1 General information

Fiber-reinforced gypsum (GRG) is a composite material composed of alpha gypsum reinforced with layers of glass fibre. This stable combination of materials allows for the creation of large-format geometric forms without the need for additional supporting substructure. With a minimum material thickness for GRG components of just 5 mm, in accordance with EN 13815:2006, this ensures that the components remain lightweight despite their size. Normally, GRG components are manufactured with a material thickness of approximately 7 mm, unless specific geometrical requirements or customer preferences necessitate a greater thickness.

The main advantage of GRG moulded parts is their suitability for producing complex, large-format elements that can be seamlessly integrated with standard drywall structures, whether on ceilings or walls. This compatibility enables flexible design solutions and efficient construction processes.

The following sections provide detailed step by step instructions regarding the suspension and component joints of the GRG components. These guidelines are intended to ensure a uniform transition between GRG moulded parts and conventional on-site drywall ceilings or walls, resulting in a visually and structurally seamless finish.

General site conditions / Manufacturers instructions:

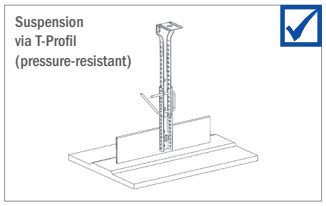
- Expansion joints of the building must be taken into account
- Expansion joints must be planned after approx. 10 m or approx. 100 m²
- Processing temperature at least +10 °C and construction site temperature not below +5 °C
- Relative humidity between 40 and 80 %
- Work on the ceiling surface (inspection openings, lamp cut-outs, etc.) must be carried out directly after the moulded part has been installed and before joints are filled and finished

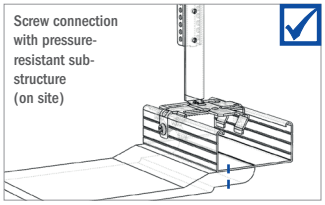
Application area of GRG moulded components	Max. screwing distance
Ceiling (horizontally)	170 mm
Wall areas (vertically)	250 mm

2 Suspension

There are two options for suspending or fastening GRG components.

GRG moulded parts can be suspended using either laminated T-profiles on the back (see 2.1) or by fastening through the visible side to a customer-provided substructure (e.g., CD 60/27 profiles; see 2.2).

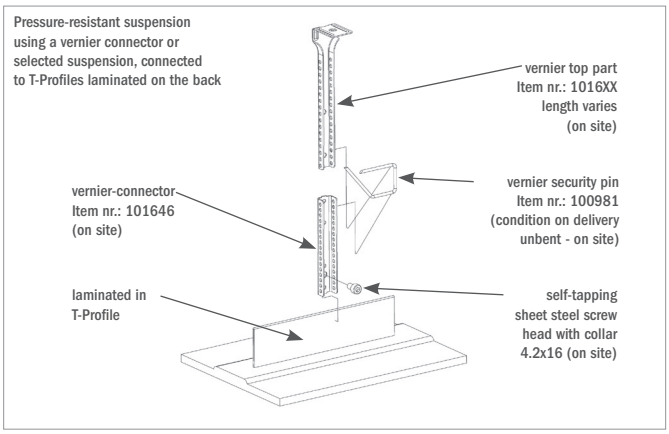




2.1 Suspension via T-profiles laminated in ex-factory (on the backside of the moulded parts)

Fibre-reinforced gypsum moulded parts are typically suspended with factory-laminated T-profiles on the reverse side.

These profiles connect to standard pressure-resistant substructure components, such as vernier upper parts, connectors, and securing pins. Using multiple T-profiles ensures balanced load distribution and flexibility for adapting to site conditions and ceiling installations.

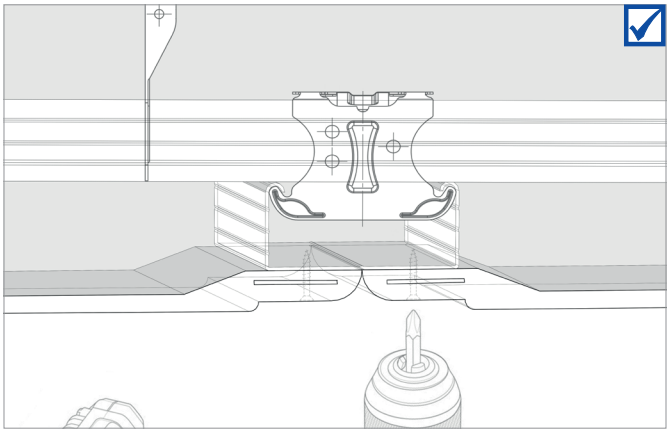


2.2 Screw connection with on-site substructure (CD 60/27)

Where a load bearing and pressure-resistant substructure is available on site, GRG moulded components may be installed from the visible side following pre-drilling (with hole diameter greater than screw diameter). Installation should use fine-thread screws with needle points, e.g. for CD 60/27 profiles.

To prevent over-penetration of the screw, metal reinforcement is incorporated at these locations within the GRG moulded part. Further information regarding alignment, screw spacing, and butt joint configuration can be found in section 3.1.

It is recommended that the spacing of primary and secondary profiles in the substructure constructed from CD profiles comply with the requirements for load class 0.30 kN, as specified in DIN 18181, to ensure proper suspension of GRG moulded components.



2 Preparations for joint finishing

Ensure the wall or ceiling substructure is load-bearing and suitable for GRG moulded parts with a flattened edge or stepped rebate design for fastening with drywall screws (see 3.1 and 3.2).

Various joint connections for GRG moulded parts offer unique assembly benefits. Screw spacing should follow standard dry construction guidelines:

- **ceiling: max. 170 mm**
- **wall: max. 250 mm**

The correct joint filling

For butt joints in GRG assemblies, use a **fiber-reinforced filler type 4B (EN 13963)** with paper reinforcement strip.

Priming is optional if GRG-to-GRG joints are cleaned and **dust-free**.

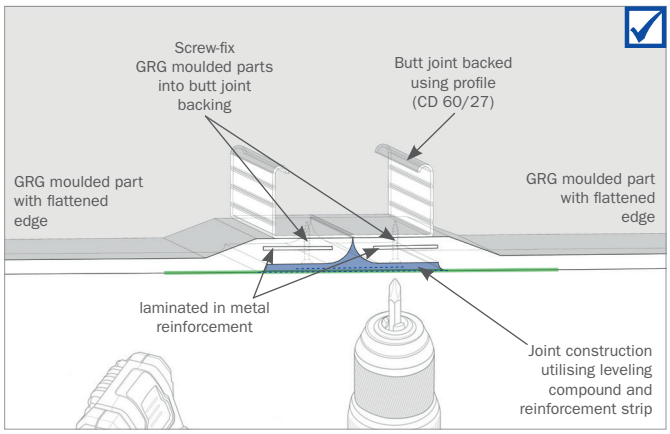
For GRG-to-plasterboard joints, always **prime the plaster core with a deep penetrating primer** such as Vogl Supergrund primer LF.

3 Joint versions

3.1 Flattened moulded part edge on both sides - GRG vs. GRG

Install moulded parts with flattened edges either flush or with a ~10 mm gap, as specified in the installation plan, onto the customer-provided substructure. When attaching GRG moulded parts to CD profiles, pre-drill and use fine-thread, needle-point drywall screws.

Fill joints directly with levelling compound, embed reinforcement tape while the compound is wet, then once dry finish to Q3-quality.
Sand the hardened joint compound to a fine finish.

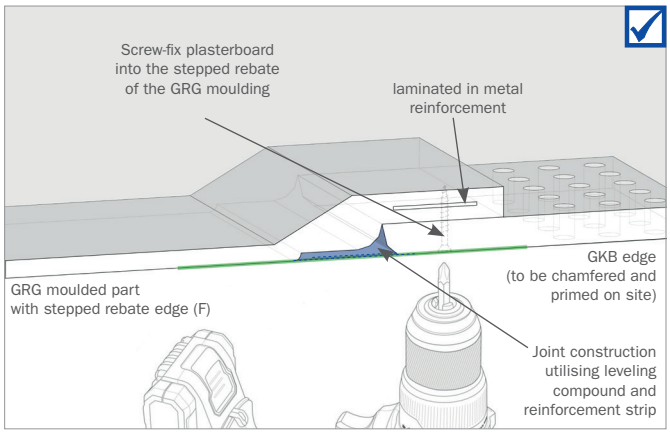


3.2 Stepped rebate edge - GRG (F) vs. chamfered GKB edge

Factory-cut or milled edges along plasterboards should be beveled (45°/22.5°) and primed before filling. Screw the moulded stepped rebate edge and the plasterboard edge together, either flush or with a ~10 mm gap (see installation plan, point 3.3).

Fill the butt joint with levelling compound and gently press reinforcement tape into the joint; avoid shifting the compound under the tape. Cover the tape with a thin layer of joint compound (2/3 under tape, 1/3 overlap).

When dry and sanded, finish the butt joint to quality level Q3 using finishing filler as wide a band as possible.



3.3 Moulded part edges with stepped rebate (M/F) - GRG vs. GRG

For GRG assemblies with stepped rebates at butt joints, (**m**ale/**f**emale edges) ensure matching edges are either flush or ~10 mm apart as per the installation plan. Pre-drill (D=2.8 mm), countersink, and screw together with coarse thread screws.

Fill visible flattened edges on both sides of the joint;
insert reinforcement tape into the wet filler and cover with a thin layer.

Once dry and fine sanded, finish the butt joint as wide a band as possible to Q3 quality level using finishing filler.