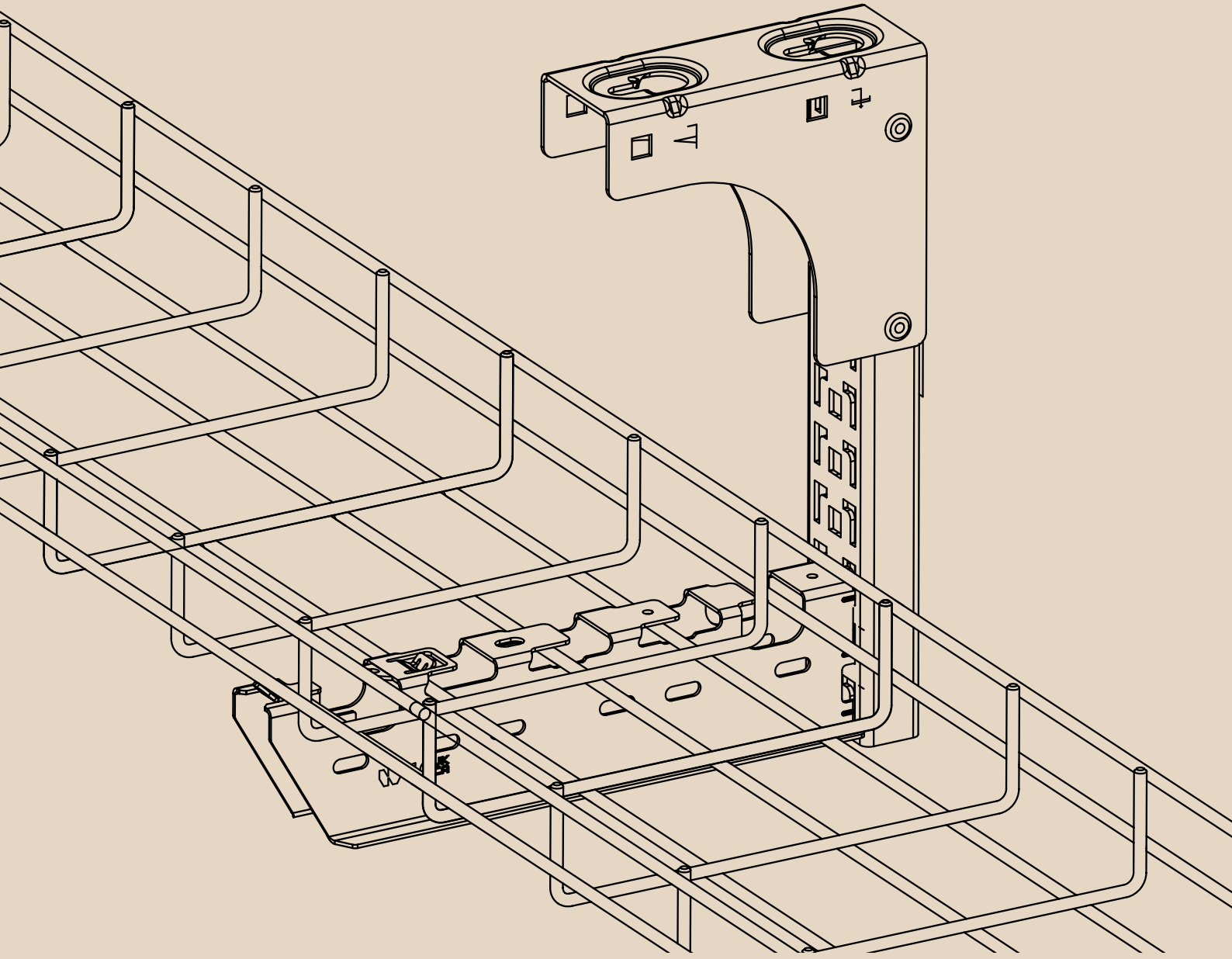
wibe group

DEFEM MESH TRAYS

Technical information



defem
powered by wibe group

The right surface treatment – crucial for a successful outcome

A cable support installation is considered to be a long-lasting solution and the life expectancy is dependent on the environment in which it is placed. A thorough investigation of the setting in terms of corrosion, pollution, humidity, salt, sanitary regulations etc will help you make the best choice. Our range of mesh trays and accessories covers all types of surface treatments, enabling a reliable, cost-efficient and long-lasting cable support solution.

C1 Electro-galvanized

Indoor environments: Schools, shops, hotels, offices, sports halls etc.

- Very low environmental corrosion.
- Heated areas.
- Arid atmosphere.
- Insignificant quantities of pollutant.
- ISO 2081.

C2 Pre-galvanized

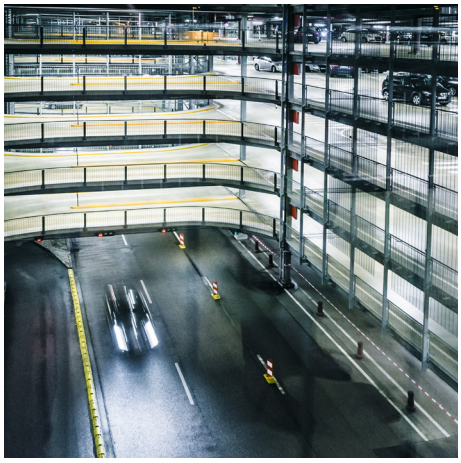
Partly outdoor environments: Industries, sports halls, warehouses, shops, rural outdoor areas etc.

- Low environmental corrosion.
- Non-heated areas with fluctuating levels of temperature and humidity.
- Few instances of condensation and low levels of airborn pollution.
- EN 10346

C3 Hot-dip galvanized

Indoor- and outdoor environments: Urban and light industrial areas, breweries, dairies, laundries etc.

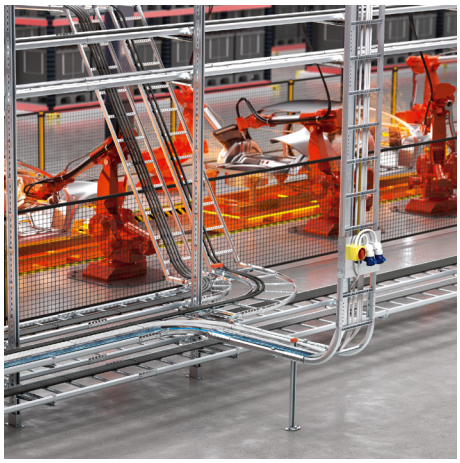
- Average environmental corrosion.
- Areas with average levels of humidity and some airborn pollution caused by production processes.
- Atmospheres containing some salt or average levels of airborne pollution.
- EN-ISO1461/EN 10346 (Z+)



C4 Hot-dip galvanized

Indoor- and outdoor environments: Chemical plants, industrial and coastal areas, swimming pools, farms, dockyards etc.

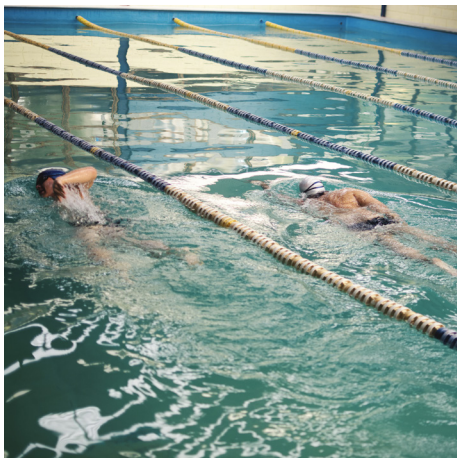
- High environmental corrosion.
- Areas with high levels of humidity and considerable airborn pollution.
- Atmospheres with average salt content or discernible levels of airborne pollution.
- EN-ISO1461



C5 Stainless steel AISI 304L

Indoor- and outdoor environments: Chemical and heavy industries, tunnels, swimming pools, dockyards etc.

- Very high (industrial) environmental corrosion.
- Areas with almost permanent condensation, large quantities of airborn pollution, high levels of humidity and aggressive atmospheres.
- EN 1.4301 acc. to EN 10088/AISI 304L



CX Stainless steel, AISI 316L

Indoor- and outdoor environments: Heavy industries, coastal and offshore areas, purifying plants etc.

- Very high (marine) environmental corrosion.
- Areas with almost permanent condensation and large quantities of airborn pollution. Atmospheres with high salt content.
- EN 1.4404 acc. to EN 10088/AISI 316L

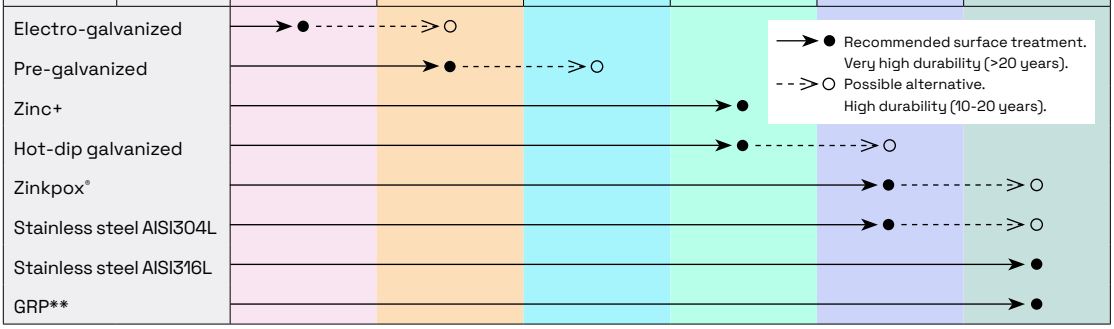
Technical information
Corrosion classes

The life expectancy of a cable support system is dependent on the environment in which it is placed. Therefore, it is important to establish the corrosive properties of an environment to ensure that the right treatment and the right material are chosen. Do not use components finish above of the corrosion class targeted. The table below shows various corrosion classes. As a guide, we have included the surface treatment recommended by Wibe Group for the different classes.

On the next page, we briefly outline the various surface treatments and materials.
As regards environmental corrosion, a steel design component can usually be assigned to one of the corrosion classes (C1 to CX) as shown in table A. Reference values for the average level of corrosion in steel and zinc are given in table B.
The corrosion classes comply with those stipulated in SS-EN ISO 12944-2.

Table A
Corrosion classes as stipulated by SS-EN ISO 12944-2 with atmospheric corrosion levels and examples of the environment in which they are most suitable for use.

Corrosion class		C1	C2	C3	C4	C5	CX
Environmental corrosion		Very low	Low	Average	High	Very high	Extremely high
Examples of typical environments in temperate climates (informative)	**Outdoors**	–	Atmospheres with low levels of airborne pollution. Rural areas.	Atmospheres containing some salt or average levels of air-borne pollution. Urban and light industrial areas. Areas affected by coastal conditions.	Atmospheres with average salt content or discernible levels of airborne pollution. Industrial and coastal areas.	Industrial areas with high humidity and aggressive atmosphere, and coastal areas with high salinity.	Offshore areas with high salinity, industrial areas with extreme humidity, and aggressive atmospheres, sub-tropical or tropical atmospheres.
	Indoors	Heated areas with arid atmosphere and insignificant quantities of pollutant, e.g. offices, shops, schools and hotels.	Non-heated areas with fluctuating levels of temperature and humidity. Few instances of condensation and low levels of airborne pollution, e.g. sports halls and warehouses.	Areas with average levels of humidity and some airborne pollution resulting from production processes, e.g. breweries, dairies, laundries.	Areas of high humidity and considerable airborne pollution as the result of production processes, e.g. chemical plants, swimming pools and dockyards.	Buildings with almost permanent condensation and with high pollution.	Industrial buildings with extreme humidity and aggressive atmosphere.



* Can be modified due to local environment and product life expectancy.
** See catalogue Mita Flex for GRP offer

Table B
Mass losses for zinc in various corrosion classes

	Mass loss per surface unit and thickness reduction (1 year of exposure)[1]	
Corrosion class	**Mass loss (g/m^2)**	**Thickness reduction (µm)**
C1	≤ 0.7	≤ 0.1
C2	> 0.7 to 5	> 0.1 to 0.7
C3	> 5 to 15	> 0.7 to 2.1
C4	> 15 to 30	> 2.1 to 4.2
C5	> 30 to 60	> 4.2 to 8.4
CX	> 60 to 180	> 8.4 to 25

[1] Corrosion speed is generally higher when the material is first exposed

Technical information
Surface treatments

Defem Mesh Trays - Technical and material data

Steel wire	
Specification:	C9D acc. to EN 10016-2 AISI 316L acc. to ASTM/EN 1.4404 acc. to EN 10088-3
Density:	7.7-7.85 kg/m^3
Surface: treatment:	• Electro-galvanized (>8 µm): EN ISO2081 • Hot-dip galvanised (>70 µm): EN ISO 1461 • Pickling (AISI 316L)
Steel sheet	
Specification:	S235 acc. to EN 10025-2 AISI 316L acc. to ASTM/EN 1.4404 acc. to EN ISO 1008-2
Density:	7.7-7.85 kg/m^3
Surface treatment:	• Electro-galvanized (>8 µm): EN ISO 2081 • Hot-dip galvanised (55-70µm): EN ISO 1461 • Pickling (Stainless steel)

Resistance to impact	20 J (IEC 61537)
Temperature range	From –40°C to +120°C

Electro-galvanized

Products are manufactured in accordance with ISO 2081. Such products are intended for use only in warm, dry areas with negligible pollutant levels.

Pre-galvanized

Products are manufactured from Z 275 pre-galvanized sheet steel in accordance with SS-EN 10346. Under normal conditions, surface sections created during cutting and drilling will repair themselves, providing superb anti-corrosion protection.

Hot-dip galvanized

Wibe Group has one of the most modern hot-dip galvanization plants in the Nordic countries. The hot-dip process is continuous, guaranteeing a high and even quality. The manufactured products are hot-dip galvanized in accordance with EN-ISO 1461 whilst nuts and bolts are hot-dip galvanized in accordance with SS-EN ISO 10684. This form of galvanization affords very good value-for-money anti-corrosion protection in atmospheres with a pH value of between 6 and 13. However, in acidic environments where pH levels fall below 6 and in alkaline environments where the pH value exceeds 13, the protective zinc layer breaks down relatively quickly. When cuts/perforations or other kind of operation that damage or remove coating in HDG items suitable to be installed in aggressive corrosion class, must be repaired with a zinc rich paint.

Stainless steel

Products manufactured in accordance with AISI 304 acc. to ASTM/1.4301 acc.to EN 10088-3 or AISI 316L acc. to ASTM/1.4404 acc. to EN 10088-3 are designed for use in highly aggressive environments, either indoors or out- doors, on industrial sites where there are high levels of potent airborne pollution such as in certain chemical industries, cellulose-related industries, refineries or artificial fertilizer factories, high humidity tunnels, etc. Stainless steel products are also ideal for use in environments where special hygiene requirements are in force, such as dairies, abattoirs, other food industries and pharmaceutical factories.

Stainless steel AISI 304L or AISI 316L

The deciding factor in choosing between stainless steel AISI 304L or AISI 316L is the aggressiveness of the environment in which it is to be used, and for this atmospheric chlorine content plays a significant role. Environments with a high chlorine content - coastal areas being a prime example - are aggressive and usually require the use of AISI 316L materials. When assessing the needs of factories, consideration should be given to the materials previously used to suspend equipment such as pipe tubing, and from this determine whether stainless steel AISI 304L or AISI 316L material is required.

Factors to consider when installing Stainless Steel Mesh trays

1. Transport/handling - Make sure that no iron objects come into contact with the stainless steel products.
2. Storing - Never store stainless steel products close to where iron products are machined, for example close to cutting and grinding operations.
3. Welding - Welding during installation should be avoided where possible. If welding must be performed, make sure that only methods suitable for stainless steel are used.
4. Tools - When cutting or grinding, always use cutting wheels and grinding tools which are free from iron. Do not use tools that have been previously used for cutting or grinding products containing iron. When drilling, use an HSS-drill. To maximize the useful life of the drill, employ a cooling fluid during drilling. When installing, conven- tional assembly tools can be used. However, when using a nut tightener, ensure that the thread is first lubricated to prevent jamming.

It is not recommended to mix untreated or galvanized products with stainless steel, in case of doubt contact Wibe Group.

5. Measures - If a blue annealing appears when cutting, grinding or drilling, remove it with pickling paste, making sure that the paste is then carefully washed away with water. If selective corrosion appears it can be removed by:

a) Washing away with water (high-pressure if possible).
b) Polishing with a cleaning cloth or a fine emery paper (wet or dry) and washing with water.
c) Grinding with a fine-grained wheel and washing with water.
d) Pickling with pickling paste, making sure that the pickling paste is then carefully washed away with water.

6. When using pickling paste or similar products, always study the safety code for the product prior to use.

Technical information
Potential balancing

Electrical continuity and earthing
The standard EN 61537 establishes that for trays with electrical continuity characteristics (metal), this continuity should be guaranteed by means of an equipotential connection and one or several connections to earth in accordance with the use of the tray system.

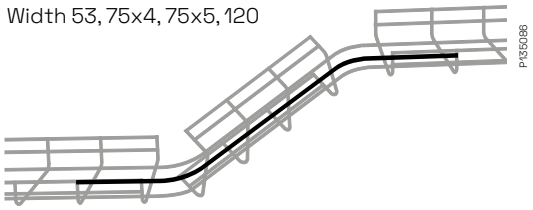
The impedance must not exceed:
- 50 mΩ through the joint.
- 5 mΩ x metre of tray.

The metre length and joining systems for the different sections that Wibe Group has, as well as the joints of the different accessories supplied, comply with the electrical continuity test established in the aforementioned standard, guaranteeing the impedance established. To guarantee these impedance values tightening torque values of no less than 5 Nm are recommended, always using the joins recommended for each tray type, and taking sizes into account.

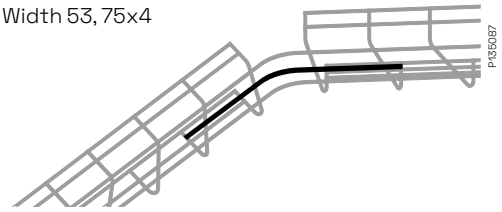
To guarantee a safe installation, Wibe Group recommends a proper earthing of all the elements that make up the system (sections and accessories), using the accessories designed specifically for this purpose. Ensure that all connections are well fixed and proper values are matching according to local legislation

Electro-galvanized and Hot-dip galvanized
The applications below are approved only in combination with copper cable.

Width 53, 75x4, 75x5, 120



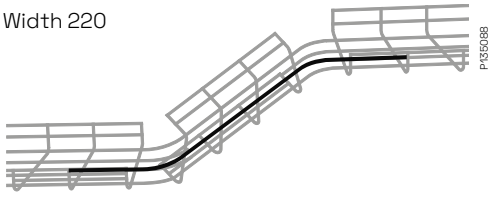
Width 53, 75x4



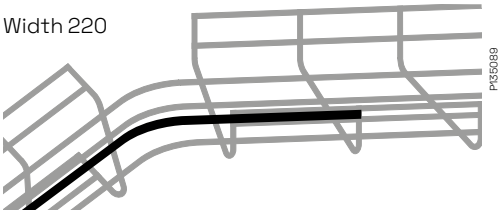
Stainless AISI 316L
Mesh Trays in the dimensions 53, 75x4, 75x5 and 120 shall always be equipped with copper cable.

The applications below are approved only in combination with copper cable.

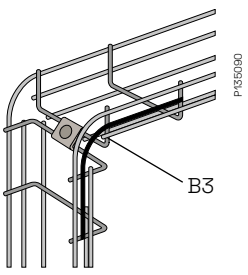
Width 220



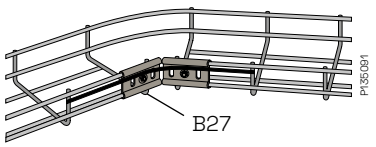
Width 220

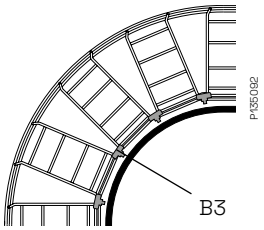


Width 220, 320



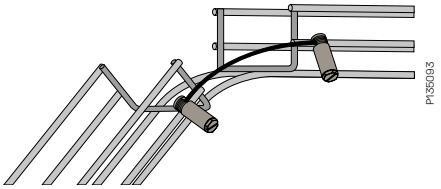
Width 220, 320, 422, 522, 622





Technical information
Potential balancing

To meet the demands for conductivity in these cases, a copper cable dimensioned according to local regulations has to be installed as shown in the adjoining drawing. End terminals at the cable are recommended in environments where there is a risk of corrosion.



Article/Material	Art. no.
Marking clip B44, Equipotential bonding Flame resistant plastics	11 494 29

Article/Material	Art. no.	Max cable area mm²
Earth Connection Clamp B18 Brass/Nickel anodized	11 491 80	25

Measured values on real installations

Resistance/Conductivity in mΩ/5 m (including Joining fitting).

A Mesh Tray	B Joints	Electro galv.		Hot Dip galvanized	
		A Tray	B Joints	A Tray	B Joints
		(mΩ/m)	(mΩ)/set of joint	(mΩ/m)	(mΩ)/set of joint
		5 mΩ/m**	50 mΩ/pcs**	5 mΩ/m**	50 mΩ/pcs**
622/110	2xB52 + 3 set B2	0.71*	0.2*	0.9*	0.2*
622/60	2xB52 + 3 set B2				
522/110	2xB52 + 3 set B2				
522/60	2xB52 + 3 set B2				
422/110	2xB52 + 2 set B2				
422/60	2xB52 + 2 set B2	0.71	0.2	0.9	0.2
320/110	2xB52 + 2 set B2	0.88*	0.24*	1.44*	0.56*
320/60	2xB52 + 2 set B2	0.88	0.24		
220/110	2xB52	1.14*	0.36		
220/60	2xB52	1.14	0.29	1.44	
120/110	2xB52	2.27*	0.72*	0.4*	
120/60	2xB52	2.27		0.4	0.56
75x5/55	2xB52	2.55		2.53*	0.56*
75x4/55	2xB52	2.67	0.72	2.53	0.56
53/45	2xB52	2.65	0.49	2.6	0.52

*Size not tested, assuming same value than previous narrower tray.
Obtained Impedance values from test report: SP_F205777.

For products outside of table, please contact Technical Department.

**Limit value according to standard.

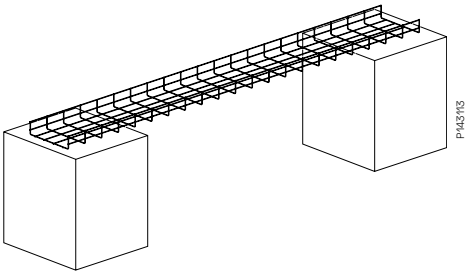
Technical information
Electro-magnetic compatibility EMC

Electromagnetic Compatibility

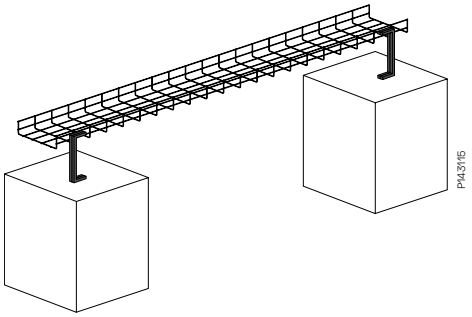
Wibe Group has performed measurements at EMC Services in Gothenburg regarding EMC requirements, report RE-10273-17181/TR-10024-16723.
The results show that the shielding performance of both incoming and emitted fields is good concerning Defem mesh trays.

When correctly installed Defem mesh tray products the equipotential bounding is guaranteed.

Recommended installation examples

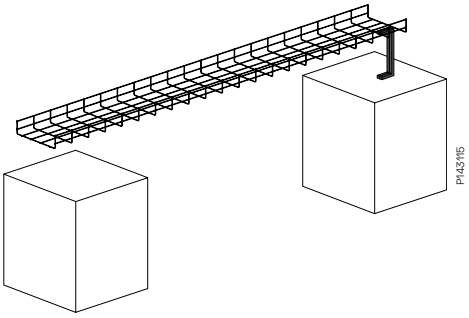


Metal against metal connection
- the ultimate installation

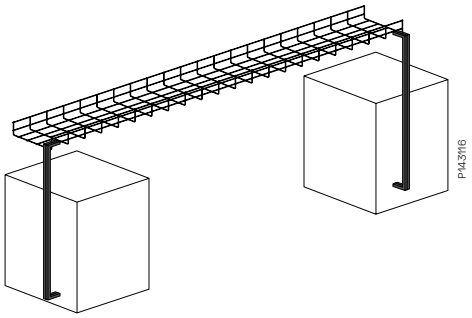


Short double connection
- realistic installation

Not recommended installation examples



Single connection
- poor installation



Long double connection
- in best case EMC neutral

Technical information
Quality

The Defem mesh trays meet the toughest product standards:
IEC 61537
DIN 4102-12 for fire resistance E30-E90
NEMA VE 1/CSA 22.2

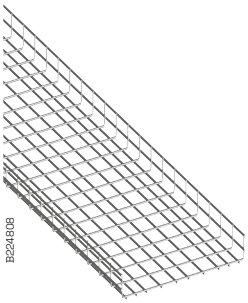
Tests and certificates	Test made by
Measurements of resistance value from different combinations of Defem Mesh tray and Defem U-bar. Report no. LNKM 036 99.	Telia, Sweden
Tests with Category 5 and 6 cables, in room temperature and in a climatic room with different loads, up to 43 layers, about 250 mm. Report no. Danak-19J0698/ Delta K311126.	Delta Institute, Denmark
EMC characteristics. Report nº TR-10024-16723.	EMC Services Elmiljöteknik AB, Sweden
EMC Performance- Shielding test Report nº RE-10273-17181.	EMC Services Elmiljöteknik AB, Sweden
Tests with fibre patch cord with 2 mm thickness. In room temperature with different loads corresponding to layers of patch cord up to 300 mm. Report nº MHN06514B.	Schenker/Telia Sonera, Sweden
Test Concerning fire resistance DIN 4102-12, E30-E60-E90, ABP P-MPA-E-13-003.	MPA NRW, Germany
Test Concerning fire resistance according to EN 1363-1. Report nº Zp-05-01.02.003.	Pavus, Czech Rep.
Defem Mesh tray as conductor of equipotential bonding according to IEC 61537,11:1. Electrical Continuity: SP F205777 Vibration: SP 94 F, 20903	SP, Sweden
Defem Mesh tray is tested according to Underwriters Laboratories - UL E212854.	UL, USA, Canada
Defem Mesh tray is approved by Det Norske Veritas (DNV) for offshore and ship-yard use, TAE00000MR.	DNV, Norway

Management system - Quality and Environment
Wibe Group has a third-party certified management system for quality and environment in accordance with OHSAS ISO 50001:2011, ISO 45001:2018, ISO 9001:2015 and ISO 14001:2015.

CE-marking of products
The CE-marking of products is placed on the product or on the packing according to “Declaration of Conformity” (DOC), applicable to Wibe Group Cable Support System.

Low voltage directive 2014/35/EU
Wibe Group fulfills the demands according to the harmonized standard EN 61537.

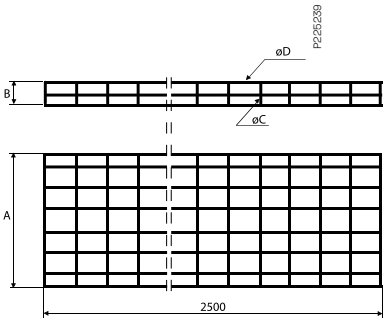
Technical information
Loading capacity



Safe working-load

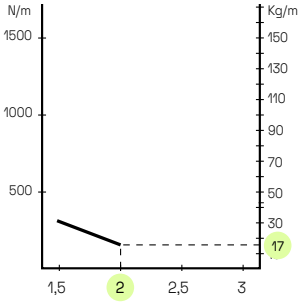
The safe working-load is determined according to the standard IEC 61537 by using the test type 2. See diagrams below.

- The load is uniformly distributed along the mesh trays
- Free location of joints between supports
- The safety working-load value is given when: – the longitudinal deflection is ≤1% of the span between brackets – the transversal deflection is ≤5% of the width of the mesh tray.

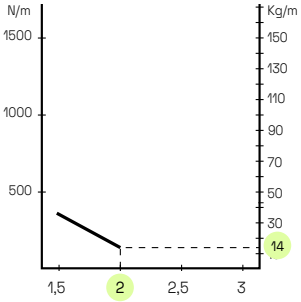


Type	A mm	B mm	C mm	D mm	E mm
Mesh tray 53/45	53	45	4	4	37
Mesh tray 75/55	75	55	4	4	59
Mesh tray 75/55	75	55	5	5	55
Mesh tray 120/60	120	60	5	5	100
Mesh tray 220/60	220	60	5	5	200
Mesh tray 320/60	320	60	5	5	300
Mesh tray 422/60	422	60	5	6	400
Mesh tray 522/60	522	60	5	6	500
Mesh tray 622/60	622	60	5	6	600

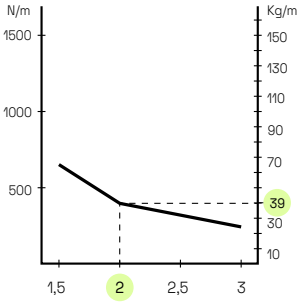
53/45



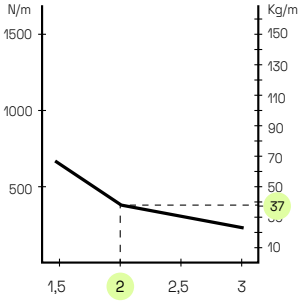
75x4/55



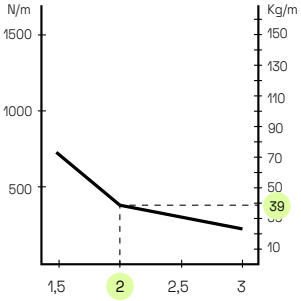
75x5/55



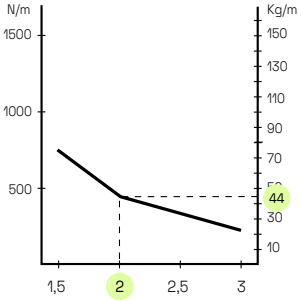
120/60



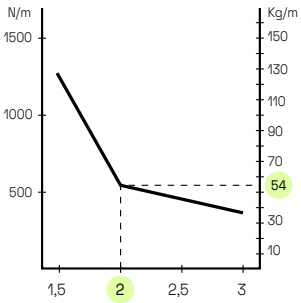
220/60



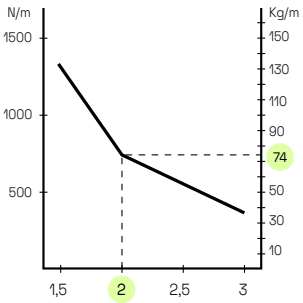
320/60



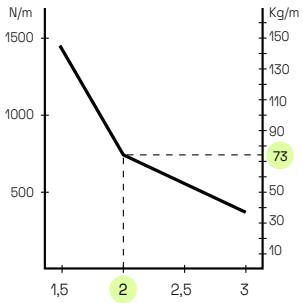
422/60



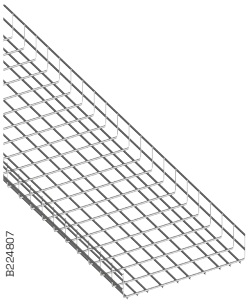
522/60



622/60



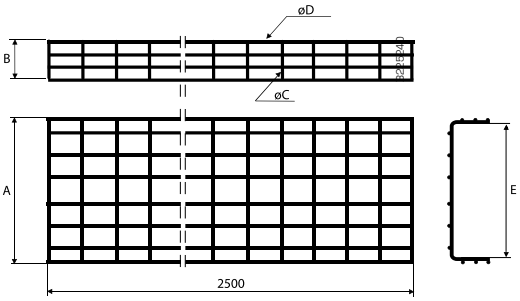
Technical information
Loading capacity



Safe working-load

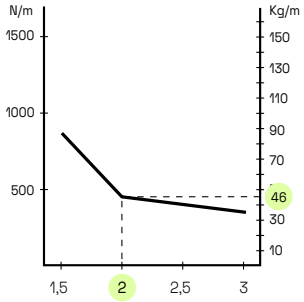
The safe working-load is determined according to the standard IEC 61537 by using the test type 2. See diagrams below.

- The load is uniformly distributed along the mesh trays
- Free location of joints between supports
- The safety working-load value is given when: – the longitudinal deflection is ≤1% of the span between brackets – the transversal deflection is ≤5% of the width of the mesh tray.

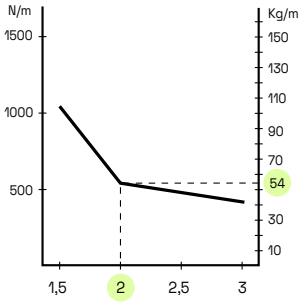


Type	A mm	B mm	C mm	D mm	E mm
Mesh tray 120/110	120	110	5	5	100
Mesh tray 220/110	220	110	5	5	200
Mesh tray 320/110	320	110	5	5	300
Mesh tray 422/110	422	110	5	6	400
Mesh tray 522/110	522	110	5	6	500
Mesh tray 622/110	622	110	5	6	600

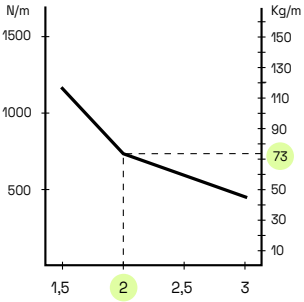
120/110



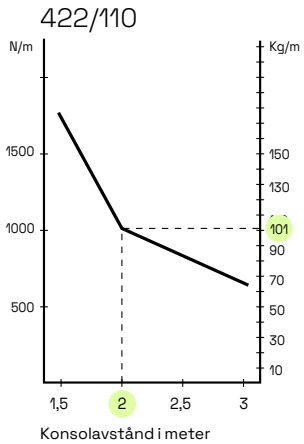
220/110



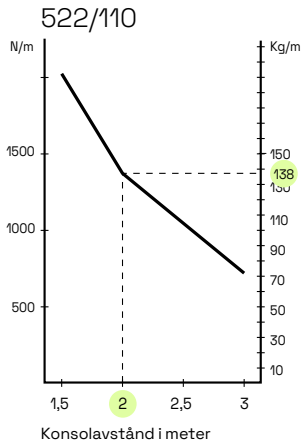
320/110



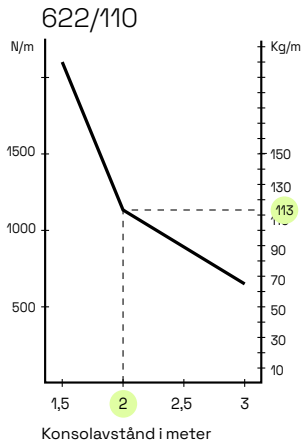
422/110



522/110



622/110

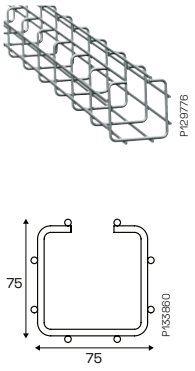


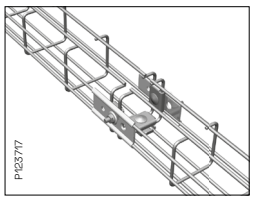
Technical information
Use and installation

C-Mesh tray

For use where mounting with long support distances (up to 4 metres) are needed.

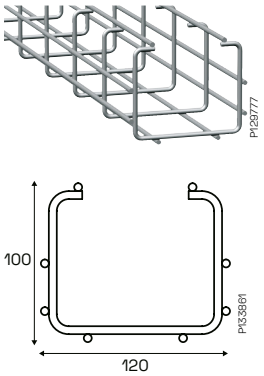
C-Mesh tray 75x75

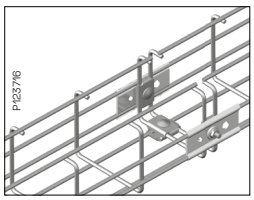




Joining of two C-Mesh trays 75x75.

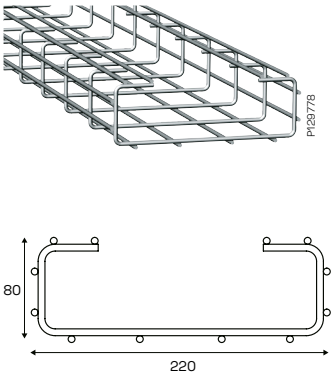
C-Mesh tray 120x100

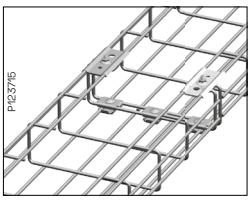




Joining of two C-Mesh trays 120x100.

C-Mesh tray 220x80



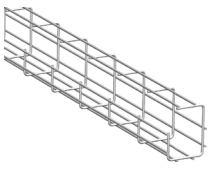


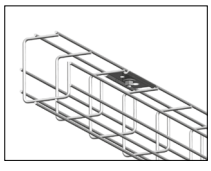
Joining of two C-Mesh trays 220x80.

G-Mesh tray

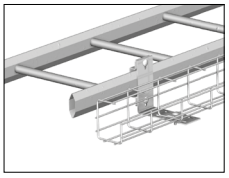
For installation in ceilings, onto walls, under desks and mounting on cable ladders.

G-Mesh tray 75x95



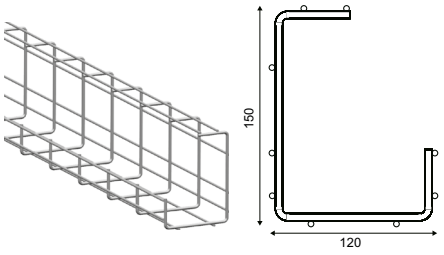


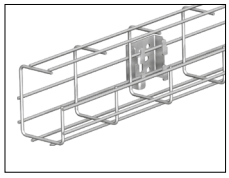
For mounting in ceilings, under desks etc. Fitting B1 is used.



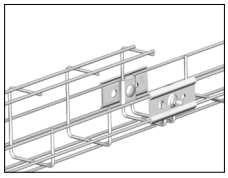
G-Mesh tray mounted on cable ladder, Combi fitting B21 90° is used.

G-Mesh tray 120x150





Bracket B4 can also be used for mounting onto floor, wall or ceiling.

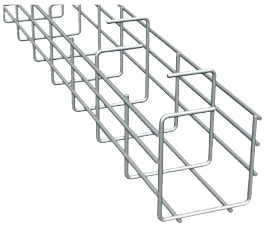


Fittings B1 and B2 are used for joining the mesh trays. Example of jointing G-mesh tray with standard mesh tray

Technical information
Use and installation

Z-Mesh tray 75x75

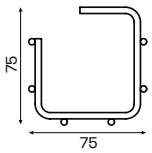
Z-Mesh tray 120x80

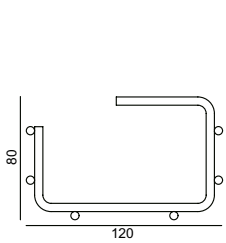


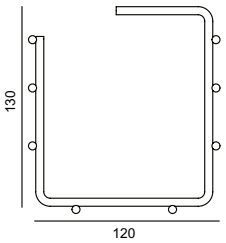
Z-Mesh tray 120x130

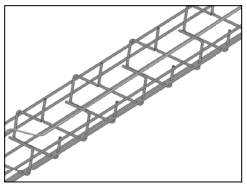
Z-Mesh tray

For environments where regular and thorough cleaning is required.

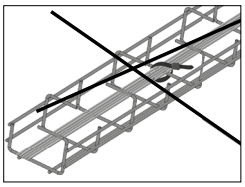




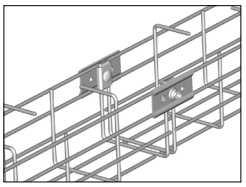




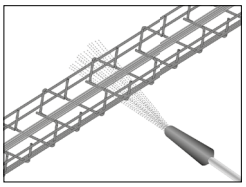
The cable is routed in a zigzag pattern inside the Z-Mesh tray.



No cable ties are needed, not even in vertically mounted trays.

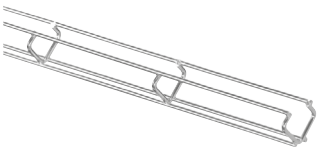


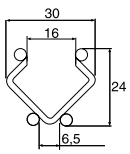
Fittings B1 and B2 are used for joining of Z-Mesh trays.

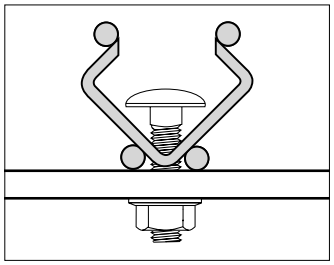


The non-bundled cables will stay in place during cleaning.

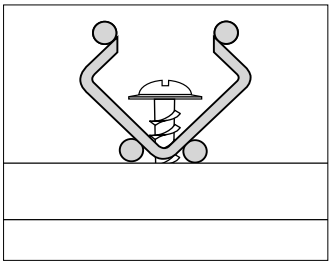
Mini Mesh B30-D



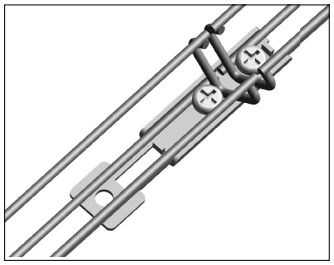




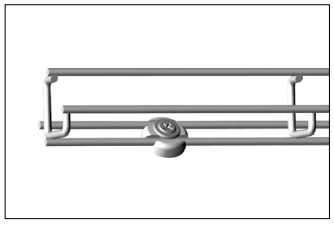
Can be mounted with Bolt and Nut B13.



Can be mounted with suitable screw for wood, concrete etc.



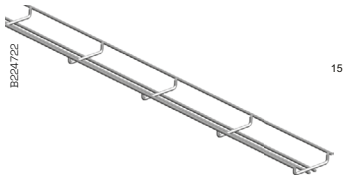
Two Mini Mesh B30-D joined with Mounting coupler B20.

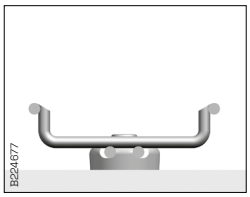


B30-D mounted onto Mounting spacer B22.

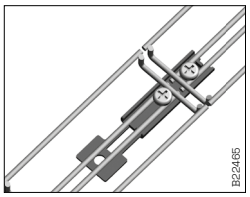
Technical information
Use and installation

Mini Mesh B30-U



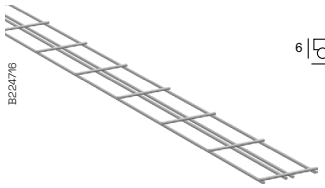


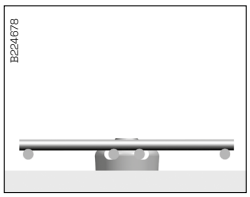
B30-U mounted onto Mounting spacer B22.



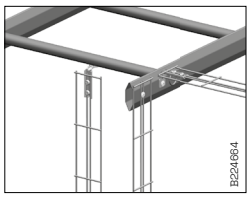
Two Mini Mesh B30-U joined with Mounting coupler B20.

Mini Mesh B30-I





B30-I mounted onto Mounting spacer B22.

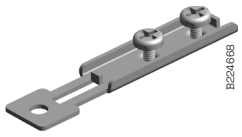


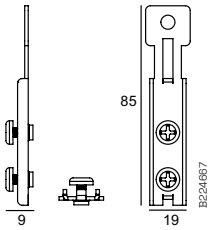
B30-I mounted onto cable ladder.

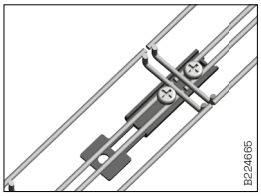
Technical information
Use and installation

Mounting coupler B20

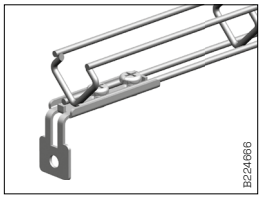
Used for joining and mounting of Mini Mesh Mesh trays.



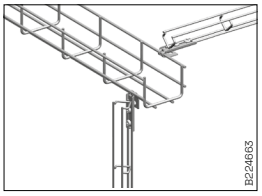


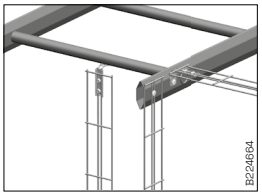


Used for joining of Mini Mesh Trays.



Can be used for mounting of Mini Mesh trays to ceiling, floor and onto wall.

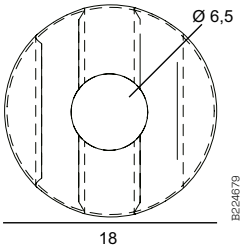


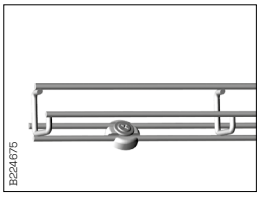


The mounting coupler can be used for vertical and horizontal mounting of Mini Mesh trays onto mesh trays and cable ladders.

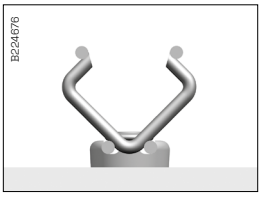
Mounting spacer B22

Plastic Spacer that fits all Mini Mesh dimensions.
Easy to mount, just snap the spacer onto the bottom wires.

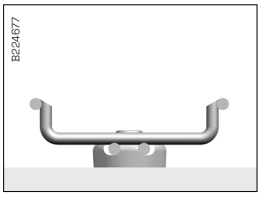




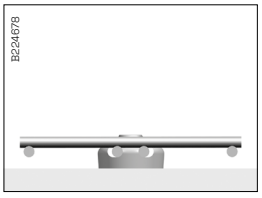
Front view of Mounting Spacer B22 attached to Mini Mesh.



Side view of Mounting Spacer. B22 attached to Mini Mesh-D.



Side view of Mounting Spacer. B22 attached to Mini Mesh-U.



Side view of Mounting Spacer. B22 attached to Mini Mesh-I.

Technical information
Use and installation

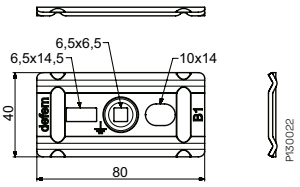
Recommended couplers

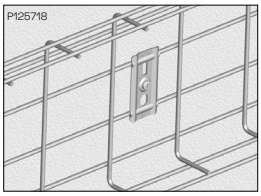
For joining Mesh trays

Mesh tray size	Side joining	Central joining
53 - 220	2xB1 + 2xB2 + 2xB13 or 2xB52	Not required
320	2xB1 + 2xB2 + 2xB13 or 2xB52	2xB2 + 1xB13
422	2xB1 + 2xB2 + 2xB13 or 2xB52	4xB2 + 2xB13
522 - 622	2xB1 + 2xB2 + 2xB13 or 2xB52	6xB2 + 3xB13

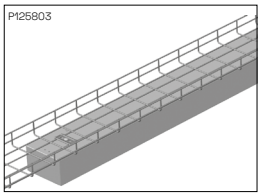
Fitting B1

Delivered without bolt and nut.

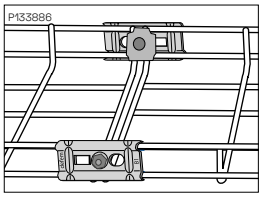




Fitting B1 can be used as a wall bracket.



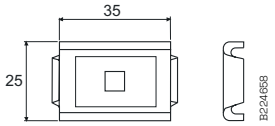
Fitting B1 can be mounted over the centre wires as carrier of lighting fittings.

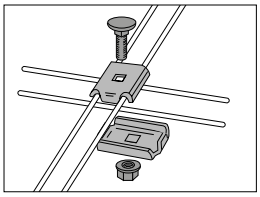


Mesh tray 53 to 220 is joined with:
2 pcs of Fitting B1
2 pcs of Fitting B2
2 pcs of Bolt and Nut B13

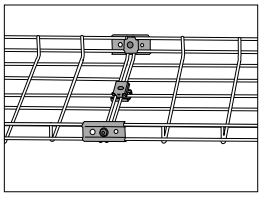
Fitting B2

Delivered without bolt and nut.

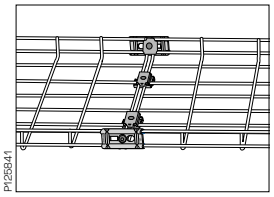




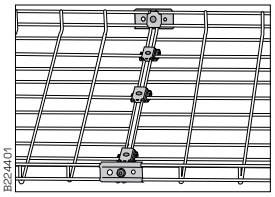
For joining in bottom of tray:
2 pcs of Fitting B2
1 pc of Bolt and Nut B13.



Mesh tray 320 is joined with
2 pcs of Fitting B1
4 pcs of Fitting B2
3 pcs of Bolt and Nut B13.

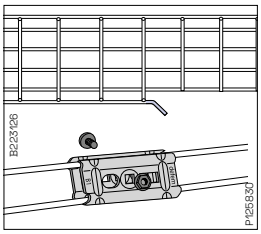


Mesh tray 422 is joined with
2 pcs of Fitting B1
6 pcs of Fitting B2
4 pcs of Bolt and Nut B13

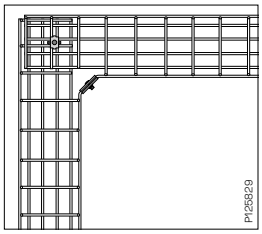


Mesh tray 522 and 622 is joined with
2 pcs of Fitting B1
8 pcs of Fitting B2
5 pcs of Bolt and Nut B13.

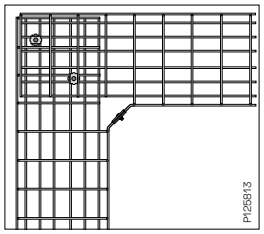
90° angling with Fitting B1 och B2



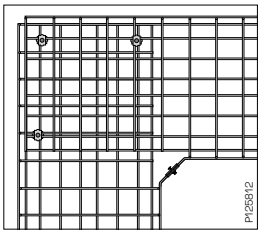
To obtain a softer inner angle, 2 Fittings B1 can be mounted with Bolt and Nut B13.



Mesh tray 53 to 220 are joined with:
2 pcs of Fitting B1
2 pcs of Fitting B2
2 pcs of Bolt and Nut B13



Mesh tray 320 and 422 are joined with:
2 pcs of Fitting B1
4 pcs of Fitting B2
3 pcs of Bolt and Nut B13

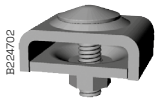


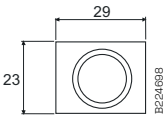
Mesh tray 522 and 622 are joined with:
2 pcs of Fitting B1
6 pcs of Fitting B2
4 pcs of Bolt and Nut B13

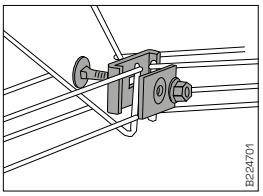
Technical information
Use and installation

Fitting B3

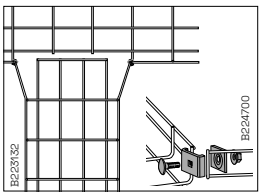
Delivered with bolt and nut.



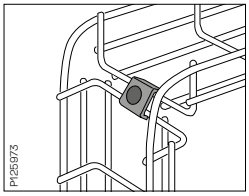




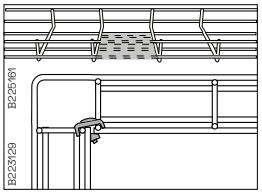
Horizontal bends are joined with Fitting B3.



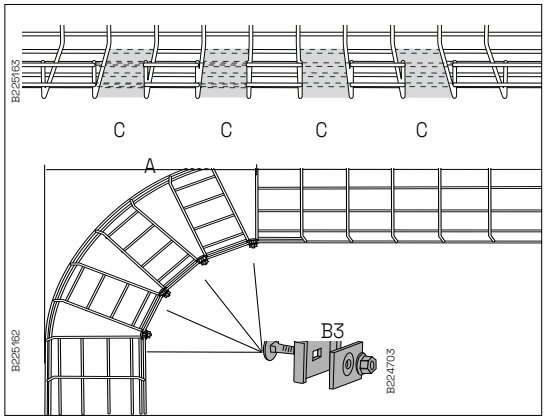
Four way and tees are joined with Fitting B3.



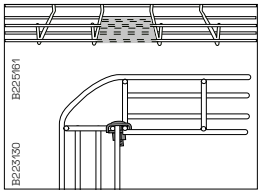
Vertical bends are joined with one or more Fitting B3, depending on mesh tray width.



Mesh tray 53 is shaped to straight 90° angle by cutting out marked wires and joined with Fitting B3.



Mesh tray 120-622 is shaped to straight 90 ° angle by cutting out every other marked mesh tray section and joined with Fitting B3 according to table below.



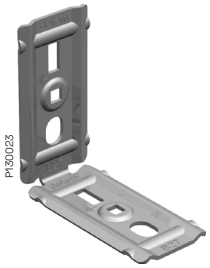
Mesh tray 53 is shaped to straight 90° angle by cutting out marked wires and joined with Fitting B3.

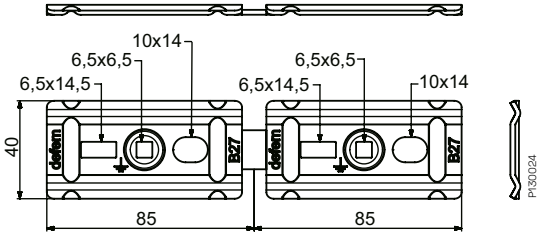
Mesh tray	A mm	C No. of cut-out sections	Fitting B3 No.
120	210	2	2
220	470	4	4
320	720	6	6
422	960	8	8
522	1210	10	10
622	1475	12	12

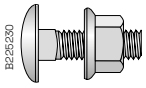
Technical information
Use and installation

Angled fitting B27

For tees and mountings to wall, ceiling and floor etc.

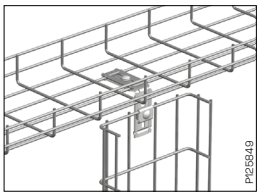




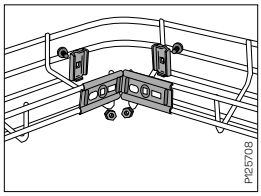


Bolt and nut B13

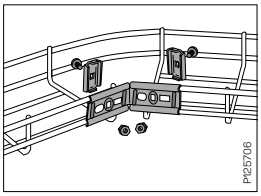
M6x25. Tensi-Lock and Flange Nut M6.



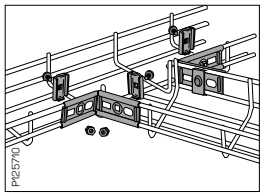
For vertical branching under mesh trays, all widths:
1 pce of Angled fitting B27
1 pce of Fitting B1
1 pce of Fitting B2
2 pcs of Bolt and Nut B13



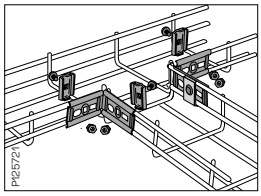
To join the bend:
1 pce of Angled fitting B27
2 pcs of Fitting B2
2 pcs of Bolt and Nut B13.



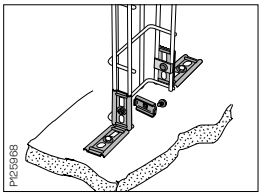
The bend can be adjusted by shaping the Angled fitting B27 to the required angle.



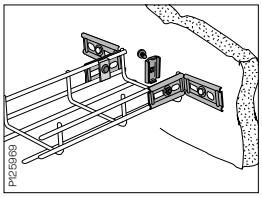
Tee with required angle is created with:
2 pcs of Angled fitting B27
4 pcs of Fitting B2
4 pcs of Bolt and Nut B13.



90° tee is created with:
2 pcs of Angled fitting B27
4 pcs of Fitting B2
4 pcs of Bolt and Nut B13.



Mounting to floor/ceiling is created with:
2 pcs of Angled fitting B27
2 pcs of Fitting B2
2 pcs of Bolt and Nut B13.

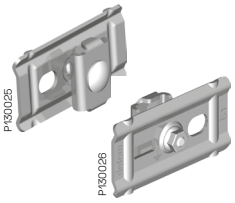


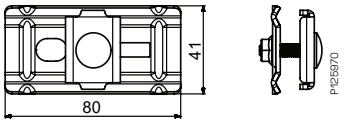
Mounting to wall is created with:
2 pcs of Angled fitting B27
2 pcs of Fitting B2
2 pcs of Bolt and Nut B13.

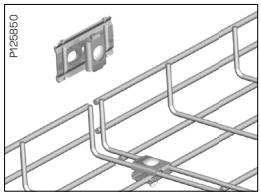
Joining set B52

Pre-assembled joining fitting (Fittings B1, B2, Bolt and Nut B13).
Used for joining of the side sections.

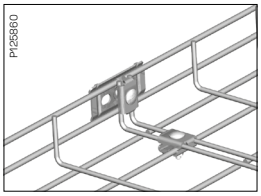
Note! For joining of 320 mm trays and wider, extra Fittings B2 need to be mounted with Bolt and Nut B13 in the bottom of the trays.







Mount Joining set B52 on the side section.

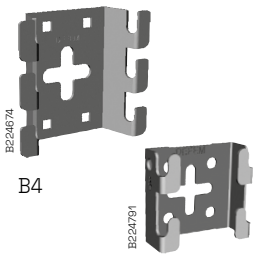


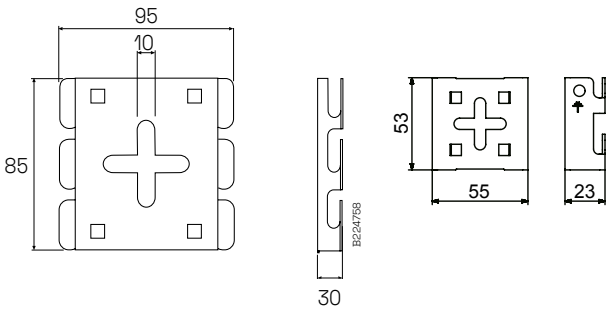
Tighten the bolt and the joining is finished.

Technical information
Use and installation

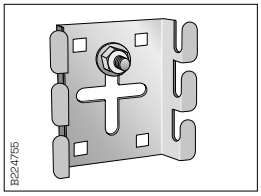
Bracket B4/B4 mini

For mounting of Mesh trays 53-622 onto wall and floor.

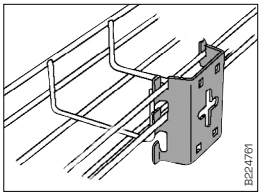




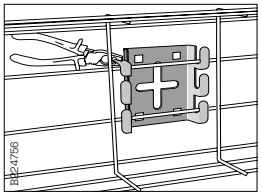
B4



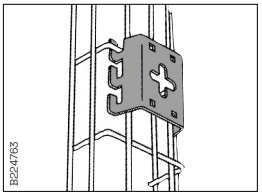
Mounted to wall/ceiling/ floor with Expansion bolt in middle hole or screws in corner holes.



The side wires of the tray are easily hooked onto the grips of the bracket.

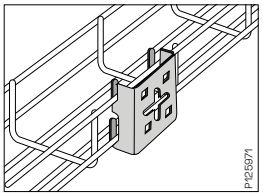


For increased stability, the B4 grips can be closed around the wires.

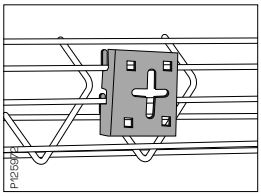


The mesh tray can also be mounted vertically.

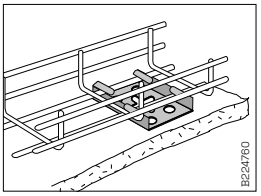
B4 Mini



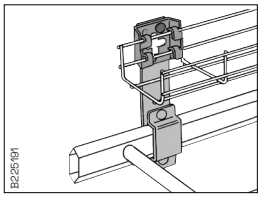
For horizontal mounting with bottom or side of tray onto the bracket grips.



The mesh tray can also be mounted with 45° angle.



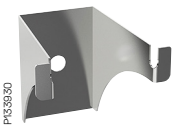
The Mesh tray can also be mounted to floor.



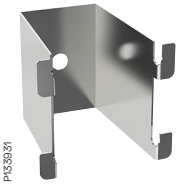
Mesh trays are mounted onto Combi Fitting B21 with Bracket B4 or B4 Mini.

Bracket B4 100/2, B4 100/4, B4 Mini 100

Brackets to be used for stable and secure mounting of mesh trays on walls and pendants. Intended for extended vertical or horizontal installation in hygienic areas where a distance is needed for cleaning purposes. Distance to the supporting surface 100 mm. Material: Stainless steel AISI316L.



B4 100/2 is used for Mesh tray 422-622 mm

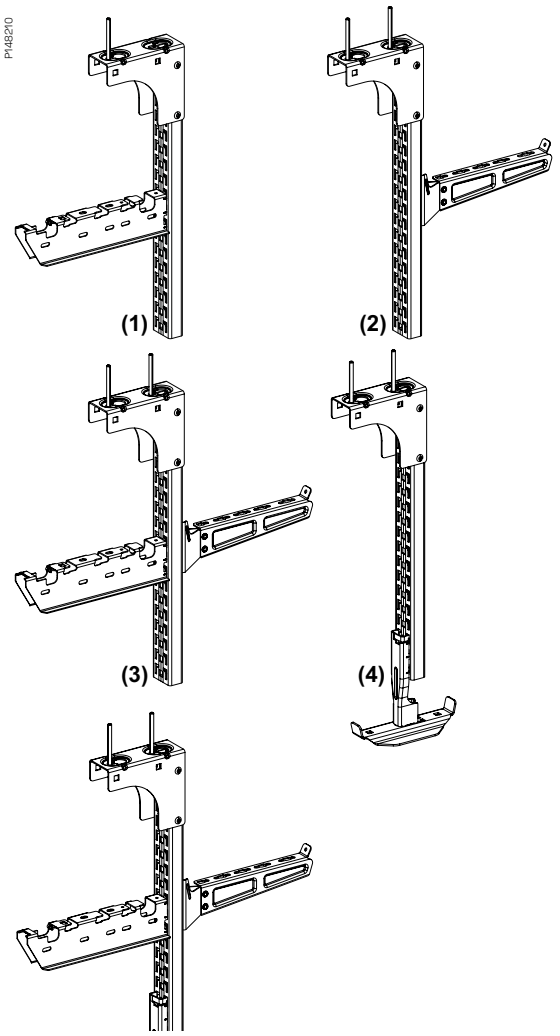


B4 100/4 is used for Mesh tray 220-320 mm

B4 Mini 100 is used for Mesh tray 53-120 mm

Bracket B4 100/2, used for the mounting of mesh tray widths 422-622 mm, are to be installed in pairs in two lines for heavy mesh tray loadings.

Technical information
Use and installation - CLX³ Click suspension



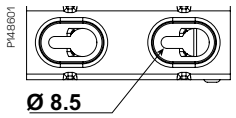
CLX³ General information

Standards
CLX³ installation system is tested and following the classification according to the IEC 61537.

Usage of gloves
According to IEC 61537 it is always recommended to use protective gloves when handling and manipulating cable support systems.

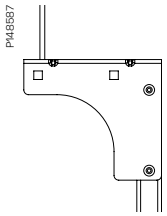
Handling and storage
- Store in dry and covered places.
- Avoid moisture and pollutants.
- Do not remove the packing until installation.
- Take care when storing and handling so that the CLX³ components are well protected from damage.

CLX³ Pendant loading configurations
CLX³ pendant is primarily designed for installation of the CLX³ support system, but can also be used for T-bolt installation.
The system can be installed in different configurations:
- Click direction **(1)**: the cantilever and the ceiling plate are in the same direction
- T-bolt direction **(2)**: a cantilever is fixed with a T-bolt to the rail, in the opposite direction of the ceiling plate
- T installation **(3)**: combination of the first 2 installations
- Central suspension **(4)**: the pendant is completed by a central suspension bracket
- T and central suspension **(5)**.

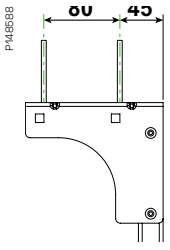


Fixation to the ceiling
Keyhole design
Keyhole design is facilitating easy mounting of the pendant to the ceiling by allowing the bolts to be pre-fixed before finally placing the pendant and tightening the bolts.

For concrete ceiling, use bolts type IMT38051.
For other bolts where bolthead is < 16 mm use washer u 16 mm.



One bolt fixation
For click direction installation of CLX³ Cantilever arm **(1)**, use a single bolt, in the outer hole position on the ceiling plate.



Two bolt fixation
For T-bolt suspension, central suspension, T installation and T and central suspension installation **(2)**, **(3)**, **(4)**, **(5)**, always fix the ceiling plate to the ceiling using 2 bolts.

Use the angle adaptor when the ceiling is not horizontal to level out the suspended pendant.

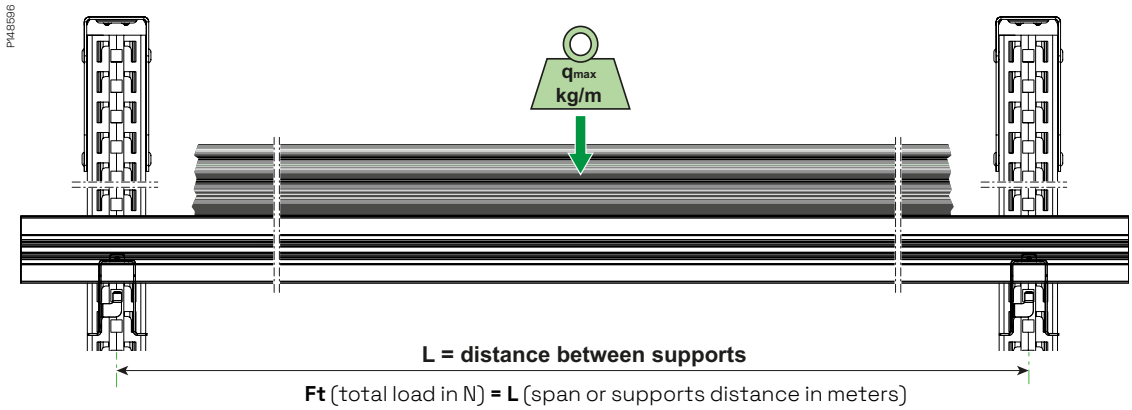
Technical information
Use and installation - CLX³ Click suspension

CLX³ Pendant load calculation

To verify that the load applied to each pendant is within performance, it is necessary to calculate and consolidate the total **tensile load force** and the total **moment-force** on each pendant and for each cantilever and after that compare the calculated values with the defined loading limitations to ensure a safe installation.

Total tensile force Ft calculation method

This is calculated as the sum of all forces applied to the pendant from the weight of cables on the length material.



Ft (total load in N) **= L** (span or supports distance in meters) x **qmax** (load in kg/m) **x 10**.

In case of several layers are installed on the pendant then the sum of the Ft tensile load from all layers shall be calculated.

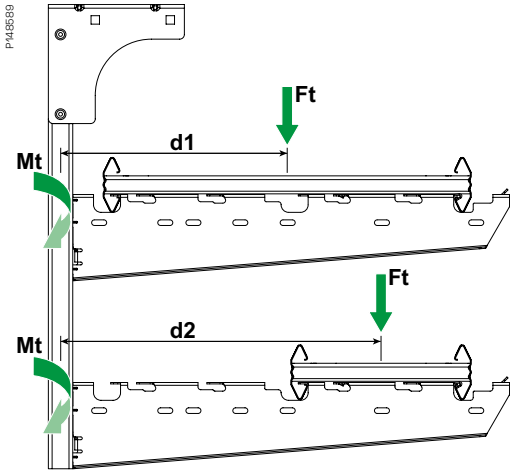
Total momentum force Mt calculation method

This is calculated as the sum of all the torsion forces applied to the pendant from the weight of cables on the length material and the offset distance created by the cantilever arm.

Mt (momentum in N.m) **= Ft** (N) x **d** (distance between axis center and point load in meters)

"**d**" depends of the position of the length material on the cantilever arm.

The distance **d** can be different depending on installation method.
When the length material is installed on the full width of the cantilever, use **d1**.
For length material that are installed at the outer end of the arm, use **d2**.



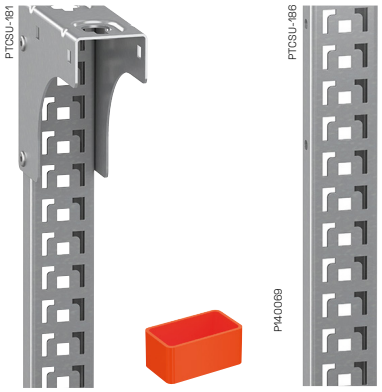
Model	PG	d1 (m)	d2 (m)
CLX³ cantilever arm 150	CSU795872	0.110	NA
CLX³ cantilever arm 200	CSU795873	0.140	
CLX³ cantilever arm 300	CSU795874	0.190	
CLX³ cantilever arm 400	CSU795649	0.240	0.340
CLX³ cantilever arm 500	CSU795650	0.290	0.440
CLX³ cantilever arm 600	CSU795651	0.340	0.490

In case of several layers are installed on the pendant then the sum of the Mt momentum force from all layers shall be calculated.

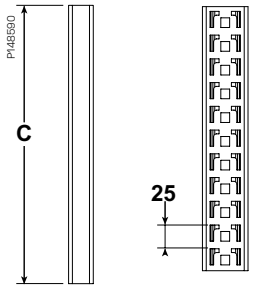
Ensure that the installation is designed so that ⍰Mt and ⍰Ft are under the limits.

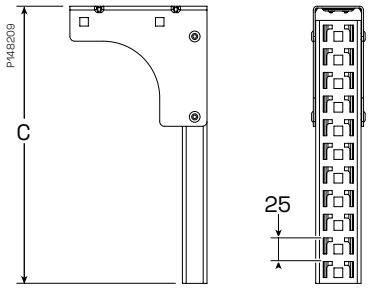
Technical information

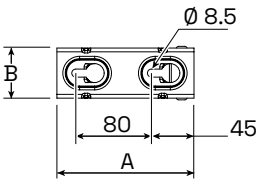
Use and installation - CLX³ Click suspension



End Plug 28E







CLX³ Pendant 24/48

Vertical piece with a perforated pattern to be used for installation of CLX³ cantilever arms or CLX³ central suspension adapter. The open side of the rail can be used for installation of cantilever arms and brackets together with T-bolt. Can be joined to CLX³ Rail 24/48 with pendant joint 2FJ.

Model	PG	High (mm) A	Width (mm) B	Length (mm) C
CLX³ pendant				
CLX³ pendant 24/48 300 mm PG	CSU795632	145	53	295
CLX³ pendant 24/48 400 mm PG	CSU795633			395
CLX³ pendant 24/48 500 mm PG	CSU795634			495
CLX³ pendant 24/48 700 mm PG	CSU795635			695
CLX³ pendant 24/48 1000 mm PG	CSU795636			995
CLX³ pendant 24/48 1500 mm PG	CSU795638			1495
CLX³ rail				
CLX³ rail 24/48 300 mm PG	CSU795640	26	48	280
CLX³ rail 24/48 1000 mm PG	CSU795641			980
CLX³ rail 24/48 3000 mm PG	CSU795637			2980

Pendants Safe Working Load (SWL)

SWL for bending moment of the pendant Mt.

Model	PG	Moment (N.m) Click side	Deflection (mm)
CLX³ pendant 24/48 300 mm PG	CSU795632	235	2
CLX³ pendant 24/48 400 mm PG	CSU795633		4
CLX³ pendant 24/48 500 mm PG	CSU795634		7
CLX³ pendant 24/48 700 mm PG	CSU795635		15
CLX³ pendant 24/48 1000 mm PG	CSU795636		30
CLX³ pendant 24/48 1500 mm PG	CSU795638	200	30

Tested according to IEC 61537 standard.

SWL bending moment for Adjustable ceiling plate Mt.

Model	PG	Moment (N.m) Click side
CLX³ adjustable ceiling plate	CSU795639	235

SWL pendant tensile strength Ft.

Model	PG	Tensile load SWL (N) 1 bolt CLX³	Tensile load SWL (N) 2 bolts CLX³
CLX³ pendant 24/48 300 mm PG	CSU795632	2000	5000
CLX³ pendant 24/48 400 mm PG	CSU795633		
CLX³ pendant 24/48 500 mm PG	CSU795634		
CLX³ pendant 24/48 700 mm PG	CSU795635		
CLX³ pendant 24/48 1000 mm PG	CSU795636		
CLX³ pendant 24/48 1500 mm PG	CSU795638		

Technical information
Use and installation - CLX³ Click suspension

CLX³ Pendant limits, torque and deflection

In the diagram below it is possible to check if **Mt** is below the momentum limitation of the pendant (end of line). It is also possible to see the deflection on the pendant at max **Mt** and all values below.

Calculation example

For a cantilever size 600, full size ladder installation, 3 m span, load of 23 kg/m on a 1000 mm pendant.

1) **F**: 3 m (span) x 23 kg/m (load) x10 = 690 N will be the load for each pendant system.
2) **Mt**: 690 (N) x 0.34 (m) = 234 N.m.

F = 690 N ≤ 2000 N and **Mt** = 234 Nm ≤ 235 N.m.

3) Drawing of the lines on the graph: for 234 N.m, the deflexion on the pendant is **30 mm**.

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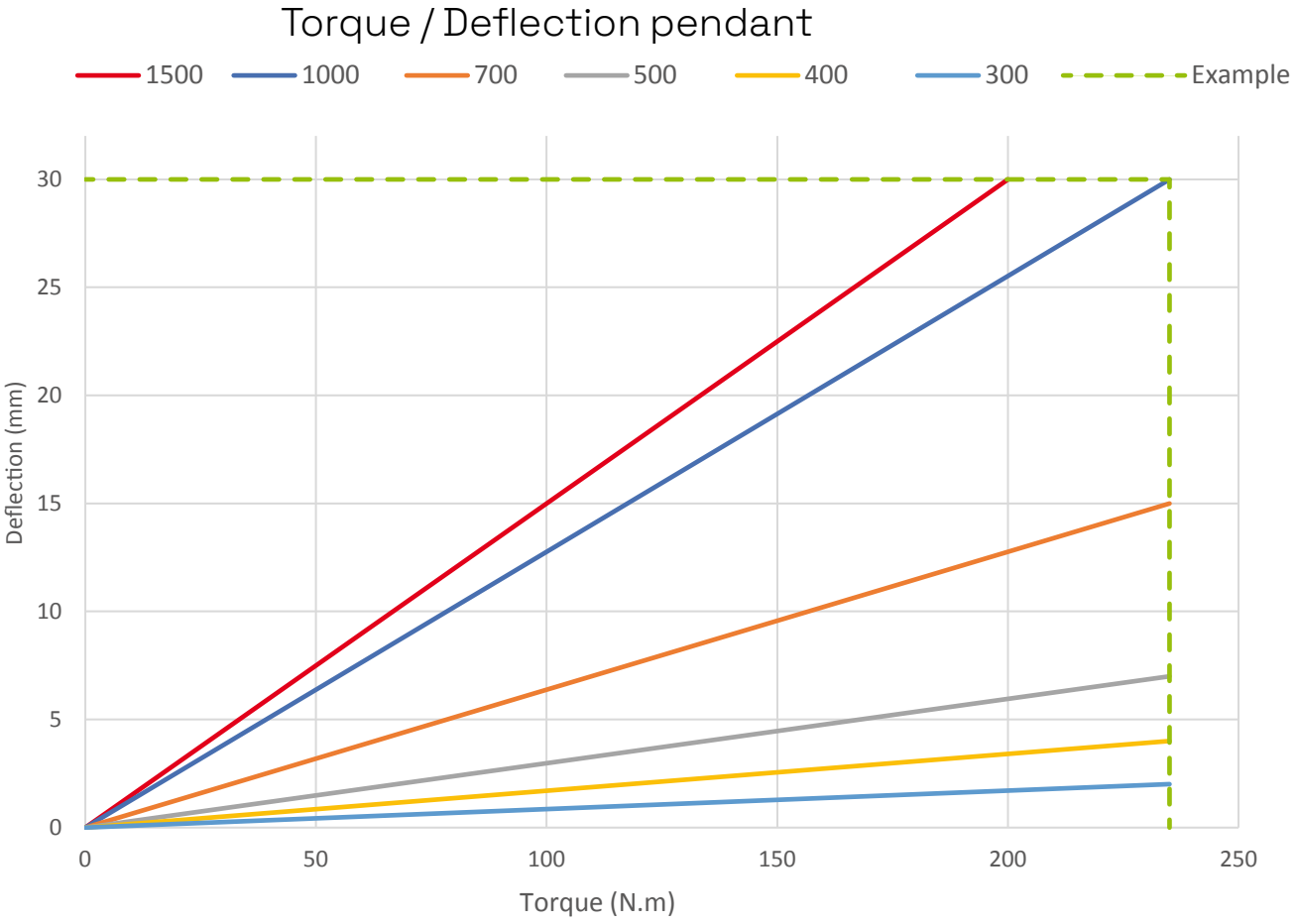
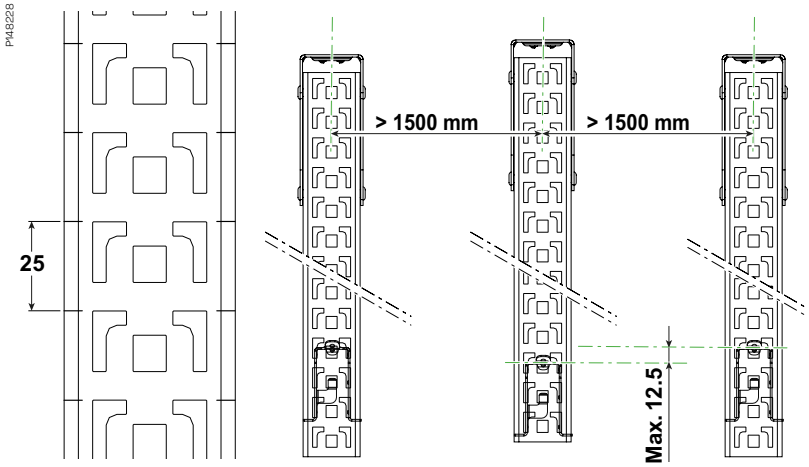


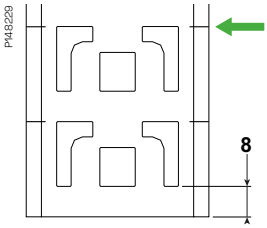
Technical information

Use and installation - CLX³ Click suspension

Distance between rails and offset

CLX³ rail have a pitch between the patterns of 25 mm.
The support distance between the pendants should be at least than 1.5 m. If the length material can't be installed on the exact same level, the length material should be installed on the closest offset- pitch and never at more than 12.5 mm vertically from the previous pattern.



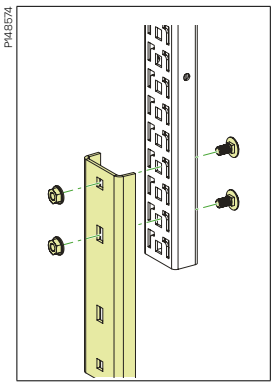


Cutting of the pendant or rail

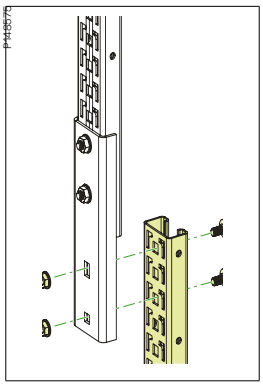
Cutting of the rail or the pendant should be made at 8 mm under the last pattern needed, as the side marks are showing. This to assure that there is enough material below the bottom pattern to secure proper fixation of the cantilever arm.

Installation of the rail joint

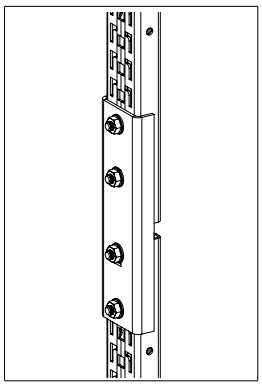
CLX³ rails can be joined together with pendant joint 2FJ.



Place the joint on the rail in place, make sure the 2 top holes are in front of slots to install the included bolts and nuts.



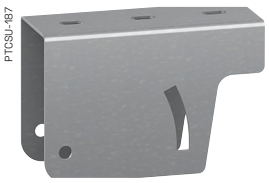
Install the second rail as high as possible and install the other bolts and nuts.



Torque of the nuts **11 N.m.**

Note: extending the pendant with the rail joint will decrease the load capacity of the pendant. For SWL information when extending the pendants, contact Technical support.

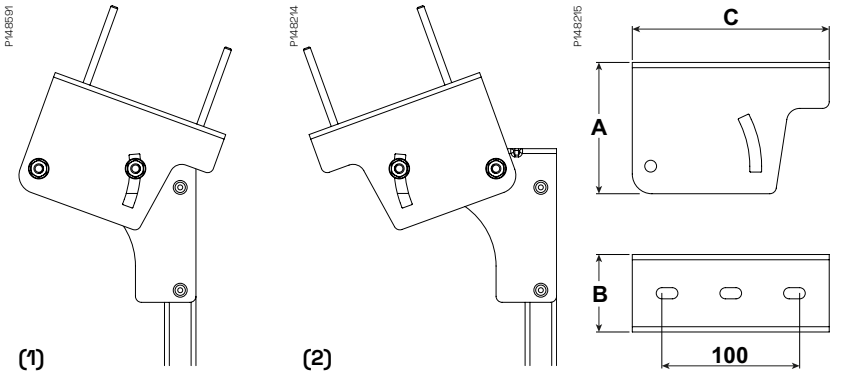
Technical information
Use and installation - CLX³ Click suspension



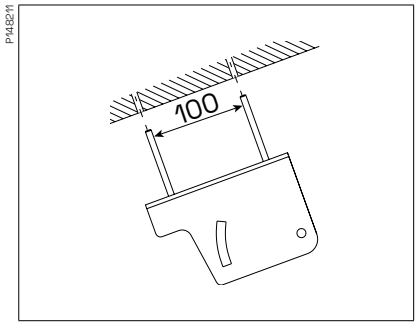
Adjustable ceiling plate

Adjustable ceiling plate is used together with CLX³ pendant to allow for angle correction up to 25°. The adjustable ceiling plate is fixed to the CLX³ pendant with 4 screw set 22S to be ordered separately. The pendant can be fixed to the adjustable ceiling plate in both possible directions (**1**) and (**2**).

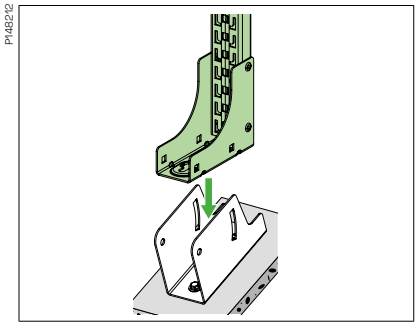
Model	PG	High (mm) A	Width (mm) B	Length (mm) C
CLX³ adjustable ceiling plate PG	CSU795639	100	59	150



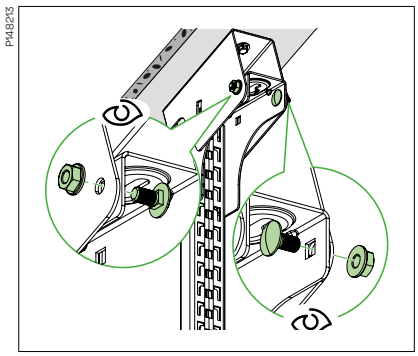
Installation of the adjustable ceiling plate

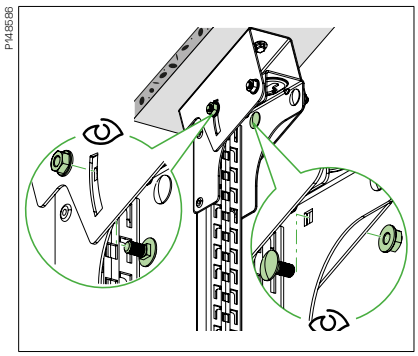


Fix the adjustable ceiling plate to the ceiling with 2 bolts. (c-c: 100 mm).



Insert the pendant into the adjustable ceiling plate.

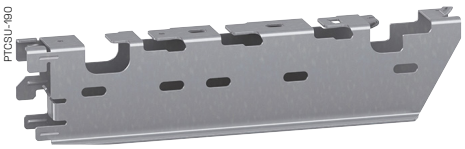


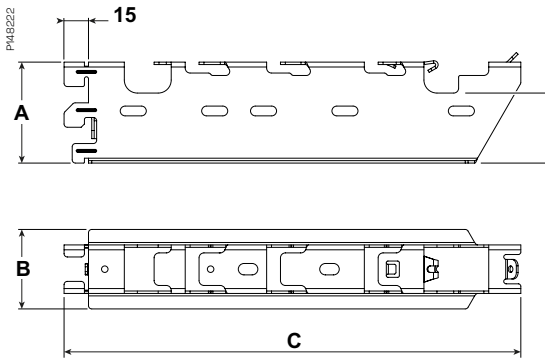


Fix the pendant to the adjustable ceiling plate with 4 bolt sets 22S and align the pendant to the vertical plane before tightening the bolts.
Recommended torque 20 N.m.

Technical information

Use and installation - CLX³ Click suspension

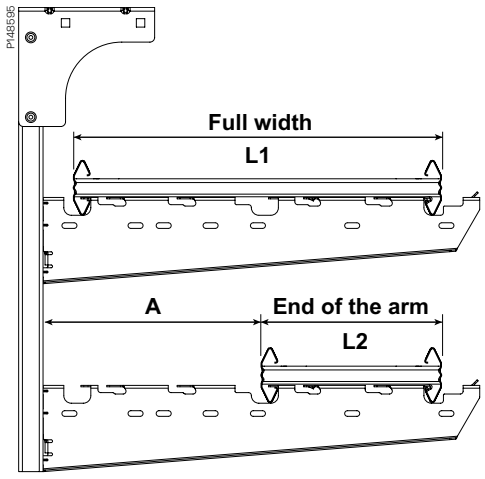




CLX³ Cantilever arm

The CLX³ cantilever arm is a screw-less cantilever that clicks into the pattern in the CLX³ pendant and rail. The cantilever arm is used to fix either the KHZSP ladder, the Defem mesh tray or the Stago height 60 trays. It can also be used for the Performa mesh trays together with fixation bolts.

Model	PG	High (mm) A	Width (mm) B	Length (mm) C	Height below ladder (mm) D
CLX³ cantilever arm 150 PG	CSU795872	62	49	220	NA
CLX³ cantilever arm 200 PG	CSU795873	62	49	280	43
CLX³ cantilever arm 300 PG	CSU795874	62	49	380	43
CLX³ cantilever arm 400 PG	CSU795649	92	49	480	73
CLX³ cantilever arm 500 PG	CSU795650	92	49	580	73
CLX³ cantilever arm 600 PG	CSU795651	92	49	680	73



Cantilever arm size compatibility

The click pattern on the cantilever arm is in some cases fitting more than one ladder width to make it possible to avoid pillars or obstacles on the wall.
See the table and illustration below.

The table also clarifies which cantilever arm to use for each with of Defem mesh tray.

Model	PG	Compatible ladder		Space to the offset ladder (mm)	Defem size compatibility
			(offset)		
		L1	L2	A	
CLX³ cantilever arm 150 PG	CSU795872	NA	NA	NA	120
CLX³ cantilever arm 200 PG	CSU795873	200	NA	NA	220
CLX³ cantilever arm 300 PG	CSU795874	300	NA	NA	320
CLX³ cantilever arm 400 PG	CSU795649	400	200	232	420
CLX³ cantilever arm 500 PG	CSU795650	500	200	332	520
CLX³ cantilever arm 600 PG	CSU795651	600	300	332	620

Cantilever arms Safe Working Load (SWL)

SWL of the cantilever bracket

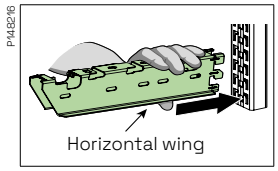
Model	PG	Safety working load as wall bracket (full width) (N)	Safety working load as wall bracket (end of the arm) (N)
CLX³ cantilever arm 150 PG	CSU795872	1800	NA
CLX³ cantilever arm 200 PG	CSU795873	1800	
CLX³ cantilever arm 300 PG	CSU795874	1250	
CLX³ cantilever arm 400 PG	CSU795649	1250	1000
CLX³ cantilever arm 500 PG	CSU795650	1250	750
CLX³ cantilever arm 600 PG	CSU795651	1000	700

Tested according to IEC 61537 standard.

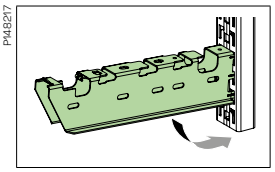
Technical information
Use and installation - CLX³ Click suspension

Installation of cantilever arms

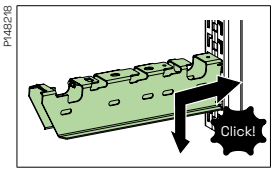
CLX³ cantilever arms are clicked to the CLX³ pendants and rails. Make sure to select a pattern allowing all hooks to grip and the full cantilever back to be supported by the rail. The horizontal wing must touch the rail.



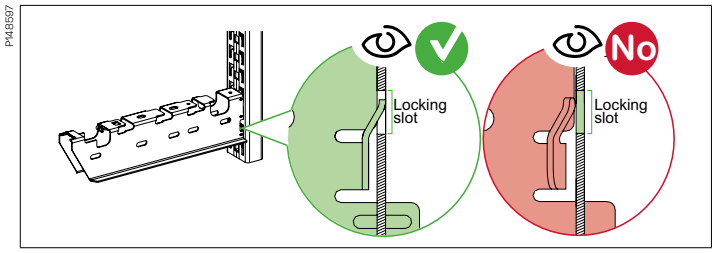
Hold the cantilever close to the hooks and insert the hooks in the rail.



Press the cantilever until the horizontal/top surface touch the rail.



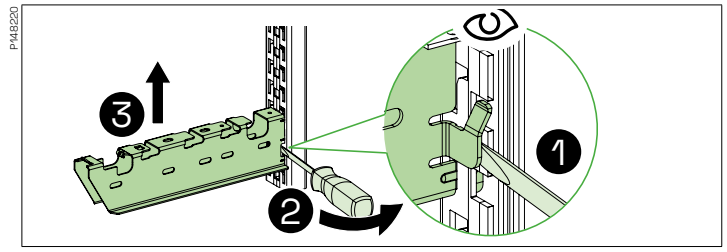
Press against the rail and pull it down until the locking lip go inside the slot in the rail.



Visually check that the cantilever arm is properly positioned and the locking lip is positioned inside of the slot of the CLX³ rail.

Apply caution with unintended upward movements as it can cause the cantilever arm to unlock and therefore be released from the rail.

Uninstallation of CLX³ cantilever arm using screwdriver



❶ Fit the head of the screwdriver between the rail and the locking lip of the cantilever.
Use the screwdriver as a lever to ❷ push the lip out of the rail.
Deform the lip as little as possible and ❸ push the cantilever up to be able to unhook the cantilever arm.

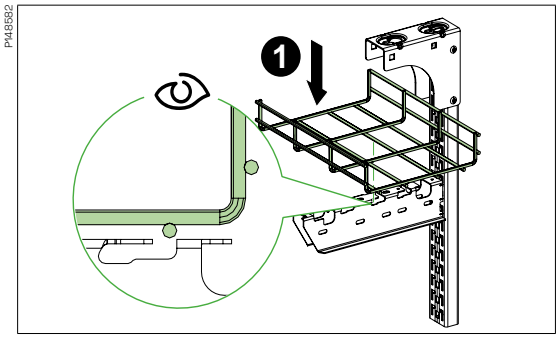
Before reinstalling a cantilever that has been removed after installation, make sure the lip is locking properly. If not, correct the lip to the initial position.

Technical information

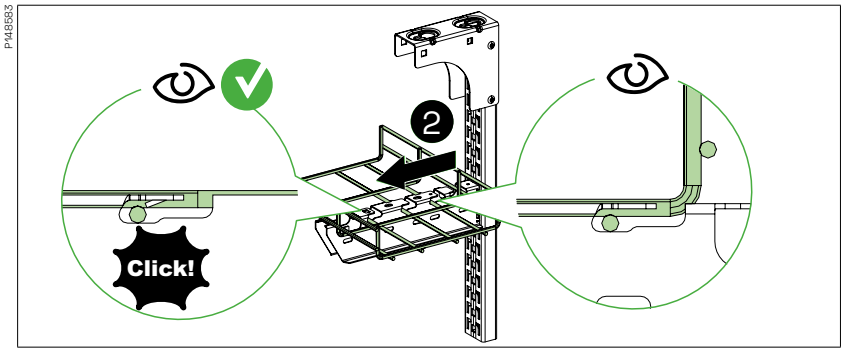
Use and installation - CLX³ Click suspension

Installation of Defem mesh trays on cantilever arms

CLX³ cantilever arms are designed to fix Defem mesh trays, height 60 and 110, without need of tools or bolts.



❶ Insert the longitudinal wires in the slots.



❷ Pull the mesh tray horizontally towards the tip of the cantilever arm until the mesh tray wire passes the locking lip and clicks into position.

Process in the opposite order to dismount the mesh tray.

Technical information
Use and installation - CLX³ Click suspension

Installation of Performa mesh trays on cantilever arms

Performa mesh trays can be fixed to the CLX³ cantilever arms with bolted couplers. The number of bolted couplers needed depends on the width of the tray.

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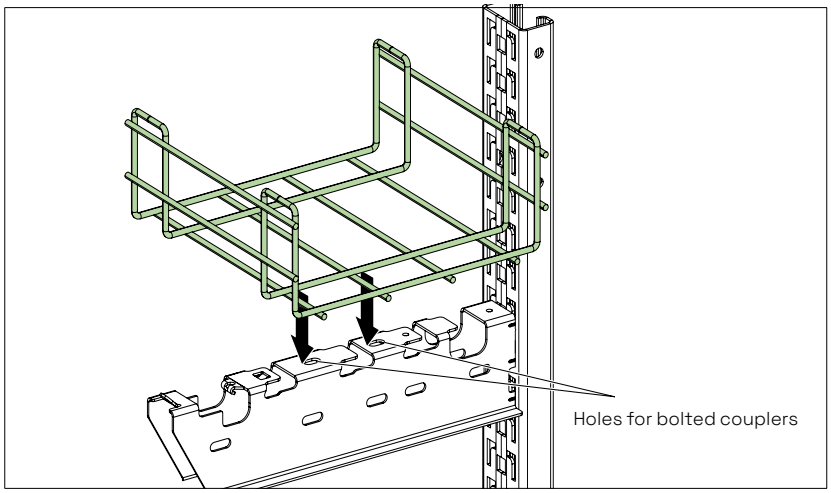

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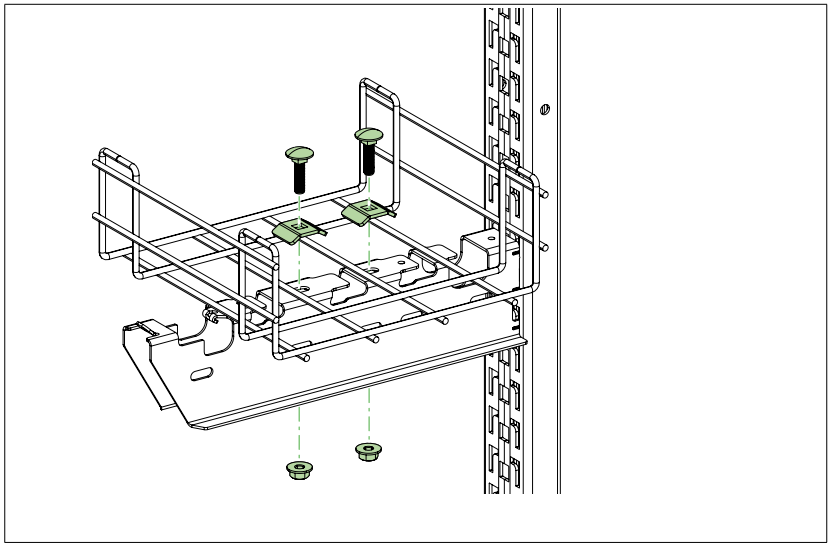

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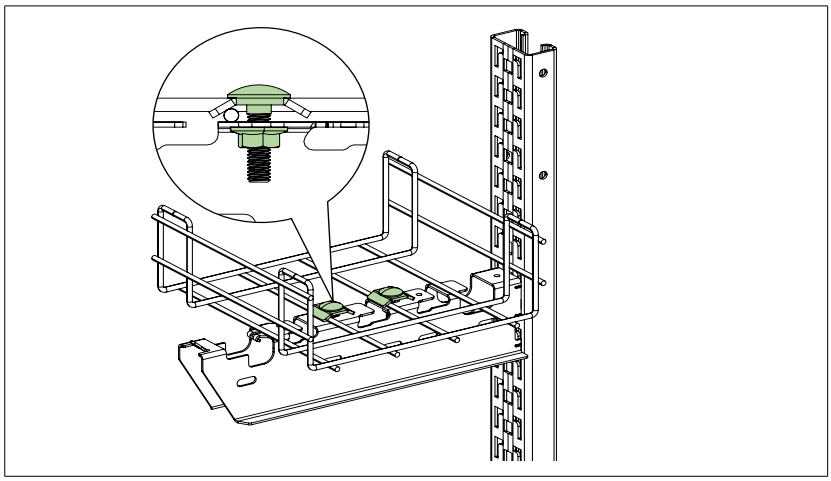
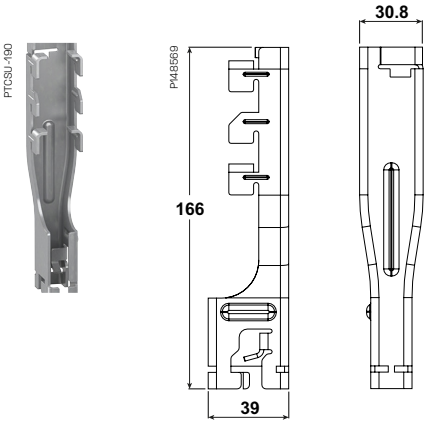


Place the Performa mesh tray on the top surface of the cantilever arm, as close as possible to the rail and by leaving at least 20 mm.
Insert the bolts of the couplers on the oblong holes on the top.
Tight the nuts under the cantilever arm (**12 N.m**).

Technical information

Use and installation - CLX³ Click suspension



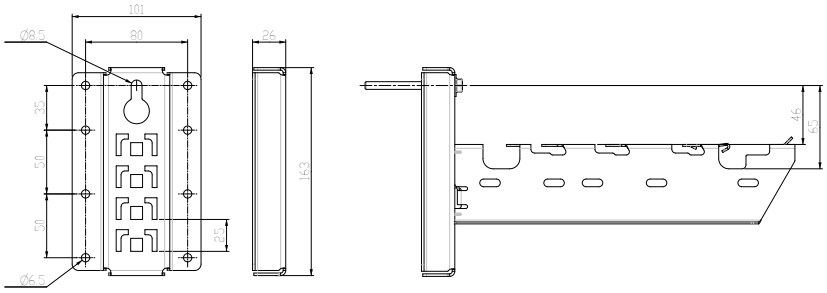
CLX³ Central suspension adapter

The CLX³ central suspension adapter is clicked together with the central suspension brackets to create a central suspension piece that can be clicked to the rail or pendant.

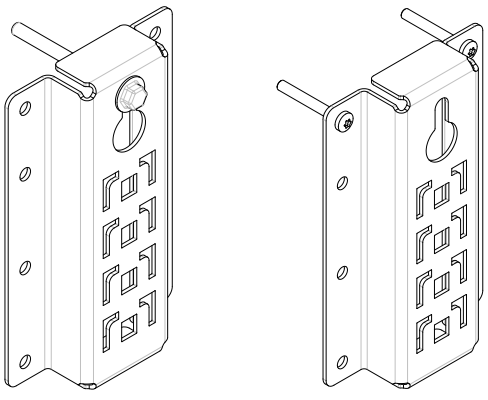
Model	PG	High (mm) A	Width (mm) B	Length (mm) C
CLX³ Central suspension adapter PG	CSU795700	166	31	39

Installation of the Wall bracket

The Wall bracket is made to directly fix a Cantilever arm to a wall, without using a full-size rail. The Wall bracket doesn't reduce the SWL of the cantilever arm and the distance between the back of the cantilever and the wall is the same as with a rail.



The wall bracket can be fixed in two different ways:
With the keyhole (A) or with the lateral holes (B).

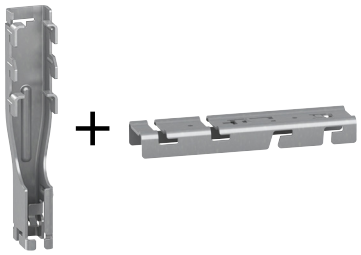


(A) (B)

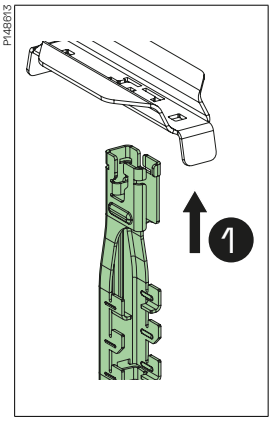
The keyhole design allows to pre-fix the bolt in the wall, before installing the bracket.
For concrete wall, use bolts IMT38051.
For non-concrete wall, M8 bolts with washer >Ø16 should be used.

For the lateral holes, the bracket should always be fixed with at least the two top Ø6mm holes (same hight as the keyhole). The left and right bolts should be horizontally separated by 80mm (axis to axis).

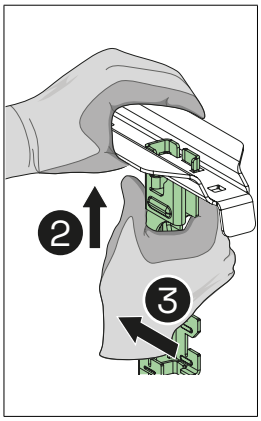
Technical information
Use and installation - CLX³ Click suspension



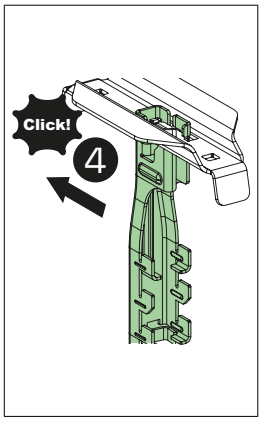
Installation of adaptor to central suspension brackets
The CLX³ central suspension bracket is installed without tools by clicking it to the central suspension. The method is the same for Central suspension bracket ladder -mesh or -tray. In the illustration below, the CSB for ladder is used.

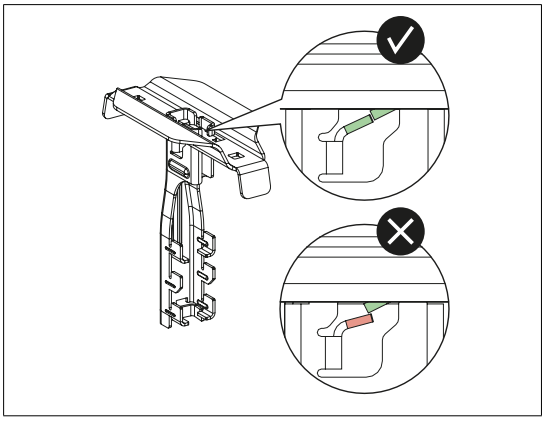
P148613


❶ Insert the adaptor in the pattern on the central suspension bracket.

P148614


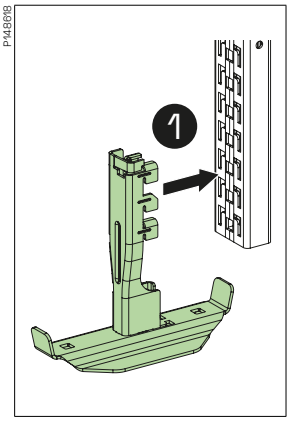
❷ Press the pieces together and ❸ slide the adaptor until the click lip of the adaptor pass over the locking lip of the central suspension bracket with a ❹ click.

P148615


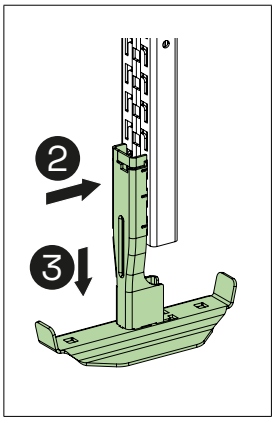
P148616


Visually check and secure that the adaptor is properly positioned, and the click lip has overpassed the locking lip.

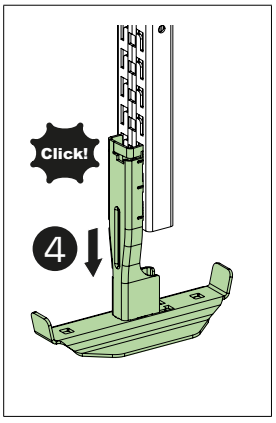
Installation of central suspension adapters to the CLX³ rail
The CLX³ central suspension adaptors is installed to the rail without tools, by clicking. To ensure proper installation a hooks must be inserted in the rail:

P148618


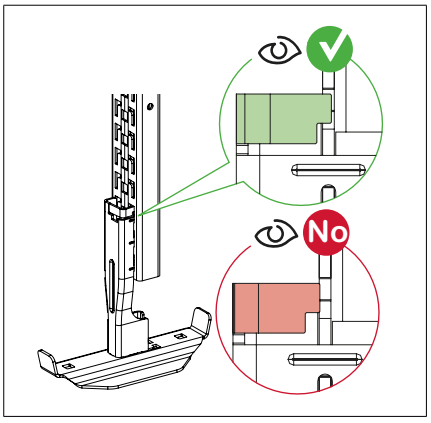
❶ Push the central suspension piece until the hooks are fully inserted in the pattern and the surface touches the rail.

P148619


❷ Press towards the rail and ❸ pull down until the click lip.

P148620


❹ Pass inside the slot in the rail.

P148621


Visually check and secure that the adaptor is properly positioned, and the click lip is properly positioned inside of the slot of the CLX³ rail.

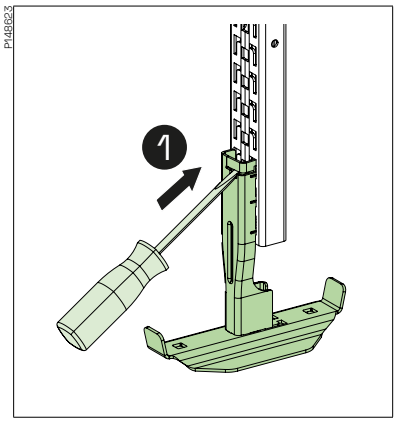
Apply caution with unintended upward movements as it can cause the adaptor to unlock and therefore be released from the rail

Technical information

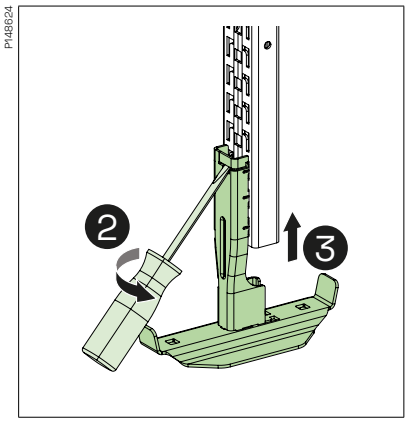
Use and installation - CLX³ Click suspension

Uninstallation of adapter from the CLX³ rail

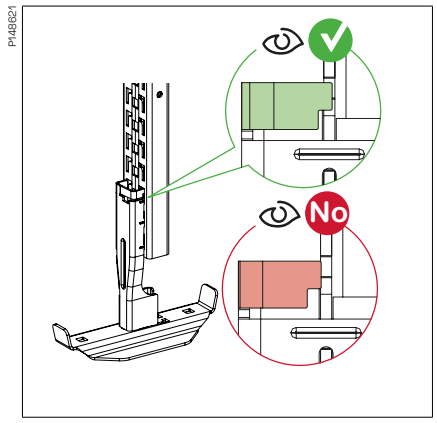
CLX³ central suspension adapters can be removed, by using a flat screwdriver.



❶ Fit the screwdriver's head in the slot of the adaptor.



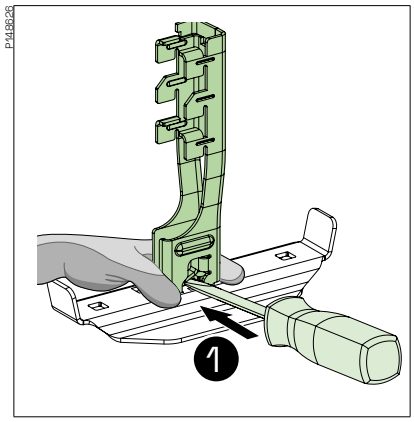
Use the screwdriver as a lever to ❷ gently release the click lip from the rail. Then ❸ push the adaptor up to release the L hooks from the rail.



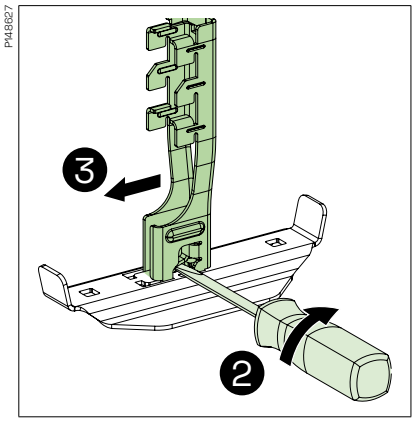
If the adapter needs to be reinstalled, correct the click lip to the initial position and make sure the click lip is locking properly.

Uninstallation of adaptor from central suspension brackets

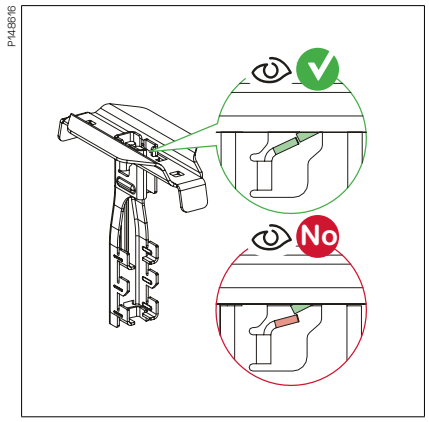
CLX³ central suspension brackets can be removed, by using a flat screwdriver.



❶ Hold the bracket, fit the screwdriver's head between the adaptor lip and the bracket.



❷ Twist the screwdriver to use it as a lever on the click lip until it passes over the bracket's locking lip and ❸ pull the adaptor sideways to release it.



When the bracket needs to be reinstalled, correct the click lip to the initial position and make sure the click lip is locking properly.

Technical information

Use and installation - CLX³ Click suspension

PTCSU-207

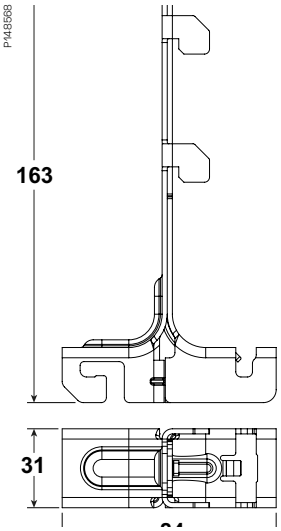
PTCSU-208

CLX³ Defem mesh tray central suspension bracket

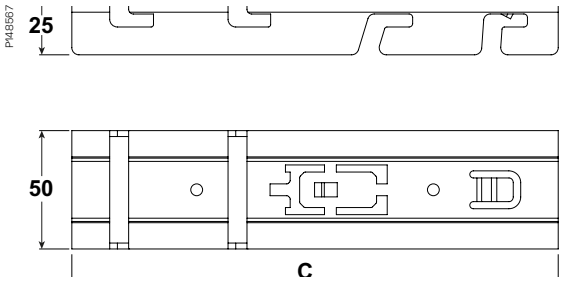
Bracket to be used for central suspension of Defem mesh trays. The bracket shall be used for mounting Defem mesh trays on vertical pieces.

Model	PG	High mm A	Width mm B	Length mm C
CLX³ Defem central suspension bracket 120-220 PG	CSU795665	163	31	84
CLX³ Defem central suspension bracket 320 PG	CSU795666	25	50	206
CLX³ Defem central suspension bracket 422 PG	CSU795668	25	50	397
CLX³ Defem central suspension bracket 522-622 PG	CSU795667	25	50	497

P48568



P48567



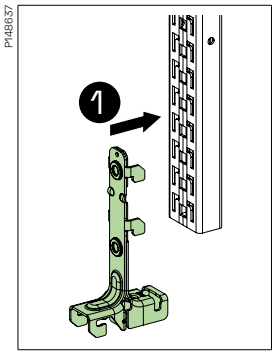
Defem Central suspension bracket	Symmetric load (N)
120	1000
220	1000
320	1000
422	900
522-622	700

Technical information

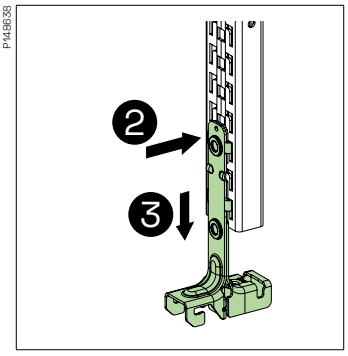
Use and installation - CLX³ Click suspension

Installation of central suspension bracket for Defem mesh tray 120/220

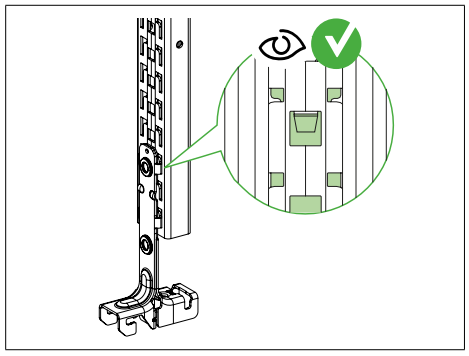
CLX³ central suspension bracket for Defem 120/220 width don't require tools to be installed.



❶ Press the bracket until the hooks are fully inserted in the pattern and the surface touches the rail.

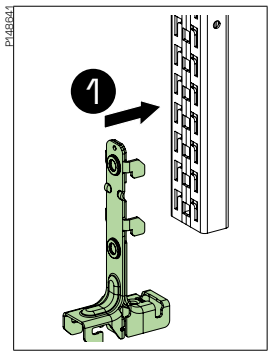


❷ Press against the top of the bracket towards the rail and ❸ pull it down until the locking lip go inside the slot in the rail.

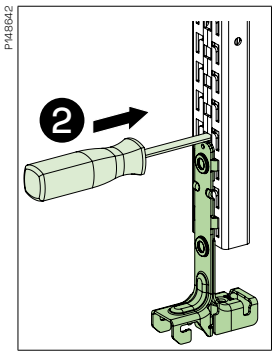


Visually check and secure that the cantilever arm is properly positioned and the locking lip is positioned inside of the slot in the CLX³ rail.

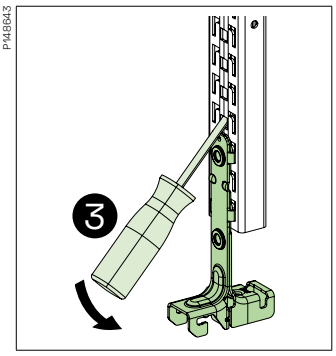
CLX³ central suspension bracket for Defem 120/220 can also be installed by using a screwdriver.



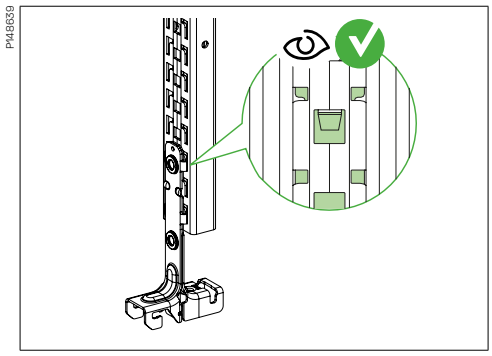
❶ Press the bracket until the hooks are fully inserted in the pattern and the surface touches the rail.



Hold the bracket and ❷ insert the screwdriver in the slot just above the bracket.



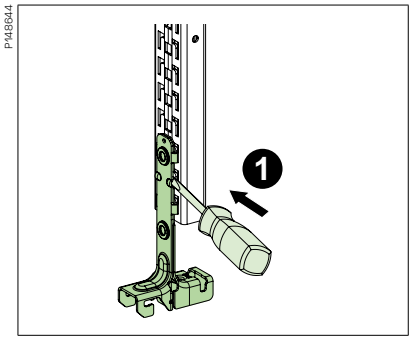
❸ Use the screwdriver as a lever to pull down the bracket until the locking lip go inside the slot in the rail.



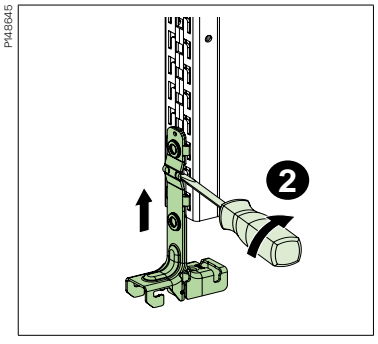
Visually check and secure that the bracket is properly positioned, and the click lip is positioned inside the slot in the CLX³ rail.

Uninstallation of central suspension brackets for Defem 120/220 from the CLX³ rail

CLX³ central suspension brackets for Defem 120/220 can be removed, by using a flat screwdriver.



❶ Insert the head of the screwdriver in the bump in the bracket and with the head simultaneously gripping in one of the slots in the rail.

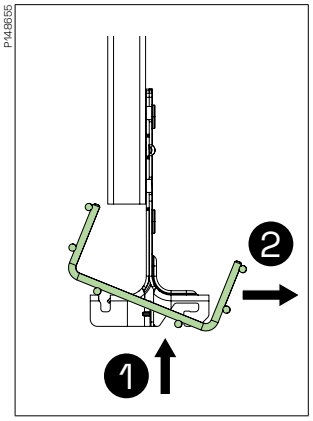


❷ Twist the screwdriver to push the bracket upwards until the bracket is released.

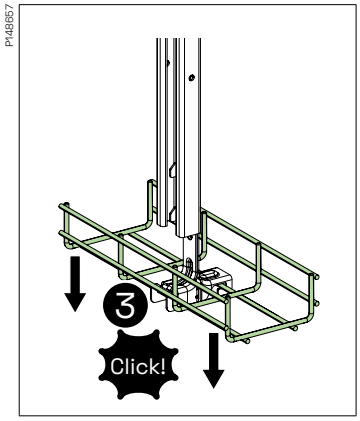
Technical information

Use and installation - CLX³ Click suspension

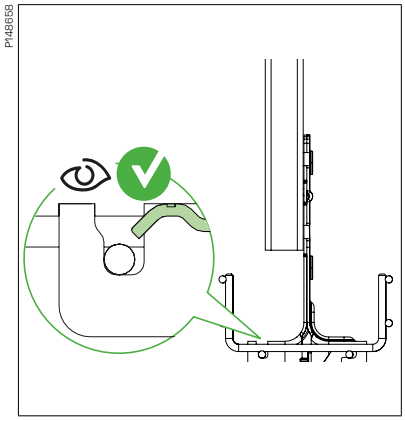
Installation of Defem mesh tray on CLX³ Defem brackets 120/220



❶ Insert the longitudinal wire in the down slot, ❷ lift and push.

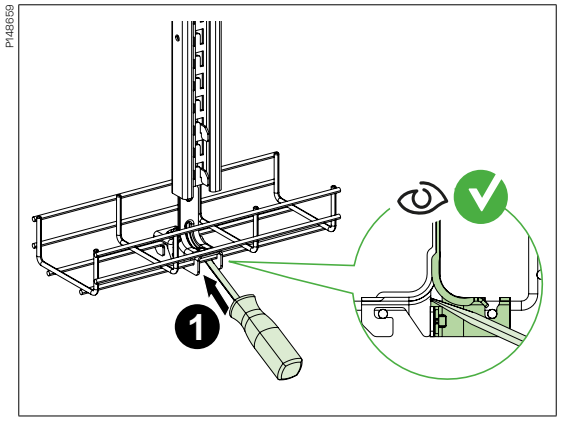


❸ Push down the other wire until it has overpassed the locking lip.

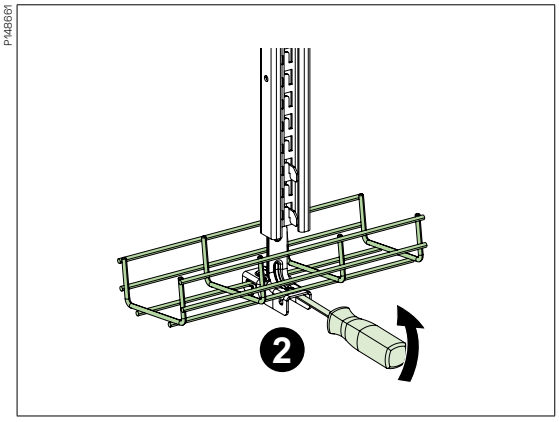


Visually check that the wire is properly positioned, and the wire has passed the locking lip.

Uninstallation of Defem mesh tray from CLX³ Defem central suspension bracket 120/220



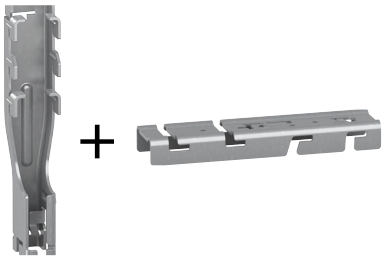
❶ Insert the head of the screwdriver above the reinforcement of the bracket and under the mesh tray as showed on the picture.



Hold the bracket and ❷ use the screwdriver as a lever until the mesh tray overpass the locking lip.

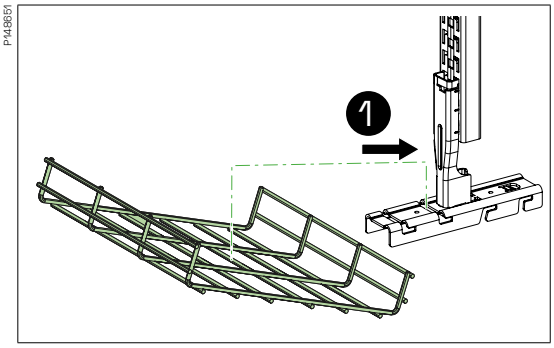
Technical information

Use and installation - CLX³ Click suspension

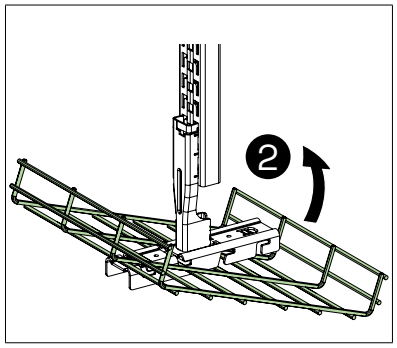


Installation of Defem mesh tray on CLX³ central suspension bracket

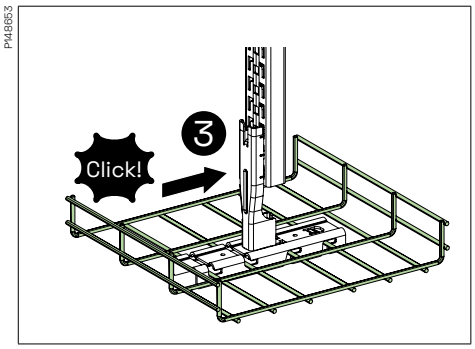
CLX³ brackets are made to fix Defem trays without tool.



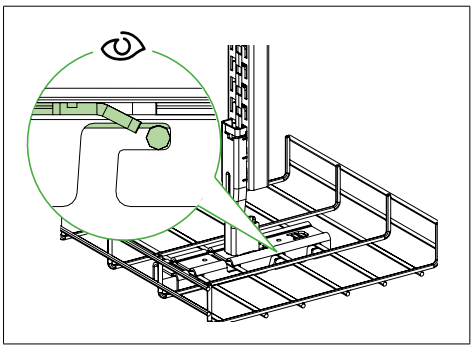
❶ Slide the middle of the mesh tray on the upper slot side of the bracket and insert the longitudinal wire on the most center top slot.



❷ Rotate the tray until all the slots are filled.



❸ Push the tray to lock it in the bracket.

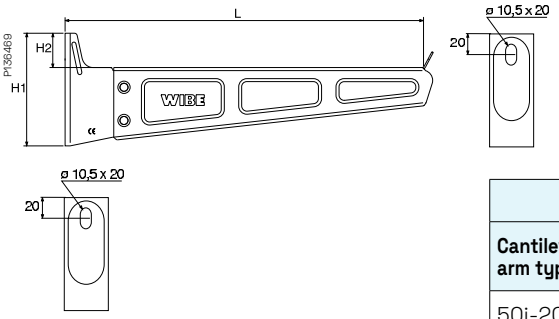


Visually check that the wire is properly positioned and the wire has passed the locking lip.

Technical information
Use and installation

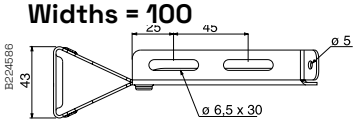
Cantilever arm 50i

Cantilever arm to be used for lighter mountings on walls, vertical piecwes or pendant/fixing rails.



	Size		
Cantilever arm type	L mm	H1 mm	H2 mm
50i-200	250	85	28.5
50i-300	350	110	33.5
50i-400	450	115	31.0
50i-500	550	150	31.0
50i-600	650	150	31.0

Widths = 100



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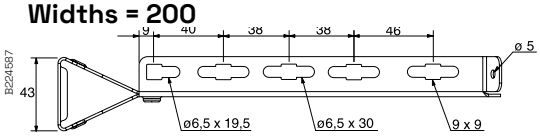

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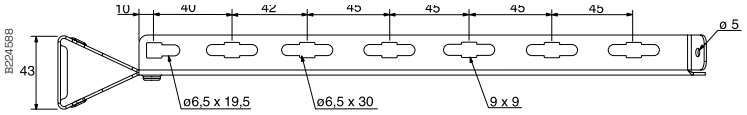

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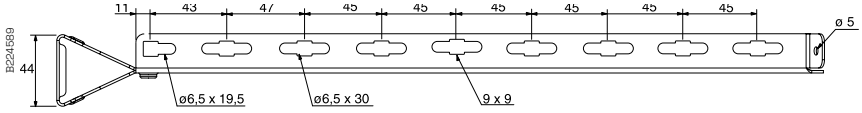

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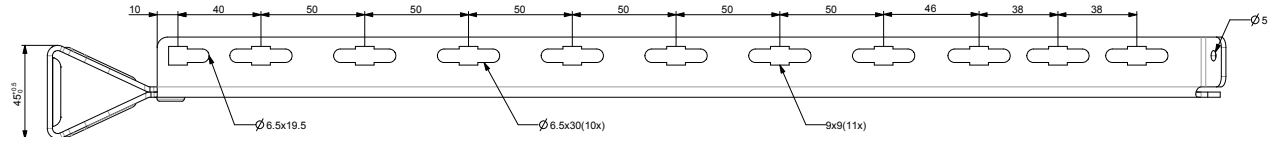

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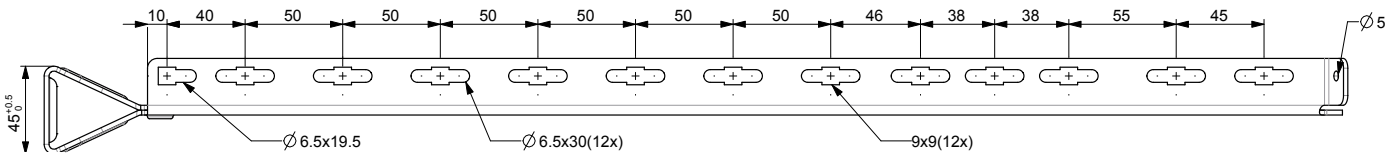
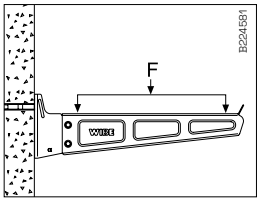
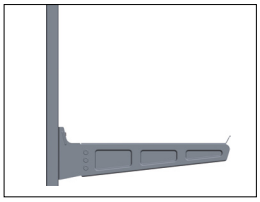


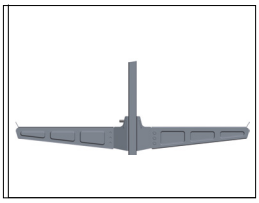
Technical information
Use and installation



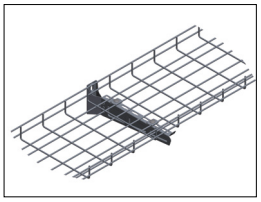
Installation of cantilever arm mounted to wall using Expansion bolt M8. Breaking load - See table below.



Mounting Cantilever arm 50i on pendant 2F/2FB with t-bolt.



Double cantilever arm 50i on pendant 2F/2FB with Screw set 20S



Mesh Tray mounted on Ca50i with 2 pcs of fitting B2 and 2 pcs of Nut B13 on longitudinal wire.

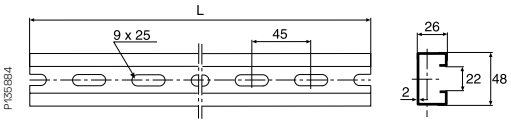
Safe Working Load (SWL) - Mounted on wall	
Type of cantilever arm	**kg**
50i-100	130
50i-200	120
50i-300	120
50i-400	170
50i-500	170
50i-600	170

Technical information
Use and installation

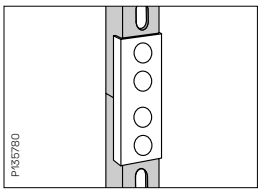
Pendant/Fixing rail 24/48

End plug 28E

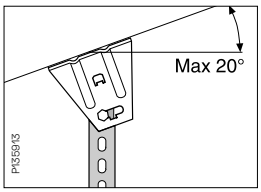
Pendant/Fixing rail for mounting of support brackets, cantilever arms, etc.



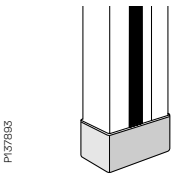
Type	L mm
Pendant/Fix. rail 24/48	2970



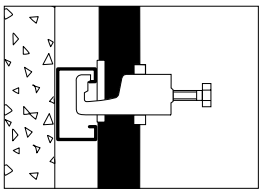
Vertical piece 2F may be joined using Pendant/ Fixing rail 24/48 and Pendant joint 2FJ to achieve the required length.



Ceiling bracket 5 and 1 Screw set 22S together provide a vertical piece that can be mounted with up to 20° slope. Only for mounting supportbrackets.



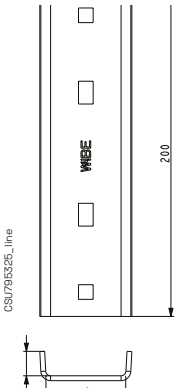
High visibility end plug for enhanced safety and provide protection against personal injury.

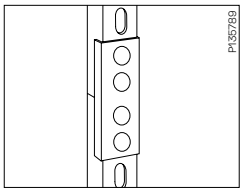


Cables are mounted on a Pendant/Fixing rail 24/48 using cable clamps of type A.

Pendant joint 2FJ

Pendant joint to be used for joining pendant/fixing rails and vertical pieces.

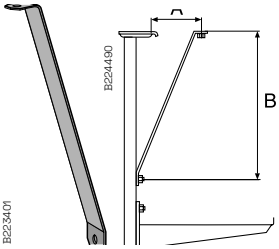




Pendant joint 2FJ, used for joining of vertical piece 2F.

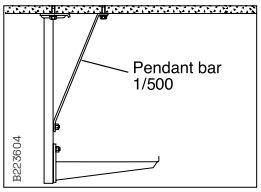
Pendant bar 1

Pendant bar to be installed in order to reduce the deflection of heavily loaded vertical pieces. Installed with T-bolt and Expansion bolt.

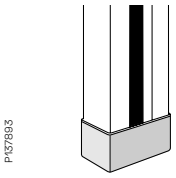


Pendant bar 1/500 Hdg

Type	A mm[1]	A mm	B mm
1/500	40	130	500



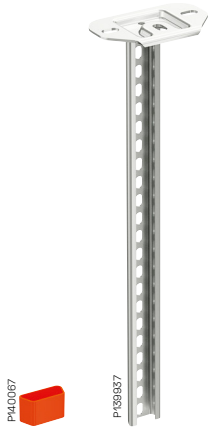
To reduce deflection of Vertical piece 2F at heavy loads on Cantile-ver arm 50 the Pendant bar 1 can be used. Install with T-bolt and Expan-sion bolt.



High visibility end plug for enhanced safety and provide protection against personal injury.

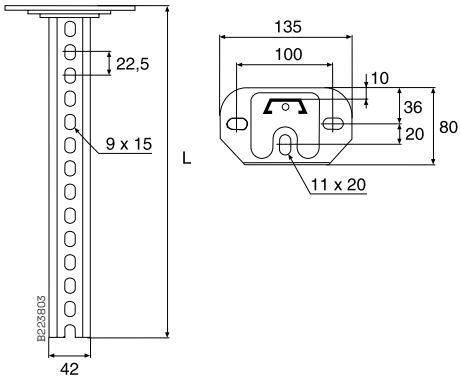
Technical information
Use and installation

Vertical piece 2

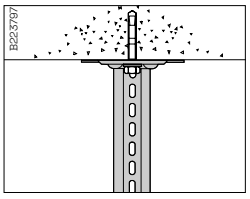


End plug
280

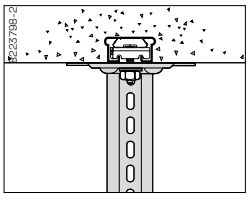
Vertical piece to be used for installation of Support bracket 3, symmetrical loading. Not suitable for cable ladders KHZV and KHZPV. Can be joined to Pendant/fixing rail 24/34 with Pendant joint 2J.



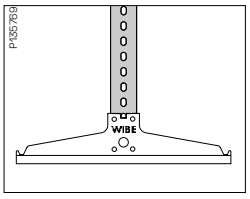
Type	L mm
Vertical piece 2/300	279
Vertical piece 2/400	392
Vertical piece 2/500	504
Vertical piece 2/700	729
Vertical piece 2/1000	1022



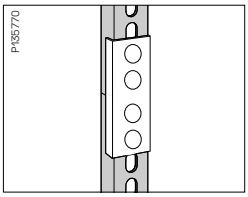
Mount Vertical piece 2 using an Expansion bolt or a concrete screw.



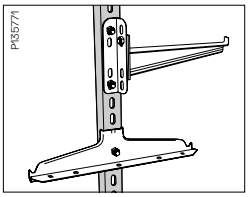
Mount Vertical piece 2 on a Fixing rail 24/26x53 for casting-in using T-bolt 26U.



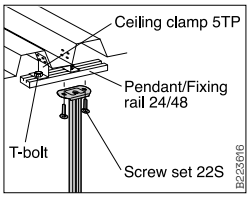
On Vertical piece 2, mount Support bracket 3 using Screw set 22S.



Vertical piece 2 can be joined to achieve the required length using Pendant/Fixing rail 24/34 and Pendant joint 2J.

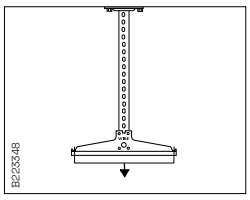


Cantilever arm 50 can, using End bracket HT-11, be mounted at 90° to the pendant/ fixing rail. Only for lightweight mounting, such as data cables.

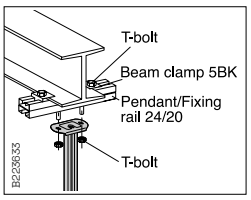


In ceilings with trapezoidal profile sheeting, mount Vertical piece 2 as shown above.

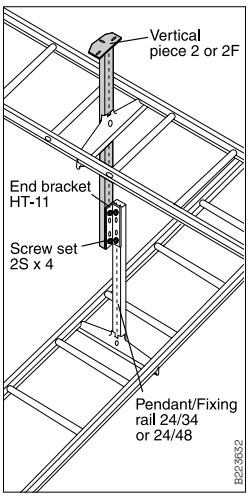
Breaking load



Breaking load for Vertical piece 2 with a symmetrical loading = 1400 kg (14 kN). See also breaking load for support bracket 3.



On beams in ceilings. When the beam flange thickness does not exceed 13 mm, use Beam clamp 5BK-10 and T-bolt 26U/40. For flange thick- nesses not excee- ding 30 mm use Beam clamp 5BK-30 and T-bolt 26U/50.

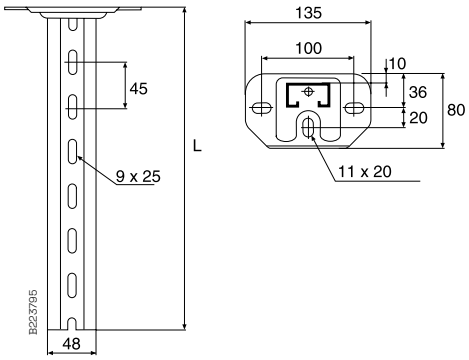


End bracket HT-11 permits the mounting of crossing cable ladders at different levels on the same pendant/fixing rail.

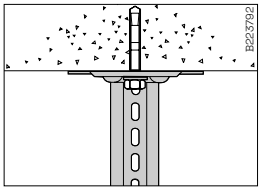
Technical information
Use and installation

Vertical piece 2F

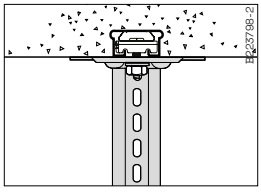
Vertical piece to be used for installation of Support bracket 3 or Cantilever arm 50 /50i. Can be joined to Pendant/fixing rail 24/48 with Pendant joint 2FJ. Can be mounted from the ceiling or on the floor . Can also be installed as a cantilever arm on a wall.



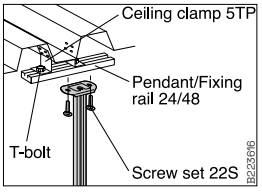
Type	L mm
Vertical piece 2F/280	280
Vertical piece 2F/505	505
Vertical piece 2F/1000	1000



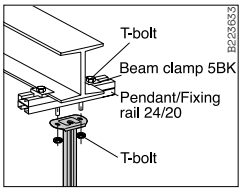
Mount Vertical piece 2F using Expansion bolt alt. Concrete screw.



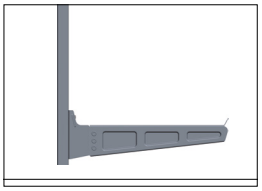
On Fixing rail forcasting-in, mount Vertical piece 2F using T-bolt.



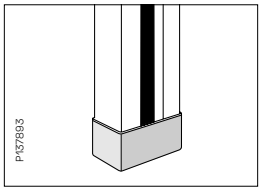
In ceilings with trapezoidal sheeting, mount Vertical piece 2F as shown above.



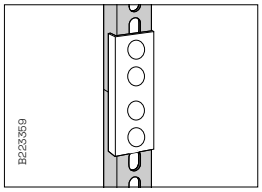
On beams in ceilings, mount Vertical piece 2F as shown in the figure above. When the beam flange thickness does not exceed 13 mm, use Beam clamp 5BK-10 and T-bolt 26U/40.
For flange thicknesses not exceeding 30 mm use Beam clamp 5BK-30 and T-bolt 26U/50.



Mounting Cantilever arm 50i on pendant 2F/2FB with t-bolt.

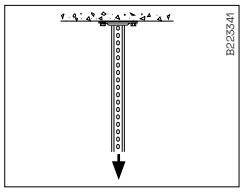


High visibility end plug for enhanced safety and provide protection against personal injury.



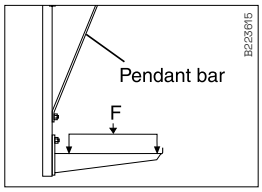
Vertical piece 2F can be joined to achieve the required length using Pendant/Fixing rail 24/48 and Pendant joint 2FJ.

Breaking load symmetrical loading*



Breaking load for Vertical piece 2F (VP) = 2300 kg (23 kN) at symmetrical loading.

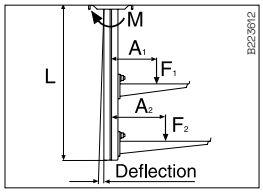
VP + Pendant bar for reduction of deflection



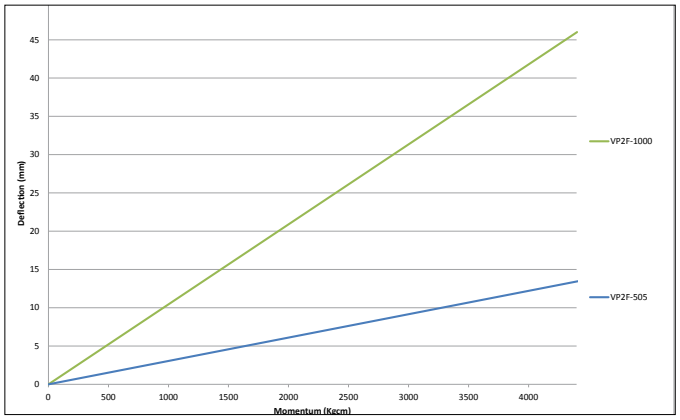
Deflection of Vertical piece 2F is reduced by installing Pendant bar 1. Loadings in accordance with chart below.

Technical information
Use and installation

Breaking load asymmetrical loading



M = ∑ F x A
See also max loading for Cantilever 50i.



For values outside diagram please contact Wibe Group.

Example
Conditions:
- 2 m support distance.
- 10 kg/m cantilever arm 50i
- Two cantilever arm 50i, 200 and 300 mm
- One-side loading
- VP 2F//505
- Bending?

M = ∑ F x A (kgcm)

$$M = 10 \times 2 \times \left(\frac{25}{2} + 2.6\right) + 10 \times 2 \times \left(\frac{35}{2} + 2.6\right)$$

(F_1) (A_1) (F_2) (A_2)

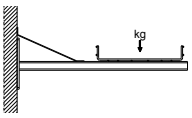
M = 704 kgcm - bending as per diagram, about 2 mm.

Bending torque M is total sum of F x A (kgcm).
F = Cantilever arm 50i loading (kg)
F = Loading (kg/m) x support distance (m).
A = Distance between loading and VP external side (cm)

$$A = \frac{\text{Ca 50i width}}{2} + 2.6 \text{ cm}$$

L = VP length
Break load torque 6 000 (kgcm)

Loading table for Vertical piece 2F installed as a cantilever arm



Vertical piece 2F with Pendant bar 1/500

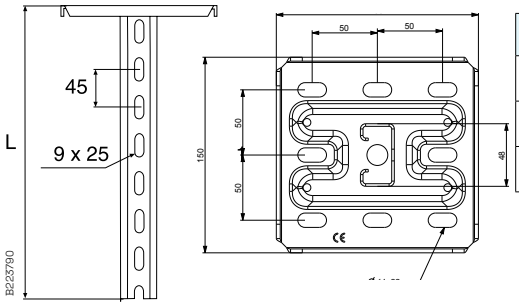
Pendant type	2F/1000
Mesh tray width	Breaking load
120	75
220	80
320	90
420	100
620	120

*Safe working load according to IEC 61537 is breaking load divided by 1.7.

Technical information
Use and installation

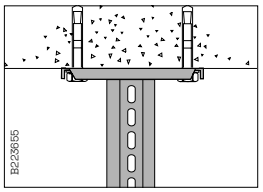
Vertical piece 2FB

Vertical piece, to be used for vertical installation together with Cantilever arm 50/50i, from a ceiling or on a floor. Can also be installed as a cantilever arm on a wall.

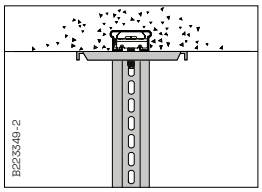


Type	L mm
Vertical piece 2FB/280	280
Vertical piece 2FB/505	505
Vertical piece 2FB/1000	1000

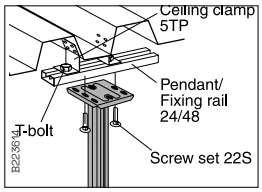
End plug 28E



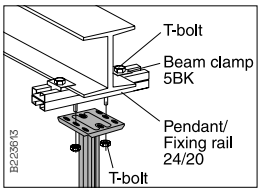
Mount Vertical piece 2FB using Expansion bolt.



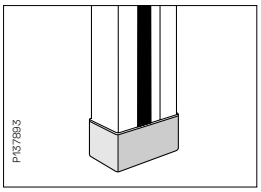
On fixing rail for casting-in,mount Vertical piece 2FB using T-bolts.



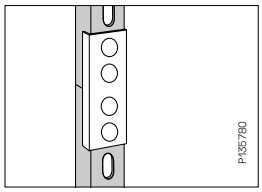
In ceilings with trapezoi-dal profile sheeting, mount Vertical piece 2FB as shown above



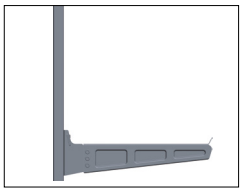
On beams in ceilings, mount Vertical piece 2FB as shown in the figure above. When the beam flange thickness does not exceed 13 mm, use Beam clamp 5BK-10 and T-bolt 26U/40. For flange thicknesses not exceeding 30 mm use Beam clamp 5BK-30 and T-bolt 26U/50.



High visibility end plug for enhanced safety and provide protection against personal injury.

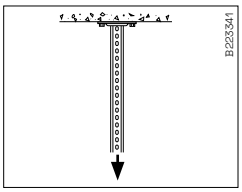


Vertical piece 2FB can be joined to achieve the required length using Pendant/Fixing rail 24/48 and Pendant joint 2FJ.



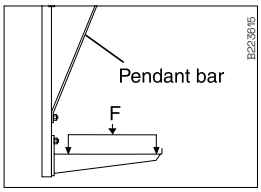
Mounting Cantilever arm 50i on pendant 2F/2FB with t-bolt.

Breaking load symmetrical loading*



Breaking Load for Vertical piece 2FB = 3000 kg (30 kN) at symmetrical loading.

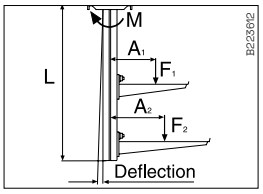
VP + Pendant bar for reduction of deflection



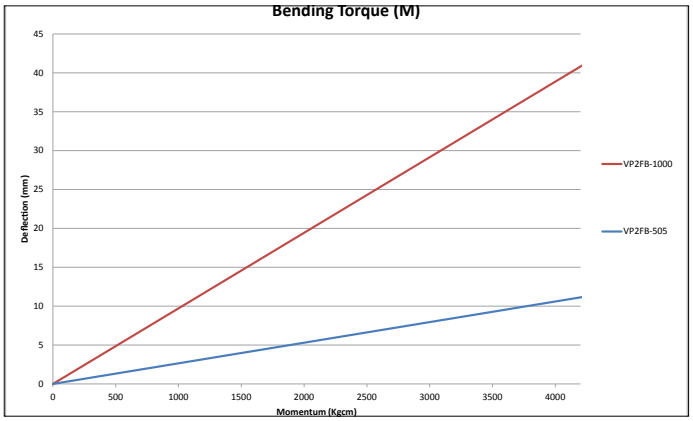
Deflection of Vertical piece 2FB is reduced by installing Pendant bar 1. Loadings in accordance with chart below.

Technical information
Use and installation

Breaking load asymmetrical loading



M = ∑ F x A
See also max loading for Cantilever 50i.



For values outside diagram please contact Wibe Group.

Example
Conditions:
- 2 m support distance.
- 10 kg/m cantilever arm 50i
- Two cantilever arm 50i, 200 and 300 mm
- One-side loading
- VP 2F/505
- Bending?

M = ∑ F x A (kgcm)

$$M = 10 \times 2 \times \left(\frac{25}{2} + 2.6\right) + 10 \times 2 \times \left(\frac{35}{2} + 2.6\right)$$

(F_1) (A_1) (F_2) (A_2)

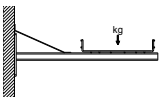
M = 704 kgcm - bending as per diagram, about 2 mm.

Bending torque M is total sum of F x A (kgcm).
F = Cantilever arm 50i loading (kg)
F = Loading (kg/m) x support distance (m).
A = Distance between loading and VP external side (cm)

$$A = \frac{\text{Ca 50i}}{2} + 2.6 \text{ cm}$$

L = VP length
Break load torque 7 000 (kgcm)

Loading table for Vertical piece 2F installed as a cantilever arm



Vertical piece 2F with Pendant bar 1/500

Pendant type	2F/1000
Mesh tray width	**Breaking load**
120	75
220	80
320	90
420	100
620	120

*Safe working load according to IEC 61537 is breaking load divided by 1.7.

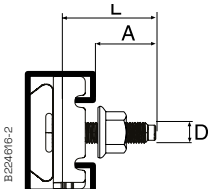
Technical information
Use and installation

Bolt and nut B13

M6x25. Tensi-Lock and Flange Nut M6. Used for mesh tray assembly with support hook B39 and various types of fitting for joining, fixing etc.

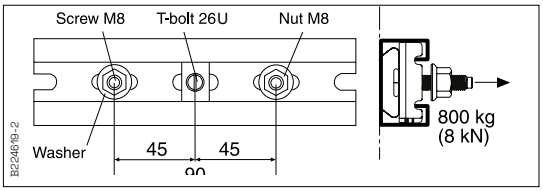
T-bolt 26U

To be used for the mounting of Cantilever arm 50 on Pendant/Fixing rail 24/48 and all vertical pieces except Vertical piece 2.

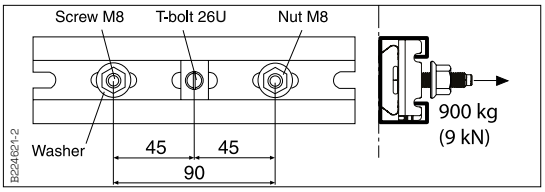


Type	L mm	A mm
M8	34	23
M10	34	23
M10	44	33
M10	54	43

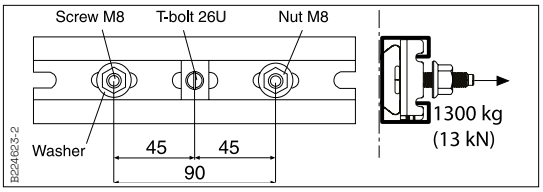
Max permitted extraction force



T-bolt 26U M8/M10 + P/F-rail 24/48 + Washer 8.4x19x1.5



T-bolt 26U M8 + P/F-rail 24/48 + Washer 9x35x2



T-bolt 26U M10 + P/F-rail 24/48 + Washer 9x35x2

Screw set 2S

Screw set to be used for fastening of Support bracket 3 on Pendant/fixing rail 24/20F and Angle bracket 5L to the opening on Pendant rail 24/34 and 24/48. Set including screw MVBF 8x40 and nut M6MF8.

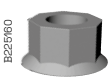
Screw set 20S

Screw set to be used for installation of Support bracket 3 on Pendant/fixing rail 24/20 and Vertical piece 20, Angle bracket 5L to the opening on Pendant rail 24/48 and 24/20. Set including screw MVBF 8x60 and nut M6MF8.

Screw set 22S

Screw set to be used for installation of Support bracket 3 on Vertical piece 2 and 2F, Support bracket 3 and Ceiling bracket 5 on Pendant/fixing rails 24/34 and 24/48, Angle bracket 5L against the back of Pendant/fixing rails, Pendant/fixing rails back to back. Set including screw MVBF 8x16 and nut M6MF8.

Technical information
Use and installation



Flange nut B43

Flange nut to be mounted onto Threaded rod B41 in order to lock it to the Support hook and the Ceiling fittings.
Material: Steel, electro-galvanized.

Distance nut B42

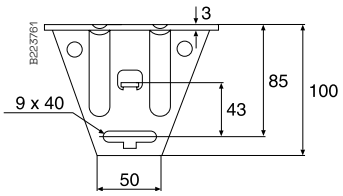
Distance nut to be used when joining Threaded rods. Screw the nut to the top rod to the middle depth of the nut. Then screw the bottom rod into the nut from below, tighten.

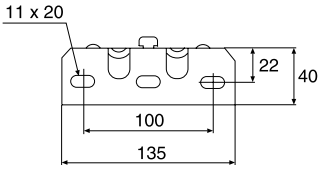
Thread lock B50

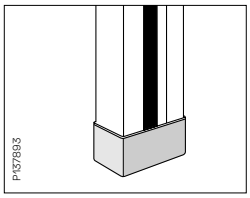
Thread lock to be used when joining Threaded rods. Pull the thread lock up high on the top threaded rod.

Ceiling bracket 5

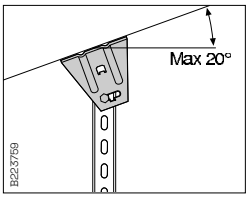
Ceiling bracket to be used for installations with Pendant/Fixing rails 24/34 and 24/48.



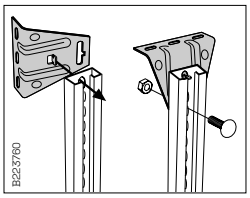




High visibility end plug for enhanced safety and provide protection against personal injury .



Using Pendant/Fixing rail 24/34 or 24/48, 1 Ceiling bracket 5 and 1 Screw set 22S it is possible to make a vertical piece that can be installed at an angle of up to 20°. Breaking load for rail 34 = 1000 kg (10 kN). Breaking load for rail 48 = 1200 kg (12 kN).

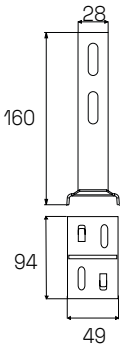


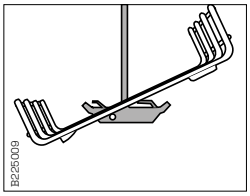
Mount Ceiling bracket 5 to the back of the pendant/fixing rail by turning the ceiling bracket 90° and inserting the tab into the hole in the rail. Then turn the ceiling bracket back and lock it in the required position using 1 Screw set 22S. When mounting it at a horizontal ceiling, lock the screw in the slot recess for better lateral stability. Ceiling bracket 5 can be tilted max. 20°.

Technical information
Use and installation

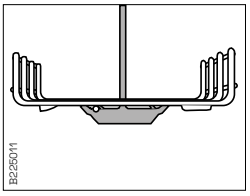
Support Hook D35/120-220

Support hook for 120-220 mm Mesh tray.

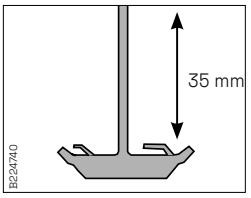




Mounted from below with angled movement.



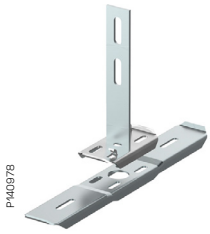
Mesh tray is mounted by closing the D35 grips.

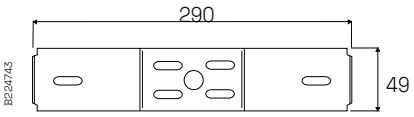


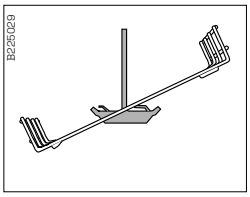
Adjustable 35 mm with Pendant 2, 2F, 2FB and Fixing rail 24/34 and 24/48.

Support Hook D35/320-422

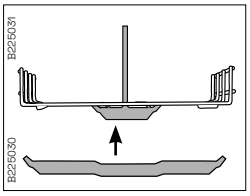
Support hook for 320-422 mm Mesh tray.



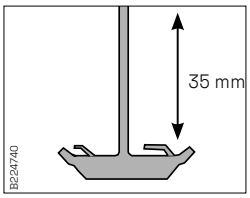




Mounted from below with angled movement and with closing of the D35 grips around the wires.



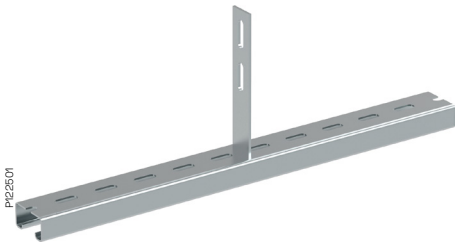
Mount the lower part of the support hook with 2 Bolt and Nut B13

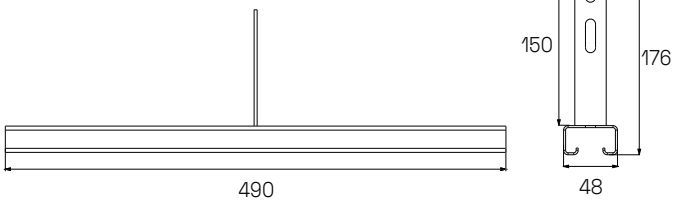


Adjustable 35 mm with Pendant 2, 2F, 2FB and Fixing rail 24/34 and 24/48.

Support Hook D35/422-622

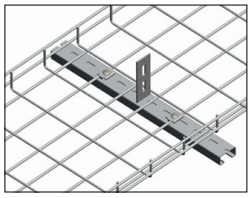
Reinforced support hook for 422-622 mm Mesh tray.





Safe Working Load (SWL)

Type of D35	kg
D35/120-220	390
D35/320-422	127
D35/422-622	370

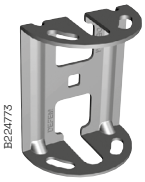


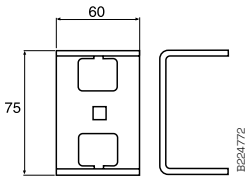
Mount the lower part of the Support Hook with 2 Fitting B2 and 2 Bolt and Nut B13. Screw set 22S is used for installation of Support hook D35 on Vertical piece 2, 2F/2FB and Pendant/fixing rail 24/34 and 24/48.

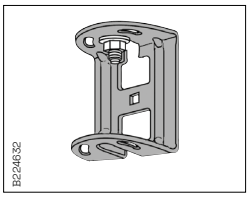
Technical information
Use and installation

Ceiling Fitting Universal B46

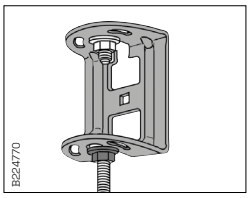
For mounting of Threaded Rod B41 onto ceiling.







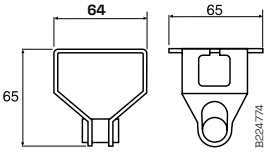
Mount the Ceiling Fitting B46 with Expansion bolt or bolt onto horizontal ceiling.

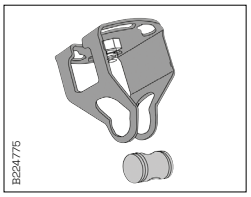


Threaded Rod B41 M8 or M10 is mounted as pendant with 2 Flange Nut B43.

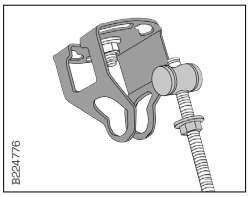
Ceiling Fitting Flexible B47

Adjusts to inclination of ceiling. Delivered complete with Tensi-lock Flange Nut.

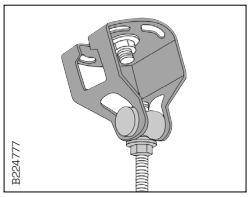




Mount the Ceiling Fitting B47 with Expansion bolt or bolt onto level or sloping ceiling.



Screw in the yoke and the Tensi-lock nut onto the Threaded Rod B41.

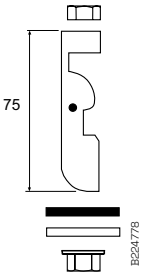


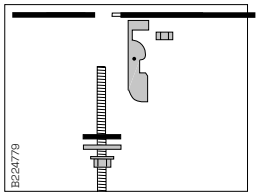
Hook the Threaded Rod onto the B47 and tighten the Nut.

Technical information
Use and installation

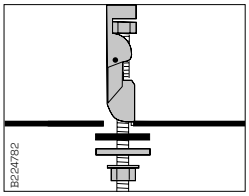
Ceiling Clamp B48

For hole Ø 22 mm. Delivered complete with Tensi-lock Nut and washers.

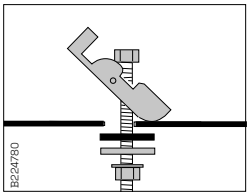




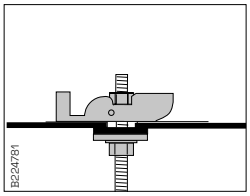
Drill a Ø 22 mm hole in the ceiling metal.



Assemble and mount the Ceiling clamp.



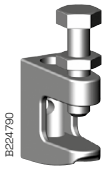
Pull down.

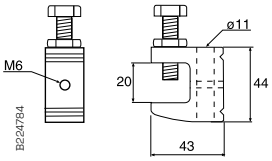


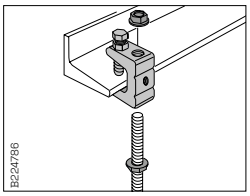
Close with the rod nut.

Beam Clamp B49

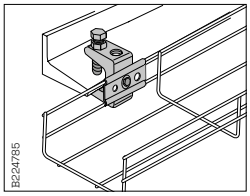
For mounting onto beam.



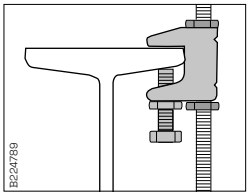




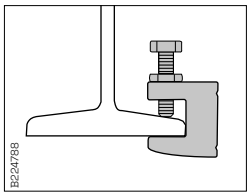
For mounting of Threaded Rod B41 with Flange Nut B43/ M8 – M10.



Mesh tray 53 –120 mm can be mounted directly onto Beam Clamp B48 with Fitting B1 and M6 bolt.



Mount the Beam Clamp with the locking bolt against the sloping side of the beam.

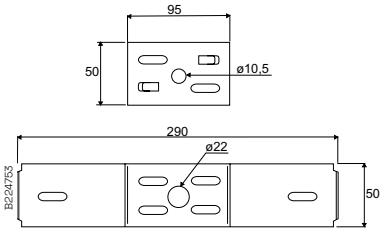


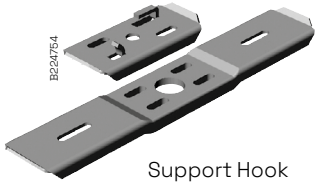
Technical information
Use and installation

Support Hook B39 120-220 and 320-422

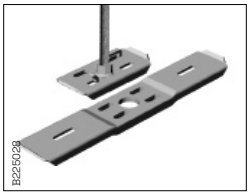
Support Hook for mounting onto Threaded Rod.

Support Hook
B39/120-220

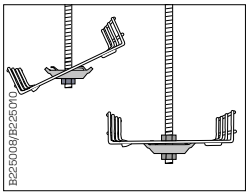




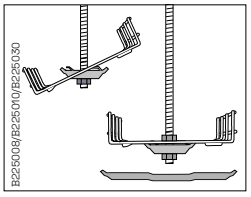
Support Hook
B39/320-422



Support Hook B39 is used together with Threaded Rod B41 as pendant. Mounted with 2 Flange Nut B43.

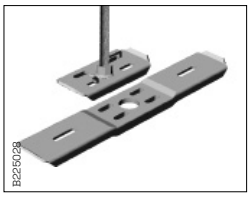


Support Hook B39/120-220. Mesh tray is moun/ted from below angled movement and by closing the grips of the B39 around the wires.

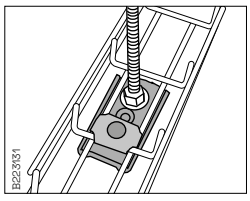


Mount the lower part of B39/320-422, after mounting the Mesh tray, with 2 Bolt and Nut B13.

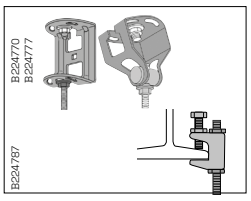
Threaded Rod B41 and Thread Lock B50



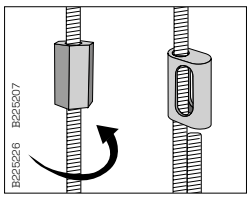
Threaded Rod B41 is mounted onto Support Hook B39 with 2 pcs Flange Nut B43.



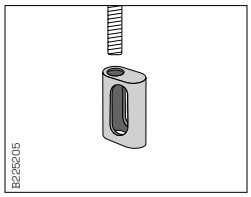
For Mesh tray 53 and 75, the Fitting B1 can be used as support hook Mounting with 1 Fitting B1, 1 Fitting B2, 1 Bolt and Nut B13 and two Flange Nut B43.



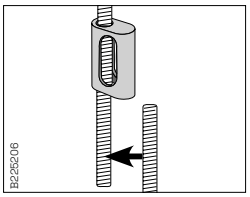
For ceiling mounting, use Ceiling Fittings B46, B47, B48 or B49.



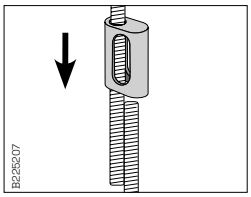
The Threaded Rod is extended by using Distance Nut B42 or Thread Lock B50 as joining fitting.



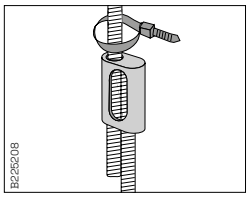
Put the Thread Lock B50 in the desired position onto the upper Rod.



Put the lower Rod in contact with the upper Rod.

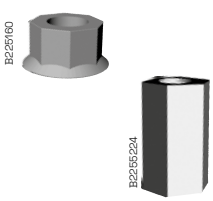


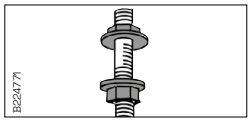
Lower the Thread Lock B50 onto both rods, now in locked position.



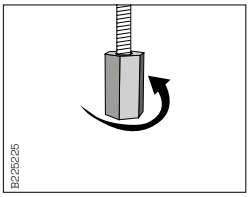
Put a cable stripe above the upper Thread Lock as safety lock.

Flange Nut B43, M8/M10 and Distance Nut B42

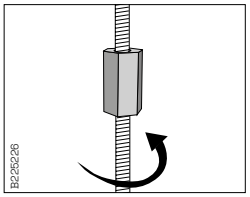




Flange Nut B43 is mounted onto Threaded Rod B41 in order to lock it to the Support Hook and the Ceiling Fittings.



Screw in the Distance Nut on the upper Threaded Rod to the middle.

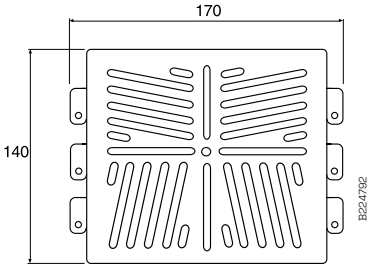


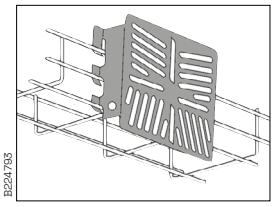
Screw in the lower Threaded Rod into the Distance Nut and tighten.

Technical information
Use and installation

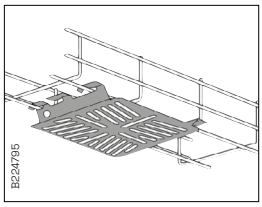
Accessories Holder B5 Mini

Fits to all Mesh trays.

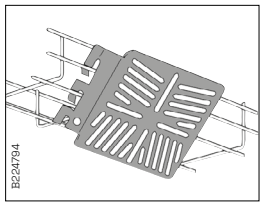




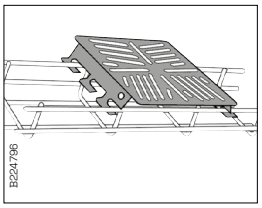
Accessories Holder B5 Mini is easily mounted directly on the side of the mesh tray.



Accessories Holder B5 Mini is mounted equally easy to the bottom of the mesh tray.



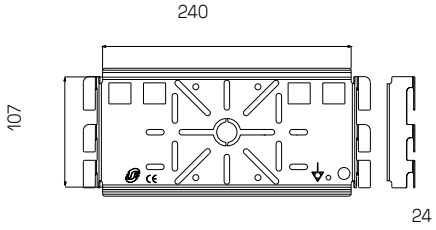
Accessories Holder B5 Mini is also mounted in 45° angle onto the mesh tray.



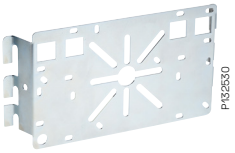
Accessories Holder B5 Mini can also be mounted on top of the 53 and 73 mesh trays.

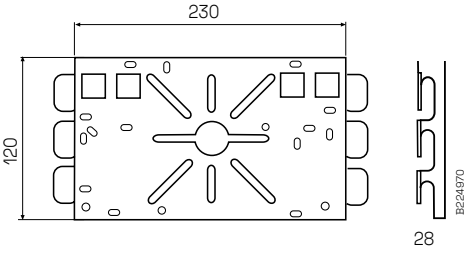
Accessories Holder B5

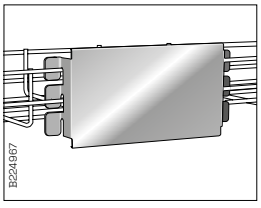
For Electro-galvanized and Hot dip galvanized



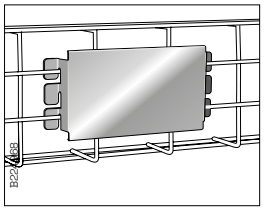
For AISI 316L



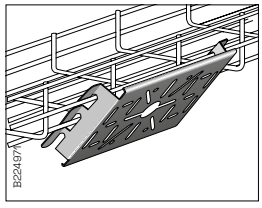




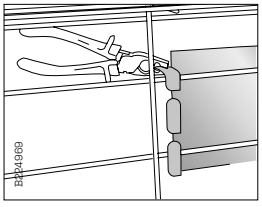
Accessories Holder B5 is easily mounted directly on the side of the mesh tray.



Accessories Holder B5 is mounted equally easy to the bottom of the mesh tray.



Accessories Holder B5 is also mounted in 45° angle onto the mesh tray.



Accessories Holder B5 is tightened to the mesh tray by closing the grips around the wires.

Technical information
Use and installation

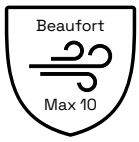
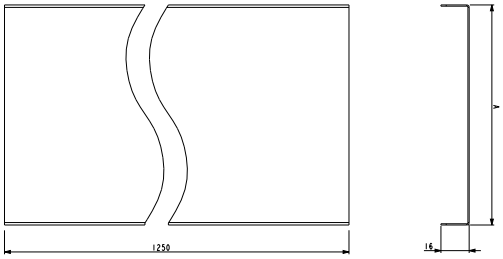


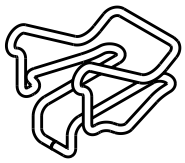
Plate Cover B7:2



	For tray width mm	A mm
Plate Cover B7/75	75	80
Plate Cover B7/120	120	125
Plate Cover B7/220	220	225
Plate Cover B7/320	320	325
Plate Cover B7/422	422	425

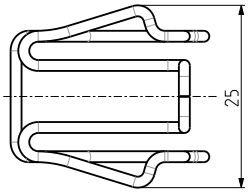
To be used with the B8:2 cover clip. (see installation instructions below)
Min 4 cover clips for indoor installation.
Min 6 cover clips for outdoor installation.

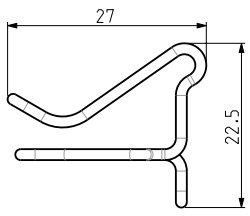
Appropriately installed the B7:2 cover can withstand up to Beaufort 10 wind force.



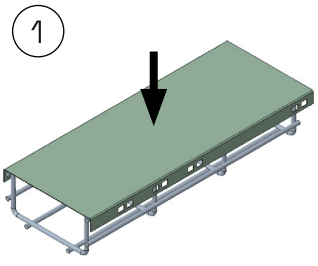
Spring Cover Clip B8:2

Spring clip used to fix B7:2 cover to the Defem mesh tray.

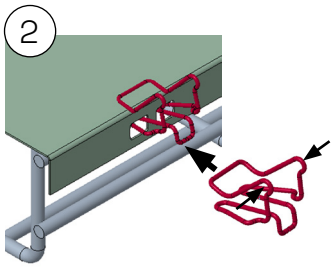




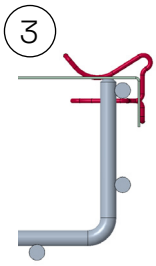
Horizontal indoor installation



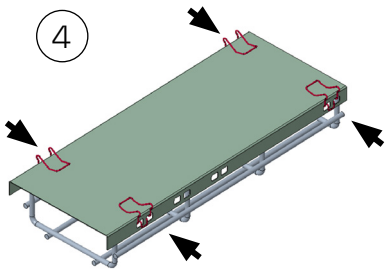
1. Place the cover on top of the mesh tray



2. Compress the clip and insert it through the cover slots before releasing it.



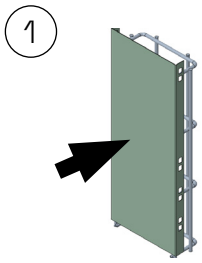
3. Make sure the bottom of the cover clip is below the mesh tray's top horizontal wire.



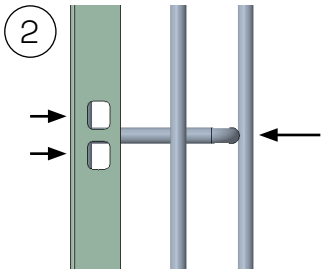
4. For indoor horizontal installations, use minimum 4 clips per cover.

Technical information
Use and installation

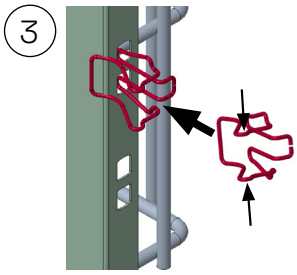
Vertical and outdoor installation



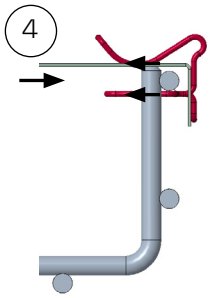
1. Place the cover on top of the mesh tray



2. Align the cover slots with the transversal wire of the mesh tray.



3. Squeeze the clip and insert it in the cover slots.

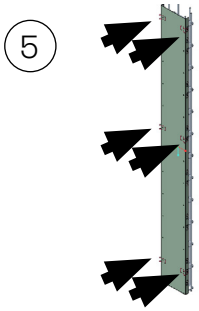


4. To secure the installation, ensure that:

a) the bottom of the cover clip is below the mesh tray's top horizontal wire

b) the transversal wire is in the middle of the clip

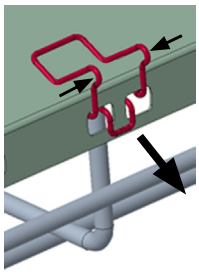
c) the clip is pushed in as far as possible



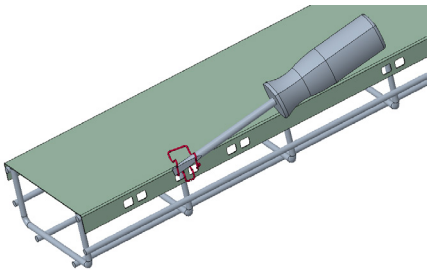
5. Use at least 6 clips per cover for all outdoor installations (vertical and horizontal).

Use minimum 4 clips for indoor vertical installations.

Dismounting



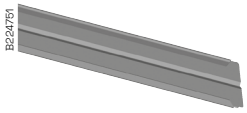
Squeeze the clip together and pull it outwards.

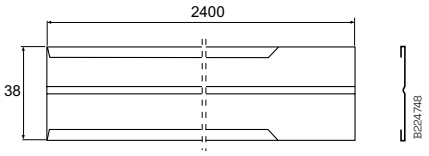


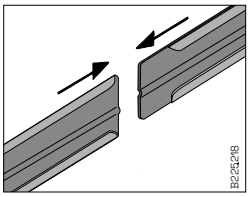
If it's difficult to remove the clip by hand, use a screwdriver to bend the clip out of the cover slots.

Technical information
Use and installation

Separating Plate B36







Simple joining by gliding Plates into each other.

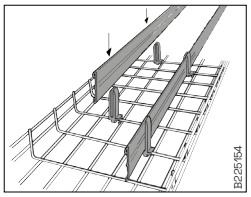
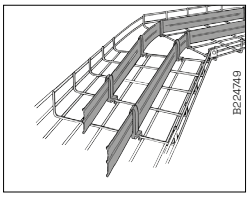


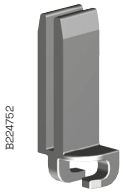
Plate Holder B38 is used for mounting of Separating Plate B36 onto Mesh tray.

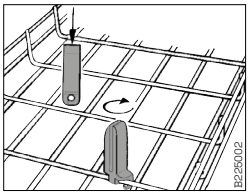


The Separating Plate B36 can be shaped to follow the horizontal bends of the mesh tray.

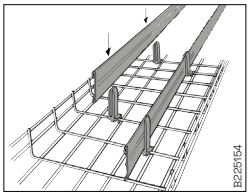
Plate Holder B38

Used for mounting of Separating Plate B36, 5 pcs/Separating Plate.





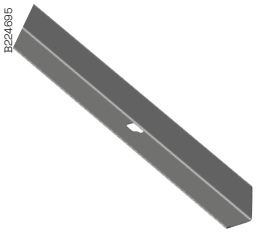
The Plate Holder is easily turned into fixed position on the mesh tray.

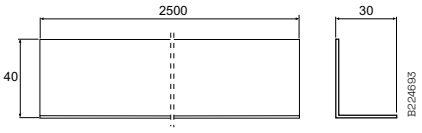


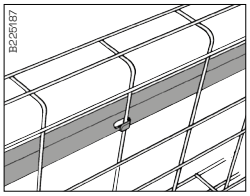
Separating Plate B36 is snapped into the Plate Holder.

Technical information
Use and installation

Separating Plate B26

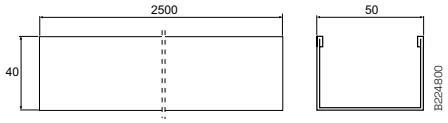


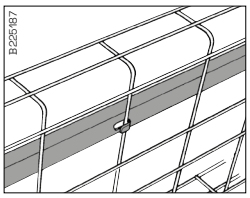




Use the grips of the Separating Plate B26 to attach to the cross wires of the Mesh tray.

Tele-Channel B6

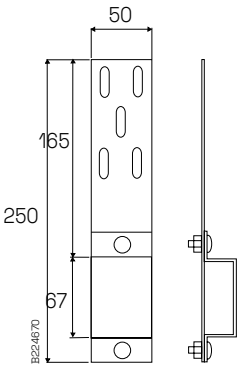


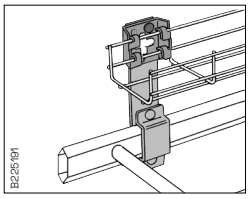


Use the grips of the B6 Tele-channel to attach to the cross wires of the Mesh tray.

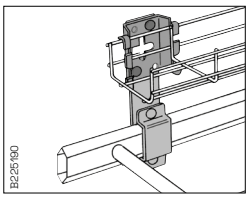
Combi Fitting B21

For mounting onto Wibe Cable Ladders.





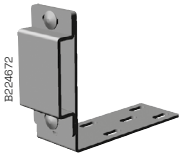
Mesh tray 53 and 75 is mounted onto Combi Fitting B21 with Bracket B4 mini Bolt and Nut B13.

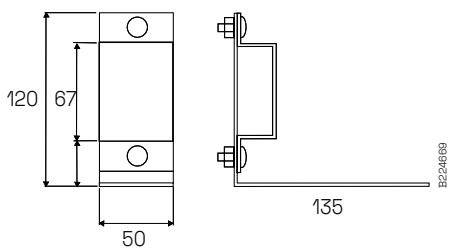


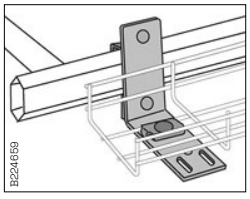
Mesh tray 120 is mounted onto Combi Fitting B21 with Bracket B4 Bolt and Nut B13.

Combi Fitting B21 90 degree

For mounting onto Wibe Cable Ladders.





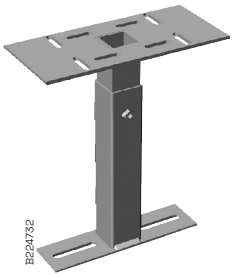


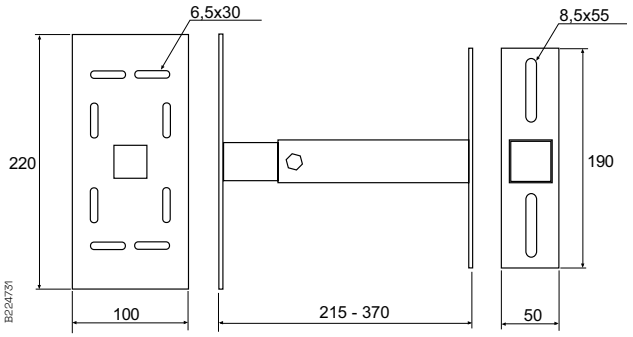
Mesh tray 53, 75 and 120 is mounted onto Combi Fitting B21 90° with 1 Fitting B2,1 Bolt and Nut B13.

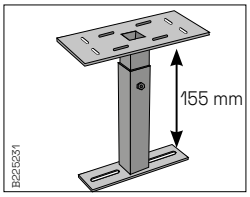
Technical information
Use and installation

Support B33

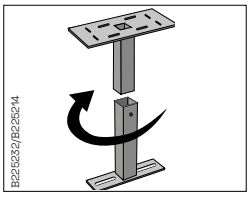
For mounting of all Mesh trays on floor, for example under raised floor.



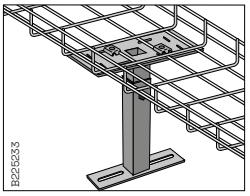




B33 Support is adjustable in height from 215 to 370 mm.



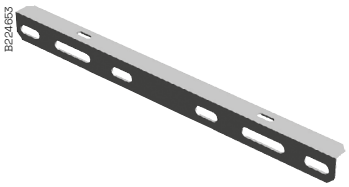
Upper or lower part can be adjusted in 90° angle.

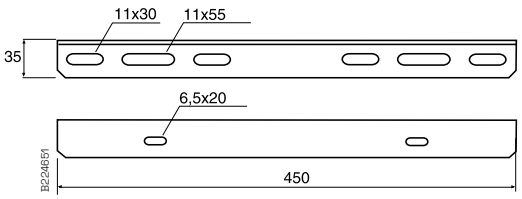


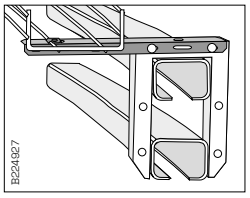
Mesh tray is mounted with suitable number of Fitting B2, Bolt and Nut B13.

Conveyor Bracket B17

Universal fitting for mounting of mesh trays along conveyor system.



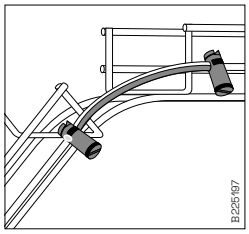




The Mesh tray is mounted onto the Conveyor Bracket with
1 Fitting B2.
1 Bolt and Nut B13.

Earth Connection Clamp B18

For mounting of earth cable onto chosen wire in the Mesh tray.

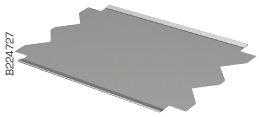


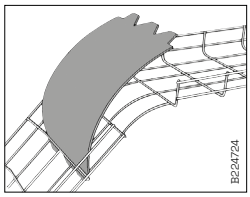
Earth connection clamp B18 is mounted to connect earth cable to mesh tray. Maximum earthing cable diameter: 1 x 16 mm2 (max. 5mm Ø). Recommended torque: 2,5 ± 0,5 Nm

Technical information
Use and installation

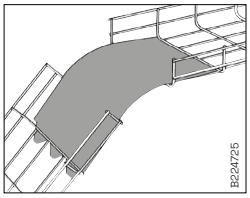
Bend Plate B31

For smooth cable bend at change of level.





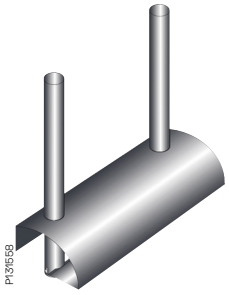
Attach the Bend Plate ends into the lower part of the Mesh tray.

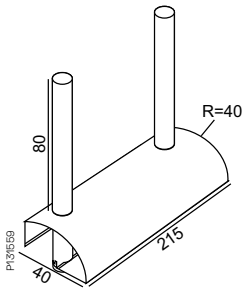


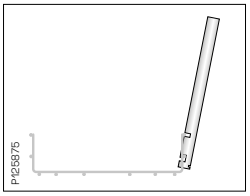
Attach the Bend Plate into the upper part of the Mesh tray.

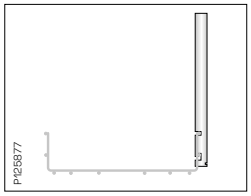
Side Radius Limiter B11

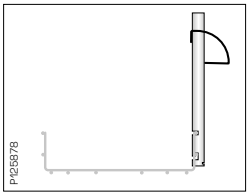
Used for limiting side bend radius of any cable type.

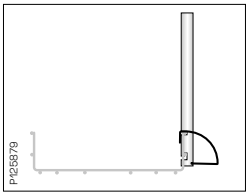






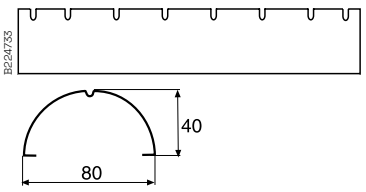


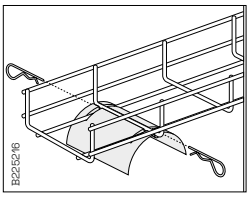




Radius Limiter B34

Limits the bend radius for sensitive cables.

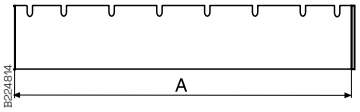


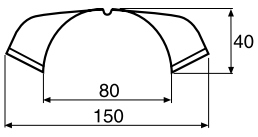


The radius limiter is mounted from below with the locking stick.

Radius Limiter B67

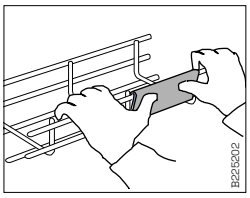
Limits the bend radius and gives protection at side position.





Technical information
Use and installation

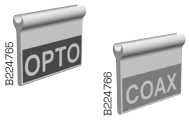
Marking Clip B44

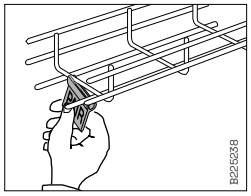


The Marking Clip is snapped onto the two side wires.

Identification Tag B40

Fits to wire Ø 5mm.

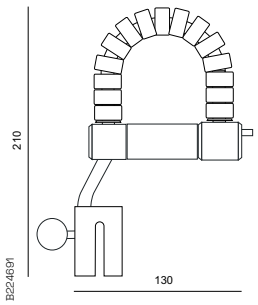


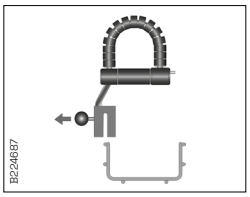


The Identification Tag is snapped onto the mesh tray.

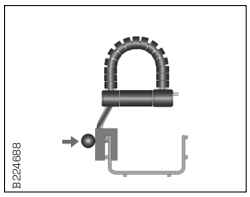
Cable Roller B25

Facilitates the pulling of cables into the mesh trays.

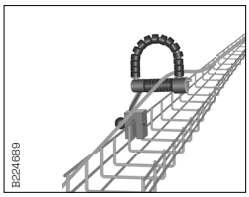




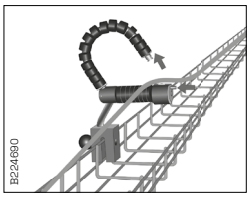
Pull the black knob outwards, place the cable roller onto the mesh tray.



Release the black knob and the cable roller is securely mounted on the mesh tray.



Simply pull the cable through the cable roller to the desired distance.



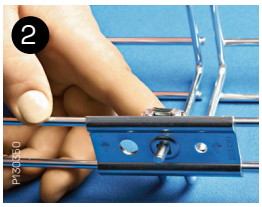
Push the small metal button to open the cable roller and place the cable in the tray.

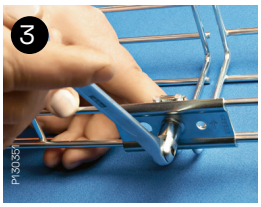
Appropriate tightening torque

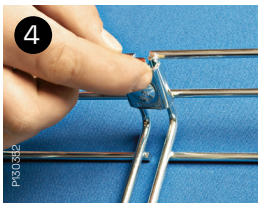
Part	Application	Tightening torque (Nm)
Fitting B52	Side joint	M6: 6
Fitting B2+B13	Couplers	M6: 6
Fitting B3	Bends	M6: 6
Fitting B2+B13+Ca50i	Fitting to Ca50i	M6: 6
Fitting B27+B13	Bends/fittings	M6: 6
B46&B47+B41&B43		M8: 15/M10: 25
B41+Nut B43	Threaded rod	M8: 15/M10: 25
B41+Nut B42	Threaded rod	M8: 15/M10: 25
B48	Fitting to ceiling	M8: 15/M10: 25
B49	Fitting to beam	M8: 15/M10: 25
MCT 75+B52	Central suspension	M6: 6
T-Bolt 26U+2F+Ca50i	Support system	M8: 15/M10: 25
Screw set 2S+Pendant bar1+2F	Support system, front side of 2F	M8: 15/M10: 25
Screw set 2S+Pendant bar1+2F	Support system, back side of 2F	M8: 15/M10: 25
Screw set 20S+2F+(2)Ca50i	Balance application	M8: 15/M10: 25
Screw set 22S+2F+Ca50i	Support system, back side of 2F	M8: 15/M10: 25
2FJ+24/48	Extension application	M8: 15/M10: 25
Earth Connection Clamp B18	Earthing connection	2,5 ± 0,5

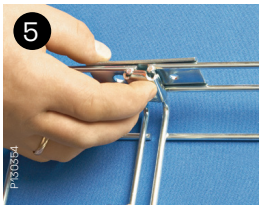
Technical information
Mounting instructions

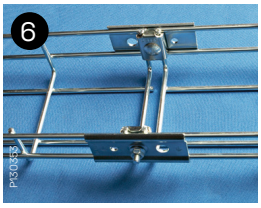
Connection of two trays / B1, B2, B13 alt B52



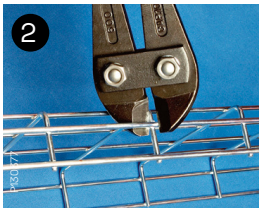


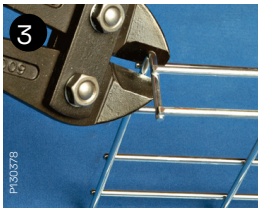


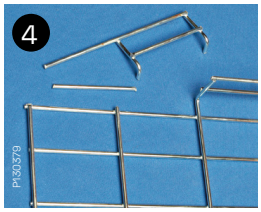


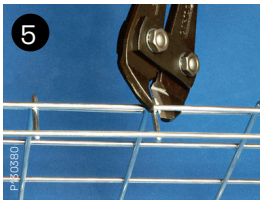


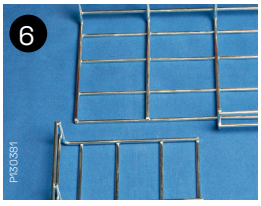
90 degree flat bends / B2

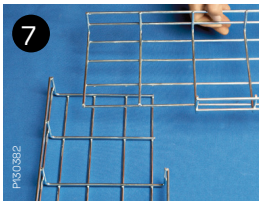


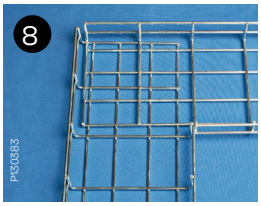


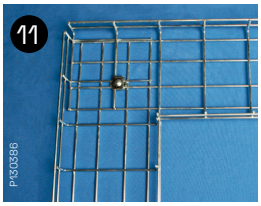


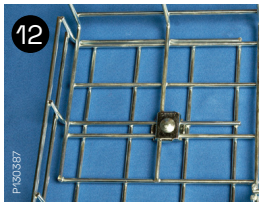




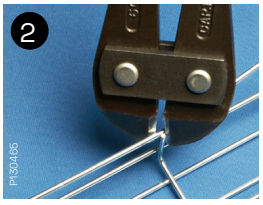


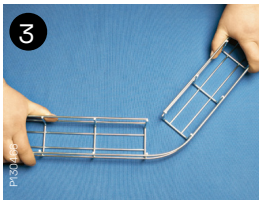


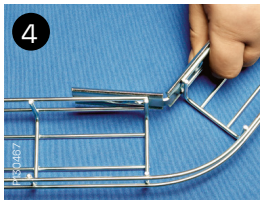


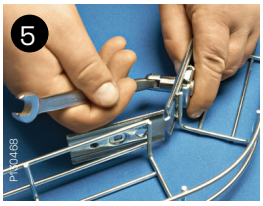


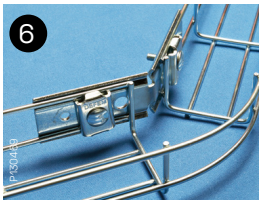
Angled flat bends / B27, B2, B13





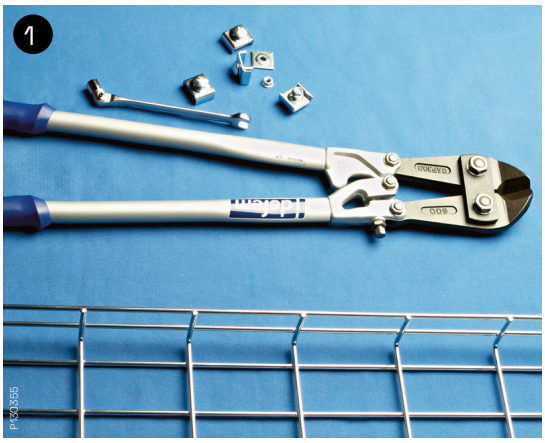


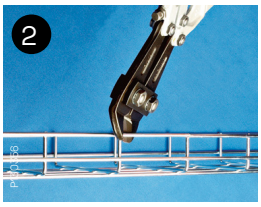


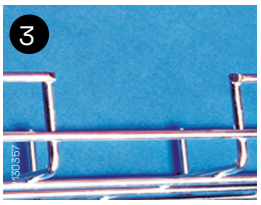


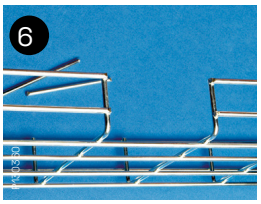
Technical information
Mounting instructions

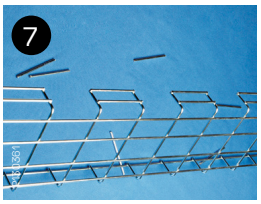
Large radius flat bends / B3

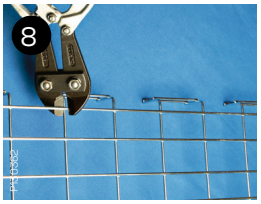


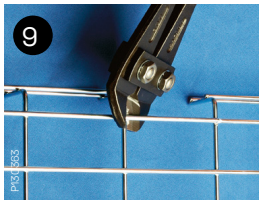


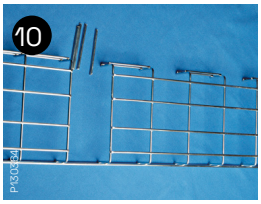


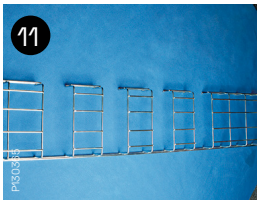


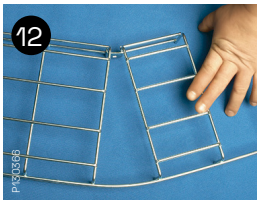


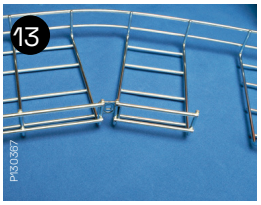


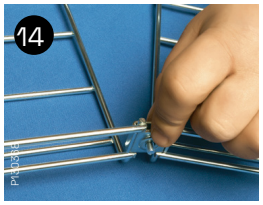


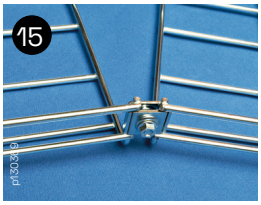


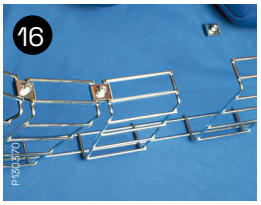


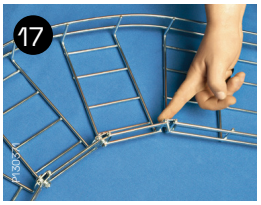


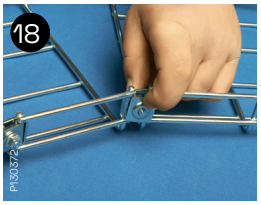


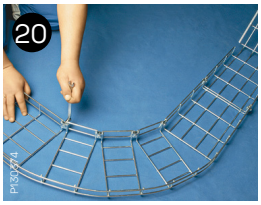


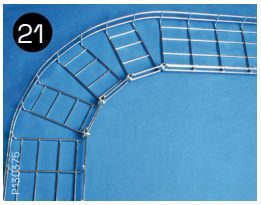






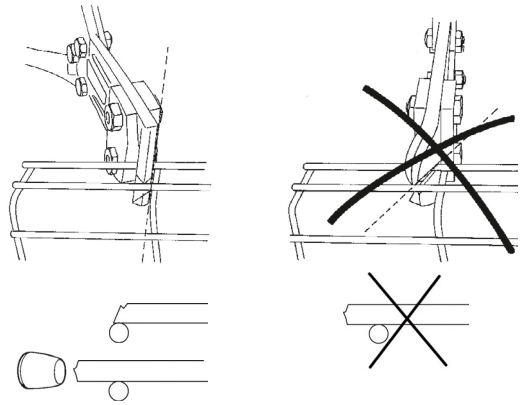


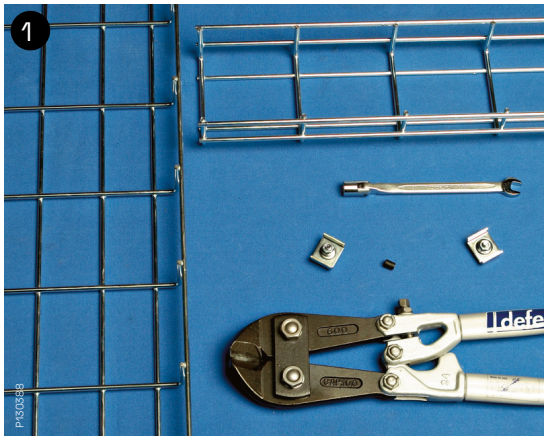


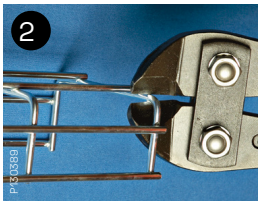


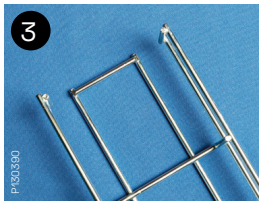
Technical information
Mounting instructions

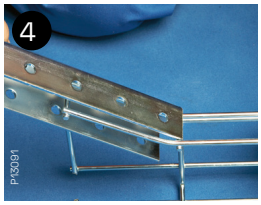
T-junction 90 degree / B3

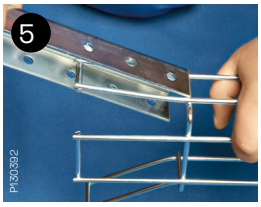


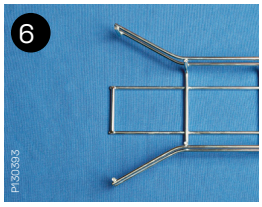


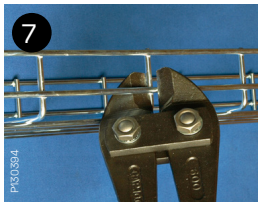


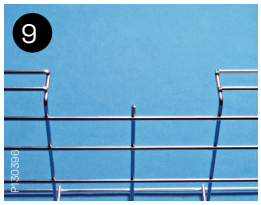


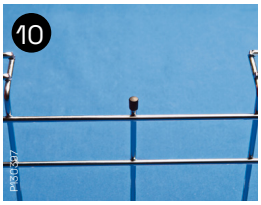


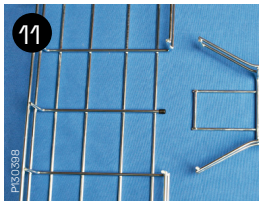


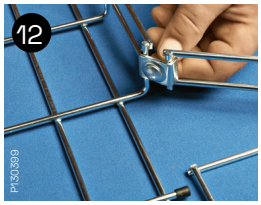


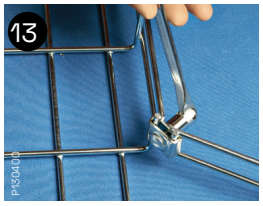


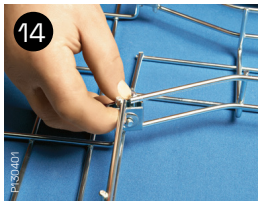


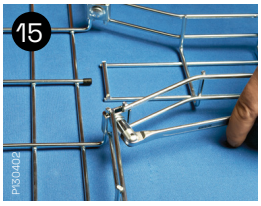


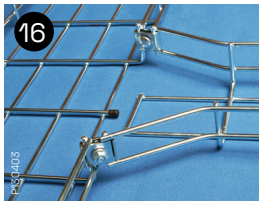


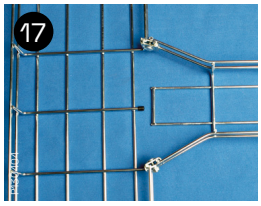






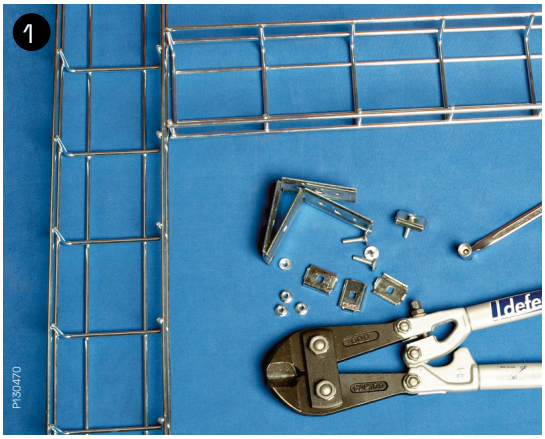


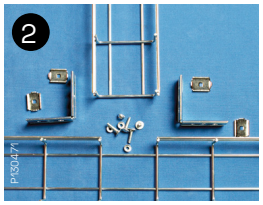


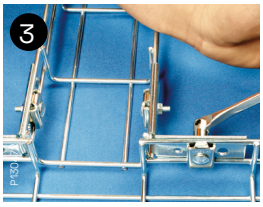


Technical information
Mounting instructions

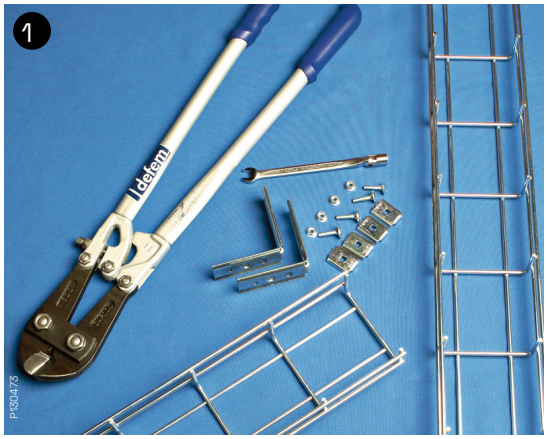
T-junction 90 degree / B27, B2, B13

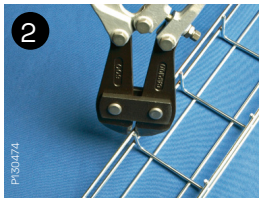


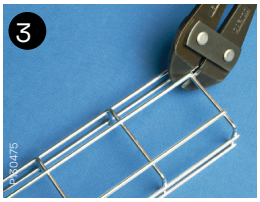


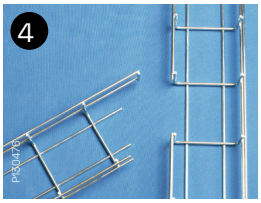


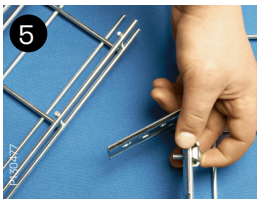
T-junction various angles / B27, B2, B13

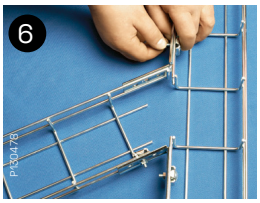


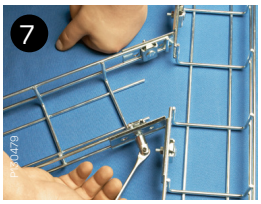


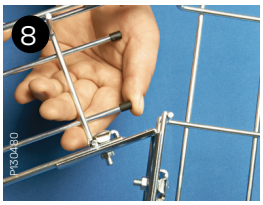


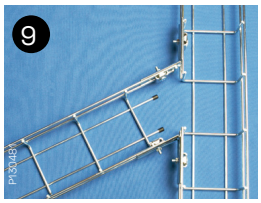


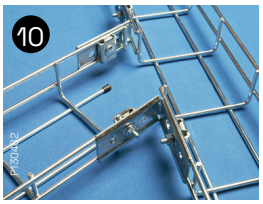






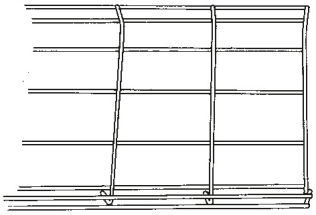


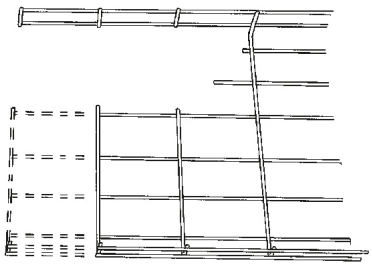


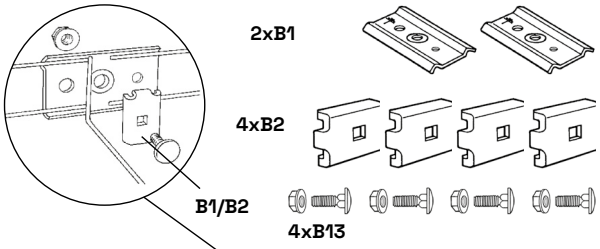


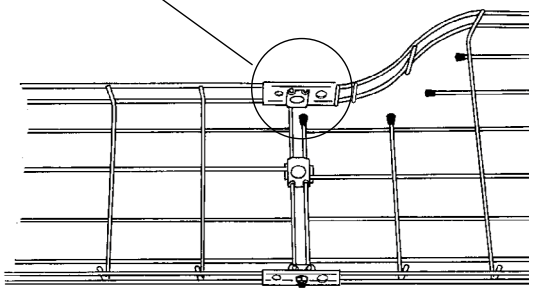
Technical information
Mounting instructions

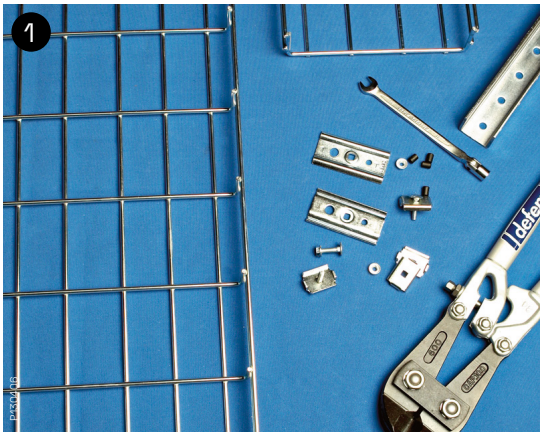
Reducer / B1, B2, B13 alt B52

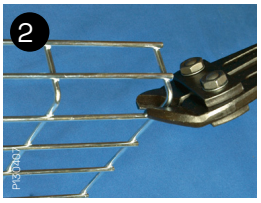


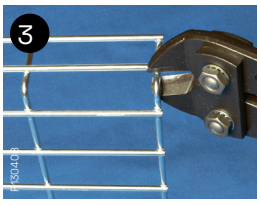


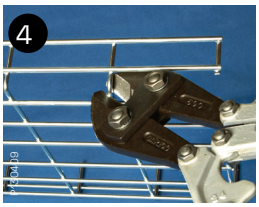


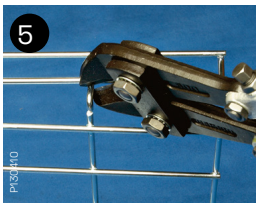


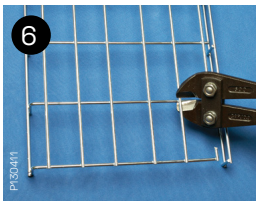


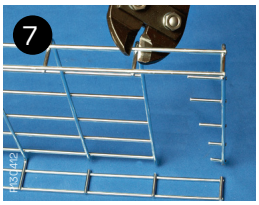


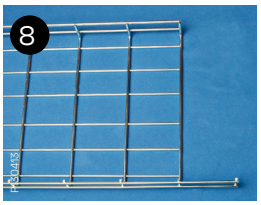


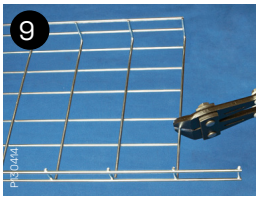


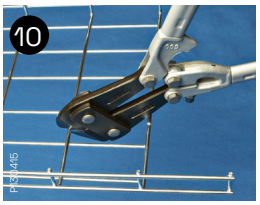


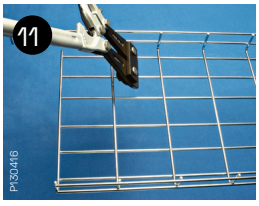


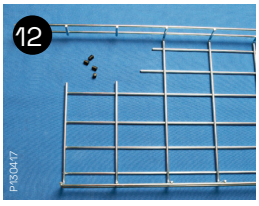


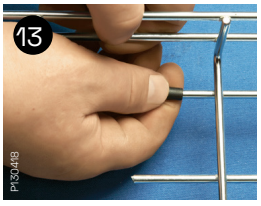


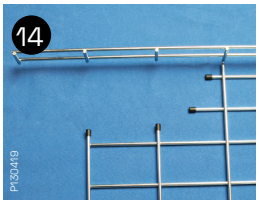


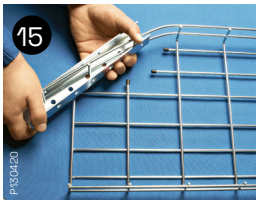


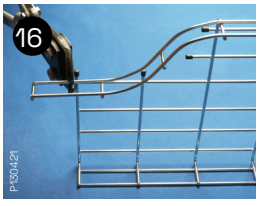


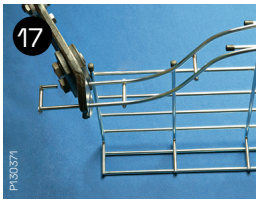


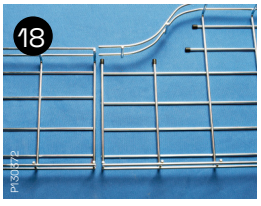


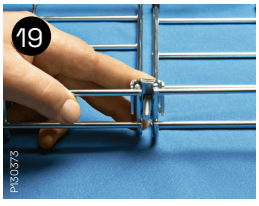


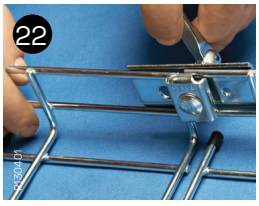


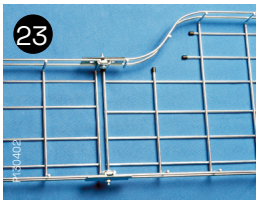






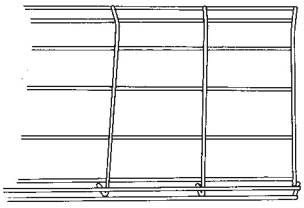


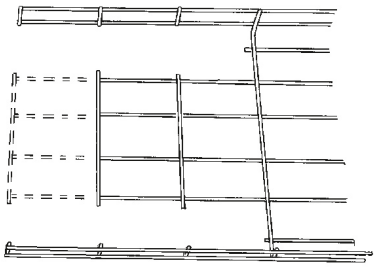


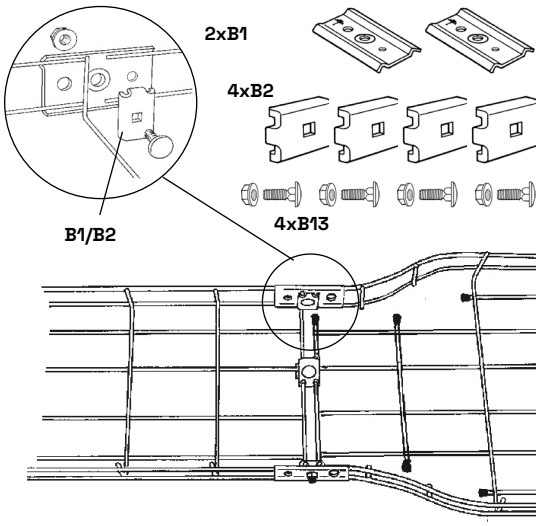


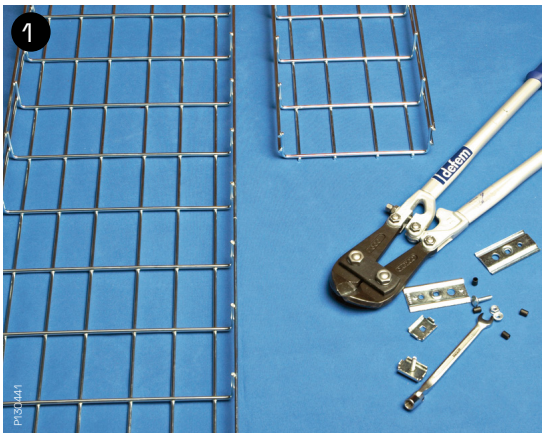
Technical information
Mounting instructions

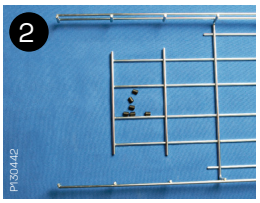
Symmetric reducer / B1, B2, B13

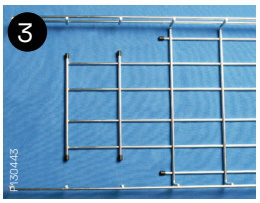


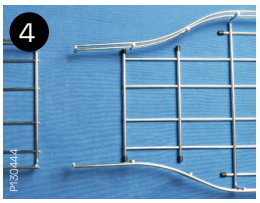


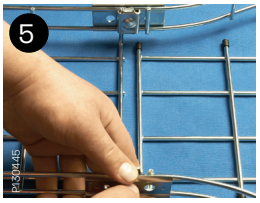


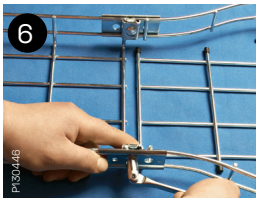


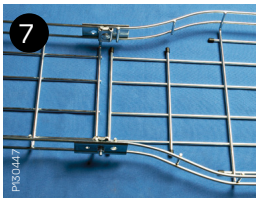




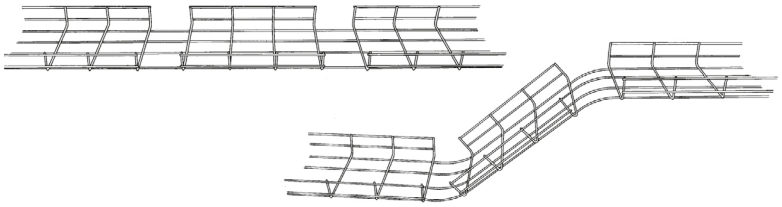


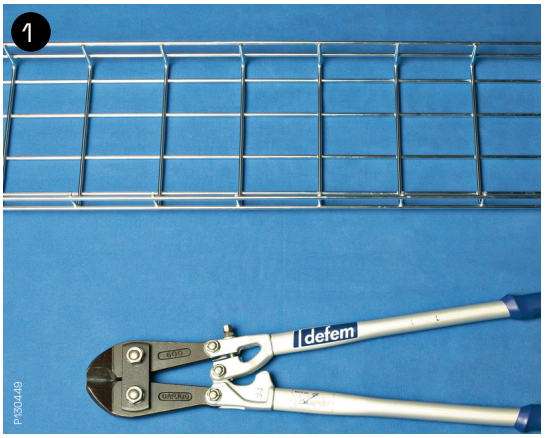


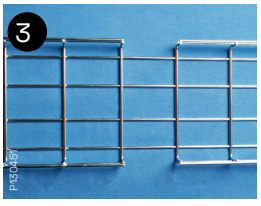


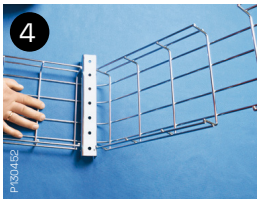


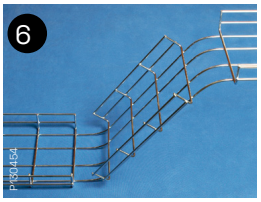
Raisers





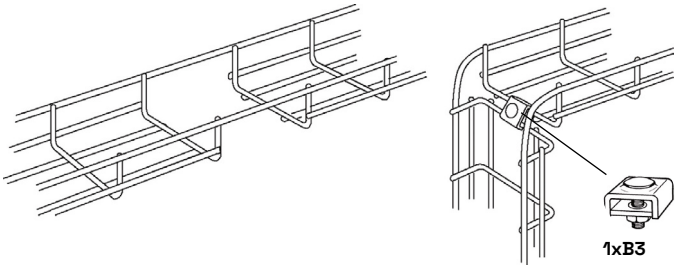


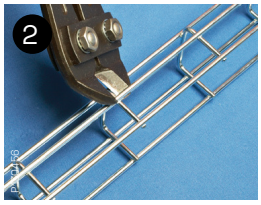


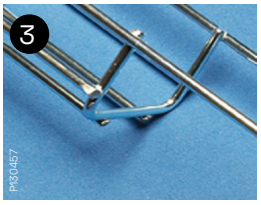


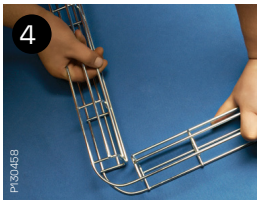
Technical information
Mounting instructions

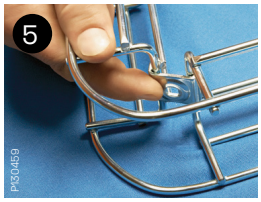
Making an external corner / B3

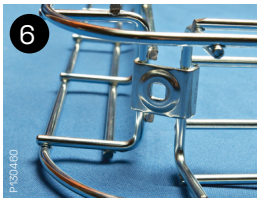


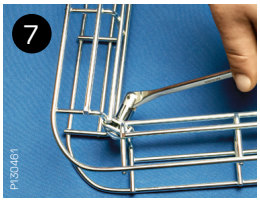


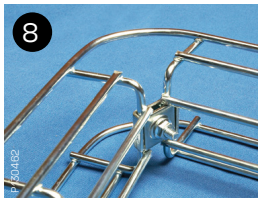


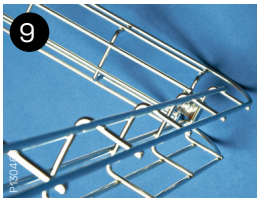












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