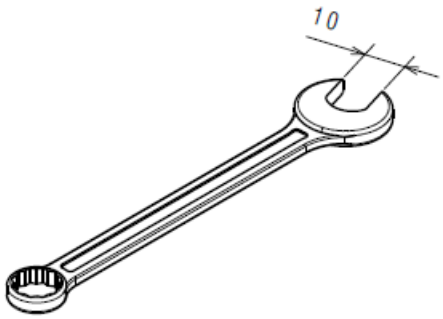
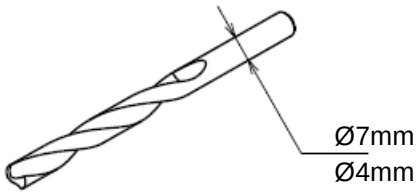
P31+ Mounting guide

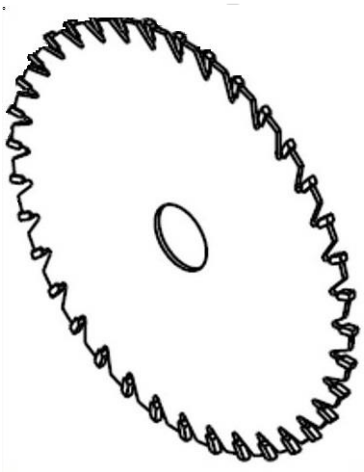
Index

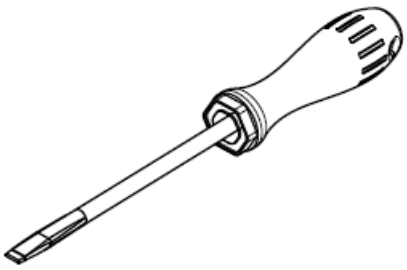
Introduction / Introduction

1.1. Utilities









General safety rules / Règles générales de sécurité

1) Please use suitable gloves throughout the installation of our products in order to protect your hands from potentially sharp metal parts.
2) Please wear suitable safety glasses when cutting or grinding metal products.
3) Please use protective devices where necessary and as required on your site,
4) When working on heights, please take protective safety measures.
5) Please pay attention to the safety working loads (SWL) of our system before the installation in order to prevent misapplication.
   SWL are available in our technical sheets and don't hesitate to contact your local LEGRAND sales office if you have any questions related to them or any other topic.

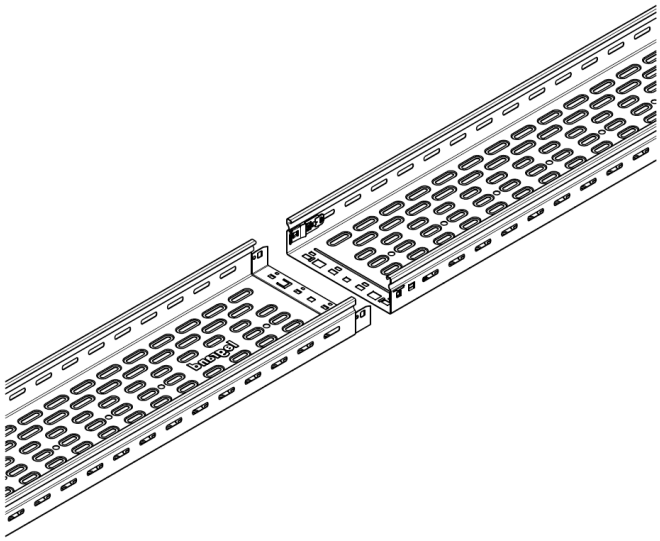
Avoid dangerous situations for you and the people around you at all times!

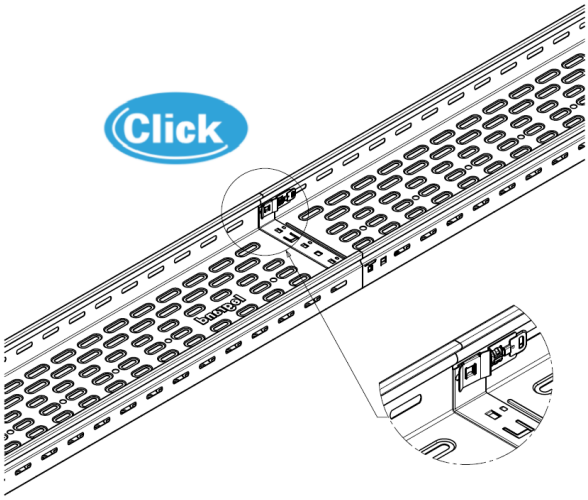
P31 Length assembling / Assemblage P31

3.1. Perforated cable tray / Chemin de câbles perforé

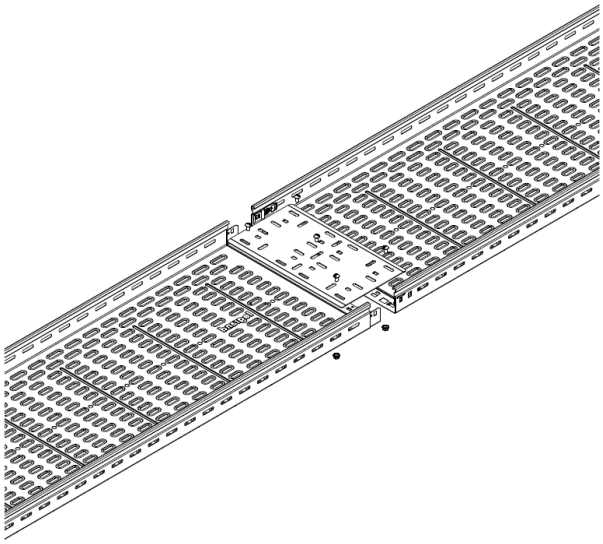
3.1.1. H60 with male – female automatic coupler system / H60 avec système d'emboitement automatique mâle - femelle

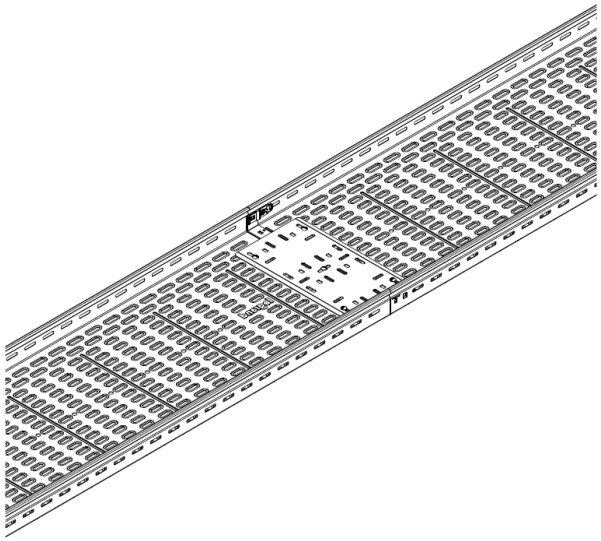
The automatic junction system does not need any screws up to and including width 300mm.
Width 400mm – 600mm; use 1 screw M6x12 in the middle of the bottom.





Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity.
(Screw in middle of bottom already present)



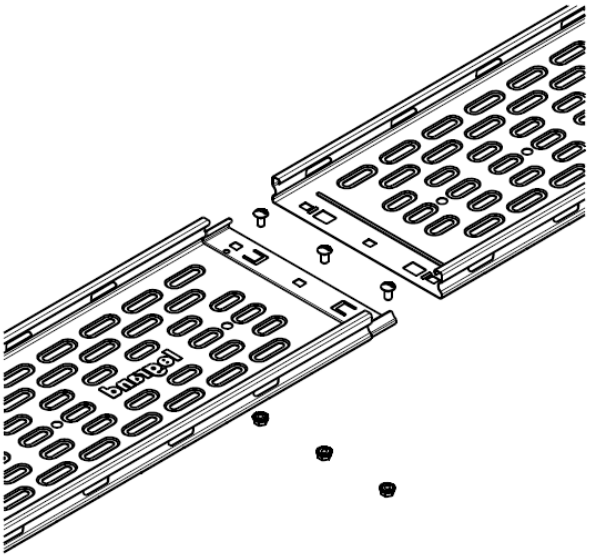


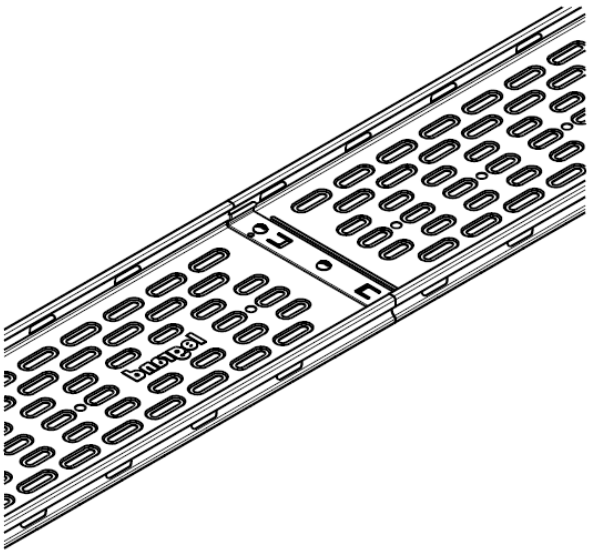
3.1.2. Male – female system / Système mâle - femelle

MF

3.1.2.1. H25 / H25

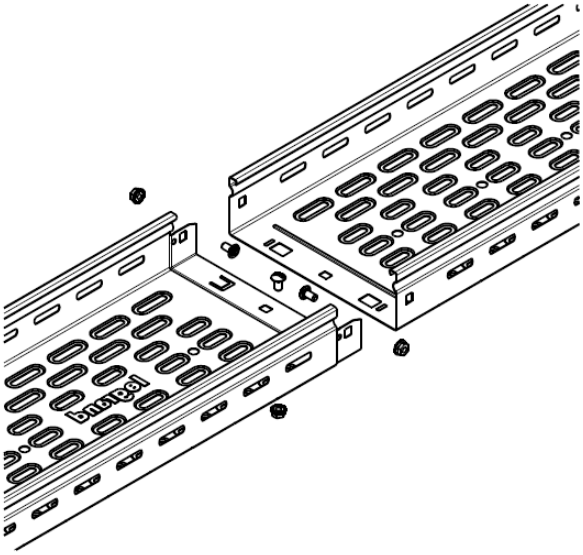
Height 25mm is assembled using 3 screws M6x12 in the bottom.
The third screw in the middle is optional up to and including width 300mm.

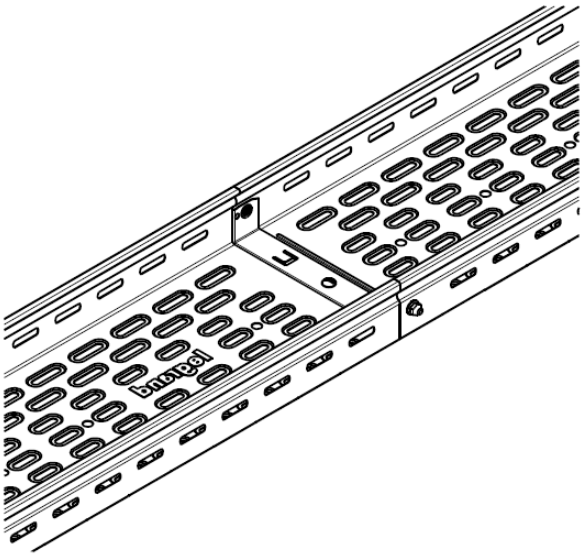




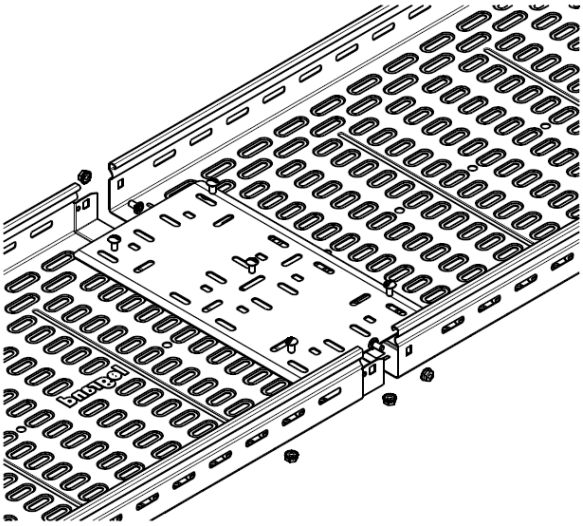
3.1.2.2. H60 / H60

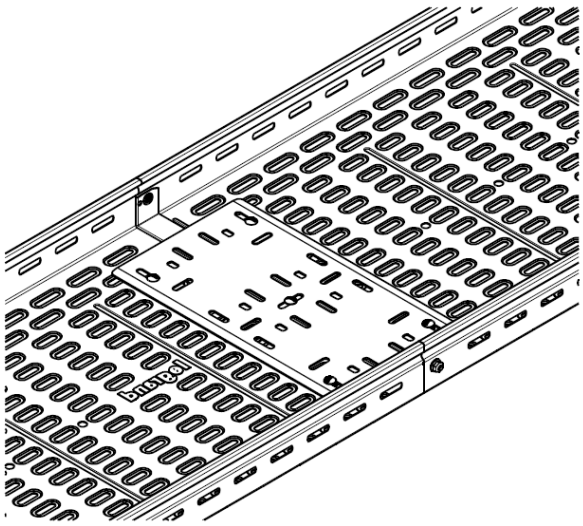
Height 60mm is assembled using 3 screws M6x12 in the side and bottom.
The third screw in the middle is optional up to and included width 300mm.





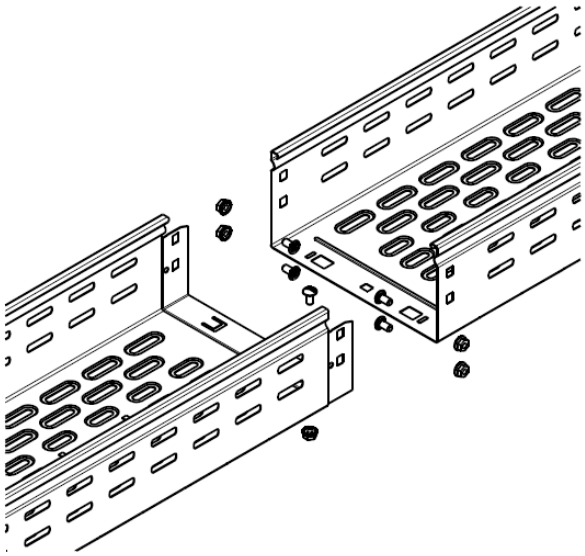
Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity.
(Screw in middle of bottom already present)

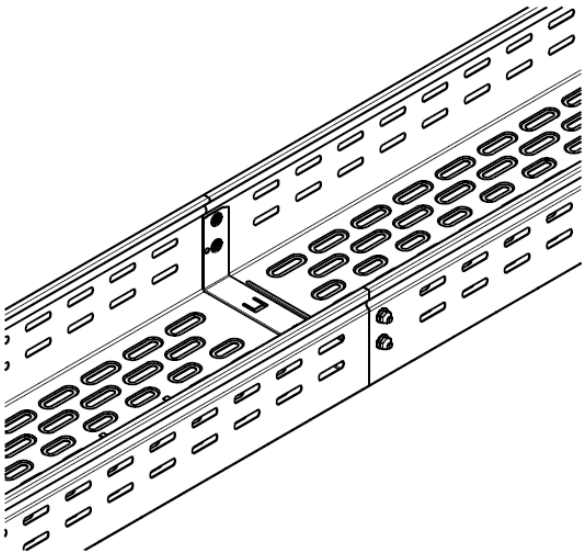




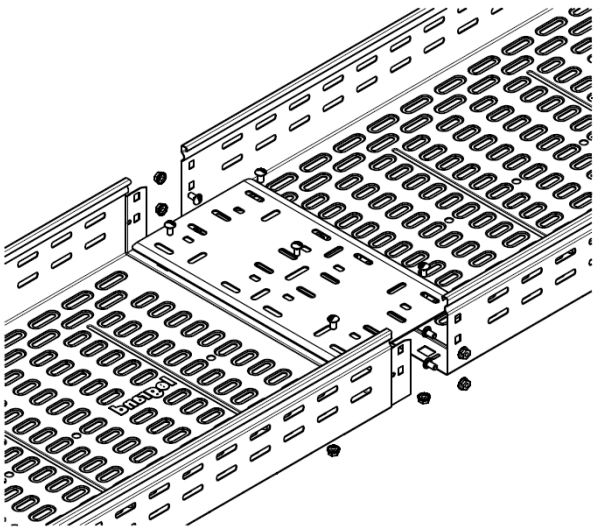
3.1.2.3. H100 / H100

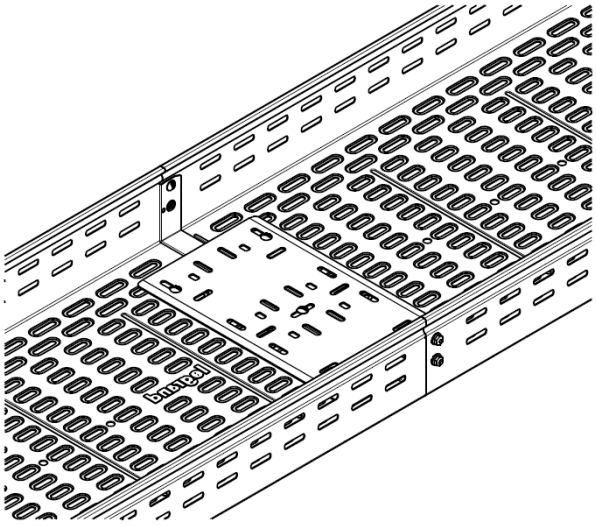
Height 100mm is assembled using 5 screws M6x12 in the side and bottom.





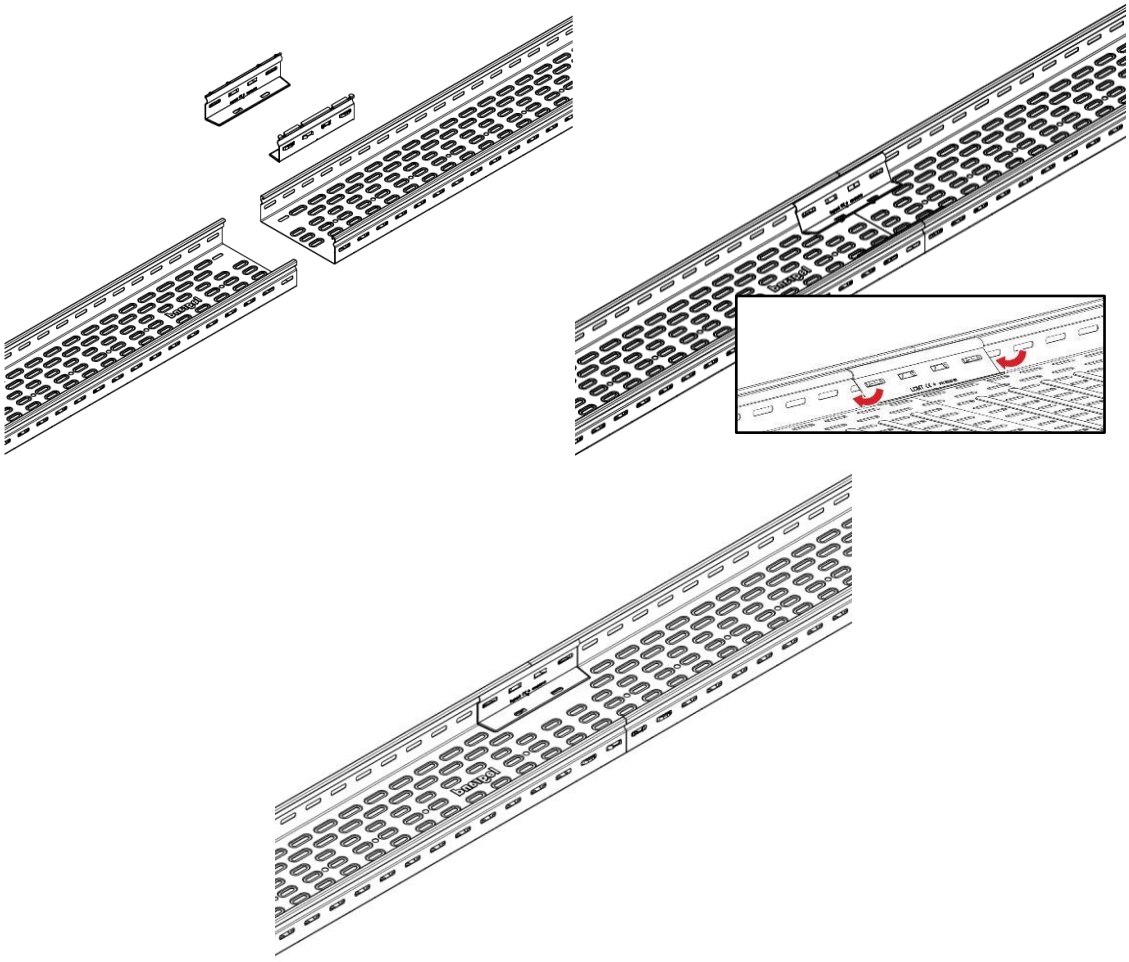
An extra bottom plate is used on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present)



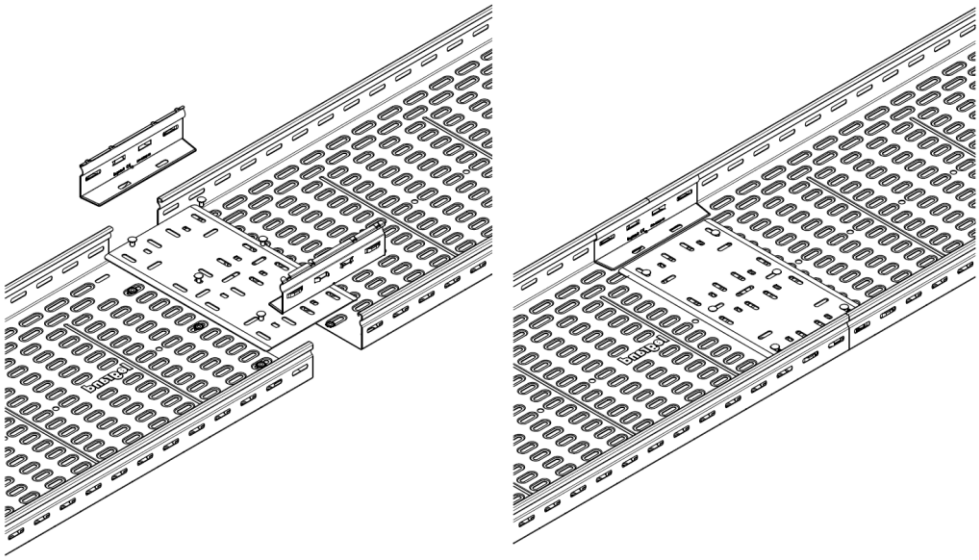


3.1.3. H60 Symmetrical cable tray / Chemin de câbles symétrique H60

P31 symmetrical cable trays are available in height 60mm and are assembled using two *ECLIC* couplers.



Optional: Put an extra bottom plate on width from 400 to 600mm using 6 additional screws M6x12 for extra rigidity.

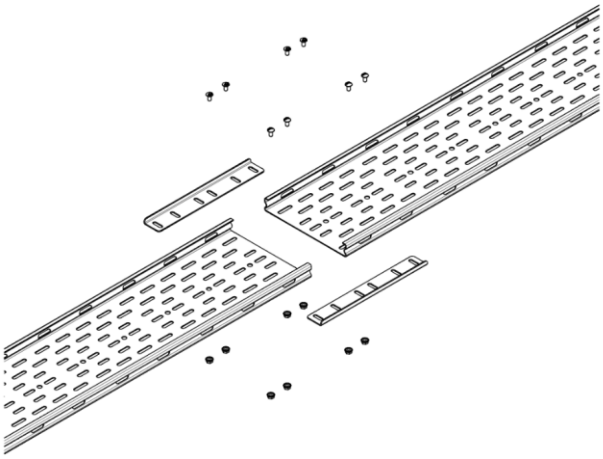


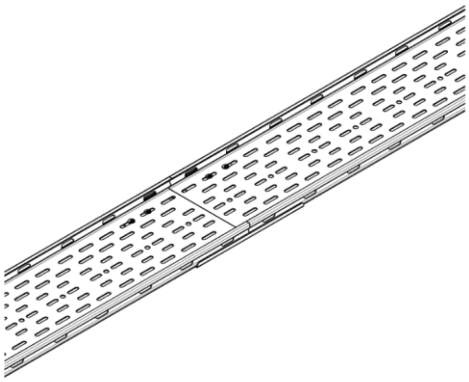
3.1.4. Heavy Duty cable tray / Chemin de câbles lourd (ZW

P31 heavy duty models ZW and EZW are symmetrical cable tray type with increased material thickness.

3.1.4.1. H25 Heavy Duty / Lourd (ZW) H25

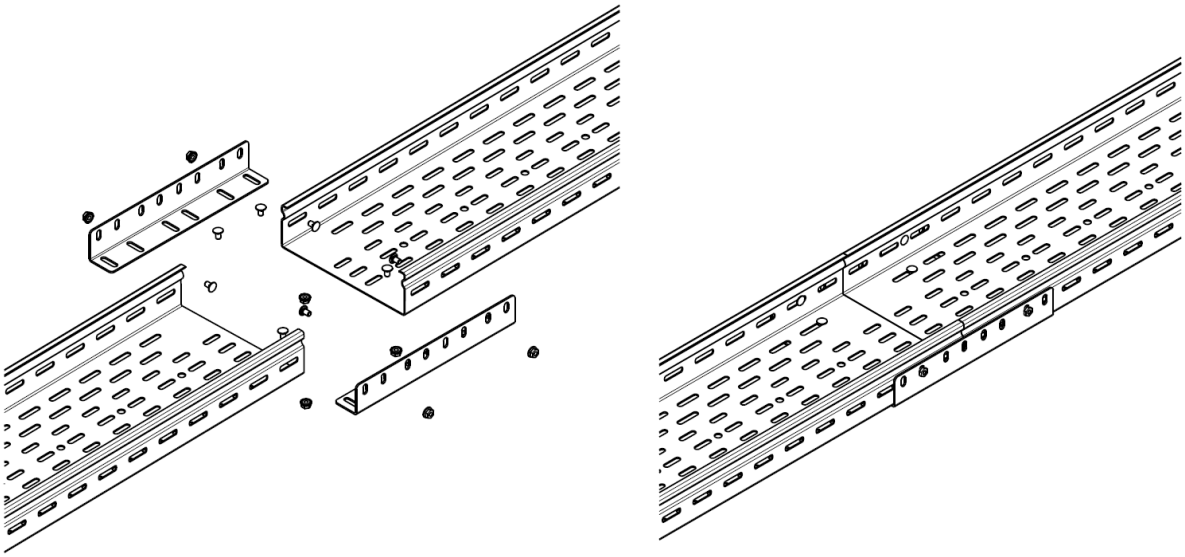
Height 25 is assembled using two external couplers and 4 screws M6x12 on each coupler.



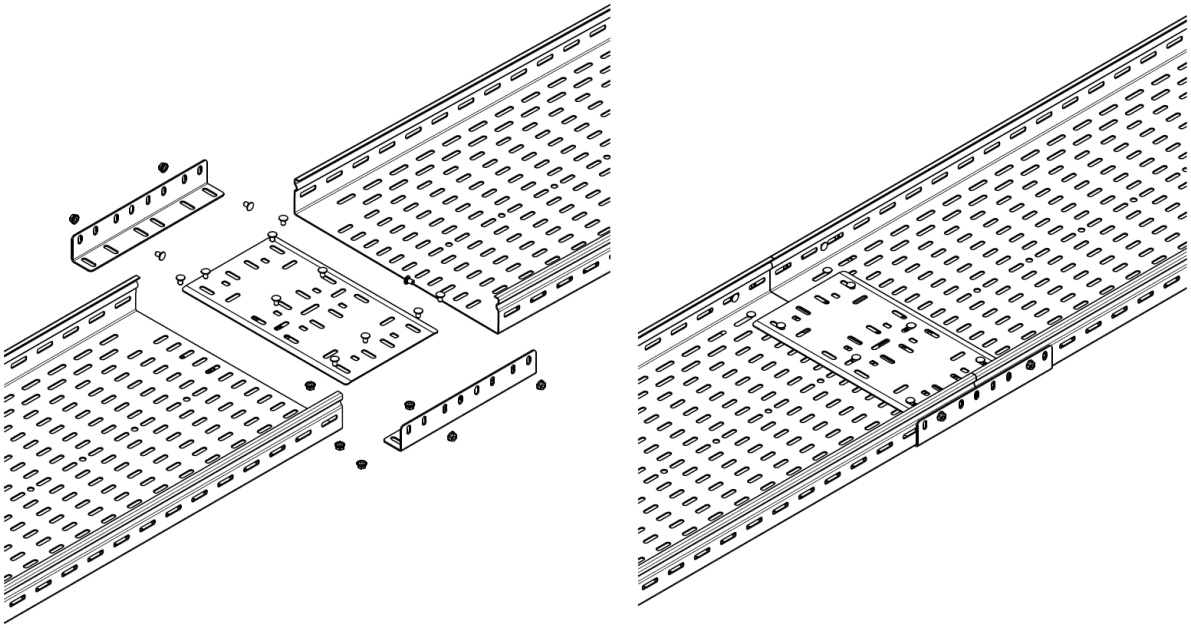


3.1.4.2. H60 Heavy Duty / Lourd (ZW) H60

Height 60 Heavy Duty up to and included width 300mm is assembled using two external couplers and 4 screws M6x12 on each coupler.

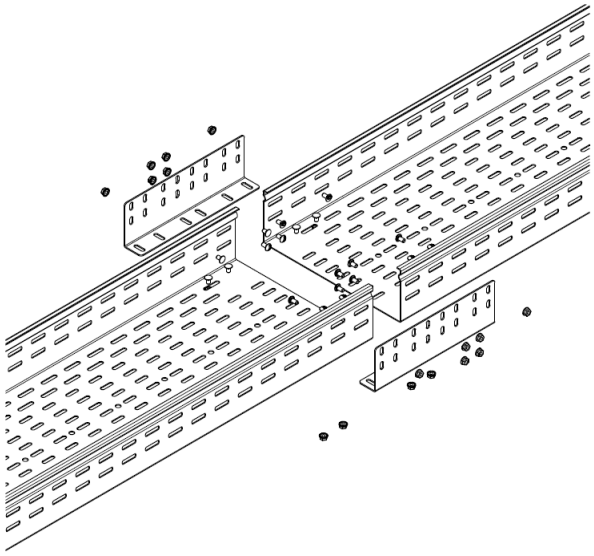


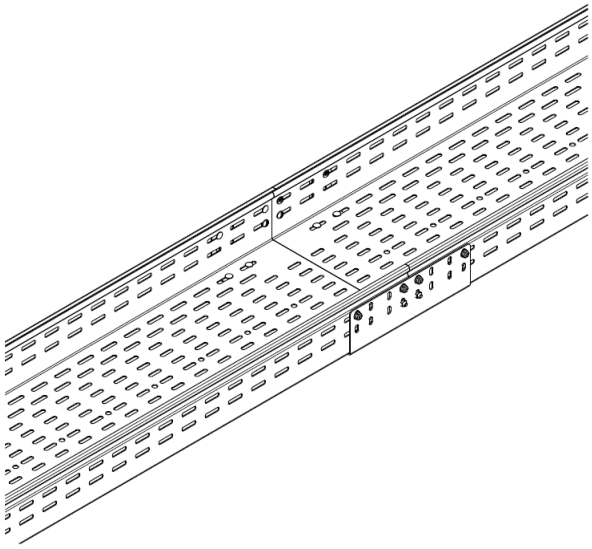
An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity.



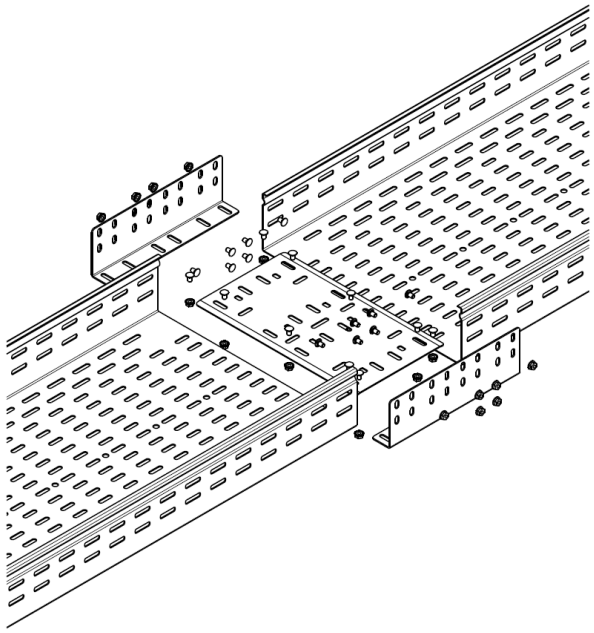
3.1.4.3. H100 Heavy Duty / Lourd (ZW) H100

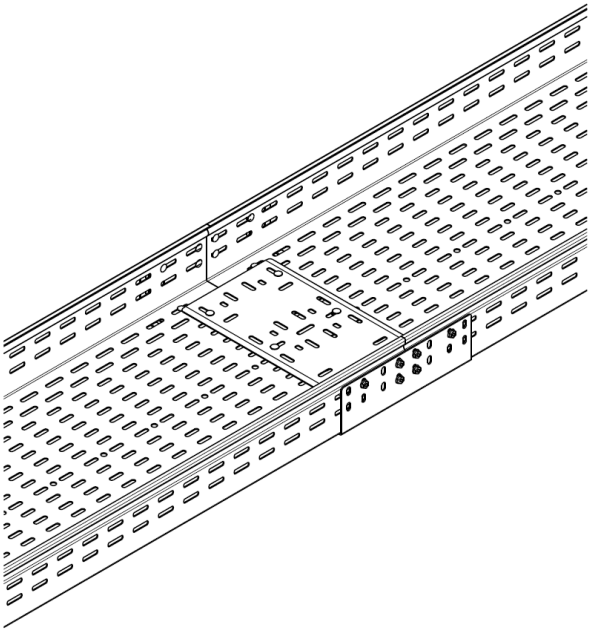
Height 100 Heavy Duty up to and including width 300mm is assembled using two external couplers and 8 screws M6x12 on each one.





An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity.

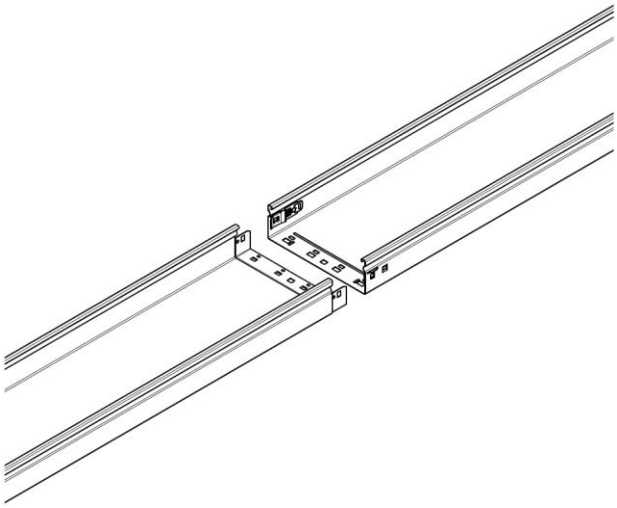


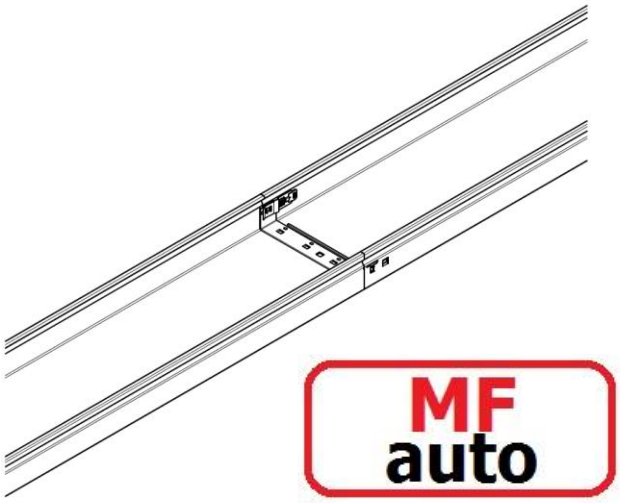


3.2. Blind cable tray / Chemin de câbles aveugle

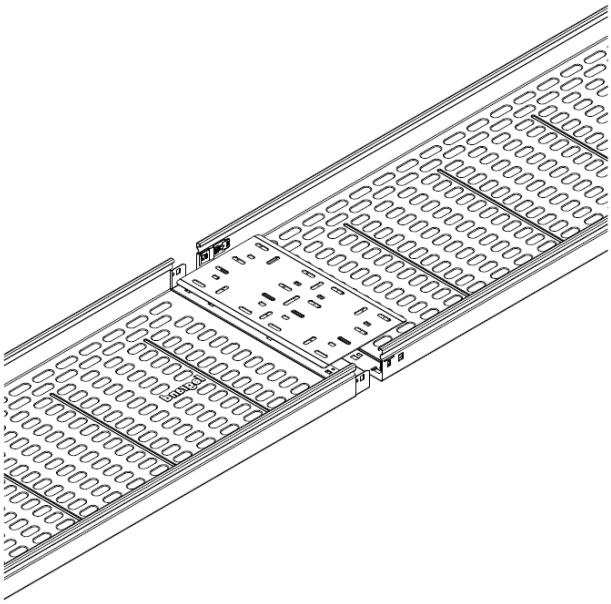
3.2.1. H60 with male – female automatic coupler system / H60 avec système d'emboitement mâle – femelle automatique

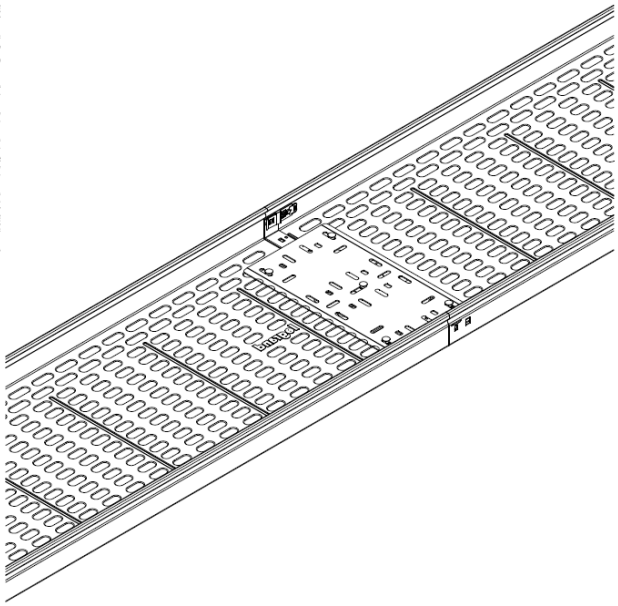
The MF automatic junction system does not need any screws up to and included width 300.
Width 400 – 600; use 1 screw M6x12 in the middle of the bottom.





Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present). Drill 4 holes in the bottom to fix the bottom plate; using a ø7mm drill.





3.2.2. With male – female system / Avec système mâle - femelle

3.2.2.1. H60 / H60

Height 60mm is assembled using 3 screws M6x12 in the side and bottom.
The third screw in the middle is optional up to and included width 300mm.
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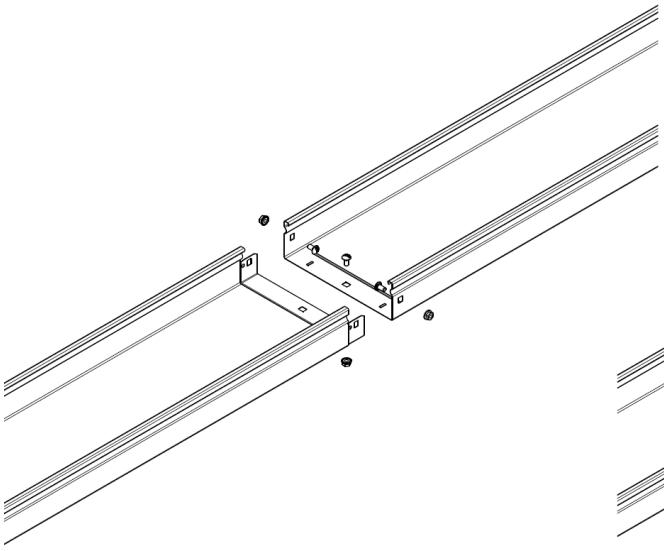
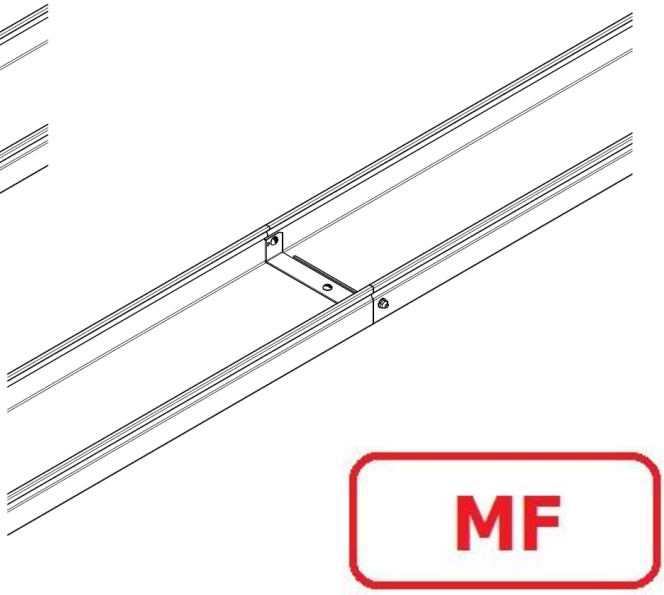
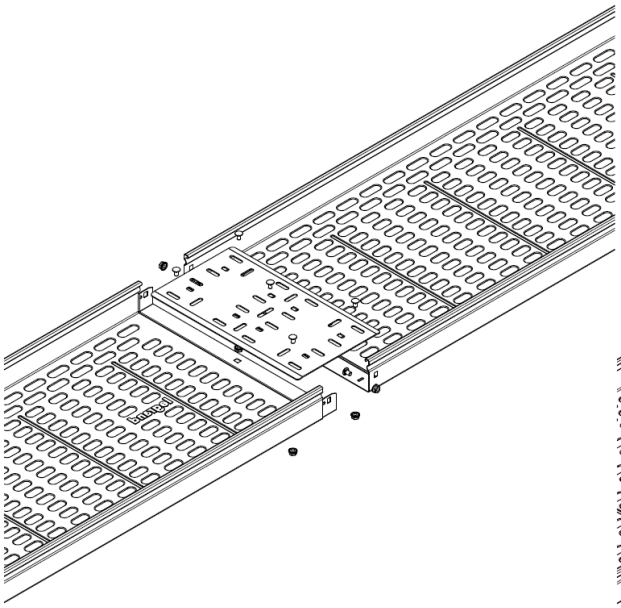
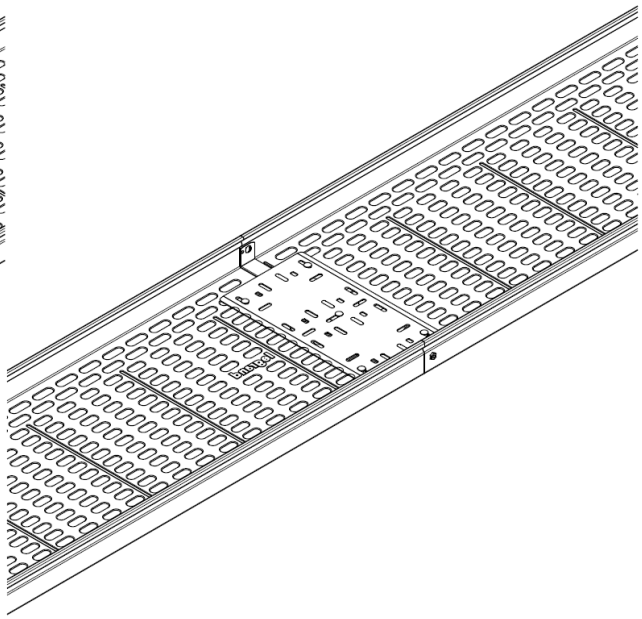




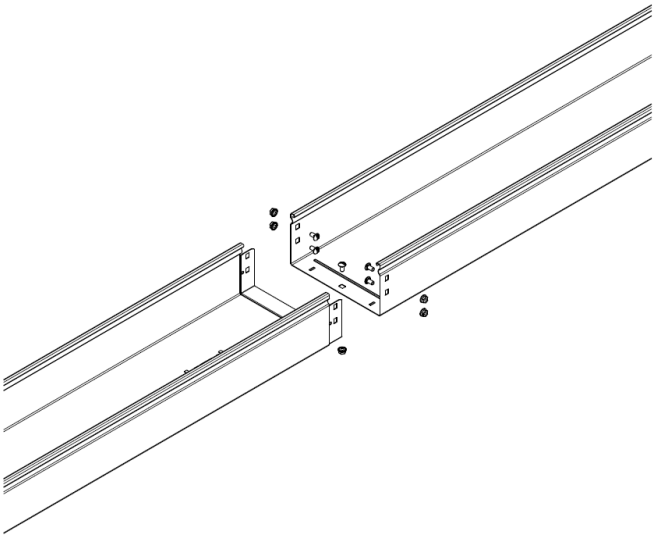
Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present). Drill 4 holes in the bottom for fixing the bottom plate; using a ø7mm drill.

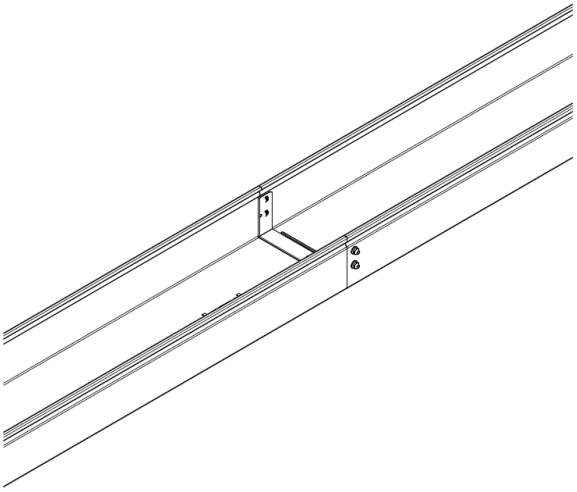




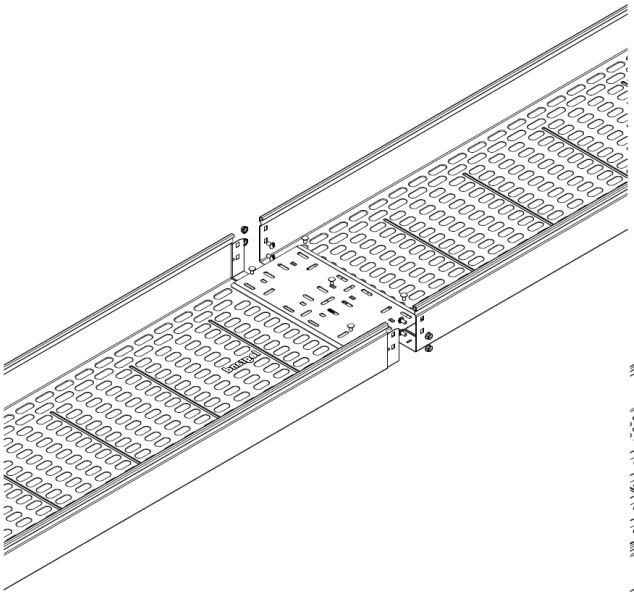
3.2.2.2. H100 / H100

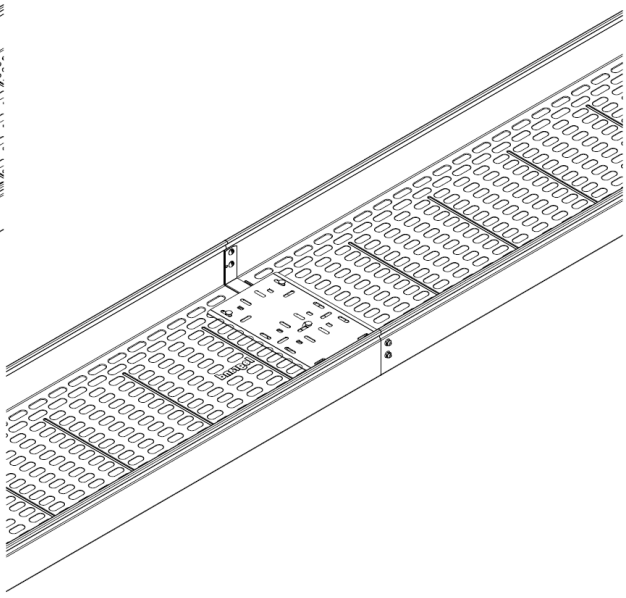
Height 100mm is assembled using 5 screws M6x12 in the side and bottom.





An extra bottom plate is used on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present). Drill 4 holes in the bottom for fixing the bottom plate; using a ø7mm drill.





3.2.3. H60 Symmetrical cable tray / Chemin de câbles symétrique H60

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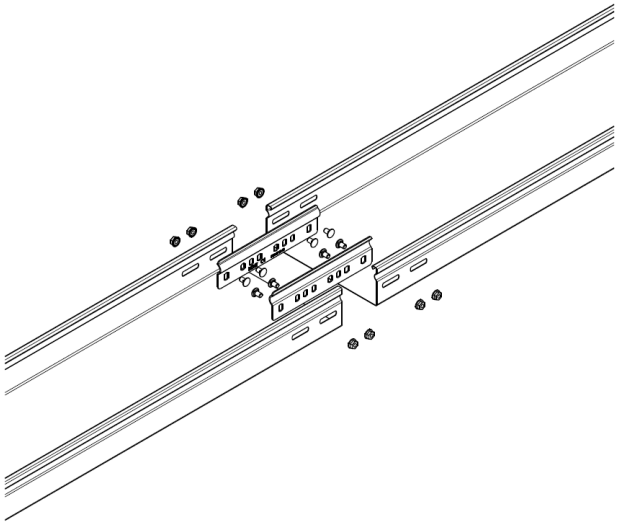
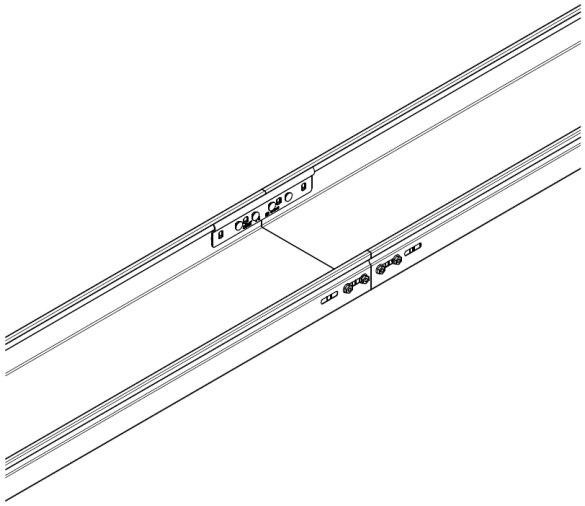
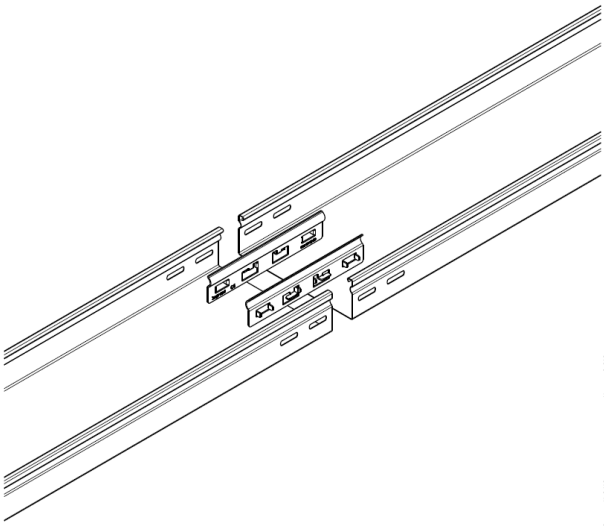
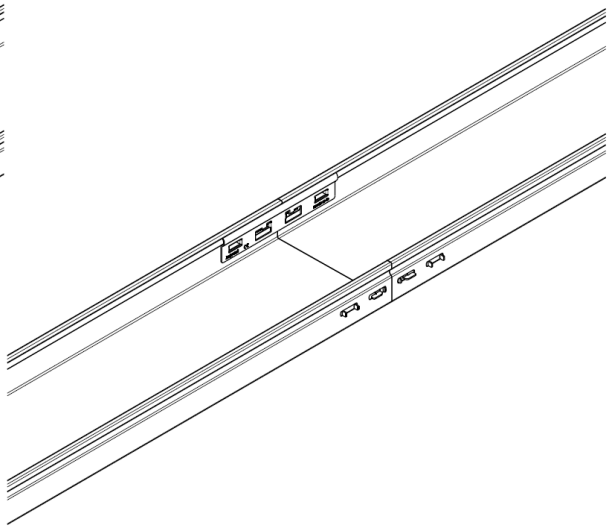
P31 symmetrical blind cable trays are available in height 60mm and are assembled using two EP couplers and 4 screws M6x12 on each coupler..



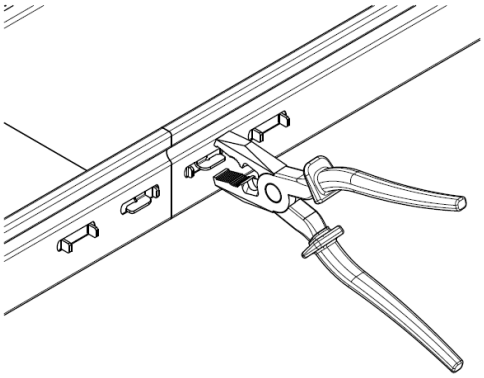


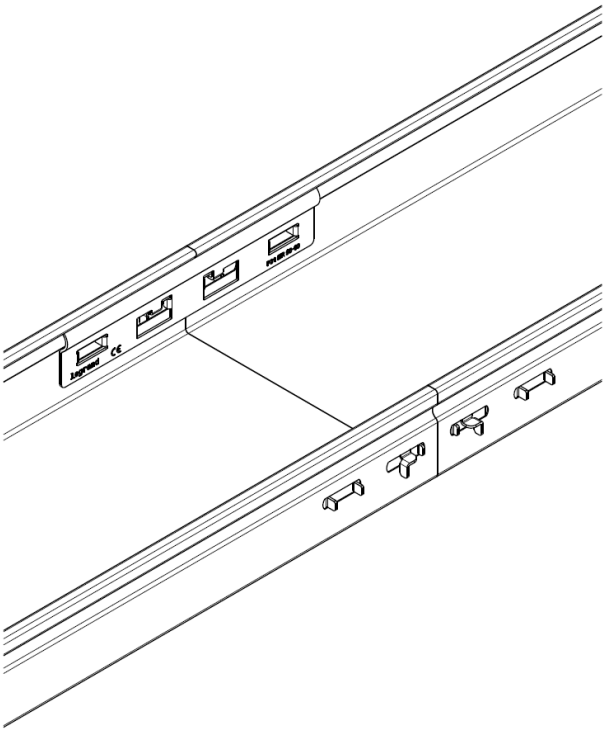
Alternative: use 2pc of the ER coupler.



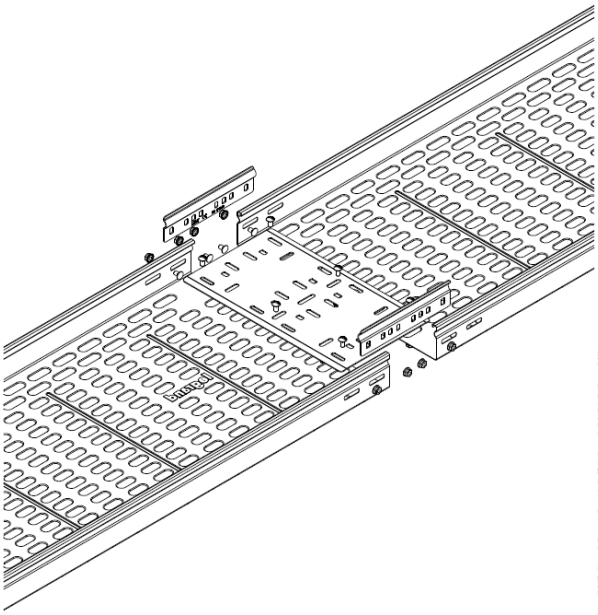


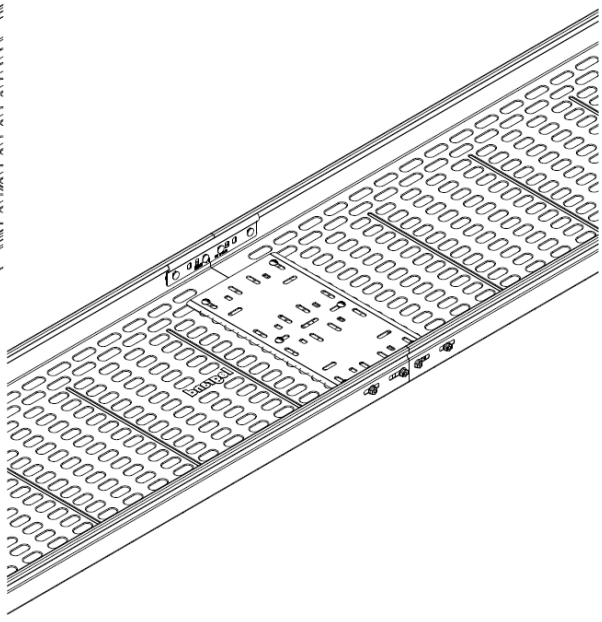
The ER coupler is assembled bending the external wings of the coupler using a pliers.





An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity. Drill 6 holes in the bottom to fix the bottom plate; using a ø7mm drill.
The bottom plate is compatible with both the EP and the ER coupler.



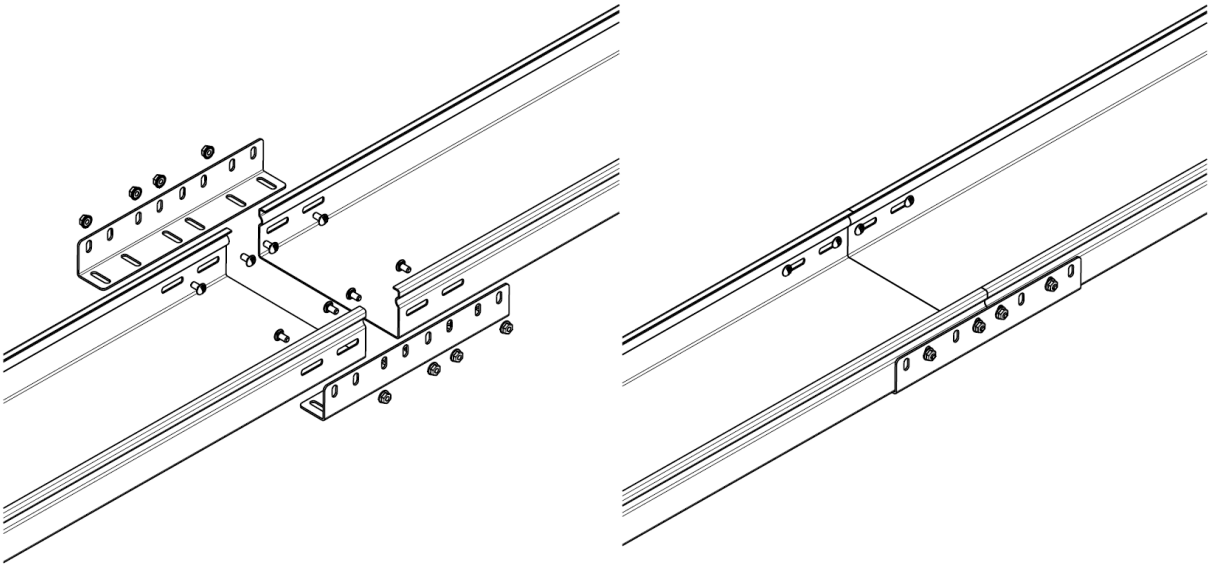


3.2.4. Heavy Duty cable tray / Chemin de câbles lourd (ZW)

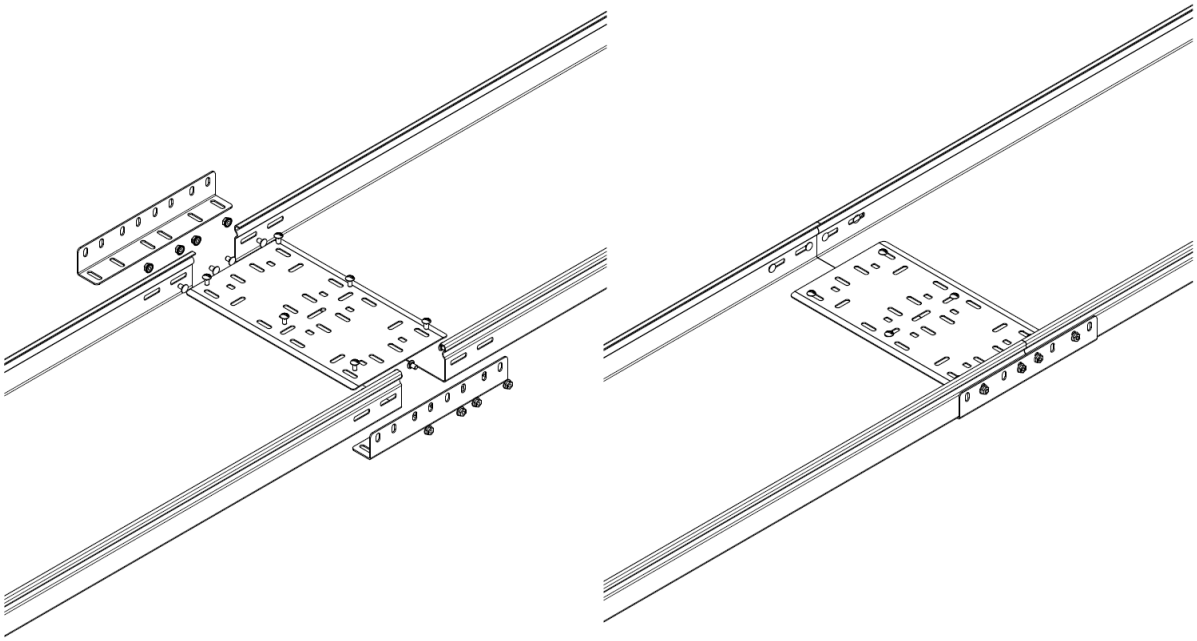
P31 heavy duty models ZW and EZW blind are symmetrical cable tray type with increased material thickness.

3.2.4.1. H60 Heavy Duty / Lourd (ZW) H60

Height 60 Heavy Duty Blind up to and included width 300mm is assembled using two external couplers and 4 screws M6x12 on each coupler.

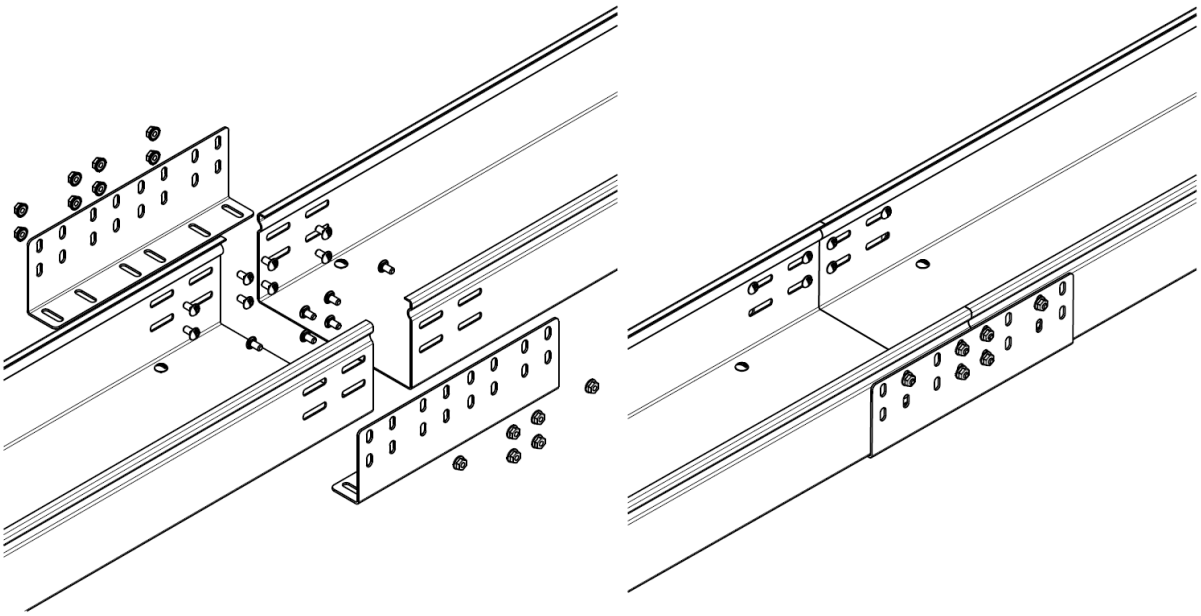


An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity. Drill holes in the bottom to fix the bottom plate; using a ø7mm drill.

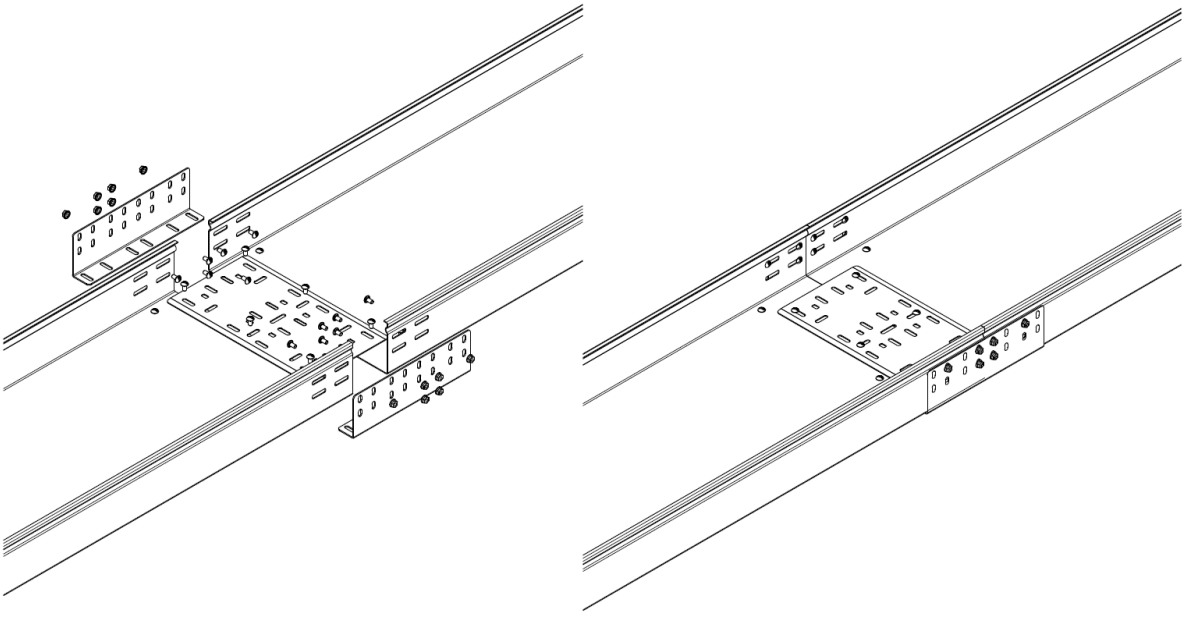


3.2.4.2. H100 Heavy Duty / Lourd (ZW) H100

Height 100 Heavy Duty up to and including width 300mm is assembled using two external couplers and 8 screws M6x12 on each one.

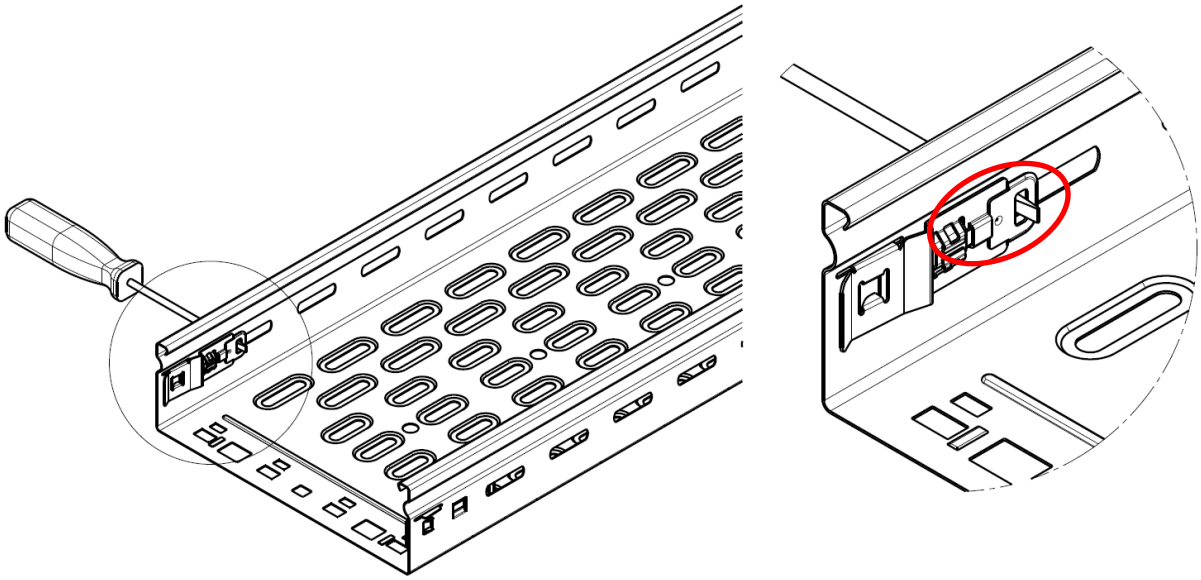


An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity. Drill holes in the bottom to fix the bottom plate; using a ø7mm drill.

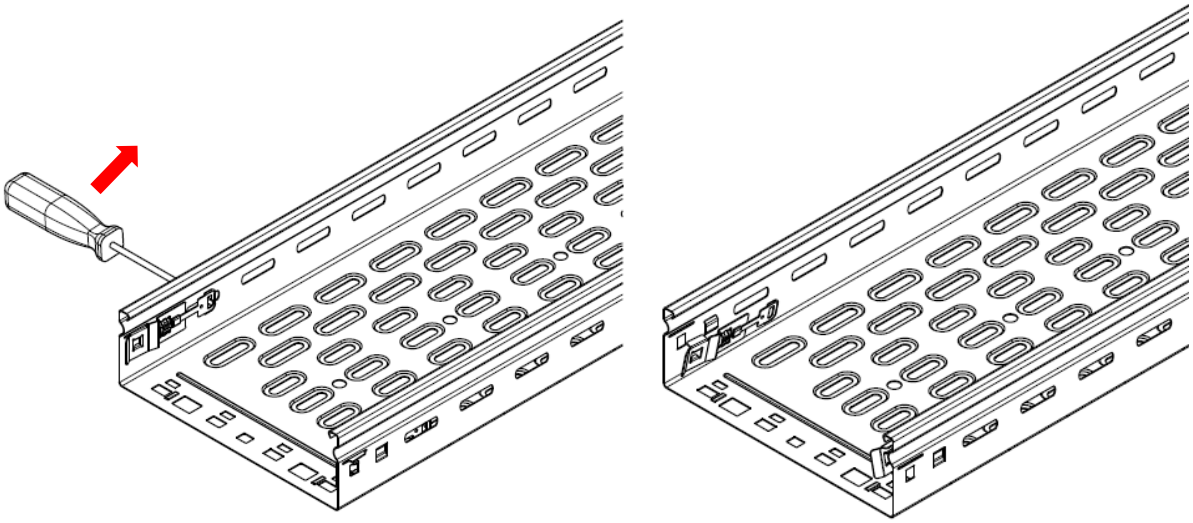


4. Disassembly automatic coupler / Démontage de l'éclisse automatique

To disassemble thee automatic coupler, it is necessary to pull the key using a screwdriver. After removing the key, the coupler will separate from the cable tray.



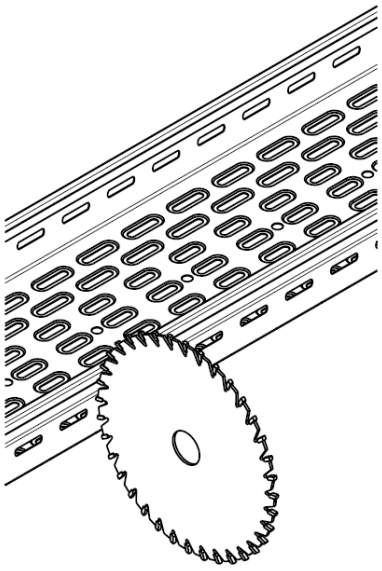
The coupler is not re-usable after the disassembly.
After removing the automatic coupler, the cable tray can be regarded as a standard male-female type.



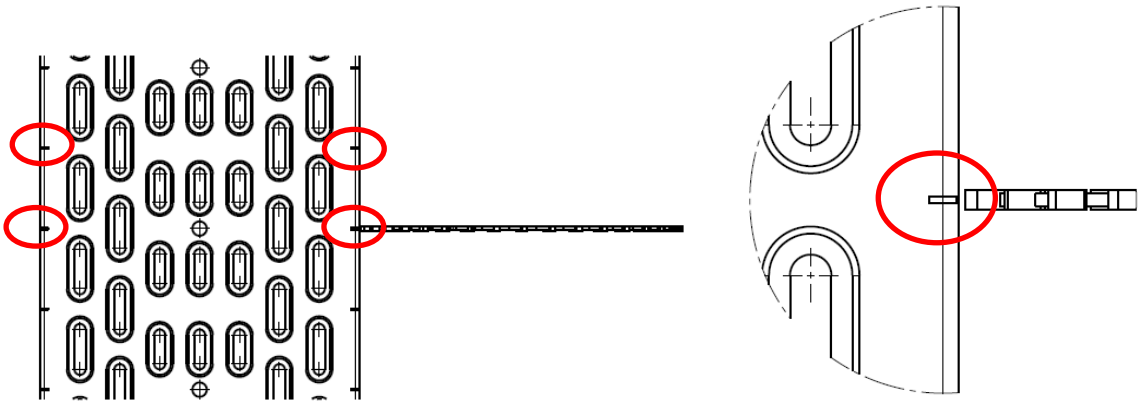
5. P31 Length assembling after cutting/ Assemblage de longueurs P31 après coupe

In this chapter we'll show you some different situation of cutting.

In order to preserve an integrated coupler, it is recommended to cut off the male side when possible. However, in every occasion it is possible to connect cable trays using the appropriate coupler.



Where ever possible, we recommend to cut cable trays at the index imprinted in the bottom. This way the hole pattern remaining will be most suitable for connections ensuring a good assembly.



Remark:

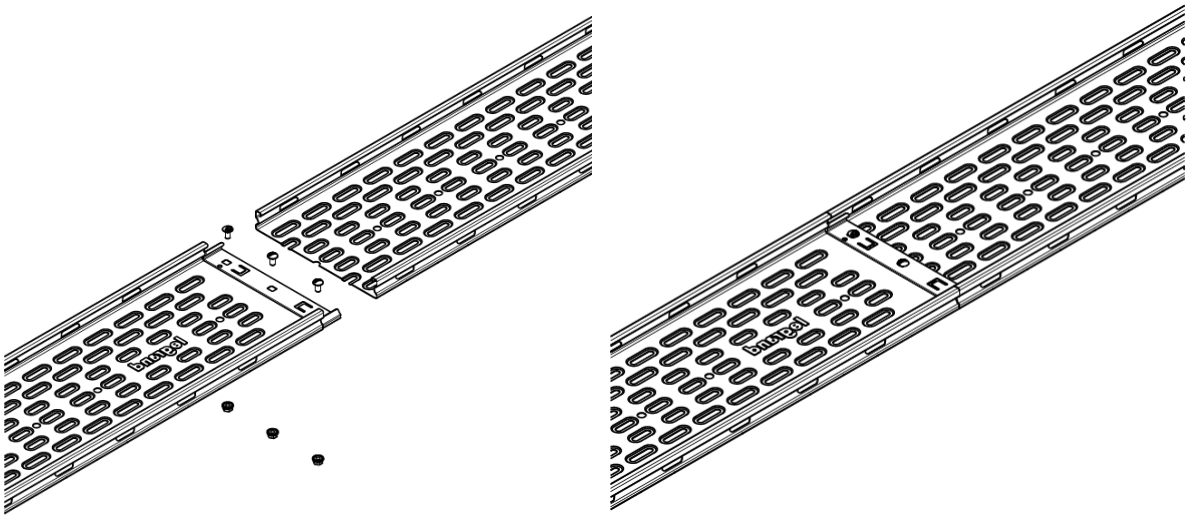
- In order to **minimise waste**, Legrand suggests to cut cable trays only where a fitting is needed, installing the fitting on to the cut-side. On the other side of the fitting, continue installing cable tray starting with the remaining piece, that was cut off before. (mounting both cut sides to the fitting).

- At all times, **burs must be removed** at a cut to avoid danger during installation and damaging cables later.

5.1. Perforated cable trays / Chemins de câbles perforés

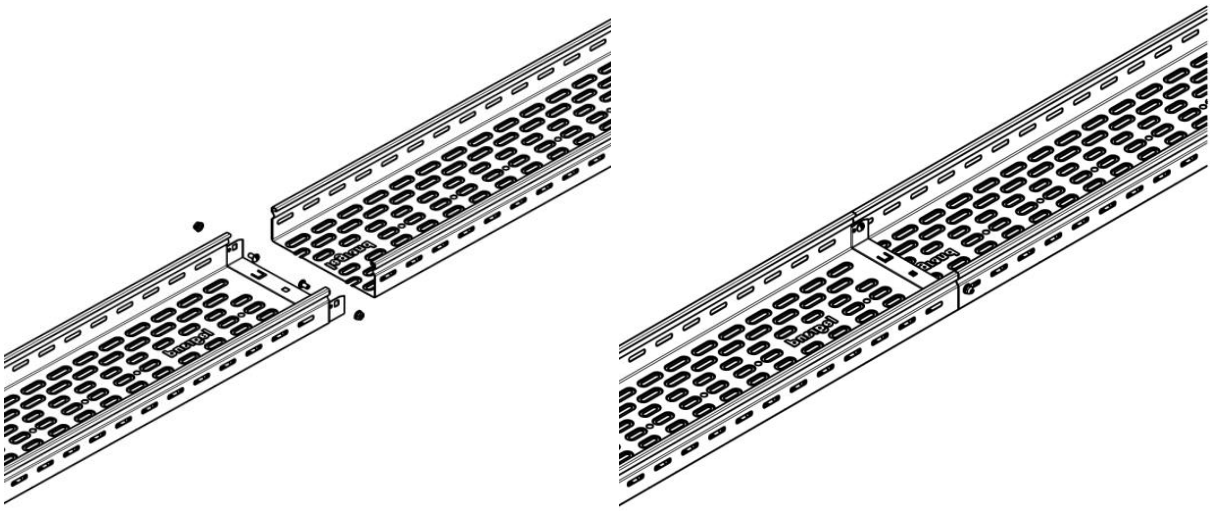
5.1.1. H25 without female side / H25 sans partie femelle

Height 25mm is assembled using 3 screws M6x12 in the bottom.
The third screw in the middle is optional up to and included width 300mm.



5.1.2. H60 without female side

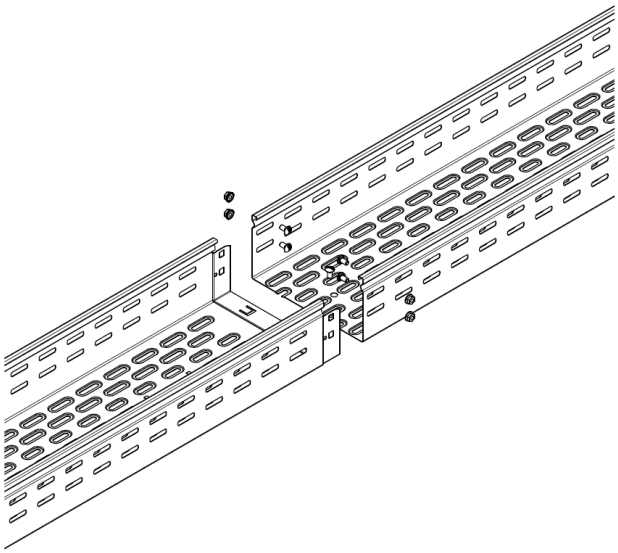
Use the holes in the side of the male part to lock the cable trays.
Height 60mm is assembled using 3 screws M6x12 in the side and bottom.
The third screw in the middle is optional up to and included width 300mm.

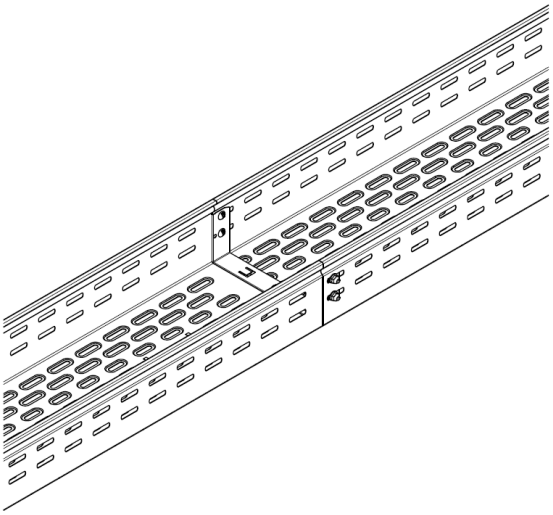


Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity.
(Screw in middle of bottom already present)

5.1.3. H100 without female side / H100 sans partie femelle

Use the holes in the side of the male part to lock the cable trays.
Height 100mm is assembled using 5 screws M6x12 in the side and bottom.
An extra bottom plate is used on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present)

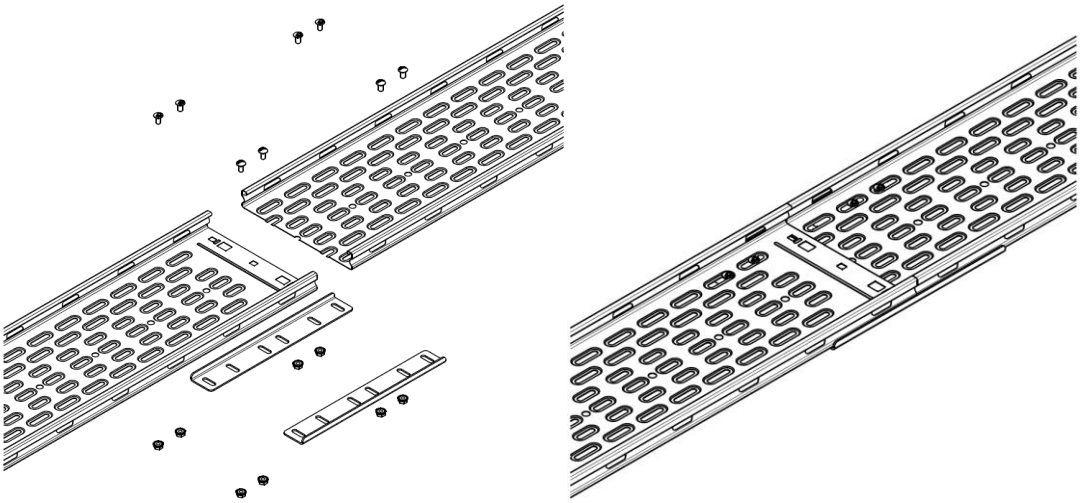




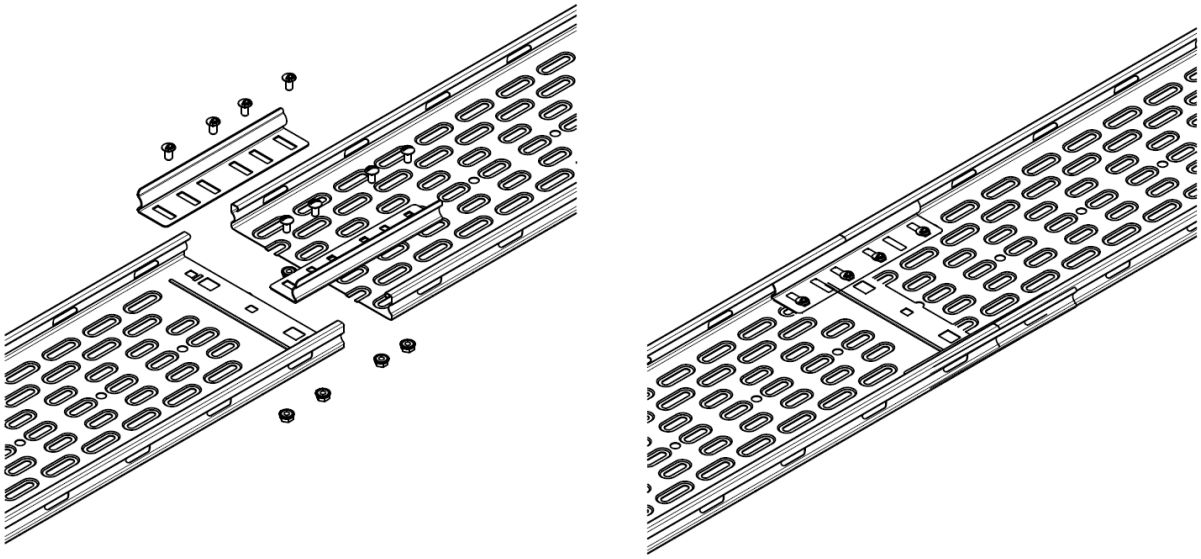
Optional:
Put an extra bottom plate on width 400 to 600mm using 4 additional screws M6x12 for extra rigidity. (Screw in middle of bottom already present)

5.1.4. H25 without male side / H25 sans partie mâle

Height 25 is assembled using two external couplers and 4 screws M6x12 on each coupler.



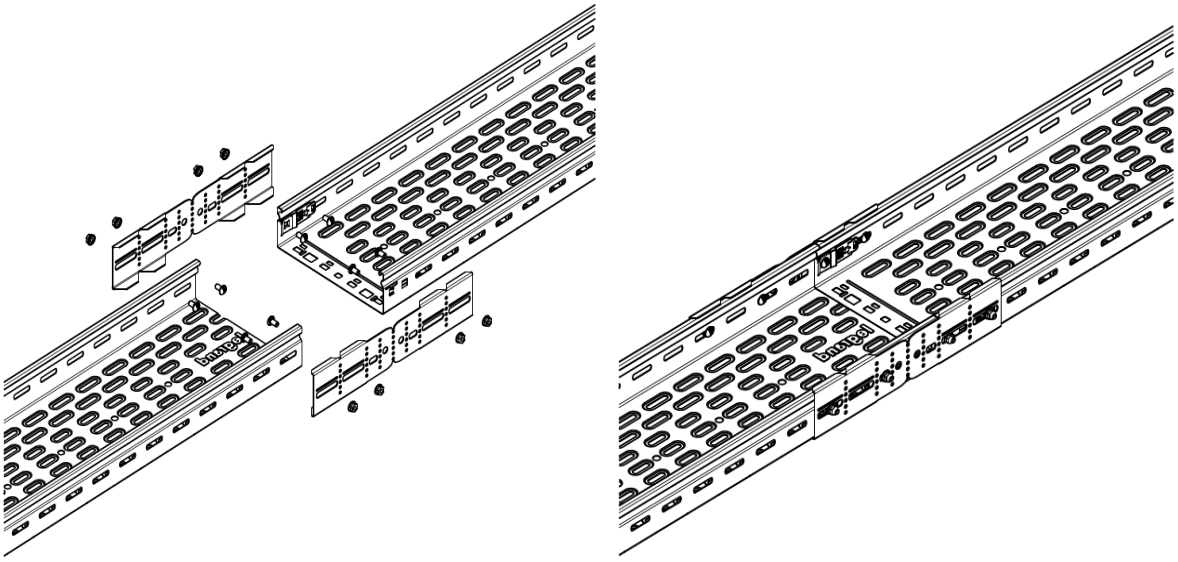
Alternative: use 2pc of the internal couplers and 4 screws M6x12 on each coupler.



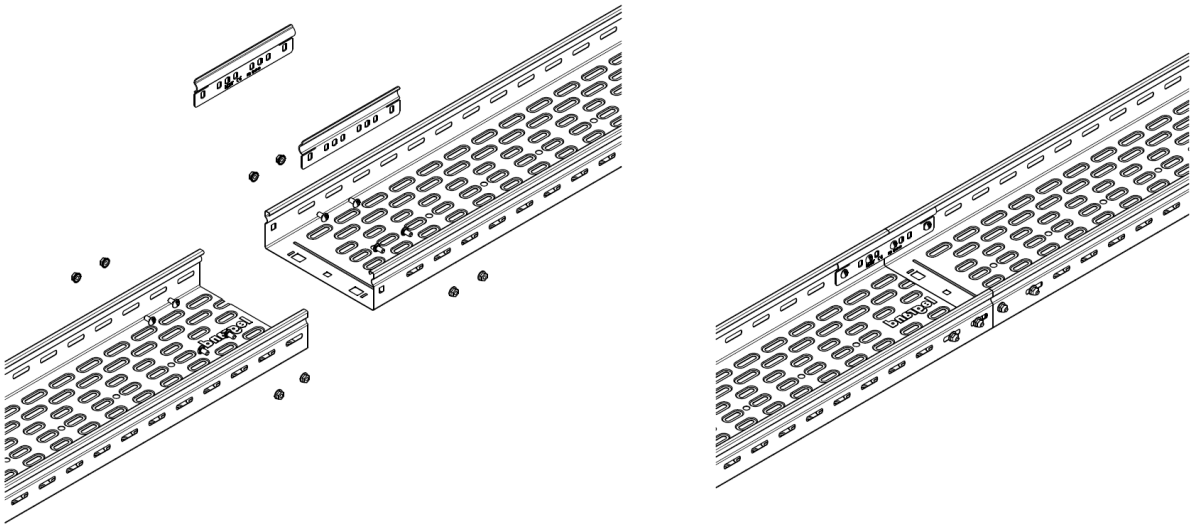
Recommendation:
Mount an extra bottom plate on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity and cable protection.

5.1.5. H60 without male side / H60 sans partie mâle

Height 60mm is assembled using 2pc of the EDU coupler for the male – female automatic junction without male side. It is not necessary to disassemble the automatic coupler. Use 4 screws M6x12 for each coupler.



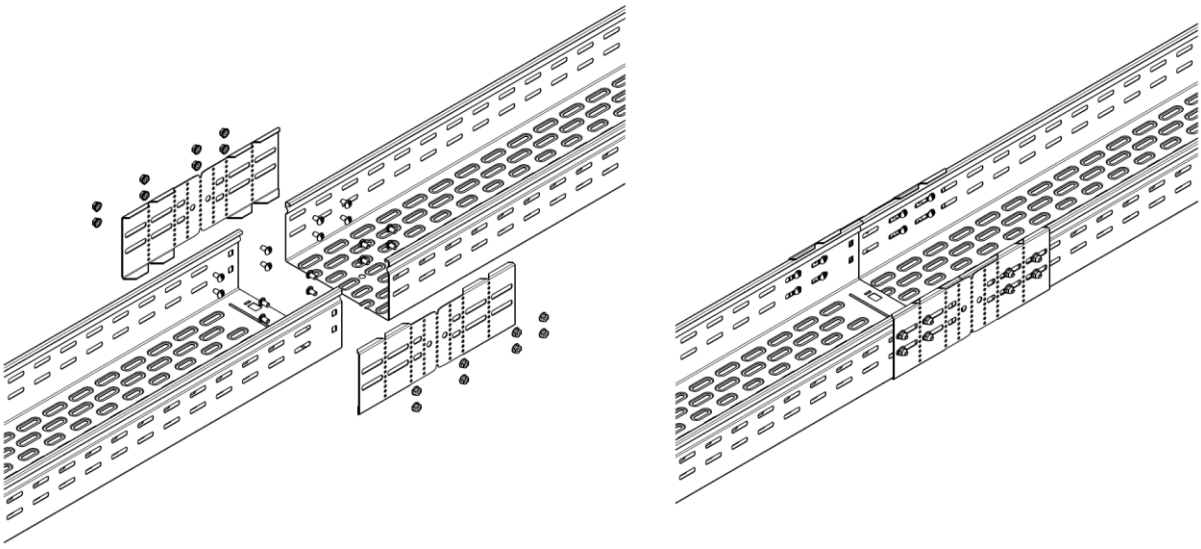
Alternative: use 2pc EP coupler, assembled using 4 screws M6x12 on each coupler.
Removing the auto coupler, if present, is necessary



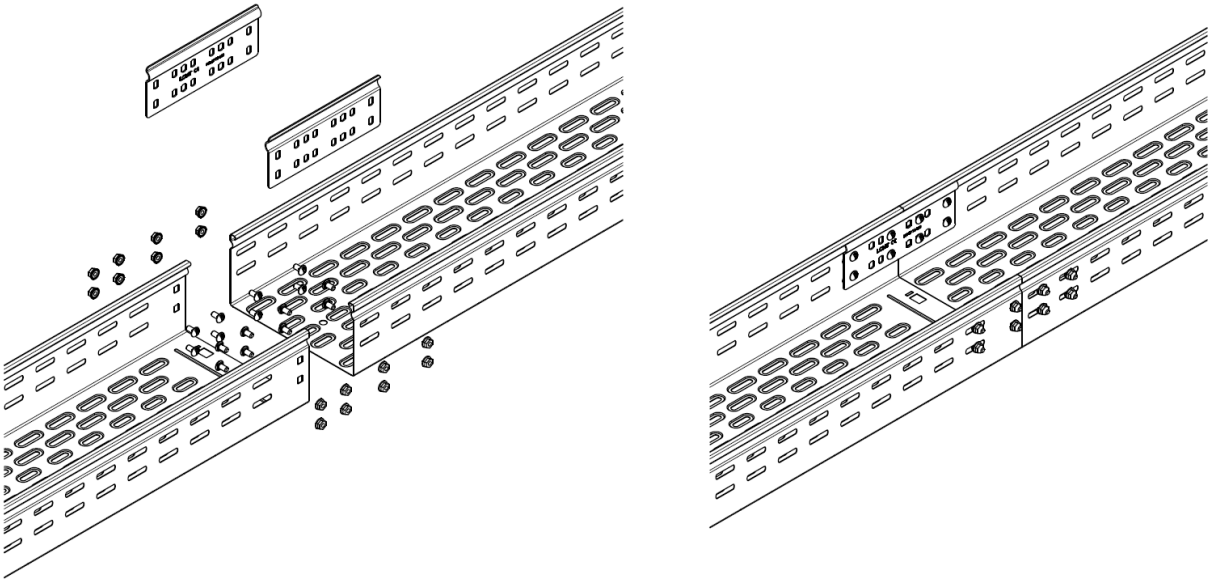
Recommendation:
Mount an extra bottom plate on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity and cable protection.

5.1.6. H100 without male side / H100 sans partie mâle

Height 100mm is assembled using 2pc of the EDU coupler for the male – female junction without male side. Use 8 screws M6x12 for each coupler.
An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity and cable protection.



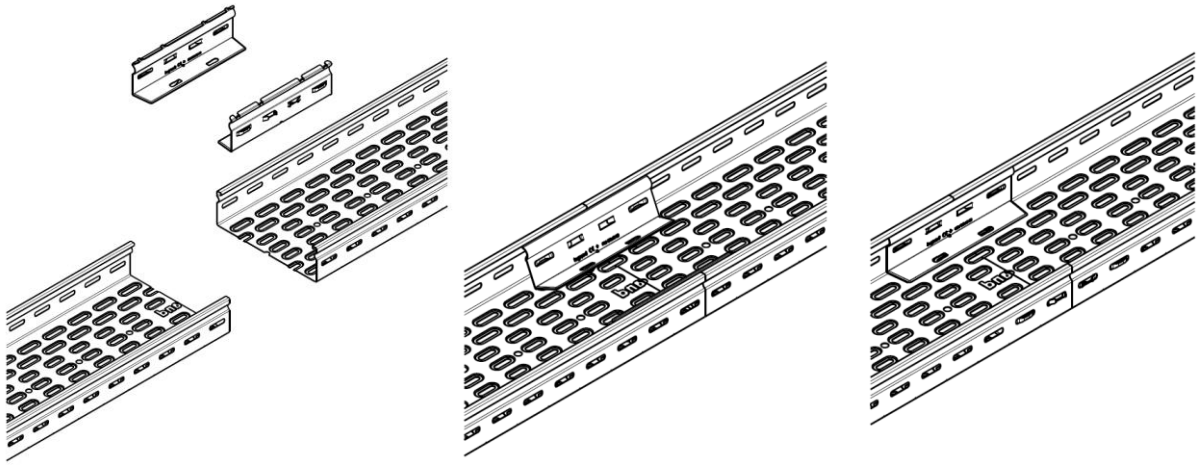
Alternative: use 2pc EP coupler, assembled using 8 screws M6x12 on each coupler.



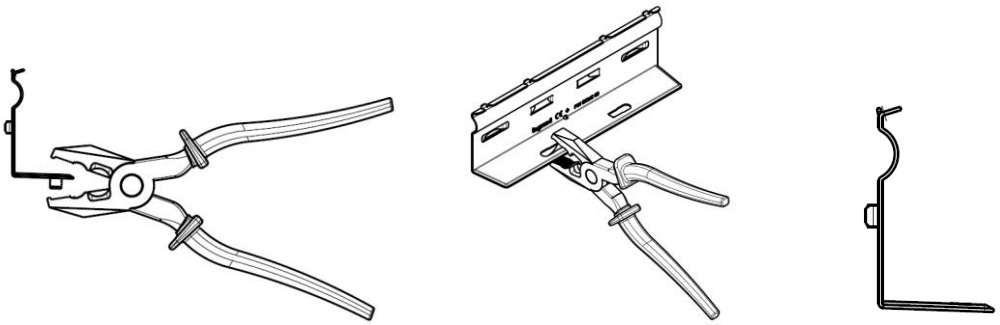
Recommendation:
Mount an extra bottom plate on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity and cable protection.

5.1.7. H60 Symmetrical cable tray cut side(s) / Coupe de chemin de câbles symétrique H60

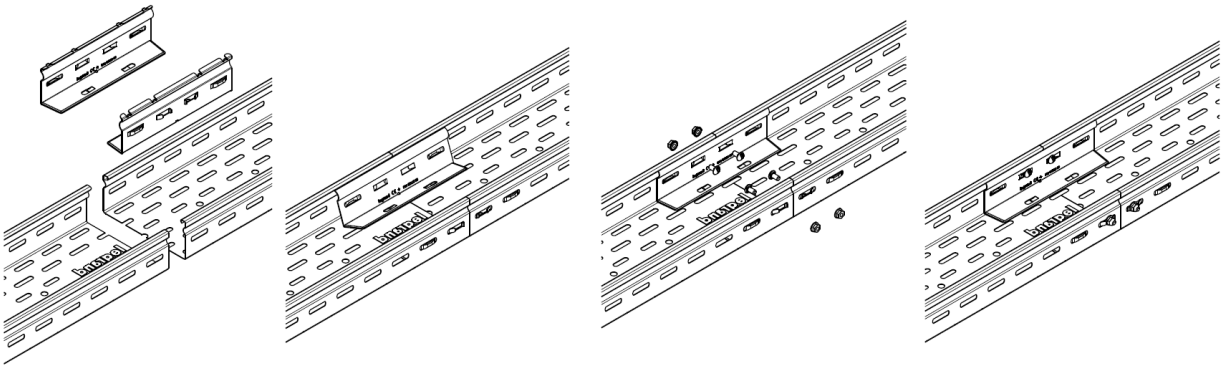
Height 60mm symmetrical assembled using 2pc Eclic coupler (standard method) is possible if tray(s) have been cut at their markings (see intro chapter 5).



Exception:
Unfortunately, this method is not possible for width 100mm and 150mm.
In this case you have to modify the bottom teeth of the coupler; following the pictures below.

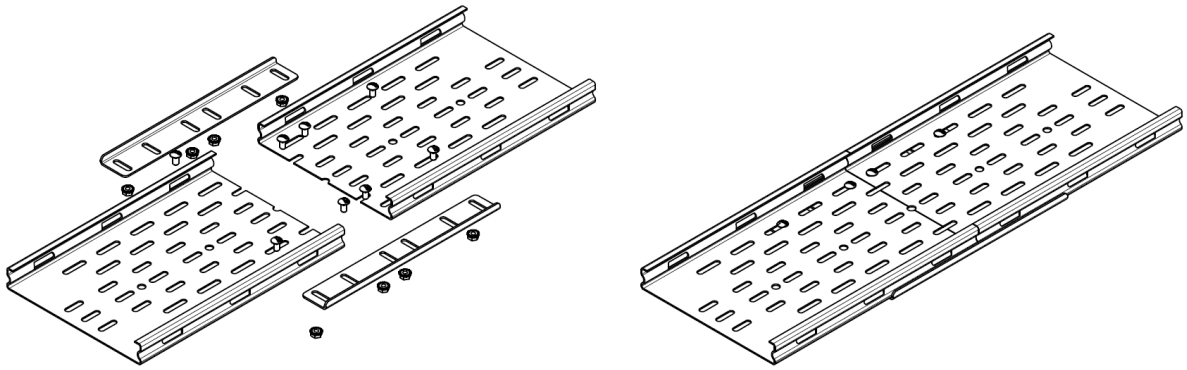


Width 100mm and 150mm in combination with 2pc adjusted Eclic are assembled using 2 screws M6x12 on each coupler.



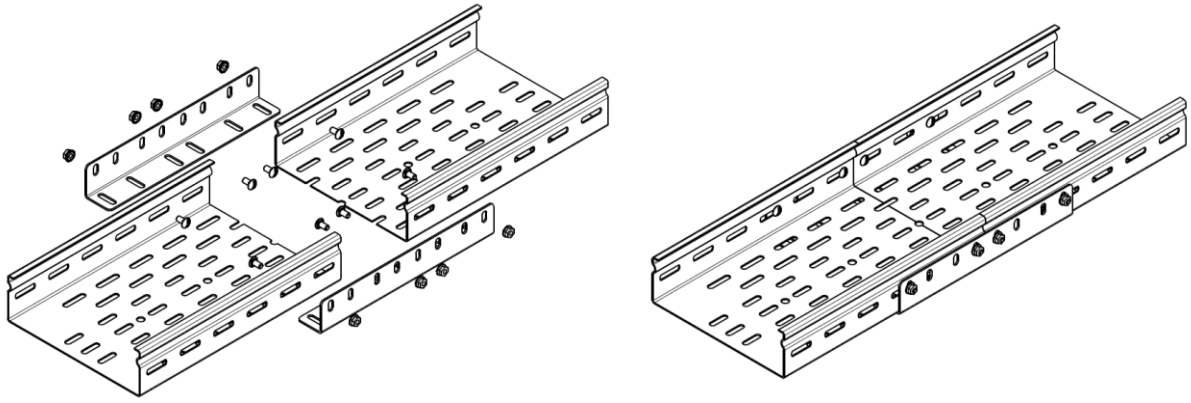
5.1.8. H25 Heavy duty cut / Coupe Lourd (ZW) H25

The heavy duty versions with cut end(s), are assembled like a standard cable tray.
For height 25mm, use the external coupler with 4 screws M6x12 on each coupler.



5.1.9. H60 Heavy duty cut / Coupe Lourd (ZW) H60

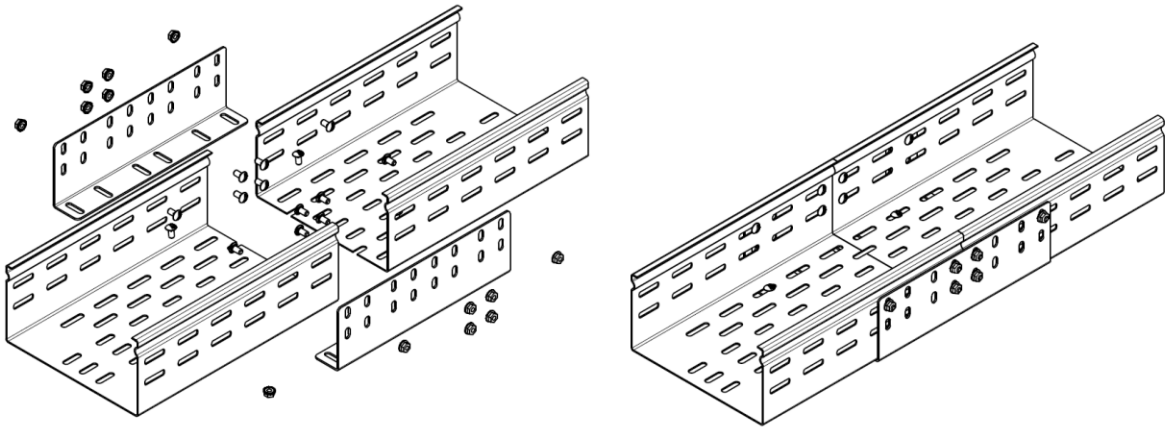
The heavy duty versions with cut end(s), are assembled like a standard cable tray.
For height 60mm, use the external coupler with 4 screws M6x12 on each coupler.



An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity.

5.1.10. H100 Heavy duty cut / Coupe Lourd (ZW) H100

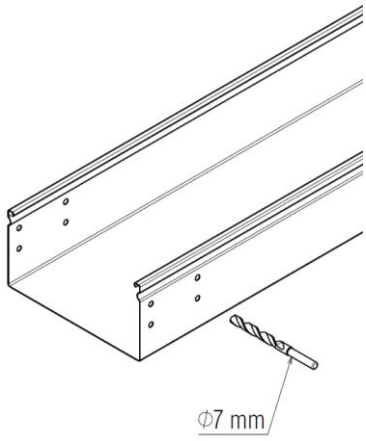
The heavy duty versions with cut end(s), are assembled like a standard cable tray.
For height 100mm, use the external coupler with 8 screws M6x12 on each coupler.



An extra bottom plate is used on width 400 to 600mm using 6 additional screws M6x12 for extra rigidity.

5.2. Blind cable trays / Chemins de câbles aveugles

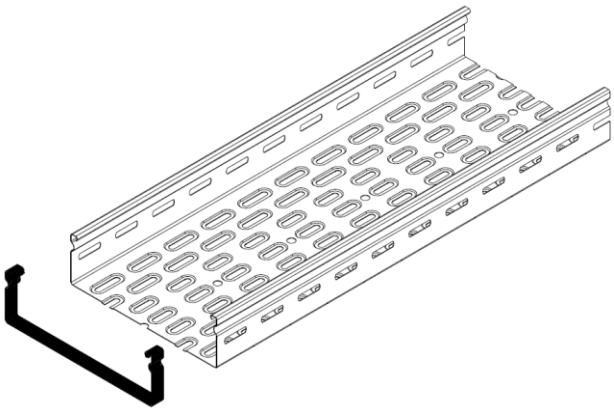
The Blind cable tray versions with cut end(s), are assembled like a standard cable tray.
Holes to mount the external coupler are to be drilled using a ø7mm drill if necessary.

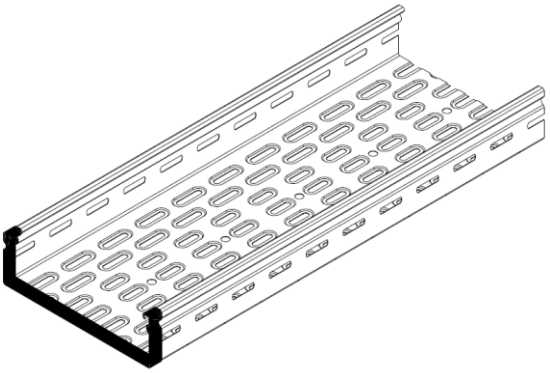


5.3. Rubber protection / Protection caoutchouc

Cut cable trays may have sharp edges. To prevent accidents, use protective end-cover.
(provided in 5m rolls).

Cut the required length and press over the edge of the cable tray.

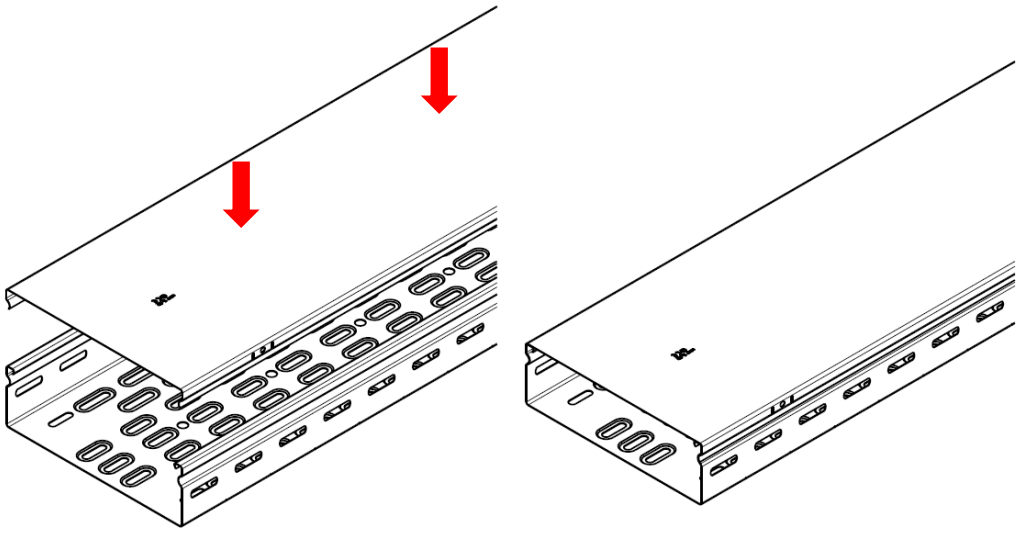




P31 cover length / Longueur de couvercle P31

6.1. Horizontal application / Utilisation horizontale

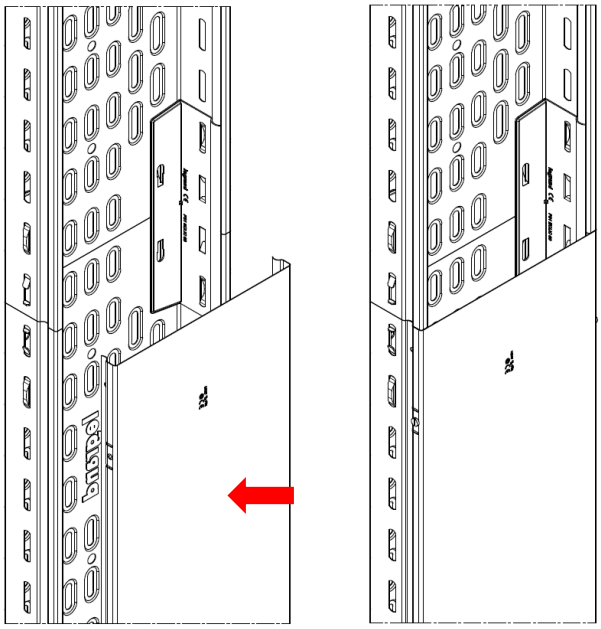
To mount a cover on a horizontal cable tray, just press until it ‘clicks’



Advise: for outdoor use, add cover clamps: 2pc per meter of cover

6.2. Vertical application / Utilisation verticale

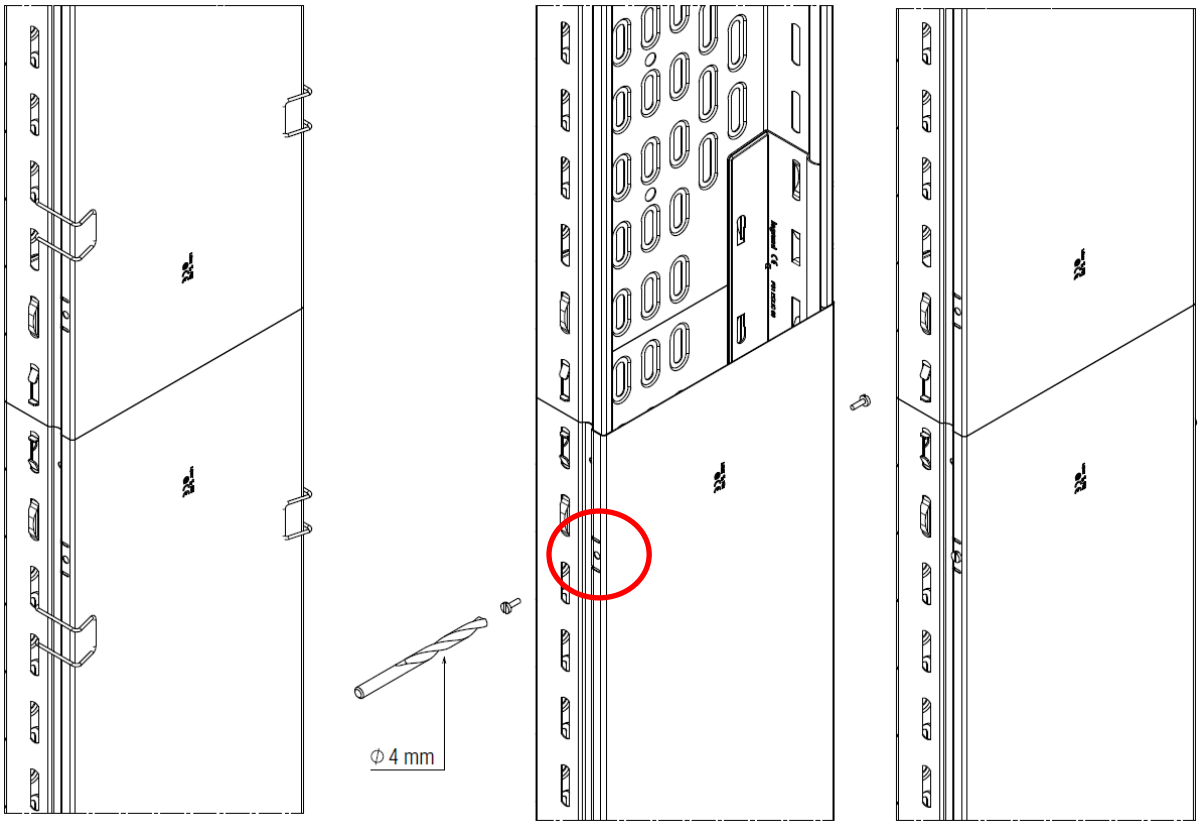
When installing covers on vertical cable trays, work from bottom to top. When disassembling, start at the top working down. Like at horizontal application, the cover can be pressed on.



Legrand advises to apply an additional fixing for vertical covers:

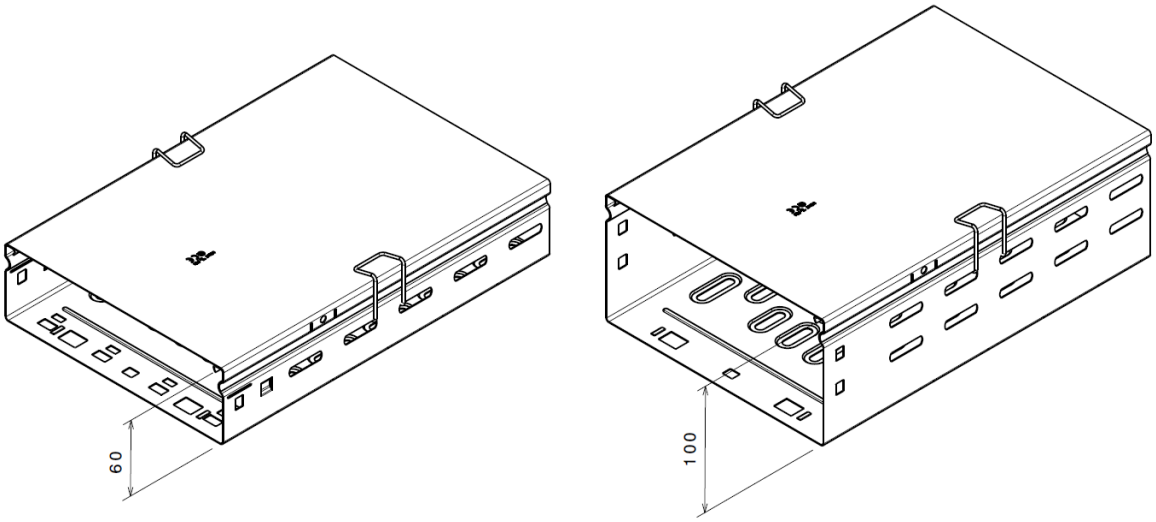
- to prevent covers sliding down due to vibrations or removal of bottom cover first
- to make it more difficult for unauthorized people to access the cable tray

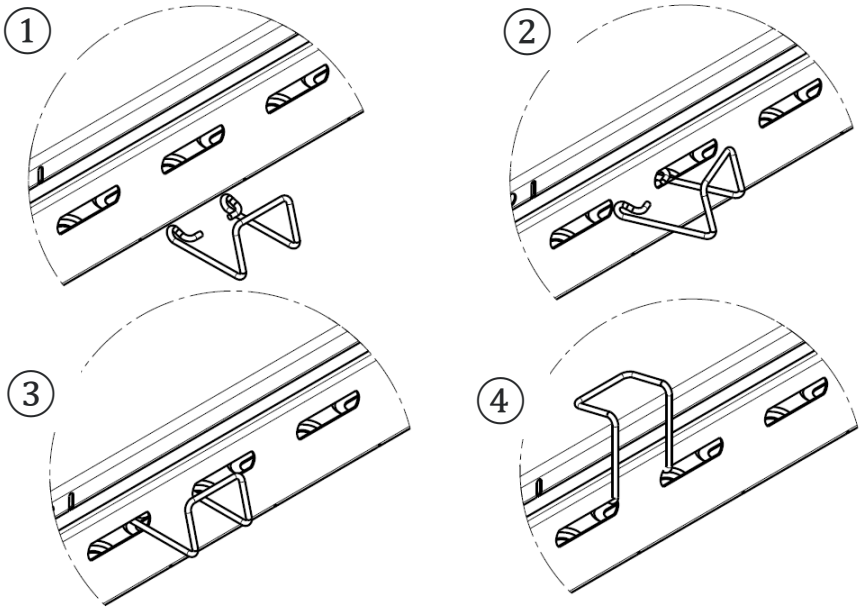
A) The first option is using a cover clamp (see chapter 6.3).
B) The second option is to drill a hole using a 4mm diameter drill ~~bit~~ aligned to the hole in the side of the cover length. Then insert self-tapping screws to fix in position the cover.



6.3. Clip cover / Clip de couvercle

In case a stronger, more secure fixation is required like in windy places or to resist vibrations, a cover clamp can be used for both horizontal and vertical installations.
Cover clamps are easy to spot and re-usable. Suitable for cable trays height 60mm and 100mm.

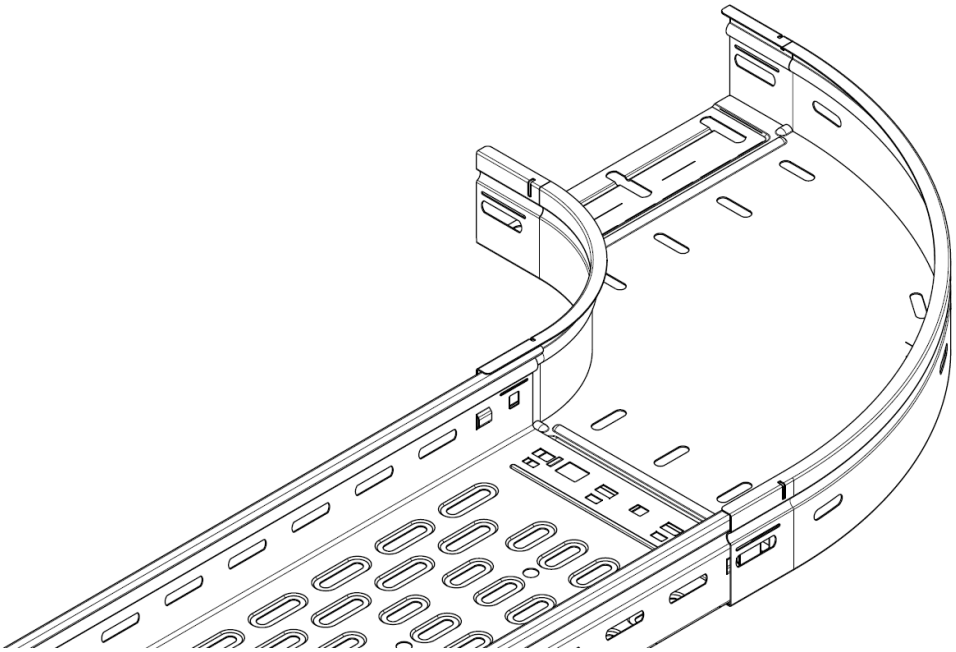




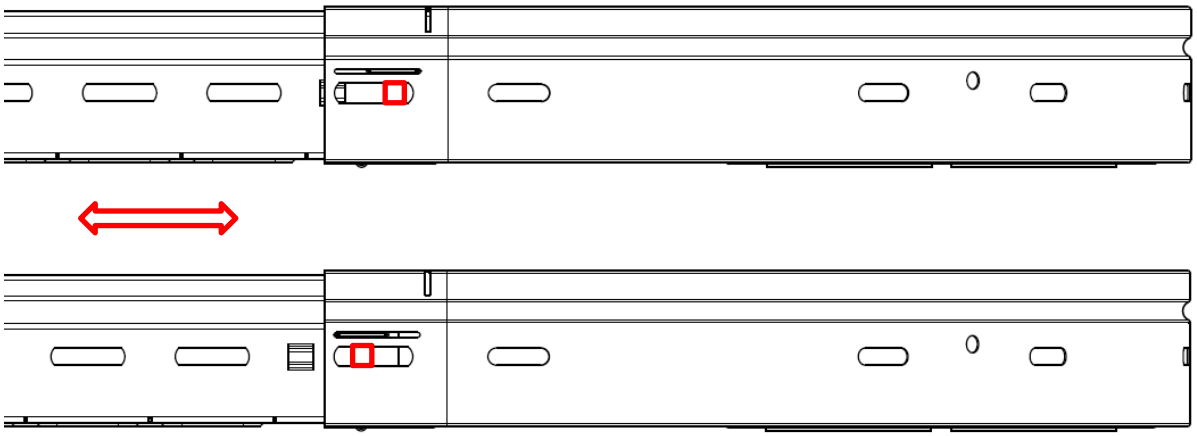
Installing a fitting / Montage avec raccord

7.1. Slide-in system / Système slide-in

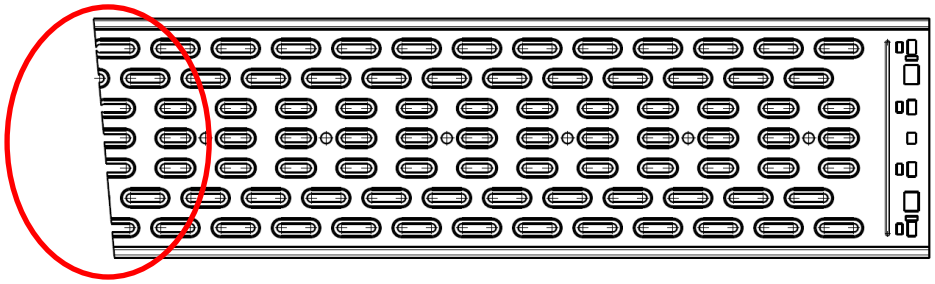
The fitting will slide over the end of the cable tray. This allows for using both hand to insert screws for the final assembly. Removing an auto coupler (if present) is not necessary.
The fitting will fit on male, female, ST and cut end of a cable tray.



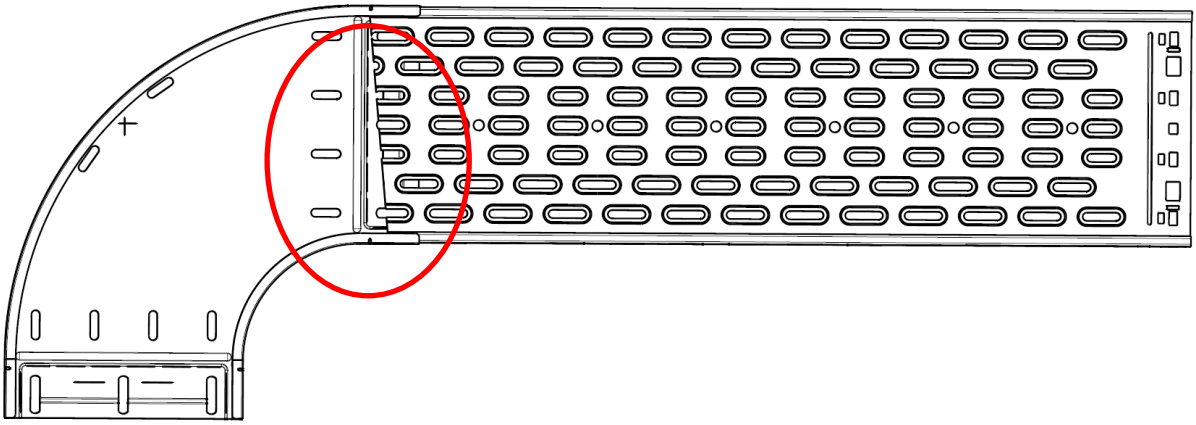
The final position of the fitting can be slightly adjusted before tightening the screws.



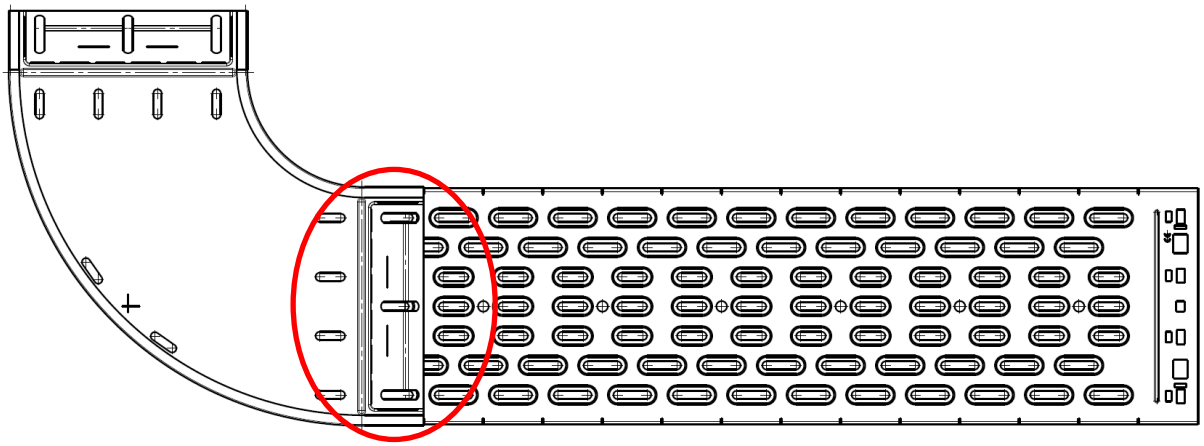
In case a cut is not perfectly perpendicular to the length of the cable tray, most fittings will hide this from view after installation.



Top view of diagonal cut.

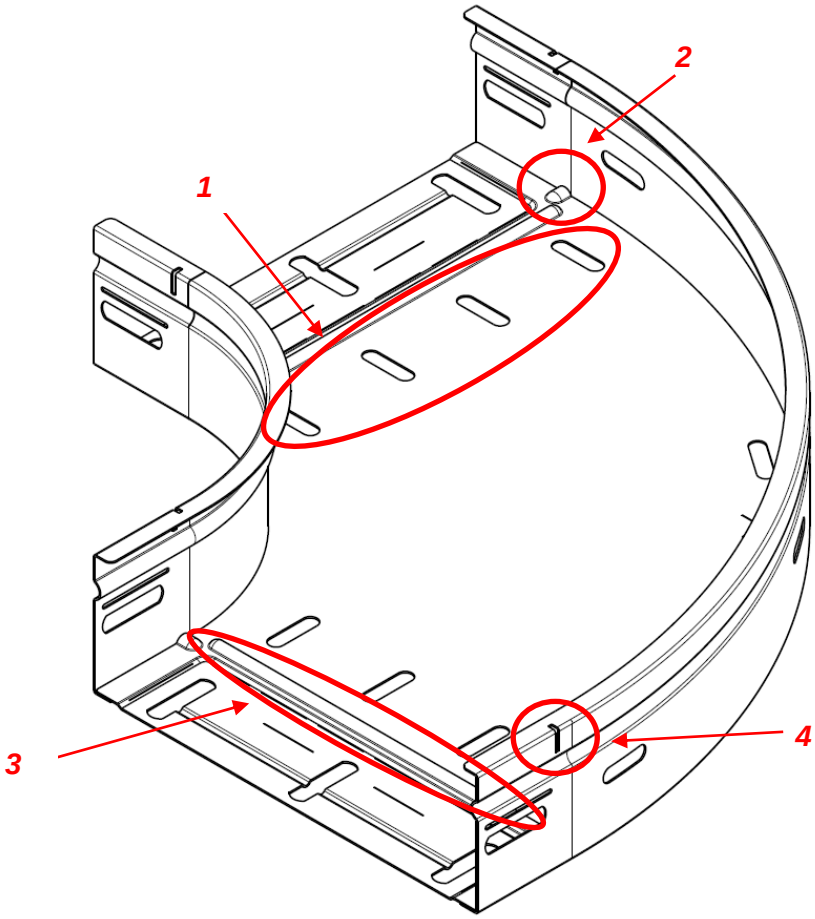


Bottom view of diagonal cut.



Improvements introduced in the fittings with the introduction of New P31+

1) Extra perforation in the bottom and outside corner to fix cables for easier pulling and better organizing.)Strap first cable to outside of corner, so cables added later will slide easily along the inside corner).
2) The tiny embossing on the side prevent cable trays from being inserted too far. (And avoid danger at pulling cables)
3) The perpendicular embossing that cross the section of fitting lifts the cable and reduces the possibility of damage when pulling them.
4) The incision on the high side of the fitting allows hooking a spring-mate rule to measure the distance to the next connection = the length of cable tray needed.

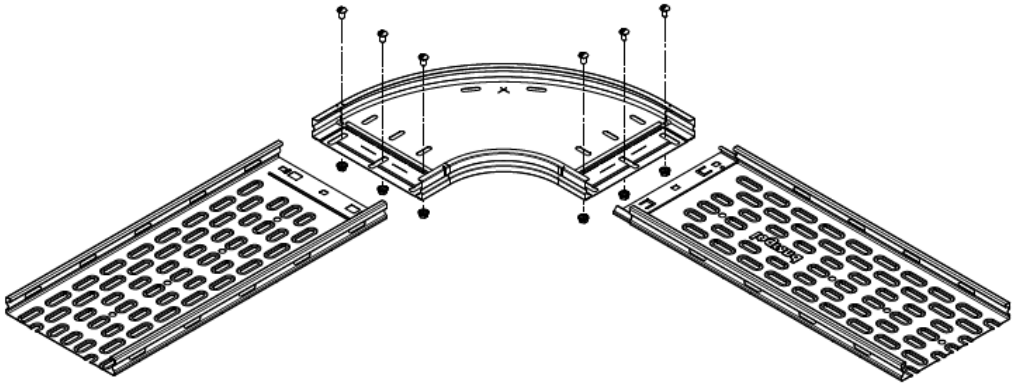


Important:
Cable trays connected to a fitting should have a support <15cm from the fitting.

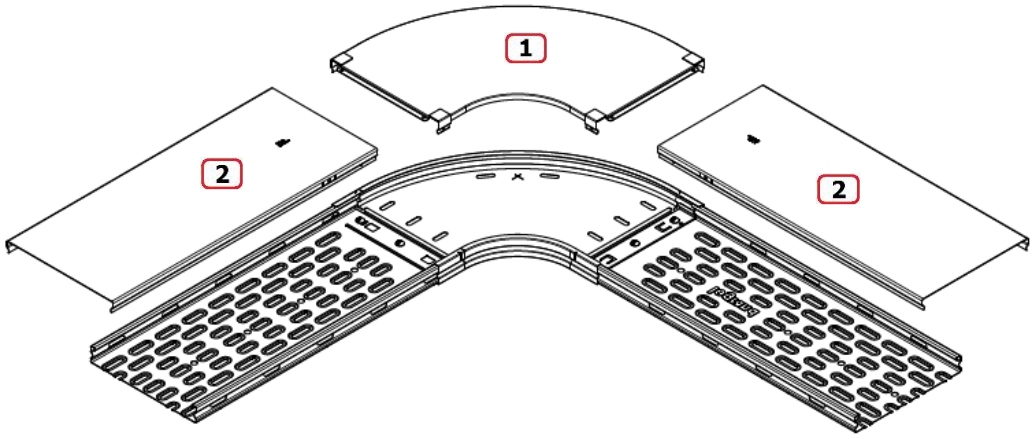
7.2. Flat bend 90° / Coude 90°

7.2.1. H25 / H25

Flat bend height 25 is assembled using 6 screws M6x12 on the bottom.
The third screw in the middle is optional up to and included width 300mm.

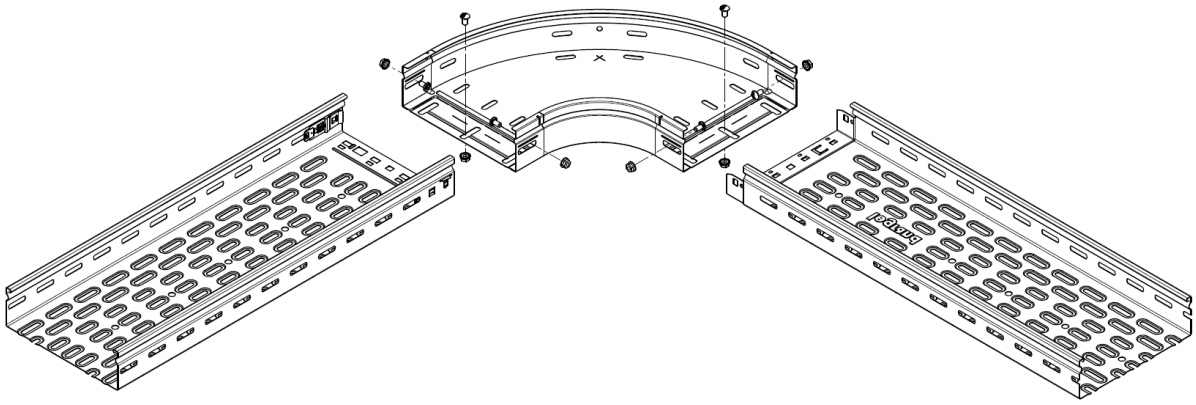


In case of covers, first fix the cover on the fitting before fitting the cover lengths.

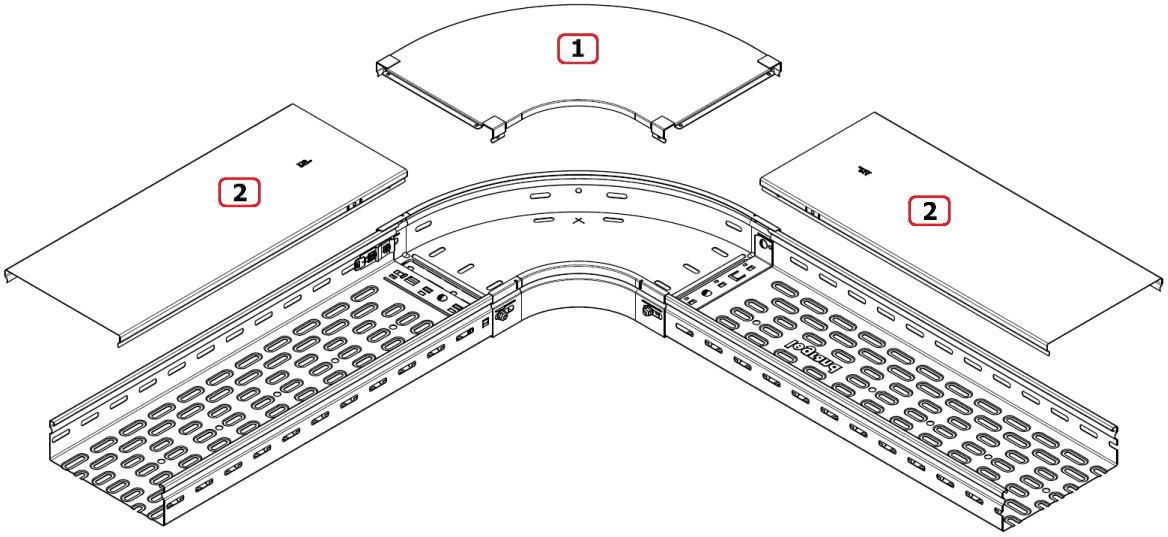


7.2.2. H60 / H60

Flat bend height 60 is assembled using 6 screws M6x12 on the side and on the bottom.
The third screw in the middle is optional up to and included width 300mm.

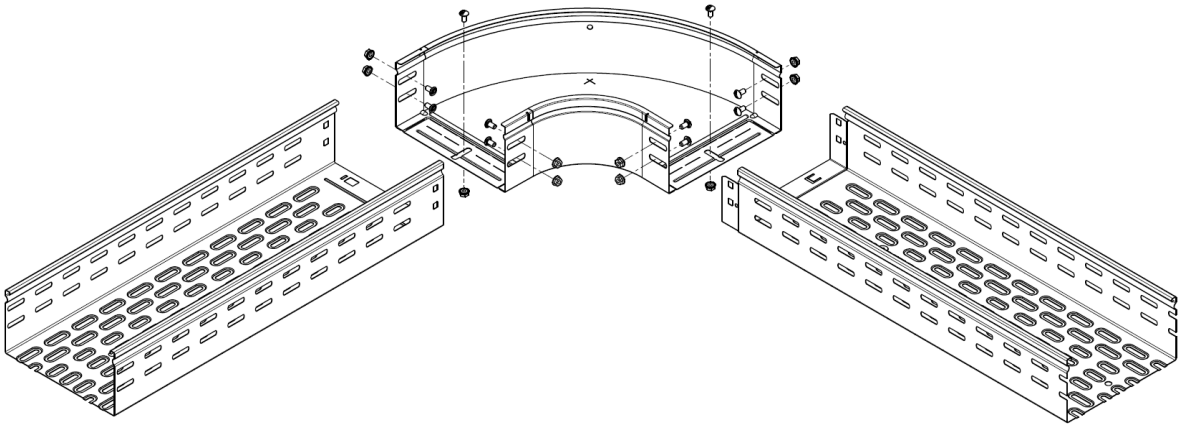


In case of covers, first fix the cover on the fitting before fitting the cover lengths.
Optional for width 400 – 600: use the hole ø7mm in the middle of the outer side wall to create an extra suspension for more rigidity.

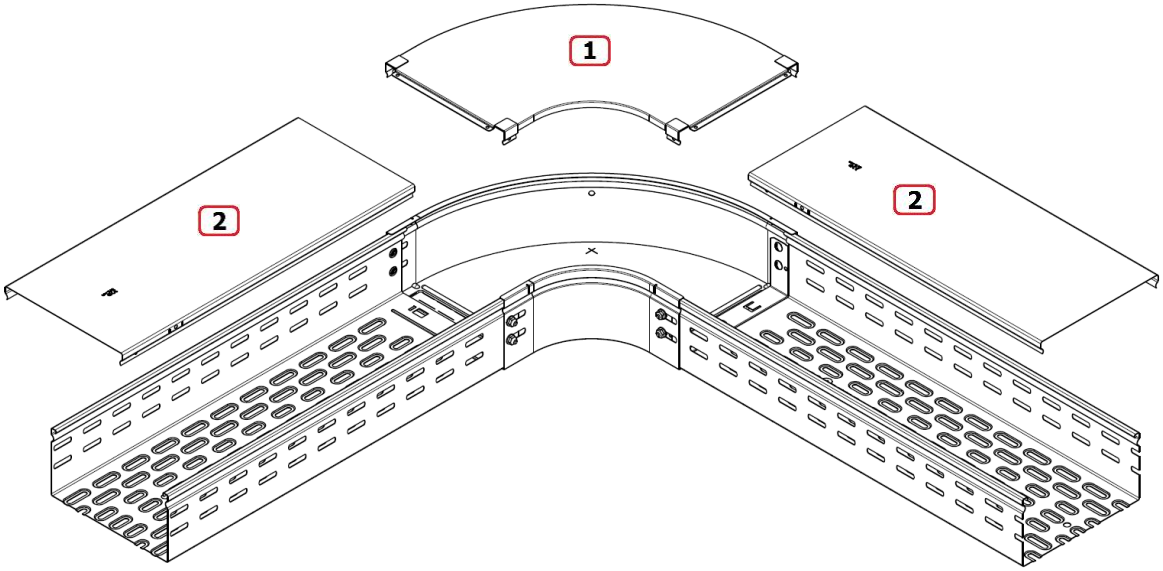


7.2.3. H100 / H100

Flat bend height 100 is assembled using 10 screws M6x12 on the side and on the bottom.
The third screw in the middle is optional up to and included width 300mm.



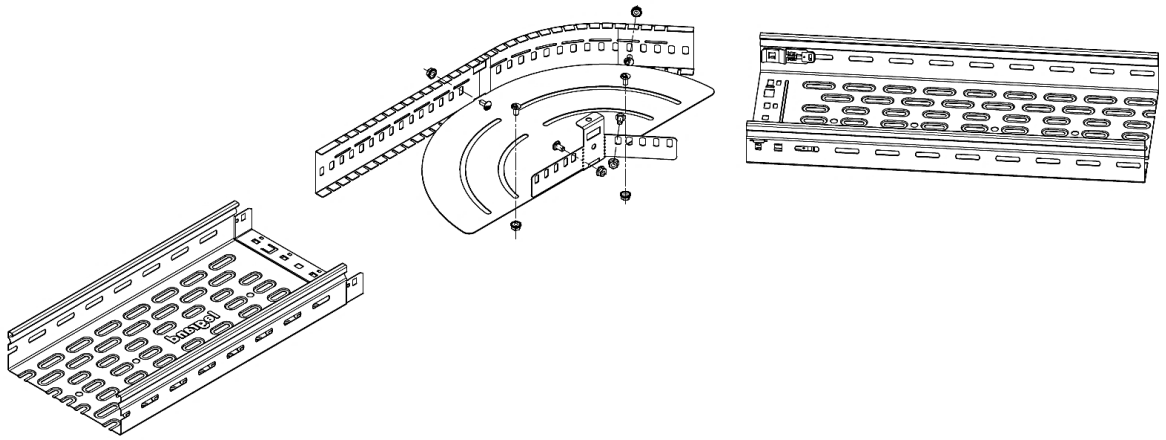
In case of covers, first fix the cover on the fitting before fitting the cover lengths.
Optional for width 400 – 600: use the hole ø7mm in the middle of the outer side wall to create an extra suspension for more rigidity.



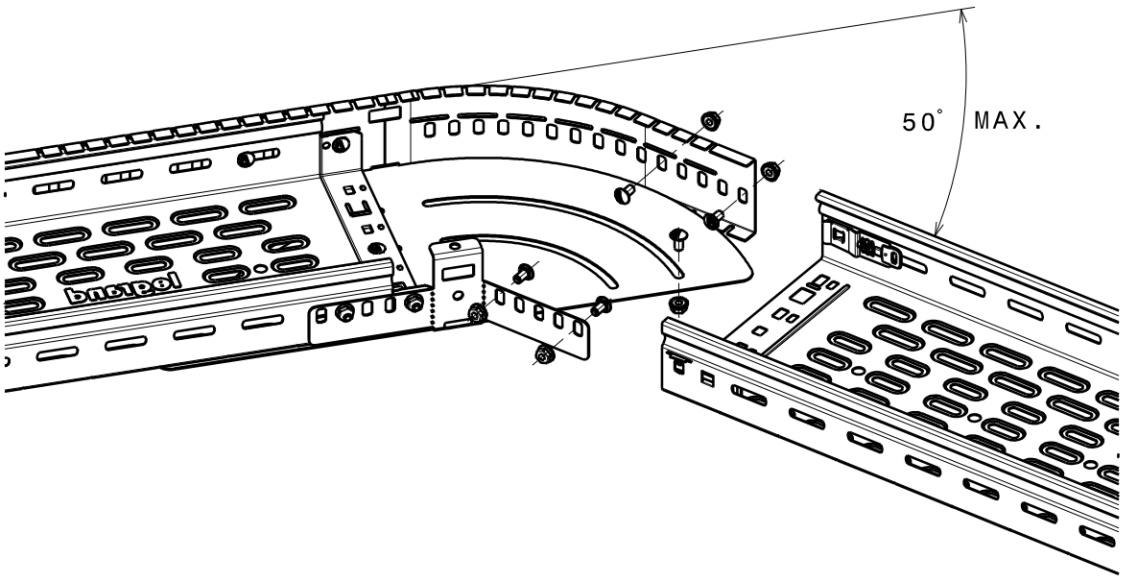
7.3. Adjustable flat bend / Coude réglable

7.3.1. H60 / H60

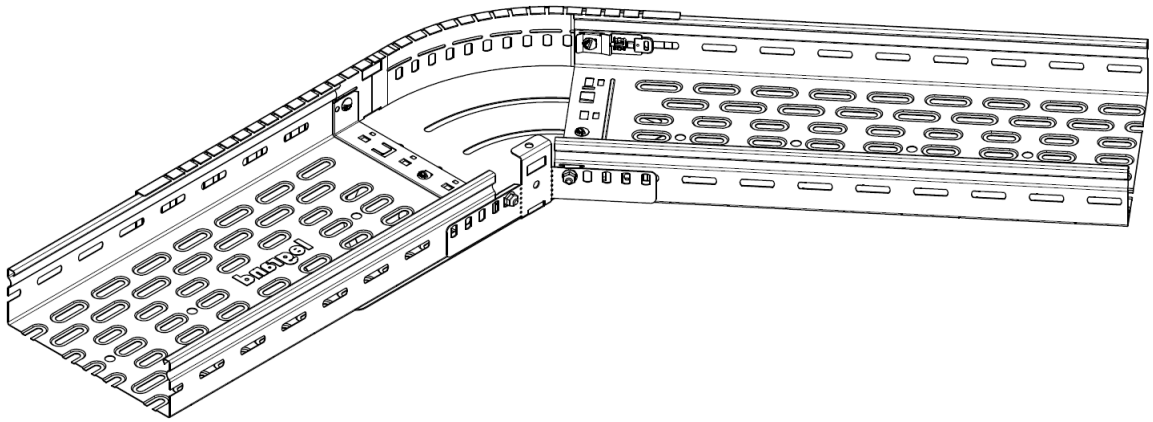
The adjustable flat bend is available only in height 60.
It is assembled using 6 screws M6x12 on the side and on the bottom.



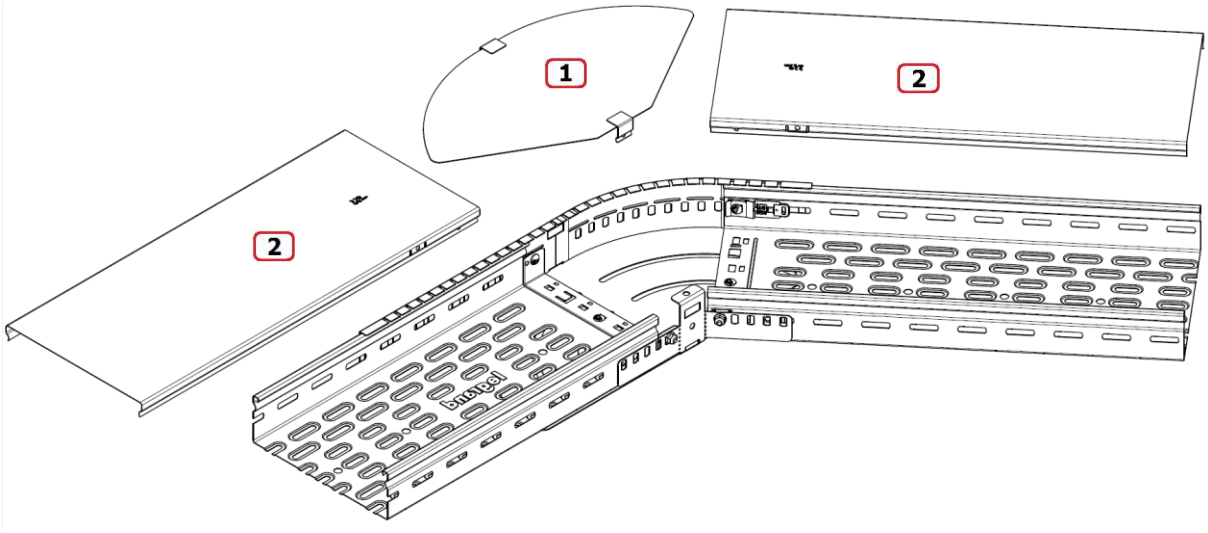
The angle of bending can be adjusted from 0 to 100° (50° for both sides).



Fix the 3 screws per side in the free holes that you find on the side and bottom.



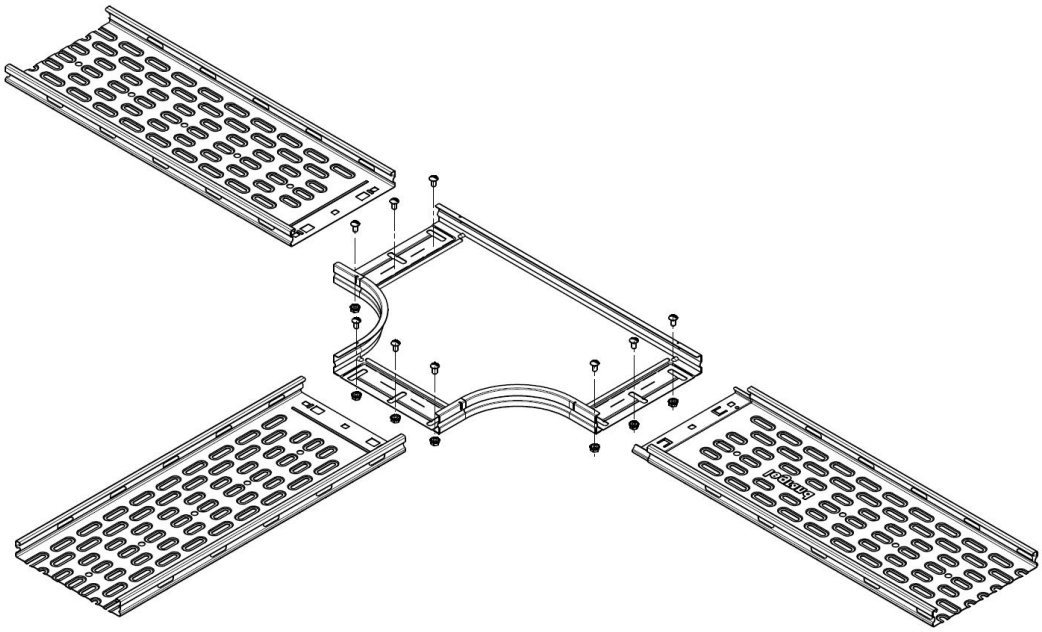
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



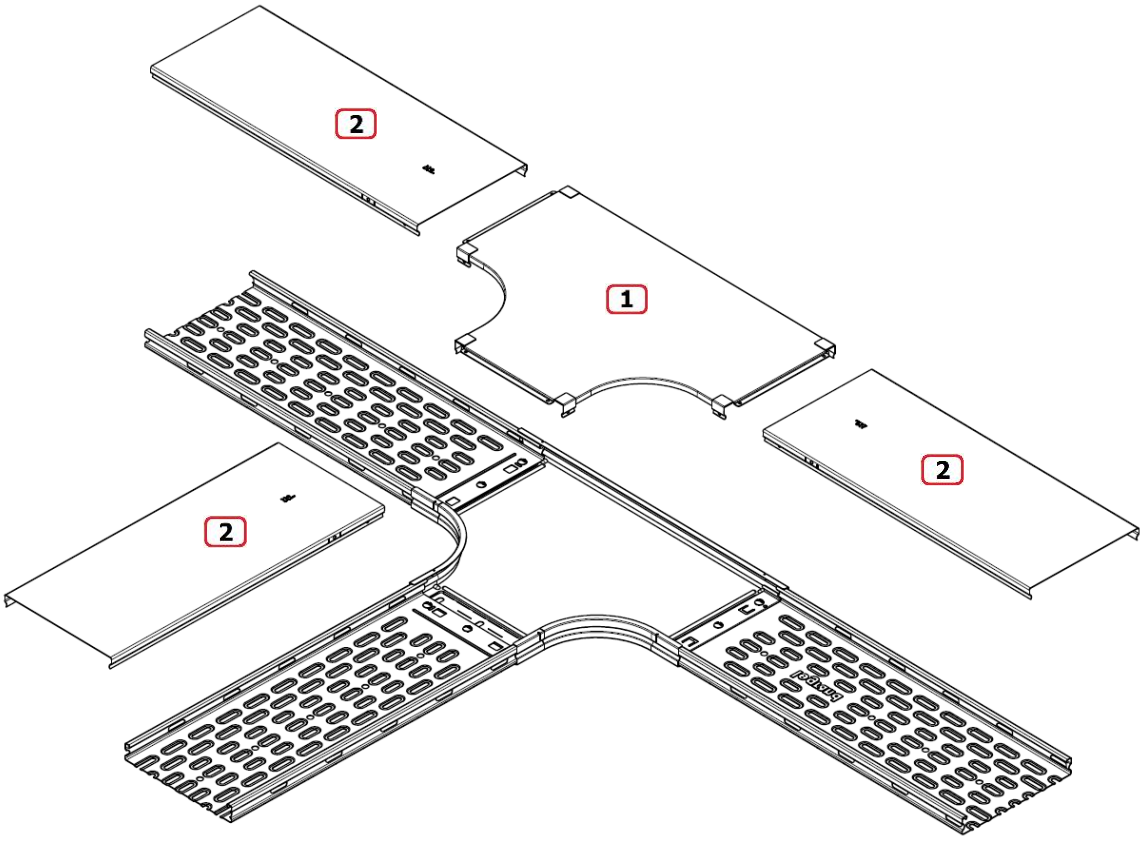
7.4. Equal tee/ Pièce en T

7.4.1. H25 / H25

Equal tee in height 25 is assembled using 9 screws M6x12 on the bottom
The third screw in the middle is optional up to and included width 300mm.

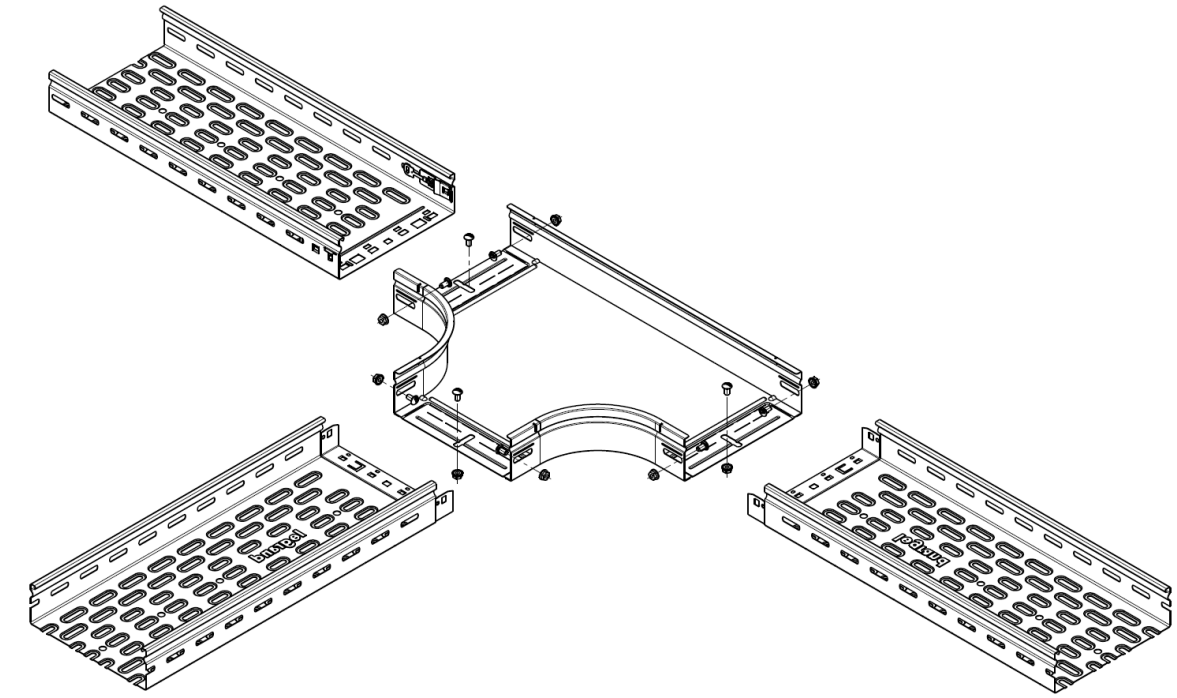


In case of covers, first fix the cover on the fitting before fitting the cover lengths.

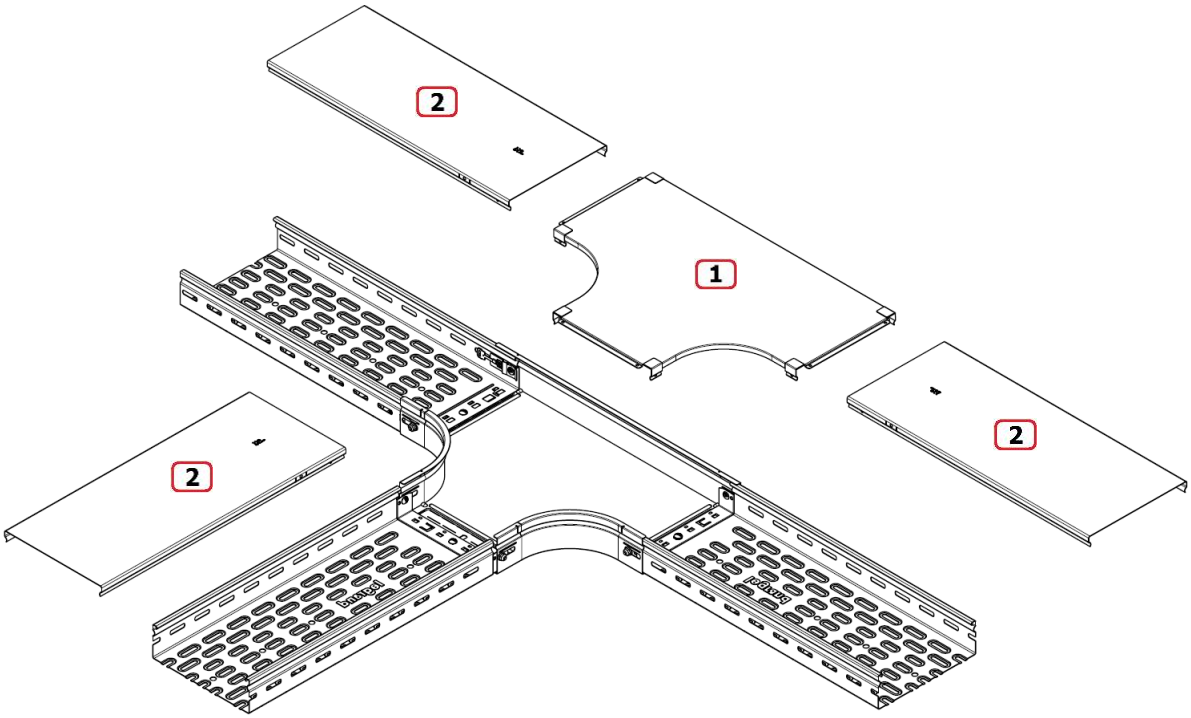


7.4.2. H60 / H60

Equal tee in height 60 is assembled using 9 screws M6x12 in the side and bottom
The third screw in the middle is optional up to and included width 300mm.

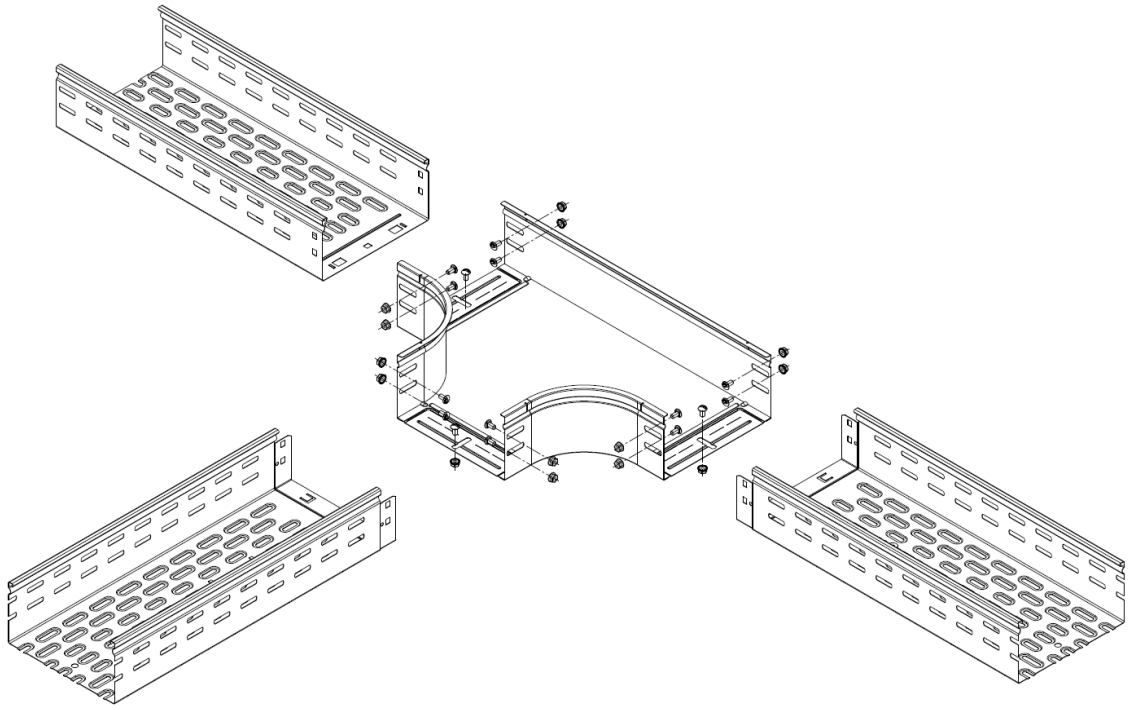


In case of covers, first fix the cover on the fitting before fitting the cover lengths.

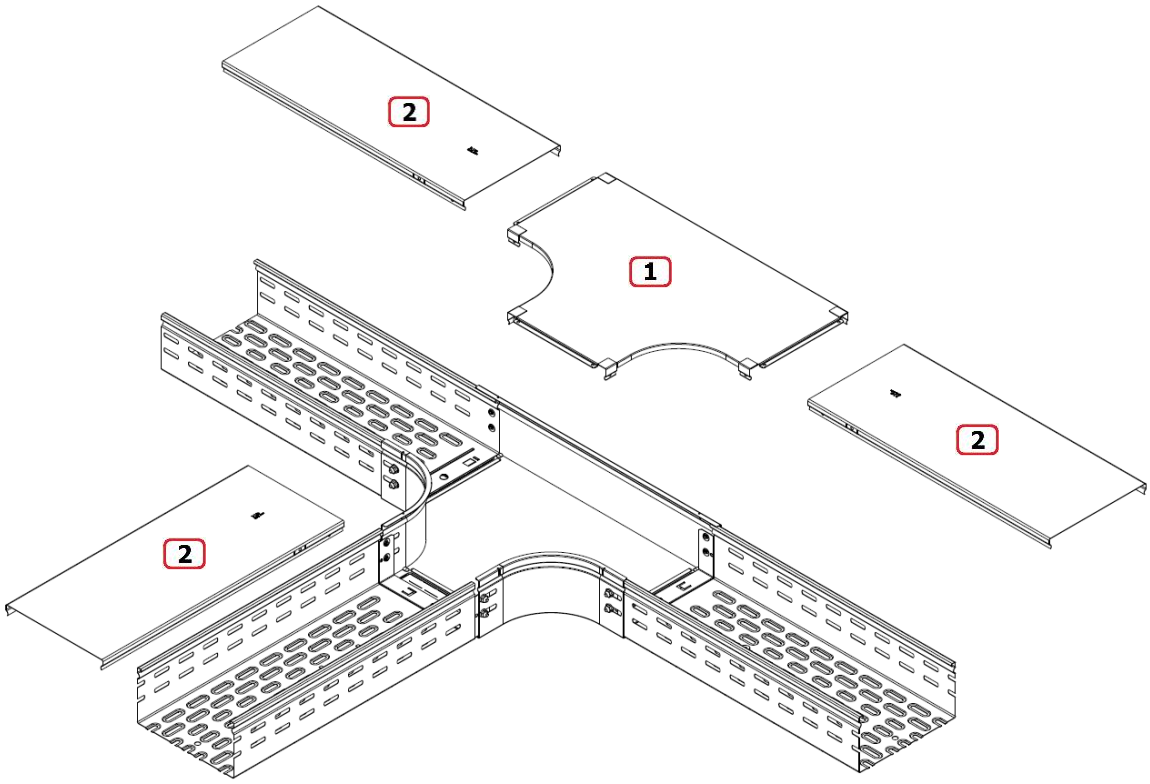


7.4.3. H100 / H100

Equal tee in height 100 is assembled using 15 screws M6x12 in the side and bottom
The fifth screw in the middle is optional up to and included width 300mm.

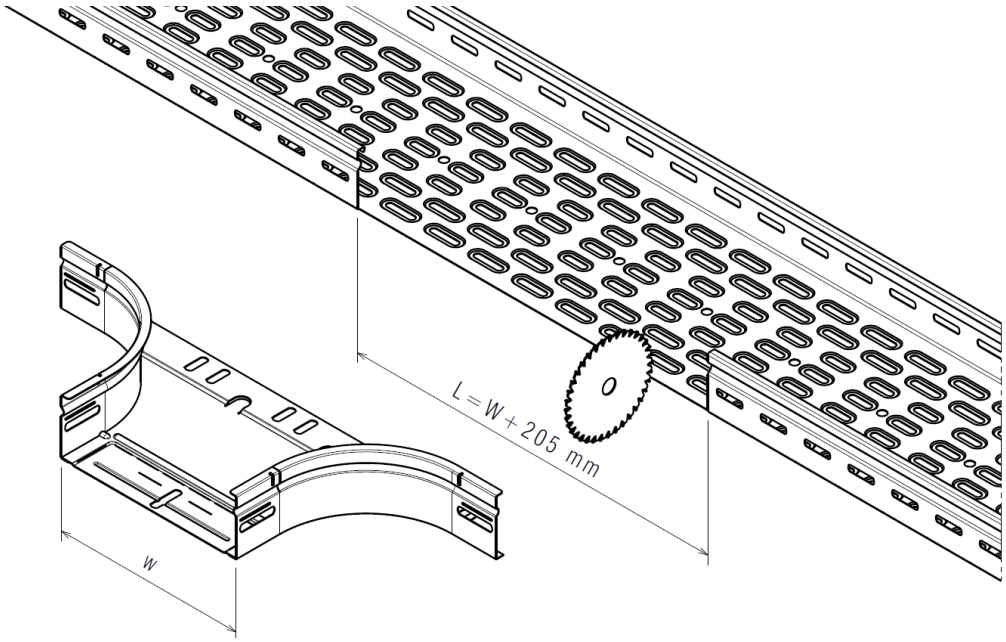


In case of covers, first fix the cover on the fitting before fitting the cover lengths.

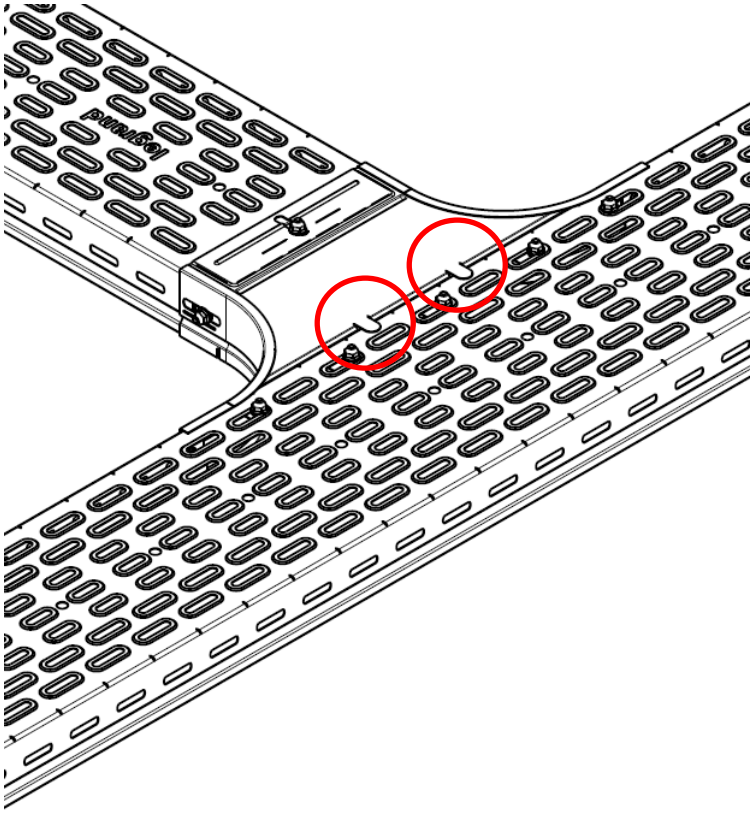


7.5. T-Branch / Dérivation en T

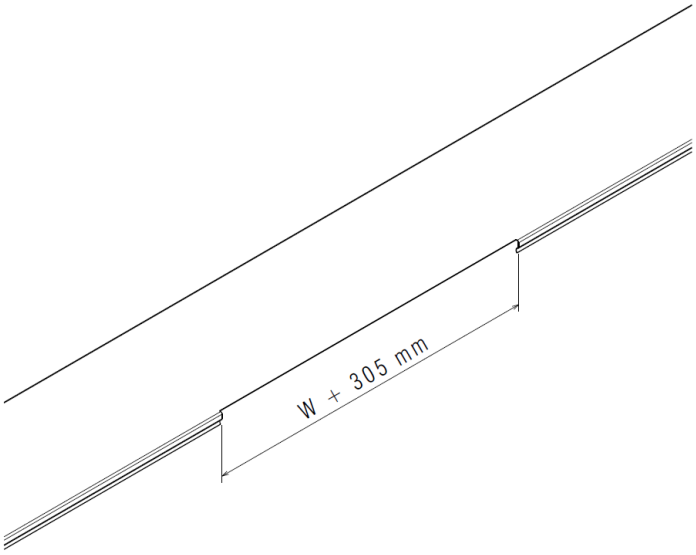
To install the T-Branch fitting, cut the side of the cable tray.
Find the right measure to cut in the pictures below.
“W” stands for the width of cable tray that you want to install as a branch.



At positioning the T-Branch, it is important to put the wings under the bottom of the cable tray for extra support.

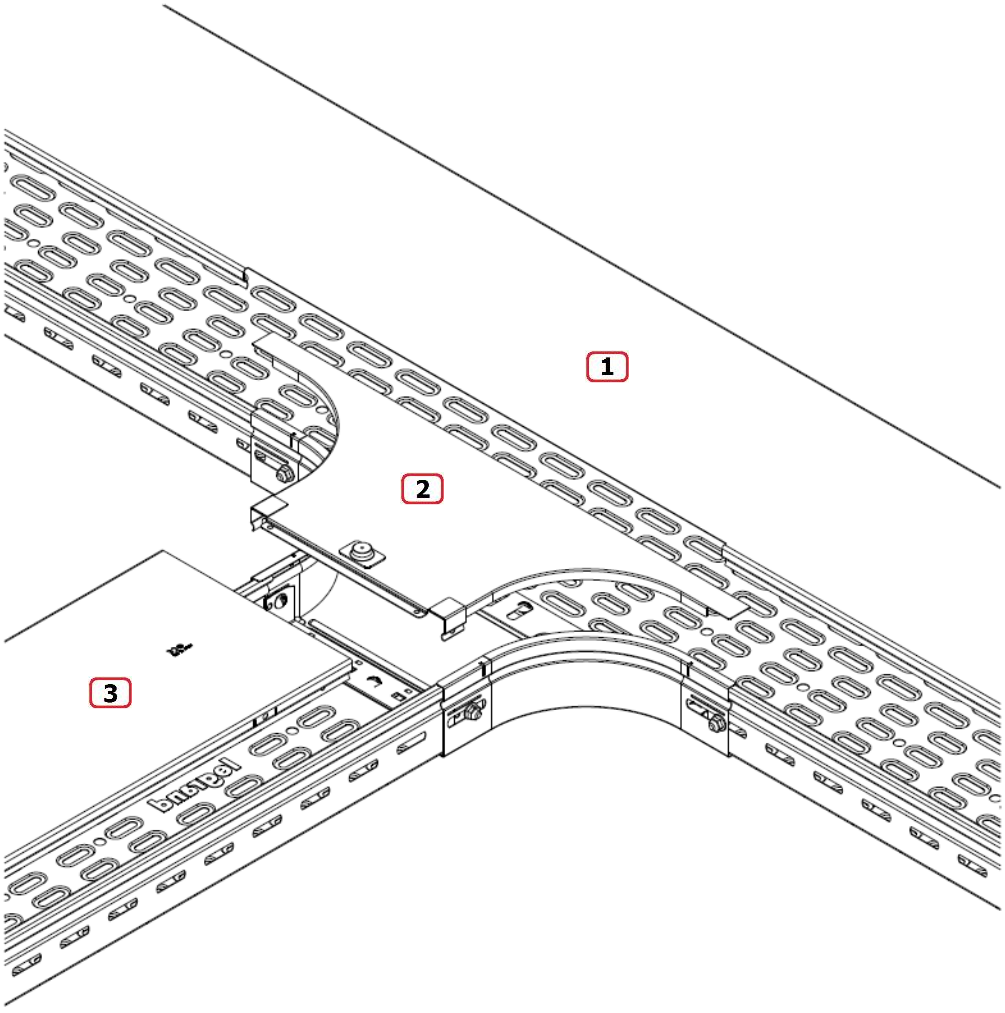


Find the right measure to cut the cover in the pictures below.
“W” stands for the width of cable tray that you want to install as a branch.



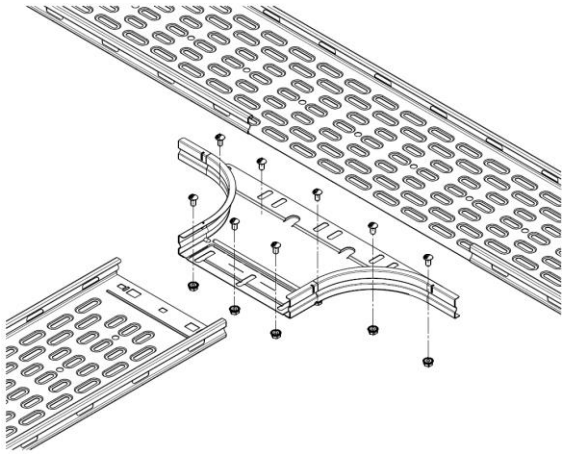
In case of covers, first fix the cover on the straight length, then the fitting and finally the branching cable tray.

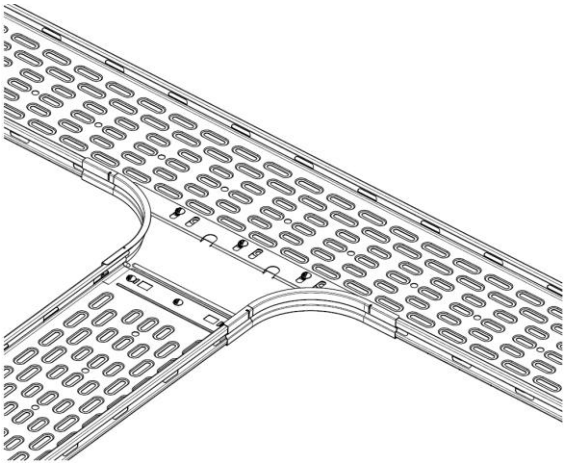
.



7.5.1. H25 / H25

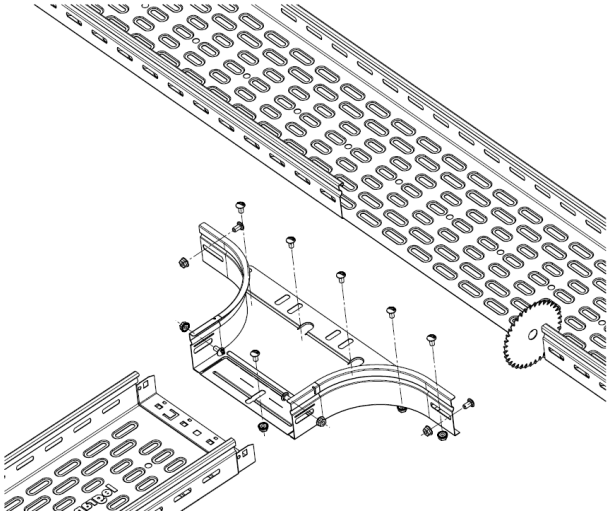
T-Branch in height 25 is assembled using ‘X’ screws M6x12 on the bottom

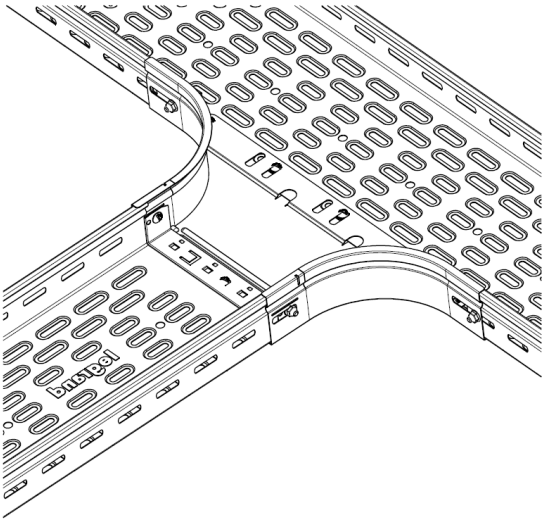




7.5.2. H60 / H60

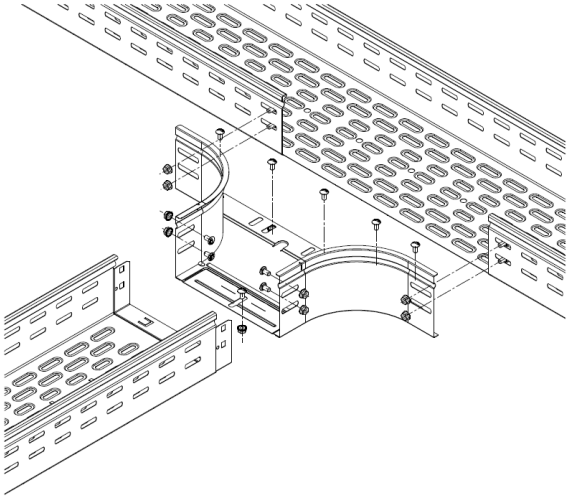
T-Branch in height 60 is assembled using ‘Y’ screws M6x12 on the bottom and side

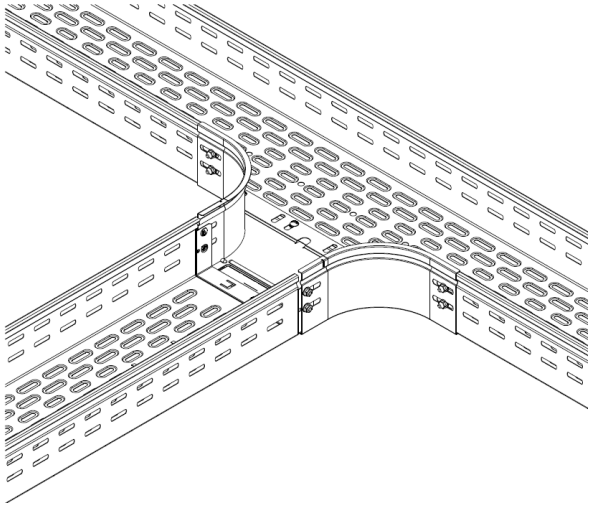




7.5.3. H100/ H100

T-Branch in height 100 is assembled using ‘Z’ screws M6x12 on the bottom and side





Width	# screws M6x12		
Cable tray	‘X’	‘Y’	‘Z’
75	4	6	10
100	4	6	10
150	5	7	11
200	6	8	12
300	6	8	12
400	7	9	13
500	9	11	15
600	9	11	15

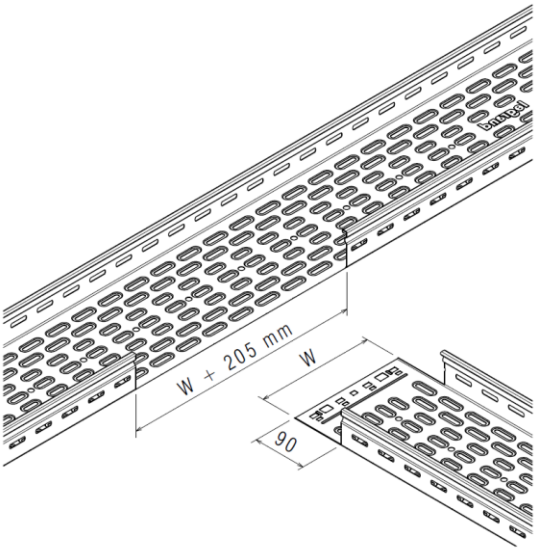
Number of screws M6x12 needed to install Branch Piece

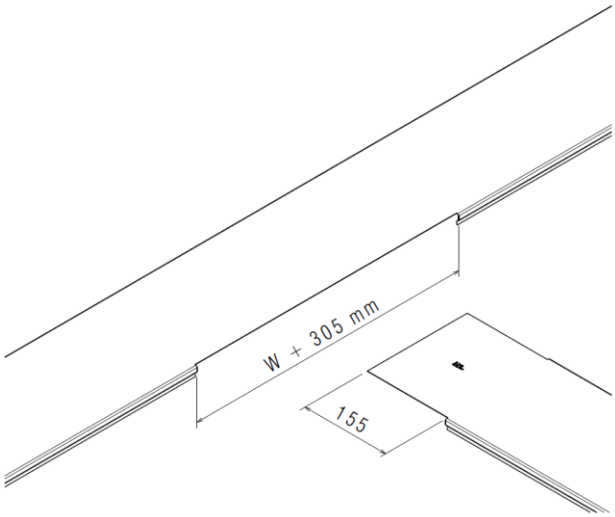
7.6. Universal Branch / Dérivation universelle

7.6.1. H60/ H60

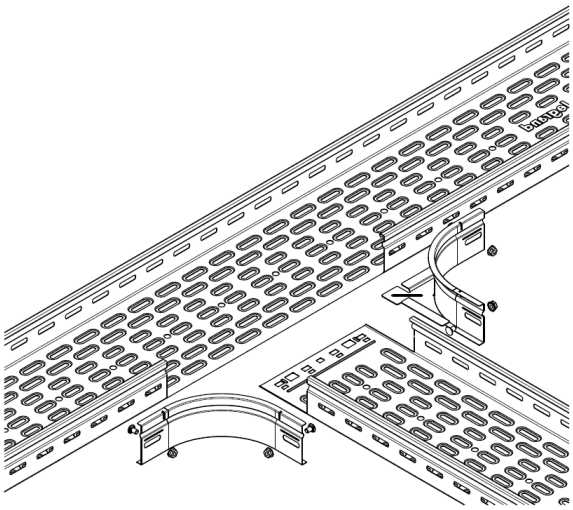
To install the universal branch piece, cut the sides of the cable trays.
This fitting is available only in height 60.

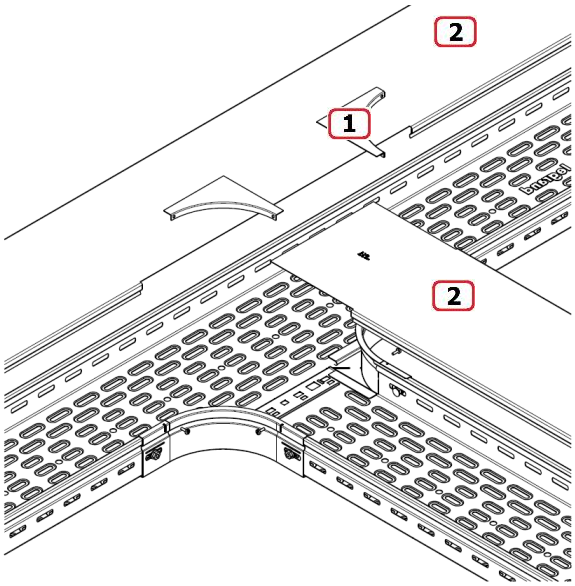
Find the right measure to cut for the side of cable trays and covers in the pictures below.
“W” stands for the width of cable tray that you want to install as a branch.





Slide the cable trays against each other and add 2pc of the universal branch piece. Use 2 screws M6x12 per branch piece for mounting.
To mount the cover of the branch piece, drill a hole using a 4mm diameter drill. Then insert self-tapping screws to fix in position the cover.

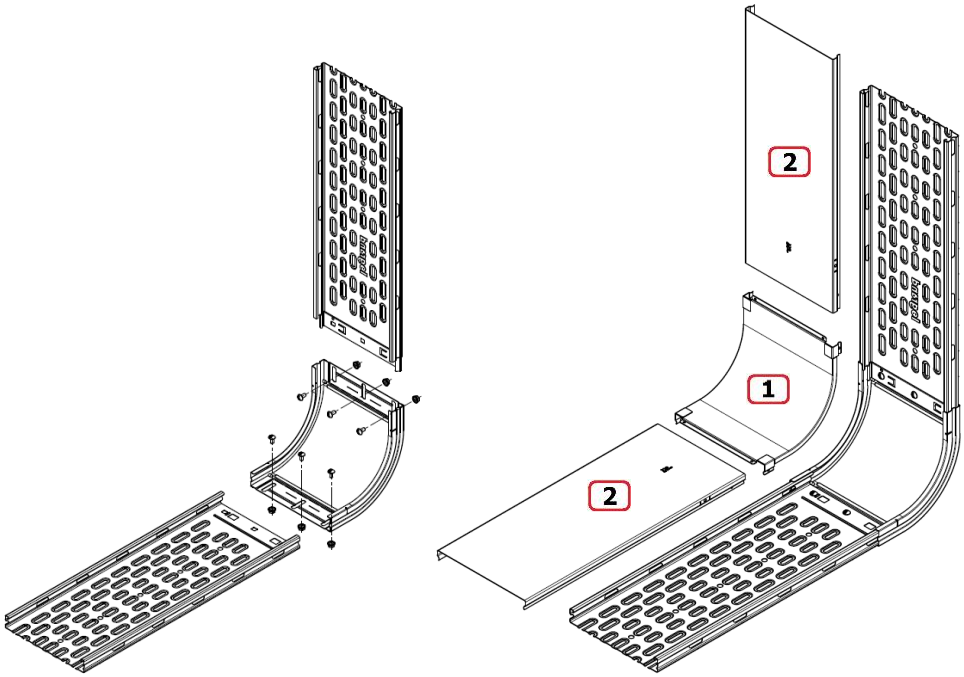




7.7. Inside riser / Raccord de montée

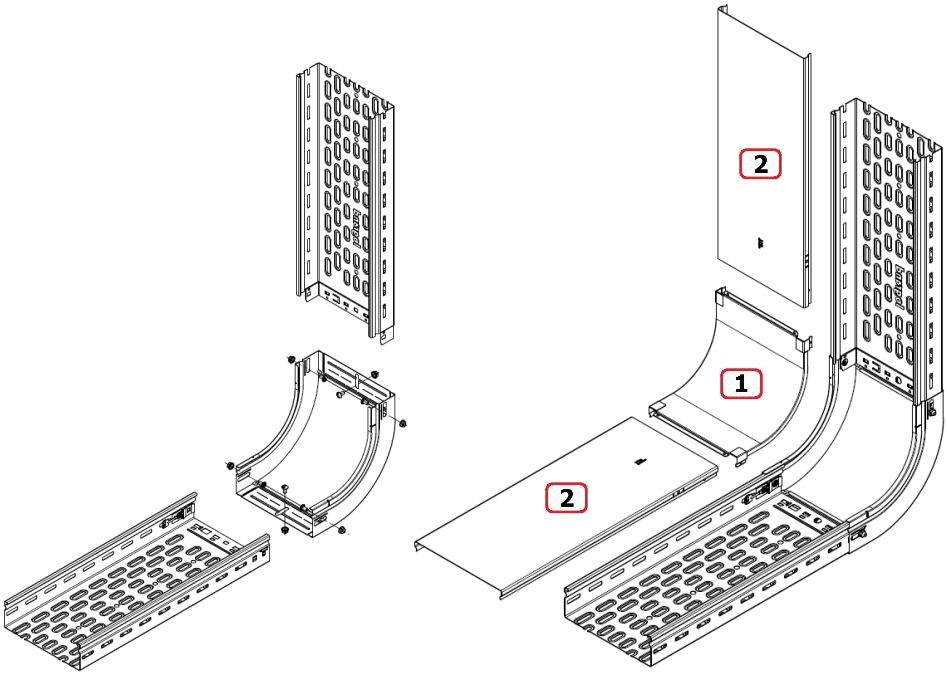
7.7.1. H25 / H25

Inside riser height 25 is assembled using 6 screws M6x12 on the bottom.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



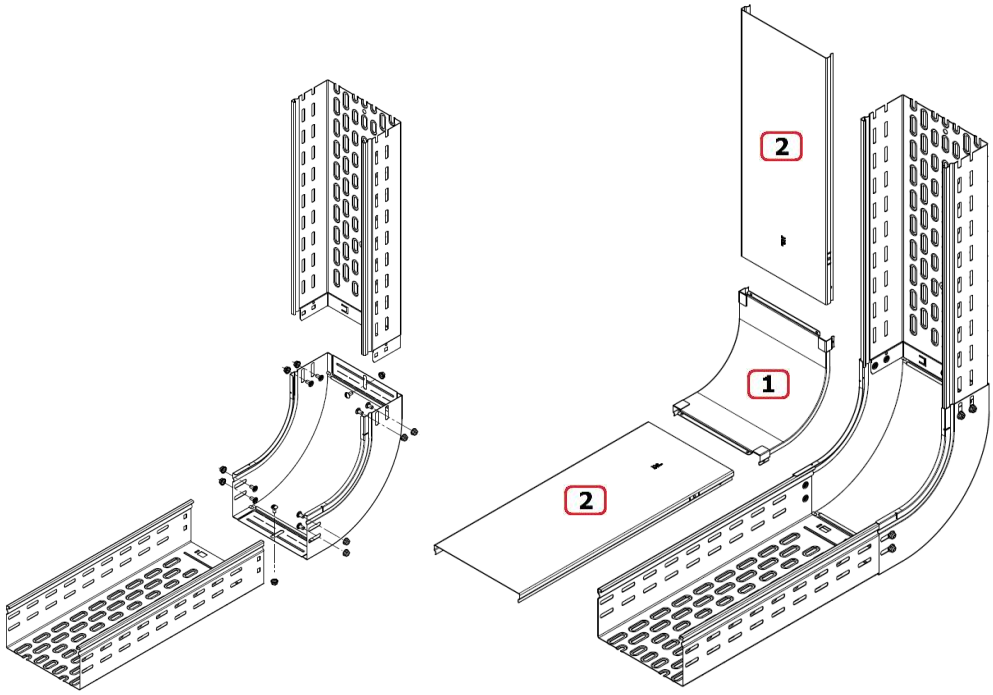
7.7.2. H60 / H60

Inside riser height 60 is assembled using 6 screws M6x12 on the bottom and the sides.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



7.7.3. H100/ H100

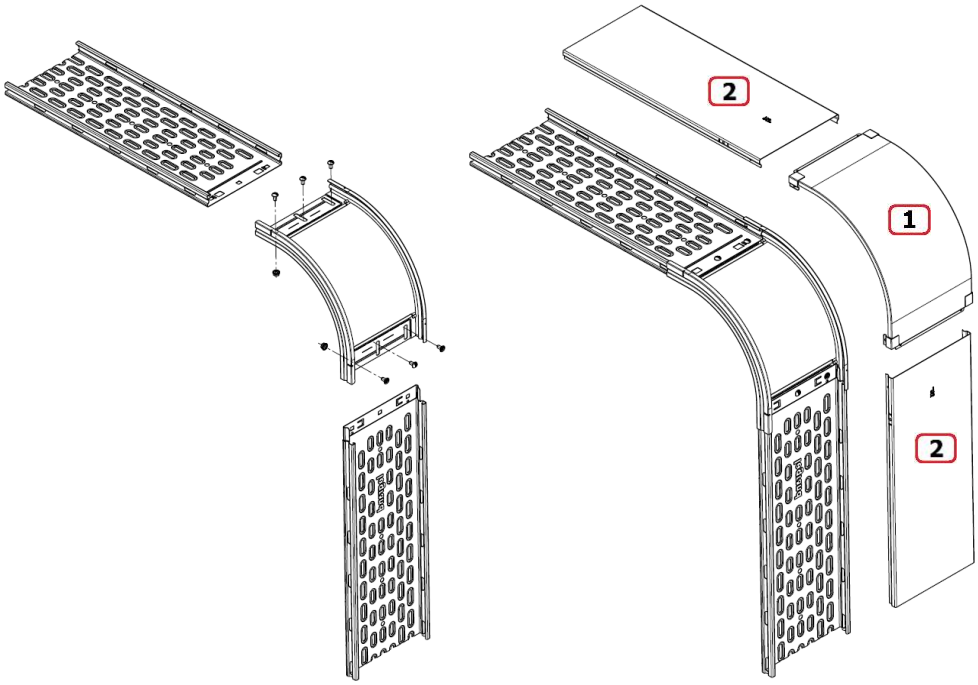
Inside riser height 100 is assembled using 10 screws M6x12 on the bottom and the sides.
The fifth screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



7.8. Outside riser / Raccord de descente

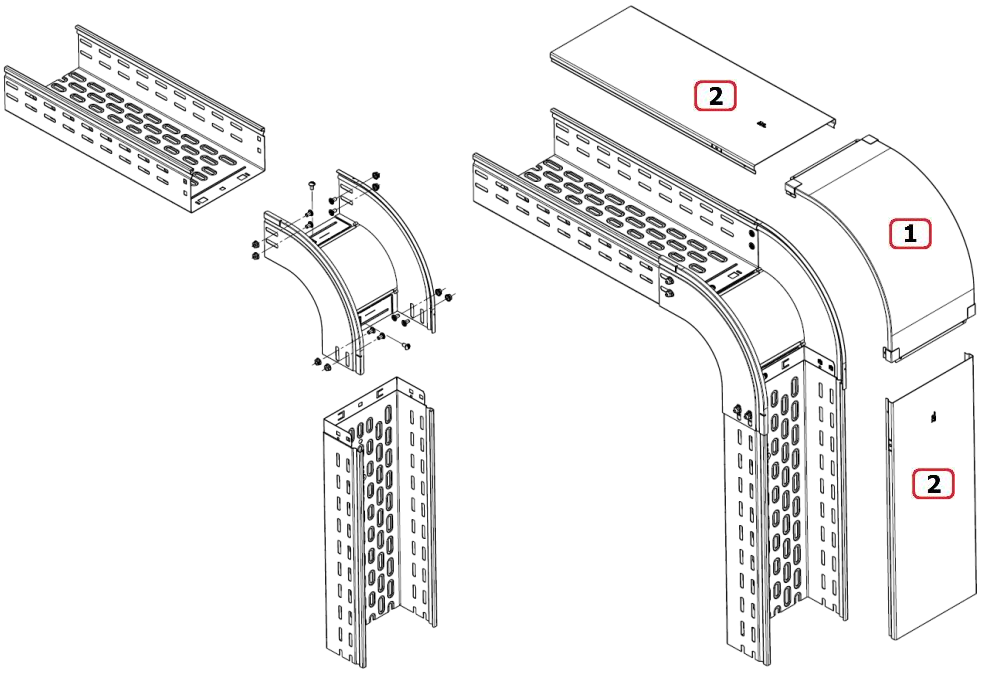
7.8.1. H25/ H25

Outside riser height 25 is assembled using 6 screws M6x12 on the bottom.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



7.8.2. H100 / H100

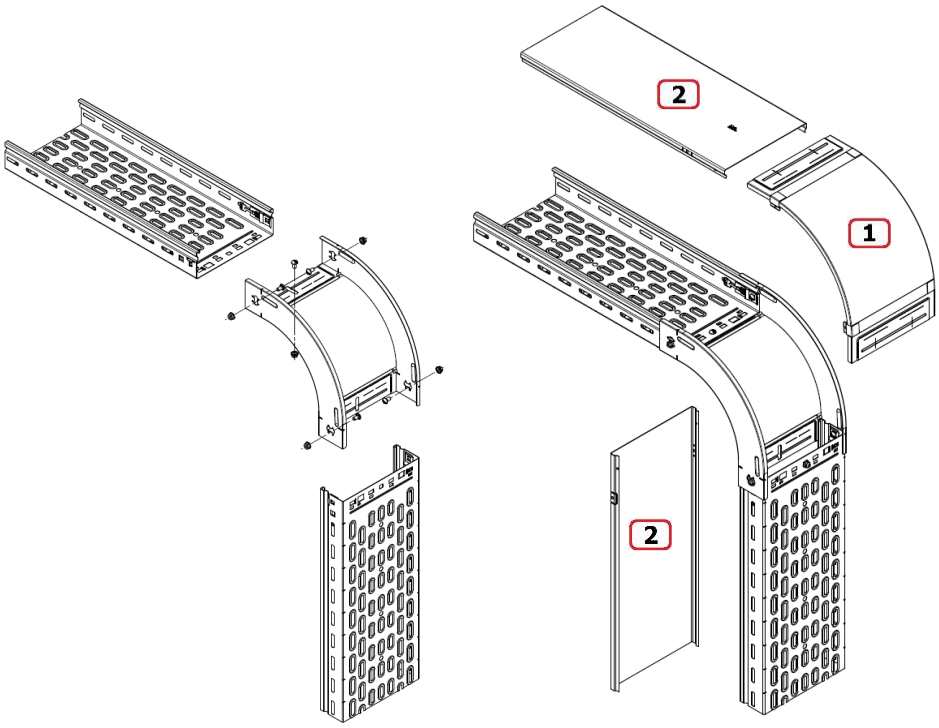
Outside riser height 100 is assembled using 10 screws M6x12 on side the bottom.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



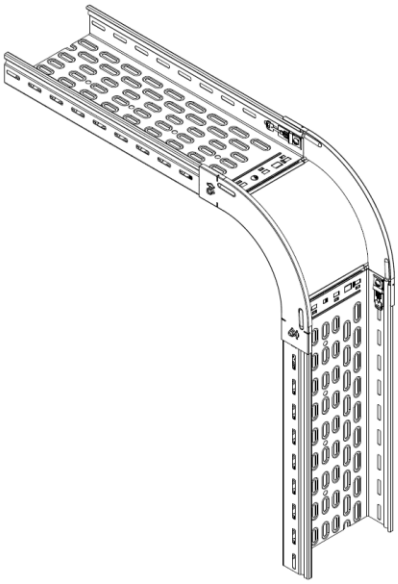
7.9. Outside riser twist / Raccord de descente inversé

7.9.1. H60 / H60

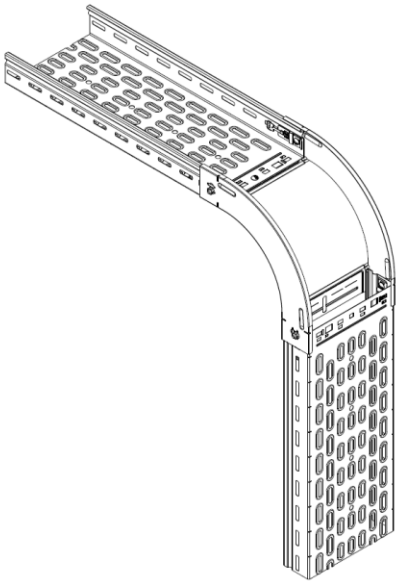
The Inside / Outside riser is available only in height 60.
It is assembled using 6 screws M6x12 on the bottom and the sides.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



Using this fitting you can also insert the lower cable tray with the bottom upside down as you can see in the pictures below.



Outside – outside riser

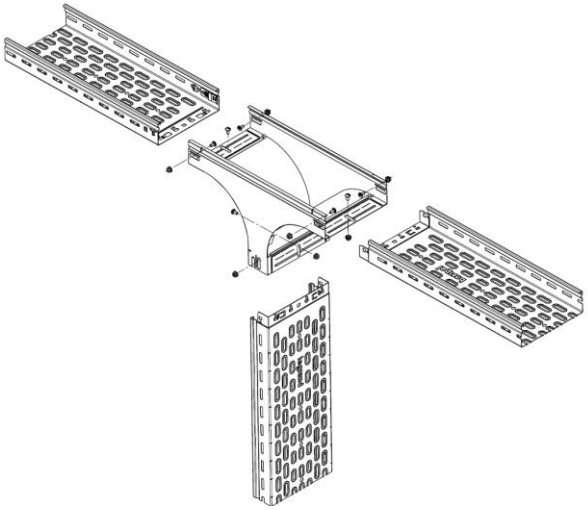


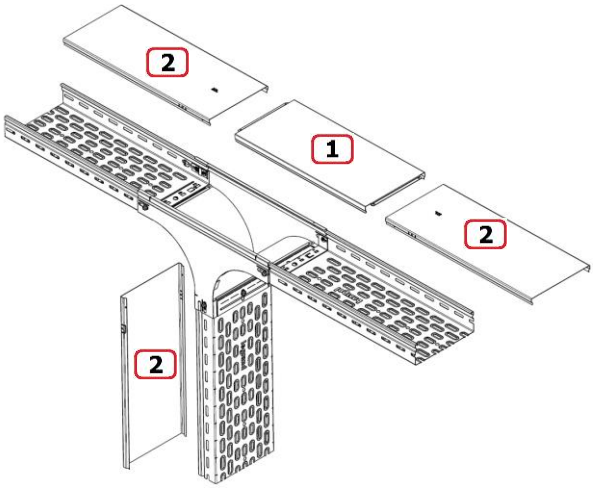
outside – inside riser

7.10. Vertical T / T vertical

7.10.1. H60 / H60

The vertical T is available only in height 60.
It is assembled using 9 screws M6x12mm.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.

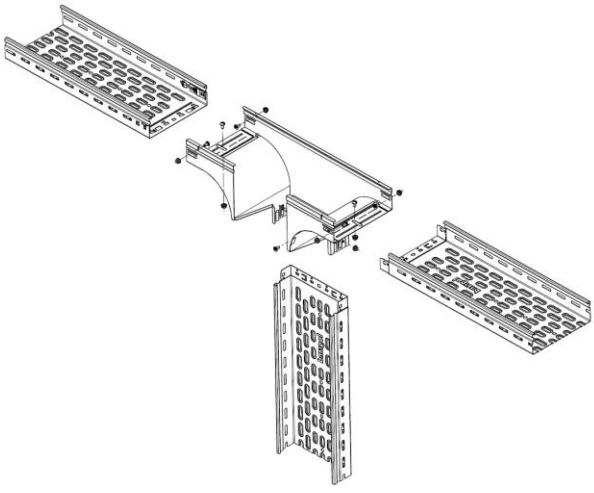


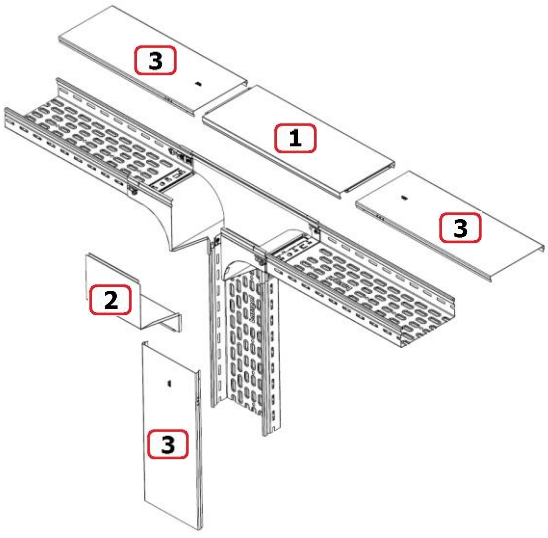


7.11. Vertical branch piece / Dérivation de fond verticale

7.11.1. H60 / H60

The vertical branch piece with plane variation is available only in height 60.
It is assembled using 9 screws M6x12mm.
The third screw in the middle is optional up to and included width 300mm.
In case of covers, first fix the cover on the fitting before fitting the cover lengths.



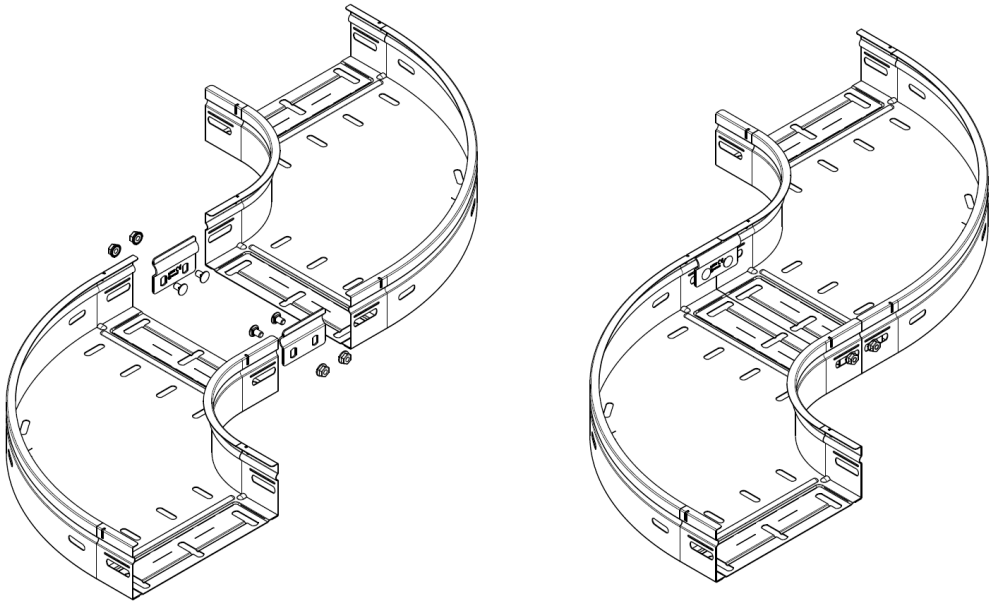


Fitting Assembly / Assemblage de raccords

Fittings can be connected directly, without a cable tray, using the EA coupler.

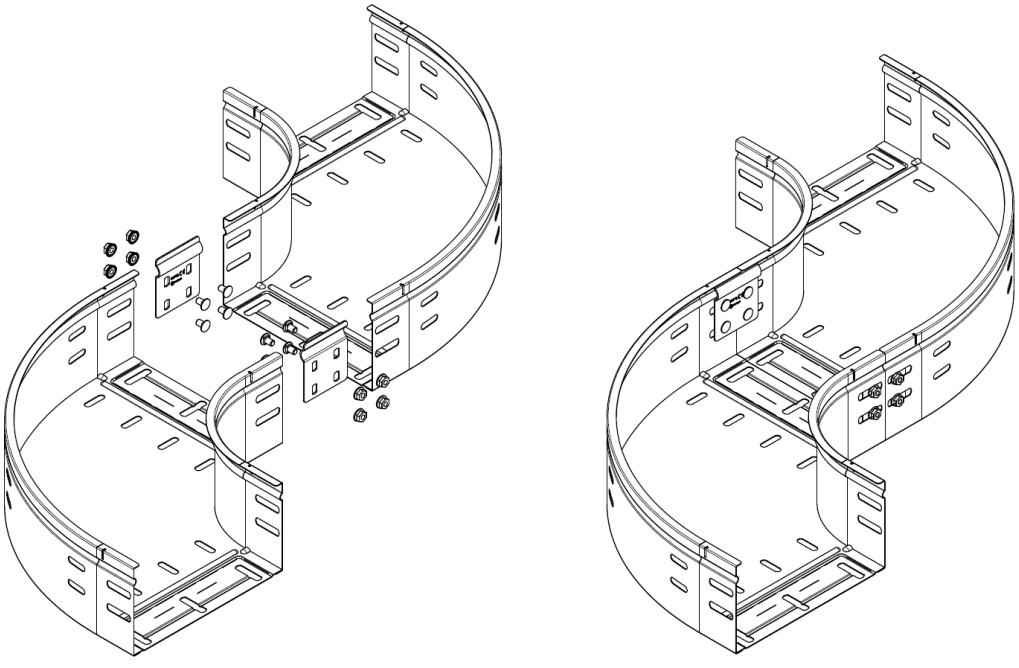
8.1. H60 / H60

Slide together the two fittings and add 2pc of EA height 60 coupler using 2 screws M6x12 on each coupler.



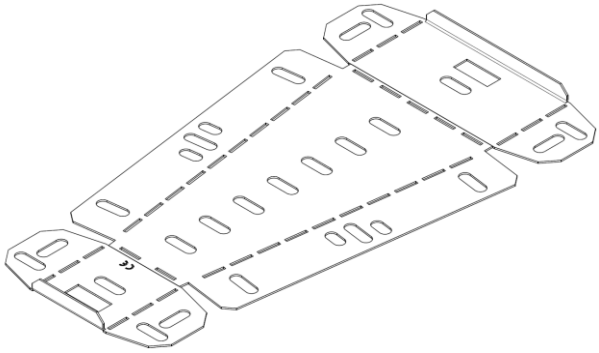
8.2. H100 / H100

Slide together the two fittings and add 2pc of EA height 100 coupler using 4 screws M6x12 on each coupler.

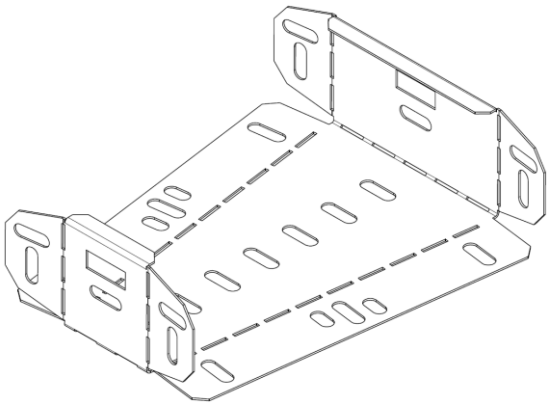


Flexible fitting H60 / Coude réglable

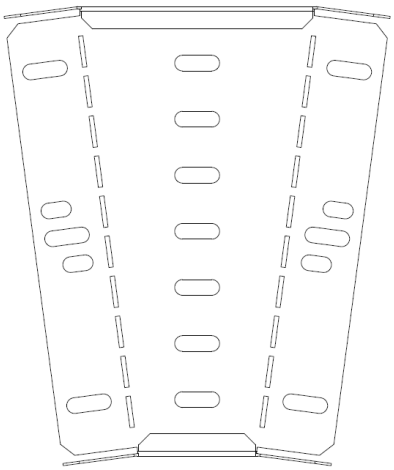
Flexible fittings height 60 are available in 15°, 30° and 45°. They can be screwed together to form other angles as well without extra parts. Flexible bends allow a bend in both horizontal and vertical plane (+/- 10°) at the same time. They come in a flat format and the sidewalls are to be bend vertical on site.



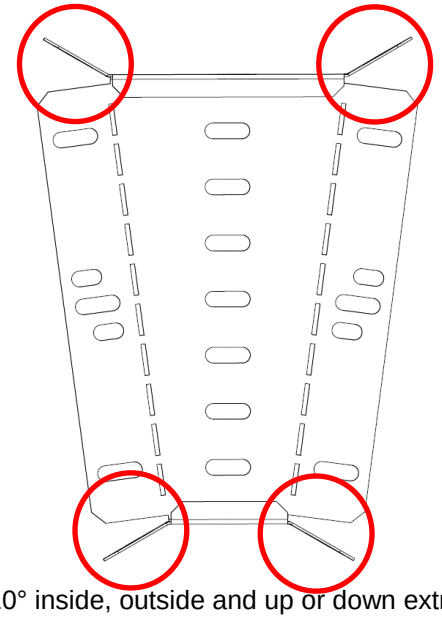
Delivered in flat format



used with sidewalls bend upward



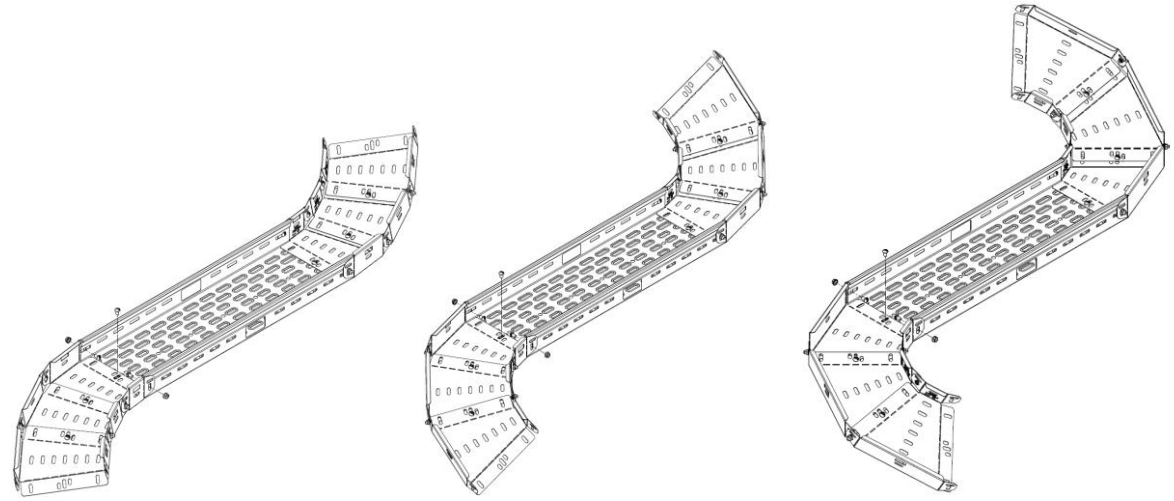
Normal use



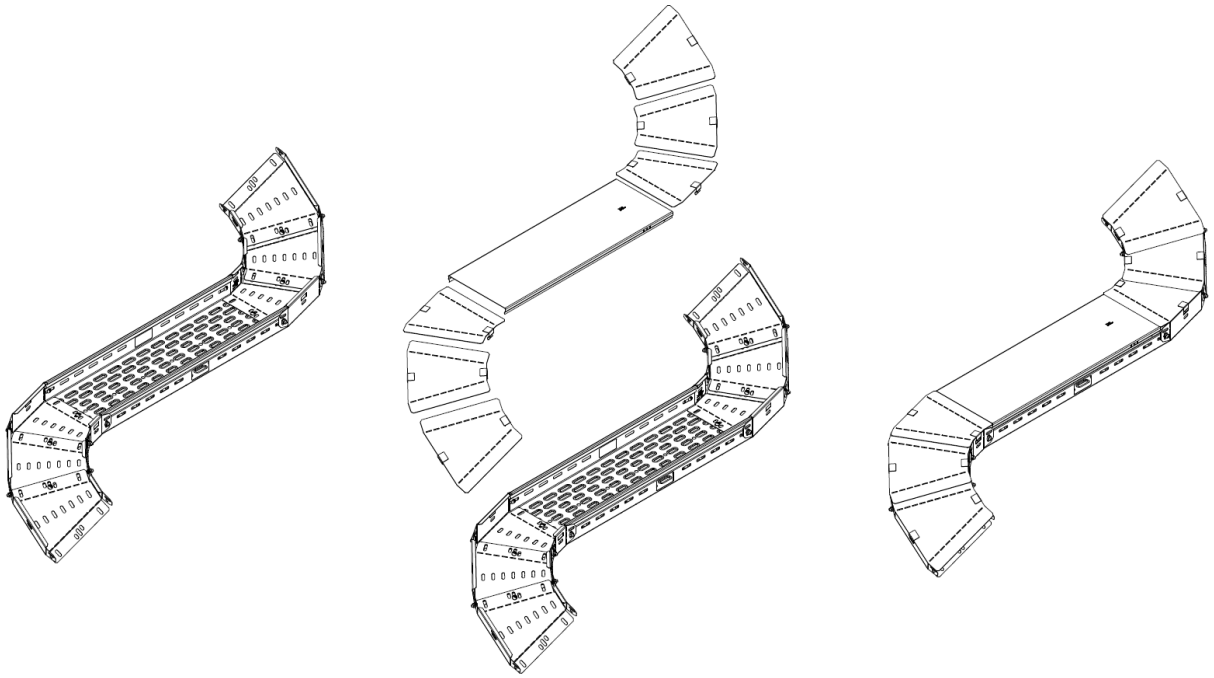
10° inside, outside and up or down extreme use.

9.1. Flexible bend (15° - 30° - 45°) / Coude (15° - 30° - 45°)

Flat bend are assembled using 3 screws M6x12 in the side and bottom.
See below an impression of the possible bends horizontal and vertical at the same time.



In case of covers, first fix the cover on the fitting before fitting the cover lengths.
Covers have been designed to allow the 10° deviation.

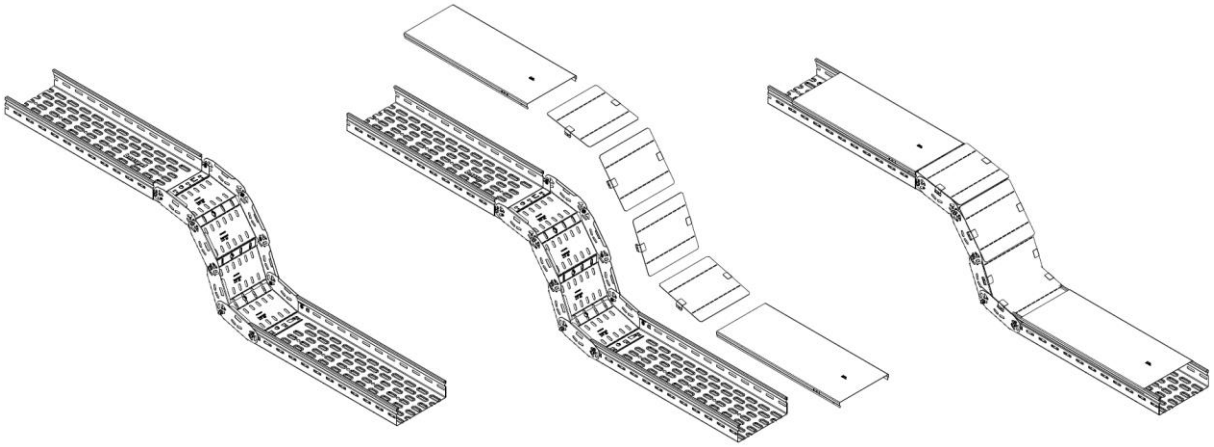


9.1. Inside – Outside riser H60 / Raccord de montée - descente

9.2.

The Inside - Outside riser height 60 is assembled to each other, cable trays and other fittings using 3 screws M6x12 in the side and bottom. It forms an angle of max. 45° up or down from the previous part

In case of covers, first fix the cover on the fitting before fitting the cover lengths.
Covers have been designed to allow the 45° deviation.

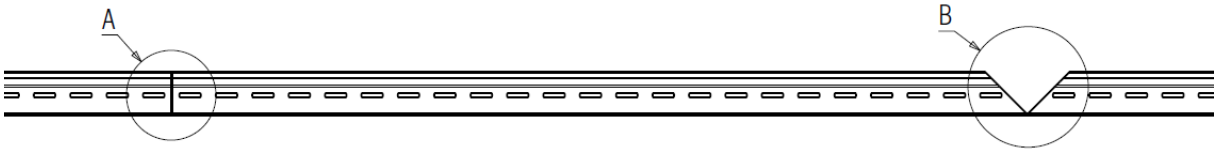


Vertical coupler / Éclisse à angle réglable

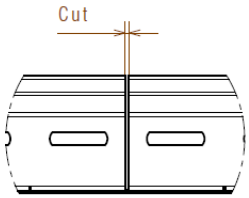
This coupler is available in height 60 and height 100.
The vertical coupler is used to connect the side wall when bending cable trays in vertical direction. This allows the installation the change of height or forming an articulated vertical bend.
To create a change of height, cut the sides of the cable trays as shown in detail A and detail B:

Important:

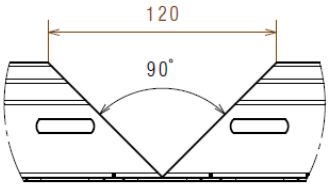
- Do not cut the bottom of the cable tray.
- For Fire resistant installations, use the EDU coupler (see 11.5) in stead.



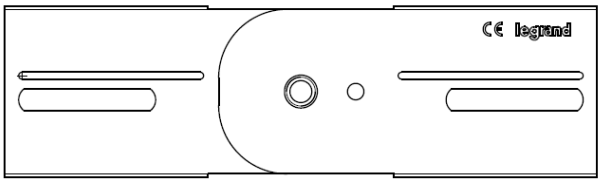
Detail A

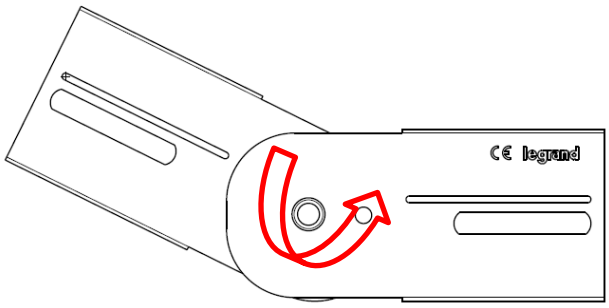


Detail B



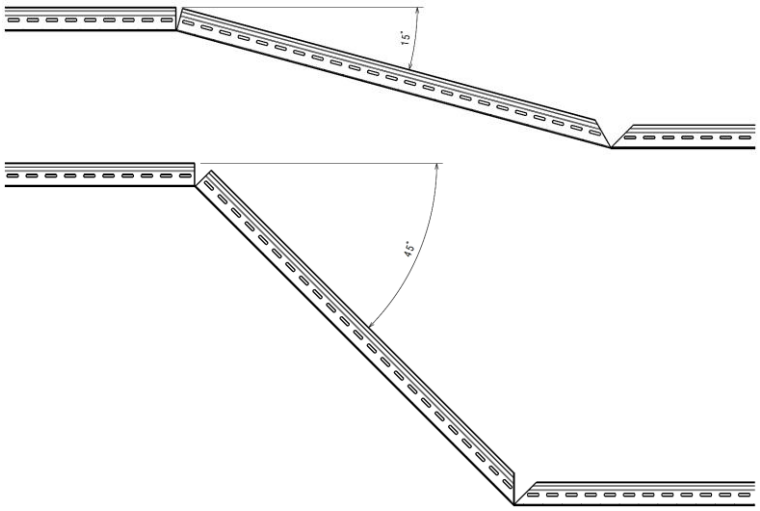
Choose the right angle of inclination for the coupler.



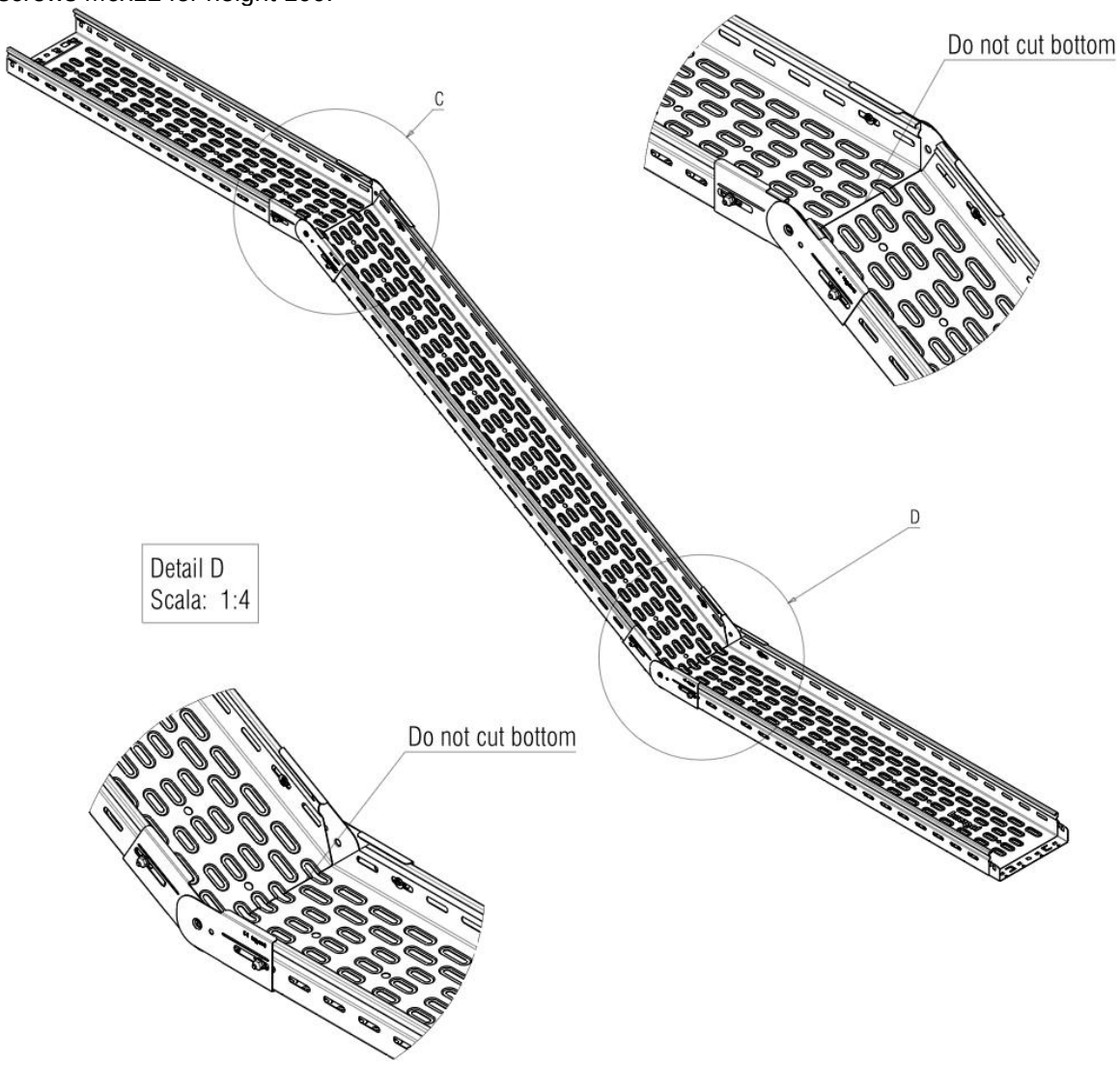


Recommendation:
In case the cable trays need to be fitted with covers, use the ‘EDU for Covers’ (see 11.8) to allow easy fitting and removing of the covers.

Bend the cable tray at the required angle (between 0 and 45°).



At each bend, fix a vertical coupler to each side wall using 2 screws M6x12 for each coupler H60 and 4 screws M6x12 for height 100.

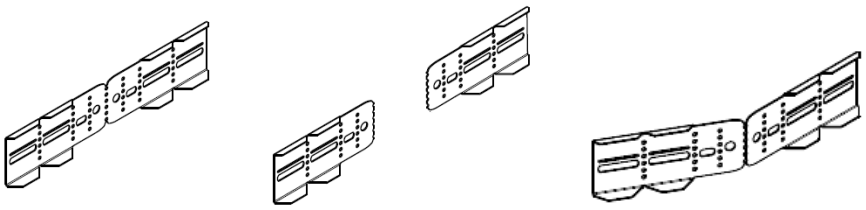


Images show installation height 60. Installation height 100 works the same.

EDU coupler / Éclisse EDU

The EDU coupler is a multifunctional accessories produced for height 60 and height 100.
Use min. 2 screws M6x12 for height 60 and min. 4 screws for height 100.

One of the advantages of this coupler is that you can bend or break it (bend several times) by hand.

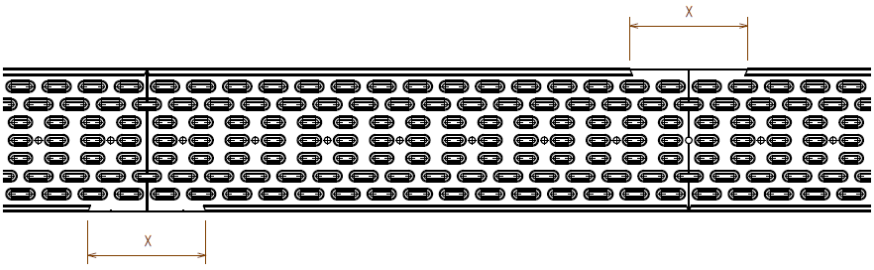


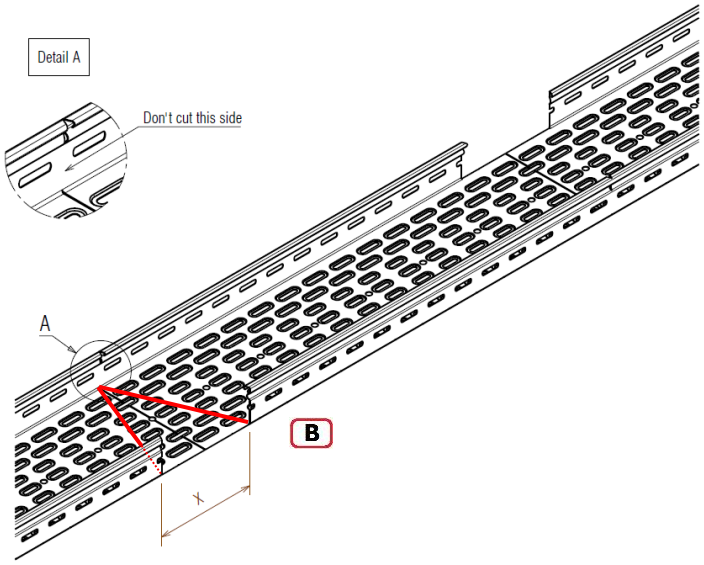
The paragraphs below show the most common installations way with the help of this coupler.
The examples shown are made using height 60 cable tray. For height 100 it works the same way.
Recommendation: while creating installations, keep in mind the minimum bending radius for cables; create articulated bends where necessary.

11.1. EDU - Flat bend (15° - 30° - 45°) / Coude (15° - 30° - 45°)

The EDU coupler can be used to create a (double) flat bend.

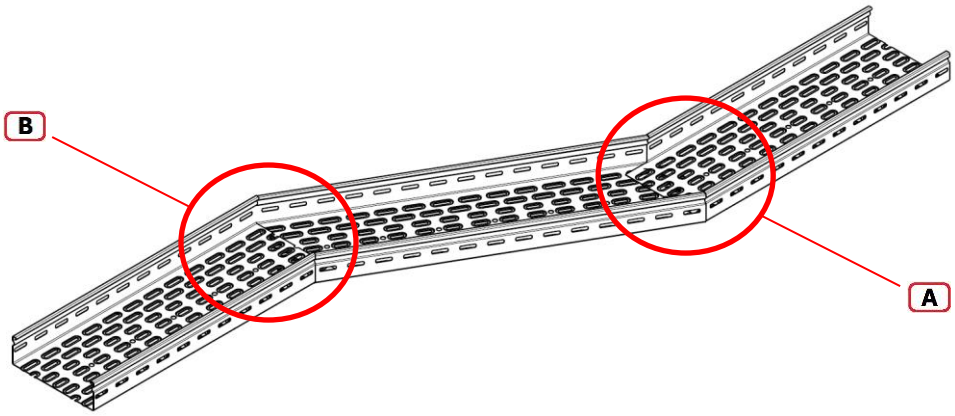
Start with cutting the side of cable trays at the right dimensions. (See the table to determine the length ‘X’ depending on the bend required).
Second, cut the bottom of the cable tray in the middle of “X”, perpendicular to the direction of the cable tray.**Important**: Only make a small cut in the horizontal top of the cable tray as shown in detail A. The side wall remains not cut.



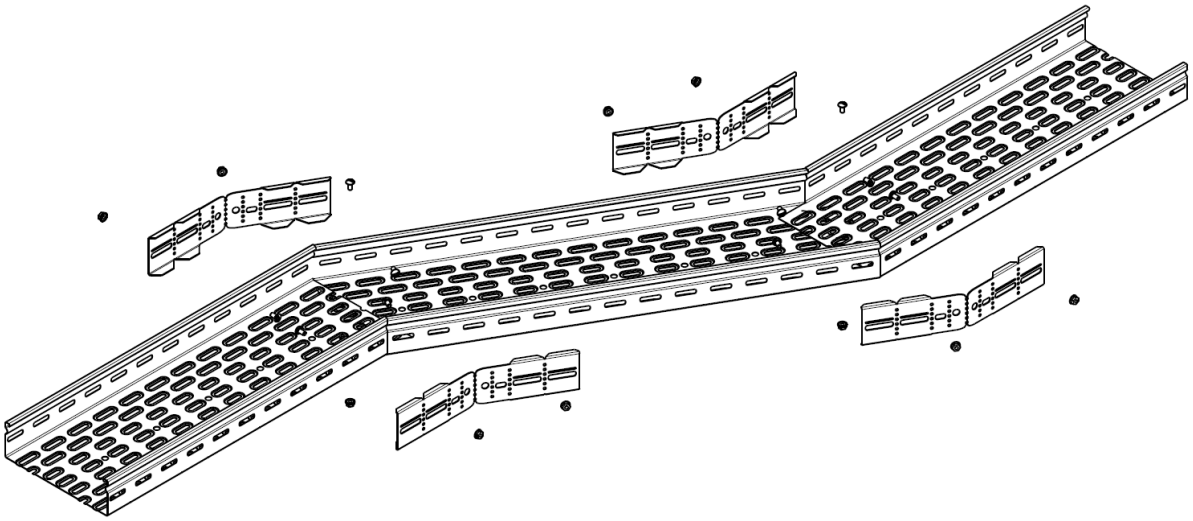


Tray Width [mm]	X for 45° [mm]	X for 30° [mm]	X for 15° [mm]
75	62	40	20
100	83	54	26
150	124	80	39
200	166	107	53
300	249	161	79
400	331	214	105
500	414	268	132
600	497	322	158

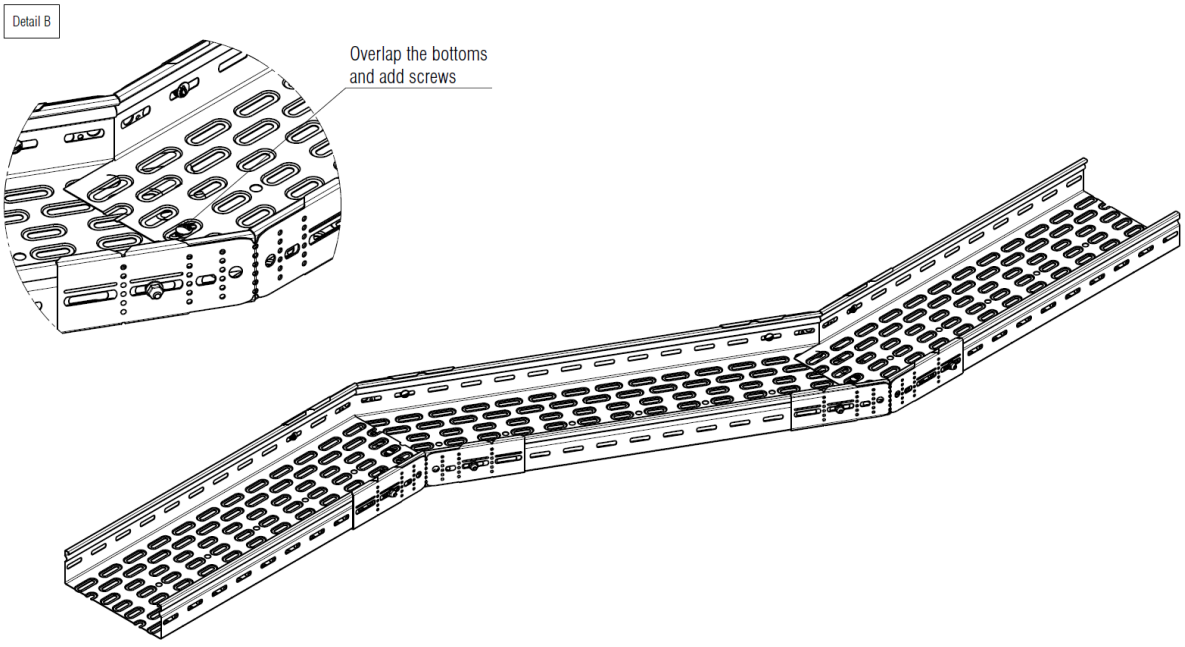
After bending the cable tray, the bottom will overlap (A). If not acceptable, cut a V-shape out of the bottom before bending (B).



Mount the bend EDU to the cable tray using min. 2 screws M6x12 on each coupler height 60. For height 100m, use min. 4 screws M6x12 per EDU. Place the screws as close as possible to the bend.



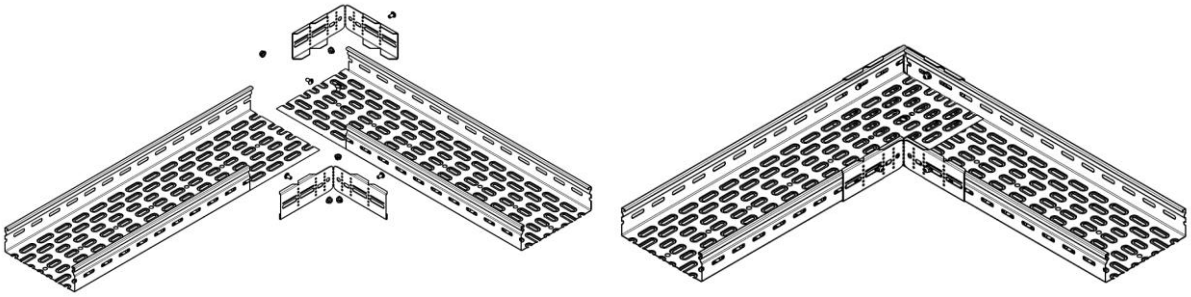
Recommendation: place a screw M6x12 in the middle of the overlapping zone to fixate the bottoms.



11.2. EDU - Flat bend 90° / EDU – Coude 90°

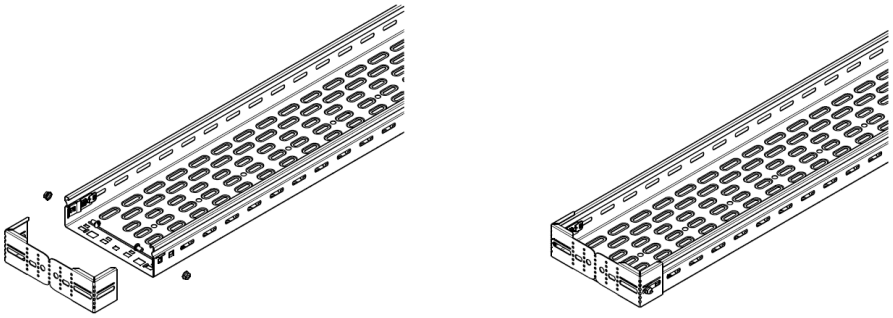
The EDU coupler can be used to create a flat bend of two cable trays in a 90° angle.

Cut the side of cable tray over the same length as the cable tray is wide. Do not cut the bottom.
Second: mount the bend EDU at the inner- and outer side wall. Place the screws as close as possible to the bend.
Recommendation: place a screw M6x12 to reinforce the overlap of the bottoms.



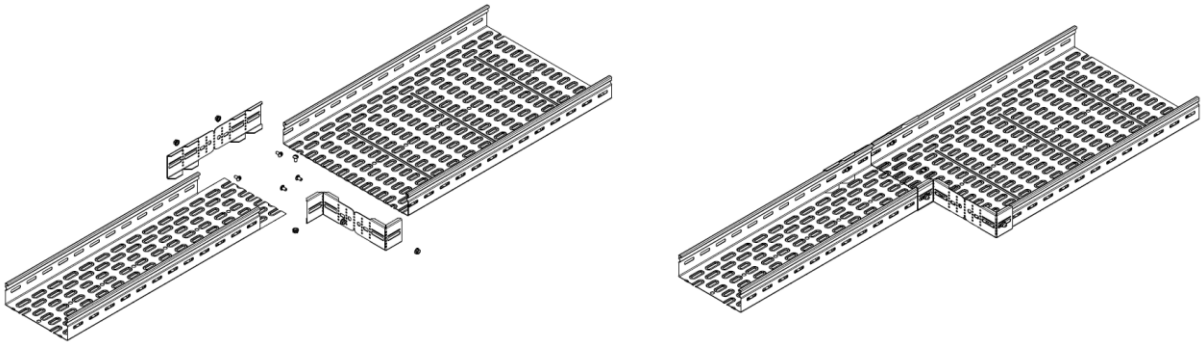
11.3. EDU - End cap / EDU – Embout d’extrémité

The EDU coupler can be used as an end-cap for cable tray up to and included width 200.
Find the matching bending line (vertical row of holes ø4mm) to enclose the width of the cable tray (for width 75 and 150, these are not symmetrical). Mount the EDU using 2 screws M6x12 for height 60 or 4 screws for height 100.



11.4. EDU – Reducer / EDU - Réducteur

The EDU coupler can be used as a reducer. The maximum width of reduction is 200mm per EDU. Reduction can be done on one or both sides of the cable tray (max. = 2x 200mm). The EDU
Recommendation: Cut the sides of the smaller cable tray on both sides to create an overlap of the bottom. Use 1–3 screws M6x12 to connect and reinforce the bottoms.

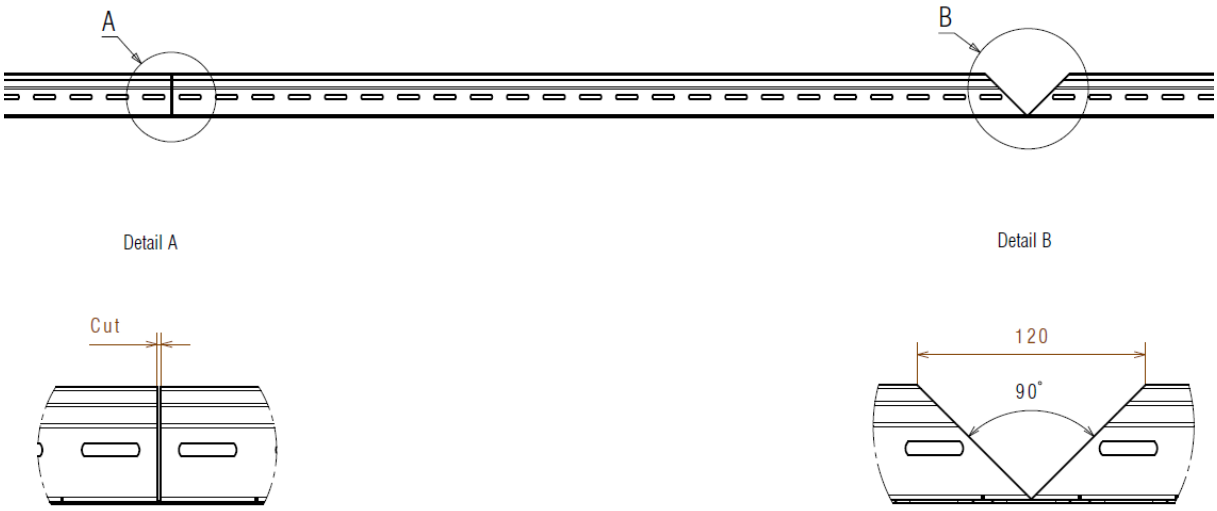


Remark: for larger reductions, see Reducer / End cap (12.1)

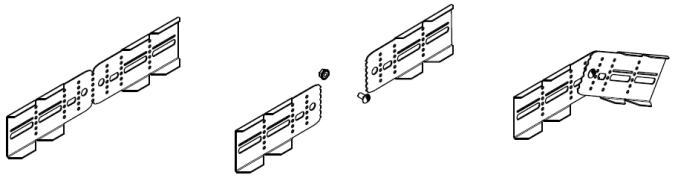
11.5. EDU - Inside – Outside riser bend / EDU – Coude de montée - descente

The EDU coupler can be used to connect the side wall when bending cable trays in vertical direction. This allows the installation the change of height or forming a vertical bend in multiple steps, like an inside or outside riser.
To create a change of height, cut the sides of the cable trays as shown in detail A and detail B:

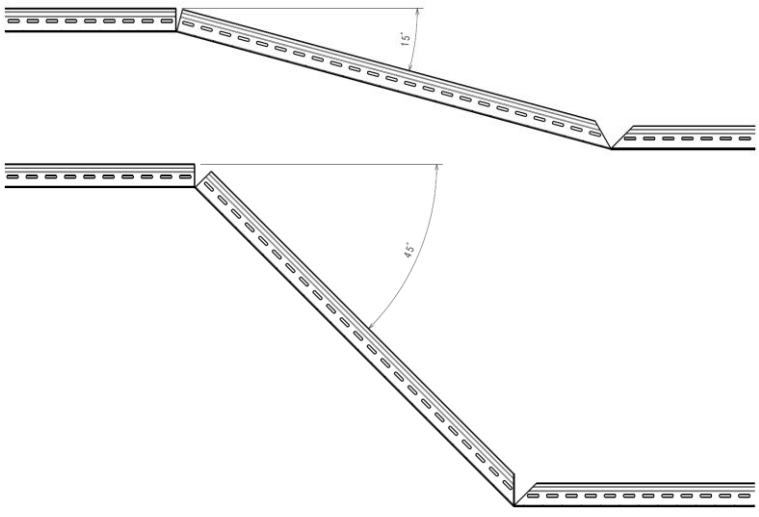
Important: Do not cut the bottom of the cable tray.



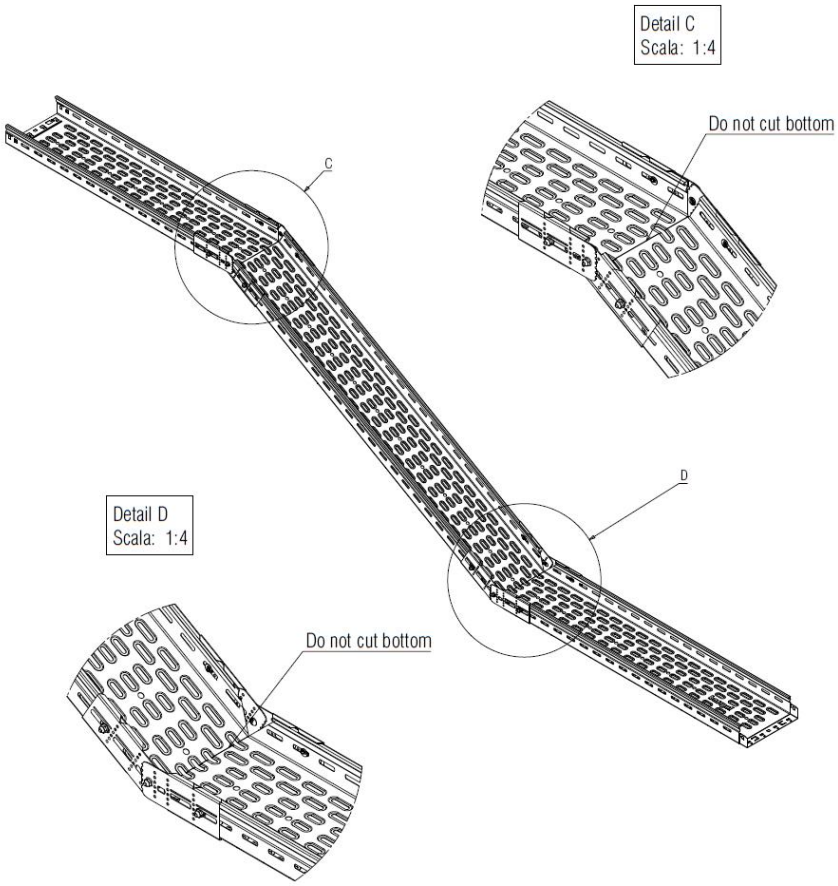
Brake the EDU coupler in the middle by manually bending it several times. Connect the two half's using a screw M6x12 to form a hinge.



Bend the cable tray at the required angle (between 0 and 45°).



At each bend, fix a modified EDU coupler to each side wall using 2 screws M6x12 for each coupler.



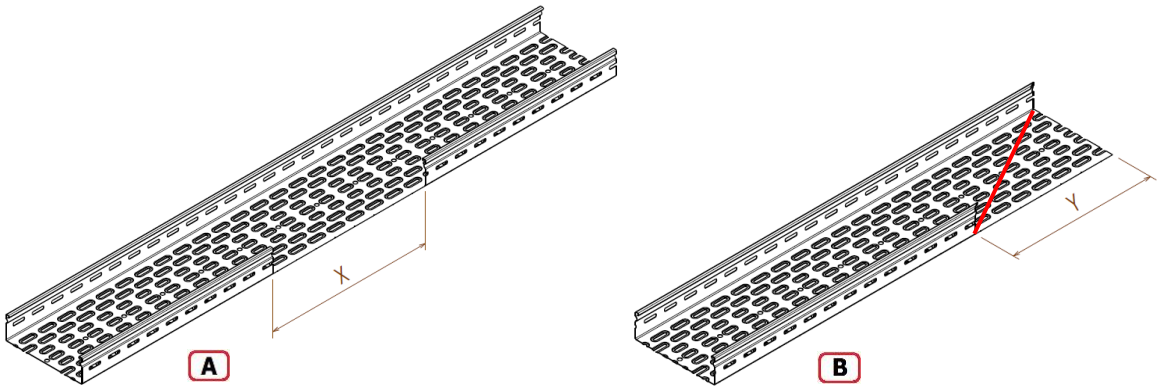
11.6. EDU - T-Branch with angle / Dérivation en T angulaire

The EDU coupler can be used to create a lateral junction between two cable trays with an angle <90°.

Start with cutting the side of cable trays at the right dimensions. (See the table to determine the lengths 'X' and 'Y' depending on the bend required).

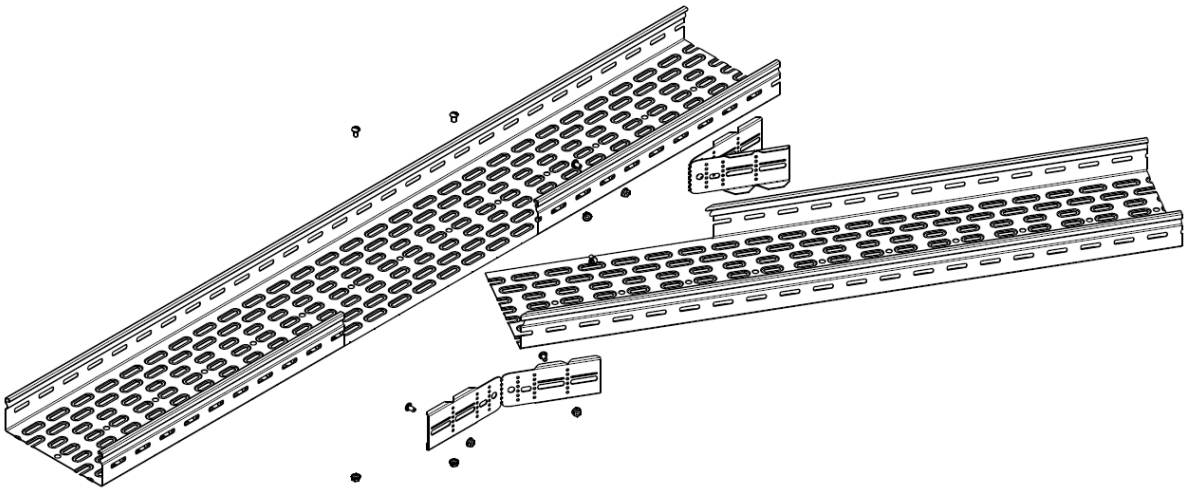
Important: Connect the 2 bottoms for reinforcement:

- Not cut bottom of tray B as to create an overlap and connect both using screw M6x12
- Cut bottom of tray B along the indicated line and use a matching bottomplate to connect both cable trays

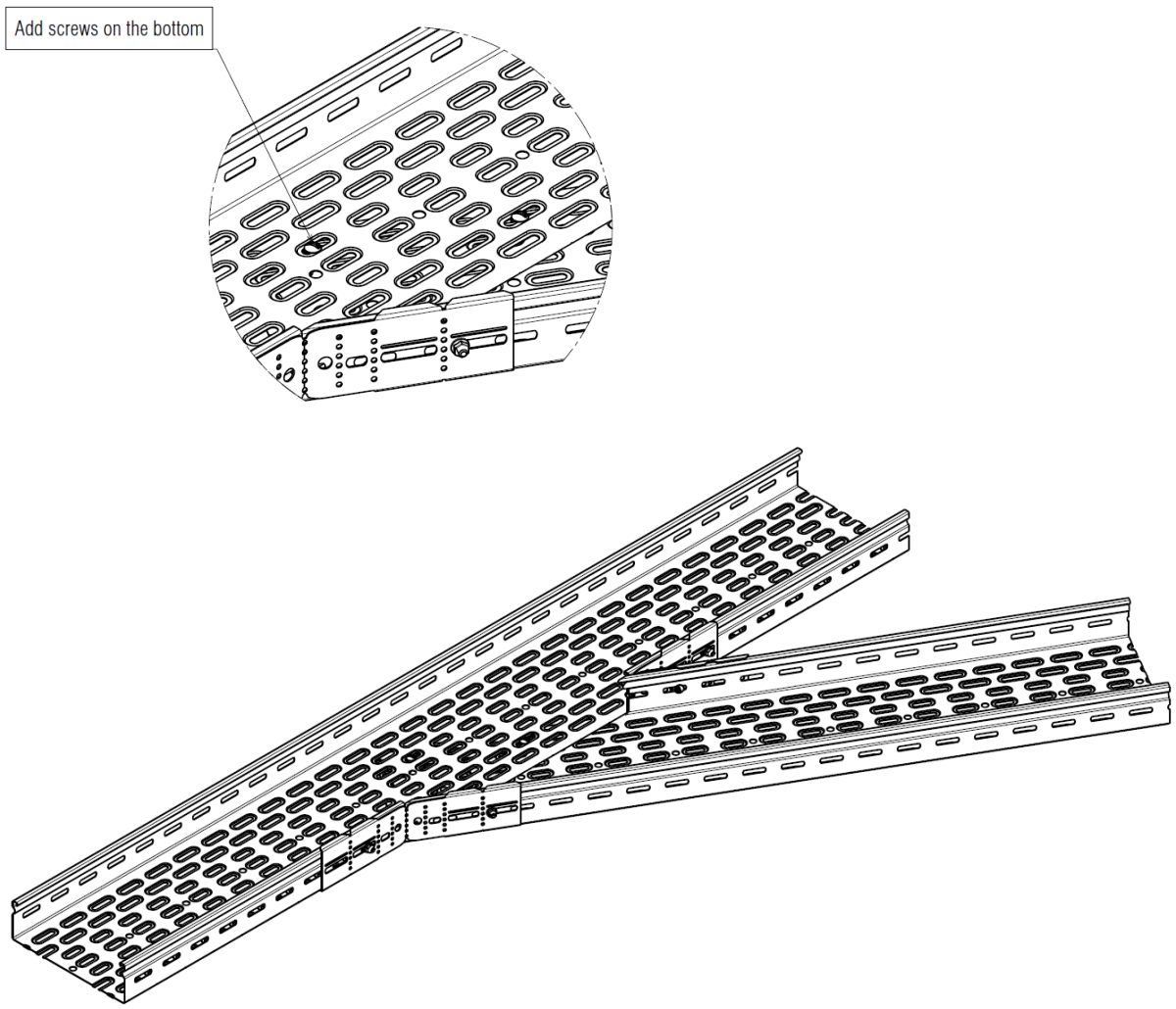


Tray Width [mm]	X for 45° [mm]	Y for 45° [mm]	X for 30° [mm]	Y for 30° [mm]	X for 15° [mm]	Y for 15° [mm]
75	106	150	150	130	290	280
100	141	200	200	173	386	373
150	212	300	300	260	580	560
200	283	400	400	346	773	746
300	424	600	600	520	1159	1120
400	566	800	800	693	1545	1493
500	707	1000	1000	866	1932	1866
600	849	1200	1200	1039	2318	2239

Mount the bend EDU to the cable tray using min. 2 screws M6x12 on each coupler. Place the screws as close as possible to the bend.



At bottom overlap: put two screws M6x12 in the overlap zone to reinforce the bottoms.

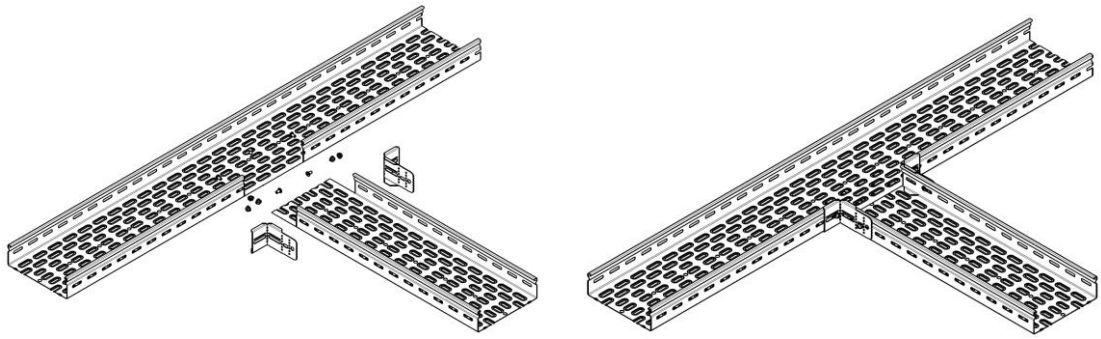


11.1. EDU - T-Branch or Crossing / EDU – Dérivation en T

The EDU coupler can be used to create a T-Branch or same level Crossing

Cut the side of the cable tray over the same length as the width of the perpendicular tray.
Brake the EDU coupler in the middle by manually bending it several times. Slide the 2 cable trays together, bend and mount each half of the EDU in the corner and fix them using 2 screws M6x12 for each half.

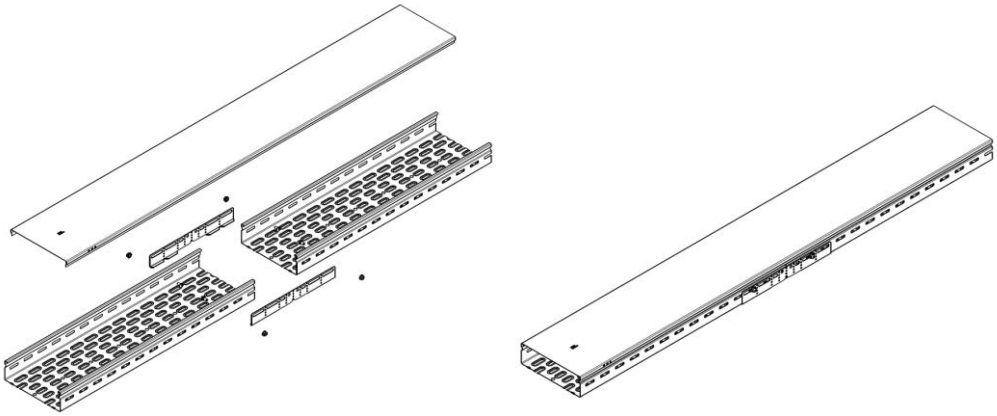
Recommendation: cut both sides of the perpendicular cable tray to allow overlap of the bottoms.
Use 2–4 screws M6x12 to connect and reinforce the bottom.



11.2. EDU for Cover / EDU pour couvercle

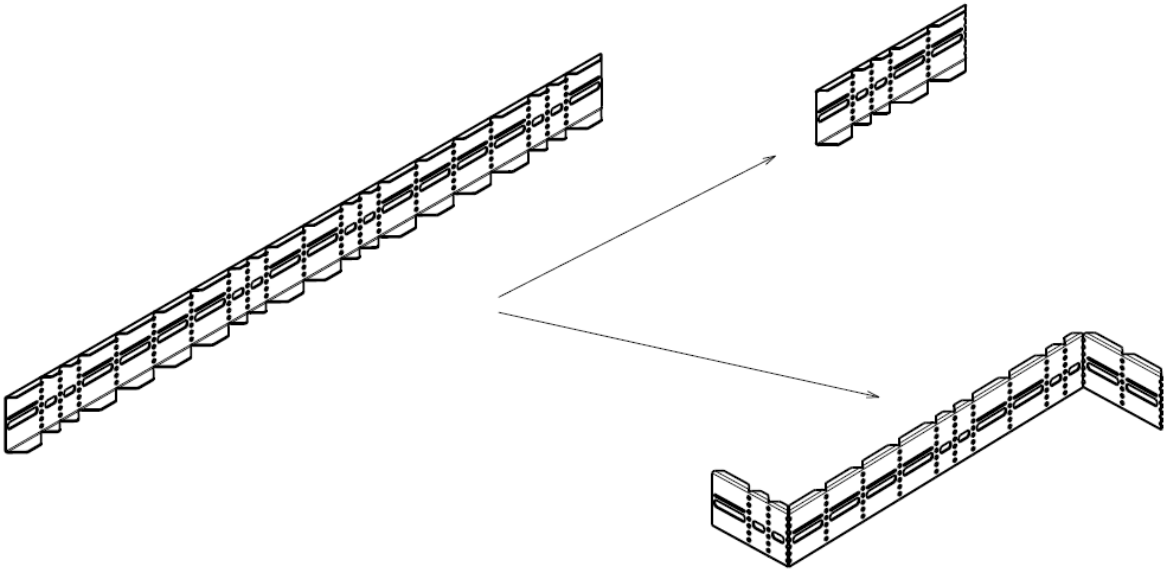
In case the cable tray installation needs to be fitted with covers, used the EDU for cover height 60.
If you need to cover cable tray and done some junction you have to use the EDU coupler for cover. It has the same functions as the standard EDU with the following remarks:

- Use the same number of screws M6x12 for installation,
- EDU for Cover does not cover the full height of the side wall, leaving gaps when used as reduced / end cap
- When installing, keep in mind the minimum bending radius for cables



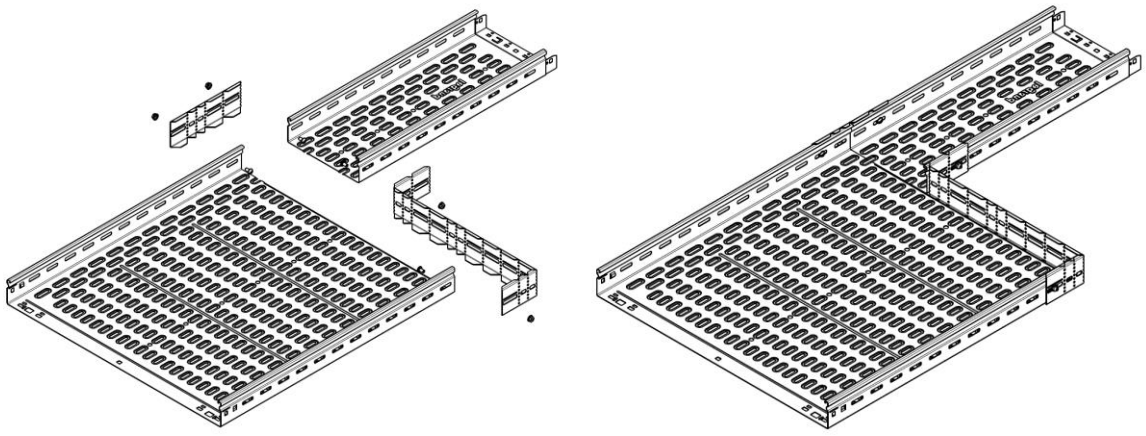
Reducer - End cap / Réducteur

Reducers can be bend into various shapes with different dimensions. They can also be broken into parts by bending them (manually) several times over the same line.



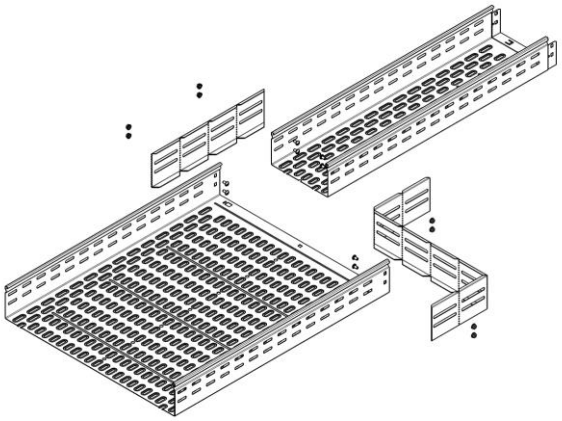
12.1. H60 / H60

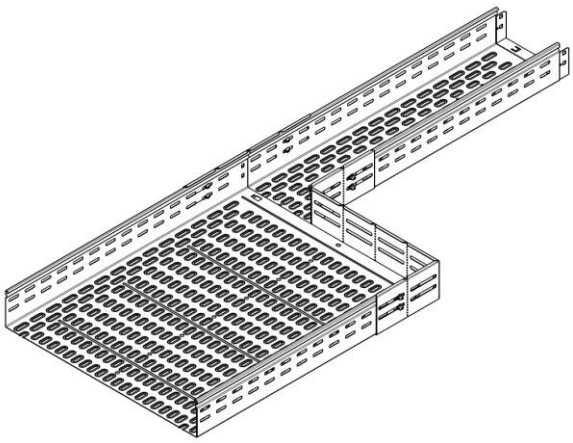
Braking a small part of and bending the larger part creates the parts needed to reduce the cable tray width. Mount each part using min. 2 screws M6x12.
Recommendation: Cut the sides of the smaller cable tray on both sides to create an overlap of the bottom. Use 1–3 screws M6x12 to connect and reinforce the bottoms (see 11.4).
.



12.2. H100/ H100

Braking a small part off (manually bend several times) and bending the larger part creates the parts needed to reduce the cable tray width. Mount each part using min. 4 screws M6x12.
Recommendation: Cut the sides of the smaller cable tray on both sides to create an overlap of the bottom. Use 1–3 screws M6x12 to connect and reinforce the bottoms.





Dividers / Cloisons de séparation

13.1. Universal divider for length / Cloison de séparation universelle pour longueur

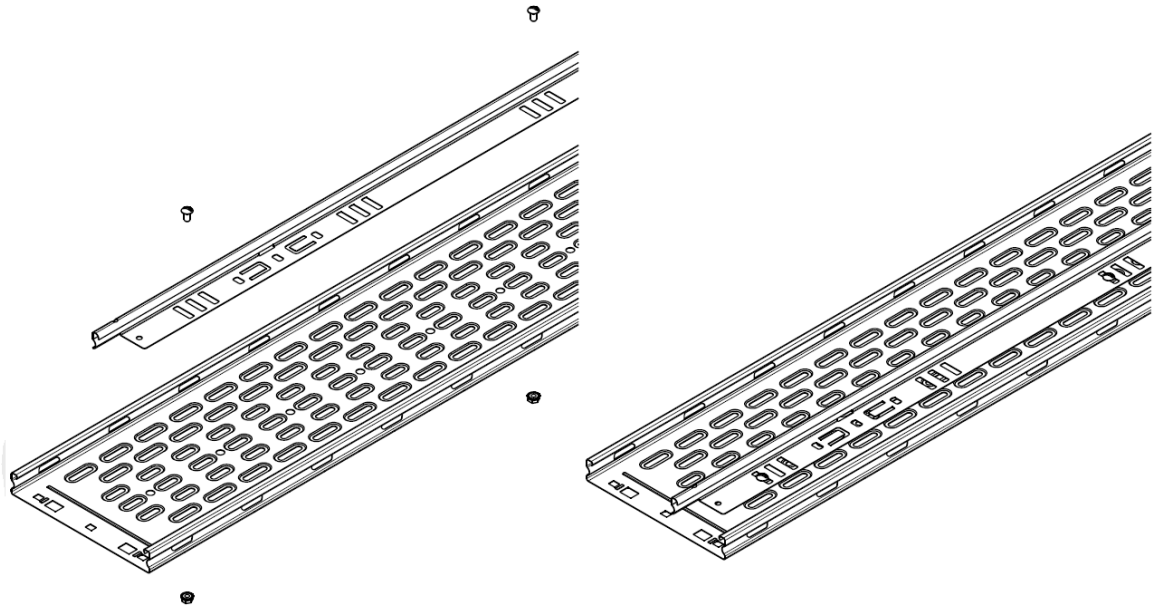
The Universal dividers can be used in combination with perforated Male-Female (auto) cable trays:
For application in blind cable trays, drill holes ø7mm and use screws M6x12: min. 2 screws per piece of divider and max. 600mm apart over longer distances.

Recommendation: for Male-Female (auto) cable trays, keep the connections of the divider at the same location as the connections of the cable trays to ensure a smooth fitting over the tray connection.

Remark: to connect length of dividers and for cable protection at the end of the divider, see End Cap (13.3.4)

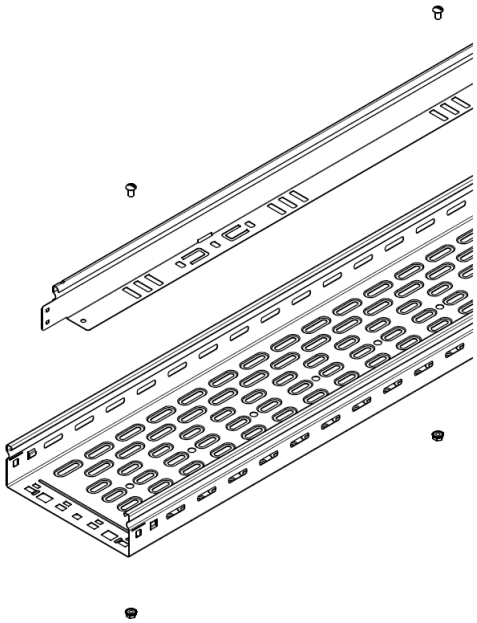
13.1.1. H25 / H25

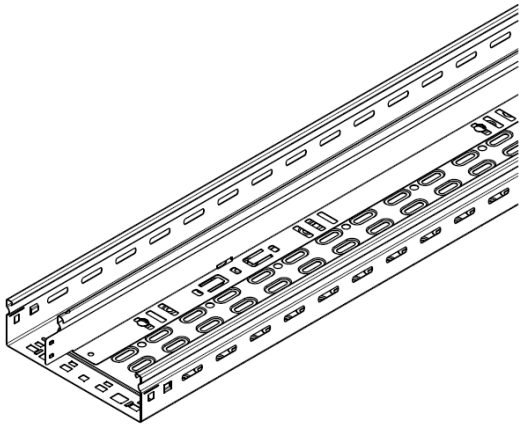
Mount the divider using min. 5 screws M6x15 evenly divided over the 3m length.



13.1.2. H60/ H60

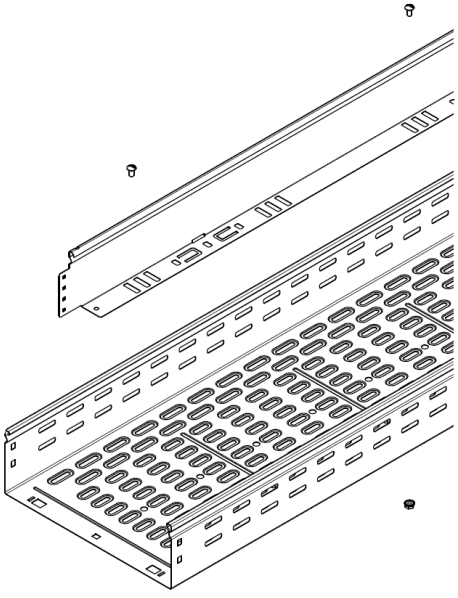
Mount the divider using min. 5 screws M6x15 evenly divided over the 3m length.

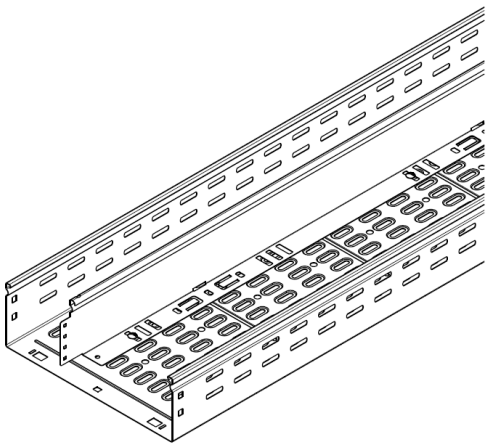




13.1.3. H100 / H100

Mount the divider using min. 5 screws M6x15 evenly divided over the 3m length.





13.2. Automatic divider for length / Cloison de séparation automatique pour longueur

The Automatic divider is available in height 60 and can be used in combination with all types of perforated cable trays: Male-Female auto, Male-Female, Symmetrical and Heavy Duty. With the MF (auto) cable trays, the dividers will overlap at the connection of the trays.

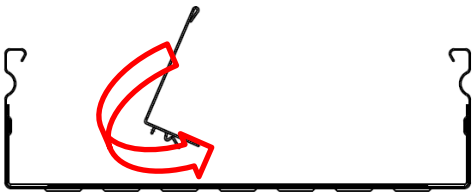
Recommendations: for Male-Female (auto) cable trays, keep the connections of the divider at the same location as the connections of the cable trays to ensure a smooth fitting over the tray connection.
Screws can be inserted after installation for extra reinforcement.

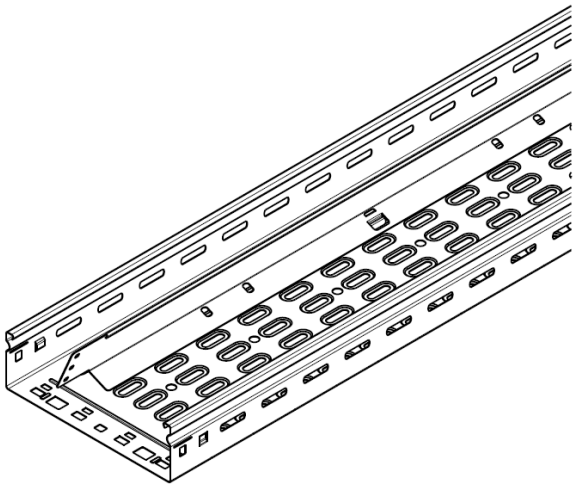
Remark: to connect length of dividers and for cable protection at the end of the divider, see End Cap (13.3.4)

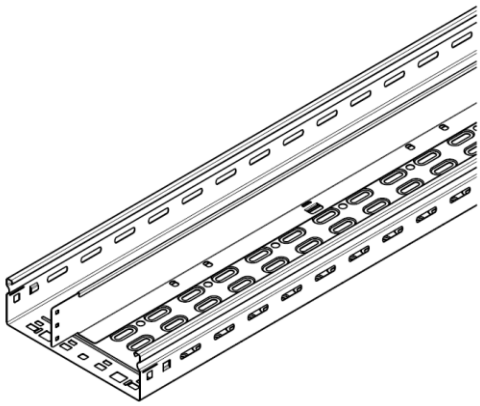
13.2.1. H60 / H60

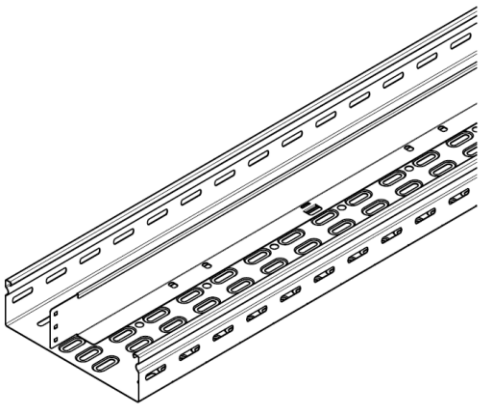
No screws are needed for the installation of the Automatic divider.

Line up the teeth of divider with the perforation in the bottom of cable trays.
Push and rotate the divider until it makes a “click” in the perforation.







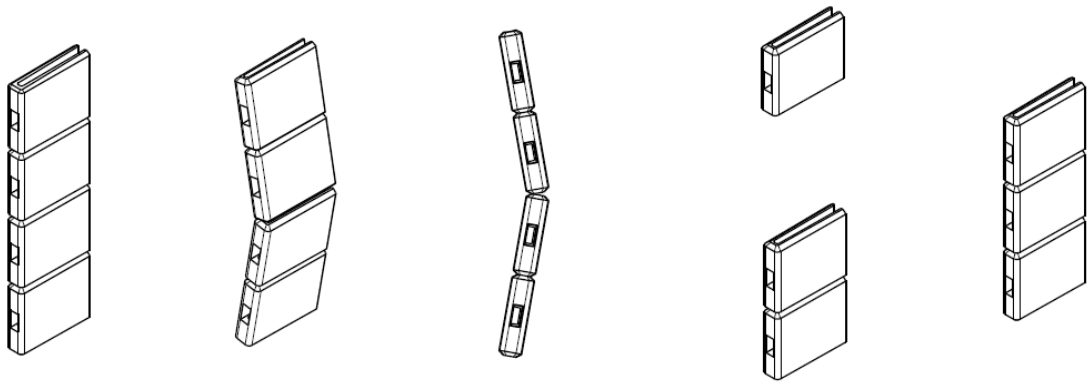


13.3. End Cap divider’s protection/ Embout d’extrémité et protection de cloison de séparation

The End-Cap divider’s protection is a yellow plastic part that has two main functions:

1) Protect the cables from the beginning and end of the divider when pulling them along these edges,
2) Connect dividers to keep them in line in lengths of cable tray

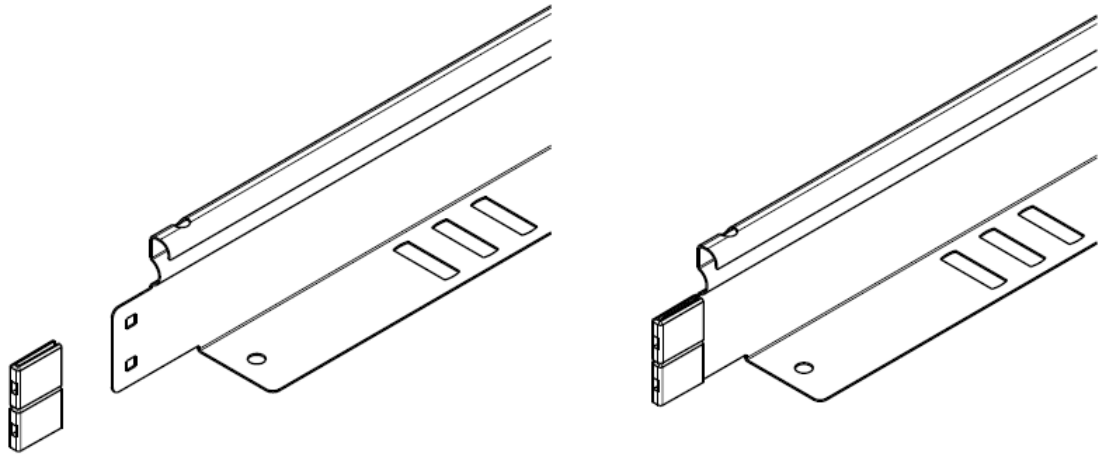
The End Cap can be used on dividers height 60 and height 100. To adjust it to the actual height of the installation, it can manually be broken into pieces along the grooves. It will “click” in the perforation at the end of the divider.



Standard shape manually braking in the middle Different possibilities of 1, 2 or 3 sections.

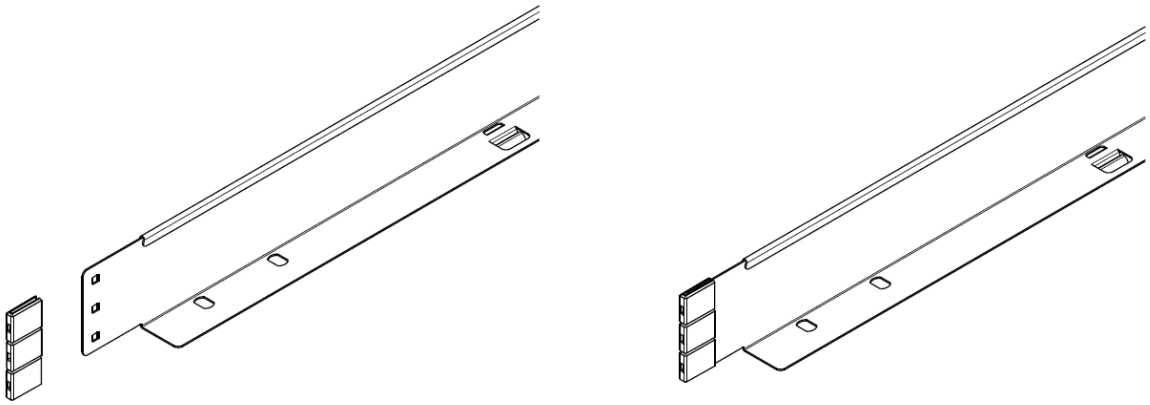
13.3.1. H60 Universal / H60 universel

Use a part of 2 section of the End-Cap and push it on the end of the divider until it “clicks”.



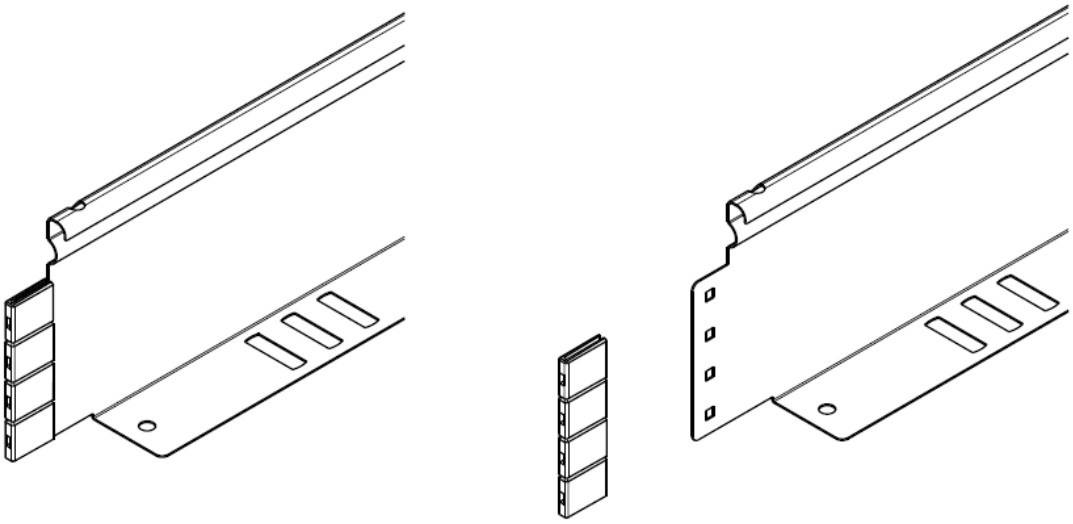
13.3.2. H60 Automatic / H60 automatique

Use a part of 3 section of the End-Cap and push it on the end of the divider until it “clicks”.



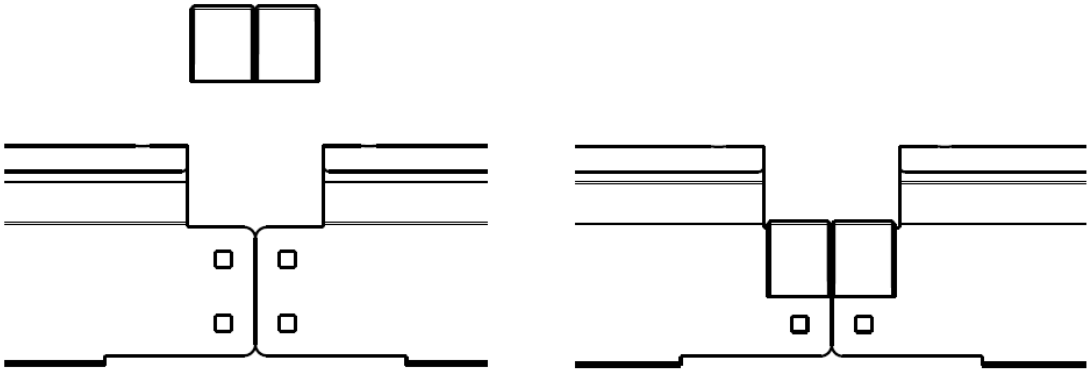
13.3.3. H100 Universal / H100 universel

Use the standard End-Cap and push it on the end of the divider until it “clicks”.

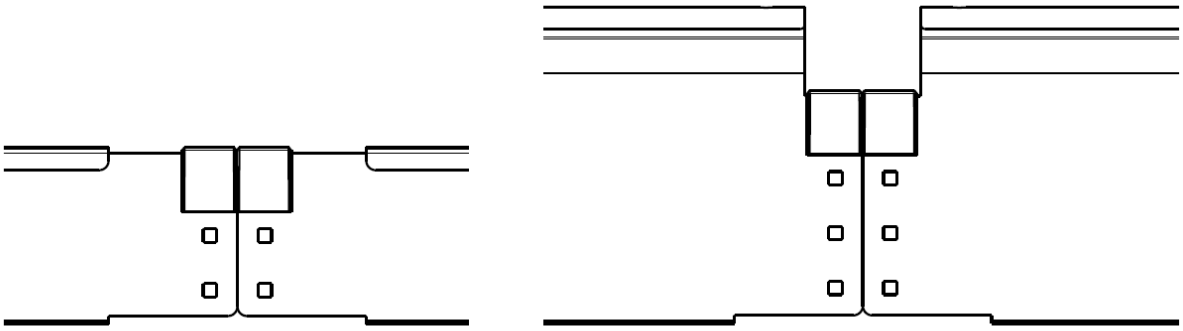


13.3.4. Divider alignment / Assemblage de cloisons de séparation

Use a part of 2 sections of the End-Cap and push it on the end of the divider until it “clicks”.
Put one divider in front of another one and push the End-Cap divider uniting.



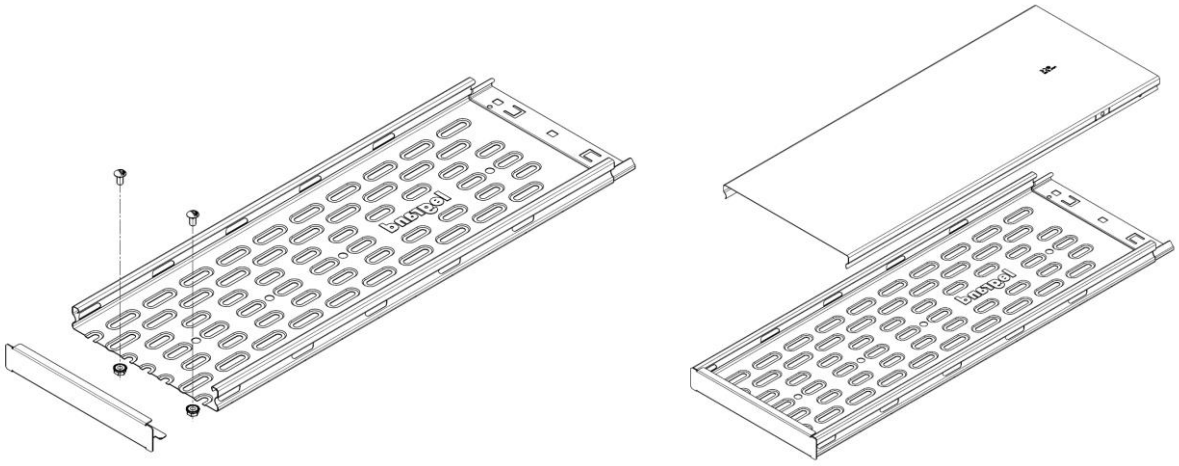
A piece of 2 section of the End-Cap can be used for all heights.



End-Cap / Embout d’extrémité

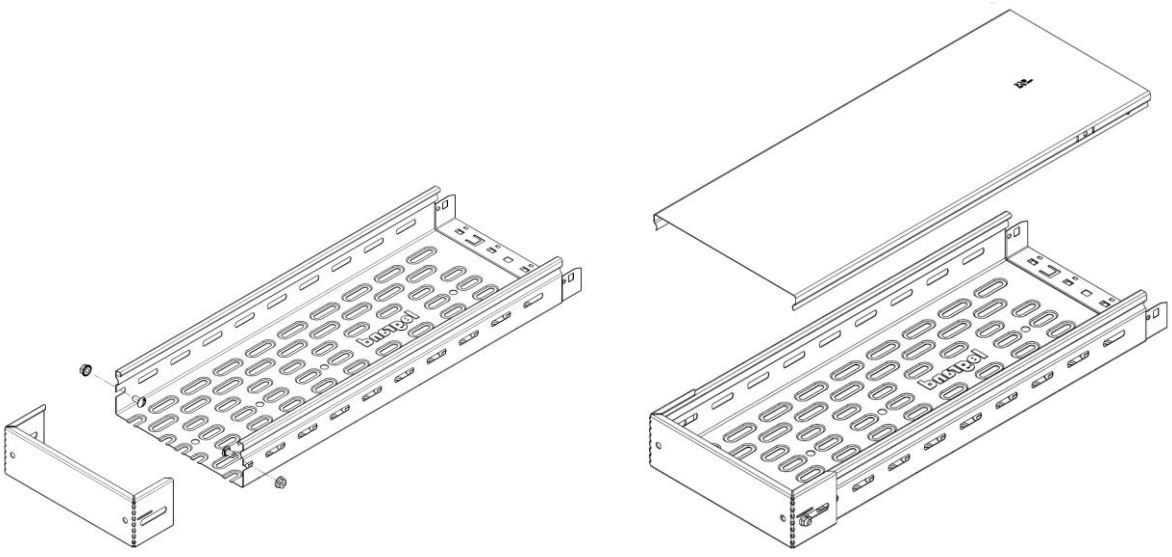
14.1. H25 / H25

The End-Cap in height 25 is assembled using 2 screws M6x12 on the bottom of the cable tray.



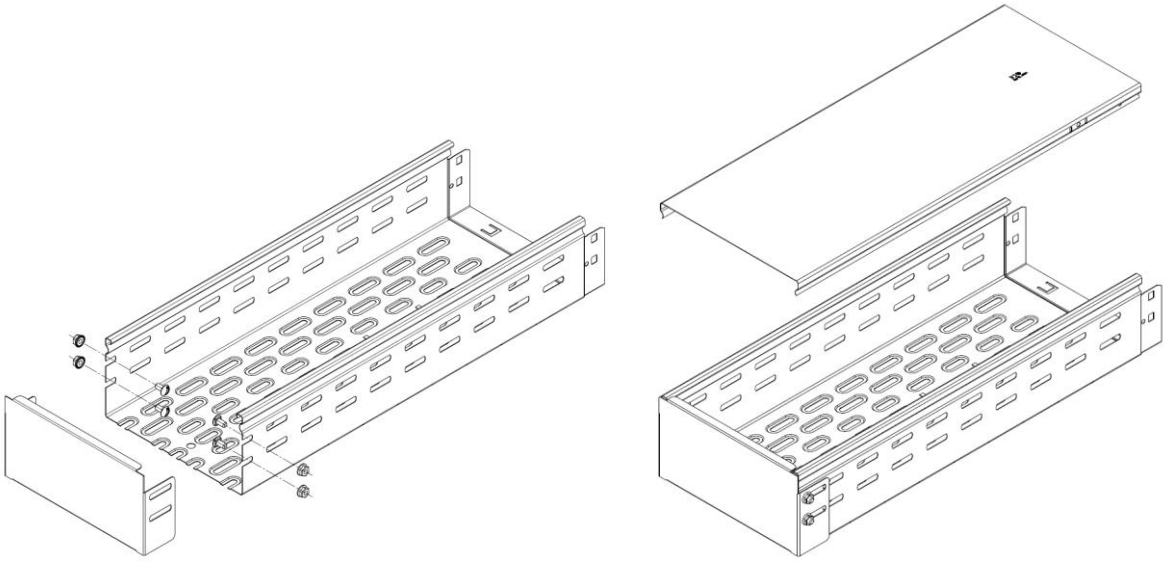
14.2. H60 / H60

The End-Cap in height 60 is assembled using 2 screws M6x12 in the sides of the cable tray.



14.3. H100/ H100

The End-Cap in height 100 is assembled using 4 screws M6x12 in the sides of the cable tray.

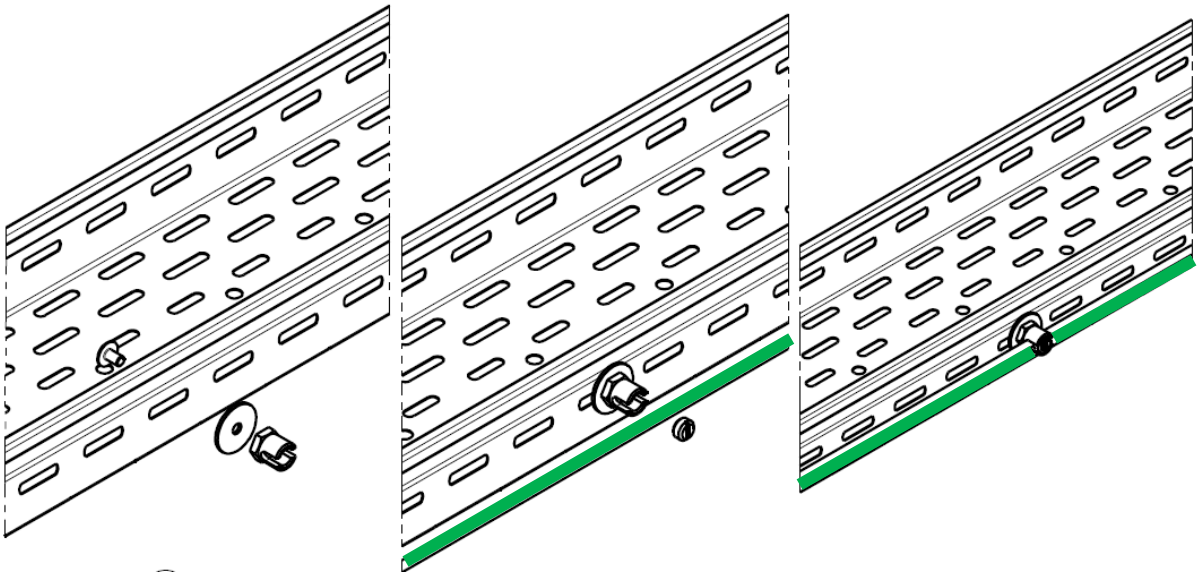


Earth grounding connection (EGC) / Raccordement à la terre

Use the standard kit to connect the grounding cable to the side of the cable tray.

Place the EGC on the side of the cable tray and fasten it using the screw supplied with the kit. Unscrew the cable clamp, place the bare grounding cable (depicted in green) and replace the clamping screw. Make sure the cable clamp holds the grounding wire tightly.

For blind cable trays it is necessary to drill a hole in the side of the cable tray using a ø7mm drill.



Fire resistant configuration E30, E60, E90 / Configuration de test au feu H60

For details regarding the construction of a Fire Resistant (FR) cable tray installation according DIN4102-12, see the certificate issued by the German Authorities: the **ABP** reg.no. **P-MPA-E-15-007**, which is leading over this mounting instruction. Whenever in doubt or if you have any questions, please contact the local Legrand office.

Key figures:

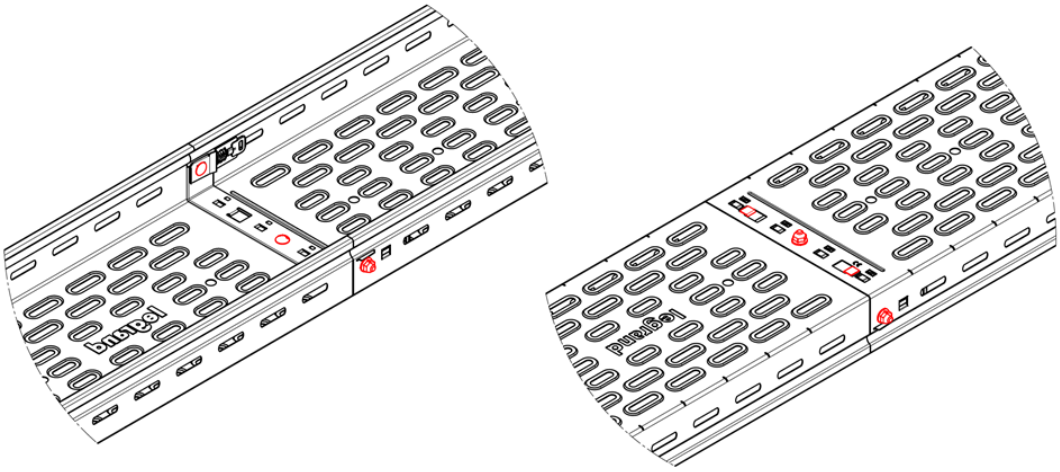
- Max. support distance for any FR installation is 1,5m,
- Max. total cable load is 20 daN/m* (for CRP constructions 10 daN/m),
- Max. 2 cable tray installations over each other on the same support
- Combining Fire Resistant cables and normal cables is allowed if separated using a divider,
- Mounting a cover is not allowed,
- For vertical installation, use GLO-4 ladder,
- Any installation over a Fire Resistance cable tray installation has to meet at least the same FR classification,
- Make sure the anchors used for installation to wall or ceiling meet at least the same FR classification at given load,
- Only perforated types of galvanized cable trays are allowed,
- Coating (paint or HD-zinc) is allowed to max. 160 µm thickness.

*[1 daN ≈ 1kg]

16.1. Cable tray assembling / Assemblage de Chemins de câbles

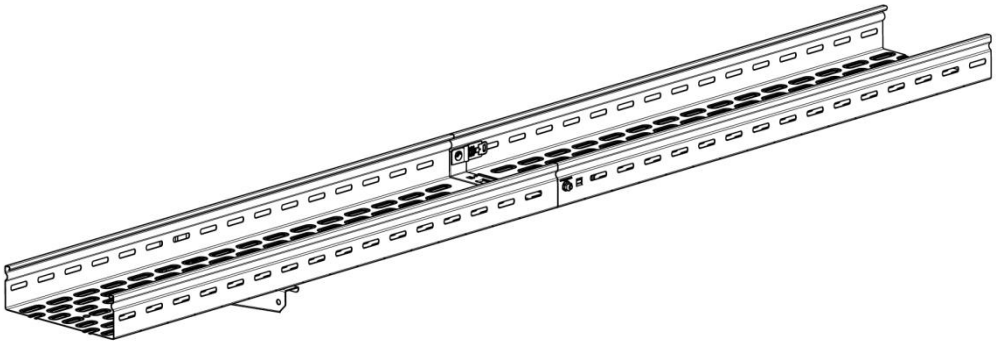
To connect cable trays, screws are always necessary:

- Male – Female (auto) cable trays: Use 3 screws M6x12 to securely connect both sides and the middle of the bottom. Additionally, bend the 2 clips in the male end trough the perforation in the female end until they point outwards again (see below). Auto clips (if present) do not have to be removed.
- Symmetrical cable trays are connected using the “Eclic” coupler plate (see 3.1.3). Additionally add 2 screws per coupler plate to securely fasten it to both trays. For width 300 and 400, mounting an bottom plate is necessary as well.



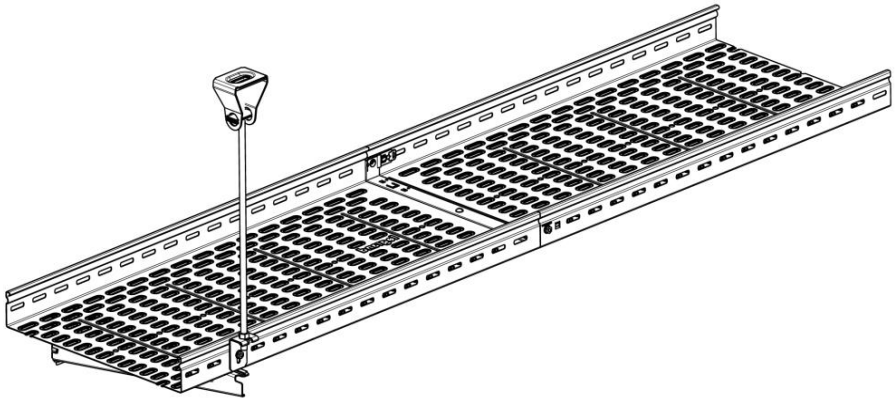
16.2. CRP configuration / Configuration CRP

The cable tray is connected to the CRP bracket using 2 screws M6x12 for each support.
The CRP bracket is mounted to the wall using 2 anchors M10
For the CRP configuration, the SWL is 10daN/m.

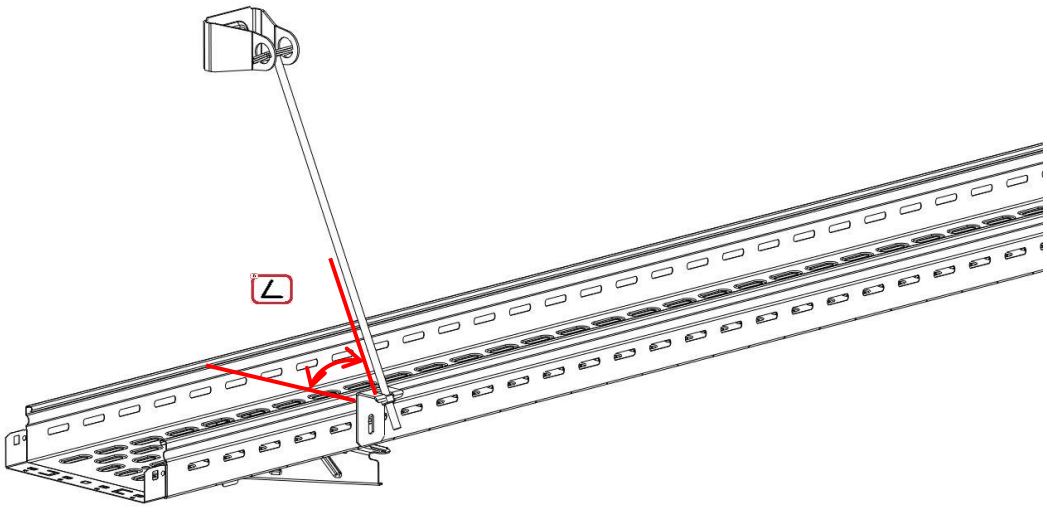


16.3. CB bracket and threaded rod configuration / Configuration avec console murale et tige filetée

The cable tray is connected to the CB bracket using 2 screws M6x12 for each support.
The M10 threaded road is mounted to the cable tray using a hook fixed with one screw M6x12.
The CB bracket is mounted to the wall using 1 anchor M10. To mount the ceiling bracket to the ceiling use 1 anchor M8.
For the CB configuration the safety working load is 20daN/m

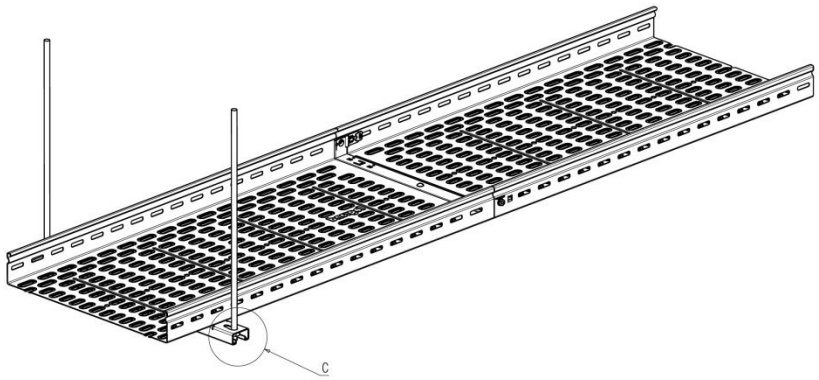


Alternative: the M10 threaded road is allowed to be led back to the wall for fixture.
The angle ∠ has to the horizontal plane is ≥45°.
The Ceiling bracket is mounted to the wall using 1 anchor M8.
For the CB configuration the safety working load is 20daN/m

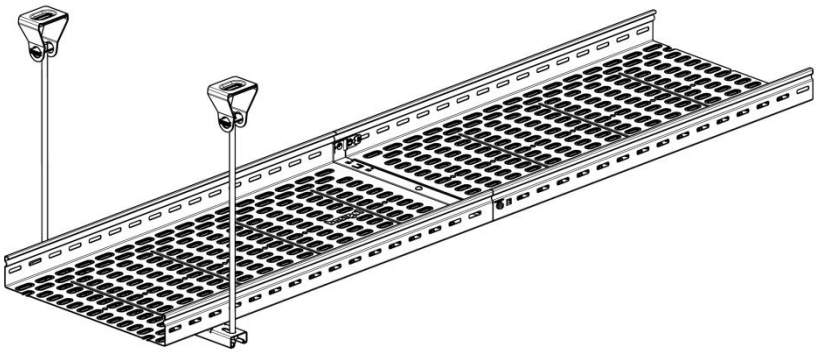


16.4. R21S trapeze configuration / Configuration R21S

The cable tray is connected to the R21S bracket using 2 screws M6x12 for each support.
The threaded road is mounted to the rail using an M10 nut. The use of a washer (M10x40x2,5; see detail C) is allowed. Max. 2 cable trays allowed on the same threaded rod suspension.
For this configuration the safety working load is 20daN/m per cable tray

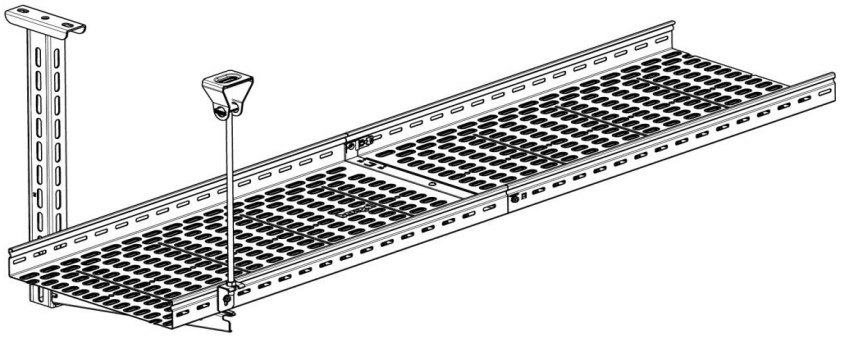


The threaded rod can be mounted directly to the ceiling using an M10 anchor with internal thread, or in the case of a sloped ceiling, use a ceiling bracket and an M10 anchor with external thread.



16.5. U55 Pendant and CB bracket configuration / Configuration avec pendard U55 et console murale

Mount the CB bracket on the pendant using M8x20 bolt and nut.
The cable tray is connected to the CB bracket using 2 screws M6x12 for each support.
The M10 threaded road is mounted to the cable tray using a hook fixed with one screw M6x12.
For this configuration the safety working load is 20daN/m



16.6. U55 Pendant and CB bracket multiple configuration / Configuration multiple avec pendard U55 et console murale

See below for the configuration of the suspension. The U55 pendant is in the middle and the CB brackets point to both sides. Max. 2 cable trays are allowed over each other, on each side of the U55 suspension (total = 4).
The cable tray is mounted to the CB bracket using 2 screws M6x12 for each support.
The M10 threaded road is mounted to the cable tray using a hook fixed with one screw M6x12.
For this configuration the safety working load is 20daN/m per cable tray way.