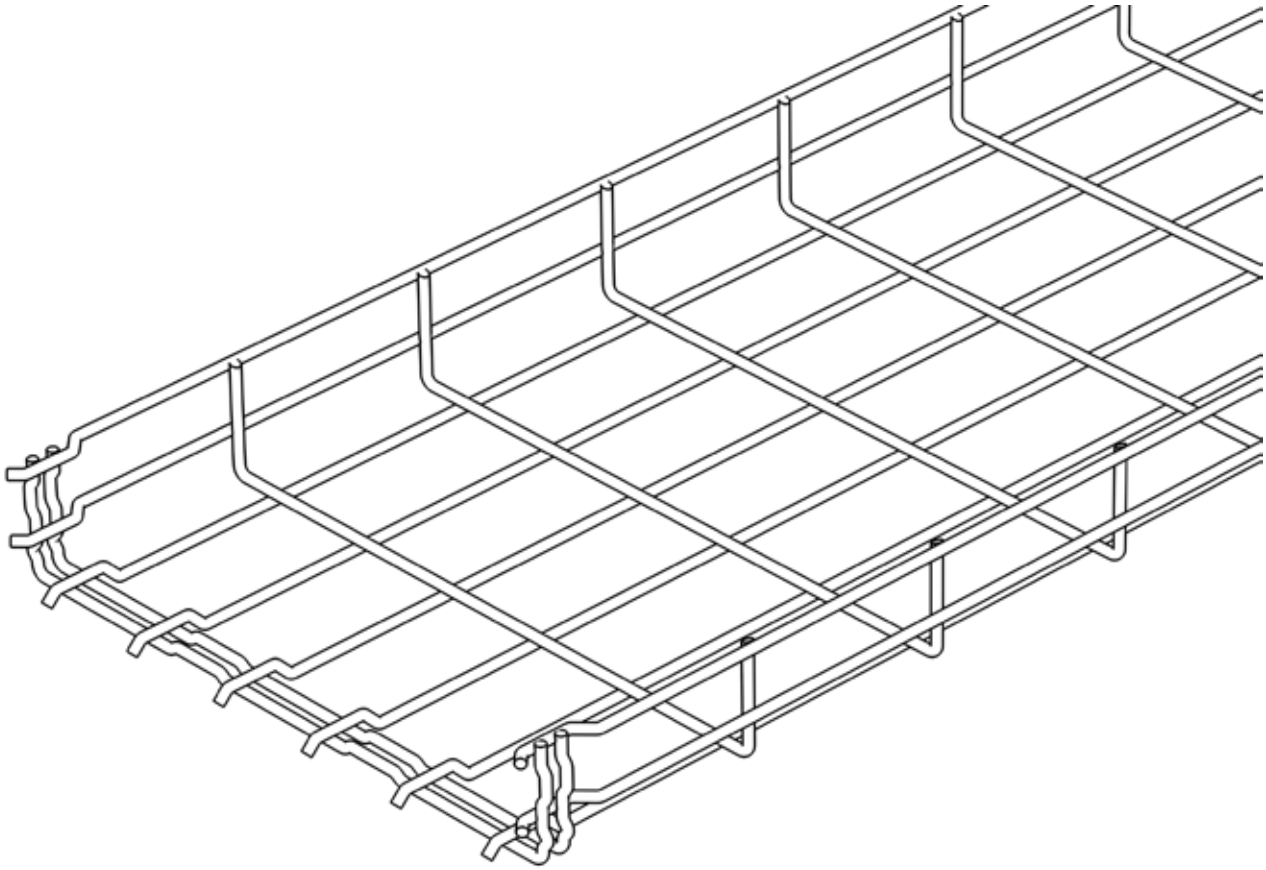
Magic® mesh cable tray system

Brief system instructions for GR-Magic®

CHALFANT

OBO Bettermann Group



Building Connections

06/2017 EN

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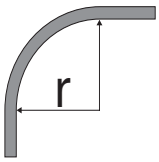
1. General safety Information

If cable support systems are touched with bare hands, then cutting could result on account of the sharp edges. Always wear suitable protective gloves when handling system parts.

When working with the cable support system, in particular during shortening, e.g. with an angle grinder, splinters and chips may result, which can cause injury. For this reason, wear personal protective equipment (PPE) during mounting.

If the maximum load capacity is exceeded, the cable support system may collapse. Comply with the load limits!



Cables can be damaged on bending. When inserting the cables, ensure that the minimum bending radius, prescribed by the cable manufacturer, is observed.

2. Straight connection of mesh cable trays

The GR-Magic® mesh cable tray system with shaped connector for screwless quick mounting guarantees the shortest possible installation times, even for complex mounting operations.

1.1 Connection of lengths stock lengths

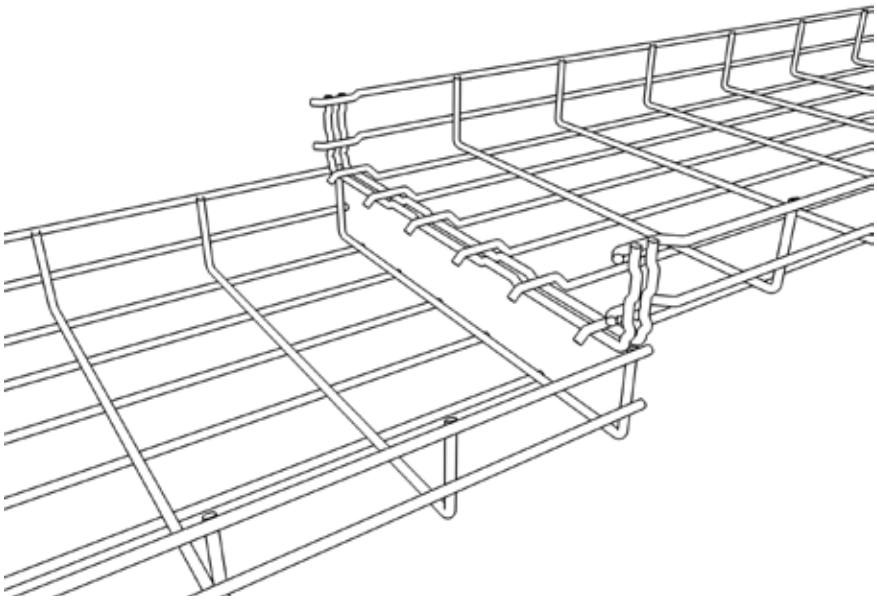


Fig. 2.1.1

Connect the mesh cable trays, as shown.

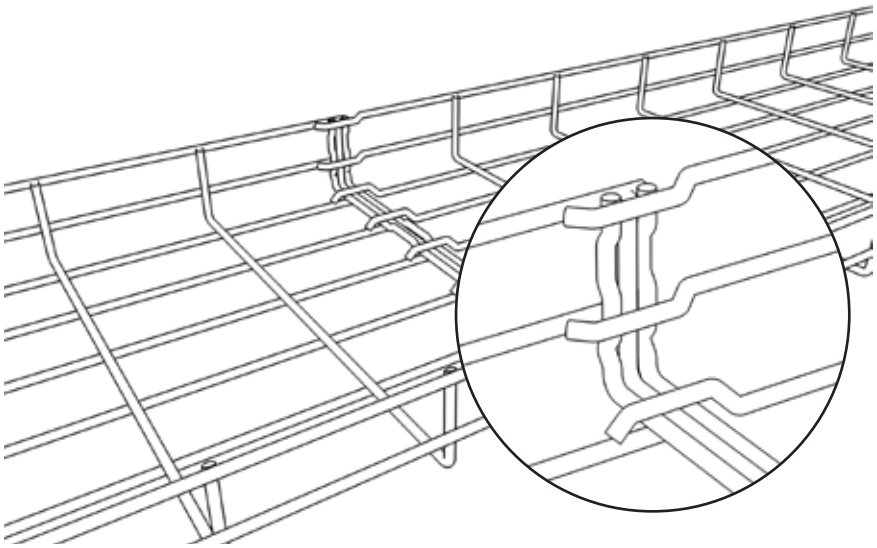


Fig. 2.1.2

The three transverse wires run in parallel when mounted.

1.2 Connection of cut mesh cable trays

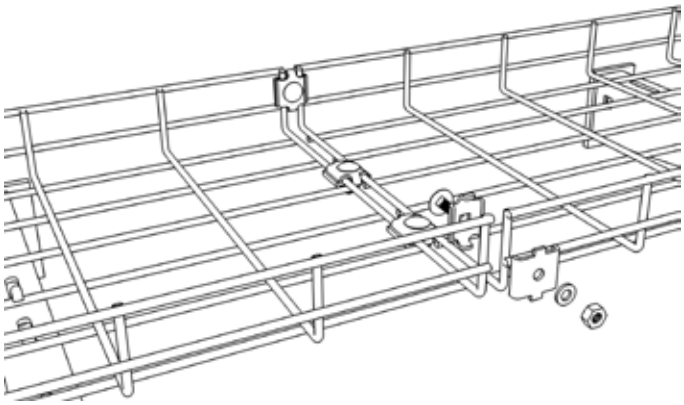


Fig. 2.2.1

Use of the joint connector type GSV 34.

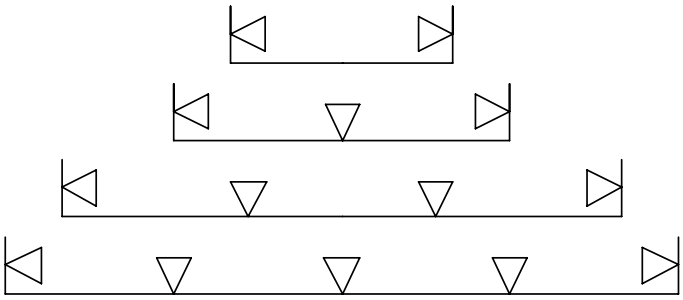


Fig. 2.2.2

Positioning and quantity of mesh cable tray connectors.

Width 50–150 mm = 2
Width 200–300 mm = 3
Width 400 mm = 4
Width 450–600 mm = 5

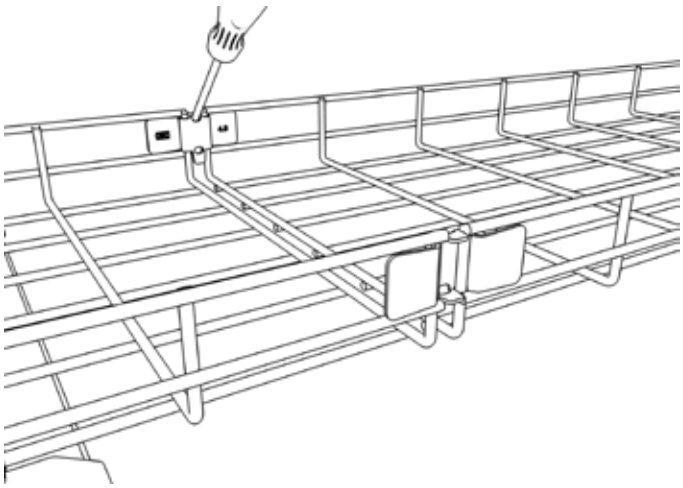


Fig. 2.2.3

Use of the quick connector type GRS 3.9 or GRS 4.8 analogue to the mesh cable tray wire thickness. For use with mesh cable trays up to a width of 150 mm.

2.2 Connection of cut mesh cable trays

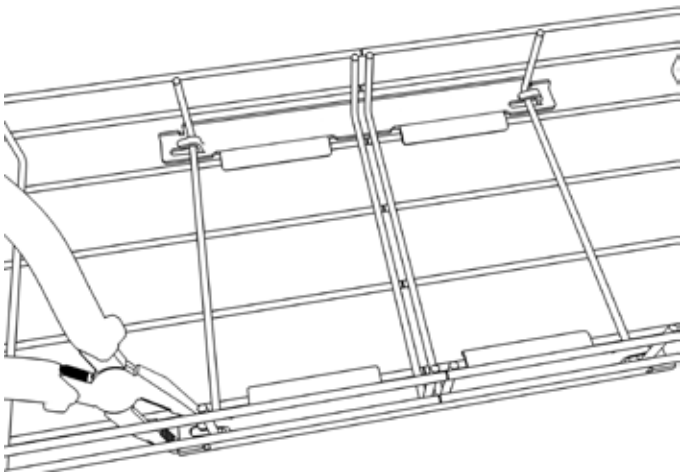


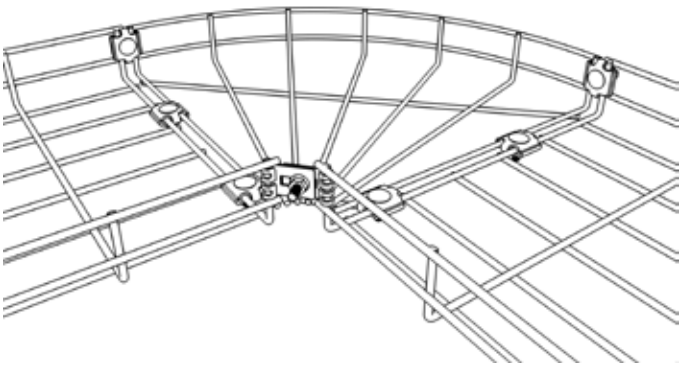
Fig. 2.2.4

Use of the quick connector type GRV 245.

3. Use of fittings

Besides the available mesh cable tray bends, flexible fittings can be created during construction.

3.1 Mounting of factory-made mesh cable tray bends



Quantity according to width

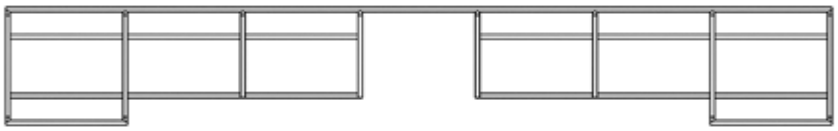
1x GEV 36

Fig. 3.1.1

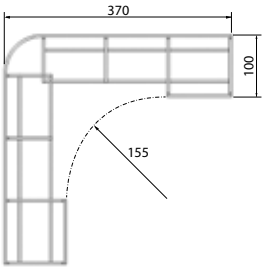
Mesh cable trays of type GRB are integrated into the route using joint connectors (GSV 34) and corner connectors (GEV 36).

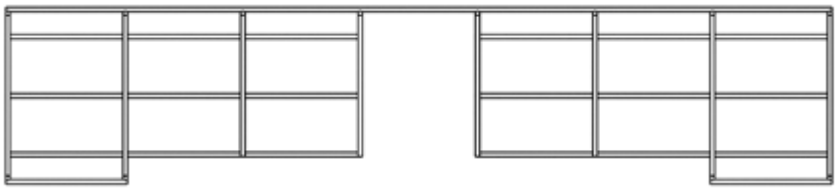
3.2 Mesh cable tray bends created on-site with small radius

Below, you will find the cutting templates/samples of the mesh cable bends to be created with a small radius.

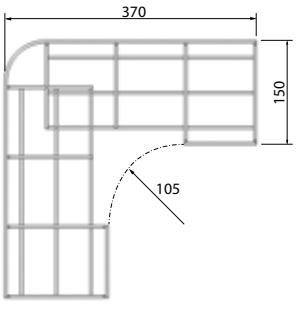


1x GSV 34

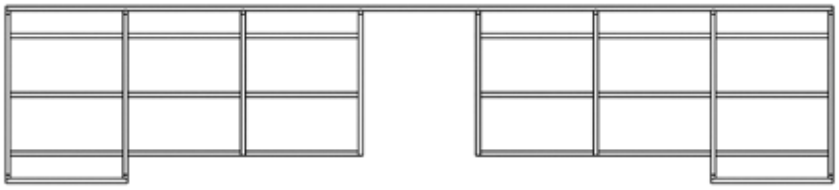




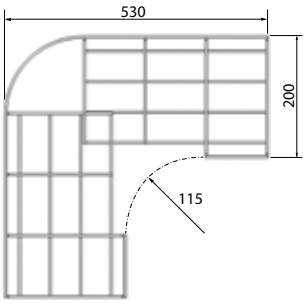
1x GSV 34

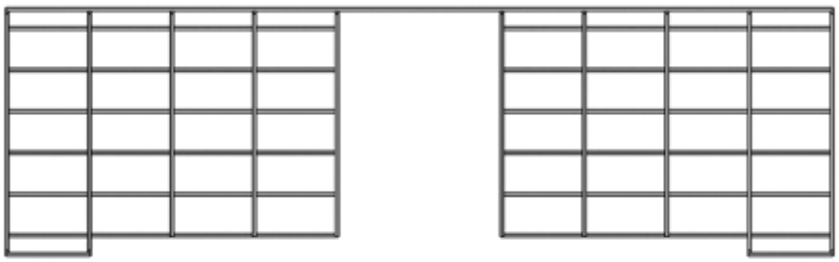


3.2 Mesh cable tray bends created on-site with small radius

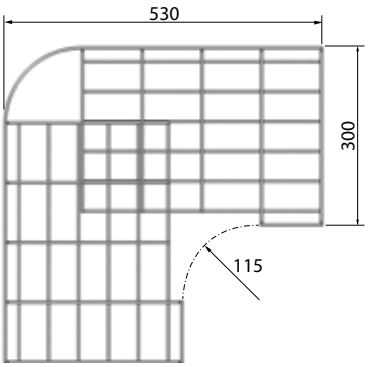


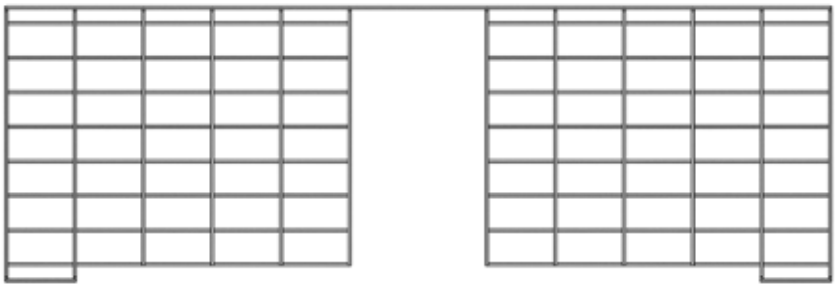
1x GSV 34



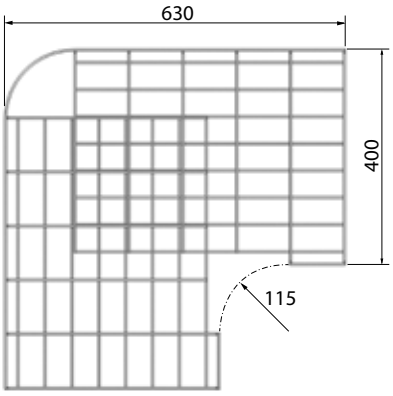


1x GSV 34

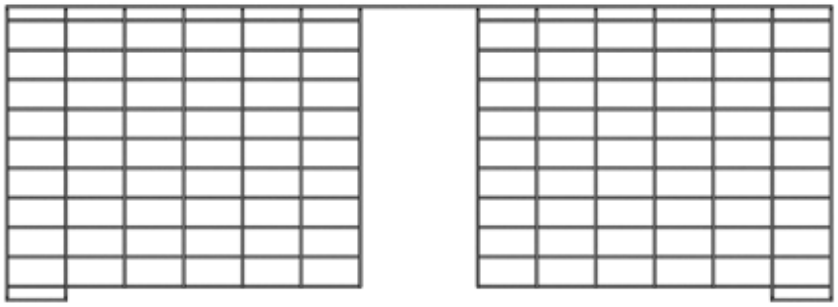


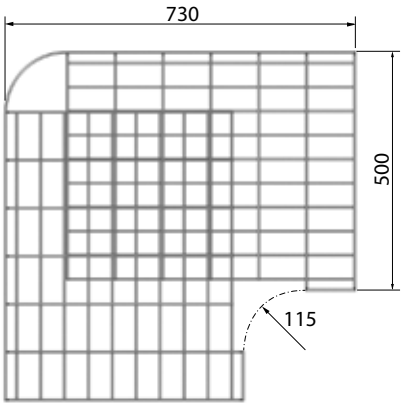


2x GSV 34

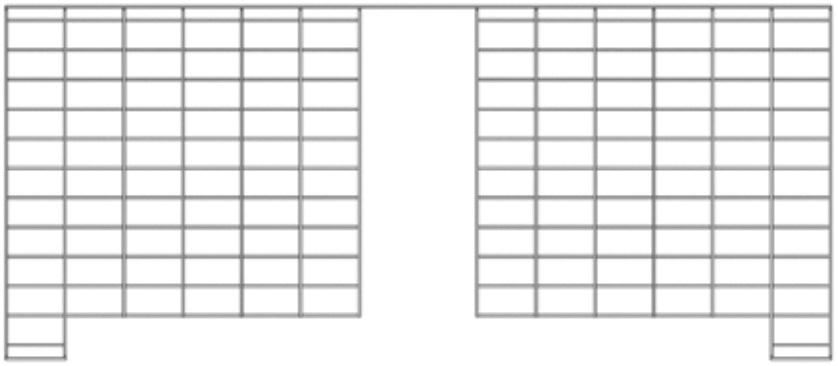


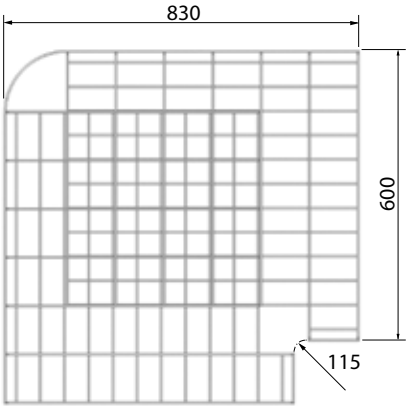
3.2 Mesh cable tray bends created on-site with small radius





2x GSV 34

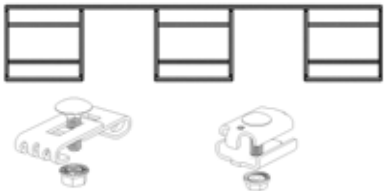




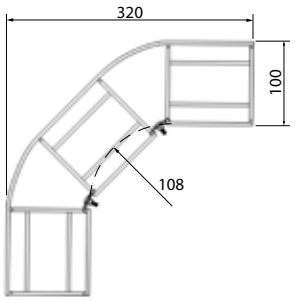
2x GSV 34

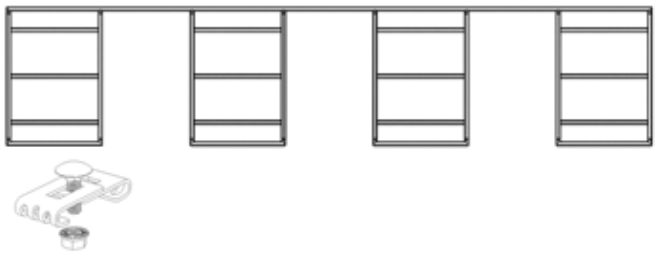
3.3 Mesh cable tray bends created on-site with large radius

Below, you will find the cutting templates/samples of the mesh cable bends to be created with a large radius.

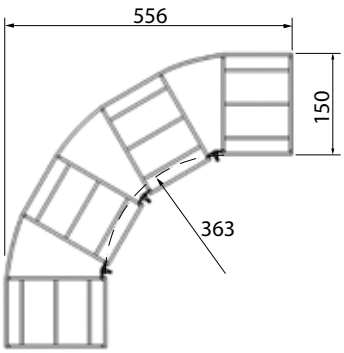


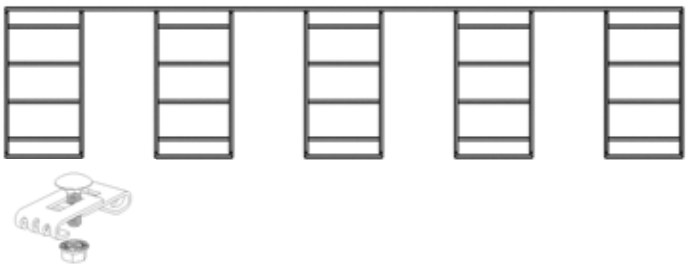
1x GEV 36 1x GSV 34



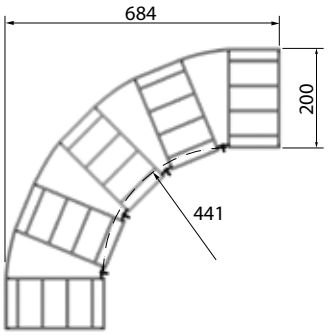


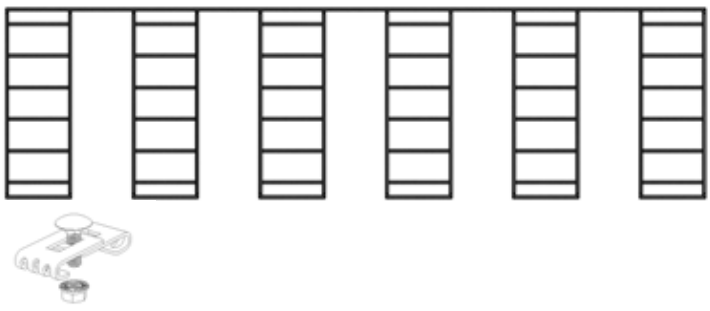
3x GEV 36



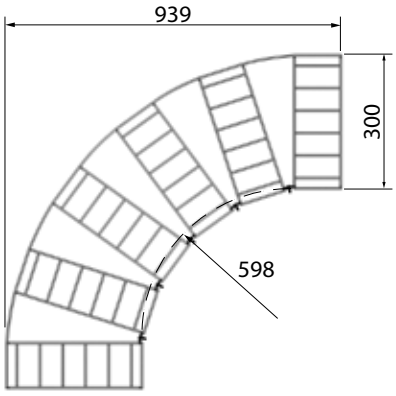


4x GEV 36

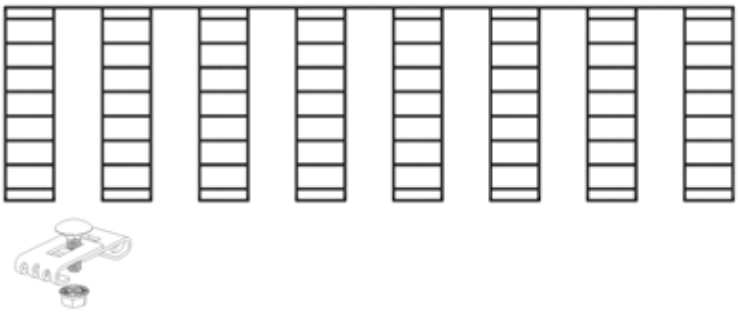




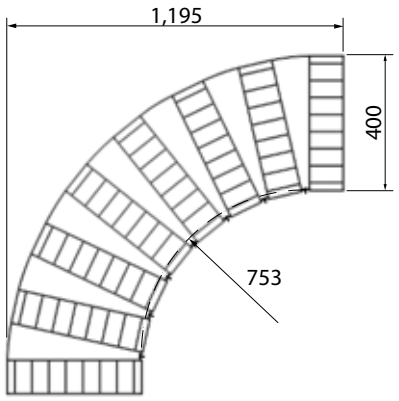
5x GEV 36

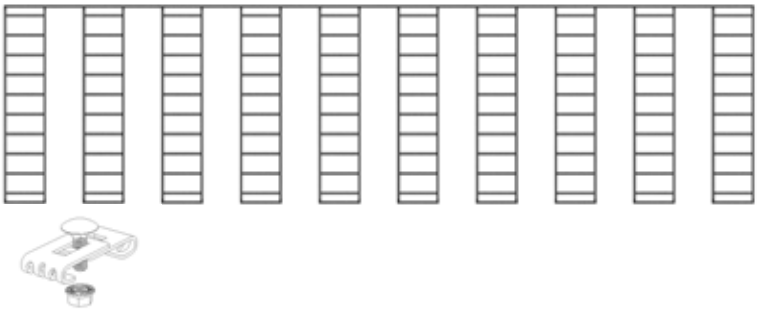


3.3 Mesh cable tray bends created on-site with large radius

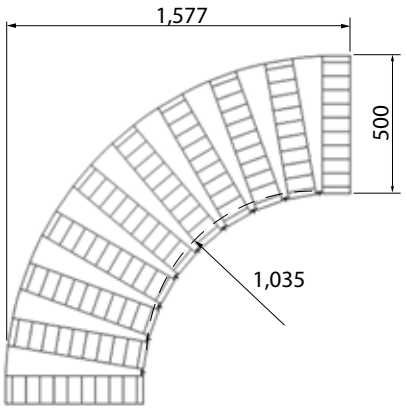


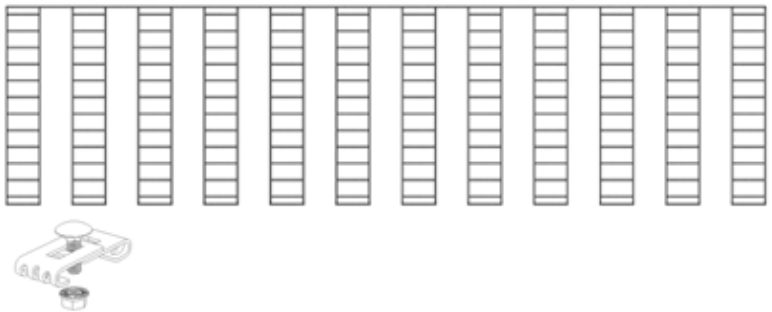
7x GEV 36



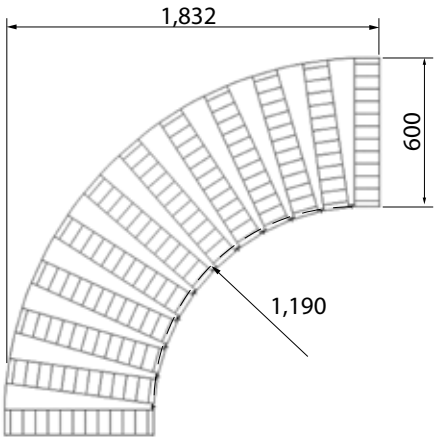


9x GEV 36





11x GEV 36



3.4 Reduction created on-site, asymmetrical

A reduction of the mesh cable tray width by 100 mm can be created.

GSV 34 joint connector
Please refer to Fig. 2.2.2 for the required number minus one connector being replaced by the GEV 36.

GSV 34 joint connector

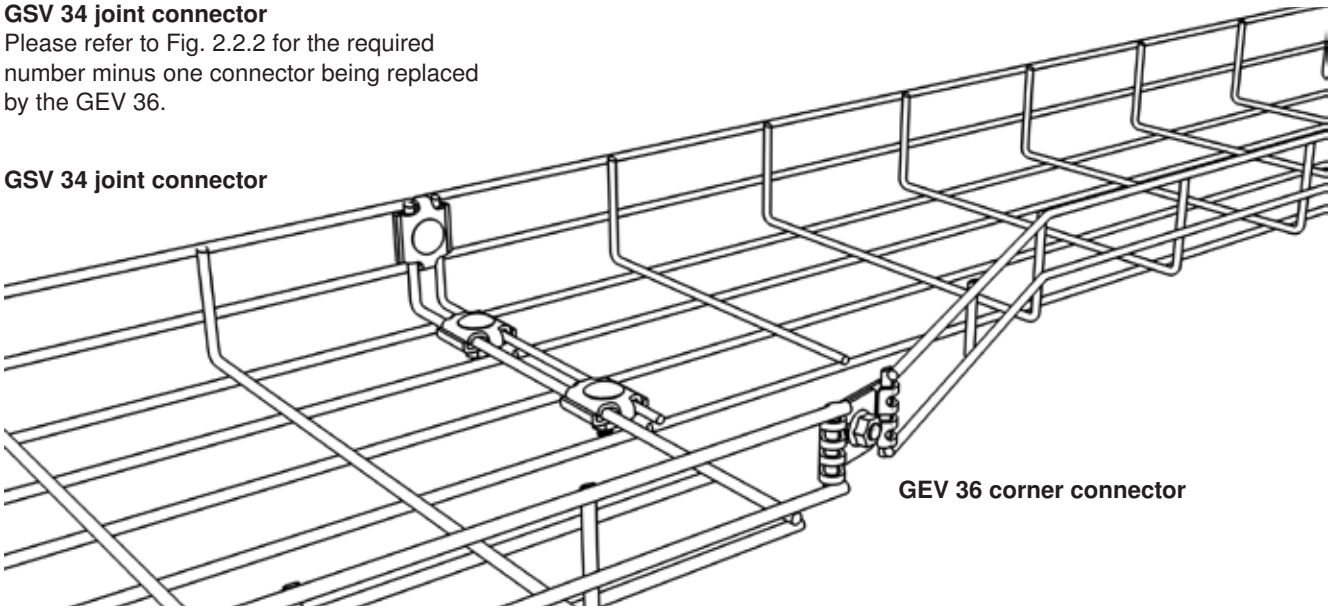


Fig. 3.4.1

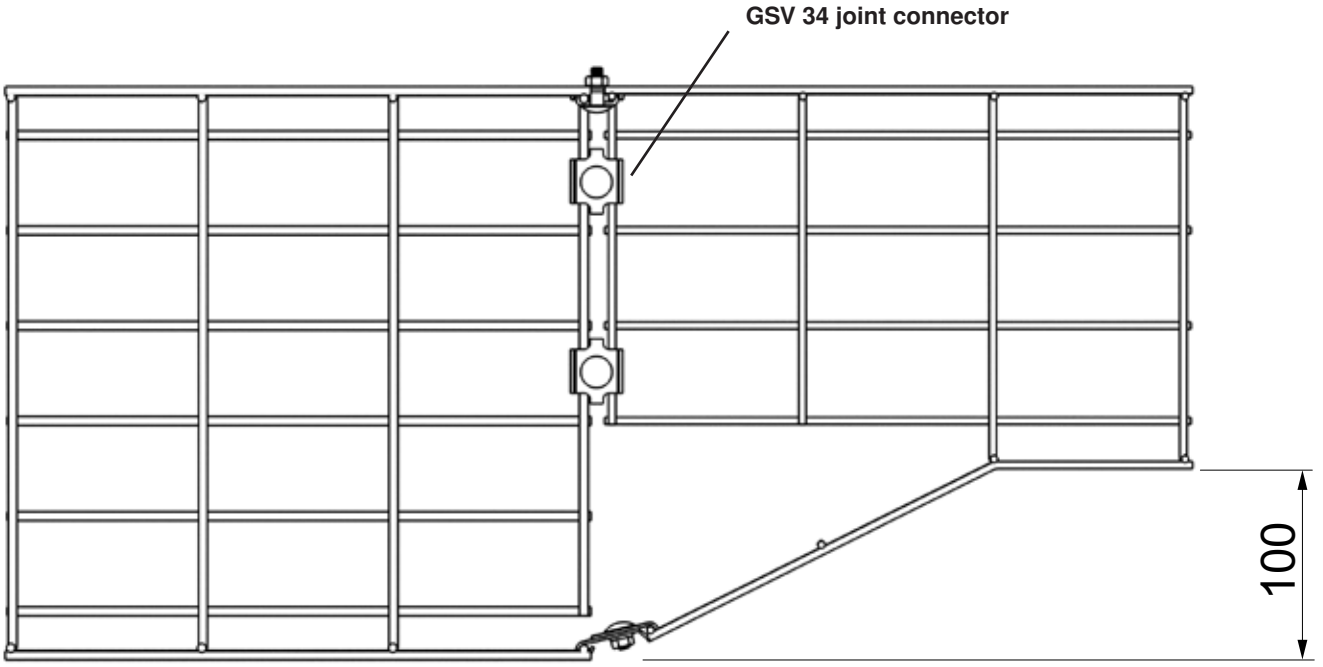


Fig. 3.4.2

3.4 Reduction created on-site, symmetrical

A reduction of the mesh cable tray width by 50 mm (Fig. 1, 2) or 100 mm (Fig. 3) can be created.

For the required number of GSV 34 joint connectors, please refer to Fig. 2.2.2, page 4.
When using the GEV 36 corner connector, the same number of GSV 34 joint connectors can be left out.

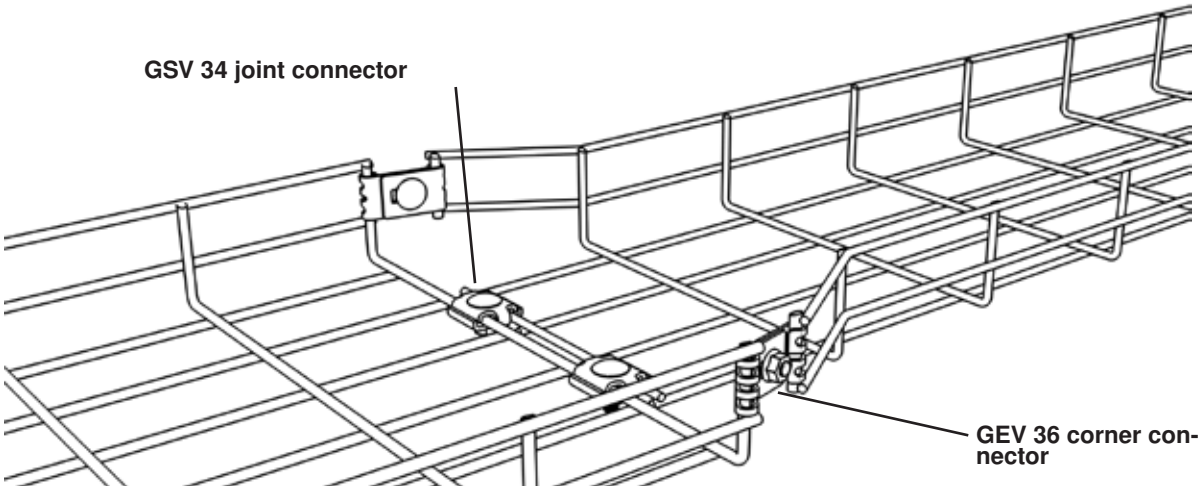


Fig. 3.4.3

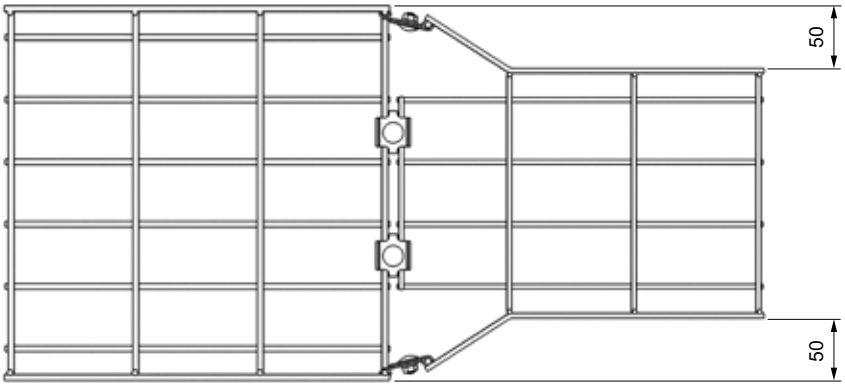


Fig. 3.4.4

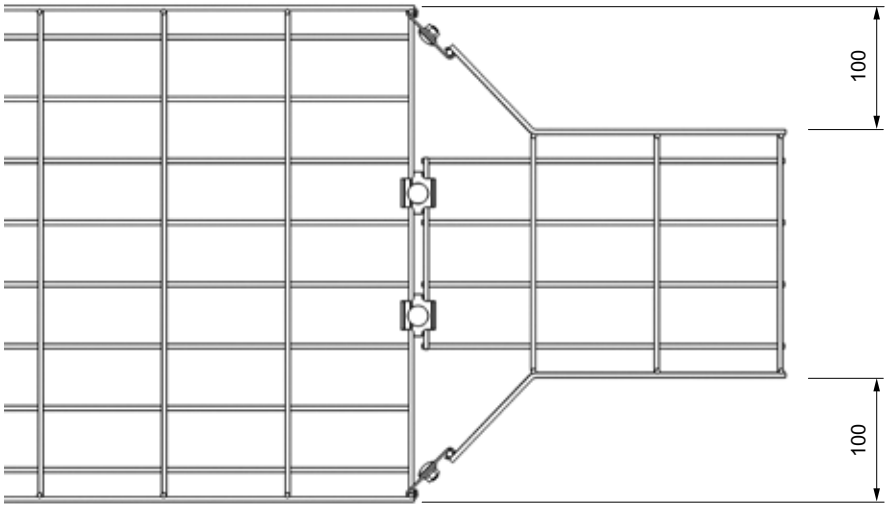
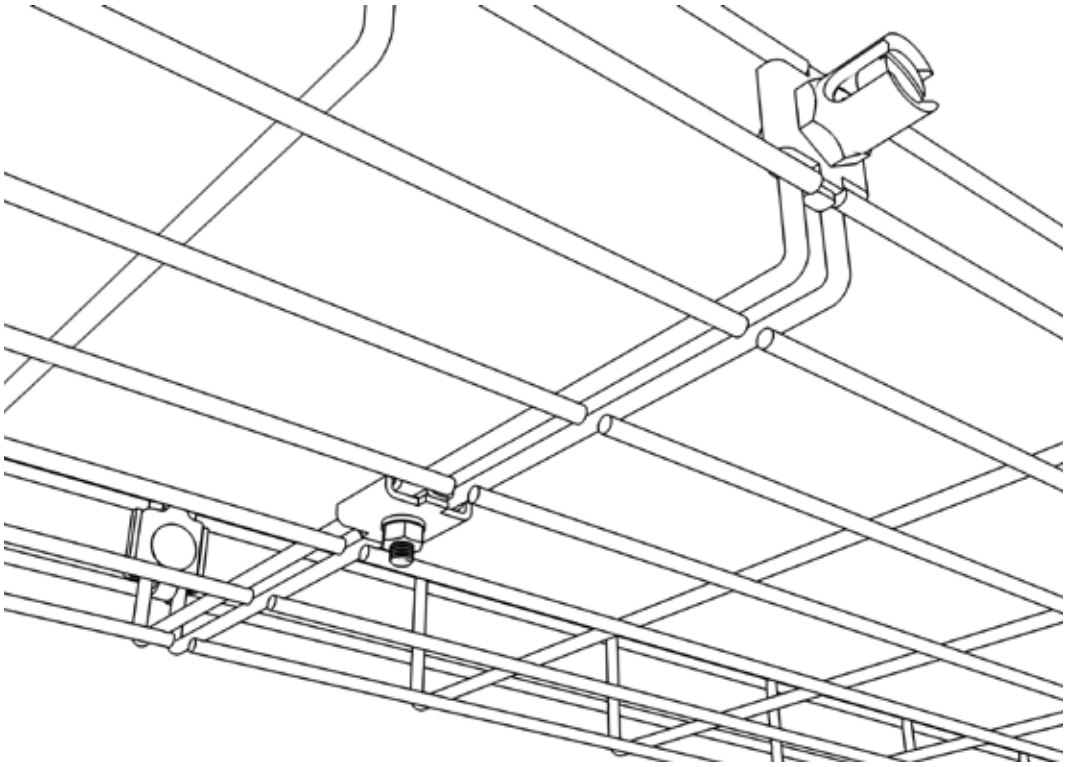


Fig. 3.4.5

3.5 Earthing connection

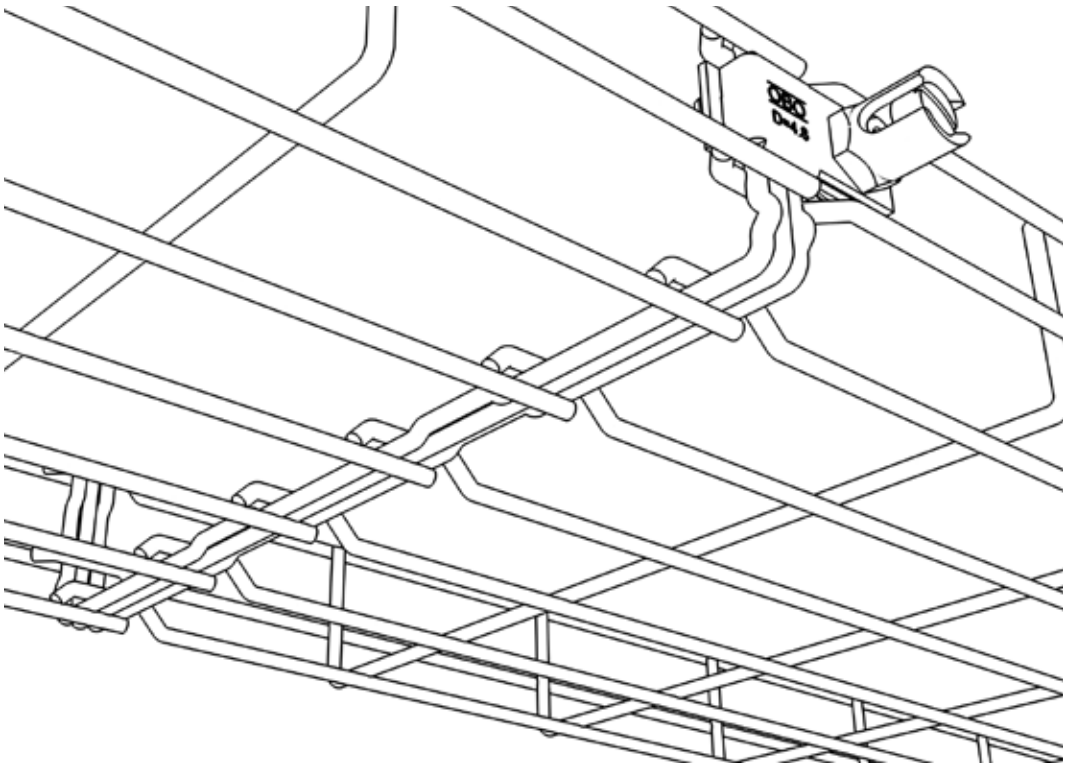
Integration of the mesh cable trays into the equipotential bonding. Please refer to the installation regulations valid for you for the number of connections.



Joint connector, GSV 34

Earthing screw, EKL

Fig. 3.5.1 Integration of a cut mesh cable tray

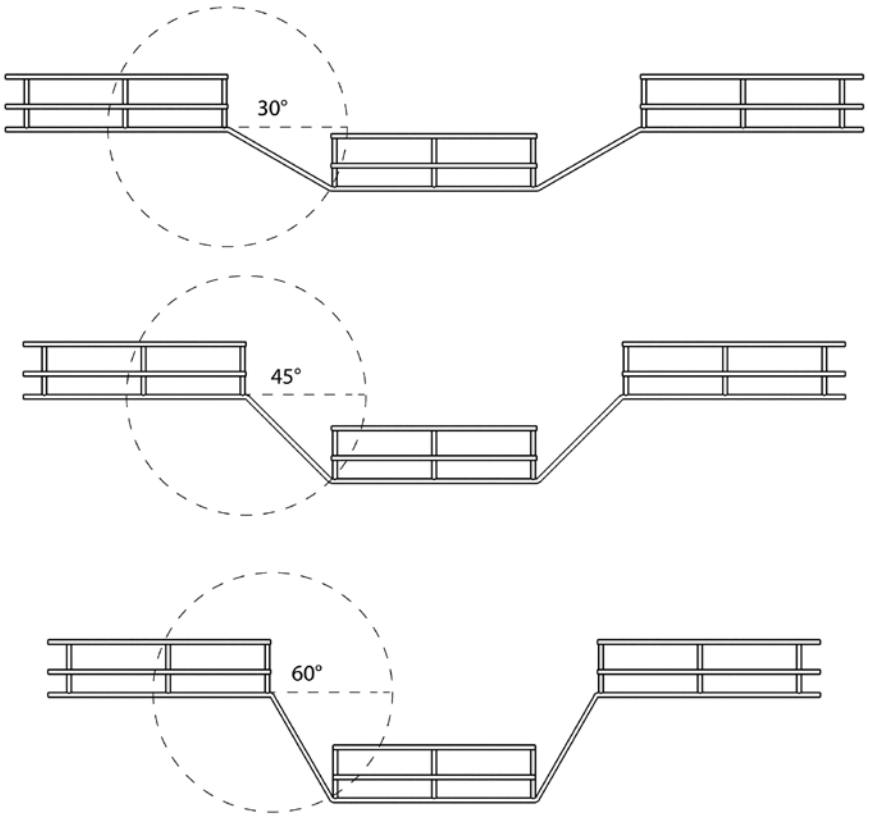


Connection and
earthing terminal, VEK-GRM

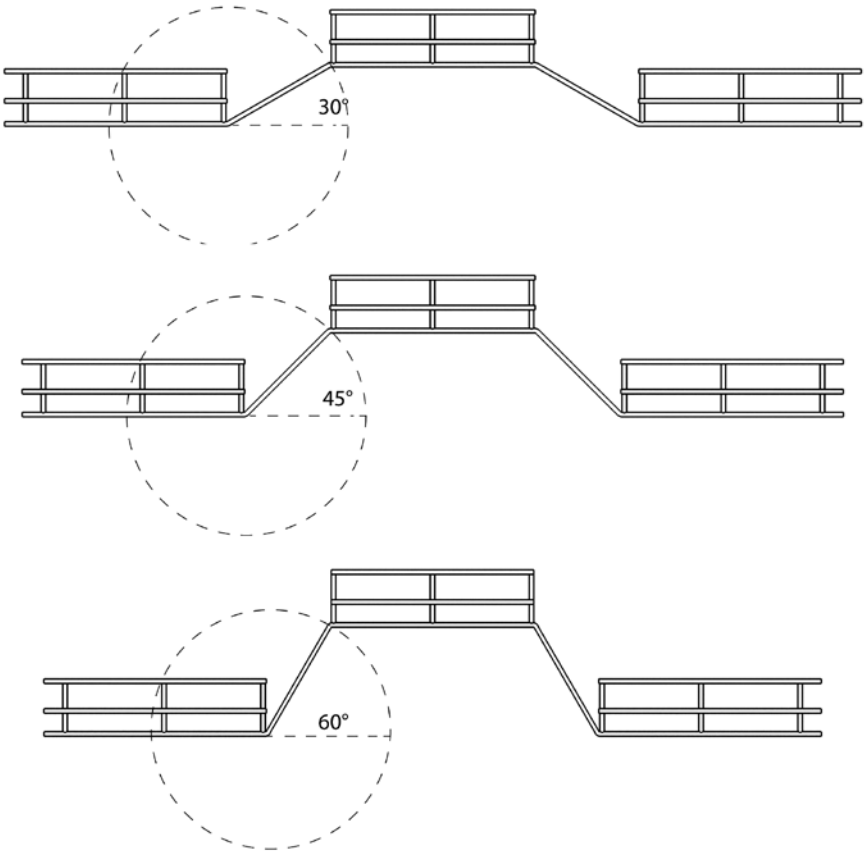
Earthing screw, EKL

Fig. 3.5.2. Integration in a Magic mesh cable tray connection

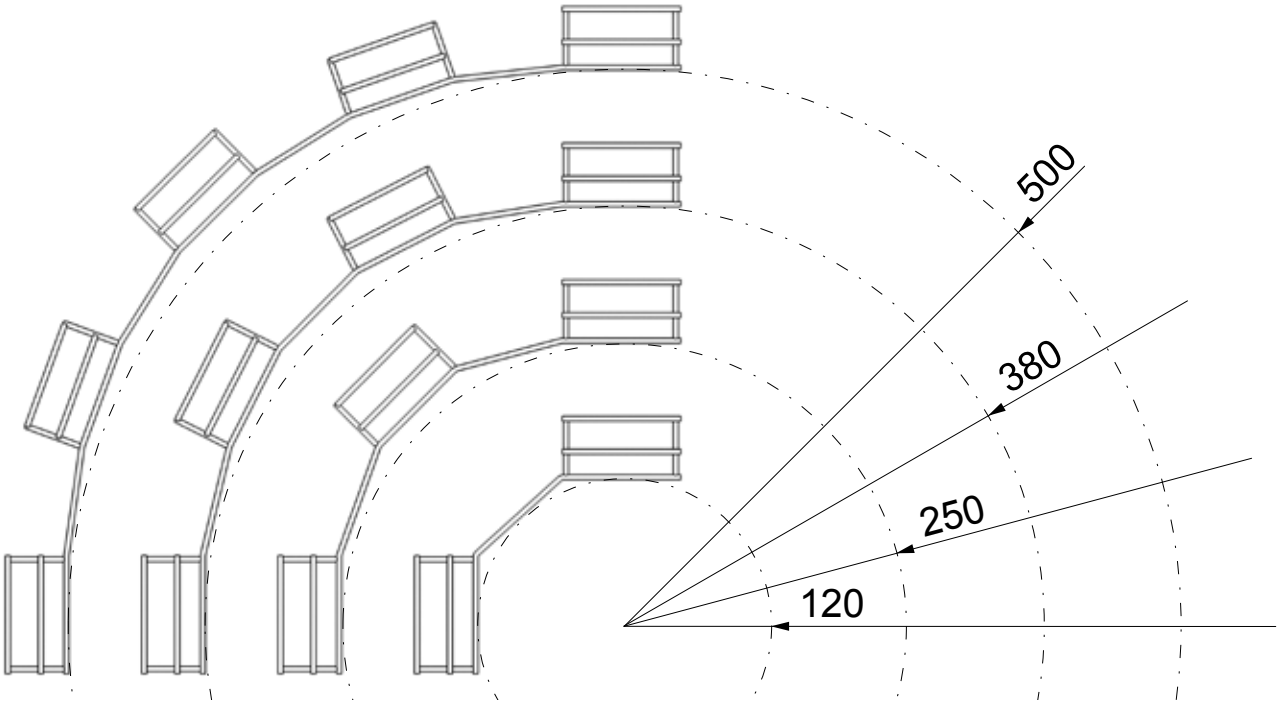
3.6 Negative height offset created on-site



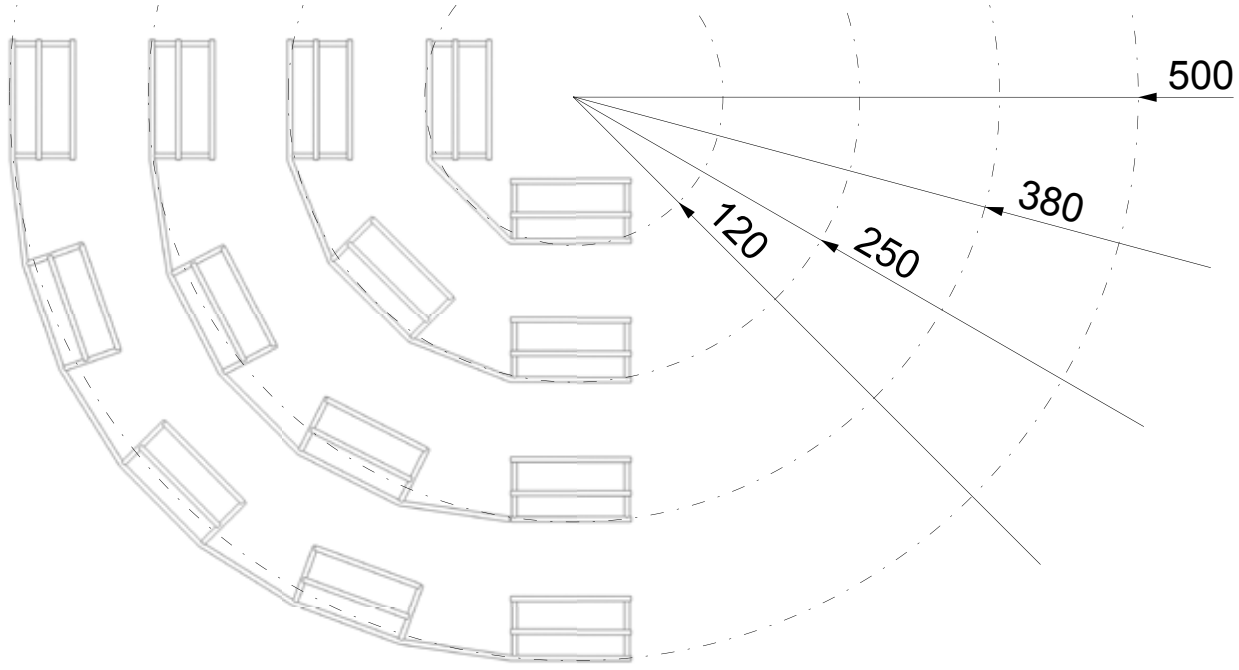
3.7 Positive height offset created on-site



3.8 Falling mesh cable tray bends created on-site



3.9 Rising mesh cable tray bends created on-site



4. Tee created on-site

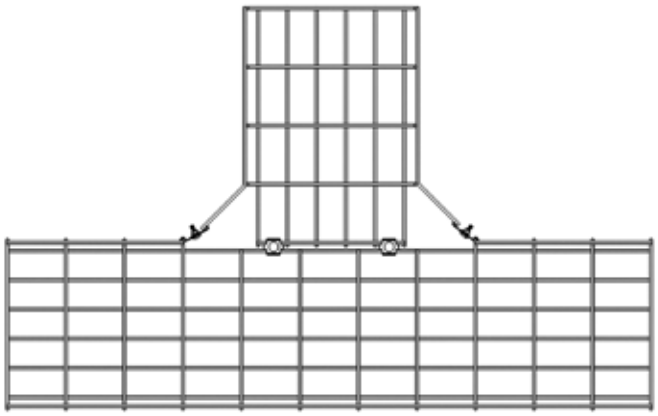


Fig. 4.1

Tee after completion

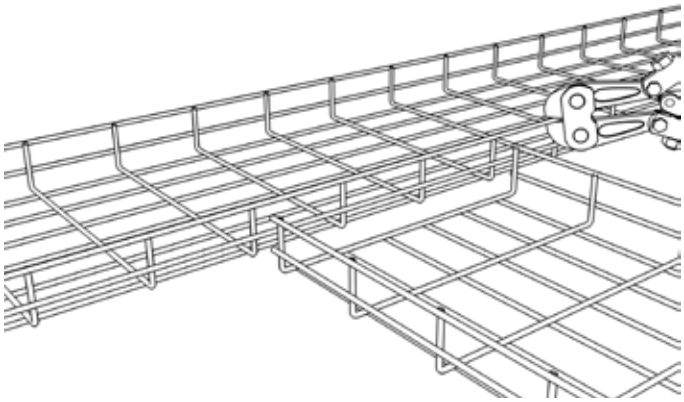


Fig. 4.2

Notching out of the side grids on both mesh cable trays to be connected (see Fig. 1).

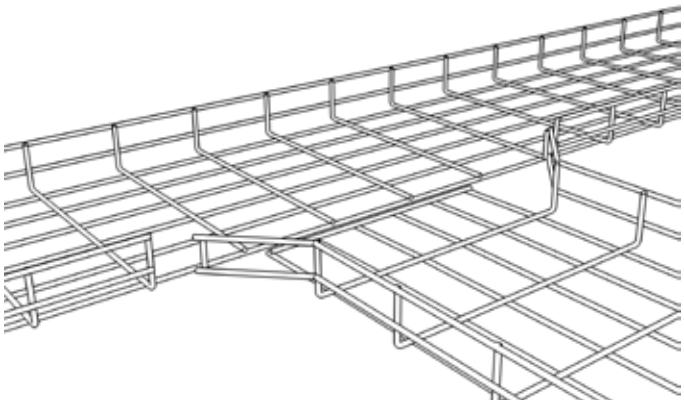
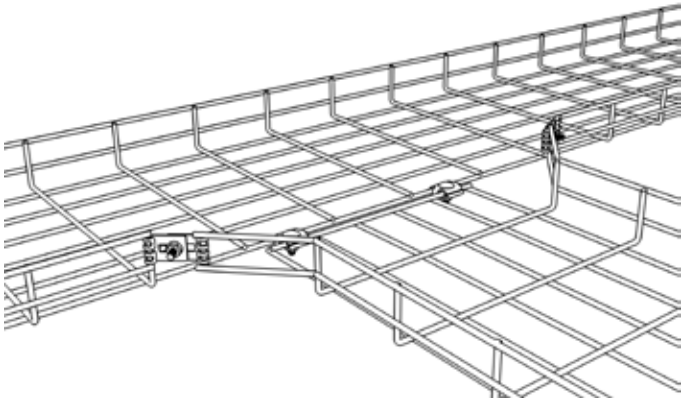


Fig. 4.3

Bend the mesh cable trays as shown.



2x GEV 36

GSV 34

Fig. 4.4

Mounting of the corner connector type GEV 36 (2x) and the mesh cable tray connector type GSV 34 in the base. Refer to Fig. 2.2.2, page 4 for the number of type GSV 34 mesh cable tray connectors in the base. If the GEV 36 corner connector is used, the same number of GSV 36 joint connectors can be left out.

4.1 Vertical branch created on-site

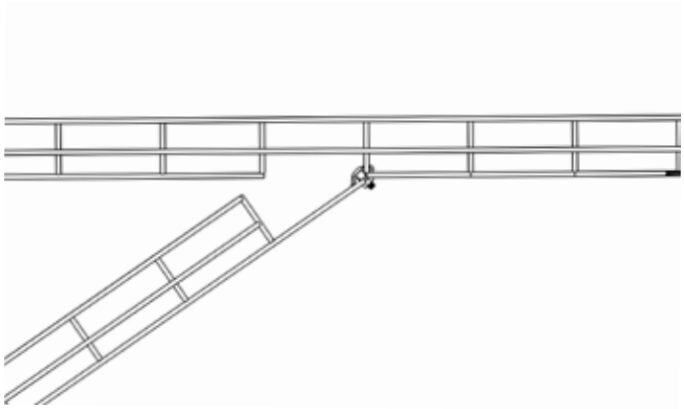


Fig. 4.1.1

Side view of the vertical branch after completion.

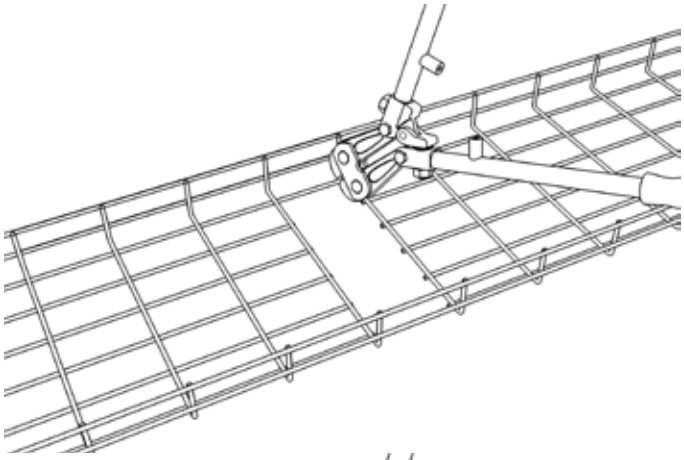


Fig. 4.1.2

Notching out of the wires in the base of the horizontally routed mesh cable tray.

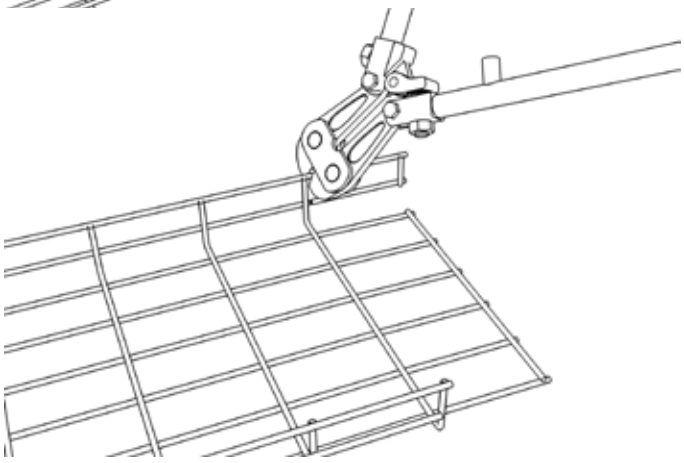


Fig. 4.1.3

Notching out of the side grids of the vertically routed mesh cable tray.

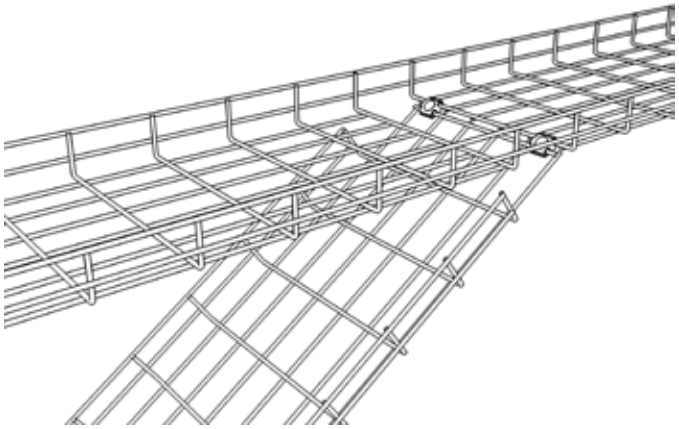


Fig. 4.1.4

Mounting of the mesh cable tray connector type GSV 34 in the base. Refer to Fig. 2.2.2, page 4 for the number of type GSV 34 mesh cable tray connectors in the base.

GSV 34

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Building Connections