OSTEC branch offices and representatives:

Ostec-Center
Bldg. 98, 29 Vereyskaya St., Moscow
tel. (495) 662-53-18

- Moscow
- Moscow Region
- Komi Republic
- Belgorod Region
- Bryansk Region
- Vladimir Region
- Voronezh Region
- Ivanovo Region
- Kaluga Region
- Kostroma Region
- Kursk Region
- Lipetsk Region
- Nizhny Novgorod Region
- Orel Region
- Ryazan Region
- Smolensk Region
- Tambov Region
- Tver Region
- Tula Region
- Yaroslavl Region

Regional representative for the Southern and North Caucasian Federal Districts
80 Obreznaya St., Khutor Lenina, Krasnodar
tel. (861) 234-73-89, (928) 232-02-22

- Krasnodar Territory
- Republic of Adygea
- Republic of Dagestan
- Republic of Ingushetia
- Kabardino-Balkar Republic
- Karachay-Cherkess Republic
- Republic of North Ossetia-Alania
- Chechen Republic
- Stavropol Territory
- Rostov Region
- Sevastopol
- Republic of Crimea

Regional representative for the Republic of Tatarstan and Volga-Vyatka region
10/A Tekhnicheskaya St., Kazan
tel. (843) 278-50-57, (927) 249-48-06

- Republic of Tatarstan
- Mari El Republic
- Republic of Mordovia
- Udmurt Republic
- Chuvash Republic (Chuvashia)
- Kirov Region

Ostec-North-West
44 Salova str., St. Petersburg
tel. (812) 490-50-15, 428-38-25

- St. Petersburg
- Leningrad Region
- Republic of Karelia
- Arkhangelsk Region
- Vologda Region
- Kaliningrad Region
- Murmansk Region
- Novgorod Region
- Pskov Region
- Nenets Autonomous Area

Ostec-Urals
31a Titov St., Yekaterinburg
tel. (343) 263-79-32, 263-79-33

- Sverdlovsk Region
- Perm Territory
- Kurgan Region
- Tyumen Region
- Chelyabinsk Region
- Khanty-Mansi Autonomous Area - Yugra
- Yamalo-Nenets Autonomous Area

Regional representative for Tyumen Region
Office B403, 62 Respubliki St., Tyumen
tel. 8-922-00-68-700

Ostec-Samara
3a Verkhne-Karyernaya St., Samara
tel. (846) 268-99-22, 372-39-27

- Samara Region
- Orenburg Region
- Penza Region
- Saratov Region
- Ulyanovsk Region

Regional representative for the Republic of Bashkortostan
tel. (927) 231-01-42

- Republic of Bashkortostan

Regional representative for Volgograd Region

tel. (937) 080-34-02
- Volgograd Region
- Republic of Kalmykia
- Astrakhan Region

Ostec-Siberia
Office 308, 68/1 Yadrintsevskaya St., Novosibirsk
tel. (383) 217-48-09

- Novosibirsk Region
- Altai Republic
- Sakha Republic (Yakutia)
- Altai Territory
- Kemerovo Region
- Omsk Region
- Tomsk Region

Regional representative for Krasnoyarsk Territory
tel. (923) 317-10-07

- Krasnoyarsk Territory
- Tyva Republic
- Republic of Khakassia

Regional representative for the East Siberian region
Office 111, 249 Baykalskaya St., Irkutsk
tel. (395) 279-89-98, (924) 530-93-30

- Irkutsk Region
- Republic of Buryatia
- Zabaykalsky Territory

Regional representative for the Far Eastern region
41 Voennoe shosse, Vladivostok
tel. (423) 244-65-84, (924) 139-03-00

- Primorsky Territory
- Kamchatka Territory
- Khabarovsk Territory
- Jewish Autonomous Region
- Amur Region
- Magadan Region
- Sakhalin Region
- Chukotka Autonomous Area

Regional warehouse in Khabarovsk
14 Gaydar St., Khabarovsk
tel. (924) 101-00-40

Representative for the Republic of Kazakhstan
tel. (777) 515-34-46

Representative for the Republic of Belarus
tel. (495) 662-53-18 (ext. 119)

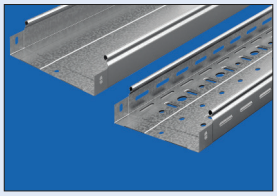
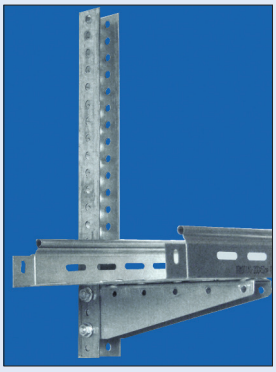
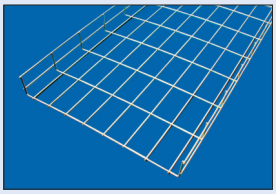
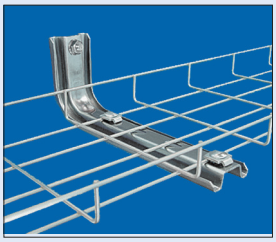
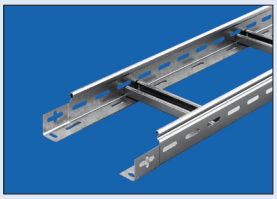
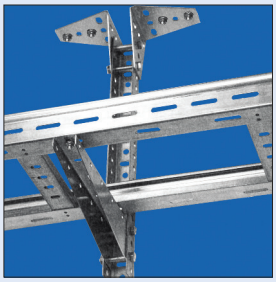
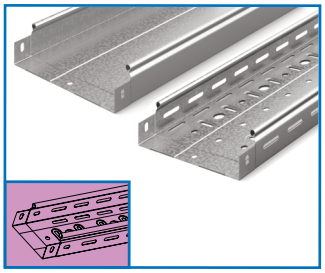
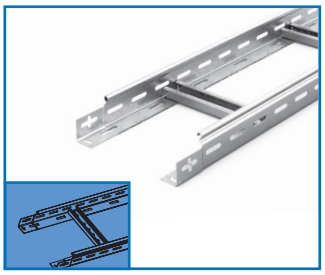
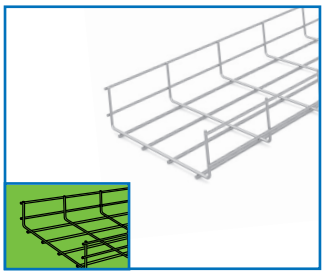







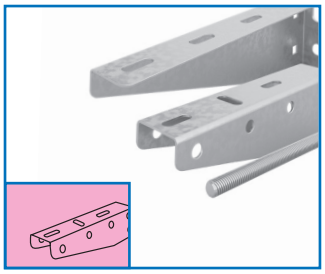

TABLE OF CONTENTS

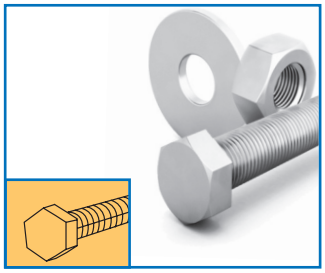
OSTEC CABLE TRAY SYSTEM





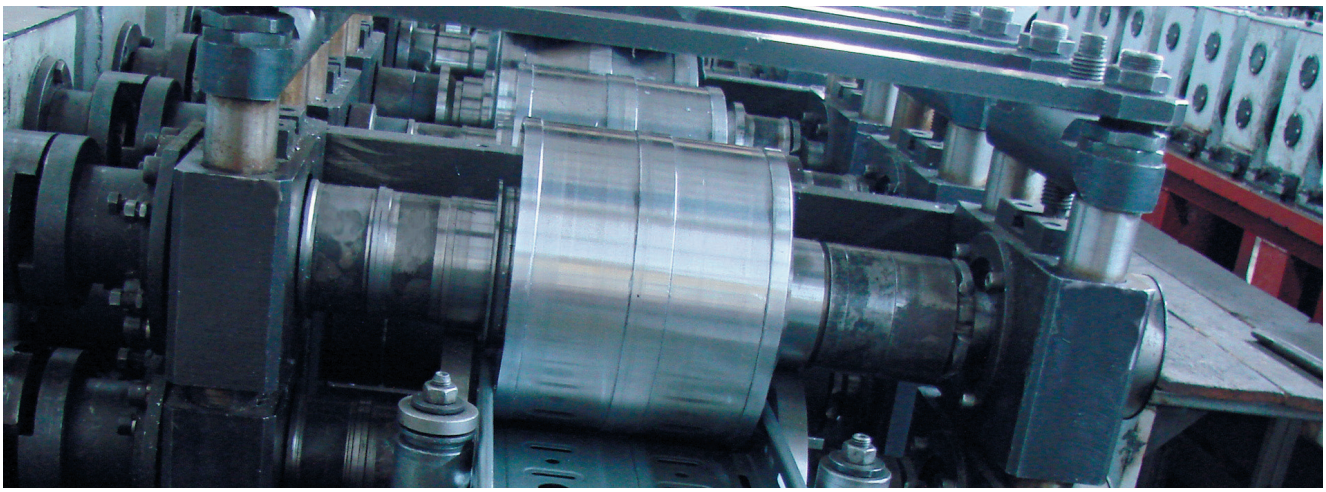






	DESIGN	APPLICATION
CABLE TRAYS	**TU-3449-001-61603126-09 — OSTEC metal trays for electrical wiring TU-3449-001-61603126-2009 — OSTEC metal trays of snap-in (male-female) series** Perforated and non-perforated. With lockable side walls, with cover (closed) and without cover (open). Perforations in the tray bottom have raised rims for extra rigidity. Special stiffening ribs on the tray bottom and side walls provide greater load capacity. The tubular tray lock securely fastens the cover, completely eliminates sharp edges, and increases tray rigidity. Side walls are flared out at a 4° angle for more secure fixation of the cover.	Installation of wires and cables rated up to 1000 V in open electrical wiring and cabling systems. Suitable for combined laying of power and data cables and installation of lighting fixtures.
CABLE LADDERS	**TU-3449-005-61603126-10 — OSTEC NLO metal cable ladders** Structurally composed of profile side rails and perforated rungs fastened to the side rails by clinching. Side rails are manufactured by roll-forming and are stiffened with longitudinal ribs for greater load capacity. Rungs made of U- or C-shaped profile have perforations for securing cables with plastic ties.	Installation of cables with a large distributed load.
WIRE MESH TRAYS	**TU-3449-004-61603126-10 — OSTEC metal wire mesh trays for electrical wiring** Metal wire mesh trays are manufactured by contact welding of wires with subsequent electrochemical zinc plating.	Installation of trunk cables in SCS and telecommunication systems for ready access, visual inspection, cleaning and good ventilation of the cables. Can be also used for installing power cables, including combined laying of power and data cables.
CABLE TRAY MOUNTING ACCESSORIES	**TU-3449-002-61603126-09 — OSTEC wall and ceiling support brackets** Universal mounting accessories are suitable for all types of OSTEC trays. Special mounting accessories are designed for specific types of cable trays to allow secure fastening and simple installation.	Fastening all types of OSTEC trays to ceilings, walls and floors.
FASTENERS	OSTEC fasteners are manufactured to meet the applicable standard specifications.	Fastening to concrete, brickwork, natural stone and other construction materials. Designed for all mounting applications from light-duty to extra critical installations.

COMPANY PROFILE



Company

Founded in 1997, OSTEC is one of Russia's leading manufacturers of cable support products (cable trays and fittings) marketed under the OSTEC® trademark. The company's manufacturing plants are located in the cities of Elektrostal ("Profkonstruktsii" LLC) and Kaluga ("Kabelnye Metallicheskie Konstruktsii" LLC).
Within Russia, OSTEC operates branch offices and warehouses in Moscow, St. Petersburg, Krasnodar, Samara, Yekaterinburg, Novosibirsk, Khabarovsk and Vladivostok. OSTEC's regional representatives are based in Volgograd, Kazan, Ufa, Tyumen, Irkutsk and Krasnoyarsk.

Mission

OSTEC specializes in manufacturing high-quality cable support structures designed for creating cabling systems of any complexity. OSTEC products are available anywhere in Russia at affordable prices and with quality matching the best international counterparts.

Our company's mission is to always be a reliable partner for our customers and rank among the Russia's top three manufacturers of cable support systems.

Strategic goal

Achieving leadership for the OSTEC® brand on the market of cable support structures in Russia and the CIS through implementation of innovative solutions, consistently high quality standards, diversification of our product range and improving customers services.

Product line

OSTEC cable support products are a complete system of cable trays, fittings, wall and ceiling suspension and support brackets, and high-quality fasteners. The tray systems include perforated and non-perforated cable trays, cable ladders, wire mesh trays, mounting profiles, support and suspension systems, and a full range of accessories for all types of the above-mentioned products.

Sales policy

OSTEC products are marketed solely on behalf of The Ostec-Systems Trading Company LLC (TD "OSTEC-SYSTEMY"), through its own network of official distributors based in most Russian Federation regions, in Belarus and in Kazakhstan. OSTEC's regional branch offices and representatives provide logistics and marketing support throughout Russia.

Quality

The company's manufacturing facilities were audited in 2007 and awarded ISO 9001:2008 certification for manufacturing metal cable trays, cable ladders, wire mesh cable trays, and wall and ceiling bracket systems for these products.
The certification confirms compliance of the company's Quality Management System (QMS) with the ISO 9000 family of international quality standards.

PRODUCT CERTIFICATIONS

Certificate of Conformity
to ISO 9001:2008
(GOST ISO 9001-2011)
No. ROSS RU.1601.14 MOBSI/GOS

Certificate of Conformity
to GOST ISO 9001-2011 (ISO 9001:2008)
No. ROSS RU.OSH01.OS02.SMK.00583

Certificate of Climatic Design UHL, HL, location category
1 for all types of OSTEC trays
No. ROSS RU.AU64.N07510

Fire Safety Certificate
for OSTEC fire-resistant cable line
No. S-RU.PB05.V.01752

Certificate of Conformity of OSTEC metal trays and
trays for electrical wiring to seismic intensity level 9
on the MSK scale
No. ROSS RU.MM04.N02258

Certificate of Conformity of OSTEC wall and ceiling
support brackets PP, PN to seismic intensity level 9 on
the MSK scale
No. ROSS RU.MM04.N02437

Certificate of Conformity of OSTEC wall and ceiling
support brackets PP, PN
No. ROSS RU.MM04.N03401

Certificate of Conformity
of OSTEC metal cable trays LPMZT(M)
and
LNMZT(M) series, covers and
accessories thereto
No. ROSS RU.AV24.N04497

Fire Safety Certificate
for OSTEC cable trays
No. DSPB.RU.PR.059.V.00003

Certificate of Conformity
of cable trays UL(N), UL(P), PLM, PLM(n)
and accessories thereto
No. ROSS RU.AG98.N10843

Fire Safety Certificate for OSTEC wire mesh trays
No. DSPB.RU.PR.059.V.00004

Health Certificate
for OSTEC cable trays and accessories thereto
Reg. No. 5382

Certificate of Conformity
of OSTEC cable ladders NLO type
and accessories thereto
No. ROSS RU.MM04.N03402

Fire Safety Certificate for OSTEC
cable ladders NLO series
No. DSPB.RU.PR.059.V.00006

TECHNICAL INFORMATION

OSTEC CABLE TRAY SYSTEM. General information

1. The cable tray system consists of:
   - Metal trays for electrical wiring
   - Tray accessories
   - Suspension system.

2. Metal trays are designed to accommodate electrical wiring and cables rated up to 1000 V in open wiring and open cabling systems.

3. Metal trays include the following modifications:
   - Perforated metal trays with and without cover
   - Non-perforated metal trays with and without cover
   - Cable ladders with and without cover
   - Metal wire mesh trays with and without cover.

4. Depending on the functional application, the main tray elements are divided into:
   - Straight sections (for straight runs of electrical wiring)
   - Angular sections (for horizontal and vertical bends of electrical wiring)
   - Branch sections (for branch connections)
   - Reducer sections (for changing to different tray widths).

5. The patented OSTEC cable tray system meets the requirements of GOST 20803-81, GOST 20783-81, and has fire resistance certification to class NG, R90.

6. The cable tray system conforms to climatic design UHL, location category 1 (GOST 15150-69).

7. OSTEC non-perforated cable trays may provide a degree of protection up to IP44 depending on the accessories used.

8. Electrical wires and cables shall be installed in the trays in accordance with the Electrical Installation Code, 6th and 7th editions (PUE, Para. 2.1.61).

Note

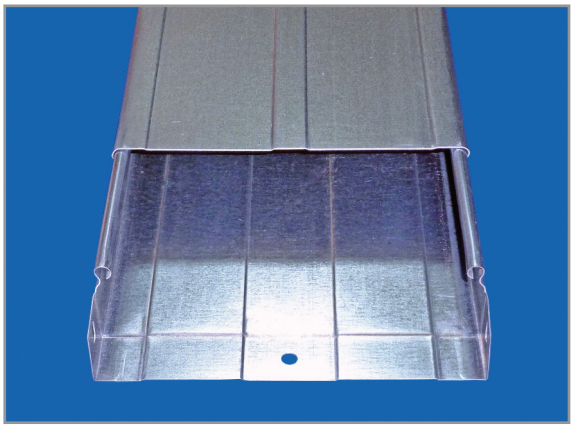
The manufacturer reserves the right to make changes in the technical and engineering data contained in the catalogue as the products are upgraded. The published data are intended for information only and may be changed without prior notice. Please contact your distributor for more detailed information.

OSTEC CABLE ROUTING SYSTEMS

The OSTEC cable support system is an integrated solution incorporating various components: cable trays, brackets, supports, bends, covers and separators designed for installing, fastening and storing cables and routing cable lines in the room space. A properly engineered cable support system should allow easy installation, secure storage and convenient maintenance of the cables, provide fire protection, and permit potential future expansion of the cabling system in the building. All of these requirements can be easily met in cabling systems built with OSTEC cable support solutions.

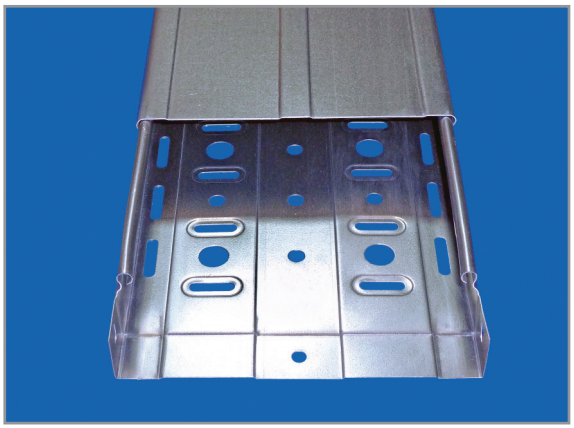
OSTEC CABLE TRAYS

OSTEC is one of the leading companies on the domestic market of cable support systems. The current capacity of OSTEC's plant makes it possible to manufacture up to 1300 km of rolled cable trays per month. OSTEC cable trays are suitable for open installation of electrical cables rated up to 1000 V.



The perforated (LPMZT(M) series) and non-perforated (LNMZT(M) series) cable trays are made of galvanized steel. The tray design features side walls with tubular edge locks for secure fastening of the cover and quick splice connection with just three screw connections using matching (male-female) patterns provided at the tray ends. LPMZT(M) and LNMZT(M) cable trays are available with standard side heights of 50-80-100 mm and tray widths of 50-100-200-300-400 mm. The OSTEC cable tray is 2500 mm long.

Heavy-duty UL cable trays specially designed for industrial cabling applications are 3000 mm long, with side heights of 50-65-80-100-150-200 mm and tray widths of 50-100-150-200-300-400-500-600 mm.



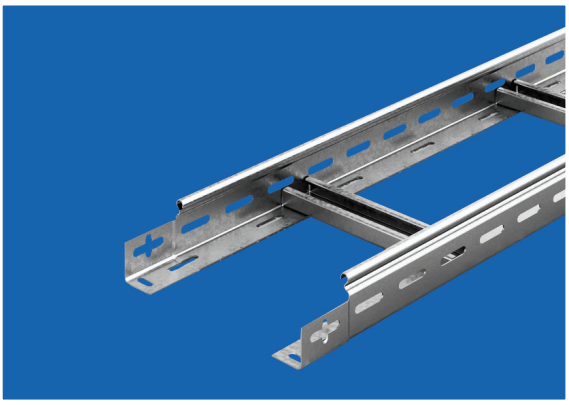
Different types of connectors are used to join straight tray sections with bends and branch fittings. Lockable covers made of 0.7 mm thick steel sheet are designed to protect cables from moisture, ultraviolet radiation, dropped objects and human contact. Where power and data cables are laid in the same tray, screw-mounted longitudinal barrier strips are provided to meet electromagnetic compatibility requirements with heights equal to the tray side height. OSTEC SZSL joint seals are recommended for additional protection of tray joints to IP44. They consist of a casing, cover (0.7 mm thick galvanized steel) and a set of adhesive rubber plates fitted inside the casing directly at the tray joint.

OSTEC offers a variety of integral and composite suspension brackets, supports, wall and ceiling support brackets designed for mounting cable support systems with tray widths from 50 to 900 mm inside and outside buildings and structures.

All support brackets are classified into three groups according to load capacity — LIGHT-DUTY (for distributed loads no less than 100 kg), MEDIUM-DUTY (for distributed loads no less than 150 kg) and HEAVY-DUTY (for distributed loads no less than 300 kg).

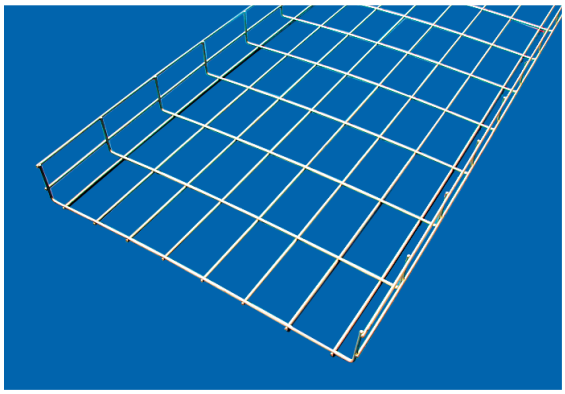
OSTEC cable trays are certified for operation according to climatic design HL, UHL, location category 1, and have fire safety certification to a fire resistance rating of R90 for OSTEC cable trays and E90 and E60 for fire-resistant cable lines. The cable trays are certified for resistance to seismic loads up to level 9 on the MSK scale.

OSTEC CABLE LADDERS



Heavy-duty cable ladders of the OSTEC NLO series are intended for open installation of cables rated up to 1000 V. The design of NLO cable ladders features tubular edge locks on the side rails for secure fastening of the cover, vibration-resistant clinch connections of the rungs, and quick splice joints using matching (male-female) patterns provided at the tray ends. NLO cable ladders are available with standard side heights of 50-80-100 mm and widths of 200-300-400-500-600 mm. The length of OSTEC NLO cable ladders is 3000 mm for the standard version, and up to 6000 mm for custom orders. Perforated side profiles of the cable ladder are made of 1.2 mm or 1.5 mm thick rolled steel sheet and match the geometry of OSTEC cable trays, allowing the use of the same connectors, angles, covers and other accessories. The rungs of NLO cable ladders are made of perforated high-rigidity C-profile that is free of sharp edges and allows cables to be fastened not only with plastic ties and binding wire passed through the perforations, but also with U-shaped cable cleats (clamps). OSTEC NLO cable ladders have the following advantages: snap-in (male-female) connections allow assembly of cable tray systems without any additional connectors. Convenient connections considerably speed up installation. High load capacity combined with the light weight of the tray itself in both horizontal and vertical mounting applications. OSTEC offers a variety of integral and composite suspension brackets, supports, wall and ceiling support brackets designed for mounting cable support systems with tray widths from 50 to 900 mm inside and outside buildings and structures. OSTEC cable ladders are certified for operation according to climatic design HL, UHL, location category 1, and have fire safety certification to a fire resistance rating of R90 for OSTEC cable trays and E60 for fire-resistant cable lines. The cable ladders are certified for resistance to seismic loads up to level 9 on the MSK scale.

OSTEC WIRE MESH TRAYS



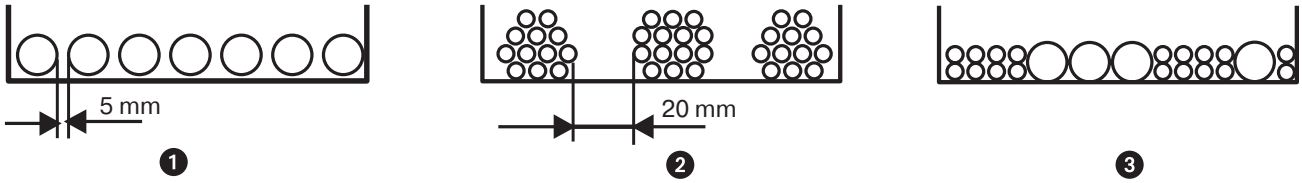
OSTEC PLM wire mesh trays are designed for open installation of cables rated up to 1000 V, as well as low-current and telecommunication cables. These cable trays are designed in the form of a lattice channel. The wires are welded into trays by automatic contact welding and then zinc plated by the electrochemical method. PLM cable trays made of AISI 304 stainless steel can be custom ordered for operation in corrosive environments or in contact with corrosive media. The main advantage of wire mesh cable trays is quick and easy construction of different tray configurations using a wire cutter to remove segments of wire from the side rails of the PLM tray and subsequent fixing with SPLD and SPLO universal screw connectors. This minimizes the use of mounting accessories and speeds up the installation of wire mesh trays. The tray's open wire mesh structure provides more efficient cooling of high loads cables and facilitates access for periodic inspection, cleaning and testing of the cables. In addition, OSTEC PLM wire mesh trays form a Faraday cage and effectively shield the cables from electromagnetic interference. The wire mesh trays are made of 3.5, 4.0 and 5.0 mm diameter wire, and are available with standard tray widths of 50-100-150-200-300-400-500-600 mm, and side heights of 35-60-85-105 mm. OSTEC wire mesh tray systems are compatible with most of OSTEC's support and suspension systems and have different connectors, covers, barrier strips and cable exit drops. PLM wire mesh trays are certified for operation according to climatic design HL, UHL, location category 1, and have fire safety certification to a fire resistance rating of R90 for OSTEC cable trays and E60 for fire-resistant cable lines. OSTEC PLM wire mesh trays are certified for resistance to seismic loads up to level 9 on the MSK scale. OSTEC PLM wire mesh trays have passed an expert review and been approved for use in the food processing and agricultural industries by Rospotrebnadzor.

TRAY FILLING AND WIRE LAYING REQUIREMENTS

The maximum permissible tray loading, mounting parts, and tray capacity required to hold the necessary number of cables must be taken into account when selecting a particular type of tray and appropriate mounting system.

The Electrical Installation Code (PUE, Para 2.1.61, 6th and 7th editions) sets out the following cable tray filling requirements: “The sum of the cross-sectional areas of wires and cables calculated from the outside diameters, including cable insulation and sheaths, shall not exceed 35% of the clear cross-sectional area in solid cable trays, and 40% in cable trays with openable covers”.

Wires and cables in a tray can be arranged in different patterns: in rows, bunches or packs. For this purpose, the following spacing shall be maintained: 5 mm clear spacing for a single-layer pattern, 20 mm for a bunched pattern, and no spacing between individual wires for a multi-layer pattern.

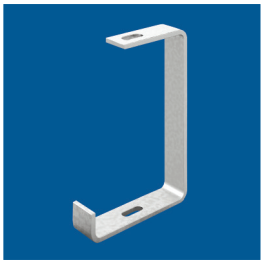


Methods of laying wires and cables in trays: ❶ — in rows, ❷ — bunched, ❸ — multi-layer

OSTEC WALL AND CEILING SUPPORT BRACKETS

OSTEC support brackets are designed for use in industrial and civil construction applications, including use in polluted industrial atmospheres. The family of wall and ceiling support brackets includes a series of products that are unique to the domestic market, and has been divided into three groups according to load capacity for design convenience.

LIGHT-DUTY SERIES (100 kg)
This group includes all supporting elements that are available to date: SPP and SPPU integral suspension brackets; UKP, UM and PPD cross beams; PP suspension systems using threaded rods, perforated steel straps and profiles; SPS and SPSu suspension systems (supports); SPT (400) (2 mm thick) and SPTZ (2900) (2 mm thick) suspended supports; and KPN (2 mm thick) cantilever brackets.



MEDIUM-DUTY SERIES (150 kg)
PKO and PKD ceiling supports; SPS(SN) (3 mm thick) suspension systems (supports); SPT(SN) (3 mm thick) suspension plates; KPN(SN) (3 mm thick) cantilever brackets; and RPK spacer (to prevent profile deformation when tightening nuts and splicing individual profiles).

HEAVY-DUTY SERIES (300 kg)
Supports and suspension members based on IPN 80 H-profiles (this series is presently under development, and is at the final testing stage).

OSTEC HOT-DIP GALVANIZED CABLE TRAYS

OSTEC cable trays are available in a hot-dip galvanized version. This method of corrosion protection is used for OSTEC trays operating in corrosive environments, severely polluted atmospheres, tropical climates, in tunnels, seaport facilities, etc. The hot-dip galvanization process involves immersing the finished product in a molten zinc bath after degreasing and passivation. Depending on the holding time, the thickness of the zinc coating produced by the hot-dip galvanization method may vary from 40 to 200 microns according to GOST 9.307-89. Hot-dip galvanization of trays and accessories significantly increases the service life of OSTEC cable trays to at least 25 years of service in extremely severe operating conditions without maintenance and repair until replacement.

OSTEC STAINLESS STEEL TRAYS

OSTEC cable trays, accessories and fasteners are available in a stainless steel version. OSTEC stainless steel trays are used in corrosive environments, severely polluted industrial atmospheres, and where there is potential exposure to acid and alkaline vapors, as well as aggressive detergents used in the food processing and agricultural industries. OSTEC wire mesh trays made of AISI 304 stainless steel are very often used in the food processing industry.

OSTEC PAINTED TRAYS

OSTEC cable trays are available in an enamel-painted version. The painted versions of cable trays not only provide additional protection against corrosion, but are also useful for decorative design of building interiors, painting cable trays in corporate colors, blending with background colors in medical and commercial premises, etc. Painted cable trays are delivered in special packaging that guarantees preservation of the decorative coating. Trays may be painted in any color from the RAL color palette as the customer wishes.

CLIMATIC DESIGN AND CONDITIONS OF USE OF METAL CABLE SUPPORT STRUCTURES

Material/type of coating	Climatic conditions of use and installation (as per GOST 15150)		Service life
	Outdoor installation	Indoor installation	
Uncoated steel	-	“U 1.1” Heated buildings and rooms	up to 10 years
Powder-coated steel	-	“U 1.1” Heated buildings and rooms	up to 15 years
Sendzimir galvanized steel	“U1” Temperate climatic regions	“U 1.1” Heated buildings and rooms	up to 20 years
	“UHL1” Temperate and cold climatic regions	“UHL3” Unheated buildings and rooms in which condensation can occur	up to 15 years
Hot-dip galvanized steel	“O1” All macroclimatic land regions, urban, industrial and littoral zones	“O4” Rooms with high air humidity and production rooms	up to 20 years
	“M1” Boreal maritime climatic regions	“O5” Rooms with high air humidity, chemical and food industry enterprises	up to 15 years
Stainless steel	“M1” Boreal maritime climatic regions	“O5” Rooms with high air humidity, chemical and food industry enterprises	up to 20 years

EARTHING

Cable trays are connected to an equipotential bonding system (main grounding busbar) by means of a grounding conductor fastened with standard hardware or welding (GOST 10434-82 “Electrical Contact Connections”). In case of phase to tray fault, the fault current will flow through the tray. The cross-sectional area of the grounding conductor is determined from the values of phase-to-tray short circuit currents using the procedure outlined in PUE, Para 1.7.126. When OSTEC trays are joined together using original OSTEC connectors, the ratio of initial (contact) resistance of the contact joint between tray elements to the full resistance of the tray section is no more than 2 which meets the requirements of GOST 10434-82.

USING AN OSTEC TRAY SYSTEM AS A PROTECTIVE EARTH (PE) CONDUCTOR

In accordance with PUE, Chapter 1.7. “Earthing and Electrical Safety Measures. Protective Conductors (PE Conductors)”, metal channels and trays for electrical wiring may be used as protective conductors provided that this use is permitted by the design of cable channel or tray. The manufacturer permits the use of OSTEC cable trays as PE conductors provided the following conditions are met:
- continuity of the cable support system throughout its entire length,
- minimum required cross-sectional area of the tray and tray joints throughout the entire length of cable support system,
- reliable galvanic bond between the elements of the cable support system,
- routine maintenance and inspection of joints.

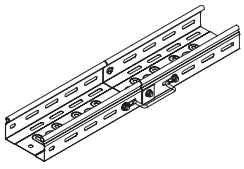
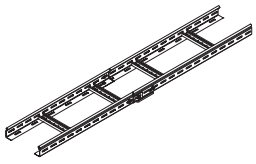
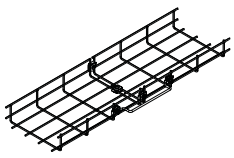
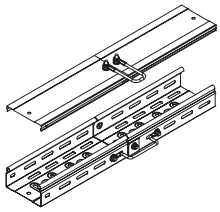
Sequence of actions necessary to use OSTEC cable trays as PE conductors.

1. Calculate the short-circuit current. Calculation of the short-circuit current is required for optimal selection of cable and characteristics of protective devices. This selection should always be the primary consideration. The results obtained are used to determine cross-sectional areas of current conductors and characteristics of protective devices.

2. Calculate minimum cross-sectional area of the PE conductor. If the cross-sectional area of the cable conductor is known, one can calculate the minimum cross-sectional area of the tray and tray joints used as protective earth (PE) conductors along the entire length of the cable support system. In accordance with PUE, Para 1.7.126, steel without an insulation coating at ambient air temperature should be used as the PE conductor material for the purpose of calculating the minimum cross-sectional area.

3. Compare the values obtained for the minimum cross-sectional area of the PE conductor with the cross-sectional area of the selected tray, including tray joints, along the entire length of the proposed cabling route (see table of cross-sectional areas). If the cross-sectional area of the selected tray, including tray joints, along the entire cabling route is greater than or equal to the calculated minimum cross-sectional area of the PE conductor, then this tray together with the connection system can be used as a PE conductor.

If the cross-sectional area at the tray joints is less than the calculated minimum cross-sectional area of the PE conductor, the cross-sectional area of the connectors must be increased.
Copper grounding jumpers may be used to improve reliability of the galvanic bond between individual trays and increase the total cross-sectional area of the tray joints.

Code	Art. No.	Cross-section, mm²
OSTEC cable trays		
012551	LNMZT(M)-50-50pr	99.55
011551	LPMZT(M)-50-50pr	97.23
012151	LNMZT(M)-100-50pr	125.18
011151	LPMZT(M)-100-50pr	119.69
012251	LNMZT(M)-200-50pr	230.37
011251	LPMZT(M)-200-50pr	215.46
012353	LNMZT(M)-300-50pr	299.95
011353	LPMZT(M)-300-50pr	282.20
012453	LNMZT(M)-400-50pr	525.00
011453	LPMZT(M)-400-50pr	490.65
012183	LNMZT(M)-100-80pr	287.60
011183	LPMZT(M)-100-80pr	261.08
012283	LNMZT(M)-200-80pr	389.10
011283	LPMZT(M)-200-80pr	354.57
012383	LNMZT(M)-300-80pr	488.90
011383	LPMZT(M)-300-80pr	449.48
012483	LNMZT(M)-400-80pr	531.09
011483	LPMZT(M)-400-80pr	410.49
012113	LNMZT(M)-100-100pr	329.10
011113	LPMZT(M)-100-100pr	295.96
012213	LNMZT(M)-200-100pr	429.10
011213	LPMZT(M)-200-100pr	387.95
012313	LNMZT(M)-300-100pr	528.90
011313	LPMZT(M)-300-100pr	480.39
012413	LNMZT(M)-400-100pr	567.09
011413	LPMZT(M)-400-100pr	446.49
Joint plates		
040651	SPU-50	58.68
040681	SPU-80	140.70
040611	SPU-100	190.05
Tray side connectors		
040551	SLB-50	58.08
040511	SLB-100	87.25
040521	SLB-200	142.25
040531	SLB-300	197.25
040541	SLB-400	458.63
040518	SLB-100 (80/100)	204.63
040528	SLB-200 (80/100)	304.63
040538	SLB-300 (80/100)	404.63
Universal connectors		
032751	SLU-50	41.45
032781	SLU-80/100	65.48
032851	SLUI-50	39.34
032881	SLUI-80/100	63.37
032951	SU-50	87.27
032981	SU-80	140.66
033051	SUP-50	33.09
033081	SUP-80	79.72
033011	SUP-100	109.07
Hinge connection plates		
040351	PSHS	91.29
040381	PSHS-80	95.88
040311	PSHS-100	119.45
Bonding jumper (6 mm², Cu)		6.00
Bonding jumper (10 mm², Cu)		10.00

EARTHING REQUIREMENTS FOR OSTEC TRAY COVERS

1. PUE, Chapter 1.7 “Earthing and Electrical Safety Measures”, Para 1.7.77, states that: “Intentional connection of the following with the source neutral in a TN system or earthing in IT and TT systems is not required:
... removable and openable parts of metal frames in switchgear cells, cubicles, guards, etc., when there is no electrical equipment installed on the removable (openable) parts or when the voltage of the installed electrical equipment does not exceed the values indicated in Para 1.7.53”.

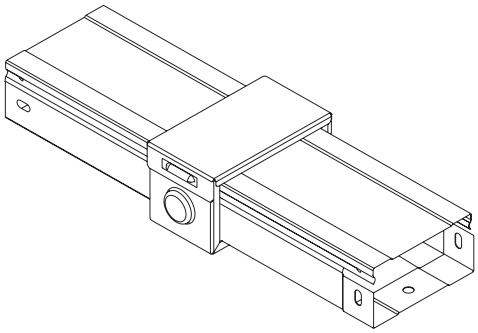
2. The tray cover is a removable component. No electrical equipment is installed on the cover. Moreover, the cover shall not be in contact with the conductor.

3. Therefore, we conclude that, in accordance with the standards and regulations effective as of 01.01.2014, tray covers need not be earthed.

In order to meet increased earthing requirements for cable tray systems in certain mounting applications, OSTEC tray covers can be joined together with grounding jumpers made of copper conductor. The jumpers shall be secured with bolts and provide reliable galvanic bond.

* The term “trays” used in this paragraph shall be understood to mean OSTEC cable trays, cable ladders and wire mesh trays collectively.

IP PROTECTION SYSTEM FOR OSTEC CABLE TRAYS



In accordance with GOST R 50571 (Para. 528.2.2), in locations where electrical wiring is run beneath utility lines susceptible to condensate formation (such as water, steam and natural gas mains), suitable measures must be employed to protect the wiring from such adverse impacts.
An OSTEC IP44 SZSL tray joint protection system is recommended for additional protection of non-perforated tray joints with installed covers. It consists of a casing, cover (0.7 mm thick galvanized steel) and a set of adhesive closed-cell rubber plates* fitted inside the casing directly over the tray joint .
Installation of an OSTEC IP44 SZSL tray joint protection system makes it possible to build cable tray systems with additional protection to IP44. The seals are compatible with splice (male-female) joints of non-perforated trays and are mounted immediately after cable installation by snapping in the tray cover on top of the adhesive neoprene plates, which can be easily dismantled during operation. IP protection ratings of the other types of trays are listed below.

DEGREES OF CABLE PROTECTION IN OSTEC TRAYS AS PER GOST 14254

IP 00 — perforated and non-perforated trays without cover
IP 20 — perforated trays with cover
IP 40 — non-perforated tray with cover
IP 44 — non-perforated tray with seal
Tray sizes from 50x50 to 400x100 mm.

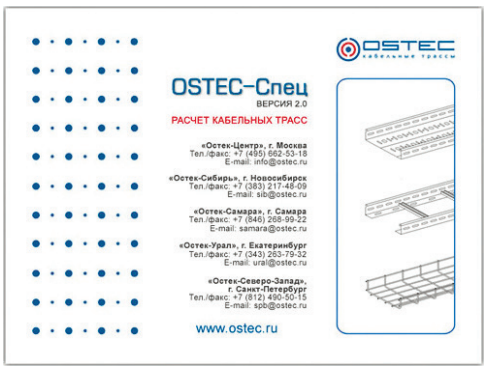
The IP degree of protection is identified by the values of the first and second digits in the IP Code, where the first digit indicates protection against ingress of solid objects and particles, and the second digit indicates ingress of water inside the enclosure. Methods used to determine the degree of protection are shown in the table below.

Illustrative table of IP protection ratings

Solid particles			Water		
Index	Degree of protection	Description	Description	Degree of protection	Index
0	No protection	No protection against accidental contact and ingress of foreign objects	No protection	No protection against moisture	0
1	Protection against large foreign objects	Protection against contact with the large surface of a human hand and against large solid objects more than 50 mm in diameter	Protection against vertically dripping water	Protection against dripping water	1
2	Protection against medium-size foreign objects	Protection against contact with fingers of a human hand, and against medium-size solid objects larger than 12 mm in diameter	Protection against water drops falling at an angle up to 15°	Protection against dripping water	2
3	Protection against small foreign objects	Protection against tools, wires or similar objects larger than 2.5 mm in diameter and small foreign objects larger than 2.5 mm in diameter	Protection against water drops falling at an angle up to 60°	Protection against water spray	3
4	Protection against granular foreign objects	Protection against tools, wires or similar objects larger than 1 mm in diameter and small foreign objects larger than 1 mm in diameter	Protection against water splashing from any direction	Protection against water splashes	4
5	Protection against dust deposition	Complete protection against contact. Protection against internal damage of equipment due to dust deposition	Protection against water jets projected under pressure from any direction	Protection against water jets	5
6	Protection against dust ingress	Complete protection against contact. Protection against dust ingress	Protection against short-time immersion	Protection against immersion	6
			Protection against temporary condensation	Protection against condensate	7
			Protection against complete immersion in water under pressure	Complete protection against moisture (watertight)	8

* A plate of rectangular section made of EPDM elastic closed-cell rubber material is mounted around the entire perimeter of the seal casing and provides additional protection against ingress of moisture and dust. Remove the release paper sheet from the seal strips during installation. Adhesive tape securely holds the seal on the surface. The working temperature range of adhesive cellular rubber seals is –30 to +70 °C.

OSTEC-SPEC: CABLE ROUTING SOFTWARE



OSTEC-Spec is the second version of a software product for preparing bills of materials and cost estimates for different configurations and applications of cable routing systems. The program is tailored to offer greater convenience to customers and designers working with OSTEC cable support systems and features a user-friendly Windows interface that is easy to learn. The program needs no installation and is distributed free of charge. The current software version can be downloaded from the website www.ostec.ru.

The following tasks can be accomplished with OSTEC-Spec software:
- Calculating the required number of straight tray sections depending on the system length for three types of metal trays: trays, ladders and wire mesh trays.
- Selecting the necessary accessories and counting up the required fittings and fasteners.
- Choosing the proper suspension system and determining the quantity of individual components, accessories and fasteners.
- Preparing editable bill of materials, including catalogue codes, article numbers and quantities of items.

Key features of OSTEC-Spec software:
- The program operates in project terms: one project — one bill of materials, where a project may comprise multiple fragments of a cable route or several independent cable routes.
- Different tray series (trays, ladders, wire mesh trays) can be included in the same bill of materials.
- Calculations can be performed for multi-tier and two-way cable routes.
- Suspension systems can be selected from a construction kit based on compatibility of individual components.
- Bills of materials are prepared in conformity with GOST requirements.
- Prices can be downloaded from the official website to prepare a bill of materials with a price schedule (cost estimate).

OSTEC-Spec allows you to calculate the number of straight tray sections, connectors and hardware, and select and calculate the quantities of fittings, suspensions and fasteners for all types of cable trays: trays, ladders and wire mesh trays. This procedure involves three consecutive steps: selecting the type of tray, connector/accessory, and type of supporting member. A Catalogue function is implemented in OSTEC-Spec as information support for users, allowing them to: select a product by its code, article number, name or from the directory structure, and search for the necessary item by keyword. The Catalogue also features such useful functions as viewing images and descriptions of selected items, viewing compatible items, and adding selected items to the project.

OSTEC ALBUM OF TYPICAL DESIGN DRAWINGS

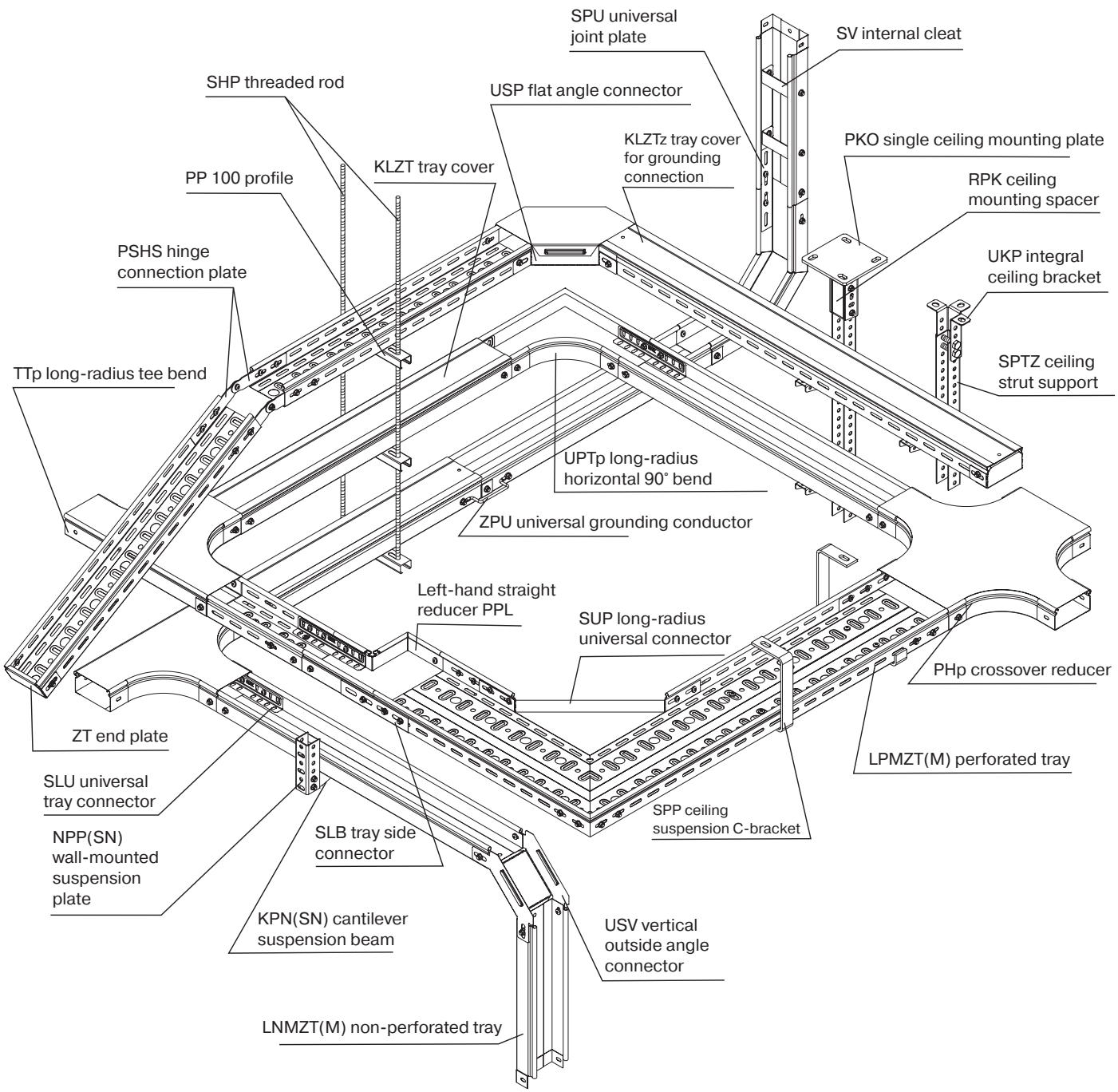
The album of standard construction drawings (SCD) contains the drawings of standard units of OSTEC cable support systems. The drawings included in the album are intended for use as part of the design packages for utility systems of buildings and structures. The album may be wholly or partially used as separate attachment forming part of the design package. Drawings from the album may also be useful for preparing installation specifications for cable support systems, process flow charts, and detailed work programs. Specification tables from the drawings can be used to prepare purchase order requisitions and schedules of project materials.

The album drawings are not intended for use as manufacturing or process engineering documentation for the purpose of manufacturing factory-made parts and components. The album is distributed in printed and electronic file formats (AutoCAD dwg and pdf).

The following input documents were used to develop the album:
- OSTEC official product catalogue
- Original manufacturing drawings of OSTEC parts and components
- Recommendations for use of OSTEC cable support systems
- Applicable regulatory documents.

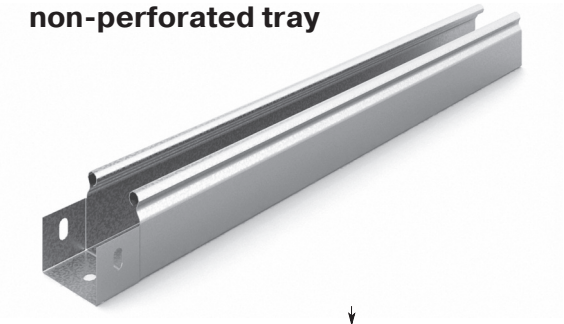
The album of standard construction drawings is distributed free of charge without any limitations, including copying of the drawings. Mention of the source (reference) is not required. Using SCD from the album does not eliminate the need for verification checks and engineering load analysis of cable support systems. The album drawings do not rule out the possibility of alternative structural configurations of cable support systems. In any case, the choice of a particular engineering solution is up to the designer.

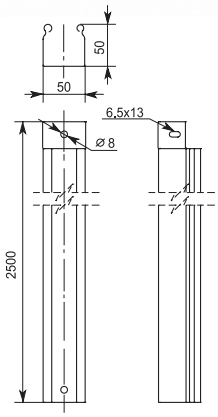
1. OSTEC CABLE TRAYS



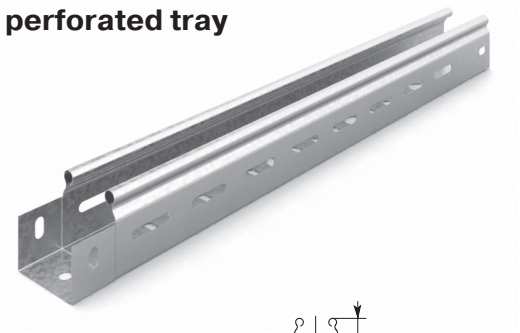
1.1 OSTEC LNMZT(M) AND LPMZT(M) CABLE TRAYS

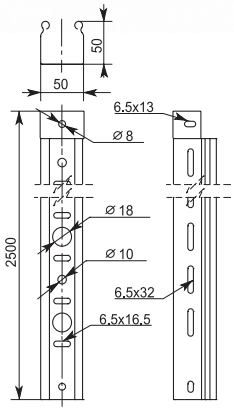
LNMZT(M)-50x50pr non-perforated tray



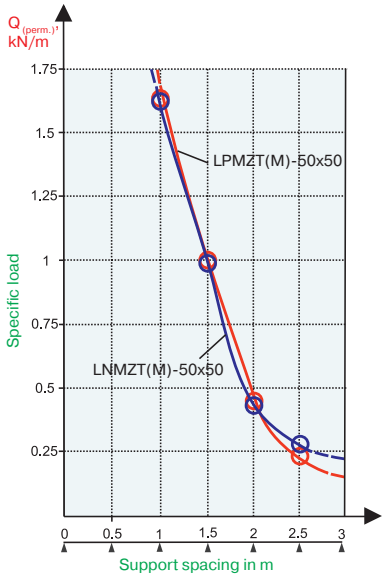


LPMZT(M)-50x50pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming



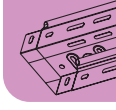
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	21	0.0336	2.5
5x2.5	14.6	0.0035	8	0.028	2.5
5x6	20.2	0.0072	5	0.036	2.5
5x16	30.9	0.017	1	0.017	2.5
4x70	49.7	0.05	-	-	-

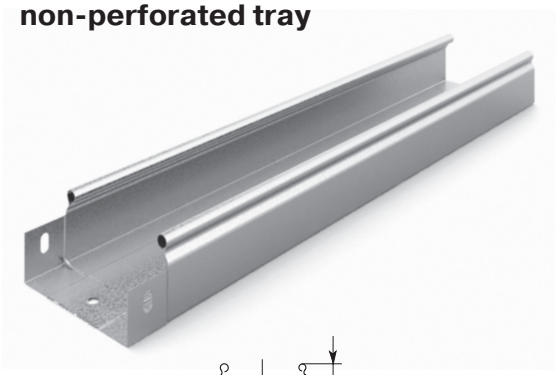
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

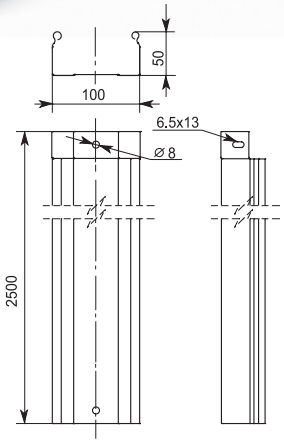
- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012551	212553	LNMZT(M)-50x50pr	50x50x2500	0.55	0.77	24.22	1.63	1.01	0.46	0.28	30
011551	211551	LPMZT(M)-50x50pr	50x50x2500	0.55	0.71	24.22	1.64	1.02	0.48	0.23	30

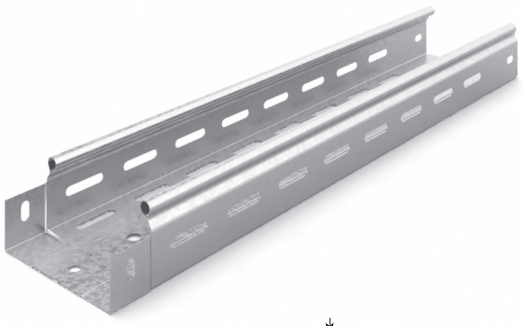


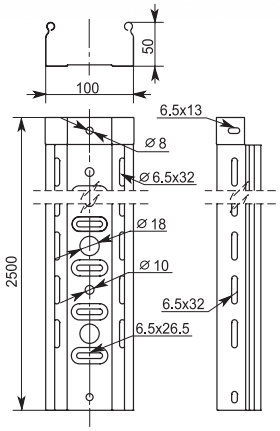
LNMZT(M)-100x50pr non-perforated tray

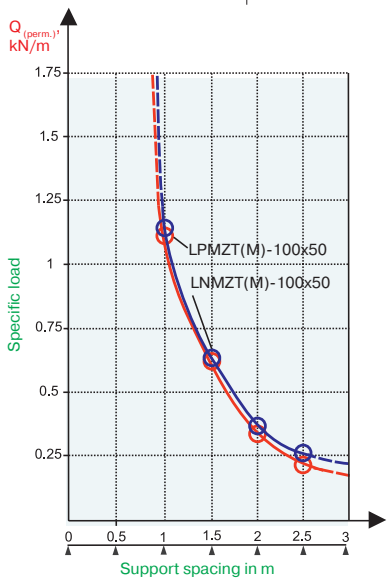




LPMZT(M)-100x50pr perforated tray







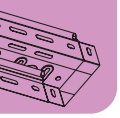
Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming

The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

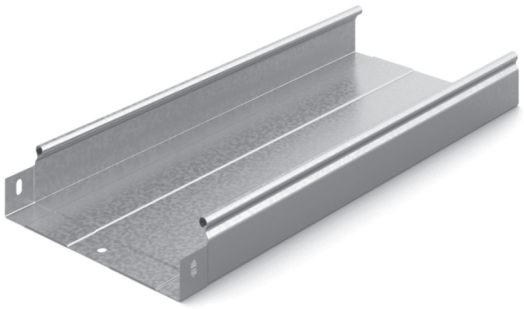
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

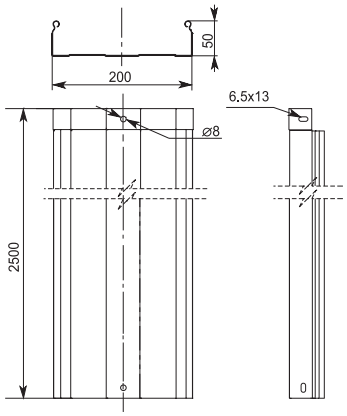
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	43	0.0688	2.5
5x2.5	14.6	0.0035	17	0.0595	2.5
5x6	20.2	0.0072	7	0.0504	2.5
5x16	30.9	0.017	3	0.051	2.5
4x70	49.7	0.05	1	0.05	2.5



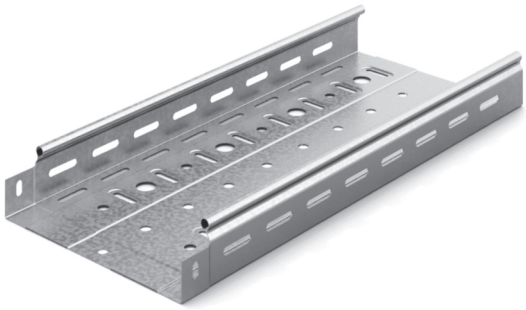
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012151	212153	LNMZT(M)-100x50pr	100x50x2500	0.55	0.91	48.44	1.14	0.67	0.39	0.26	20
011151	211151	LPMZT(M)-100x50pr	100x50x2500	0.55	0.84	48.44	1.11	0.67	0.31	0.21	20

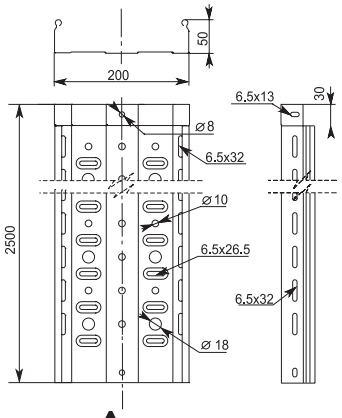
LNMZT(M)-200x50pr non-perforated tray



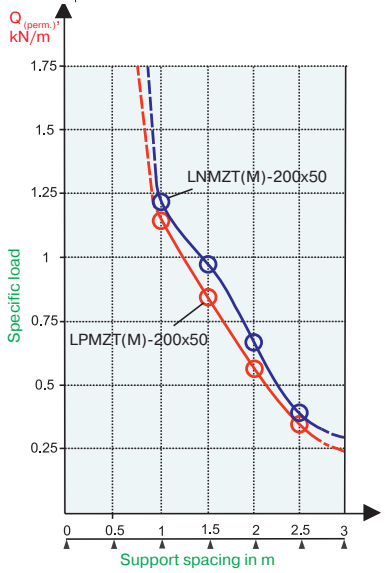


LPMZT(M)-200x50pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming



When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

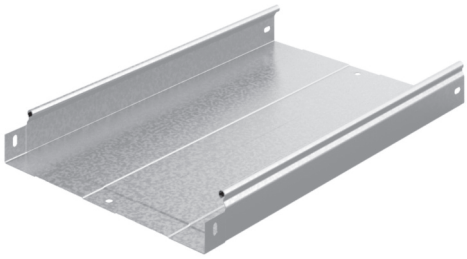
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	93	0.1488	2.5
5x2.5	14.6	0.0035	38	0.133	2.5
5x6	20.2	0.0072	17	0.1224	2.5
5x16	30.9	0.017	6	0.102	2.5
4x70	49.7	0.05	3	0.15	2.5

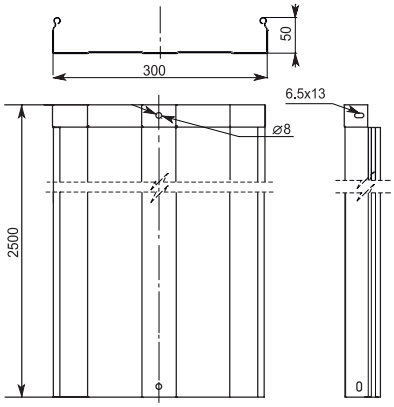
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

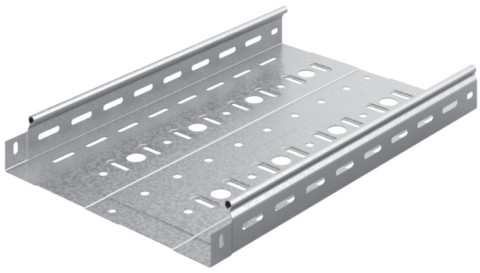
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012251	212251	LNMZT(M)-200x50pr	200x50x2500	0.70	1.77	98.44	1.20	0.91	0.66	0.36	10
011251	211251	LPMZT(M)-200x50pr	200x50x2500	0.70	1.61	98.44	1.14	0.71	0.55	0.34	10

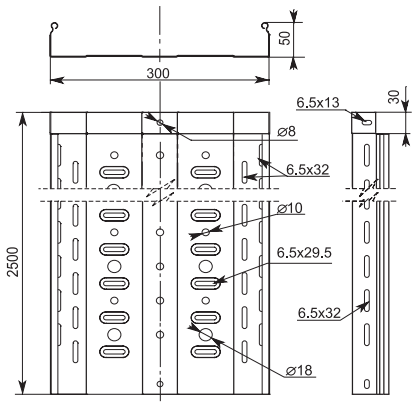
LNMZT(M)-300x50pr non-perforated tray

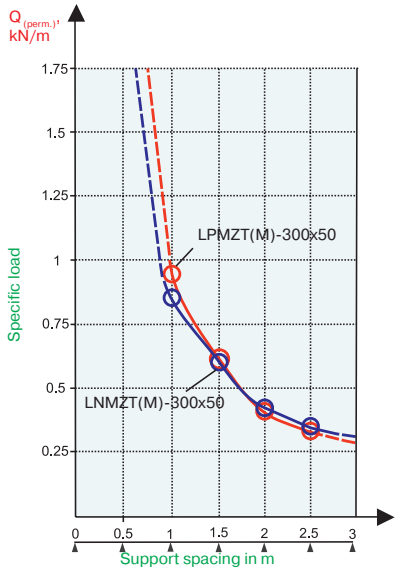




LPMZT(M)-300x50pr perforated tray







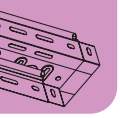
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming

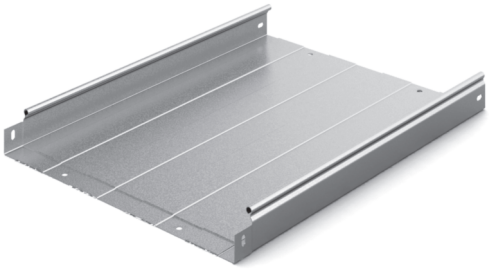
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

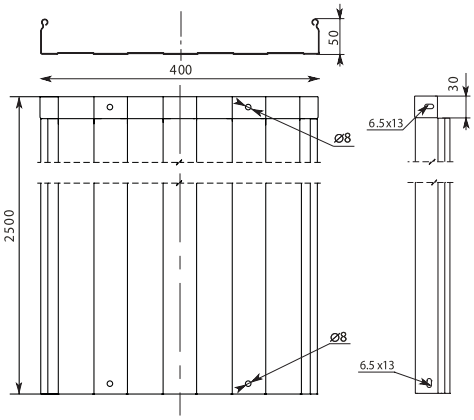
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	143	0.2288	2.5
5x2.5	14.6	0.0035	59	0.2065	2.5
5x6	20.2	0.0072	27	0.1944	2.5
5x16	30.9	0.017	9	0.153	2.5
4x70	49.7	0.05	6	0.3	2.5



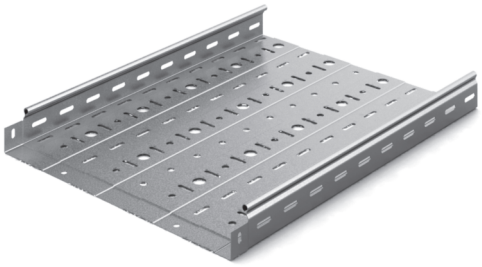
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012353	212353	LNMZT(M)-300x50pr	300x50x2500	0.70	2.32	147.44	0.80	0.58	0.45	0.35	10
011353	211353	LPMZT(M)-300x50pr	300x50x2500	0.70	2.10	147.44	0.94	0.59	0.44	0.33	10

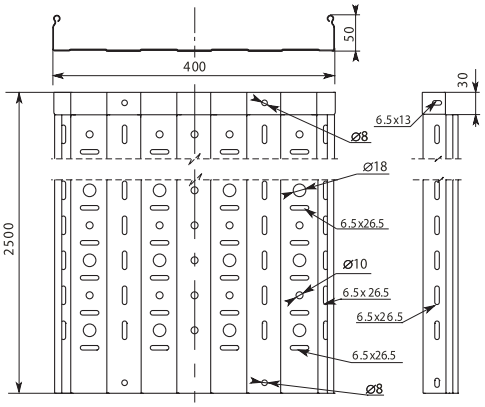
LNMZT(M)-400x50pr
Non-perforated tray





LPMZT(M)-400x50pr
perforated tray





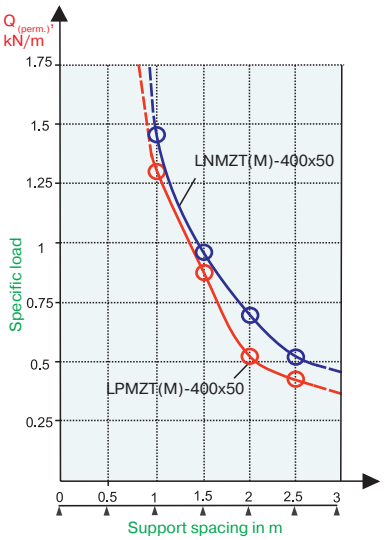
Material Steel coil. Available versions: Sendzimir galvanized steel, painted trays

Steel grade 08 PS GOST 52246-2004

Design features Tray bottom reinforced with additional stiffening ribs for greater load capacity

Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray

Manufacturing method Roll-forming



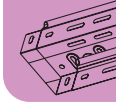
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	193	0.3088	2.5
5x2.5	14.6	0.0035	80	0.28	2.5
5x6	20.2	0.0072	37	0.2664	2.5
5x16	30.9	0.017	12	0.204	2.5
4x70	49.7	0.05	8	0.4	2.5

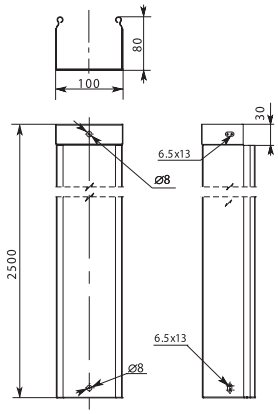
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

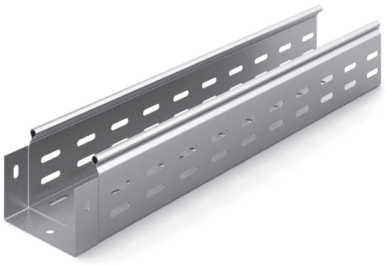
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012453	212453	LNMZT(M)-400x50pr	400x50x2500	1.00	3.88	198.44	1.49	0.96	0.70	0.55	5
011453	211453	LPMZT(M)-400x50pr	400x50x2500	1.00	3.49	198.44	1.28	0.85	0.57	0.44	5

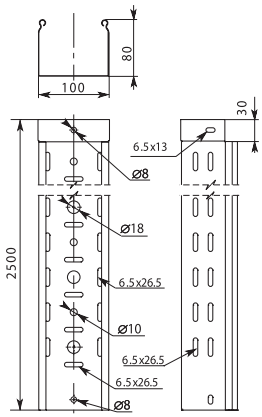


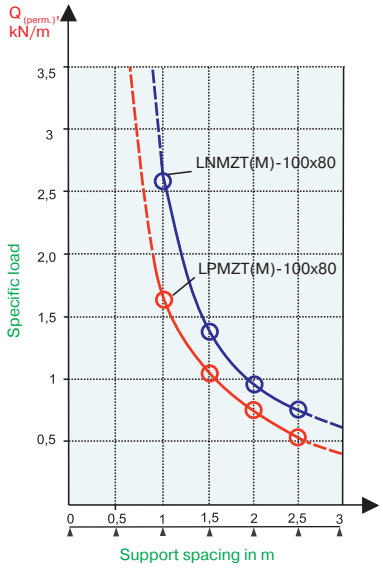
LNMZT(M)-100x80pr non-perforated tray



LPMZT(M)-100x80pr perforated tray







Material — Steel coil. Available versions: Sendzimir galvanized steel, painted trays

Steel grade — 08 PS GOST 52246-2004

Design features — Tray bottom reinforced with additional stiffening ribs for greater load capacity

Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray

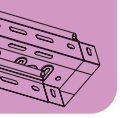
Manufacturing method — Roll-forming

The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

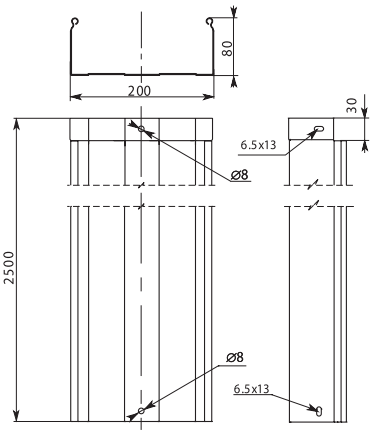
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	77	0.1232	2.5
5x2.5	14.6	0.0035	33	0.1155	2.5
5x6	20.2	0.0072	14	0.1008	2.5
5x16	30.9	0.017	5	0.085	2.5
4x70	49.7	0.05	2	0.1	2.5

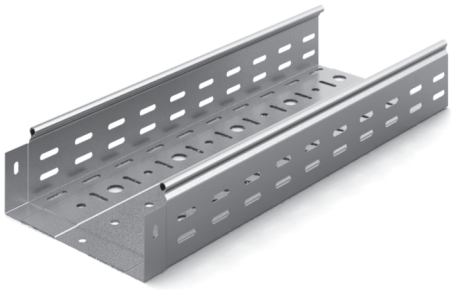


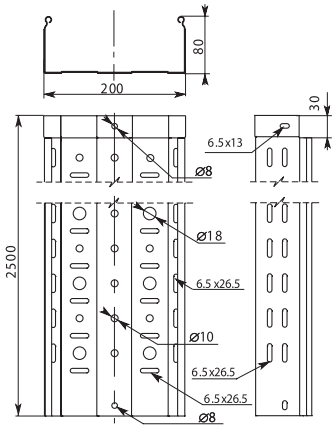
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012183	212183	LNMZT(M)-100x80pr	100x80x2500	1.00	2.11	77.42	2.13	1.34	0.93	0.72	5
011183	211183	LPMZT(M)-100x80pr	100x80x2500	1.00	1.94	77.42	1.60	1.05	0.72	0.57	5

LNMZT(M)-200x80pr non-perforated tray

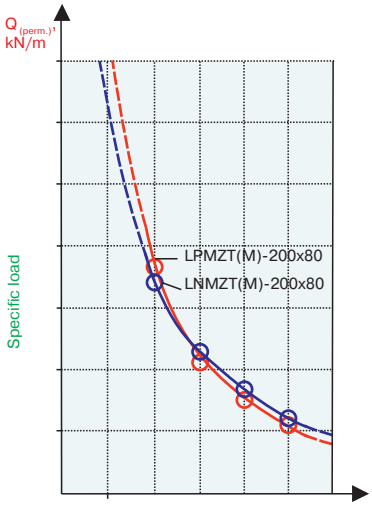


LPMZT(M)-200x80pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity
	Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming



When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

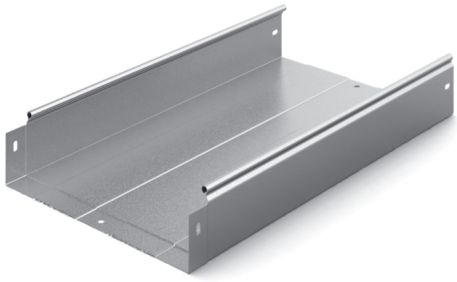
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	167	0.2672	2.5
5x2.5	14.6	0.0035	75	0.2625	2.5
5x6	20.2	0.0072	34	0.2448	2.5
5x16	30.9	0.017	11	0.187	2.5
4x70	49.7	0.05	3	0.15	2.5

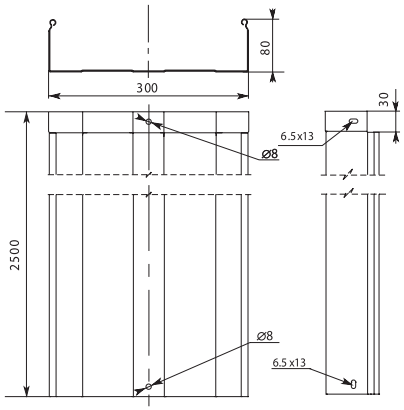
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

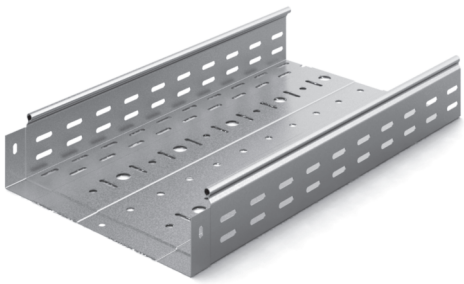
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012283	212283	LNMZT(M)-200x80pr	200x80x2500	1.00	2.84	156.42	1.71	1.13	0.83	0.59	5
011283	211283	LPMZT(M)-200x80pr	200x80x2500	1.00	2.62	156.42	1.78	1.06	0.77	0.60	5

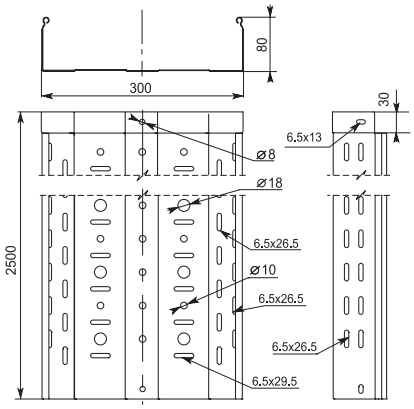
LNMZT(M)-300x80pr non-perforated tray

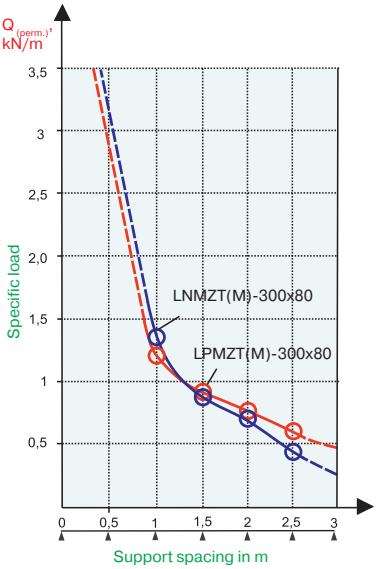




LPMZT(M)-300x80pr perforated tray







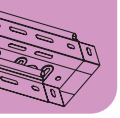
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming

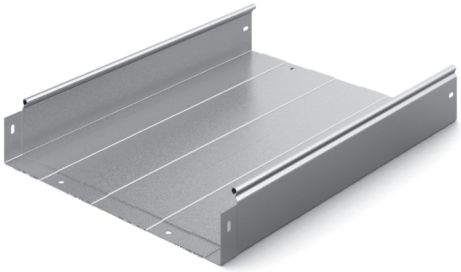
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

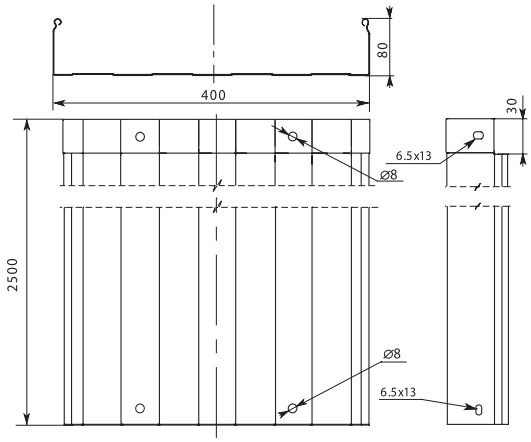
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	257	0.4112	2.5
5x2.5	14.6	0.0035	117	0.4095	2.5
5x6	20.2	0.0072	54	0.3888	2.5
5x16	30.9	0.017	17	0.289	2.5
4x70	49.7	0.05	5	0.25	2.5



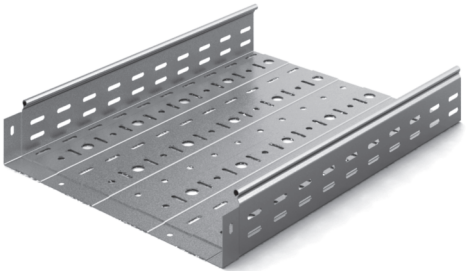
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012383	212383	LNMZT(M)-300x80pr	300x80x2500	1.00	3.58	235.42	1.39	0.85	0.62	0.44	5
011383	211383	LPMZT(M)-300x80pr	300x80x2500	1.00	3.12	235.42	1.23	0.88	0.75	0.57	5

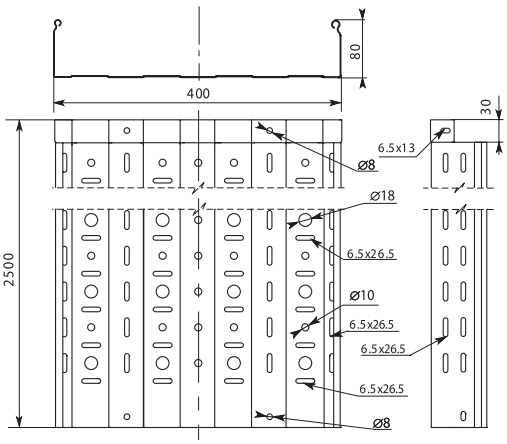
LNMZT(M)-400x80pr non-perforated tray



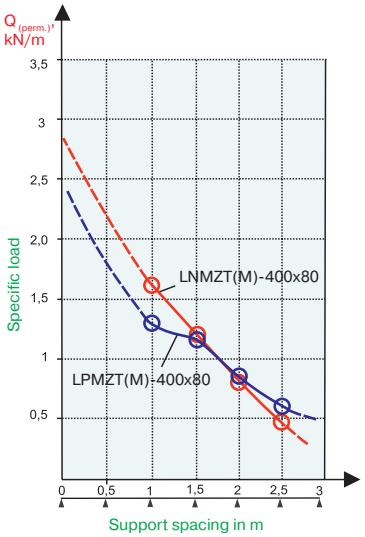


LPMZT(M)-400x80pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming



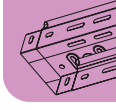
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	334	0.5344	2.5
5x2.5	14.6	0.0035	150	0.525	2.5
5x6	20.2	0.0072	68	0.4896	2.5
5x16	30.9	0.017	22	0.374	2.5
4x70	49.7	0.05	6	0.3	2.5

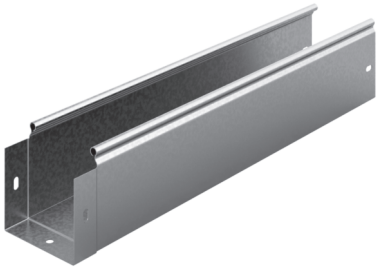
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

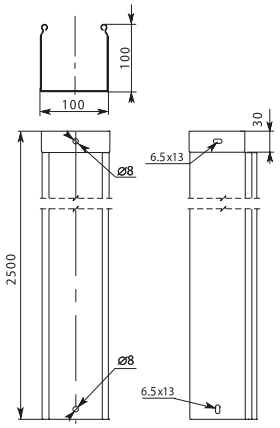
- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012483	212483	LNMZT(M)-400x80pr	400x80x2500	1.00	10.60	314.56	1.55	1.28	0.82	0.49	5
011483	211483	LPMZT(M)-400x80pr	400x80x2500	1.00	9.70	314.56	1.36	1.25	0.88	0.58	5

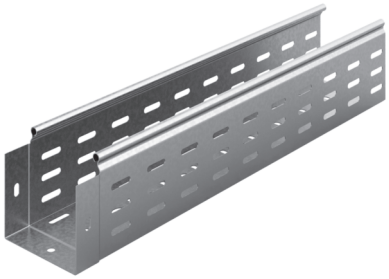


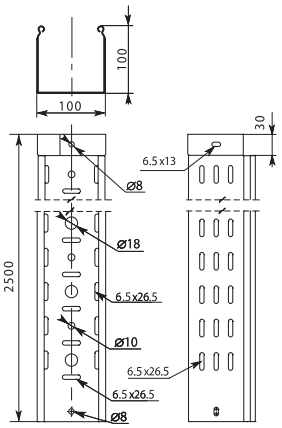
LNMZT(M)-100x100pr non-perforated tray





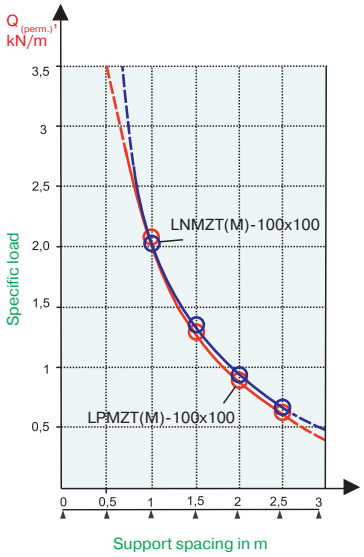
LPMZT(M)-100x100pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming

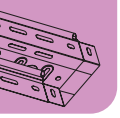
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.



Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	94	0.1504	2.5
5x2.5	14.6	0.0035	44	0.154	2.5
5x6	20.2	0.0072	21	0.1512	2.5
5x16	30.9	0.017	8	0.136	2.5
4x70	49.7	0.05	3	0.15	2.5

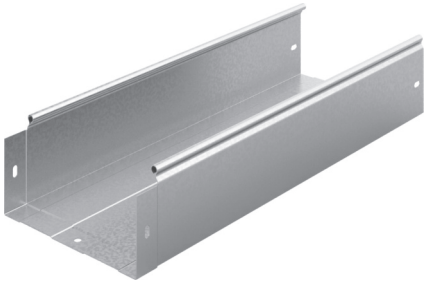
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

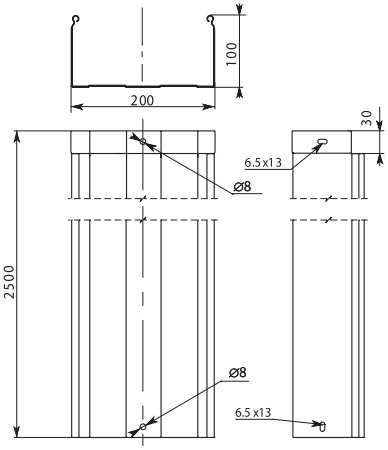
- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.



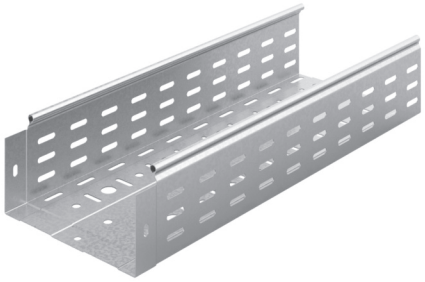
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012113	212113	LNMZT(M)-100x100pr	100x100x2500	1.00	2.40	97.02	2.09	1.35	0.90	0.67	5
011113	211113	LPMZT(M)-100x100pr	100x100x2500	1.00	2.21	97.02	2.13	1.25	0.83	0.63	5

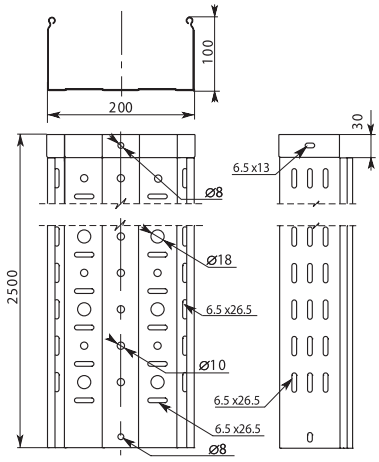
LNMZT(M)-200x100pr non-perforated tray

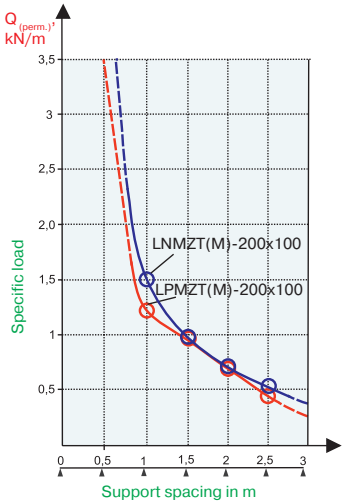




LPMZT(M)-200x100pr perforated tray







Material — Steel coil. Available versions: Sendzimir galvanized steel, painted trays

Steel grade — 08 PS GOST 52246-2004

Design features — Tray bottom reinforced with additional stiffening ribs for greater load capacity

Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray

Manufacturing method — Roll-forming

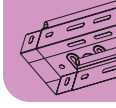
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

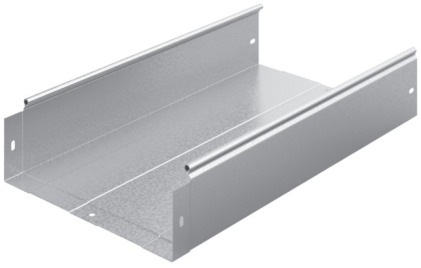
When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

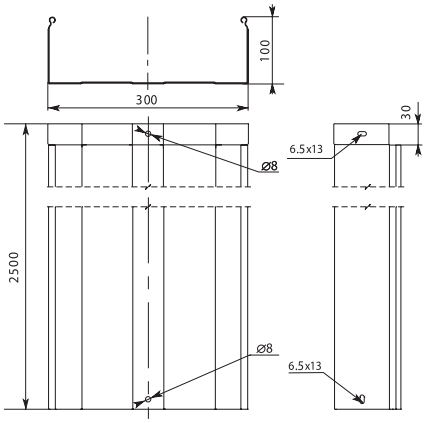
Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	204	0.3264	2.5
5x2.5	14.6	0.0035	88	0.308	2.5
5x6	20.2	0.0072	43	0.3096	2.5
5x16	30.9	0.017	17	0.289	2.5
4x70	49.7	0.05	5	0.25	2.5

Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012213	212213	LNMZT(M)-200x100pr	200x100x2500	1.00	3.14	196.02	1.51	0.96	0.69	0.53	5
011213	211213	LPMZT(M)-200x100pr	200x100x2500	1.00	2.88	196.02	1.21	0.93	0.66	0.40	5

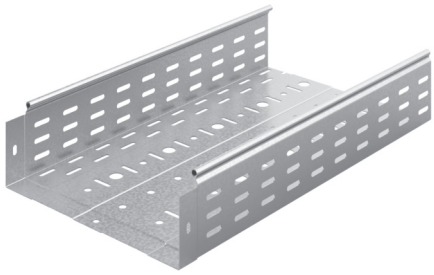


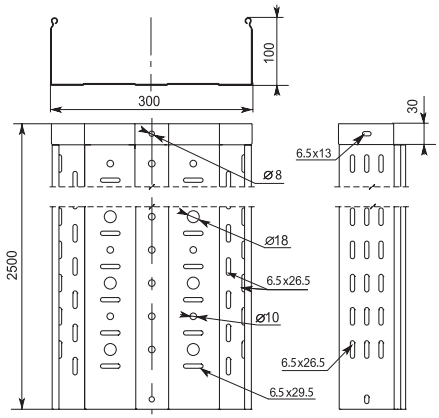
LNMZT(M)-300x100pr non-perforated tray



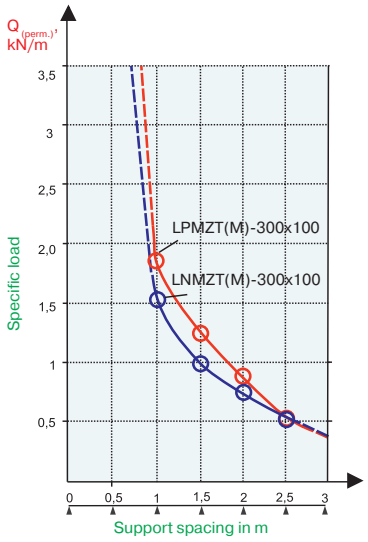


LPMZT(M)-300x100pr perforated tray





Material	Steel coil. Available versions: Sendzimir galvanized steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Tray bottom reinforced with additional stiffening ribs for greater load capacity Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray
Manufacturing method	Roll-forming

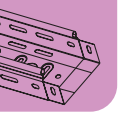


When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	314	0.5024	2.5
5x2.5	14.6	0.0035	137	0.4795	2.5
5x6	20.2	0.0072	68	0.4896	2.5
5x16	30.9	0.017	26	0.442	2.5
4x70	49.7	0.05	9	0.45	2.5

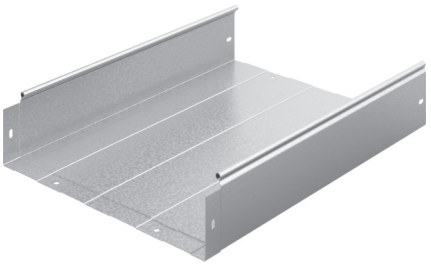
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80% of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

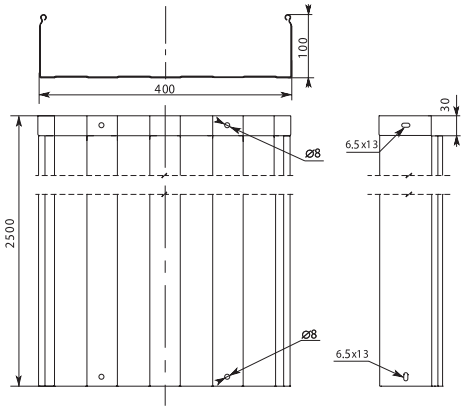
- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing.
- Maximum lateral deflection is 1/20 of the tray width.



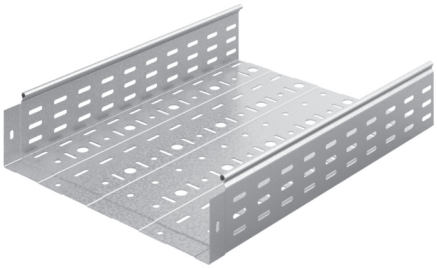
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012313	212313	LNMZT(M)-300x100pr	300x100x2500	1.00	3.88	295.02	1.52	0.99	0.72	0.57	5
011313	211313	LPMZT(M)-300x100pr	300x100x2500	1.00	3.34	295.02	1.87	1.19	0.87	0.58	5

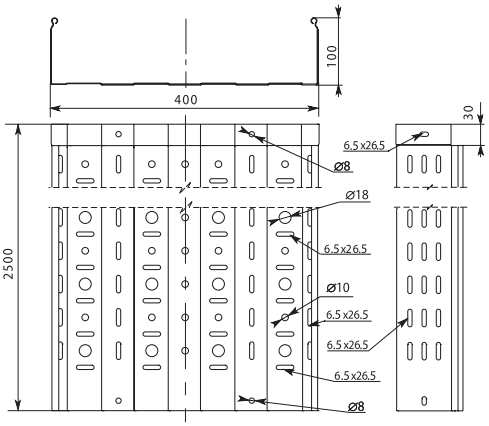
LNMZT(M)-400x100pr non-perforated tray

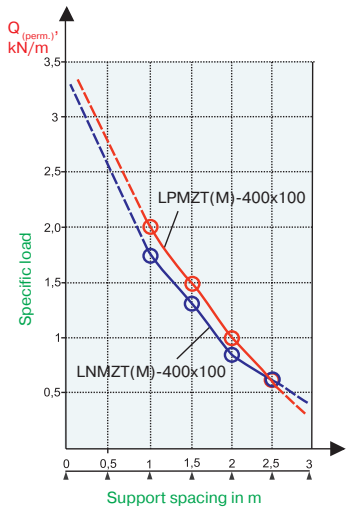




LPMZT(M)-400x100pr perforated tray







Material — Steel coil. Available versions: Sendzimir galvanized steel, painted trays

Steel grade — 08 PS GOST 52246-2004

Design features — Tray bottom reinforced with additional stiffening ribs for greater load capacity

Tubular side locks designed to eliminate sharp edges and increase load capacity of the tray

Manufacturing method — Roll-forming

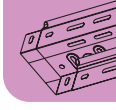
The graph shows the safe working load (SWL — the maximum load that can be safely applied to the system under normal conditions) recommended for use when designing cable routing systems. SWL is equal to 80 % of the values obtained from load tests as per GOST R 52868-2007 under the following conditions:

- The trays are fastened to supports with screws and nuts
- The tray orientation is horizontal
- The supports are assumed to be rigid
- The load is evenly distributed (in the longitudinal and transverse directions)
- Terminal spans of the tray have no joints
- Maximum linear deflection is 1/100 of the support spacing
- Maximum lateral deflection is 1/20 of the tray width.

When the tray is filled with the maximum theoretical number of cables (pcs.) of specified diameter (D) and specific weight (M), the design cable load (Q) permits spacing Δ between the supports.

Cable	D, mm	M, kN/m	Pcs.	Q, kN/m	Δ, m
3x1.5	10.1	0.0016	408	0.6528	2.5
5x2.5	14.6	0.0035	176	0.616	2.5
5x6	20.2	0.0072	86	0.6192	2.5
5x16	30.9	0.017	34	0.578	2.5
4x70	49.7	0.05	10	0.5	2.5

Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Usable cross-section area, cm²	Load Q, kN/m (L — support spacing, mm)				Packaging, m
Sendzimir galvanized	Painted						L=1000	L=1500	L=2000	L=2500	
012413	212413	LNMZT(M)-400x100pr	400x100x2500	1.00	11.34	393.20	1.70	1.37	0.86	0.69	5
011413	211413	LPMZT(M)-400x100pr	400x100x2500	1.00	10.44	393.20	2.01	1.47	0.98	0.69	5



Important! With an installed cover and end plate, the IP rating is increased by 2X for perforated trays and 4X for non-perforated trays.

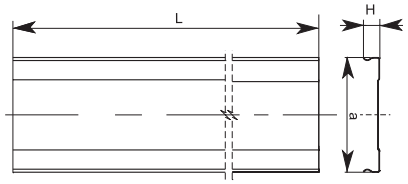
1.2 COVERS

Tray cover

Lockable covers are designed to protect cables from ultraviolet radiation, atmospheric precipitation, dust, dropped objects and accidental human contact. Lockable covers can be mounted on all types of trays: trays, ladders, and wire mesh trays. The covers are designed to maintain electrical continuity of the cable tray system, when they are mounted on trays, and do not require special earthing.

NEW

Version code		Art. No.	Metal thickness, mm	Weight, kg/m	Dimensions, mm a x H x L	Packaging, pcs.
Sendzimir galvanized	Painted					
020103	220103	KLZT-50	0.55	0.25	50x14x2500	50
020113	220113	KLZT-100	0.55	0.44	100x14x2500	30
020123	220123	KLZT-200	0.70	1.14	200x14x2500	20
020133	220133	KLZT-300	0.70	1.65	300x14x2500	15
020143	220143	KLZT-400	0.70	2.25	400x14x2500	10
020153	220153	KLZT-500	0.90	5.72	500x15x3000	6
020163	220163	KLZT-600	0.90	6.79	600x15x3000	6

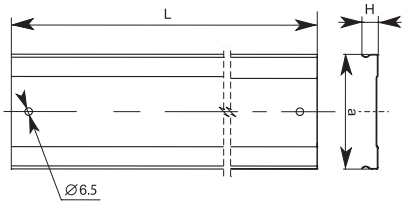


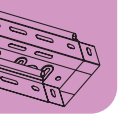
Tray cover for grounding connection

NEW

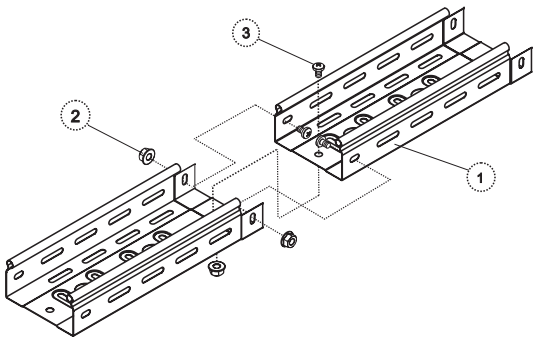
This cover has a special opening for connecting a ZP grounding conductor. The grounding conductor is connected to the cover with an M6 screw.

Version code		Art. No.	Metal thickness, mm	Weight, kg/m	Dimensions, mm a x H x L	Packaging, pcs.
Sendzimir galvanized	Painted					
020103	220104	KLZTz-50	0.55	0.25	50x14x2500	50
020113	220114	KLZTz-100	0.55	0.44	100x14x2500	30
020123	220124	KLZTz-200	0.70	1.14	200x14x2500	20
020133	220134	KLZTz-300	0.70	1.65	300x14x2500	15
020143	220144	KLZTz-400	0.70	2.25	400x14x2500	10
020153	220154	KLZTz-500	0.90	5.72	500x15x3000	6
020163	220164	KLZTz-600	0.90	6.79	600x15x3000	6





Joining cable trays together

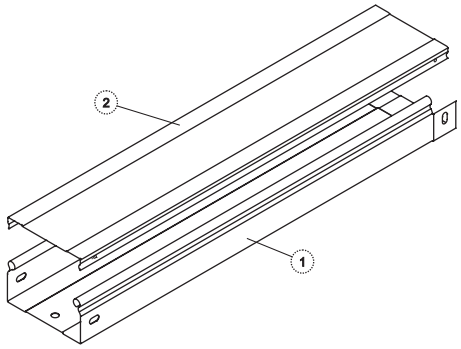


Line up the trays (1) to be joined and snap them together (male-female), then secure with 3 screw sets as follows: screw (3) on the inside of the tray; nut (2) on the outside, against the side wall of the tray.

The following fasteners are used for each joint:

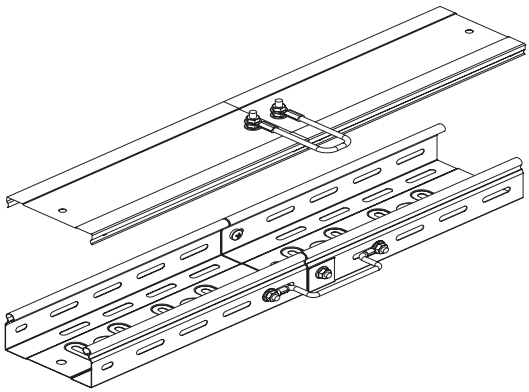
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3

Fastening a cover to a cable tray



Line up the cover (2) with locks on the tray (1) and push slightly to snap in place.

Fastening a cover for grounding connection to a cable tray

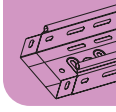


If there are no grounding conductors, use two M6x10 screws and two nuts to join the trays. To connect grounding conductors, use two M6x20 screws and two nuts to join the trays together. Use the remaining two M6x20 screws and two nuts to join the covers.

Fit the lugs of the grounding conductors on the long ends of M6x20 screws (on top of the nuts) and tighten the nuts.

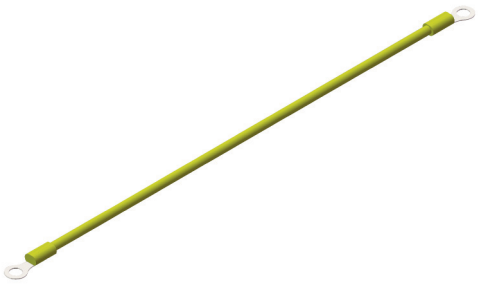
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
ZPU	Grounding conductor	2
VM610	M6x10 screw	2
VM620	M6x20 screw	4
GM6SB	M6 nut with locking collar	10



1.3 FLEXIBLE GROUNDING JUMPERS

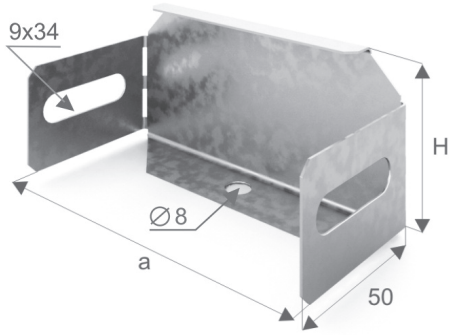
ZPU universal grounding conductor



Code	Art. No.	Weight, kg	Packaging, pcs.
060062	ZPU 6x200	0.030	10
060102	ZPU 10x200	0.035	10

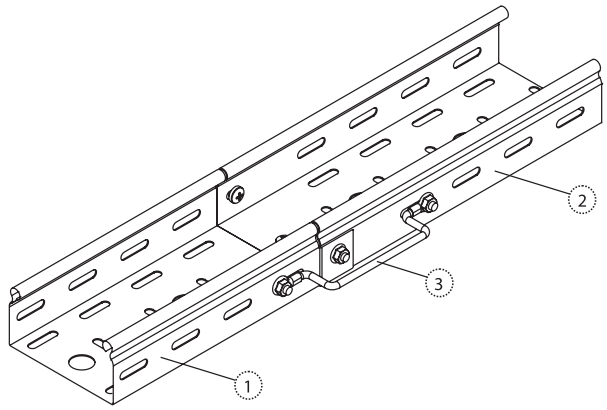
1.4 END PLATES

An end plate (ZT) is used to blank the ends of a cable tray at the route termination points.



Version code		Art. No.	Metal thickness, mm	Weight, kg/ each	Dimensions, mm		Packaging, pcs.
Sendzimir galvanized	Painted				a	H	
040755	240755	ZT-50x50	0.70	0.03	50	50	100
040715	240715	ZT-100x50	0.70	0.05	100	50	100
040725	240725	ZT-200x50	0.70	0.09	200	50	100
040735	240735	ZT-300x50	0.70	0.13	300	50	50
040745	240745	ZT-400x50	0.70	0.18	400	50	10
040718	240718	ZT-100x80	0.70	0.08	100	80	70
040728	240728	ZT-200x80	0.70	0.14	200	80	60
040738	240738	ZT-300x80	0.70	0.20	300	80	50
040711	240711	ZT-100x100	0.70	0.10	100	100	70
040721	240721	ZT-200x100	0.70	0.17	200	100	60
040731	240731	ZT-300x100	0.70	0.24	300	100	50

Connecting a grounding conductor to cable trays

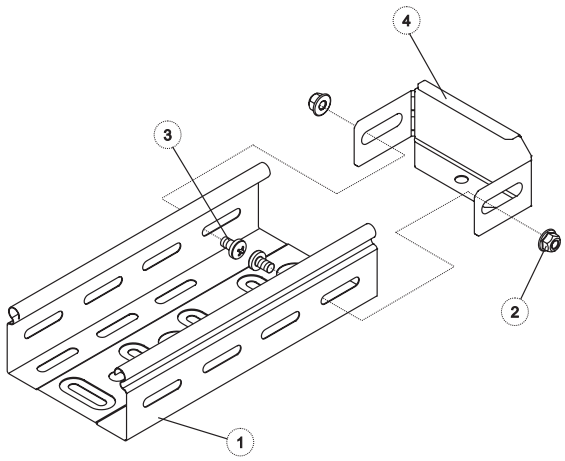


A grounding conductor is connected at the joint between adjoining cable trays. Secure one end of the grounding conductor (3) on the outside of the tray (1) with one screw set through the hole provided in the side wall of the tray (1). Secure the other end of the grounding conductor (3) on the outside of the side wall of the tray (2) with one screw set. Secure the fasteners in the following manner: tighten the screw on the inside of the tray, and the nut on the outside.

The following fasteners are required to connect a grounding conductor to the tray:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2

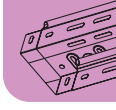
Fastening an end plate to a cable tray



Mount the end plate (4) on the end of tray (1) and secure with 2 screw sets as follows: screw (3) on the inside of the tray; nut (2) on the outside of the tray.

The following fasteners are used for each joint:

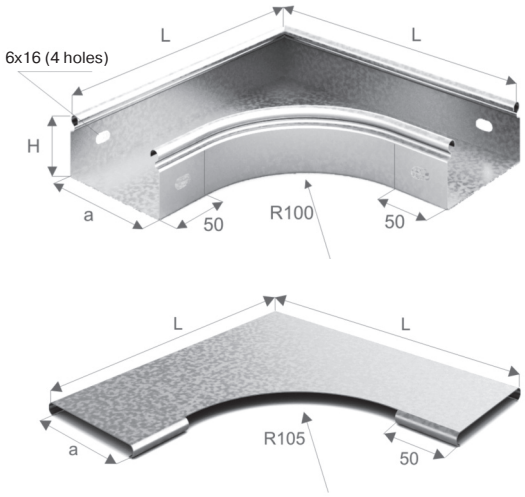
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2



1.5 FLAT BENDS

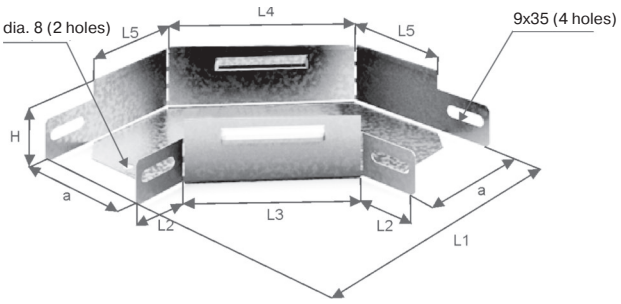
Important! Covers for long-radius bends, tees and branch fittings are supplied separately.

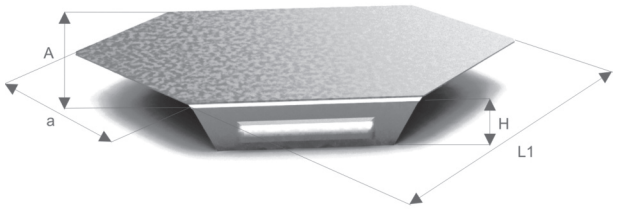
UPTp long-radius horizontal bend/KUPTp cover for bend



Version code		Art. No.	Metal thickness, mm	Weight, kg/each	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted				a	L	H	
032055	232055	UPTp-50x50	0.70	0.31	50	200	50	10
032015	232015	UPTp-100x50	0.70	0.47	100	250	50	10
032025	232025	UPTp-200x50	0.70	0.86	200	350	50	10
032035	232035	UPTp-300x50	0.70	1.36	300	450	50	10
032045	232045	UPTp-400x50	0.70	1.97	400	550	50	6
032018	232018	UPTp-100x80	0.70	0.68	100	250	80	4
032028	232028	UPTp-200x80	0.70	1.12	200	350	80	4
032038	232038	UPTp-300x80	0.70	1.68	300	450	80	4
032048	232048	UPTp-400x80	0.70	2.18	400	550	80	4
032011	232011	UPTp-100x100	0.70	0.76	100	250	100	4
032021	232021	UPTp-200x100	0.70	1.23	200	350	100	4
032031	232031	UPTp-300x100	0.70	1.81	300	450	100	4
032041	232041	UPTp-400x100	0.70	2.45	400	550	100	4
022051	222051	KUPTp-50	0.70	0.13	50	200	-	10
022011	222011	KUPTp-100	0.70	0.25	100	250	-	10
022021	222021	KUPTp-200	0.70	0.60	200	350	-	10
022031	222031	KUPTp-300	0.70	1.05	300	450	-	10
022041	222041	KUPTp-400	0.70	1.62	400	550	-	6

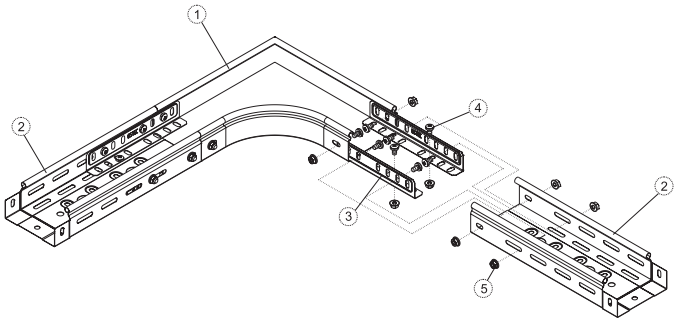
USP flat angle connector/KUSP cover for connector

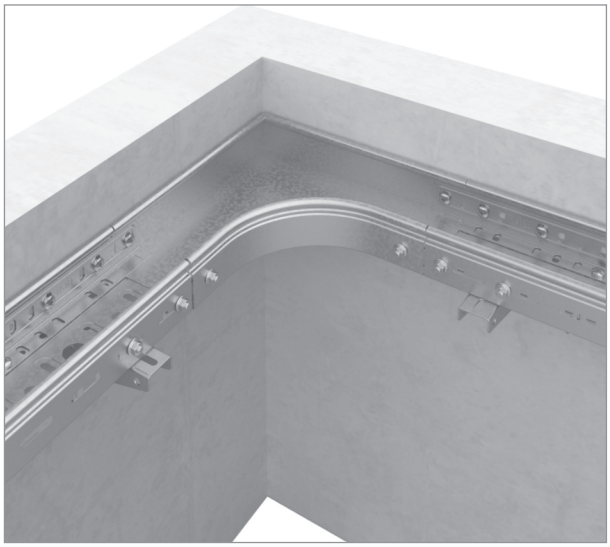




Version code		Art. No.	Weight, kg				Dimensions, mm					Packaging, pcs.
Sendzimir galvanized	Painted			a	H	L1	L2	L3	**L4**	L5	A	
032255	232255	USP-50x50	0.20	50	50	200	50	135	120	60	-	20
032215	232215	USP-100x50	0.32	100	50	250	50	135	160	85	-	20
032225	232225	USP-200x50	0.79	200	50	350	50	135	235	130	-	10
032235	232235	USP-300x50	1.28	300	50	450	50	135	315	170	-	6
032245	232245	USP-400x50	1.90	400	50	550	50	135	395	215	-	6
032218	232218	USP-100x80	0.55	100	80	250	50	135	160	85	-	20
032228	232228	USP-200x80	0.96	200	80	350	50	135	235	130	-	10
032238	232238	USP-300x80	1.49	300	80	450	50	135	315	170	-	8
032211	232211	USP-100x100	0.64	100	100	250	50	135	160	85	-	20
032221	232221	USP-200x100	1.08	200	100	350	50	135	235	130	-	10
032231	232231	USP-300x100	1.64	300	100	450	50	135	315	170	-	8
022251	222251	KUSP-50	0.11	50	27	150	-	-	-	-	82	20
022211	222211	KUSP-100	0.19	100	27	200	-	-	-	-	135	20
022221	222221	KUSP-200	0.56	200	27	300	-	-	-	-	235	20
022231	222231	KUSP-300	0.99	300	27	400	-	-	-	-	340	10
022241	222241	KUSP-400	1.54	400	27	500	-	-	-	-	440	10

Connecting a cable tray to a long-radius horizontal bend





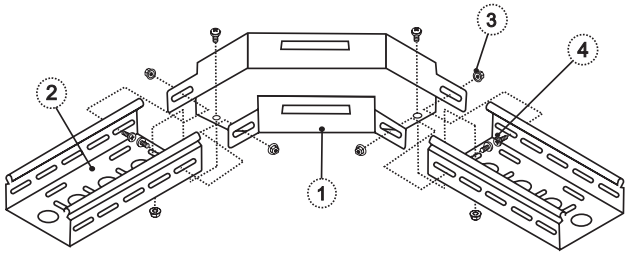
Use a SLU universal tray connector to connect the cable tray to the long-radius horizontal bend in the following manner. Line up the tray (2) and the bend (1) end to end. Fasten the universal tray connector (3) on the inside of the side walls of adjoining structural elements (the tray and the bend in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the bend side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

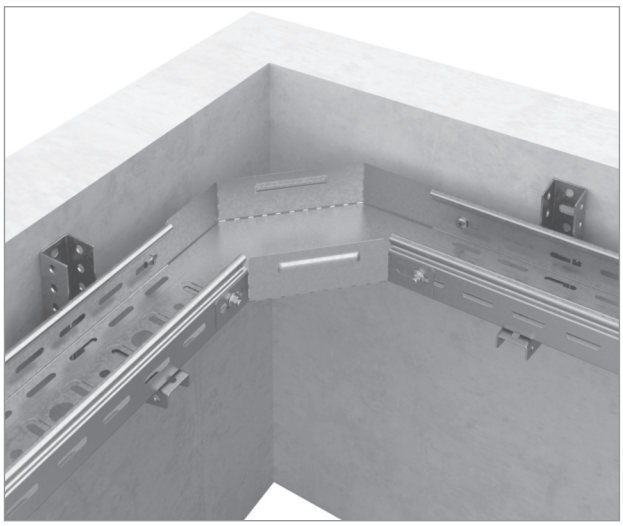
The same connection principle is used for all horizontal bend sizes.

The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

Joining cable trays together with a flat angle connector

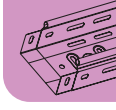




Insert the tray (2) into the angle connector (1) until it stops and secure with 3 screw sets as follows: screw (4) on the inside, from the tray (2) side; nut (3) on the outside, from the connector side. The same connection principle is used for all flat angle connector sizes.

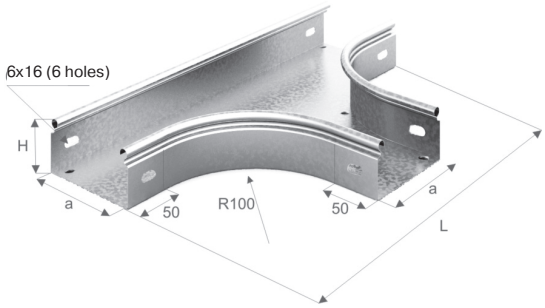
The following fasteners are used for each joint:

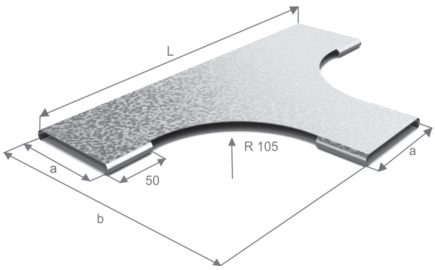
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3



1.6 TEES

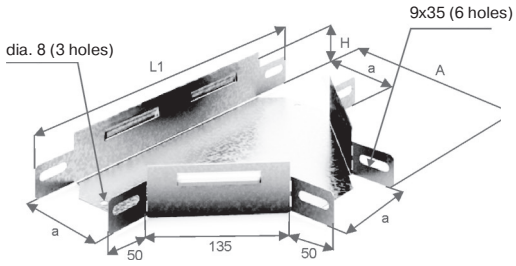
TTp long-radius tee bend/KTTp cover for bend

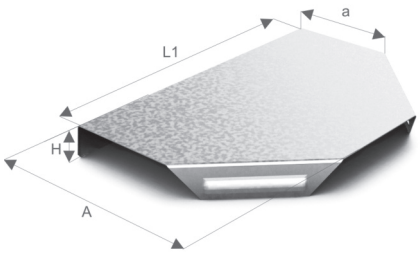




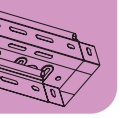
Version code		Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm				Packaging, pcs.
Sendzimir galvanized	Painted				a	L	b	H	
031955	231955	TTp-50x50	0.70	0.44	50	350	200	50	10
031915	231915	TTp-100x50	0.70	0.62	100	400	250	50	10
031925	231925	TTp-200x50	0.70	1.06	200	500	350	50	10
031935	231935	TTp-300x50	0.70	1.61	300	600	450	50	6
031945	231945	TTp-400x50	0.70	2.28	400	700	550	50	6
031918	231918	TTp-100x80	0.70	0.87	100	400	250	80	4
031928	231928	TTp-200x80	0.70	1.34	200	500	350	80	4
031938	231938	TTp-300x80	0.70	1.92	300	600	450	80	4
031948	231948	TTp-400x80	0.70	2.88	400	700	550	80	4
031911	231911	TTp-100x100	0.70	0.97	100	400	250	100	4
031921	231921	TTp-200x100	0.70	1.45	200	500	350	100	4
031931	231931	TTp-300x100	0.70	2.04	300	600	450	100	4
031941	231941	TTp-400x100	0.70	3.10	400	700	550	100	4
021951	221951	KTTp-50	0.70	0.18	50	350	200	-	10
021911	221911	KTTp-100	0.70	0.35	100	400	250	-	10
021921	221921	KTTp-200	0.70	0.77	200	500	350	-	10
021931	221931	KTTp-300	0.70	1.30	300	600	450	-	6
021941	221941	KTTp-400	0.70	1.95	400	700	550	-	6

UST tee connector/KUST cover for connector





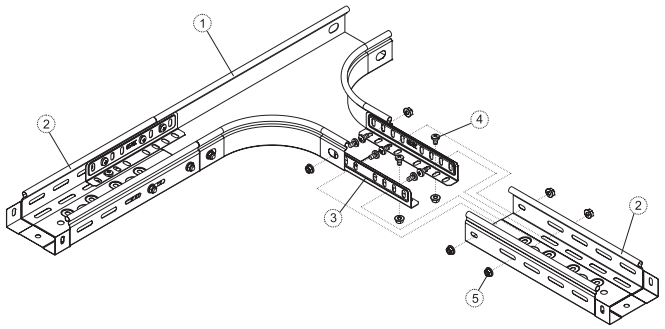
Version code		Art. No.	Weight, kg	Dimensions, mm				Packaging, pcs.
Sendzimir galvanized	Painted			a	H	L1	A	
032355	232355	UST-50x50	0.33	50	50	345	200	20
032315	232315	UST-100x50	0.48	100	50	395	250	20
032325	232325	UST-200x50	1.10	200	50	495	350	10
032335	232335	UST-300x50	1.73	300	50	595	450	6
032345	232345	UST-400x50	2.51	400	50	695	550	6
032318	232318	UST-100x80	0.80	100	80	395	250	10
032328	232328	UST-200x80	1.31	200	80	495	350	6
032338	232338	UST-300x80	1.95	300	80	595	450	6
032311	232311	UST-100x100	0.92	100	100	395	250	10
032321	232321	UST-200x100	1.44	200	100	495	350	10
032331	232331	UST-300x100	2.10	300	100	595	450	6
022351	222351	KUST-50	0.22	50	27	245	150	20
022311	222311	KUST-100	0.35	100	27	295	200	20
022321	222321	KUST-200	0.88	200	27	395	300	10
022331	222331	KUST-300	1.46	300	27	495	400	8
022341	222341	KUST-400	2.18	400	27	595	500	6



Connecting a cable tray to a long-radius tee bend

Use a SLU universal tray connector to connect the cable tray to the tee bend in the following manner. Line up the tray (2) and the tee bend (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the tee bend in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the tee bend side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same assembly principle is used for all tee bend sizes.



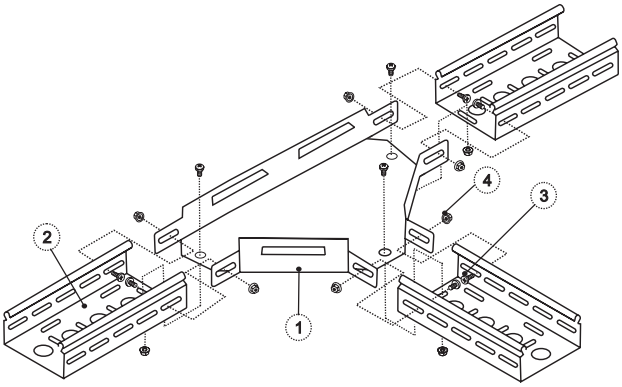
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

Joining cable trays together with a tee connector

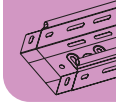
Insert the tray (2) into the connector (1) until it stops and secure with 3 screw sets as follows: screw (3) on the inside, from the tray side; nut (4) on the outside, from the connector side.

The same connection principle is used for all tee connector sizes.



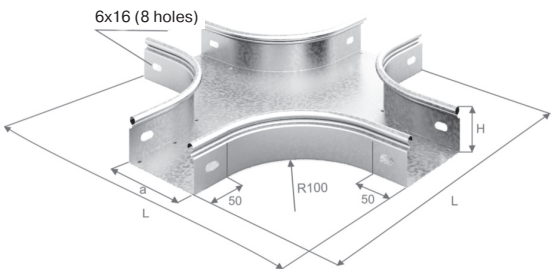
The following fasteners are used for each joint:

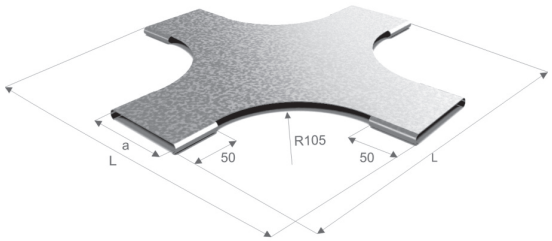
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3



1.7 CROSSOVERS

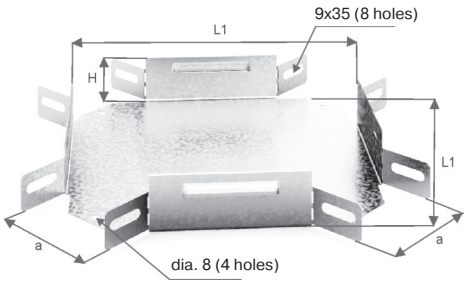
HTp long-radius crossover/KHTp cover for crossover

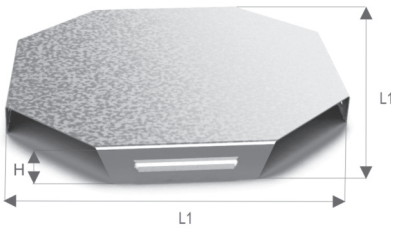




Version code		Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted				a	L	H	
032155	232155	HTp-50x50	0.70	0.57	50	350	50	6
032115	232115	HTp-100x50	0.70	0.78	100	400	50	6
032125	232125	HTp-200x50	0.70	1.28	200	500	50	6
032135	232135	HTp-300x50	0.70	1.88	300	600	50	6
032145	232145	HTp-400x50	0.70	2.59	400	700	50	4
032118	232118	HTp-100x80	0.70	1.04	100	400	80	4
032128	232128	HTp-200x80	0.70	1.54	200	500	80	2
032138	232138	HTp-300x80	0.70	2.14	300	600	80	2
032148	232148	HTp-400x80	0.70	3.50	400	700	80	4
032111	232111	HTp-100x100	0.70	1.16	100	400	100	2
032121	232121	HTp-200x100	0.70	1.65	200	500	100	2
032131	232131	HTp-300x100	0.70	2.26	300	600	100	2
032141	232141	HTp-400x100	0.70	3.68	400	700	100	4
022151	222151	KHTp-50	0.70	0.46	50	350	-	6
022111	222111	KHTp-100	0.70	0.67	100	400	-	6
022121	222121	KHTp-200	0.70	1.17	200	500	-	6
022131	222131	KHTp-300	0.70	1.78	300	600	-	6
022141	222141	KHTp-400	0.70	2.50	400	700	-	4

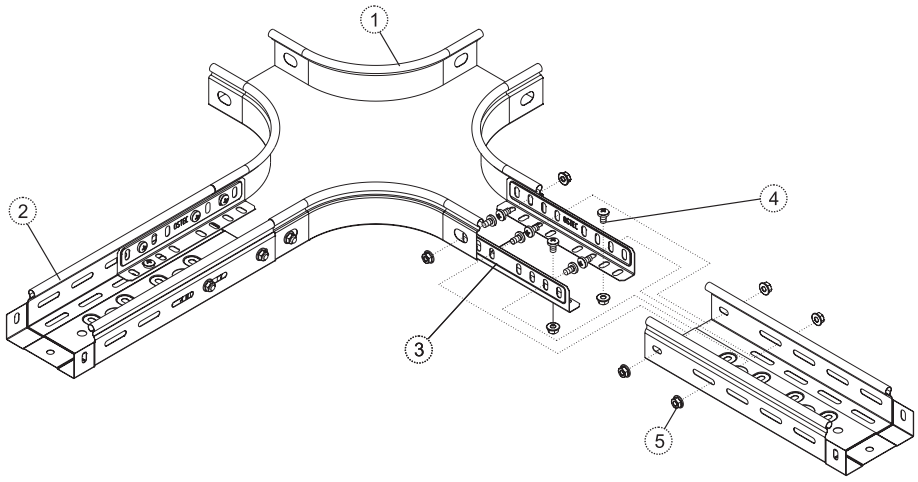
USH crossover connector/KUSH cover for connector





Version code		Art. No.	Weight, kg	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted			a	H	L1	
032455	232455	USH-50x50	0.43	50	50	210	20
032415	232415	USH-100x50	0.60	100	50	280	10
032425	232425	USH-200x50	1.32	200	50	420	10
032435	232435	USH-300x50	2.01	300	50	565	6
032445	232445	USH-400x50	2.84	400	50	705	4
032418	232418	USH-100x80	0.97	100	80	280	10
032428	232428	USH-200x80	1.52	200	80	420	6
032438	232438	USH-300x80	2.21	300	80	565	6
032411	232411	USH-100x100	1.11	100	100	280	10
032421	232421	USH-200x100	1.65	200	100	420	10
032431	232431	USH-300x100	2.34	300	100	565	6
022451	222451	KUSH-50	0.30	50	27	210	20
022411	222411	KUSH-100	0.45	100	27	280	20
022421	222421	KUSH-200	1.06	200	27	420	10
022431	222431	KUSH-300	1.69	300	27	565	8
022441	222441	KUSH-400	2.46	400	27	705	6

Connecting a cable tray to a long-radius crossover

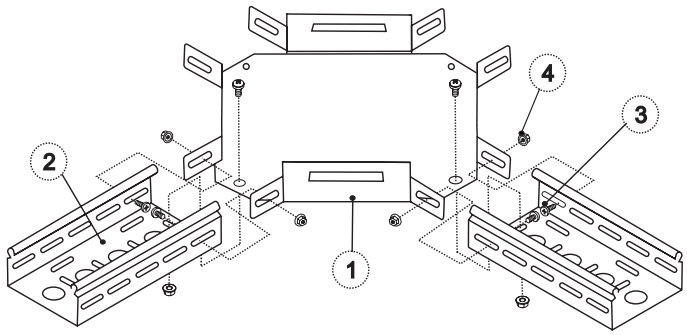


Use a SLU universal tray connector to connect the cable tray to the crossover in the following manner. Line up the tray (2) and the crossover (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the crossover in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the crossover side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint. The same connection principle is used for all crossover sizes.

The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

Joining cable trays together with a crossover connector

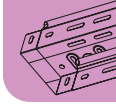


The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3

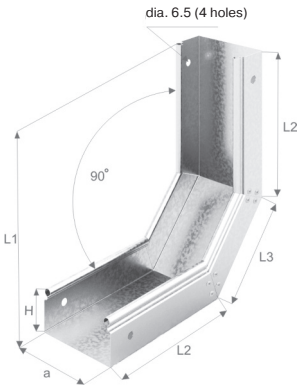
Insert the tray (2) into the connector (1) until it stops and secure with 3 screw sets as follows: screw (3) on the inside, from the tray (2) side; nut (4) on the outside, from the connector side.

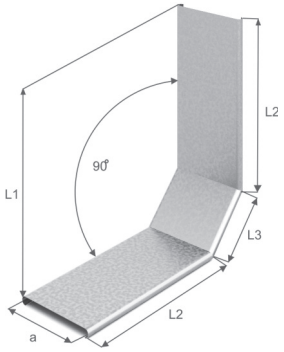
The same connection principle is used for all crossover connector sizes.



1.8 90° VERTICAL INSIDE AND OUTSIDE BENDS

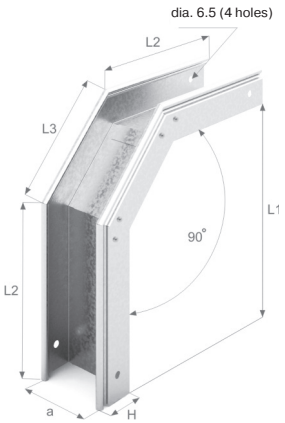
UVNT 90° vertical inside bend (supplied complete with cover)

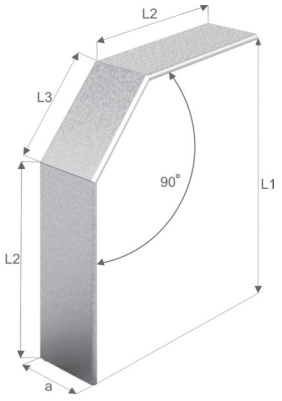




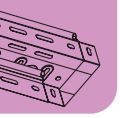
Version code		Art. No.	Metal thickness, mm	Weight, kg/ each	a, mm	H, mm	Bend			Cover			Packaging, pcs.
Sendzimir galvanized	Painted						L1, mm	L2, mm	L3, mm	L1, mm	L2, mm	L3, mm	
031055	231055	UVNT-50x50	0.55	0.45	50	50	270	185	125	270	235	85	4
031015	231015	UVNT-100x50	0.55	0.64	100	50	270	185	125	270	235	85	4
031025	231025	UVNT-200x50	0.70	1.44	200	50	270	185	125	270	235	85	2
031035	231035	UVNT-300x50	0.70	1.97	300	50	270	185	125	270	235	85	2
031045	231045	UVNT-400x50	1.00	3.71	400	50	325	185	325	325	235	150	2
031018	231018	UVNT-100x80	1.00	1.42	100	80	310	195	165	270	205	95	2
031028	231028	UVNT-200x80	1.00	2.16	200	80	310	195	165	270	205	95	2
031038	231038	UVNT-300x80	1.00	2.89	300	80	310	195	165	270	205	95	2
031048	231048	UVNT-400x80	1.00	3.58	400	80	325	185	195	270	190	110	2
031011	231011	UVNT-100x100	1.00	1.57	100	100	320	200	165	270	205	95	2
031021	231021	UVNT-200x100	1.00	2.33	200	100	320	200	165	270	205	95	2
031031	231031	UVNT-300x100	1.00	3.07	300	100	320	200	165	270	205	95	2
031041	231041	UVNT-400x100	1.00	3.81	400	100	325	185	195	270	190	110	2

UVT 90° vertical outside bend (supplied complete with cover)

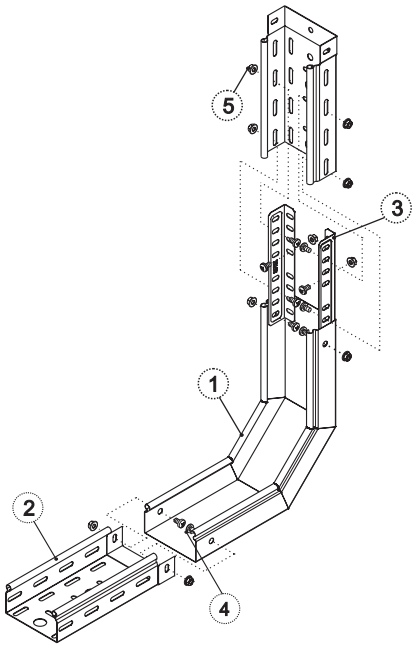


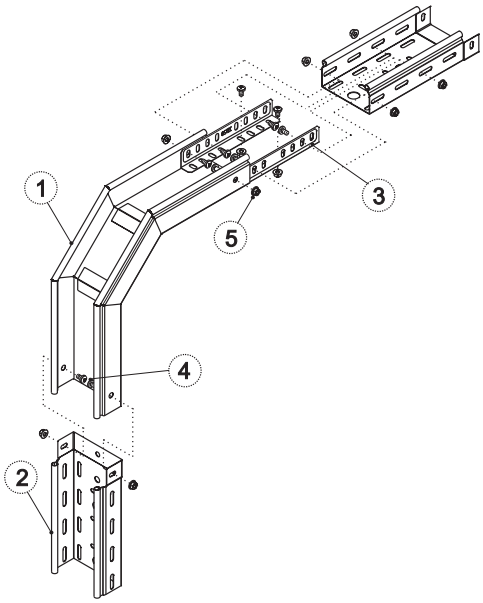


Version code		Art. No.	Metal thickness, mm	Weight, kg/ each	a, mm	H, mm	Bend			Cover			Packaging, pcs.
Sendzimir galvanized	Painted						L1, mm	L2, mm	L3, mm	L1, mm	L2, mm	L3, mm	
031155	231155	UVT-50x50	0.55	0.56	50	50	320	210	155	370	260	155	4
031115	231115	UVT-100x50	0.55	0.81	100	50	320	210	155	370	260	155	4
031125	231125	UVT-200x50	0.70	1.79	200	50	320	210	155	370	260	155	2
031135	231135	UVT-300x50	0.70	2.46	300	50	320	210	155	370	260	155	2
031145	231145	UVT-400x50	1.00	3.00	400	50	400	210	225	450	260	225	2
031118	231118	UVT-100x80	1.00	1.80	100	80	400	215	230	490	300	230	2
031128	231128	UVT-200x80	1.00	2.74	200	80	400	215	230	490	300	230	2
031138	231138	UVT-300x80	1.00	3.36	300	80	400	215	230	490	300	230	2
031148	231148	UVT-400x80	1.00	4.86	400	80	355	240	300	505	295	300	2
031111	231111	UVT-100x100	1.00	2.16	100	100	410	240	250	460	300	250	2
031121	231121	UVT-200x100	1.00	3.19	200	100	410	240	250	460	300	250	2
031131	231131	UVT-300x100	1.00	4.22	300	100	410	240	250	460	300	250	2
031141	231141	UVT-400x100	1.00	5.94	400	100	355	240	300	505	295	300	2



Connecting a cable tray to a vertical inside/outside bend





Use a SLU universal tray connector to connect the cable tray to the vertical bend in the following manner. Line up the tray (2) and the bend (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the bend in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the bend side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

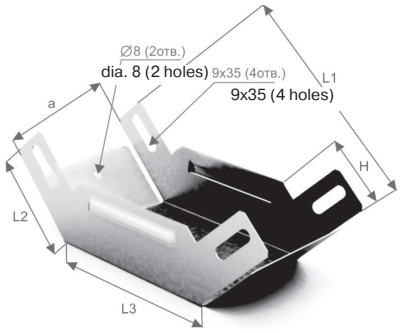
Use a splice connection to connect the cable tray to the vertical bend in the following manner. Line up the tray (2) and the bend (1) to be joined and snap them together (male-female); then secure with 2 screw sets as follows: screw (4) on the inside of the bend; nut (5) on the outside, from the tray side.

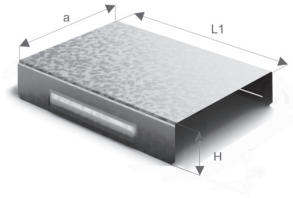
The same connection principle is used for all vertical bend sizes.

The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
Connecting a cable tray to a bend using a universal tray connector		
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8
Connecting a cable tray to a bend using splice connection (male-female)		
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2

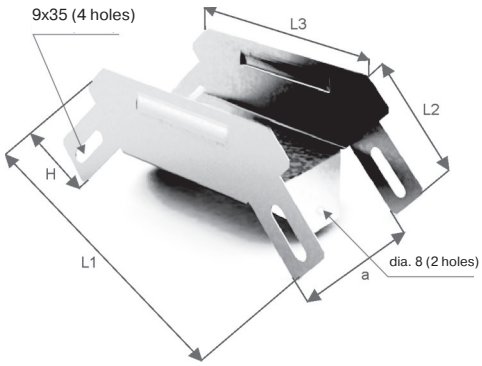
USVN vertical inside angle connector/KUSVN cover for connector

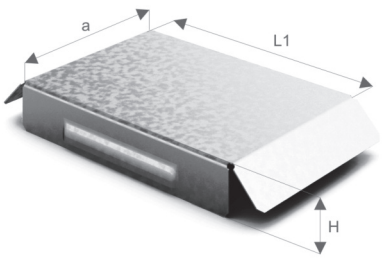




Version code		Art. No.	Weight, kg/each		Dimensions, mm				Packaging, pcs.
Sendzimir galvanized	Painted			a	H	L1	L2	L3	
032555	232555	USVN-50x50	0.16	50	50	165	75	130	20
032515	232515	USVN-100x50	0.23	100	50	165	75	130	20
032525	232525	USVN-200x50	0.54	200	50	165	75	130	20
032535	232535	USVN-300x50	0.75	300	50	165	75	130	10
032545	232545	USVN-400x50	0.95	400	50	165	75	130	10
032518	232518	USVN-100x80	0.48	100	80	200	75	170	20
032528	232528	USVN-200x80	0.68	200	80	200	75	170	20
032538	232538	USVN-300x80	0.89	300	80	200	75	170	10
032511	232511	USVN-100x100	0.60	100	100	220	75	200	20
032521	232521	USVN-200x100	0.82	200	100	220	75	200	10
032531	232531	USVN-300x100	1.04	300	100	220	75	200	10
022551	222551	KUSVN-50	0.05	50	25	93	-	-	40
022511	222511	KUSVN-100	0.08	100	25	93	-	-	40
022521	222521	KUSVN-200	0.17	200	25	93	-	-	40
022531	222531	KUSVN-300	0.23	300	25	93	-	-	40
022541	222541	KUSVN-400	0.30	400	25	93	-	-	40

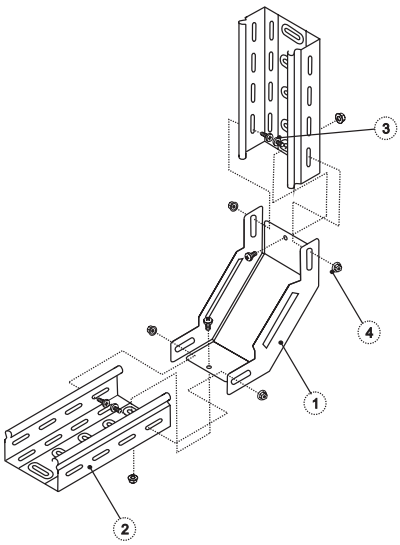
USV vertical outside angle connector/KUSV cover for connector





Version code		Art. No.	Weight, kg/each		Dimensions, mm				Packaging, pcs.
Sendzimir galvanized	Painted			a	H	L1	L2	L3	
032655	232655	USV-50x50	0.14	50	50	175	72	145	20
032615	232615	USV-100x50	0.18	100	50	175	72	145	20
032625	232625	USV-200x50	0.40	200	50	175	72	145	20
032635	232635	USV-300x50	0.59	300	50	175	72	145	20
032645	232645	USV-400x50	0.78	400	50	175	72	145	10
032618	232618	USV-100x80	0.34	100	80	205	72	190	20
032628	232628	USV-200x80	0.51	200	80	205	72	190	20
032638	232638	USV-300x80	0.70	300	80	205	72	190	10
032611	232611	USV-100x100	0.41	100	100	225	72	215	20
032621	232621	USV-200x100	0.58	200	100	225	72	215	20
032631	232631	USV-300x100	0.77	300	100	225	72	215	10
022651	222651	KUSV-50x50	0.10	50	25	145	-	-	20
022611	222611	KUSV-100x50	0.15	100	25	145	-	-	20
022621	222621	KUSV-200x50	0.33	200	25	145	-	-	20
022631	222631	KUSV-300x50	0.47	300	25	145	-	-	20
022641	222641	KUSV-400x50	0.61	400	25	145	-	-	20
022618	222618	KUSV-100x80	0.24	100	25	190	-	-	20
022628	222628	KUSV-200x80	0.41	200	25	190	-	-	20
022638	222638	KUSV-300x80	0.58	300	25	190	-	-	20
022610	222610	KUSV-100x100	0.27	100	25	215	-	-	20
022620	222620	KUSV-200x100	0.46	200	25	215	-	-	20
022630	222630	KUSV-300x100	0.64	300	25	215	-	-	20

Joining cable trays together with a vertical inside angle connector

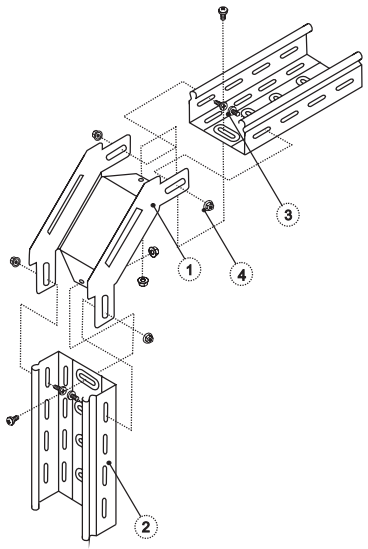


Insert the tray (2) into the angle connector (1) until it stops and secure with 3 screw sets as follows: screw (3) on the inside, from the side of tray (2); nut (4) on the outside, from the connector side.
The same connection principle is used for all vertical inside angle connector sizes.

The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3

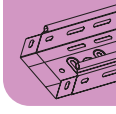
Joining cable trays together with a vertical outside angle connector



Insert the tray (2) into the angle connector (1) until it stops and secure with 3 screw sets as follows: screw (3) on the inside, from the side of tray (2); nut (4) on the outside, from the connector side.
The same connection principle is used for all vertical outside angle connector sizes.

The following fasteners are used for each joint:

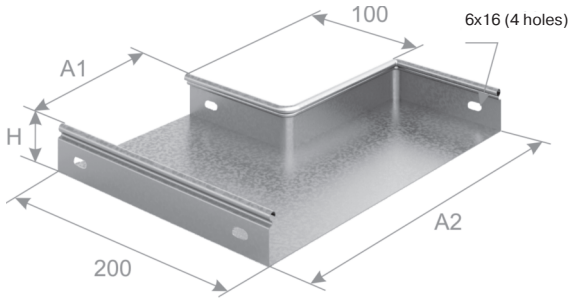
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3

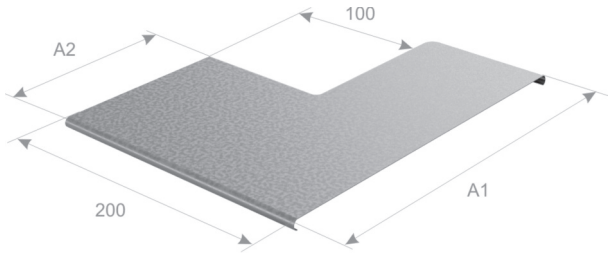


1.9 STRAIGHT REDUCERS

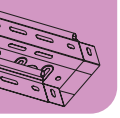
PPP, PPL and PPC reducers are used to join together a cable route consisting of tray sections of different widths

PPL left-hand straight reducer

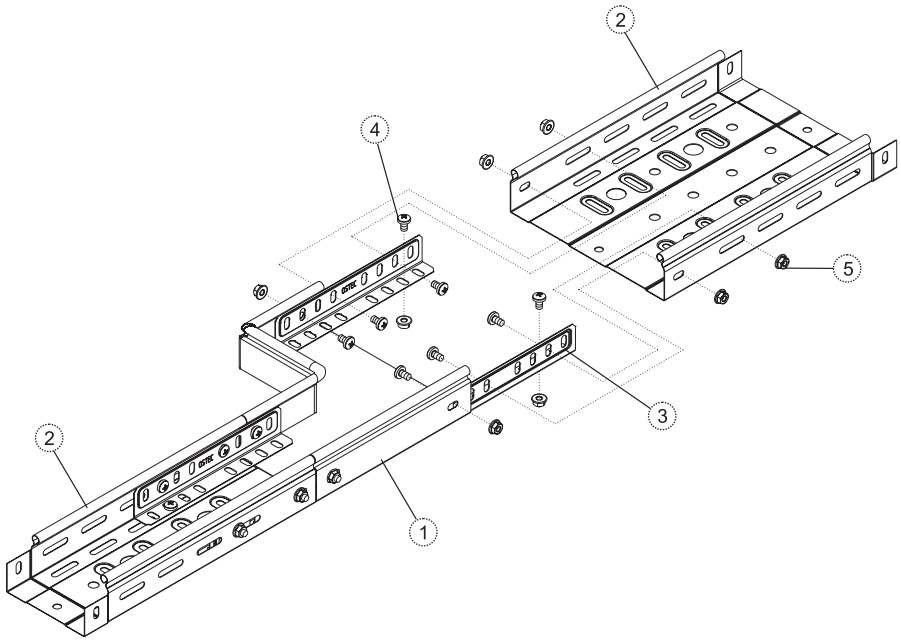




Version code		Art. No.	Weight, kg/each	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted			A1	A2	H	
035015	235015	PPL 100x50x50	0.21	100	50	50	2
035025	235025	PPL 200x50x50	0.30	200	50	50	2
035035	235035	PPL 300x50x50	0.39	300	50	50	2
035045	235045	PPL 400x50x50	0.47	400	50	50	2
035021	235021	PPL 200x100x50	0.31	200	100	50	2
035031	235031	PPL 300x100x50	0.40	300	100	50	2
035041	235041	PPL 400x100x50	0.48	400	100	50	2
035032	235032	PPL 300x200x50	0.42	300	200	50	2
035042	235042	PPL 400x200x50	0.51	400	200	50	2
035043	235043	PPL 400x300x50	0.53	400	300	50	2
033821	233821	PPL 200x100x80	0.37	200	100	80	2
033831	233831	PPL 300x100x80	0.48	300	100	80	2
033841	233841	PPL 400x100x80	0.58	400	100	80	2
033832	233832	PPL 300x200x80	0.51	300	200	80	2
033842	233842	PPL 400x200x80	0.61	400	200	80	2
033843	233843	PPL 400x300x80	0.64	400	300	80	2
033921	233921	PPL 200x100x100	0.41	200	100	100	2
033931	233931	PPL 300x100x100	0.53	300	100	100	2
033941	233941	PPL 400x100x100	0.64	400	100	100	2
033932	233932	PPL 300x200x100	0.56	300	200	100	2
033942	233942	PPL 400x200x100	0.68	400	200	100	2
033943	233943	PPL 400x300x100	0.75	400	300	100	2
022715	222715	KRPL 100x50	0.11	100	50	-	2
022725	222725	KRPL 200x50	0.17	200	50	-	2
022735	222735	KRPL 300x50	0.23	300	50	-	2
022745	222745	KRPL 400x50	0.30	400	50	-	2
022721	222721	KRPL 200x100	0.20	200	100	-	2
022731	222731	KRPL 300x100	0.26	300	100	-	2
022741	222741	KRPL 400x100	0.32	400	100	-	2
022732	222732	KRPL 300x200	0.31	300	200	-	2
022742	222742	KRPL 400x200	0.37	400	200	-	2
022743	222743	KRPL 400x300	0.42	400	300	-	2



Connecting a cable tray to a left-hand straight reducer

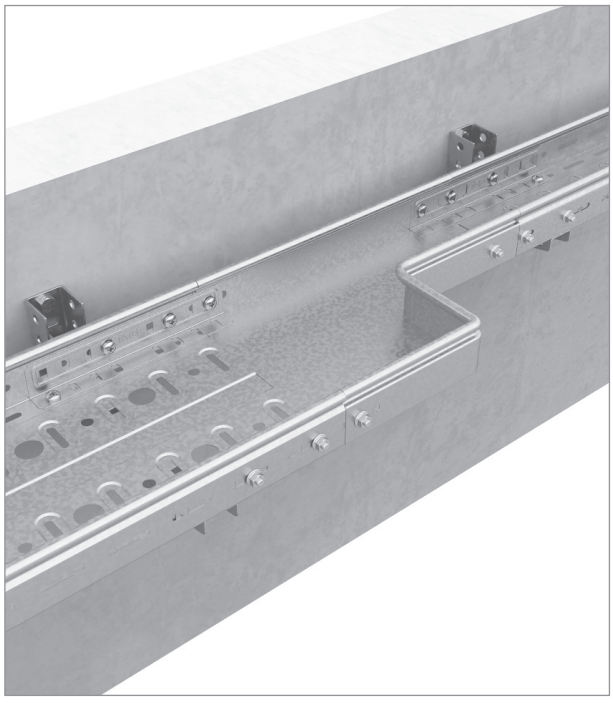


Use a SLU universal tray connector to connect the cable tray to the reducer in the following manner. Line up the tray (2) and the reducer (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the reducer in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the reducer side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

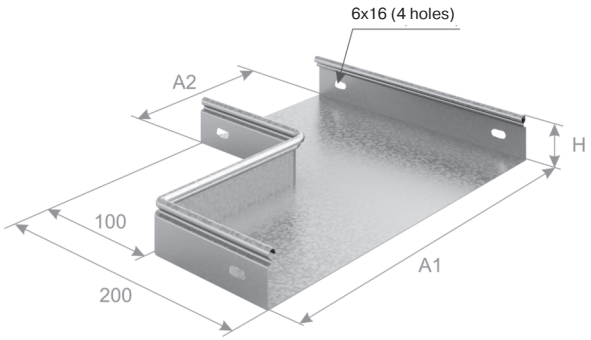
The same connection principle is used for all reducer sizes.

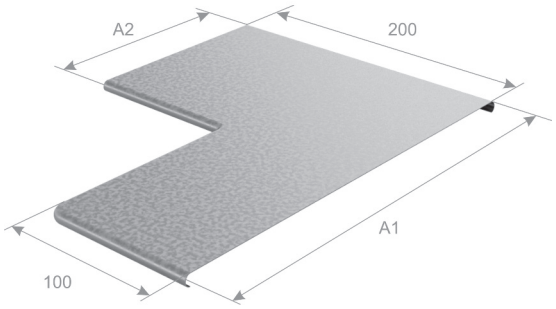
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

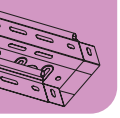


PPP right-hand straight reducer

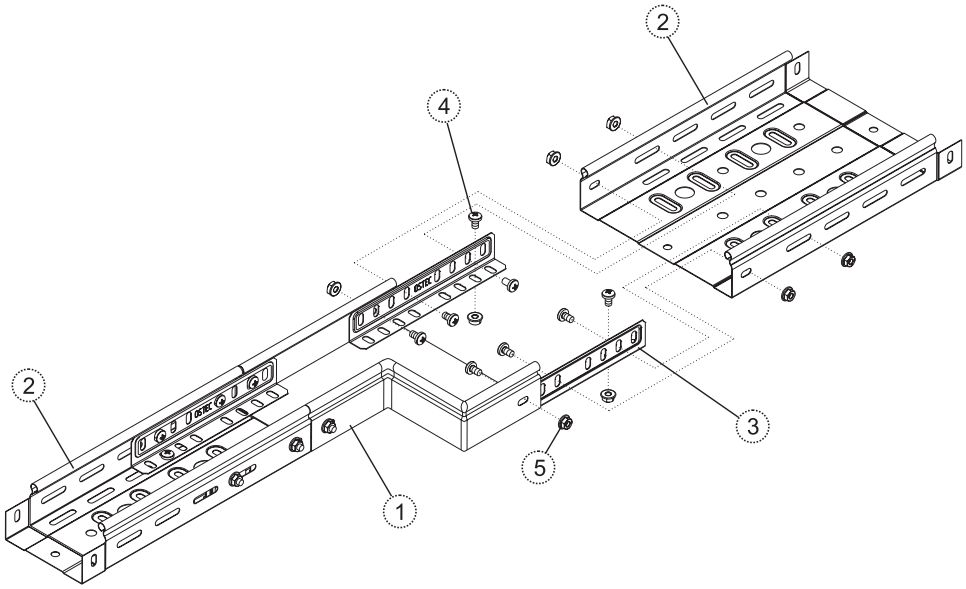




Version code		Art. No.	Weight, kg/each	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted			A1	A2	H	
035115	235115	PPP 100x50x50	0.21	100	50	50	2
035125	235125	PPP 200x50x50	0.30	200	50	50	2
035135	235135	PPP 300x50x50	0.39	300	50	50	2
035145	235145	PPP 400x50x50	0.47	400	50	50	2
035121	235121	PPP 200x100x50	0.31	200	100	50	2
035131	235131	PPP 300x100x50	0.40	300	100	50	2
035141	235141	PPP 400x100x50	0.48	400	100	50	2
035132	235132	PPP 300x200x50	0.42	300	200	50	2
035142	235142	PPP 400x200x50	0.51	400	200	50	2
035143	235143	PPP 400x300x50	0.53	400	300	50	2
034021	234021	PPP 200x100x80	0.37	200	100	80	2
034031	234031	PPP 300x100x80	0.48	300	100	80	2
034041	234041	PPP 400x100x80	0.58	400	100	80	2
034032	234032	PPP 300x200x80	0.51	300	200	80	2
034042	234042	PPP 400x200x80	0.61	400	200	80	2
034043	234043	PPP 400x300x80	0.64	400	300	80	2
034121	234121	PPP 200x100x100	0.41	200	100	100	2
034131	234131	PPP 300x100x100	0.53	300	100	100	2
034141	234141	PPP 400x100x100	0.64	400	100	100	2
034132	234132	PPP 300x200x100	0.56	300	200	100	2
034142	234142	PPP 400x200x100	0.68	400	200	100	2
034143	234143	PPP 400x300x100	0.71	400	300	100	2
022815	222815	KRPP 100x50	0.11	100	50	-	2
022825	222825	KRPP 200x50	0.17	200	50	-	2
022835	222835	KRPP 300x50	0.23	300	50	-	2
022845	222845	KRPP 400x50	0.30	400	50	-	2
022821	222821	KRPP 200x100	0.20	200	100	-	2
022831	222831	KRPP 300x100	0.26	300	100	-	2
022841	222841	KRPP 400x100	0.32	400	100	-	2
022832	222832	KRPP 300x200	0.31	300	200	-	2
022842	222842	KRPP 400x200	0.37	400	200	-	2
022843	222843	KRPP 400x300	0.42	400	300	-	2



Connecting a cable tray to a right-hand straight reducer

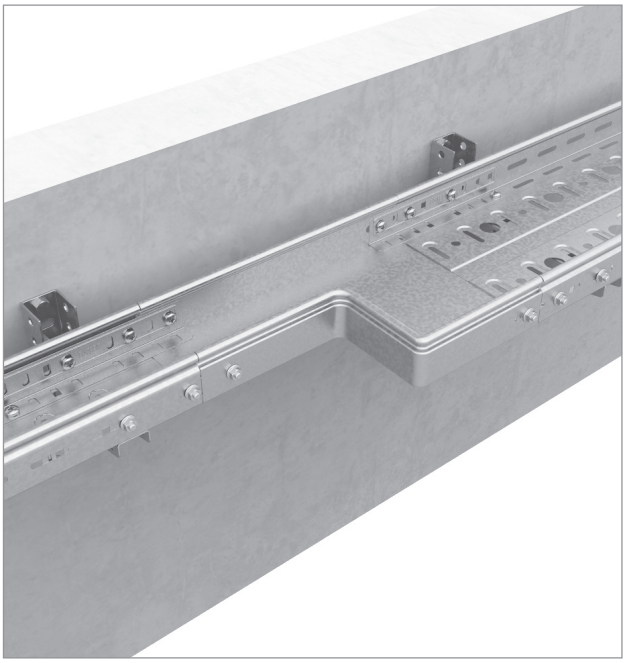


Use a SLU universal tray connector to connect the cable tray to the reducer in the following manner. Line up the tray (2) and the reducer (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the reducer in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the reducer side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

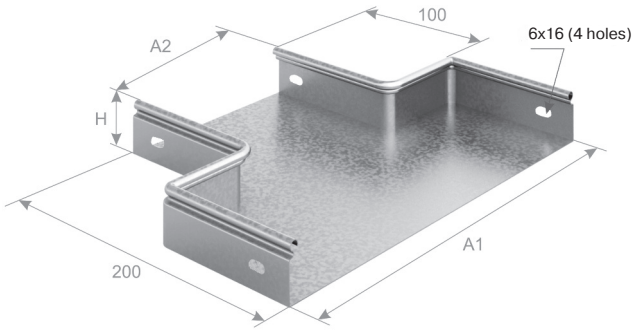
The same connection principle is used for all reducer sizes.

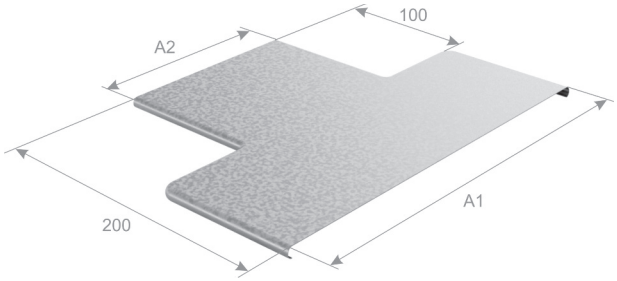
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

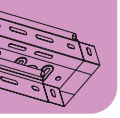


PPC concentric straight reducer

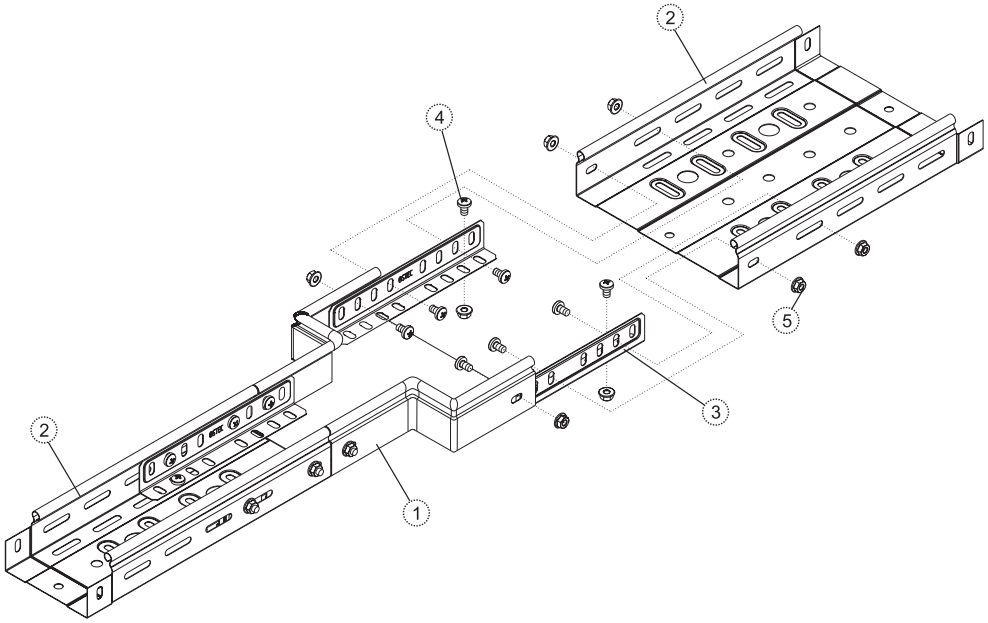




Version code		Art. No.		Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted		Weight, kg/each	A1	A2	H	
035215	235215	PPC 100x50x50	0.21	100	50	50	2
035225	235225	PPC 200x50x50	0.30	200	50	50	2
035235	235235	PPC 300x50x50	0.38	300	50	50	2
035245	235245	PPC 400x50x50	0.47	400	50	50	2
035221	235221	PPC 200x100x50	0.31	200	100	50	2
035231	235231	PPC 300x100x50	0.40	300	100	50	2
035241	235241	PPC 400x100x50	0.48	400	100	50	2
035232	235232	PPC 300x200x50	0.42	300	200	50	2
035242	235242	PPC 400x200x50	0.50	400	200	50	2
035243	235243	PPC 400x300x50	0.53	400	300	50	2
034221	234221	PPC 200x100x80	0.37	200	100	80	2
034231	234231	PPC 300x100x80	0.48	300	100	80	2
034241	234241	PPC 400x100x80	0.58	400	100	80	2
034232	234232	PPC 300x200x80	0.51	300	200	80	2
034242	234242	PPC 400x200x80	0.60	400	200	80	2
034243	234243	PPC 400x300x80	0.64	400	300	80	2
034321	234321	PPC 200x100x100	0.41	200	100	100	2
034331	234331	PPC 300x100x100	0.53	300	100	100	2
034341	234341	PPC 400x100x100	0.64	400	100	100	2
034332	234332	PPC 300x200x100	0.56	300	200	100	2
034342	234342	PPC 400x200x100	0.67	400	200	100	2
034343	234343	PPC 400x300x100	0.71	400	300	100	2
022915	222915	KRPC 100x50	0.21	100	50	-	2
022925	222925	KRPC 200x50	0.30	200	50	-	2
022935	222935	KRPC 300x50	0.38	300	50	-	2
022945	222945	KRPC 400x50	0.47	400	50	-	2
022921	222921	KRPC 200x100	0.31	200	100	-	2
022931	222931	KRPC 300x100	0.40	300	100	-	2
022941	222941	KRPC 400x100	0.48	400	100	-	2
022932	222932	KRPC 300x200	0.42	300	200	-	2
022942	222942	KRPC 400x200	0.50	400	200	-	2
022943	222943	KRPC 400x300	0.53	400	300	-	2



Connecting a cable tray to a concentric straight reducer

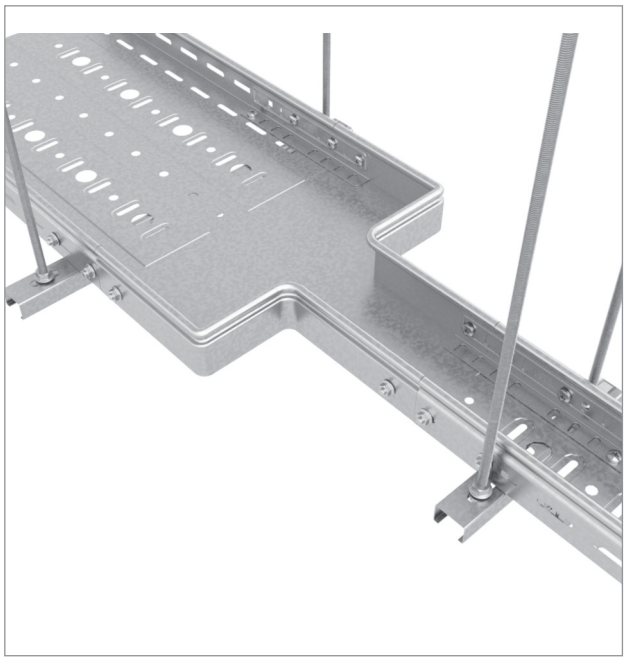


Use a SLU universal tray connector to connect the cable tray to the reducer in the following manner. Line up the tray (2) and the reducer (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the reducer in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the reducer side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same connection principle is used for all reducer sizes.

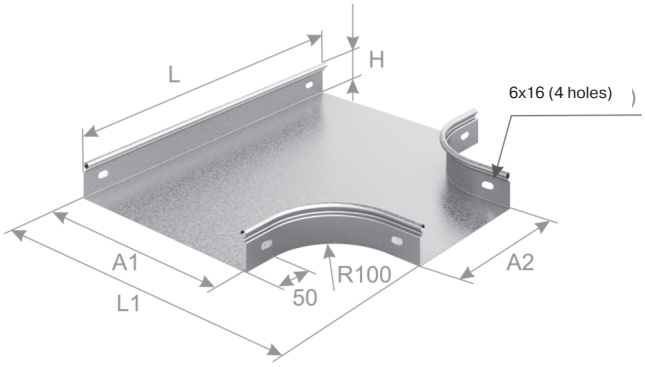
The following fasteners are used for each joint:

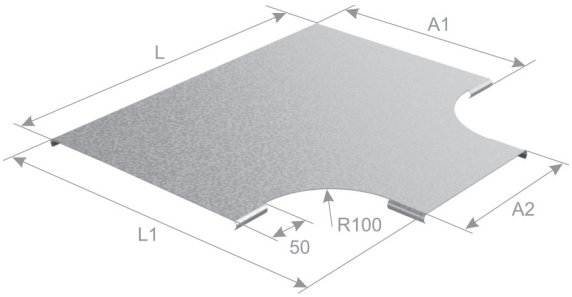
Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8



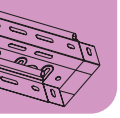
1.10 TEE REDUCERS

PTp long-radius tee reducer



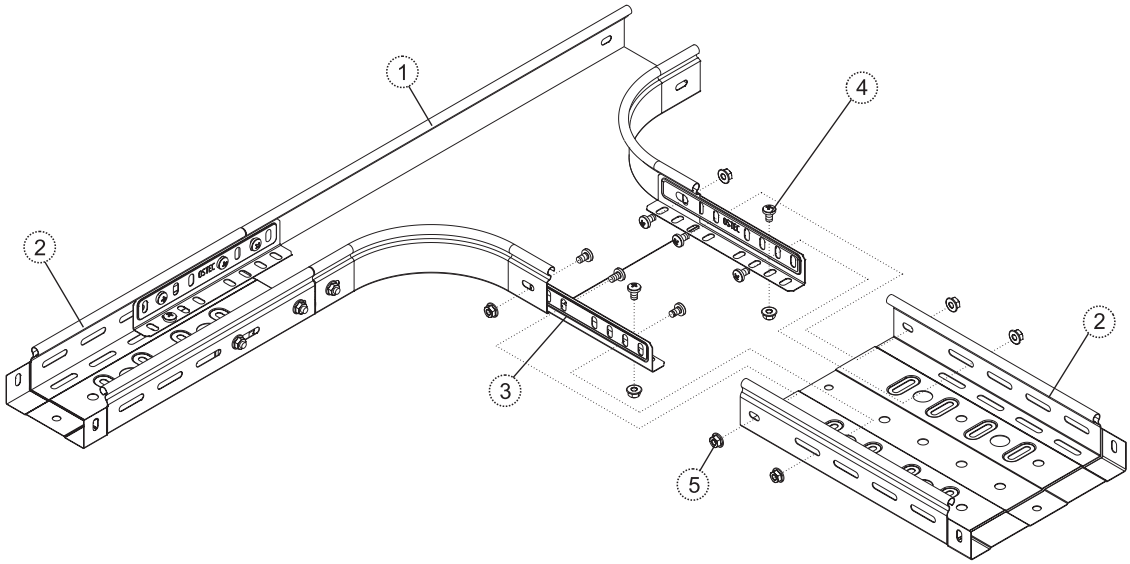


Version code		Art. No.	Weight, kg/ each	Dimensions, mm					Packa-ging, pcs.	Version code		Art. No.	Weight, kg/ each	Dimensions, mm					Packa-ging, pcs.
Sendzimir galvanized	Painted			A1	A2	L	L1	H		Sendzimir galvanized	Painted			A1	A2	L	L1	H	
034415	234415	PTp 100x50x50	0.53	100	50	350	250	50	2	034621	234621	PTp 200x100x100	1.12	200	100	400	350	100	2
034425	234425	PTp 200x50x50	0.73	200	50	350	350	50	2	034631	234631	PTp 300x100x100	1.41	300	100	400	450	100	2
034435	234435	PTp 300x50x50	0.92	300	50	350	450	50	2	034641	234641	PTp 400x100x100	1.70	400	100	400	550	100	2
034445	234445	PTp 400x50x50	1.11	400	50	350	550	50	2	034612	234612	PTp 100x200x100	1.05	100	200	500	250	100	2
034451	234451	PTp 50x100x50	0.51	50	100	400	200	50	2	034632	234632	PTp 300x200x100	1.78	300	200	500	350	100	2
034421	234421	PTp 200x100x50	0.84	200	100	400	350	50	2	034642	234642	PTp 400x200x100	2.14	400	200	500	450	100	2
034431	234431	PTp 300x100x50	1.06	300	100	400	450	50	2	034613	234613	PTp 100x300x100	1.26	100	300	600	250	100	2
034441	234441	PTp 400x100x50	1.28	400	100	400	550	50	2	034623	234623	PTp 200x300x100	1.70	200	300	600	350	100	2
034452	234452	PTp 50x200x50	0.65	50	200	500	200	50	2	034643	234643	PTp 400x300x100	2.58	400	300	600	450	100	2
034412	234412	PTp 100x200x50	0.79	100	200	500	250	50	2	034614	234614	PTp 100x400x100	1.49	100	400	700	250	100	2
034432	234432	PTp 300x200x50	1.34	300	200	500	350	50	2	034624	234624	PTp 200x400x100	2.01	200	400	700	350	100	2
034442	234442	PTp 400x200x50	1.61	400	200	500	450	50	2	034634	234634	PTp 300x400x100	2.51	300	400	700	450	100	2
034453	234453	PTp 50x300x50	0.79	50	300	600	200	50	2	021415	221415	KPTp 100x50	0.28	100	50	350	250	-	2
034413	234413	PTp 100x300x50	0.95	100	300	600	250	50	2	021425	221425	KPTp 200x50	0.48	200	50	350	350	-	2
034423	234423	PTp 200x300x50	1.28	200	300	600	350	50	2	021435	221435	KPTp 300x50	0.67	300	50	350	450	-	2
034443	234443	PTp 400x300x50	1.94	400	300	600	450	50	2	021445	221445	KPTp 400x50	0.86	400	50	350	550	-	2
034454	234454	PTp 50x400x50	0.93	50	400	700	200	50	2	021451	221451	KPTp 50x100	0.24	50	100	400	200	-	2
034414	234414	PTp 100x400x50	1.12	100	400	700	250	50	2	021421	221421	KPTp 200x100	0.58	200	100	400	350	-	2
034424	234424	PTp 200x400x50	1.51	200	400	700	350	50	2	021431	221431	KPTp 300x100	0.80	300	100	400	450	-	2
034434	234434	PTp 300x400x50	1.89	300	400	700	450	50	2	021441	221441	KPTp 400x100	1.02	400	100	400	550	-	2
034521	234521	PTp 200x100x80	1.01	200	100	400	350	80	2	021452	221452	KPTp 50x200	0.36	50	200	500	200	-	2
034531	234531	PTp 300x100x80	1.27	300	100	400	450	80	2	021412	221412	KPTp 100x200	0.50	100	200	500	250	-	2
034541	234541	PTp 400x100x80	1.54	400	100	400	550	80	2	021432	221432	KPTp 300x200	1.05	300	200	500	350	-	2
034512	234512	PTp 100x200x80	0.95	100	200	500	250	80	2	021442	221442	KPTp 400x200	1.33	400	200	500	450	-	2
034532	234532	PTp 300x200x80	1.61	300	200	500	350	80	2	021453	221453	KPTp 50x300	0.48	50	300	600	200	-	2
034542	234542	PTp 400x200x80	1.93	400	200	500	450	80	2	021413	221413	KPTp 100x300	0.64	100	300	600	250	-	2
034513	234513	PTp 100x300x80	1.14	100	300	600	250	80	2	021423	221423	KPTp 200x300	0.97	200	300	600	350	-	2
034523	234523	PTp 200x300x80	1.54	200	300	600	350	80	2	021443	221443	KPTp 400x300	1.64	400	300	600	450	-	2
034543	234543	PTp 400x300x80	2.33	400	300	600	450	80	2	021454	221454	KPTp 50x400	0.59	50	400	700	200	-	2
034514	234514	PTp 100x400x80	1.34	100	400	700	250	80	2	021414	221414	KPTp 100x400	0.78	100	400	700	250	-	2
034524	234524	PTp 200x400x80	1.81	200	400	700	350	80	2	021424	221424	KPTp 200x400	1.17	200	400	700	350	-	2
034534	234534	PTp 300x400x80	2.27	300	400	700	450	80	2	021434	221434	KPTp 300x400	1.56	300	400	700	450	-	2



Connecting a cable tray to a tee reducer

PTp reducers are used to join together a cable route consisting of tray sections of different widths

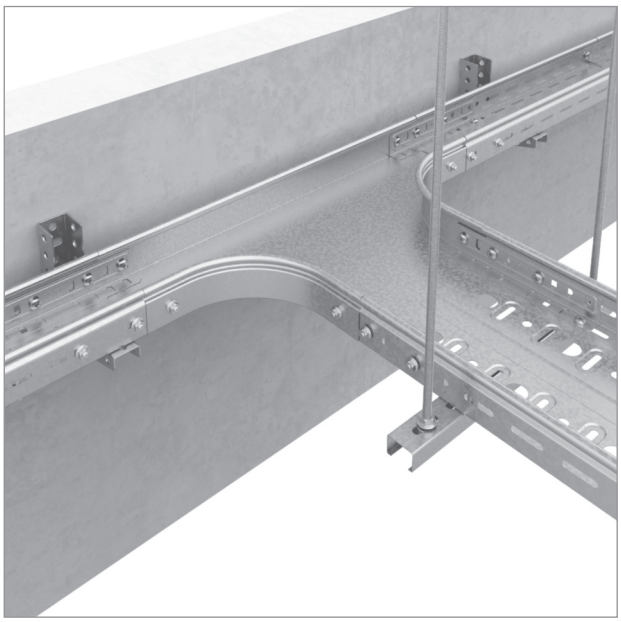


Use a SLU universal tray connector to connect the cable tray to the reducer in the following manner. Line up the tray (2) and the reducer (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the reducer in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the reducer side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same connection principle is used for all reducer sizes.

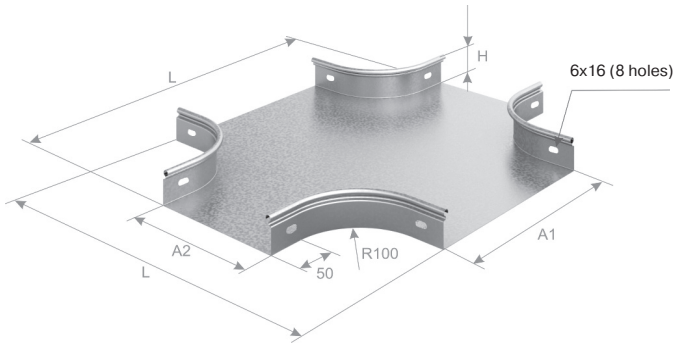
The following fasteners are used for each joint:

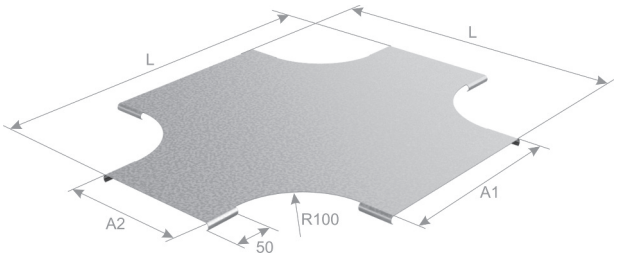
Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8



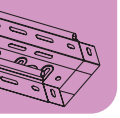
1.11 CROSSOVER REDUCERS

PHp long-radius crossover reducer



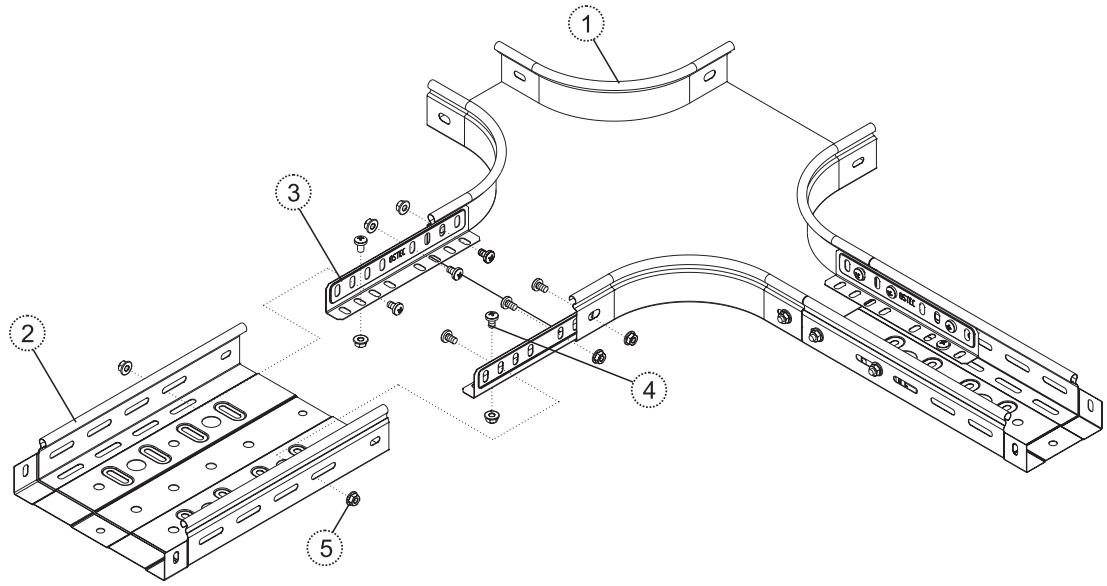


Version code		Art. No.	Weight, kg/each	Dimensions, mm					Packaging, pcs.
Sendzimir galvanized	Painted			A1	A2	L	L1	H	
034715	234715	PHp 100x50x50	0.67	100	50	400	350	50	2
034725	234725	PHp 200x50x50	0.86	200	50	500	350	50	2
034735	234735	PHp 300x50x50	1.05	300	50	600	350	50	2
034745	234745	PHp 400x50x50	1.25	400	50	700	350	50	2
034721	234721	PHp 200x100x50	1.00	200	100	500	400	50	2
034731	234731	PHp 300x100x50	1.22	300	100	600	400	50	2
034741	234741	PHp 400x100x50	1.44	400	100	700	400	50	2
034732	234732	PHp 300x200x50	1.55	300	200	600	500	50	2
034742	234742	PHp 400x200x50	1.82	400	200	700	500	50	2
034743	234743	PHp 400x300x50	2.21	400	300	700	600	50	2
034821	234821	PHp 200x100x80	1.20	200	100	500	400	80	2
034831	234831	PHp 300x100x80	1.46	300	100	600	400	80	2
034841	234841	PHp 400x100x80	1.73	400	100	700	400	80	2
034832	234832	PHp 300x200x80	1.86	300	200	600	500	80	2
034842	234842	PHp 400x200x80	2.18	400	200	700	500	80	2
034843	234843	PHp 400x300x80	2.65	400	300	700	600	80	2
034921	234921	PHp 200x100x100	1.33	200	100	500	400	100	2
034931	234931	PHp 300x100x100	1.62	300	100	600	400	100	2
034941	234941	PHp 400x100x100	1.92	400	100	700	400	100	2
034932	234932	PHp 300x200x100	2.06	300	200	600	500	100	2
034942	234942	PHp 400x200x100	2.42	400	200	700	500	100	2
034943	234943	PHp 400x300x100	2.94	400	300	700	600	100	2
021515	221515	KPHp 100x50	0.33	100	50	400	350	-	2
021525	221525	KPHp 200x50	0.53	200	50	500	350	-	2
021535	221535	KPHp 300x50	0.72	300	50	600	350	-	2
021545	221545	KPHp 400x50	0.91	400	50	700	350	-	2
021521	221521	KPHp 200x100	0.66	200	100	500	400	-	2
021531	221531	KPHp 300x100	0.89	300	100	600	400	-	2
021541	221541	KPHp 400x100	1.11	400	100	700	400	-	2
021532	221532	KPHp 300x200	1.22	300	200	600	500	-	2
021542	221542	KPHp 400x200	1.49	400	200	700	500	-	2
021543	221543	KPHp 400x300	1.88	400	300	700	600	-	2



Connecting a cable tray to a crossover reducer

PHp reducers are used to join together a cable route consisting of tray sections of different widths

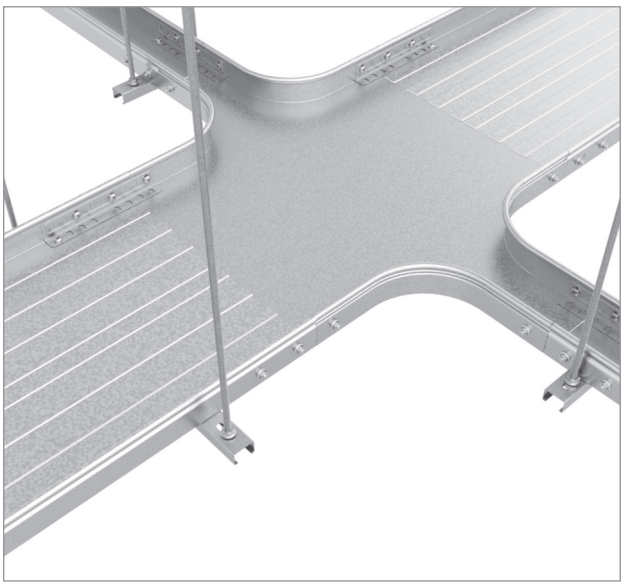


Use a SLU universal tray connector to connect the cable tray to the reducer in the following manner. Line up the tray (2) and the reducer (1) end to end. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the reducer in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the reducer side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side; nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same connection principle is used for all reducer sizes.

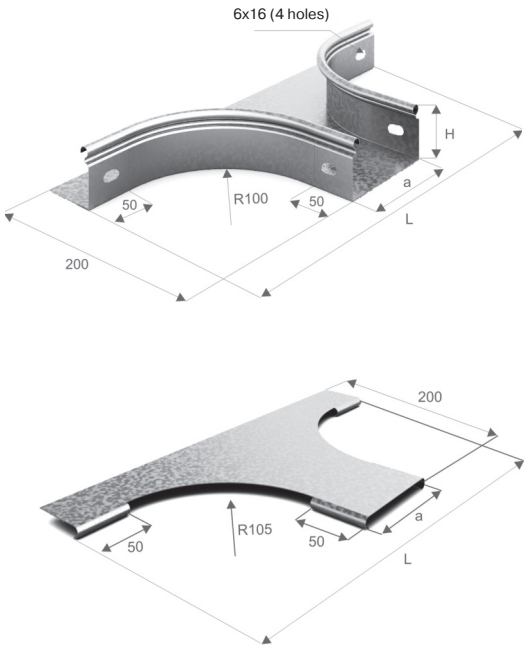
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8



1.12 HORIZONTAL BRANCH FITTINGS

OGp long-radius horizontal add-on tee/KOGp cover for horizontal add-on tee



Version code		Art. No.	Metal thickness, mm	Weight, kg/ each	Dimensions, mm			Packaging, pcs.
Sendzimir galvanized	Painted				a	L	H	
031855	231855	OGp-50x50	0.55	0.32	50	350	50	20
031815	231815	OGp-100x50	0.55	0.37	100	400	50	20
031825	231825	OGp-200x50	0.70	0.48	200	500	50	20
031835	231835	OGp-300x50	0.70	0.59	300	600	50	20
031845	231845	OGp-400x50	0.70	0.73	400	700	50	4
031818	231818	OGp-100x80	0.70	0.52	100	400	80	1
031828	231828	OGp-200x80	0.70	0.63	200	500	80	1
031838	231838	OGp-300x80	0.70	0.74	300	600	80	1
031848	231848	OGp-400x80	0.70	0.86	400	700	80	4
031811	231811	OGp-100x100	0.70	0.58	100	400	100	1
031821	231821	OGp-200x100	0.70	0.69	200	500	100	1
031831	231831	OGp-300x100	0.70	0.80	300	600	100	4
031841	231841	OGp-400x100	0.70	0.95	400	700	100	4
021851	221851	KOGp-50	0.55	0.16	50	350	-	20
021811	221811	KOGp-100	0.55	0.23	100	400	-	20
021821	221821	KOGp-200	0.70	0.32	200	500	-	20
021831	221831	KOGp-300	0.70	0.43	300	600	-	20
021841	221841	KOGp-400	0.70	0.56	400	700	-	20

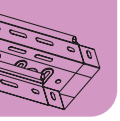
1.13 IP PROTECTION SYSTEMS

IP44 joint protection system for a cable tray

NEW

A joint protection system provides an additional degree of protection for IP44 at the joints of non-perforated trays.

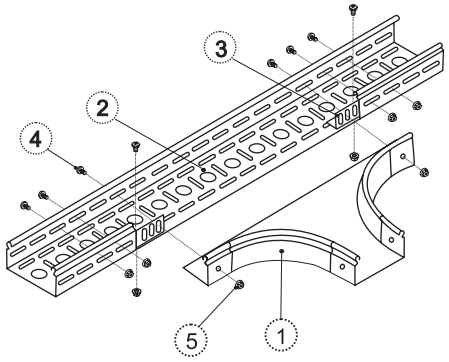
Version code		Art. No.	Weight, kg	Dimensions, mm	Packaging, pcs.
Sendzimir galvanized	Painted				
060553	260553	SZSL-50x50	0.20	77x66x74	1
060153	260153	SZSL-100x50	0.24	127x66x74	1
060253	260253	SZSL-200x50	0.34	227x66x74	1
060353	260353	SZSL-300x50	0.44	327x66x74	1
060453	260453	SZSL-400x50	0.54	427x66x74	1
060183	260183	SZSL-100x80	0.26	127x66x104	1
060283	260283	SZSL-200x80	0.36	227x66x104	1
060383	260383	SZSL-300x80	0.46	327x66x104	1
060483	260483	SZSL-400x80	0.56	427x66x104	1
060113	260113	SZSL-100x100	0.28	127x66x124	1
060213	260213	SZSL-200x100	0.38	227x66x124	1
060313	260313	SZSL-300x100	0.48	327x66x124	1
060413	260413	SZSL-400x100	0.58	427x66x124	1



Connecting a cable tray to a long-radius horizontal add-on tee

Make a 16 mm deep cut through the tray side wall equal to the length of the add-on tee (1). Insert the add-on tee (1) into the tray (2) until the side walls of the tray (2) and the add-on tee (1) are aligned. Fasten the universal tray connector (3) on the inside to the side walls of the adjoining structural elements (the tray and the tee in this case) with 3 screw sets through the holes provided in the side walls as follows: screw (4) on the inside, from the connector side; nut (5) on the outside, from the tee side; two screws (4) on the inside, from the connector side; two nuts (5) on the outside, from the tray side. Secure the universal tray connector (3) to the bottom of the tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side, nut (5) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same connection principle is used for all add-on tee sizes.

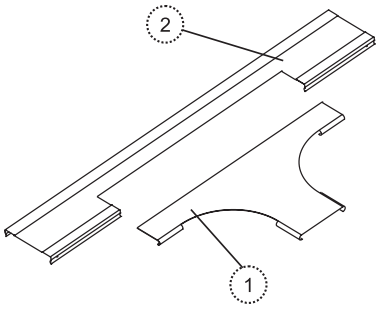


The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

Joining a tray cover and an add-on tee cover

Make a 50 mm deep cut in the tray cover (2) equal to the length of the add-on tee cover (1). Join the covers end to end without any additional elements.

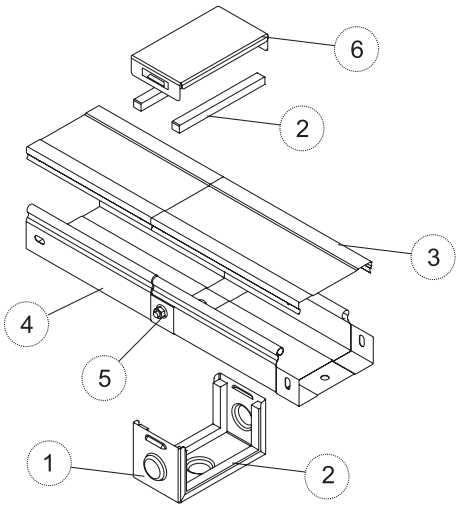


Mounting an IP44 joint protection system on cable trays

Join the trays (4) together with screws. Mount the cover (3) over the joint and align it so that the cover joint is positioned exactly above the tray joint. Center the IP44 seal casing (1) with pre-installed rubber gaskets (2) beneath the joint so that the bolts (5) fit into the cups provided on the seal casing. Then, holding up the seal casing (1) from underneath by hand, mount the top cover (6) with pre-installed rubber gaskets (2). After all the parts are properly aligned, press down the top cover until it snaps into place ensuring secure coupling of all elements.

The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SZSL	IP44 joint protection system for cable tray	1
VM610	M6x10 screw	3
GM6SB	M6 nut with locking collar	3

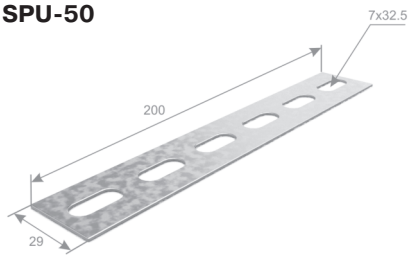


1.14 CONNECTORS

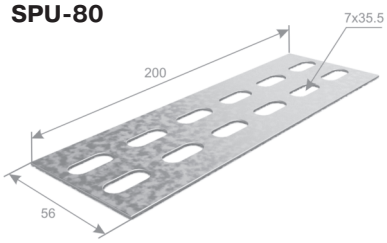
SPU universal joint plate

Joint plates are used to join cable trays together and connect trays to bends and tees. Joint plates are used for trays with side heights of 50, 80 and 100 mm.

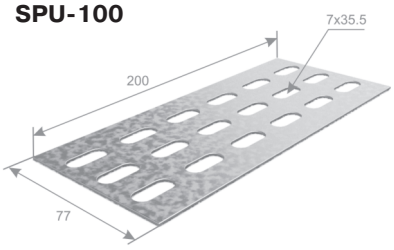
SPU-50



SPU-80



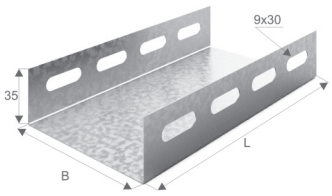
SPU-100

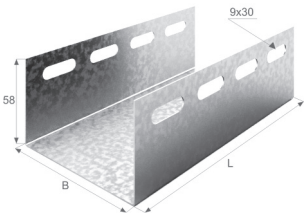


Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Painted					
040651	240651	SPU-50	29x200	1.20	0.05	160
040681	240681	SPU-80	56x200	1.50	0.11	80
040611	240611	SPU-100	77x200	1.50	0.15	80

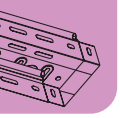
SLB tray side connector

SLB-50
SLB-100
SLB-200
SLB-300
SLB-400
SLB-100 (80/100)
SLB-200 (80/100)
SLB-300 (80/100)
SLB-400 (80/100)





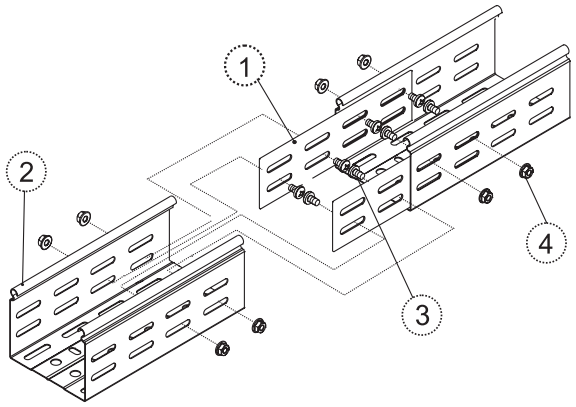
Version code		Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm		Packaging, pcs.
Sendzimir galvanized	Painted				B	L	
040551	240551	SLB-50	0.55	0.07	50	150	200
040511	240511	SLB-100	0.55	0.14	100	190	100
040521	240521	SLB-200	0.55	0.21	200	190	40
040531	240531	SLB-300	0.55	0.31	300	190	50
040541	240541	SLB-400	1.00	0.65	400	190	20
040518	240518	SLB-100 (80/100)	1.00	0.30	100	190	50
040528	240528	SLB-200 (80/100)	1.00	0.44	200	190	30
040538	240538	SLB-300 (80/100)	1.00	0.58	300	190	30
040548	240548	SLB-400 (80/100)	1.00	0.69	400	190	20



Joining cable trays together with a universal joint plate

Line up the trays (2) to be joined end to end. Fasten an SPU-80 universal joint plate (1) on the inside to the side walls of the adjoining elements (the two trays in this case) with 4 screw sets through the holes provided in the side walls as follows: screw (3) on the inside, from the plate side (1); nut (4) on the outside, from the tray side (2). Use two screw sets to fasten each tray (2) to the plate (1). Two joint plates are used for each joint.

The same connection principle is used for all tray sizes.



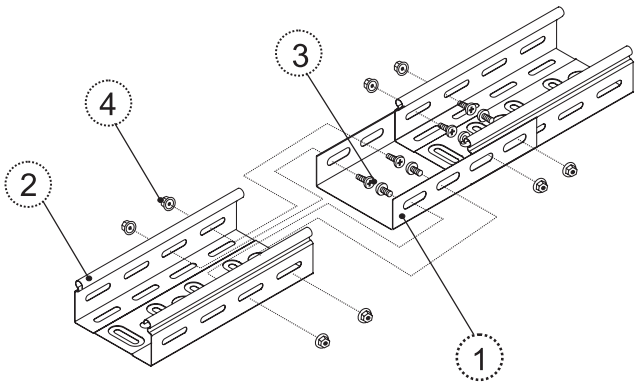
The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SPU-80	Universal joint plate	2
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

Joining cable trays together with a side connector

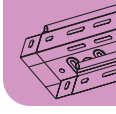
Line up the trays (2) to be joined end to end. Bridge the joint between the adjoining elements (the two trays in this case) from underneath with the side connector (1) and secure with 8 screw sets through the holes provided in the side walls as follows: screw (3) on the inside, from the tray side (2); nut (4) on the outside, from the connector side (1). Use four screw sets to fasten each tray (2) to the connector (1).

The same connection principle is used for all tray sizes.



The following fasteners are used for each joint:

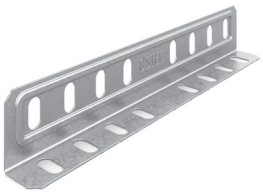
Art. No.	Description	Quantity, pcs.
SLB	Tray side connector	1
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8



1.15 UNIVERSAL CONNECTORS

SLU universal tray connector

SLU-50

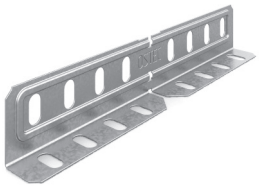


SLU-80/100

Version code		Art. No.	Metal thickness, mm	Height H, mm	Weight, kg	Packaging, pcs.
Sendzimir galvanized	Painted					
032751	232751	SLU-50	0.90	32	0.07	150
032781	232781	SLU-80/100	0.90	62	0.10	150

SLUI universal adjustable tray connector

SLUI-50

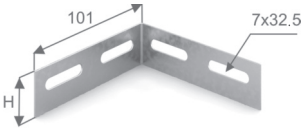


SLUI-80/100

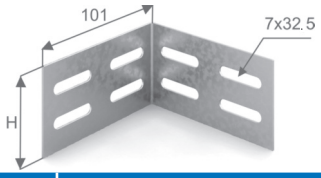
Version code		Art. No.	Metal thickness, mm	Height H, mm	Weight, kg	Packaging, pcs.
Sendzimir galvanized	Painted					
032851	232851	SLUI-50	0.90	32	0.06	150
032881	232881	SLUI-80/100	0.90	62	0.09	150

SU universal connector

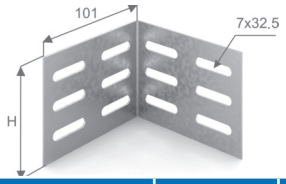
SU-50



SU-80



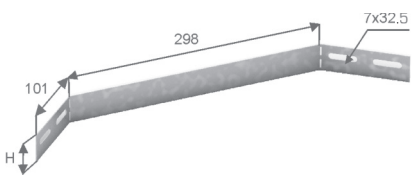
SU-100



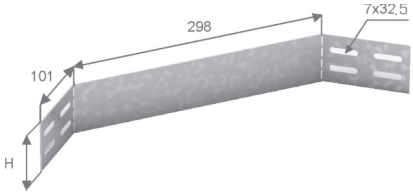
Version code		Art. No.	Metal thickness, mm	Height H, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Painted					
032951	232951	SU-50	1.20	29	0.05	100
032981	232981	SU-80	1.50	56	0.11	50
032911	232911	SU-100	1.50	77	0.15	80

SUP long-radius universal connector

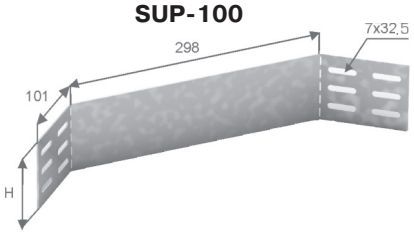
SUP-50



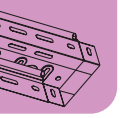
SUP-80



SUP-100



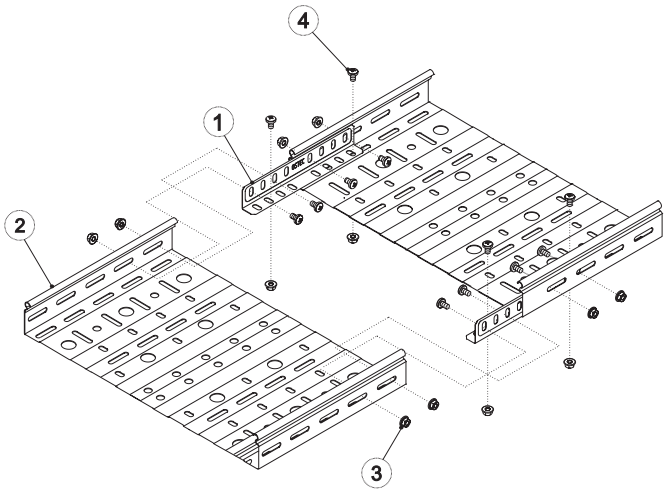
Version code		Art. No.	Metal thickness, mm	Height H, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Painted					
033051	233051	SUP-50	1.20	29	0.13	50
033081	233081	SUP-80	1.50	56	0.31	50
033011	233011	SUP-100	1.50	77	0.42	50



Joining cable trays together with a universal tray connector

Line up the trays (2) to be joined end to end. Fasten the universal tray connector (1) on the inside to the side walls of either tray (2) with 2 screw sets through the holes provided in the side walls proceeding as follows: screw (4) on the inside, from the connector side; nut (3) on the outside, from the tray side. Secure the universal tray connector (1) to the bottom of either tray (2) with one screw set through the holes provided in the tray bottom as follows: screw (4) on the top, from the connector side, nut (3) on the bottom, from the tray side. Two universal tray connectors are used for each joint.

The same connection principle is used for all tray sizes.

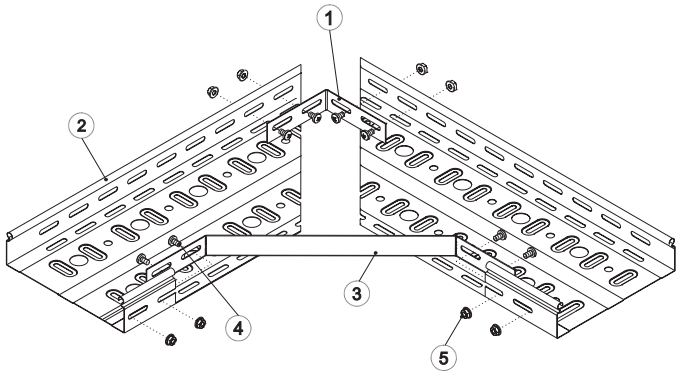


The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
SLU-50	Universal tray connector	2
VM610	M6x10 screw	12
GM6SB	M6 nut with locking collar	12

Joining cable trays together with universal connectors

Fasten the universal connector (1) and the long-radius universal connector (3) to the trays (2) with 4 screw sets per tray through the perforations as follows: screw (4) on the inside; nut (5) on the outside, from the tray (2) side. A universal connector and/or long-radius universal connector can be used to create long-radius 90˚ tees and crossovers.

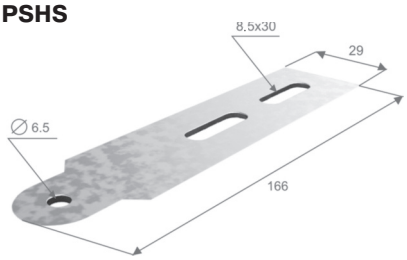


The following fasteners are used for each joint:

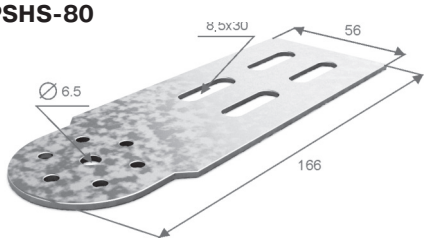
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	8
GM6SB	M6 nut with locking collar	8

1.16 HINGE CONNECTION PLATE

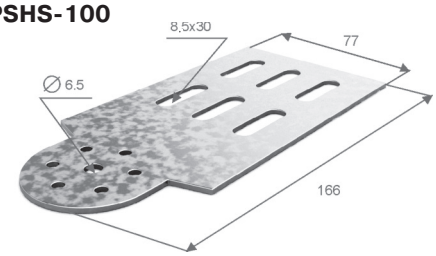
PSHS



PSHS-80



PSHS-100



A hinge connection combines the functions of connector and bend. It can be used to change the direction of the cable tray system in the vertical plane by any angle. Compared to 90° vertical bends (UVT and UVNT), a hinge connection is a simpler and more economical solution. It consists of two sets of PSHS hinge plates joined together with a screw and nut. When the outer angle is being formed, it is recommended to cover the ends of the tray in order to protect the cables from accidental cuts.

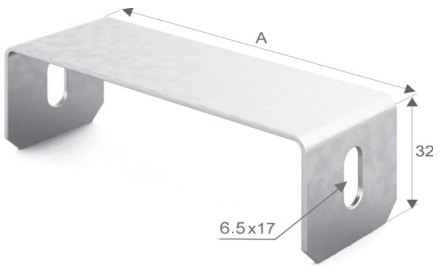
Version code		Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Painted					
040351	240351	PSHS	29x166	2.00	0.06	250
040381	240381	PSHS-80	56x166	2.00	0.12	100
040311	240311	PSHS-100	77x166	2.00	0.16	50

1.17 INTERNAL CABLE CLEATS

SV internal cable cleat

Internal cleats are used to prevent contact between the cable and the tray cover in vertical sections of cable tray systems, and to prevent deformation of the trays when they are mounted vertically on uneven walls. Use of a cleat is mandatory in this case. The recommended spacing between cable cleats is 0.5 m.

Version code		Art. No.	Width A, mm	Metal thickness, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Painted					
040211	240211	SV-100	100	1.50	0.07	50
040221	240221	SV-200	200	2.00	0.10	50
040231	240231	SV-300	300	2.00	0.16	10
040241	240241	SV-400	400	2.00	0.20	10
040251	240251	SV-500	500	2.00	0.26	10
040261	240261	SV-600	600	2.00	0.32	10

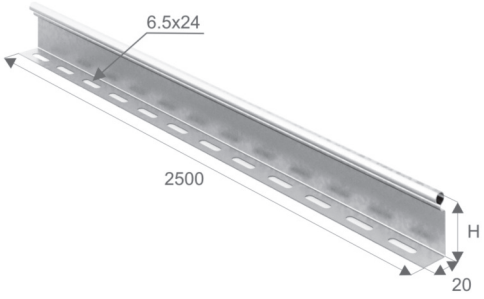


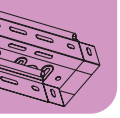
1.18 BARRIER STRIPS

PLPT barrier strip

A PLPT barrier strip is used in OSTEC LNMZT(M), LPMZT(M) and UL cable trays and NLO cable ladders to separate power cables and data cables.

Version code		Art. No.	Metal thickness, mm	Weight, kg/m	Length (mm)	Height H, mm	Packaging, m
Sendzimir galvanized	Painted						
040151	240151	PLPT-50	0.55	0.31	2500	45	50
040181	240181	PLPT-80	0.70	0.59	2500	75	50
040111	240111	PLPT-100	0.70	0.64	2500	95	25

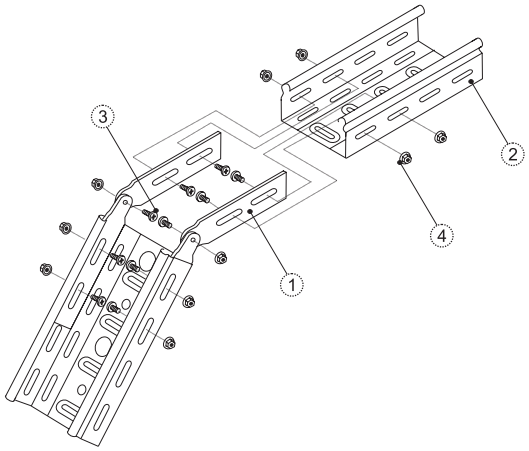




Joining cable trays together with hinge connection plates

The hinge connector (1) consists of two PSHS plates that are joined together at the required angle with 1 screw set.

Fasten one hinge connector (1) on the inside to the trays (2) with 4 screw sets through the holes provided in the side walls as follows: screw (3) on the inside, from the plate side (1); nut (4) on the outside, from the tray side (2). Two hinge connectors are used for each joint. The same connection principle is used for all tray sizes.

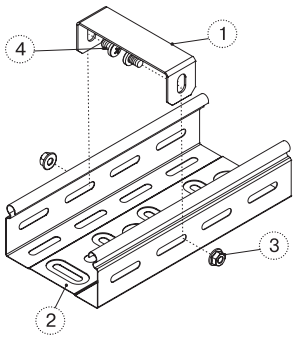


The following fasteners are used for each joint:

Art. No.	Description	Quantity, pcs.
PSHS	Hinge connection plate	4
VM610	M6x10 screw	10
GM6SB	M6 nut with locking collar	10

Connecting a tray to an internal cable cleat to hold the cable

Fasten the internal cleat (1) on the inside to the side walls of the tray (2) with 2 screw sets. Secure screw (4) on the inside of the cleat (1) from the tray side (2).



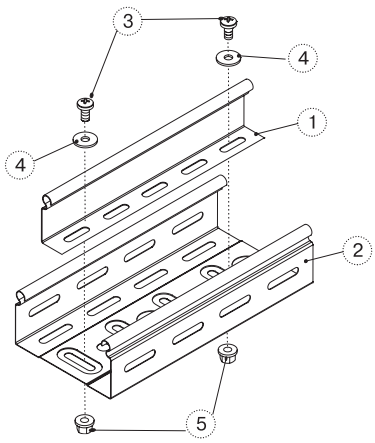
The following fasteners are used for each cleat:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2

Fastening a barrier strip to a cable tray

Position the barrier strip (1) in the tray (2) at the required distance from the tray side.

Secure the barrier strip (1) to the tray (2) with 2 screw sets through the perforations at 1.5 m intervals (recommended spacing) as follows: screw (3) and washer (4) on the inside; nut (5) on the outside, from the bottom of the tray (2).



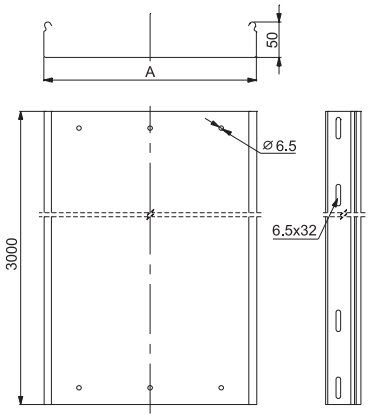
The following fasteners are used for each barrier strip:

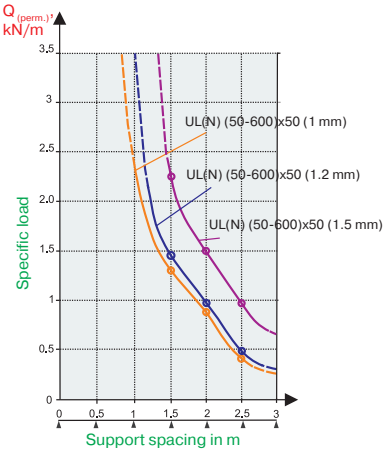
Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2
SHM6U	SHM6 heavy-duty washer	2

1.19 OSTEC UL CABLE TRAYS

NEW

UL(N) trays, height 50 mm





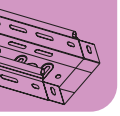
Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

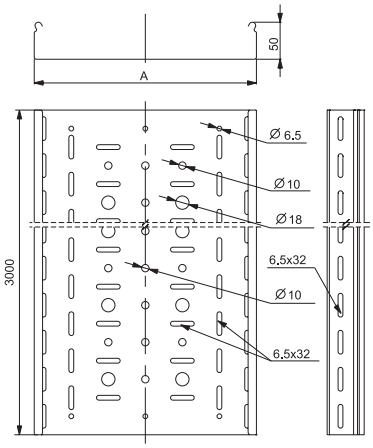
Manufacturing method Bending

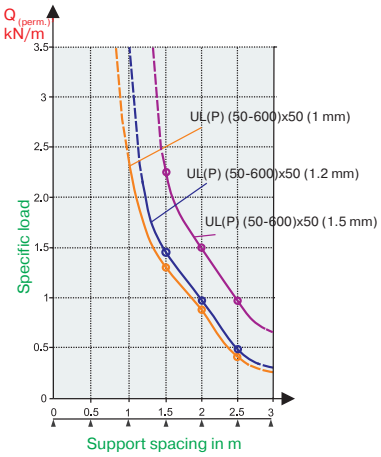
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packaging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083255	383255	183255	283255	UL(N)-50x50x3000	50x50x3000	1.00	3.98	2000	1.28	0.85	0.43	
083215	383215	183215	283215	UL(N)-100x50x3000	100x50x3000	1.00	5.15	4570	1.28	0.85	0.43	6
083250	383250	183250	283250	UL(N)-150x50x3000	150x50x3000	1.00	6.33	7020	1.28	0.85	0.43	6
083225	383225	183225	283225	UL(N)-200x50x3000	200x50x3000	1.00	7.51	9470	1.28	0.85	0.43	6
083235	383235	183235	283235	UL(N)-300x50x3000	300x50x3000	1.00	9.86	14360	1.28	0.85	0.43	6
083245	383245	183245	283245	UL(N)-400x50x3000	400x50x3000	1.00	12.21	19250	1.28	0.85	0.43	6
083205	383205	183205	283205	UL(N)-500x50x3000	500x50x3000	1.00	14.57	24140	1.28	0.85	0.43	6
083265	383265	183265	283265	UL(N)-600x50x3000	600x50x3000	1.00	16.92	29030	1.28	0.85	0.43	6
083355	383355	183355	283355	UL(N)-50x50x3000	50x50x3000	1.20	4.74	1995	1.40	0.94	0.47	6
083315	383315	183315	283315	UL(N)-100x50x3000	100x50x3000	1.20	6.16	4565	1.40	0.94	0.47	6
083350	383350	183350	283350	UL(N)-150x50x3000	150x50x3000	1.20	7.57	7015	1.40	0.94	0.47	6
083325	383325	183325	283325	UL(N)-200x50x3000	200x50x3000	1.20	8.98	9465	1.40	0.94	0.47	6
083335	383335	183335	283335	UL(N)-300x50x3000	300x50x3000	1.20	11.80	14355	1.40	0.94	0.47	6
083345	383345	183345	283345	UL(N)-400x50x3000	400x50x3000	1.20	14.63	19245	1.40	0.94	0.47	6
083305	383305	183305	283305	UL(N)-500x50x3000	500x50x3000	1.20	17.45	24135	1.40	0.94	0.47	6
083365	383365	183365	283365	UL(N)-600x50x3000	600x50x3000	1.20	20.28	29025	1.40	0.94	0.47	6
083455	383455	183455	283455	UL(N)-50x50x3000	50x50x3000	1.50	5.87	1990	2.25	1.53	0.98	6
083415	383415	183415	283415	UL(N)-100x50x3000	100x50x3000	1.50	7.64	4560	2.25	1.53	0.98	6
083450	383450	183450	283450	UL(N)-150x50x3000	150x50x3000	1.50	9.41	7010	2.25	1.53	0.98	6
083425	383425	183425	283425	UL(N)-200x50x3000	200x50x3000	1.50	11.17	9460	2.25	1.53	0.98	6
083435	383435	183435	283435	UL(N)-300x50x3000	300x50x3000	1.50	14.70	14340	2.25	1.53	0.98	6
083445	383445	183445	283445	UL(N)-400x50x3000	400x50x3000	1.50	18.23	19240	2.25	1.53	0.98	6
083405	383405	183405	283405	UL(N)-500x50x3000	500x50x3000	1.50	21.76	24130	2.25	1.53	0.98	6
083465	383465	183465	283465	UL(N)-600x50x3000	600x50x3000	1.50	25.29	29020	2.25	1.53	0.98	6



UL(P) trays, height 50 mm

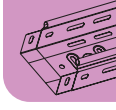
NEW





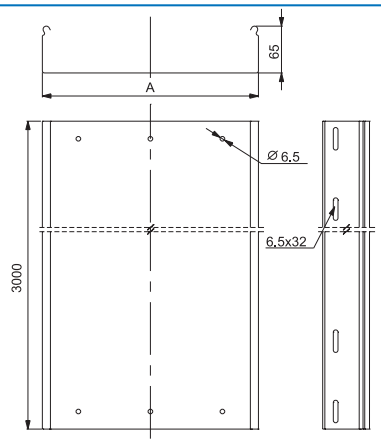
Material	Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe
Manufacturing method	Bending

Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082855	382855	182855	282855	UL(P)-50x50x3000	50x50x3000	1.00	3.67	2000	1.28	0.85	0.43	6
082815	382815	182815	282815	UL(P)-100x50x3000	100x50x3000	1.00	4.63	4570	1.28	0.85	0.43	6
082850	382850	182850	282850	UL(P)-150x50x3000	150x50x3000	1.00	5.62	7020	1.28	0.85	0.43	6
082825	382825	182825	282825	UL(P)-200x50x3000	200x50x3000	1.00	6.77	9470	1.28	0.85	0.43	6
082835	382835	182835	282835	UL(P)-300x50x3000	300x50x3000	1.00	8.94	14360	1.28	0.85	0.43	6
082845	382845	182845	282845	UL(P)-400x50x3000	400x50x3000	1.00	10.96	19250	1.28	0.85	0.43	6
082805	382805	182805	282805	UL(P)-500x50x3000	500x50x3000	1.00	13.13	24140	1.28	0.85	0.43	6
082865	382865	182865	282865	UL(P)-600x50x3000	600x50x3000	1.00	15.14	29030	1.28	0.85	0.43	6
082955	382955	182955	282955	UL(P)-50x50x3000	50x50x3000	1.20	4.38	1995	1.40	0.94	0.47	6
082915	382915	182915	282915	UL(P)-100x50x3000	100x50x3000	1.20	5.52	4565	1.40	0.94	0.47	6
082950	382950	182950	282950	UL(P)-150x50x3000	150x50x3000	1.20	6.71	7015	1.40	0.94	0.47	6
082925	382925	182925	282925	UL(P)-200x50x3000	200x50x3000	1.20	8.10	9465	1.40	0.94	0.47	6
082935	382935	182935	282935	UL(P)-300x50x3000	300x50x3000	1.20	10.70	14355	1.40	0.94	0.47	6
082945	382945	182945	282945	UL(P)-400x50x3000	400x50x3000	1.20	13.12	19245	1.40	0.94	0.47	6
082905	382905	182905	282905	UL(P)-500x50x3000	500x50x3000	1.20	15.72	24135	1.40	0.94	0.47	6
082965	382965	182965	282965	UL(P)-600x50x3000	600x50x3000	1.20	18.14	29025	1.40	0.94	0.47	6
083055	383055	183055	283055	UL(P)-50x50x3000	50x50x3000	1.50	5.42	1990	2.25	1.53	0.98	6
083015	383015	183015	283015	UL(P)-100x50x3000	100x50x3000	1.50	6.85	4560	2.25	1.53	0.98	6
083050	383050	183050	283050	UL(P)-150x50x3000	150x50x3000	1.50	8.34	7010	2.25	1.53	0.98	6
083025	383025	183025	283025	UL(P)-200x50x3000	200x50x3000	1.50	10.07	9460	2.25	1.53	0.98	6
083035	383035	183035	283035	UL(P)-300x50x3000	300x50x3000	1.50	13.33	14340	2.25	1.53	0.98	6
083045	383045	183045	283045	UL(P)-400x50x3000	400x50x3000	1.50	16.34	19240	2.25	1.53	0.98	6
083005	383005	183005	283005	UL(P)-500x50x3000	500x50x3000	1.50	19.60	24130	2.25	1.53	0.98	6
083065	383065	183065	283065	UL(P)-600x50x3000	600x50x3000	1.50	22.62	29020	2.25	1.53	0.98	6



UL(N) trays, height 65 mm

NEW

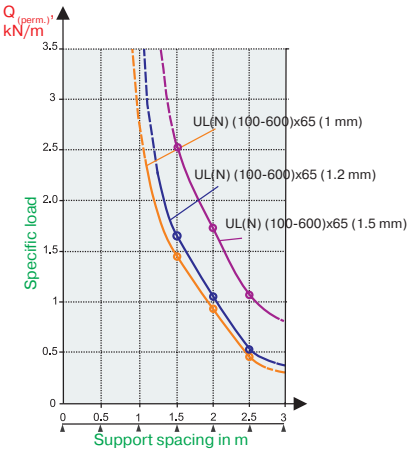


Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

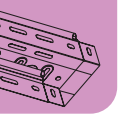
Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

Manufacturing method Bending

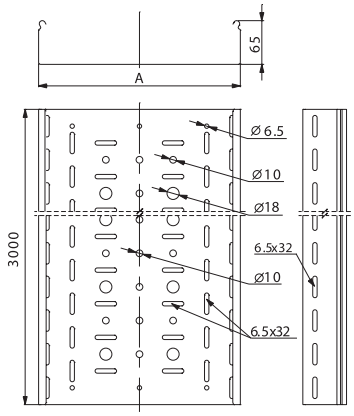


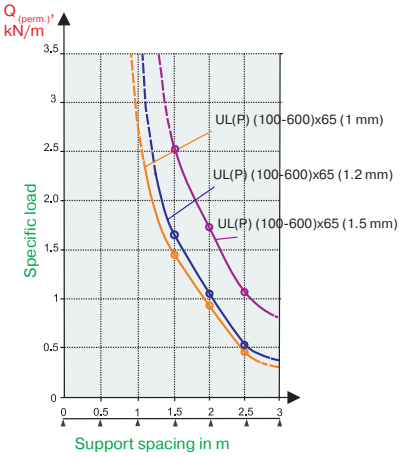
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083213	383213	183213	283213	UL(N)-100x65x3000	100x65x3000	1.00	5.86	6050	1.43	0.95	0.48	6
083206	383206	183206	283206	UL(N)-150x65x3000	150x65x3000	1.00	7.04	9240	1.43	0.95	0.48	6
083226	383226	183226	283226	UL(N)-200x65x3000	200x65x3000	1.00	8.21	12430	1.43	0.95	0.48	6
083236	383236	183236	283236	UL(N)-300x65x3000	300x65x3000	1.00	10.57	18825	1.43	0.95	0.48	6
083246	383246	183246	283246	UL(N)-400x65x3000	400x65x3000	1.00	12.92	25215	1.43	0.95	0.48	6
083253	383253	183253	283253	UL(N)-500x65x3000	500x65x3000	1.00	15.27	31605	1.43	0.95	0.48	6
083266	383266	183266	283266	UL(N)-600x65x3000	600x65x3000	1.00	17.63	37995	1.43	0.95	0.48	6
083312	383312	183312	283312	UL(N)-100x65x3000	100x65x3000	1.20	7.00	6045	1.60	1.07	0.53	6
083306	383306	183306	283306	UL(N)-150x65x3000	150x65x3000	1.20	8.42	9235	1.60	1.07	0.53	6
083326	383326	183326	283326	UL(N)-200x65x3000	200x65x3000	1.20	9.83	12425	1.60	1.07	0.53	6
083336	383336	183336	283336	UL(N)-300x65x3000	300x65x3000	1.20	12.65	18820	1.60	1.07	0.53	6
083346	383346	183346	283346	UL(N)-400x65x3000	400x65x3000	1.20	15.47	25210	1.60	1.07	0.53	6
083353	383353	183353	283353	UL(N)-500x65x3000	500x65x3000	1.20	18.30	31600	1.60	1.07	0.53	6
083366	383366	183366	283366	UL(N)-600x65x3000	600x65x3000	1.20	21.12	37990	1.60	1.07	0.53	6
083412	383412	183412	283412	UL(N)-100x65x3000	100x65x3000	1.50	8.70	6040	2.52	1.71	1.09	6
083406	383406	183406	283406	UL(N)-150x65x3000	150x65x3000	1.50	10.47	9230	2.52	1.71	1.09	6
083426	383426	183426	283426	UL(N)-200x65x3000	200x65x3000	1.50	12.43	12420	2.52	1.71	1.09	6
083436	383436	183436	283436	UL(N)-300x65x3000	300x65x3000	1.50	15.76	18815	2.52	1.71	1.09	6
083446	383446	183446	283446	UL(N)-400x65x3000	400x65x3000	1.50	19.29	25205	2.52	1.71	1.09	6
083453	383453	183453	283453	UL(N)-500x65x3000	500x65x3000	1.50	22.82	31595	2.52	1.71	1.09	6
083466	383466	183466	283466	UL(N)-600x65x3000	600x65x3000	1.50	26.35	37980	2.52	1.71	1.09	6
083445	383445	183445	283445	UL(N)-400x50x3000	400x50x3000	1.50	18.23	19240	2.25	1.53	0.98	6
083405	383405	183405	283405	UL(N)-500x50x3000	500x50x3000	1.50	21.76	24130	2.25	1.53	0.98	6
083465	383465	183465	283465	UL(N)-600x50x3000	600x50x3000	1.50	25.29	29020	2.25	1.53	0.98	6



UL(P) trays, height 65 mm

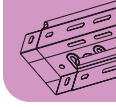
NEW





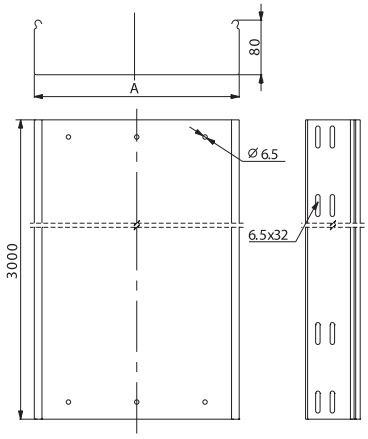
Material	Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe
Manufacturing method	Bending

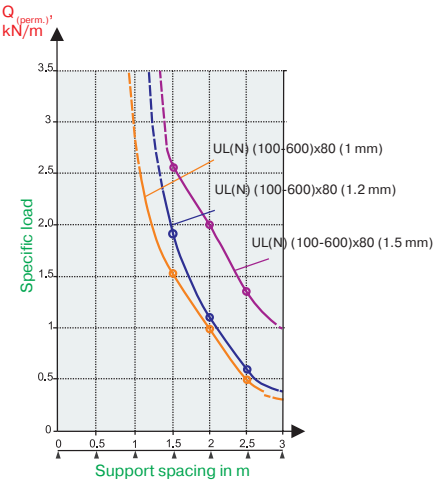
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082816	382816	182816	282816	UL(P)-100x65x3000	100x65x3000	1.00	5.33	6050	1.43	0.95	0.48	6
082806	382806	182806	282806	UL(P)-150x65x3000	150x65x3000	1.00	6.33	9240	1.43	0.95	0.48	6
082826	382826	182826	282826	UL(P)-200x65x3000	200x65x3000	1.00	7.48	12430	1.43	0.95	0.48	6
082836	382836	182836	282836	UL(P)-300x65x3000	300x65x3000	1.00	9.65	18825	1.43	0.95	0.48	6
082846	382846	182846	282846	UL(P)-400x65x3000	400x65x3000	1.00	11.66	25215	1.43	0.95	0.48	6
082856	382856	182856	282856	UL(P)-500x65x3000	500x65x3000	1.00	13.83	31605	1.43	0.95	0.48	6
082866	382866	182866	282866	UL(P)-600x65x3000	600x65x3000	1.00	15.84	37995	1.43	0.95	0.48	6
082916	382916	182916	282916	UL(P)-100x65x3000	100x65x3000	1.20	6.37	6045	1.60	1.07	0.53	6
082906	382906	182906	282906	UL(P)-150x65x3000	150x65x3000	1.20	7.56	9235	1.60	1.07	0.53	6
082926	382926	182926	282926	UL(P)-200x65x3000	200x65x3000	1.20	8.95	12425	1.60	1.07	0.53	6
082936	382936	182936	282936	UL(P)-300x65x3000	300x65x3000	1.20	11.55	18820	1.60	1.07	0.53	6
082946	382946	182946	282946	UL(P)-400x65x3000	400x65x3000	1.20	13.97	25210	1.60	1.07	0.53	6
082956	382956	182956	282956	UL(P)-500x65x3000	500x65x3000	1.20	16.57	31600	1.60	1.07	0.53	6
082966	382966	182966	282966	UL(P)-600x65x3000	600x65x3000	1.20	18.98	37990	1.60	1.07	0.53	6
083016	383016	183016	283016	UL(P)-100x65x3000	100x65x3000	1.50	7.91	6040	2.52	1.71	1.09	6
083006	383006	183006	283006	UL(P)-150x65x3000	150x65x3000	1.50	9.40	9230	2.52	1.71	1.09	6
083026	383026	183026	283026	UL(P)-200x65x3000	200x65x3000	1.50	11.13	12420	2.52	1.71	1.09	6
083036	383036	183036	283036	UL(P)-300x65x3000	300x65x3000	1.50	14.39	18815	2.52	1.71	1.09	6
083046	383046	183046	283046	UL(P)-400x65x3000	400x65x3000	1.50	17.40	25205	2.52	1.71	1.09	6
083056	383056	183056	283056	UL(P)-500x65x3000	500x65x3000	1.50	20.66	31595	2.52	1.71	1.09	6
083066	383066	183066	283066	UL(P)-600x65x3000	600x65x3000	1.50	23.68	37980	2.52	1.71	1.09	6
083045	383045	183045	283045	UL(P)-400x50x3000	400x50x3000	1.50	16.34	19240	2.25	1.53	0.98	6
083005	383005	183005	283005	UL(P)-500x50x3000	500x50x3000	1.50	19.60	24130	2.25	1.53	0.98	6
083065	383065	183065	283065	UL(P)-600x50x3000	600x50x3000	1.50	22.62	29020	2.25	1.53	0.98	6



UL(N) trays, height 80 mm

NEW





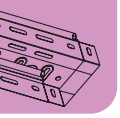
Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe.

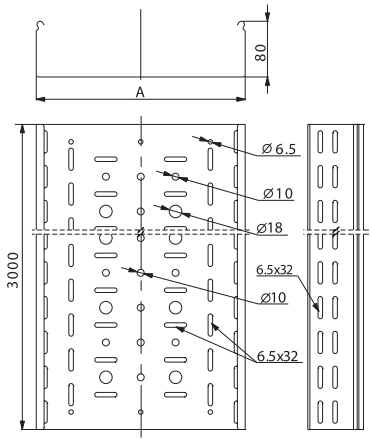
Manufacturing method Bending

Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083218	383218	183218	283218	UL(N)-100x80x3000	100x80x3000	1.00	6.57	7500	1.58	0.99	0.50	6
083208	383208	183208	283208	UL(N)-150x80x3000	150x80x3000	1.00	7.74	11460	1.58	0.99	0.50	6
083228	383228	183228	283228	UL(N)-200x80x3000	200x80x3000	1.00	8.92	15400	1.58	0.99	0.50	6
083238	383238	183238	283238	UL(N)-300x80x3000	300x80x3000	1.00	11.27	23290	1.58	0.99	0.50	6
083248	383248	183248	283248	UL(N)-400x80x3000	400x80x3000	1.00	13.63	31180	1.58	0.99	0.50	6
083258	383258	183258	283258	UL(N)-500x80x3000	500x80x3000	1.00	15.98	39070	1.58	0.99	0.50	6
083268	383268	183268	283268	UL(N)-600x80x3000	600x80x3000	1.00	18.33	46960	1.58	0.99	0.50	6
083318	383318	183318	283318	UL(N)-100x80x3000	100x80x3000	1.20	7.85	6995	1.81	1.14	0.58	6
083308	383308	183308	283308	UL(N)-150x80x3000	150x80x3000	1.20	9.26	11455	1.81	1.14	0.58	6
083328	383328	183328	283328	UL(N)-200x80x3000	200x80x3000	1.20	10.67	15395	1.81	1.14	0.58	6
083338	383338	183338	283338	UL(N)-300x80x3000	300x80x3000	1.20	13.50	23285	1.81	1.14	0.58	6
083348	383348	183348	283348	UL(N)-400x80x3000	400x80x3000	1.20	16.32	31175	1.81	1.14	0.58	6
083358	383358	183358	283358	UL(N)-500x80x3000	500x80x3000	1.20	19.15	39065	1.81	1.14	0.58	6
083368	383368	183368	283368	UL(N)-600x80x3000	600x80x3000	1.20	21.97	46955	1.81	1.14	0.58	6
083418	383418	183418	283418	UL(N)-100x80x3000	100x80x3000	1.50	9.76	6990	2.55	2.05	1.37	6
083408	383408	183408	283408	UL(N)-150x80x3000	150x80x3000	1.50	11.53	11450	2.55	2.05	1.37	6
083428	383428	183428	283428	UL(N)-200x80x3000	200x80x3000	1.50	13.29	15390	2.55	2.05	1.37	6
083438	383438	183438	283438	UL(N)-300x80x3000	300x80x3000	1.50	16.82	23280	2.55	2.05	1.37	6
083448	383448	183448	283448	UL(N)-400x80x3000	400x80x3000	1.50	20.35	31170	2.55	2.05	1.37	6
083458	383458	183458	283458	UL(N)-500x80x3000	500x80x3000	1.50	23.88	39060	2.55	2.05	1.37	6
083468	383468	183468	283468	UL(N)-600x80x3000	600x80x3000	1.50	27.41	46950	2.55	2.05	1.37	6

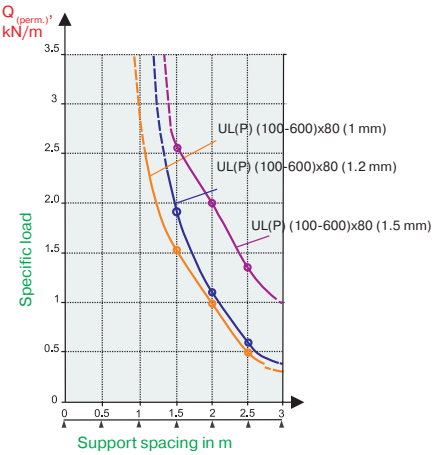


UL(P) trays, height 80 mm

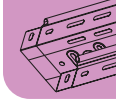
NEW



Material	Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe
Manufacturing method	Bending

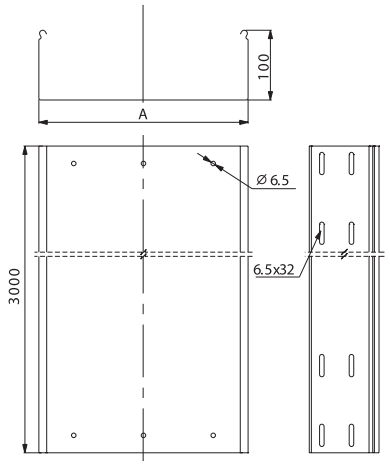


Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082818	382818	182818	282818	UL(P)-100x80x3000	100x80x3000	1.00	6.04	7500	1.58	0.99	0.50	6
082808	382808	182808	282808	UL(P)-150x80x3000	150x80x3000	1.00	7.03	11460	1.58	0.99	0.50	6
082828	382828	182828	282828	UL(P)-200x80x3000	200x80x3000	1.00	8.19	15400	1.58	0.99	0.50	6
082838	382838	182838	282838	UL(P)-300x80x3000	300x80x3000	1.00	10.36	23290	1.58	0.99	0.50	6
082848	382848	182848	282848	UL(P)-400x80x3000	400x80x3000	1.00	12.37	31180	1.58	0.99	0.50	6
082858	382858	182858	282858	UL(P)-500x80x3000	500x80x3000	1.00	14.54	39070	1.58	0.99	0.50	6
082868	382868	182868	282868	UL(P)-600x80x3000	600x80x3000	1.00	16.55	46960	1.58	0.99	0.50	6
082918	382918	182918	282918	UL(P)-100x80x3000	100x80x3000	1.20	7.22	6995	1.81	1.14	0.58	6
082908	382908	182908	282908	UL(P)-150x80x3000	150x80x3000	1.20	8.41	11455	1.81	1.14	0.58	6
082928	382928	182928	282928	UL(P)-200x80x3000	200x80x3000	1.20	9.80	15395	1.81	1.14	0.58	6
082938	382938	182938	282938	UL(P)-300x80x3000	300x80x3000	1.20	12.40	23285	1.81	1.14	0.58	6
082948	382948	182948	282948	UL(P)-400x80x3000	400x80x3000	1.20	14.81	31175	1.81	1.14	0.58	6
082958	382958	182958	282958	UL(P)-500x80x3000	500x80x3000	1.20	17.42	39065	1.81	1.14	0.58	6
082968	382968	182968	282968	UL(P)-600x80x3000	600x80x3000	1.20	19.83	46955	1.81	1.14	0.58	6
083018	383018	183018	283018	UL(P)-100x80x3000	100x80x3000	1.50	8.97	6990	2.55	2.05	1.37	6
083008	383008	183008	283008	UL(P)-150x80x3000	150x80x3000	1.50	10.46	11450	2.55	2.05	1.37	6
083028	383028	183028	283028	UL(P)-200x80x3000	200x80x3000	1.50	12.90	15390	2.55	2.05	1.37	6
083038	383038	183038	283038	UL(P)-300x80x3000	300x80x3000	1.50	15.45	23280	2.55	2.05	1.37	6
083048	383048	183048	283048	UL(P)-400x80x3000	400x80x3000	1.50	18.46	31170	2.55	2.05	1.37	6
083058	383058	183058	283058	UL(P)-500x80x3000	500x80x3000	1.50	21.72	39060	2.55	2.05	1.37	6
083068	383068	183068	283068	UL(P)-600x80x3000	600x80x3000	1.50	24.74	46950	2.55	2.05	1.37	6



UL(N) trays, height 100 mm

NEW

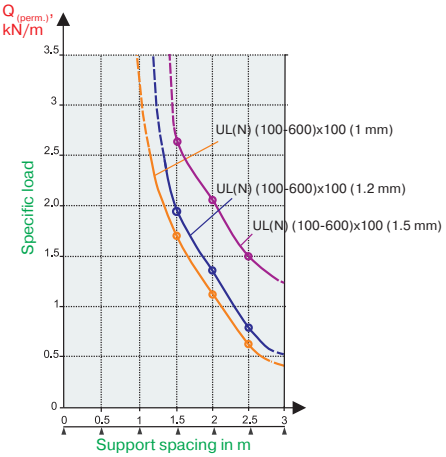


Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

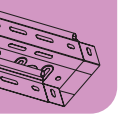
Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

Manufacturing method Bending

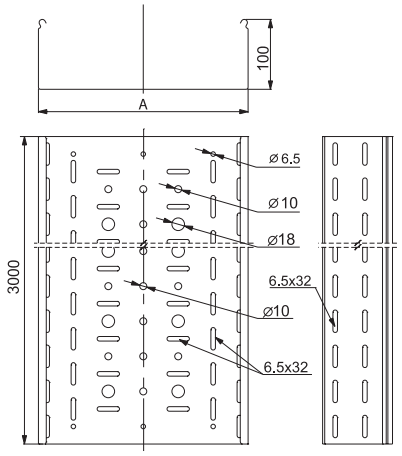


Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083212	383211	183212	283212	UL(N)-100x100x3000	100x100x3000	1.00	7.50	9470	1.62	1.14	0.66	6
083210	383210	183210	283210	UL(N)-150x100x3000	150x100x3000	1.00	8.67	14410	1.62	1.14	0.66	6
083223	383221	183223	283223	UL(N)-200x100x3000	200x100x3000	1.00	9.85	19360	1.62	1.14	0.66	6
083231	383231	183231	283231	UL(N)-300x100x3000	300x100x3000	1.00	12.20	29250	1.62	1.14	0.66	6
083241	383241	183241	283241	UL(N)-400x100x3000	400x100x3000	1.00	14.56	39140	1.62	1.14	0.66	6
083203	383203	183203	283203	UL(N)-500x100x3000	500x100x3000	1.00	16.91	49030	1.62	1.14	0.66	6
083263	383263	183263	283263	UL(N)-600x100x3000	600x100x3000	1.00	19.26	58920	1.62	1.14	0.66	6
083313	383313	183313	283313	UL(N)-100x100x3000	100x100x3000	1.20	8.97	9465	1.90	1.34	0.77	6
083310	383310	183310	283310	UL(N)-150x100x3000	150x100x3000	1.20	10.38	14405	1.90	1.34	0.77	6
083323	383323	183323	283323	UL(N)-200x100x3000	200x100x3000	1.20	11.79	19355	1.90	1.34	0.77	6
083331	383331	183331	283331	UL(N)-300x100x3000	300x100x3000	1.20	14.62	29245	1.90	1.34	0.77	6
083341	383341	183341	283341	UL(N)-400x100x3000	400x100x3000	1.20	17.44	39135	1.90	1.34	0.77	6
083303	383303	183303	283303	UL(N)-500x100x3000	500x100x3000	1.20	20.26	49025	1.90	1.34	0.77	6
083363	383363	183363	283363	UL(N)-600x100x3000	600x100x3000	1.20	23.09	58915	1.90	1.34	0.77	6
083413	383413	183413	283413	UL(N)-100x100x3000	100x100x3000	1.50	11.15	9460	2.63	2.10	1.49	6
083410	383410	183410	283410	UL(N)-150x100x3000	150x100x3000	1.50	12.92	14400	2.63	2.10	1.49	6
083423	383423	183423	283423	UL(N)-200x100x3000	200x100x3000	1.50	14.68	19350	2.63	2.10	1.49	6
083431	383431	183431	283431	UL(N)-300x100x3000	300x100x3000	1.50	18.22	29240	2.63	2.10	1.49	6
083441	383441	183441	283441	UL(N)-400x100x3000	400x100x3000	1.50	21.74	39130	2.63	2.10	1.49	6
083403	383403	183403	283403	UL(N)-500x100x3000	500x100x3000	1.50	25.28	49020	2.63	2.10	1.49	6
083463	383461	183463	283463	UL(N)-600x100x3000	600x100x3000	1.50	28.81	58910	2.63	2.10	1.49	6



UL(P) trays, height 100 mm

NEW

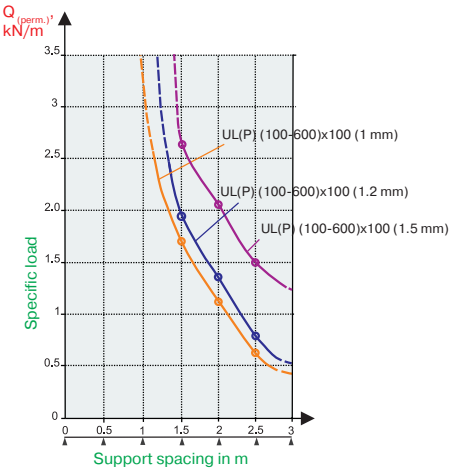


Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

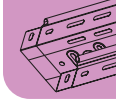
Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

Manufacturing method Bending

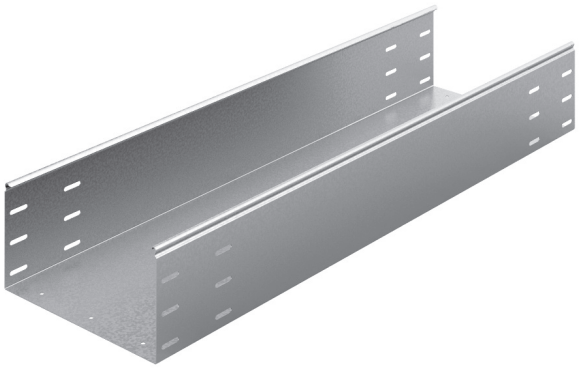


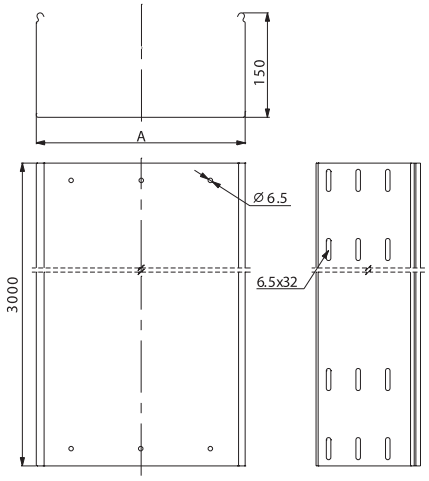
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082811	382811	182811	282811	UL(P)-100x100x3000	100x100x3000	1.00	6.89	9470	1.62	1.14	0.66	6
082810	382810	182810	282810	UL(P)-150x100x3000	150x100x3000	1.00	7.88	14410	1.62	1.14	0.66	6
082821	382821	182821	282821	UL(P)-200x100x3000	200x100x3000	1.00	9.04	19360	1.62	1.14	0.66	6
082831	382831	182831	282831	UL(P)-300x100x3000	300x100x3000	1.00	11.21	29250	1.62	1.14	0.66	6
082841	382841	182841	282841	UL(P)-400x100x3000	400x100x3000	1.00	13.22	39140	1.62	1.14	0.66	6
082801	382801	182801	282801	UL(P)-500x100x3000	500x100x3000	1.00	15.39	49030	1.62	1.14	0.66	6
082861	382861	182861	282861	UL(P)-600x100x3000	600x100x3000	1.00	17.40	58920	1.62	1.14	0.66	6
082911	382911	182911	282911	UL(P)-100x100x3000	100x100x3000	1.20	8.24	9465	1.90	1.34	0.77	6
082910	382910	182910	282910	UL(P)-150x100x3000	150x100x3000	1.20	9.43	14405	1.90	1.34	0.77	6
082921	382921	182921	282921	UL(P)-200x100x3000	200x100x3000	1.20	10.81	19355	1.90	1.34	0.77	6
082931	382931	182931	282931	UL(P)-300x100x3000	300x100x3000	1.20	13.42	29245	1.90	1.34	0.77	6
082941	382941	182941	282941	UL(P)-400x100x3000	400x100x3000	1.20	15.83	39135	1.90	1.34	0.77	6
082951	382951	182951	282951	UL(P)-500x100x3000	500x100x3000	1.20	18.44	49025	1.90	1.34	0.77	6
082961	382961	182961	282961	UL(P)-600x100x3000	600x100x3000	1.20	20.85	58915	1.90	1.34	0.77	6
083013	383013	183013	283013	UL(P)-100x100x3000	100x100x3000	1.50	10.24	9460	2.63	2.10	1.49	6
083010	383010	183010	283010	UL(P)-150x100x3000	150x100x3000	1.50	11.73	14400	2.63	2.10	1.49	6
083023	383023	183023	283023	UL(P)-200x100x3000	200x100x3000	1.50	13.46	19350	2.63	2.10	1.49	6
083031	383031	183031	283031	UL(P)-300x100x3000	300x100x3000	1.50	16.72	29240	2.63	2.10	1.49	6
083041	383041	183041	283041	UL(P)-400x100x3000	400x100x3000	1.50	19.74	39130	2.63	2.10	1.49	6
083003	383003	183003	283003	UL(P)-500x100x3000	500x100x3000	1.50	22.99	49020	2.63	2.10	1.49	6
083063	383063	183063	283063	UL(P)-600x100x3000	600x100x3000	1.50	26.01	58910	2.63	2.10	1.49	6



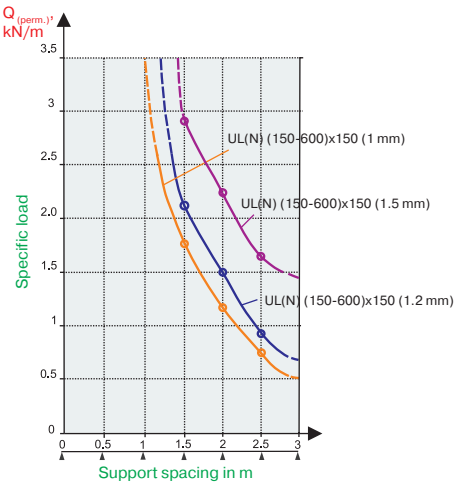
UL(N) trays, height 150 mm

NEW

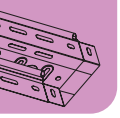




Material	Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe
Manufacturing method	Bending

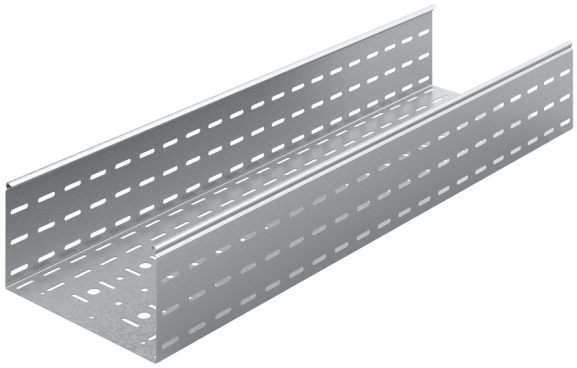


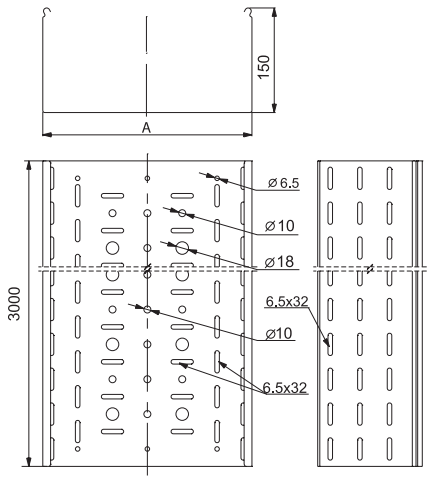
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083209	383209	183209	283209	UL(N)-150x150x3000	150x150x3000	1.00	11.01	21800	1.75	1.25	0.72	6
083220	383220	183220	283220	UL(N)-200x150x3000	200x150x3000	1.00	12.18	29250	1.75	1.25	0.72	6
083230	383230	183230	283230	UL(N)-300x150x3000	300x150x3000	1.00	14.54	44140	1.75	1.25	0.72	6
083240	383240	183240	283240	UL(N)-400x150x3000	400x150x3000	1.00	16.89	59030	1.75	1.25	0.72	6
083200	383200	183200	283200	UL(N)-500x150x3000	500x150x3000	1.00	19.25	73920	1.75	1.25	0.72	6
083260	383260	183260	283260	UL(N)-600x150x3000	600x150x3000	1.00	21.60	88810	1.75	1.25	0.72	6
083309	383309	183309	283309	UL(N)-150x150x3000	150x150x3000	1.20	13.18	21795	2.10	1.50	0.86	6
083320	383320	183320	283320	UL(N)-200x150x3000	200x150x3000	1.20	14.59	29245	2.10	1.50	0.86	6
083330	383330	183330	283330	UL(N)-300x150x3000	300x150x3000	1.20	17.42	44135	2.10	1.50	0.86	6
083340	383340	183340	283340	UL(N)-400x150x3000	400x150x3000	1.20	20.24	59025	2.10	1.50	0.86	6
083300	383300	183300	283300	UL(N)-500x150x3000	500x150x3000	1.20	23.07	73915	2.10	1.50	0.86	6
083360	383360	183360	283360	UL(N)-600x150x3000	600x150x3000	1.20	25.89	88805	2.10	1.50	0.86	6
083409	383409	183409	283409	UL(N)-150x150x3000	150x150x3000	1.50	16.42	21890	2.85	2.25	1.63	6
083420	383420	183420	283420	UL(N)-200x150x3000	200x150x3000	1.50	18.19	29240	2.85	2.25	1.63	6
083430	383430	183430	283430	UL(N)-300x150x3000	300x150x3000	1.50	21.72	44130	2.85	2.25	1.63	6
083440	383440	183440	283440	UL(N)-400x150x3000	400x150x3000	1.50	25.25	59020	2.85	2.25	1.63	6
083400	383400	183400	283400	UL(N)-500x150x3000	500x150x3000	1.50	28.78	73910	2.85	2.25	1.63	6
083460	383460	183460	283460	UL(N)-600x150x3000	600x150x3000	1.50	32.31	88800	2.85	2.25	1.63	6



UL(P) trays, height 150 mm

NEW



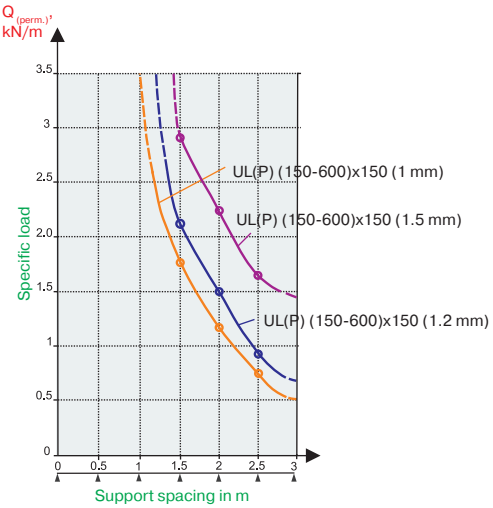


Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

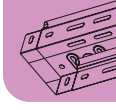
Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

Manufacturing method Bending

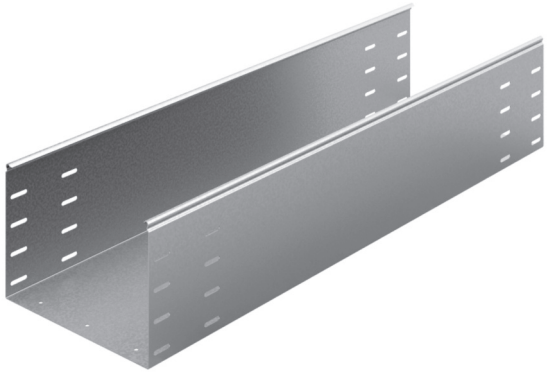


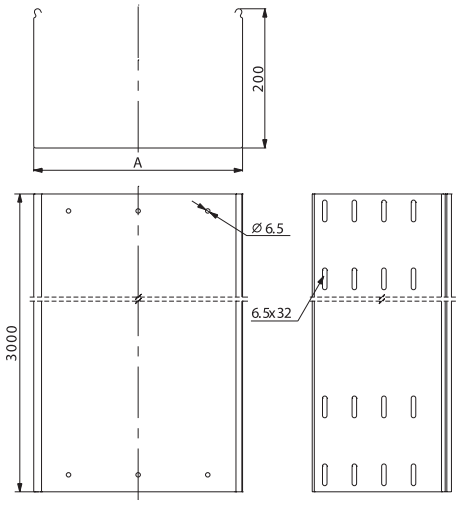
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082809	382809	182809	282809	UL(P)-150x150x3000	150x150x3000	1.00	10.05	21800	1.75	1.25	0.72	6
082820	382820	182820	282820	UL(P)-200x150x3000	200x150x3000	1.00	11.20	29250	1.75	1.25	0.72	6
082830	382830	182830	282830	UL(P)-300x150x3000	300x150x3000	1.00	13.37	44140	1.75	1.25	0.72	6
082840	382840	182840	282840	UL(P)-400x150x3000	400x150x3000	1.00	15.38	59030	1.75	1.25	0.72	6
082800	382800	182800	282800	UL(P)-500x150x3000	500x150x3000	1.00	17.56	73920	1.75	1.25	0.72	6
082860	382860	182860	282860	UL(P)-600x150x3000	600x150x3000	1.00	19.57	88810	1.75	1.25	0.72	6
082909	382909	182909	282909	UL(P)-150x150x3000	150x150x3000	1.20	12.03	21795	2.10	1.50	0.86	6
082920	382920	182920	282920	UL(P)-200x150x3000	200x150x3000	1.20	13.41	29245	2.10	1.50	0.86	6
082930	382930	182930	282930	UL(P)-300x150x3000	300x150x3000	1.20	16.02	44135	2.10	1.50	0.86	6
082940	382940	182940	282940	UL(P)-400x150x3000	400x150x3000	1.20	18.43	59025	2.10	1.50	0.86	6
082900	382900	182900	282900	UL(P)-500x150x3000	500x150x3000	1.20	21.04	73915	2.10	1.50	0.86	6
082960	382960	182960	282960	UL(P)-600x150x3000	600x150x3000	1.20	23.45	88805	2.10	1.50	0.86	6
083009	383009	183009	283009	UL(P)-150x150x3000	150x150x3000	1.50	14.98	21890	2.85	2.25	1.63	6
083020	383020	183020	283020	UL(P)-200x150x3000	200x150x3000	1.50	16.71	29240	2.85	2.25	1.63	6
083030	383030	183030	283030	UL(P)-300x150x3000	300x150x3000	1.50	19.97	44130	2.85	2.25	1.63	6
083040	383040	183040	283040	UL(P)-400x150x3000	400x150x3000	1.50	22.99	59020	2.85	2.25	1.63	6
083000	383000	183000	283000	UL(P)-500x150x3000	500x150x3000	1.50	26.24	73910	2.85	2.25	1.63	6
083060	383060	183060	283060	UL(P)-600x150x3000	600x150x3000	1.50	29.26	88800	2.85	2.25	1.63	6



UL(N) trays, height 200 mm

NEW



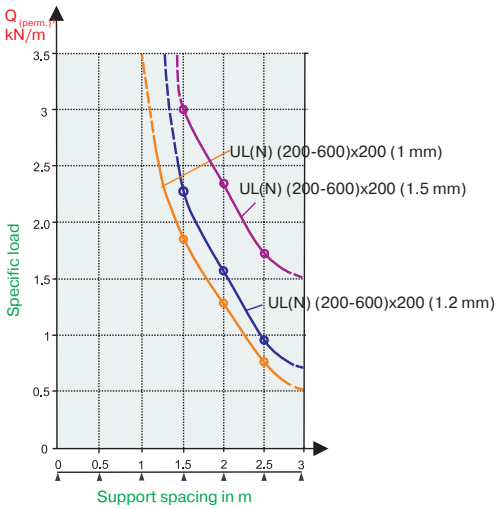


Material Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays

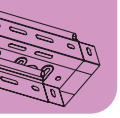
Steel grade 08 PS GOST 52246-2004

Design features Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe

Manufacturing method Bending

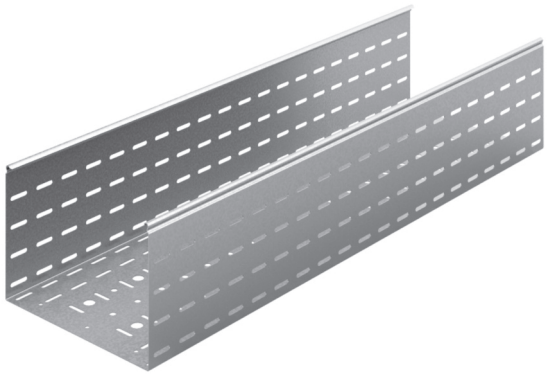


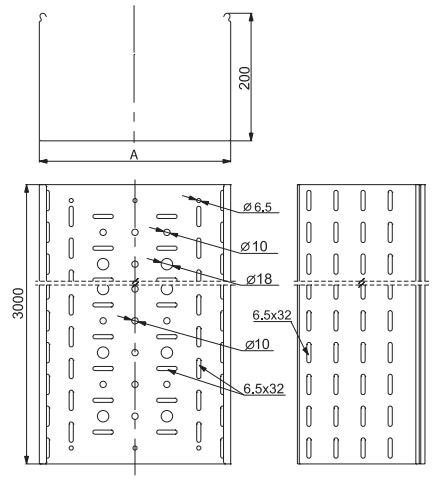
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
083222	383222	183222	283222	UL(N)-200x200x3000	200x200x3000	1.00	14.52	39150	1.85	1.30	0.75	6
083232	383232	183232	283232	UL(N)-300x200x3000	300x200x3000	1.00	16.88	59030	1.85	1.30	0.75	6
083242	383242	183242	283242	UL(N)-400x200x3000	400x200x3000	1.00	19.23	78920	1.85	1.30	0.75	6
083202	383202	183202	283202	UL(N)-500x200x3000	500x200x3000	1.00	21.58	98810	1.85	1.30	0.75	6
083262	383262	183262	283262	UL(N)-600x200x3000	600x200x3000	1.00	23.94	118700	1.85	1.30	0.75	6
083322	383322	183322	283322	UL(N)-200x200x3000	200x200x3000	1.20	17.40	39145	2.27	1.59	0.92	6
083332	383332	183332	283332	UL(N)-300x200x3000	300x200x3000	1.20	20.22	59025	2.27	1.59	0.92	6
083342	383342	183342	283342	UL(N)-400x200x3000	400x200x3000	1.20	23.05	78915	2.27	1.59	0.92	6
083302	383302	183302	283302	UL(N)-500x200x3000	500x200x3000	1.20	25.87	98805	2.27	1.59	0.92	6
083362	383362	183362	283362	UL(N)-600x200x3000	600x200x3000	1.20	28.69	118695	2.27	1.59	0.92	6
083422	383422	183422	283422	UL(N)-200x200x3000	200x200x3000	1.50	21.29	39140	3.00	2.40	1.75	6
083432	383432	183432	283432	UL(N)-300x200x3000	300x200x3000	1.50	25.22	59020	3.00	2.40	1.75	6
083442	383442	183442	283442	UL(N)-400x200x3000	400x200x3000	1.50	28.75	78910	3.00	2.40	1.75	6
083402	383402	183402	283402	UL(N)-500x200x3000	500x200x3000	1.50	32.29	98800	3.00	2.40	1.75	6
083462	383462	183462	283462	UL(N)-600x200x3000	600x200x3000	1.50	35.81	118690	3.00	2.40	1.75	6



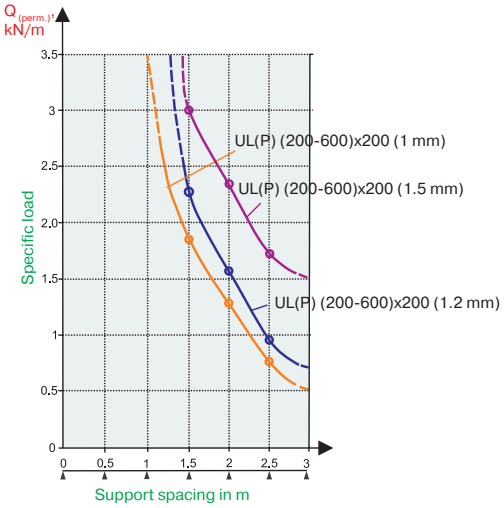
UL(P) trays, height 200 mm

NEW

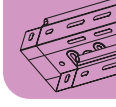




Material	Steel coil. Available versions: Sendzimir galvanized steel, hot-dip galvanized steel, stainless steel, painted trays
Steel grade	08 PS GOST 52246-2004
Design features	Rounded tray lock. Edges of the lock are bent to act as additional stiffener and polished to keep cables safe
Manufacturing method	Bending



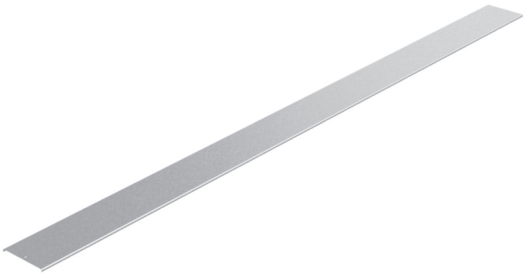
Version code				Art. No.	Dimensions, mm	Metal thickness, mm	Weight, kg/ each	Usable cross-section area, mm²	Load Q, kN/m (L — support spacing, mm)			Packa-ging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted						L=1500	L=2000	L=2500	
082822	382822	182822	282822	UL(P)-200x200x3000	200x200x3000	1.00	13.37	39150	1.85	1.30	0.75	6
082832	382832	182832	282832	UL(P)-300x200x3000	300x200x3000	1.00	15.54	59030	1.85	1.30	0.75	6
082842	382842	182842	282842	UL(P)-400x200x3000	400x200x3000	1.00	17.55	78920	1.85	1.30	0.75	6
082802	382802	182802	282802	UL(P)-500x200x3000	500x200x3000	1.00	19.72	98810	1.85	1.30	0.75	6
082862	382862	182862	282862	UL(P)-600x200x3000	600x200x3000	1.00	21.73	118700	1.85	1.30	0.75	6
082922	382922	182922	282922	UL(P)-200x200x3000	200x200x3000	1.20	16.02	39145	2.27	1.59	0.92	6
082932	382932	182932	282932	UL(P)-300x200x3000	300x200x3000	1.20	18.62	59025	2.27	1.59	0.92	6
082942	382942	182942	282942	UL(P)-400x200x3000	400x200x3000	1.20	21.03	78915	2.27	1.59	0.92	6
082902	382902	182902	282902	UL(P)-500x200x3000	500x200x3000	1.20	23.64	98805	2.27	1.59	0.92	6
082962	382962	182962	282962	UL(P)-600x200x3000	600x200x3000	1.20	26.05	118695	2.27	1.59	0.92	6
083022	383022	183022	283022	UL(P)-200x200x3000	200x200x3000	1.50	19.97	39140	3.00	2.40	1.75	6
083032	383032	183032	283032	UL(P)-300x200x3000	300x200x3000	1.50	23.22	59020	3.00	2.40	1.75	6
083042	383042	183042	283042	UL(P)-400x200x3000	400x200x3000	1.50	26.24	78910	3.00	2.40	1.75	6
083002	383002	183002	283002	UL(P)-500x200x3000	500x200x3000	1.50	29.49	98800	3.00	2.40	1.75	6
083062	383062	183062	283062	UL(P)-600x200x3000	600x200x3000	1.50	32.51	118690	3.00	2.40	1.75	6

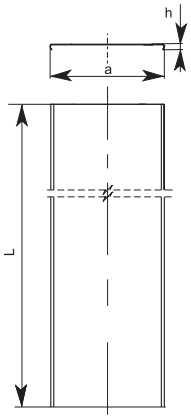


1.20 OSTEC UL COVERS

NEW

KLZT covers, UL series

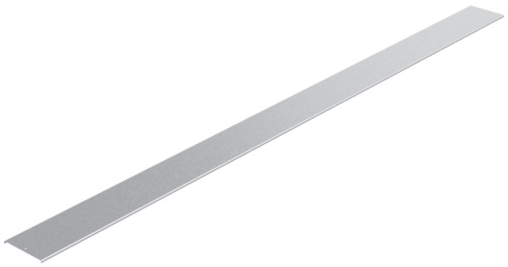


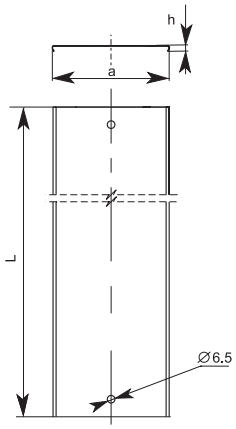


Version code				Art. No.	Dimensions, mm axhxL	Weight, kg/each	Packaging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
021605	321605	121605	221605	KLZT-50x3000 (1 mm) UL	50x15x3000	1.55	3
021611	321611	121611	221611	KLZT-100x3000 (1 mm) UL	100x15x3000	2.84	3
021615	321615	121615	221615	KLZT-150x3000 (1 mm) UL	150x15x3000	3.88	3
021621	321621	121621	221621	KLZT-200x3000 (1 mm) UL	200x15x3000	5.21	3
021631	321631	121631	221631	KLZT-300x3000 (1 mm) UL	300x15x3000	7.57	3
021641	321641	121641	221641	KLZT-400x3000 (1 mm) UL	400x15x3000	9.93	3
021651	321651	121651	221651	KLZT-500x3000 (1 mm) UL	500x15x3000	12.29	3
021661	321661	121661	221661	KLZT-600x3000 (1 mm) UL	600x15x3000	14.65	3

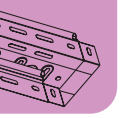
KLZTz cover for grounding connection, UL series

NEW





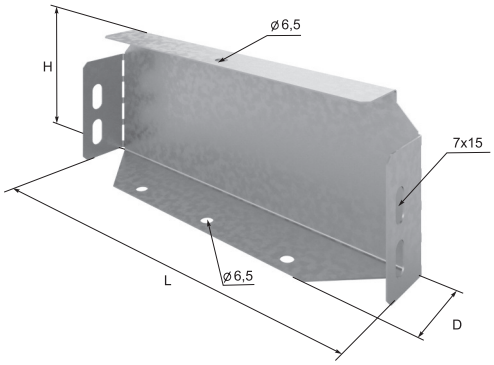
Version code				Art. No.	Dimensions, mm axhxL	Weight, kg/each	Packaging, m
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
021705	321705	121705	221705	KLZTz-50x3000 (1 mm) UL	50x15x3000	1.55	3
021711	321711	121711	221711	KLZTz-100x3000 (1 mm) UL	100x15x3000	2.84	3
021715	321715	121715	221715	KLZTz-150x3000 (1 mm) UL	150x15x3000	3.88	3
021721	321721	121721	221721	KLZTz-200x3000 (1 mm) UL	200x15x3000	5.21	3
021731	321731	121731	221731	KLZTz-300x3000 (1 mm) UL	300x15x3000	7.57	3
021741	321741	121741	221741	KLZTz-400x3000 (1 mm) UL	400x15x3000	9.93	3
021751	321751	121751	221751	KLZTz-500x3000 (1 mm) UL	500x15x3000	12.29	3
021761	321761	121761	221761	KLZTz-600x3000 (1 mm) UL	600x15x3000	14.65	3



1.21 OSTEC UL END PLATES

NEW

ZT end plates, UL series

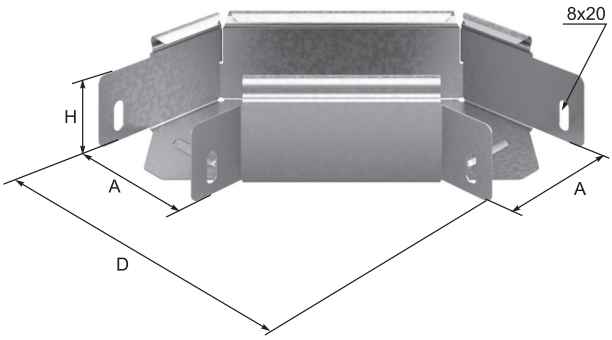


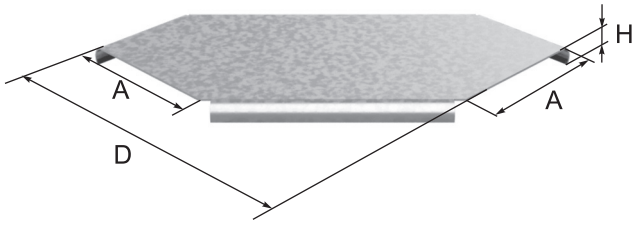
Version code				Art. No.	Dimensions, mm DxHxL	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
081705	381705	181705	281705	ZT-50x50 (1 mm) UL	50x50x50	0.03	1
081715	381715	181715	281715	ZT-100x50 (1 mm) UL	100x50x50	0.05	1
081750	381750	181750	281750	ZT-150x50 (1 mm) UL	150x50x50	0.07	1
081725	381725	181725	281725	ZT-200x50 (1 mm) UL	200x50x50	0.09	1
081735	381735	181735	281735	ZT-300x50 (1 mm) UL	300x50x50	0.01	1
081745	381745	181745	281745	ZT-400x50 (1 mm) UL	400x50x50	0.17	1
081755	381755	181755	281755	ZT-500x50 (1 mm) UL	500x50x50	0.22	1
081765	381765	181765	281765	ZT-600x50 (1 mm) UL	600x50x50	0.26	1
081716	381716	181716	281716	ZT-100x65 (1 mm) UL	100x50x65	0.07	1
081706	381706	181706	281706	ZT-150x65 (1 mm) UL	150x50x65	0.09	1
081726	381726	181726	281726	ZT-200x65 (1 mm) UL	200x50x65	0.12	1
081736	381736	181736	281736	ZT-300x65 (1 mm) UL	300x50x65	0.17	1
081746	381746	181746	281746	ZT-400x65 (1 mm) UL	400x50x65	0.22	1
081756	381756	181756	281756	ZT-500x65 (1 mm) UL	500x50x65	0.26	1
081766	381766	181766	281766	ZT-600x65 (1 mm) UL	600x50x65	0.31	1
081718	381718	181718	281718	ZT-100x80 (1 mm) UL	100x50x80	0.08	1
081708	381708	181708	281708	ZT-150x80 (1 mm) UL	150x50x80	0.11	1
081728	381728	181728	281728	ZT-200x80 (1 mm) UL	200x50x80	0.14	1
081738	381738	181738	281738	ZT-300x80 (1 mm) UL	300x50x80	0.21	1
081748	381748	181748	281748	ZT-400x80 (1 mm) UL	400x50x80	0.27	1
081758	381758	181758	281758	ZT-500x80 (1 mm) UL	500x50x80	0.34	1
081768	381768	181768	281768	ZT-600x80 (1 mm) UL	600x50x80	0.40	1
081711	381711	181711	281711	ZT-100x100 (1 mm) UL	100x50x100	0.10	1
081710	381710	181710	281710	ZT-150x100 (1 mm) UL	150x50x100	0.14	1
081721	381721	181721	281721	ZT-200x100 (1 mm) UL	200x50x100	0.18	1
081731	381731	181731	281731	ZT-300x100 (1 mm) UL	300x50x100	0.25	1
081741	381741	181741	281741	ZT-400x100 (1 mm) UL	400x50x100	0.33	1
081701	381701	181701	281701	ZT-500x100 (1 mm) UL	500x50x100	0.40	1
081761	381761	181761	281761	ZT-600x100 (1 mm) UL	600x50x100	0.48	1
081709	381709	181709	281709	ZT-150x150 (1 mm) UL	150x50x150	0.20	1
081720	381720	181720	281720	ZT-200x150 (1 mm) UL	200x50x150	0.25	1
081730	381730	181730	281730	ZT-300x150 (1 mm) UL	300x50x150	0.36	1
081740	381740	181740	281740	ZT-400x150 (1 mm) UL	400x50x150	0.46	1
081700	381700	181700	281700	ZT-500x150 (1 mm) UL	500x50x150	0.56	1
081760	381760	181760	281760	ZT-600x150 (1 mm) UL	600x50x150	0.67	1
081722	381722	181722	281722	ZT-200x200 (1 mm) UL	200x50x200	0.33	1
081732	381732	181732	281732	ZT-300x200 (1 mm) UL	300x50x200	0.46	1
081742	381742	181742	281742	ZT-400x200 (1 mm) UL	400x50x200	0.59	1
081702	381702	181702	281702	ZT-500x200 (1 mm) UL	500x50x200	0.72	1
081762	381762	181762	281762	ZT-600x200 (1 mm) UL	600x50x200	0.85	1

1.22 OSTEC UL FLAT BENDS

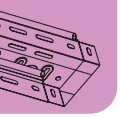
NEW

USPR flat angle connector/KUSPR cover for connector





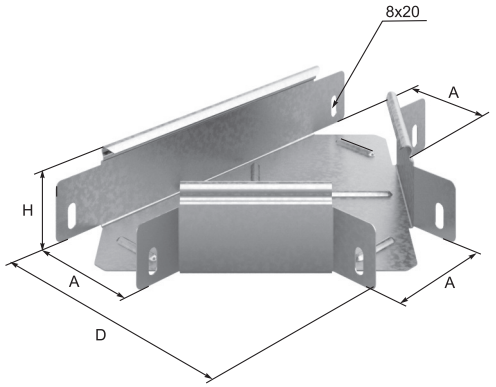
Version code				Art. No.	Dimensions, mm DxHxA	Metal thickness, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
080355	380355	180355	280355	USPR-50x50 UL	140x50x50	1.00	0.20	1
080315	380315	180315	280315	USPR-100x50 UL	220x50x100	1.00	0.42	1
080350	380350	180350	280350	USPR-150x50 UL	265x50x150	1.00	0.57	1
080325	380325	180325	280325	USPR-200x50 UL	342x50x200	1.00	0.99	1
080335	380335	180335	280335	USPR-300x50 UL	425x50x300	1.00	1.47	1
080345	380345	180345	280345	USPR-400x50 UL	525x50x400	1.00	2.19	1
080305	380305	180305	280305	USPR-500x50 UL	625x50x500	1.00	2.91	1
080365	380365	180365	280365	USPR-600x50 UL	725x50x600	1.00	3.94	1
080316	380316	180316	280316	USPR-100x65 UL	220x65x100	1.00	0.48	1
080306	380306	180306	280306	USPR-150x65 UL	265x65x150	1.00	0.65	1
080326	380326	180326	280326	USPR-200x65 UL	342x65x200	1.00	1.09	1
080336	380336	180336	280336	USPR-300x65 UL	425x65x300	1.00	1.58	1
080346	380346	180346	280346	USPR-400x65 UL	525x65x400	1.00	2.31	1
080356	380356	180356	280356	USPR-500x65 UL	625x65x500	1.00	3.05	1
080366	380366	180366	280366	USPR-600x65 UL	725x65x600	1.00	4.10	1
080318	380318	180318	280318	USPR-100x80 UL	220x80x100	1.00	0.54	1
080308	380308	180308	280308	USPR-150x80 UL	265x80x150	1.00	0.71	1
080328	380328	180328	280328	USPR-200x80 UL	342x80x200	1.00	1.18	1
080338	380338	180338	280338	USPR-300x80 UL	425x80x300	1.00	1.68	1
080348	380348	180348	280348	USPR-400x80 UL	525x80x400	1.00	2.44	1
080358	380358	180358	280358	USPR-500x80 UL	625x80x500	1.00	3.19	1
080368	380368	180368	280368	USPR-600x80 UL	725x80x600	1.00	4.26	1
080311	380311	180311	280311	USPR-100x100 UL	220x100x100	1.00	0.63	1
080310	380310	180310	280310	USPR-150x100 UL	265x100x150	1.00	0.81	1
080321	380321	180321	280321	USPR-200x100 UL	342x100x200	1.00	1.30	1
080331	380331	180331	280331	USPR-300x100 UL	425x100x300	1.00	1.82	1
080341	380341	180341	280341	USPR-400x100 UL	525x100x400	1.00	2.60	1
080301	380301	180301	280301	USPR-500x100 UL	625x100x500	1.00	3.38	1
080361	380361	180361	280361	USPR-600x100 UL	725x100x600	1.00	4.48	1
080309	380309	180309	280309	USPR-150x150 UL	265x150x150	1.00	1.04	1
080320	380320	180320	280320	USPR-200x150 UL	342x150x200	1.00	1.61	1
080330	380330	180330	280330	USPR-300x150 UL	425x150x300	1.00	2.17	1
080340	380340	180340	280340	USPR-400x150 UL	525x150x400	1.00	3.02	1
080300	380300	180300	280300	USPR-500x150 UL	625x150x500	1.00	3.85	1
080360	380360	180360	280360	USPR-600x150 UL	725x150x600	1.00	5.02	1
080322	380322	180322	280322	USPR-200x200 UL	342x200x200	1.00	1.92	1
080332	380332	180332	280332	USPR-300x200 UL	425x200x300	1.00	2.52	1
080342	380342	180342	280342	USPR-400x200 UL	525x200x400	1.00	3.43	1
080302	380302	180302	280302	USPR-500x200 UL	625x200x500	1.00	4.32	1
080362	380362	180362	280362	USPR-600x200 UL	725x200x600	1.00	5.57	1
020305	320305	120305	220305	KUSPR-50 UL	153x10x50	1.00	0.07	1
020311	320311	120311	220311	KUSPR-100 UL	264x10x100	1.00	0.22	1
020301	320301	120301	220301	KUSPR-150 UL	328x10x150	1.00	0.31	1
020321	320321	120321	220321	KUSPR-200 UL	440x10x200	1.00	0.65	1
020331	320331	120331	220331	KUSPR-300 UL	557x10x300	1.00	1.04	1
020341	320341	120341	220341	KUSPR-400 UL	698x10x400	1.00	1.64	1
020351	320355	120351	220351	KUSPR-500 UL	840x10x500	1.00	2.26	1
020361	320361	120361	220361	KUSPR-600 UL	981x10x600	1.00	3.18	1

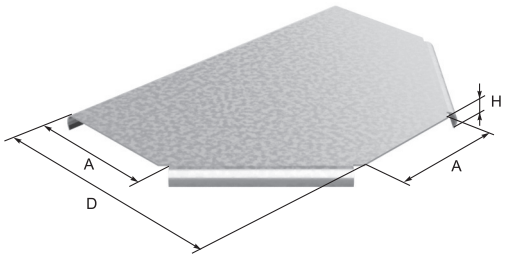


1.23 OSTEC UL TEES

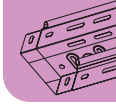
NEW

USTR tee connector/KUSTR cover for connector





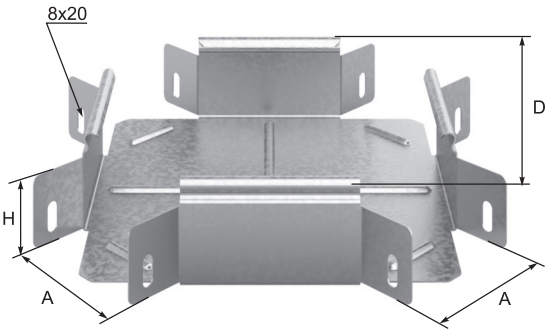
Version code				Art. No.	Dimensions, mm DxHxA	**Metal thickness, mm**	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
080755	380755	180755	280755	USTR-50x50 UL	162x50x50	1.00	0.30	1
080715	380715	180715	280715	USTR-100x50 UL	212x50x100	1.00	0.58	1
080750	380750	180750	280750	USTR-150x50 UL	262x50x150	1.00	0.88	1
080725	380725	180725	280725	USTR-200x50 UL	312x50x200	1.00	1.12	1
080735	380735	180735	280735	USTR-300x50 UL	412x50x300	1.00	1.83	1
080745	380745	180745	280745	USTR-400x50 UL	512x50x400	1.00	2.69	1
080705	380705	180705	280705	USTR-500x50 UL	612x50x500	1.00	3.70	1
080765	380765	180765	280765	USTR-600x50 UL	712x50x600	1.00	4.88	1
080716	380716	180716	280716	USTR-100x65 UL	212x65x100	1.00	0.66	1
080706	380706	180706	280706	USTR-150x65 UL	262x65x150	1.00	0.96	1
080726	380726	180726	280726	USTR-200x65 UL	312x65x200	1.00	1.22	1
080736	380736	180736	280736	USTR-300x65 UL	412x65x300	1.00	1.93	1
080746	380746	180746	280746	USTR-400x65 UL	512x65x400	1.00	2.80	1
080756	380756	180756	280756	USTR-500x65 UL	612x65x500	1.00	3.83	1
080766	380766	180766	280766	USTR-600x65 UL	715x65x600	1.00	5.02	1
080718	380718	180718	280718	USTR-100x80 UL	212x80x100	1.00	0.76	1
080708	380708	180708	280708	USTR-150x80 UL	262x80x150	1.00	1.04	1
080728	380728	180728	280728	USTR-200x80 UL	312x80x200	1.00	1.34	1
080738	380738	180738	280738	USTR-300x80 UL	412x80x300	1.00	2.07	1
080748	380748	180748	280748	USTR-400x80 UL	512x80x400	1.00	2.95	1
080758	380758	180758	280758	USTR-500x80 UL	612x80x500	1.00	4.00	1
080768	380768	180768	280768	USTR-600x80 UL	712x80x600	1.00	5.20	1
080711	380711	180711	280711	USTR-100x100 UL	212x100x100	1.00	0.85	1
080710	380710	180710	280710	USTR-150x100 UL	262x100x150	1.00	1.16	1
080721	380721	180721	280721	USTR-200x100 UL	312x100x200	1.00	1.43	1
080731	380731	180731	280731	USTR-300x100 UL	412x100x300	1.00	2.17	1
080741	380741	180741	280741	USTR-400x100 UL	512x100x400	1.00	3.07	1
080701	380701	180701	280701	USTR-500x100 UL	612x100x500	1.00	4.13	1
080761	380761	180761	280761	USTR-600x100 UL	712x100x600	1.00	5.34	1
080709	380709	180709	280709	USTR-150x150 UL	262x150x150	1.00	1.44	1
080720	380720	180720	280720	USTR-200x150 UL	312x150x200	1.00	1.73	1
080730	380730	180730	280730	USTR-300x150 UL	412x150x300	1.00	2.51	1
080740	380740	180740	280740	USTR-400x150 UL	512x150x400	1.00	3.45	1
080700	380700	180700	280700	USTR-500x150 UL	612x150x500	1.00	4.55	1
080760	380760	180760	280760	USTR-600x150 UL	712x150x600	1.00	5.80	1
080722	380722	180722	280722	USTR-200x200 UL	312x200x200	1.00	2.03	1
080732	380732	180732	280732	USTR-300x200 UL	412x200x300	1.00	2.85	1
080742	380742	180742	280742	USTR-400x200 UL	512x200x400	1.00	3.83	1
080702	380702	180702	280702	USTR-500x200 UL	612x200x500	1.00	4.96	1
080762	380762	180762	280762	USTR-600x200 UL	712x200x600	1.00	6.26	1
020805	320805	120805	220805	KUSTR-50 UL	105x10x50	1.00	0.13	1
020811	320811	120811	220811	KUSTR-100 UL	230x10x100	1.00	0.33	1
020801	320801	120801	220801	KUSTR-150 UL	282x10x150	1.00	0.55	1
020821	320821	120821	220821	KUSTR-200 UL	382x10x200	1.00	0.76	1
020831	320831	120831	220831	KUSTR-300 UL	482x10x300	1.00	1.33	1
020841	320841	120841	220841	KUSTR-400 UL	582x10x400	1.00	2.07	1
020851	320851	120851	220851	KUSTR-500 UL	682x10x500	1.00	2.96	1
020861	320861	120861	220861	KUSTR-600 UL	782x10x600	1.00	4.01	1

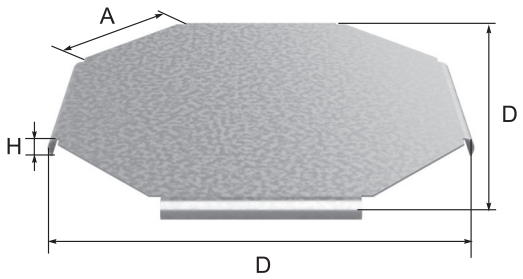


1.24 OSTEC UL CROSSOVERS

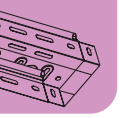
NEW

USHR crossover connector/KUSHR cover for connector





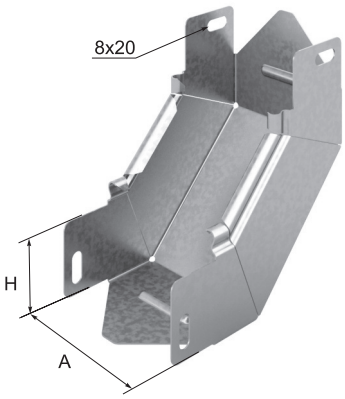
Version code				Art. No.	Dimensions, mm DxHxA	**Metal thickness, mm**	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
080855	380855	180855	280855	USHR-50x50 UL	226x50x50	1.00	0.40	1
080815	380815	180815	280815	USHR-100x50 UL	328x50x100	1.00	0.70	1
080850	380850	180850	280850	USHR-150x50 UL	378x50x150	1.00	1.03	1
080825	380825	180825	280825	USHR-200x50 UL	428x50x200	1.00	1.29	1
080835	380835	180835	280835	USHR-300x50 UL	528x50x300	1.00	2.04	1
080845	380845	180845	280845	USHR-400x50 UL	628x50x400	1.00	2.95	1
080805	380805	180805	280805	USHR-500x50 UL	728x50x500	1.00	4.01	1
080865	380865	180865	280865	USHR-600x50 UL	828x50x600	1.00	5.23	1
080816	380816	180816	280816	USHR-100x65 UL	328x65x100	1.00	0.78	1
080806	380806	180806	280806	USHR-150x65 UL	378x65x150	1.00	1.11	1
080826	380826	180826	280826	USHR-200x65 UL	428x65x200	1.00	1.37	1
080836	380836	180836	280836	USHR-300x65 UL	528x65x300	1.00	2.12	1
080846	380846	180846	280846	USHR-400x65 UL	628x65x400	1.00	3.03	1
080856	380856	180856	280856	USHR-500x65 UL	728x65x500	1.00	4.10	1
080866	380866	180866	280866	USHR-600x65 UL	828x65x600	1.00	5.32	1
080818	380818	180818	280818	USHR-100x80 UL	328x80x100	1.00	0.89	1
080808	380808	180808	280808	USHR-150x80 UL	378x80x150	1.00	1.19	1
080828	380828	180828	280828	USHR-200x80 UL	428x80x200	1.00	1.48	1
080838	380838	180838	280838	USHR-300x80 UL	528x80x300	1.00	2.23	1
080848	380848	180848	280848	USHR-400x80 UL	628x80x400	1.00	3.14	1
080858	380858	180858	280858	USHR-500x80 UL	728x80x500	1.00	4.20	1
080868	380868	180868	280868	USHR-600x80 UL	828x80x600	1.00	5.43	1
080811	380811	180811	280811	USHR-100x100 UL	328x100x100	1.00	0.98	1
080810	380810	180810	280810	USHR-150x100 UL	378x100x150	1.00	1.30	1
080821	380821	180821	280821	USHR-200x100 UL	428x100x200	1.00	1.57	1
080831	380831	180831	280831	USHR-300x100 UL	528x100x300	1.00	2.32	1
080841	380841	180841	280841	USHR-400x100 UL	628x100x400	1.00	3.23	1
080801	380801	180801	280801	USHR-500x100 UL	728x100x500	1.00	4.29	1
080861	380861	180861	280861	USHR-600x100 UL	828x100x600	1.00	5.51	1
080809	380809	180809	280809	USHR-150x150 UL	378x150x150	1.00	1.57	1
080820	380820	180820	280820	USHR-200x150 UL	428x150x200	1.00	1.84	1
080830	380830	180830	280830	USHR-300x150 UL	528x150x300	1.00	2.59	1
080840	380840	180840	280840	USHR-400x150 UL	628x150x400	1.00	3.50	1
080800	380800	180800	280800	USHR-500x150 UL	728x150x500	1.00	4.56	1
080860	380860	180860	280860	USHR-600x150 UL	828x150x600	1.00	5.79	1
080822	380822	180822	280822	USHR-200x200 UL	428x200x200	1.00	2.11	1
080832	380832	180832	280832	USHR-300x200 UL	528x200x300	1.00	2.86	1
080842	380842	180842	280842	USHR-400x200 UL	628x200x400	1.00	3.77	1
080802	380802	180802	280802	USHR-500x200 UL	728x200x500	1.00	4.84	1
080862	380862	180862	280862	USHR-600x200 UL	828x200x600	1.00	6.06	1
020905	320905	120905	220905	KUSHR-50 UL	165x10x50	1.00	0.17	1
020911	320911	120911	220911	KUSHR-100 UL	267x10x100	1.00	0.48	1
020901	320901	120901	220901	KUSHR-150 UL	328x10x150	1.00	0.70	1
020921	320921	120921	220921	KUSHR-200 UL	367x10x200	1.00	0.98	1
020931	320931	120931	220931	KUSHR-300 UL	467x10x300	1.00	1.63	1
020941	320941	120941	220941	KUSHR-400 UL	567x10x400	1.00	2.45	1
020951	320951	120951	220951	KUSHR-500 UL	667x10x500	1.00	3.42	1
020961	320961	120961	220961	KUSHR-600 UL	767x10x600	1.00	4.45	1

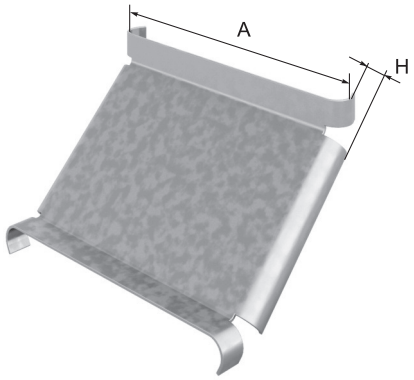


1.25 OSTEC UL 90° VERTICAL INSIDE AND OUTSIDE BENDS

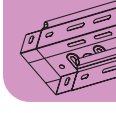
NEW

USVNR vertical inside angle connector/KUSVNR cover for connector





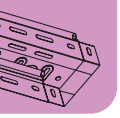
Version code				Art. No.	Dimensions, mm HxA	Metal thickness, mm	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
082555	382555	182555	282555	USVNR-50x50 UL	50x47	1.00	0.16	1
082515	382515	182515	282515	USVNR-100x50 UL	50x97	1.00	0.27	1
082550	382550	182550	282550	USVNR-150x50 UL	50x147	1.00	0.36	1
082525	382525	182525	282525	USVNR-200x50 UL	50x197	1.00	0.45	1
082535	382535	182535	282535	USVNR-300x50 UL	50x297	1.00	0.62	1
082545	382545	182545	282545	USVNR-400x50 UL	50x397	1.00	0.79	1
082505	382505	182505	282505	USVNR-500x50 UL	50x497	1.00	0.97	1
082565	382565	182565	282565	USVNR-600x50 UL	50x597	1.00	1.14	1
082516	382516	182516	282516	USVNR-100x65 UL	65x97	1.00	0.35	1
082506	382506	182506	282506	USVNR-150x65 UL	65x147	1.00	0.45	1
082526	382526	182526	282526	USVNR-200x65 UL	65x197	1.00	0.54	1
082536	382536	182536	282536	USVNR-300x65 UL	65x297	1.00	0.73	1
082546	382546	182546	282546	USVNR-400x65 UL	65x397	1.00	0.93	1
082556	382556	182556	282556	USVNR-500x65 UL	65x497	1.00	1.12	1
082566	382566	182566	282566	USVNR-600x65 UL	65x597	1.00	1.31	1
082518	382518	182518	282518	USVNR-100x80 UL	80x97	1.00	0.42	1
082508	382508	182508	282508	USVNR-150x80 UL	80x147	1.00	0.53	1
082528	382528	182528	282528	USVNR-200x80 UL	80x197	1.00	0.63	1
082538	382538	182538	282538	USVNR-300x80 UL	80x297	1.00	0.85	1
082548	382548	182548	282548	USVNR-400x80 UL	80x397	1.00	1.06	1
082558	382558	182558	282558	USVNR-500x80 UL	80x497	1.00	1.27	1
082568	382568	182568	282568	USVNR-600x80 UL	80x597	1.00	1.49	1
082511	382511	182511	282511	USVNR-100x100 UL	100x97	1.00	0.54	1
082510	382510	182510	282510	USVNR-150x100 UL	100x147	1.00	0.66	1
082521	382521	182521	282521	USVNR-200x100 UL	100x197	1.00	0.78	1
082531	382531	182531	282531	USVNR-300x100 UL	100x297	1.00	1.01	1
082541	382541	182541	282541	USVNR-400x100 UL	100x397	1.00	1.25	1
082501	382501	182501	282501	USVNR-500x100 UL	100x497	1.00	1.49	1
082561	382561	182561	282561	USVNR-600x100 UL	100x597	1.00	1.73	1
082509	382509	182509	282509	USVNR-150x150 UL	150x147	1.00	1.02	1
082520	382520	182520	282520	USVNR-200x150 UL	150x197	1.00	1.17	1
082530	382530	182530	282530	USVNR-300x150 UL	150x297	1.00	1.47	1
082540	382540	182540	282540	USVNR-400x150 UL	150x397	1.00	1.77	1
082500	382500	182500	282500	USVNR-500x150 UL	150x497	1.00	2.08	1
082560	382560	182560	282560	USVNR-600x150 UL	150x597	1.00	2.38	1
082522	382522	182522	282522	USVNR-200x200 UL	200x197	1.00	1.22	1
082532	382532	182532	282532	USVNR-300x200 UL	200x297	1.00	1.69	1
082542	382542	182542	282542	USVNR-400x200 UL	200x397	1.00	2.36	1
082502	382502	182502	282502	USVNR-500x200 UL	200x497	1.00	2.73	1
082562	382562	182562	282562	USVNR-600x200 UL	200x597	1.00	3.10	1
020405	320405	120405	220405	KUSVNR-50 UL	50x17	1.00	0.03	1
020411	320411	120411	220411	KUSVNR-100 UL	100x17	1.00	0.07	1
020401	320401	120401	220401	KUSVNR-150 UL	150x17	1.00	0.10	1
020421	320421	120421	220421	KUSVNR-200 UL	200x17	1.00	0.14	1
020431	320431	120431	220431	KUSVNR-300 UL	300x17	1.00	0.20	1
020441	320441	120441	220441	KUSVNR-400 UL	400x17	1.00	0.26	1
020451	320451	120451	220451	KUSVNR-500 UL	500x17	1.00	0.33	1
020461	320461	120461	220461	KUSVNR-600 UL	600x17	1.00	0.39	1



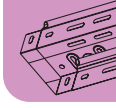
USVR vertical outside angle connector/KUSVR cover for connector

NEW

Version code				Art. No.	Dimensions, mm HxA	Metal thickness, mm	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
082755	382755	182755	282755	USVR-50x50 UL	50x47	1.00	0.20	1
082715	382715	182715	282715	USVR-100x50 UL	50x97	1.00	0.28	1
082750	382750	182750	282750	USVR-150x50 UL	50x147	1.00	0.36	1
082725	382725	182725	282725	USVR-200x50 UL	50x197	1.00	0.41	1
082735	382735	182735	282735	USVR-300x50 UL	50x297	1.00	0.54	1
082745	382745	182745	282745	USVR-400x50 UL	50x397	1.00	0.67	1
082705	382705	182705	282705	USVR-500x50 UL	50x497	1.00	0.79	1
082765	382765	182765	282765	USVR-600x50 UL	50x597	1.00	0.92	1
082716	382716	182716	282716	USVR-100x65 UL	65x97	1.00	0.36	1
082706	382706	182706	282706	USVR-150x65 UL	65x147	1.00	0.44	1
082726	382726	182726	282726	USVR-200x65 UL	65x197	1.00	0.49	1
082736	382736	182736	282736	USVR-300x65 UL	65x297	1.00	0.62	1
082746	382746	182746	282746	USVR-400x65 UL	65x397	1.00	0.75	1
082756	382756	182756	282756	USVR-500x65 UL	65x497	1.00	0.87	1
082766	382766	182766	282766	USVR-600x65 UL	65x597	1.00	1.00	1
082718	382718	182718	282718	USVR-100x80 UL	80x97	1.00	0.44	1
082708	382708	182708	282708	USVR-150x80 UL	80x147	1.00	0.52	1
082728	382728	182728	282728	USVR-200x80 UL	80x197	1.00	0.57	1
082738	382738	182738	282738	USVR-300x80 UL	80x297	1.00	0.70	1
082748	382748	182748	282748	USVR-400x80 UL	80x397	1.00	0.83	1
082758	382758	182758	282758	USVR-500x80 UL	80x497	1.00	0.96	1
082768	382768	182768	282768	USVR-600x80 UL	80x597	1.00	1.08	1
082711	382711	182711	282711	USVR-100x100 UL	100x97	1.00	0.57	1
082710	382710	182710	282710	USVR-150x100 UL	100x147	1.00	0.65	1
082721	382721	182721	282721	USVR-200x100 UL	100x197	1.00	0.70	1
082731	382731	182731	282731	USVR-300x100 UL	100x297	1.00	0.82	1
082741	382741	182741	282741	USVR-400x100 UL	100x397	1.00	0.95	1
082701	382701	182701	282701	USVR-500x100 UL	100x497	1.00	1.08	1
082761	382761	182761	282761	USVR-600x100 UL	100x597	1.00	1.21	1
082709	382709	182709	282709	USVR-150x150 UL	150x147	1.00	1.01	1
082720	382720	182720	282720	USVR-200x150 UL	150x197	1.00	1.08	1
082730	382730	182730	282730	USVR-300x150 UL	150x297	1.00	1.21	1
082740	382740	182740	282740	USVR-400x150 UL	150x397	1.00	1.34	1
082700	382700	182700	282700	USVR-500x150 UL	150x497	1.00	1.47	1
082760	382760	182760	282760	USVR-600x150 UL	150x597	1.00	1.60	1
082722	382722	182722	282722	USVR-200x200 UL	150x197	1.00	1.50	1
082732	382732	182732	282732	USVR-300x200 UL	150x297	1.00	1.62	1
082742	382742	182742	282742	USVR-400x200 UL	150x397	1.00	1.75	1
082702	382702	182702	282702	USVR-500x200 UL	150x497	1.00	1.88	1
082762	382762	182762	282762	USVR-600x200 UL	150x597	1.00	2.01	1
020705	320705	120705	220705	KUSVR-50x50 UL	10x50	1.00	0.08	1
020715	320715	120715	220715	KUSVR-100x50 UL	10x100	1.00	0.17	1
020701	320701	120701	220701	KUSVR-150x50 UL	10x150	1.00	0.25	1
020725	320725	120725	220725	KUSVR-200x50 UL	10x200	1.00	0.32	1
020735	320735	120735	220735	KUSVR-300x50 UL	10x300	1.00	0.47	1

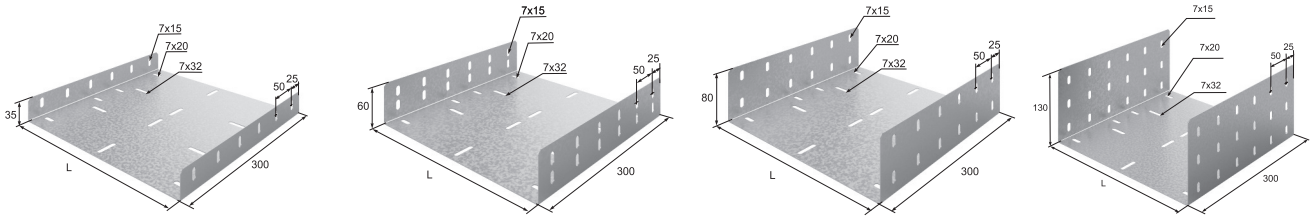


Version code				Art. No.	Dimensions, mm HxA	Metal thickness, mm	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
020745	320745	120745	220745	KUSVR-400x50 UL	10x400	1.00	0.63	1
020755	320755	120755	220755	KUSVR-500x50 UL	10x500	1.00	0.78	1
020765	320765	120765	220765	KUSVR-600x50 UL	10x600	1.00	0.93	1
020716	320716	120716	220716	KUSVR-100x65 UL	10x100	1.00	0.20	1
020706	320706	120706	220706	KUSVR-150x65 UL	10x150	1.00	0.28	1
020726	320726	120726	220726	KUSVR-200x65 UL	10x200	1.00	0.37	1
020736	320736	120736	220736	KUSVR-300x65 UL	10x300	1.00	0.55	1
020746	320746	120746	220746	KUSVR-400x65 UL	10x400	1.00	0.72	1
020756	320756	120756	220756	KUSVR-500x65 UL	10x500	1.00	0.90	1
020766	320766	120766	220766	KUSVR-600x65 UL	10x600	1.00	1.08	1
020718	320718	120718	220718	KUSVR-100x80 UL	10x100	1.00	0.22	1
020708	320708	120708	220708	KUSVR-150x80 UL	10x150	1.00	0.32	1
020728	320728	120728	220728	KUSVR-200x80 UL	10x200	1.00	0.42	1
020738	320738	120738	220738	KUSVR-300x80 UL	10x300	1.00	0.62	1
020748	320748	120748	220748	KUSVR-400x80 UL	10x400	1.00	0.82	1
020758	320758	120758	220758	KUSVR-500x80 UL	10x500	1.00	1.02	1
020768	320768	120768	220768	KUSVR-600x80 UL	10x600	1.00	1.22	1
020711	320711	120711	220711	KUSVR-100x100 UL	10x100	1.00	0.26	1
020710	320710	120710	220710	KUSVR-150x100 UL	10x150	1.00	0.37	1
020721	320721	120721	220721	KUSVR-200x100 UL	10x200	1.00	0.49	1
020731	320731	120731	220731	KUSVR-300x100 UL	10x300	1.00	0.72	1
020741	320741	120741	220741	KUSVR-400x100 UL	10x400	1.00	0.95	1
020751	320751	120751	220751	KUSVR-500x100 UL	10x500	1.00	1.18	1
020761	320761	120761	220761	KUSVR-600x100 UL	10x600	1.00	1.41	1
020709	320709	120709	220709	KUSVR-150x150 UL	10x150	1.00	0.50	1
020720	320720	120720	220720	KUSVR-200x150 UL	10x200	1.00	0.65	1
020730	320730	120730	220730	KUSVR-300x150 UL	10x300	1.00	0.96	1
020740	320740	120740	220740	KUSVR-400x150 UL	10x400	1.00	1.27	1
020700	320700	120700	220700	KUSVR-500x150 UL	10x500	1.00	1.58	1
020760	320760	120760	220760	KUSVR-600x150 UL	10x600	1.00	1.89	1
020722	320722	120722	220722	KUSVR-200x200 UL	10x200	1.00	0.82	1
020732	320732	120732	220732	KUSVR-300x200 UL	10x300	1.00	1.21	1
020742	320742	120742	220742	KUSVR-400x200 UL	10x400	1.00	1.60	1
020702	320702	120702	220702	KUSVR-500x200 UL	10x500	1.00	1.99	1
020762	320762	120762	220762	KUSVR-600x200 UL	10x600	1.00	2.37	1

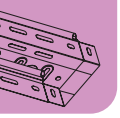


1.26 OSTEC UL UNIVERSAL CONNECTORS NEW

SLB tray side connector, UL series



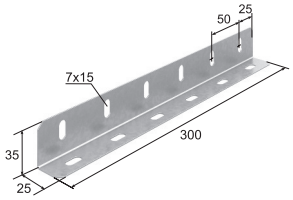
Version code				Art. No.	L, mm	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
080077	380077	180077	280077	SLB-50x50 (1 mm) UL	54	0.27	1
080071	380071	180071	280071	SLB-100 (50/65) (1 mm) UL	104	0.39	1
080070	380070	180070	280070	SLB-150 (50/65) (1 mm) UL	154	0.51	1
080072	380072	180072	280072	SLB-200 (50/65) (1 mm) UL	204	0.63	1
080073	380073	180073	280073	SLB-300 (50/65) (1 mm) UL	304	0.86	1
080074	380074	180074	280074	SLB-400 (50/65) (1 mm) UL	404	1.10	1
080075	380075	180075	280075	SLB-500 (50/65) (1 mm) UL	504	1.33	1
080076	380076	180076	280076	SLB-600 (50/65) (1 mm) UL	604	1.57	1
080018	380018	180018	280018	SLB-100x80 (1 mm) UL	104	0.49	1
080008	380008	180008	280008	SLB-150x80 (1 mm) UL	154	0.61	1
080028	380028	180028	280028	SLB-200x80 (1 mm) UL	204	0.73	1
080038	380038	180038	280038	SLB-300x80 (1 mm) UL	304	0.97	1
080048	380048	180048	280048	SLB-400x80 (1 mm) UL	404	1.21	1
080058	380058	180058	280058	SLB-500x80 (1 mm) UL	504	1.45	1
080068	380068	180068	280068	SLB-600x80 (1 mm) UL	604	1.68	1
080011	380011	180011	280011	SLB-100x100 (1 mm) UL	104	0.59	1
080001	380001	180001	280001	SLB-150x100 (1 mm) UL	154	0.71	1
080021	380021	180021	280021	SLB-200x100 (1 mm) UL	204	0.83	1
080031	380031	180031	280031	SLB-300x100 (1 mm) UL	304	1.07	1
080041	380041	180041	280041	SLB-400x100 (1 mm) UL	404	1.31	1
080051	380051	180051	280051	SLB-500x100 (1 mm) UL	504	1.55	1
080061	380061	180061	280061	SLB-600x100 (1 mm) UL	604	1.78	1
080090	380090	180090	280090	SLB-150x150 (1 mm) UL	154	0.86	1
080092	380092	180092	280092	SLB-200 (150/200) (1 mm) UL	204	1.05	1
080093	380093	180093	280093	SLB-300 (150/200) (1 mm) UL	304	1.29	1
080094	380094	180094	280094	SLB-400 (150/200) (1 mm) UL	404	1.52	1
080095	380095	180095	280095	SLB-500 (150/200) (1 mm) UL	504	1.76	1
080096	380096	180096	280096	SLB-600 (150/200) (1 mm) UL	604	1.99	1
081977	381977	181977	281977	SLB-50x50 (1.2 mm) UL	54	0.33	1
081971	381971	181971	281971	SLB-100 (50/65) (1.2 mm) UL	104	0.47	1
081970	381970	181970	281970	SLB-150 (50/65) (1.2 mm) UL	154	0.61	1
081972	381972	181972	281972	SLB-200 (50/65) (1.2 mm) UL	204	0.75	1
081973	381973	181973	281973	SLB-300 (50/65) (1.2 mm) UL	304	1.03	1
081974	381974	181974	281974	SLB-400 (50/65) (1.2 mm) UL	404	1.31	1
081975	381975	181975	281975	SLB-500 (50/65) (1.2 mm) UL	504	1.59	1
081976	381976	181976	281976	SLB-600 (50/65) (1.2 mm) UL	604	1.88	1
081918	381918	181918	281918	SLB-100x80 (1.2 mm) UL	104	0.59	1
081908	381908	181908	281908	SLB-150x80 (1.2 mm) UL	154	0.74	1
081928	381928	181928	281928	SLB-200x80 (1.2 mm) UL	204	0.88	1
081938	381938	181938	281938	SLB-300x80 (1.2 mm) UL	304	1.17	1
081948	381948	181948	281948	SLB-400x80 (1.2 mm) UL	404	1.45	1
081958	381958	181958	281958	SLB-500x80 (1.2 mm) UL	504	1.74	1
081968	381968	181968	281968	SLB-600x80 (1.2 mm) UL	604	2.02	1
081911	381911	181911	281911	SLB-100x100 (1.2 mm) UL	104	0.69	1
081901	381901	181901	281901	SLB-150x100 (1.2 mm) UL	154	0.84	1
081921	381921	181921	281921	SLB-200x100 (1.2 mm) UL	204	0.98	1

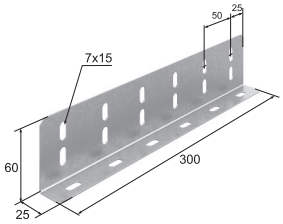


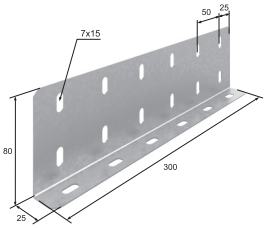
Version code				Art. No.	L, mm	Weight, kg/each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
081931	381931	181931	281931	SLB-300x100 (1.2 mm) UL	304	1.27	1
081941	381941	181941	281941	SLB-400x100 (1.2 mm) UL	404	1.55	1
081951	381951	181951	281951	SLB-500x100 (1.2 mm) UL	504	1.84	1
081961	381961	181961	281961	SLB-600x100 (1.2 mm) UL	604	2.12	1
081990	381990	181990	281990	SLB-150x150 (1.2 mm) UL	154	1.12	1
081992	381992	181992	281992	SLB-200 (150/200) (1.2 mm) UL	204	1.26	1
081993	381993	181993	281993	SLB-300 (150/200) (1.2 mm) UL	304	1.54	1
081994	381994	181994	281994	SLB-400 (150/200) (1.2 mm) UL	404	1.83	1
081995	381995	181995	281995	SLB-500 (150/200) (1.2 mm) UL	504	2.11	1
081996	381996	181996	281996	SLB-600 (150/200) (1.2 mm) UL	604	2.39	1
082077	382077	182077	282077	SLB-50x50 (1.5 mm) UL	54	0.41	1
082071	382071	182071	282071	SLB-100 (50/65) (1.5 mm) UL	104	0.59	1
082070	382070	182070	282070	SLB-150 (50/65) (1.5 mm) UL	54	0.77	1
082072	382072	182072	282072	SLB-200 (50/65) (1.5 mm) UL	204	0.93	1
082073	382073	182073	282073	SLB-300 (50/65) (1.5 mm) UL	304	1.28	1
082074	382074	182074	282074	SLB-400 (50/65) (1.5 mm) UL	404	1.64	1
082075	382075	182075	282075	SLB-500 (50/65) (1.5 mm) UL	504	1.99	1
082076	382076	182076	282076	SLB-600 (50/65) (1.5 mm) UL	604	2.34	1
082018	382018	182018	282018	SLB-100x80 (1.5 mm) UL	104	0.74	1
082008	382008	182008	282008	SLB-150x80 (1.5 mm) UL	154	0.92	1
082028	382028	182028	282028	SLB-200x80 (1.5 mm) UL	204	1.10	1
082038	382038	182038	282038	SLB-300x80 (1.5 mm) UL	304	1.46	1
082048	382048	182048	282048	SLB-400x80 (1.5 mm) UL	404	1.82	1
082058	382058	182058	282058	SLB-500x80 (1.5 mm) UL	504	2.17	1
082068	382068	182068	282068	SLB-600x80 (1.5 mm) UL	604	2.52	1
082011	382011	182011	282011	SLB-100x100 (1.5 mm) UL	104	0.84	1
082001	382001	182001	282001	SLB-150x100 (1.5 mm) UL	154	1.02	1
082021	382021	182021	282021	SLB-200x100 (1.5 mm) UL	204	1.20	1
082031	382031	182031	282031	SLB-300x100 (1.5 mm) UL	304	1.56	1
082041	382041	182041	282041	SLB-400x100 (1.5 mm) UL	404	1.92	1
082051	382051	182051	282051	SLB-500x100 (1.5 mm) UL	504	2.27	1
082061	382061	182061	282061	SLB-600x100 (1.5 mm) UL	604	2.62	1
082090	382090	182090	282090	SLB-150x150 (1.5 mm) UL	154	1.40	1
082092	382092	182092	282092	SLB-200 (150/200) (1.5 mm) UL	204	1.58	1
082093	382093	182093	282093	SLB-300 (150/200) (1.5 mm) UL	304	1.93	1
082094	382094	182094	282094	SLB-400 (150/200) (1.5 mm) UL	404	2.28	1
082095	382095	182095	282095	SLB-500 (150/200) (1.5 mm) UL	504	2.64	1
082096	382096	182096	282096	SLB-600 (150/200) (1.5 mm) UL	604	2.99	1

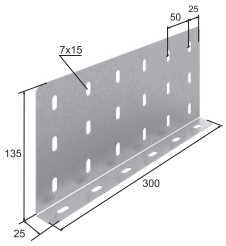
SLU universal connector, UL series

NEW





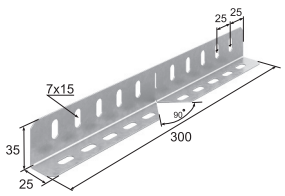


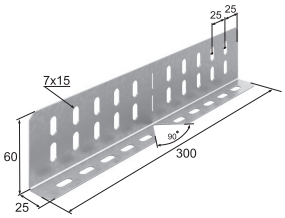


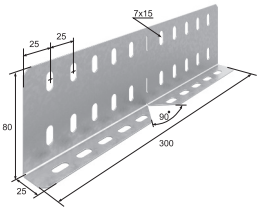
Version code				Art. No.	Dimensions, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
083915	383915	183915	283915	SLU-50/65 (1 mm) UL	300x25x35	0.13	1
083918	383918	183918	283918	SLU-80 (1 mm) UL	300x25x60	0.18	1
083911	383911	183911	283911	SLU-100 (1 mm) UL	300x25x80	0.23	1
083910	383910	183910	283910	SLU-150/200 (1 mm) UL	300x25x135	0.35	1
083925	383925	183925	283925	SLU-50/65 (1.2 mm) UL	300x25x35	0.15	1
083928	383928	183928	283928	SLU-80 (1.2 mm) UL	300x25x60	0.22	1
083921	383921	183921	283921	SLU-100 (1.2 mm) UL	300x25x80	0.29	1
083920	383920	183920	283920	SLU-150/200 (1.2 mm) UL	300x25x135	0.42	1
083935	383935	183935	283935	SLU-50/65 (1.5 mm) UL	300x25x35	0.19	1
083938	383938	183938	283938	SLU-80 (1.5 mm) UL	300x25x60	0.27	1
083931	383931	183931	283931	SLU-100 (1.5 mm) UL	300x25x80	0.35	1
083930	383930	183930	283930	SLU-150/200 (1.5 mm) UL	300x25x135	0.53	1

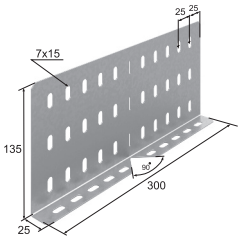
SLUI universal adjustable connector, UL series

NEW

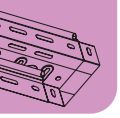






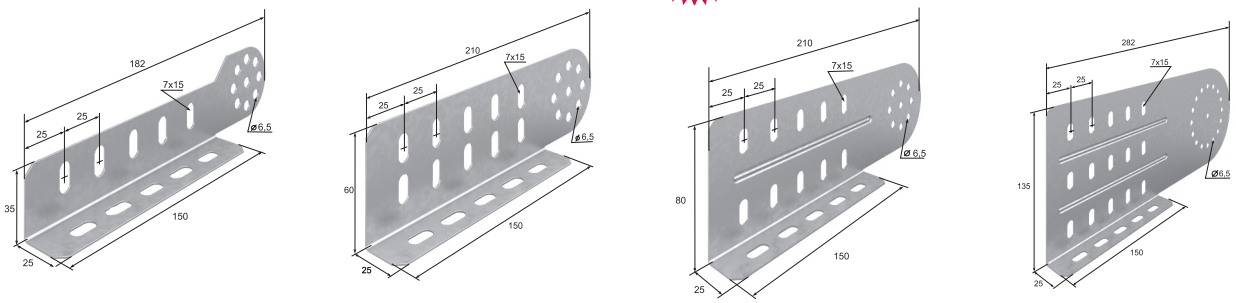


Version code				Art. No.	Dimensions, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
084015	384015	184015	284015	SLUI-50/65 (1 mm) UL	300x25x35	0.12	1
084018	384018	184018	284018	SLUI-80 (1 mm) UL	300x25x60	0.18	1
084011	384011	184011	284011	SLUI-100 (1 mm) UL	300x25x80	0.24	1
084010	384010	184010	284010	SLUI-150/200 (1 mm) UL	300x25x135	0.35	1
084025	384025	184025	284025	SLUI-50/65 (1.2 mm) UL	300x25x35	0.15	1
084028	384028	184028	284028	SLUI-80 (1.2 mm) UL	300x25x60	0.21	1
084021	384021	184021	284021	SLUI-100 (1.2 mm) UL	300x25x80	0.27	1
084020	384020	184020	284020	SLUI-150/200 (1.2 mm) UL	300x25x135	0.42	1
084035	384035	184035	284035	SLUI-50/65 (1.5 mm) UL	300x25x35	0.18	1
084038	384038	184038	284038	SLUI-80 (1.5 mm) UL	300x25x60	0.26	1
084031	384031	184031	284031	SLUI-100 (1.5 mm) UL	300x25x80	0.34	1
084030	384030	184030	284030	SLUI-150/200 (1.5 mm) UL	300x25x135	0.52	1



SLUSH universal hinge connector, UL series

NEW

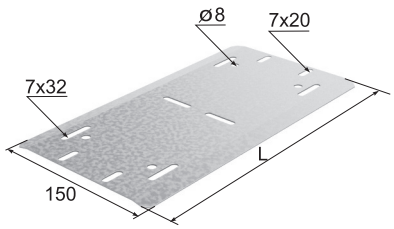


Version code				Art. No.	Dimensions, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
083815	383815	183815	283815	SLUSH-50/65 (1 mm) UL	182x25x35	0.07	1
083818	383818	183818	283818	SLUSH-80 (1 mm) UL	210x25x60	0.11	1
083811	383811	183811	283811	SLUSH-100 (1 mm) UL	210x25x80	0.17	1
083810	383810	183810	283810	SLUSH-150/200 (1 mm) UL	282x25x135	0.30	1
083825	383825	183825	283825	SLUSH-50/65 (1.2 mm) UL	182x25x35	0.08	1
083828	383828	183828	283828	SLUSH-80 (1.2 mm) UL	210x25x60	0.13	1
083821	383821	183821	283821	SLUSH-100 (1.2 mm) UL	210x25x80	0.19	1
083820	383820	183820	283820	SLUSH-150/200 (1.2 mm) UL	282x25x135	0.36	1
083835	383835	183835	283835	SLUSH-50/65 (1.5 mm) UL	182x25x35	0.10	1
083838	383838	183838	283838	SLUSH-80 (1.5 mm) UL	210x25x60	0.17	1
083831	383831	183831	283831	SLUSH-100 (1.5 mm) UL	210x25x80	0.23	1
083830	383830	183830	283830	SLUSH-150/200 (1.5 mm) UL	282x25x135	0.44	1

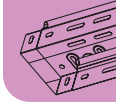
1.27 OSTEC UL PROTECTORS

NEW

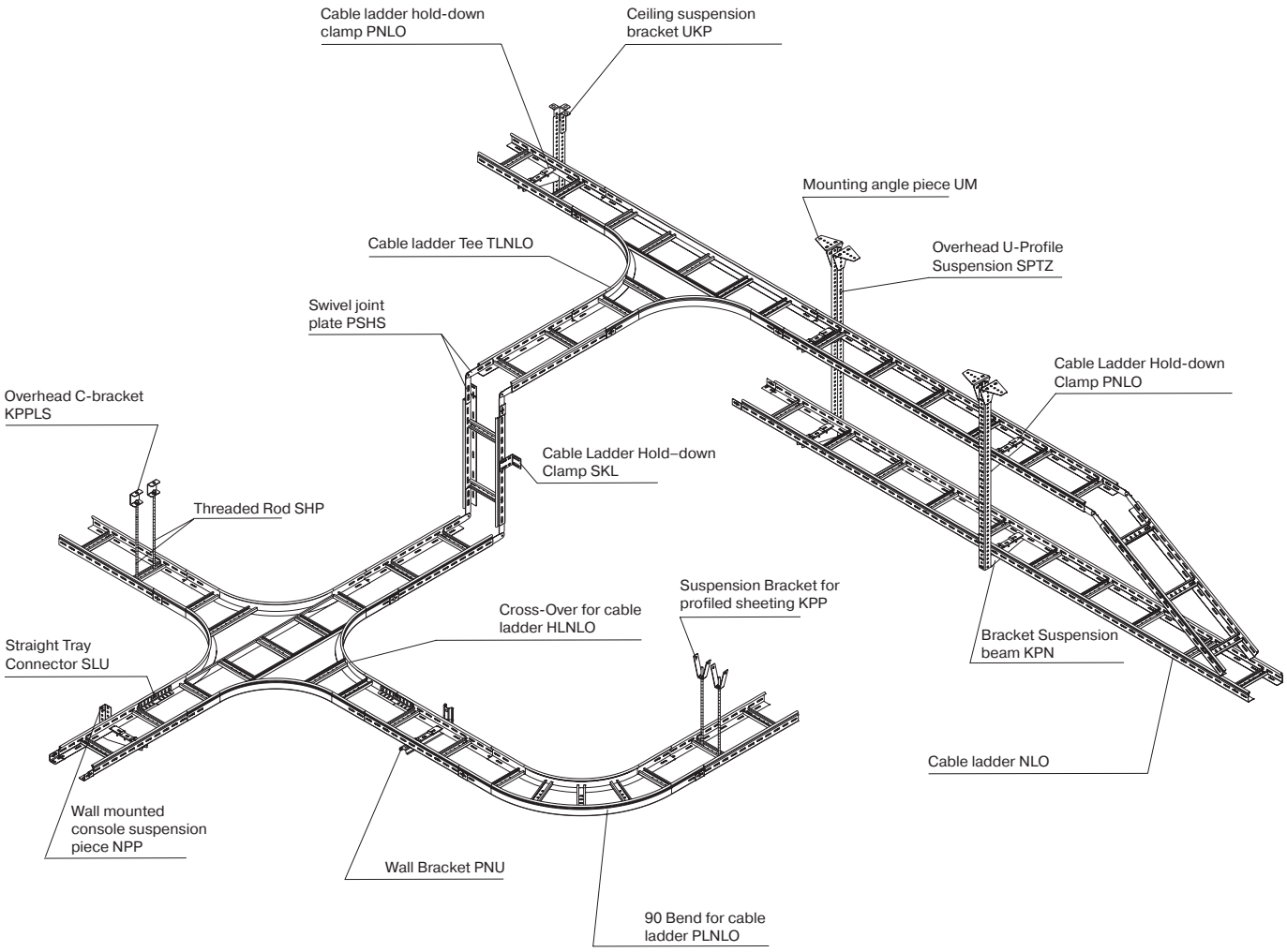
UL tray joint protector



Version code				Art. No.	L, mm	Weight, kg/ each	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				
060104	360104	160104	260104	Pr-100 UL	90	0.10	1
060154	360154	160154	260154	Pr-150 UL	140	0.15	1
060204	360204	160204	260204	Pr-200 UL	190	0.21	1
060304	360304	160304	260304	Pr-300 UL	290	0.34	1
060404	360404	160404	260404	Pr-400 UL	390	0.44	1
060504	360504	160504	260504	Pr-500 UL	490	0.54	1
060604	360604	160604	260604	Pr-600 UL	590	0.64	1



2. CABLE LADDERS OSTEC

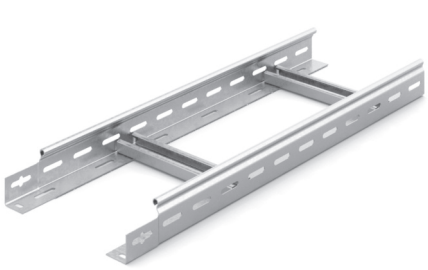


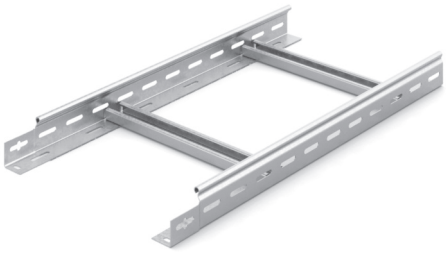
2.1 CABLE LADDERS OSTEC NLO SERIES

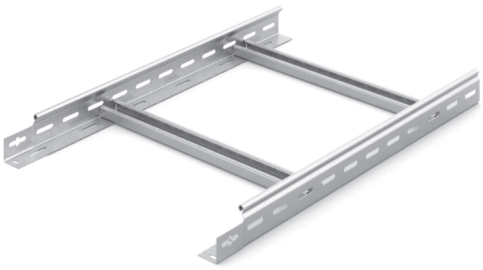
Cable ladder NLO 200x50

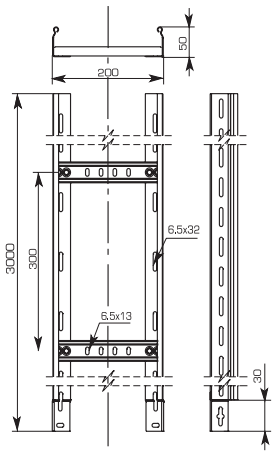
Cable ladder NLO 300x50

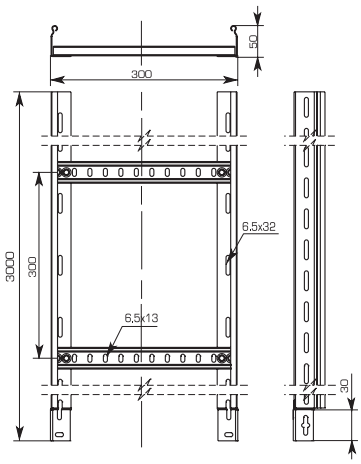
Cable ladder NLO 400x50

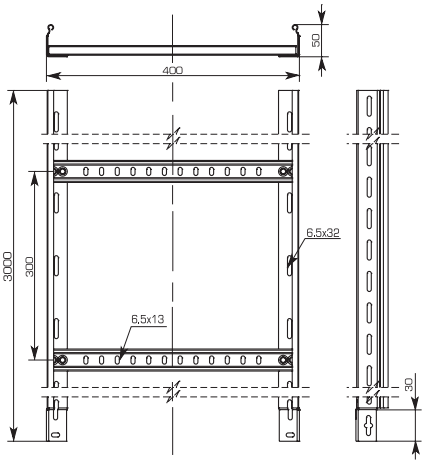












Material Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)

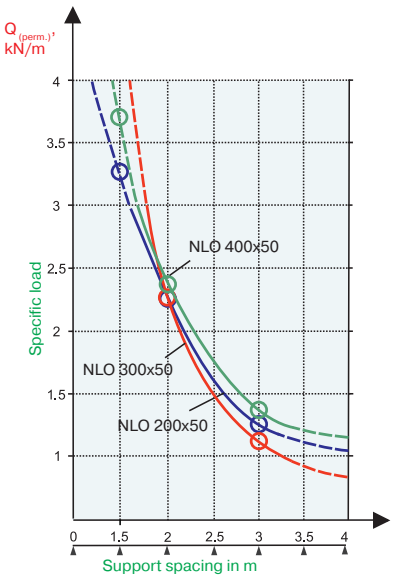
Steel grade 08 PS GOST 52246-2004

Structure Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs. The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling. Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers

Manufacturing method Roll-forming, clinching

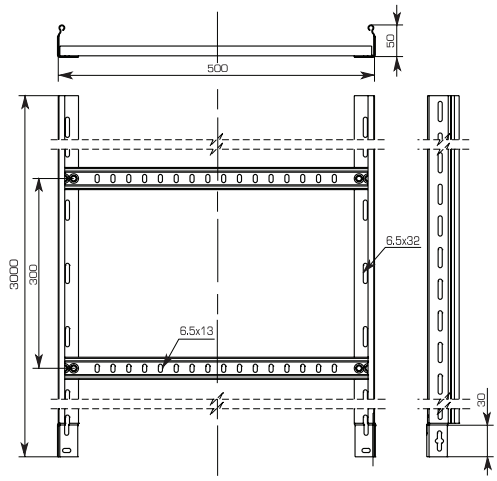
Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

- Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

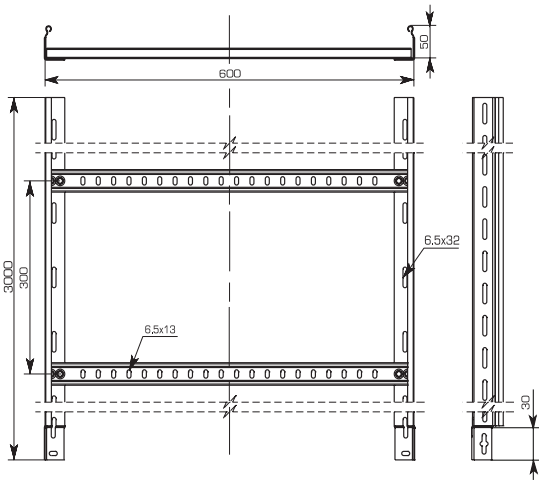


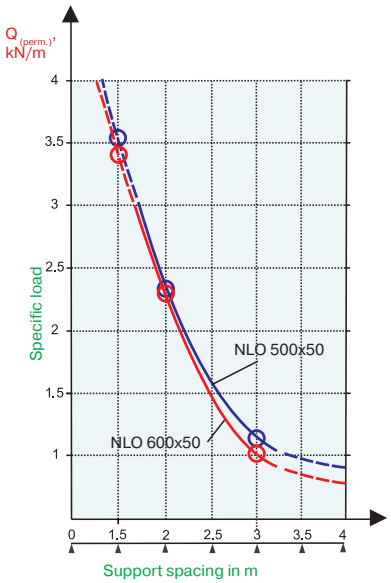
Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013251	313251	213251	NLO 200x50	200x50x3000	1.20	2.03	2.25	1.24	6
013351	313351	213351	NLO 300x50	300x50x3000	1.20	2.21	2.25	1.13	6
013451	313451	213451	NLO 400x50	400x50x3000	1.20	2.40	2.35	1.29	6
083256	383256	283256	NLO 200x50x6000	200x50x6000	1.20	2.03	2.25	1.24	12
083356	383356	283356	NLO 300x50x6000	300x50x6000	1.20	2.21	2.25	1.13	12
083456	383456	283456	NLO 400x50x6000	400x50x6000	1.20	2.40	2.35	1.29	12

Cable ladder NLO 500x50



Cable ladder NLO 600x50





Material Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)

Steel grade 08 PS GOST 52246-2004

Structure Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs.

The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling.

Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers.

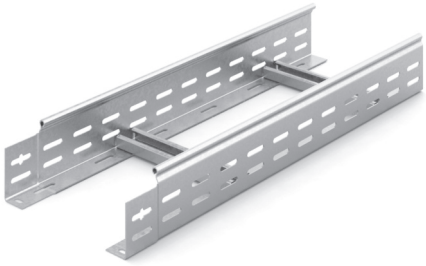
Manufacturing method Roll-forming, clinching

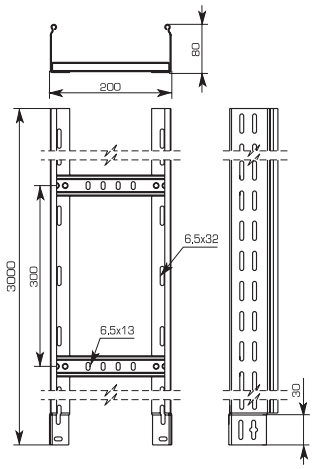
Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

- Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

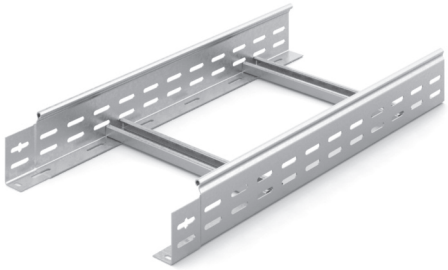
Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013551	313551	213551	NLO 500x50	500x50x3000	1.20	2.58	2.35	1.17	6
013651	313651	213651	NLO 600x50	600x50x3000	1.20	2.76	2.30	1.05	6
083556	383556	283556	NLO 500x50x6000	500x50x6000	1.20	2.58	2.35	1.17	12
083656	383656	283656	NLO 600x50x6000	600x50x6000	1.20	2.76	2.30	1.05	12

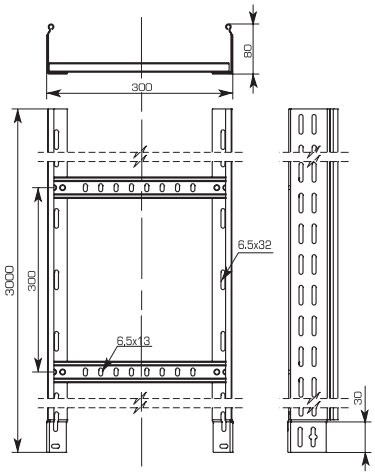
Cable ladder NLO 200x80



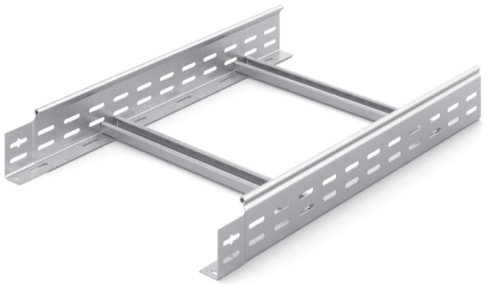


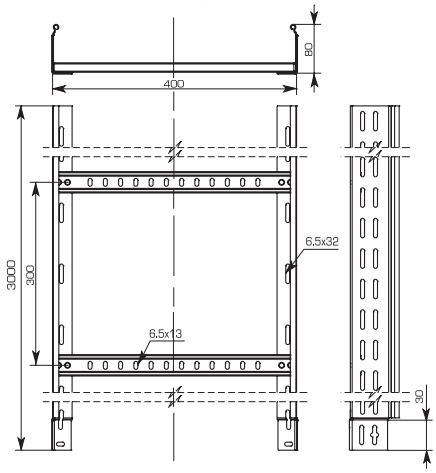
Cable ladder NLO 300x80





Cable ladder NLO 400x80





Material	Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)
Steel grade	08 PS GOST 52246-2004
Structure	Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs. The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling. Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers.
Manufacturing method	Roll-forming, clinching

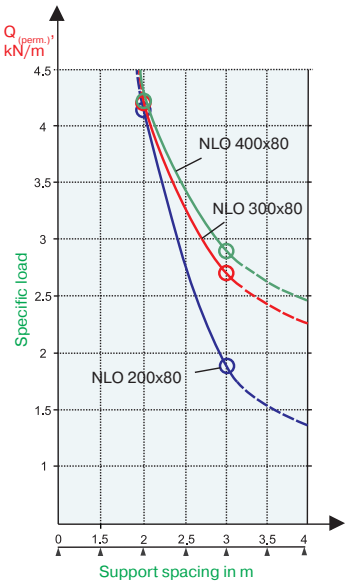
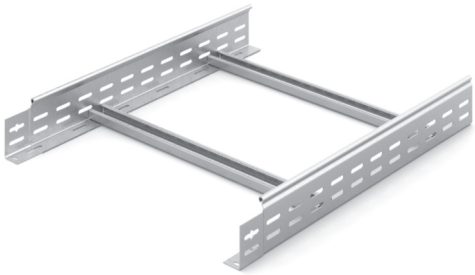


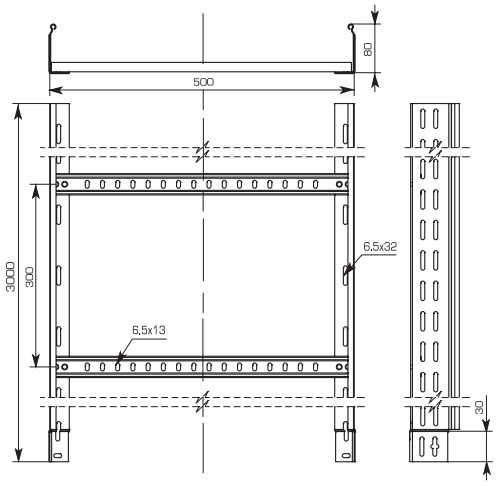
Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

- Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

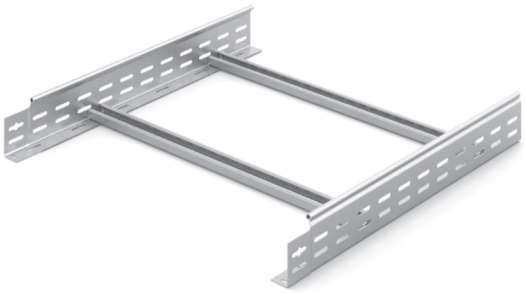
Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013281	313281	213281	NLO 200x80	200x80x3000	1.50	3.06	4.12	1.88	6
013381	313381	213381	NLO 300x80	300x80x3000	1.50	3.22	4.19	2.65	6
013481	313481	213481	NLO 400x80	400x80x3000	1.50	3.40	4.21	2.71	6
083286	383286	283286	NLO 200x80x6000	200x80x6000	1.50	3.06	4.12	1.88	12
083386	383386	283386	NLO 300x80x6000	300x80x6000	1.50	3.22	4.19	2.65	12
083486	383486	283486	NLO 400x80x6000	400x80x6000	1.50	3.40	4.21	2.71	12

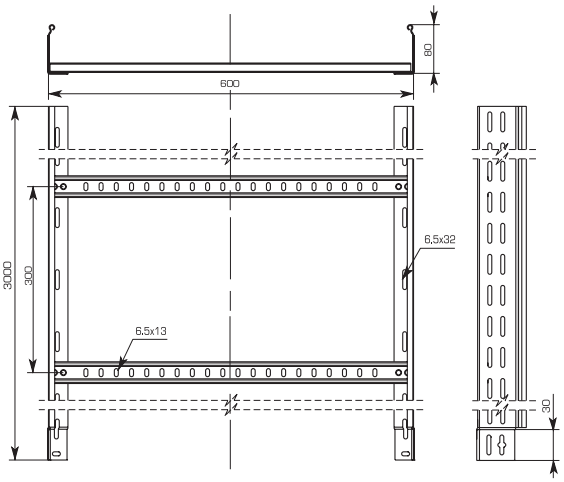
Cable ladder NLO 500x80

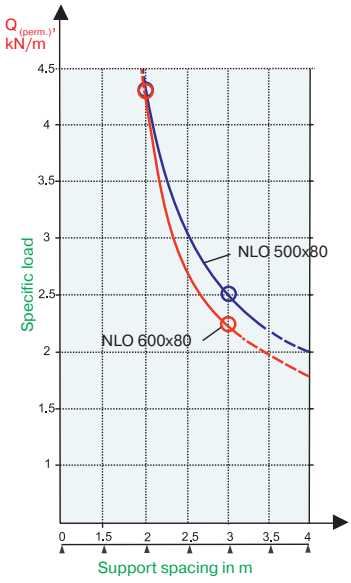




Cable ladder NLO 600x80







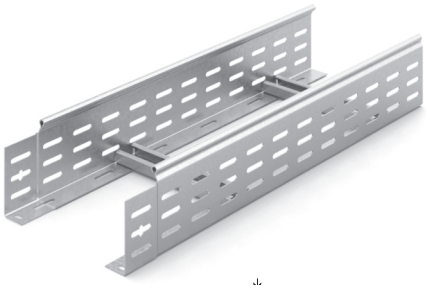
Material	Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)
Steel grade	08 PS GOST 52246-2004
Structure	Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs. The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling. Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers.
Manufacturing method	Roll-forming, clinching

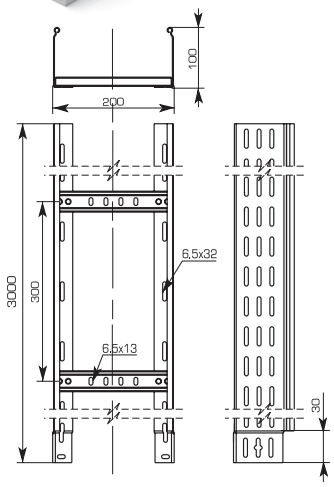
Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

- Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

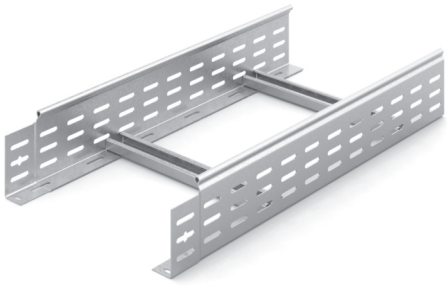
Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013581	313581	213581	NLO 500x80	500x80x3000	1.50	2.58	4.32	2.52	6
013681	313681	213681	NLO 600x80	600x80x3000	1.50	3.76	4.31	2.25	6
083586	383586	283586	NLO 500x80x6000	500x80x6000	1.50	2.58	4.32	2.52	12
083686	383686	283686	NLO 600x80x6000	600x80x6000	1.50	3.76	4.31	2.25	12

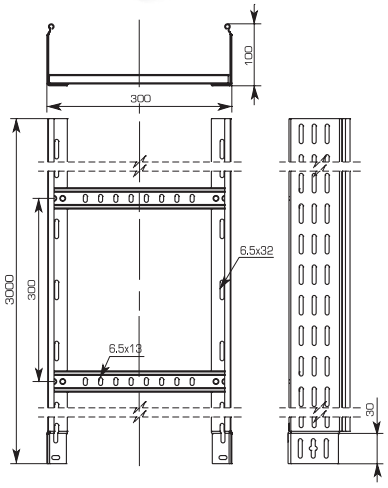
Cable ladder NLO 200x100



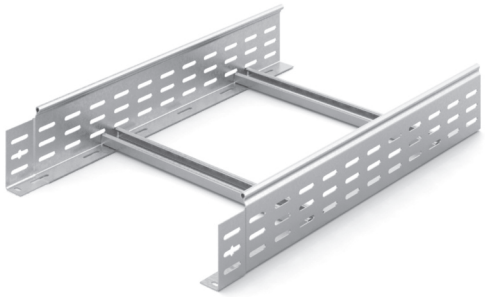


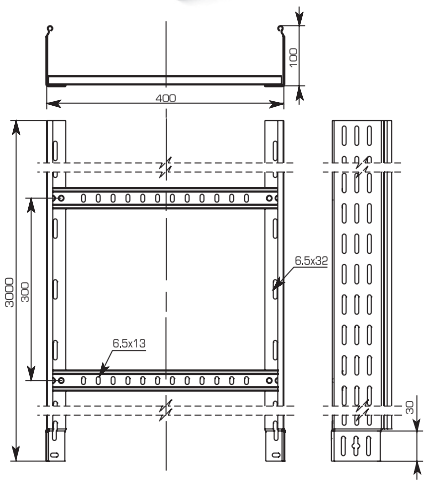
Cable ladder NLO 300x100





Cable ladder NLO 400x100





Material	Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)
Steel grade	08 PS GOST 52246-2004
Structure	Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs. The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling. Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers.
Manufacturing method	Roll-forming, clinching

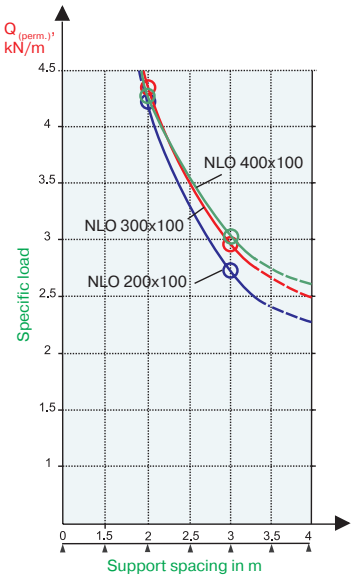
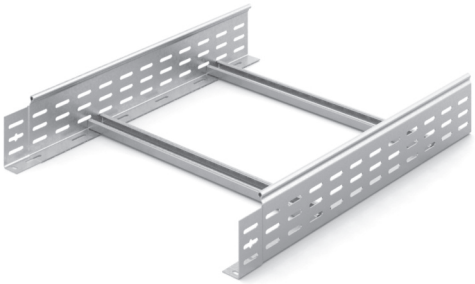


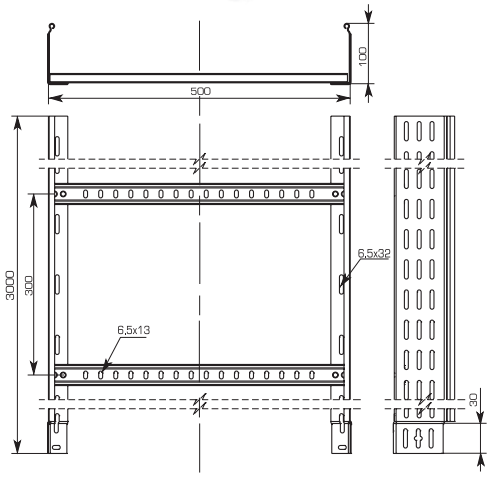
Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

-Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

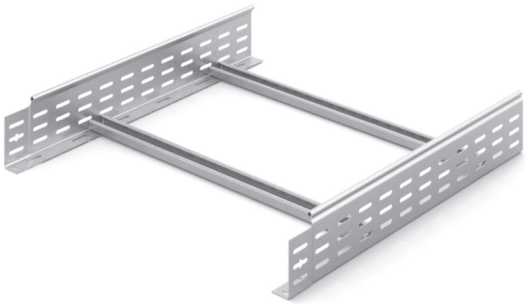
Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013211	313211	213211	NLO 200x100	200x100x3000	1.50	3.41	4.21	2.70	6
013311	313311	213311	NLO 300x100	300x100x3000	1.50	3.60	4.36	2.94	6
013411	313411	213411	NLO 400x100	400x100x3000	1.50	3.78	4.26	3.06	6
083216	383216	283216	NLO 200x100x6000	200x100x6000	1.50	3.41	4.21	2.70	12
083316	383316	283316	NLO 300x100x6000	300x100x6000	1.50	3.60	4.36	2.94	12
083416	383416	283416	NLO 400x100x6000	400x100x6000	1.50	3.78	4.26	3.06	12

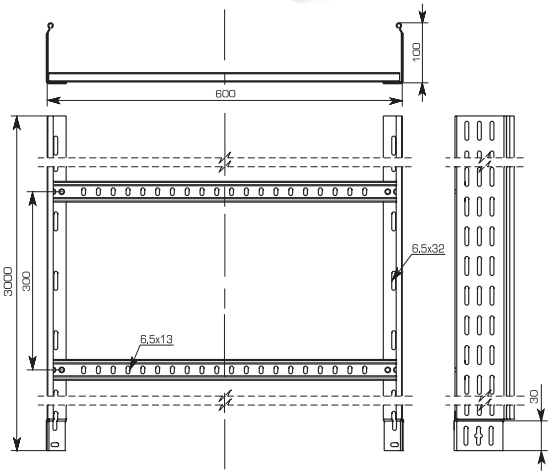
Cable ladder NLO 500x100





Cable ladder NLO 600x100





Material Produced of cold-rolled pre-galvanized steel (Sendzimir hot galvanization method)

Steel grade 08 PS GOST 52246-2004

Structure Cable ladders NLO are designed with 2 inverted L-profiles and 10 perforated runs. The L-profile of the side rail has a tubular structure of the top edge which allows safe handling and cable pulling. Tubular structure of side rail L-profiles ensures of the tray allows usage of cable protecting KLZT tray covers

Manufacturing method Roll-forming, clinching

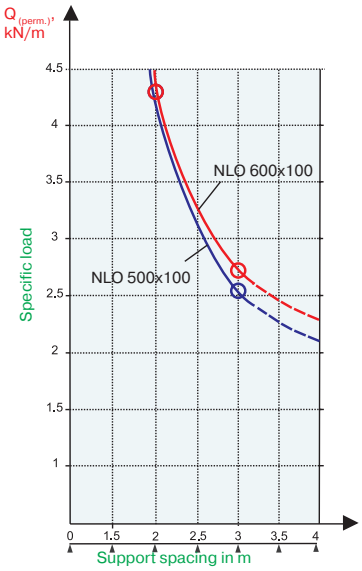
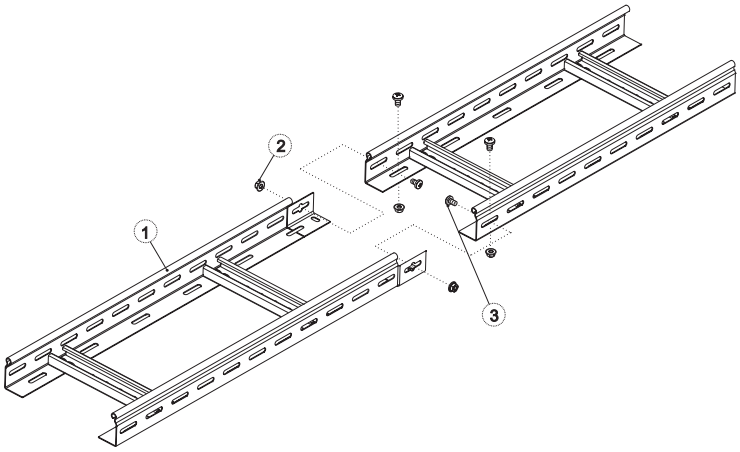


Diagram shows safe working load (SWL is the maximal load that can be safely applied to the system under normal conditions), recommended for cableway design. SWL corresponds to 80% of data received during load testing according to GOST R 52868-2007 (IEC 61537:2006) in compliance with the following requirements:

- Trays are fixed to supports with screws and nuts
- Installation — horizontal
- Supports are considered to be rigid
- Even load distribution (both longitudinal and lateral)
- Tray ends are disconnected
- Max linear deflection shall not exceed 1/100 of distance between supports
- Max lateral deflection shall not exceed 1/20 of tray width.

Version code			Art.	Dimensions, mm	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)		Packing, m
Sendzimir galvanized	Hot-dip galvanized	Painted					L = 2000	L = 3000	
013511	313511	213511	NLO 500x100	500x100x3000	1.50	3.96	4.31	2.59	6
013611	313611	213611	NLO 600x100	600x100x3000	1.50	4.14	4.31	2.65	6
083516	383516	283516	NLO 500x100x6000	500x100x6000	1.50	3.96	4.31	2.59	12
083616	383616	283616	NLO 600x100x6000	600x100x6000	1.50	4.14	4.31	2.65	12

Connection of cable ladders

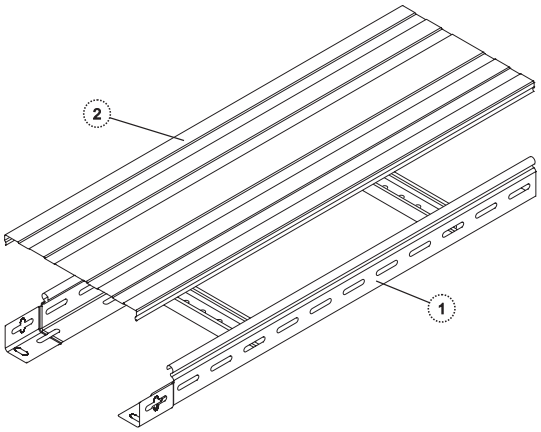


Connected trays (1) are male-female overlapped and are connected with the help of 4 set of screws in the following order: screw (3) — from inside of the tray, nut (2) — from outside of the tray.

Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
VM610	Screw M6x10	4
GM6SB	Nut M6 with locking collar	4

Installation of cable ladder cover

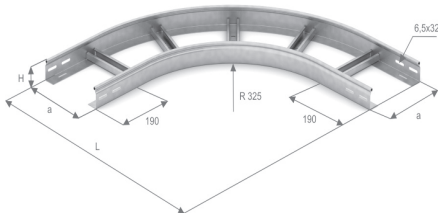


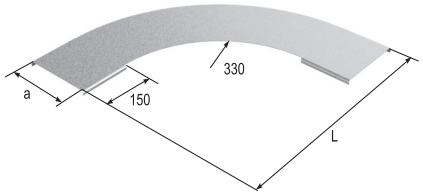
Cover (1) is positioned over the tray (2) and locks up by light pushing.

2.2 FLAT BENDS

90° bend for cable ladder NLO

Bends are used for horizontal cable routing at 90 degrees turn. A support or bracket shall be placed in the area of the bend connection to the ladder tray.



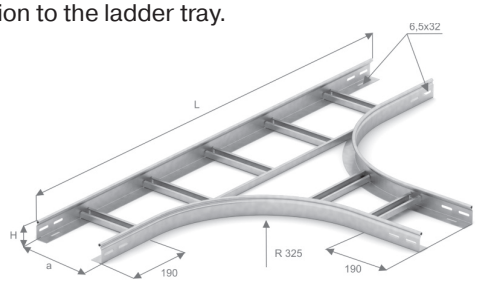


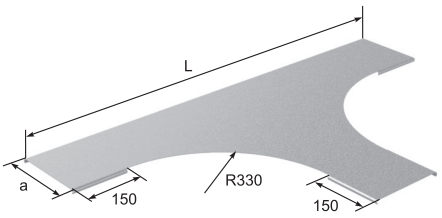
Version code			Art.	H, mm	a, mm	L, mm	Weight, kg	Packing, pieces
Sendzimir galvanized	Hot-dip galvanized	Painted						
033125	333125	333125	PLNLO 200x50	50	200	1230	2.37	2
033135	333135	333135	PLNLO 300x50	50	300	1330	2.78	2
033145	333145	333145	PLNLO 400x50	50	400	1430	3.19	2
033105	333105	333105	PLNLO 500x50	50	500	1530	3.60	2
033165	333165	333165	PLNLO 600x50	50	600	1630	4.02	2
033128	333128	333128	PLNLO 200x80	80	200	1230	2.96	2
033138	333138	333138	PLNLO 300x80	80	300	1330	3.42	2
033148	333148	333148	PLNLO 400x80	80	400	1430	3.87	2
033158	333158	333158	PLNLO 500x80	80	500	1530	4.33	2
033168	333168	333168	PLNLO 600x80	80	600	1630	4.79	2
033121	333121	333121	PLNLO 200x100	100	200	1230	3.36	2
033131	333131	333131	PLNLO 300x100	100	300	1330	3.84	2
033141	333141	333141	PLNLO 400x100	100	400	1430	4.33	2
033101	333101	333101	PLNLO 500x100	100	500	1530	4.81	2
033161	333161	333161	PLNLO 600x100	100	600	1630	5.30	2
023121	323121	323121	KPLNLO-200	-	200	675	1.06	1
023131	323131	323131	KPLNLO-300	-	300	775	1.72	1
023141	323141	323141	KPLNLO-400	-	400	875	2.47	1

2.3 HORIZONTAL TEES

Tees for cable ladder NLO

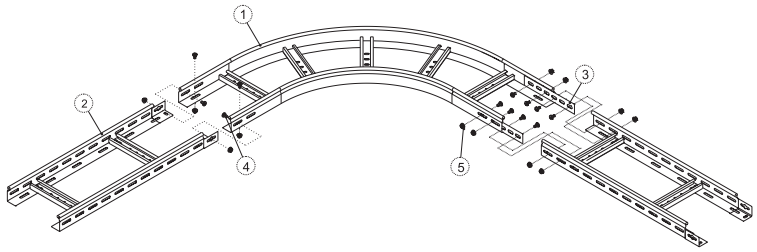
Horizontal tee is used for horizontal T-branch cable routing. A support or bracket shall be placed in the area of the bend connection to the ladder tray.





Version code			Art.	H, mm	a, mm	L, mm	Weight, kg	Packing, pieces
Sendzimir galvanized	Hot-dip galvanized	Painted						
033225	333225	233225	TLNLO 200x50	50	200	1230	3.86	2
033235	333235	233235	TLNLO 300x50	50	300	1330	4.38	2
033245	333245	233245	TLNLO 400x50	50	400	1430	4.90	2
033205	333205	233205	TLNLO 500x50	50	500	1530	5.42	2
033265	333265	233265	TLNLO 600x50	50	600	1630	6.28	2
033228	333228	233228	TLNLO 200x80	80	200	1230	4.71	2
033238	333238	233238	TLNLO 300x80	80	300	1330	5.26	2
033248	333248	233248	TLNLO 400x80	80	400	1430	5.81	2
033258	333258	233258	TLNLO 500x80	80	500	1530	6.36	2
033268	333268	233268	TLNLO 600x80	80	600	1630	7.24	2
033221	333221	233221	TLNLO 200x100	100	200	1230	5.28	2
033231	333231	233231	TLNLO 300x100	100	300	1330	5.85	2
033241	333241	233241	TLNLO 400x100	100	400	1430	6.41	2
033201	333201	233201	TLNLO 500x100	100	500	1530	6.98	2
033261	333261	233261	TLNLO 600x100	100	600	1630	7.88	2
023221	323221	223221	KPLNLO-200	-	200	1150	2.11	1
023231	323231	223231	KPLNLO-300	-	300	1250	3.17	1
023241	323241	223241	KPLNLO-400	-	400	1350	4.34	1

Connecting a cable ladder and horizontal bend



Each joint is assembled with the use of the following:

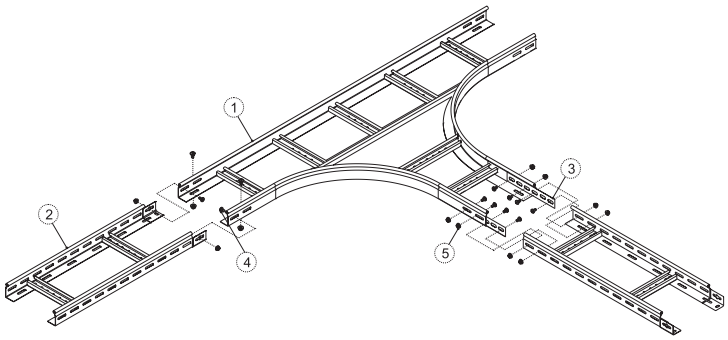
Art.	Name	Quantity, pieces
Connection of tray and bend with the use of straight tray connector		
SLU-50	Straight tray connector	2
VM610	Screw M6x10	8
GM6SB	Nut M6 with locking collar	8
Male-female overlapping of tray and bend		
VM610	Screw M6x10	4
GM6SB	Nut M6 with locking collar	4

Use a SPU joint plate to connect the cable ladder to the horizontal bend in the following manner. Line up the tray (2) and the bend (1) end to end. Fasten the joint plate (3) on the inside to the side rails of the adjoining elements (the tray and the bend in this case) with 4 screw sets through the holes provided in the side rails as follows: two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the bend side; two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the tray side. Two joint plates are used for each joint.

Use a splice connection to connect the cable tray to the horizontal bend in the following manner. Line up the tray (2) and the bend (1) to be joined and snap them together (male-female), then secure with 4 screw sets as follows: screw (4) on the inside of the bend; nut (5) on the outside of the tray.

The same assembly principle is used for all horizontal bend sizes.

Connecting a cable ladder and tee



Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
Connection of tray and tee with the use of straight tray connector		
SLU-50	Straight tray connector	2
VM610	Screw M6x10	8
GM6SB	Nut M6 with locking collar	8
Male-female overlapping of tray and tee		
VM610	Screw M6x10	4
GM6SB	Nut M6 with locking collar	4

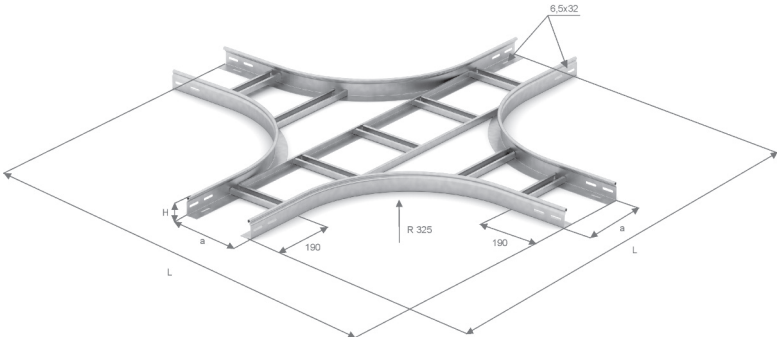
Use a SPU joint plate to connect the cable ladder to the tee in the following manner. Line up the tray (2) and the tee (1) end to end. Fasten the joint plate (3) on the inside to the side rails of the adjoining elements (the tray and the tee in this case) with 4 screw sets through the holes provided in the side rails as follows: two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the tee side; two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the tray side. Two joint plates are used for each joint.

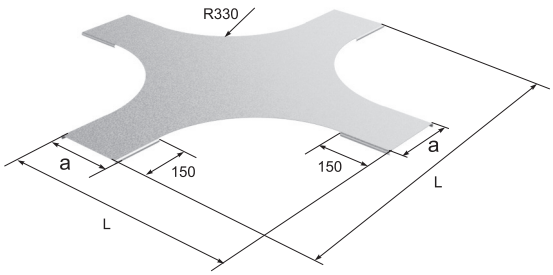
Use a splice connection to connect the cable tray to the tee in the following manner. Line up the tray (2) and the tee (1) to be joined and snap them together (male-female), then secure with 4 screw sets as follows: screw (4) on the inside of the tee; nut (5) on the outside of the tray.

The same assembly principle is used for all tee sizes.

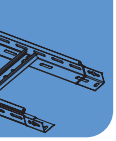
2.4 CROSS-OVERS X-TYPE CROSS-OVERS FOR CABLE LADDER NLO

Cross-over is used for horizontal X-type cable routing. A support or bracket shall be placed in the area of the cross-over connection to the ladder tray.



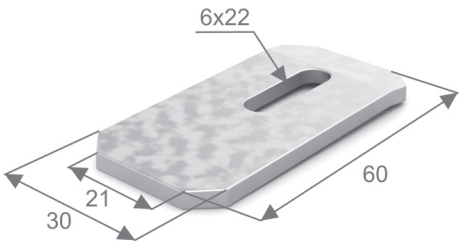


Version code			Art.	H, mm	a, mm	L, mm	Weight, kg	Packing, pieces
Sendzimir galvanized	Hot-dip galvanized	Painted						
033325	333325	233325	HLNLO 200x50	50	200	1230	5.03	2
033335	333335	233335	HLNLO 300x50	50	300	1330	5.62	2
033345	333345	233345	HLNLO 400x50	50	400	1430	6.21	2
033305	333305	233305	HLNLO 500x50	50	500	1530	6.80	2
033365	333365	233365	HLNLO 600x50	50	600	1630	7.74	2
033328	333328	233328	HLNLO 200x80	80	200	1230	6.04	2
033338	333338	233338	HLNLO 300x80	80	300	1330	6.63	2
033348	333348	233348	HLNLO 400x80	80	400	1430	7.22	2
033358	333358	233358	HLNLO 500x80	80	500	1530	7.80	2
033368	333368	233368	HLNLO 600x80	80	600	1630	8.74	2
033321	333321	233321	HLNLO 200x100	100	200	1230	6.71	2
033331	333331	233331	HLNLO 300x100	100	300	1330	7.30	2
033341	333341	233341	HLNLO 400x100	100	400	1430	7.89	2
033301	333301	233301	HLNLO 500x100	100	500	1530	8.48	2
033361	333361	233361	HLNLO 600x100	100	600	1630	9.42	2
023321	323321	223321	KHLNLO-200	-	200	1150	2.82	1
023331	323331	223331	KHLNLO-300	-	300	1250	4.14	1
023341	333341	223341	KHLNLO-400	-	400	1350	5.57	1



2.5 CLAMPS

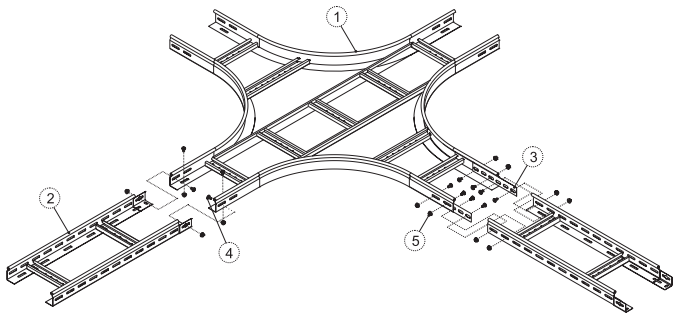
Cable ladder hold-down clamp PNLO



Is used for clamping of tray NLO bottom to support (beam, bracket). Clamps lower parts of tray side profiles from inside.

Version code			Art.	Metal thickness, mm	Weight, kg/piece	Packing, pieces
Sendzimir galvanized	Hot-dip galvanized	Painted				
041301	341301	241301	PNLO	2.00	0.04	500

Connecting a cable ladder and coupler



Use a SPU joint plate to connect the cable ladder to the cross-over in the following manner. Line up the tray (2) and the cross-over (1) end to end. Fasten the joint plate (3) on the inside to the side rails of the adjoining elements (the tray and the cross-over in this case) with 4 screw sets through the holes provided in the side rails as follows: two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the cross-over side; two screws (4) on the inside, from the joint plate side; two nuts (5) on the outside, from the tray side. Two joint plates are used for each joint.

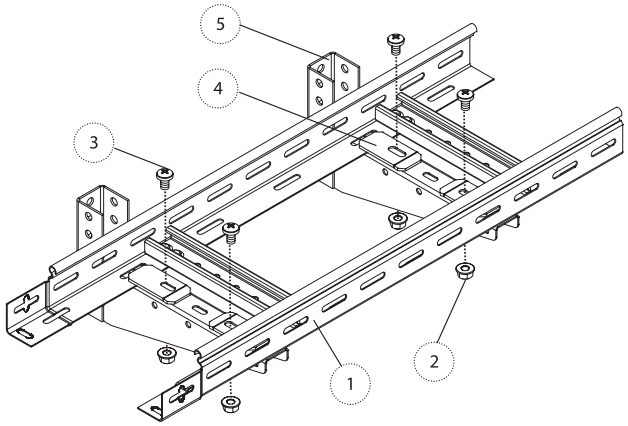
Use a splice connection to connect the tray and the cross-over in the following manner. Line up the tray (2) and the cross-over (1) to be joined and snap them together (male-female), then secure with 4 screw sets as follows: screw (4) on the inside of the cross-over; nut (5) on the outside of the tray.

The same assembly principle is used for all cross-over sizes.

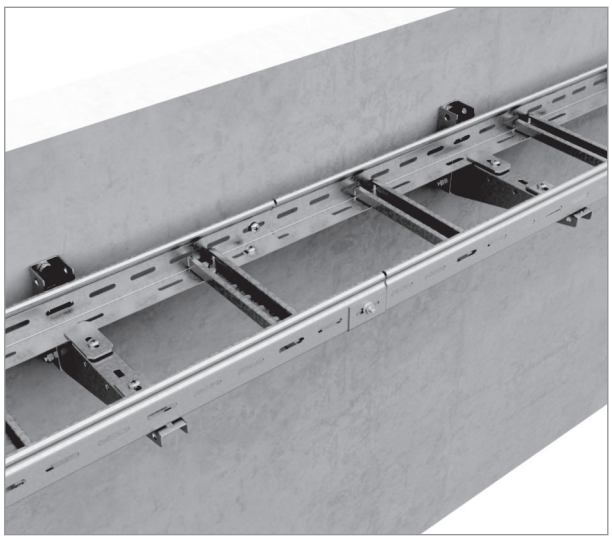
Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
Connection of tray and coupler with the use of straight tray connector		
SLU-50	Straight tray connector	2
VM610	Screw M6x0	8
GM6SB	Nut M6 with locking collar	8
Male-female overlapping of tray and coupler		
VM610	Screw M6x10	4
GM6SB	Nut M6 with locking collar	4

Ladder clamp with NLO tray connection



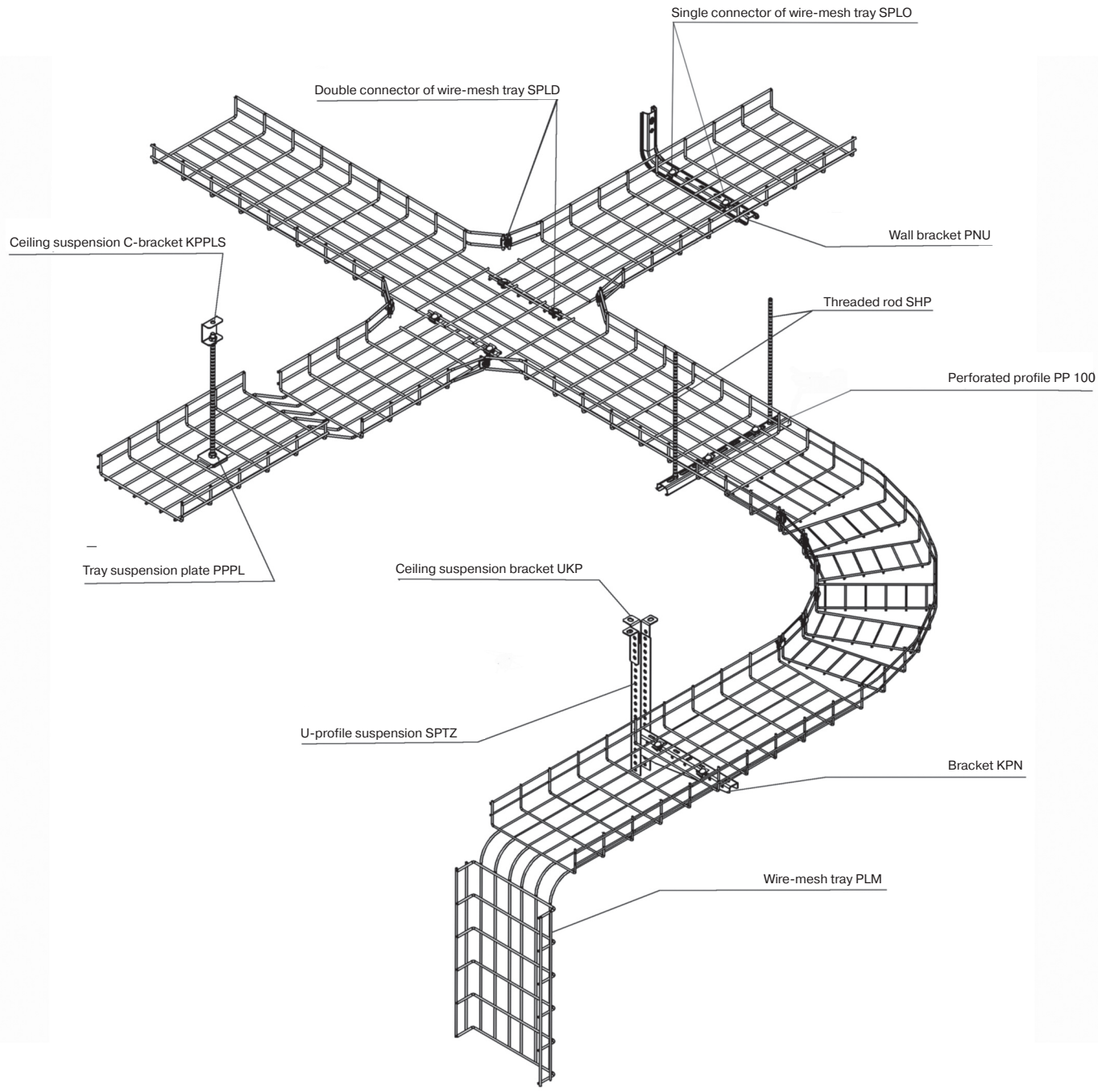
Place the NLO cable ladder (1) on the shelf of the cantilever bracket (5). Use PNLO hold-down clips (4) to clamp the bottom parts of the tray side rails to the bracket and secure them with screws (3) on the tray side and nuts (2) on the bracket side. Two hold-down clips PNLO are used for each joint.



For each connection the following parts are used:

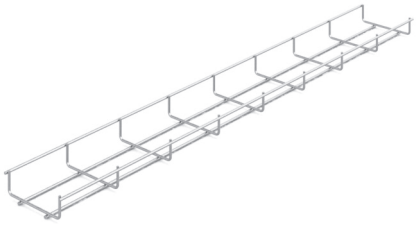
Art.	Name	Quantity, pieces
VM612	Screw M6x12	2
GM6SB	Nut M6 with locking collar	2

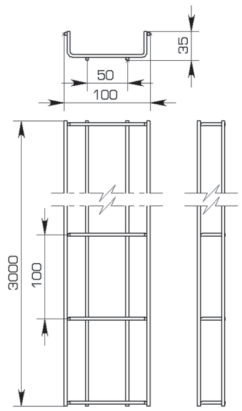
3. WIRE-MESH TRAYS OSTEC



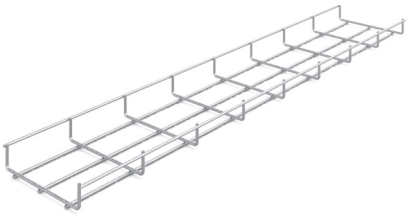
3.1 WIRE-MESH TRAYS OSTEC PLM SERIES

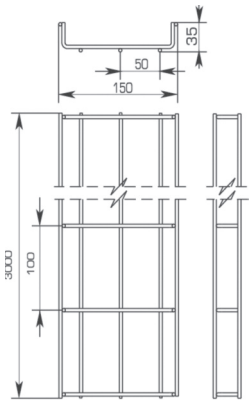
Wire-mesh tray PLM-100.35



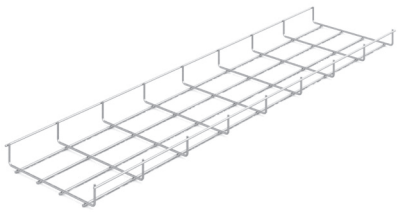


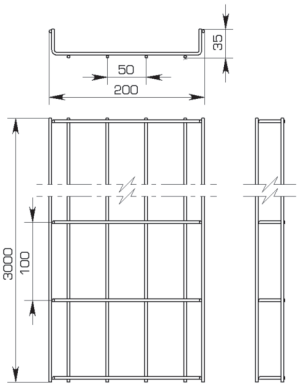
Wire-mesh tray PLM-150.35





Wire-mesh tray PLM-200.35

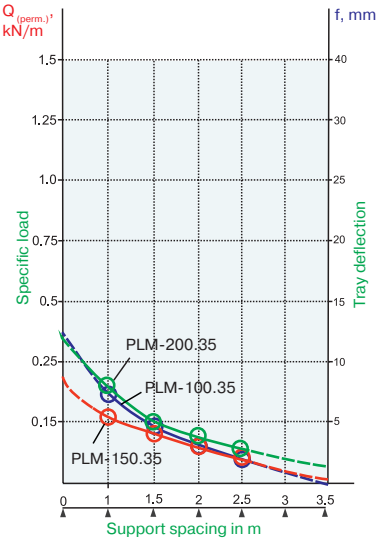




Material — Low carbon wire of general purpose as per GOST 3282-74

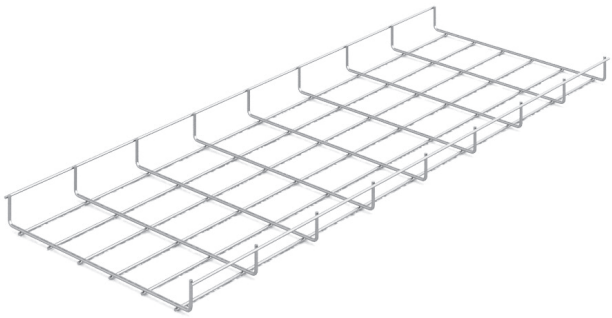
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

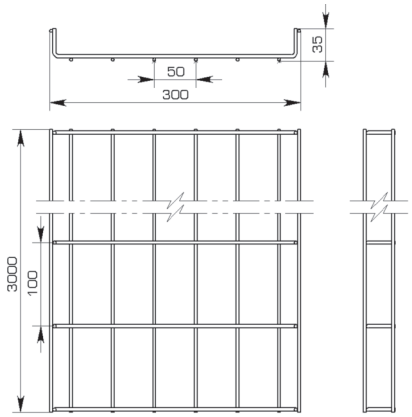
Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation



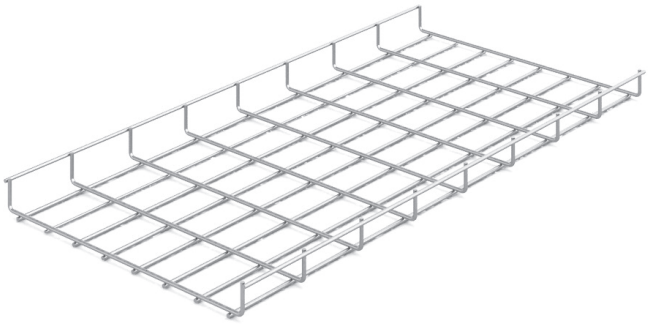
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015135	315135	115135	215135	PLM-100.35	3.5	100x35x3000	0.44	0.18	0.13	0.09	2400	30
015153	315153	115153	215153	PLM-150.35	3.5	150x35x3000	0.53	0.16	0.12	0.09	4488	18
015235	315235	115235	215235	PLM-200.35	3.5	200x35x3000	0.67	0.22	0.15	0.12	5200	18

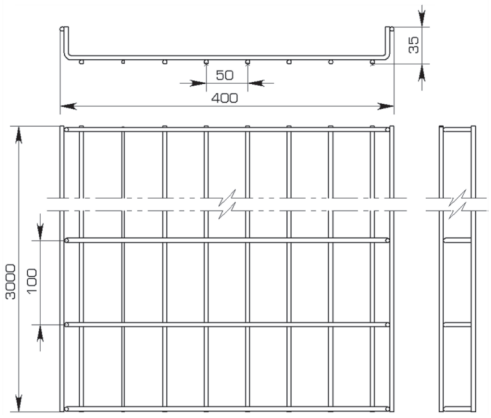
Wire-mesh tray PLM-300.35

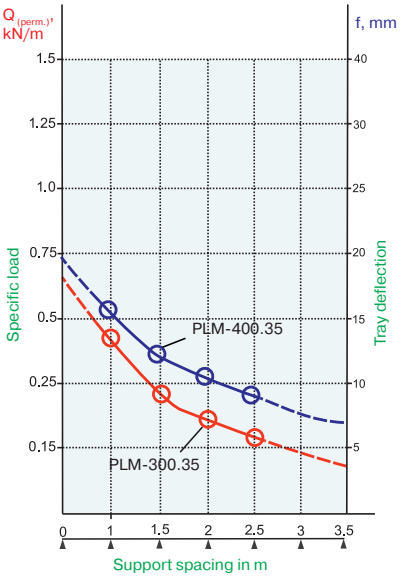




Wire-mesh tray PLM-400.35







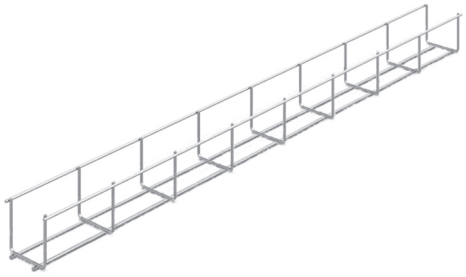
Material — Low carbon wire of general purpose as per GOST 3282-74

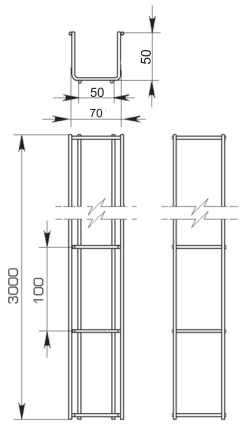
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

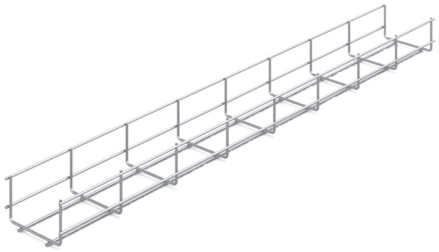
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015335	315335	115335	215335	PLM-300.35	4.0	300x35x3000	1.16	0.42	0.24	0.19	9000	18
015435	315435	115435	215435	PLM-400.35	4.0	400x35x3000	1.45	0.52	0.34	0.26	12000	12

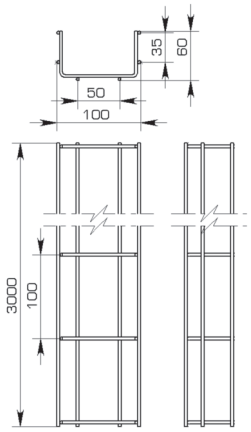
Wire-mesh tray PLM-70.50





Wire-mesh tray PLM-100.60

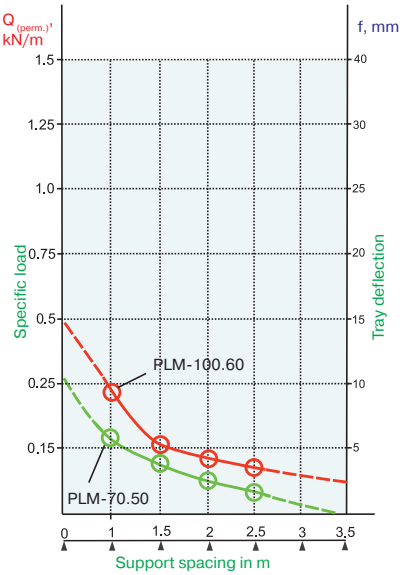




Material Low carbon wire of general purpose as per GOST 3282-74

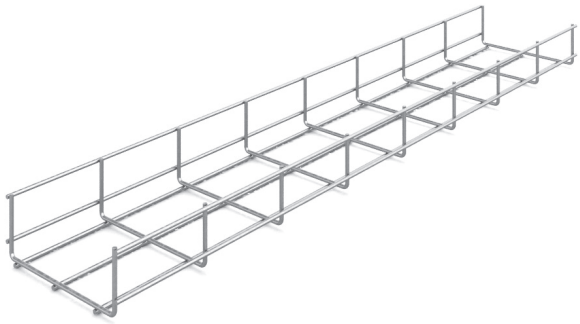
Structure Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

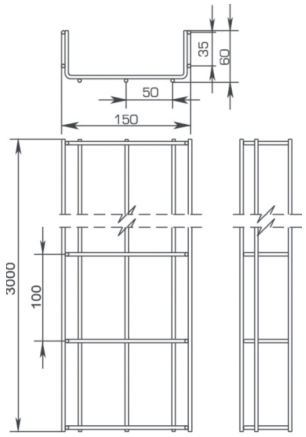
Manufacturing method Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation



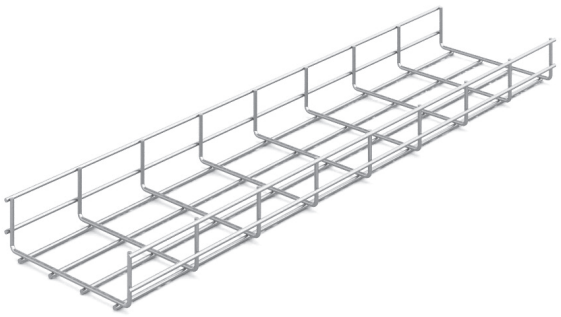
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015066	315066	115066	215066	PLM-70.50	3.5	60x60x3000	0.42	0.20	0.15	0.10	2400	36
015160	315160	115160	215160	PLM-100.60	3.5	100x60x3000	0.60	0.22	0.16	0.11	4500	18

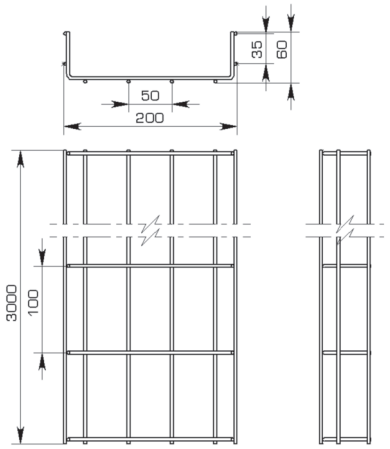
Wire-mesh tray PLM-150.60

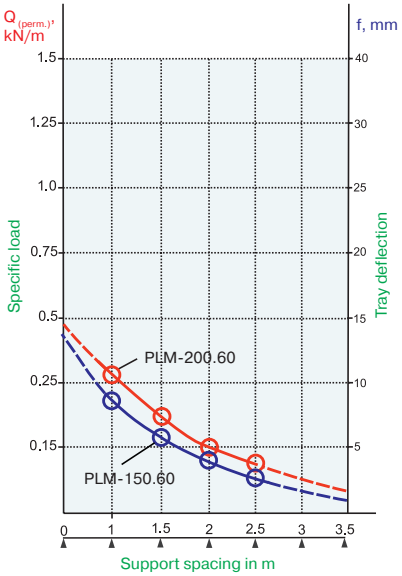




Wire-mesh tray PLM-200.60







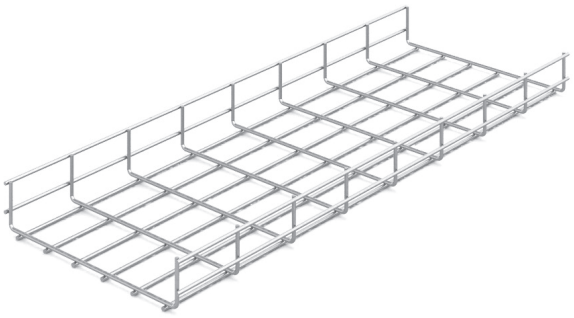
Material — Low carbon wire of general purpose as per GOST 3282-74

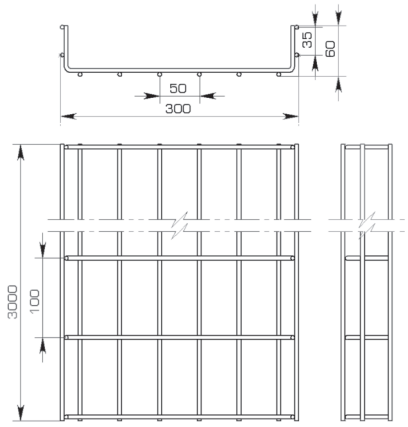
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

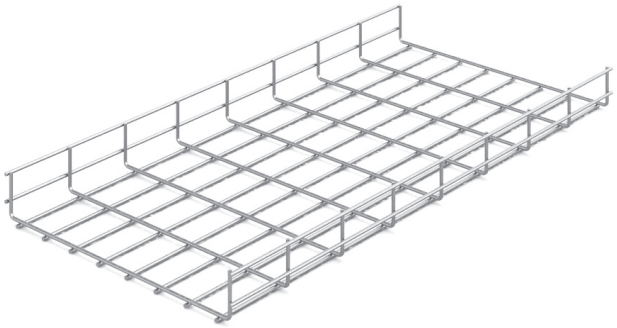
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015156	315156	115156	215156	PLM-150.60	3.5	150x60x3000	0.73	0.43	0.32	0.24	7752	18
015260	315260	115260	215260	PLM-200.60	3.5	200x60x3000	0.84	0.26	0.20	0.15	9000	12

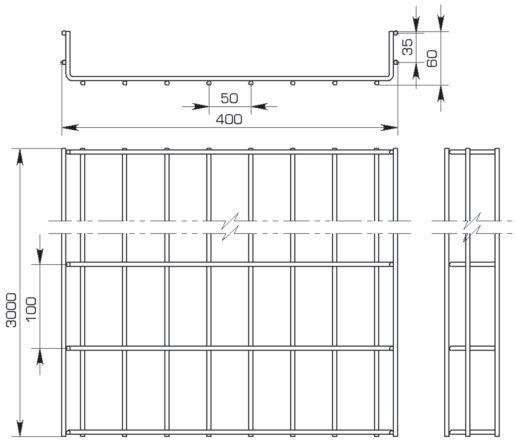
Wire-mesh tray PLM-300.60



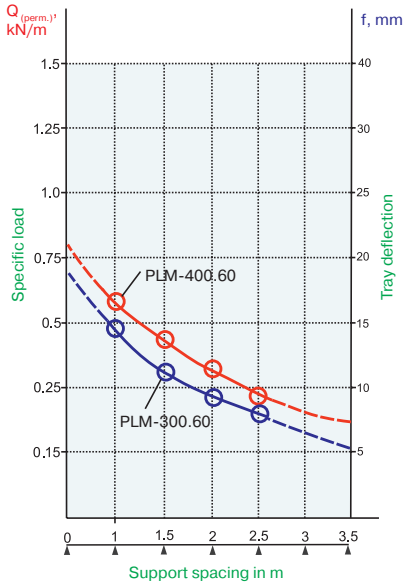


Wire-mesh tray PLM-400.60



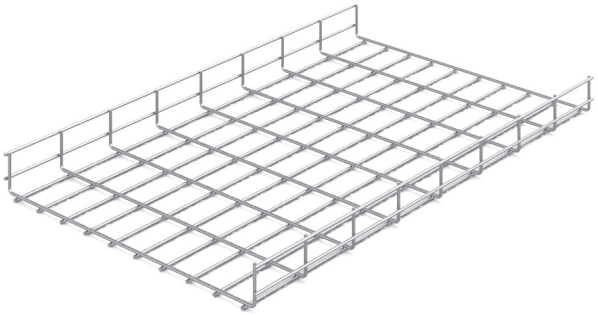


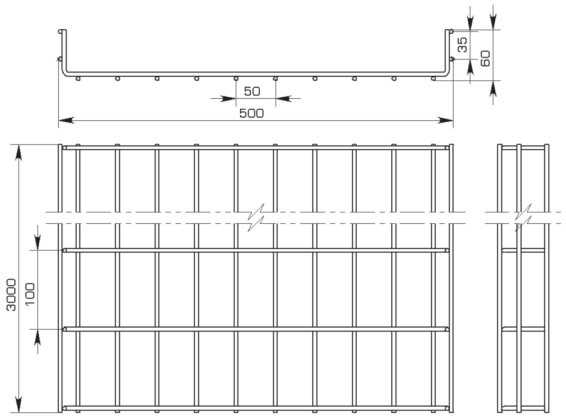
Material	Low carbon wire of general purpose as per GOST 3282-74
Structure	Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance
Manufacturing method	Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation



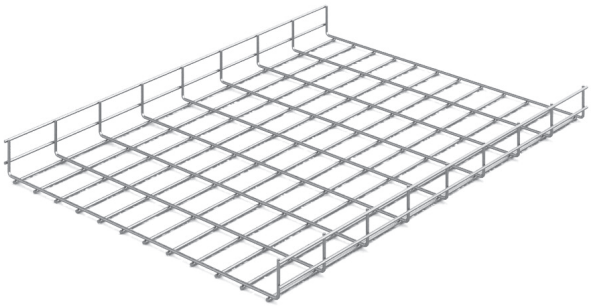
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015360	315360	115360	215360	PLM-300.60	4.0	300x60x3000	1.39	0.47	0.35	0.23	15000	12
015460	315460	115460	215460	PLM-400.60	4.0	400x60x3000	1.68	0.56	0.43	0.28	20400	12

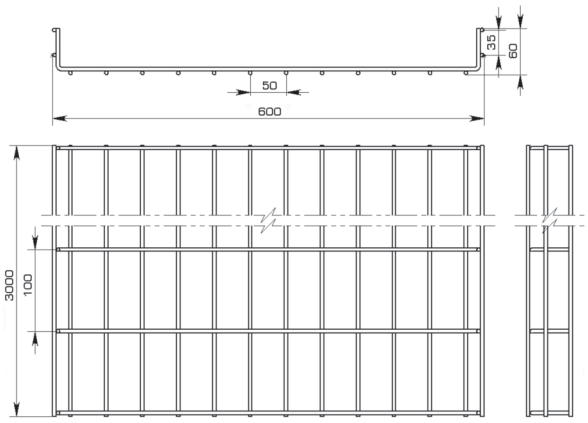
Wire-mesh tray PLM-500.60

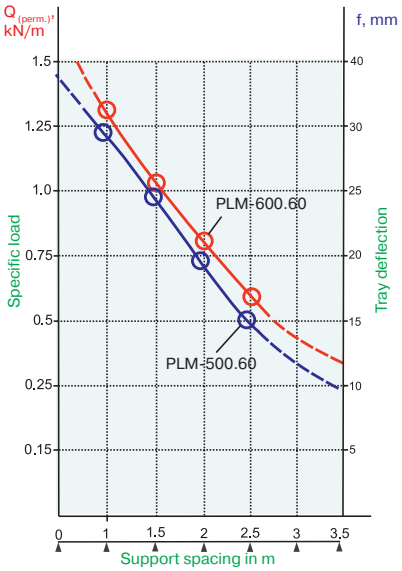




Wire-mesh tray PLM-600.60



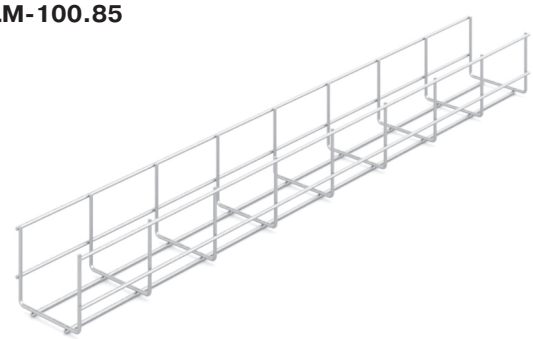


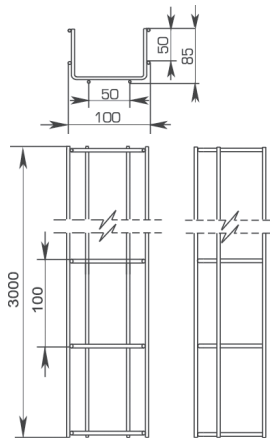


Material	Low carbon wire of general purpose as per GOST 3282-74
Structure	Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance
Manufacturing method	Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

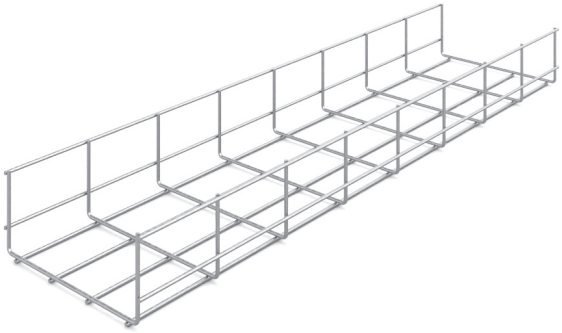
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015560	315560	115560	215560	PLM-500.60	5.0	500x60x3000	2.97	1.23	0.98	0.73	24000	6
015660	315660	115660	215660	PLM-600.60	5.0	600x60x3000	3.47	1.28	1.19	1.14	29000	6

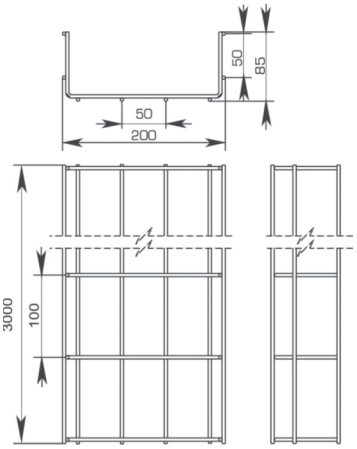
Wire-mesh tray PLM-100.85



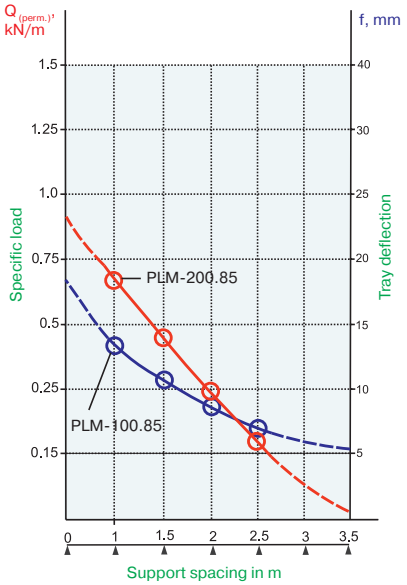


Wire-mesh tray PLM-200.85



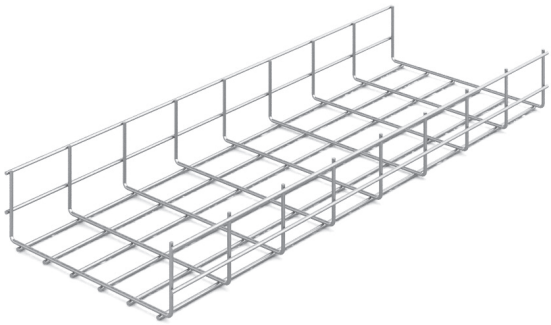


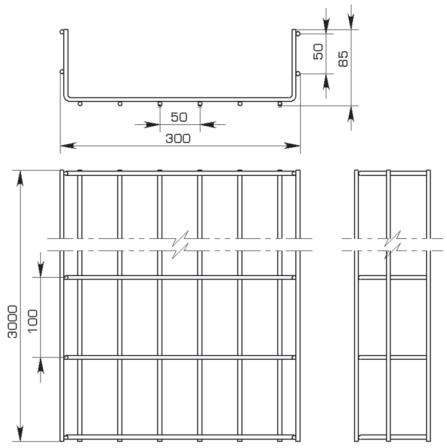
Material	Low carbon wire of general purpose as per GOST 3282-74
Structure	Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance
Manufacturing method	Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation



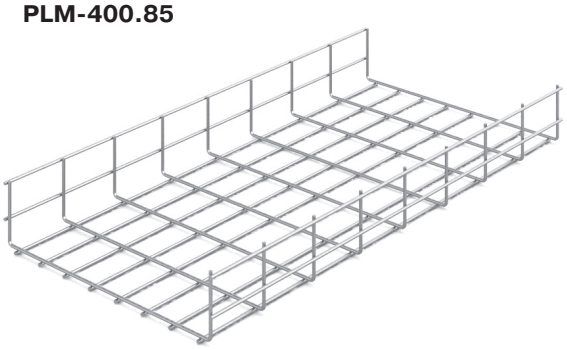
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015185	315185	115185	215185	PLM-100.85	4.0	100x85x3000	0.85	0.38	0.29	0.22	6468	12
015285	315285	115285	215285	PLM-200.85	4.0	200x85x3000	1.15	0.67	0.42	0.31	14168	12

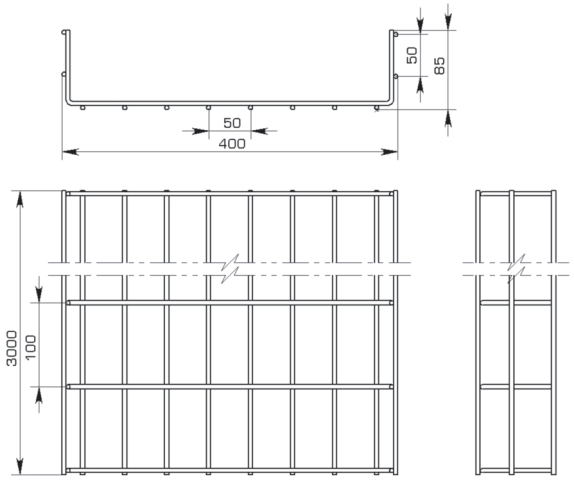
Wire-mesh tray PLM-300.85





Wire-mesh tray PLM-400.85

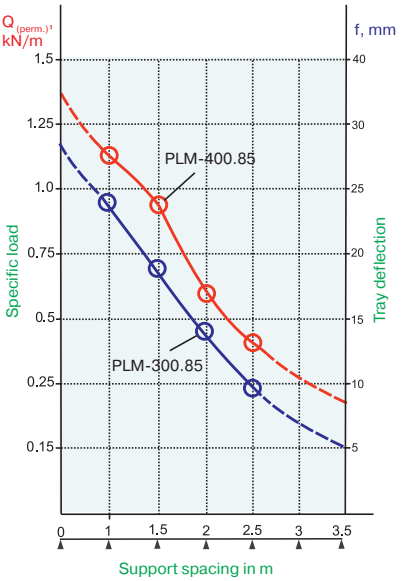




Material — Low carbon wire of general purpose as per GOST 3282-74

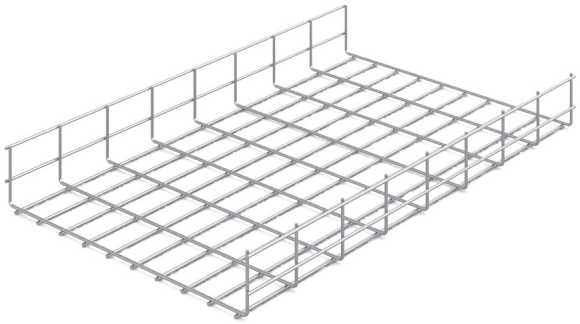
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

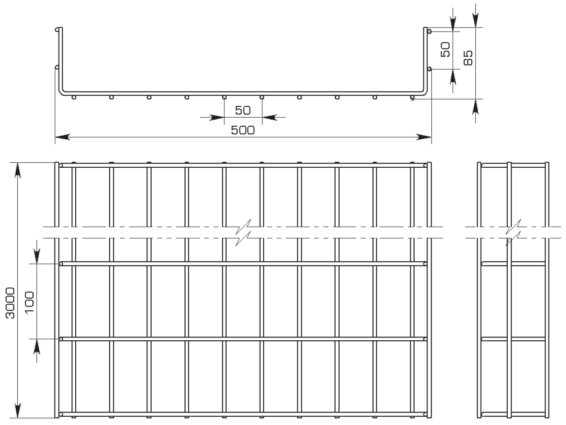
Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation



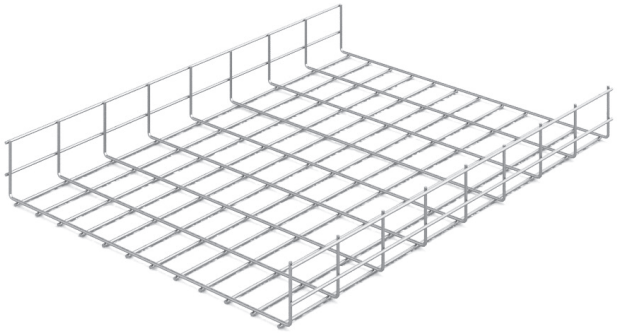
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015385	315385	115385	215385	PLM-300.85	5.0	300x85x3000	2.27	0.90	0.70	0.45	21000	6
015485	315485	115485	215485	PLM-400.85	5.0	400x85x3000	2.74	1.16	0.91	0.65	28500	6

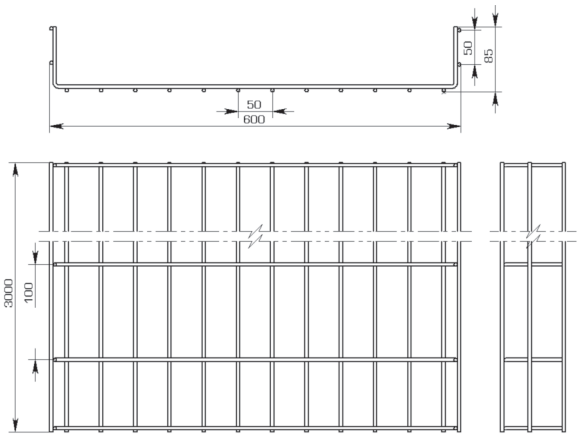
Wire-mesh tray PLM-500.85





Wire-mesh tray PLM-600.85

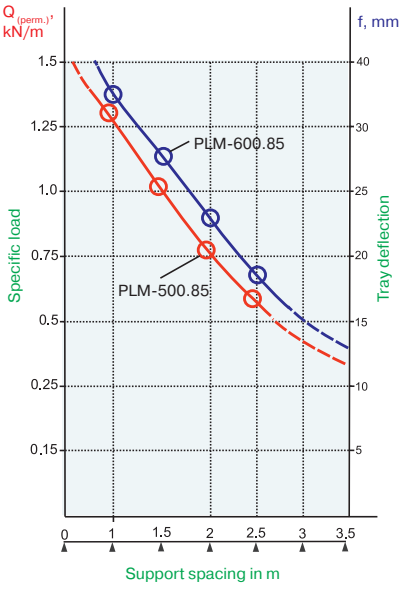




Material — Low carbon wire of general purpose as per GOST 3282-74

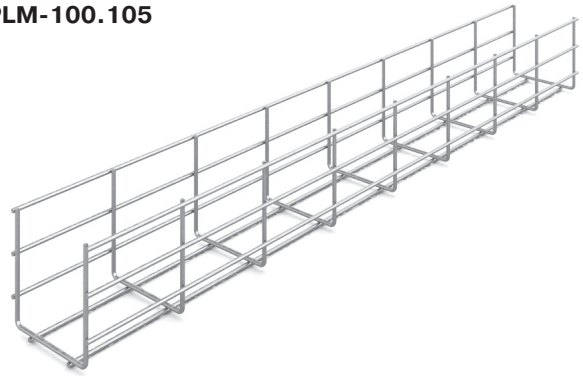
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

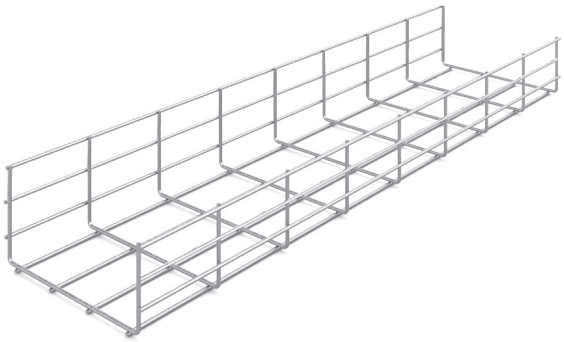


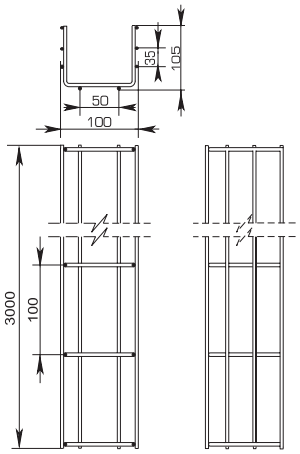
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015585	315585	115585	215585	PLM-500.85	5.0	500x85x3000	3.20	1.28	1.03	0.77	36000	6
015685	315685	115685	215685	PLM-600.85	5.0	600x85x3000	3.67	1.38	1.18	0.86	43500	6

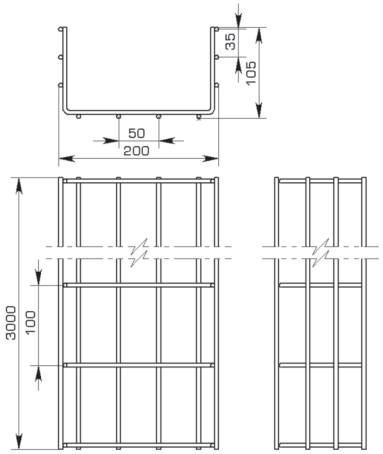
Wire-mesh tray PLM-100.105

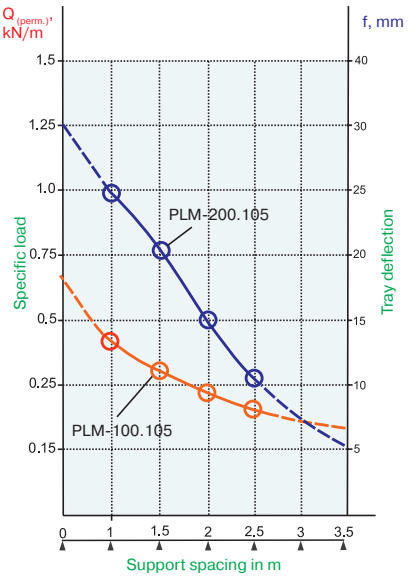


Wire-mesh tray PLM-200.105









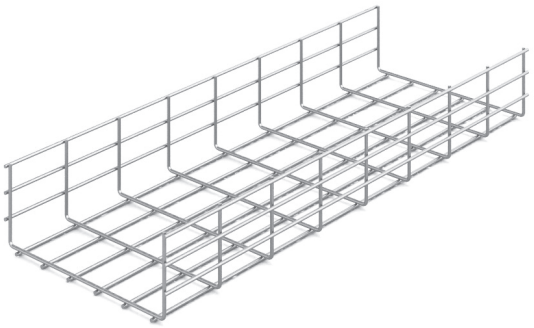
Material — Low carbon wire of general purpose as per GOST 3282-74

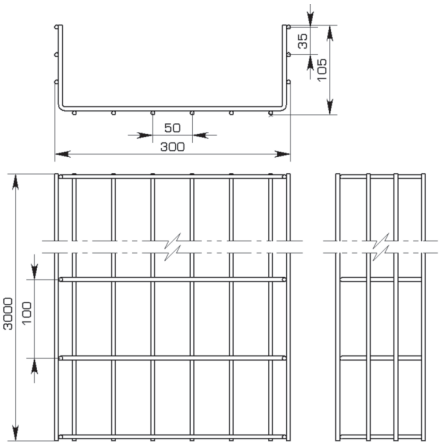
Structure — Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance

Manufacturing method — Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

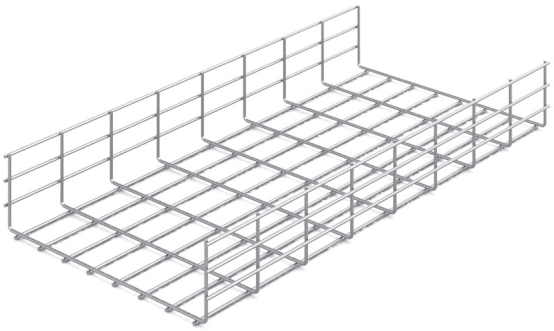
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015115	315115	115115	215115	PLM-100.105	4.0	100x105x3000	1.52	0.45	0.33	0.26	8200	12
015215	315215	115215	215215	PLM-200.105	4.0	200x105x3000	1.39	0.95	0.76	0.50	17848	6

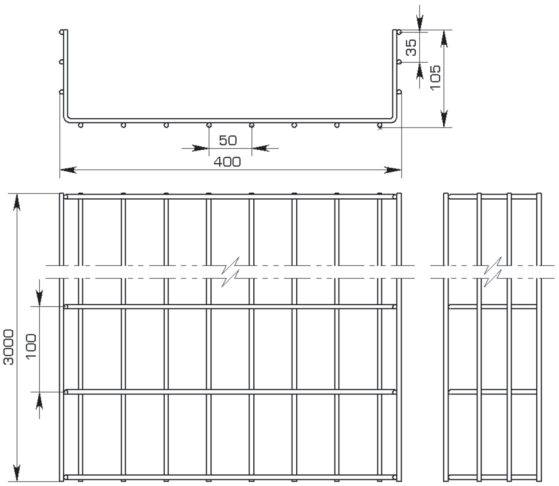
Wire-mesh tray
PLMU-300.105



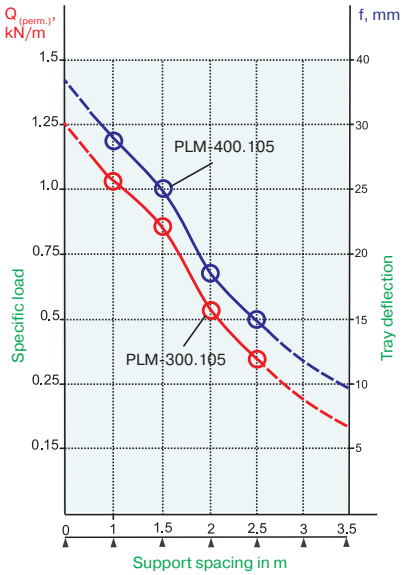


Wire-mesh tray
PLMU-400.105





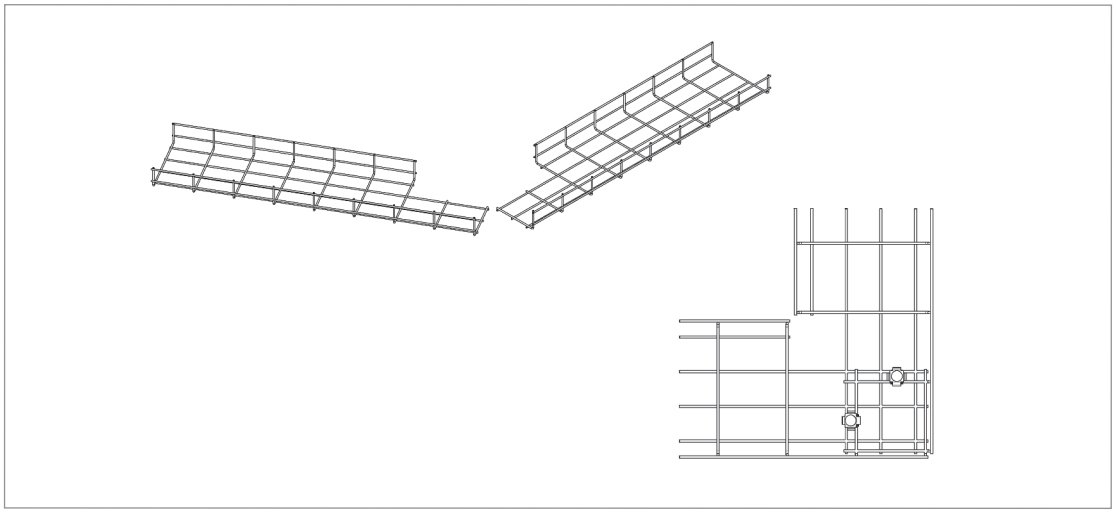
Material	Low carbon wire of general purpose as per GOST 3282-74
Structure	Mesh structure of the tray allows good ventilation of cables inside the tray and visual monitoring of cable routing for further maintenance
Manufacturing method	Contact welding of steel wires with further electrochemical zinc plating. Wire is machine-welded into flat cards, then its side walls are bent into U-shaped profile. Electrochemical zinc plating is the final operation

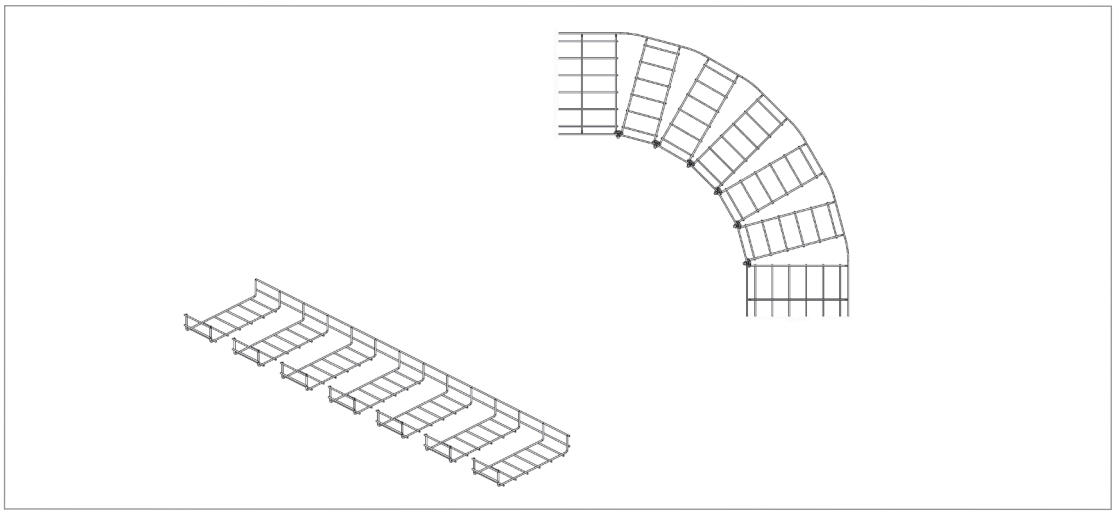


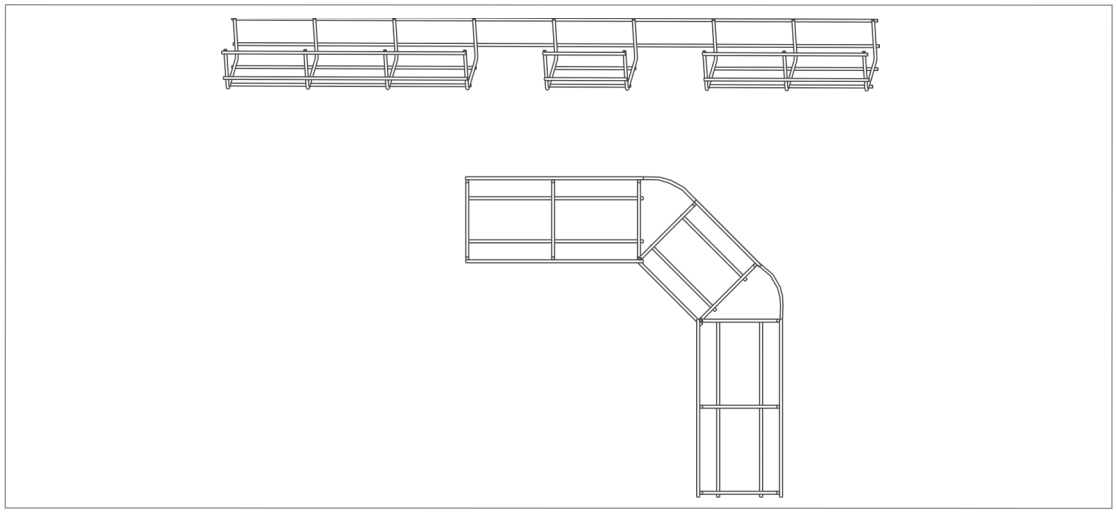
Version code				Art.	Wire diameter, mm	Dimensions, mm	Weight, kg/m	Load Q, kN/m (L — distance between supports, mm)			Cross section area, mm²	Packing, m
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					L = 1000	L = 1500	L = 2000		
015315	3015315	115315	215315	PLM-300.105	5.0	300x105x3000	2.49	1.05	0.84	0.55	26600	6
0154153	315415	115415	215415	PLM-400.105	5.0	400x105x3000	2.95	1.19	1.01	0.70	36100	6

3.2 WAYS OF BENDS CONFIGURATION

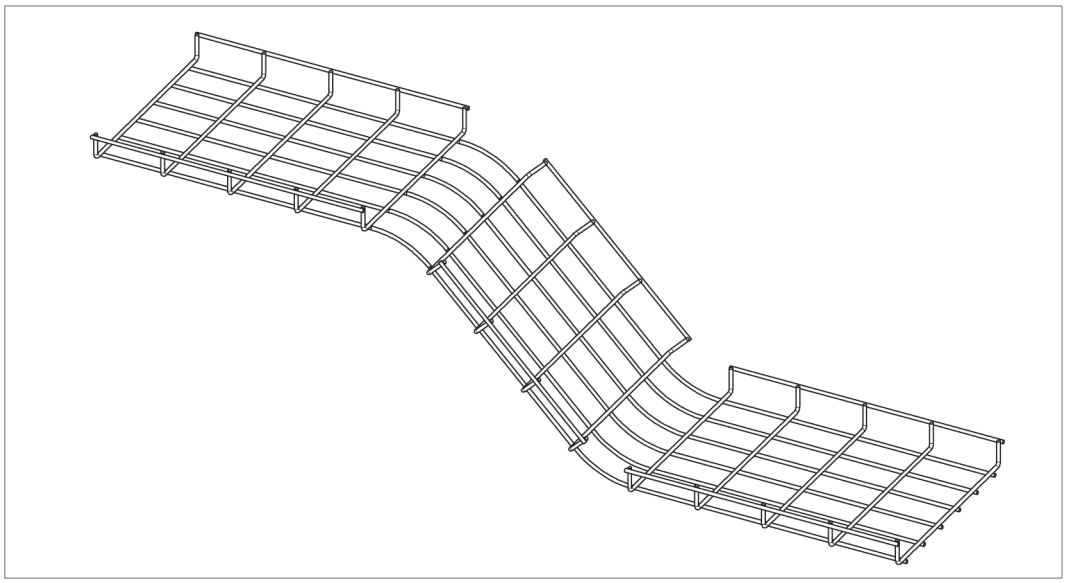
Ways of flat bend configuration



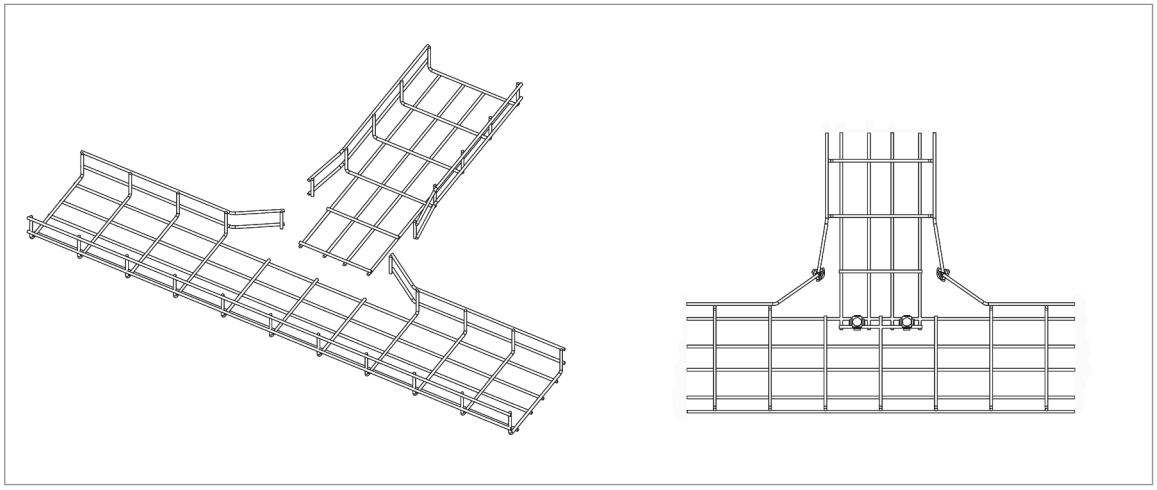


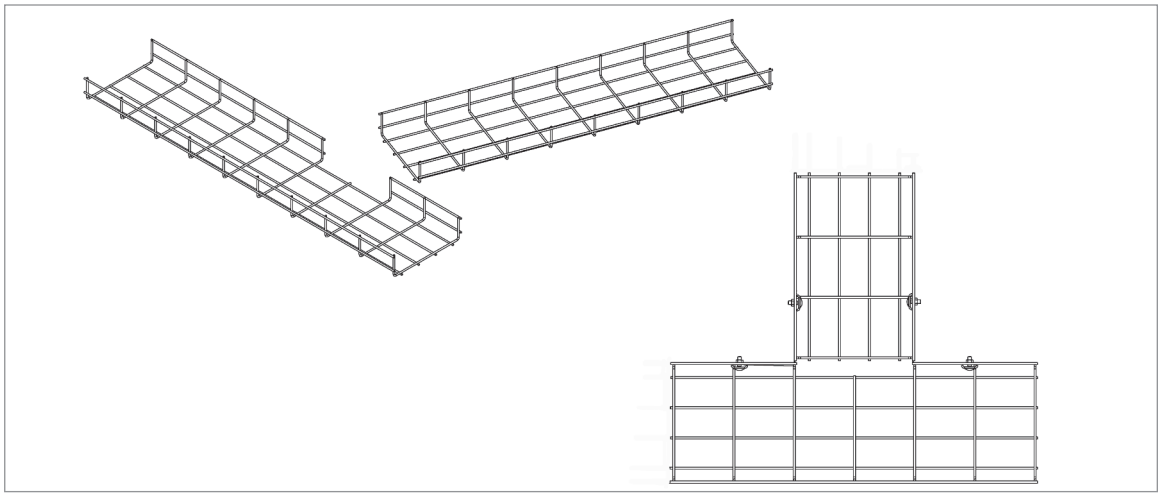


Ways of inner and outer drop configuration



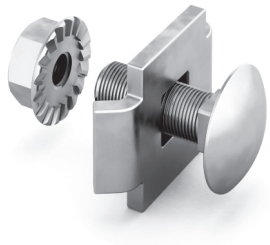
Ways of tees configuration





3.3 CONNECTORS

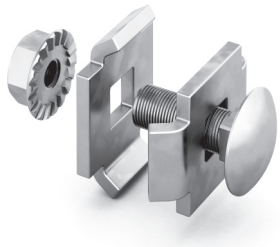
Wire-mesh tray connector SPLO20



Connector SPLO20 is used for wire-mesh tray attachment to support brackets (KPN, PNU, SPP(p), etc.).
Plate SPLO20 is attached from inside of the tray so that its curve is aligned with one of longitudinal wires of the tray, then it is fixed on the support structure with the help of screw and nut.

Code	Art.	Weight, kg/piece	Packing, pieces
041001	SPLO20	0.02	500

Double wire-mesh tray connector (fastener assembly) SPLD20

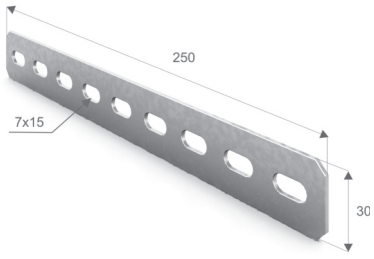


It is used for connection of wire-mesh trays.
Connects wire-mesh trays and is fixed with the help of screw and nut (supplied).

Screwless wire-mesh tray connector SPLB

It is used for in-line connection of wire-mesh trays. There is no need to use any screws.

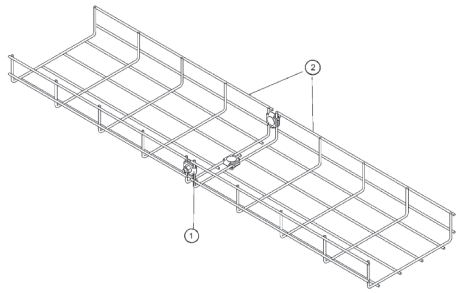
Perforated wire-mesh tray connector SPLP



It is used for in-line or angular connections of wire-mesh trays arrangement and increases joint strength. For trays connection with the help of SPLP two SPLO connectors are required (optional).

Code	Art.	Metal thickness, mm	Weight, kg	Packing, pieces
040901	SPLD20	-	0.03	500
040801	SPLB	0.70	0.03	100
041201	SPLP	2.00	0.09	120

Connecting trays using a double wire-mesh tray connector

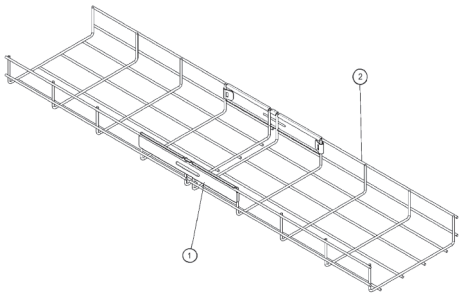


Trays (2) are connected adjacent.
Connector plates (1) are attached from both sides of the tray (2) being in reverse position. One of the connected trays should fit into first plate cavity for wire and the second tray fits another plate curve. Plates are tightened with the help of screw and nut from SPLD20 kit.
For trays connection a three points fixing is used, i.e. two on both sides and one at the bottom of the tray.

Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
SPLD20	Double wire-mesh tray connector	3

Connecting trays using a screwless wire-mesh tray connector

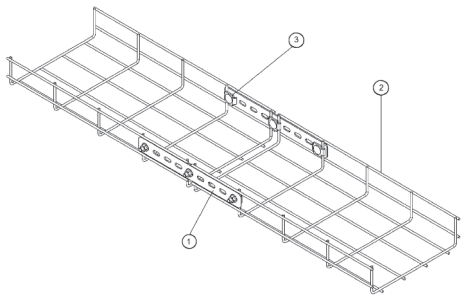


Trays (2) are connected adjacent.
SPLB (1) is attached to the side wall of connected trays (2) in such a way that the wire of the tray (2) fits into the corresponding cavities of SPLB. Screwdriver or other tool is inserted into the side bend opening and side bend is bent by force embracing the wire of the tray.

Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
SPLB	Screwless wire-mesh tray connector	2

Connecting trays using a perforated wire-mesh tray connector



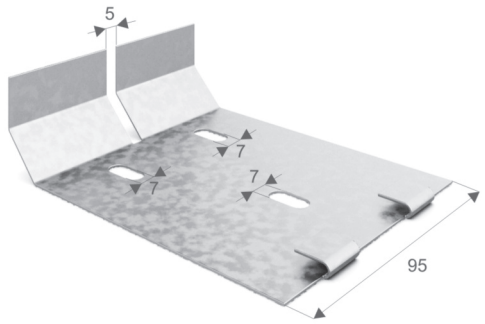
Trays (2) are connected adjacent.
SPLP (1) is attached to the sidewall of connected trays (2). SPLO20 (3) plate is attached to SPLP from the inner side of the tray (2), embracing the tray wire with its curve, then it is tightened with the help of screw and nut from the SPLO20 kit.
Three SPLO20 kits are required for each SPLP connector fastening — on both sides of SPLP and in the middle of adjacent point of the trays. For trays connection two SPLP connectors are used — one on each side of the tray.

Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
SPLP	Perforated wire-mesh tray connector	2
SPLO20	Single wire-mesh tray connector	6

3.4 ACCESSORIES

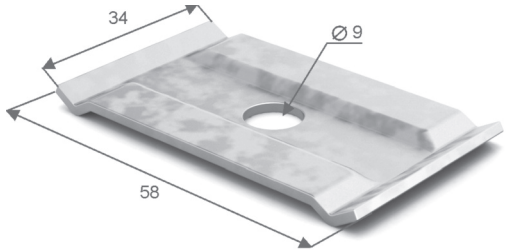
Vertical cable drop SK



Vertical cable drop SK is used to maintain safe cable bending radius when outputting cable downward parallel or perpendicular to the conduit axis, through the wire mesh tray bottom.

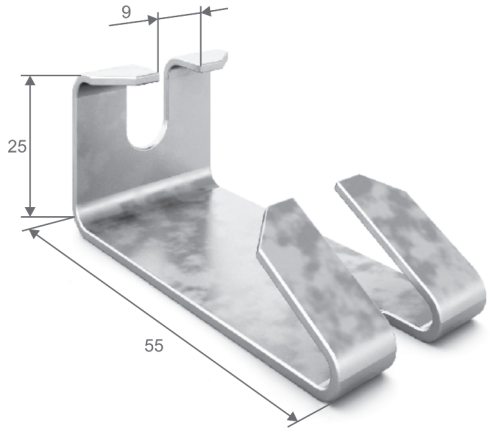
Code	Art.	Metal thickness, mm	Weight, kg	Packing, pieces
053101	SK	1.50	0.11	60

Wire-mesh tray suspension plate PPPL



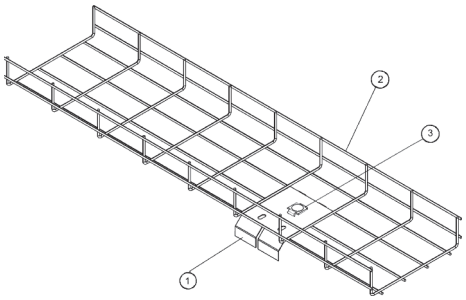
Code	Art.	Metal thickness, mm	Weight, kg	Packing, pieces
053001	PPPL	2.00	0.025	200

Suspension hook for wire-mesh tray KPPL



Code	Art.	Metal thickness, mm	Weight, kg	Packing, pieces
053201	KPPL	1.50	0.03	80

Vertical cable drop installation

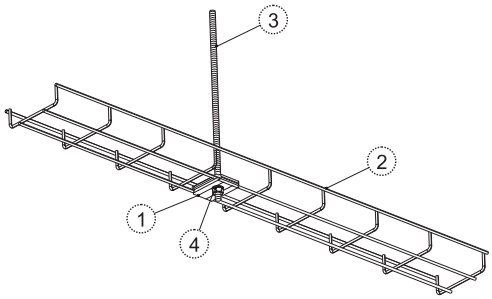


The cable drop plate SK (1) is attached from the inner side of the tray (2) with the help of one fixing kit SPLO20 (3).

Each joint is assembled with the use of the following:

Art.	Name	Quantity, pieces
SPLO20	Single wire-mesh tray connector	1

Attachment with the help of wire-mesh tray suspension plate

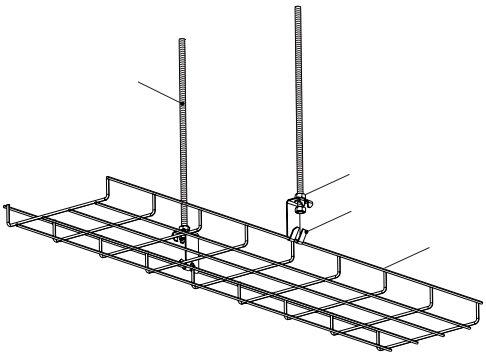


Two wire-mesh tray suspension plates are used for tray attachment to the threaded rod.
Plates (1) are attached from both sides of the mesh bottom in reverse order embracing the longitudinal wires of tray bottom (2). They are fixed to a threaded rod (3) attached to the ceiling with the help of two nuts (4). The way of the rod-to-ceiling attachment depends on the ceiling material and calculated load.

Each suspension is assembled with the use of the following:

Art.	Name	Quantity, pieces
GM6SB	Nut M6 with locking collar	2

Attachment with the help of suspension hook



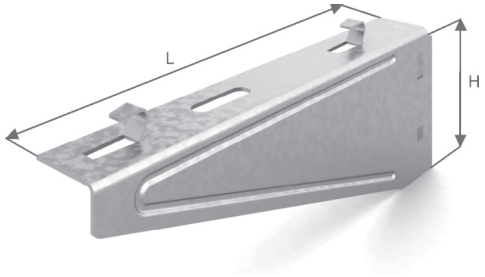
The wire-mesh tray suspension hook (1) is fixed on the attached to the ceiling threaded rod (3) with two Nuts (4). The way of the rod-to-ceiling attachment depends on the ceiling material and calculated load. Tray (2) is suspended on the Hook (1) at top of the tray side wall longitudinal wires.

Each suspension is assembled with the use of the following:

Art.	Name	Quantity, pieces
GM6SB	Nut M6 with locking collar	2

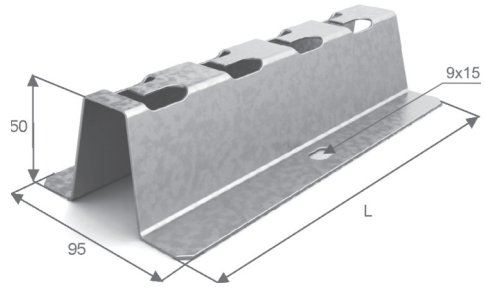
3.5 SUPPORT ELEMENTS

Screw-free wall bracket for wire-mesh tray KNPLB



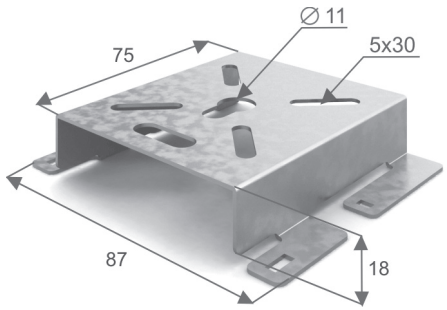
Code	Art.	Metal thickness, mm	Dimensions, mm		Weight, kg/piece	Load Q, N	Packing, pieces
			L	H			
052711	KNPLB-100	1.50	130	60	0.13	570	100
052721	KNPLB-200	1.50	230	87	0.30	650	50
052731	KNPLB-300	1.50	330	114	0.42	450	10

Floor and wall mount holder NND



Code	Art.	Metal thickness, mm	Length L, mm	Weight, kg/piece	Load Q, N	Packing, pieces
053411	NND-100	1.50	115	0.21	1150	30
053421	NND-200	1.50	215	0.39	1270	10
053431	NND-300	1.50	315	0.57	970	10
053441	NND-400	1.50	415	0.75	850	10
053451	NND-500	1.50	515	1.05	750	10

Mounting plate MP



Code	Art.	Metal thickness, mm	Weight, kg/ piece	Load Q, N	Packing, pieces
053301	MP	1.20	0.09	450	50

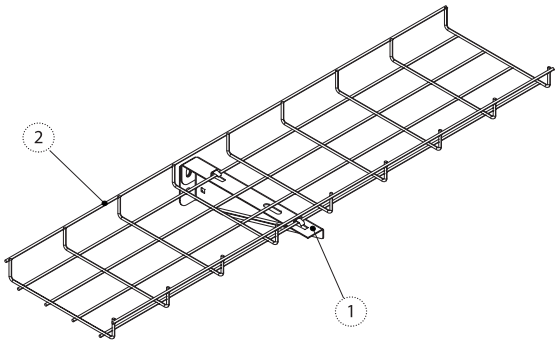
3.6 TOOLS

Bolt-cutter for wire-mesh trays KPLM6

For bends arrangement it is recommended to use KPLM6 Bolt-Cutter, which produces flat cut at the end of the wire.

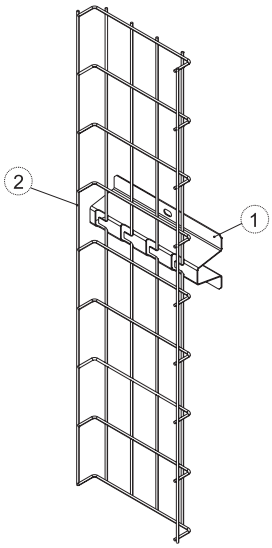
Code	Art.	Weight, kg/ piece	Packing, pieces
071001	KPLM6	1.50	1

Wire-mesh tray attachment to wall bracket



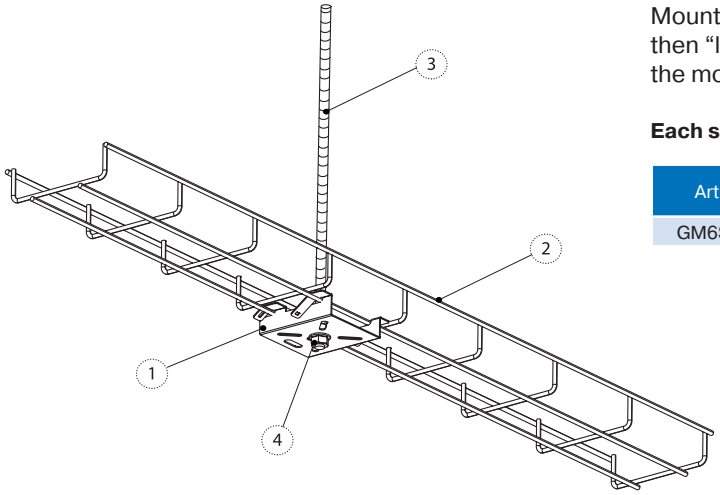
The way of the bracket to the wall attachment depends on the wall material and calculated load. Tray (2) is laid onto the bracket (1) in such a way that the wire of the tray (2) fits into the corresponding openings of the bracket (1). Screwdriver or other tool is inserted into the leaf openings and it is bent by force embracing the wire of the tray (2).

Tray attachment to floor and wall mounted holder



Tray (2) is laid onto the holder (1) in such a way that the wire of the tray (2) fits into the corresponding openings of the holder. Screwdriver or other tool is inserted into the leaf openings and it is bent by force embracing the wire of the tray (2).

Fixing with the help of mounting plate



Mounting plate (1) is fixed between wire bars of the tray (2), then “lugs” of mounting plate are bent. Pin (3) is attached to the mounting plate (1) with two nuts (4).

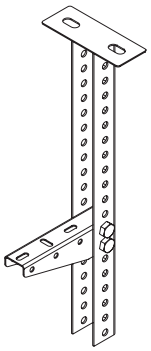
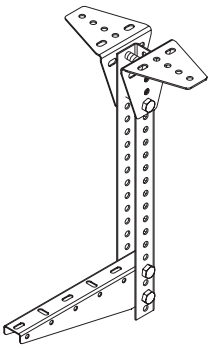
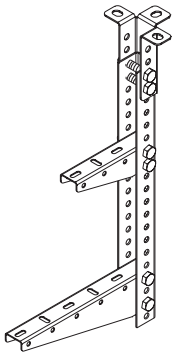
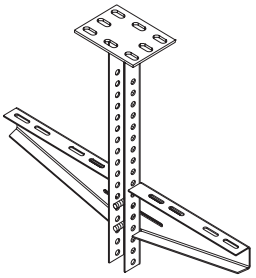
Each suspension is assembled with the help of the following:

Art.	Name	Quantity, pcs.
GM6SB	Nut M6 with collar	2

4. OSTEC SUSPENSION SYSTEM

Ceiling mounting

Composite suspension brackets

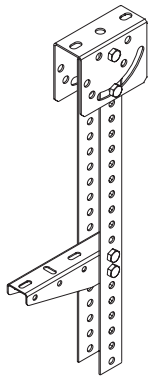
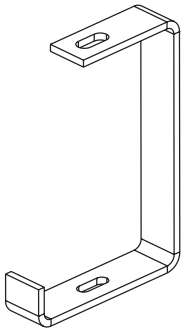
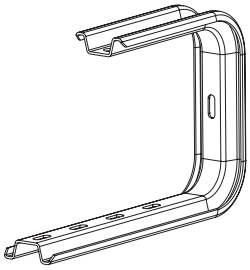
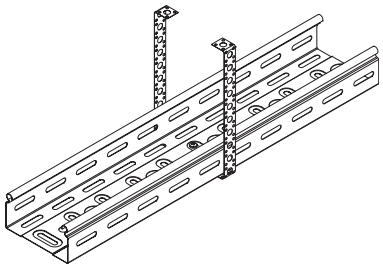
				
Components of suspension assembly set	SPS — 1 pc. (p. 126) KPN — 1 pc. (p. 130) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	UM — 2 pcs. (p. 140) SPT (400) — 1 pc. (p. 128) KPN — 1 pc. (p. 130) BM845PN bolt — 4 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)	UKP — 1 pc. (p. 140) SPTZ (2900) — 1 pc. (p. 128) KPN — 2 pcs. (p. 130) BM845PN bolt — 6 pcs. (p. 150) GM8SB nut — 6 pcs. (p. 150)	SPSu — 1 pc. (p. 126) KOD — 1 pc. (p. 130) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)

Recommended suspension brackets				
Cable trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**			
50	KPN-100	KPN-100	KPN-100	KOD-200
100	KPN-100	KPN-100	KPN-100	KOD-200
200	KPN-200	KPN-200	KPN-200	KOD-200
300	KPN-300	KPN-300	KPN-300	KOD-300
400	KPN-400	KPN-400	KPN-400	KOD-400
Cable ladders, width, mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**			
200	KPN-200	KPN-200	KPN-200	KOD-200
300	KPN-300	KPN-300	KPN-300	KOD-300
400	KPN-400	KPN-400	KPN-400	KOD-400
500	KPN-500	KPN-500	KPN-500	KOD-500
600	-	-	-	KOD-600
Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**			
60	KPN-100	KPN-100	KPN-100	KOD-200
100	KPN-100	KPN-100	KPN-100	KOD-200
200	KPN-200	KPN-200	KPN-200	KOD-200
300	KPN-300	KPN-300	KPN-300	KOD-300
400	KPN-400	KPN-400	KPN-400	KOD-400
500	KPN-500	KPN-500	KPN-500	KOD-500
600	-	-	-	KOD-600

Composite suspension brackets

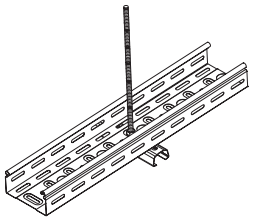
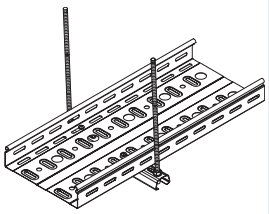
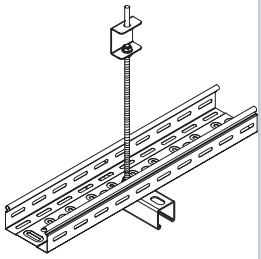
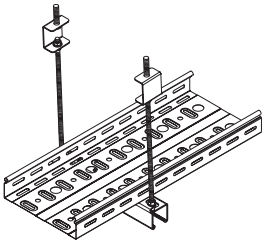
Integral suspension brackets

Mounting with perforated steel strap

			
PPD — 1 pc. (p. 140) SPT (400) — 1 pc. (p. 128) KPN — 1 pcs. (p. 130) BM845PN bolt — 4 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)	SPP (p. 144)	SPPU (p. 144)	LP200 (p. 144)

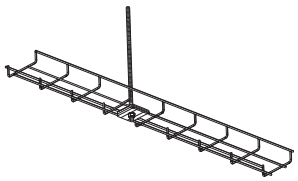
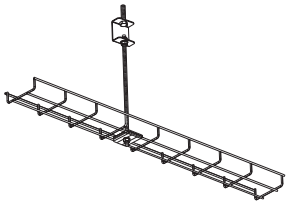
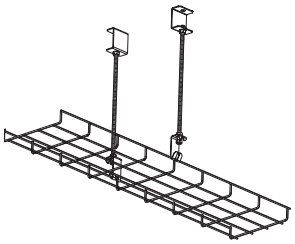
Recommended suspension brackets			
The following additional fasteners are required to fasten the cable trays to the suspension system:			
VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.	**VM610 screw — 1 pc., GM6SB nut — 1 pc., SHM6 washer — 1 pc.**	**VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**	**VM610 screw — 1 pc., GM6SB nut — 1 pc., SHM6 washer — 1 pc.**
KPN-100	SPP-100(p)	SPPU-100	LP200
KPN-100	SPP-100(p)	SPPU-100	LP200
KPN-200	SPP-200(p)	SPPU-200	-
KPN-300	-	SPPU-300	-
KPN-400	-	-	-
The following additional fasteners are required to fasten the cable ladders to the suspension system:			
PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.	-	-	-
KPN-200	-	-	-
KPN-300	-	-	-
KPN-400	-	-	-
KPN-500	-	-	-
–	-	-	-
The following additional fasteners are required to fasten the wire mesh trays to the suspension system:			
SPLO20 — 2 pcs.	**SPLO20 — 1 pc.**	**SPLO20 — 2 pcs.**	-
KPN-100	**SPLO20 — 1 pc.**	**SPLO20 — 2 pcs.**	-
KPN-100	SPP-100(p)	SPPU-100	-
KPN-200	SPP-100(p)	SPPU-100	-
KPN-300	SPP-200(p)	SPPU-200	-
KPN-400	-	SPPU-300	-
KPN-500	-	-	-
-	-	-	-

Ceiling mounting with threaded rods

				
Components of suspension assembly set	SHP threaded rod — 1 pc. (p. 150) PP100 — 1 pc. (p. 132) Nut — 1 pc. (p. 150) Washer — 1 pc. (p. 150)	SHP threaded rod — 2 pcs. (p. 150) PP100 — 1 pc. (p. 132) Nut — 2 pcs. (p. 150) Washer — 2 pcs. (p. 150)	SHP threaded rod — 1 pc. (p. 150) SP-41x41x2.5 — 1 pc. (p. 132) KPPLS — 1 pc. (p. 150) Nut — 1 pc. (p. 150)	SHP threaded rod — 2 pcs. (p. 150) SP-41x41x2.5 — 1 pc. (p. 132) KPPLS — 2 pcs. (p. 140) Nut — 2 pcs. (p. 150) GKM slide nut — 2 pcs. (p. 132)

Recommended threaded rods				
Cable trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**			
50	SHP8-2	SHP8-2	SHP8-2	SHP8-2
100	SHP8-2	SHP8-2	SHP8-2	SHP8-2
200	-	SHP8-2	-	SHP8-2
300	-	SHP8-2	-	SHP8-2
400	-	SHP10-2	-	SHP10-2
Cable ladders, width mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**			
200	-	SHP8-2	-	SHP8-2
300	-	SHP8-2	-	SHP8-2
400	-	SHP10-2	-	SHP10-2
500	-	SHP10-2	-	SHP10-2
600	-	SHP10-2	-	SHP10-2
Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**			
60	SHP8-2	SHP8-2	SHP8-2	SHP8-2
100	SHP8-2	SHP8-2	SHP8-2	SHP8-2
200	-	SHP8-2	-	SHP8-2
300	-	SHP8-2	-	SHP8-2
400	-	SHP10-2	-	SHP10-2
500	-	SHP10-2	-	SHP10-2
600	-	SHP10-2	-	SHP10-2

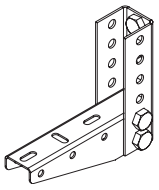
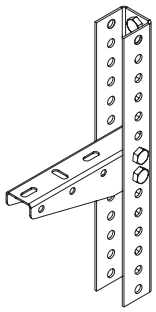
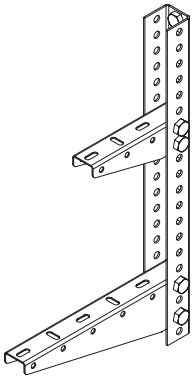
Ceiling mounting with threaded rods

		
SHP threaded rod — 1 pc. (p. 150) PPPL — 2 pcs. (p. 112) Nut — 2 pcs. (p. 150)	SHP threaded rod — 1 pc. (p. 150) PPPL — 2 pcs. (p. 112) KPPLS — 1 pc. (p. 140) Nut — 2 pcs. (p. 150)	SHP threaded rod — 2 pcs. (p. 150) KPPL — 2 pcs. (p. 112) KPPLS — 2 pcs. (p. 140) Nut — 4 pcs. (p. 150)

Recommended threaded rods		
	-	
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
	-	
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
	-	
SHP8-2	SHP8-2	SHP8-2
SHP8-2	SHP8-2	SHP8-2
-	-	SHP8-2
-	-	SHP8-2
-	-	SHP10-2
-	-	SHP10-2
-	-	SHP10-2

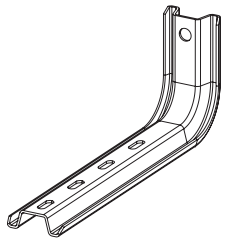
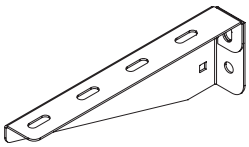
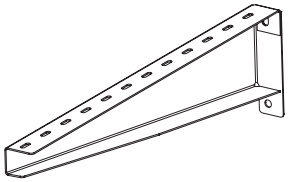
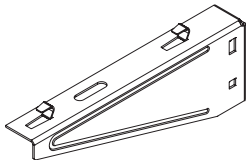
WALL MOUNTING

Composite suspension brackets

			
Components of suspension assembly set	NPP120 — 1 pc. (p. 128) KPN — 1 pc. (p. 130) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	SPT (400) — 1 pc. (p. 128) KPN — 1 pc. (p. 130) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	SPTZ (2900) — 1 pc. (p. 128) KPN — 2 pcs. (p. 130) BM845PN bolt — 4 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)

Recommended suspension brackets			
Cable trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**		
50	KPN-100	KPN-100	KPN-100
100	KPN-100	KPN-100	KPN-100
200	KPN-200	KPN-200	KPN-200
300	KPN-300	KPN-300	KPN-300
400	KPN-400	KPN-400	KPN-400
Cable ladders, width, mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**		
200	KPN-200	KPN-200	KPN-200
300	KPN-300	KPN-300	KPN-300
400	KPN-400	KPN-400	KPN-400
500	KPN-500	KPN-500	KPN-500
600	-	-	-
Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**		
60	KPN-100	KPN-100	KPN-100
100	KPN-100	KPN-100	KPN-100
200	KPN-200	KPN-200	KPN-200
300	KPN-300	KPN-300	KPN-300
400	KPN-400	KPN-400	KPN-400
500	KPN-500	KPN-500	KPN-500
600	-	-	-

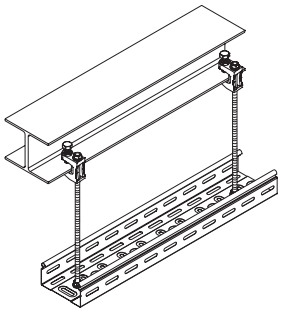
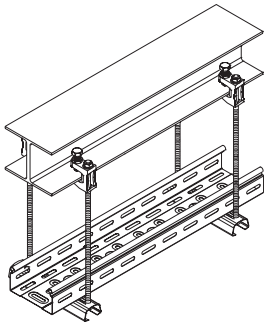
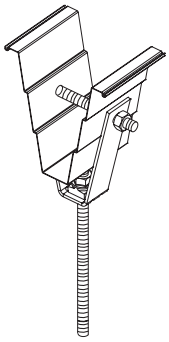
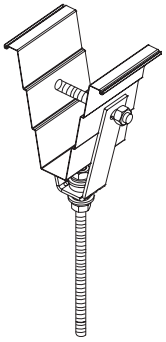
Integral suspension brackets

			
PNU (p. 148)	KNPL (p. 146)	KNPLU (p. 146)	KNPLB (p. 114)

Recommended suspension brackets			
The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.			
PNU-100	KNPL-100	-	-
PNU-100	KNPL-100	-	-
PNU-200	KNPL-200	-	-
PNU-300	KNPL-300	-	-
PNU-400	KNPL-400	KNPLU-500	-
The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.			
PNU-200	KNPL-200	-	-
PNU-300	KNPL-300	-	-
PNU-400	KNPL-400	KNPLU-500	-
-	-	KNPLU-500	-
-	-	KNPLU-600	-
The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.			
PNU-100	KNPL-100	-	KNPLB-100
PNU-100	KNPL-100	-	KNPLB-100
PNU-200	KNPL-200	-	KNPLB-200
PNU-300	KNPL-300	-	KNPLB-300
PNU-400	KNPL-400	KNPLU-500	-
-	-	KNPLU-500	-
-	-	KNPLU-600	-

MOUNTING ON STRUCTURAL STEEL MEMBERS

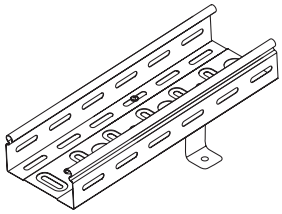
Beam clamps and brackets

				
Components of suspension assembly set	STR beam clamp — 1 pc. (p. 142) SHP threaded rod — 1 pc. (p. 150) SHM8U washer — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	STR beam clamp — 2 pcs. (p. 142) PP100 (p. 132) SHP threaded rod — 2 pcs. (p. 150) SHM8U washer — 4 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)	KPP (p. 142)	KPPZ (p. 142)

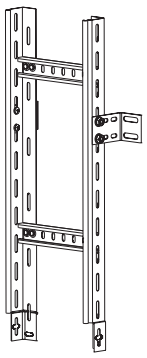
Recommended threaded rods				
Cable trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system:**			
	-	**VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**	-	-
50	SHP8-2	SHP8-2	SHP8-2	SHP8-2
100	SHP8-2	SHP8-2	SHP8-2	SHP8-2
200	-	SHP8-2	SHP8-2	SHP8-2
300	-	SHP8-2	SHP8-2	SHP8-2
400	-	SHP10-2	SHP8-2	SHP8-2
Cable ladders, width, mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system:**			
	-	**PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**	-	-
200	-	SHP8-2	SHP8-2	SHP8-2
300	-	SHP8-2	SHP8-2	SHP8-2
400	-	SHP10-2	SHP8-2	SHP8-2
500	-	SHP10-2	SHP8-2	SHP8-2
600	-	SHP10-2	SHP8-2	SHP8-2
Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system:**			
	SPLO20 — 1 pc.	**SPLO20 — 2 pcs.**	-	-
60	SHP8-2	SHP8-2	SHP8-2	SHP8-2
100	SHP8-2	SHP8-2	SHP8-2	SHP8-2
200	-	SHP8-2	SHP8-2	SHP8-2
300	-	SHP8-2	SHP8-2	SHP8-2
400	-	SHP10-2	SHP8-2	SHP8-2
500	-	SHP10-2	SHP8-2	SHP8-2
600	-	SHP10-2	SHP8-2	SHP8-2

FLOOR AND WALL MOUNTING

Cleats

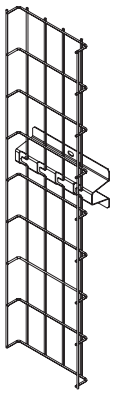


SN (p. 146)



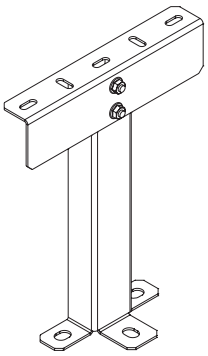
SKL — 2 pcs. (p. 148)

Holders



NND (p. 114)

Floor Stand

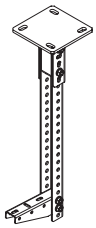
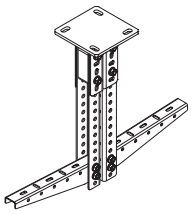
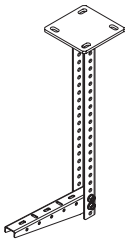
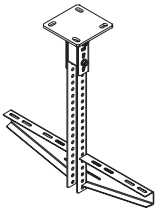
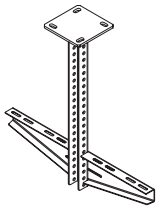
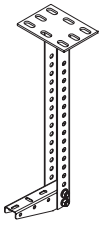


SPN — 1 pc. (p. 128)
PS — 1 pc. (p. 128)
VM610 screw — 2 pcs. (p. 150)
GM6SB nut — 2 pcs. (p. 150)

Recommended cleats		Recommended holders	Recommended floor stand shelves
The following additional fasteners are required to fasten the cable trays to the suspension system:			
VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.	**BM835PN bolt — 4 pcs., GM8SB nut — 4 pcs.**	**-**	**VM610 screw — 2 pcs., GM6SB nut — 2 pcs., SHM6 washer — 2 pcs.**
SN-100	SKL	-	PS-100
SN-100	SKL	-	PS-100
SN-200	SKL	-	PS-200
SN-300	SKL	-	PS-300
SN-400	SKL	-	PS-400
The following additional fasteners are required to fasten the cable ladders to the suspension system:			
PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.	**BM835PN bolt — 4 pcs., GM8SB nut — 4 pcs.**	**-**	**PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**
SN-200	SKL	-	PS-200
SN-300	SKL	-	PS-300
SN-400	SKL	-	PS-400
SN-500	SKL	-	PS-500
SN-600	SKL	-	PS-600
The following additional fasteners are required to fasten the wire mesh trays to the suspension system:			
SPLO20 — 2 pcs.	**-**	**-**	**SPLO20 — 2 pcs.**
SN-100	-	NND-100	PS-100
SN-100	-	NND-100	PS-100
SN-200	-	NND-200	PS-200
SN-300	-	NND-300	PS-300
SN-400	-	NND-400	PS-400
SN-500	-	NND-500	PS-500
SN-600	-	-	PS-600

CEILING MOUNTING

Medium-duty composite suspension brackets

						
Components of suspension assembly set	PKO — 1 pc. (p. 138) RPK — 1 pc. (p. 138) SPT(SN) — 1 pc. (p. 134) KPN(SN) — 1 pc. (p. 136) RKPN — 1 pc. (p. 136) BM855PN bolt — 2 pcs. (p. 150) BM845PM bolt — 2 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)	PKD — 1 pc. (p. 138) RPK — 2 pcs. (p. 138) SPT(SN) — 2 pcs. (p. 134) KPN(SN) — 2 pcs. (p. 136) RKPN — 2 pcs. (p. 136) BM855PN bolt — 4 pcs. (p. 150) BM845PM bolt — 4 pcs. (p. 150) GM8SB nut — 8 pcs. (p. 150)	SPS(SN) — 1 pc. (p. 136) KPN(SN) — 1 pc. (p. 136) RKPN — 1 pc. (p. 136) Bolt BM845PN — 2 pcs. (p. 150) Nut GM8SB — 2 pcs. (p. 150)	PKO — 1 pc. (p. 138) RPK — 1 pc. (p. 138) SPT(SN) — 1 pc. (p. 134) KOD — 1 pc. (p. 130) BM855PM bolt — 2 pcs. (p. 150) BM845PM bolt — 2 pcs. (p. 150) GM8SB nut — 4 pcs. (p. 150)	SPS(SN) — 1 pc. (p. 136) KOD — 1 pc. (p. 130) BM845PM bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	SPSu — 1 pc. (p. 126) KPN(SN) — 1 pc. (p. 136) BM845PM bolt — 2 pcs. (p. 150) GM8SB nut — 8 pcs. (p. 150)

Recommended suspension brackets

UL trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**					
50	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KOD-100	KOD-100	
100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KOD-100	KOD-100	
150	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KOD-200	KOD-200	
200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KOD-200	KOD-200	
300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KOD-300	KOD-300	
400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KOD-400	KOD-400	
500	KPN(SN)-500	KPN(SN)-500	KPN(SN)-500	KOD-500	KOD-500	
600	KPN(SN)-600	KPN(SN)-600	KPN(SN)-600	KOD-600	KOD-600	

LPMZT, LNMZT trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: screw VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**					
50	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KOD-100	KOD-100	KPN(SN)-100
100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KOD-100	KOD-100	KPN(SN)-100
200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KOD-200	KOD-200	KPN(SN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KOD-300	KOD-300	KPN(SN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KOD-400	KOD-400	KPN(SN)-400

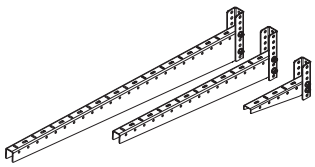
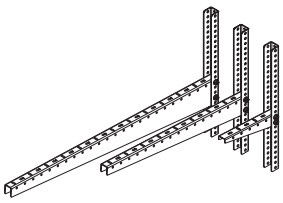
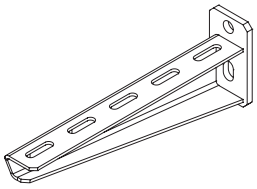
Cable ladders, width, mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**					
200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KOD-200	KOD-200	
300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KOD-300	KOD-300	
400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KOD-400	KOD-400	
500	KPN(SN)-500	KPN(SN)-500	KPN(SN)-500	KOD-500	KOD-500	
600	KPN(SN)-600	KPN(SN)-600	KPN(SN)-600	KOD-600	KOD-600	

Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**					
70	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100
100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100	KPN(SN)-100
200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200	KPN(SN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300	KPN(SN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400	KPN(SN)-400
500	KPN(SN)-500	KPN(SN)-500	KPN(SN)-500	KPN(SN)-500	KPN(SN)-500	
600	KPN(SN)-600	KPN(SN)-600	KPN(SN)-600	KPN(SN)-600	KPN(SN)-600	

WALL MOUNTING

Medium-duty composite suspension brackets

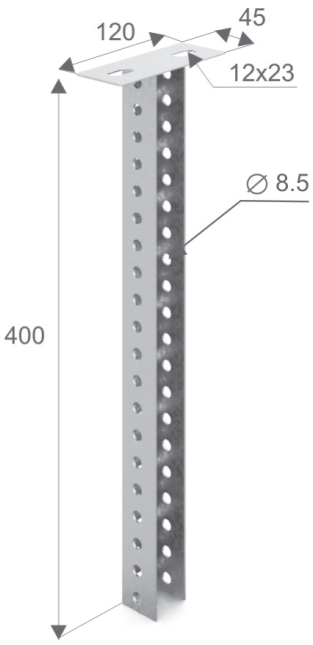
Heavy-duty integral suspension brackets

			
Components of suspension assembly set	NPP(SN) — 1 pc. (p. 134) KPN(SN) — 1 pc. (p. 136) RKPN — 1 pc. (p. 136) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	SPT(SN) — 1 pc. (p. 134) KPN(SN) — 1 pc. (p. 136) RKPN — 1 pc. (p. 136) BM845PN bolt — 2 pcs. (p. 150) GM8SB nut — 2 pcs. (p. 150)	KPN(VN) — 1 pc. (p. 138)

Recommended suspension brackets			
UL trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**		**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**
50	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
100	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
150	KPN(SN)-200	KPN(SN)-200	KPN(VN)-200
200	KPN(SN)-200	KPN(SN)-200	KPN(VN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(VN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(VN)-400
500	KPN(SN)-500	KPN(SN)-500	KPN(VN)-500
600	KPN(SN)-600	KPN(SN)-600	KPN(VN)-600
LPMZT, LNMZT trays, width, mm	**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**		**The following additional fasteners are required to fasten the cable trays to the suspension system: VM610 screw — 2 pcs., SHM6 washer — 2 pcs., GM6SB nut — 2 pcs.**
50	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
100	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
200	KPN(SN)-200	KPN(SN)-200	KPN(VN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(VN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(VN)-400
Cable ladders, width, mm	**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**		**The following additional fasteners are required to fasten the cable ladders to the suspension system: PNLO hold down clip — 2 pcs., VM612 screw — 2 pcs., GM6SB nut — 2 pcs.**
200	KPN(SN)-200	KPN(SN)-200	KPN(VN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(VN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(VN)-400
500	KPN(SN)-500	KPN(SN)-500	KPN(VN)-500
600	KPN(SN)-600	KPN(SN)-600	KPN(VN)-600
Wire mesh trays, width, mm	**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**		**The following additional fasteners are required to fasten the wire mesh trays to the suspension system: SPLO20 — 2 pcs.**
70	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
100	KPN(SN)-100	KPN(SN)-100	KPN(VN)-200
200	KPN(SN)-200	KPN(SN)-200	KPN(VN)-200
300	KPN(SN)-300	KPN(SN)-300	KPN(VN)-300
400	KPN(SN)-400	KPN(SN)-400	KPN(VN)-400
500	KPN(SN)-500	KPN(SN)-500	KPN(VN)-500
600	KPN(SN)-600	KPN(SN)-600	KPN(VN)-600

4.1 SUPPORTS FOR COMPOSITE SUSPENSION SYSTEMS

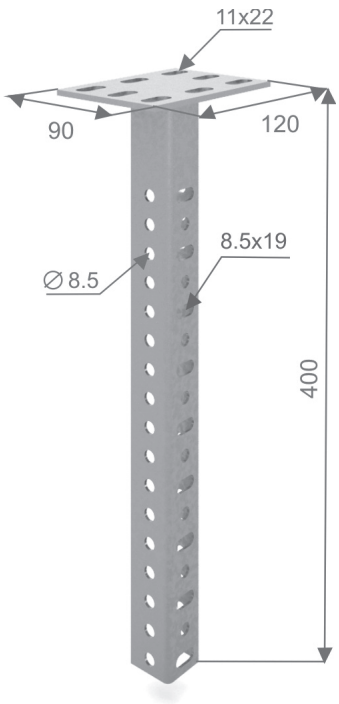
SPS ceiling support



The SPS suspension system consists of a ceiling support with a welded head plate. A KPN cantilever bracket 100 to 600 mm in size is fastened to the support. The SPS support is fastened to the ceiling with two anchors or dowels.

Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
051101	SPS	2.00	0.70	2400	18

SPSu welded stationary ceiling support



The SPSu suspension system consists of a support with a welded head plate. A KPN cantilever bracket 100 to 600 mm in size or a KOD support bracket 100 to 600 mm in size is fastened to the support. The SPSu support is fastened to the ceiling with four anchors or dowels.

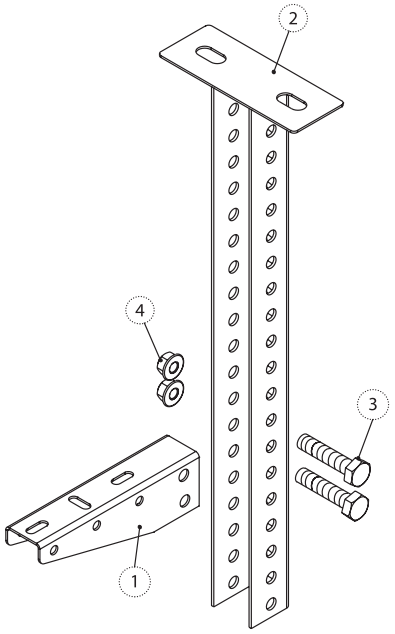
Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
051201	SPSu	2.00	0.84	2100	3

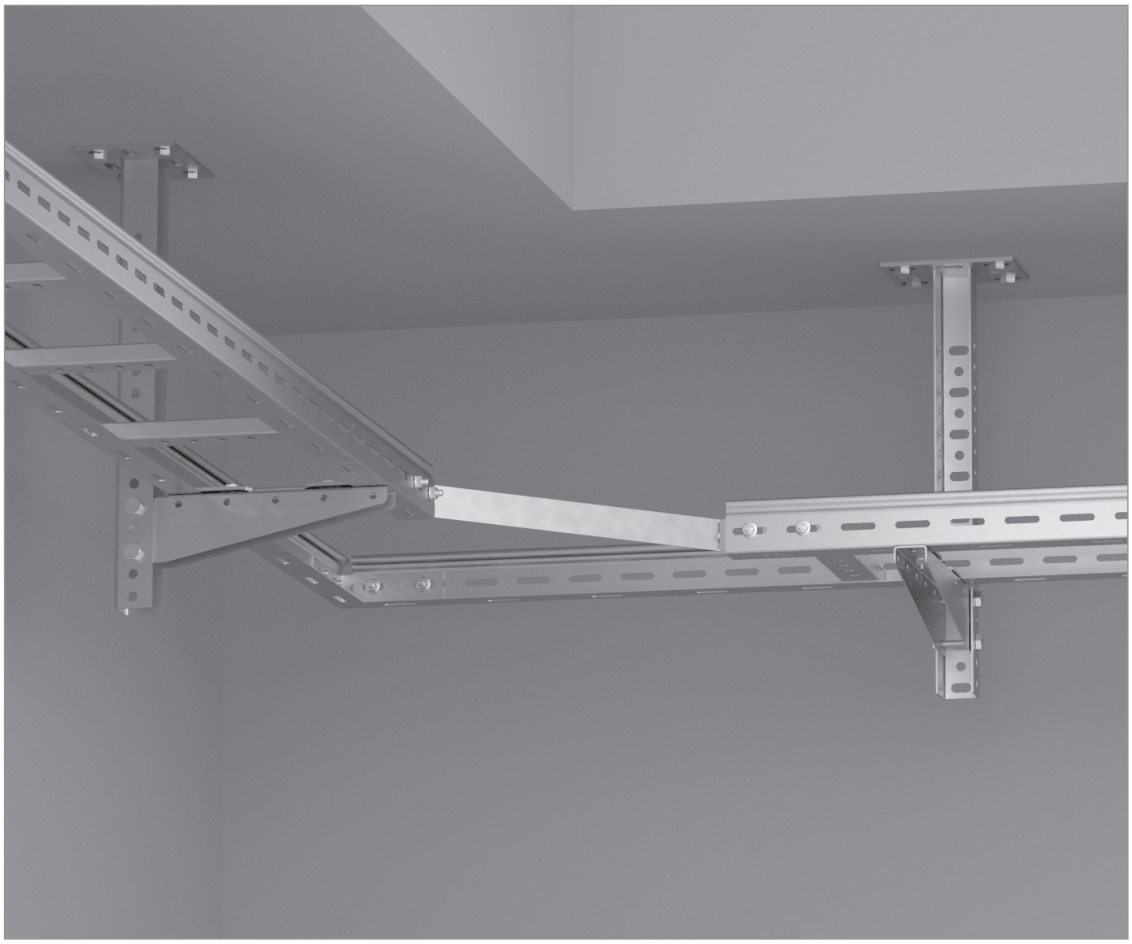
Fastening a wall cantilever bracket to a suspended support

Insert the cantilever bracket (1) into the suspended support (2) and match the bolt holes at the required height; then secure with two bolts (3) and two nuts with locking collar (4).

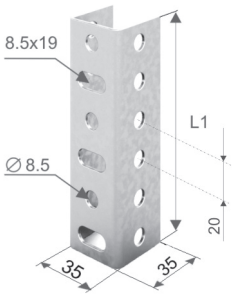
The following fasteners are used for assembly:

Art. No.	Description	Quantity, pcs.
BM845PN	M8x45 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

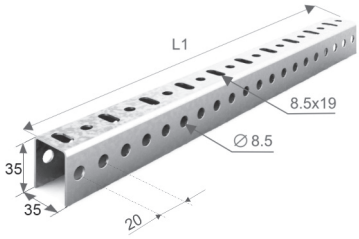




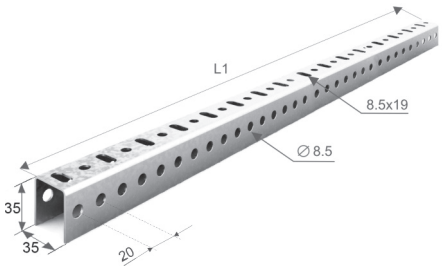
NPP 120 wall suspension plate



SPT (400) suspended ceiling support



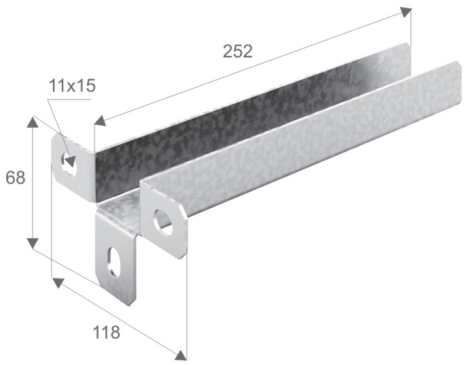
SPTZ (2900) suspended ceiling support



Code	Art. No.	Metal thickness, mm	Weight, kg	L1, mm	Packaging, pcs.
050701	NPP 120	2.00	0.17	120	100
051301	SPT (400)	2.00	0.55	400	40
051302	SPT (600)	2.00	0.82	600	40
051303	SPT (800)	2.00	1.09	800	40
051304	SPT (1200)	2.00	1.63	1200	40
051305	SPT (1800)	2.00	2.45	1800	30
051306	SPT (2200)	2.00	3.00	2200	30
051401	SPTZ (2900)	2.00	3.90	2900	30

The SPTZ support (2900) (2.9 m long) can be used for mounting ceiling and wall suspension systems up to 3 m in height. The support is fastened to the floor and ceiling with a pair of UM mounting angles.

SPN floor stand

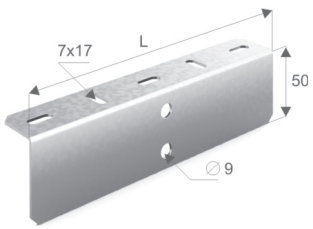


The SPN floor stand is used together with a PS shelf to fasten trays in floor mounting of cable routing systems. This solution is indispensable for cable installations under raised floors and on roof decks.

Code	Art. No.	Metal thickness, mm	Weight, kg	Packaging, pcs.
050301	SPN	1.50	0.38	40

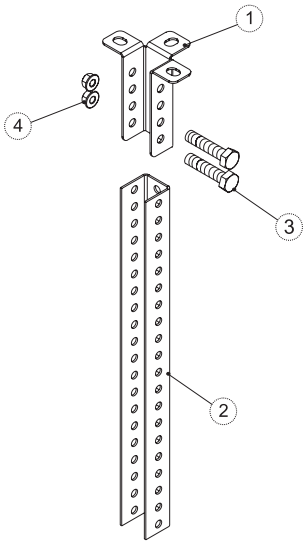
4.2 SHELVES FOR COMPOSITE SUSPENSION SYSTEMS

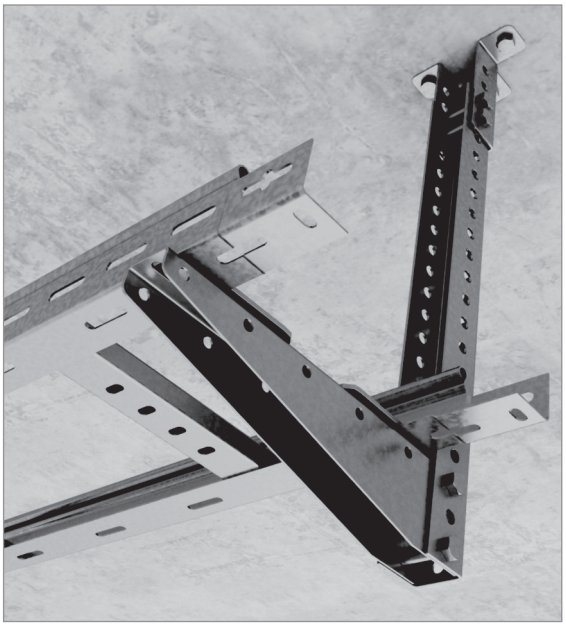
PS shelf



Code	Art. No.	Metal thickness, mm	Weight, kg	Width L, mm	Packaging, pcs.
050411	PS-100	1.50	0.10	100	25
050421	PS-200	1.50	0.21	200	25
050431	PS-300	1.50	0.32	300	25
050441	PS-400	1.50	0.43	400	25
050451	PS-500	1.50	0.55	500	25
050461	PS-600	1.50	0.67	600	25

Fastening an integral ceiling bracket to a suspended support



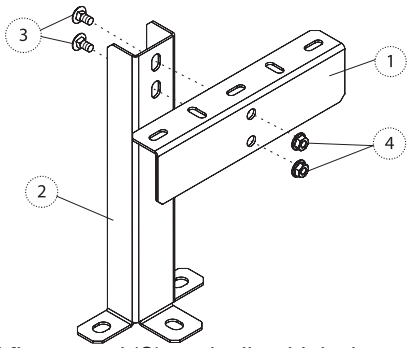


Fasten the integral ceiling bracket (1) on the sides to the suspended ceiling support (2) with two bolts and two nuts with locking collar (4).

The following fasteners are used for assembly:

Art. No.	Description	Quantity, pcs.
BM845PN	M8x45 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

Assembling the floor stand

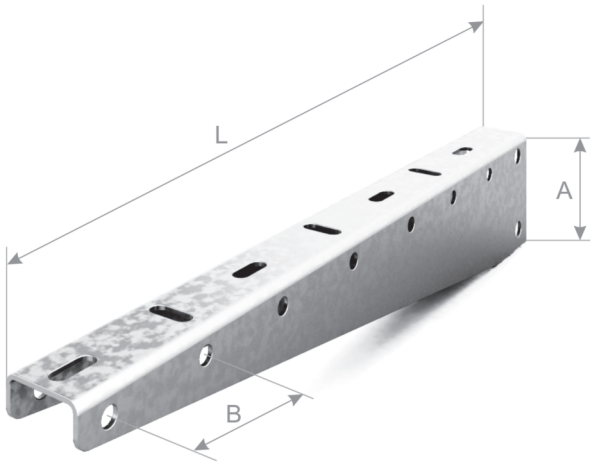


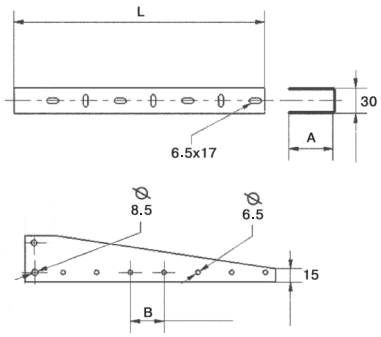
Mount the SPN floor stand (2) vertically with its base against the floor.
Position a PS shelf (1) corresponding to the tray width on the perforations in the upper part of the SPN floor stand (2).
Fasten the PS shelf (1) to the SPN floor stand (2) with two screws (3) and two nuts with locking collar (4).

The following fasteners are used for each floor stand:

Art. No.	Description	Quantity, pcs.
GM6SB	M6 nut with locking collar	2
VM610	M6x10 screw	2

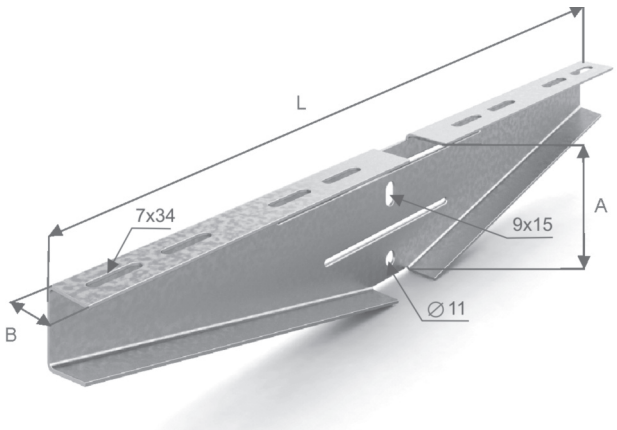
KPN cantilever wall bracket





Code	Art. No.	Metal thickness, mm	Weight, kg/each	Dimensions, mm			Load Q, N	**Packaging,** pcs.
				L	A	B		
054411	KPN(SN)-100	2.00	0.19	140	40	30	2200	100
054421	KPN(SN)-200	2.00	0.31	240	40	30	2000	30
054431	KPN(SN)-300	2.00	0.54	340	60	30	1600	30
050541	KPN-400	2.00	0.69	440	60	47	1500	30
050551	KPN-500	2.00	0.85	540	60	95	1200	12
050561	KPN-600	2.00	1.10	640	60	95	950	12

KOD double-sided support bracket



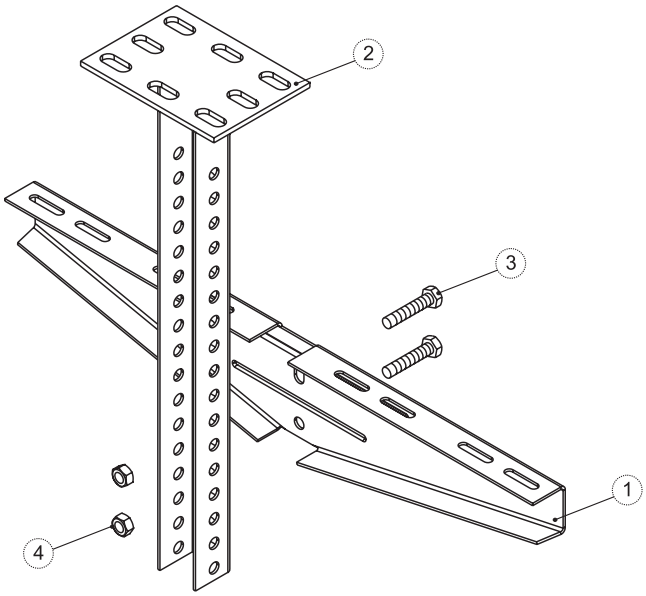
Code	Art. No.	Metal thickness, mm	Weight, kg/ each	Dimensions, mm			Load Q, N	Packaging, pcs.
				L	A	B		
051811	KOD-100	2.00	0.46	295	80	30	2200	10
051821	KOD-200	2.00	0.80	495	80	30	2100	10
051831	KOD-300	2.00	1.12	695	80	30	2000	6
051841	KOD-400	2.00	1.84	895	110	30	1800	6
051851	KOD-500	2.00	2.88	1095	150	35	1700	6
051861	KOD-600	2.00	4.00	1295	150	35	1600	6

Fastening a double-sided support bracket to a ceiling support

Fit the double-sided support bracket (1) to the strengthened support (2) and match the bolt holes at the required height; then secure with bolts (3) and two nuts with locking collar (4).

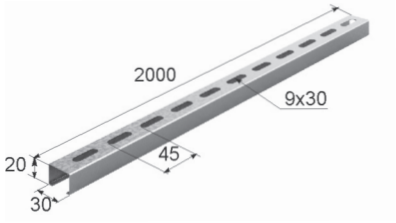
The following fasteners are used for assembly:

Art. No.	Description	Quantity, pcs.
BM835PN	M8x35 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

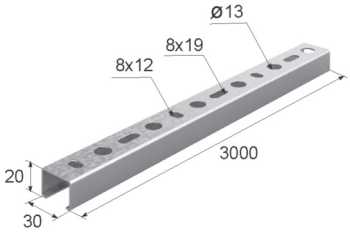


Mounting profiles

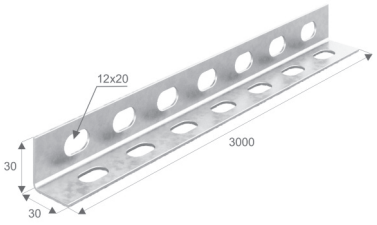
PP100 profile



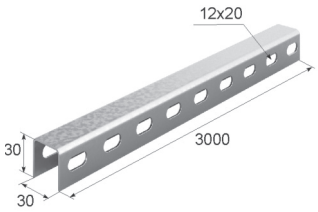
Perforated C-profile, PP-S



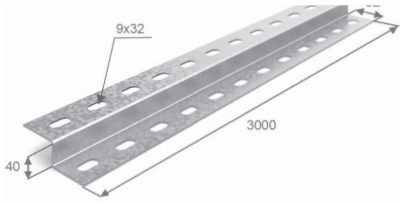
Perforated L-profile, PP-L



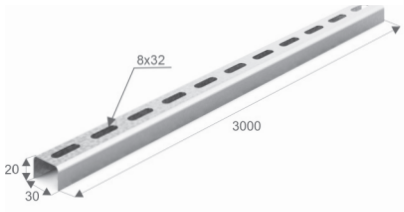
Perforated U-profile, PP-U



Z-profile, PP-Z

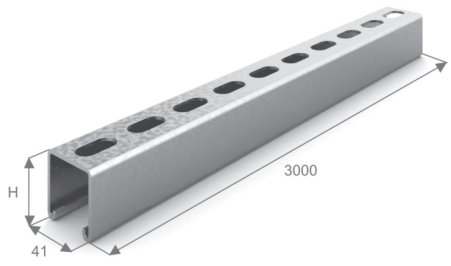


Perforated C-profile, PP-P



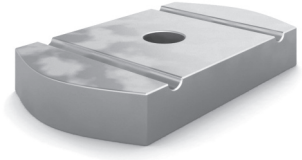
Code	Art. No.	Metal thickness, mm	Weight, kg/m	Load Q, kN/m (L — support spacing, mm)			Packaging, m
				L=500	L=1000	L=2000	
051901	PP100	1.00	0.50	3.00	0.45	0.08	60
052001	PP-S	1.50	0.90	2.15	0.43	0.11	3
052101	PP-L	2.00	0.90	2.20	0.52	0.08	3
052201	PP-U	2.00	1.20	7.50	1.70	0.28	3
052301	PP-Z	2.00	1.39	-	-	-	3
052401	PP-P	2.00	1.50	-	-	-	3

SP strut profile



Code	Art. No.	Height H, mm	Packaging, pcs.
052512	SP-41x21x1.5	21	3
052522	SP-41x21x2	21	3
052532	SP-41x21x2.5	21	3
052614	SP-41x41x1.5	41	3
052624	SP-41x41x2	41	3
052634	SP-41x41x2.5	41	3

GKM slide nut

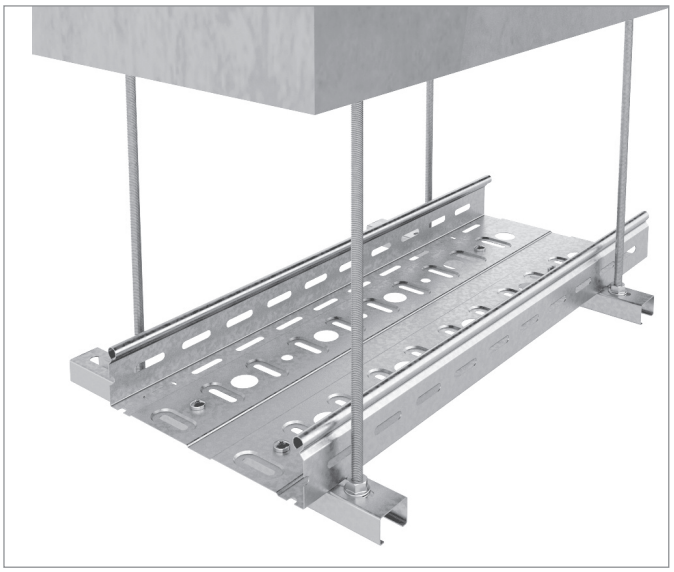


The slide nut is suitable for all types of strut profiles. The nut firmly secures structural elements made of strut profiles and has a high load capacity.

Code	Art. No.	Packaging, pcs.
053908	GKM8	1
053910	GKM10	1
053912	GKM12	1

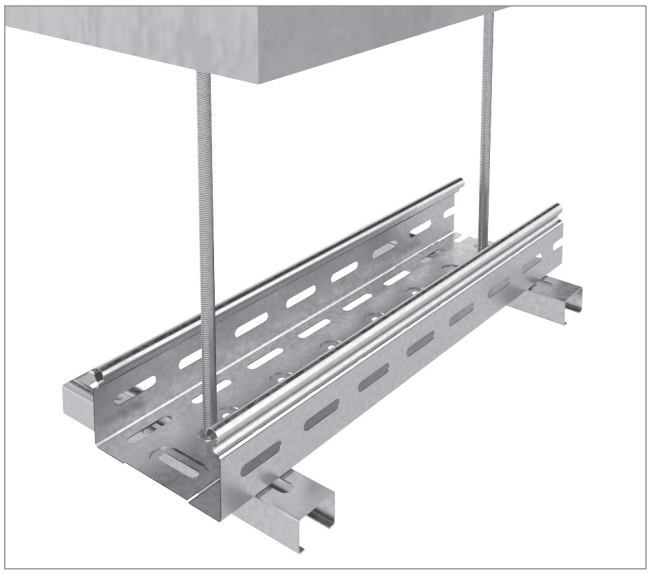
Mounting a cable tray with two threaded rods using mounting profiles

Cut the profile to the width of the tray to be mounted with 30–50 mm wide margins on either side to accommodate the threaded rods. Drive the anchors into the ceiling. Screw the upper parts of both threaded rods into the anchor threads until they stop. Mount the profiles in the true horizontal position and secure with two heavy-duty washers and two nuts for each rod, one on either side of the profile.

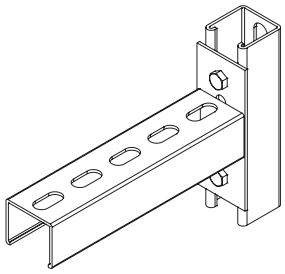


Mounting a cable tray with one threaded rod using mounting profiles

Cut the profile to the width of the tray to be mounted. Drive the anchor into the ceiling. Screw the upper part of the threaded rod into the anchor thread until it stops. Mount the profiles in the true horizontal position and secure on the rod with two heavy-duty washers and two nuts, one on either side of the profile.



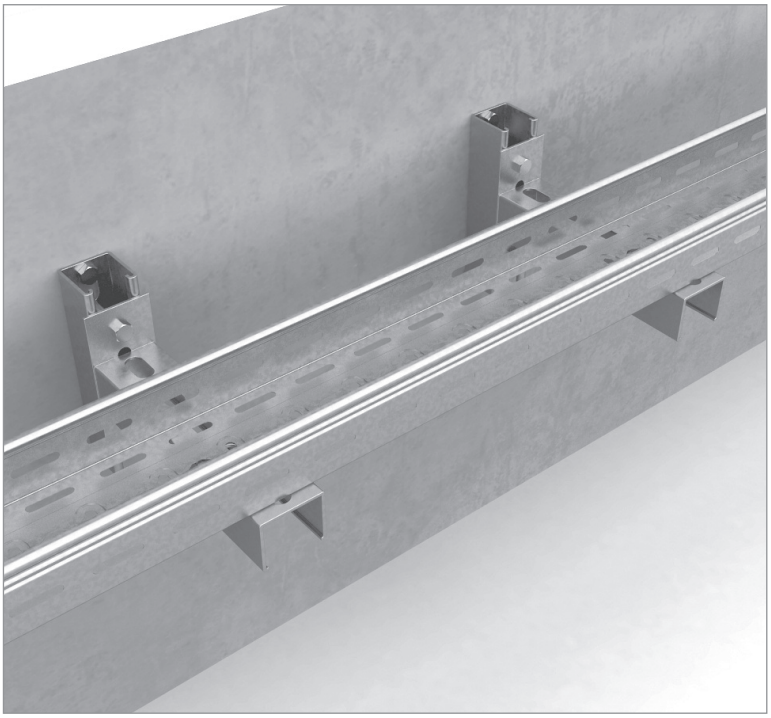
Mounting a cable tray on a strut profile using a welded integral bracket



1. Set the nut on the threaded end of the bolt.
2. Insert into the mounting profile.
3. Press and turn the nut through 90 degrees.
4. Then tighten the bolt by applying torque to firmly secure the slide nut to the mounting profile.

The following fasteners are used for each assembly:

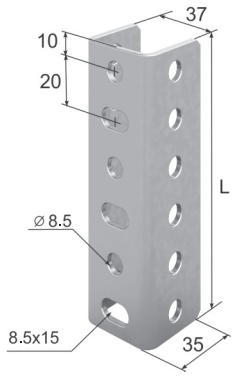
Art. No.	Description	Quantity, pcs.
BM8	M8x35 bolt	2
GKM8	M8 slide nut	2



4.3 MEDIUM-DUTY SUSPENSION SYSTEMS

NPP(SN) wall suspension plate

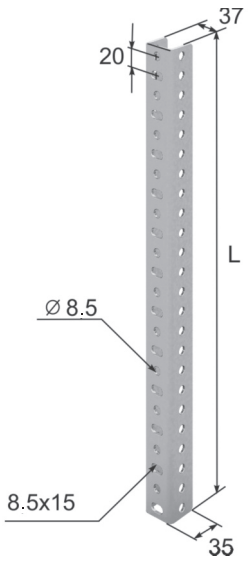
NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	L, mm	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
055021	355021	155021	255021	NPP(SN)-120	3.00	0.25	120	1
055011	355011	155011	255011	NPP(SN)-160	3.00	0.33	160	1

SPT(SN) suspended ceiling support

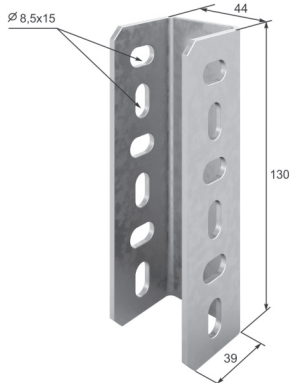
NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	L, mm	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
054704	354704	154704	254704	SPT(SN)-480	3.00	1.68	480	1
054706	354706	154706	254706	SPT(SN)-600	3.00	1.93	600	1
054707	354707	154707	254707	SPT(SN)-720	3.00	2.18	720	1
054708	354708	154708	254708	SPT(SN)-840	3.00	2.42	840	1
054709	354709	154709	254709	SPT(SN)-960	3.00	2.67	960	1
054710	354710	154710	254710	SPT(SN)-1080	3.00	2.92	1080	1
054712	354712	154712	254712	SPT(SN)-1200	3.00	3.17	1200	1
054713	354713	154713	254713	SPT(SN)-1320	3.00	3.41	1320	1
054714	354714	154714	254714	SPT(SN)-1440	3.00	3.66	1440	1
054715	354715	154715	254715	SPT(SN)-1560	3.00	3.91	1560	1
054716	354716	154716	254716	SPT(SN)-1680	3.00	4.15	1680	1
054718	354718	154718	254718	SPT(SN)-1800	3.00	4.40	1800	1
054719	354719	154719	254719	SPT(SN)-1920	3.00	4.65	1920	1
054720	354720	154720	254720	SPT(SN)-2040	3.00	4.90	2040	1
054721	354721	154721	254721	SPT(SN)-2160	3.00	5.14	2160	1
054722	354722	154722	254722	SPT(SN)-2280	3.00	5.39	2280	1
054724	354724	154724	254724	SPT(SN)-2400	3.00	5.64	2400	1
054725	354725	154725	254725	SPT(SN)-2520	3.00	5.89	2520	1
054726	354726	154726	254726	SPT(SN)-2640	3.00	6.13	2640	1
054727	354727	154727	254727	SPT(SN)-2780	3.00	6.38	2780	1
054728	354728	154728	254728	SPT(SN)-2880	3.00	6.63	2880	1
054730	354730	154730	254730	SPT(SN)-3000	3.00	6.87	3000	1

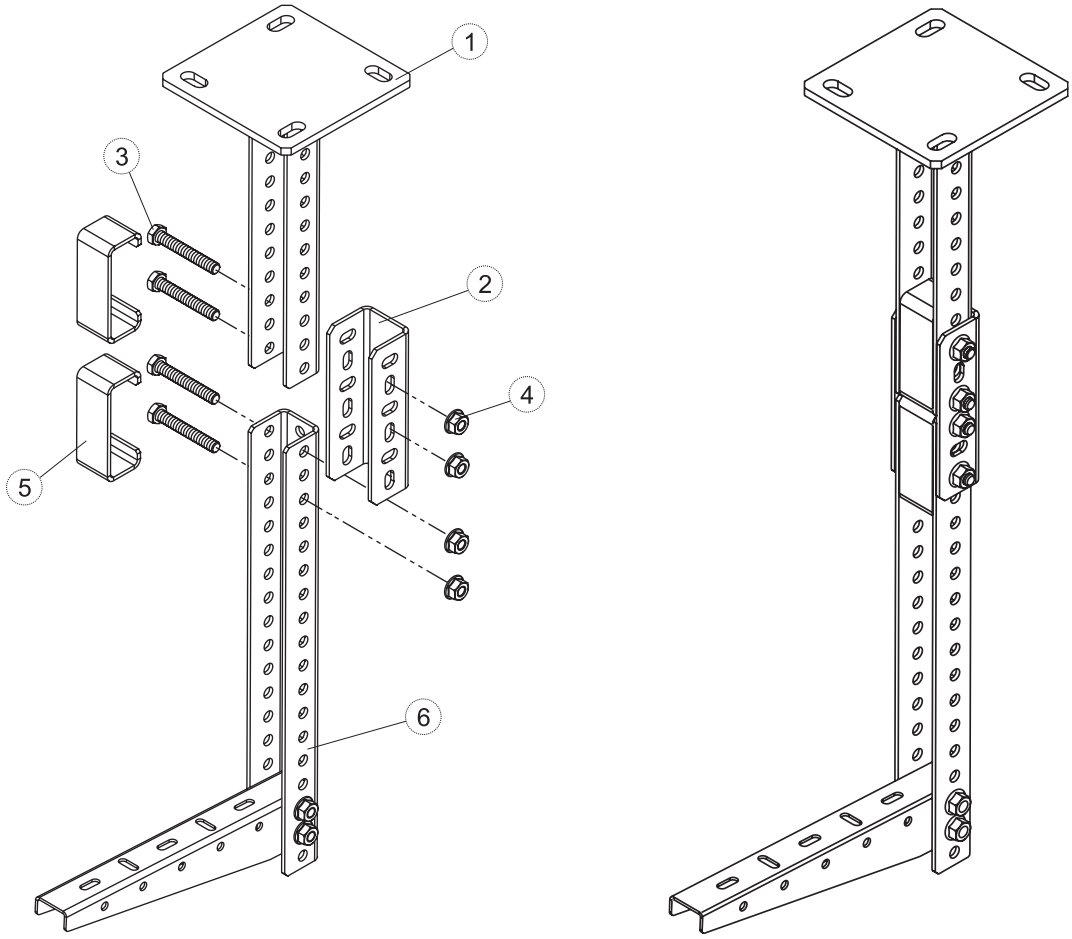
SSP(SN) connector for suspended ceiling support

NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
042501	342501	142501	242501	SSP(SN)	3.00	0.31	44x39x130	1

Fastening a welded ceiling support to a suspended ceiling support



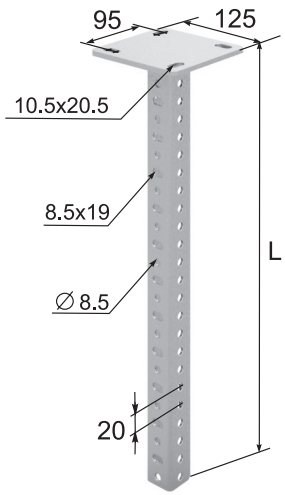
Lay the support connector (2) on the back of the welded ceiling support (1). Align the uppermost slot in the perforated side rail of the support connector (2) with the third hole from the bottom on the welded ceiling support (1) and pass bolts (3) through the holes.
Then insert the ceiling mounting spacer (5) into the profile of the welded ceiling support (1) and install the second bolt. Then insert the suspended ceiling support (6) into the lower part of the support connector (2) and fasten to the bottom of the spacer (5). Then install the second upper bolt and one lower bolt. Finally, secure the bolts with the nuts (4).

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
BM855PN	M8x55 full-threaded bolt	4
GM8SB	M8 nut with locking collar	4

SPS(SN) welded ceiling support

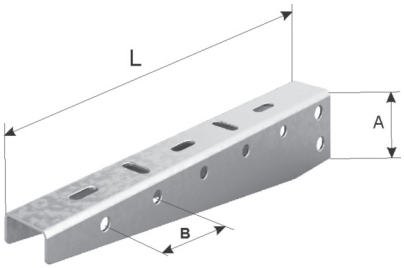
NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	L, mm	Packaging, pcs.
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted					
054804	354804	154804	254804	SPS(SN)-480	3.00	1.68	480	1
054806	354806	154806	254806	SPS(SN)-600	3.00	1.93	600	1
054807	354807	154807	254807	SPS(SN)-720	3.00	2.18	720	1
054808	354808	154808	254808	SPS(SN)-840	3.00	2.42	840	1
054809	354809	154809	254809	SPS(SN)-960	3.00	2.67	960	1
054810	354810	154810	254810	SPS(SN)-1080	3.00	2.92	1080	1
054812	354812	154812	254812	SPS(SN)-1200	3.00	3.17	1200	1
054813	354813	154813	254813	SPS(SN)-1320	3.00	3.41	1320	1
054814	354814	154814	254814	SPS(SN)-1440	3.00	3.66	1440	1
054815	354815	154815	254815	SPS(SN)-1560	3.00	3.91	1560	1
054816	354816	154816	254816	SPS(SN)-1680	3.00	4.15	1680	1
054818	354818	154818	254818	SPS(SN)-1800	3.00	4.40	1800	1
054819	354819	154819	254819	SPS(SN)-1920	3.00	4.65	1920	1
054820	354820	154820	254820	SPS(SN)-2040	3.00	4.90	2040	1
054821	354821	154821	254821	SPS(SN)-2160	3.00	5.14	2160	1
054822	354822	154822	254822	SPS(SN)-2280	3.00	5.39	2280	1
054824	354824	154824	254824	SPS(SN)-2400	3.00	5.64	2400	1
054825	354825	154825	254825	SPS(SN)-2520	3.00	5.89	2520	1
054826	354826	154826	254826	SPS(SN)-2640	3.00	6.13	2640	1
054827	354827	154827	254827	SPS(SN)-2760	3.00	6.38	2760	1
054828	354828	154828	254828	SPS(SN)-2880	3.00	6.63	2880	1
054830	354830	154830	254830	SPS(SN)-3000	3.00	6.88	3000	1

KPN(SN) cantilever bracket

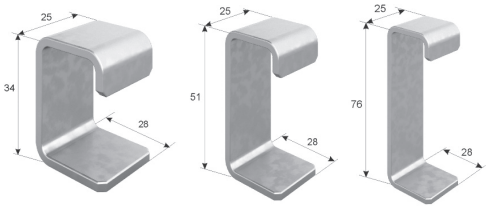
NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm		Load Q, N	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted				L	A		
054411	354401	154411	254411	KPN(SN)-100	2.00	0.19	140	40	2200	100
054421	354421	154421	254421	KPN(SN)-200	2.00	0.31	240	40	2000	30
054431	354431	154431	254431	KPN(SN)-300	2.00	0.54	340	60	1600	30
054441	354441	154441	254441	KPN(SN)-400	3.00	1.12	440	70	1500	1
054451	354451	154451	254451	KPN(SN)-500	3.00	1.51	540	70	1500	1
054461	354461	154461	254461	KPN(SN)-600	3.00	1.82	640	70	1500	1
054471	354471	154471	254471	KPN(SN)-700	3.00	2.24	740	80	1500	1
054481	354481	154481	254481	KPN(SN)-800	3.00	2.75	840	90	1500	1
054491	354491	154491	254491	KPN(SN)-900	3.00	3.45	940	100	1500	1

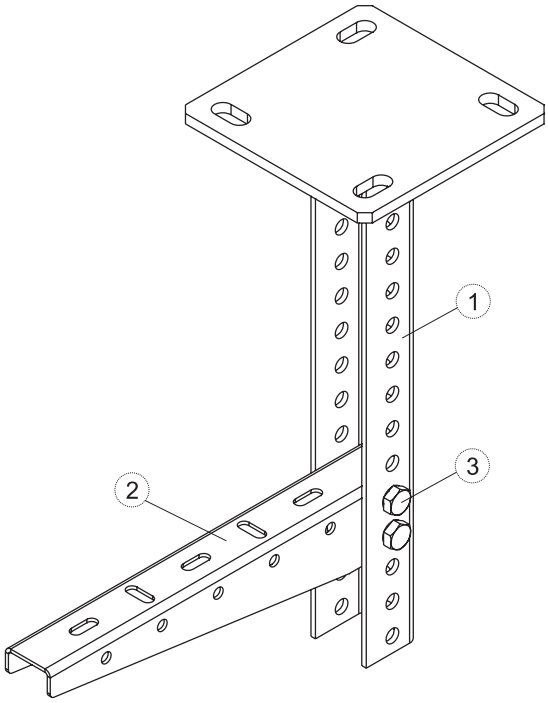
RKPN(SN) spacer for cantilever bracket

NEW



Version code				Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
055221	355221	155221	255221	RKPN(SN)100-200	3.00	0.06	30x35x25	1
055222	355222	155222	255222	RKPN(SN)300-600	3.00	0.07	30x50x25	1
055223	355223	155223	255223	RKPN(SN)700-900	3.00	0.08	30x75x25	1

Fastening a welded ceiling support to a cantilever bracket

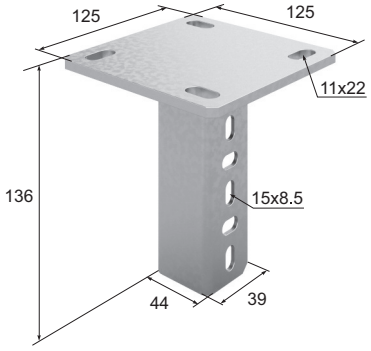


Insert the cantilever bracket (2) into the welded ceiling support (1) at the required level. Insert the ceiling mounting spacer into the cantilever bracket profile (2) and the welded ceiling support (1) from below and secure with bolts (3) and nuts.

The following fasteners are used for each assembly:

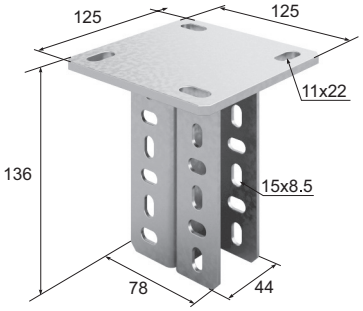
Art. No.	Description	Quantity, pcs.
BM855PN	M8x55 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

PKO single ceiling support



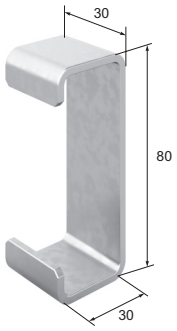
Version code				Art. No.	Metal thickness, mm	Weight, kg	Packaging, pcs.
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted				
054911	354911	154911	254911	PKO	3.00	1.01	1

PKD double ceiling support



Version code				Art. No.	Metal thickness, mm	Weight, kg	Packaging, pcs.
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted				
054922	354922	154922	254922	PKD	3.00	1.32	1

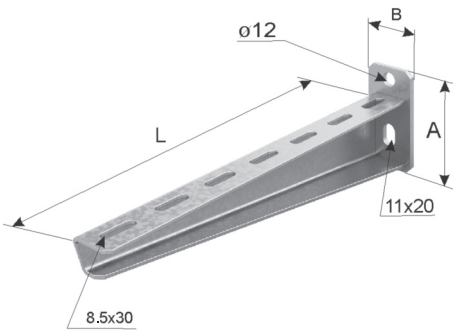
RPK spacer for ceiling support



Version code				Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm	Packaging, pcs.
Sendzimir galvanized	Hot-dip galvanized	Stainless steel	Painted					
055211	355211	155211	255211	RPK	3.00	0.11	30x30x80	1

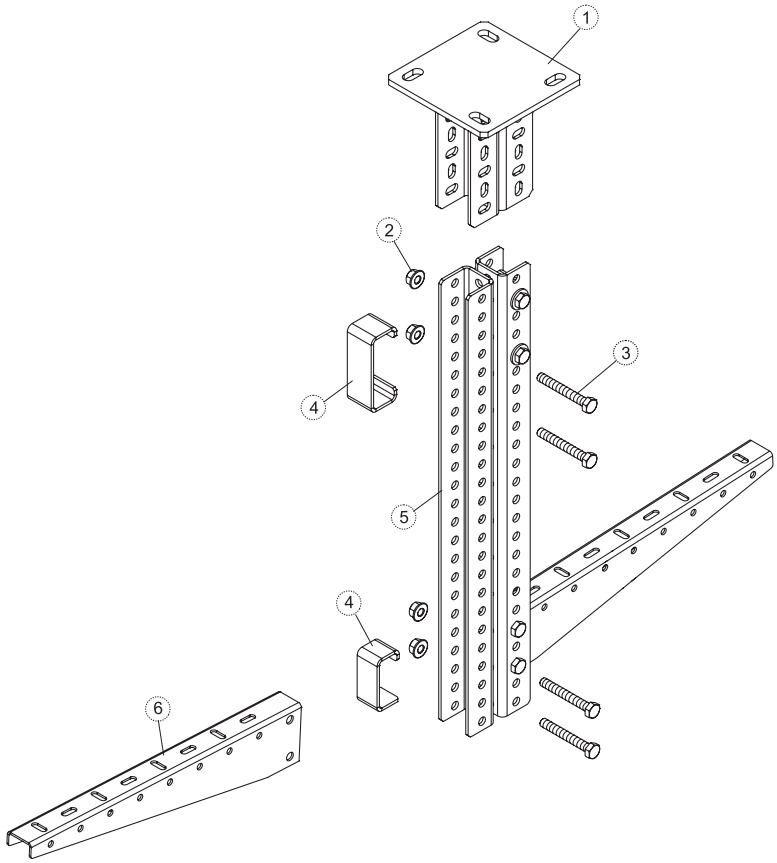
4.4 HEAVY-DUTY SUSPENSION SYSTEMS

KPN(VN) cantilever bracket



Version code				Art. No.	Metal thickness, mm	Weight, kg	Dimensions, mm		Load Q, N	Packaging, pcs.
Electro-galvanized	Hot-dip galvanized	Stainless steel	Painted				L	A		
054521	354521	154521	254521	KPN(VN)-200	3.00	0.66	250	85	3000	1
054531	354531	154531	254531	KPN(VN)-300	3.00	0.90	350	90	3000	1
054541	354541	154541	254541	KPN(VN)-400	3.00	1.21	450	95	3000	1
054551	354551	154551	254551	KPN(VN)-500	3.00	1.47	550	100	3000	1
054561	354561	154561	254561	KPN(VN)-600	3.00	1.75	650	105	3000	1
054571	354571	154571	254571	KPN(VN)-700	3.00	2.10	750	110	3000	1
054581	354581	154581	254581	KPN(VN)-800	3.00	2.47	850	120	3000	1
054591	354591	154591	254591	KPN(VN)-900	3.00	2.86	950	130	3000	1

Fastening a double ceiling support to a suspended ceiling support



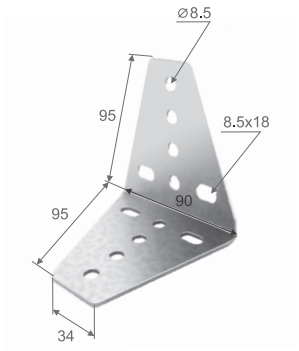
Fasten the double ceiling support (1) to the structural ceiling slab with four drive-in M8 anchor bolts. Choose the appropriate suspended ceiling support (5) according to the required length of the suspension system. Install spacers (4) inside the profile of the suspended ceiling support (5) to prevent its potential deformation when tightening the nuts (2). To mount the spacer for ceiling support (4), hang it first on the pre-installed upper bolt (3), then install the lower bolts on the double ceiling support (1). Fasten cantilever brackets (6) to the suspended ceiling support (5) with bolts and be sure to install the spacers for ceiling support (4), such that the shelves of the cantilever brackets (6) are preferably positioned at the same level.

The following fasteners are for each assembly:

Art. No.	Description	Quantity, pcs.
BM855PN	M8x55 full-threaded bolt	4
BM845PN	M8x45 full-threaded bolt	4
GM8SB	M8 nut with locking collar	8

4.5 OTHER COMPONENTS OF COMPOSITE SUSPENSION SYSTEMS

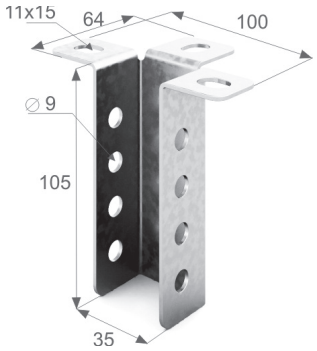
UM mounting angle



UM mounting angles are used in pairs to secure SPT (400) and SPTZ (2900) supports to the floor or ceiling.

Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
051601	UM	2.00	0.18	2200	100

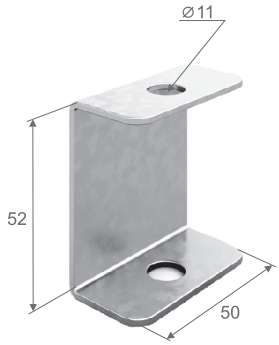
UKP integral ceiling bracket



Used to secure supports SPT (400) and SPTZ (2900) supports to the floor or ceiling.

Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
051501	UKP	2.00	0.22	900	40

KPPLS ceiling C-bracket



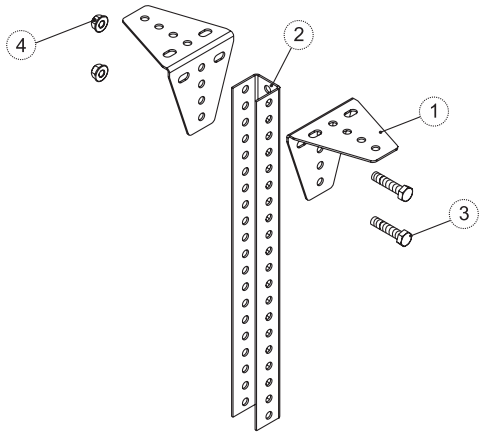
Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
052901	KPPLS	2.00	0.07	450	120

Variable ceiling holder PPD

Used to fasten suspended supports to sloped and horizontal ceilings.

Code	Art. No.	Metal thickness, mm	Weight, kg	Packaging, pcs.
051701	PPD	2.00	0.24	36

Fastening mounting angles to a suspended support

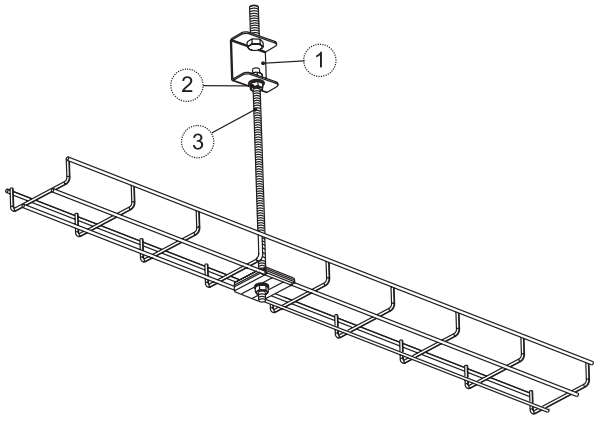


Fasten mounting angles (1) on either side to suspended ceiling support (2) aligning the upper edges and holes with two bolts (3) and two nuts (4).

The following fasteners are used for assembly:

Art. No.	Description	Quantity, pcs.
BM845PN	M8x45 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

Fastening a threaded rod to a ceiling C-bracket

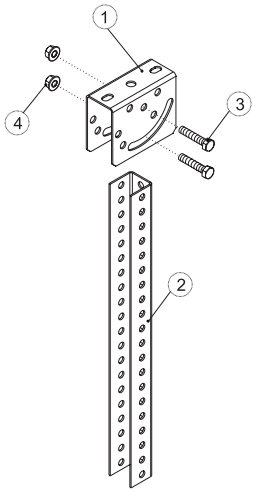


Choose the method of mounting the C-bracket (1) on the ceiling depending on the ceiling material and the design load. Fasten the threaded rod (3) to the bracket (1) with two nuts (2).

The following fasteners are used for assembly:

Art. No.	Description	Quantity, pcs.
GM6SB	M6 nut with locking collar	2

Fastening a suspended ceiling support to a variable ceiling holder

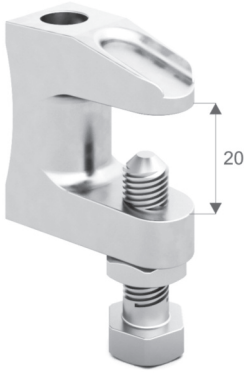


Choose the method of mounting the variable holder (1) on the ceiling depending on the ceiling material and the design load. Fasten the suspended support (2) to the holder (1) through one of the holes on the holder using one bolt (3) and one nut (4). Use one bolt (3) and one nut (4) to secure the support (2) to the slotted section of the holder (1). Then tighten the bolt to firmly secure the support in the vertical position.

The following fasteners are used for assembly:

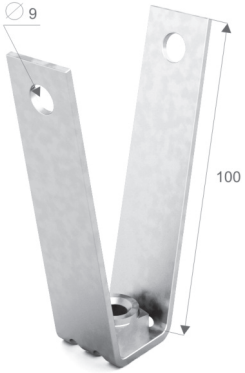
Art. No.	Description	Quantity, pcs.
BM845PN	M8x45 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

STR cast beam clamp



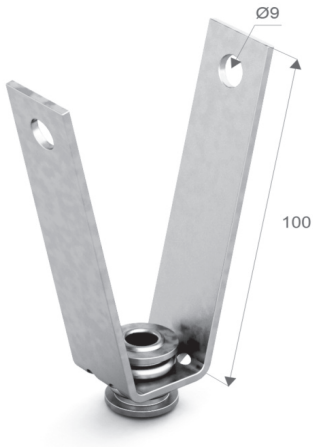
Code	Art. No.	Weight, kg	Load Q, N	Packaging, pcs.
053801	STRf	0.15	2500	50
053889	STR8k	0.15	2500	100
053819	STR10k	0.15	2500	100

KPP trapezoidal ceiling and corrugated steel sheet bracket



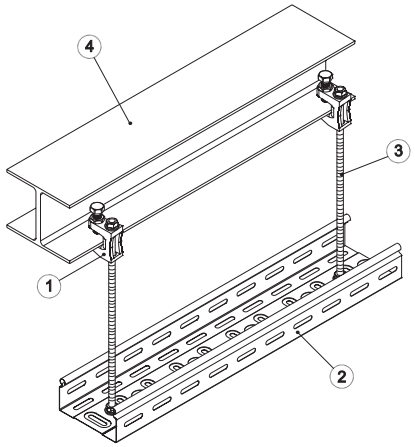
Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
053710	KPPf-10	2.50	0.11	2000	100
053708	KPPf-8	2.50	0.10	2000	100
053528	KPP-12M8	2.00	0.07	2000	150
053520	KPP-12M10	2.00	0.07	2000	150
053521	KPP-12D11	2.00	0.11	2000	150
053588	KPP-18M8	2.00	0.14	2000	150
053580	KPP-18M10	2.00	0.14	2000	150
053581	KPP-18D11	2.00	0.14	2000	150

KPPZ soundproof trapezoidal ceiling and corrugated steel sheet bracket



Code	Art. No.	Metal thickness, mm	Weight, kg	Load Q, N	Packaging, pcs.
053601	KPPZ	2.50	0.12	2000	100

Mounting a cable tray with a cast beam clamp

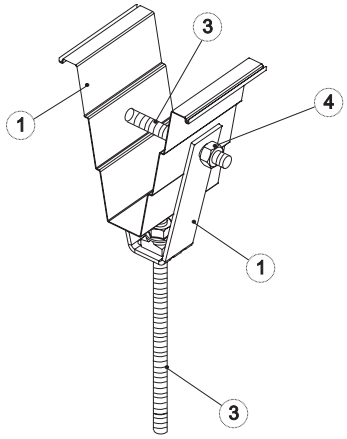


Secure the clamp (1) on a structural steel member (4) by tightening the bolt and locknut included in the clamp kit. Pass the threaded rod (3) for suspending the cable tray (2) through the opening in the clamp (1) and secure at the required level with two separate nuts in the upper part of the clamp.

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
SHP8-2	SHP8-2 threaded rod	1
GM8SB	M8 nut with locking collar	2

Mounting a cable tray with a trapezoidal ceiling and corrugated steel sheet bracket

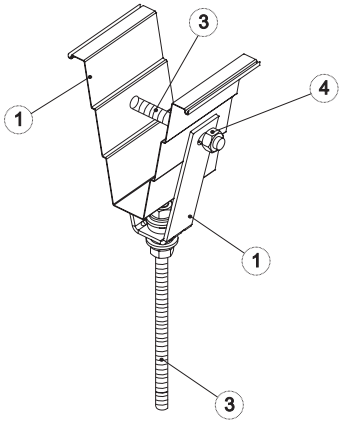


Prior to mounting the bracket (1) on the corrugated steel sheet (2), drill holes or make perforations through the corrugations in the sheet. Cut the threaded rod (3) to the corrugation width and pass it through the holes in the bracket; then insert the upper portion of the bracket (1) into the corrugation, and secure the threaded rod to the corrugated sheet with two nuts (4). Screw the threaded rod (3) for suspending the cable tray into the hole in the clamp and secure with the provided nut at the required level from underneath the bracket.

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
SHP8-2	SHP8-2 threaded rod	1
GM8SB	M8 nut with locking collar	3

Mounting a cable tray with a soundproof trapezoidal bracket



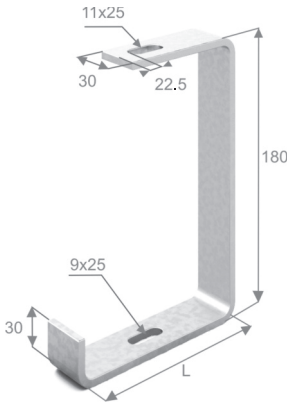
Prior to mounting the bracket (1) on the corrugated steel sheet (2), drill holes or make perforations through the corrugations in the sheet. Cut the threaded rod (3) to the corrugation width and pass it through holes in the bracket; then insert the upper portion of the bracket (1) into the corrugation, and secure the threaded rod to the corrugated sheet with two nuts (4). Screw the threaded rod (3) for suspending the cable tray into the hole in the clamp and secure with the provided nut at the required level from underneath the bracket.

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
SHP8-2	SHP8-2 threaded rod	1
GM8SB	M8 nut with locking collar	3

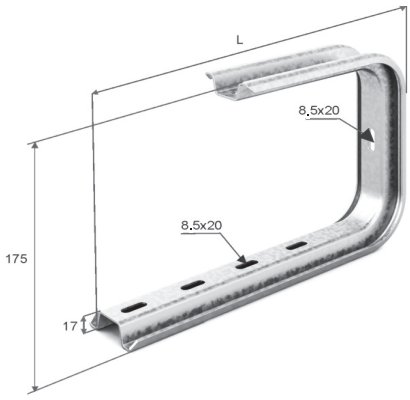
4.6 INTEGRAL CEILING SUSPENSION SYSTEMS

SPP ceiling suspension C-bracket



Code	Art. No.	Metal thickness, mm	Weight, kg	L, mm	Load Q, N	Packaging, pcs.
050915	SPP-100(p)	5.00	0.49	125	590	25
050925	SPP-200(p)	5.00	0.67	225	230	24
050931	SPP-300	8.00	1.19	300	500	1
050941	SPP-400	8.00	1.48	400	500	1

SPPU ceiling suspension C-bracket

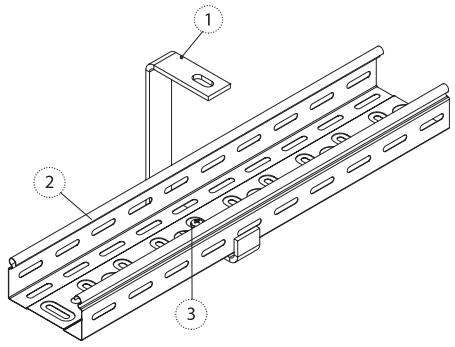


Code	Art. No.	Metal thickness, mm	Weight, kg	L, mm	Load Q, N	Packaging, pcs.
051011	SPPU-100	2.00	0.49	170	1200	12
051021	SPPU-200	2.00	0.68	270	900	6
051031	SPPU-300	2.00	0.80	370	700	4

LP200 perforated steel strap

Code	Art. No.	Dimensions		Metal thickness, mm	Weight, kg/each	Packaging, pcs.
		Width, mm	Length, m			
050630	LP200	19	30	0.75	2.40	6
050650	LP20x0.7	20	50	0.70	2.90	4

Mounting a cable tray on an SPP ceiling suspension C-bracket

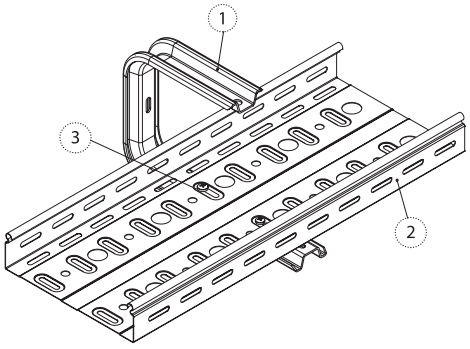


Choose the method of mounting the C-bracket (1) on the ceiling depending on the ceiling material and the design load.
Place the cable tray (2) on the shelf of the fastened C-bracket (1) and secure with a screw (3) and a nut.

The following fasteners are used to fasten the cable tray to the bracket:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	1
GM6SB	M6 nut with locking collar	1

Mounting a cable tray on an SPPU ceiling suspension C-bracket

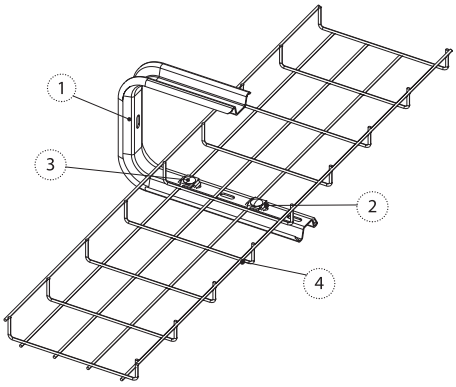


Choose the method of mounting the C-bracket (1) on the ceiling depending on the ceiling material and the design load. Place the cable tray (2) on the shelf of the fastened C-bracket (1) and secure with two screws (3) and two nuts.

The following fasteners are used to fasten the cable tray to the bracket:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2

Mounting a wire mesh tray on an SPPU ceiling suspension C-bracket using an SPLO20 connector



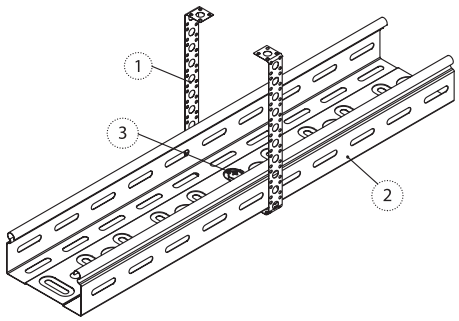
Use the SPLO20 connector to mount the wire mesh tray on structural steel members with SPPU (1) (KPN, PNU, SPP, etc.). Position the SPLO20 (2) connector plate inside the tray (4) so that the tray wires fit into the recess of the plate, then secure with a screw (3) and a nut.

The following fasteners are used to fasten the cable tray to the bracket:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
GM6SB	M6 nut with locking collar	2
SPLO20	Single wire mesh tray connector	2

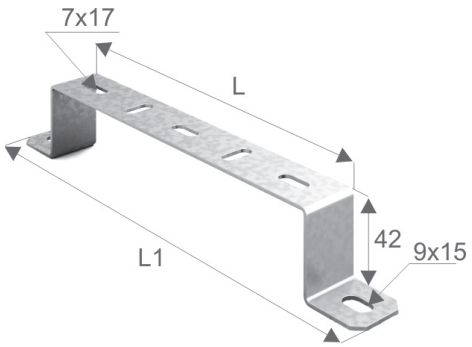
Mounting a cable tray with a perforated steel strap

To mount the cable tray (2) with the perforated steel strap (1), use pieces of steel strap (1) cut to length and bent to match the tray profile, and fasten them to the ceiling. Fasten the steel strap (1) to the tray (2) with screws (3) and nuts. Choose the method of fastening the strap to the ceiling depending on the ceiling material and the design load.



4.7 INTEGRAL WALL SUSPENSION SYSTEMS

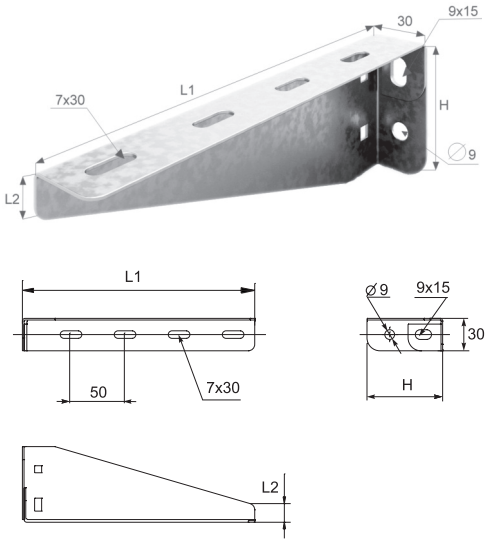
SN wall stand-off cleat



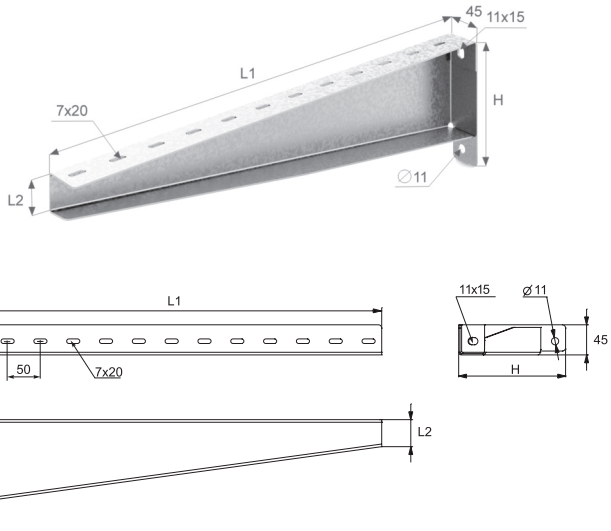
The SN cleat is used for wall and floor mounting applications.

Code	Art. No.	Metal thickness, mm	Weight, kg	L, mm	L1, mm	Packaging, pcs.
050111	SN-100	1.50	0.10	100	160	30
050121	SN-200	1.50	0.15	200	260	30
050131	SN-300	1.50	0.20	300	360	12
050141	SN-400	1.50	0.25	400	460	12
050151	SN-500	1.50	0.30	500	560	10
050161	SN-600	1.50	0.35	600	760	10

KNPL integral wall bracket



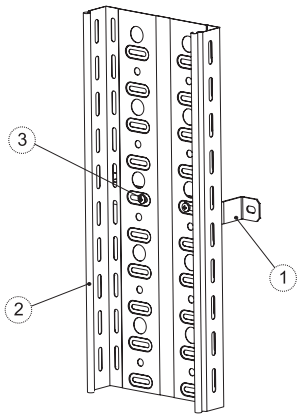
KNPLU heavy-duty integral wall bracket



Code	Art. No.	Metal thickness, mm	Weight, kg/each	Dimensions, mm			Load Q, N	Packaging, pcs.
				L1	L2	H		
052811	KNPL-100	1.50	0.12	140	24	59	800	100
052821	KNPL-200	1.50	0.24	240	24	86	700	50
052831	KNPL-300	1.50	0.36	338	24	112	600	10
052841	KNPL-400	2.00	0.73	416	17	115	1000	10
052851	KNPLU-500	2.00	1.34	512	48	152	900	4
052861	KNPLU-600	2.00	1.56	612	41	163	800	4

Mounting a cable tray on a wall stand-off cleat

Fasten the cleat (1) to the wall with two anchor bolts. Secure the bottom of the tray (2) to the cleat (1) with a screw set at two points through the perforations as follows: screw (3) on the inside; nut on the outside.



The following fasteners are used for each assembly:

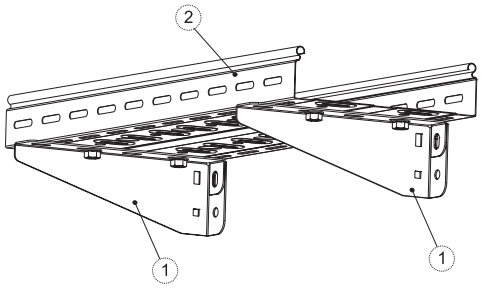
Art. No.	Description	Quantity, pcs.
GM6SB	M6 nut with locking collar	2
VM610	M6x10 screw	2

Mounting a cable tray on an integral wall bracket

Choose the method of fastening the bracket to the wall depending on the wall material and the design load. Place the tray (2) on the bracket (1) and secure in place with a screw set at two points through the perforations as follows: screw and washer on the inside; nut on the outside, from the bottom side.

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
SHM6	SHM6 washer	2
GM6SB	M6 nut with locking collar	2

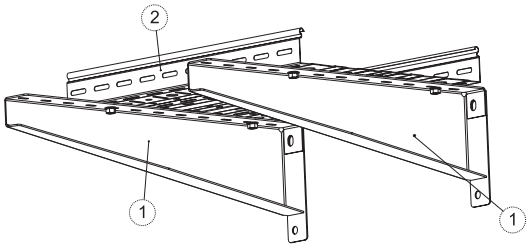


Mounting a cable tray on a heavy-duty wall bracket

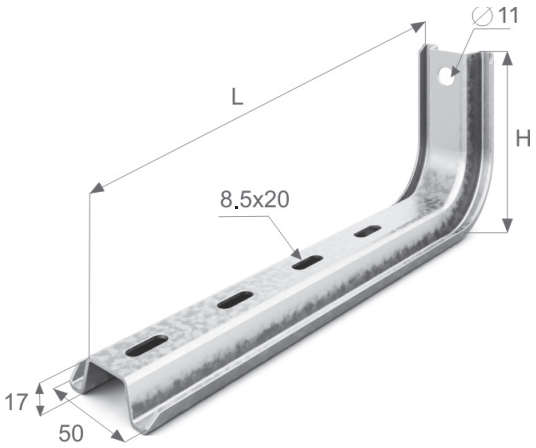
Choose the method of fastening the bracket to the wall depending on the wall material and the design load. Place the tray (2) on the bracket (1) and secure in place with a screw set at two points through the perforations as follows: screw and washer on the inside; nut on the outside, from the bottom side.

The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
SHM6	SHM6 washer	2
GM6SB	M6 nut with locking collar	2

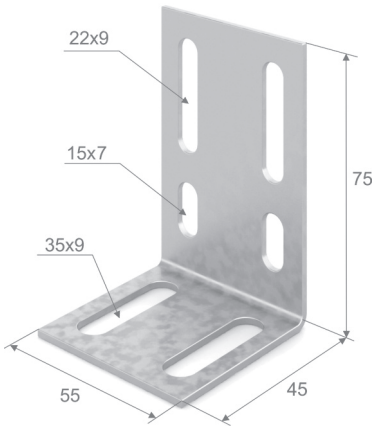


PNU integral wall support



Code	Art. No.	Metal thickness, mm	Weight, kg/each	L, mm	H, mm	Load Q, N	Packaging, pcs.
050811	PNU-100	2.00	0.29	155	100	1500	30
050821	PNU-200	2.00	0.41	255	100	1100	20
050831	PNU-300	2.00	0.57	355	130	850	12
050841	PNU-400	2.00	0.72	455	130	600	10

SKL tray mounting cleat

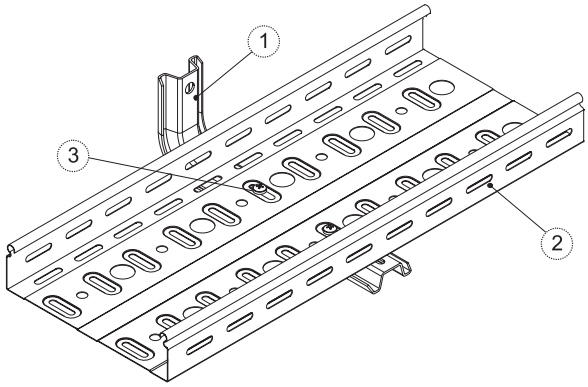


Used for vertical mounting of cable trays and NLO cable ladders. Position the bracket on the outside of the tray. Fasten the bracket to the side rail of the tray with an M6 screw set.

Code	Art. No.	Metal thickness, mm	Weight, kg/each	Packaging, pcs.
050201	SKL	2.00	0.08	120

Mounting a cable tray on an integral wall support

Choose the method of fastening the bracket to the wall depending on the wall material and the design load. Place the tray (2) on the bracket (1) and secure in place with a screw set (3) at two points through the perforations as follows: screw and washer on the inside; nut on the outside, from the bottom side.

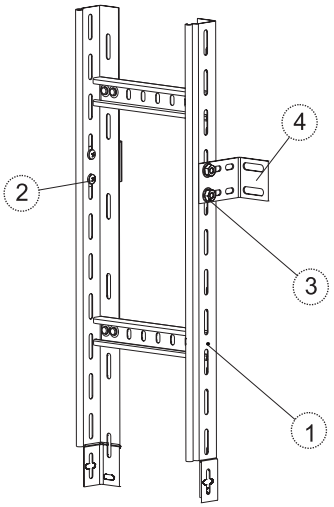


The following fasteners are used for each assembly:

Art. No.	Description	Quantity, pcs.
VM610	M6x10 screw	2
SHM6	SHM6 washer	2
GM6SB	M6 nut with locking collar	2

Mounting a cable tray with tray mounting cleat

Position the cable tray (1) vertically against the wall. Mount the cleat (4) on the outside of the tray (1) and secure with bolts (2) and nuts (3). Use an anchor bolt to fasten the cleat (4) to the wall. Select the anchor bolt according to the design load.



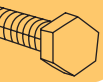
The following fasteners are used for each assembly:

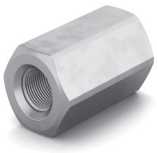
Art. No.	Description	Quantity, pcs.
BM835PN	M8x35 full-threaded bolt	2
GM8SB	M8 nut with locking collar	2

5. FASTENERS

5.1 METRIC FASTENERS

Screws, nuts and washers of the following sizes are recommended for use as fasteners for OSTEC cable trays and accessories.





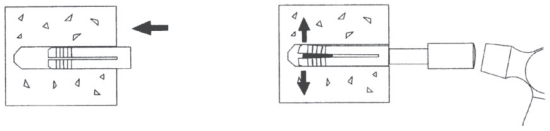
Code	Art. No.	Description
		Screws
066109	VM610k	M6x10 screw
066129	VM612k	M6x10 screw
		Bolts
065839	BM835PNk	M8x35 full-threaded bolt
065809	BM840PNk	M8x40 full-threaded bolt
065859	BM845PNk	M8x45 full-threaded bolt
065559	BM855PNk	M8x55 full-threaded bolt
065109	BM1045PNk	M10x45 full-threaded bolt
065129	BM1250PNk	M12x50 full-threaded bolt
		Nuts
067069	GM6k	M6 nut
067089	GM8k	M8 nut
067109	GM10k	M10 nut
067129	GM12k	M12 nut
		Nuts with locking collar
067609	GM6SBk	M6 nut with locking collar
067809	GM8SBk	M8 nut with locking collar
		Coupling nuts
069069	GSM6k	M6 coupling nut
069089	GSM8k	M8 coupling nut
069109	GSM10k	M10 coupling nut
069129	GSM12k	M12 coupling nut
		Washers
068069	SHM6k	SHM6 washer
068089	SHM8k	SHM8 washer
068109	SHM10k	SHM10 washer
		Heavy-duty washers
068609	SHM6Uk	SHM6U heavy-duty washer
068809	SHM8Uk	M8 heavy-duty washer
		Threaded rods
064629	SHP6-2k	M6x2000 mm threaded rod
064829	SHP8-2k	M8x2000 mm threaded rod
064109	SHP10-2k	M10x2000 mm threaded rod
064129	SHP12-2k	M12x2000 mm threaded rod

5.2 DRIVE-IN ANCHORS

Application: Drive-in anchors are used to fasten heavyweight structures, cable support systems and load-bearing brackets to solid concrete, natural stone and brick masonry (M6, M8). Used in critical mounting applications.
Specific design features: The anchor is a hollow cylinder. One end has an internal thread, and the other end has an expansion head with 4 segments. A mandrel (cone) is installed inside.
Operating principle: The expansion head of the anchor is wedged out inside the borehole using a special tool to drive through the mandrel. When the bolt or other threaded element is screwed in, further expansion and securing of the anchor occurs.
Mounting procedure: Bore a hole h_1 deep and d_0 in diameter. Insert the anchor into the hole and drive the wedge inside the anchor to the end using the special tool. Secure the part to be mounted.

MOUNTING DIMENSIONS

Size	Thread	L, mm	d_0, mm	h_1, mm	f, mm
M6x25	M6	25	8	25	11
M8x30	M8	30	10	30	13
M10x40	M10	40	12	40	15
M12x50	M12	50	15	50	19



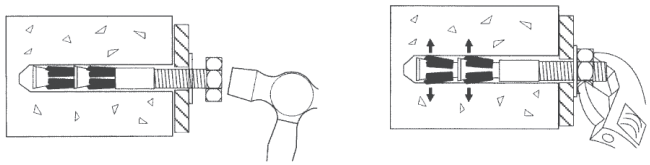
Code	Art. No.	Dimensions, mm	Ultimate pull-out load, concrete K25, kN	Ultimate shear load, concrete K25, kN
063629	AZM625k	M6x25	1.30	1.50
063839	AZM830k	M8x30	1.80	2.40
063109	AZM1040k	M10x40	2.90	2.50
063129	AZM1250k	M12x50	4.30	3.50
063089	AZM830I	M8x30	1.50	1.50

5.3 ANCHOR BOLTS

Application: Anchor bolts are used to fasten heavyweight structures, cable support systems and load-bearing brackets to solid concrete, natural stone and brick masonry using the straight-through mounting method. They can be used for mounting jobs in thin concrete partitions.
Specific design features: Threaded steel body with tapered shank and cylindrical sliding sleeve with longitudinal slots, complete with washer and nut.
Operating principle: When the nut is tightened, the tapered shank will pull into the sleeve and expand it.
Mounting procedure: Bore a hole h_1 deep and d_0 in diameter and clean it thoroughly.
Drive in the bolt with a hammer. Use a wrench to tighten the nut. The bolt should be free of dirt. The hole in the component to be mounted should be clean.

MOUNTING DIMENSIONS

Size	Thread	L, mm	d_1, mm	h_1, mm	f, mm
M6x25	M6	25	8	25	11
M8x30	M8	30	10	30	13
M10x40	M10	40	12	40	15
M12x50	M12	50	15	50	19



Code	Art. No.	Dimensions, mm	Ultimate pull-out load, concrete K25, kN	Ultimate shear load, concrete K25, kN
062889	ABM885k	M8x85	2.40	2.40
062109	ABM10125k	M10x125	4.00	5.70
062129	ABM12100k	M12x100	6.50	9.60

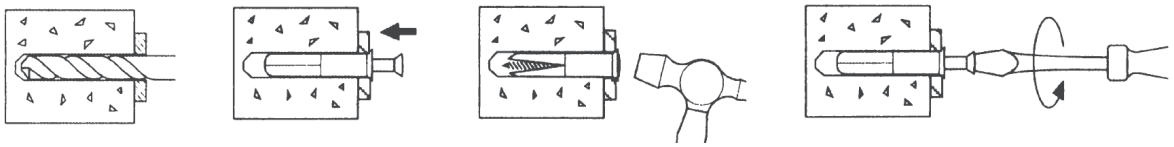
5.4 DOWEL STUDS

Application: Dowel studs are used to fasten cable support systems and load-bearing brackets to low-density concrete, concrete, stone, foamed clay, cellular and solid brick work and plasterboard using the straight-through mounting method.

Operating principle: The dowel will expand when the stud is driven, and stay in place due to the friction effect.

Mounting procedure: Bore a hole and clean it thoroughly. Insert the dowel into the hole. Drive the dowel with a hammer.

Code	Art. No.	Dimensions, mm	Ultimate pull-out load, concrete K25, kN	Ultimate shear load, concrete K25, kN
061649	DG640k	M6x40	1.60	1.80
061869	DG860k	M8x60	2.40	2.90



CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
282565	78	282845	61	283028	65	283306	62	283450	60
282566	78	282846	63	283030	69	283308	64	283453	62
282568	78	282848	65	283031	67	283309	68	283455	60
282700	78	282850	61	283032	71	283310	66	283456	85
282701	78	282855	61	283035	61	283312	62	283458	64
282702	78	282856	63	283036	63	283313	66	283460	68
282705	78	282858	65	283038	65	283315	60	283462	70
282706	78	282860	69	283040	69	283316	89	283463	66
282708	78	282861	67	283041	67	283318	64	283465	60
282709	78	282862	71	283042	71	283320	68	283466	62
282710	78	282865	61	283045	61	283322	70	283468	64
282711	78	282866	63	283046	63	283323	66	283486	87
282715	78	282868	65	283048	65	283325	60	283516	90
282716	78	282900	69	283050	61	283326	62	283556	86
282718	78	282902	71	283055	61	283328	64	283586	88
282720	78	282905	61	283056	63	283330	68	283616	90
282721	78	282906	63	283058	65	283331	66	283656	86
282722	78	282908	65	283060	69	283332	70	283686	88
282725	78	282909	69	283062	71	283335	60	283810	83
282726	78	282910	67	283063	67	283336	62	283815	83
282728	78	282911	67	283065	61	283338	64	283820	83
282730	78	282915	61	283066	63	283340	68	283825	83
282731	78	282916	63	283068	65	283341	66	283830	83
282732	78	282918	65	283200	68	283342	70	283835	83
282735	78	282920	69	283202	70	283345	60	283910	82
282736	78	282921	67	283203	66	283346	62	283915	82
282738	78	282922	71	283205	60	283348	64	283920	82
282740	78	282925	61	283206	62	283350	60	283925	82
282741	78	282926	63	283208	64	283353	62	283930	82
282742	78	282928	65	283209	68	283355	60	283935	82
282745	78	282930	69	283210	66	283356	85	284010	82
282746	78	282931	67	283212	66	283358	64	284015	82
282748	78	282932	71	283213	62	283360	68	284020	82
282750	78	282935	61	283215	60	283362	70	284025	82
282755	78	282936	63	283216	89	283363	66	284030	82
282756	78	282938	65	283218	64	283365	60	284035	82
282758	78	282940	69	283220	68	283366	62	313211	89
282760	78	282941	67	283222	70	283368	64	313251	85
282761	78	282942	71	283223	66	283386	87	313281	87
282762	78	282945	61	283225	60	283400	68	313311	89
282765	78	282946	63	283226	62	283402	70	313351	85
282766	78	282948	65	283228	64	283403	66	313381	87
282768	78	282950	61	283230	68	283405	60	313411	89
282800	69	282951	67	283231	66	283406	62	313451	85
282801	67	282955	61	283232	70	283408	64	313481	87
282802	71	282956	63	283235	60	283409	68	313511	90
282805	61	282958	65	283236	62	283410	66	313551	86
282806	63	282960	69	283238	64	283412	62	313581	88
282808	65	282961	67	283240	68	283413	66	313611	90
282809	69	282962	71	283241	66	283415	60	313651	86
282810	67	282965	61	283242	70	283416	89	313681	88
282811	67	282966	63	283245	60	283418	64	315066	99
282815	61	282968	65	283246	62	283420	68	315115	106
282816	63	283000	69	283248	64	283422	70	315135	97
282818	65	283002	71	283250	60	283423	66	315153	97
282820	69	283003	67	283253	62	283425	60	315156	100
282821	67	283005	61	283255	60	283426	62	315160	99
282822	71	283006	63	283256	85	283428	64	315185	103
282825	61	283008	65	283258	64	283430	68	315215	106
282826	63	283009	69	283260	68	283431	66	315235	97
282828	65	283010	67	283262	70	283432	70	315260	100
282830	69	283013	67	283263	66	283435	60	315285	103
282831	67	283015	61	283265	60	283436	62	315315	107
282832	71	283016	63	283266	62	283438	64	315335	98
282835	61	283018	65	283268	64	283440	68	315360	101
282836	63	283020	69	283286	87	283441	66	315385	104
282838	65	283022	71	283300	68	283442	70	315415	107
282840	69	283023	67	283302	70	283445	60	315435	98
282841	67	283025	61	283303	66	283446	62	315460	101
282842	71	283026	63	283305	60	283448	64	315485	104

CODE DIRECTORY

CODE DIRECTORY

CODE DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

ARTICLE NUMBER DIRECTORY

NOTES

NOTES