

Transport instructions

Dear Customer,

Please check the consignment is complete and intact immediately after delivery.

Any damage to the panels must be **noted in writing on the consignment note**.

Complaints will only be accepted if reported on the day of receipt of the goods.

With kind regards

Merriott Customer Services

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Assembly Instructions: Radiant Panels

TRANSPORT AND STORAGE

The panels are delivered as single panels or partial lengths up to 6m in length. According to the order, the primed and painted plates are combined in pallets of up to 8 panels. Maximum weight per pallet is approx. 1.5 tons. Loading is by forklift trucks and the goods are then transported by truck directly from the factory to the construction site.

For unloading, appropriate unloading and transport equipment (forklift, crane) should be provided. The lifting points must be positioned at the fastening points so that no damage or bending of the panels occurs. If the lifting tool can only be placed in the intermediate area, the supporting surface should be enlarged by underlaying with large-area panels so that no damage can occur due to point loading.

Unloading by hand is very time-consuming and bears an increased risk of damage. Therefore, it is worthwhile to prepare carefully with regard to unloading tools, accessibility and temporary storage space close to the installation site.

The panels should always be stored horizontally, without bending, in a dry environment, protected from the weather.

TRANSPORT BY HAND

The panels must always be handled in such a way that bending is avoided. With long radiant panels (> 3.50 m) there is a risk that the panels will buckle when lifted. Therefore, the panel must be lifted upright (pipe axles on top of each other) and transported this way.

Ensure that the panels are not lifted at the pipe ends but by the panel edges in order not to stress the spot-welded joint between pipe and panel.

ASSEMBLY AIDS

Due to the individual weights and dimensions of the radiant panels, suitable lifting and transport equipment is necessary for rational assembly. Trolleys with a support surface of at least 2m for horizontal transport within halls, as well as scissor lifts for vertical transport to the hall ceiling are recommended. Motor winches or wire rope hoists in conjunction with rolling scaffolds are also suitable for this purpose. However, they usually require a considerably larger amount of assembly time, so renting lifting platforms may also be worthwhile, especially for larger installations.

ASSEMBLY PROCESS

- 1) According to the position plan and the arrangement of the suspension braces, measure the fixing points first and mount the suspension sets. The specified suspension height is set approximately.
- 2) Each individual panel has a position number. Beam bands of several partial lengths are to be mounted in sequence according to these position numbers. The panels can then be lifted to their destination using lifting equipment (lifting platform) and the suspension bars hooked in, then the protective foil/layer can be removed.
- 3) After the individual panels have been completely suspended, they should be aligned, usually by means of turnbuckles, in special cases with special devices for height adjustment. It is essential to ensure that there are no kinks or pipe misalignments at the joints.
- 4) The piping and connection of the flow and return lines should be carried out according to the installation plan. Please ensure, if possible, that a central venting of the main line and the draining of the panels is made possible. For pipe connections and panel suspensions, the expansion of the radiant plates should be taken into account.
- 5) After pressure testing and heat testing, if necessary, adjust the system, then the panel connections can be concealed using cover plates. To protect against mechanical stress, the panels can be additionally fastened with self-tapping screws. The joints and any paint damage should be repainted.

GENERAL INSTRUCTIONS

The work described in points a, c, d and e can be undertaken with rolling scaffolds. Only the assembly noted in point b requires special lifting equipment for a short time.

Due to the weights and dimensions of the radiant panels, slight damage to the paint can not be ruled out, even with the most careful handling. Repair work should therefore be taken into account from the outset.

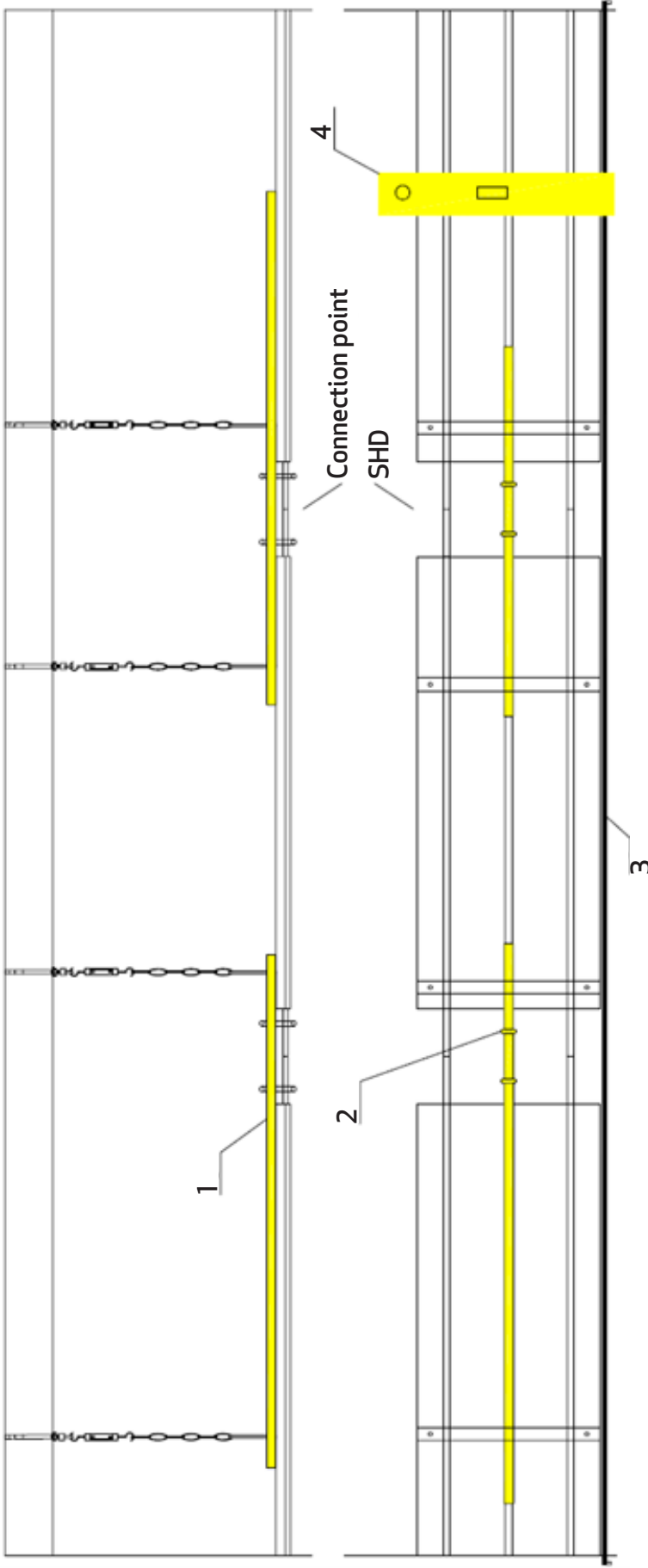
Our installation instructions are enclosed with every delivery. **Observing these instructions saves time.**

Assembly Instructions: SHD

MOUNTING PROCEDURE WHEN CONNECTING SEVERAL RADIANT PANEL PARTS

- 1) Alignment of multi-part radiant strips (see also "**Assembly aids**").
- 2) Depending on the model ordered (welding or press fit), the connection of the individual pipes should be made after the alignment of the individual part lengths:
 - a) Pressfit (standard version)
 - Assembly of the special sockets 28mm OD must be carried out in accordance with Viega assembly guidelines (cleaning, deburring etc).
 - Position the sockets centrally in the space between the panels and then press them in place.
(see also "**Assembly of press fitting connection & pressing tools**")
 - b) Welding (special design)
 - Adjust pipes with gripping pliers and spot weld several times.
 - Weld seams with a small welding tip (material thickness 1.5mm); reheat to avoid stress.
- 3) After successful pressure tests, paint the connecting pipes as well as the weld seams or sockets.
- 4) Mount the cover plates (see also "**Mounting the cover plates**").
- 5) Insert the insulating strips.

Assembly Aids



ALIGNMENT OF SHD RADIANT PANEL MODULES

At the joints of the partial lengths, kinks occur due to the overhang of the panels caused by their own weight, which must be aligned before joining the joints (welding and pressing).

The easy height adjustment of the SHD suspension sets (turnbuckle etc.) allows a quick and precise alignment of the straps.

- 1) Place a tube (1 1/4") or shaped steel over the suspension webs closest to the joints as an assembly aid.
- 2) Adjust the connection point by means of gripping pliers or round steel U-bolts, bringing the panels into alignment
- 3) Tighten string or align lengthwise with laser
- 4) Align transversely with spirit level.

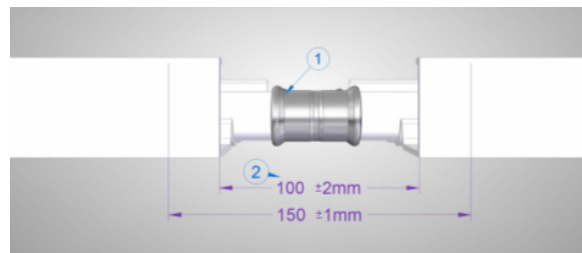
Note: Do not remove assembly aid 1+2 until the weld seams have cooled down!

Assembly instructions: Press Fitting Connection

- 1) The general assembly instructions for the radiant panels apply equally to the assembly of the press fit - "P" version and the welded - "S" version.
- 2) The only difference for the welded version "S" is in the connection of the partial lengths.
 - a) Instead of welding, the connection of the register pipes is carried out with Viega special press sleeves.
 - b) The overlapping cover plate of the "S" version is replaced by a special cover plate with deep-drawn beads to accommodate the press fittings.
- 3) The installation of the press sleeves must be carried out according to the installation guidelines of Viega. (Cleaning, pressing etc.). Special sockets with a diameter of 28mm must be used.

IMPORTANT: The deep-drawing bead of the cover sheet may not fit other compression joints!

- a) The sockets are pushed onto the register pipes of one side of the panel. After mounting and aligning the partial lengths, the actual connection of the panels is made by pushing the sleeves back onto the pipes of the next partial length to be connected.
 - b) The sleeves (1) are aligned so that they are positioned centrally in the gap.
 - c) It is essential that the gap between the panels (2) of at least $100 \pm 2\text{mm}$ is maintained and checked.
 - Simple distance blocks/ templates are recommended as aids.
 - The width of the cover plates is $150 \pm 1\text{mm}$.
 - d) The grouting of the sleeves can take place.
- 4) After the pressure test/heating test through the system, the cover plates can be mounted and then the insulation strip inserted.



PRESSING TOOLS

The following pressing tools with a 28mm Viega jaw are to be used for the special Viega press sockets.



PT2 TYP2



PRESSGUN 4E



PT3-EH



PRESSGUN 4B



PT3-AH

ASSEMBLY INSTRUCTION TOP COVER

The flat cover plates for radiant ceiling panels are made of PU hard foam boards with a stable aluminium cardboard coating on top and are 10mm thick.

Hard foam cover plates are made to order and supplied separately. These are generally supplied in a standard length of 2m up to a construction width of 1200mm and length of 1m for a construction width of 1350mm and 1500mm.

The hard foam plates should be placed on the radiant ceiling panels with the aluminium cardboard coating facing upwards and pushed flat under the lateral upstand of the radiant panels. They should then be butted together at the joints.

The notches for suspension are made on site. These should be marked accordingly and notched with a cutter knife. Then the next section is pushed butt against it and also notched.

ASSEMBLY INSTRUCTION BALL DEFLECTORS

Ball deflectors consist of roof-shaped PU hard foam panels with a top stable aluminium cardboard coating which is 10mm thick. They are used in sports halls on freely suspended radiant ceiling panels. Ball deflectors prevent damage to the thermal insulation and prevent balls (except shuttlecocks) from flying up or getting stuck.

Ball deflectors are made to order and supplied separately. These are generally supplied in a standard length of 2m up to a width of 1200mm and in a length of 1m for a width of 1350mm and 1500mm.

A mitre cut is prefabricated in the middle of the PU rigid foam elements at the factory. This mitre cut allows the PU panel to be bent in the shape of a roof and then placed on top of the radiant panel. During assembly, the ball deflectors should be butted together at the joints.

The notches for the suspensions are made on site. These should be marked accordingly and notched with a cutter knife. Then the next section is pushed butt against it and also notched.

For construction widths of 1350mm and 1500mm, the supplied stabilising brackets are placed in the centre of the radiant ceiling panel, before mounting the hard foam panels. These form a stable support for the "ridge" of the ball deflectors.

