



Cable trays

Assembling instruction

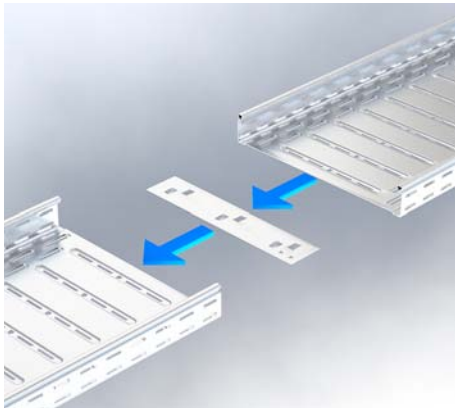


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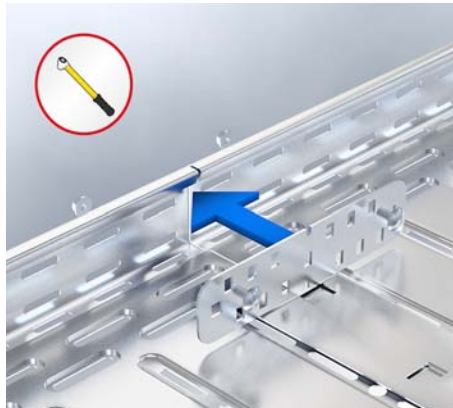
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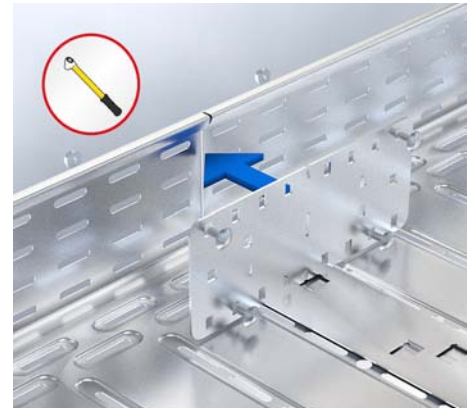
Cable trays serve the bridging of medium-size fitting distances. The support structures must be planned by engineering experts and observing the permissible torque of all screw connections.



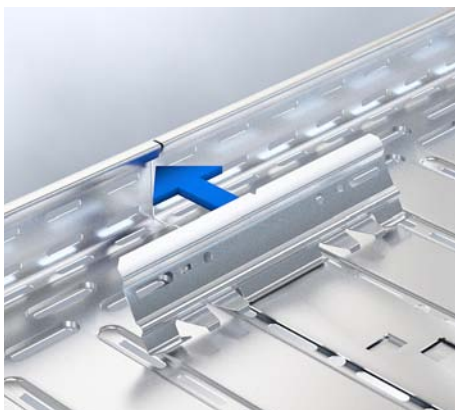
1 | Floor connector
From 100 mm nominal width attach floor connector (VB) to the cable tray bottom.



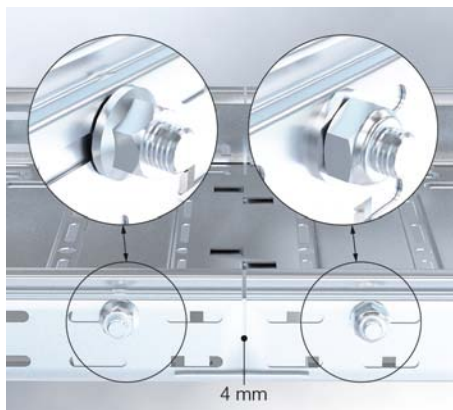
2 | Side connector
Push the side connector (RGV) into the cable tray side rail, screw each side rail tight using a clamping screw (KLR), then push in the connecting tray and screw to the side connector (RGV).



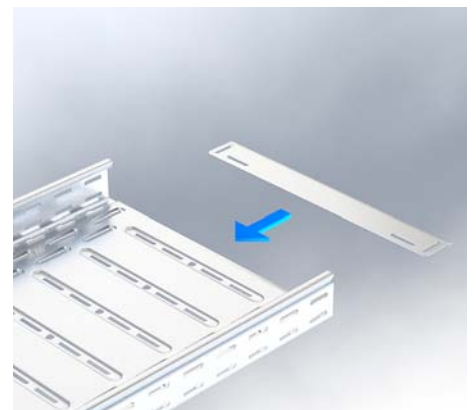
3 | Side connector
Type R 35, RG 35, R 60, RG 60, and RI 60 cable trays are to be screwed using one clamping screw (KLR) per side rail. Type R 85, RG 85, R 110, and RG 110 cable trays are to be screwed with two clamping screws per side rail (top and bottom).



4 | Snap-lock connectors
Alternatively, the cable tray RG 60 can be latched on the inside below the head of the side rail using the snap-lock connector (RGVS 60) without tools. Push the snap-lock connector against the tray bottom by hand until a positive locking into place in the tray bottom occurs.



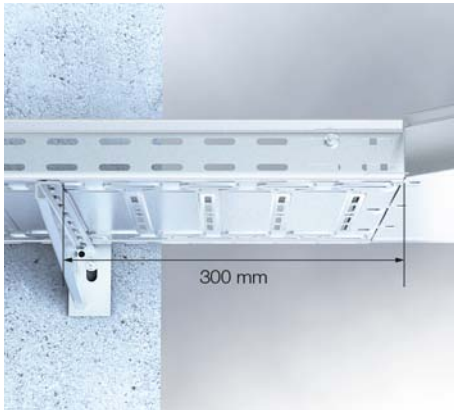
5 | Fixed and floating bearings
In case of extreme variations in temperature, a fixed and free bearing in the joint must be allowed for.
Left view: Fixed bearing (with pre-stamped washer, FRSV+SEMS)
Right view: floating bearing (with free washer FRSV+SEMSS+US) and a clearance of 4 mm.



6 | End plate
In case of open support ends and a horizontal change in direction by <math>< 30^\circ</math> open tray bottom. For cable tray ends or open changes in direction, push tray end plate (REB) into the bottom of the cable tray and screw together.

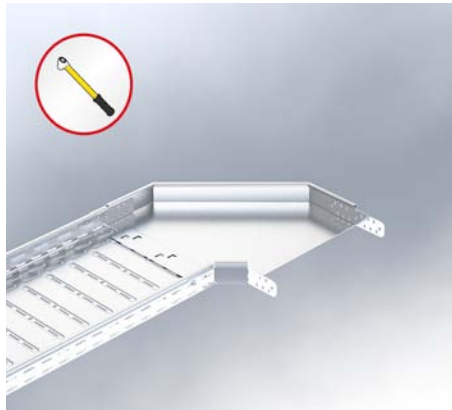
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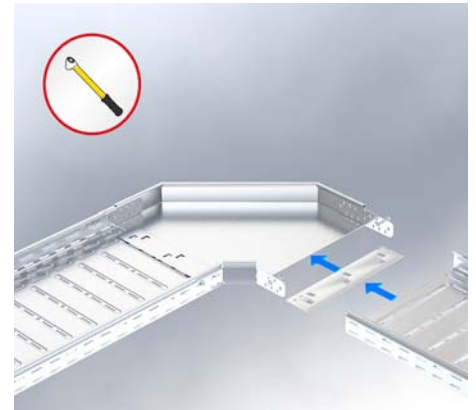
7 | Support distance to formed part end

Applies to all formed parts or changes in direction or open ends: The maximum distance of 300 mm with regard to the formed part end and the support must be observed.



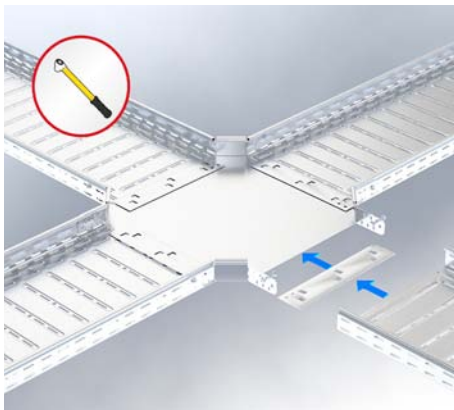
8 | Horizontal curve

Insert the horizontal curve (RB) and the floor connector (VB) into the cable tray and screw together in one place per side rail. For type R 85, RG 85, R 110 and RG 110 cable trays, screw in two places per side rail as described for RB.



9 | Horizontal curve

Insert connecting tray and floor connector (VB) into horizontal curve (RB) and screw together in one place per side rail. For type R 85, RG 85, R 110 and RG 110 cable trays, screw in two places per side rail as described for RB.



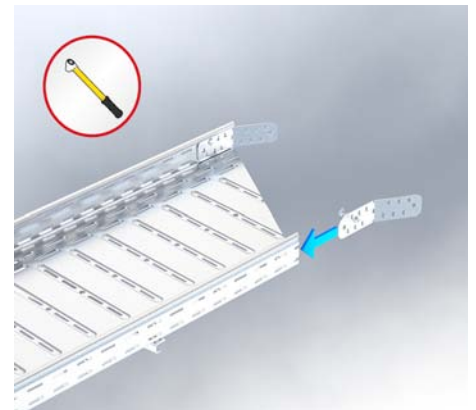
10 | Junction

Insert cable tray junction (RK) and floor connector (VB) into cable tray and screw together in one place per side rail. For type R 85, RG 85, R 110 and RG 110 cable trays, screw in two places per side rail as described for RB.



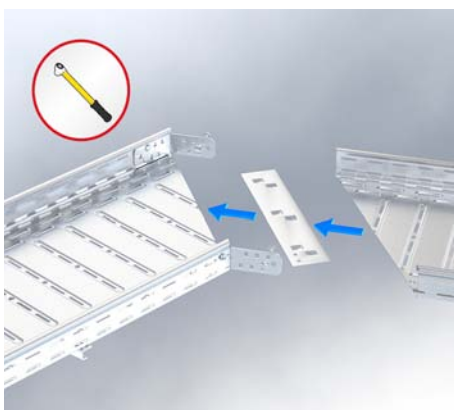
11 | Horizontal change in direction

For a horizontal change in direction without normed formed components, mitre the cable tray as required, deburr and cold-galvanise it.



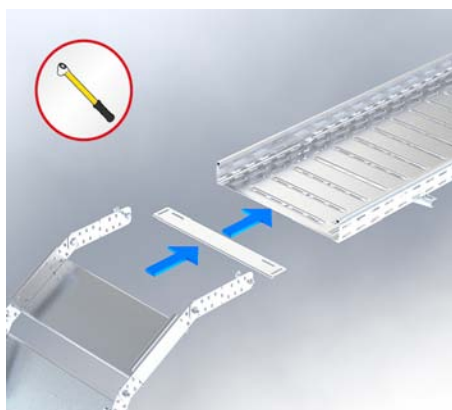
12 | Horizontal change in direction

Bend both side connectors (RGV) to the necessary angle, insert into the side rails of the cable tray and screw together as described for RGV (see image 3).



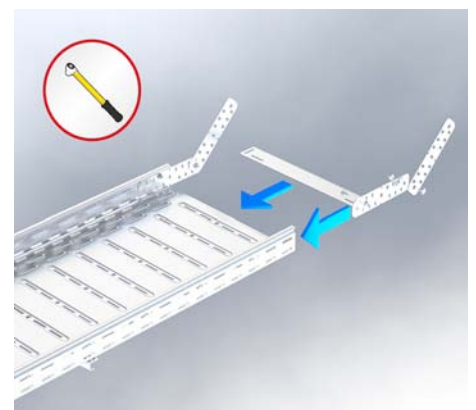
13 | Horizontal change in direction

Place floor connector (VB) of corresponding length inside the cable tray bottom, push connecting cable tray into side connectors (RGV) and screw together as described for RGV (see image 3).



14 | Curve

Push flexible cable tray curve (RVB) into cable trays and screw together as described for RGV (see image 3). Insert the cable tray end plates at the ends of cable trays, push into the bottom of the cable trays and screw together as described for RGV (see image 6).

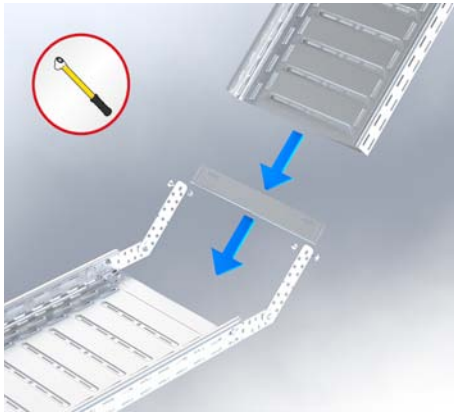


15 | Vertical change in direction

Vertical change in direction without formed component: Push tray end plate (REB) into the bottom of the cable tray and screw together as described for RGV (see image 3). Screw one RGV to each side rail with projection.

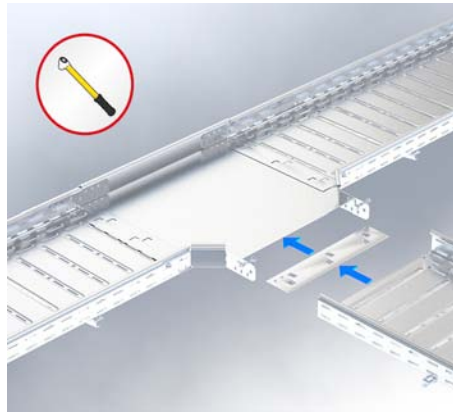
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16 | Vertical change in direction

Insert connecting cable tray into the side connectors (RGV) and screw together (see image 3). At the cable tray ends, push cable tray end plates (REB) into the bottom of the cable tray and screw together (see image 6).



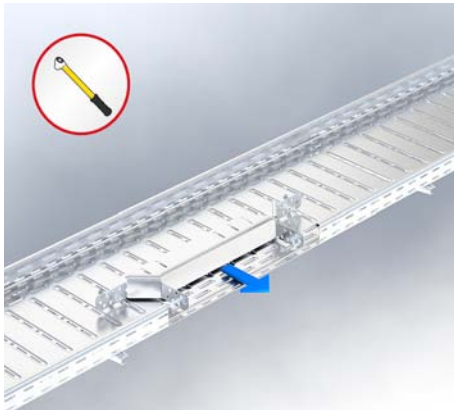
17 | Joint

Push joint (RA) and floor connector (VB) into the cable tray and screw together as described for RGV (see image 3). For type R 85, RG 85, R 110 and RG 110 cable trays, screw in two places as described for RB (see image 8).



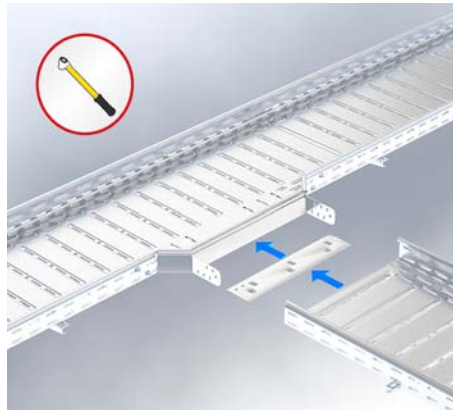
18 | Extension joint

Installation of extension joints manufactured on site (RAA). Cut out the side rail of the cable tray flush with the bottom in width B = the connecting cable tray width + 120 cm, deburr and cold-galvanise.



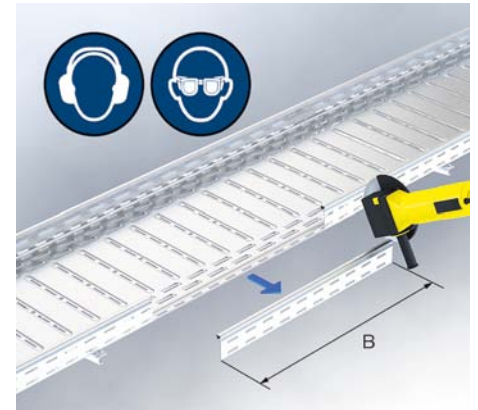
19 | Extension joint

Attach extension joint (RAA) and screw in one place per side rail. For type R 85, RG 85, R 110 and RG 110 cable trays screw together in two places as described for RB (see image 8).



20 | Extension joint

Insert connecting cable tray and floor connector (VB) into the extension joint (RAA) and screw together as described for RGV (see image 3).



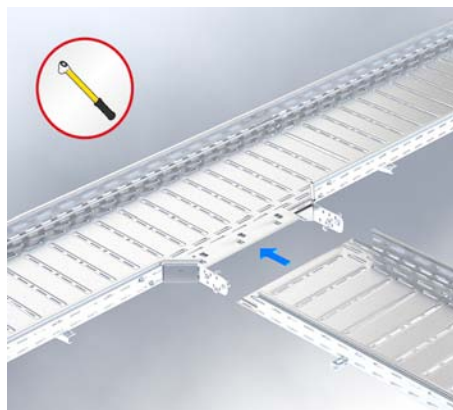
21 | Extension angle

Installation of tray extension angles (RAE). Cut out the side rail of the cable tray flush to the bottom in width B = the extension cable tray width + 120 mm.



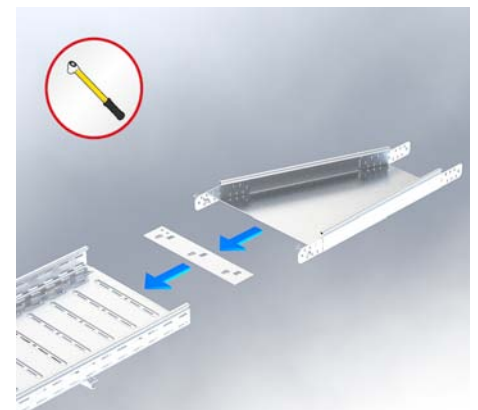
22 | Extension angle

Insert tray extension angles (RAE) into the cable trays and screw to the bottom in one place per side rail. Attach floor connector (VB).



23 | Extension angle

Trim extension trays by 60 mm per side rail, push onto the extension angles and screw together in one place per side rail.

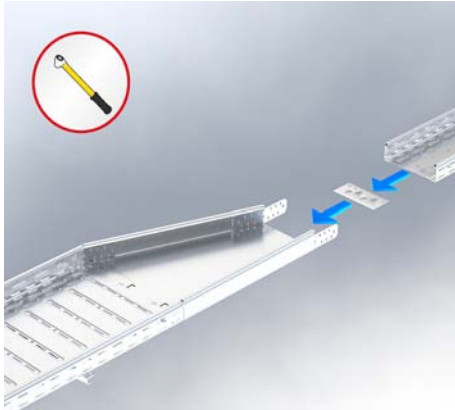


24 | Reduction

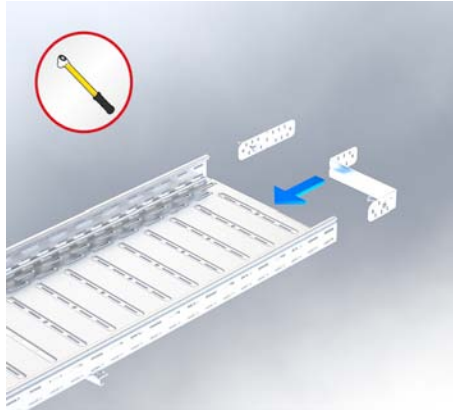
Insert cable tray reduction (RR) and floor connector (VB) into the cable tray and screw together in one place per side rail. For type R 85, RG 85, R 110 and RG 110 cable trays screw together in two places as described for RB (see image 8).

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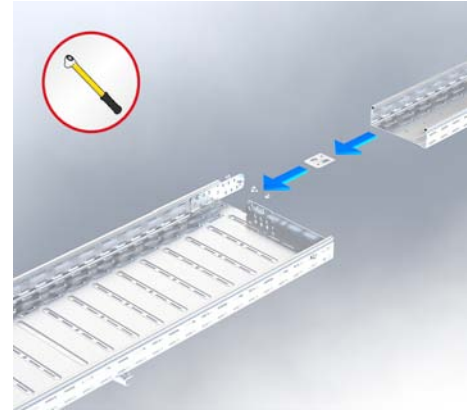
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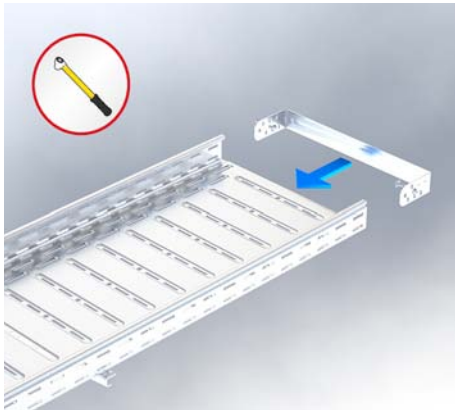
25 | Reduction
Insert extension cable tray and floor connector (VB) into cable tray reduction (RR) and screw together as described for RGV (see image 3).



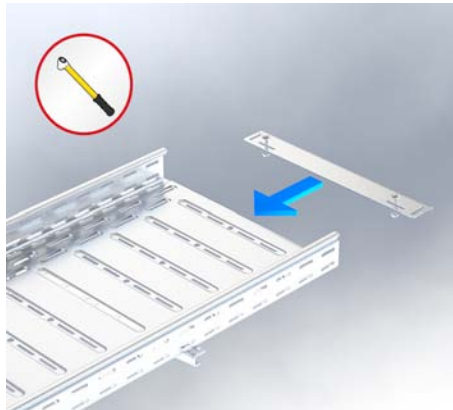
26 | Reduction using a closing plate
Cable tray reduction using a tray closing plate (RAB) and a side connector (RGV). Bend tray closing plate (RAB) into a z-shape and screw side connector (RGV) and tray end plate (RAB) as described for RGV (see image 3).



27 | Reduction using a closing plate
Insert extension cable tray and floor connector (VB) into the cable tray reduction (RAB) and screw together as described for RGV (see image 3).



28 | Closing plate
Closing of a cable tray using a tray closing plate (RAB). Bend tray closing plate into a u-shape and push into the cable tray. Screw together as described for RGV (see image 3).



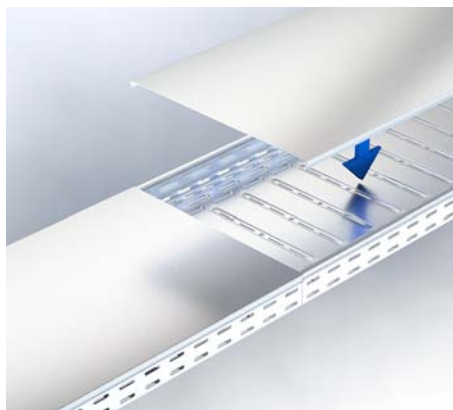
29 | End plate
Mounting of the tray end plate for the protection of the inbound or outbound cables. Push tray end plate (REB) onto cable tray and screw to the bottom in two places if the width is at least 200 mm.



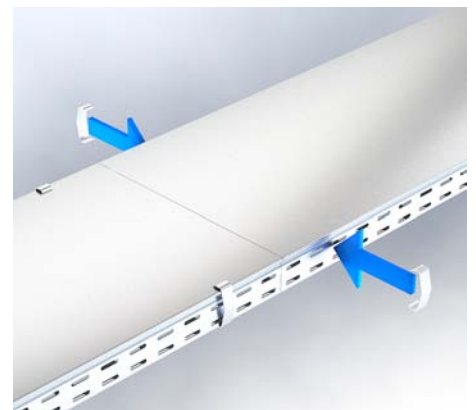
30 | Barrier strip
Screw barrier strip in three places (approx. 100 mm from both barrier strip ends as well as in the middle).



31 | Assembly plate
Screw the assembly plate (MP-RG) for electric components to the side rail of the cable tray in two places.



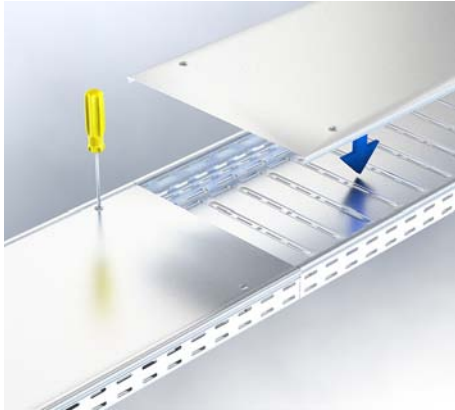
32 | Cover
Place the tray cover (RD) onto the cable tray and push against the side rail until a positive locking into place in the side rail occurs. For indoor use only!



33 | Brackets
Place the cover brackets (RDKL) sideways onto the tray cover (RD) and push against the cover bracket (RDKL) until a positive locking into place with the cable tray bottom occurs. For indoor use only! 6 pieces / 3 metres

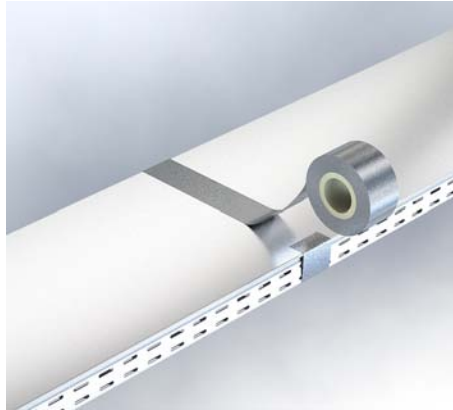
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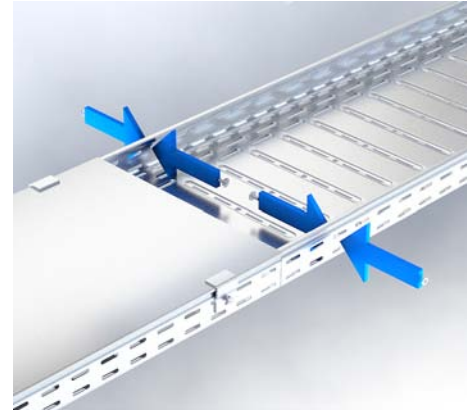
34 | Turning bolt

The tray cover with a turning bolt (RDR) should be mounted as described for RD (see image 32). In addition, turn the turning bolt using a screwdriver until the slit in the screw head points lengthwise towards the cable tray. For indoor use only!



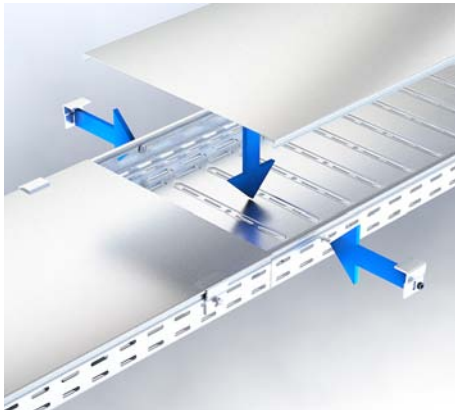
35 | Adhesive metal strip

Place the tray cover (RD) onto the cable tray (see image 32), then remove the separating foil of the adhesive metal strip (MKB) and wrap the strip around the cover and around the cable tray. For indoor use only!



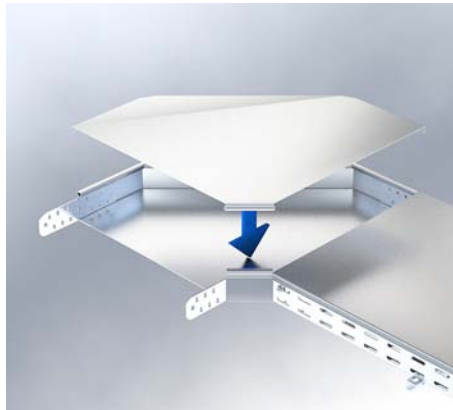
36 | Storm safety angle

Lead the screw (KLR) of the storm safety angle (RD-SW) on the inside through the cable tray. Push the anti-loss washer (UVS M6) on the screw.



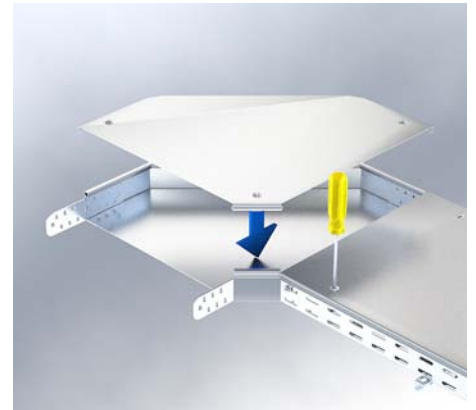
37 | Storm safety angle

Fasten the tray cover (RD) to the cable tray (see image 32), place the storm safety angle (RD-SW) from the outside onto the cover and screw using the screw nut SEMS M6. Suitable for outdoor use! 6 pieces / 3 metres



38 | Curve cover

As described for the cable tray covers (RD) (see image 32), the formed components, e.g. the curve cover (RBD), should be placed on the cable tray curve, pushing against the side rail until a positive locking into place in the side rail occurs. For indoor use only!



39 | Curve cover

The formed component covers with turning bolt, e.g. the tray curve cover (RDBR), are mounted with a turning bolt (RDR) as described for the tray cover (see image 34).



40 | Storm safety angle

Storm safety angles (RD-SW-L) for formed components covers are mounted as described for the tray cover (RD) (see image 38). In addition, the through holes should be made using an RD-SW-L as a drilling template. RAA 2 pieces, RB 3 pieces and RA and RK 4 pieces



41 | Cutting and sectioning work

Perform cutting and sectioning work with greatest care and observe the occupational safety.



42 | Galvanising

All cutting and sectioning points must be galvanised with cold zinc paint (KZF) or cold zinc spray (KZS) by the customer after the deburring.

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Legend Accessories

FRSV 6x12



US 6x12



SEMS M6



SEMSS M6



SEM M6



KLR



Symbols



Wear protection glasses



Wear ear protection



Observe tightening torque for fasteners

S

Sendzimir-hot-dip galvanised according to DIN EN 10346

F

Hot-dip galvanised according to DIN EN ISO 1461

E

High-grade steel material No. 1.4301 (V 2A)

Screw tightening torques (recommended)

Bolt diameter	Strength category screw (DIN 267 part 3)	Strength category nut (DIN 267 part 4)	Screw tightening torque (Nm) acc. VDI 2230
M6	4.6	5	4
M6 E	4.6	A2 50	4



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