

Certificates



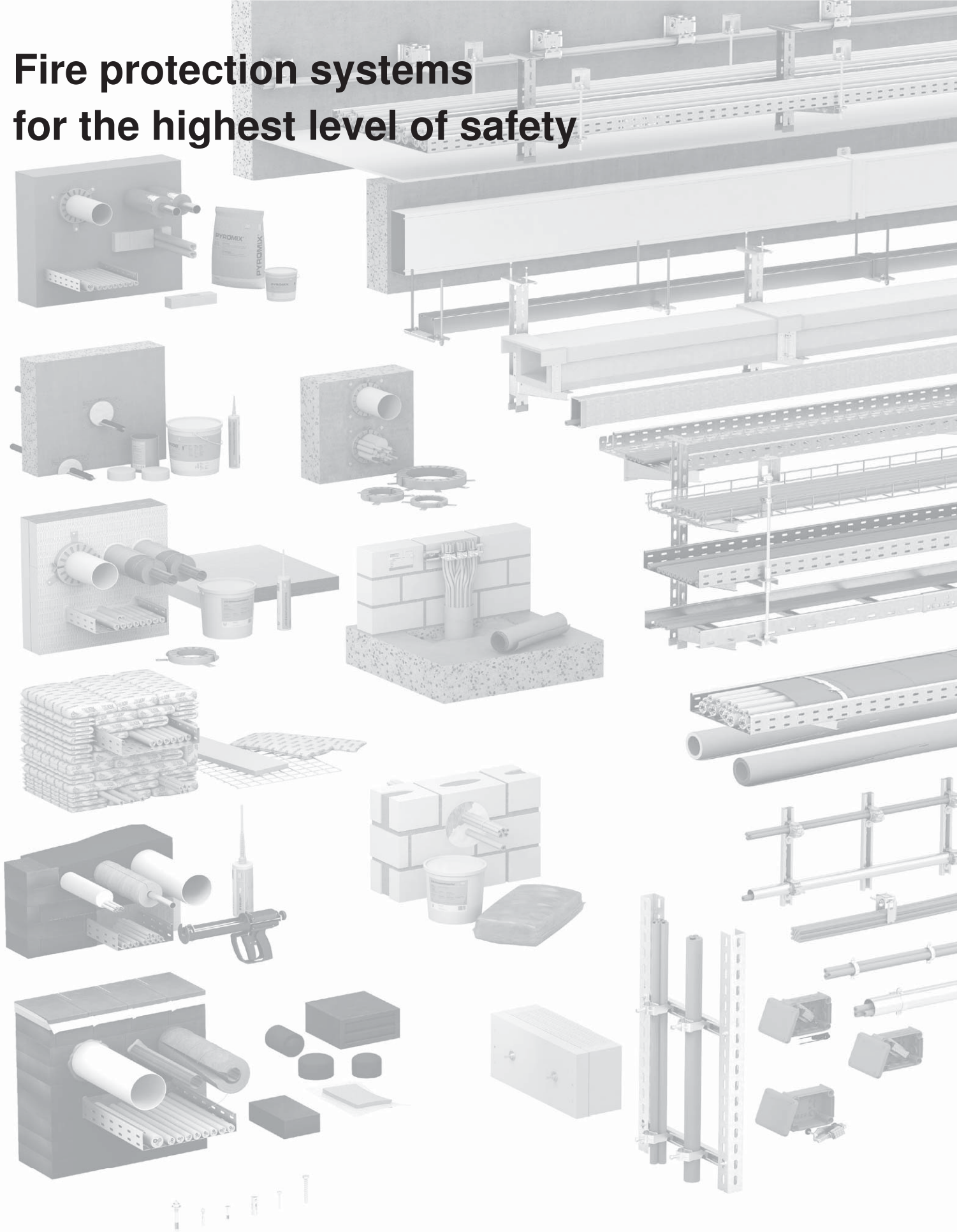
Maintaining electrical functionality

Mesh cable tray GR-Magic® - Center suspension

General building authority test certificate no. P-MPA-E-18-004, valid until 22.08.2023

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General building authority test certificate

Test certificate number: P-MPA-E-18-004

Subject: Cable system with integrated maintenance of electrical function in the function maintenance classes E30 to E90 as described in DIN 4102-12: 1998-11 pursuant to Building Rules List A Part 3, No. 2.9 (Edition 2015-2)

Applicant: OBO Bettermann Produktion Deutschland GmbH & Co. KG
Hüingser Ring 52
58710 Menden, Germany

Date of issue: 23.08.2018

Valid until: 22.08.2023

The aforementioned product can be used in compliance with the state building regulations based on this general building authority test certificate.

This general building authority test certificate comprises 9 pages and 12 annexes.

1 Subject matter and scope of application

1.1 Subject

1.1.1

This general building authority test certificate applies to the manufacture and use of the cable system with integrated maintenance of electrical function as a construction type. The cable system with integrated maintenance of electrical function allows classification into function maintenance classes E 30 to E 90 (depending on the cable construction type) as described in DIN 4102-12 (edition 11/1998).

1.1.2

The cable system with integrated maintenance of electrical function must consist of the cable construction types described in Section 3.1 and a cable support structure as described in Section 3.2.

Table 1

Installation type			
<p>1 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,000 mm) (b = 200 mm) (g ≤ 7.5 kg/m)</p> <p>2 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,250 mm) (b = 200 mm) (g ≤ 7.5 kg/m)</p>			
Cable construction type: Manufacturer's designation EUPEN EUCASAFE	Installation type no.:	Dimension: wire count x cross-section [n x mm ²] or wire count x 2 x diameter [n x 2 mm]	Classification: pursuant to DIN 4102-12 1998-11
(N)HXH... FE180 E30 VDE 0266 VDE reg. no. 8512 and 7581	1	n x 1.5–25	E30
	1	n x 1.5–25	E60
(N)HXCH... FE180 E30 VDE 0266 VDE reg. no. 8512 and 7581	2	n x 1.5/1.5–25/16	E30
(N)HXH... FE180 E90 VDE 0266 VDE reg. no. 8566 and 8513	1	n x 1.5–25	E30
	1	n x 1.5–25	E60
	2	n x 25	E60
	1	n x 1.5	E90
(N)HXCH... FE180 E90 VDE 0266 VDE reg. no. 8566 and 8513	1	n x 1.5/1.5–25/16	E30
	1	n x 1.5/1.5–25/16	E60
	1	n x 1.5/1.5–25/16	E90
	2	n x 25/16	E90
JE-H(St)H... FE180 E30 VDE reg. no. 7510	2	n x 2 x 0.8	E30

Table 1 (continued)

Installation type			
<p>1 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,000 mm) (b = 200 mm) (g ≤ 7.5 kg/m)</p> <p>2 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,250 mm) (b = 200 mm) (g ≤ 7.5 kg/m)</p>			
Cable construction type: Manufacturer's designation Dätwyler Pyrofil Keram	Installation type no.:	Dimension: wire count x cross-section [n x mm ²] or wire count x 2 x diameter [n x 2 mm]	Classification: pursuant to DIN 4102-12 1998-11
(N)HXH... FE180 E30-E60 VDE reg. no. 7780	2	n x 1.5–25	E30
(N)HXCH... FE180 E30-E60 VDE reg. no. 7780	1	n x 6/6–25/16	E30
	1	n x 6/6	E60
(N)HXH... FE180 E90 VDE reg. no. 7780	1	n x 1.5–25	E30
	1	n x 1.5–25	E60
	1	n x 1.5	E90
(N)HXCH... FE180 E90 VDE reg. no. 7780	1	n x 1.5/1.5–25/16	E30
	1	n x 1.5/1.5–25/16	E60
	1	n x 1.5/1.5–25/16	E90
JE-H(St)HRH... FE180 E30-E90 VDE reg. no. 9361	1	n x 2 x 0.8	E30

Table 1 (continued)

Installation type			
1 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,000 mm) (b = 200 mm) (g ≤ 7.5 kg/m)			
2 Ceiling mounting Mesh cable tray GRM55 200 with centre suspension GMS 170 (a ≤ 1,250 mm) (b = 200 mm) (g ≤ 7.5 kg/m)			
Cable construction type: Manufacturer's designation LEONI Studer BETAflam	Installation type no.:	Dimension: wire count x cross-section [n x mm ²] or wire count x 2 x diameter [n x 2 mm]	Classification: pursuant to DIN 4102-12 1998-11
(N)HXH... FE180 / E30-E60 S VDE reg. no. 8849	1	n x 1.5 - 16	E30
(N)HXH... FE180 / E30-E60 VDE reg. no. 9803	1	n x 16 - 25	E30
(N)HXCH... FE180 / E30-E60 VDE reg. no. 9803	1	n x 1.5/1.5–25/16	E30
(N)HXH... FE180 / E90 VDE reg. no. 9803	1	n x 1.5–25	E30
	1	n x 1.5	E60
(N)HXCH... FE180 / E90 VDE reg. no. 9803	1	n x 1.5/1.5–25/16	E30
	1	n x 25/16	E60
JE-H(St)H... FE180 / E30 S VDE reg. no. 8619	1	n x 2 x 0.8	E30
JE-H(St)H... FE180 / E30-E90 VDE reg. no. 9593	2	n x 2 x 0.8	E30
JE-H(St)HRH... FE180 / E30-E90 VDE reg. no. 8238	2	n x 2 x 0.8	E30

2.1 Area of application

2.1.1

The area of application is limited to cables with nominal voltages of ≤ 1 kV. When dimensioning cable systems with integrated maintenance of electrical function, the possibility of the cables becoming functionally impaired due to thermally induced resistance increases must be considered.

2.1.2

A combination of different laying methods is permissible, provided they have the same maintenance of electrical function classes.

2.1.3

If there are additional requirements, these must be demonstrated separately.

3 Provisions for execution

The cable system must be designed in accordance with the following details.

3.1 Cable construction types

Only the cable construction types listed in Table 1, and with valid VDE approvals, may be used. The structural design of the cable construction types is on file at MPA NRW.

3.2 Cable support structures

The cable support structure must be made of steel (S235, see details in Table 1 and the appendix). The cable support structure and clips may be coated with plastics or fire protection paint up to a thickness of 1.5 mm.

3.2.1

Colour coatings and paints with commercially available thicknesses of up to 150 μm are permissible.

The following points should be observed:

Components under tensile stress should be dimensioned in such a way that their calculated tensile stress is not greater than 9 N/mm² (classifications E30 and E60) or not greater than 6 N/mm² (classification E90) as defined in Table 109 of DIN 4102-4:1994-03.

Anchors must comply with the specifications of the applicable general building authority approvals issued by Deutsches Institut für Bautechnik (the German Institute of Construction Technology), Berlin, and must also be installed twice as deep as specified in the approval notice – and at least 6 cm deep – unless otherwise stated in the approval; the calculated tensile load per anchor shall not exceed 500 N, cf. DIN 4102-4:1994-03, Section 8.5.7.5. Alternatively, anchors may be used whose suitability for fire protection is demonstrated by a general building authority approval, a European technical approval or assessment, or a

general building authority test certificate. They must be installed in accordance with the specifications of the general building authority approval or general building authority test certificate.

The general building authority test certificate only applies if:

- the cables or lines are designed without connecting elements;
- it is ensured that cable systems with integrated maintenance of electrical function are not negatively impacted in their function maintenance class by surrounding components.

3.3 Labelling

3.3.1 Cable construction types

The cable must be labelled in accordance with VDE regulations.

3.3.2 Cable system with integrated maintenance of electrical function

Each cable installation must be permanently marked with a plate or sticker attached to the cable support structure and displaying the following information:

- Name of the contractor who manufactured the cable system with integrated maintenance of electrical function;
- Cable system with integrated maintenance of electrical function E... pursuant to DIN 4102-12:1998-11;
- General building authority test certificate no. P-MPA-E-18-004 dated 23.08.2018, MPA Erwitte;
- Holder of the general building authority test certificate OBO Bettermann Produktion Deutschland GmbH & Co. KG, Hüingser Ring 52, 58710 Menden;
- Year of manufacture.

4 Proof of conformity

The construction type described in this general building authority test certificate requires proof of conformity (compliance certificate) as defined by the specifications of Building Rules List A Part 3 (no. C 2.9), according to which the manufacturer (contractor) must issue a declaration of conformity.

The contractor who manufactures the cable system must issue a written declaration of conformity to the client certifying that the cable system complies with the provisions of this general building authority test certificate.

5 Legal basis

This general building authority test certificate is issued on the basis of § 22 III of the building regulations of the state of North Rhine-Westphalia (BauO NW) dated 22.07.2003, in conjunction with Building Rules List A, Edition 2015/2. The state building codes of the other federal states contain equivalent legal bases.

6 Legal information

Objection may be raised to this notification, within one month of its publication, at the Gelsenkirchen Administrative Court, Bahnhofsvorplatz 3, 45879 Gelsenkirchen, Germany, in writing, or for the record of the clerk of that court's office. The objection must designate the plaintiff, the defendant and the subject of the claim and should entail a specific request. The facts and evidence serving as grounds must be stated and the original or a copy of the contested notification should be attached. Copies for the other parties involved should be attached to the objection.

7 General information

This general building authority test certificate proves the usability of the construction product/applicability of the construction type in compliance with the state building regulations.

The general building authority test certificate does not replace the permits, approvals and certificates required by law when carrying out building projects.

This general building authority test certificate is issued without prejudice to the rights of third parties, in particular private property rights.

Manufacturers and distributors of the construction product/type shall, without prejudice to further regulations in the "Special Provisions", provide the user of the construction product/type with copies of the general building authority test certificate and indicate that the general building authority test certificate must be available at the place of use. Copies of the general building authority test certificate shall be provided to the authorities involved on request.

The general building authority test certificate may only be duplicated in its entirety. Publication of extracts requires the consent of the testing centre. Text and drawings in promotional literature must not contradict the general building authority test certificate. Translations of the general building authority test certificate must include the note "This is a translation of the original German version and has not been checked by the NRW Materials Testing Office".

This general building authority test certificate is revocable. The provisions of the general building authority test certificate may be added to or amended later, especially if technical findings so dictate.

The test reports for this general building authority test certificate have been communicated to MPA NRW by the client.

Erwitte, 23.08.2018

On behalf of

Friedrichs
Deputy Director of the Testing Centre

Diekmann
Clerk

Sample for

Declaration of Compliance

- Name and address of the contractor who manufactured the cable system with integrated maintenance of electrical function;
- Construction site or building:
- Date of manufacture:
- Maintenance of electrical function class required by the cable system(s) with integrated maintenance of electrical function: E...

It is hereby confirmed that the cable system(s) with integrated maintenance of electrical function of class E... has/have been manufactured and installed professionally in every respect and in compliance with all the provisions of general building authority test certificate No. P-MPA-E-12-011 issued by MPA NRW on 17.07.2017.

For construction products or individual parts not manufactured by the undersigned (e.g. cable construction types), this is also hereby confirmed on the basis of:

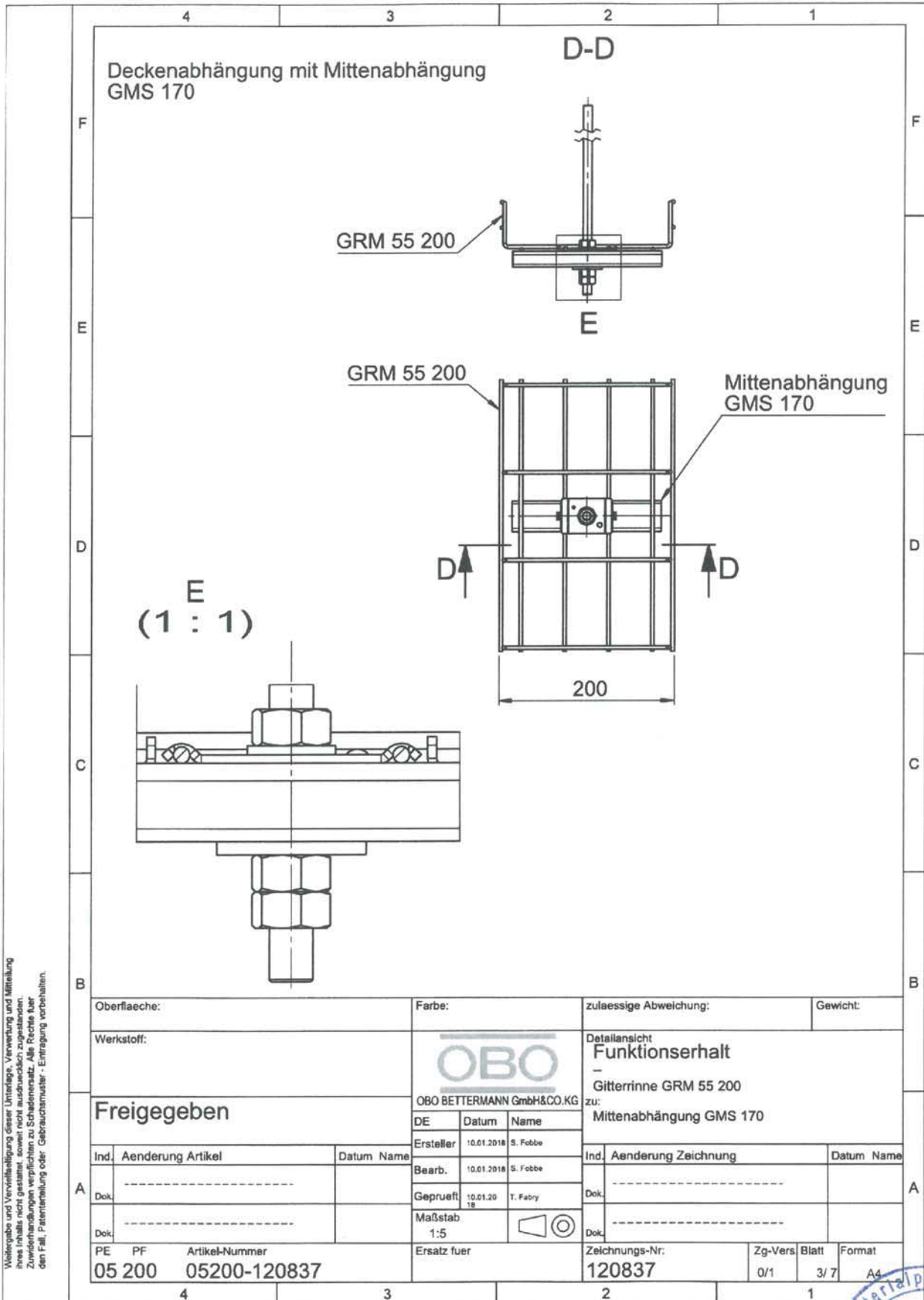
- the markings on the parts in compliance with the provisions of the general building authority test certificate; *)
- internal checks; *)
- corresponding written confirmations from the manufacturers of the construction products or parts, which the signatory has kept on file. *)

Place, date

Stamp and signature

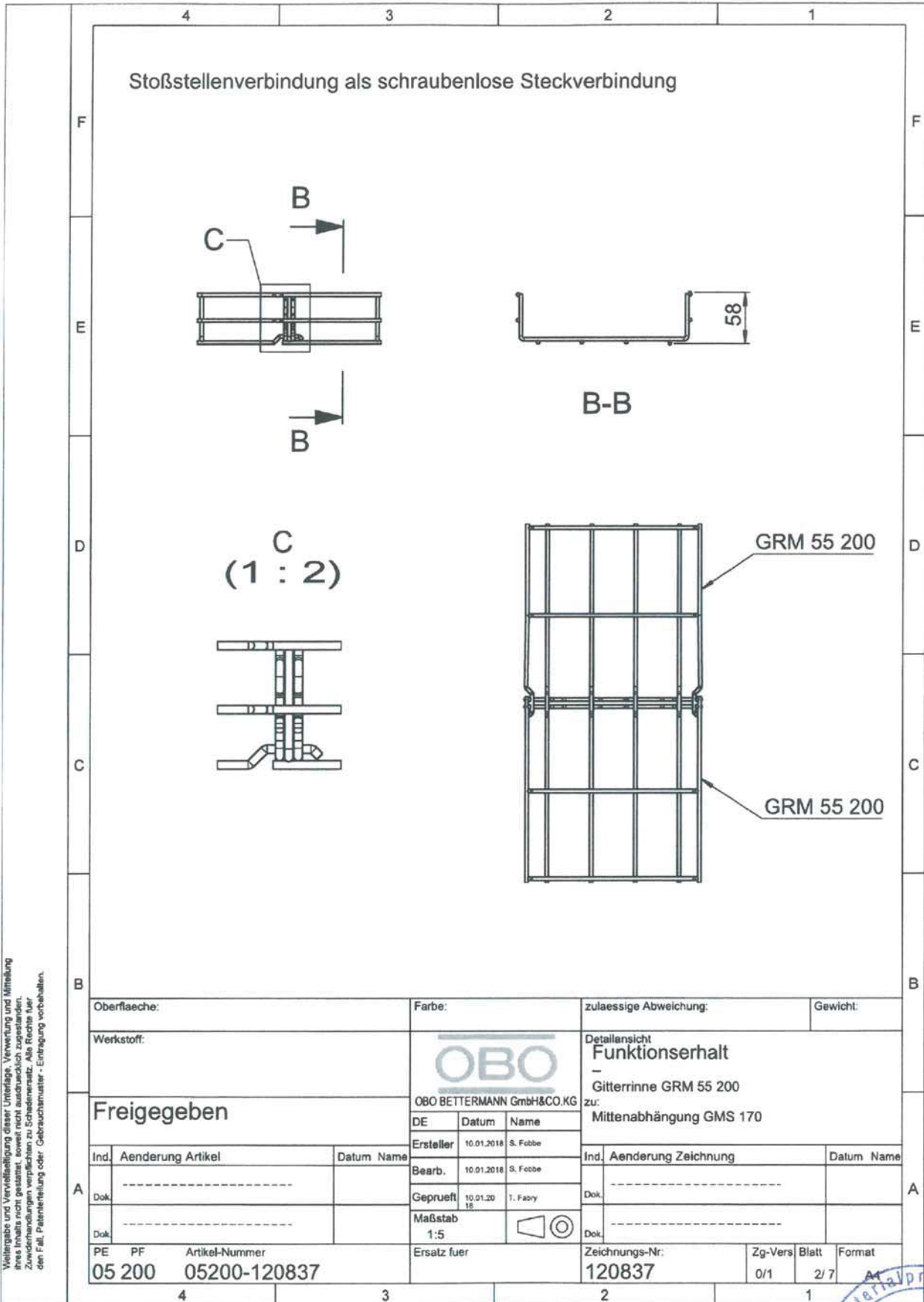
(The certificate is to be given to the builder so that it can be passed on to the responsible building inspection authorities.)

*) Delete where not applicable



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Stoßstellenverbindung mit Schraubverbinder GSV 34

GSV 34

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GRM 55 200

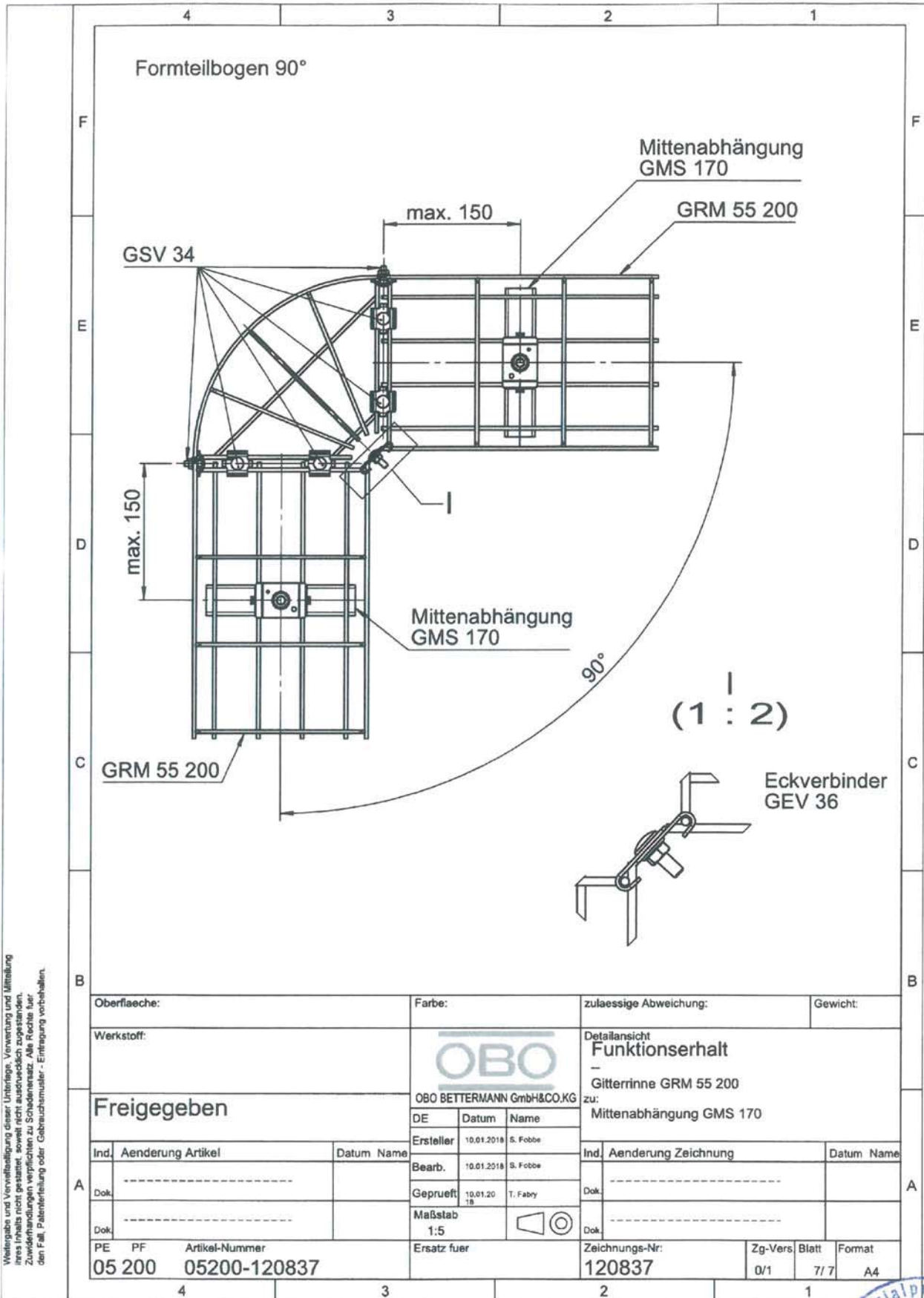
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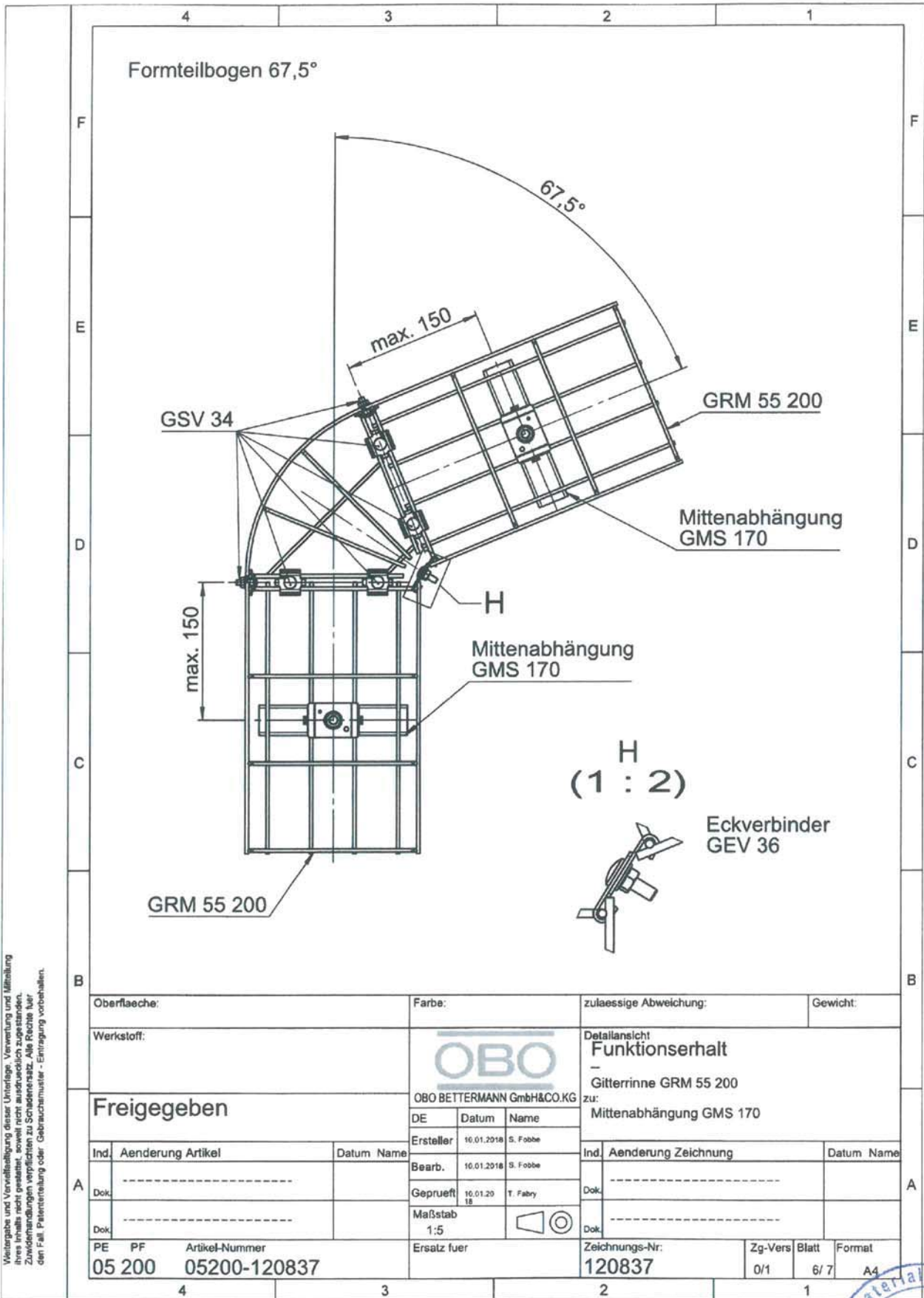




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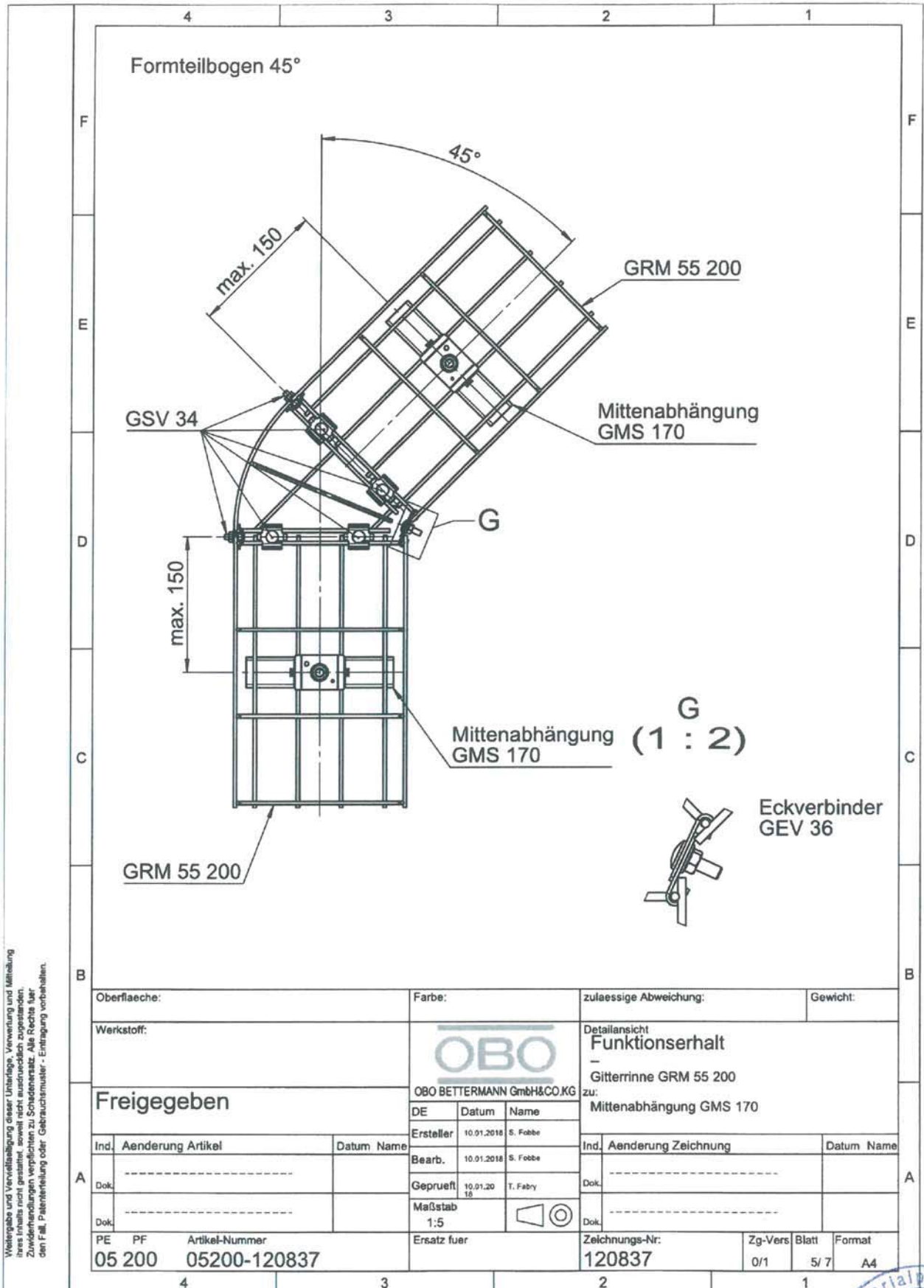




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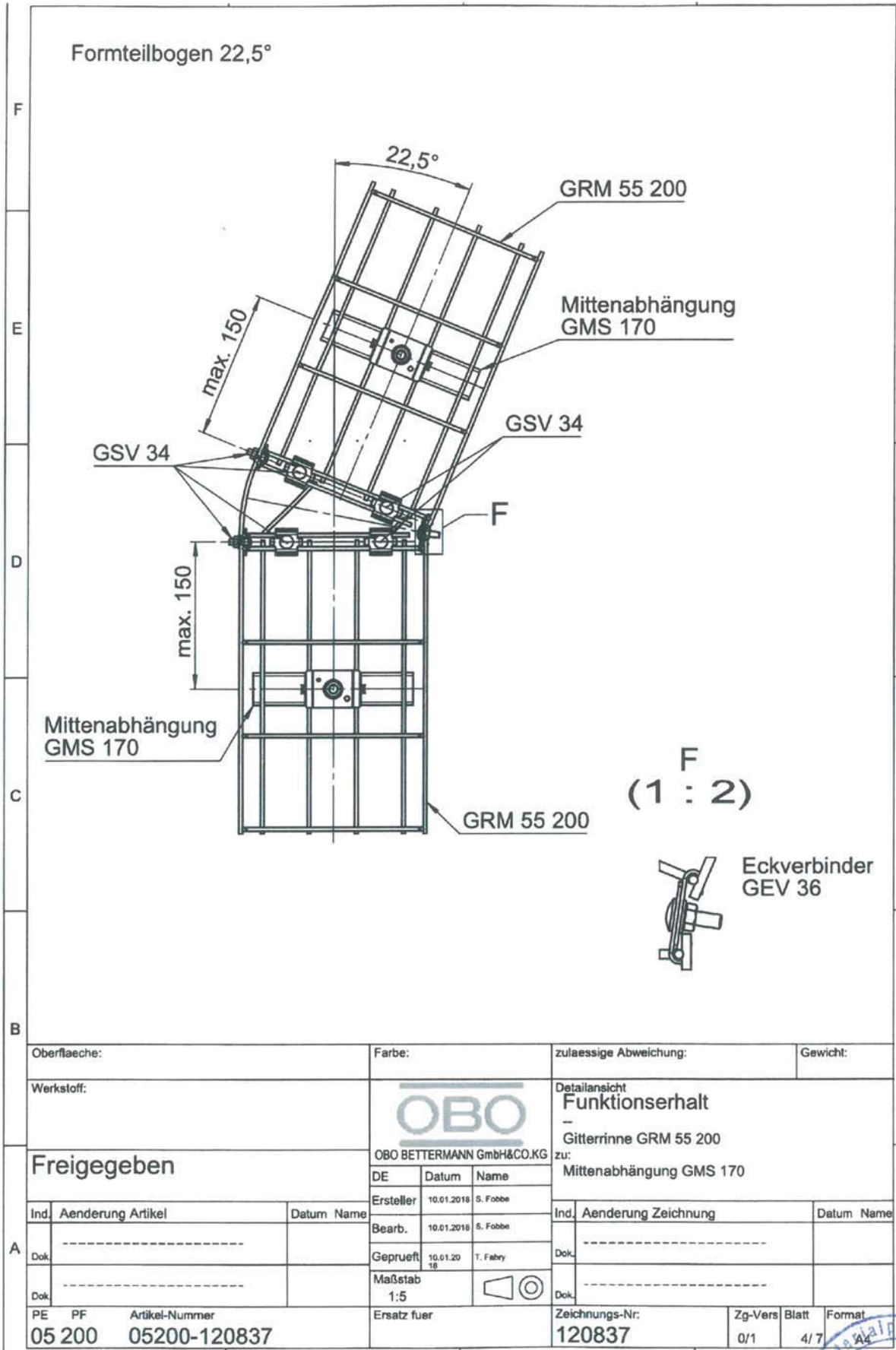




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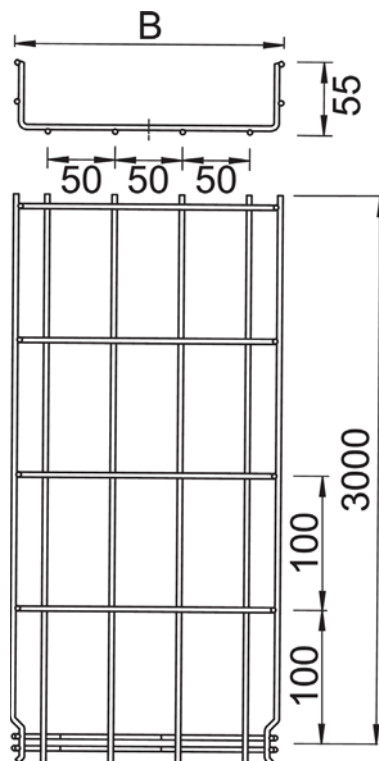
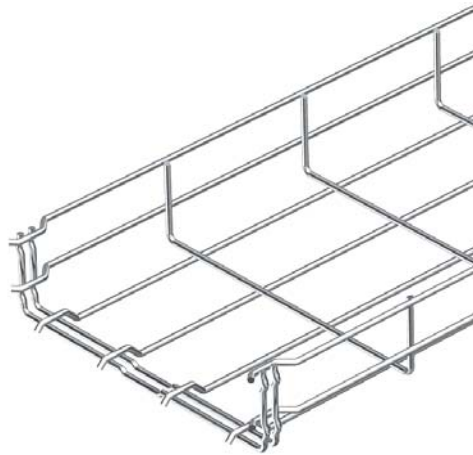
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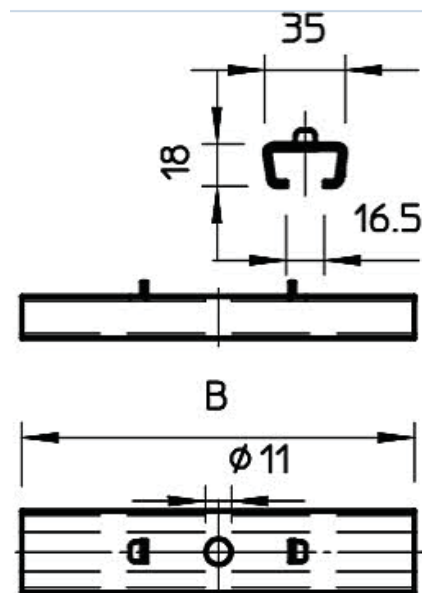
Mesh cable tray type GRM 55 200



Dimension B:	200 mm
Diameter of longitudinal wire:	3.9 mm
Diameter of transverse wire:	3.9 mm



Centre suspension type GMS 170

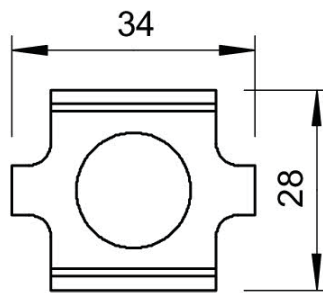
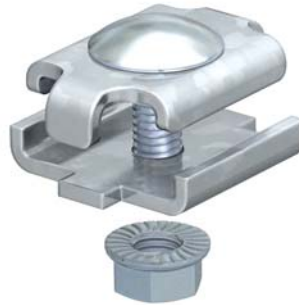


Dimension B:

170 mm



Joint connector type GSV 43

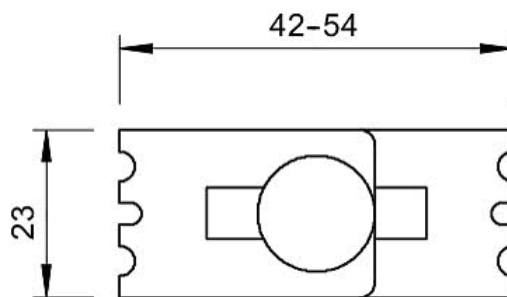
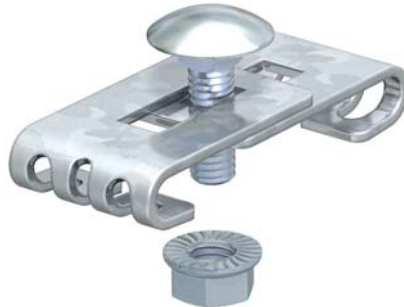


Truss-head bolt:

M6 x 20 with combination nut M6



Corner connector type GEV 36



Truss-head bolt:

M6 x 12 with combination nut M6

OBO Bettermann Holding GmbH & Co. KG

P.O. Box 1120
58694 Menden
GERMANY

Customer Service

Tel.: +49 23 73 89-1300
Fax: +49 23 73 89-71442
toi@obo.de

www.obo-bettermann.com

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Building Connections

