PohlCon

PARTNER
FROM START
TO FUTURE.

Mesh Cable Trays

Assembly instructions



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General information

PohlCon Mesh cable trays are ideally suited for flexible and safe cable routing both indoors and outdoors. Typical areas of application include data centres, industrial plants or hygienic environments. The mesh design ensures excellent cable ventilation and allows cables to be routed in and out flexibly at any point. The standard range covers all common applications. The Mesh cable trays are available in U-, C-, G- or W-shaped versions in various heights. The support structures are to be planned by qualified engineers, and the permissible torque must be observed for all screw connections.

The following general instructions must be observed before beginning assembly work:

1. The permissible torque must be observed for all screw connections (see table: "Selection of screw tightening torques").
2. The following applies to all shaped parts, changes in direction or open ends: The maximum distance of 300 mm in relation to the end of the shaped part and the support must be observed (see Fig. 1).
3. Carry out cutting and sectioning work with the utmost care and in compliance with occupational safety (see Fig. 2).
4. All cutting and sectioning points are to be galvanised on site after deburring. For touching up cut edges and defects, a cold zinc paint (KZF) or cold zinc spray (KZS) may be used for strip-galvanised or pre-galvanised material (version S). For batch-galvanised or piece-galvanised material (version F), only cold zinc paint (KZF) may be used.
5. Screw locking devices must be used in areas with vibration.
6. Threaded rod ends must be avoided in areas where cables and conductors are routed (see Fig. 3). Risk of cable damage!

Recommended tightening torques

Nominal thread diameter	Property class for bolts/screws GV/F (DIN EN ISO 898-1)	Tightening torque [Nm] acc. to VDI 2230 Coefficient of friction μ = 0.12	Property class for bolts/screws E/E4 (DIN EN ISO 3506-1)	Tightening torque [Nm] acc. to VDI 2230 Coefficient of friction μ = 0.20
M6	4.6	**3.7**	50	**4.6**
M8	4.6	**9.1**	50	**11.2**
M10	4.6	**18.3**	50	**22.2**
M12	4.6	**31.0**	50	**38.0**
M6	8.8	**10.1**	70	**10.0**
M8	8.8	**24.6**	70	**24.1**
M10	8.8	**48.0**	70	**47.7**
M12	8.8	**84.0**	70	**82.0**

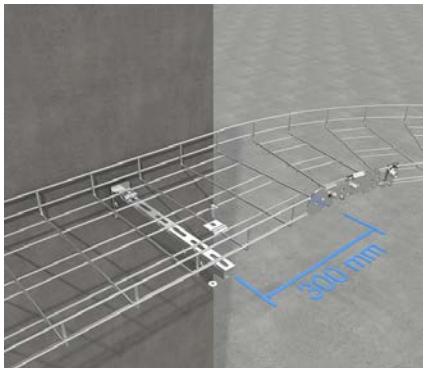


Fig. 1: Support spacing
Distance to a change in direction: max. 300 mm.



Fig. 2: Cutting and sectioning work
Carry out cutting and sectioning work in compliance with occupational safety regulations.
E.g.: Mesh cable tray cover GD 06.

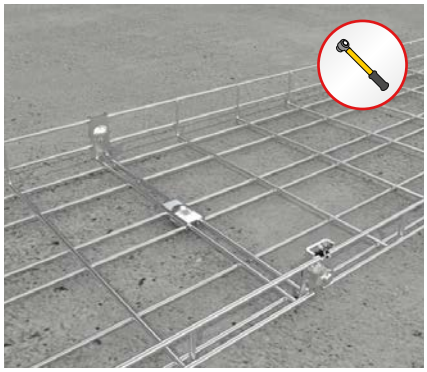


Fig. 3: Risk of cable damage
Threaded rod ends must be avoided in areas where cables and conductors are routed.

Safety instructions



Wear safety goggles



Wear hearing protection

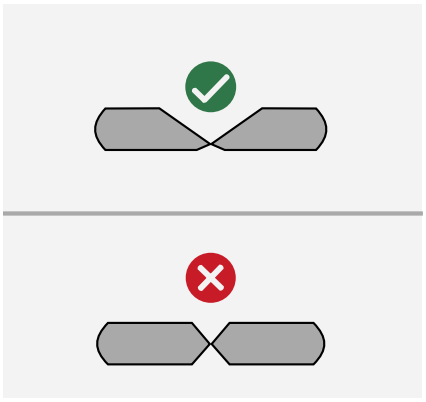


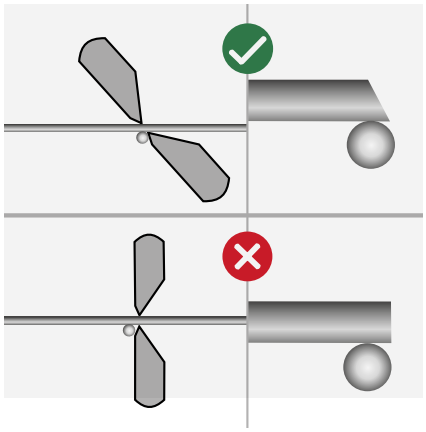
Observe tightening torque for fastening elements

Cutting instructions

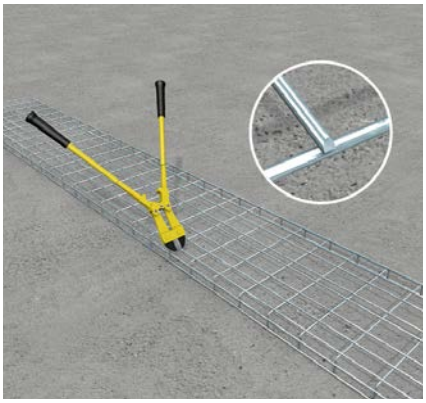


The required mesh cut-out is created using a 40° bolt flush cutter (BS).











The illustration shows a mesh cable tray (G 50-40) designed for installation in bends. Except for the wires on the side, (2 pieces for G 50, 3 pieces for G 100), all wire cross-struts must be removed.

Steps for assembly

Connectors and fastening elements

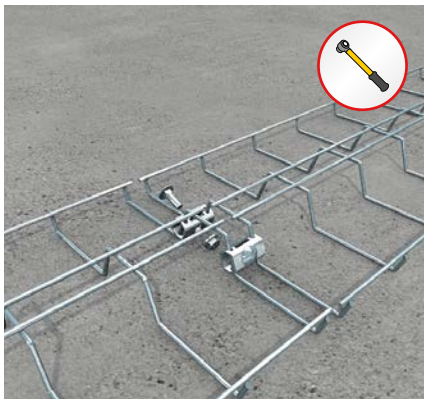
Mesh cable tray connectors GV 30 and GVD 30



Mesh cable tray (G 50/100)
Place the mesh cable tray connector (GV 30) on the Mesh cable trays from the inside and fix in place with a round-head screw (FRSV 8x16).



Mesh cable tray (GI)
Place the mesh cable tray connector (GV 30) on the Mesh cable trays from the inside and fix in place with a round-head screw (FRSV 8x16).



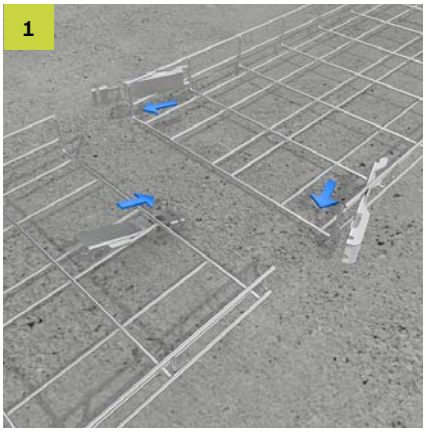
Mesh cable tray (GTD 30)
Attach the mesh cable tray connector (GVD 30) on top and fix in place with a round-head screw (FRS 8x25).



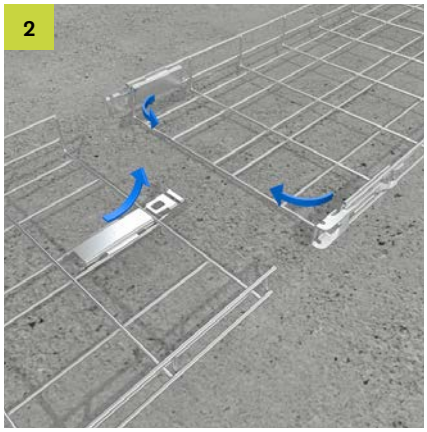
Mesh cable tray GTDW
Place the mesh cable tray connector (GV 30) on the Mesh cable trays from the inside and fix in place with a round-head screw (FRSV 8x16).

Mesh cable tray type	Tray width mm	Number of connectors		
		Side	Top	Base
G 50, G 100	100, 200 300, 400 500, 600	2x GV 30 2x GV 30 2x GV 30	-	1x GV 30 2x GV 30 3x GV 30
GI	60 120 200 300	2x GV 30 2x GV 30 2x GV 30 2x GV 30	-	1x GV 30 1x GV 30 1x GV 30 2x GV 30
GTD 30	300	-	2x GVD 30	-
GTDW	80 - 130	1x GV 30	1x GV 30	-

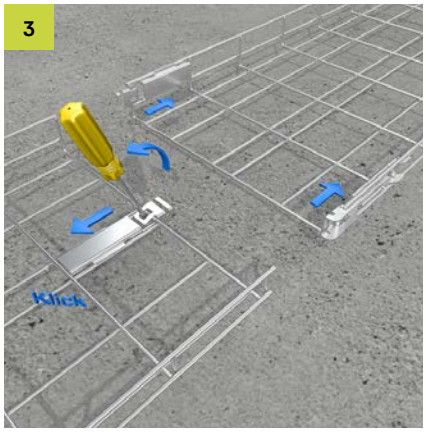
Mesh cable tray snap-in connector (GVR)



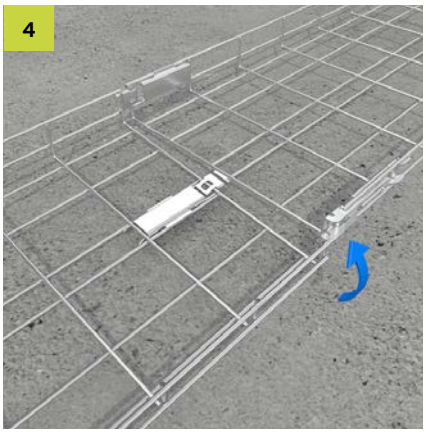
Insert the connectors on the sides of the mesh cable tray between the longitudinal wires from the inside. Position the connector in the base of the opposite mesh cable tray.



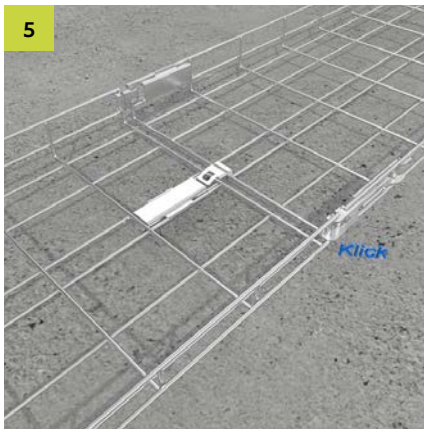
Rotate the connectors into place and pull the locking hooks towards the transverse wire.



Using a slotted screwdriver, engage the connectors and secure the bending tab (from the inside or outside).



Position the mesh cable tray on one side in a side connector and engage the opposite mesh cable tray from below.



For disassembly, release the connectors in the reverse order using a slotted screwdriver.

Mesh cable tray type	Tray width mm	Wire diameter mm	Snap connector type	Number of connectors	
				Side	Base
G 50	100, 200, 300	4.0	GVR 4.0	2	1
G 100	100, 200	4.0	GVR 4.0	2	1

The connector is not compatible with G 50 widths 400-600 or G 100 widths 300-600.

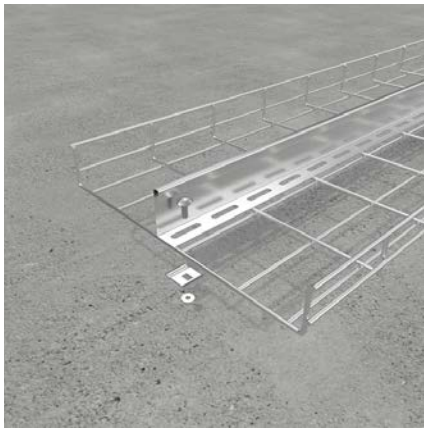
Clamp fastening set KLU



The clamp fastening set (KLU-L, FRSV 6x16, SEMS 6) is used for fastening Mesh cable trays (G 50/100, GI, GTDW) to brackets and for attaching accessories to Mesh cable trays.



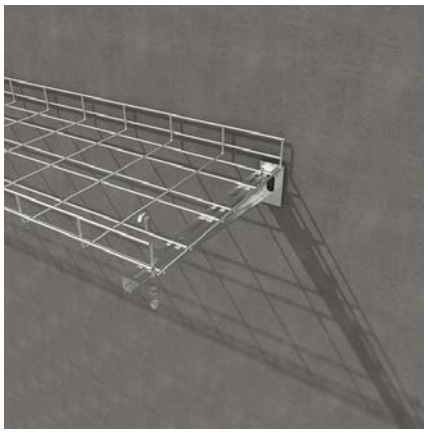
Fastening to bracket
It is recommended to secure Mesh cable trays to the bracket using two clamp fastening sets (KLU), one on each side.

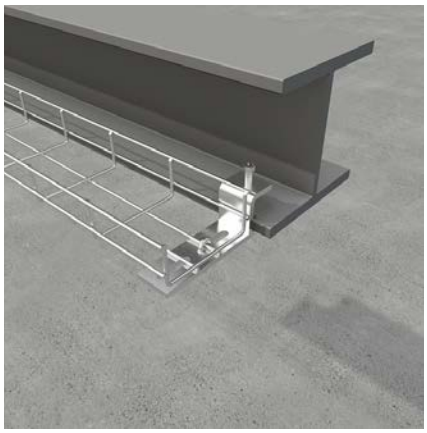


Fastening accessories
The clamp fastening set (KLU) can be used, for example, to attach separating strips (GTR) or drop-out plates (GKAB) to the mesh cable tray.



The fastening hook is used for fastening Mesh cable trays (G 50/100, GI, GTDW) to brackets and for attaching accessories to Mesh cable trays. Washers (US) and nuts (SEM 6) must be ordered separately.





Fastening to bracket
It is recommended to secure Mesh cable trays to the bracket using two fastening hooks (GH 6x24), one on each side. For narrow Mesh cable trays or supports such as clamp fasteners (KLUGS, KLUGW), one fastening hook (GH 6x24) is generally sufficient.

Mesh cable tray branches





Tray width mm	Number of GV 30 for side	Number of GVD 30 for base
100, 200	2x	2x
300, 400	2x	4x
500, 600	2x	6x

Mesh cable tray branch for corners (for mesh cable tray G 50/100)
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Slide the Mesh cable trays over one another and fasten them together using mesh cable tray connectors (GV 30 and GVD 30) and round-head screws (FRSV 8x16 and FRS 8x25).





Tray width mm	Number of GV 30 for side	Number of GVD 30 for base
100, 200	2x	1x
300, 400	2x	2x
500, 600	2x	3x

Mesh cable tray branch without radius (for mesh cable tray G 50/100)
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Join the Mesh cable trays and fasten them together from the inside using mesh cable tray connectors (GV 30 and GVD 30) and round-head screws (FRSV 8x16 and FRS 8x25).



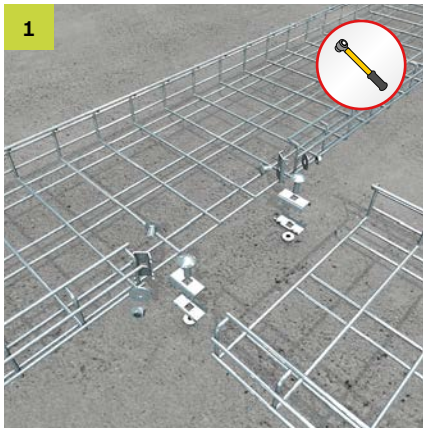


Tray width mm	Number of GVU / GVK for side	Number of GV 30 for base
100, 200	2x/4x	1x
300, 400	2x/4x	2x
500, 600	2x/4x	3x

Sides: Fasten the mesh cable tray universal connector (GVU)* from the outside onto the Mesh cable trays using the clamp (GVK)* and clamping screw (FRS 6x20).

* The article mentioned is not included in the scope of delivery and must be ordered separately.

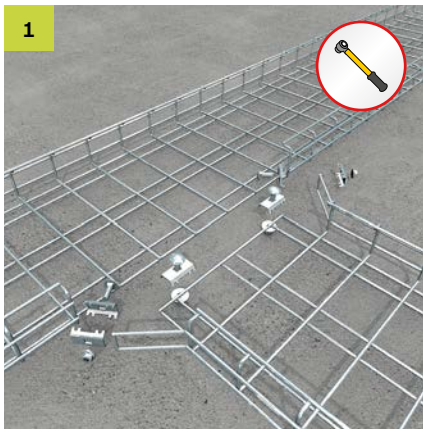
Mesh cable tray branch with radius (for mesh cable tray G 50/100)
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Join the Mesh cable trays and fasten them together from the inside at their base using mesh cable tray connectors (GV 30) and round-head screws (FRSV 8x16).





Tray width mm	Number of GV 30 for side	Number of GVD 30 for base
60	2x	1x
120	2x	1x
200	2x	1x
300	2x	2x

Mesh cable tray branch without radius (for mesh cable tray GI)
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Join the Mesh cable trays and fasten them together from the inside using mesh cable tray connectors (GV 30 and GVD 30) and round-head screws (FRSV 8x16 and FRS 8x25).





Tray width mm	Number of GVD 30 for side	Number of GV 30 for base
60	2x	1x
120	2x	1x
200	2x	1x
300	2x	2x

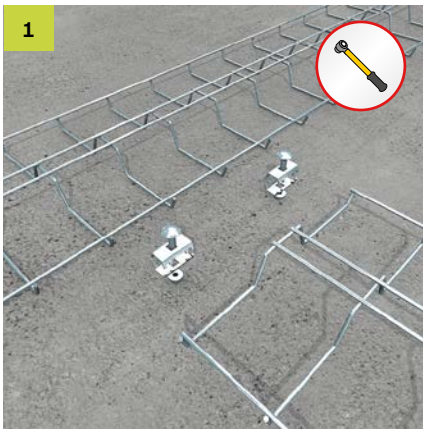
Mesh cable tray branch with radius (for mesh cable tray GI)
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Join the Mesh cable trays and fasten them together from the inside using mesh cable tray connectors (GV 30 and GVD 30) and round-head screws (FRSV 8x16 and FRS 8x25).

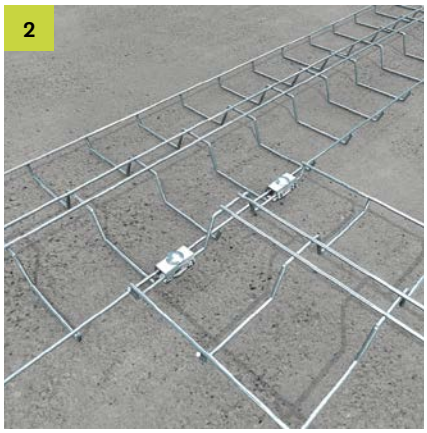




Tray width mm	Number of GV 30 for side
80 - 130	2x

Standard mesh cable tray branch for Mesh cable trays GTDW
Remove the wire cross-struts on the Mesh cable trays as shown, using a bolt flush cutter (BBS). Join the Mesh cable trays (GTDW) and fasten the mesh cable tray connectors (GV 30)* from the inside onto the Mesh cable trays using clamping screws (FRSV 8x16).





Tray width mm	Number of GV 30 for side
300	2x

Mesh cable tray branch for Mesh cable trays GTD 30
Join the Mesh cable trays GTD 30. Fasten the mesh cable tray connector (GVD 30) from above onto the Mesh cable trays using clamping screws (FRS 8x25).

*The article mentioned is not included in the scope of delivery and must be ordered separately.

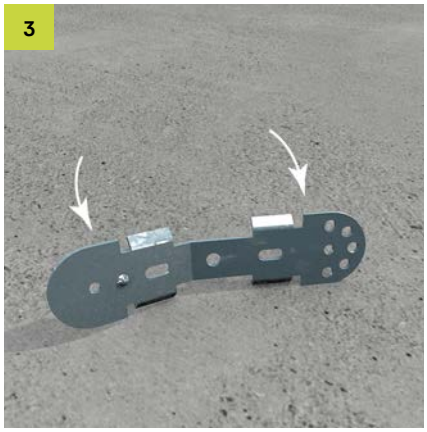
Mesh cable tray bends



Segmented mesh cable tray bend with mesh cable tray connector (GV 30) and mesh cable tray universal connector (GVU) Position the mesh cable tray and secure it using a mesh cable tray connector (GV 30).



First, install all mesh cable tray connectors (GV 30), then the mesh cable tray universal connectors (GVU).



Adjust the mesh cable tray universal connector (GVU) to the angle of the mesh cable tray.



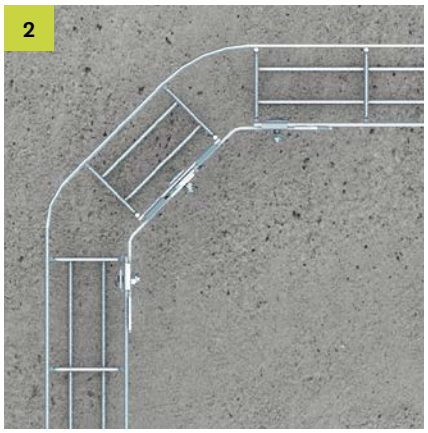
Install the mesh cable tray connector clamp (GVK) into the elongated holes of the mesh cable tray universal connector (GVU).



Caution: The curved sides of the mesh cable tray universal connector (GVU) must be facing inwards.



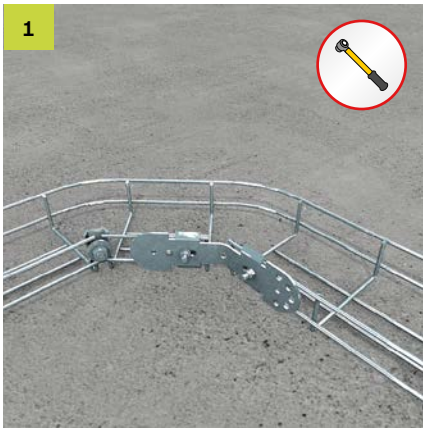
Mesh cable tray G 50-06
Detailed view of the segmented mesh cable tray bend.



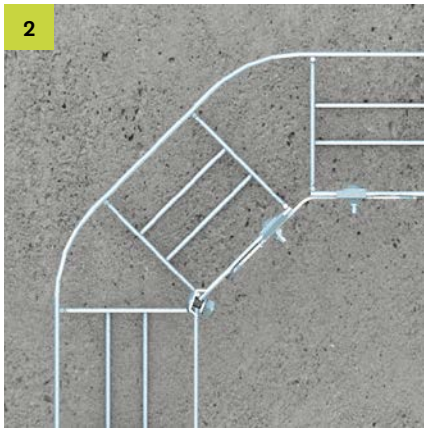
Removing 2 mesh cut-outs results in an internal radius of 130 mm.



You will require: 2 mesh cable tray universal connectors (GVU) and 3 mesh cable tray connector clamps (GVK).



Mesh cable tray G 50-10, G 100-10
Detailed view of the segmented mesh cable tray bend.



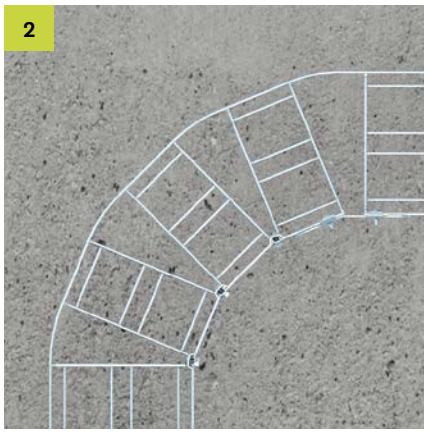
Removing 2 mesh cut-outs results in an internal radius of 90 mm.



You will require: 1 mesh cable tray connector (GV 30), 1 mesh cable tray universal connector (GVU) and 2 mesh cable tray connector clamps (GVK).



Mesh cable tray G 50-20, G 100-20
Detailed view of the segmented mesh cable tray bend.



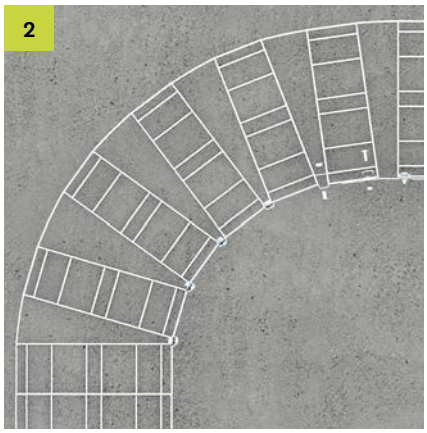
Removing 4 mesh cut-outs results in an internal radius of 250 mm.



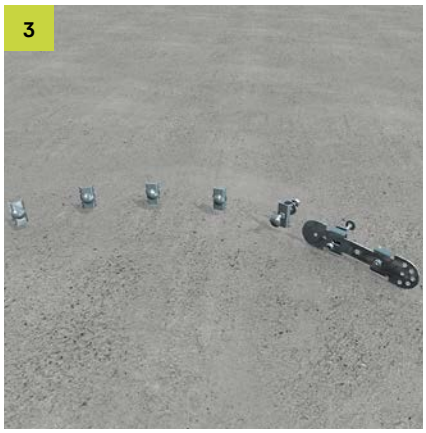
You will require: 3 mesh cable tray connectors (GV 30), 1 mesh cable tray universal connector (GVU) and 2 mesh cable tray connector clamps (GVK).



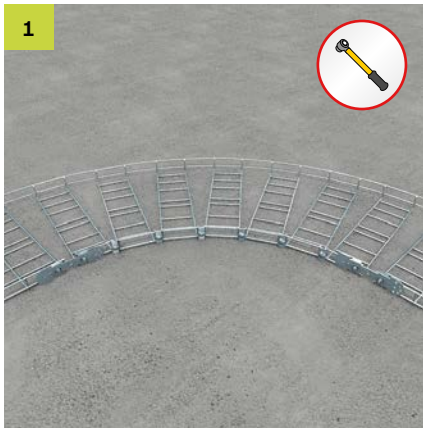
Mesh cable tray G 50-30, G 100-30
Detailed view of the segmented mesh cable tray bend.



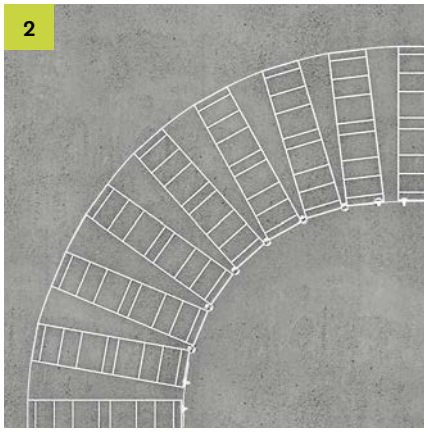
Removing 6 mesh cut-outs results in an internal radius of 390 mm.



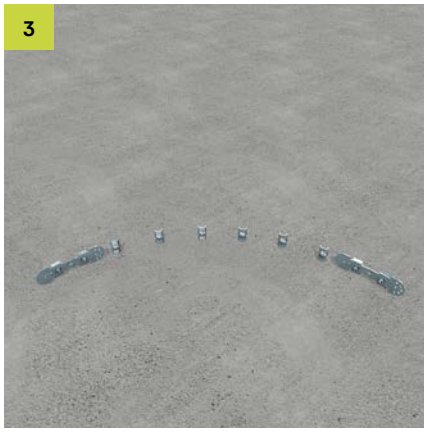
You will require: 5 mesh cable tray connectors (GV 30), 1 mesh cable tray universal connector (GVU) and 2 mesh cable tray connector clamps (GVK).



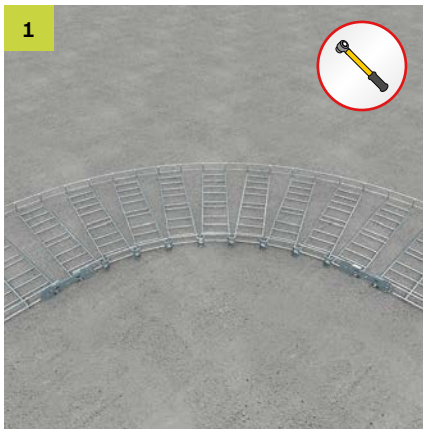
Mesh cable tray G 50-40, G 100-40
Detailed view of the segmented mesh cable tray bend.



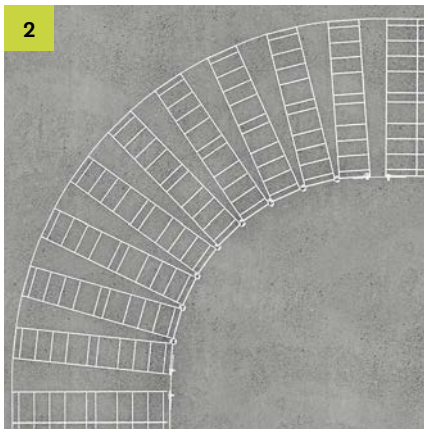
Removing 8 mesh cut-outs results in an internal radius of 550 mm.



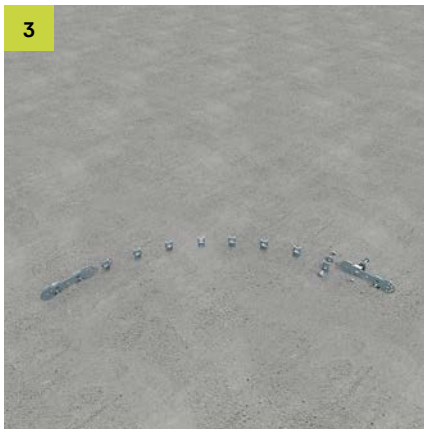
You will require: 6 mesh cable tray connectors (GV 30), 2 mesh cable tray universal connectors (GVU) and 4 mesh cable tray connector clamps (GVK).



Mesh cable tray G 50-50, G 100-50
Detailed view of the segmented mesh cable tray bend.



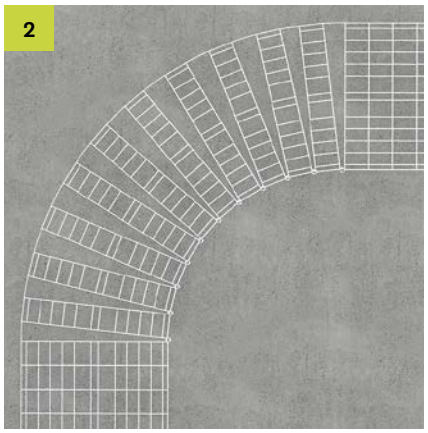
Removing 10 mesh cut-outs results in an internal radius of 700 mm.



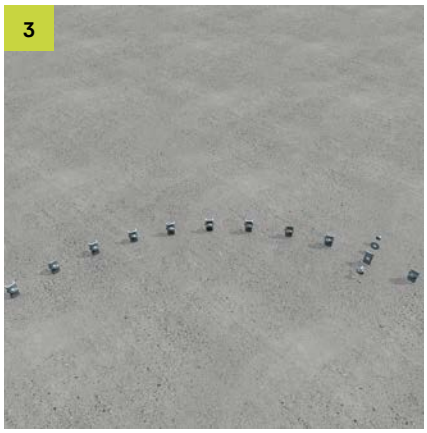
You will require: 8 mesh cable tray connectors (GV 30), 2 mesh cable tray universal connectors (GVU) and 4 mesh cable tray connector clamps (GVK).



Mesh cable tray G 50-60, G 100-60
Detailed view of the segmented mesh cable tray bend.



Removing 11 mesh cut-outs results in an internal radius of 740 mm.



You will require 11 mesh cable tray connectors (GV 30).

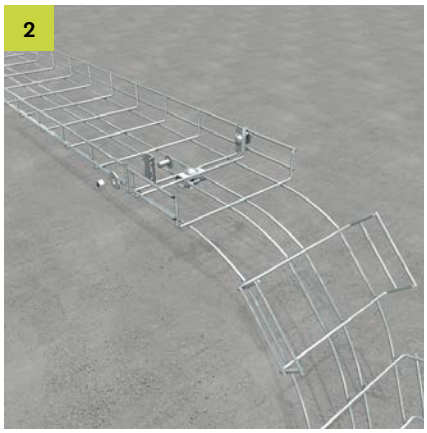
Vertical change in direction

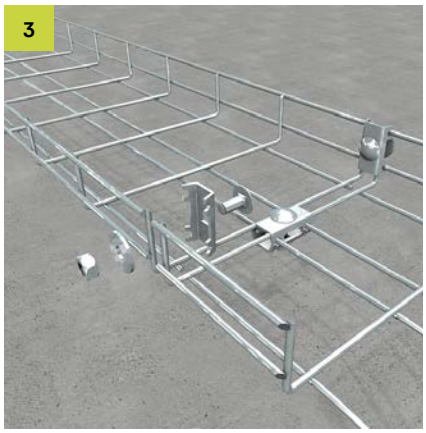




Vertical change in direction with the mesh cable tray universal connector (GVU)
Slide the mesh cable tray universal connector (GVU) from the outside onto the side rail and fasten it using mesh cable tray connector clamps (GVK), hexagon head bolts (SES 6x20) and self-locking hex nuts (SEMSS M6). Adjust the angle before fully tightening.







Riser optional with the mesh cable tray connector
Remove the wire cross-struts as shown in the diagram using the 40° bolt flush cutter (BS). Optional for the mesh cable tray riser (G 50/100, GI): Fasten the mesh cable tray connector (GV 30 and GVD 30) from the inside onto the mesh cable tray using round-head screws (FRSV 8x16 and FRS 8x25).

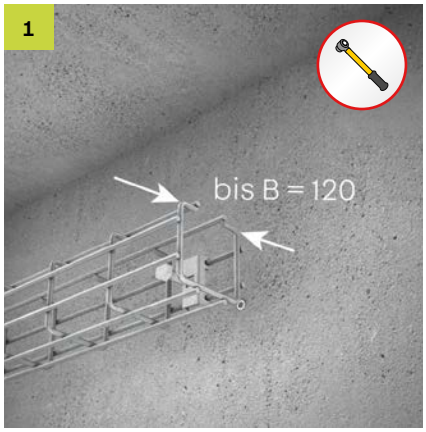
Mesh cable tray G 50, G100

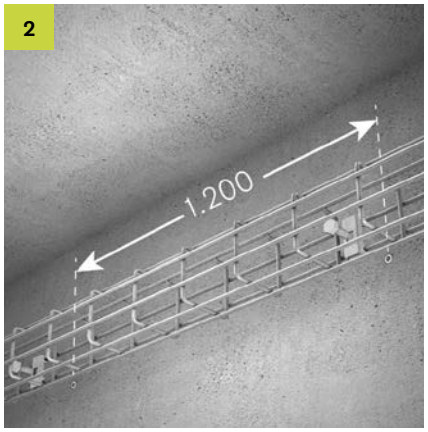
Tray width mm	Number of GV 30 for side rail	Number of GV 30 for base
100, 200	2x	1x
300, 400	2x	2x
500, 600	2x	3x

Mesh cable tray GI

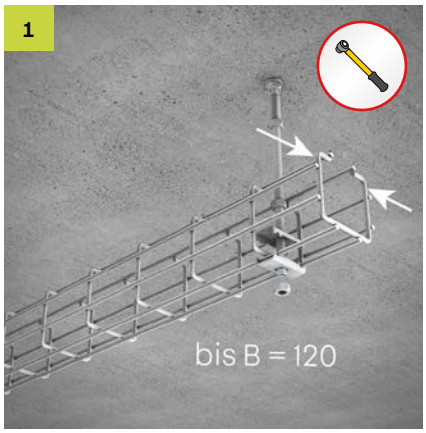
Tray width mm	Number of GV 30 for side rail	Number of GV 30 for base
60	2x	1x
120	2x	1x
200	2x	1x
300	2x	2x

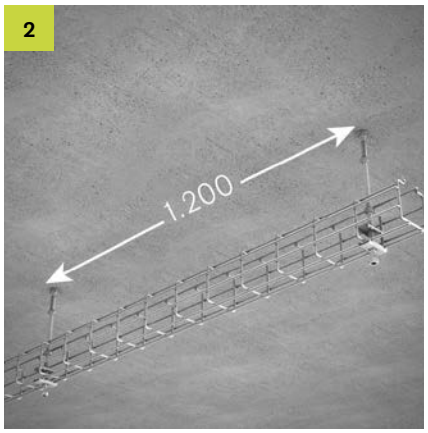
Wall and ceiling mounting



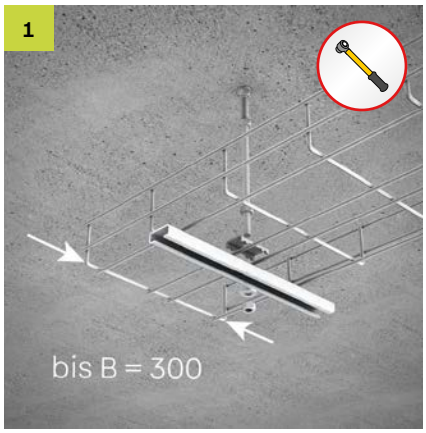


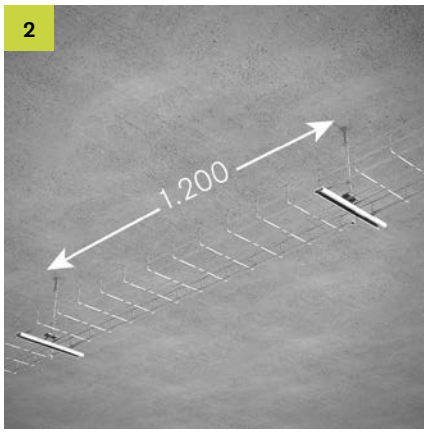
Wall mounting using mesh cable tray connector (GV-L 30)
Fix the mesh cable tray (GI, G 50) to the concrete wall with the standard support spacing of 1,200 mm using a mesh cable tray connector (GV-L 30), a hexagon head bolt (SES 8x20) and an anchor bolt (SAZ 8) with anchor (SAZ-D 8). Maximum mesh cable tray width: 120 mm.



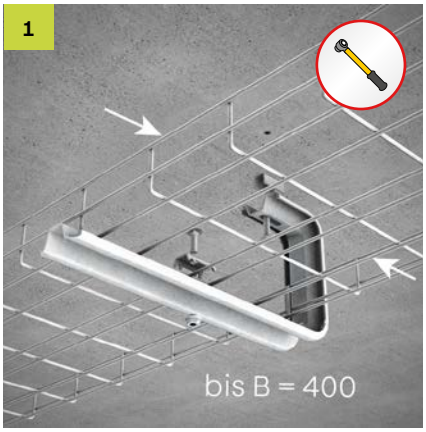


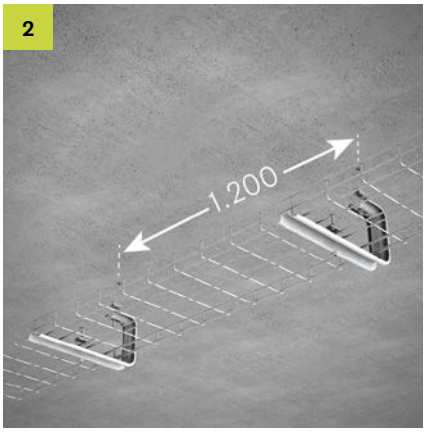
Ceiling mounting using central suspension set (GBAG 10)
Fix the mesh cable tray (GI, G 50) to the concrete ceiling with the standard support spacing of 1,200 mm using a central suspension set GBAG (consisting of: GB, GV-L 30, SEM 8, US 8x17), a connecting sleeve (VM M8) and a steel expansion anchor (SD 8/10). Maximum mesh cable tray width: 120 mm.





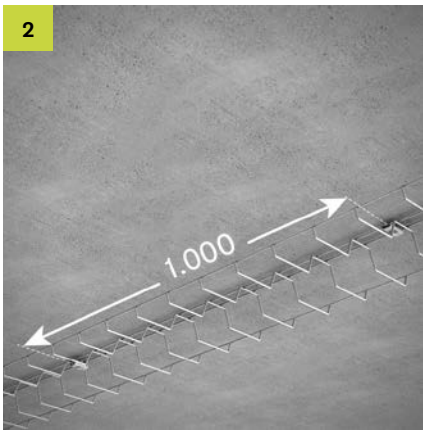
Ceiling mounting using central suspension set (GBAG 20, GBAG 30)
Fix the mesh cable tray (GI, G 50) to the concrete ceiling with the standard support spacing of 1,200 mm using a central suspension set GBAG (consisting of: GB, GV-L 30, SEM 8, US 8x25), a connecting sleeve (VM M8) and a steel expansion anchor (SD 8/10). Maximum mesh cable tray width: 300 mm.



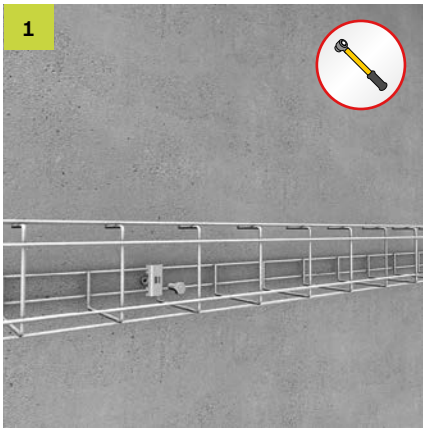


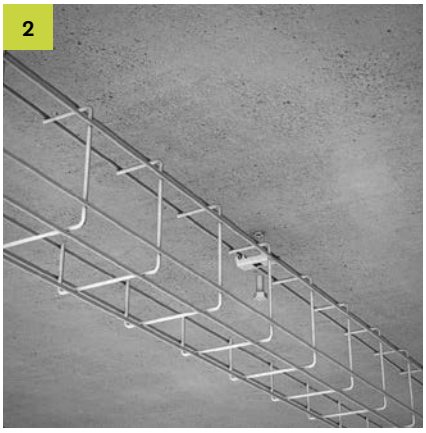
Ceiling mounting using ceiling bracket (DKSL)
Fix the ceiling bracket (DKSL) to the concrete ceiling with the standard support spacing of 1,200 mm using an anchor bolt (SAZ 8) with anchor (SAZ-D 8) and a hexagon head bolt (SES 8x35). Fasten the mesh cable tray (G 50/100, GI) onto the ceiling bracket using the mesh cable tray connector (GV-L 30) and round-head screws (KLS 8x25).

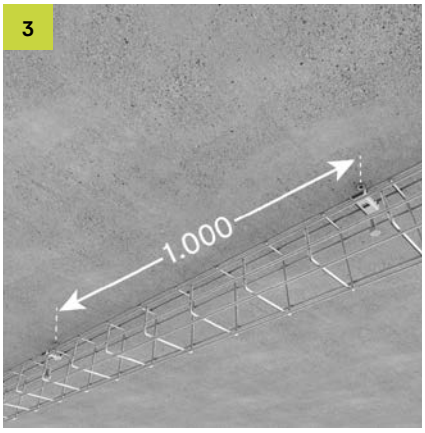




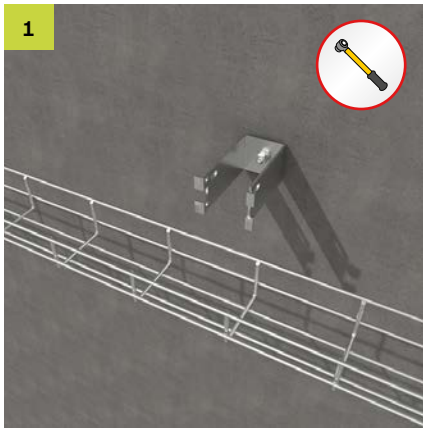
Ceiling mounting using mesh cable tray connector (GV-L 30) and anchor bolt (SAZ)
Fix the mesh cable tray (GTD 30) in the concrete ceiling with the standard support spacing of 1,200 mm using a mesh cable tray connector (GV-L 30), a hexagon head bolt (SES 8x20) and an anchor bolt (SAZ 8) with anchor (SAZ-D 8).

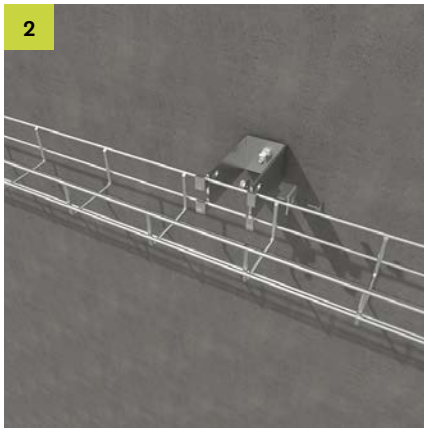


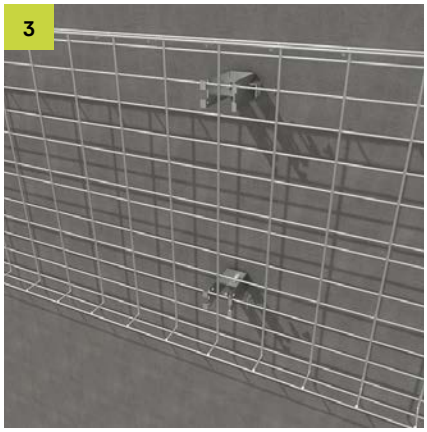




Wall and ceiling mounting using mesh cable tray connector (GV-L 30) and anchor bolt (SAZ)
Fix the mesh cable tray (GTDW) in the concrete ceiling or wall with the standard support spacing of 1,200 mm using a mesh cable tray connector (GV-L 30), a hexagon head bolt (SES 8x20) and an anchor bolt (SAZ 8) with anchor (SAZ-D 8).

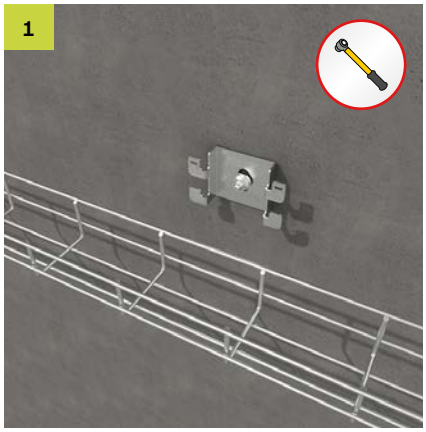


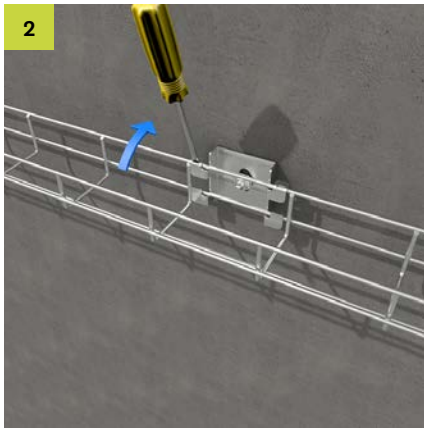


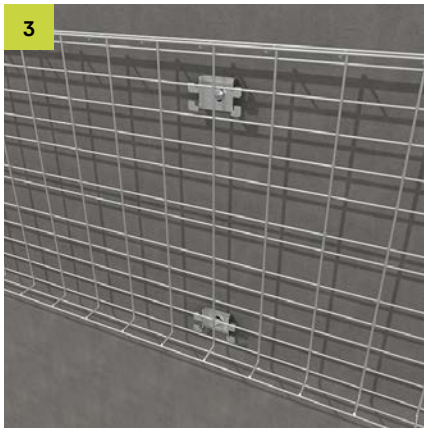


Horizontal wall mounting using mesh cable tray spacer bracket (GBH 30, GBH 50)
Insert the steel expansion anchors (SD 8/10) into the concrete wall with the standard support spacing of 1,200 mm. For horizontal installation, hang the mesh cable tray (G 50/100, GI; max. width: 100 mm) in place and fasten it using the spacer bracket securing tab (GBH-SL) and the clamp fastening set (KLR).

Vertical wall mounting using mesh cable tray spacer bracket (GBH 30, GBH 50)
For vertical installation, two mesh cable tray spacer brackets (GBH) must be used in parallel on the mesh cable tray base for Mesh cable trays with a width of 300 mm or more.







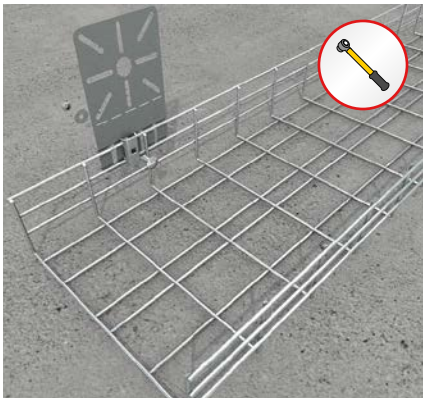
Horizontal wall mounting using mesh cable tray spacer bracket, short version (GBHK 30, GBHK 50)
Insert the steel expansion anchors (SD 8/10) into the concrete wall with the standard support spacing of 1,200 mm. For horizontal installation, hang the mesh cable tray (G 50/100, GI; max. width: 100 mm) in place and bend the locking tabs into position using a slotted screwdriver.

Vertical wall mounting using mesh cable tray spacer bracket (GBHK 30, GBHK 50)
For vertical installation, two mesh cable tray spacer brackets (GBH) must be used in parallel on the mesh cable tray base for Mesh cable trays with a width of 300 mm or more.

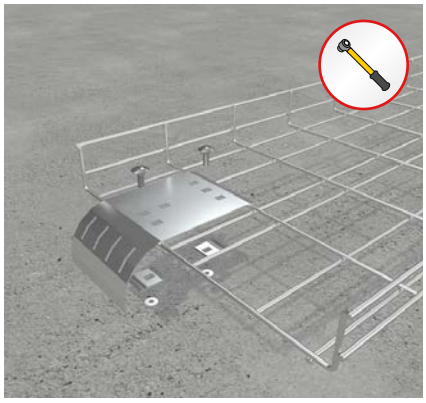
Installing other elements



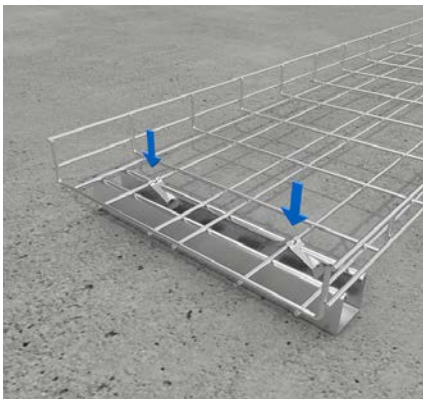
Separating strips (GTR 50 / 60 / 100)
Secure the separating strip to the mesh cable tray using 3 clamp fasteners (KLU) – one in the centre and approximately 100 mm from each end of the separating strip.



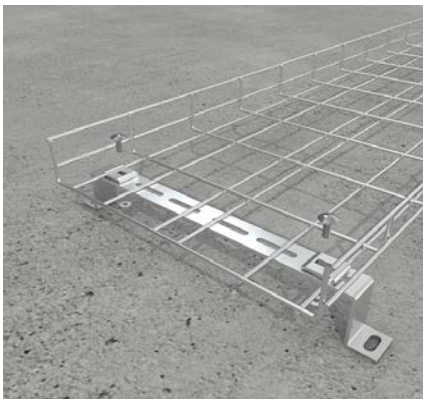
Mounting plate (MP-G)
Fix the mounting plate (MP-G) for electrical components to the side rail of the mesh cable tray from the inside using a mesh cable tray connector (GV 30).



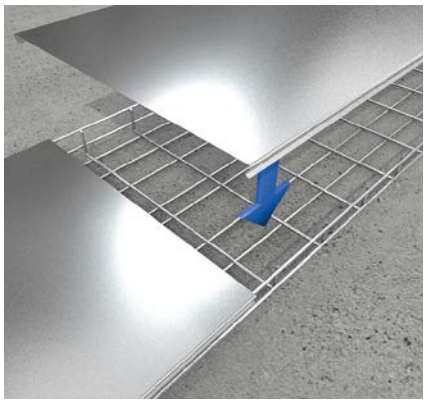
Mesh cable tray drop-out plate (GKAB)
Place the mesh cable tray drop-out plate (GKAB) at the end of the mesh cable tray (optionally rotated 90° and routed through the cross wires on the side) and secure it with two clamp fastening sets (KLU).



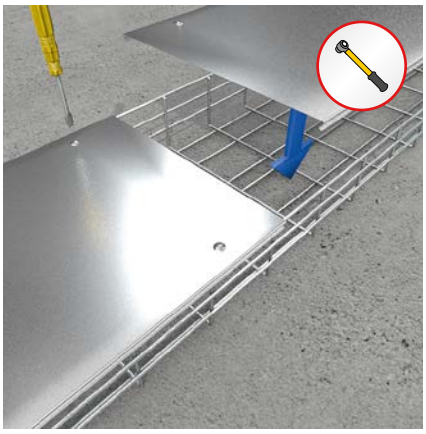
Mesh cable tray clamp (GK-A)
The clamp secures the mesh cable tray to an open mounting channel or a bracket with a C+ profile. Position it on a longitudinal wire and hook both wings into place from above.



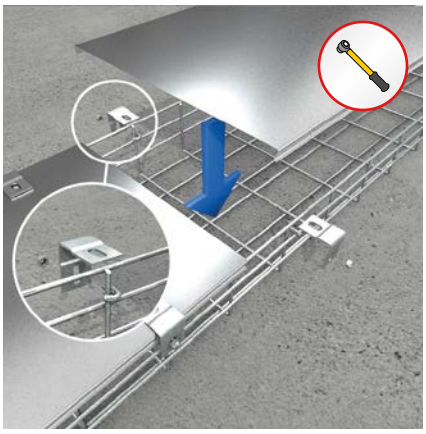
Mesh cable tray hat rail (HB 50)
Place the mesh cable tray (G 50/100, GI) on the mesh cable tray hat rail bracket and secure it with 2 clamp fastening sets (KLU).



Mesh cable tray cover (GD)
Place the mesh cable tray cover (GD) onto the mesh cable tray (G 50/100) and engage it securely with the side rails.
Approved for indoor use only!

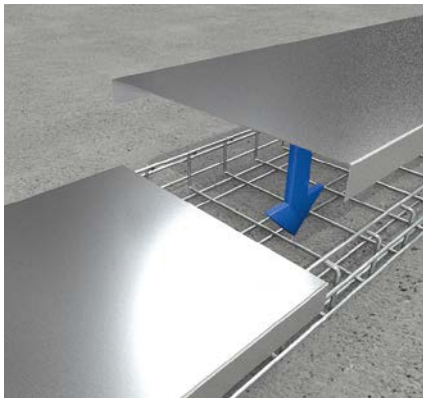


Mesh cable tray cover with twist lock (GDR)
Install the cover in the same way as the GD cover. Tighten the twist lock until the screw head slot aligns longitudinally with the mesh cable tray.
Approved for indoor use only!

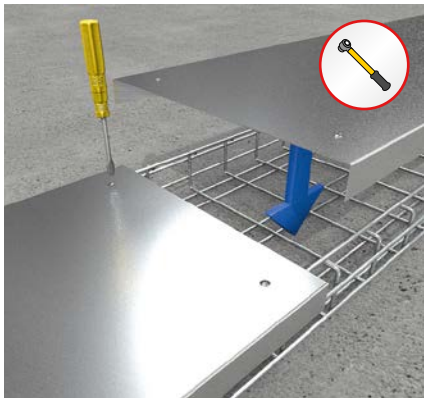


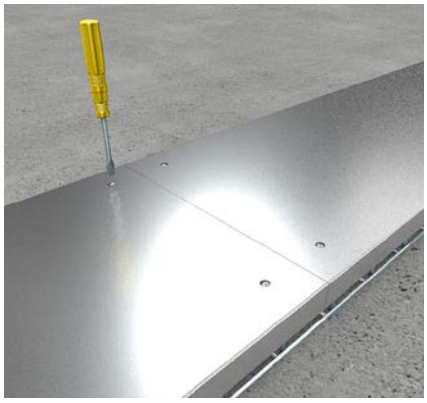


Storm protection angle (GD-SW)
Secure the fastening hook (GH 6x24) as shown in the detailed illustration, place the storm protection angle (GD-SW) from the outside onto the cover and fasten with a self-locking nut (SEMSS 6). Suitable for outdoor use. Install 6 storm protection angles (GD-SW) per 3 metres.

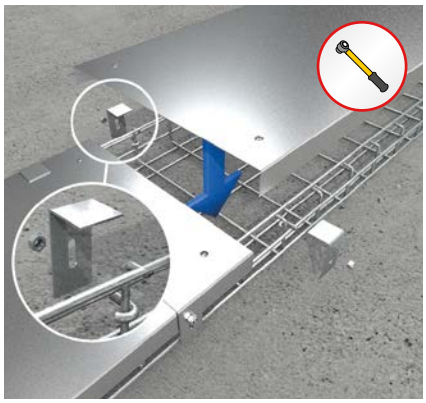


Mesh cable tray cover (GID)
Place the mesh cable tray cover (GID) onto the mesh cable tray (GI).
Approved for indoor use only!





Mesh cable tray cover with twist lock (GIDR)
Install the mesh cable tray cover with twist lock (GIDR) in the same way as the mesh cable tray cover with twist lock (GDR). Tighten the twist lock with a screwdriver until the screw head slot is aligned longitudinally with the mesh cable tray.
Approved for indoor use only!





Storm protection angle (GID-SW)
Secure the fastening hook (GH 6x24) as shown in the detailed illustration, place the storm protection angle (GID-SW) from the outside onto the cover and fasten with a self-locking nut (SEMSS 6). Suitable for outdoor use. Install 6 storm protection angles (GD-SW) per 3 running metres.

Index

Cable trays

G 50/100	Mesh cable tray, U-shaped, height = 50/100 mm
GI	Mesh cable tray, C-shaped, height = 75 mm
GTD 30	Mesh cable tray, W-shaped, height = 50 mm
GTDW	Mesh cable tray, G-shaped, height = 44/54/64/115 mm

Fastening accessories

FRS 8x25	Round-head bolt with square, DIN 603
FRSV 6x12	Round-head bolt with short square, DIN 603
FRSV 8x16	Round-head bolt with short square, DIN 603
GB 8/10/12	Threaded rod, DIN 976-1
GH 6x24	Fastening hook
GBH-SL	Spacer bracket securing tab
GK-A	Mesh cable tray clamp for mounting channels
GV 30	Mesh cable tray connector set for mesh cable tray grid dimension 30
GVD 30	Mesh cable tray connector set for mesh cable tray grid dimension 30
GV-L 30	Mesh cable tray connector for mesh cable tray grid dimension 30
KLR	Clamp fastening set (2x SEMS M6 + 2x FRSV 6x12)
KLU	Clamp fastening set (1x KLU-L + 1x SEMS M6 + 1x FRSV 6x12)
KLU-L	Clamp fastener
SAZ 6/8/10/12	Female anchor
SAZ -D 8/10/12	Anchor
SD	Expansion anchor
SEM 6/8	Hex nut, DIN 934
SEMS 6/8/10	Hex flange nut, DIN EN 1661
SEMSS 5/6/8/10	Hex nut, self-locking, DIN 985
SES 6x20	Hexagon head bolt, DIN 933
SES 8x20	Hexagon head bolt, DIN 933
US 6x12	Washer, DIN 125
US 8x17	Washer, DIN 125
US 8x25	Washer, DIN 125
VM M8/M10/M12	Coupling sleeve

Brackets and suspending brackets/hangers

DKSL	Ceiling bracket, lightweight
GB 8/10/12	Threaded rod, DIN 976-1
GBAG	Middle suspending bracket, external
GBH 30/50	Spacer bracket, for mesh cable tray grid dimensions 30/50 mm
GBHK 30/50	Spacer bracket, short, for mesh cable tray grid dimensions 30/50 mm
HB 50	Hat rail, height = 50 mm
KLUGS	Clamp fastener, universal, welded, vertical
KLUGW	Clamp fastener, universal, welded, horizontal

Accessories

BS	40° bolt flush cutter
GKAB	Mesh cable tray drop-out plate
GTR 50/60/100	Mesh cable tray separating strip, height = 33/50/80 mm
GV 30	Mesh cable tray connector set for mesh cable tray grid dimension 30 mm
GVD 30	Mesh cable tray connector set for mesh cable tray grid dimension 30 mm
GVK	Mesh cable tray connector clamp for GVU
GVR	Mesh cable tray snap-in connector for mesh cable tray grid dimension 30 mm
GVU	Mesh cable tray connector set for mesh cable tray grid dimension 30 mm
KZF	Cold zinc paint
KZS	Cold zinc spray
MP-G/MP-G90	Mounting plate/Mounting plate 90°

Covers

GD	Mesh cable tray cover for G 50 and G 100
GDR	Mesh cable tray cover with locks for G 50 and G 100
GD-SW	Storm protection angle for mesh cable tray cover GD – mesh cable tray
GH 6x24	Fastening hook
GID	Mesh cable tray cover for GI
GIDR	Mesh cable tray cover with locks for GI
GID-SW	Storm protection angle for mesh cable tray cover GID – mesh cable tray

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