

2023



TERRAZN®
LIGHTNING PROTECTION GROUNDING

LIGHTNING PROTECTION AND GROUNDING CATALOG

TERRAZN.BY



About company **TERRAZN**

The TerraCynk Ltd. works since 2015.

The main activity is the production and implementation of effective systems of lightning protection and grounding.

We believe that the protection of residential and industrial facilities from lightning strikes and its consequences will always be relevant. Assessing the urgency of this problem, we set ourselves the goal of becoming the most reliable and progressive manufacturer of lightning protection and grounding elements.

In a short time, we managed to establish ourselves as a successful young enterprise. We are confidently moving forward, this is confirmed by the feedback of our customers. We have become a well-known brand in Eastern Europe, and now we are entering the markets of the European Union.

Thanks to the well-coordinated and efficient work of our team, the organization holds many patents and certificates.

Why exactly us?

You might think that there are other manufacturers of such products. Why do you need to choose TerraCynk Ltd.?

The answer is obvious.

Cooperating with us, you get:

- **High quality products and fast production times.**
- **Reasonable prices.**
The best conditions and prices from the manufacturer with a full guarantee and no extra charges.
- **Qualified assistance**
from professionals with extensive experience.
- **Custom products manufacturing.**
Upon your request, we will produce products that meet your specific requirements.
- **Qualified support at all stages of the project.**



We strive to ensure that our products are of high quality and the price is right!

For our partners

TerraZinc Company regularly holds seminars for design departments and our representatives in the Republic of Belarus. At your request, we are ready to provide catalogs, drawings of elements in AutoCAD format, drawings of the main units with installation examples, broadsheets and other promotional products.

For seminars and promotional items
you can contact our office at the address:

17 Parkovaya str., Kolodishchi, Minsk region, Minsk district, Belarus
or call us directly: +375 (17) 516-29-70, +375 (44) 729-99-09.



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TerraCynk Ltd. values its reputation and is responsible for the quality of its products. Without stopping at the achieved results we introduce modern corrosion protection technologies for our manufactured items.

Since 2018, the TerraZinc company has launched a modern line of thermal diffusion galvanizing, which allows to increase the period of corrosion resistance of manufactured elements (Test report No. 886 / 1-6 from 12/14/2018). In addition, the thermal diffusion zinc coating features high hardness (up to 4500 MPa) and has good resistance to abrasion.

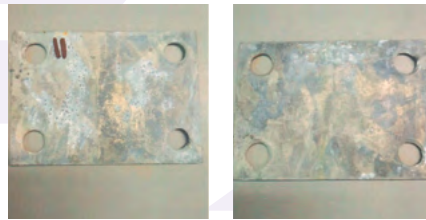
Thus, using the thermal diffusion technology of zinc-plating the metal, we offer our customers products with a high level of corrosion resistance and extended service life: the thickness of the zinc coating layer of the elements of the lightning protection system is 30-40 microns and higher, which fully complies with the normative document TKP 336-2011 «Lightning protection for buildings, constructions and industrial communications» in force in the Republic of Belarus.

Today we are ready to offer our customers favorable prices for lightning protection elements and grounding elements in thermal diffusion zinc coating as well as favorable prices for zinc-plating of metal products using thermal diffusion method.

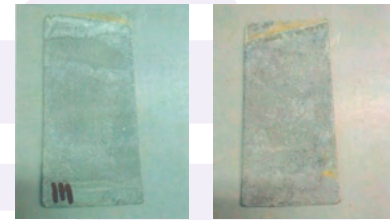
Samples of metal plates with various zinc coatings after salt fog resistance test (duration: 1000 hours)



a) plates with galvanic zinc coating



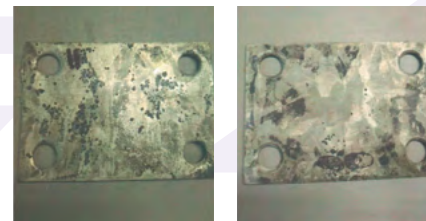
a) plates with hot dip galvanic zinc coating



a) plates with thermal diffusion zinc coating



b) plates with galvanic zinc coating after removing the corrosion of the zinc coating



b) plates with hot dip galvanic zinc coating after removing the corrosion of the zinc coating



b) plates with thermal diffusion zinc coating after removing the corrosion of the zinc coating

Benefits of thermal diffusion zinc-plating technology:

- **High corrosion resistance of the product** (up to 1500 hours in a salt fog chamber).
- **The coating accurately reproduces the surface relief** of the product (thread, marking, etc.)
- **The coating has a higher hardness** than other zinc coatings and has good abrasion resistance.
- **The absence of hydrogen fragility** in coated products (the harmful effect of hydrogen on a metal is primarily manifested in a decrease in its strength and other properties).
- **The coating can be applied to spring and other details, which were heat treated in advance.**
- The thickness of the zinc layer can vary **from 15 to 100 microns and more.**
- Modern technologies of producing thermal diffusion zinc coatings are **environmentally friendly**, there is no need for special disposal of the resulting waste.

Thunderstorms and lightning

A thunderstorm is a dangerous natural phenomenon, which is characterized by heavy rainfall, thunder, squally winds, and lightning. The average duration of thunderstorms is only 40 minutes, but hundreds of lightning strikes between a thundercloud and the ground can occur during this period.

Lightning is an electrical atmospheric discharge. It is cause of annual fires in the warm season. A typical lightning flash is about 300 million Volts and about 30,000 Amps. The average lightning length can reach 3 km. Due to its high energy, the lightning channel creates a temperature of up to 30,000 °C and quickly ignites combustible building's elements. A significant proportion of fires from lightning strikes are fires in rural areas. Most of the fires are caused by a direct lightning strike, to a lesser extent, fires from a lightning strike are caused by the introduction of high potential through conductive communications into the building. Damage from lightning can be caused by fire, damage to people and animals, explosions at hazardous production facilities.

Lightning can cause damage to walls, concrete, plaster and glass of a building. It can damage the electrical appliances connected to damaged sockets. According to statistics, about 90% of lightning strikes occur on the roofs. Non-combustible dielectric materials encountered in the path of the lightning current will also be pierced by a strong electrolytic field. As a result of uncontrolled distribution of lightning current, destruction or deformation of equipment, building structures, building engineering systems can occur.

Lightning protection is used to protect buildings from lightning. The purpose of lightning protection is to prevent lightning contact with an object and divert the lightning current to the ground. External lightning protection consists of a lightning rod, a down conductor and a grounding device. Internal lightning protection protects the electrical network from the introduction of high potentials due to a direct lightning strike. For internal lightning protection, a surge protection device (SPD) is used.



30 MICRONS IS THE OPTIMUM VALUE FOR ZINC COATING

Attention! After the introduction of building codes CH 4.04.03-2020, a new requirement for the quality of lightning protection products has appeared.

All metal products intended for mounting lightning rods and down conductors on buildings must be protected from corrosion and aging. Therefore, metal elements of lightning protection must have a zinc coating with a thickness of at least 30 microns.

It should be noted that such a requirement is designed to improve product quality and increase its warranty period.

TerraZinc takes a responsible approach to the quality of its products. A modern line of thermal diffusion zinc coating was launched by the company several years ago. Currently, this makes it possible to provide a zinc coating thickness of 30 µm on conductor holders and clamps. At the same time, a competitive advantage is provided in relation to hot-dip zinc coating or galvanized zinc coating of Belarusian-made products, and the operational characteristics of the product are also significantly increased.



Lightning protection and grounding

Lightning protection and grounding are the guarantor of the safe operation of a building or structure. According to the current legislation, this is necessary to ensure individual and collective protection against lightning strikes.

Buildings and engineering systems are provided with lightning protection. The safe operation of explosive and flammable technological processes, transport communications, communication systems, data transmission and video surveillance depends on lightning protection.

Lightning protection requirements are standardized in most countries of the world. There are a number of technical requirements for lightning protection products, the main of which are the use of high-strength materials, the protection of metal products from corrosion, the use of a sufficient cross-sectional area and the correct configuration of conductors.

In accordance with the current requirements of building codes CH 4.04.03-2020 "Lightning protection of buildings, structures and utilities", lightning protection is provided by:

- rod vertical lightning rods, including free-standing masts, masts on concrete bases;
- lightning protection mesh;
- cables;
- active lightning rods;
- natural elements of lightning protection (metal roofs, trusses, columns, etc.).

The need for a lightning protection device is determined by the risk calculation, which is carried out in accordance with Chapter 6 of CH 4.04.03–2020.

Grounding is an element of lightning protection. It can be installed separately from the lightning rod and serve as a protective or functional ground. The controlled grounding parameter is the resistance to the spreading of the lightning current. Therefore, it is important that the grounding is low-resistance. The value of ground resistance and its other parameters are standardized and should not be violated during design and installation. The choice of configuration, materials and grounding installation scheme depends on many factors, for example, on the electrical resistivity of the soil.

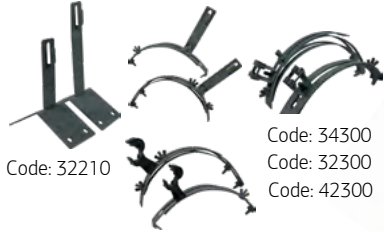
The project is the basis for the correct installation of lightning protection and grounding. The task of the project is to establish the protection option, range and number of products for lightning protection and grounding of the building. When choosing the type of lightning protection or grounding for an industrial building, a multi-storey building or a country house, it is better to entrust the design and installation work to competent specialists with the appropriate education and work experience.

TerraZinc LLC offers various options for lightning protection and grounding for the protection of residential buildings, telecommunications and energy facilities, mobile and fixed-line operators, industrial enterprises and other facilities. The catalog contains a wide range of lightning rods, which differ in design features and purpose, ground electrodes, special fasteners, holders, clamps, mounting plates and mounting brackets for flat and sloping, horizontal and vertical surfaces. All products have high corrosion resistance and the necessary strength characteristics.

LIGHTNING PROTECTION AND GROUNDING ELEMENTS FOR A RESIDENTIAL HOUSE

(A full list of items can be found on the company's website)

Peak holder



Code: 32210

Code: 34300
Code: 32300
Code: 42300

Lightning rod

Code: 11000

Mast holder

Code: 04100



Under tile holder

Code: 42202



Code: 32212

Universal holder

Code: 32101



Plastic holder

Code: 40000, 44000



Down conductor
(round rod, strip, galvanized wire)

Gutter clamp

Code: 33101



Code: 33102



Facade holder

Code: 31000



Code: 31600



Code: 41100, 44100



Strip-wire and strip-strip clamps

Code: 55780, 55781



Grounding set

Code: 21300, 21450, 21600, 24301, 24451, 24601, 21901



Control clamp

Code: 55114, 55408



Wire-wire universal clamp

Code: 55911, 55758, 55757



Universal wire clamp

Code: 51510, 51515



Holders for pipes

Code: 33210, 33215, 33220, 33225, 33310, 33315, 33320, 33325



LIGHTNING PROTECTION AND GROUNDING ELEMENTS FOR A PUBLIC BUILDINGS

(A full list of items can be found on the company's website)

Mast holder

Code: 04100, 04007, 04007SP, 04017, 04018



Roof concrete holder in plastic

Code: 30200, 30201



Lightning mast on concrete foundation

Code: 19000, 04009, 03003, 55422

Code: 16000, 04006, 03003, 55422



Universal wire clamp

Code: 51510, 51515



Wire-wire universal clamp

Code: 55757, 55758, 55911



Wire holder

Code: 31546



Code: 31540



Code: 31000

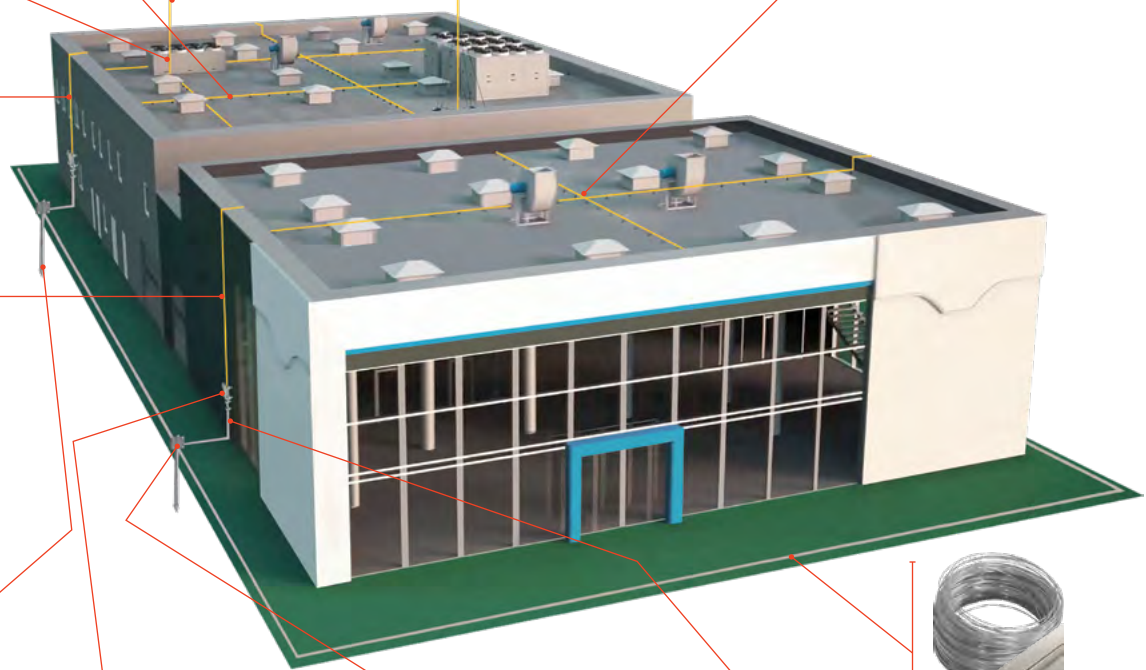


Code: 40000



Code: 44055

Code: 35025



Grounding set

Code: 21300, 21450, 21600, 24301, 24451, 24601, 21901



Control clamp

Code: 55114, 55408



Strip-wire and strip-strip clamps

Code: 55780, 55781



Facade holder for a strip

Code: 31508, 31551



Down conductor
(round rod, strip, galvanized wire)



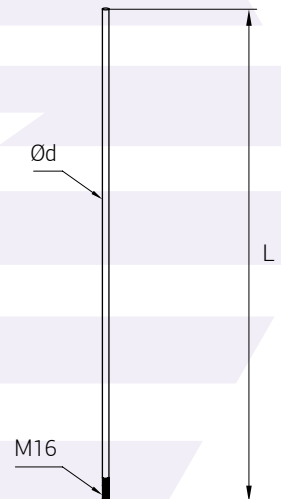
ABBREVIATION AND CONVENTIONS EXPLANATION

- OC** – Metal coating by galvanizing.
- OG/TD** – Metal coating by hot dip galvanizing or thermal diffusion.
- AL** – Product material – aluminum.
- NI** – Product material – stainless steel.
- CU** – Product material – copper.
- PCV** – Product material – plastic.
- CL** – Polymer coating.

LIGHTNING ROD 1-2.5 m

It accepts a lightning strike on itself and transfers it through a down conductor to the ground electrode. Designed for installation with concrete, metal bases, or for fastening by holders to the vertical elements of buildings.

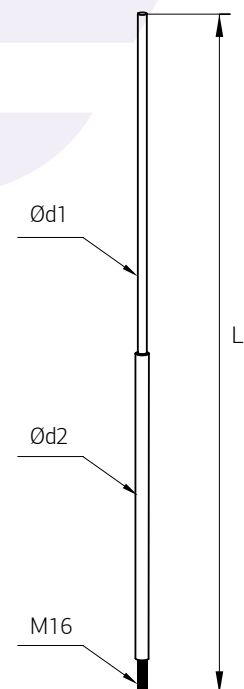
Code	Dimensions, mm		Weight, kg	Versions	
	L	d		AL	OC
11000	1000	16	0,57	Aluminum D16T Without stabilizer	Cink-coated Steel Without stabilizer
11500	1500	16	0,85		
12000	2000	16	1,14		
12500	2500	16	1,2		
13010	3000	16	1,71		



LIGHTNING ROD 3-4 m

It accepts a lightning strike on itself and transfers it through a down conductor to the ground electrode. Designed for installation with concrete, metal bases, or for fastening by holders to the vertical elements of buildings.

Code	Dimensions, mm			Weight, kg	Material
	L	d1	d2		
13000	3000	16	20	1,5	Stabilizer material: TP 304 Stainless Steel
13000SP	3000	12		1,69	
13500	3500	16		2,3	
13500SP	3500	12		1,84	
14000	4000	16		3,08	
14000SP	4000	12		1,98	
14500SP*	4500	12		3,4	



The addition to the article “-SP” means that the transport length is 2 m (SP* – 2,5 m).



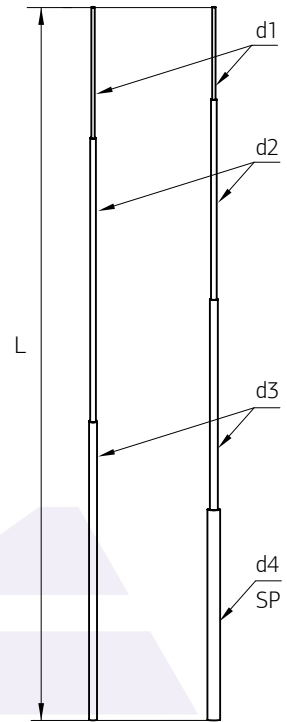


LIGHTNING MAST 5-7 m

Designed to protect of detached elements located on the roofs of buildings against lightning strike

Code	Dimensions, mm		Weight, kg	Material
	L	d1/d2/d3/d4		
15000	5000	16/25/40	8,4	NI Stabilizer material: TP 304 Stainless Steel
16000	6000	16/25/40	9	
17000	7000	16/25/40	11,5	
17000SP	7000	12/25/32/40	9,5	

Tripod material: **OG** Case material: **NI**
 Tip material: **AL**
 Construction: telescopic, composite.
The addition to the article "-SP"
means that the transport length is 3 m.



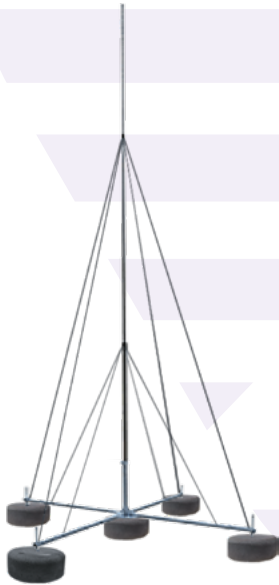
GROUP I
GROUNDING MASTS

GROUP II
GROUNDING

GROUP II
CONDUCTOR HOLDERS

LIGHTNING MAST 8-10 m

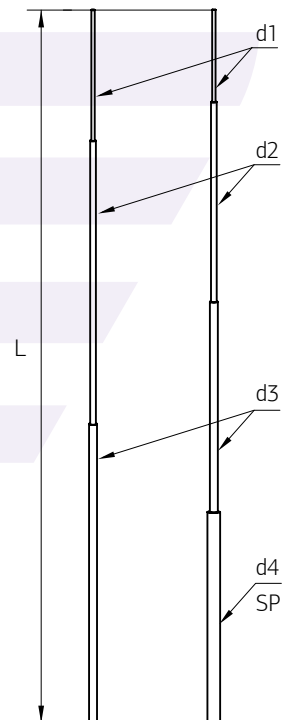
Designed for installation with concrete foundations 03003 and with quadropod support 04009.



Code	Dimensions, mm		Weight, kg
	A	d1/d2/d3/d4	
18000*	8000	16/25/40	13,2
18000SP*	8000	16/25/32/40	10,5
19000**	9000	16/25/40	14,8
19000SP**	9000	16/25/32/40	11,5
10000**	10000	16/25/40	15,5
10000SP**	10000	16/25/32/40	12,0
10100SP**	11000	16/25/32/40	12,5
10200SP**	12000	16/25/32/40	13,0

Material of part at the base: **NI**
 40×2 mm AISI-304 stainless steel pipe;
 middle part: **NI**
 25×1.5 /32×1,5 mm AISI-304 stainless steel pipe;
 top part: aluminum rode D16T Ø16 mm **AL**
 The design is telescopic, composite.
 The delivery set includes cables for attaching the mast.
The addition to the article "-SP"
means that the transport length is 3 m.

*Supplied with 1 set of guy wires.
 **Supplied with 2 sets of guy wires.



GROUP IV
CLAMPS (CONNECTORS)

SPD

GROUP V
CONDUCTORS

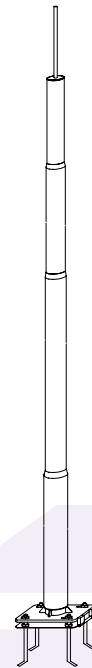
GROUP VI
OTHER ELEMENTS

FOUNDATION LIGHTNING RODS

Lightning protection of gas distribution facilities, oil and oil products warehouses, warehouses containing combustible dust is the most important condition for their safe operation. The optimal solution here is the use of stand-alone high-altitude foundation lightning rods to protect large open areas and objects from a direct lightning strike.

Foundation lightning rods offered by our company consist of several sections and are produced up to 24 m high. They are distinguished by a large area of the protection zone, compact size, resistance to wind loads, ease of transportation and installation. The polymer coating of lightning rods makes them durable. The dimensions of lightning rods (base diameter, height) are selected depending on the dimensions of the protected object and operating conditions.

Lightning rods have their own foundation. The parameters of the foundation are determined in accordance with the project, taking into account the characteristics of the soil and the climatic conditions of the area. Lightning rods are mounted on the ground. Sections are joined together by installing the top on the bottom. The assembled lightning rod is installed on the foundation base with the help of a crane and safety cables, leveled and fixed with anchor bolts.



TRIPOD FOR LIGHTNING MAST

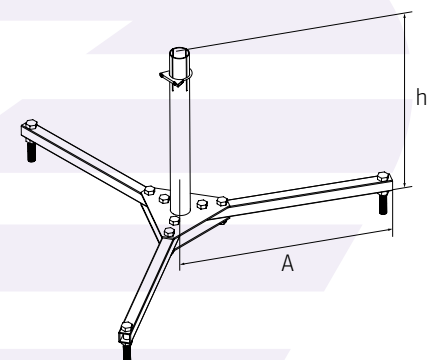
Designed for installation of lightning rods with a height of 5 to 7 m. Used with concrete foundations (code 02002/03003 – 3 pcs.).

Code	Dimensions, mm		Weight, kg
	A	h	
04016	450	670	8,80

OC

OG/TD

Concrete foundations and down conductor clamps are not included.



SUPPORTING LEG FOR LIGHTNING MAST

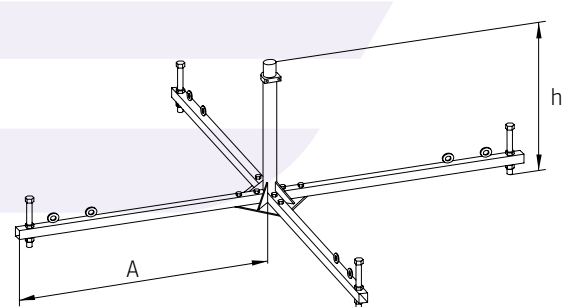
Designed for installation of grounding mast with a height of 8 to 12 m. Concrete foundations (code 03003 – 5 pcs.) are included additionally.

Code	Dimensions, mm		Weight, kg
	A	h	
04009	1500	650	28

OC

OG/TD

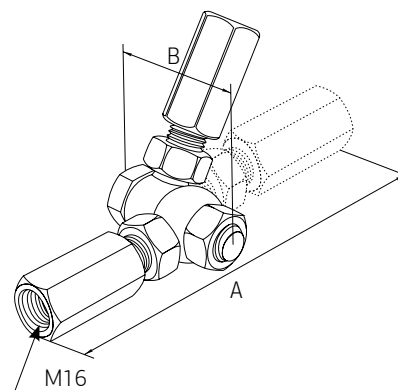
Concrete foundations and down conductor clamps are not included.





MOUNTING BRACKET FOR FIXING THE AIR TERMINAL ON AN INCLINED SURFACE

Designed for installation on the roof slope of lightning rods with a height of 1-2 m. Used in conjunction with a mini-stand code 04004, 04005 or mounting plate code 05007



Code	Dimensions, mm		Weight, kg
	A	B	
04001	150	55	0,62

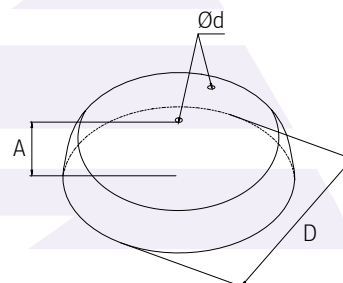
OC

OG/TD

CONCRETE FOUNDATION



Designed for installation of lightning rods with a height of 1-2 m (code 02001 (M16), 02002), 3-4 m (code 03003) on a flat roof. Also used as part of supports code 04006 and code 04009. Code 02001 is used for mounting cable trays.



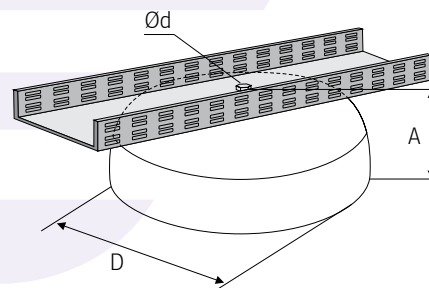
Code	Dimensions, mm			Weight, kg
	A	D	Ød	
02001	95	270	M16	10,2
02002	110	410	M16	26
03003	150	410	M16	42

Frost resistant concrete M300 with a protective coating

CONCRETE FOUNDATION FOR CABLE TRAYS



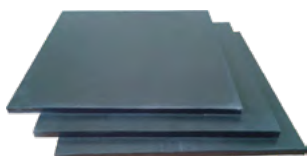
Used as a support for cable support systems.



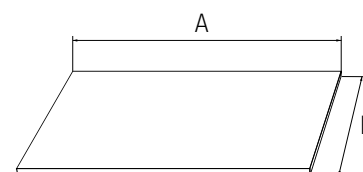
Code	Dimensions, mm			Weight, kg
	A	D	Ød	
02001	95	270	M8	10,2

LINING FOR CONCRETE FOUNDATION

To protect the roofing from damage when installing the mast.



Code	Dimensions, mm		Weight, kg
	A	B	
02012	400	400	0,4
03012	500	500	0,625
03013	600	600	0,9



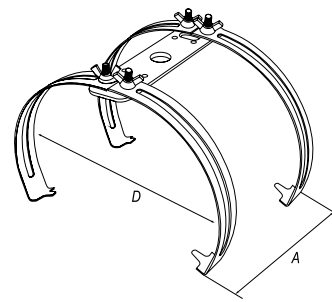


DOUBLE MAST HOLDER ON A ROUND ROOF RIDGE

For installation of lightning rod of 1-2 m high on a round roof ridge of tiles.

Code	Dimensions, mm		Weight, kg
	A	D	
04002	170	130-240	0,414

- OC
- OG/TD
- CL

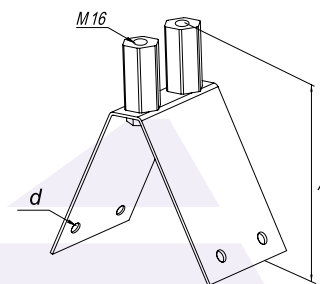


LIGHTNING ROD HOLDER ON THE PEAK STAND

For installation of lightning rod of 1-2 m high on the roof ridge.

Code	Dimensions, mm		Weight, kg
	A	d	
04003	180	6	1,24

- OC
- OG/TD
- CL

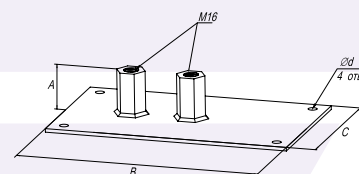


STAND FOR LIGHTNING MAST, SMALL

For installation of lightning rod 1-2 m high (code 04004); 3-4 m (code 04005) on a flat roof.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
04004	53	250	125	11	1,72
04005	53	300	200	11	2,85

- OC
- OG/TD
- CL



Additional nut is used to connect the down conductor with clamp 55420/55423

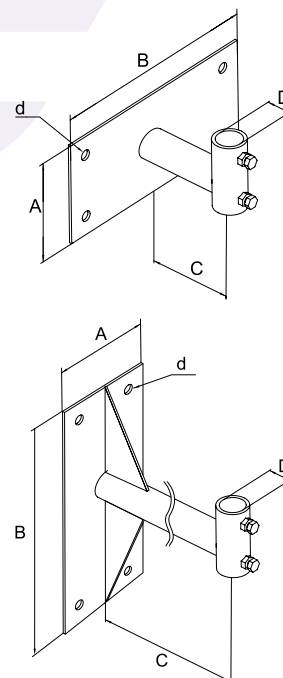


LIGHTNING MAST WALL HOLDER

For fastening of a lightning rod 1-4 m high on the vertical structures of the building.

Code	Dimensions, mm					Weight, kg
	A	B	C	D	d	
04007SP	100	250	110	20	11	1,45
04017SP	100	250	540	20	11	2,85

- OC
- OG/TD
- CL

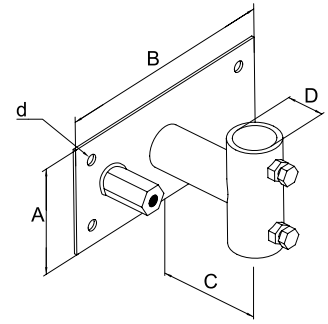




LIGHTNING MAST WALL HOLDER

For fastening of a lightning rod 5-7 m high on the vertical structures of the building.

Code	Dimensions, mm					Weight, kg
	A	B	C	D	d	
04007	100	250	110	40	11	2,0
04018SP	100	250	540	40	11	3,49



OG/TD

OC

CL



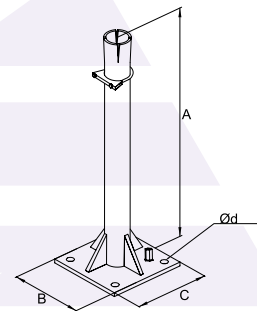
STAND FOR LIGHTNING MAST

For fastening the grounding mast on horizontal surfaces.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
04008	900	300	300	11	8,5

OG/TD

CL



Down conductor clamps not included.

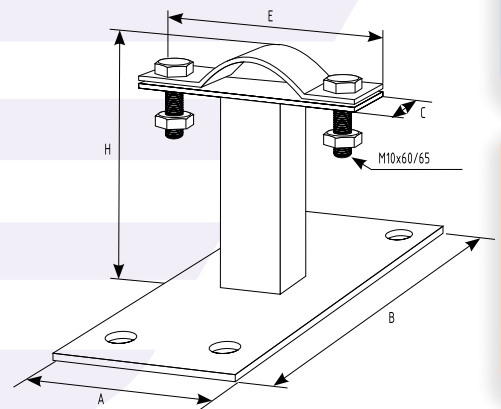


LIGHTNING ROD MAST HOLDER TO THE WALL

Designed for fastening the mast of the lightning rod $\varnothing 20-40$ mm on the vertical structures of the building.

Code	Dimensions, mm					Weight, kg
	A	B	C	E	H	
04027SP	100	250	30	105	100	1,5

OG/TD

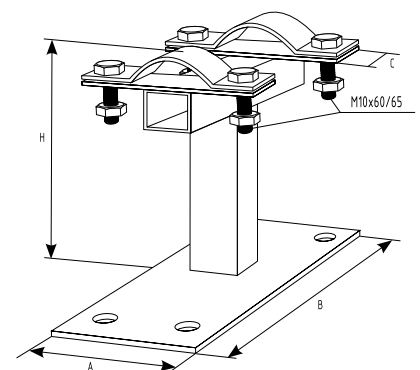


UNIVERSAL LIGHTNING ROD MAST HOLDER TO THE WALL

Designed for fastening the mast of the lightning rod $\varnothing 20-40$ mm on the vertical structures of the building.

Code	Dimensions, mm				Weight, kg
	A	B	C	H	
04027	100	250	30	100	2,0

OG/TD



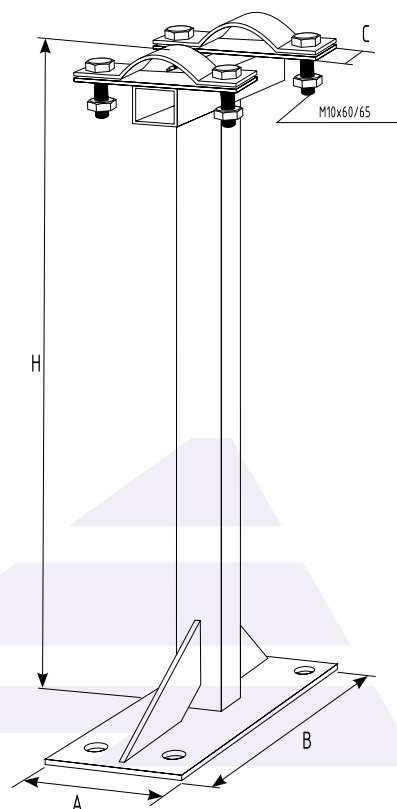


UNIVERSAL LIGHTNING ROD MAST HOLDER TO THE WALL L500

Designed for fastening the mast of the lightning rod on the vertical structures of the building.

Code	Dimensions, mm				Weight, kg
	A	B	C	H	
04037	100	250	30	500	3,5

OG/TD



LIGHTNING ROD HOLDER TO THE WALL

Designed for fastening the lightning rod (Ø16-20 mm) to the vertical structure of the building.



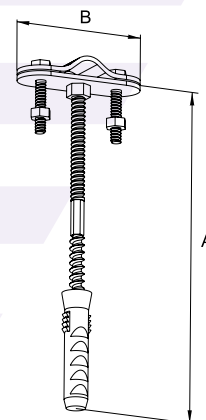
Code	Dimensions, mm		Weight, kg
	A	B	
04100	100	60	0,06
04120	120	60	0,07
04160	160	60	0,07
04200	200	60	0,09
04250	250	60	0,11
04400	400	60	0,15

OC

NI

OG/TD

CL



ISOLATED LIGHTNING PROTECTION SYSTEM

People and technological equipment are at serious risk from lightning strikes and their consequences every year. Inflicted social and material damage is calculated in huge amounts and is constantly growing. This already speaks of the important role of an isolated system of lightning protection.

The isolated lightning protection system is designed to protect against direct lightning strikes and incomplete electrical discharges that occur along with lightning strikes. The isolated lightning protection system is used: at observation platforms and terraces, in warehouses of explosive and pyrotechnic products, at explosion and fire hazardous facilities, at facilities with equipment, sensitive impulse overvoltage, at telecommunication facilities, and also, if necessary, isolate the equipment from the external lightning protection system.

The isolated lightning protection system consists of rod or cable lightning rods, down conductors and isolated remote holders. An lightning rod of an isolated lightning protection system is mounted at a safe distance from the object of protection. This distance depends on the level of lightning protection, the insulating properties of the material, the number of down conductors and the length of the path from the point of safe distance to the nearest connection point with the potential equalization (grounding) system is determined. With a special clamp, a lightning rod is connected to a down

conductor (a wire of 8-10 mm diameter). The down conductor from the lightning rod on remote isolated holders is laid vertically down to the earthing switch.

New product of TerraCynk Ltd. in 2018 was isolated remote holders for an isolated lightning protection system. Holders are made in sizes 500 and 750 mm, have a small weight, so they are widely used on typical and atypical objects of construction design. On one side of the holder there is a clip for an lightning rod of 16 mm diameter or a down conductor of 8-10 mm diameter, at the other side there is a mounting element.

Isolated remote holders are made of a dielectric material – fiberglass. This provides a high electrical resistance of the down conductor relative to the object of protection. Also this excludes the possibility of spark discharges. Thus, a safe distance is ensured by the isolating properties of fiberglass. In addition to a safe distance, the holders provide a reliable mechanical connection between the lightning rod and the down conductor.

The various fastenings of isolated remote holders to building structures and structures is benefits and difference of our products from competitors. Using the holders of our production, it is possible to provide an isolated lightning protection system on the vertical facades of buildings and on a horizontal surface. This is especially important with lightning protection of atypical facilities, where there is a lot of technological equipment.

There are two ways to attach isolated remote holders to structures: on a mounting plate or clamps. The mounting plate is fastened with four anchors, this increases the resistance to wind loads of the isolated rod of the lightning conductor and of the down conductor. By clamp fixed at one side of the isolated remote holder, the reliable fastening of the down conductor and lightning rod to typical chimneys, a gas or a water pipe. The maintaining a safe distance through the holder ensures a guaranteed and safe removal of lightning current from the protection object.

IMPORTANT:

An isolated lightning protection system is needed:

- for open terraces, public viewing platforms;
- for explosive and fire hazardous industries;
- for facilities where pyrotechnic products are produced and stored;
- for facilities where explosives are produced and stored;
- for telecommunication facilities.

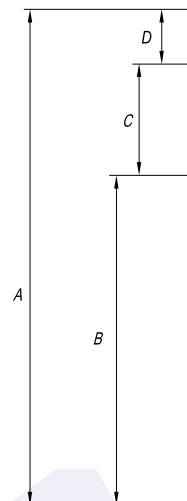




Insulated lightning rod mast 3-7 m

It is used in cases where it is impossible to provide a safe distance due to the technological or architectural features of the protected object. By its constructive solution, the insulated mast provides rated insulation.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
13000 IZ	3000	2000	500	500	4,5
14000 IZ	4000	3000	500	500	6,4
15000 IZ	5000	3500	750	750	8,0
16000 IZ	6000	4500	750	750	9,9
17000 IZ	7000	5500	750	750	11,4



Under the order, it is possible to manufacture insulated masts with a height of 8, 9 and 10 m

INSULATED MAST

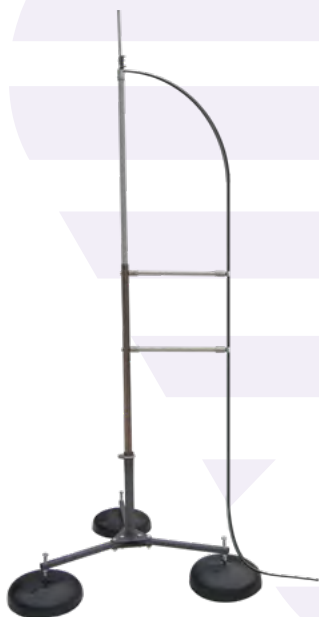
An important requirement in the design and installation of a lightning protection system is its normalized isolation from the protected object. Insulation is required to ensure the calculated safe distances to engineering equipment, from places of constant gathering of people, communications with flammable gases and flammable liquids.

An insulated lightning rod mast with a height of 3-7 m is used to maintain insulation. Such a mast places the down conductor on insulated holders at a distance from the protected object in such a way that it allows receiving and deflecting a lightning strike without consequences for it.

Optionally available (not included in delivery): clamp 57081 (55416); rods (05300, 05400); holder 05002.

The number of additional elements depends on the height of the masts.

Installation can be carried out both on a flat roof, using a tripod (code 04016) with concrete bases (code 03003), and on a vertical surface using holders (code 04007/04018)



Accessories (quantity)

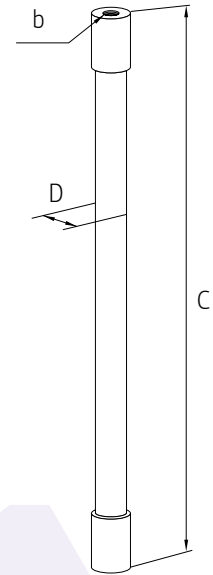
Code	Mast height				
	7 m	6 m	5 m	4 m	3 m
Isolated bar, code. 05300, 05400	5	5	4	3	2
Conductor holder, code. 05002	5	5	4	3	2



ISOLATED BAR

For mounting an lightning mast up to 4 m to the vertical structure of the building.

Code	Dimensions, mm			Weight, kg
	C	D	b	
05200	250	21	M8	0,270
05300	500	21	M8	0,270
05400	750	21	M8	0,354
05250	250	32	M16	0,274
05500	500	32	M16	0,392
05750	750	32	M16	0,506

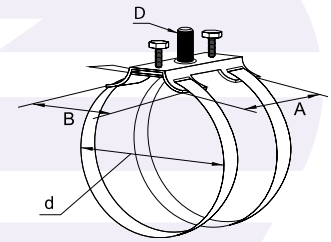


DOUBLE PIPE HOLDER

For mounting an isolated bar to the pipe.



Code	Dimensions, mm				Weight, kg
	A	B	D	d	
05151	120	80	M16	80-150	0,388
05301	120	80	M16	80-300	0,430
05501	120	80	M16	80-500	0,494
05251	120	80	M8	80-150	0,321
05401	120	80	M8	80-300	0,363
05601	120	80	M8	80-500	0,418



CL
OG/TD

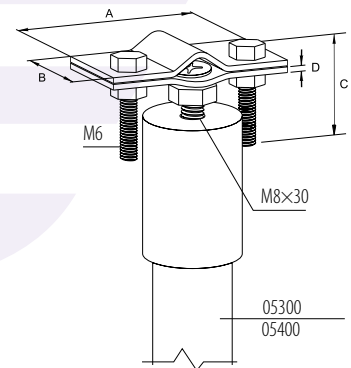
CONDUCTOR HOLDER

Designed for fixing down conductor Ø8-20 mm.



Code	Dimensions, mm				Weight, kg
	A	B	C	D	
05002	61	19	30	2	0,068

OC
OG/TD



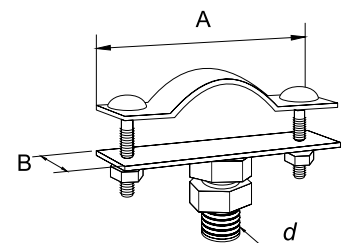
HOLDER FOR LIGHTNING MAST

Designed for mounting the lightning rod to building structures through an insulating rod.



Code	Dimensions, mm			Weight, kg
	A	B	d	
05006	110	30	M16	0,349

OG/TD
CL



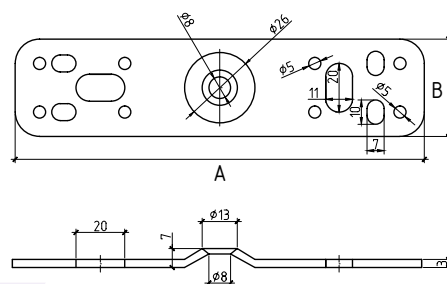


MOUNTING PLATE

Designed for fastening the insulating bar to building structures.

Code	Dimensions, mm		Weight, kg
	A	B	
05003	168	40	0,140

OC OG/TD

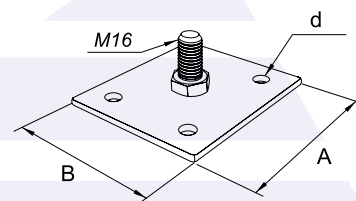


MOUNTING PLATE

Designed for fastening the insulating bar to building structures.

Code	Dimensions, mm			Weight, kg
	A	B	d	
05007	120	100	11	0,538

OG/TD CL

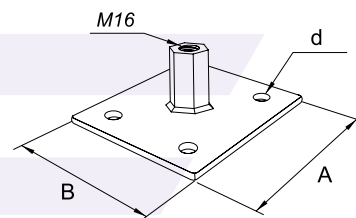


MOUNTING PLATE

Designed for fastening the insulating bar to building structures.

Code	Dimensions, mm			Weight, kg
	A	B	d	
05008	120	100	11	0,538

OG/TD CL

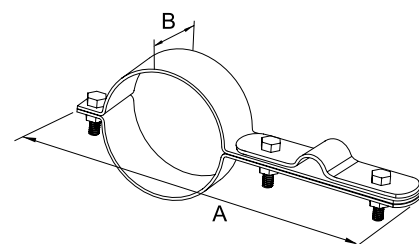


DOWN CONDUCTOR HOLDER FOR LIGHTNING RODS Ø40 mm

Designed to connect lightning rod mast 5-12 m with down conductor 8-10 mm

Code	Dimensions, mm		Weight, kg
	A	B	
33040	130	25	0,15

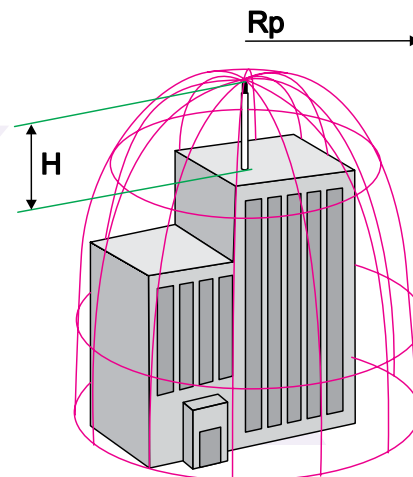
OC OG/TD



ACTIVE LIGHTNING PROTECTION

Active lightning protection is a technology in the field of external lightning protection systems based on the operation of an active lightning rod. During the period of thunderstorm activity, lightning rods create an adjustable arc between the earth and clouds. The principle of operation of such a device is based on the creation of high-voltage pulses around the head of the lightning rod under the influence of static electricity fields arising during a thunderstorm, which contributes to the reverse ionization of the surrounding air, which causes the effect of attracting lightning discharges.

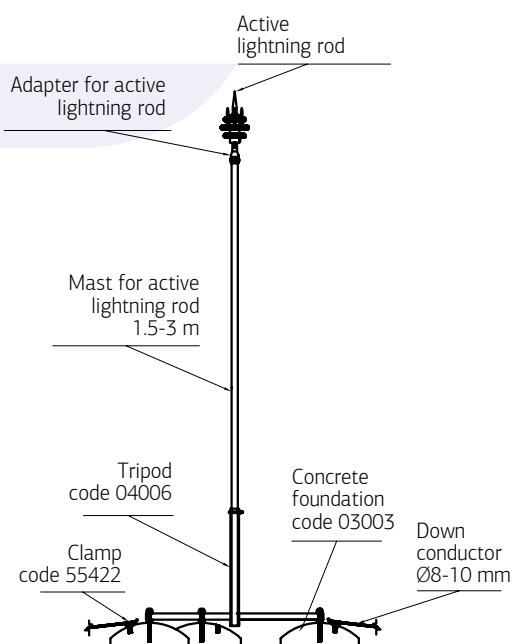
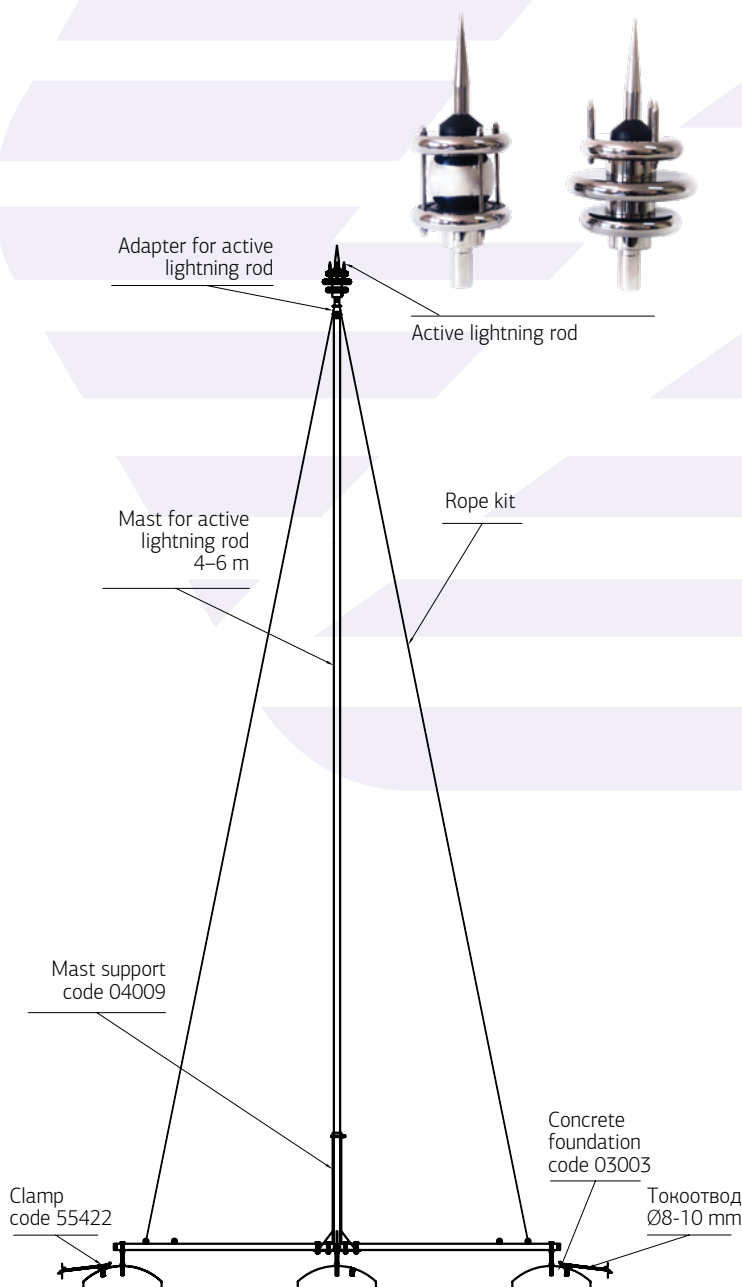
Installation of an active lightning rod does not require special conditions. The highest efficiency of lightning rods is achieved when they are installed at a height of at least one meter above the highest point of the protected object. Thus, the ionization of the surrounding space creates a dome-shaped protective zone around the entire object.



MAST FOR ACTIVE LIGHTNING RODS

Designed for installation of active lightning rods. Supplied with a set of cable braces. Installation of masts 4-6 m on a flat roof is carried out using support art. 04009 (page 8)

Code	Height, mm	Weight, kg
11000 AC	1000	1,9
12000 AC	2000	3,8
13000 AC	3000	5,7
14000 AC*	4000	10,47
15000 AC*	5000	12,37
16000 AC*	6000	14,27



EARTHING SETS FOR LIGHTNING PROTECTION

The main task of a lightning protection grounding element is to pull as much of the lightning current to the ground as possible. Requirements of the normative document TCP 336-2011 "Lightning protection for buildings, constructions and industrial communications" prescribe to comply with the mandatory low ground resistance of not more than 10 ohms (section 7.2.3 «Grounding System»).

According to the applicable lightning protection requirements in the Republic of Belarus, an earthing element for a building or structure can be natural and artificial. The natural grounding system includes the foundation of a building or structure, support, etc. Artificial includes grounding elements made in form of vertical rods and a horizontal strip that unites them.

To determine the configuration of the grounding device that can safely divert lightning current from the object of

protection, the following basic information is required:

- the type of grounding;
- the shapes and sizes of the electrodes from which the earthing switch is supposed to be mounted;
- measurement data or reference data on the soil resistivity in the area where the ground electrode system will be mounted

According to the specified information the required number of elements of the grounding device is calculated, based on generally accepted methods.

TerraCynk ltd. offers various sets of grounding devices, depending on the type of the soil. Also every vertical grounding electrode is 3 meters long and consists of two separate rods of 1.5 meters long, connected by means of couplings. Vertical electrodes are connected by means of a horizontal steel stripe. The distance between the vertical electrodes is 3 m. The options of the grounding sets and resistance they provide are shown in the tables below.

RECOMMENDED GRUNDING SETS

10 ohm resistance provided by earthing device in the ground

Soil composition	Soil resistivity, Ohm · m	Name of grounding elements				
		Grounding pin 1.5 m long, Ø16 mm, pc	The tip of the earthing switch – 24 mm, pc	Connecting coupling, pc	Clamp for the strip, pc	Strip 40×4 mm, m
Peat	45	4	2	2	2	4
Sandy loam saturated with aggressive waters	110	6	3	3	3	7
Solid and semi-solid clay mixed with gravel, sand, limestone	125	8	4	4	4	10
Solid and semi-solid loam	200	12	6	6	6	16
Hard sandy loam	275	16	8	8	8	25
Wet sands	450	44	22	22	22	64

4 ohm resistance provided by earthing device in the ground

Soil composition	Soil resistivity, Ohm · m	Name of grounding elements				
		Grounding pin 1.5 m long, Ø16 mm, pc	The tip of the earthing switch – 24 mm, pc	Connecting coupling, pc	Clamp for the strip, pc	Strip 40×4 mm, m
Peat	45	8	4	4	4	10
Solid and semi-solid clay mixed with gravel, sand, limestone	125	16	8	8	8	22
Solid and semi-solid loam	200	24	12	12	12	34
Hard sandy loam	275	40	20	20	20	58

2 ohm resistance provided by earthing device in the ground

Soil composition	Soil resistivity, Ohm · m	Name of grounding elements				
		Grounding pin 1.5 m long, Ø16 mm, pc	The tip of the earthing switch – 24 mm, pc	Connecting coupling, pc	Clamp for the strip, pc	Strip 40×4 mm, m
Peat	45	16	8	8	8	22
Solid and semi-solid clay mixed with gravel, sand, limestone	125	28	14	14	14	40
Solid and semi-solid loam	200	44	22	22	22	64
Hard sandy loam	275	62	31	31	31	91

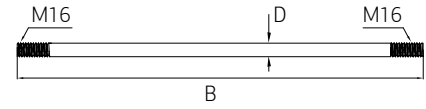
GROUNDING ELECTRODE

Used for vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
21020	1200	16	1,9
21050	1500	16	2,5
21050SP	1500	18	2,98

- OC
- OG/TD
- TDZ



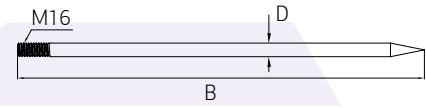
POINTED GROUNDING ELECTRODE

Used as the first for vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
21120	1200	16	1,9
21150	1500	16	2,5
21150SP	1500	18	2,98

- OG/TD
- TDZ
- OC



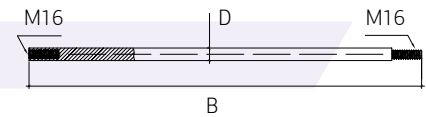
COUPLINGLESS GROUNDING ELECTRODE

Used when installing vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
24050	1500	20	3,7

- OG/TD
- TDZ
- OC
- NI



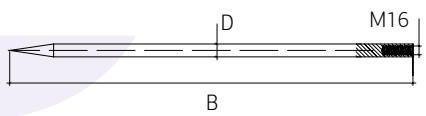
POINTED COUPLINGLESS GROUNDING ELECTRODE

Used as the first for vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
24150	1500	20	3,7

- OG/TD
- TDZ
- OC
- NI



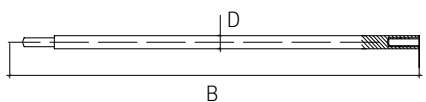
GROUNDING ELECTRODE WITH MORSE CONE

Couplingless grounding electrode with "Morse Cone" connection make it possible to simplify and facilitate the installation of earthing switches. Used for vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
25050	1500	16	2,37

- OG/TD
- TDZ
- OC
- NI



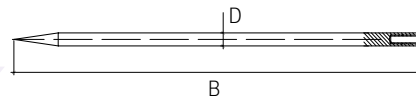
POINTED GROUNDING ELECTRODE WITH MORSE CONE

Couplingless grounding electrode with "Morse Cone" connection make it possible to simplify and facilitate the installation of earthing switches. Used as the first for vertical grounding.



Code	Dimensions, mm		Weight, kg
	B	D	
25150	1500	16	2,39

OG/TD
TDZ
OC
NI



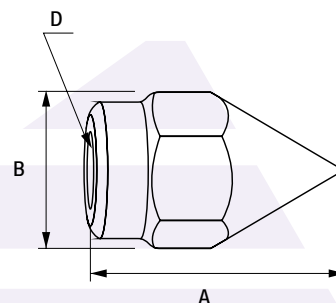
PEAK FOR GROUNDING ELECTRODE

To facilitate clogging of a vertical rod earthing switch. Comes complete with grounding electrode (Code 21020, 21050, 21050SP).



Code	Dimensions, mm			Weight, kg
	A	B	D	
23051	65	24	M16	0,086
23051SP	65	24	M18	0,102

OG/TD
OC



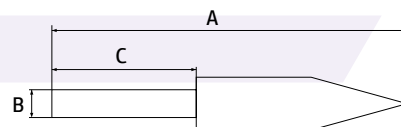
PEAK FOR COUPLINGLESS GROUNDING ELECTRODE

Used as a starting peak for couplingless electrode (Code 24050).



Code	Dimensions, mm			Weight, kg
	A	B	C	
24051	80	16	30	0,086

OG/TD
OC



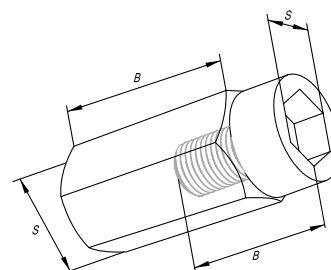
MOUNTING KIT

The mounting kit is used when mounting the grounding system to connect the grounding electrode to the hammer. The bolt and nut take the main shock load on themselves, are consumables.



Code		Dimensions, mm		Weight, kg
		B	S	
Mounting kit M16	Impact screw	40-55	14	0,09
	High nut	48	24	0,16
Mounting kit M18	Impact screw	40-55	14	0,09
	High nut	48	24	0,16

OG/TD
OC



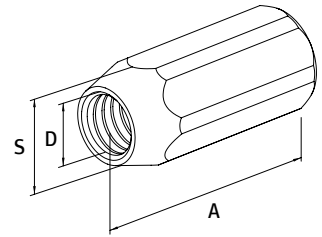
COUPLING JOINT



For connecting ground electrode to an impact bolt. The main function is to ensure reliable connection of the electrodes to each other.

Attention: before installation, apply EPS-98 electrically conductive grease to the threaded connection!

Reliability of the connection when using grease is confirmed by test report No. 9979/3 of 07/19/2017



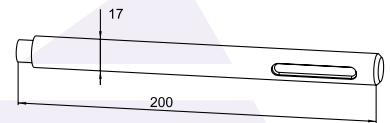
Code	Dimensions, mm			Weight, kg
	A	S	D	
21052	72	24	M16	0,11
21052SP	72	24	M18	0,115

OG/TD

21060. SDS-MAX IMPACT HEAD



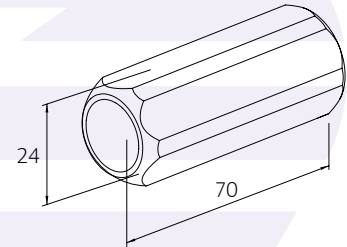
For use with SDS-Max rotary hammer for deep installation of ground electrodes. Weight: 0.362 kg.



21063. SDS-MAX IMPACT HEAD COUPLINGLESS



It is used when installing earthing switches in the ground. It is a consumable item. The impact head 21063 is thrown on top of the couplingless electrode and, using the nozzle on the SDS-max perforator (code 21060), the grounding electrode is driven into the ground. Weight: 0.1 kg.



GROUNDING POINT



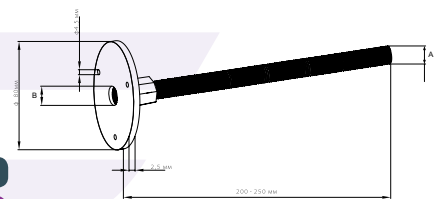
For connect the down conductor to the reinforcement of the building.

Code	Dimensions, mm		Weight, kg
	A	B	
22010	M10	11	0,35
22012	M12	13	0,45
22016	M16	17	0,53

NI

OG/TD

CL



HOLDER 8x330 FOR CHEMICAL ANCHOR



For attaching a round down conductor to the building facade by chemical anchors and metal anchor bushings.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
22330	330	45	45	M8	0,23

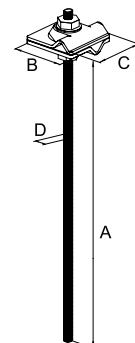
OC

NI

OG/TD

CU

CL



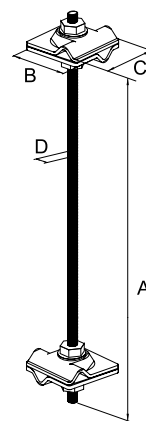


THROUGH PASSAGE EARTHING POINT

For connecting 6-12 mm round conductors to each other when entering the building or mounting through walls.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
22500	500	45	45	M6	0,28
22508	500	45	45	M8	0,3

OC
NI
OG/TD
CU
CL

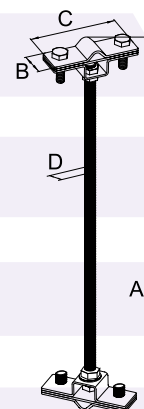


THROUGH PASSAGE EARTHING POINT

For connecting round conductors 8-10 mm or stripe conductor up to 40 mm wide to each other when entering the building or mounting through walls.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
22546	500	25	65	M8	0,32

OC
NI
OG/TD
CU
CL

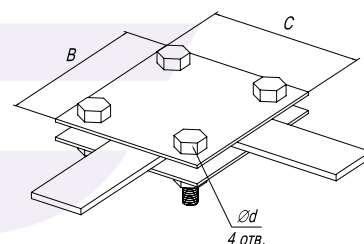


CLAMP STRIP-STRIP WITH TWO PLATES

Designed for strip connection up to 40 mm wide between each other

Code	Dimensions, mm			Weight, kg
	A	B	D	
55782	70	70	M8	0,24

OC
NI
OG/TD
CU
CL

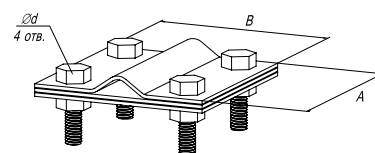


CLAMP GROUNDING ELECTRODE-STRIP

Designed to connect the grounding electrode $\varnothing 12-20$ mm with strip width up to 50 mm.

Code	Dimensions, mm			Weight, kg
	A	B	D	
57080	70	80	9	0,32

OC
NI
OG/TD
CU
CL



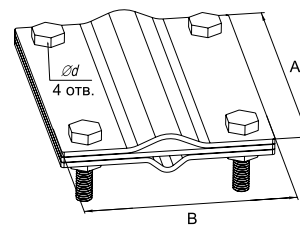


CLAMP FOR GROUNDING ELECTRODE-STRIP-WIRE

For connecting the grounding electrode $\varnothing 16$ mm with a wire $\varnothing 8-12$ mm and / or strip up to 40 mm wide.

Code	Dimensions, mm			Weight, kg
	A	B	D	
57081	70	70	9	0,33

- OC
- NI
- OG/TD
- CU
- CL

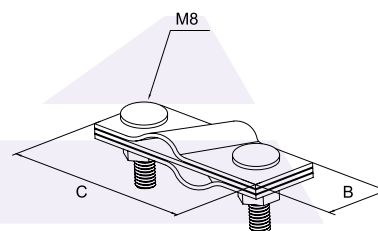


DIAGONAL CLAMP FOR GROUNDING ELECTRODE-STRIP-WIRE

For connecting the grounding electrode $\varnothing 16$ mm with a wire $\varnothing 8-12$ mm and / or strip up to 40 mm wide.

Code	Dimensions, mm			Weight, kg
	B	C	d	
57082	30	108	9	0,32

- OC
- NI
- OG/TD
- CU
- CL

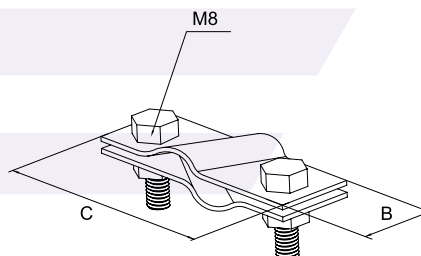


DIAGONAL CLAMP FOR GROUNDING ELECTRODE-WIRE

For connecting the grounding electrode $\varnothing 16$ mm with a wire $\varnothing 8-12$ mm

Code	Dimensions, mm			Weight, kg
	B	C	d	
57083	30	108	9	0,27

- OC
- NI
- OG/TD
- CL

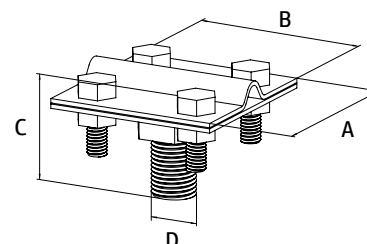


WIRE-GROUNDING ELECTRODE CLAMP

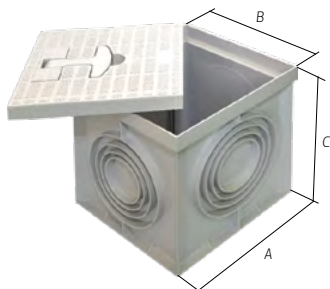
For attaching a down conductor (rod $\varnothing 6-10$ mm or strip up to 40 mm) to the grounding electrode and grounding mast. It is screwed into concrete foundations (code 02002, 03003) and into holders (code 04004, 04005, 04007, 04007SP, 04008) for connecting a down conductor to them.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
55422	57	57	50	M16	0,28
55423	70	70	50	M16	0,324

- OC
- NI
- OG/TD
- CL



GROUP I
GROUNDING MASTS



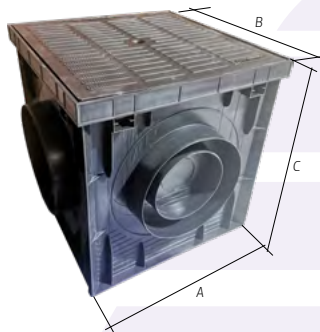
UNDERGROUND CONTROL WELL

Used in the installation of the control connection and down conductor. Placed in the ground.

Code	Dimensions, mm			Weight, kg
	A	B	C	
R.8170	198	198	200	0,91

PCV

GROUP II
GROUNDING



UNDERGROUND CONTROL WELL

Code	Dimensions, mm			Weight, kg
	A	B	C	
	300	300	300	2,5

PCV

GROUP III
CONDUCTOR HOLDERS



CONDUCTIVE GREASE

Used in electrical contacts for increases their resource and protects against corrosion. Packing: 40 g.



CORROSION-RESISTANT TAPE

To protect joints of elements in the ground. Width 50 mm, length 10 m. Weight: 0.66 kg.



BOX FOR CONTROL CONNECTION (FRONT)

Provides access to periodic measurements in the lightning protection circuit. Dimensions: 200×160×70 mm. Weight: 0.18 kg

GROUP IV
CLAMPS (CONNECTORS)



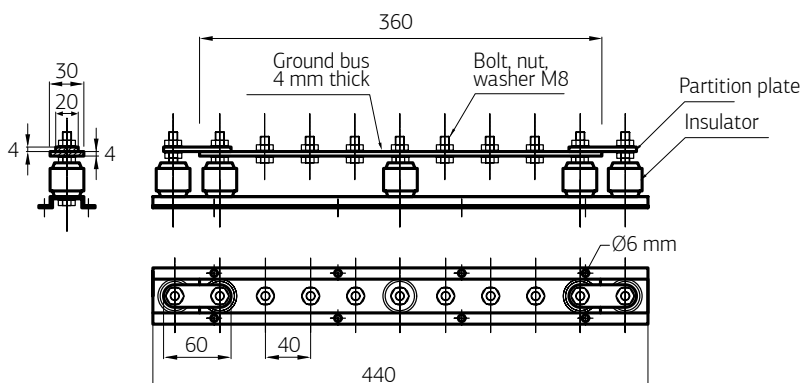
**EARTH BAR WITH COVER FOR 9 GROUPS
1×50, 1×35, 7×25**

The potential equalization bus provides access to the disconnecting spark gaps for conducting control tests. Weight: 0.3 kg

GROUP V
SFD



MAIN GROUND BUS



GROUP VI
CONDUCTORS

GROUP VII
OTHER ELEMENTS

Earth electrodes, galvanized by thermal diffusion

Grounding of an electrical installation is its electrical connection with a grounding device.

Since grounding today is an effective measure of protection against electric shock, today it is subject to a number of requirements aimed at improving the electrical characteristics of this technical solution.

One of the requirements for grounding is protection against corrosion and aging. The essence of the requirement is to apply a protective zinc layer on the surface of metal products so that electrical corrosion does not appear on them. Today, this requirement is contained in the standards of the International Electrotechnical Commission, national and interstate standards.

For example, in accordance with the provisions of section 4.3 of ТКП 339-2011 (02230) "Electrical installations with voltage up to 750 kV. Overhead power lines and conductors, distribution devices and transformer substations, electric power and battery electrical installations of residential and public buildings. Device rules and electrical safety protective measures. Accounting for electricity. Norms of acceptance tests.» (Table 4.3.4), a galvanized round profile with a diameter of 16 mm should be used as grounding. In this case, the average value of the coating thickness for galvanized pin ground electrodes must be at least 70 microns.

Metal products can be hot-dip galvanized, thermal diffusion or galvanized. However, many years of operating experience has shown that galvanic zinc coating of ground electrodes does not justify itself from a practical point of view due to the provision of short-term protection against corrosion and poor resistance to abrasive wear. In turn, comparative tests of samples of metal products coated with hot-dip galvanized zinc and thermal diffusion method showed that the thermal diffusion zinc coating is 1.5-2 times superior to the hot-dip galvanized coating in terms of corrosion resistance.

The process of thermochemical diffusion of zinc into the surface of the product consists in the fact that under certain temperature conditions (about 420°C) in the presence of zinc powder, a layer of zinc coatings. At the same time, the thermal diffusion

zinc coating has good protective properties: the damage site does not corrode as long as zinc atoms are present nearby, the coating is uniform in thickness, accurately reproduces the profile of the product. Products galvanized by thermal diffusion are resistant to abrasive wear (microhardness 3300-4400 MPa) and have a high degree of adhesion to the surface of the protected product. The actual (average resulting) value of the thickness of the zinc coating on a metal product is 73 microns and is not subject to chipping and peeling. The value of the measured transient resistance of the contact connection "coupling-grounding pin" is 0.0037 Ohm, which fully complies with the norm of national and international standards. It should also be noted the good mounting properties of metal products galvanized by the thermal diffusion method: the iron-zinc phases of the coating do not burn out during welding, and the coating is closely adjacent to the weld, thus providing protection to the joint.

TerraZinc LLC believes that the use of thermal diffusion zinc coating allows you to quickly and inexpensively create reliable grounding. The advantages of such grounding are: a service life of 25 years, the safety of the presence of a ground electrode next to conductive communications (it is not washed out by stray currents), corrosion resistance, the ability to use ground pins for deep modular grounding, and high corrosion resistance.



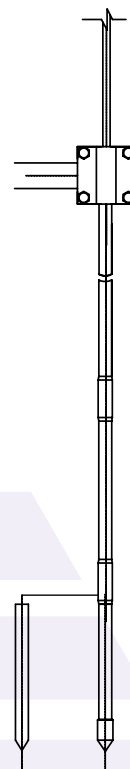
GROUNDING SET

The set for installation grounding includes all the necessary elements:

- grounding electrodes (code 21050);
- Pointed grounding electrode (code 21150);
- coupling joint (code 21052);
- peak for grounding electrode (code 21051);
- impact bolt with connecting high nut (mounting kit);
- grounding electrode-strip-wire clamp (code 57081);
- conductive grease (40 g)
- and gloves (1 pair).



Code	Nam	Immersion depth, m	Weight, kg
21300	Rod earthing switch Ø16	3,0	5,68
21301	Rod earthing switch pointed Ø16	3,0	5,52
21450	Rod earthing switch Ø16	4,5	8,24
21451	Rod earthing switch pointed Ø16	4,5	8,08
21600	Rod earthing switch Ø16	6,0	10,81
21601	Rod earthing switch pointed Ø16	6,0	10,65

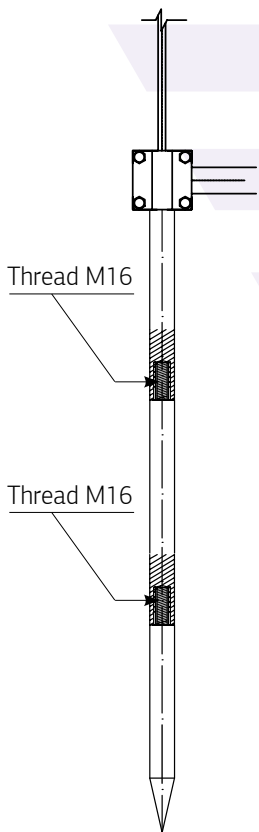


The number of components depends on the selected article.

COUPLINGLESS GROUNDING KITS

The set for installation grounding includes all the necessary elements:

- grounding electrodes couplingless (code 24050);
- grounding electrodes pointed couplingless (code 24150);
- mounting kit (code 21063);
- grounding electrode-strip-wire clamp (art. 57081);
- conductive grease (40 g)
- and gloves (1 pair).



Артикул	Наименование	Глубина погружения, м	Вес, кг
24301	Grounding electrodes pointed couplingless Ø20 L: = 3 / 4,5 / 6 m	3,0	8,7
24451		4,5	12,6
24601		6,0	16,6

The number of components depends on the selected article.



GROUNDING ELECTRODE FOR ELECTRICAL PANEL

We offer a novelty in 2023 – a grounding electrode for an electrical panel. The grounding electrode is intended for the device of a ground loop for an electrical panel.

The grounding kit includes grounding electrode, a coupling, a profile clamp for connecting a flexible copper conductor, which is a flexible copper wire 10 m long and with a cross section of 16 to 26 mm², electrically conductive grease, and a mounting kit.

Scope: construction of protective, functional grounding for electrical installations in various soils.

It is a budget solution for the construction of grounding. Installation of the ground electrode does not require large-scale earthworks.

Produced according to TU BY 691788197.006-2023.

The mass of the ground electrode assembly is only 5.188 kg.

The earthing switch is supplied in a corrugated box.

PLATE GROUNDING



The grounding plate is designed for conditions where vertical grounding electrodes do not give the necessary effect when they are immersed to a great depth, or their immersion is very laborious or not economically profitable. Can be used for grounding device for electrical panel.

It is a galvanized plate with dimensions of 60 × 40 cm, 4 mm thick with a profile clamp fixed on it for connecting a flexible conductor or a galvanized profile strip. It is also completed with a flexible copper conductor, 5 m long and 16 sq. mm in cross section.

A feature of the lamellar ground electrode is that it can be used for potential equalization in order to prevent dangerous touch and step voltages.

It is a budget solution for the construction of grounding. Installation does not require large-scale earthworks and the use of special equipment.

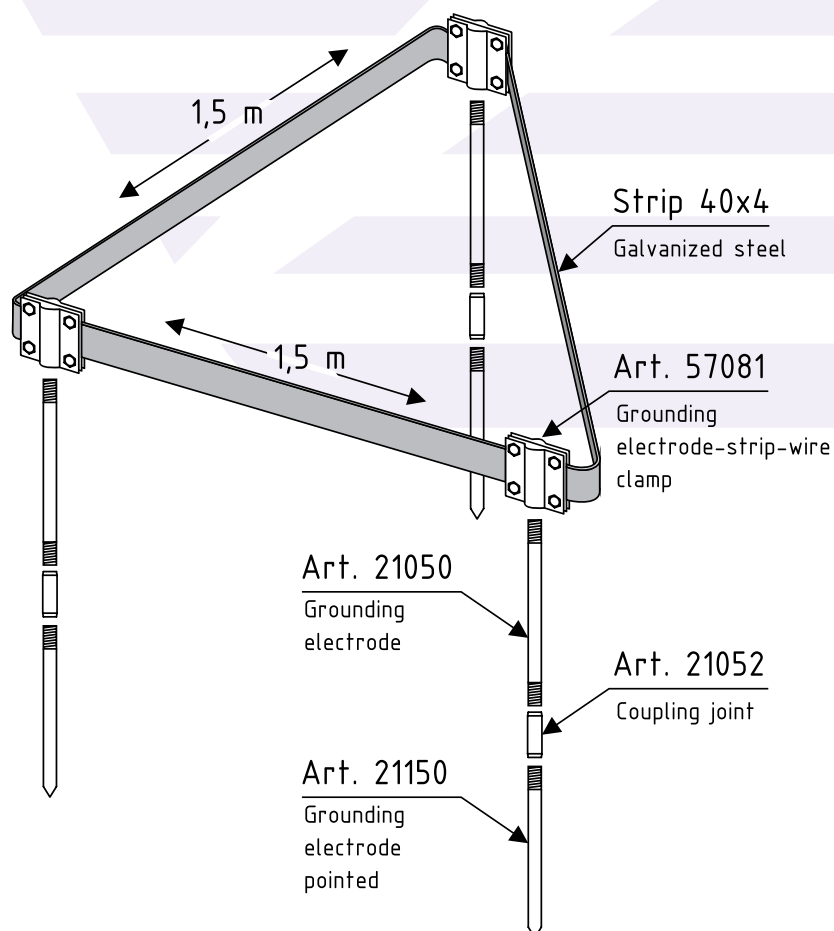
Produced according to TU BY 691788197.006-2023.

The mass of the ground electrode assembly is only 10.260 kg.

21901. GROUND LOOP WITH POINTED ELECTRODE

The set includes all the necessary elements for mounting the grounding.

Name	Pcs.	Weight, kg
Grounding electrode L-1.5 m Ø16	3	23,00
Pointed grounding electrode L-1.5 m Ø16	3	
Coupling joint	3	
Mounting kit (impact bolt with connecting nut)	1	
Grounding electrode-strip-wire clamp	3	
Galvanized steel strip 40×4×1500 mm	3	
Conductive grease, 40 g	1	
Corrosion-resistant tape	1 roll	
Working gloves	1 pair	



Grounding mixtures TERRAZN

In modern industrial and civil buildings, grounding devices play an important role in ensuring the safe operation of electrical installations, process and engineering equipment. A high-quality grounding device allows you to avoid accidents related to electricity and their consequences.

When grounding, an important role is played by the electrical conductivity of the soil. The lower the value of the electrical resistivity of the soil, and the better its conductivity, the less cost and effort is required for the installation of grounding.

In 2021, TerraZinc LLC launched the production of a product that was highly anticipated on the market for materials for the construction of grounding and lightning protection in regions with high-resistivity soils.

TERRAZN grounding mixtures is produced in two types. The composition of the near-electrode mixture TERRAZN was developed on the basis of research by Belarusian scientists. The development experience accumulated in the USSR was also used. Our development does not violate third-party copyrights, our own technical specifications have been developed for our mixtures and a number of necessary certificates have been received.

The mixture is not aggressive to metal, non-toxic and environmentally friendly.

The effect of using the mixture in relation to analogues is the long-term content of the mixture in the near-electrode space of the ground electrode, the rapid reduction of the ground-electrode contact resistance.

The use of the mixture in experimental and technological work showed that its introduction into the near-electrode space of the ground electrode system can reduce soil resistivity from 25 to 75.5%, and significantly save money when installing a grounding device. The properties of the mixture also make it possible to smooth out seasonal fluctuations in the effective operation of the grounding device.



GROUP I
GROUNDING MASTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

SPD

GROUP V
CONDUCTORS

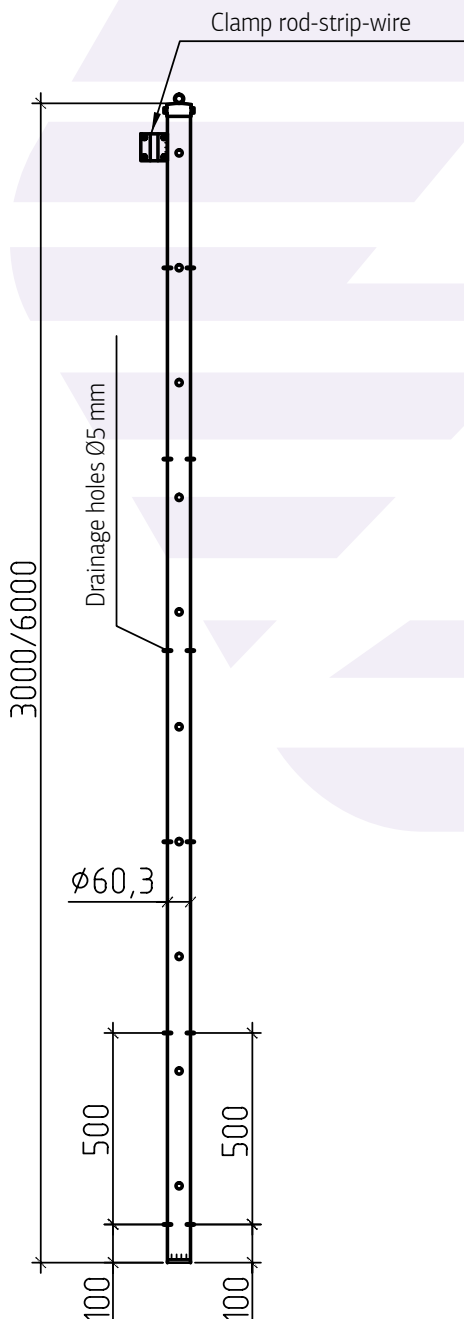
GROUP VI
OTHER ELEMENTS



SET OF ELECTROLYTIC GROUNDING VERTICAL 3 m/6 m

The kit includes all the necessary elements for grounding installation:

- inraelectrode mixture – 30 kg (for 3-meter) and 40 kg (for 6-meter) in a carton box;
- near-electrode mixture – 80 kg (for 3-meter) and 160 kg (for 6-meter) in a carton box;
- electrolytic vertical grounding electrode made of stainless steel with a cover for maintenance, perforation along the entire length and a welded clamp for connecting a flexible conductor (3 or 6 meters) – 1 pc.;
- ground well – 1 pc.

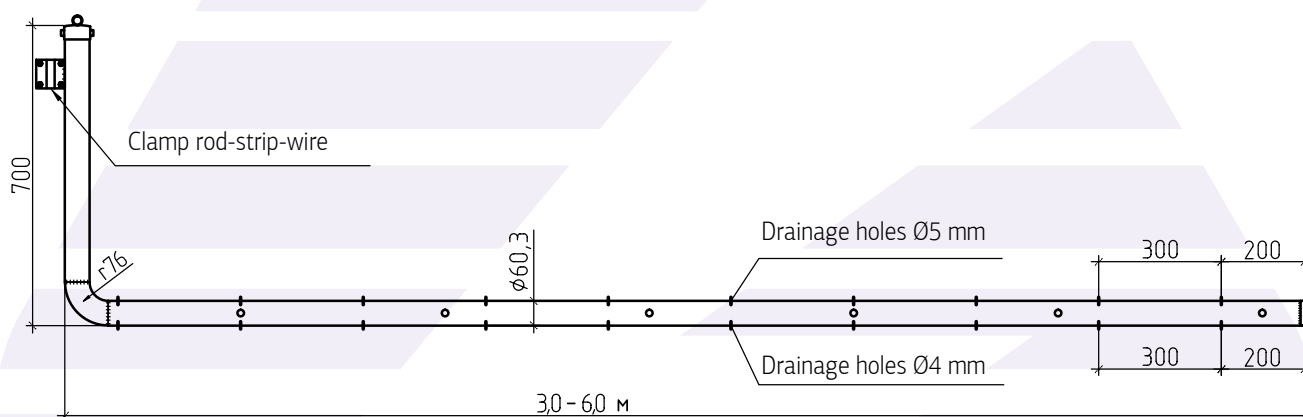




SET OF ELECTROLYTIC GROUNDING HORIZONTAL 3 m/6 m

The kit includes all the necessary elements for grounding installation:

- intraelectrode mixture – 30 kg (for 3-meter) and 40 kg (for 6-meter) in a carton box;
- near-electrode mixture – 80 kg (for 3-meter) and 160 kg (for 6-meter) in a carton box;
- electrolytic vertical grounding electrode made of stainless steel with a cover for maintenance, perforation along the entire length and a welded clamp for connecting a flexible conductor (3 or 6 meters) – 1 pc.;
- ground well – 1 pc.



One of the main problems in the energy industry is the problem of creating a low-resistance grounding device in soils with high resistivity. At the moment, electrolytic grounding electrodes have become actively used, which replace dozens, and sometimes hundreds, of steel rods and strips, coated or uncoated with a protective coating and located over a large area. The company TerraZinc offers its own development – electrolytic ground electrode TERRAZN. In order to determine the effectiveness of the manufactured product in 2021, we organized tests. The commercially produced electrolytic ground electrode systems of horizontal and vertical installation, 3 m long, were tested.

In the process of testing, the installation technology of the TERRAZN electrolytic grounding electrode assumed soil replacement around it. To measure the ground resistance in the case of spreading low-frequency currents, a 4-electrode circuit was used using an IS-10 ground resistance meter. The first resistance measurements were made immediately after the installation of ground electrodes. Subsequent measurements were carried out once every 1-2 weeks for each investigated ground electrode.

The first measurements showed that the use of the TERRAZN electrolytic grounding device made it possible to reduce the resistance of the grounding device up to three times in comparison with control grounding devices.

Subsequent measurements made it possible to conclude that the presence of an intra-electrode mixture (TU BY 691788197.003-2021) in the internal volume of an electrolytic ground electrode has a strong effect on reducing

the value of ground resistance and, in combination with a near-electrode mixture (TU BY 691788197.004-2021), changes the electrical properties of the soil by water-salt chemical reaction. As a result, a soil area with high conductivity and water-holding capacity is formed around the ground electrode system, which within a short period of time allows to reduce the resistance of the grounding device by up to 13 times in comparison with a deep rod vertical ground electrode system. At the same time, the efficiency coefficient of the ground electrode system reached the value of 0.025, which made it possible to declare with full responsibility the resource-saving value of the use of the ground electrode system.

Another advantage of the TERRAZN ground electrode system, revealed in the course of research, was the possibility of its use for the repair of grounding devices that were put into operation earlier, when it is necessary to ensure a guaranteed reduction in the increased resistance of the grounding device, for example, due to a decrease in the level of groundwater, as well as smoothing seasonal fluctuations in the effective operation of the grounding device.

In general, the test results showed that the use of an electrolytic earthing device manufactured by TerraZinc LLC for the construction of a grounding device provides the lowest and most stable resistance, which practically does not change over a long period of time under the influence of various climatic conditions, reduces the capital costs for installation and repair by several times. grounding devices.

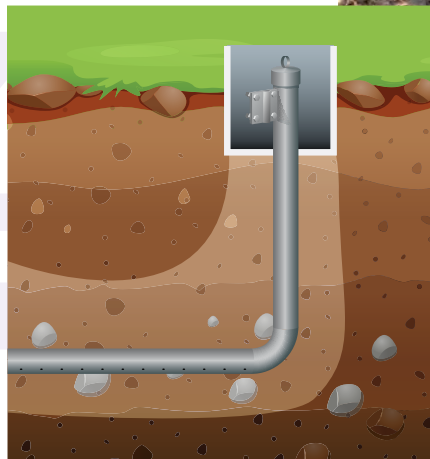
Electrolytic grounding DG 3 m/6 m

To install a low-resistance grounding device in poorly conducting soils, dozens, and sometimes hundreds, of steel rods and strips are required, located over a large area and requiring periodic inspections and repairs. TerraZinc LLC offers long-term electrolytic grounding, the specification of which contains the prefix DG.

Such grounding for a long period of time (up to 30 years), regardless of soil geology, provides a significant increase in soil electrical conductivity due to its design features and water-salt chemical reactions. It is a stainless steel pipe, vertical or in the form of the letter "L" with perforation in the horizontal part. Stainless steel ensures the absence of corrosion, and perforation ensures a continuous water-salt reaction. The increased content of electrolytic mixtures creates a strong and lasting effect of reducing the resistance of the grounding device.

Manufactured according to the technical specifications TU BY 691788197.005-2021.

Long-term electrolytic grounding has a small mass, since it does not contain an excess amount of materials. It does not require frequent periodic inspections. Grounding installation is carried out without the involvement of third-party specialists and large volumes of earthworks.



Low resistance ground loop

The total ground resistance depends on the resistance of the soil layers adjacent to the ground electrode. Therefore, it is possible to achieve a reduction in grounding resistance, for example, by a combined solution: the use of a vertical composite ground electrode and an electrolytic mixture. The table shows the practical effect of replacing standard grounding kits with low-resistance ones in soil with a resistivity of 100 ohm*m.

Low resistance ground loop		Standard grounding kit		
Immersion depth of the vertical composite earth electrode, m	Weight of the mixture, kg	Immersion depth of the vertical earth electrode, m		
		3	4,5	6
		Number of standard kits pcs.		
3	20	2	1	1
4,5	20	3	2	1
6	20	4	3	2



GROUP I
GROUNDING MAISTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

GROUP V
SIP

GROUP V
CONDUCTORS

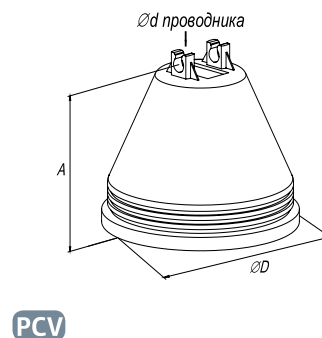
GROUP VI
OTHER ELEMENTS

ROOF PLASTIC (CONCRETE) HOLDER WITH TWO CLAMPS H-110



For fixing a down conductor Ø8-12 mm on a flat roof.

Code	Dimensions, mm			Weight, kg
	A	D	d	
30011	110	135	8	1,05 (with concrete)
30100				0,11 (without concrete)
30110	110	135	10-12	1,05 (with concrete)
30111				0,11 (without concrete)



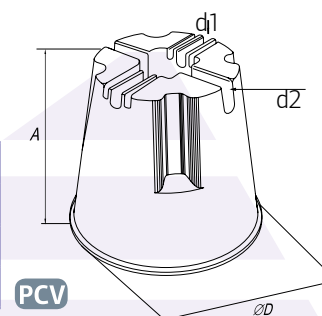
PCV

ROOF PLASTIC (CONCRETE) HOLDER



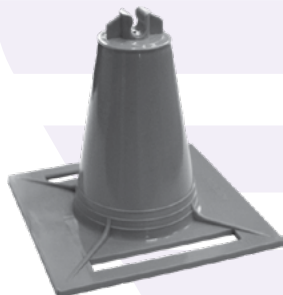
For fixing a down conductor Ø8-12 mm on a flat roof.

Code	Dimensions, mm				Weight, kg
	A	D	d1	d2	
30200	111	127	8	10-12	0,12 (without concrete)
30201					1,00 (with concrete)



PCV

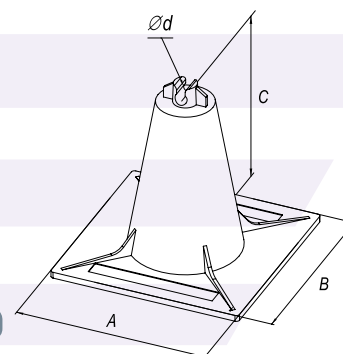
PLASTIC HOLDER FOR SOFT ROOF H-110



For fixing the down conductor on a flat soft roof. It is mounted on a soft roof with frost-resistant glue or bitumen strips.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
30002	120	120	100	8	0,06

PCV

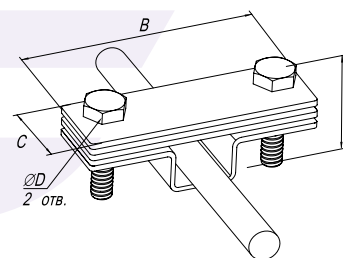


STRIP RETAINER FOR ROOF HOLDER



It is recessed into the holder (code 30200/30201) and allows you to fix a strip up to 40 mm wide at a height of 100 mm above the roof surface.

Code	Dimensions, mm				Weight, kg
	A	B	C	ØD	
31543	15	65	25	6	0,066

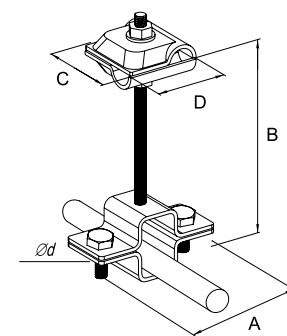


WIRE HOLDER FOR ROOF HOLDER



It is recessed into the holder (code 30200/30201) and allows you to fix the wire 8-10 mm at a distance of 300 mm above the roof surface.

Code	Dimensions, mm					Weight, kg
	A	B	C	D	d	
31563	65	200	30	30	6	0,22



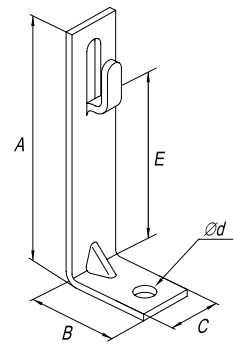


UNIVERSAL ROOF HOLDER

For fixing a down conductor Ø6-10 mm on the roof.
Down conductor mounting height 80 mm.

Code	Dimensions, mm					Weight, kg
	A	B	C	d	E	
32101	110	35	25	6	75	0,05

OC
NI
OG/TD
CU CL

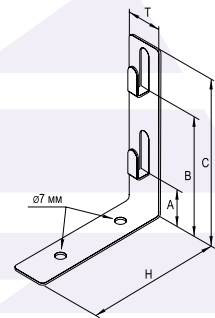


UNIVERSAL HOLDER L-100

For fixing a down conductor Ø6-10 mm.
It can also be used to fixing a heating cable.

Code	Dimensions, mm					Weight, kg
	A	B	C	H	T	
32111	33	90	122	100	25	0,104

OC
NI
OG/TD
CU
CL

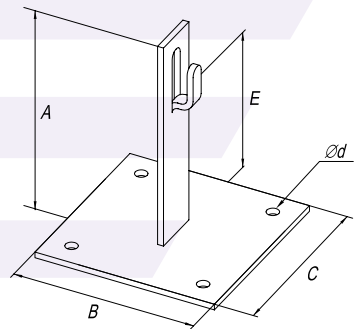


ROOF HOLDER WITH A PLATE

For fixing a down conductor Ø6-10 mm
on a flat roof, on the parapet.

Code	Dimensions, mm					Weight, kg
	A	B	C	d	E	
32510	100	70	70	6	65	0,11
32515	150				110	0,13

OC
NI
OG/TD
CL

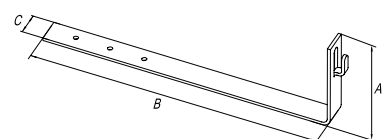


UNDER TILE HOLDER

For fixing a down conductor Ø6-10 mm
on the tiled roof.

Code	Dimensions, mm			Weight, kg
	A	B	C	
32102	100	330	25	0,16
32103		415		0,2
32122	135	330		0,18
32123		415		0,22

OC
NI
OG/TD
CU
CL



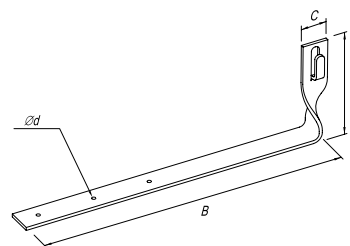
UNDER TILE HOLDER

For fixing a down conductor Ø6-10 mm on the tiled roof.



Code	Dimensions, mm				Weight, kg
	A	B	C	d	
32112	100	330	25	5	0,16
32113		415			0,2
32132	135	330			0,18
32133		415			0,22

- OC
- NI
- OG/TD
- CU
- CL



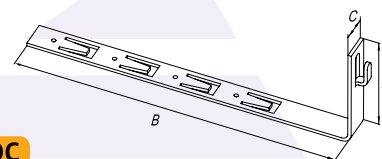
UNDER TILE HOLDER WITH A HOOK

For fixing a down conductor Ø6-10 mm on the tiled roof. Equipped with mounting hooks.



Code	Dimensions, mm			Weight, kg
	A	B	C	
32202	100	330	25	0,15
32203		415		0,19
32222	135	330		0,17
32223		415		0,21

- OC
- NI
- OG/TD
- CU
- CL



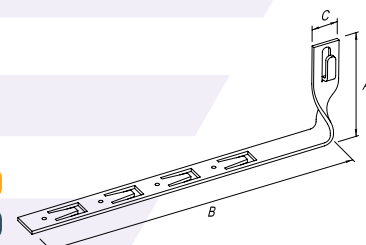
UNDER TILE HOLDER WITH A HOOK

For fixing a down conductor Ø6-10 mm on the tiled roof. Equipped with mounting hooks.



Code	Dimensions, mm			Weight, kg
	A	B	C	
32212	100	330	25	0,15
32213		415		0,19
32232	135	330		0,17
32233		415		0,21

- OC
- NI
- OG/TD
- CU
- CL



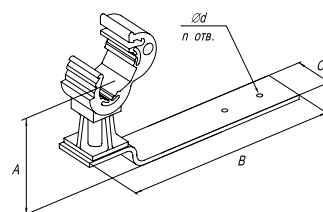
UNDER TILE HOLDER WITH PLASTIC WIRE HOLDER

For fixing a down conductor on the tiled roof. Fixing of the down conductor is carried out by clicking on the holder.



Code	Dimensions, mm				Weight, kg
	A	B	C	d	
42111	35	58	25	5	0,04
42101		100			0,05
42102		330			0,14
42103		415			0,18

- OC
- NI
- OG/TD
- CU
- PCV
- CL



GROUP I
GROUNDING MAISTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

GROUP V
SPD

GROUP VI
CONDUCTORS

GROUP VII
OTHER ELEMENTS

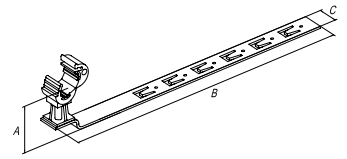
UNDER TILE HOLDER WITH A HOOK AND WITH PLASTIC WIRE HOLDER

For fixing a down conductor Ø6-10 mm on the tiled roof. Equipped with mounting hooks. Fixing of the down conductor is carried out by clicking on the holder.



Code	Dimensions, mm			Weight, kg
	A	B	C	
42202	35	330	25	0,13
42203		415		0,17

- OC
- NI
- OG/TD
- CU
- PCV
- CL



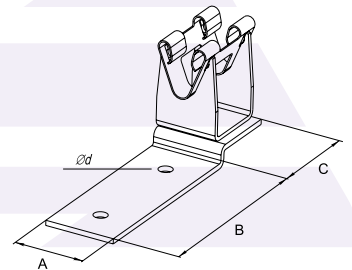
UNDER TILE HOLDER WITH METAL WIRE HOLDER

For fixing a down conductor Ø8 mm on the roof. Fixing of the down conductor is carried out by clicking on the holder.



Code	Dimensions, mm				Weight, kg
	A	B	C	d	
34111	25	58	20	5	0,045
34101	25	100	20		0,05
34102	25	330	20		0,12

- OG/TD
- OC
- NI
- CU
- CL



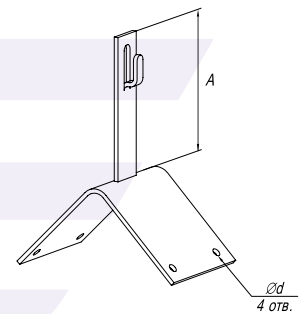
PEAK HOLDER

For fixing a down conductor Ø6-10 mm on the roof ridge.



Code	Dimensions, mm		Weight, kg
	A	d	
32210	100	7	0,15
32215	150		0,16

- OC
- NI
- OG/TD
- CL



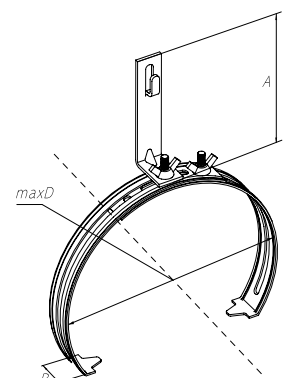
ROOF RIDGE TILE HOLDER

For fixing a down conductor Ø6-10 mm on the tiled roof ridge.



Code	Dimensions, mm			Weight, kg
	A	B	D	
32300	110	26	130-240	0,15
32310	110		230-350	0,16

- OC
- NI
- OG/TD
- CU
- CL



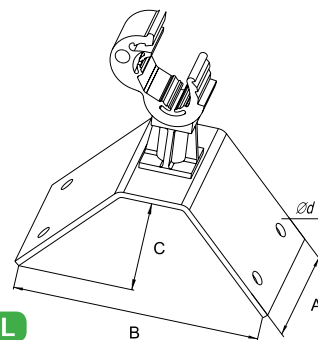


PEAK HOLDER WITH PLASTIC WIRE HOLDER

For fixing a down conductor Ø8-10 mm on the roof ridge. The mounting height of the down conductor from the roof ridge is 30 mm. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
42210	55	100	45	6	0,14

- OC
- NI
- OG/TD
- CU
- PCV
- CL

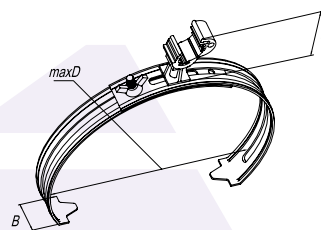


ROOF RIDGE TILE HOLDER WITH PLASTIC WIRE HOLDER

For fixing a down conductor Ø8-10 mm on the tiled roof ridge. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm			Weight, kg
	A	B	D	
42300	35	26	130-240	0,16
42310	35		230-350	0,19

- OC
- NI
- OG/TD
- CU
- PCV
- CL

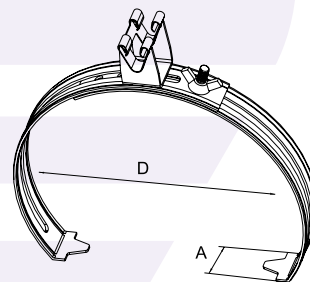


ROOF RIDGE TILE HOLDER WITH STEEL WIRE HOLDER

For fixing a down conductor Ø8 mm on the tiled roof ridge. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm		Weight, kg
	A	D	
34300	26	130-240	0,15
34310		230-350	0,22

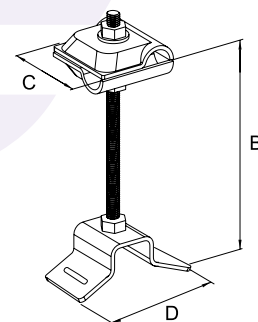
- OC
- NI
- CU
- CL
- OG/TD



CONDUCTOR HOLDER FOR PIPELINES L-110 MM

The holder is fixed on the pipe with a mounting tape and fastens the down conductor Ø8-10 mm at a distance of 110 mm from the pipe.

Code	Dimensions, mm			Weight, kg
	B	C	D	
38110	130	30	60	0,18

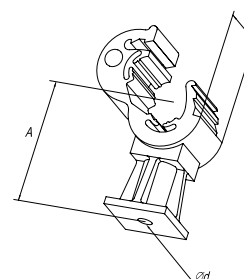


PLASTIC WIRE HOLDER

For fixing a down conductor Ø8-10 mm on the roof or on the facade of the building. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm			Weight, kg
	A	C	d	
40000	25	20	4	0,01

- PCV



GROUP I
GROUNDING MASTS

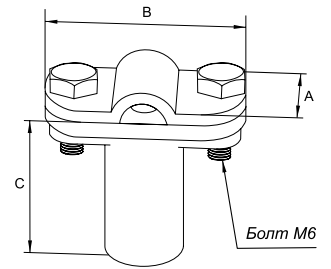


FACADE PLASTIC HOLDER, SCREWED

For fixing a down conductor Ø8-10 mm on the roof or on the facade of the building.

Code	Dimensions, mm			Weight, kg
	A	B	C	
44000	20	45	40	0,015

PCV



GROUP II
GROUNDING

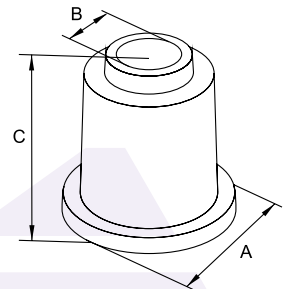


INSERT FOR PLASTIC HOLDER

Used with holder art. 44000. Designed to increase the mounting height of the holder art. 44000

Code	Dimensions, mm			Weight, kg
	A	B	C	
44001	24	11	25	0,01

PCV



GROUP III
CONDUCTOR HOLDERS



DISTANCE HOLDER, SCREWED

For fixing a down conductor Ø8-10 mm on the surface of the sandwich panel.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
44055			55		0,045
44075	25	65	75	6	0,05
44110			110		0,055

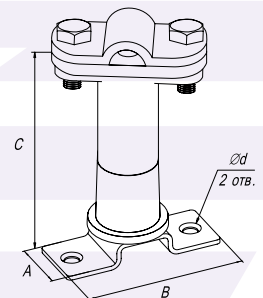
OG/TD

OC

NI

CU

PCV



GROUP IV
CLAMPS (CONNECTORS)

GROUP V
SFP



PLASTIC FACADE HOLDER, SCREWED

For fixing a down conductor Ø8-10 mm on the surface of the sandwich panel.

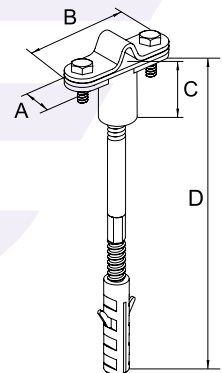
Code	Dimensions, mm				Weight, kg
	A	B	C	D	
44100				100	0,05
44120				120	0,055
44160				160	0,065
44200				200	0,07

OC

NI

OG/TD

CU



GROUP VI
CONDUCTORS

GROUP VII
OTHER ELEMENTS



DISTANCE HOLDER

For fixing a down conductor Ø8-10 mm on the surface of the sandwich panel. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
40100	40		25	6	0,04
40190	95-100	65	25	6	0,07

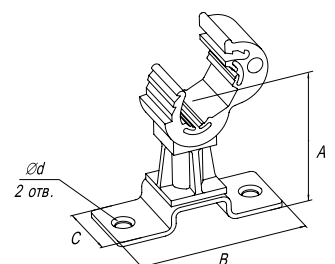
OG/TD

OC

NI

CU

PCV



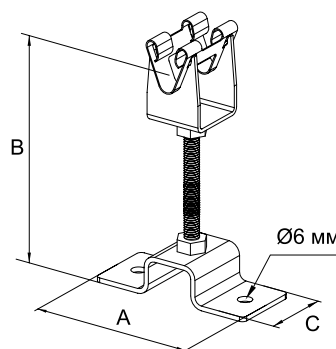


DISTANCE METAL HOLDER

For fixing a down conductor Ø8 mm on the surface of the sandwich panel. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm			Weight, kg
	A	B	d	
34100	65	45	6	0,05
34190	65	100	6	0,07

- OG/TD
- OC
- NI
- CU
- CL

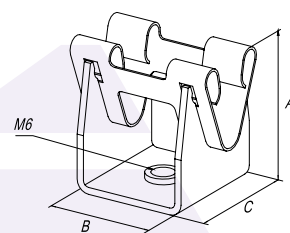


METAL WIRE HOLDER

For fixing a down conductor Ø8 mm on the facade of the building. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm			Weight, kg
	A	B	C	
34000	35	20	20	0,02

- OC
- NI
- CU
- OG/TD
- CL

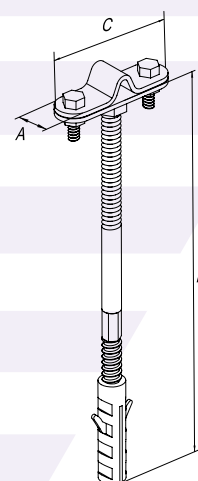


FACADE HOLDER

For fixing a down conductor Ø6-10 mm on the facade of the building.

Code	Dimensions, mm			Weight, kg
	A	C	B	
31000	20	60	0	0,05
31100			100	0,08
31120			120	0,09
31160			160	0,1
31200			200	0,11
31250			250	0,12
31400			400	0,14

- OC
- NI
- OG/TD
- CL



For fastening in concrete, brick, natural stone, wood.



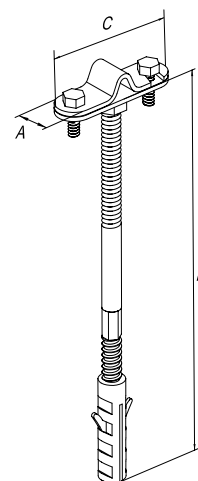
FAST MOUNTING FACADE HOLDER

For fixing a down conductor Ø6-10 mm on the facade of the building.

Thread in the bottom plate of the holder simplifies installation and speeds up work.

Code	Dimensions, mm			Weight, kg
	A	C	B	
31710	20	60	100	0,08
31712			120	0,09
31716			160	0,1
31720			200	0,11
31740			250	0,12

- OC
- NI
- OG/TD
- CL



For fastening in concrete, brick, natural stone, wood.

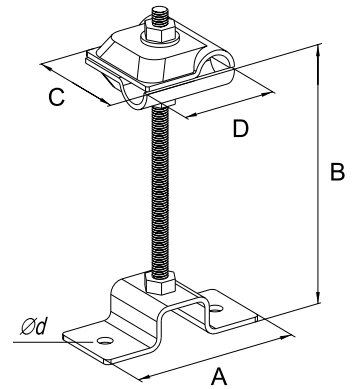


WIRE HOLDER ON HORIZONTAL AND VERTICAL SURFACES

For fixing a down conductor Ø6-10 mm on the surface of the sandwich panel or on the roof.

Code	Dimensions, mm					Weight, kg
	A	B	C	D	d	
35025	65	25	30	30	6	0,08
35080		80				0,09
35110		110				0,1
35170		170				0,12

- OC
- NI
- OG/TD
- CU
- CL

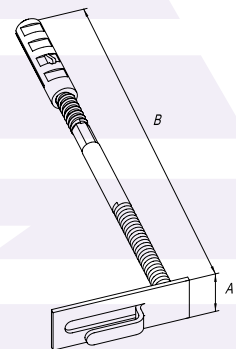


FACADE HOLDER WITH A HOOK

For fixing a down conductor Ø6-10 mm on the facade of the building.

Code	Dimensions, mm		Weight, kg
	A	B	
31600	25	0	0,02
31610		100	0,04
31612		120	0,05
31616		160	0,06
31620		200	0,07

- OC
- NI
- OG/TD
- CL

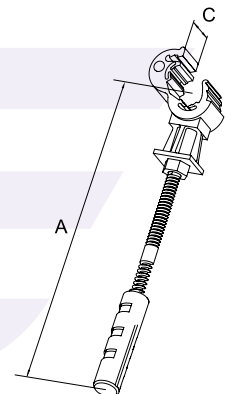


PLASTIC FACADE HOLDER

For fixing a down conductor Ø8-10 mm on the facade of the building. Fixing of the down conductor is carried out by clicking on the holder.

Code	Dimensions, mm		Weight, kg
	A	C	
41100	100	20	0,04
41120	120		0,05
41160	160		0,06
41200	200		0,07

- OC
- PCV
- OG/TD

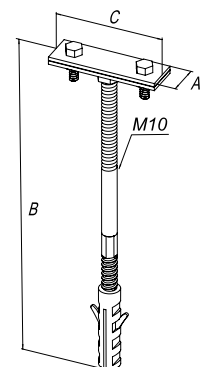


FACADE HOLDER FOR A STRIP

For fixing a strip up to 50 mm wide on the wall of the building.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
31508	20	100	80	9	0,095
31512		120			0,1
31516		160			0,105
31520		200			0,115

- OC
- NI
- OG/TD
- CL



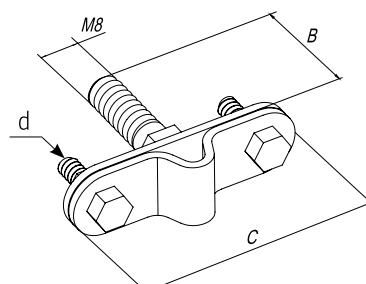


FACADE HOLDER WITH THE THREADED CONNECTION

For fixing a down conductor Ø6-10 mm on the wall of the building.

Code	Dimensions, mm			Weight, kg
	B	C	d	
31020	35	60	6	0,06

- OC
- NI
- OG/TD
- CL

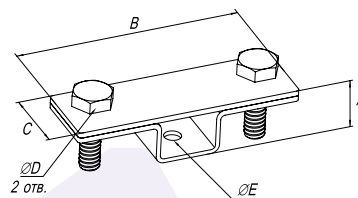


STRIP HOLDER

For fixing a strip up to 40 mm wide on the wall of the building.

Code	Dimensions, mm					Weight, kg
	A	B	C	øD	øE	
31540	15	65	25	6	6	0,066

- OC
- NI
- OG/TD
- CU
- CL

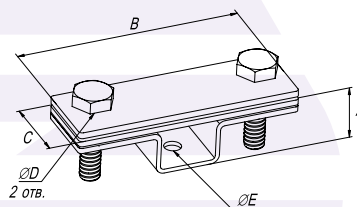


STRIP HOLDER WITH TWO PLATES

For fixing a strip up to 40 mm wide on the wall of the building.

Code	Dimensions, mm					Weight, kg
	A	B	C	øD	øE	
31541	15	65	25	6	6	0,077

- OC
- NI
- OG/TD
- CU
- CL

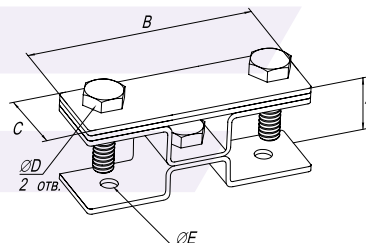


DISTANCE STRIP HOLDER

For mounting a strip up to 40 mm wide at a distance from the wall.

Code	Dimensions, mm					Weight, kg
	A	B	C	øD	øE	
31542	35	65	25	6	6	0,13

- OC
- NI
- OG/TD
- CU
- CL

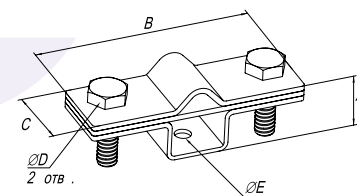


STRIP AND WIRE HOLDER

For fixing a down conductor Ø6-10 mm or a strip up to 40 mm wide.

Code	Dimensions, mm					Weight, kg
	A	B	C	øD	øE	
31546	15	65	25	6	6	0,077

- OC
- NI
- OG/TD
- CU
- CL

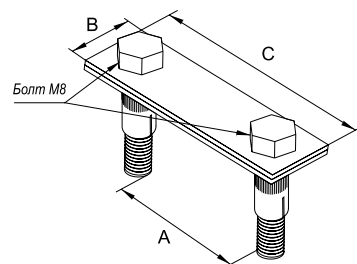


STRIP HOLDER 50 mm WITH CARVING RIVETS

For fixing strip up to 50 mm wide over the surface of a thin-sheet metal base.

Code	Dimensions, mm			Weight, kg
	A	B	C	
31547	55	23	80	0,13

- OC
- NI
- OG/TD
- CU
- CL

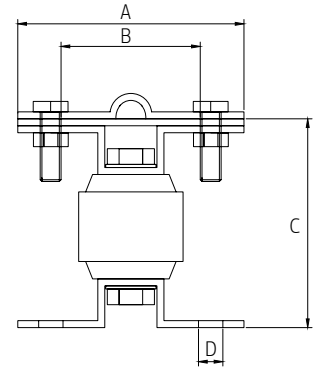




INSULATED HOLDER FOR WIRE 8-10 mm AND STRIP 25-40 mm

The reason for fixing and rod on vertical and horizontal wires, in cases where insulation of the conductive part is required.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
05041	65	40	60	7	0,18



GROUP I
GROUNDING MAISTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

GROUP V
SFP

GROUP VI
CONDUCTORS

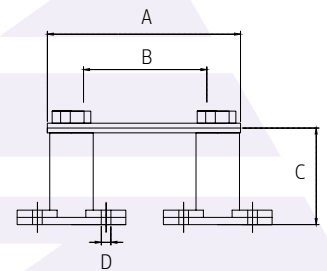
GROUP VII
OTHER ELEMENTS



STRIP HOLDER WITH PLASTIC INSULATOR

Designed for fastening a strip up to 50 mm wide on vertical and horizontal surfaces, in cases where insulation of a conductive part is necessary.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
05042	80	51	40	4	0,085



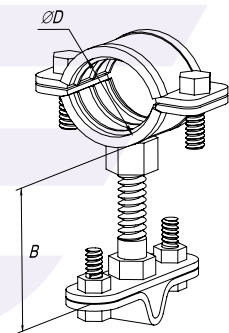
WIRE HOLDER ON A PIPE

For fixing a down conductor Ø6-10 mm on the pipe.



Code	Dimensions, mm		Weight, kg
	B	D	
31021	35	15-19	0,12
31022		20-24	0,14
31023		32-36	0,15
31024		40-46	0,15
31025		48-53	0,16
31026		60-65	0,18
31027		86-92	0,24
31028		112-117	0,26
31029		139-144	0,28

- OC
- NI
- OG/TD
- CL



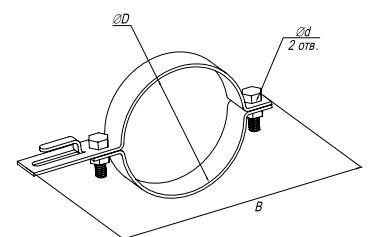
DRAINAGE PIPE HOLDER

For fixing a down conductor Ø6-10 mm on the drainage pipe.



Code	Dimensions, mm			Weight, kg
	B	D	d	
33080	165	80	9	0,12
33100	185	100		0,13

- OC
- NI
- OG/TD
- CU
- CL



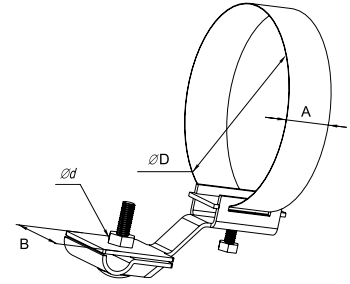
UNIVERSAL CLAMPING RING

For fixing a down conductor Ø6-10 mm on the drainage pipe.



Code	Dimensions, mm				Weight, kg
	A	B	D max	d	
33210	20	36	0-100	9	0,11
33215			0-160		0,12
33220			0-200		0,12
33225			0-250		0,13

- OC
- NI
- OG/TD
- CU
- CL



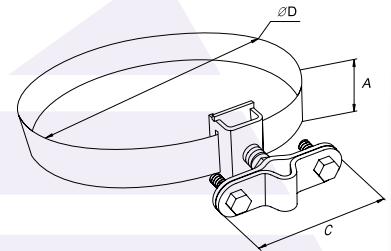
HOLDER FOR PIPES

For fixing a down conductor Ø6-10 mm to various structural elements of a building.



Code	Dimensions, mm			Weight, kg
	A	C	D max	
33310	20	60	0-100	0,11
33315			0-160	0,12
33320			0-200	0,12
33325			0-250	0,13

- OC
- NI
- OG/TD
- CU
- CL

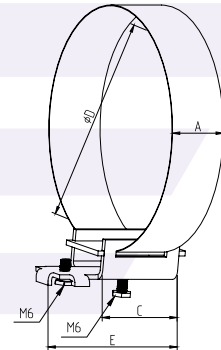


HOLDER FOR POTENTIAL EQUALIZATION



Code	Dimensions, mm				Weight, kg
	A	C	E	D max	
33410	20	34	52	0-100	0,063
33415				0-150	0,070
33420				0-200	0,077
33425				0-250	0,084

- OC
- NI
- OG/TD
- CU
- CL



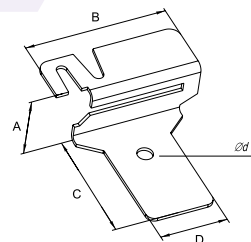
HOLDER FOR THE GROUNDING CONDUCTORS

For fixing a strip up to 40 mm wide or a down conductor Ø8-10 mm on the wall of building.



Code	Dimensions, mm					Weight, kg
	A	B	C	D	d	
31510	25	55	45	25	6	0,04

- OC
- NI
- OG/TD
- CU
- CL



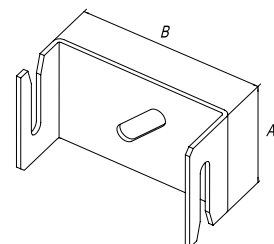
STRIP HOLDER

For fixing strips 4x25; 4x30; 4x40; 5x40 mm on the wall of building.



Code	Dimensions, mm		Weight, kg
	A	B	
31525	30	48	0,03
31550	40	70	0,05

- OC
- NI
- OG/TD
- CU
- CL



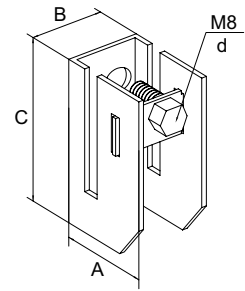


STRIP HOLDER WITH THE FIXING BOLT

For fixing strip up to 8 mm thickness on the wall of building.

Code	Dimensions, mm				Weight, kg
	B	C	A	d	
31551	30	65	56	9	0,22

- OC
- NI
- OG/TD
- CU
- CL



GROUP I
GROUNDING MAISTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

GROUP V
SPD

GROUP VI
CONDUCTORS

GROUP VII
OTHER ELEMENTS

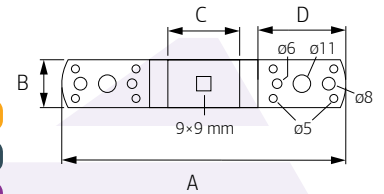


BRIDGE SUPPORT

Designed for connecting conductive roofing elements with the ability to fix an 8-10 mm down conductor on it using a clamp code 51520 and code 51525

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
31552	178	30	45	55	0,11

- OC
- NI
- OG/TD
- CU

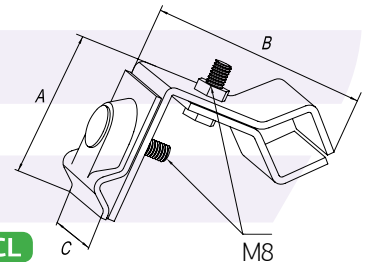


UNIVERSAL SEAM HOLDER

For fixing a down conductor Ø6-10 mm on the seam roof or on the sheet steel.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
33096	45	60	45	9	0,24

- OC
- NI
- OG/TD
- CU
- CL

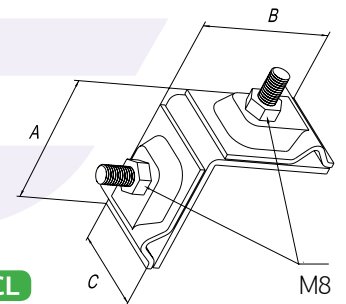


SEAM HOLDER

For fixing a down conductor Ø6-10 mm on the seam roof or on the sheet steel.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
33196	45	45	45	9	0,16
33296	30	30	30	9	0,1

- OC
- NI
- OG/TD
- CU
- CL

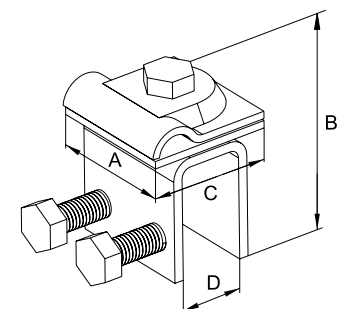


SEAM HOLDER SCREWED

For fixing a down conductor Ø6-10 mm on the seam roof or on the sheet steel up to 12 mm thickness.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
33396	30	40	30	12	0,09

- OC
- NI
- OG/TD
- CU
- CL



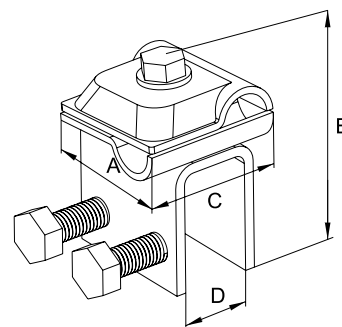


SEAM HOLDER SCREWED

For fixing a down conductor Ø6-10 mm on the seam roof or on the sheet steel up to 12 mm thickness.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
33397	30	50	30	12	0,09

- OC
- NI
- OG/TD
- CU
- CL

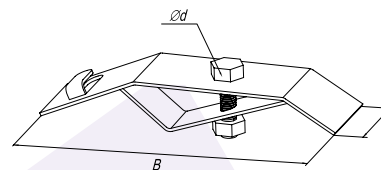


HOLDER ON GUTTER

For fixing a down conductor Ø6-10 mm on the gutter.

Code	Dimensions, mm			Weight, kg
	B	C	d	
33101	105	40	9	0,11

- OC
- NI
- OG/TD
- CU
- CL

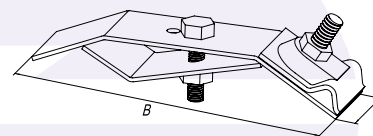


HOLDER ON GUTTER SCREWED

For fixing a down conductor Ø6-10 mm on the gutter.

Code	Dimensions, mm			Weight, kg
	B	C	d	
33102	105	40	9	0,15

- OC
- NI
- OG/TD
- CU
- CL

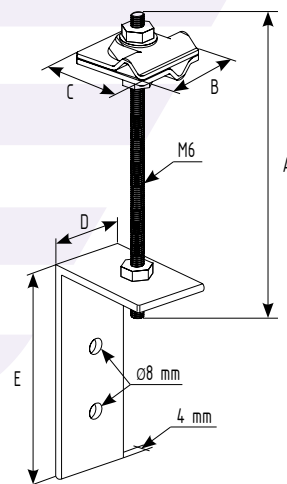


PARAPET HOLDER

Designed to fix the down conductor Ø8-10 mm on parapets.

Code	Dimensions, mm					Weight, kg
	A	B	C	D	E	
35510	120	30	30	25	105	0,192

- OC
- OG/TD

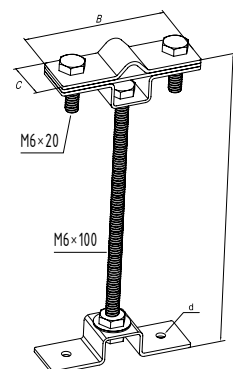


DISTANCE HOLDER FOR STRIP STRIP AND WIRE

Designed for joint fastening of a strip and a wire remotely from the surface.

Code	Dimensions, mm				Weight, kg
	A	B	C	d	
36110	110	65	25	6	0,14

- OC
- OG/TD



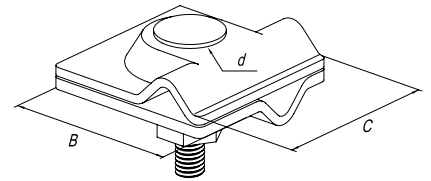
GROUP I
GROUNDING MAISTS



SMALL UNIVERSAL WIRE CLAMP

For parallel or perpendicular connection of the down conductor Ø6-10 mm.

Code	Dimensions, mm			Weight, kg
	B	C	d	
51510	30	30	9	0,05
51515	45	45	9	0,09



- OC
- NI
- OG
- CU
- CL

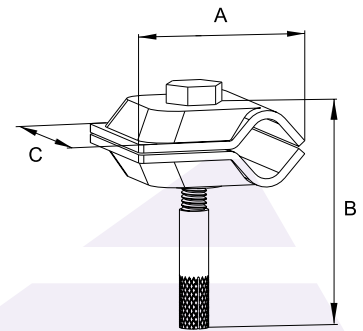
GROUP II
GROUNDING



UNIVERSAL WIRE CLAMP WITH ANCHOR (M8×30 mm), SMALL

For fixing a down conductor Ø6-10 mm on the facade of the building.

Code	Dimensions, mm			Weight, kg
	A	B	C	
51511	30	50	30	0,06
51512	30	120	30	0,1
51516	45	55	45	0,09



- OC
- NI
- OG
- CU
- CL

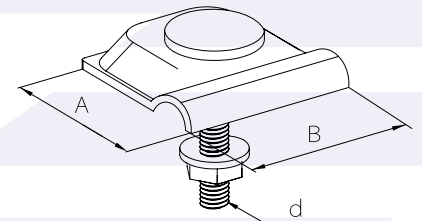
GROUP III
CONDUCTOR HOLDERS



SMALL PRESSING CLAMP

For fixing a down conductor Ø6-10 mm to metal surfaces.

Code	Dimensions, mm			Weight, kg
	A	B	d	
51520	30	30	Болт М8	0,035
51525	45	45	Болт М8	0,045



- OC
- NI
- OG
- CU
- CL

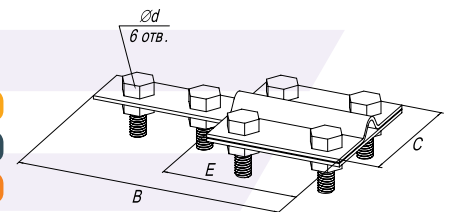
GROUP IV
CLAMPS (CONNECTORS)



CONTROL CLAMP

For control connecting the wire Ø6-10 mm with a strip.

Code	Dimensions, mm				Weight, kg
	B	C	E	d	
55114	115	56	60	9	0,21



- OC
- NI
- OG
- CU
- CL

SPD

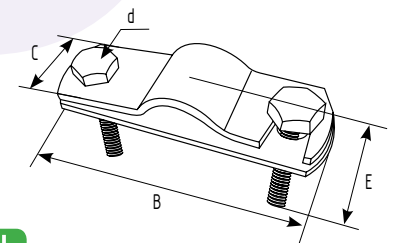
GROUP V
CONDUCTORS



SMALL CONTROL CLAMP

Designed for control parallel fastening of a strip up to 40 mm wide and a rod of 8-10 mm between each other.

Code	Dimensions, mm				Weight, kg
	B	C	E	d	
55115	65	20	30	M8	0,065



- OC
- NI
- OG
- CU
- CL

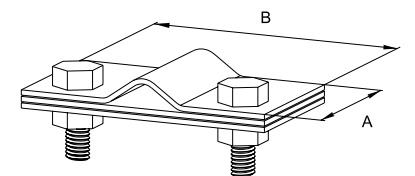
GROUP VI
OTHER ELEMENTS



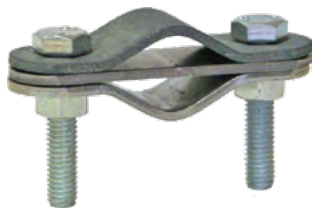
SMALL STRIP-WIRE CLAMP

For connection of the down conductor Ø6-10 mm with the strip up to 40 mm wide.

Code	Dimensions, mm		Weight, kg
	A	B	
55408	25	65	0,09



- OC
- NI
- OG
- CU
- CL

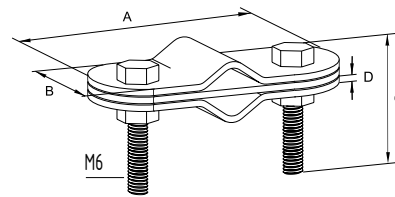


CLAMP FOR PARALLEL CONNECTION OF A ROD 8-20 mm

Designed for parallel connection of large diameter down conductors.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
55416	60	20	30	2	0,07

- OC
- NI
- OG
- CU



GROUP I
GROUNDING MASTS

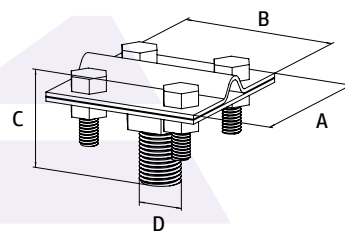


WIRE-GROUNDING ELECTRODE CLAMP

For attaching a down conductor (rod 6-10 mm or strip up to 30 mm) to the grounding electrode and grounding mast. It is screwed into concrete foundations (code 02002, 03003) and into holders (code 04004, 04005, 04007, 04007SP, 04008) for connecting a down conductor to them.

Code	Dimensions, mm				Weight, kg
	A	B	C	D	
55422	57	57	50	M16	0,28
55423	70	70	50	M16	0,324

- OC
- NI
- OG/TD
- CL



GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

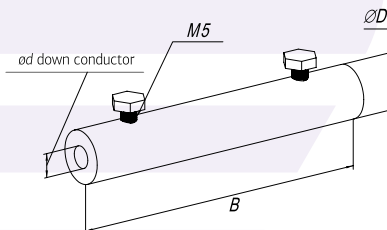


LONGITUDINAL CLAMP

For longitudinal connection of down conductors.

Code	Dimensions, mm			Weight, kg
	B	D	d	
55571	100	16	6-8	0,14
55572	100	18	8-10	0,2

- OC
- NI
- CU
- OG/TD
- CL



GROUP IV
CLAMPS (CONNECTORS)

SPD

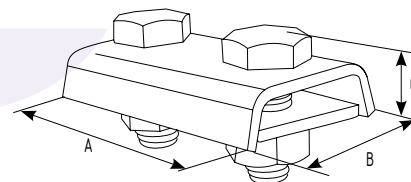


PARALLEL CLAMP

Designed for parallel connection of down conductor.

Code	Dimensions, mm			Weight, kg
	A	B	C	
55573	50	30	25	0,06

- OC
- NI
- OG
- CU
- CL



GROUP V
CONDUCTORS

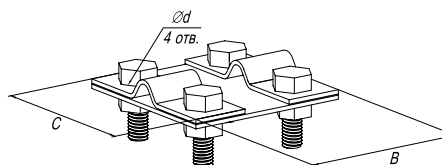


WIRE-WIRE CONTROL CLAMP

For control connecting a down conductor Ø6-10 mm.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55611	57	57	9	0,148

- OC
- NI
- OG/TD
- CU
- CL



GROUP VI
OTHER ELEMENTS



WIRE-WIRE CROSS CLAMP

For parallel or perpendicular connection of the down conductor $\varnothing 6-10$ mm.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55757	57	57	9	0,16

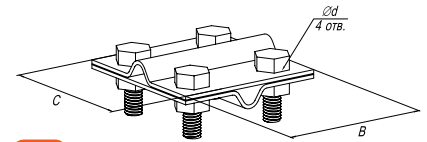
OC

NI

OG/TD

CU

CL



WIRE-WIRE CROSS CLAMP WITH 3 PLATES

For parallel or perpendicular connection of the down conductor $\varnothing 6-10$ mm.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55758	57	57	9	0,22

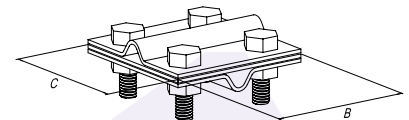
OC

NI

OG/TD

CU

CL



STRIP-WIRE CLAMP WITH 3 PLATES

For connection of the down conductor $\varnothing 6-10$ mm with the strip up to 40 mm wide. 3 plates.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55780	70	70	9	0,3

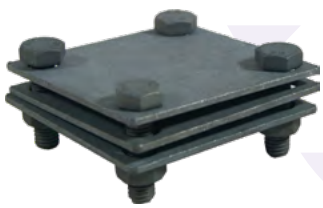
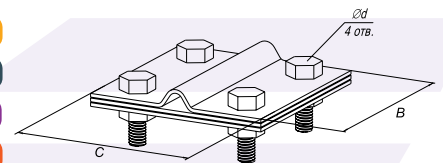
OC

NI

OG/TD

CU

CL



STRIP-STRIP CLAMP

For parallel or perpendicular connection of the strips up to 40 mm wide.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55781	70	70	9	0,27

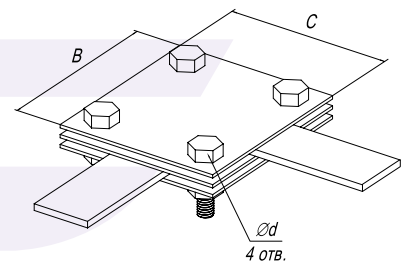
OC

NI

OG/TD

CU

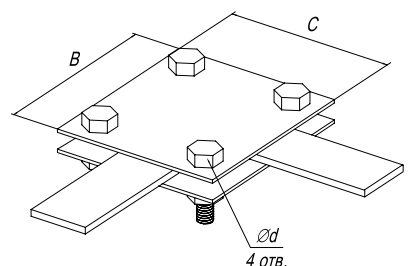
CL



CLAMP FOR LONGITUDINAL CONNECTION OF STRIP UP TO 50 mm

For parallel fastening of a strip 50 mm wide between each other, as well as for perpendicular fastening of a strip 40-50 mm wide between each other.

Code	Dimensions, mm			Weight, kg
	B	C	d	
55783	80	70	9	0,25



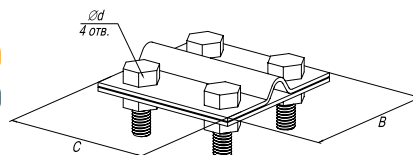
STRIP-WIRE CLAMP

For parallel or perpendicular connection of the down conductor Ø6-10 mm with the strip up to 30 mm wide.



Code	Dimensions, mm			Weight, kg
	B	C	d	
55911	57	57	9	0,16

- OC
- NI
- OG/TD
- CU
- CL



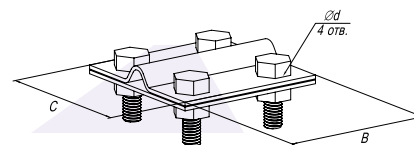
UNIVERSAL STRIP-WIRE CLAMP P-40

For connection of the down conductor Ø6-10 mm with the strip up to 40 mm wide. 2 plates.



Code	Dimensions, mm			Weight, kg
	B	C	d	
55922	70	70	9	0,21

- OC
- NI
- OG/TD
- CU
- CL



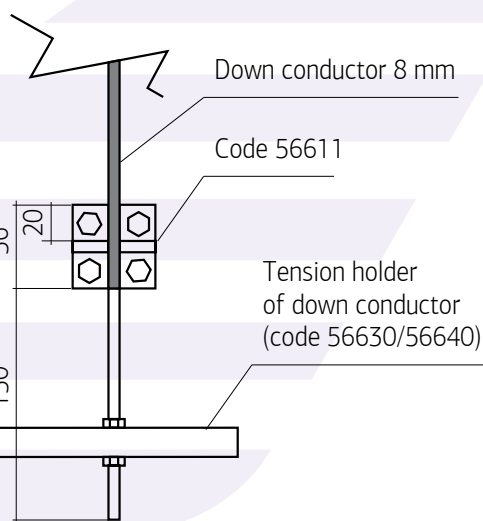
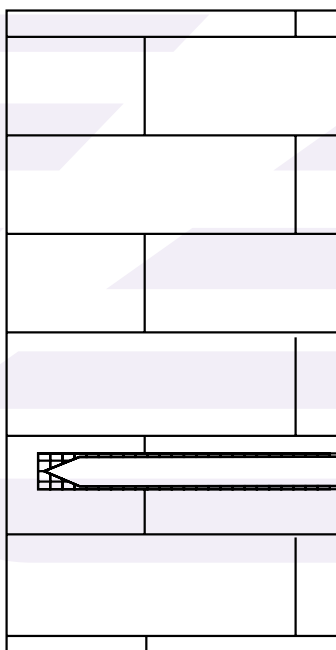
TENSION HOLDER OF DOWN CONDUCTOR



Code 56611



Code 56630/56640



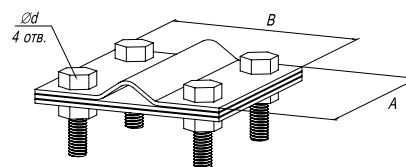
GROUNDING ELECTRODE CLAMP FOR STRIP

For connecting the grounding electrode Ø12-20 mm with a strip up to 50 mm wide.



Code	Dimensions, mm			Weight, kg
	A	B	d	
57080	70	80	9	0,32

- OC
- NI
- OG/TD
- CU
- CL





CLAMP FOR GROUNDING ELECTRODE-STRIP-WIRE

For connecting the grounding electrode $\varnothing 12-20$ mm with a wire $\varnothing 8-10$ mm and / or strip up to 40 mm wide.

Code	Dimensions, mm			Weight, kg
	A	B	D	
57081	70	70	9	0,33

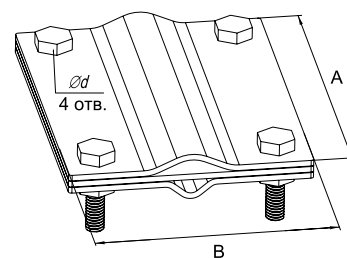
OC

NI

OG/TD

CU

CL



DIAGONAL CLAMP FOR GROUNDING ELECTRODE-STRIP-WIRE

For connecting the grounding electrode $\varnothing 16$ mm with a wire $\varnothing 8-12$ mm and / or strip up to 40 mm wide.

Code	Dimensions, mm			Weight, kg
	B	C	d	
57082	30	108	9	0,3

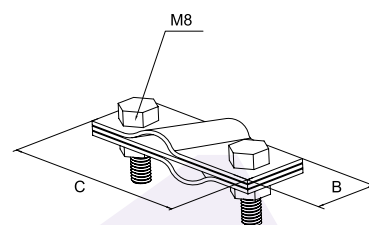
OC

NI

OG/TD

CU

CL



DIAGONAL CLAMP FOR GROUNDING ELECTRODE-WIRE

For connecting the grounding electrode $\varnothing 16$ mm with a wire $\varnothing 8-12$ mm

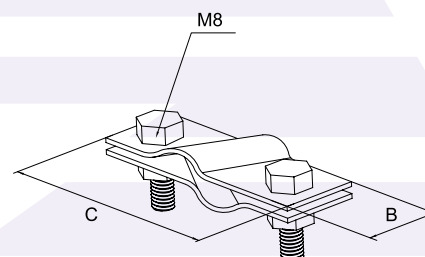
Code	Dimensions, mm			Weight, kg
	B	C	d	
57083	30	108	9	0,27

OC

NI

OG/TD

CL



STRIP-ROD CLAMP

Designed to connect a rod $\varnothing 16-40$ mm with a strip up to 40 mm.

Code	Dimensions, mm			Weight, kg
	A	B	C	
05016	108	30	60	0,33

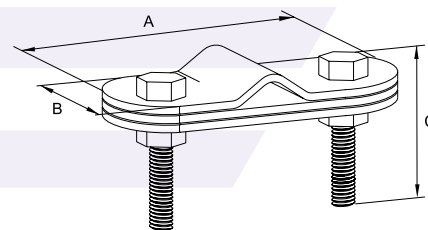
OC

NI

OG/TD

CU

CL



LONGITUDINAL FAST MOUNTING CLAMP

For parallel quick fixation of a rod $\varnothing 8-10$ mm.

Code	Dimensions, mm		Weight, kg
	A	B	
55575	100	34	0,06

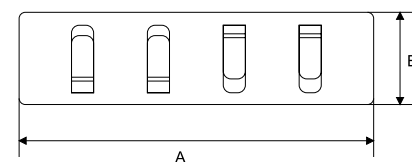
OC

NI

OG/TD

CU

CL





SPD TERRAZN

Each house has a minimum set of expensive electrical equipment (computer, speaker system, TV, smart home system), which is sensitive to surges. However, few people think that the equipment included in the electrical network during the thunderstorm season is at risk of being disabled by a high voltage pulse.

TerraZinc LLC offers surge protection devices (SPD TERRAZN). The basis of the SPD is the varistor. During the action of the overvoltage pulse, the resistance of the varistor decreases sharply, and the main surge of current flows through it, and not through the electrical equipment. The energy released when current passes through the varistor is dissipated as heat.

After the end of the overvoltage pulse, the varistor recovers its original high resistance in a short time.

SPD TERRAZN protects the electrical network from lightning surges in electrical installations caused by:

- direct lightning strike into the infrastructure of the facility;
- in case of a distant lightning strike (inside a cloud, between clouds, or into nearby objects);
- when lightning strikes the ground next to the object;

from switching overvoltages of electrical installations caused by:

- resonant voltage fluctuations in electrical circuits;
- damage in power supply systems (short circuit to ground, arc discharges);
- switching in powerful power supply systems;
- switching in power supply systems in the immediate vicinity of electrical installations.

SPD TERRAZN has the following advantages.

On the front panel, the device has inscriptions on the main characteristics of the network and protection parameters, which makes it easy to identify the possibility of applying one or another device to the protected object. To ensure correct connection, all screw terminal connections are marked (L, N, PE).

In the event of a thermal runaway, the thermal protection built into the device will disconnect it from the AC mains, and a color indicator on the front of the device will warn the

user about the failure of the plug-in module and the need to replace it.

The devices are produced with replaceable modules based on metal oxide varistors. SPD case material – thermoplastic. Plug-in modules are connected to the base, which is mounted on a mounting surface (DIN rail). This allows you to easily change the modules without violating the protective function of the SPD, saving on repair costs. Replaceable modules are securely attached to the base.

The device does not require constant maintenance due to low operational wear. The operating temperature of SPD application is from -40 to +85°C.

The device provides a Protection level (limits the potential drift impulse) less than 2 kV.

SPDs use standard screw terminals to connect the conductor.

SPDs are subdivided according to:

- type of protection (T1, T2, T3, etc.);
- impulse current per pole (Iimp);
- maximum discharge current (Imax);
- rated discharge current (In);
- network voltage (Uc);
- protection level (Up);
- the number of phases;
- IP code.

SPDs TERRAZN are represented by types 1, 2, combined devices of types 2+3, one-, two-, three- and four-pole. They are mounted on a DIN rail with a profile of 35 mm and are designed to protect AC networks with a neutral configuration TT-TNS, TNC, TN.

SPD type 1 is used in places of high risk of a direct lightning strike (ASU), type 2 is installed on the main switchboard or near sensitive terminal devices, a combined type 2 + 3 device is designed to provide protection for ultra-sensitive overvoltage impulses or remote electrical equipment.

The use of TERRAZN SPD will help to avoid negative consequences in the operation of electrical equipment and prevent the occurrence of possible fires due to a lightning strike.

CET-T1-AC 1 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I (B)
Number of protected poles	1
Protection level, Up L/PE, N/PE Up	<2,0 kV
Max. inst. operating voltage, Uc	AC358V
Imp. current per pole, Iimp	10/350 = 15 kA
Rated discharge current per pole, In	8/20=150 kA
Technology	Varistor
Execution	Monoblock
Degree of protection of the shell	IP20
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1-AC 2 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I (B)
Number of protected poles	2
Protection level, Up L/PE, N/PE Up	<2,0 kV
Max. inst. operating voltage, Uc	AC358V
Imp. current per pole, Iimp	10/350 = 15 kA
Rated discharge current per pole, In	8/20=150 kA
Technology	Varistor
Execution	Monoblock
Degree of protection of the shell	IP20
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1-AC 3 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I (B)
Number of protected poles	3
Protection level, Up L/PE, N/PE Up	<2,0 kV
Max. inst. operating voltage, Uc	AC358V
Imp. current per pole, Iimp	10/350 = 15 kA
Rated discharge current per pole, In	8/20=150 kA
Technology	Varistor
Execution	Monoblock
Degree of protection of the shell	IP20
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1-AC 4 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I (B)
Number of protected poles	4
Protection level, Up L/PE, N/PE Up	<2,0 kV
Max. inst. operating voltage, Uc	AC358V
Imp. current per pole, Iimp	10/350 = 15 kA
Rated discharge current per pole, In	8/20=150 kA
Technology	Varistor
Execution	Monoblock
Degree of protection of the shell	IP20
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1+T2-AC 1 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I, II (B, C)
Number of protected poles	1
Protection level, Up L/PE, N/PE Up	<1,5 kV
Max. inst. operating voltage, Uc	AC275V
Imp. current per pole, Iimp	10/350 = 7 kA
Rated discharge current per pole, In	8/20 = 20 kA
Max. discharge current per pole, I _{max}	8/20 = 50 kA
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1+T2-AC 2 P

Specifications	
Mains voltage, Un	230/400 kV
Protection class	I, II (B, C)
Number of protected poles	2
Protection level, Up L/PE, N/PE Up	<1,5 kV
Max. inst. operating voltage, Uc	AC275V
Imp. current per pole, Iimp	10/350 = 7 kA
Rated discharge current per pole, In	8/20 = 20 kA
Max. discharge current per pole, I _{max}	8/20 = 50 kA
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T1+T2-AC 3 P

Specifications	
Mains voltage, Un	230/400 κ V
Protection class	I, II (B, C)
Number of protected poles	3
Protection level, Up L/PE, N/PE Up	<1,5 κ V
Max. inst. operating voltage, Uc	AC275V
Imp. current per pole, Iimp	10/350 = 7 κ A
Rated discharge current per pole, In	8/20 = 20 κ A
Max. discharge current per pole, Imax	8/20 = 50 κ A
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



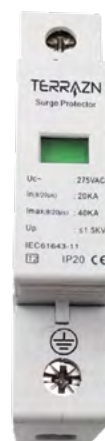
CET-T1+T2-AC 4 P

Specifications	
Mains voltage, Un	230/400 κ V
Protection class	I, II (B, C)
Number of protected poles	4
Protection level, Up L/PE, N/PE Up	<1,5 κ V
Max. inst. operating voltage, Uc	AC275V
Imp. current per pole, Iimp	10/350 = 7 κ A
Rated discharge current per pole, In	8/20 = 20 κ A
Max. discharge current per pole, Imax	8/20 = 50 κ A
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T2-AC 1 P

Specifications	
Mains voltage, Un	230/400 κ V
Protection class	II (C)
Number of protected poles	1
Protection level, Up L/PE, N/PE Up	<1,5 κ V
Max. inst. operating voltage, Uc	AC275V
Rated discharge current per pole, In	8/20 = 20 κ A
Max. discharge current per pole, Imax	8/20 = 40 κ A
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm ²



CET-T2-AC 2 P

Specifications	
Mains voltage, U_n	230/400 κ V
Protection class	II (C)
Number of protected poles	2
Protection level, U_p L/PE, N/PE U_p	<1,5 κ V
Max. inst. operating voltage, U_c	AC275V
Rated discharge current per pole, I_n	8/20 = 20 κ A
Max. discharge current per pole, I_{max}	8/20 = 40 κ A
Grounding system	TN
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm^2



CET-T2-AC 4 P

Specifications	
Mains voltage, U_n	230/400 κ V
Protection class	II (C)
Number of protected poles	4
Protection level, U_p L/PE, N/PE U_p	<1,5 κ V
Max. inst. operating voltage, U_c	AC275V
Rated discharge current per pole, I_n	8/20 = 20 κ A
Max. discharge current per pole, I_{max}	8/20 = 40 κ A
Grounding system	TT-TNS
Technology	Varistor
Execution	Replaceable protection modules
Degree of protection of the shell	IP20
Trip indicator	color
Installation	DIN rail (35 mm)
Compound	Screw clamp 2.5-25 mm^2



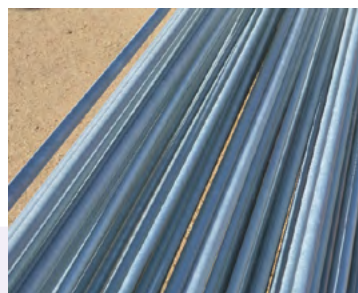
HOT DIP GALVANIZED WIRE* IN COILS



Ø6, 8, 10 mm

Galvanized wire (down conductor) is used to divert the lightning current from the air terminal to the ground electrode.

HOT DIP GALVANIZED ROD*



L = 6 m;
Ø8, 10, 12, 16 mm

The galvanized rod is used as a down conductor (Ø8 mm) or as a ground electrode (Ø12-16 mm).

HOT DIP GALVANIZED STRIP* IN COILS



Thickness: 3, 4, 5 mm.
Wide: 25, 30, 40, 50 mm.

It is used for horizontal grounding ring around a protected object or for connecting a down conductor with grounding electrode.

HOT DIP GALVANIZED STRIP*



Available upon reservation.

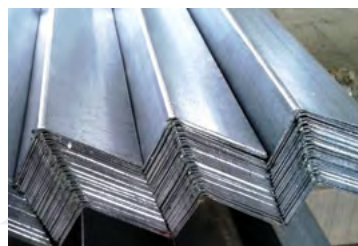
ALUMINUM WIRE IN COILS



Ø8 mm

The wire is used to divert lightning current from the air terminal to the ground electrode.

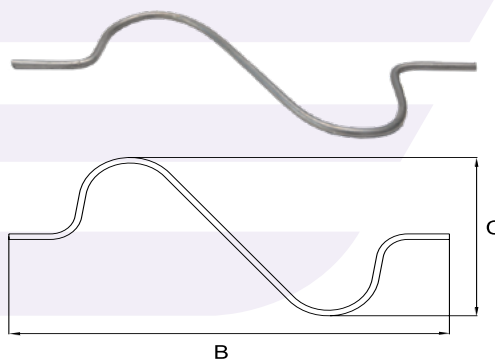
**HOT-DIP GALVANIZED ANGLE*,
HOT DIP GALVANIZED PIPE***



Available upon reservation.

ALUMINUM COMPENSATOR

Designed to align the length of the down conductor, deformed by temperature exposure. For round conductors.



Art.	Dimensions, mm			Weight, kg	Material
	B	C	d		
55570	400	180	8	0,14	AL

STEEL STRIP AND WIRE WEIGHT TABLES

Wide, mm	HOT DIP GALVANIZED STRIP			
	Thickness, mm			
	2	3	4	5
	Weight, kg/linear metres			
20	0,32	0,48	0,64	0,8
25	0,4	0,6	0,8	1
30	0,48	0,72	0,96	1,2
35	0,56	0,84	1,12	1,4
40	0,64	0,96	1,29	1,6
45	0,72	1,08	1,4	1,8
50	0,8	1,2	1,6	2

HOT DIP GALVANIZED WIRE	
Diameter, mm	Weight, kg/linear metres
6	0,23
8	0,4
10	0,63
12, L = 6 m	0,89
16, L = 6 m	1,6

*Zinc coating thickness: 70-120 microns.

GROUP I
GROUNDING MAISTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

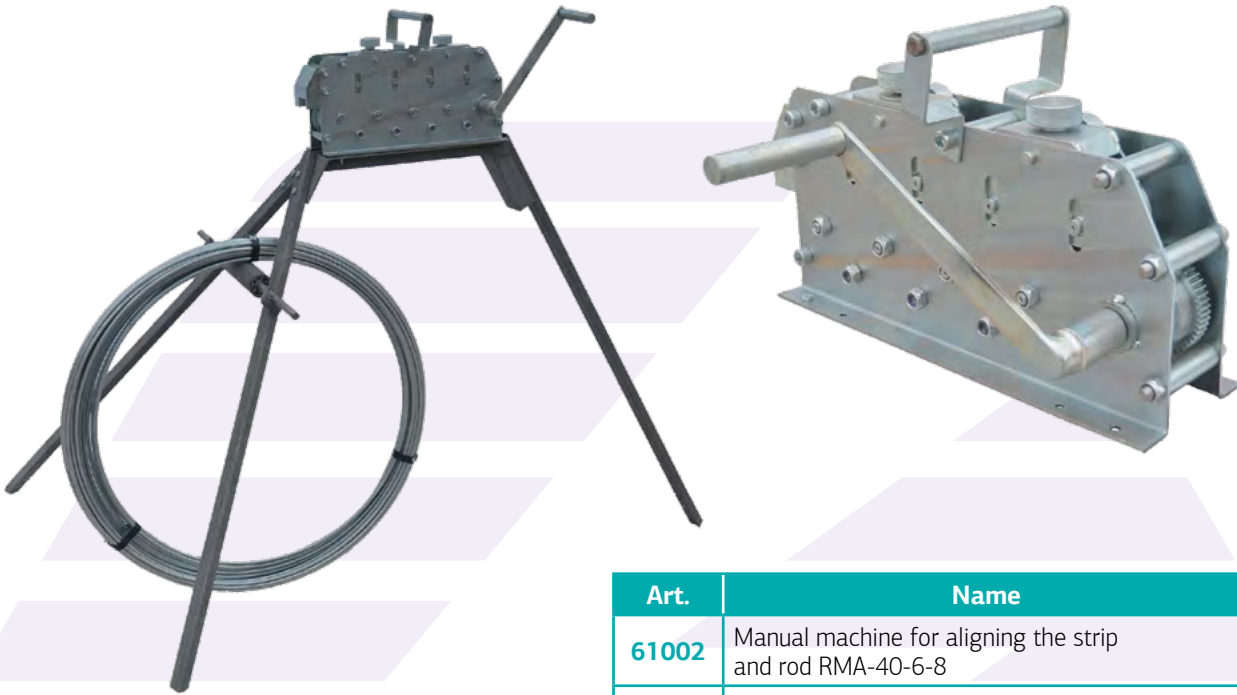
GROUP V
SDP

GROUP V
CONDUCTORS

GROUP VI
OTHER ELEMENTS
OTHER ELEMENTS

MANUAL MACHINE (TOOL) FOR STRIP AND WIRE ALIGNMENT RMA-40-6-8

Manual drive machine for wire alignment
 Ø6-10 mm and strips up to 40 mm wide.



Art.	Name
61002	Manual machine for aligning the strip and rod RMA-40-6-8
61003	Stand for RMA

PURPOSE OF THE PRODUCT AND CHARACTERISTICS:

The machine with a manual drive RMA-40-6-8 allows you to align the strip up to 40×4 mm and Ø6-10 mm bar from bays without additional connection to power supply, which ensures its mobility.

Adjustability allows you to quickly adapt the tool to the appropriate wire diameter or strip thickness.

The RMA-40-6-8 is completely zinc-plated with a galvanic coating with colorless pas-sivation.

MECHANISM AND PRINCIPLE OF WORK:

The RMA-40-6-8 is characterized by simplicity, reliability of construction and safety of work. It consists of 9-roller mechanism with broaches-alignments and handles.

Before starting work, the device must be installed on a flat surface. We recommend using RMA stand (art. 61003).

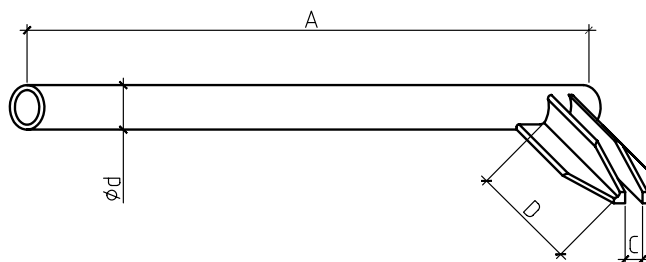
The end of the rod or strip of at least 500 mm in length must be straightened, and then the rod or strip should be fixed in the device, and after adjusting the rollers, the alignment process can be done.

MAINTENANCE:

Maintenance of the RMA-40-6-8 device is an activity aimed at prevention of early wear of parts:

- clean the rotating parts (rollers, gears) from scale and dust after finishing work;
- manually lubricate the bronze sleeves of the in-between gears with a syringe or lu-bricator every 100 working hours.

ROD LEVELING TOOL



Dimensions				Weight, kg
A	C	D	Ød	
400	11	60	26,3	0,75

GROUP I
GROUNDING MASTS

GROUP II
GROUNDING

GROUP III
CONDUCTOR HOLDERS

GROUP IV
CLAMPS (CONNECTORS)

SPD

GROUP V
CONDUCTORS

GROUP VI
OTHER ELEMENTS

Group I · Grounding masts

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02002	Concrete foundation 26 kg.....	9
02012	Lining for concrete foundation 40×40 cm.....	9
03003	Concrete foundation 42 кг.....	9
03012	Lining for concrete foundation 50×50 cm.....	9
03013	Lining for concrete foundation 60×60 cm.....	9
04001	Mounting bracket for fixing the air terminal on an inclined surface.....	9
04002	Double mast holder on a round roof ridge.....	10
04003	Lightning rod holder on the peak stand.....	10
04004	Stand for lightning mast, small.....	10
04005	Stand for lightning mast, small.....	10
04007	Lightning mast wall holder.....	11
04007SP	Lightning mast wall holder.....	10
04017SP	Lightning mast wall holder.....	10
04018SP	Lightning mast wall holder.....	11
04008	Stand for lightning mast.....	11
04009	Supporting leg for lightning mast.....	8
04016	Tripod for lightning mast.....	8
04027	Universal lightning rod mast holder to the wall.....	11
04027SP	Lightning mast wall holder.....	11
04037	Universal lightning rod mast holder to the wall L500.....	12
04100	Lightning rod holder to the wall.....	12
04120	Lightning rod holder to the wall.....	12
04160	Lightning rod holder to the wall.....	12
04200	Lightning rod holder to the wall.....	12
04250	Lightning rod holder to the wall.....	12
04400	Lightning rod holder to the wall.....	12
05002	Conductor holder.....	15
05003	Mounting plate.....	16
05006	Holder for lightning mast.....	15
05007	Mounting plate.....	16
05008	Mounting plate.....	16
05151	Double pipe holder M16 Ø80-150 mm.....	15
05200	Isolated bar 0,25 m Ø21.....	15
05251	Double pipe holder M8 Ø80-150 mm.....	15
05301	Double pipe holder M16 Ø80-300 mm.....	15
05401	Double pipe holder M8 Ø80-300 mm.....	15
05501	Double pipe holder M16 Ø80-500 mm.....	15
05601	Double pipe holder M8 Ø80-500 mm.....	13
05250	Isolated bar 0,25 m Ø32.....	15
05300	Isolated bar 0,5 m Ø21.....	15
05400	Isolated bar 0,75 m Ø21.....	15
05500	Isolated bar 0,5 m Ø32.....	15
05750	Isolated bar 0,75 m Ø32.....	15
10000	Lightning mast 10 m Ø16/25/40.....	7
10000SP	Lightning mast 10 m Ø16/25/32/40.....	7
10100SP	Lightning mast 11 m Ø16/25/32/40.....	7
10200SP	Lightning mast 12 m Ø16/25/32/40.....	7
11000	Lightning rod 1-2.5 m Ø16.....	6
11000AC	Mast AC 1 m.....	17
11500	Lightning rod 1,5 m Ø16.....	6
12000	Lightning rod 2 m Ø16.....	6
12000AC	Mast AC 2 m.....	17
12500	Lightning rod 2,5 m Ø16.....	6
13000	Lightning rod 3 m Ø16/20.....	6
13000AC	Mast AC 3 m.....	17
13000SP	Lightning rod 3 m Ø12/20.....	6
13010	Lightning rod 3 m Ø16.....	6
13000IZ	Insulated lightning rod mast 3 m.....	14
13500	Lightning rod 3,5 m Ø16/20.....	6
13500SP	Lightning rod 3,5 m Ø12/20.....	6
14000	Lightning rod 4 m Ø16/20.....	6
14000AC	Mast AC 4 m.....	17
14000SP	Lightning rod 4 m Ø12/20.....	6
14500SP	Lightning rod 4,5 m Ø12/20.....	6
14000IZ	Insulated lightning rod mast 4 m.....	14
15000	Lightning mast 5 m Ø16/25/40.....	7
15000AC	Mast AC 5 m.....	17
15000IZ	Insulated lightning rod mast 5 m.....	14
16000	Lightning mast 6 m Ø16/25/40.....	7
16000AC	Mast AC 6 m.....	17
16000IZ	Insulated lightning rod mast 6 m.....	14
17000	Lightning mast 7 m Ø16/25/40.....	7
17000SP	Lightning mast 7 m Ø12/25/32/40.....	7
17000IZ	Insulated lightning rod mast 7 m.....	14
18000	Lightning mast 8 m Ø16/25/40.....	7
18000SP	Lightning mast 8 m Ø16/25/32/40.....	7
19000	Lightning mast 9 m Ø16/25/40.....	7
19000SP	Lightning mast 9 m Ø16/25/32/40.....	7
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21050	Grounding electrode M16 1,5 m.....	19
21050SP	Grounding electrode M18 1,5 m.....	19
21052	Coupling joint M16.....	21
21052SP	Coupling joint M18.....	21
21060	SDS-MAX Impact head.....	21
21063	Impact head couplingless.....	21
21120	Pointed grounding electrode M16 1,2 m.....	19
21150	Pointed grounding electrode M16 1,5 m.....	19
21150SP	Pointed grounding electrode M18 1,5 m.....	19
21300	Grounding set L-3 m.....	26
21301	Pointed grounding set L-3 m.....	26
21450	Grounding set L-4,5 m.....	26
21451	Pointed grounding set L-4,5 m.....	26
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22012	Grounding point M12.....	21
22016	Grounding point M16.....	21
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22500	Through passage earthing point for wire M6×500.....	22
22508	Through passage earthing point for wire M8×500.....	22
22546	Through passage earthing point for strip and wire.....	22
23051	Peak for grounding electrode M16.....	20
23051SP	Peak for grounding electrode M18.....	20
24050	Couplingless grounding electrode Ø20 1,5 m.....	19
24051	Peak for couplingless grounding electrode M16.....	20
25050	Grounding electrode with Morse cone Ø16 1,5 m.....	19

24150	Pointed couplingless grounding electrode, Ø20 1,5 m.....	19	31160	Facade holder 160 mm.....	39
24301	Couplingless grounding set L-3 m.....	26	31200	Facade holder 200 mm.....	39
24451	Couplingless grounding set L-4,5 m.....	26	31250	Facade holder 250 mm.....	39
24601	Couplingless grounding set L-6 m.....	26	31400	Facade holder 400 mm.....	39
25150	Pointed grounding electrode with Morse cone Ø16 1,5 m.....	20	31508	Facade holder 100 mm для полосы.....	40
55422	Wire-grounding electrode clamp 57×57 mm.....	23	31510	Holder for the grounding conductors.....	43
55423	Wire-grounding electrode clamp 70×70 mm.....	23	31512	Facade holder 120 mm для полосы.....	40
55782	Clamp strip-strip with two plates.....	22	31516	Facade holder 160 mm для полосы.....	40
57080	Clamp grounding electrode-strip.....	22	31520	Facade holder 200 mm для полосы.....	40
57081	Clamp for grounding electrode-strip-wire.....	23	31525	Strip holder 4×25, 4×30.....	43
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57083	Diagonal clamp for grounding electrode-wire.....	23	31541	Strip holder with two plates.....	41
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	Set of electrolytic grounding vertical 3 m/6 m.....	30	31610	Facade holder with a hook 100 mm.....	40
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			32103	Under tile holder 415 mm.....	34
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			32112	Under tile holder 330 mm.....	35
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			32122	Under tile holder.....	34
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			32132	Under tile holder.....	35
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			32233	Under tile holder with a hook 415 mm.....	35
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30110	Roof plastic holder with two clamps (with concrete).....	33
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30201	Roof plastic holder (with concrete).....	33
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31100	Facade holder 100 mm.....	39
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34101	Under tile holder with metal holder 100 mm	36
34102	Under tile holder with metal holder 330 mm	36
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34300	Roof ridge tile holder with steel wire holder	37
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35080	Wire holder on horizontal and vertical surfaces	40
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41120	Plastic facade holder 120 mm	40
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41200	Plastic facade holder 200 mm	40
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42102	Under tile holder with plastic wire holder 330 mm	35
42103	Under tile holder with plastic wire holder 415 mm	35
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42202	Under tile holder with a hook and with plastic wire holder 330 mm	36
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42300	Roof ridge tile holder with plastic wire holder	37
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44100	Plastic facade holder, screwed	38
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Group V · SPD

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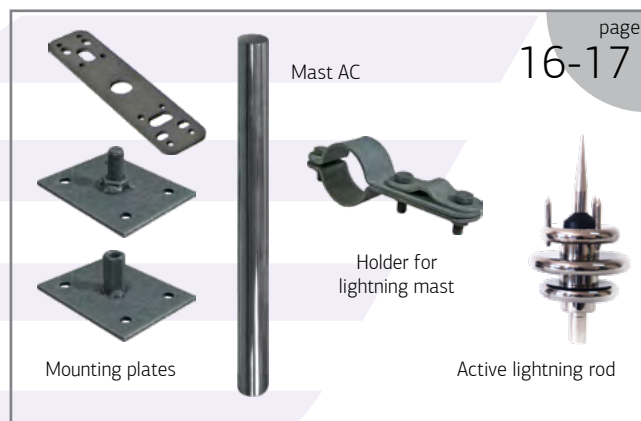
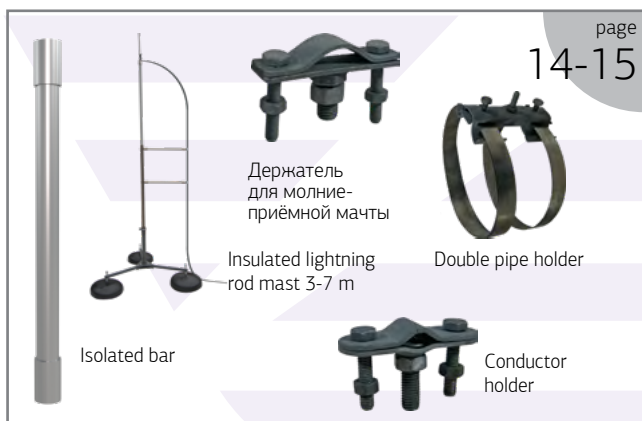
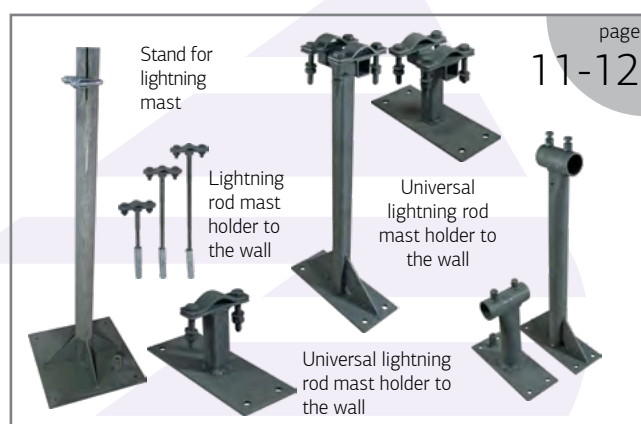
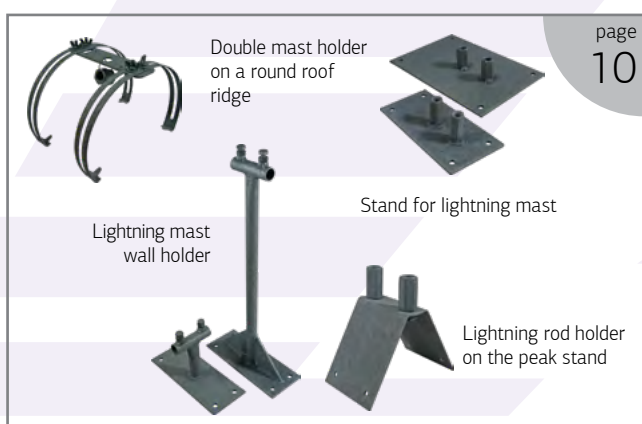
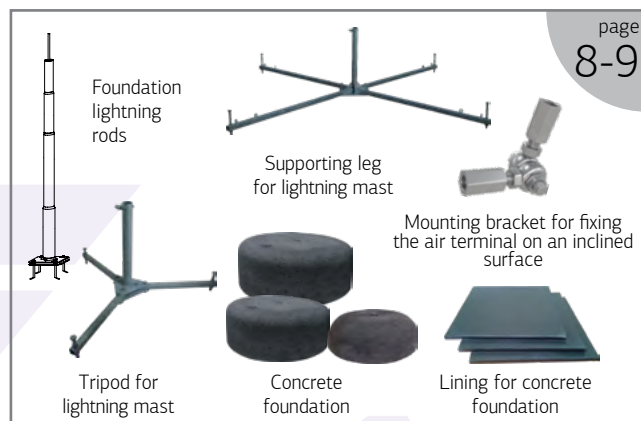
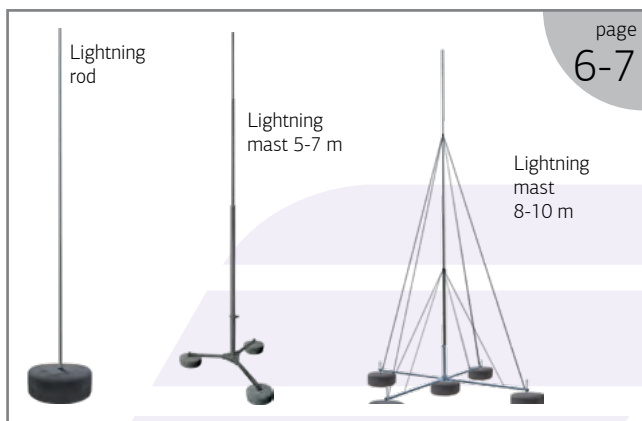
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55570	Aluminum compensator	58

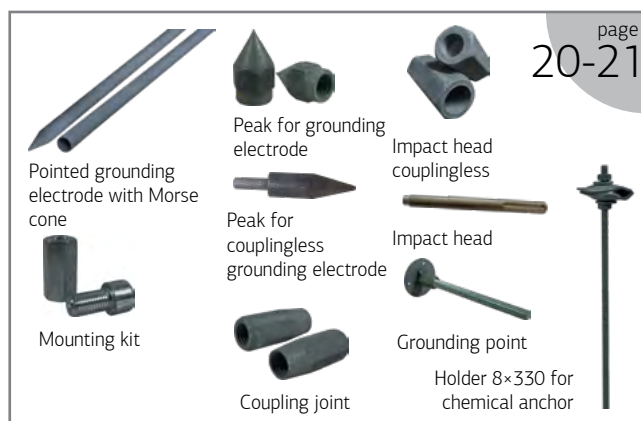
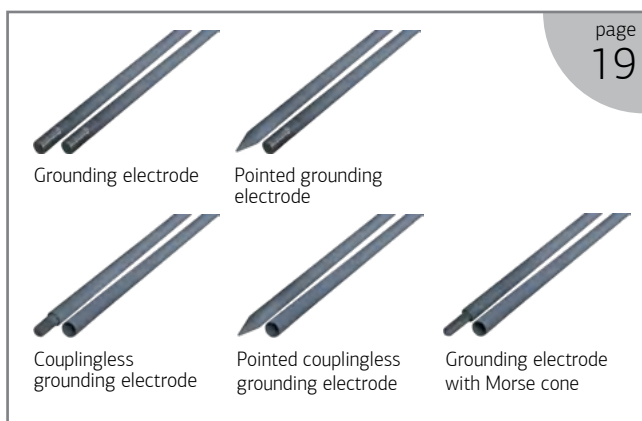
Group VII · Other elements

61002	Manual machine (tool) for strip and wire alignment RMA-40-6-8	59
61003	Stand for RMA	59
	Rod leveling tool	59

Group I · Grounding masts




Group II · Grounding



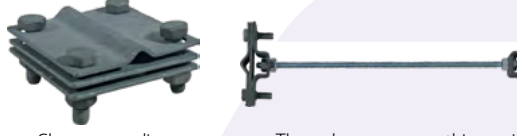
Group II · Grounding

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Clamp strip-strip with two plates


Through passage earthing point M8x500



Clamp grounding electrode-strip


Through passage earthing point

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Clamp grounding electrode-strip-wire

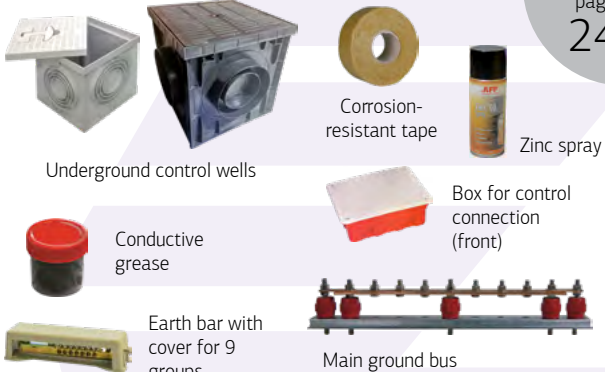
Diagonal clamp for grounding electrode-wire



Diagonal clamp for grounding electrode-strip-wire

Wire-grounding electrode clamp

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Underground control wells

Corrosion-resistant tape

Zinc spray

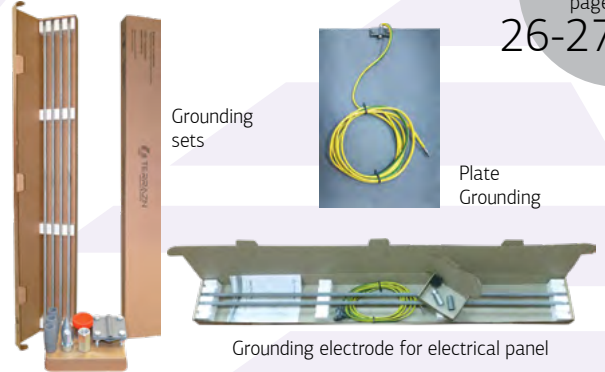
Conductive grease

Box for control connection (front)

Earth bar with cover for 9 groups

Main ground bus

page 26-27




Grounding sets

Plate Grounding

Grounding electrode for electrical panel

page 28-29



Grounding mixtures

Ground loop with pointed electrode

page 30-31



Set of electrolytic grounding horizontal

Set of electrolytic grounding vertical

Group III · Conductor holders

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Plastic holder for soft roof

Strip retainer for roof holder

Roof plastic (concrete) holder

Wire holder for roof holder

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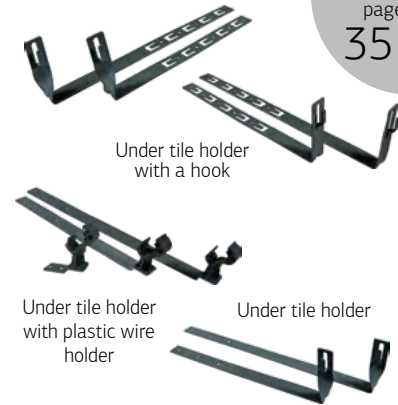
Universal holder L-100

Roof holder with a plate

Universal roof holder

Under tile holder

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Under tile holder with a hook

Under tile holder with plastic wire holder

Under tile holder

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Under tile holder with a hook and with plastic wire holder

Under tile holder with metal wire holder

Peak holder

Roof ridge tile holder

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Peak holder with plastic wire holder

Roof ridge tile holder with steel wire holder

Plastic wire holder

Conductor holder for pipelines

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Facade plastic holder, screwed

Insert for plastic holder

Distance holder, screwed

Plastic facade holder, screwed

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Distance metal holder

Metal wire holder

Facade holder

Fast mounting facade holder

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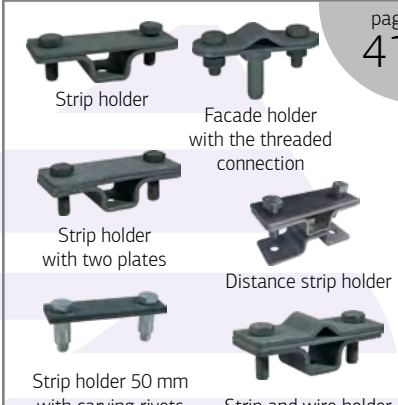
Wire holder on horizontal and vertical surfaces

Facade holder with a hook

Plastic facade holder

Facade holder for a strip

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Strip holder

Facade holder with the threaded connection

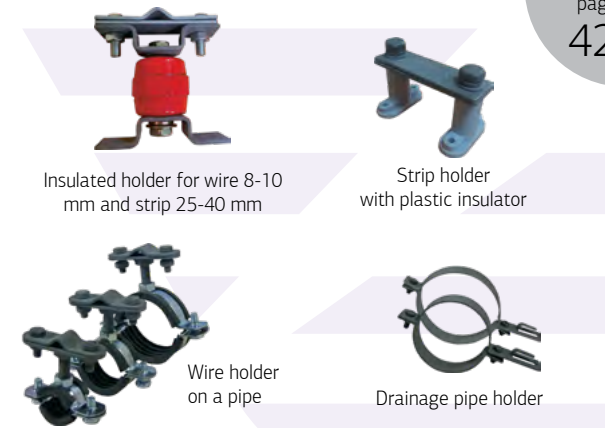
Strip holder with two plates

Distance strip holder

Strip holder 50 mm with carving rivets

Strip and wire holder

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Insulated holder for wire 8-10 mm and strip 25-40 mm

Strip holder with plastic insulator

Wire holder on a pipe

Drainage pipe holder

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Holder for potential equalization

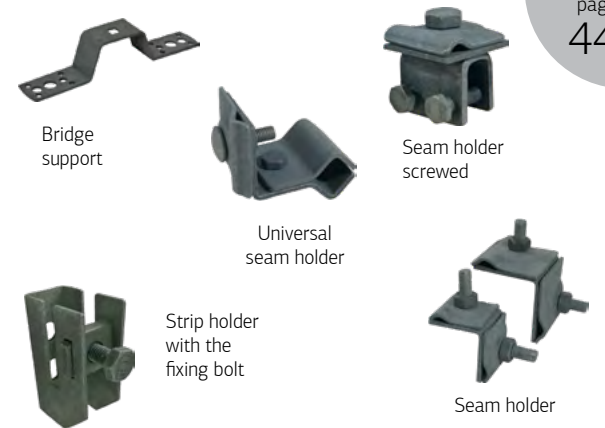
Holder for pipes

Universal clamping ring

Holder for the grounding conductors

Strip holder

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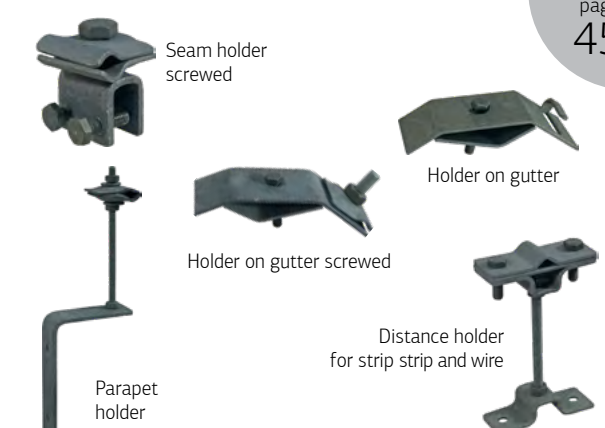
Bridge support

Universal seam holder

Strip holder with the fixing bolt

Seam holder

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Seam holder screwed

Holder on gutter

Holder on gutter screwed

Parapet holder

Distance holder for strip strip and wire

CONTENT

Group IV · Clamps (connectors)

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Small universal wire clamp



Small pressing clamp



Control clamp



Universal wire clamp with anchor




Small control clamp



Small strip-wire clamp


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Clamp for parallel connection of a rod




Wire-grounding electrode clamp



Longitudinal clamp



Wire-wire control clamp



Parallel clamp

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Wire-wire cross clamp



Wire-wire cross clamp with 3 plates



Strip-wire clamp with 3 plates




Strip-strip clamp

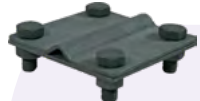


Clamp for longitudinal connection of strip

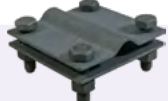
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Tension holder of down conductor



Strip-wire clamp




Universal strip-wire clamp P-40




Clamp for grounding electrode-strip


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Clamp for grounding electrode-strip-wire




Diagonal clamp for grounding electrode-strip-wire



Strip-rod clamp



Diagonal clamp for grounding electrode-wire



Longitudinal fast mounting clamp


Group V · SPD

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Group VI · Conductors

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Hot dip galvanized wire in coils
Hot dip galvanized strip in coils
Aluminum wire in coils
Hot dip galvanized rod
Hot dip galvanized strip
Hot-dip galvanized angle
Hot dip galvanized pipe



Aluminum compensator


Group VII · Other elements

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Stand for RMA-40-6-8

Manual machine (tool) for strip and wire alignment RMA-40-6-8



Rod leveling tool

For our partners

TerraZinc Company regularly holds seminars for design departments and our representatives in the Republic of Belarus. At your request, we are ready to provide catalogs, drawings of elements in AutoCAD format, drawings of the main units with installation examples, broadsheets and other promotional products.

For seminars and promotional items
you can contact our office at the address: Minsk region, Minsk district,
settlement Kolodishchi, st. Parkovaya, 17,
by calling us in advance: +375 (17) 516-29-70, +375 (44) 729-99-09.

TerraCynk Ltd (reg. № 691788197)
Parkovaya, 17, Kolodishchi,
Minsk region, Belarus, 223050

+375-17-516-29-70
+375-17-516-29-71
+375-17-516-29-72
+375-17-516-29-74
+375-17-516-29-75
+375-17-516-29-76
+375 (44) 729-99-09
+375 (33) 330-99-09
+7 951 696-96-08
info@terrazn.by

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