GALAXIS Radiant ceiling panels 2.31

Radiant heat for halls and large spaces

Installation and operating manual

Please retain this manual carefully for future use!
Read prior to commissioning!

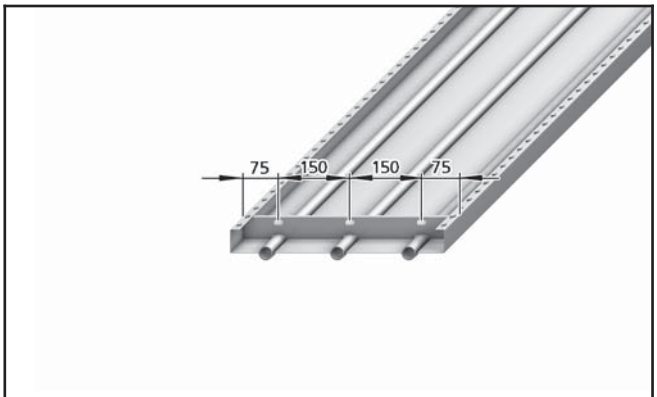
KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

I 353/04/10/1 GB

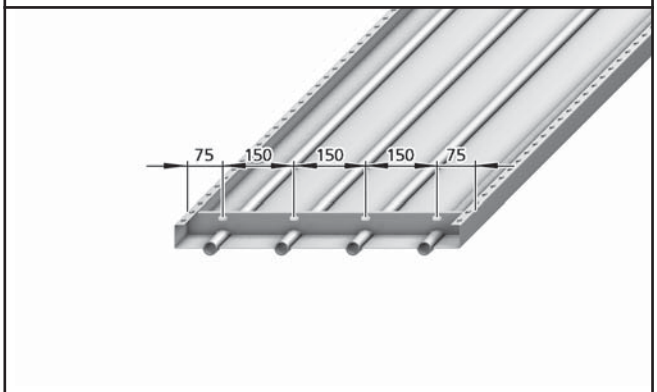
2.31 GALAXIS Radiant ceiling panels

Radiant heat for halls and large spaces

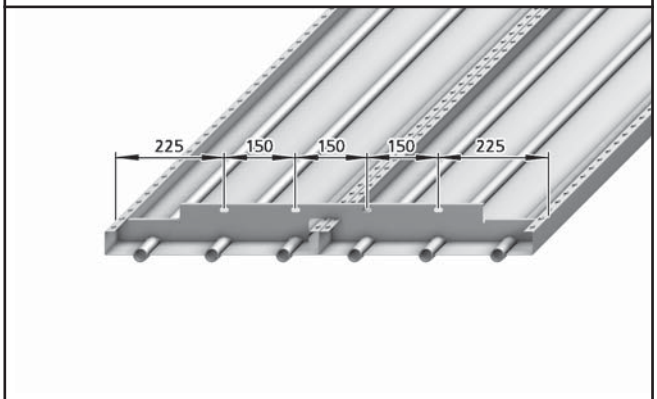
Overview of panel widths • Dimensions of fixing rails



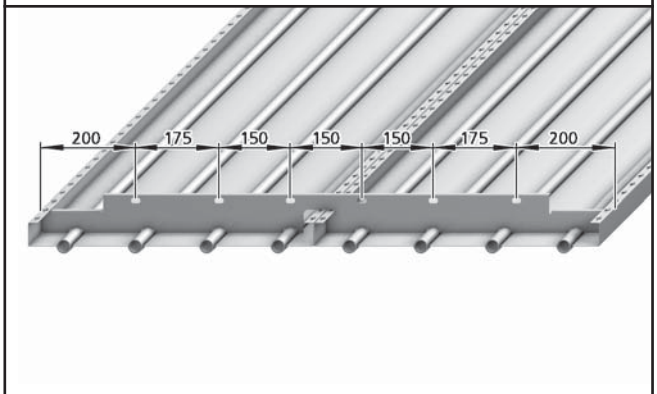
Panel width 450 mm



Panel width 600 mm



Panel width 900 mm



Panel width 1200 mm

We reserve the right to make modifications to the contents or design without prior notification!

KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

Explanation of symbols:

Caution! Danger**!**

The non-observance of this information can result in serious injury to persons or property.

Important note

Important note! Non-observance of this note cannot guarantee the fault-free operation of the unit(s).

Read this manual carefully prior to installation!

All persons involved in the installation, commissioning and use of this product are obliged to pass this manual on to all persons working simultaneously or subsequently on this equipment, including the end user. Retain this manual until the equipment is ultimately decommissioned!

2.31 GALAXIS Radiant ceiling panels

Radiant heat for halls and large spaces

Installation and operating manual

Please read the Operating Manual carefully prior to fitting the GALAXIS radiant ceiling panels!

1. Correct and proper use

Kampmann GALAXIS radiant ceiling panels are manufactured in accordance with the state of the art and recognised safety regulations. Personal danger or damage to the equipment or other property can be caused if they are not installed, commissioned and used correctly and properly.

Kampmann GALAXIS radiant ceiling panels are solely intended to be used as an indoor heating system. They should not be used in moist or damp areas, such as swimming pools or outdoors. The products should be protected against moisture during storage and installation. If in doubt, the proposed use should be discussed with the manufacturer. Any other use or any use, other than the aforementioned, will not be deemed to be correct and proper. Any damage resulting from improper use is the sole responsibility of the user/operator of the equipment. Correct and proper use will also be deemed to include observance of all information regarding safety, operation and maintenance/servicing, contained in this manual.

The installation of this product requires specialist knowledge in the field of heating, cooling, ventilation and electrical enginering. This knowledge is generally taught as part of vocational training in the aforementioned fields and so is not described separately here. Damage resulting from improper installation is the sole responsibility of the operator.

2. Safety information

Caution! There may be sharp edges on the radiant ceiling panels, which could cause injury. The weight of the radiant ceiling panel itself could cause crushing and broken limbs.

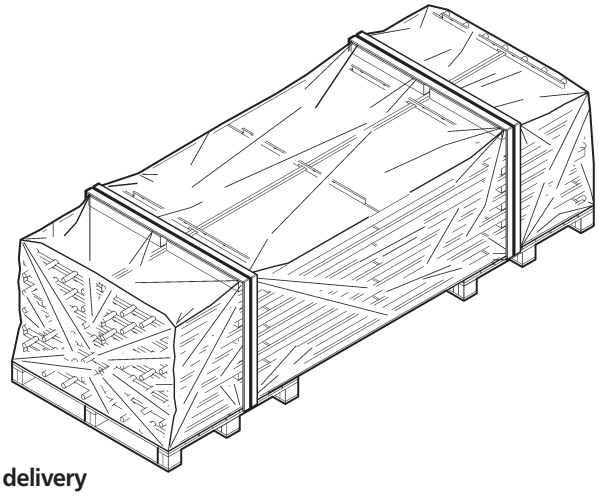
Please ensure that you wear gloves and protective footwear and, where possible, only move the radiant ceiling panels with a lifting platform or fork lift!.

KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

3. Delivery / Storage

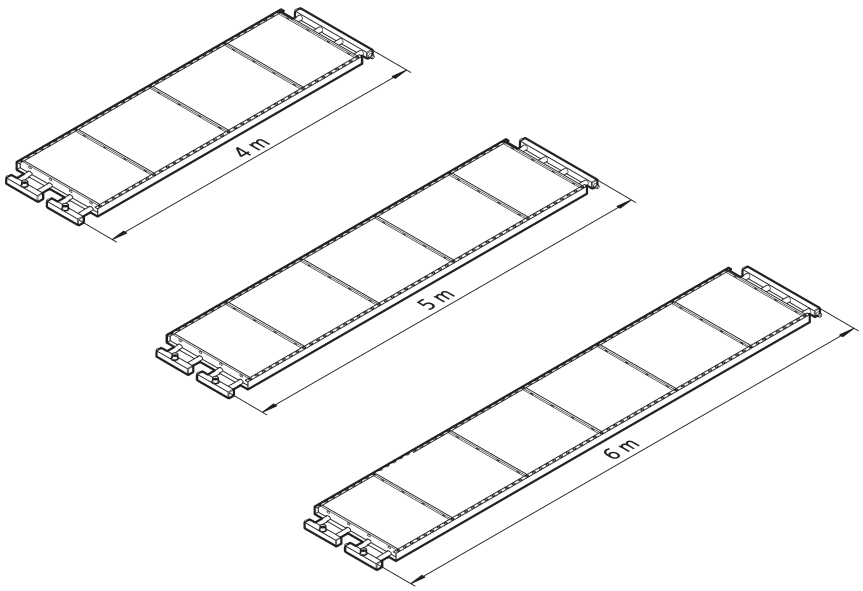
Kampmann GALAXIS radiant ceiling panels are delivered on palettes with wooden battens and polystyrene blocks in between (Fig. A). In order to avoid damage to the units or possible bending, when unloading, the palette should be lifted under the wooden battens.

Radiant ceiling panels should be stored in a dry place. Their packaging will not prevent them from becoming wet.



Packaging on delivery **A**

Corresponding widths of radiant ceiling panels will be delivered in single panels lengths of either 4, 5 or 6 metres. The headers and manifolds are already welded on and insulation is fitted (Fig. B).



Single panel lengths **B**

① Radiant ceiling panel unit e.g. 600 mm
② Fixing struts
③ Heat insulation, fitted
④ Headers and return bends

4. Fitting

Minimum clearance from ceiling		
Radiant ceiling panel length L	Min. clearance from ceiling average water temperature	
	< 75 °C	< 100 °C
10 m	200	210
20 m	220	240
30 m	240	270
40 m	270	310
50 m	300	350

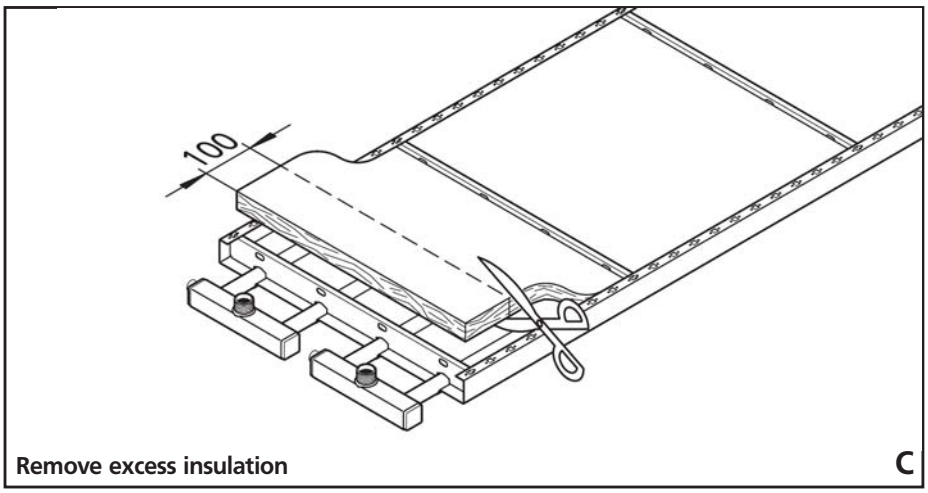
Kampmann GALAXIS radiant ceiling panels are joined to each other either by pressfitting the steel pipes together using Sliding-sleeve Press fittings (Viega) or by welding the steel pipes together.

Heat insulation

GALAXIS radiant ceiling panels are supplied with heat insulation already fitted. This overhangs by 100 mm at both ends of the panel.

- Cut off the 100 mm overhanging section of insulation. This can possibly be used to insulated the header and return bends, if cover plates are being used (optional accessory), see Fig. C.

Caution when removing and inserting insulation!
The heat output can only be guaranteed if the top layer of heat insulation (40 mm, heat index 0.04 w/mK) is fitted with the aluminium coating facing upwards.



Remove excess insulation C

4.1 Fitting using Sliding-sleeve Press fittings

Fixing the brackets:

- Please read the description of the brackets on page 10.
- Determine the positions of the brackets on the ceiling and insert rawl-plugs or corrugated metal brackets.
- Fix the brackets to the ceiling and adjust the mounting height approximately. In doing so, please note the minimum clearance from the ceiling (see above table)!

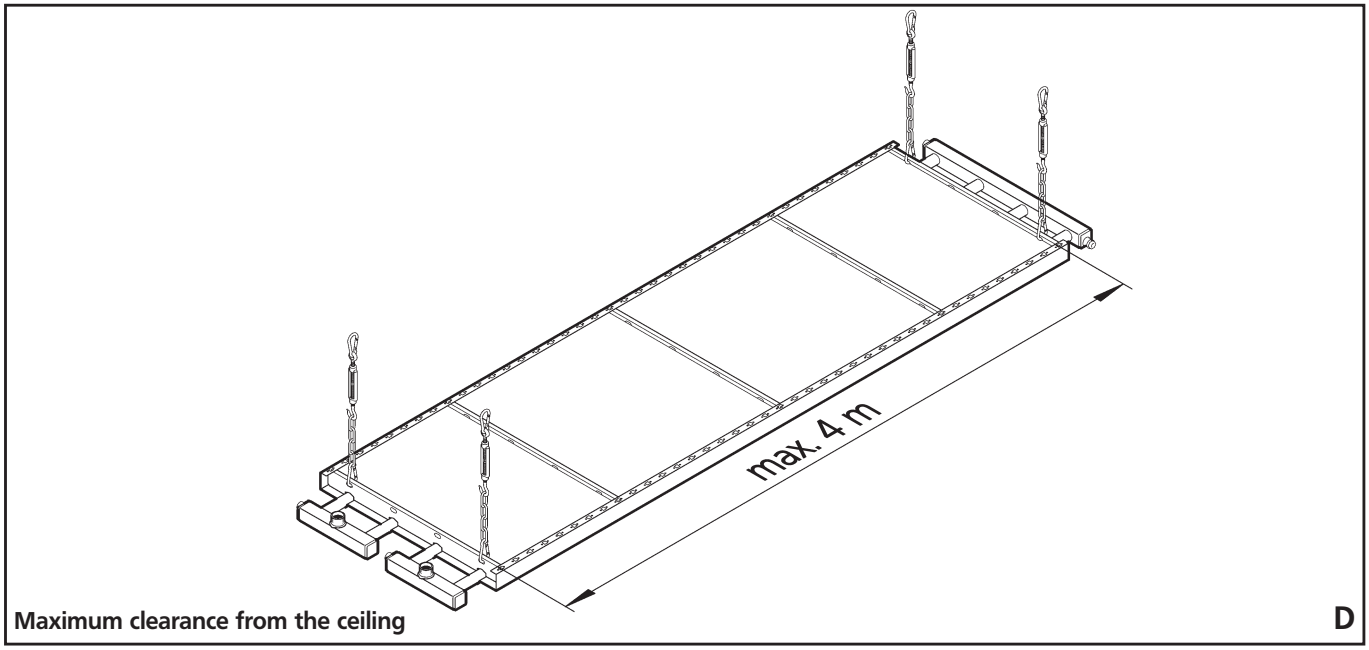
Connecting the panels to form their final length

If the total panel length is 4 m, 5 m or 6 m, the panel can be fixed as one length, complete with welded headers and return bends and with its insulation fitted. When fitting panel lengths of longer than 6 m, only as many panels can be joined together on the floor as can be lifted to the ceiling when joined together using a lifting platform, crossbar etc. We would recommend connecting up single panels of up to 6 m once they have been fixed to the ceiling.

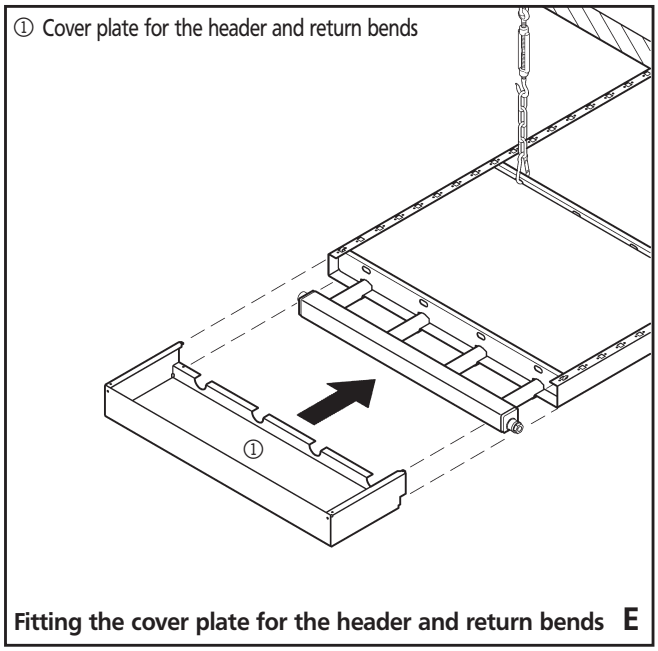
KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

Fitting panels of up to an overall length of 6 metres:

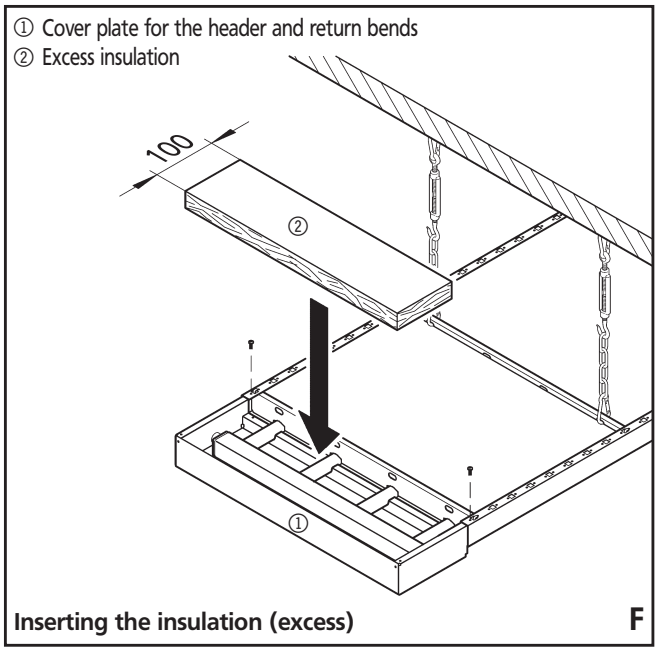
- Fix the panel to the ceiling. Lift it to ceiling height on a lifting platform and suspend it on the brackets. The panel must be fixed to the fixing and suspension rails. Every panel has to be fixed using a minimum of four fixing points. **The distance between the fixings should be at most 4 metres.** (Fig. D)!
- Fit the cover plate for the header and return bends (if using) as shown in Fig. E and F.



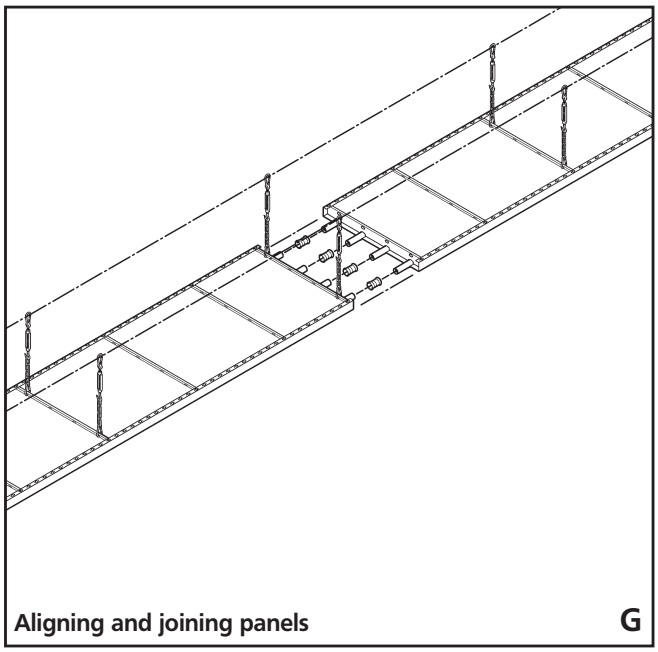
Maximum clearance from the ceiling **D**



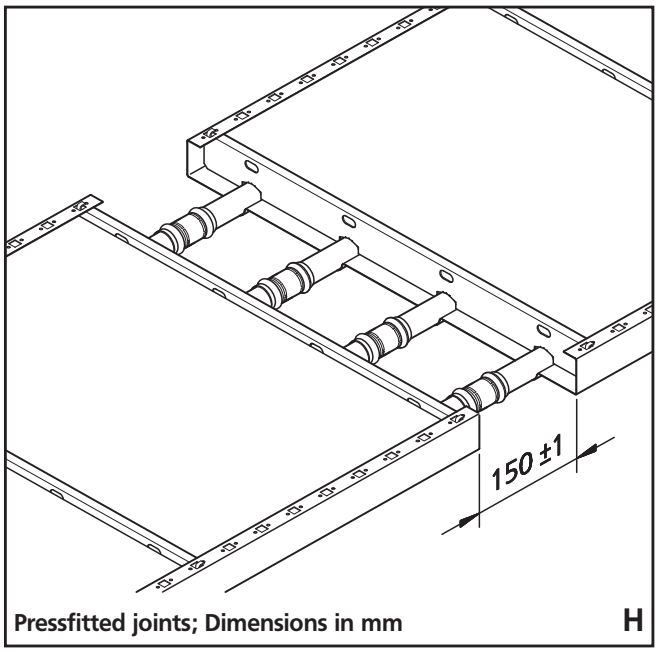
Fitting the cover plate for the header and return bends **E**



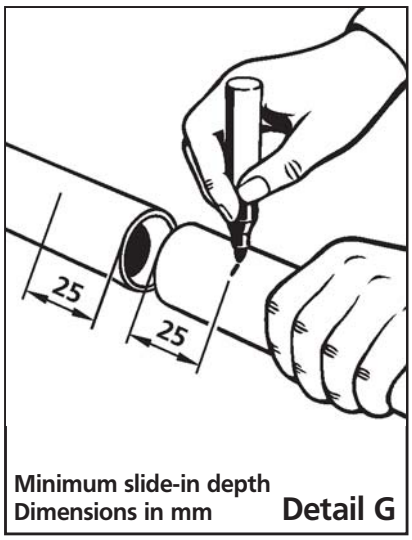
Inserting the insulation (excess) **F**



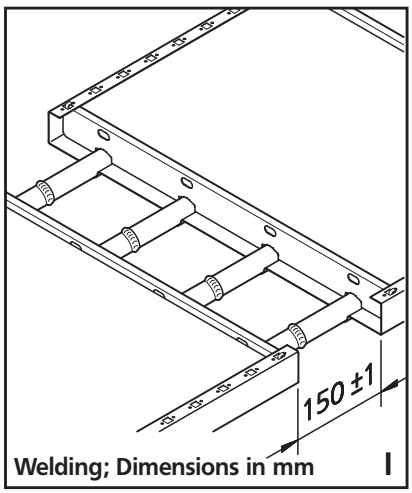
Aligning and joining panels G



Pressfitted joints; Dimensions in mm H



Minimum slide-in depth
Dimensions in mm Detail G



Welding; Dimensions in mm I

Fitting connected panels with an overall length of > 6 m:

- Remove the pipe end caps from the steel pipes.
- Lay out all the panels, including start and end panels, together with headers and return bends, in the order in which they are to be fitted, on the floor under where they are to be fitted.
- Fix the start and end panels, as well as the intermediate panels, to the ceiling. Lift these with a lifting platform and suspend them from the brackets that have been previously fitted.
- Adjust the panels to ensure that they are completely aligned (Fig. G).
- Then push the Sliding-sleeve Press fittings onto the steel pipes, without the pipes twisting in the pressfittings. Take care that the minimum slide-in depths are observed when inserting the pipes into the sliding-sleeve press fittings (see detail G). A distance of 150 ± 1 mm is to be kept between two radiant panels (pic. H and I). This distance is required for the cover plates for connections.
- Press the Sliding-sleeve Press fittings on the steel pipes together. Use a pressfitting tool for this, such as tool type 2, PT3-EH, PT3-AH, Pressgun 4E, Pressgun 4B as supplied by Viega with the corresponding pressshoes (Fig. H).

4.2 Fitting by welding

Kampmann GALAXIS radiant ceiling panels can also be welded if pressfittings are not used. They are fitted in the same way as described in 4.1, but, instead of using pressfittings, the steel pipes are welded together (without pressfittings); refer to Fig. I for welded panels.

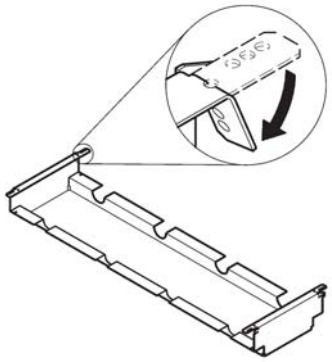
- Adjust the intermediate panels to ensure that they are aligned before welding.
- Keep the distance of 150 ± 1 mm between two radiant panels (pic. I).
- Then weld the connections; clean the welds.

KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

5. Alignment and connections

- Ensure that the radiant ceiling panels are horizontal using a measuring device, by adjusting the tension locks (Fig. G) when using the Kampmann fixing set.
- Make the water connections.
- Fix the cover plate for the header and return bends (if using) to the panel (Fig. F).
- Cut off the excess insulation (100 mm) and use this to insulate the header and return bends (refer also to Fig. F on page 7) when using cover plates (optional accessory).

• Bend fixing lug downwards

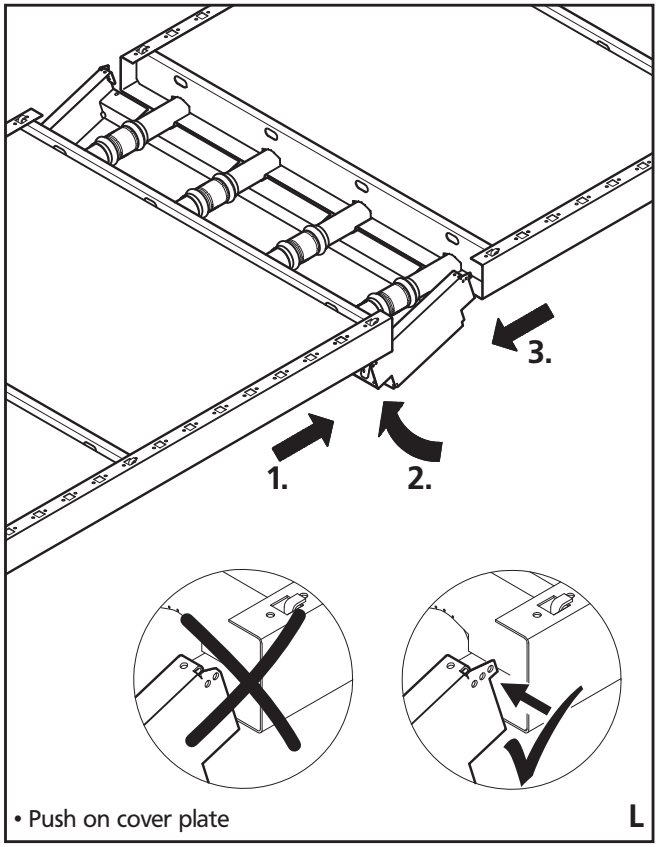


Cover plate K

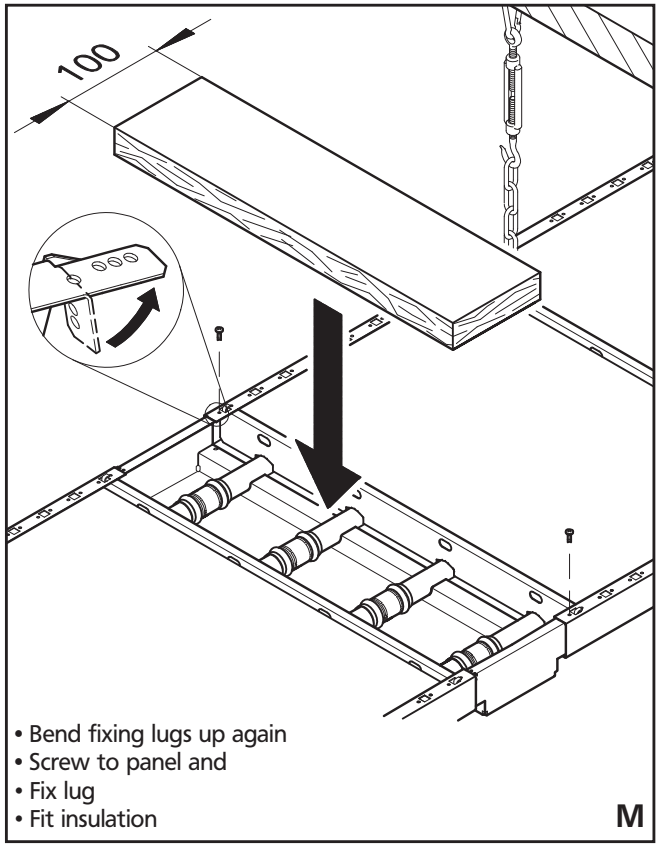
Caution when removing and reinserting the insulation!
The heat outputs can only be guaranteed if the top layer of insulation (40 mm, heat index 0.04 w/mK) is carefully fitted with the aluminium coating facing upwards.

5.1 Fitting the cover plate

Fit the cover plate (Fig. K) for the connections as shown in Figs. K, L and M. Proceed as follows:



• Push on cover plate L



• Bend fixing lugs up again
• Screw to panel and
• Fix lug
• Fit insulation

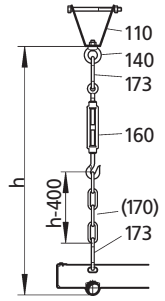
M

6. Fixing accessories

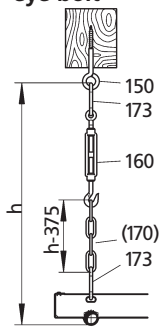
Type numbers of fixings

Caution! When fixing GALAXIS radiant ceiling panels in sports halls, only the tension lock type 161 with eyes on both sides can be used!

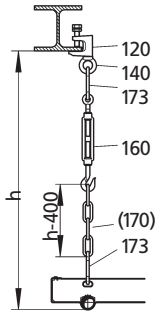
1-point fixing with trapezium bracket



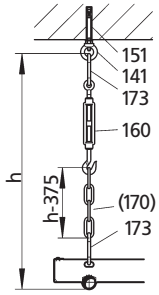
1-point fixing with wood - eye bolt



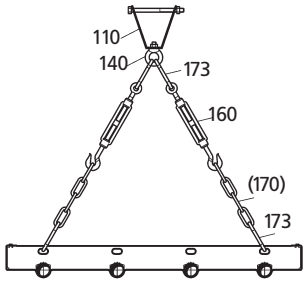
1-point fixing with girder clamp



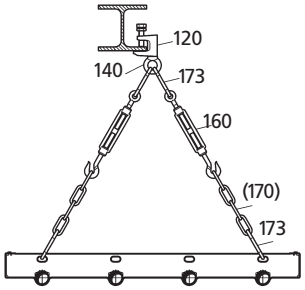
1-point fixing with ceiling plug



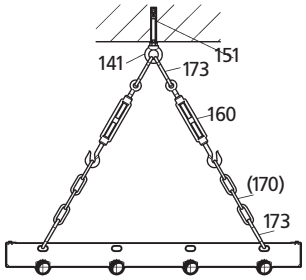
Triangular fixing with trapezium bracket



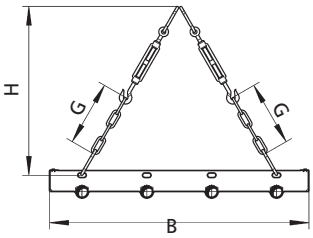
Triangular fixing with girder clamp



Triangular fixing with ceiling plug



Chain with triangular fixing

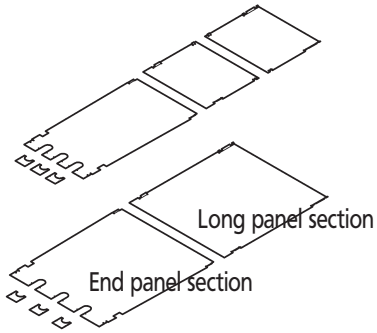


Individual fixings			
Type 110	Trapezium bracket M 8	Type 151	Anchor bolt M 8
Type 120	Girder clamp M 8	Type 160 (Type 161)	Tension lock M8
Type 140	Eye bolt AG M 8	Type 170	Chain
Type 141	Eye bolt IG M 8	Type 173	Carabiner hook, 7 mm
Type 150	Wood - eye bolt		

Chain requirements for triangular fixings

Chain length G in mm							
Panel width in mm	Clearance from ceiling H in mm						
	400	600	800	1000	1200	1400	every further 100 mm
450	2 x 200	2 x 370	2 x 570	2 x 770	2 x 970	2 x 1170	+ 2 x 100 mm
600	2 x 230	2 x 410	2 x 600	2 x 790	2 x 990	2 x 1180	+ 2 x 100 mm
900	2 x 320	2 x 480	2 x 650	2 x 840	2 x 1030	2 x 1220	+ 2 x 100 mm
1200	2 x 440	2 x 570	2 x 730	2 x 900	2 x 1080	2 x 1260	+ 2 x 100 mm

KAMPMANN
SYSTEMS FOR HEATING · COOLING · VENTILATING

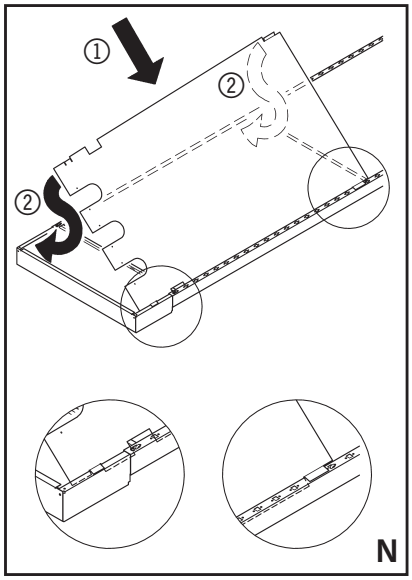


7. Fitting impact guards

Caution: Please read the general installation instructions for GALAXIS radiant ceiling panels before fitting the impact guards.

Caution: Please use cover plates for headers, return bends and connections in conjunction with impact guards!

Fitting end panel sections



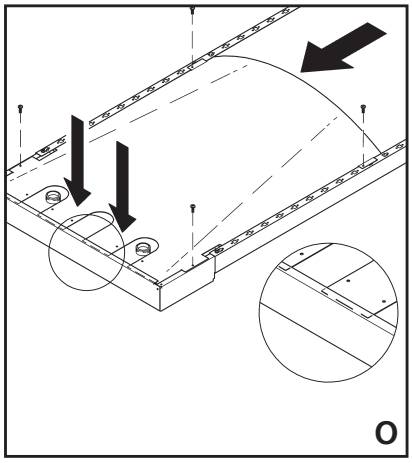
The set includes

2 no. end panel sections

4 screws per end panel section
2 screws per cover plate for recesses

The end panel sections of the impact guards will be supplied for either same end or opposite end connection.

- Push one side of an end panel section for the header or return bend end of the panel under the outer edge of the radiant ceiling panel ①. The fixing lugs (see detail) should lie on top of the outer edge (Fig. N)
- Bend the end section under the opposite outer edge of the radiant ceiling panel ②. The fixing lugs (see detail in Fig. N) have to lie on top of the outer edge.
- If using a cover plate for the headers and return bends, push the end panel section under the front edge of the cover plate (Fig. O).
- Then fix the fixing lugs of the end panel section to the radiant panels using the screws provided.
- There are semi-circular openings in the end panel section for the flow and return connections. Once the pipework has been connected up, these openings can be covered with the cover panels provided. Fix these panels at the appropriate positions on the end panel section using the screws provided (Fig. P).



Fitting the long panel sections

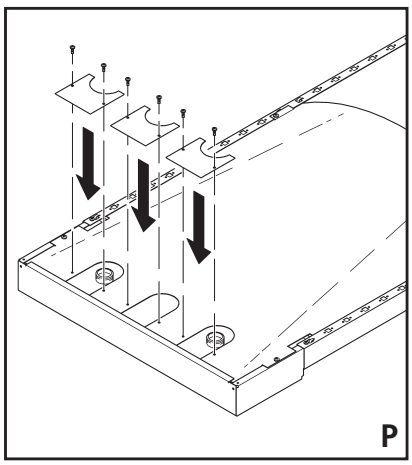
The set includes

per panel:

Panel width **450 mm and 600 mm**: 2 no. long panel sections per panel between two fixing struts

Panel width **900 mm and 1200 mm**: 1 no. long panel section per panel between 2 fixing struts

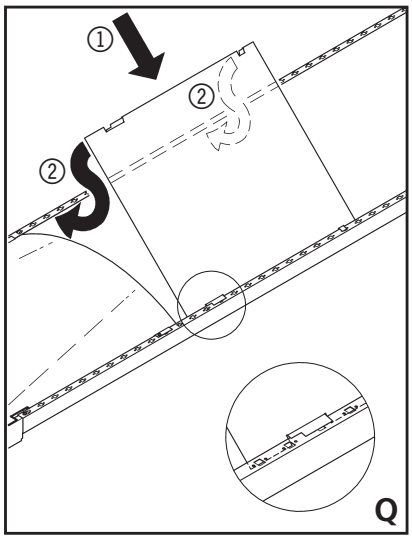
4 screws per long panel section



2.31 GALAXIS Radiant ceiling panels

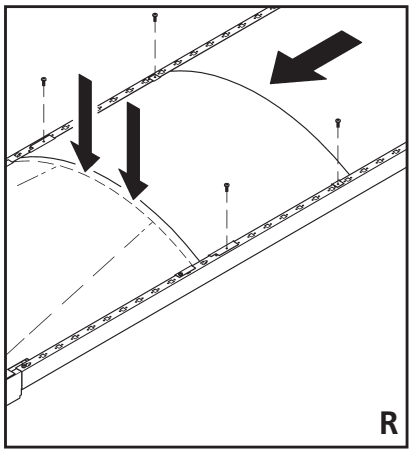
Radiant heat for halls and large spaces

Installation and operating manual



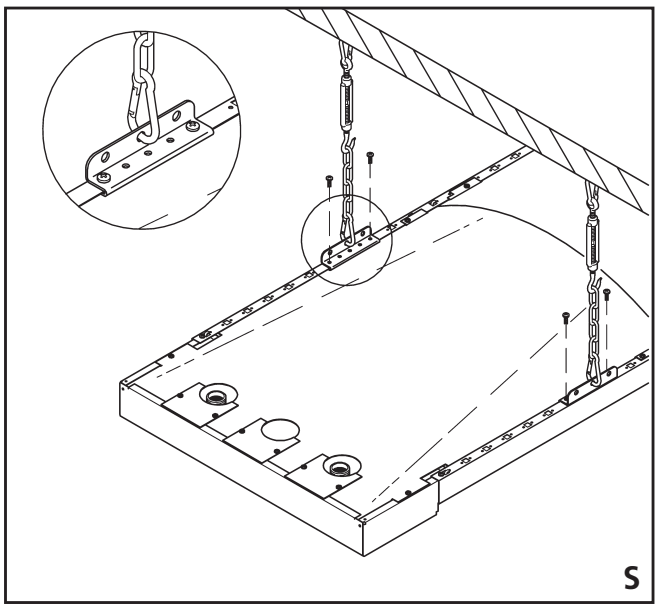
Q

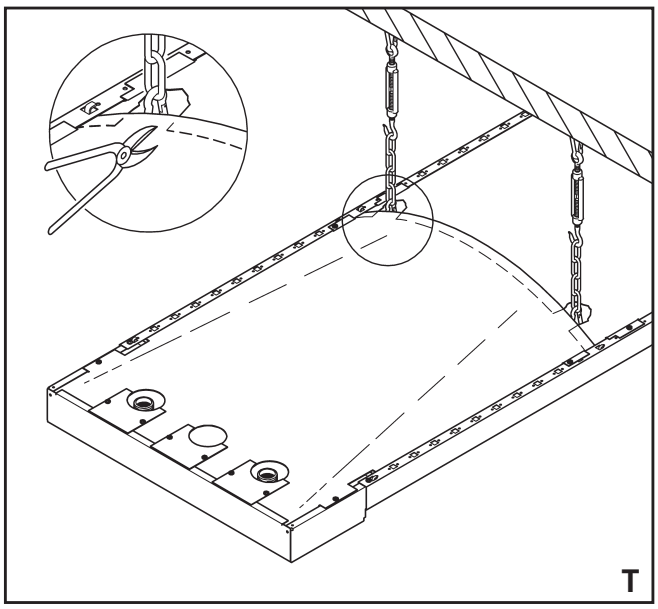
- Insert the long panel section between the fixing struts under the outer edge of the radiant ceiling panel on one side ①. The fixings lugs (see detail) have to lie on top of the outer edge (Fig. Q).
- Bend the long panel section under the opposite outer edge of the radiant ceiling panel ②. The fixing lugs (see detail) should be lying on top of the outer edge (Fig. Q).
- Push the long panel sections under each other or have them overlapping telescopically (Fig. R).
- Fix the fixing lugs of the long panel section to the radiant ceiling panel using the screws provided.


R

Fixings

- If fixing angle type 180 is used for adjustable fixing, then press the metal panels down gently at the fixing points and then push the angle onto the outer edges (Fig. S). Fix the fixing angle to the outer edge of the radiant ceiling panel using the screws provided.
- If you are using the fixing set for 1-point fixings or triangular fixings, the metal panel will have to be cut on site around the fixing points using metal cutters (Fig. T).


S


T

KAMPMANN
SYSTEMS FOR HERTING · COOLING · VENTILATING
KAMPMANN GMBH • Germany
Friedrich-Ebert-Straße 128 - 130 • 49811 Lingen (Ems)
Telefon: +49 591 7108-0 • Telefax +49 591 7108-300
info@kampmann.de • www.kampmann.de

CE