



Cable conduction
and protection
system

Insulating cable tray halogen free

66

raw material
colour

U48X

Grey



66

U48X

Grey

Insulating cable tray
halogen free

For support, protection and conduction of cables

- Excellent equipment protection.
- **Suitable for outdoor use.**
- Designed to support full load.
- Maintains its features up to 90°C.
- Inherently resistant to humid and saline corrosion.

Raw material

U48X


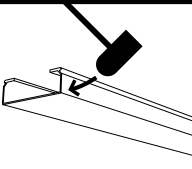
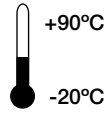


Cable trays and elements



Compliant



Technical characteristics

Electrical	Mechanical	Service temperature	Outdoors	In front of fire
				
IEC 61537*	IEC 61537*	IEC 61537*		
Insulating material. <hr/> No earthing required.	20 J at -20°C (except 60x100: 10 J). <hr/> IK10 acc./ EN 50085-2-1 (cable tray with cover).		Good performance outdoors and with exposure to UV rays.	Glow-wire test at 960°C. <hr/> Non flame propagating. <hr/> Flammability test UL94: V0 (test thickness sample: 3.2 mm).

* The values indicated according to IEC 61537 have been tested under the equivalent standard EN 61537. BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

Insulating cable tray
halogen free

66 **U48X**
Grey



Length

3 m

Colour

Grey

RAL 7038

Non perforated
or perforated base

Conformity declaration



See updated technical
information of each
part number on
www.unex.net



Photovoltaics: central bus station roof



Industrial building: dressing room



Railway infrastructure: tunnel



Photovoltaics



Road infrastructure: tunnel

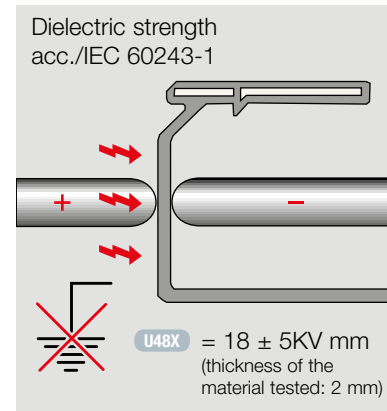
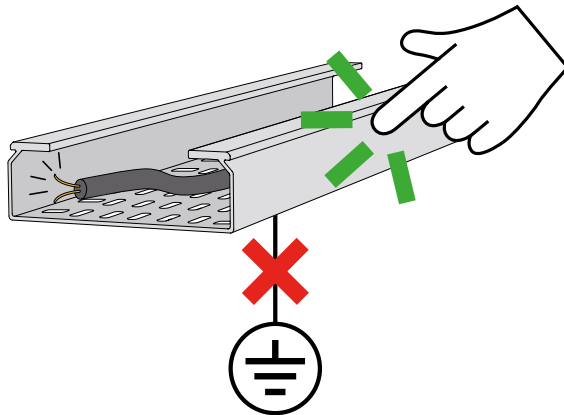


Power generation and distribution

Higher safety for the installation

Insulating material: increased protection for people and cables

Provides additional insulation for people and cables, which remains unaltered in the course of time.



Insulating material:

Advantages	Benefits
<p>Avoids creepage towards the conducting element:</p> <ul style="list-style-type: none"> • Risk of indirect contacts with the conducting element is reduced. • Possible sources of fire are reduced. • No need to earth the conducting element. • Avoids hot spots and electrical arcs between cables and cable tray. 	<p>Increased protection for people and cables.</p>
<p>Increased protection against indirect contacts:</p> <p>Provides an insulating enclosure:</p> <ul style="list-style-type: none"> • Protection degree IP3X/IP2X: Cable tray + cover. • Protection degree IP3XD: Non perforated cable tray + cover + joint cover piece + flat corners and semi T cover. 	
<p>No earthing required:</p> <ul style="list-style-type: none"> • No maintenance. 	<p>Cost savings due to the ease of the installation, project management and maintenance.</p>

Good resistance to humid and saline corrosion

The raw material assures excellent behaviour in front of corrosion; this feature is inherent, **it is not achieved by applying a coating to the final product.**

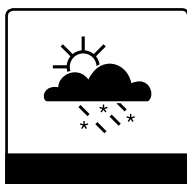
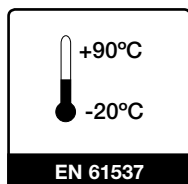
Therefore, the corrosion protection remains unchanged:

- In the course of time.
- After cutting and manual processing the material in the worksite.



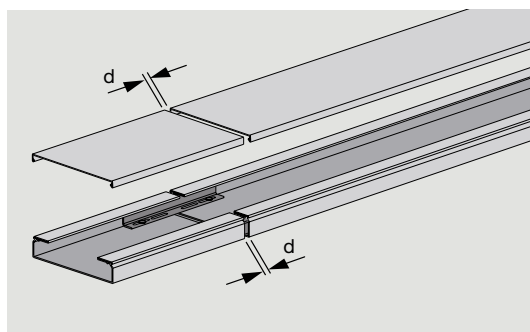
Outdoor behaviour

Unex raw material is formulated to achieve good resistance to outdoors.



- Unex insulating cable trays are designed to absorb linear expansion. The “**d**” distance between two lengths varies depending on the difference between the maximum temperature and the installation temperature.

Separation between lengths	
ΔT (°C)	d (mm)
20	5
30	7
40	9
50	11
$\Delta T = T_{\text{max}} - T_{\text{inst.}}$	



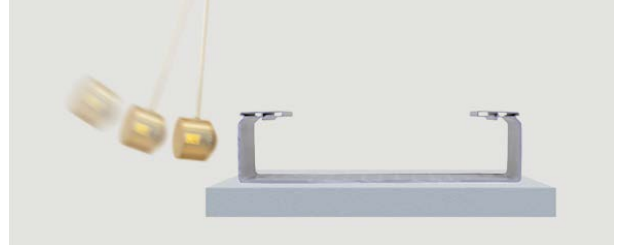
High impact absorption

Impact test acc./IEC 61537* at the minimum declared temperature.

Unex designs its cable trays to avoid impact damage at their lowest declared temperature (-20°C).

Impact resistance	Minimum temperature
20 J	-20°C

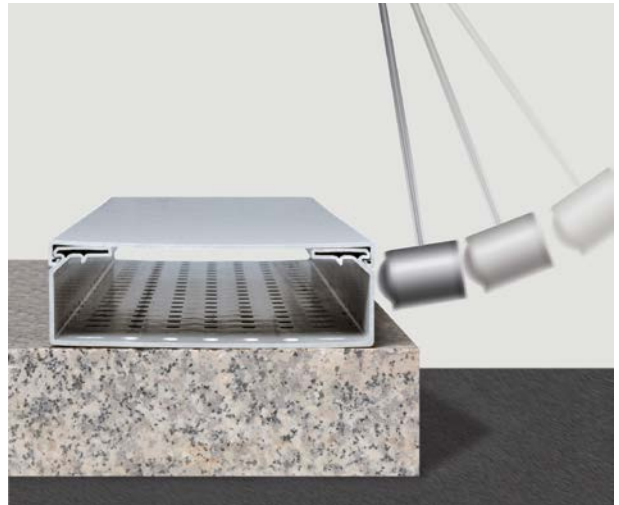
Except part numbers 66100-48 and 66101-48 (10J).



Impact test acc./EN 50085-1*

Unex insulating cable tray with cover, by complying with the European Standard EN 50085-2-1*, is considered a protecting enclosure (trunking).

Impact test for trunkings: IK10 (with cover fixing).



Reaction to fire

Our own formulation of the raw material is designed to obtain better results than standard ones. Unex cable tray passes the flammability and flame-propagation tests included in IEC 61537* with the best classification achievable for organic materials.



Glow-wire test IEC 61537*.

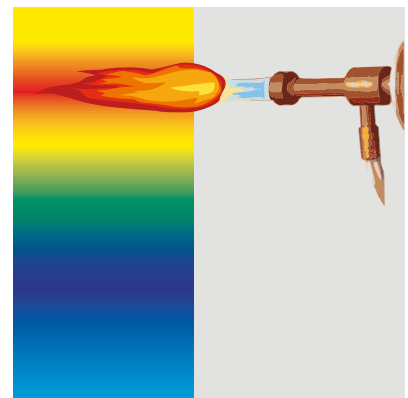
Test measuring the material's flammability by overheating a conductor.



Non-flame propagating IEC 61537*.

Test measuring flame spread caused by electrical ignition sources.

Flammability test UL94: V0
(thickness of the material tested: 3.2 mm).



No heat propagation.

As a result of the low thermal conductivity of insulating materials, no hot spots are generated away from the fire source.

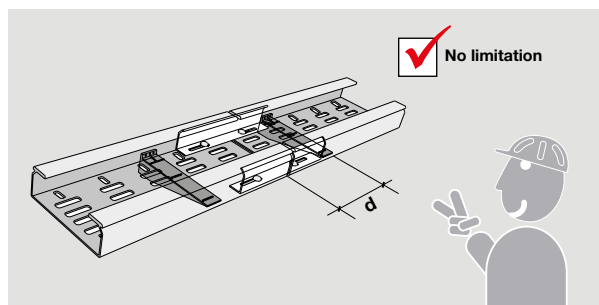
* BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

* BS EN 50085-1 is the UK implementation of EN 50085-1.

Designed to work at 100% cable capacity

Safe working load test **Type I acc./IEC 61537***

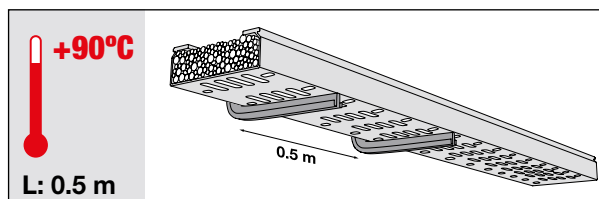
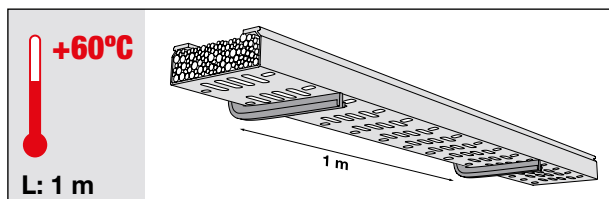
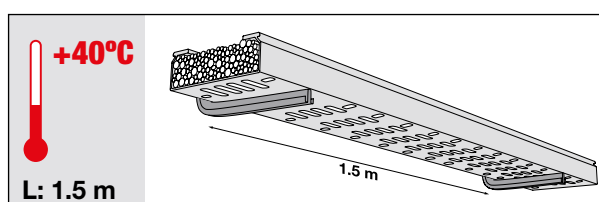
- Longitudinal deflection < 1% and transverse deflection < 5%.
 - Safety coefficient **1.7**.
- Allows placing the junctions at any point between two brackets, assuring the safe admissible load.



Type I full load

Higher safety for the installation.

Simplification of the calculations on cable management system design, execution and control of the installation. Load resistance in future extension of the installation.



Safe working load (SWL) in (kg/m) or (N) acc/ IEC 61537*

Sizes (mm)	60x100	60x200	60x300	100x400	100x600
Admissible load (Kg/m) SWL	10.8	22.5	33.7	77.2	116.5
Admissible load (N) SWL	105	220	330	756	1141

For cable trays of width ≥ 300 mm the use of a base union is necessary to comply with the requirements of full load transverse deflection defined by international cable trays Standard IEC 61537.

Packaging

A packaging designed to protect the product's characteristics during transport and storage, until the moment of final use.



*BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

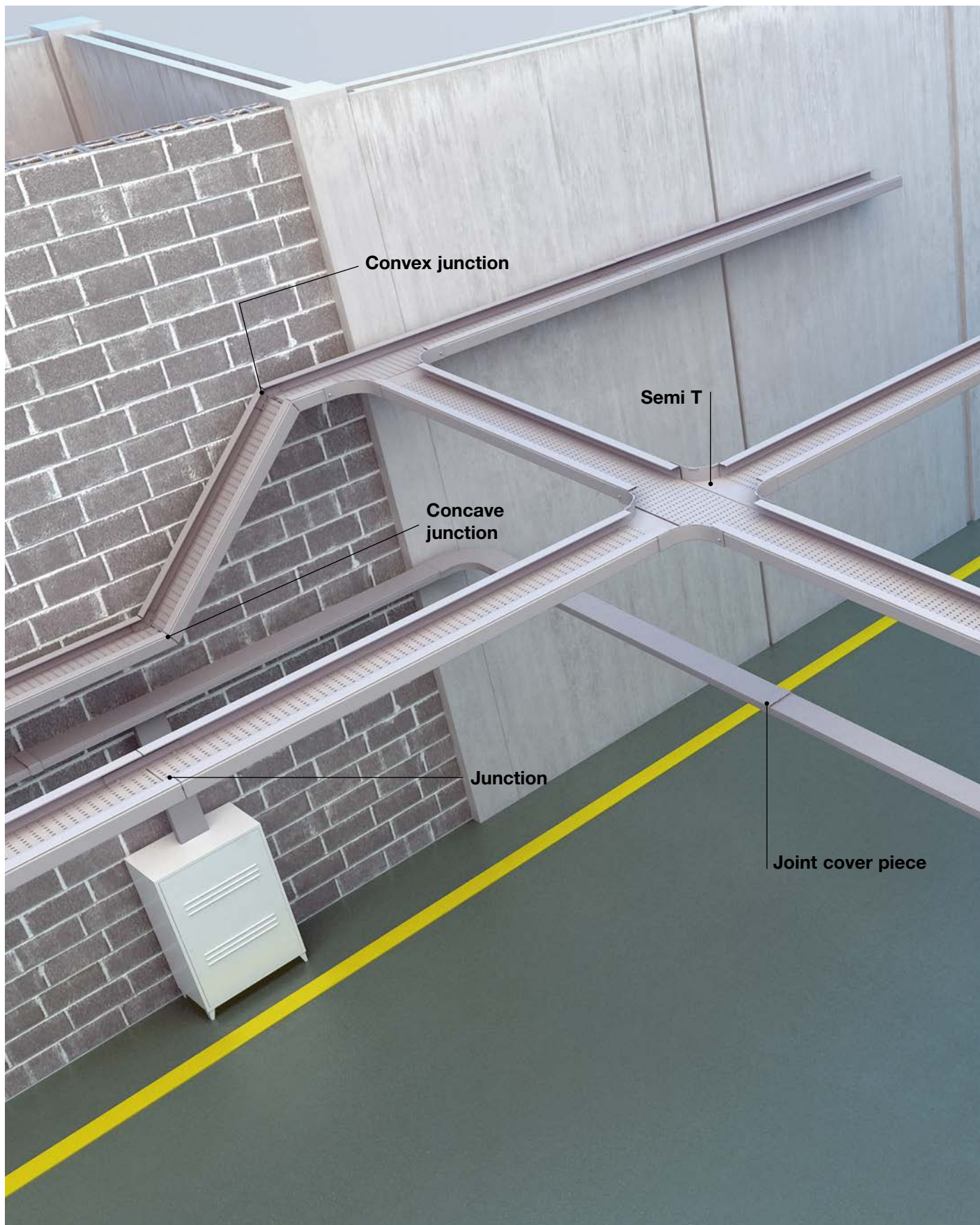
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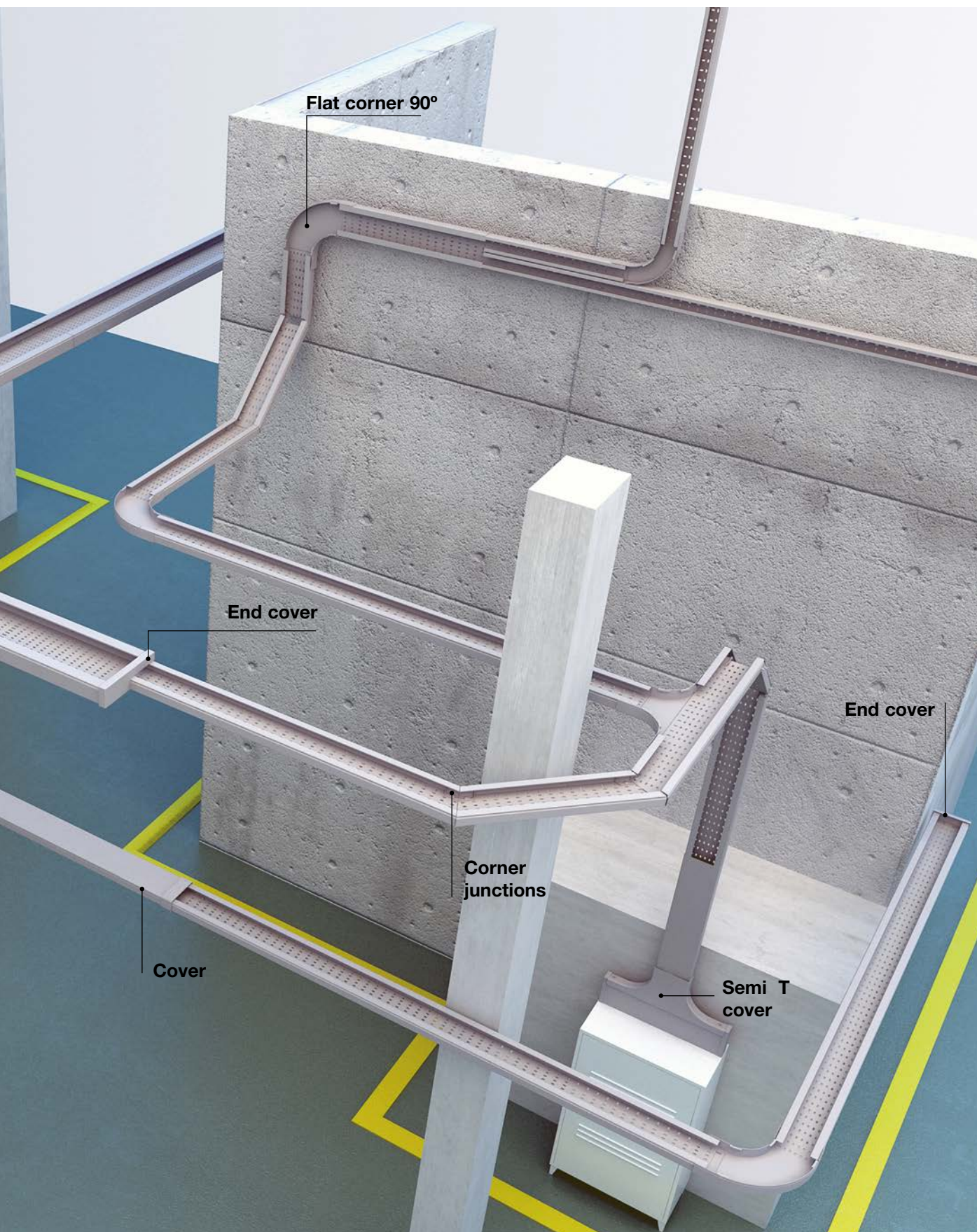
U48X
Grey

Insulating cable tray
halogen free

Elements for cable conduction

Safe, easy and quick mounting





Supporting elements

Wall

U48X

Temperature	≤ 40°C	≤ 60°C	≤ 90°C
Distance between brackets (L)	1.5 m	1 m	0.5 m

Directly (1 level)



Horizontal supports in:

- U48X insulating.
- SST. AISI 304 with grey epoxy coating.
- Galvanized steel with grey epoxy coating.



L bracket in:

- Steel sendzimir.
- Galvanized steel with grey epoxy coating.



Insulating vertical support in U48X ⚠

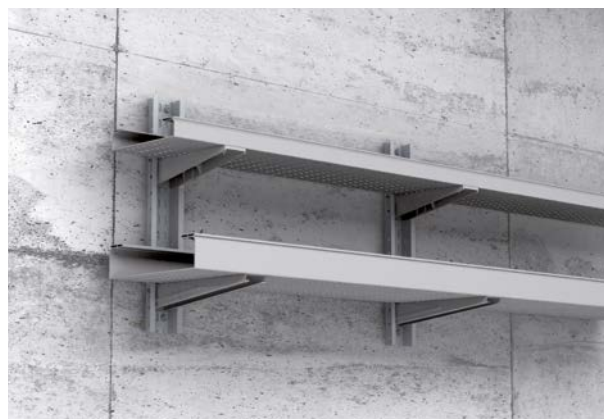
Just one piece: added safety.

By means of a profile (several levels)



Perforated U profile in:

- SST. AISI 304 with grey epoxy coating.
 - Galvanized steel with grey epoxy coating.
- With insulating horizontal supports in U48X.



Perforated Ω profile in:

- SST. AISI 304 with grey epoxy coating.
 - Galvanized steel with grey epoxy coating.
- With insulating horizontal supports in U48X and/or metallic.

Ceiling



Two L brackets in:

- Steel sendzimir.
- Galvanized steel with grey epoxy coating.



Metallic perforated U profile in:

- SST. AISI 304 with grey epoxy coating.
 - Galvanized steel with grey epoxy coating.
- With insulating horizontal supports in **U48X**.



Metallic perforated Ω profile in:


- SST. AISI 304 with grey epoxy coating.
- Galvanized steel with grey epoxy coating.

With insulating horizontal supports in **U48X** and/or metallic.




Floor



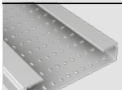








Insulating vertical support in **U48X** .

Just one piece: added safety.


 Trays must be fixed to the insulating vertical supports by means of metal screws in every mounting layout.

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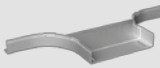
U48X
GreyInsulating cable tray
halogen free

Cable tray sizes (mm)		60x100	60x200	60x300	100x400	100x600
 Grey RAL 7038 (Part no. 66xxx-48)						
	Perforated cable tray 3 m	66100-48	66200-48	66300-48	66420-48	66620-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48	66421-48	66621-48
	Cover 3 m	66102-48	66202-48	66302-48	66402-48	66602-48

Junction parts in U48X

	Junction	66825-48		66835-48	
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48		66839 (1)	






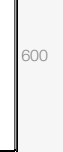
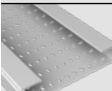
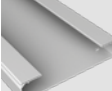
Cable conduction parts in U48X

 2 x meter of divider	Divider 3 m	66821-48			66831-48	
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (1)	
 2 x meter of divider	Reinforced divider 3 m		66826-48		66836-48	
	Nuts and bolts (M 8 DIN 603 ISO 8677)		66809-48		66839 (1)	
 4 x	Flat corner 90°	66110-48	66210-48	66310-48	66430-48	66630-48
	Nuts and bolts (M8 DIN 603 ISO 8677)	66809-48			66839 (1)	
	Flat corner cover 90° (Includes 4 screws AISI 304 part no. 66001)	66111-48	66211-48	66311-48	66411-48	66611-48
	End cover (Includes 2 screws AISI 304)	66113-48	66213-48	66313-48	66433-48	66633-48
	Joint cover piece	66114-48	66214-48	66314-48	66434-48	66634-48
 6 x	Semi T	66128-48	66228-48	66328-48	66448-48 (2)	66648-48 (2)
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (1)	



(1) As an alternative for metallic nuts and bolts and plugs, when insulating protection is required, use part numbers 66829 Hexagonal nuts and bolts AISI 304 (M 8x25 DIN 6921) + 66819 Insulating protector for plugs.

(2) Part number 66448-48 requires 7 screws to fix it to the cable tray. Part number 66648-48 requires 8 screws to fix it to the cable tray.




Cable tray sizes (mm)		60x100	60x200	60x300	100x400	100x600
 Grey RAL 7038 (Part no. 66xxx-48)						
	Perforated cable tray 3 m	66100-48	66200-48	66300-48	66420-48	66620-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48	66421-48	66621-48

Cable conduction parts in U48X

	Semi T cover (Includes 4 screws AISI 304 part no. 66001)	66129-48	66229-48	66329-48	66429-48	66629-48
	Cover fixing IK10	66845-48			66855-48	


Other junction parts in U48X

	Base unions (1) (Include 2 screws AISI 304)				66820-48	66830-48
1 x 	Corner junctions Mounting corners Note: A unit is composed by a set of 2 pieces (internal and external)	66841-48			66851-48	
4 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	
2 x 	Convex change - 45° level-changing	66842-48			66852-48	
4 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	
2 x 	Concave change + 45° level-changing	66843-48			66853-48	
4 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	
2 x 	Vertical hinge Variable-angle level changing	66813-48			66833-48	
8 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	
2 x 	Horizontal hinge	66844-48			66854-48	
4 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	

(1) For cable trays of width ≥ 300 mm the use of a base union is necessary to comply with the requirements of full load transverse deflection defined by international cable trays Standard IEC 61537.

(2) As an alternative for metallic nuts and bolts and plugs, when insulating protection is required, use part numbers 66829 Hexagonal nuts and bolts AISI 304 (M 8x25 DIN 6921) + 66819 Insulating protector for plugs.

* The values indicated according to IEC 61537 have been tested under the equivalent standard EN 61537.
BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

See next page 

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U48X









Grey

Insulating cable tray
halogen free

Parts for direct wall fixing (one level)

	Cable tray sizes (mm)	60x100	60x200	60x300	100x400	100x600
	Grey RAL 7038 (Part no. 66xxx-48)					
	Perforated cable tray 3 m	66100-48	66200-48	66300-48	66420-48	66620-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48	66421-48	66621-48





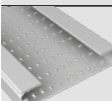
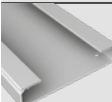
Parts for direct wall fixing (one level) in U48X and steel

		Insulating U48X	66103-48	66203-48	66303-48	66403-48	66603-48	
	Horizontal support	SST AISI 304 with grey epoxy coating					66423	66623
		Galvanized steel with grey epoxy coating					66424	66624
		+	+				+	
2 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)		66809-48			66839 (1)		
	Vertical insulating support Use metal screws to fix the tray	U48X	66155-48	66205-48	66305-48	66405-48	66605-48	
			+	+	+	+	+	
		2 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	SST AISI 304 66839 (1)				
	L bracket	Galvanized steel with grey epoxy coating	66106	66206	66306			
		Steel sendzimir	66107	66207	66307			
	+	+			+			
	2 x 	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48					
	Nuts and bolts (M 8 DIN DIN 6921)		66829					
	+	+						
		Insulating protector for plugs LDPE	66819					

(1) As an alternative for metallic nuts and bolts and plugs, when insulating protection is required, use part numbers 66829 Hexagonal nuts and bolts AISI 304 (M 8x25 DIN 6921) + 66819 Insulating protector for plugs.

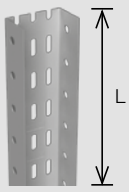



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Parts for wall fixing with profiles (several levels)

Cable tray sizes (mm)		60x100	60x200	60x300
 Grey RAL 7038 (Part no. 66xxx-48)				
	Perforated cable tray 3 m	66100-48	66200-48	66300-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48



Parts for wall fixing with profiles (several levels) in **U48X** and steel

	SST AISI 304 with grey epoxy coating L = 0,5 m	66838		
	Galvanized steel with grey epoxy coating	66938		
	SST AISI 304 with grey epoxy coating L = 3 m	66898		
	Galvanized steel with grey epoxy coating	66998		
	Horizontal insulating support U48X	66103-48	66203-48	66303-48
	Mounting pin SST AISI 304	66812		
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48		

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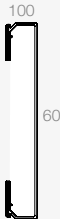
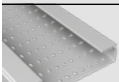
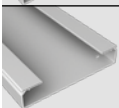
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U48X

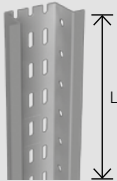



Grey

Insulating cable tray
halogen free

Parts for wall fixing with profiles (several levels)

	Cable tray sizes (mm)	60x100	60x200	60x300	100x400	100x600
	Grey RAL 7038 (Part no. 66xxx-48)					
	Perforated cable tray 3 m	66100-48	66200-48	66300-48	66420-48	66620-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48	66421-48	66621-48

Parts for wall fixing with profiles (several levels) in U48X and steel

 +  +  + 	SST AISI 304 with grey epoxy coating L = 0.5 m	66837				
	Galvanized steel with grey epoxy coating Ω perforated profile	66937				
	SST AISI 304 with grey epoxy coating L = 3 m	66897				
	Galvanized steel with grey epoxy coating	66997				
	Insulating U48X	66103-48	66203-48	66303-48	66403-48 (1)	66603-48 (1)
	Horizontal support SST AISI 304 with grey epoxy coating Galvanized steel with grey epoxy coating				66423	66623
					66424	66624
	Mounting pin SST AISI 304	66812			66822	
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (2)	





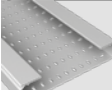
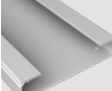
(1) Can be mounted with the mounting pin part no. 66812.

(2) As an alternative for metallic nuts and bolts and plugs, when insulating protection is required, use part numbers 66829 Hexagonal nuts and bolts AISI 304 (M 8x25 DIN 6921) + 66819 Insulating protector for plugs.

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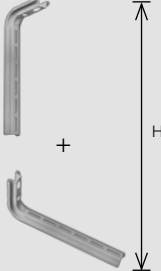
Mounting table for double L ceiling brackets

(Compatible with trays **up to 60x300 mm**)

Cable tray sizes (mm)		60x100	60x200	60x300
 Grey RAL 7038 (Part no. 66xxx-48)				
	Perforated cable tray 3 m	66100-48	66200-48	66300-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48



Ceiling fixing parts in steel

	Galvanized steel with grey epoxy coating	66106 + 66106	66106 + 66206	66106 + 66306
	H = 150 mm.			
	Steel sendzimir	66107 + 66107	66107 + 66207	66107 + 66307
	Galvanized steel with grey epoxy coating	66206 + 66106	66206 + 66206	66206 + 66306
	H = 250 mm.			
	L bracket + L bracket	66207 + 66107	66207 + 66207	66207 + 66307
	Steel sendzimir			
	Galvanized steel with grey epoxy coating	66306 + 66106	66306 + 66206	66306 + 66306
	H = 350 mm.			
	Steel sendzimir	66107 + 66107	66207 + 66207	66307 + 66307
	Nuts and bolts (M 8x25 DIN 6921) SST AISI 304	66829 (1)		
	Nuts and bolts (M 8 DIN 603 ISO 8677) U48X	66809-48 (2)		

(1) To fix both L brackets use nuts and bolts 66829.

(2) To fix the cable tray to L bracket use nuts and bolts 66809-48.

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U48X

Grey

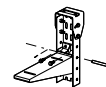
Insulating cable tray
halogen free

Mounting table for U perforated ceiling supports



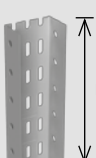


(Compatible with trays **up to 60x300 mm**).

In installations with ceiling supports, the load calculations should be checked.

Perforated U profile



Supporting elements

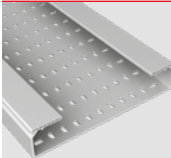
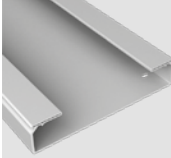


		SST AISI 304 with grey epoxy coating	Galvanized steel with grey epoxy coating
	U profile connector	66880	66980
+		+	+
	Nuts and bolts (M 8x25 DIN 6921)	66829	
4 x			
+			
	U profile		
	L = 0.25 m	66808	66908
	L = 0.50 m	66838	66938
	L = 3 m	66898	66998
+			
	Horizontal support	See table below for horizontal supports. (compatible only with insulating supports in U48X)	
+			
	Mounting pin	66812	
1 x			

Cable tray sizes (mm)

60x100

60x200

60x300

	Perforated cable tray 3 m	66100-48	66200-48	66300-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48
	Horizontal support	66103-48	66203-48	66303-48
+		+	+	+
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48		
2 x				

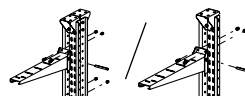
See next page ➔

Mounting table for Ω perforated ceiling supports

(Compatible with all sizes of cable tray).

In installations with ceiling supports, the load calculations should be checked.

Perforated Ω profile



Supporting elements

		SST AISI 304 with grey epoxy coating	Galvanized steel with grey epoxy coating
	Ω profile connector	66890	66990
	Nuts and bolts (M 8x25 DIN 6921) SST AISI 304	66829	
	Ω profile L = 0.50 m	66837	66937
	Ω profile L = 3 m	66897	66997
	Horizontal support	See table below for horizontal supports.	
	Mounting pin SST AISI 304	66812 (1)	

(1) Part number 66812 for horizontal supports in **U48X** and part number 66822 for metallic horizontal supports.

Cable tray sizes (mm)		60x100	60x200	60x300	100x400	100x600
	Perforated cable tray 3 m	66100-48	66200-48	66300-48	66420-48	66620-48
	Non perforated cable tray 3 m	66101-48	66201-48	66301-48	66421-48	66621-48
	Insulating U48X	66103-48	66203-48	66303-48	66403-48	66603-48
	Horizontal support SST AISI 304 with grey epoxy coating				66423	66623
	Horizontal support Galvanized steel with grey epoxy coating				66424	66624
	Nuts and bolts (M 8 DIN 603 ISO 8677)	66809-48			66839 (1)	

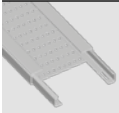





(1) As an alternative for metallic nuts and bolts and plugs, when insulating protection is required, use part numbers 66829 Hexagonal nuts and bolts AISI 304 (M 8x25 DIN 6921) + 66819 Insulating protector for plugs.

66

U48X

Grey

Insulating cable tray
halogen freeUseful cross-sections (mm²)

Sizes (mm)		60x100	60x200	60x300	100x400	100x600
Grey RAL 7038						
Part numbers perforated cable tray		66100-48	66200-48	66300-48	66420-48	66620-48
Part numbers non perforated cable tray		66101-48	66201-48	66301-48	66421-48	66621-48
		 4349	 9900	 15301	 34506	 53492
Divider	Section occupied	344	344	344	534	534
	Max. no. of compartments	2	5	7	11	17
Reinforced divider	Section occupied		343	343	673	673
	Max. no. of compartments	1	2	3	5	5

Load test conditions TEST TYPE I acc./IEC 61537*

U48X			
Temperature	40°C	60°C	90°C
Distance between supports (L)	1.5 m	1 m	0.5 m
Longitudinal deflection	Lower than 1% of the distance between supports		
Transverse deflection	Lower than 5% of the tray's width		

Safe working load (SWL) in (kg/m) or (N) acc/ IEC 61537*

Sizes (mm)	60x100	60x200	60x300	100x400	100x600
Admissible load (Kg/m) SWL	10.8	22.5	33.7	77.2	116.5
Admissible load (N) SWL	105	220	330	756	1141

For cable trays of width ≥ 300 mm the use of a base union is necessary to comply with the requirements of full load transverse deflection defined by international cable trays Standard IEC 61537.

*BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

Supports. Safe working load (SWL) (Kg) or (N) acc./IEC 61537*

U48X

Temperature	40°C	60°C	90°C
Admissible deflection	Lower than 5% of the length of the support		
Overload without collapsing (Deformation is admitted)	1.7 times the safe working load declared		
Part no.	Insulating horizontal support		
66103-48	35 kg (343 N)	25 kg (245 N)	5.4 kg (52 N)
66203-48	60 kg (588 N)	40 kg (392 N)	11.3 kg (110 N)
66303-48	60 kg (588 N)	40 kg (392 N)	16.9 kg (165 N)
66403-48	116 kg (1134 N)	77 kg (756 N)	38.6 kg (378 N)
66603-48	175 kg (1712 N)	116.5 kg (1141 N)	58 kg (568 N)
Part no.	Insulating vertical support		
66155-48	25 kg (243 N)	16.6 kg (162 N)	
66205-48	56 kg (554 N)	37.6 kg (369 N)	
66305-48	86 kg (842 N)	57.3 kg (561 N)	
66405-48	116 kg (1134 N)	77.2 kg (756 N)	
66605-48	175 kg (1712 N)	116.5 kg (1141 N)	



In Steel sendzimir, Galvanized steel with grey epoxy coating or steel AISI 304 with epoxy coating

Temperature	40°C, 60°C and 90°C			
Admissible deflection	Lower than 5% of the length of the support			
Overload without collapsing (Deformation is admitted)	1.7 times the safe working load declared			
	Steel sendzimir	Steel epoxy	Steel AISI 304	Metallic horizontal support
Part no.		66424	66423	116 kg (1137 N)
		66524	66523	145 kg (1421 N)
		66624	66623	175 kg (1715 N)
	Steel sendzimir	Steel epoxy	Steel AISI 304	Metallic L support
Part no.	66107	66106		90 kg (882 N)
	66207	66206		55 kg (540 N)
	66307	66306		51 kg (500 N)

*BS EN 61537 is the UK implementation of EN 61537 and IEC 61537.

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U48X
GreyInsulating cable tray
halogen free

Unex online: Tools for specification

www.unex.net

Technical information

- Technical specifications
- Mounting instructions
- Different database formats



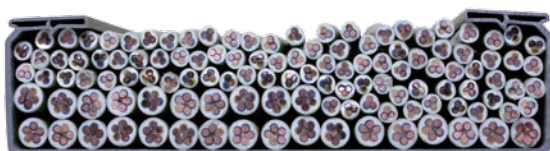
Configurator

- Unex cable tray's configurator allows you to obtain a complete list of materials



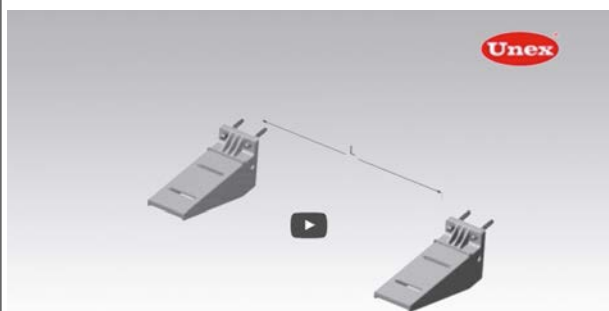
Unexproject

- Your tool for dimensioning the cable tray according to the cables you are using in your project



YouTube Unex Solutions

- Mounting videos



EPLAN

Unex products are available in the EPLAN Data Portal, classified as "Electrical engineering" and "Mechanics".



Databases

As a customer-oriented company, we provide our data in different formats: BIM-REVIT and 3D-DWG.