gasket along the entire primary and secondary supports.
9) Fit the panels using the standard springs and the hinge.



Aseismic devices

According to the 2018 Construction Technical Standards (NTC), "it is the planner's responsibility to identify the correct demand, it is the supplier and or installer's responsibility to provide connection elements and systems of proper capacity and it is the work site manager's responsibility to verify their proper installation" when the non-structural element is assembled on site; according to the above, Giacomini must be notified on any action (seismic accelerations, wind loads, ...) affecting the suspended ceiling system so as to provide properly sized single elements.
For more details on aseismic systems, please contact Giacomini's technical assistance service.

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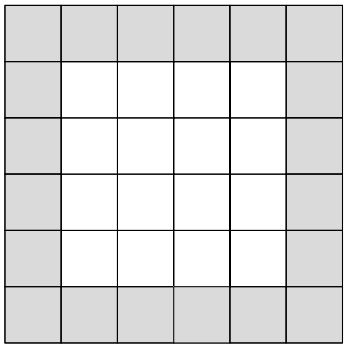
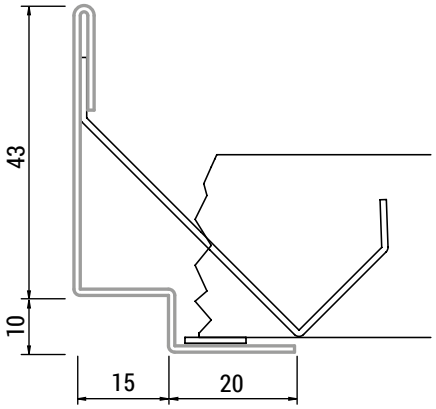
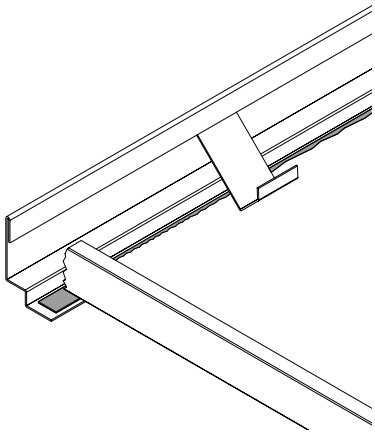
Installing the panels near the edge profiles

- Cut the panels to measure
- Tip the panels to lay them on top of the edge profile
- Fit the panels to the primary supports using the standard connection springs and the hinge
- Seal the system by fitting the V-shaped springs to push the profiled panels towards the gasket
- When there is no need to cut the panels near the edge profiles, install them as provided and as described above

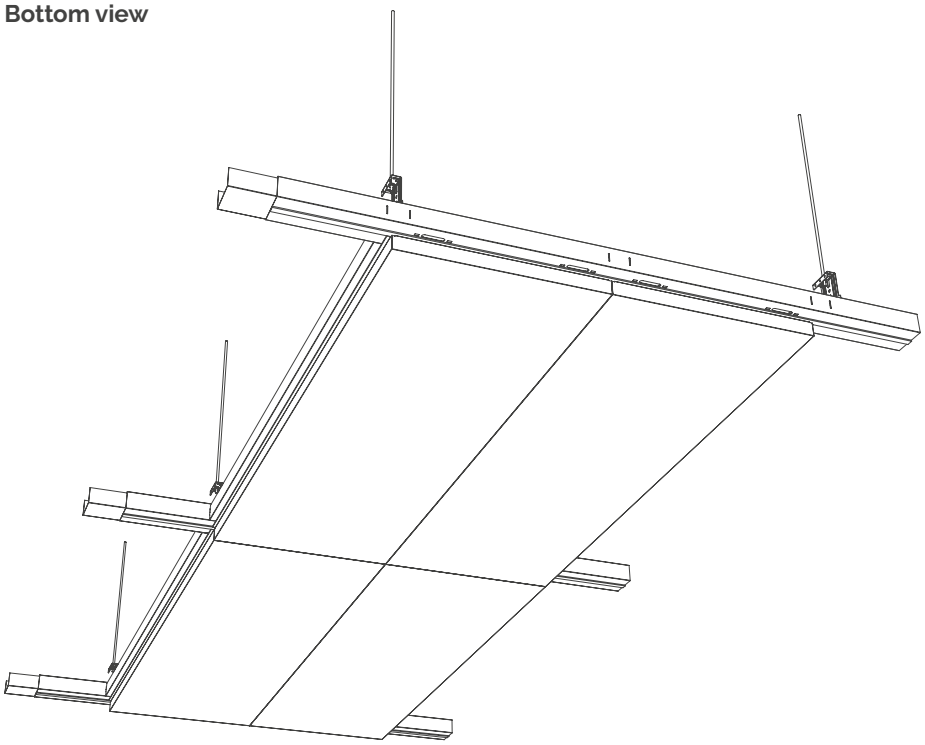


Example of panel laying: do not cover the last row before the edge profiles

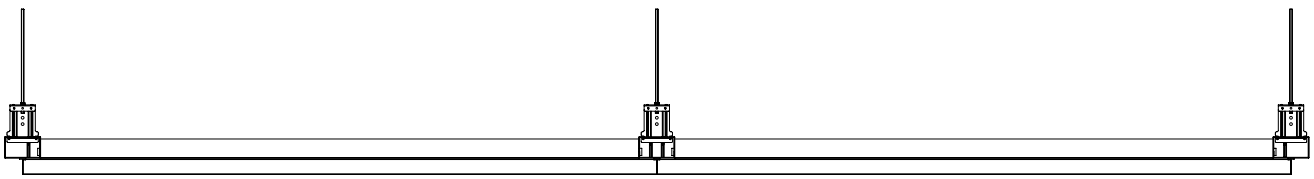




Bottom view



System section



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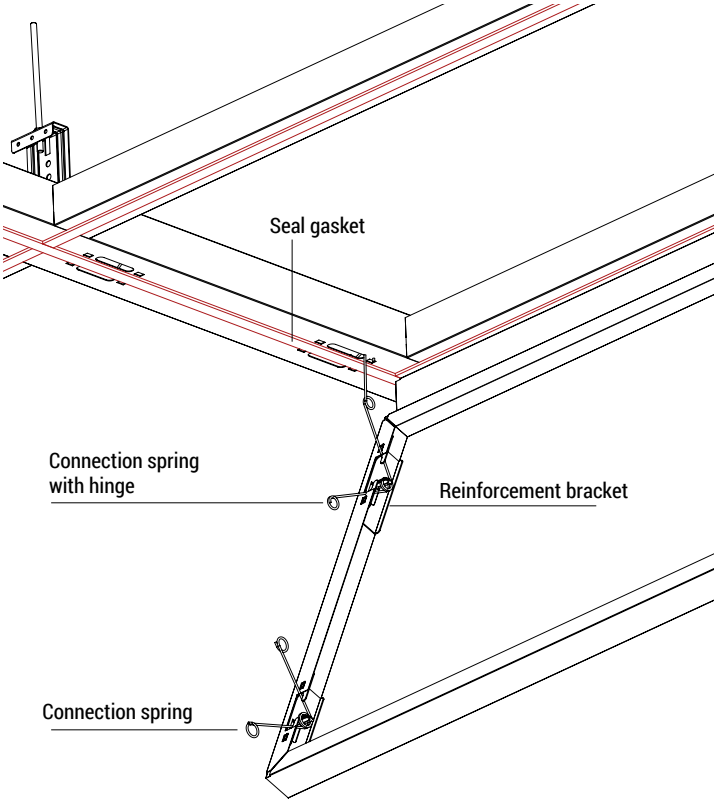
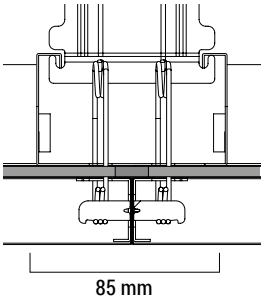
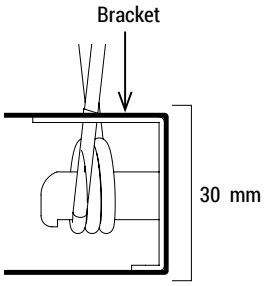
Connection and distribution system

Suspended ceiling with panels connected to the supports







Panel-panel hydraulic connections

The panels are connected one to the other using pre-assembled kit K85RS (length 900 mm), consisting of a flexible pipe with anti-oxygen barrier, stainless steel mesh sleeve and two 12 mm push-fittings RS.

K85RSY053 (12 x 12 mm - length 900 mm)

Panel-manifold hydraulic connections

To connect the distribution manifold to the panels, use the K85RS pre-assembled kit (length 900 mm), consisting of a flexible pipe with anti-oxygen barrier and stainless steel mesh, plus an RS 12 mm push-fitting on one side and a 1/2"F fitting on the other.
Installation of the RC107 push-fitting (1/2"M x 16 mm) enables to connect the plastic pipe (Ø16x1,5 mm).

K85RSY054
(12 mm x 1/2"F - length 900 mm)

RC107X017 (1/2"M x 16 mm)

R986SY120 (16 x 1,5 mm)

RC900Y016 (16 x 1,5 mm)

⚠ **WARNING.** Connections made with RC push-fittings are irreversible.
The terminal section with the plastic pipe must be completed with an RC900 reinforcement bush before inserting it into the RC push-fitting.

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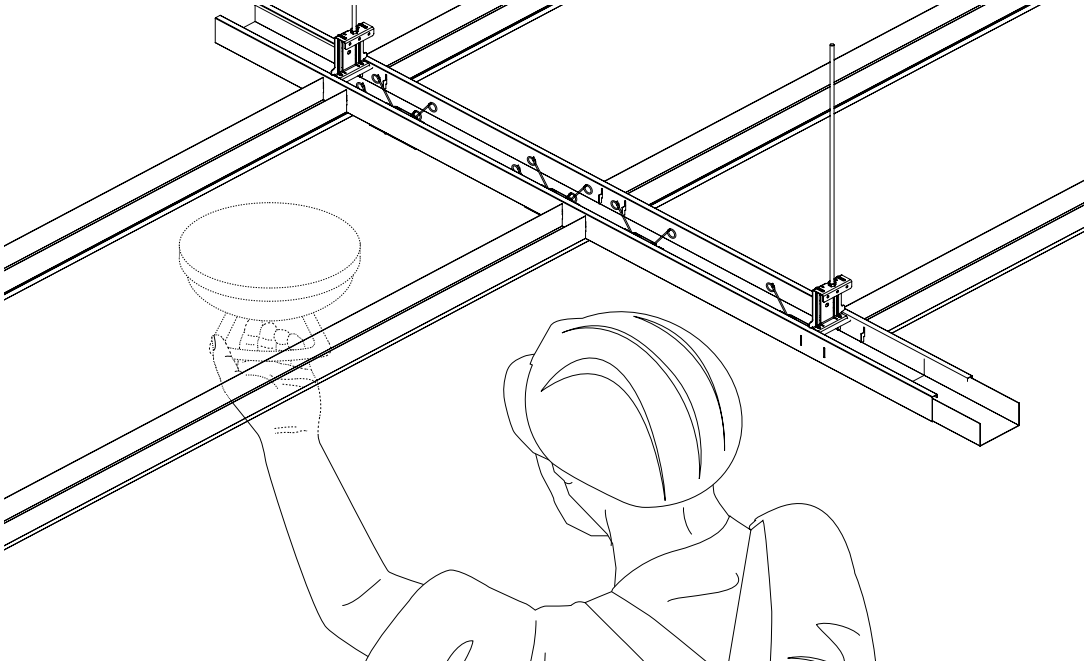
Disassembly

Use the suction caps to loosen the panel.
Squeeze the springs and release the panel.
Once maintenance is completed, reinstall the panels making sure they are planar and properly connected to the primary supports.
Height differences may be the result of an improper panel installation and should be promptly notified and inspected.



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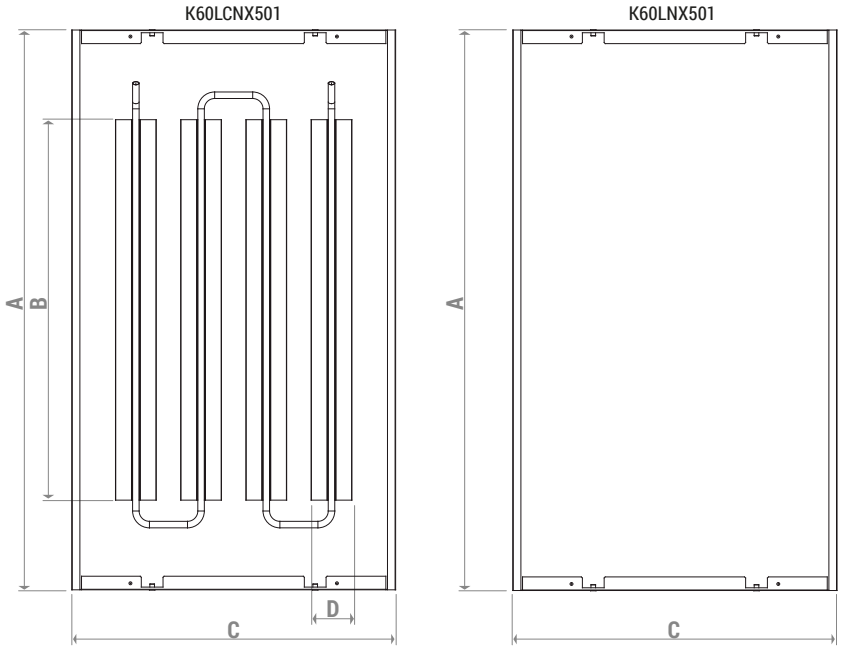
Dimensions



SERIES	PRODUCT CODE	TYPE	A [mm]	B [mm]	C [mm]	D [mm]
GK Top PSN	K60LNX501	Inactive	1196	-	596	-
	K60LCNX501	Active	1196	700	596	75

Product specifications

K60LNX501
Inactive smooth panel consisting of a galvanized steel sheet with RAL 9010 post-varnishing, for laying on concealed structure. Pivot opening and spring-fitted closing system. Dimensions of suspended ceiling module 600x1200 mm. Panel dimensions 596x1196 mm. Panel thickness: 0,8 mm.

K60LCNX501
Active smooth panel consisting of a galvanized steel sheet with RAL 9010 post-varnishing, for laying on concealed structure. Activation with four 75x700 mm anodized aluminum thermal diffusers. Hydraulic circuit with 12 mm copper pipe coil. Pivot opening and spring-fitted closing system. Dimensions of suspended ceiling module 600x1200 mm. Panel dimensions 596x1196 mm. Panel thickness: 0,8 mm.

Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

Package Disposal. Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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Product Disposal. Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

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