



Power of Nature, Supremacy of Knowledge



Lightning Protection

ISSUE 17

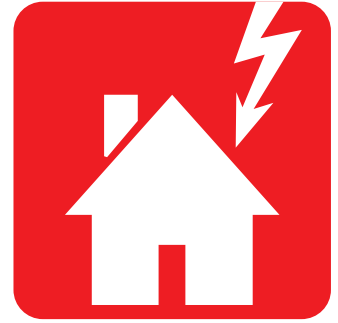
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POWER OF NATURE, SUPREMACY OF KNOWLEDGE



HERMI[®] 

The Hermi company is renowned as a high-tech business both in Slovenia and abroad, which has built its standing with the highest quality of products and solutions for comprehensive external and internal protection against the effects of lightning and overvoltage, cable trays and mounting systems for photovoltaics.



Lightning Protection

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AN INNOVATIVE COMPANY WITH ITS OWN MANUFACTURE WITH A FOCUS ON THE CUSTOMER'S NEEDS

We are an innovation-oriented company which through its development and own production of products offers comprehensive customised solutions of the highest quality. The sales programme under the Hermi brand comprises top-quality lightning protection, surge protection, cable trays and mounting systems. The HERMI product range is the result of the company's commitment to development and continuous professional progress. With its long-term vision oriented to customers and business partners, the company strategically develops its innovative offer which stands out for its flexibility and versatility of use. We are proud to offer multiple solutions from our production range at a single point. Hereby, we assure our clients comprehensive expert technical support, timely delivery, and support with technical documentation.



We upgrade our business operations each year. This means that we must be better than the year before. The world keeps turning! And not only our competition is not sleeping, the expectations of our customers also grow each day. Our and also my focus is always to be a step ahead of our customers!

– Miran Rauter, Director



OUR MISSION AND VISION: years-long experience and innovative solutions to satisfy the needs of our customers

We use our knowledge, experiences and innovative ideas to fulfil needs and wishes of our customers for high quality products. Using state-of-the-art technology we develop and produce the protection programme which sets new standards protecting the lives of individuals and property. Our own innovations help us to adjust the programme of cable trays and cable ladders to individual needs with type-adjusted elements. Our mounting systems programme provides simple assembly to our customers.

Through innovations and expertise we will continue to develop our Hermi trademark which is a result of over thirty years of successful operation. We have achieved a competitive advantage of a comprehensive, external and internal lightning protection and quality and advanced production of cable and mounting systems, and thus we will in particular focus on challenges of internationalisation of our operation. We wish to become a leading provider of external and internal lightning protection, cable trays and cable ladders and own professional solutions, increase our market share in other European countries and focus on countries beyond Europe's borders.

OUR STRATEGY: an innovative, competitive and comprehensive range

We attain the goals and vision of the company through innovative products, a competitive range of products, excellent technical support and efficiency and rapidness of execution. Our advantage is that we are in constant contact with contractors, investors and end-users who are aware of the importance of quality products.



PRODUCTION PROGRAMME AND ACTIVITIES of the Hermi company

Under our own Hermi® brand we provide manufacture, sales and assembly of:



LIGHTNING PROTECTION



SURGE PROTECTION



CABLE TRAYS



MOUNTING SYSTEMS

We also offer comprehensive expert technical support and consultations.



Standards and collaboration with industry

The Hermi product programme and trade mark are protected. All our products comply with strict national standards which are harmonised with European and international standards. We have successfully conducted tests and obtained all required international certificates.

In the field of quality assurance and development of our products we cooperate with various institutions and work within the scope of relevant standards. Our collaboration with industry is very significant since it helps us develop innovations and make progress in the industry.

Our knowledge, long experience and innovative ideas enable us to fulfil the needs and wishes of our customers to have quality products for lightning and surge protection. In the field of production of cable trays and ladders we provide the highest quality which has already been recognised by design engineers, contractors and end-users. The quality of E90 cable trays is proven by successful tests of fire resistance in a certified test laboratory.

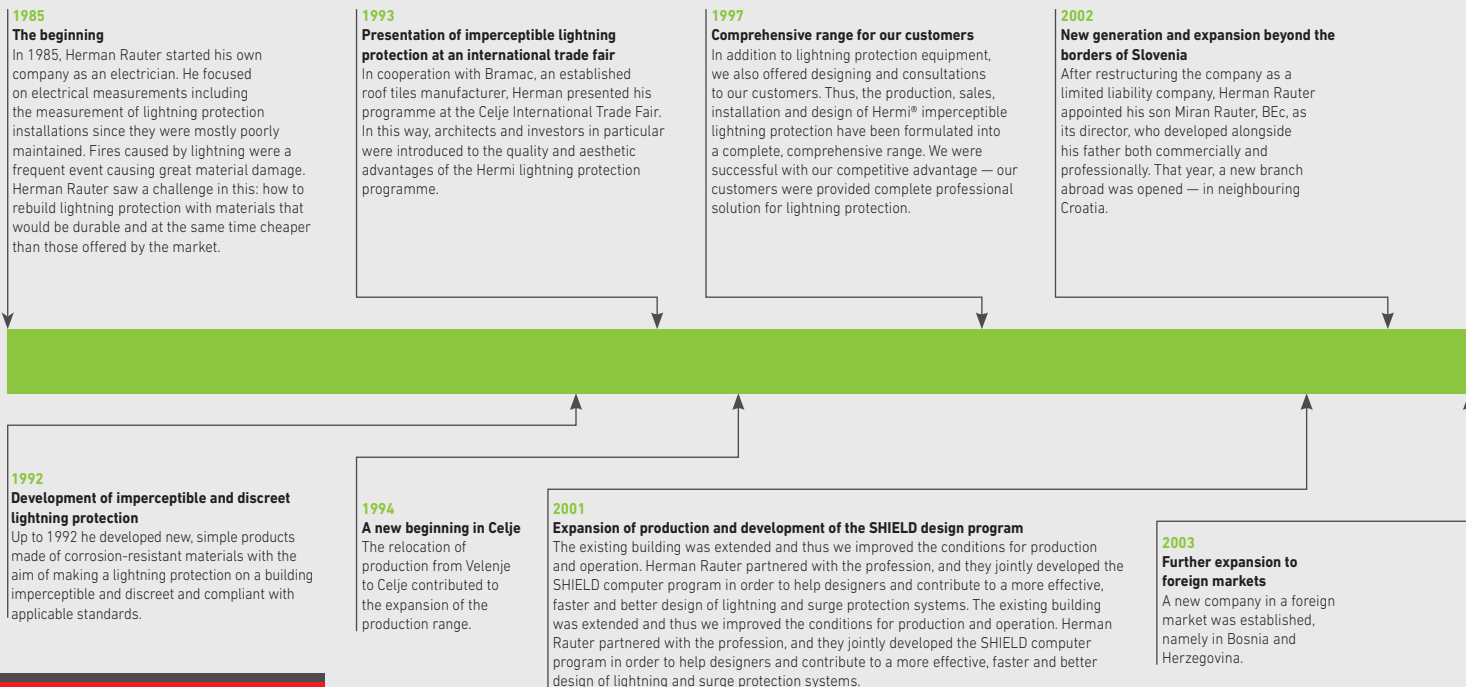
QUALITY OF HERMI® PRODUCTS IS CONFIRMED BY INTERNATIONAL AND NATIONAL INDEPENDENT CERTIFICATION AUTHORITIES

- ISO 9001:2015
- IQNet
- ETIM International
- Expert evaluation of the M. V. Electric Power Research Institute
- Certificate of the Institute for the Electricity and Energy
- Certificate of the School of Electrical Engineering of the University of Belgrade
- Certificate of the Institute for Health Protection and Safety at Work
- Recommendations for roof coverings
- Production according to the German standard DIN 4102-12:1998 for fire resistance of cable paths



ETIM
International

Company's milestones





SHIELD Software

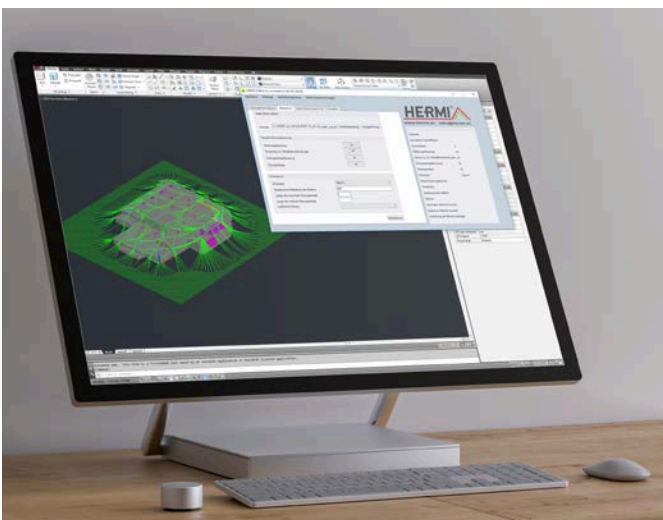
The SHIELD software is an excellent tool for planning since it enables a calculation of the required protection or its optimisation and prepares an inventory of the needed material.

We are authors of software for the design and control of lightning protection installations and the range of surge protection – Shield. The Shield program is designed in cooperation with the University of Maribor, Faculty of Electrical Engineering and Computer Science.

Shield was developed to facilitate the work of designers and contribute to optimally efficient, rapid and quality solutions of designing lightning and surge protection against lightning strikes.

Expert workshops are also organised within the scope of the program where we instruct designers, other professional and interested public in a short period of time on how to use the Shield program, which they receive free of charge after the workshop ends.

” The Hermi company strives for development and we have therefore already started to work on a new software which will further facilitate the work of designers.



2006
New commercial building and expansion to foreign markets
Due to the expansion of production, we built a new commercial building to conduct sales and storage of products. A company was established in Serbia.

2008
New markets
We actively entered new markets – Romania, Russia, Bulgaria, Kosovo and Macedonia.

2011
New commercial-production building in Celje
We built a new commercial-production building in Celje, as it was easier for us to implement the production plans and to meet the growing market demands.

2012
New commercial-production building in Croatia
We finished the construction of a new commercial-production building in Croatia, in the vicinity of Zagreb.

2013
New markets
We established a company in Romania – Hermi Protection srl. At the same time we started to be active in the Austrian and Hungarian markets too. We crossed the EU borders with projects in Saudi Arabia and other Arab States of the Gulf.

2017
Expansion of production and technological development
Due to increased production, we built a new facility and thus provided space for new and technologically sophisticated machines.

> The future
Over the next few years we plan to build our own commercial buildings in all the countries where we already have our companies. We plan to expand our operation to those European markets where we are not present yet. We look to the future full of optimism – led by our goal to always be a step ahead of our customers

2007
Expansion of the range of products for surge protection systems
We introduced the HERMI surge protection. Thus we managed to achieve that customers select all elements for external and internal surge protection at a single point.

2009
Production automation and international product certification
We put a lot of energy and means into modernising and automating production and developing new products made according to European and international standards and harmonised national standards. Our products successfully underwent testing and obtained all required international certificates – also pursuant to IEC and EN standards.

2015
30th anniversary of business operation and awarded tradition
We celebrated 30 years of operation and received the award of the Chamber of Commerce and Industry of the Republic of Slovenia. Miran Rauter, the company director, received the award for outstanding achievements in the field of economic and entrepreneurial achievements for 2015.

2018
Expansion to the north
We founded a company in Austria and also entered the German market.



TECHNICAL DATA AND STANDARDS

LEGEND

MATERIAL

LABEL	MATERIAL
Rf	stainless steel
Rf*H4	acid-resisting stainless steel
Cu	copper
Al	aluminium
Fe	steel
FeZn	galvanized steel
FeZn-H	hot-dip galvanized sheet metal
KFe	polypropylen
FeCu	copper coated steel
Me	brass
PE	polyetilen - UV resistant
N	nylon – UV resistant
P-SV	polyester with UV resistant glass fibres
pvc	electrostatic plastic-coated
PVC	resistant synthetic material
wood	wood
concrete	concrete
cast iron	cast iron
CuSn	tinned copper
PP	polypropylen

CONDUCTOR DIMENSIONS

(appropriateness of holders for a certain profile of conductors)

LABEL	DESCRIPTION
∅	round cross-section conductor
P	rectangular cross-section conductor

CONDUCTOR ATTACHMENT ON FASTENER

LABEL	DESCRIPTION
N	attachment with nylon attachment elements
PE	attachment with polyetilen attachment elements
K	click attachment system
V	screw attachment
*	upon request

” Our warranty is equal quality according to our specifications and general terms of delivery.

MATERIAL COMPATIBILITY

	FeZn	Al	Cu	Rf
FeZn	+	+	-	+
Al	+	+	-	+
Cu	-	-	+	+
Rf	+	+	+	+

TORQUE

Standard hand tools are to be used. Torque moment is dependent on the shape and material of a conductor and clip, and on the material and mechanical properties of the screw. We recommend torque moment as follows.

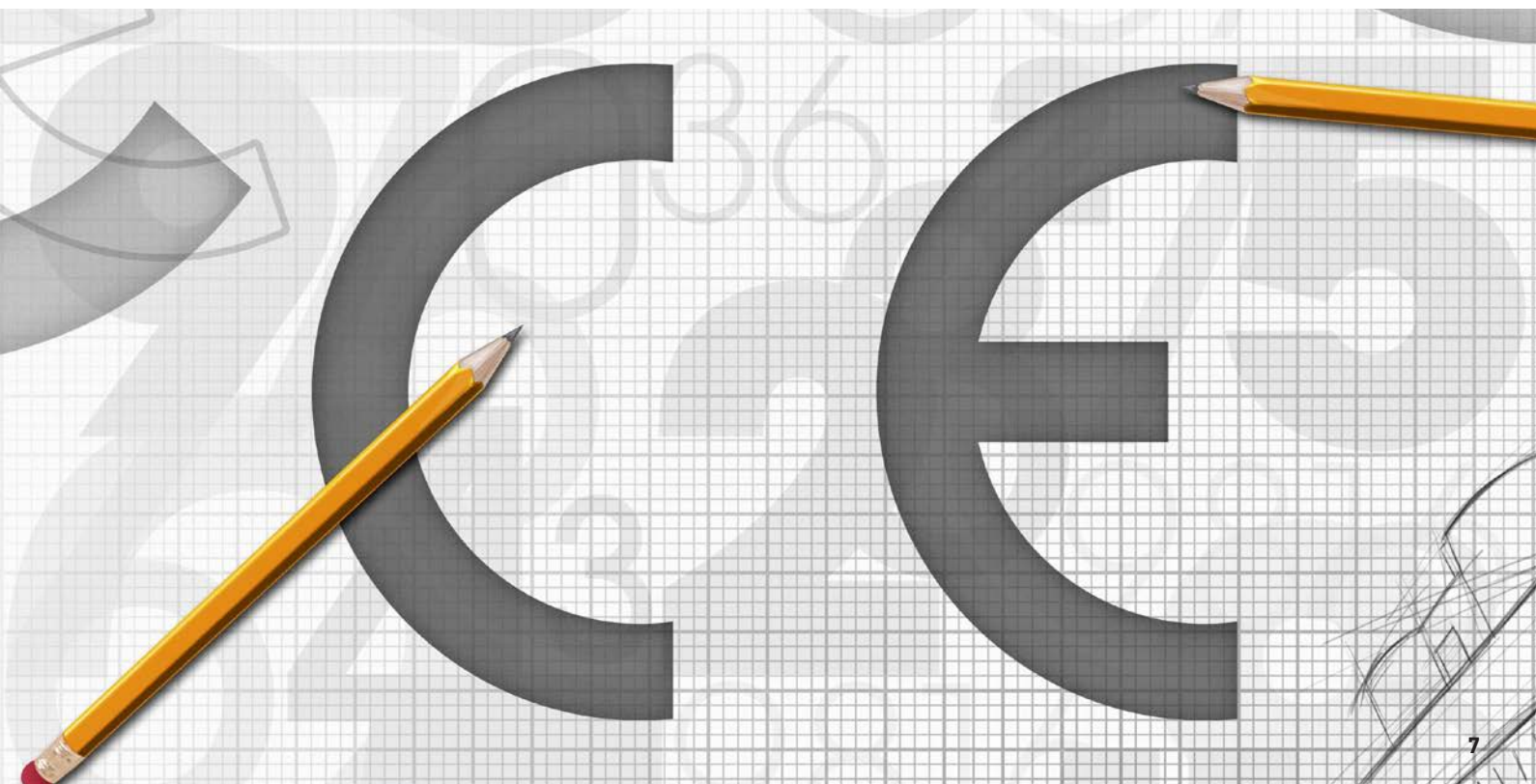
SCREW	TORQUE (Nm)
M5	3
M6	4
M8	10
M10	15

Before using HERMI products a professional has to make a calculation for their use. Since we do not deal with the planning of protecting systems from lightning strikes take the content of this product catalogue as information and/or advice. Our advice is based on experience from practice and our knowledge. We recommend you to enquire at qualified experts if Hermi products are appropriate for your needs. It is not allowed to reconstruct and use reconstructed Hermi products without our knowledge and supervision. If there is a question of warranty all damage is turned to value of products supplied by us and fitted by you. Constant quality is our guarantee suitable to our specification and in terms of supply conditions..



STANDARDS

EN 62305-1	Protection against lightning - Part 1: General principles
EN 62305-2	Protection against lightning - Part 2: Risk management
EN 62305-3	Protection against lightning - Part 3: Physical damage to structures and life hazard
EN 62305-4	Protection against lightning - Part 4: Electrical and electronic systems within structures
EN 62561-1	Lightning Protection System Components (LPSC) - Part 1: Requirements for connection components
EN 62561-2	Lightning Protection System Components (LPSC) - Part 2: Requirements for conductors and earth electrodes
EN 62561-3	Lightning Protection System Components (LPSC) - Part 3: Requirements for isolating spark gaps
EN 62561-4	Lightning Protection System Components (LPSC) - Part 4: Requirements for conductor fasteners
EN 62561-5	Lightning Protection System Components (LPSC) - Part 5: Requirements for earth electrode inspection housings and earth electrode seals
EN 62561-6	Lightning Protection System Components (LPSC) - Part 6: Requirements for lightning strike counters (LSC)
EN 62561-7	Lightning Protection System Components (LPSC) - Part 7: Requirements for earthing enhancing compounds
IEC 61312-1	Protection against lightning electromagnetic impulse - Part 1: General principles
EN 50468	Resistibility requirements to overvoltages and overcurrents due to lightning for equipment having telecommunication ports
CLC/TR 50469	Lightning protection systems - Symbols





LIGHTNING PROTECTION

Appropriate lightning protection is installed to adequately protect buildings and equipment from damage due to lightning strikes. How to make proper and effective lightning protection is defined by Slovenian (European) standards for protection of buildings against lightning:

- EN 62305-1: Lightning protection - part 1: General principles**
- EN 62305-2: Lightning protection - part 2: Risk management**
- EN 62305-3: Lightning protection - part 3: Physical damage to buildings and danger to living beings**
- EN 62305-4: Lightning protection - part 4: Electrical and electronic systems in buildings**

Lightning impact parameters are defined by the EN 62305-1 standard. In view of this standard, we plan lightning protection for lightning currents up to 200kA. Depending on the lightning current, the lightning protection is divided into four protection levels. A minimum and a maximum lightning current is defined for each protection level.

Table 1: Minimum lightning current depending on the protection level

LPL	MINIMUM PEAK CURRENT (kA)	ROLLING SPHERE RADIUS r (m)
I	3	20
II	5	30
III	10	45
IV	16	60

Table 2: Maximum lightning current depending on the protection level

CURRENT PARAMETERS	LPL			
	I	II	III	IV
First Positive Impulse				
Peak current I [kA]	200	150	100	
Impulse charge Q_{short} [C]	100	75	50	
Specific energy W/R [MJ/Q]	10	5,6	2,5	
Time parameters T_1/T_2 [$\mu s/\mu s$]	10/350			

When planning a lightning protection system, we calculate the possibility of damage that can be caused by a lightning strike or we make a risk assessment. This assessment depends on the dimensions of the building, the materials from which the building is built, the location, purpose, and value of the building, as well as the value of the equipment. Risk assessment calculation is defined by the EN 62305-2 standard.

Lightning protection is divided into protection against direct lightning strike and indirect lightning strike. A direct lightning strike can cause mechanical damage or fire as well as damage to electrical installations and equipment. Therefore, in order to protect against direct lightning strikes, it is necessary to install external lightning protection—a lightning protection installation, overvoltage protection and to perform appropriate equipotential bonding. In the case of an indirect lightning strike, the damage that occurs is usually caused by large electromagnetic fields present at the time of the lightning strike. The influence of a large magnetic field is manifested in large induced voltages in electrical conductors, devices or injuries to these. For protection against these events, it is necessary to install an appropriate internal lightning protection - overvoltage protection and to ensure proper equipotential bonding.

Table 3: Origin and type of injuries, losses

POINT OF STRIKE	SOURCE OF DAMAGE	TYPE OF DAMAGE	TYPE OF LOSS
Structure	S1	D1	L1, L4 ¹
		D2	L1, L2, L3, L4
		D3	L1 ² , L2, L4
Near a structure	S2	D3	L1 ² , L2, L4
Line connected to the structure	S3	D1	L1, L4 ¹
		D2	L1, L2, L3, L4
		D3	L1 ² , L2, L4
Near a line	S4	D3	L1 ² , L2, L4

¹ Only for properties where animals may be lost.

² Only for structures with risk of explosion and for hospitals or other structures where failure of internal systems immediately endangers human life.





EXTERNAL LIGHTNING PROTECTION

External lightning protection is a system of conductors installed on a building. Their position or installation is specified in the EN 62305-3 standard. The external lightning protection system consists of a catching system, a drainage system and an earthing system, each of which has an important role.

The catching system is a system of conductors installed in those parts of the building where a direct lightning strike can be expected. Each conductor provides a well-defined protection area. The number and position of conductors largely depends on the shape of the building or the shape of the roof of the building. Chimneys, antennas, any electrical appliances and other exposed parts on the roof must also be taken into account when planning the catching system. A catching system is suitable when its protected area covers the entire facility and exposed devices.

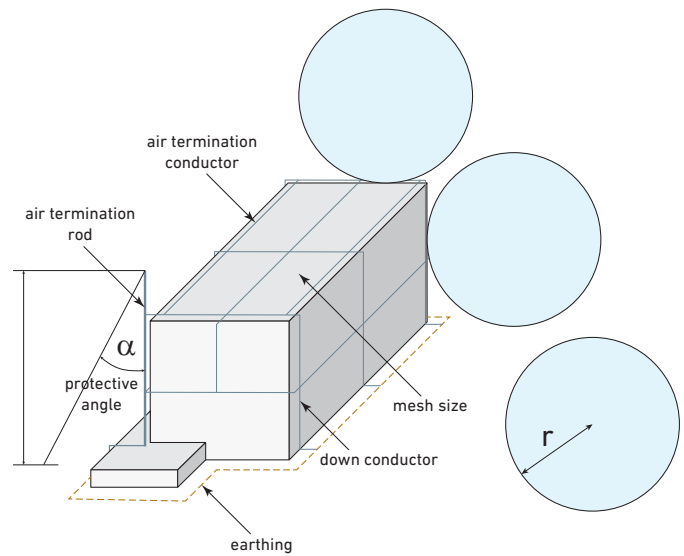


Figure 2: Methods for determining the protected area

The protected area depends on the protection level. The protected area is determined by one of three methods: the rolling ball method, the protection angle method or the catch net method. The rolling ball method is the basic method and at the same time the most accurate method for determining the protected area. The radius of the ball actually depends on the lightning current and thus depends on the selected protection level. The protected area is determined by rolling the ball along the catching system and is usually determined by computer simulation using the SHIELD software package.

Table 4: Ball radius depending on the protection level

PROTECTION LEVEL (LPL)	BALL RADIUS
I	20 m
II	30 m
III	45 m
IV	60 m

The protected area can also be determined using the protection angle method or the catch net method. These two methods are derivatives of the basic method, suitable for determining the protected area on objects of simple shapes.

When installing such a specific catching system, we must additionally take into account several different factors. The choice of a suitable lightning conductor depends on the material and type of roofing, as well as the material of other metal masses present on the building. In any case, we must prevent the formation of galvanic junctions between individual elements made of different materials. The possibility of direct junctions between different materials is shown in the table of the EN 62305-3 standard.

Table 6: Material compatibility

	FeZn	Al	Cu	Rf
FeZn	+	+	-	+
Al	+	+	-	+
Cu	-	-	+	+
Rf	+	+	+	+

The catching system conductors must be attached to the roofing with appropriate fasteners in accordance with the EN 62561-4

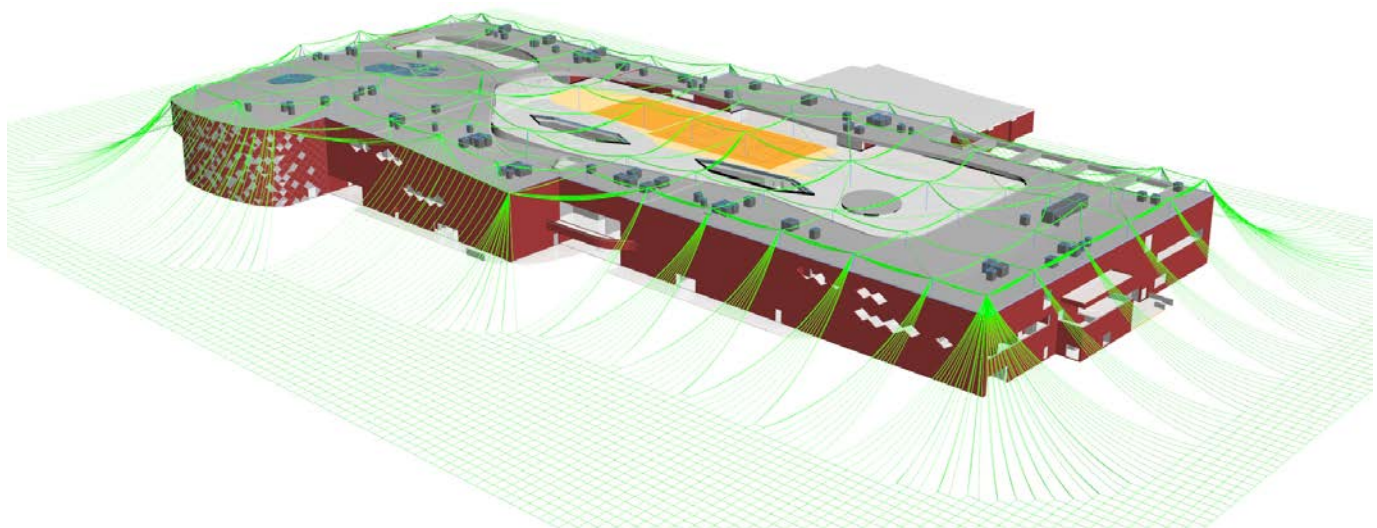


Figure 1: Protected area determined by the rolling ball method using the SHIELD program

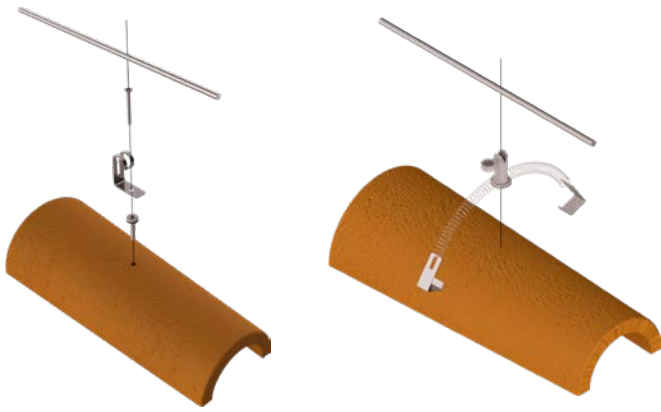


Figure 3: Installation of suitable ridge load-bearing elements on concrete/brick roofing



Figure 4: Installation of suitable roof load-bearing elements on concrete/brick roofing

standard. At the same time, the roof's load-bearing elements must be compatible with the roofing, which means that there is no need to modify the roofing when installing the lightning conductors. The use of appropriate load-bearing elements designed for each type of roofing ensures the water-tightness of the roof even after the installation of the catching system.

Roofs covered with tin sheet roofing require special treatment. Given the fact that a large current—even up to 200 kA—flows into the tin sheet roofing on a single point when struck by lightning. Due to the extremely high current density, the tin sheet begins to melt at that point, and the molten tin sheet can fall onto certain flammable materials (wood, paper, etc.), which can certainly cause a fire.

Table 7 shows the minimum material thicknesses that can be used as a catching system as required by the EN 62305-3 standard. When the thickness of the natural parts does not meet the requirements, it is necessary to install adequate protection against direct lightning strikes. The installation of the catching system prevents direct lightning strikes into the tin sheet roofing. When installing load-bearing elements, it is necessary to prevent water inflow. It is also necessary to pay attention to the material of the tin sheet roofing to avoid galvanic junction. All of the above can be ensured by using appropriate support elements (SON16, SON15, KON20, etc.). To make a catching system on tin sheet metal roofing, we usually choose an aluminium conductor (AH1, AH2) or a stainless

steel conductor to avoid the formation of a galvanic junction between incompatible materials, as tin sheet roofing is usually made of galvanised tin sheet metal.

Table 7: the thickness of the "natural" parts

CLASS OF LPS	MATERIAL	THICKNESS t ¹ (mm)	THICKNESS t ² (mm)
I to IV	Blei	-	2,0
	steel/galvanized, stainless steel	4	0,5
	Titan	4	0,5
	copper	5	0,5
	aluminium	7	0,65
	Zink	-	0,7

t¹ prevents puncture.

t² only for metal sheets if it is not important to prevent puncture, hot spot or ignition problems.

Installing a lightning protection installation on flat roofs covered with bitumen or PVC roofing requires a slightly different approach. Such roofs are usually like a kind of pool with waterproof joints between parts of the roofing (individual strips). It is usually not possible to screw in the load-bearing elements of the roof. The load-bearing elements for attaching the lightning conductor on flat roofs are designed to provide "fixed" support to the lightning



Figure 5: Installation of a suitable load-bearing element on a trapezoidal roofing.



Figure 6: Installation of suitable load-bearing elements on tin sheet roofing types DECRA, GERARD, etc.

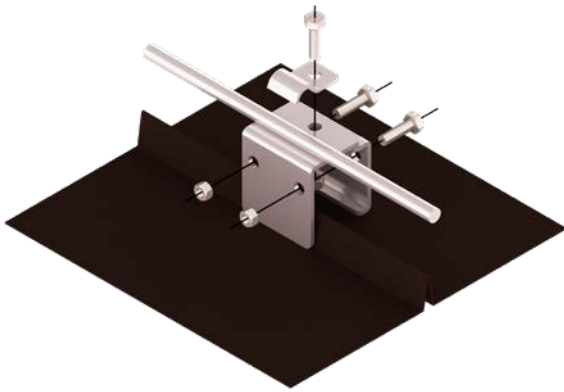


Figure 7: Installation of appropriate load-bearing elements on tin sheet roofing

conductor with their weight. The installation of the load-bearing element on PVC roofing is usually performed using a dedicated SON17 A bracket. This bracket is welded to the roofing with a strip of the same material as the roofing itself. This prevents the bracket from moving on the roofing or damaging it.

Protection of electrical devices on the roof or in endangered zones. In these cases, we strive to separate the lightning installation and devices or endangered zones. Protection implemented as an insulated system is generally the most appropriate solution. By separating the lightning conductor from the conductive parts of the devices we want to protect, we achieve that the lightning current flows only through the conductors of the lightning installation. The protected area of the catching system must cover the entire device that we want to protect, and the distance between the catching system and the conductive parts must be greater than the calculated safety distance.

Insulated systems can be implemented by placing catching rods connected to a catching system mounted on the roof. The attachment of the catching rods to the roof of the building depends on the roofing type and the catching rod height, as well as the possibility of additionally attaching the catching rod itself with the help of an insulated spacer elements to the protected device.

The required height of the catching rod depends on the dimensions of the protected device, the safety distance and the selected protection level. In the case where the protected device is of larger dimensions, the required heights of the catching rods can be quite large. If, due to various reasons, the installation of large catching rods on the roof of the building is not allowed, the appropriate solution is the use of insulated load-bearing elements (IZO20, IZO30, IZO45, etc.) as load-bearing elements of the lightning conductor. In this case, the catching system is actually a catch net that is raised above the protected device. Also, the jump distances are slightly smaller in the case of insulated load-bearing elements usage due to the division of the lightning current.

Drainage system

To ensure a suitable conduction path of the lightning flow, downconductors are installed on the building, which connect the catching system with the ground. The number of downconductors depends on the dimensions of the building and the selected protection level. The typical distance between downconductors in relation to the protection level is specified in the EN 62305-3 standard.



Figure 8: Installation of a SON17 A load-bearing element on PVC roofing

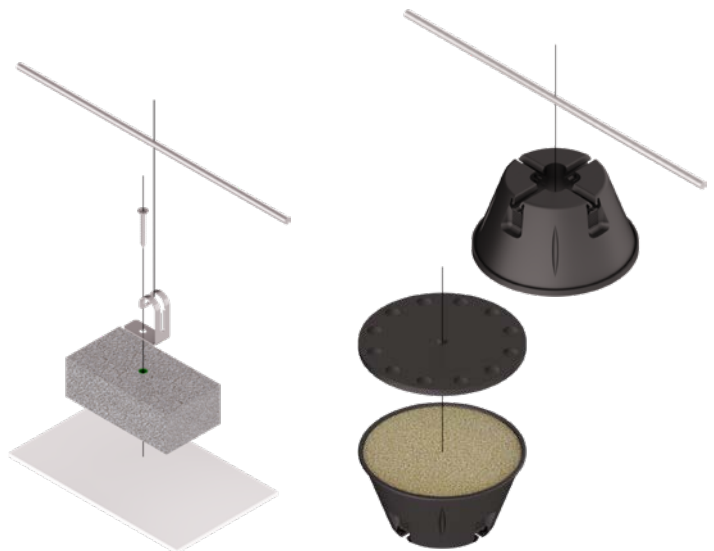


Figure 9: Installation of a suitable load-bearing element SON17, SON17 B on a flat roof covered with bituminous roofing or additionally covered with sand

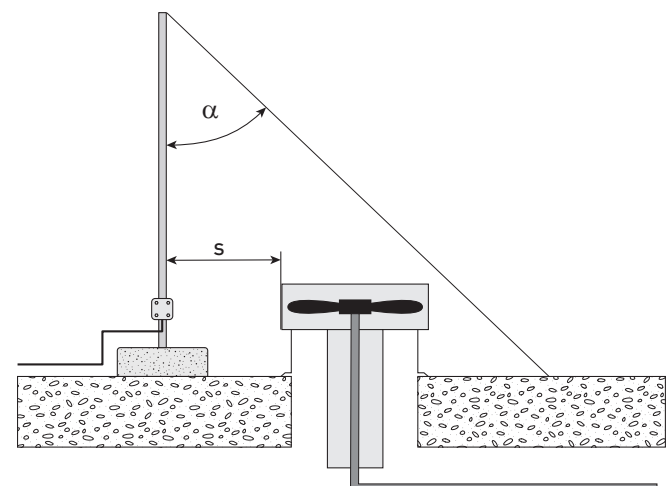


Figure 10: Electrical device on the roof protected by an insulated catching system



Table 8: The distance between the downconductors depending on the protection level.

PROTECTION LEVEL (LPL)	DISTANCE BETWEEN DOWNCONDUCTORS
I	10 m
II	10 m
III	15 m
IV	20 m

Downconductors are usually the most visible part of a lightning protection installation. For this reason, attention must be paid during installation to the selection of the appropriate conductor material, the selection of appropriate fasteners and their location on the building. The use of appropriate fasteners ensures adequate mechanical strength, the right material and the shape of the load-bearing element prevents stains on the façade.

When stormwater drain pipes are installed on the building, downconductors can be attached to them. This avoids unnecessary



Figure 11: Catching rod mounted on a flat roof



Figure 12: Catching rod mounted on a flat roof and additionally attached to the protected device by means of spacer elements.



Figure 13: Catching rod mounted on the roof covered with trapezoidal tin sheet roofing



Figure 14: Catching system mounted on insulated load-bearing elements IZ045



drilling into the façade of the building, and at the same time the downconductor is "hidden" next to the drain pipe. When installing downconductors on stormwater drain pipes, care must be taken in the choice of material to avoid galvanic corrosion.

In certain cases, either for technical or aesthetic reasons, downconductors are installed under the façade.

Irrespective of the installation of downconductors, a measuring joint must be installed on each downconductor. Installation of the measuring joint enables the measurements of the lightning protection system. On surface-mounted downconductors, the measuring joint is made by installing a measuring clamp (KON02). The measuring clamp

usually connects the downconductor to the earth line or earthing. The selected measuring clamp must be compatible with the materials of the conductors connected. In case the downconductors are made under the façade, the measuring joint is made in the measuring cabinet. The measuring cabinet can be installed on a façade or in the ground.

An earthing system

An earthing system is a system of interconnected earthing electrodes. When lightning current passes from the downconductors to the ground, the earth electrodes allow the lightning current to dissipate in the ground. Depending on the requirements of EN 62305-3, the earthing system can be implemented as type A or as type B.

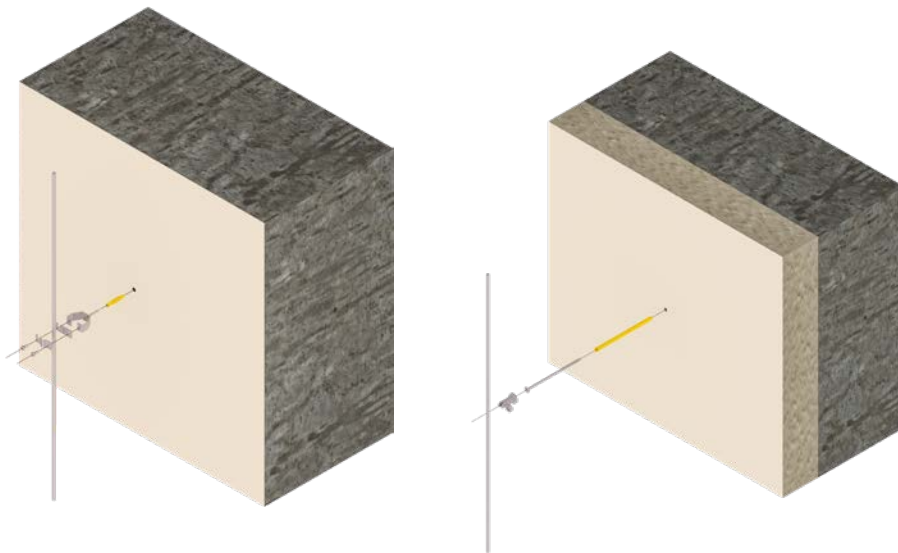


Figure 15: Installation of the downconductor on the insulated façade by means of a suitable load-bearing element with a suitable fastening screw.



Figure 16: Downconductor, installed on the drain pipe

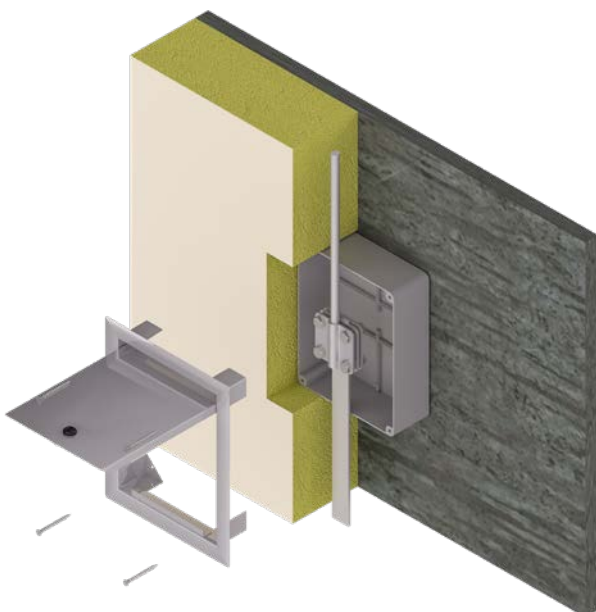


Figure 17: Installation of the measuring cabinet with the measuring joint on the façade



Figure 18: Installation of the measuring cabinet in the ground



A type A installation consists of separate earthing electrodes connected to each of the downconductors or a strip earthing that does not have the shape of a closed loop. The length of the earthing electrodes is determined according to the specific resistance of the ground in which the earthing electrodes are located.

The length of each horizontal earth electrode should be greater than l_1 . The length of each vertical earth electrode should be greater than $0.5 l_1$.

A Type B installation consists of a horizontal earth electrode in the form of a closed loop outside the building with more than 80% of its length in the ground or in the foundations. The radius of a circle having the same area as the area of the loop should be greater than the value of l_1 . The horizontal earth electrode should be placed at least at a depth of 0.5 m and 1 m away from the wall of the building.

Type A earthing is most often made up of vertical earthing electrodes. They must be installed so that the upper part of the earth electrode is at least 0.5 m deep in the ground. In practice, earthing probes made of stainless steel with the possibility of extension (POS K Rf) are mostly used. If the soil structure enables the driving of vertical earthing, and the specific resistance of the soil decreases with depth, with such a method of earthing we achieve a low sinking resistance or quality earthing.

The diagram shows the dependence of the sinking resistance on the depth of the rod earthing in the case of pillar earthing on DV Cirkovce - Zlatoličje

The corrosion resistance of earthing electrodes is extremely important. The earth electrodes are buried in the ground, so it is not possible to perform a periodic visual inspection. Replacement or repair of earthing is usually a demanding and expensive intervention. If stainless steel is used as the material of the earthing electrodes, the corrosion resistance of the earth is at a very high level.

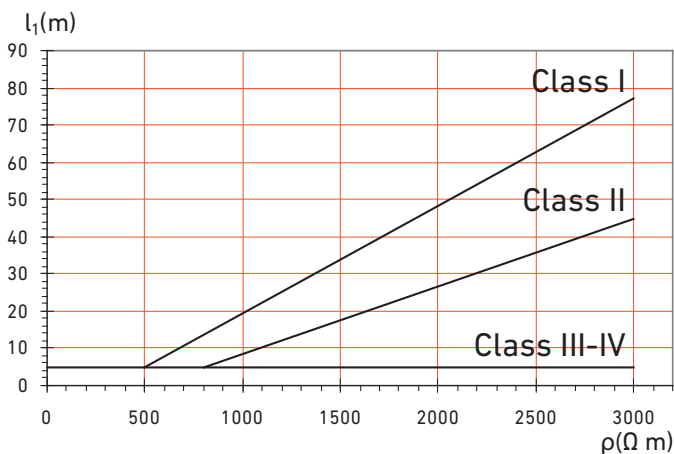


Figure 19: Length of earthing electrodes according to specific soil resistance and protection level.

In the case of earthing as foundation earthing, the earthing electrode should be connected to the reinforcing iron. The connection between the reinforcing iron and the earthing electrode must meet the requirements of EN 62305-3.

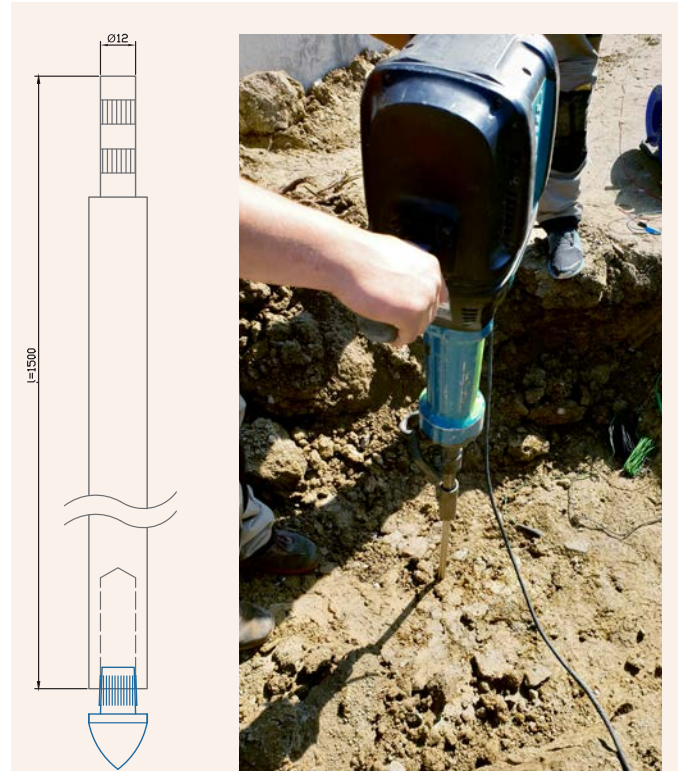


Figure 20: Example of an earthing device with a POS K Rf earth rod

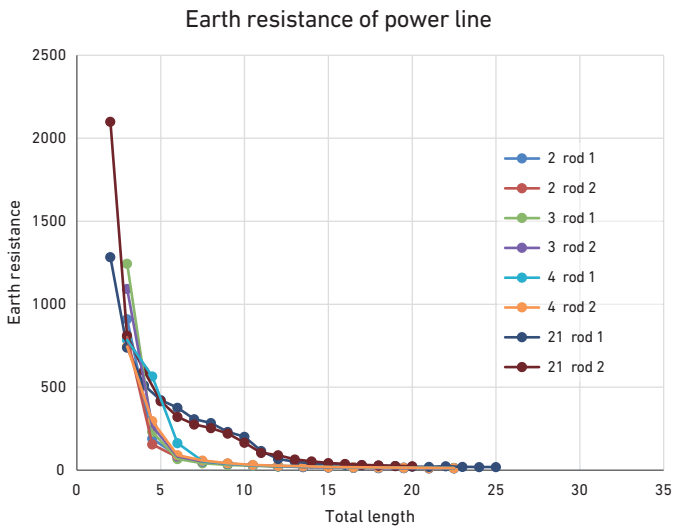


Figure 21: Diagram of the dependence of the rod resistance of the probes from the earthing depth

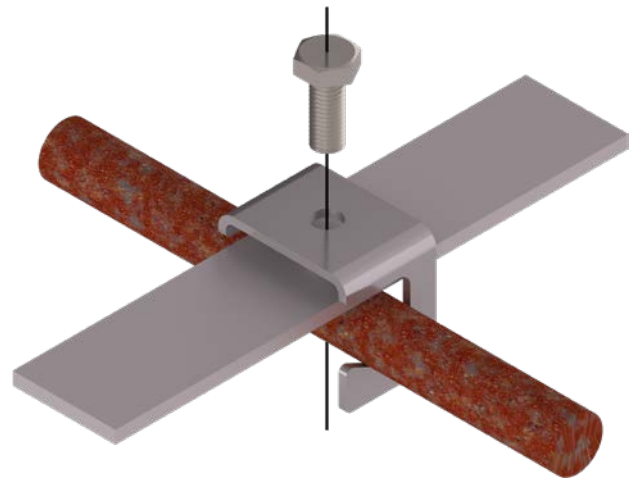


Figure 22: The connection between the earth electrode and the reinforcing iron is made using the KONO9 clamp

Table 9: Lightning protection system materials and conditions of use

MATERIAL	USE			CORROSION		
	IN OPEN AIR	IN EARTH	IN CONCRETE	RESISTANCE	INCREASED BY	MAY BE DESTROYED BY GALVANIC COUPLING WITH
Copper	Solid Stranded	Solid Stranded As coating	Solid Stranded As coating	Good in many environments	Sulphur compounds Organic materials	–
Hot galvanized steel ^{c, d, e}	Solid Stranded ^b	Solid	Solid Stranded ^b	Acceptable in air, in concrete and in benign soil	High chlorides content	Copper
Steel with electrodeposited copper	Solid	Solid	Solid	Good in many environments	Sulphur compounds	–
Stainless steel	Solid Stranded	Solid Stranded	Solid Stranded	Good in many environments	High chlorides content	–
Aluminium	Solid Stranded	Unsuitable	Unsuitable	Good in atmospheres containing low concentrations of sulphur and chloride	Alkaline solutions	copper
Lead ^f	Solid As coating	Solid As coating	Unsuitable	Good in atmosphere with high concentration of sulphates	Acid soils	Copper Stainless steel

a This table gives general guidance only. In special circumstances more careful corrosion immunity considerations are required.
 b Stranded conductors are more vulnerable to corrosion than solid conductors. Stranded conductors are also vulnerable where they enter or exit earth/concrete positions. This is the reason why stranded galvanized steel is not recommended in earth.
 c Galvanized steel may be corroded in clay soil or moist soil.
 d Galvanized steel in concrete should not extend into the soil due to possible corrosion of the steel just outside the concrete.
 e Galvanized steel in contact with reinforcement steel in concrete should not be used in coastal areas where there may be salt in the ground water.
 f Use of lead in the earth is often banned or restricted due to environmental concerns.

INTERNAL LIGHTNING PROTECTION SYSTEM

To ensure complete lightning protection, it is important to also install internal lightning protection. Depending on the source of the damage (Table 3), an external lightning protection system is only required in case S1, and in cases S2, S3 and S4 we need adequate internal protection. The internal lightning protection is a proper-

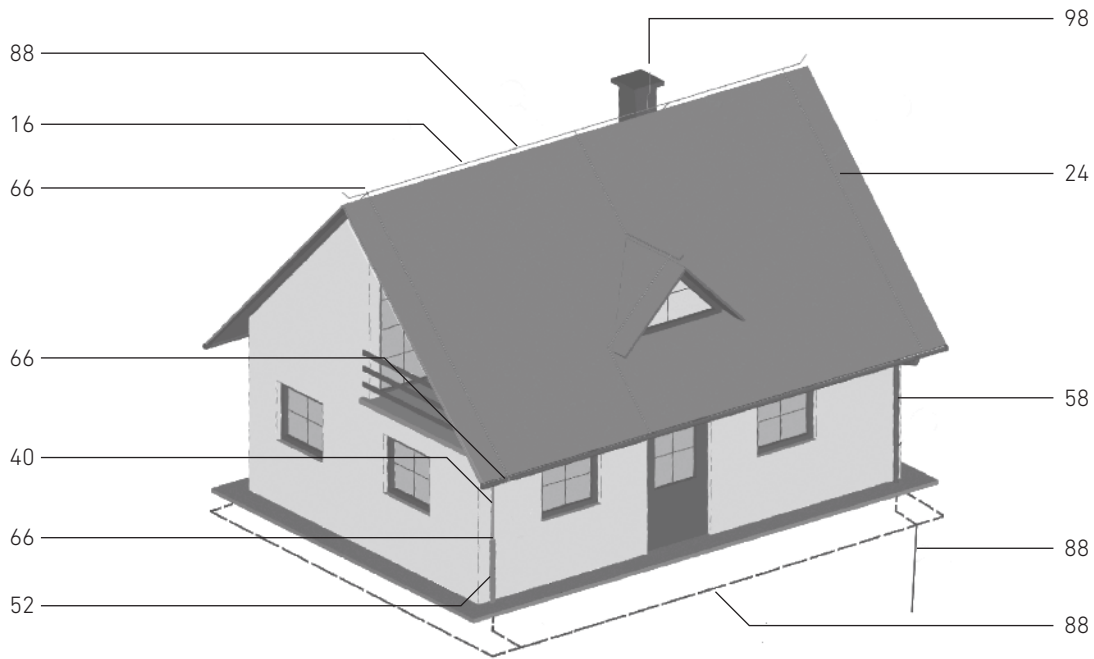
ly selected and installed surge protection and a corresponding equipotential bonding, dimensioned accordingly to the selected protection level and must withstand a maximum lightning current, depending on the selected protection level.



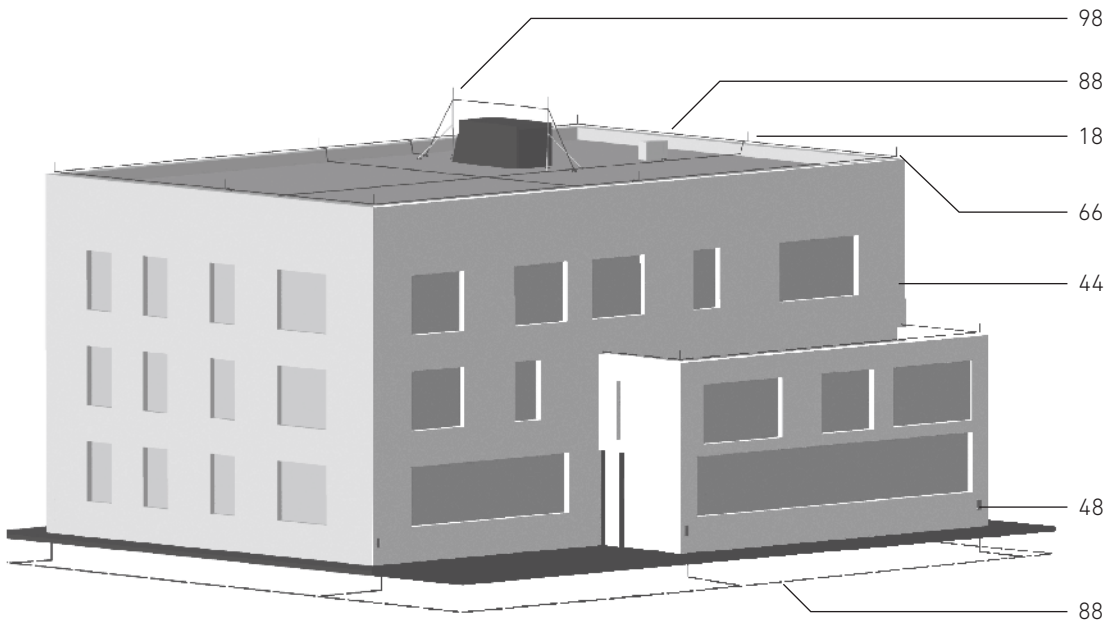
EXTERNAL LIGHTNING PROTECTION INSTALLATION

Numbers in circles show the page where products are presented.

PRIVATE HOUSES



OFFICE BUILDINGS















LIGHTNING PROTECTION

Lightning protection installation protects a facility against direct lightning strikes. Only correctly positioned lightning protection conductors on a building are intended to discharge lightning current. By installing lightning protection we successfully protect a building against mechanical damage or fire.

Hermi lightning protection systems have low, standard supports adapted to all types of roof coverings and are creatively adjusted to the architecture of the building. They are made of durable materials – stainless steel, copper or aluminium – and provide the highest level of protection against damages caused by lightning strikes.

S0N Roof ridge fasteners	18	
S0N Roof fasteners	24	
Z0N Wall fasteners	40	
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VZ Vertical protection	52	
K0N Pipe Bonding Clamps	58	
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On-roof and downlead conductor installations, earthing and equipotential bondings	88	
Insulated air termination systems	98	
Accessories	106	



SON ROOF RIDGE FASTENERS

SON roof ridge conductor fasteners are designed to attach a lightning conductor to the ridge of the roof. Particular roof ridge fasteners are adapted to a specific type of roof tile, which means that installation of a conductor to the fastener is simple and fast. The conductor is fixed without screwing, except in some cases in which the conductor can be screwed.



SON Roof ridge fastener



SON01 Roof ridge fastener

Roof ridge conductor fastener, universal, is appropriate for concrete and fire-baked roof tile such as BRAMAC, BOBROVEC, TONDACH, KOREC, CREATON and the like.

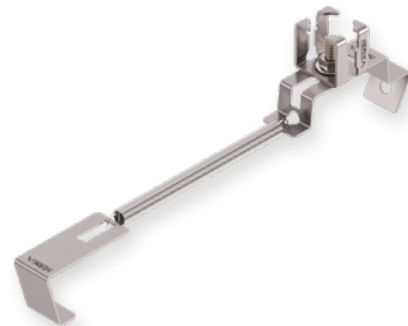
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu N-N grey	Φ = 8	11301	80
Cu N-N brown	Φ = 8	11302	80
Cu N-N brick red	Φ = 8	11303	80
Rf N-N grey	Φ = 8	10301	80
Rf N-N brown	Φ = 8	10302	80
Rf N-N brick red	Φ = 8	10303	80



SON01 D Roof ridge fastener

Roof ridge conductor fastener is appropriate for concrete and fire-baked roof tile such as BRAMAC, BOBROVEC, TONDACH, KOREC, CREATON and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-KD	Φ = 8	10314	80



SON02 Roof ridge fastener

Roof ridge conductor fastener with a screw and rubber seal is appropriate for METAL SHEET PANEL coverings such as TRIMO and the like, fibrocement roof coverings such as SALONIT VALOVITKA and the like.

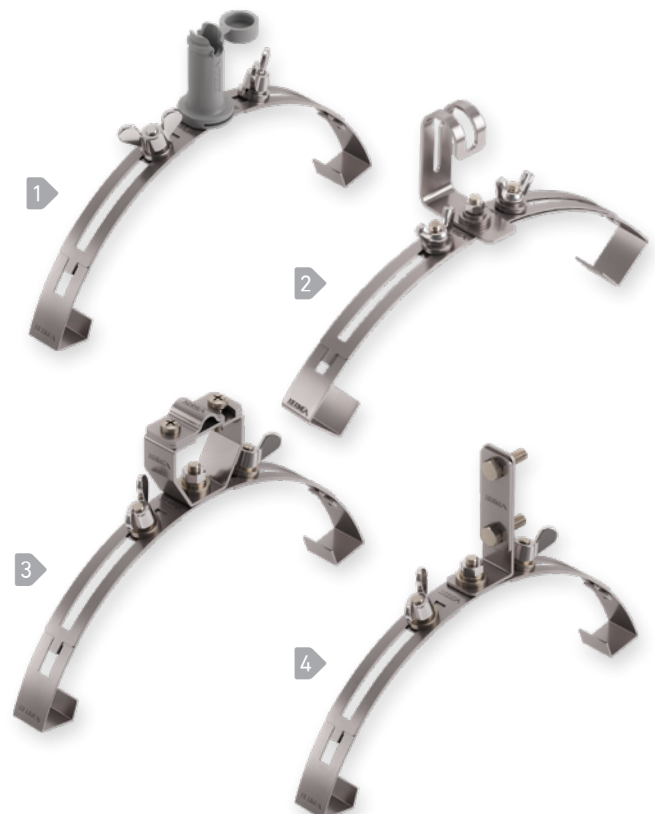
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu N-N brown	Φ = 8	2304	45
1	Cu N-N brick red	Φ = 8	2305	45
1	Rf N-N grey	Φ = 8	2301	45
1	Rf N-N brown	Φ = 8	2302	45
1	Rf N-N brick red	Φ = 8	2303	45

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-K	Φ = 8	2307	25
2	Rf-K	Φ = 8	2306	25
2	Rf*H4-K	Φ = 8	* 2311 *	25

! Coloring according to RAL color scale

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	Φ = 8 - 10	* 2324 *	25

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Cu-V	P 20x3	* 2326 *	25
4	Rf-V	P 20x3	* 2325 *	25
4	Rf-V	P 30x3	2327	25



* upon request



SON02 A Roof ridge fastener

Roof ridge conductor fastener is appropriate for fire-baked roof tile such as KOREC and the like.

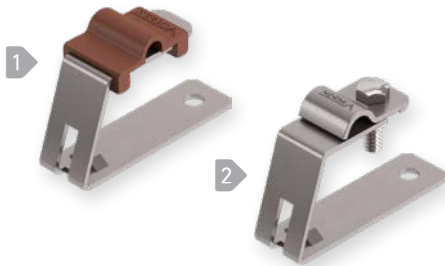
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	2313	25
1	Rf-K	Φ = 8	2312	25
1	Rf*H4-K	Φ = 8	2314	25
2	Rf-V	P 20x3	* 2315 *	25



SON02TD-13-19 Roof ridge fastener

Roof ridge conductor fastener with a screw and rubber seal is appropriate for METAL SHEET PANEL coverings such as TRIMO and the like, fibrocement roof coverings such as SALONIT VALOVITKA and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-KD	Φ = 8	2317	50



SON03 Roof ridge fastener

Roof ridge conductor fastener, is appropriate for roof coverings such as ESAL (Roofing Slates), ETERNIT and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-N	Φ = 8	322	100
1	Rf-N	Φ = 10	323	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	* 324 *	100



SON05 Roof ridge fastener

Roof ridge conductor fastener, is appropriate for sheet metal roof coverings such as GERARD, DECRA, METROTILE, HOSEKRA, ALUMET, METALKO, METROBOND, ISOLA, ROSER and the like; installation when covering the roof.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-N	Φ = 8	522	50
1	Rf-N	Φ = 10	523	50
1	Rf/PVC brown-N	Φ = 8	5220	50
1	Rf/PVC brown-N	Φ = 10	5230	50
2	Rf-V	Φ = 8 - 10	* 524 *	50

! Coloring according to RAL color scale

* upon request



SON05 A Roof ridge fastener

Roof ridge conductor fastener, is appropriate for sheet metal roof coverings such as GERARD, DECRA, METROTILE, HOSEKRA, ALUMET, METALKO, METROBOND, ISOLA, ROSER and the like; installation when covering the roof, the holder being fixed to the roof ridge.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	Φ = 8	521	100
Rf*H4-K	Φ = 8	527	100

! Coloring according to RAL color scale



SON05 AQ Roof ridge fastener

Roof ridge conductor fastener, is appropriate for sheet metal roof covering DECRA QUADRO; installation when covering the roof.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	Φ = 8	529	100



SON06 Roof ridge fastener

Roof ridge conductor fastener with a screw, rubber seal and plug is appropriate for concrete and fire-baked roof coverings such as BRAMAC, BOBROVEC, TONDACH, KOREC, CREATON and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	N-N grey	Φ = 8	6301	100
1	N-N brown	Φ = 8	6302	100
1	N-N brick red	Φ = 8	6303	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-K	Φ = 8	609	100
2	Rf-K	Φ = 8	621	100
2	Rf*H4-K	Φ = 8	* 627 *	100

! Coloring according to RAL color scale

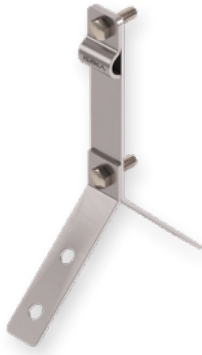
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-N	Φ = 8	607	80
3	Rf-N	Φ = 8	622	80
3	Rf-N	Φ = 10	623	80
3	Rf*H4-N	Φ = 8	626	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Cu-V	Φ = 8	* 608 *	50
4	Rf-V	Φ = 8 - 10	* 624 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf-V	P 20x3	* 625 *	50



* upon request



SON07 Roof ridge fastener

Roof ridge conductor fastener with a screw and washer is appropriate for triangular concrete and fire-baked roof coverings.

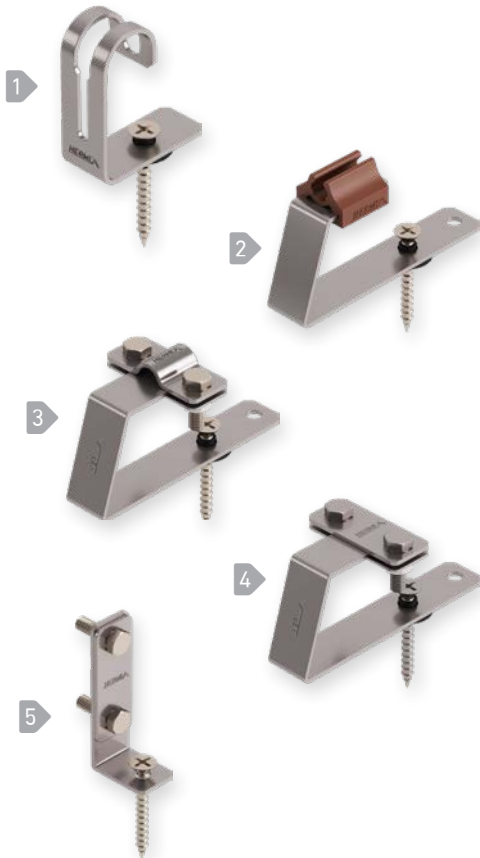
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	$\Phi = 8 - 10$	* 708 *	50
Rf-V	$\Phi = 8 - 10$	* 724 *	50



SON08 Roof ridge fastener

Roof ridge conductor fastener with a screw and washer is appropriate for roofing slates or corrugated bituminized roof coverings such as TEGULA, GUTANIT, ONDULINE, sheet metal roof coverings such as LINDAB, S-METAL and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-N	$\Phi = 8$	807	100
Rf-N	$\Phi = 8$	822	100
Rf-N	$\Phi = 10$	823	100
Rf/PVC brown-N	$\Phi = 8$	8220	100



SON14 Roof ridge fastener

Roof ridge conductor fastener with a screw and rubber seal is appropriate for roofing slates or corrugated bituminized roof coverings such as TEGULA, GUTANIT, ONDULINE, and roofs already covered with sheet metal coverings such as GERARD, DECRA, HOSEKRA, ALUMET, METALKO, METROBOND, LINDAB, S-METAL and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	$\Phi = 8$	1409	100
1	Rf-K	$\Phi = 8$	1421	100
1	Rf*H4-K	$\Phi = 8$	* 1427 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-N	$\Phi = 8$	1407	100
2	Rf-N	$\Phi = 8$	1422	100
2	Rf-N	$\Phi = 10$	1423	100
2	Rf/PVC brown-N	$\Phi = 8$	14220	100
2	Rf/PVC brown-N	$\Phi = 10$	14230	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-V	$\Phi = 8$	* 1408 *	50
3	Rf-V	$\Phi = 8 - 10$	* 1424 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V	P 20x3	* 1425 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf-V	P 20x3	425	100

* upon request



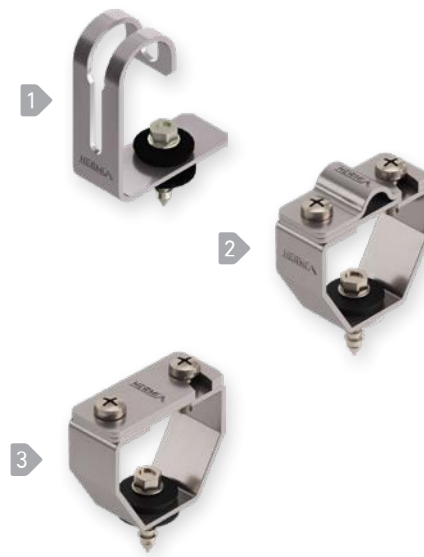
SON16 Roof ridge fastener

Roof ridge conductor fastener with a screw and rubber seal is appropriate for METAL SHEET PANEL coverings such as TRIMO and the like, fibrocement roof coverings such as SALONIT VALOVITKA and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	Ø = 8	11621	120
1	Rf*H4-K	Ø = 8	* 11623 *	120

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Ø = 8 - 10	11622	120
2	Rf*H4-V	Ø = 8 - 10	11627	120

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	P 20x3	11625	120
3	Rf-V	P 30x3,5	11626	120
3	Rf*H4-V	P 20x3	* 11628 *	120
3	Rf*H4-V	P 30x3,5	* 11629 *	120



SON20 L Roof ridge fastener

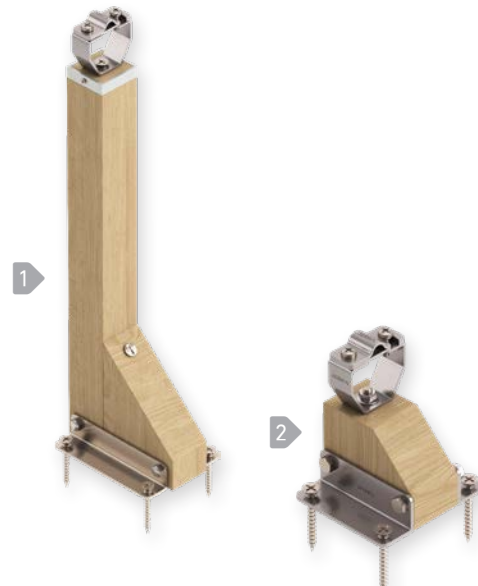
Roof ridge conductor fastener, made of oak tree wood is appropriate for wooden roof coverings and other flammable roof coverings.

SON20 L Bracket height: 40 cm

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	wood/Rf-V	Ø = 8 - 10	12032	4
1	wood/Rf*H4-V	Ø = 8 - 10	* 12037 *	4

SON20 L-B Bracket height: 10 cm

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	wood/Rf-V	Ø = 8 - 10	12034	4



* upon request



SON ROOF FASTENERS

SON roof conductor fasteners are designed for fitting on-roof conductors on the roof sides or roof tiles. Particular roof conductor fasteners are adapted to a specific type of roof tiles, so that the installation of the conductor to the fastener is simple and easy. The roof conductor is fixed without screwing, except in cases where the conductor can be screwed.

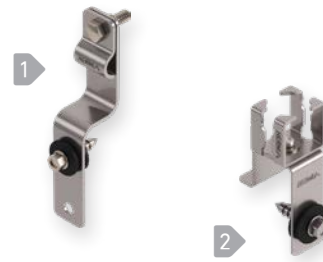


SON04 A Roof fastener

Roof conductor fastener, is appropriate for installation on an attica covered with a sheet metal border.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V	$\Phi = 8 - 10$	426	100
1	Rf*H4	$\Phi = 8 - 10$	428	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-KD	$\Phi = 8$	429	150



SON04 C Roof fastener

Roof conductor fastener, is appropriate for installation on an attica covered with a sheet metal border.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	$\Phi = 8 - 10$	431	50



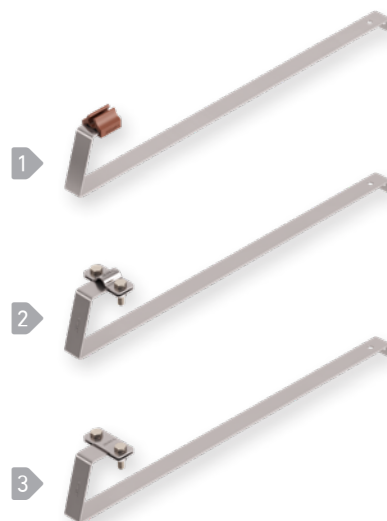
SON12 Roof fastener

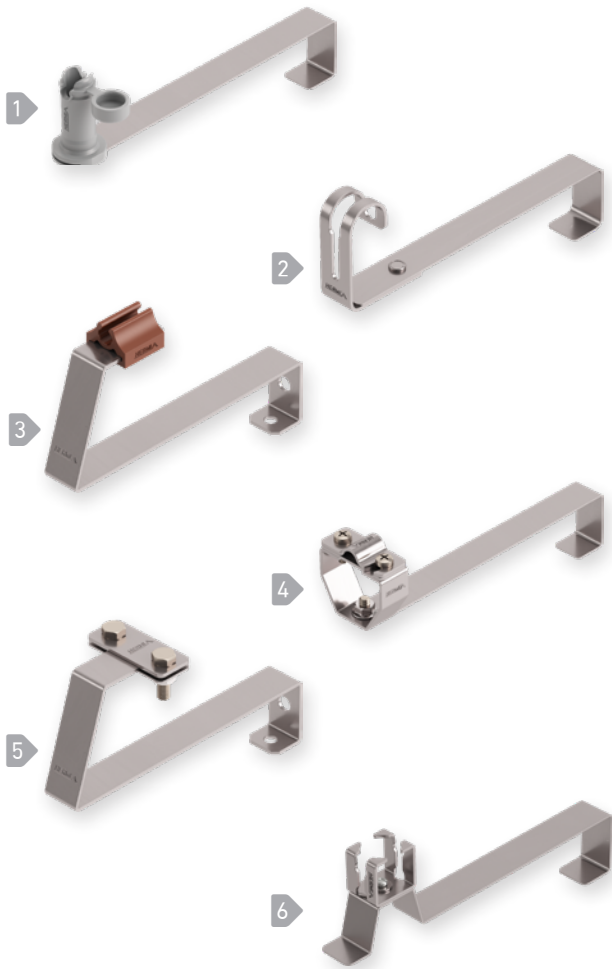
Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as BRAMAC, BOBROVEC, SKRILAVEC, NIBRA D55 and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-N	$\Phi = 8$	11207	80
1	Rf-N	$\Phi = 8$	11222	80
1	Rf-N	$\Phi = 10$	11223	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-V	$\Phi = 8$	* 11208 *	50
2	Rf-V	$\Phi = 8 - 10$	* 11224 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	P 20x3	* 11225 *	50





SON12 A Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as BRAMAC (MARKANT, ALPSKI, MEDITERAN, KLASIK, DONAV, ADRIA) TONDACH (CONTINENTAL, EFEKT, FRAGMENT, ZAREZNI BOBROVEC, NORMA), MONDO L42, ERGOLDSBACHER GROSSFALZZIEGEL XXL D, KIKINDA (VELIKA KIKINDA M-333, MALA KIKINDA M272, CLASSIC M-002, BANAT M-997, PVC), POLET M-555, PIKA, NELASKAMP NIBRA, BENDERS, ETERNIT, concrete roof coverings such as WIENER NORMA, DVOJNI ZAREZNIK and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf N-N grey	Φ = 8	112301	80
1	Rf N-N brown	Φ = 8	112302	80
1	Rf N-N brick red	Φ = 8	112303	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-K	Φ = 8	112090	80
2	Rf-K	Φ = 8	112210	80
2	Rf*H4-K	Φ = 8	* 112217 *	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-N	Φ = 8	112070	80
3	Rf-N	Φ = 8	112220	80
3	Rf-N	Φ = 10	112230	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V	Φ = 8 - 10	112211	80
5	Rf-V	P 20x3	112214	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
6	Rf-KD	Φ = 8	112204	50



SON13 A Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked coverings such as TONDACH (BOBROVEC, ZAREZNI BOBROVEC), BOBROVEC, KIKINDA BANAT M-997 and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf N-N grey	Φ = 8	113301	100
1	Rf N-N brown	Φ = 8	113302	100
1	Rf N-N brick red	Φ = 8	113303	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-K	Φ = 8	113090	100
2	Rf-K	Φ = 8	113210	100
2	Rf*H4-K	Φ = 8	* 113217 *	100

! Coloring according to RAL color scale

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-N	Φ = 8	* 113070 *	50
3	Rf-N	Φ = 8	* 113220 *	50
3	Rf-N	Φ = 10	* 113230 *	50

* upon request



SON14 Roof fastener

Roof conductor fastener with a screw and rubber seal is appropriate for roofing slates or corrugated bituminized roof coverings such as TEGULA, GUTANIT, ONDULINE, and roofs already covered with sheet metal coverings such as GERARD, DECRA, HOSEKRA, ALUMET, METALKO, METROBOND, LINDAB, S-METAL and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	1409	100
1	Rf-K	Φ = 8	1421	100
1	Rf*H4-K	Φ = 8	* 1427 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-N	Φ = 8	1407	100
2	Rf-N	Φ = 8	1422	100
2	Rf-N	Φ = 10	1423	100
2	Rf/PVC brown-N	Φ = 8	14220	100
2	Rf/PVC brown-N	Φ = 10	14230	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-V	Φ = 8	* 1408 *	50
3	Rf-V	Φ = 8 - 10	* 1424 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V	P 20x3	* 1425 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf-V	P 20x3	425	100



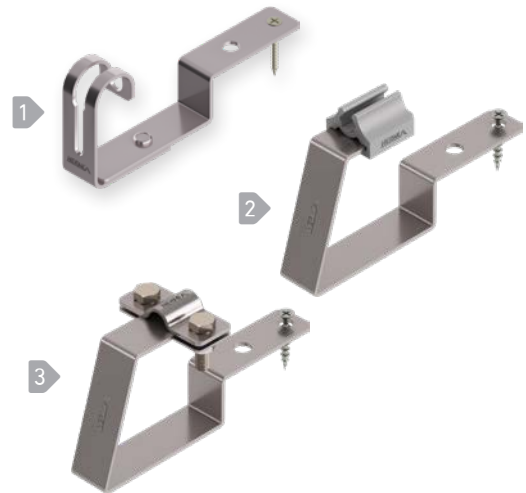
SON15 Roof fastener

Roof conductor fastener, is appropriate for roof coverings such as GERARD, DECRA, HOSEKRA, ALUMET, METROTILE, METALKO, METROBOND, ISOLA, ROSER and the like, installation when covering the roof.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	Φ = 8	11521	100
1	Rf*H4-K	Φ = 8	* 11527 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-N	Φ = 8	11522	50
2	Rf-N	Φ = 10	11523	50
2	Rf/PVC brown-N	Φ = 8	115220	50
2	Rf/PVC brown-N	Φ = 10	115230	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	Φ = 8 - 10	* 11524 *	50



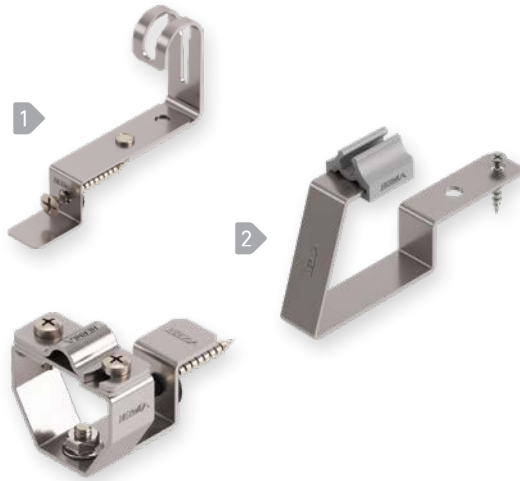
SON15 Q Roof fastener

Roof ridge conductor fastener, is appropriate for sheet metal roof covering DECRA QUADRO; installation when covering the roof.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	Φ = 8	11529	100



* upon request



SON15 A Roof fastener

Roof conductor fastener, is appropriate for roof coverings such as GERARD, DECRA, HOSEKRA, ALUMET, METROTILE, METALKO, METROBOND, ISOLA, ROSER and the like, installation when covering the roof.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	Φ = 8	115225	100
1	Rf*H4-K	Φ = 8	* 115228 *	100

! Coloring according to RAL color scale

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-N	Φ = 8	115222	100
2	Rf-N	Φ = 10	115232	100
2	Rf/PVC brown-N	Φ = 8	115221	100

! Coloring according to RAL color scale

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	Φ = 8 - 10	115227	80



SON N-N Roof fastener

Roof conductor fastener with a screw and rubber seal.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N grey	Φ = 8	116301	150
N-N brown	Φ = 8	116302	150
N-N brick red	Φ = 8	116303	150



SON N-NS Roof fastener

Roof conductor fastener without screw material.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N grey	Φ = 8	116304	250
N-N brown	Φ = 8	116305	250
N-N brick red	Φ = 8	116306	250



SON N-NS Roof fastener

Roof conductor fastener with additional Rf plate, intended for attachment to existing screws.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-NS/Rf grey	Φ = 8	116307	250
N-NS/Rf brown	Φ = 8	116308	250
N-NS/Rf brick red	Φ = 8	116309	250

* upon request



SON16 Roof fastener

Roof conductor fastener with a screw and rubber seal is appropriate for METAL SHEET PANEL coverings such as TRIMO and the like, fibrocement roof coverings such as SALONIT VALOVITKA and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	Φ = 8	11621	120
1	Rf*H4-K	Φ = 8	* 11623 *	120
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	11622	120
2	Rf*H4-V	Φ = 8 - 10	11627	120
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	P 20x3	11625	120
3	Rf-V	P 30x3,5	11626	120
3	Rf*H4-V	P 20x3	* 11628 *	120
3	Rf*H4-V	P 30x3,5	* 11629 *	120
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-KD	Φ = 8	11631	150
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf-KDT	Φ = 8	11632	80



SON16 A Roof fastener

Roof conductor fastener with a screw and rubber seal is appropriate for SHEET METAL PANEL coverings such as TRIMO (TPO DOM) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	Φ = 8 - 10	116220	120



SON16 C Roof fastener

Roof conductor fastener with a screw and rubber seal is appropriate for SHEET METAL PANEL coverings.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	Φ = 8 - 10	* 116222 *	70



SON16 D Roof fastener

Roof conductor fastener with a screw and rubber seal is appropriate for SHEET METAL PANEL coverings.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	Φ = 8	116227	40



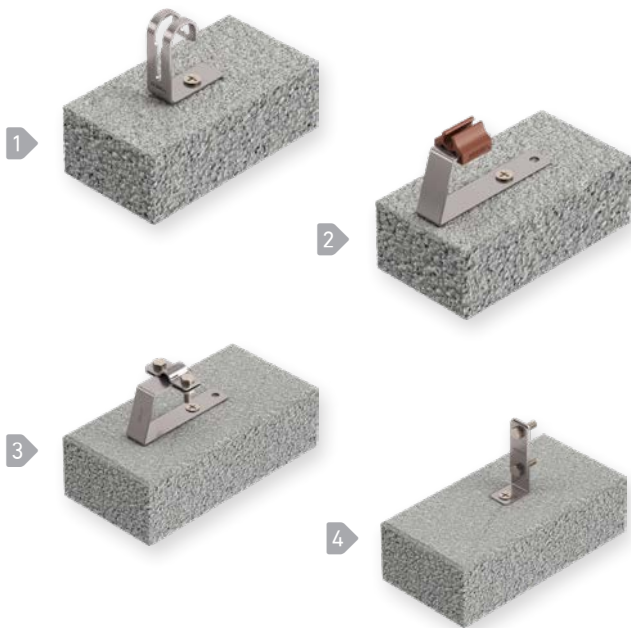
SON16 E Roof fastener

Roof bracket in a set with a gasket and screw, suitable for SHEET METAL roofing.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	Φ = 8 - 10	*116228*	40



* upon request



SON17 Roof fastener

Roof conductor fastener, roof conductor fastener is appropriate for FLAT ROOFS with BITUMEN HIDROISULATION and the like. The holder consists from a **concrete block (Product code 40)** and a **lightning conductor fastener (SON14)**. Order the **block and SON14 fastener** separately.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	11709	
1	Rf-K	Φ = 8	11721	
1	Rf*H4-K	Φ = 8	* 11727 *	

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-N	Φ = 8	11707	
2	Rf-N	Φ = 8	11722	
2	Rf-N	Φ = 10	11723	

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-V	Φ = 8	* 11708 *	
3	Rf-V	Φ = 8 - 10	* 11724 *	

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V	P 20x3	* 11725 *	



SON17 consists of: concrete block for SON17

A concrete block with a plug to which the bracket is attached.

MATERIAL	PROD. CODE	PACKAGE
concrete	40	1



SON14 Roof fastener

Roof ridge conductor fastener with a screw and rubber seal is appropriate for roofing slates or corrugated bituminized roof coverings such as TEGULA, GUTANIT, ONDULINE, and roofs already covered with sheet metal coverings such as GERARD, DECRA, HOSEKRA, ALUMET, METALKO, METROBOND, LINDAB, S-METAL and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	1409	100
1	Rf-K	Φ = 8	1421	100
1	Rf*H4-K	Φ = 8	* 1427 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-N	Φ = 8	1407	100
2	Rf-N	Φ = 8	1422	100
2	Rf-N	Φ = 10	1423	100
2	Rf/PVC brown-N	Φ = 8	14220	100
2	Rf/PVC brown-N	Φ = 10	14230	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Cu-V	Φ = 8	* 1408 *	50
3	Rf-V	Φ = 8 - 10	* 1424 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V	P 20x3	* 1425 *	50

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf-V	P 20x3	425	100

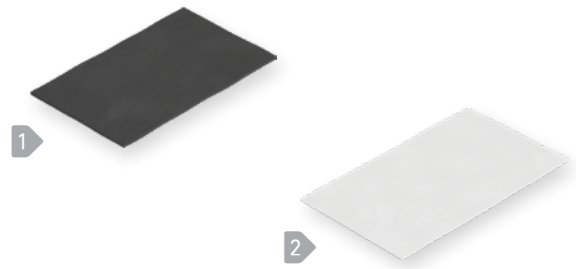
* upon request



Horizontal strip used under the concrete block

HORIZONTAL STRIP used UNDER THE CONCRETE BLOCK 250 x 150 mm prevents possible damage on roof coverings caused by the block.

TYPE	MATERIAL	PROD. CODE	PACKAGE
1	■ Bitumen	117225	50
2	■ Sika	117238	100



SON17 A Roof fastener

Roof conductor fastener, is appropriate for FLAT ROOFS covered with PVC roof coverings such as SIKA, PROTAN, SARNAFIL and SINTAFOIL and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	■ PP	Φ = 8	117220	40
2	■ PP/Rf-V	Φ = 8 - 10	117236	50



Fixing tape for SON17 A

FIXING TAPE for SON17 A, designed for fixing a roof conductor fastener SON 17 A for roofs covered with PVC roof coverings such as SIKA, PROTAN, SARNAFIL, SINTAFOIL and the like. The tape MUST BE from the same material as the roof covering on which the fastener is fixed. **ATTENTION: before ordering please check the producer and the type of roof covering! The tape must be attached according to the instructions of the roof covering producer.**

MATERIAL	PROD. CODE	PACKAGE
■ Sika	117221	1
■ Protan	117222	1
■ Sintafol	117223	1



SON17 B Roof fastener

Roof conductor fastener, appropriate for flat roofs with different types of roof coverings. No filling. The fastener is filled with granular material.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
■ PP	Φ = 8 - 10	117226	40



SON17 C Roof fastener

Roof conductor fastener, appropriate for flat roofs with bitumen isolation and the like. Composition: fastener (Product code 117227) and concrete block (Product code 41). Individual parts can be supplied.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	■ PP	Φ = 8 - 10	117227	40
2	■ concrete		41	1

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	■ PP + concrete	Φ = 8 - 10	117237	10



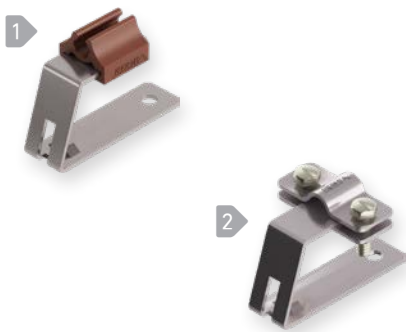
* upon request



SON17 D Roof fastener

Roof bracket, suitable for flat roofs with bitumen isolation and similar. The bracket is intended to ensure the gap distances between the interception lead and conductive parts (cable paths, ...) The height of the bracket is 610 mm.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V/PVC/concrete	Φ = 8 - 10	*117232*	1



SON18 Roof fastener

Roof conductor fastener, appropriate for roof coverings such as ESAL (Roofing Slates), ETERNIT and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-N	Φ = 8	11822	100
1	Rf-N	Φ = 10	11823	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	* 11824 *	100



SON18 A Roof fastener

Roof conductor fastener, appropriate for roof coverings such as ESAL (Roofing Slates), ETERNIT and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N grey	Φ = 8	11831	60
N-N brown	Φ = 8	11832	60
N-N brick red	Φ = 8	11833	60



SON19 Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (FUTURA, FUTURA 2002), JUNGMEIER, MEDITERAN PLUS and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	11909	100
Rf-K	Φ = 8	11921	100
Rf*H4-K	Φ = 8	* 11927 *	100

* upon request



SON20 L Roof fastener

Roof ridge conductor fastener, made of oak tree wood is appropriate for wooden roof coverings and other flammable roof coverings.

SON20 L

Bracket height: 40 cm

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	wood/Rf-V	Φ = 8 - 10	12032	4
1	wood/Rf*H4-V	Φ = 8 - 10	* 12037 *	4

SON20 L-B

Bracket height: 10 cm

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	wood/Rf-V	Φ = 8 - 10	12034	4



SON22 Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as TONDACH (LANDDACH), COMPACT, CONSTANT, CONTRAST, CONSTANT PLUS, FRAGMENT PLUS, EFEKTPLUS, BOGENER INNOVO 12, POLET M-555 and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	12209	100
1	Rf-K	Φ = 8	12221	100
1	Rf*H4-K	Φ = 8	* 12227 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-N	Φ = 10	* 12223 *	100



SON23 Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as TONDACH (SULM), CREATON (SINFONIE, HARMONIE), UNIVERSO L43, POLET M-222, KIKINDA (CLASSIC M-002, HOLANDEZ M-993) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	12309	100
Rf-K	Φ = 8	12321	100
Rf*H4-K	Φ = 8	* 12327 *	100

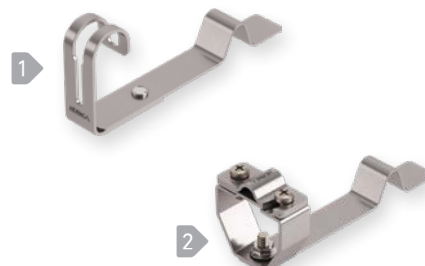


SON24 Roof fastener

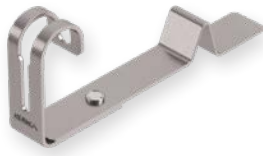
Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as TONDACH (CARMEN), CREATON (KERA-PFANNE 2003), JUNGMEIER (COSMO) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	12409	100
1	Rf-K	Φ = 8	12421	100
1	Rf*H4-K	Φ = 8	* 12427 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	* 12422 *	100



* upon request

**SON25 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (MAGNUM) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	12509	100
Rf-K	Φ = 8	12521	100
Rf*H4-K	Φ = 8	* 12527 *	100

**SON26 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (DOMINO), TONDACH (FIGARO, FIDELIO, JUPITER, KONTINENTAL PLUS, LANDACH VZ) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	12609	100
1	Rf-K	Φ = 8	12621	100
1	Rf*H4-K	Φ = 8	* 12627 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Cu-N	Φ = 8	12607	80
2	Rf-N	Φ = 10	* 12623 *	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	Φ = 8 - 10	12624	80
4	Rf-V	PL 20x3	12625	80

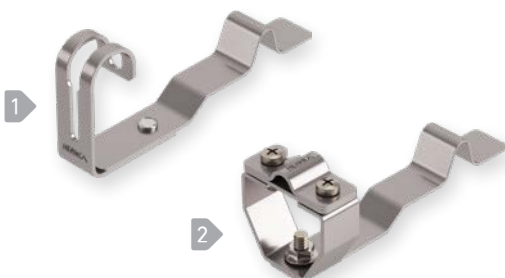
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
5	Rf N-N	Φ = 8	12603	100

**SON27 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (BALANCE) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	12709	100
1	Rf-K	Φ = 8	12721	100
1	Rf*H4-K	Φ = 8	* 12727 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-N	Φ = 10	* 12723 *	80

**SON28 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (ELEGANZ) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	12809	100
1	Rf-K	Φ = 8	12821	100
1	Rf*H4-K	Φ = 8	* 12827 *	100




TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	* 12822 *	100

* upon request



SON29 Roof fastener




Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as TONDACH (MULDE, CONTINENTAL-22, CONTINENTAL PLUS), PFLEIDERER TERRA EXTRA, BRAS TOPAZ 13 and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
 Cu-K	Φ = 8	12909	100
 Rf-K	Φ = 8	12921	100
 Rf*H4-K	Φ = 8	* 12927 *	100



SON40 Roof fastener




Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (RUSTICO) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
 Cu-K	Φ = 8	14009	100
 Rf-K	Φ = 8	14021	100
 Rf*H4-K	Φ = 8	* 14027 *	100



SON41 Roof fastener




Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (RATIO) and the like.

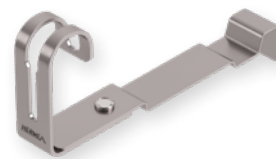
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
 Cu-K	Φ = 8	14109	100
 Rf-K	Φ = 8	14121	100
 Rf*H4-K	Φ = 8	* 14127 *	100



SON42 Roof fastener




Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as WAZTENPUTL, WALTHER DACHZIEGEL TRADITIONAL (VELIKI ZAREZNIK) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
 Cu-K	Φ = 8	14209	100
 Rf-K	Φ = 8	14221	100
 Rf*H4-K	Φ = 8	* 14227 *	100



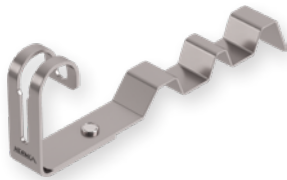
SON43 Roof fastener

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as SKRILAVEC and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
 Cu-K	Φ = 8	* 14309 *	100
 Rf-K	Φ = 8	* 14321 *	100
 Rf*H4-K	Φ = 8	* 14327 *	100



* upon request

**SON44 Roof fastener**

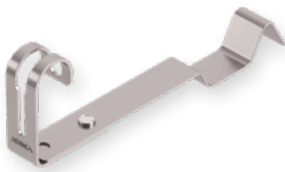
Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as WALTHER DACHZIEGEL (model W5) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	14409	100
Rf-K	Φ = 8	14421	100
Rf*H4-K	Φ = 8	* 14427 *	100

**SON45 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as ERLUS (KARAT) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	14509	100
Rf-K	Φ = 8	14521	100
Rf*H4-K	Φ = 8	* 14527 *	100

**SON46 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as ERLUS (E58 S) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	* 14609 *	100
Rf-K	Φ = 8	* 14621 *	100
Rf*H4-K	Φ = 8	* 14627 *	100

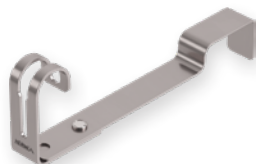
**SON47 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as CREATON (RAPIDO) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	14709	100
1	Rf-K	Φ = 8	14721	100
1	Rf*H4-K	Φ = 8	* 14727 *	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	Φ = 8 - 10	* 14724 *	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V	P 20x3	* 14725 *	80

**SON48 Roof fastener**

Roof conductor fastener, is appropriate for concrete and fire-baked roof coverings such as RÖBEN (MONZA PLUS) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	Φ = 8	14809	100
Rf-K	Φ = 8	14821	100
Rf*H4-K	Φ = 8	* 14827 *	100

* upon request



SON49 Roof fastener

Roof conductor fastener is appropriate for fire-baked roof coverings such as KOREC and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	Φ = 8	14909	50
1	Rf-K	Φ = 8	14921	50
1	Rf*H4-K	Φ = 8	14927	50
2	Rf-V	Φ = 8 - 10	14924	25
3	Rf-V	P 20x3	14925	25



SON50 Roof fastener

Roof conductor fastener, universal, is appropriate for concrete and fire-baked roof tiles. The fastener must be adapted to the shape of the tile at fitting.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	Φ = 8	15021	100

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf N-N grey	Φ = 8	15301	80
2	Rf N-N brown	Φ = 8	15302	80
2	Rf N-N brick red	Φ = 8	15303	80

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-KD	Φ = 8	15004	50



SON50 D Roof fastener

Roof conductor fastener, universal, is appropriate for concrete and fire-baked roof tiles. The fastener must be adapted to the shape of the tile at fitting.

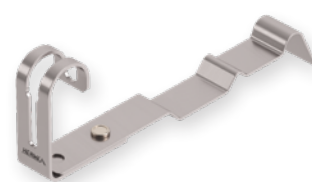
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-KD	Φ = 8	15014	50

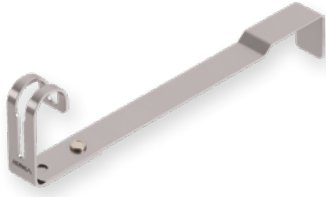


SON51 T Roof fastener

Roof conductor fastener is appropriate for fire-baked roof coverings such as TONDACH (Ikarus) and the like.

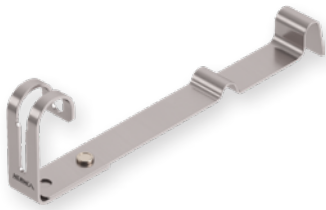
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	Φ = 8	15121	80



**SON52 T Roof fastener**

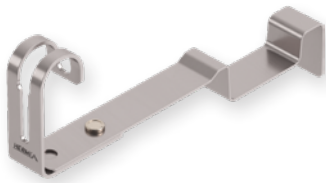
Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as TONDACH (Figaro, Fidelio, Vineam) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	$\Phi = 8$	15221	60
Rf-V	$\Phi = 8 - 10$	15222	50

**SON53 T Roof fastener**

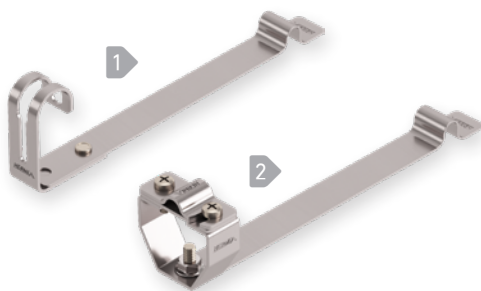
Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as TONDACH (Sulm Verschiebebeizel, Mediteran Plus) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-K	$\Phi = 8$	15309	80
Rf-K	$\Phi = 8$	15321	80

**SON54 T Roof fastener**

Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as TONDACH (Carmen) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	$\Phi = 8$	15421	80

**SON55 T Roof fastener**

Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as TONDACH (Saturn) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	$\Phi = 8$	15521	80
2	Rf-V	$\Phi = 8 - 10$	15524	80

**SON56 T-10 Roof fastener**

Roof conductor fastener is appropriate for fire-baked roof coverings such as KOREC and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	$\Phi = 8$	15621	50

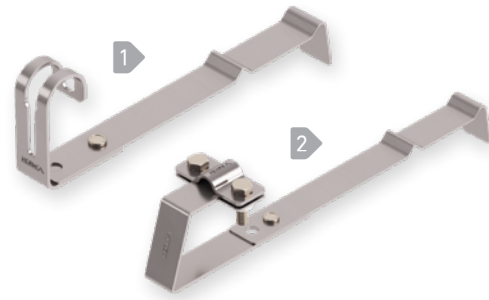
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SON57 T Roof fastener

Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as TONDACH (Figaro Deluxe) and the like.

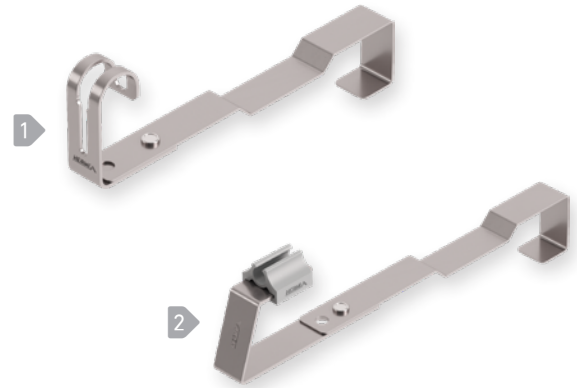
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	$\Phi = 8$	15721	100
2	Rf-V	$\Phi = 8 - 10$	15724	100



SON60 Roof fastener

Roof bracket, suitable for brick roofing BOGENER MAXIFALZZIEGEL and similar.

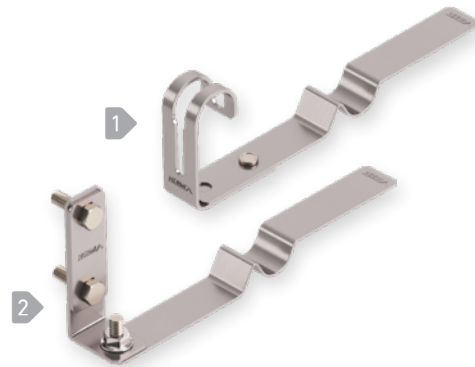
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Cu-K	$\Phi = 8$	16009	80
1	Rf-K	$\Phi = 8$	16021	80
1	Rf*H4-K	$\Phi = 8$	16027	80
TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-N	$\Phi = 10$	* 16023 *	80



SON61 Roof fastener

Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as CREATON (Romano) and the like.

TYPE	MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-K	$\Phi = 8$	16121	50
2	Rf-V	PL 20x3	16125	50



SON62 Roof fastener

Roof conductor fastener is appropriate for roof coverings such as PREFA and the like.

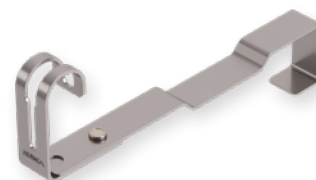
MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	$\Phi = 8$	16221	100



SON63 Roof fastener

Roof conductor fastener is appropriate for concrete and fire-baked roof coverings such as JUNGMEIER (Mondo) and the like.

MAT. / FIXING	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-K	$\Phi = 8$	16321	80



* upon request



ZON WALL FASTENERS

ZON on-wall conductor fasteners are designed for the installation of downlead conductors to the walls of the building. The fastener has to be fixed, so that it is always rectangular to the wall, irrespective of the borehole. The fasteners are made of stainless steel or they are plastic coated in white or brown colour. The conductor is screwed to the support element with screws (ZON01, 02, 03, 04, 08, 09, 10). In our sales assortment we also have a new support element made of a synthetic material. The conductor can be fixed without screwing (ZON01 N-N, 02 N-N, 03 N-N, 04 N-N, 08 N-N, 09 N-N, 10 N-N).



ZON03 Wall fastener

On-wall conductor fastener, made of stainless steel, is appropriate for solid walls with screw length of 50 mm and a wall plug $\Phi 8$ mm, the conductor is **screwed** to the fastener.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	20322	100
1	Rf*H4-V		$\Phi = 8 - 10$	20327	100
1	Rf/PVC-V	white	$\Phi = 8 - 10$	20301	100
1	Rf/PVC-V	brown	$\Phi = 8 - 10$	203010	100
1	FeZn-H-V		$\Phi = 8 - 10$	20321	100

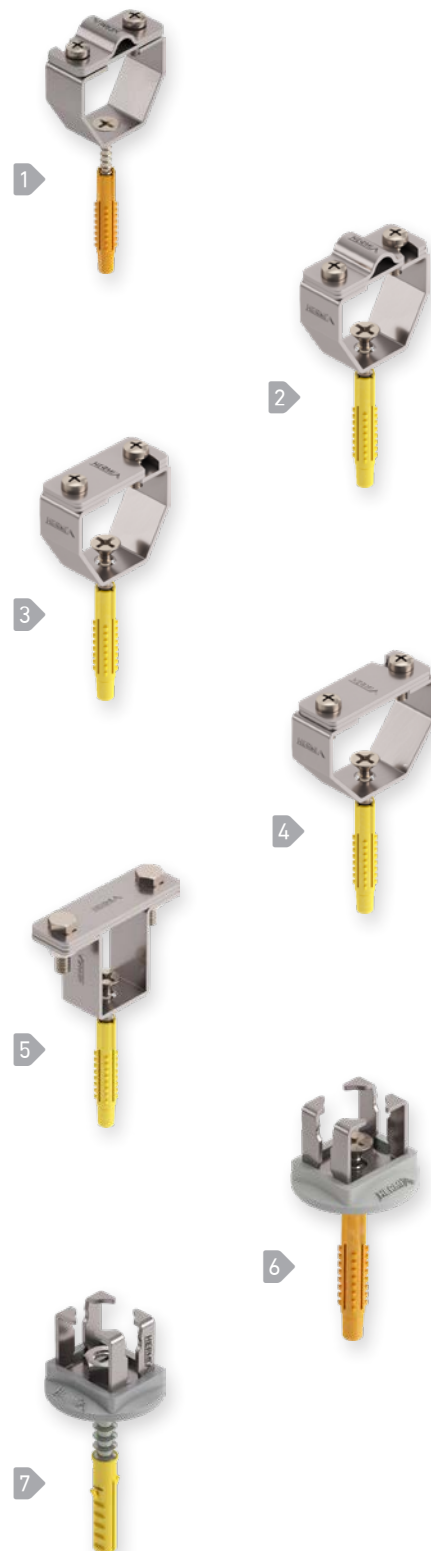
TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		16-35 mm ²	20335	100
2	Rf-V		50 mm ²	20343	100
2	Rf-V		70 mm ²	20334	100
2	Rf-V		95 mm ²	20333	100
2	Rf-V		120 mm ²	20324	100
2	Rf-V		150 mm ²	20330	100
2	Rf-V		185 mm ²	20331	100
2	Rf-V		240 mm ²	20332	100
2	Rf*H4-V		16-35 mm ²	20341	100
2	Rf*H4-V		50 mm ²	20342	100
2	Rf*H4-V		70 mm ²	20340	100
2	Rf*H4-V		95 mm ²	20339	100
2	Rf*H4-V		120 mm ²	20326	100
2	Rf*H4-V		150 mm ²	20336	100
2	Rf*H4-V		185 mm ²	20337	100
2	Rf*H4-V		240 mm ²	20338	100

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V		P up to 25 x 4	20325	100
3	Rf*H4-V		P up to 25 x 4	20328	100

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-V		P up to 30 x 3,5	203250	100
4	Rf*H4-V		P up to 30 x 3,5	20329	100

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
	Rf-V		$\Phi = 20$	20346	100
5	Rf-V		P up to 40 x 4	203251	80

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
6	Rf-KD		$\Phi = 8$	20344	150
7	Rf-KDS		$\Phi = 8$	20347	100



ZON03 N-N Wall fastener

On-wall conductor fastener, made of a synthetic material sustainable to atmospheric influences (N), appropriate for solid walls with screw length of 50 mm and a wall plug $\Phi 8$ mm, the conductor is fixed to the fastener **without screwing**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	$\Phi = 8$	22322	150
N-N	brown	$\Phi = 8$	22333	150
N-N	brick red	$\Phi = 8$	22344	150



* upon request



ZON02 Wall fastener

On-wall conductor fastener, made of stainless steel is appropriate for hollow walls with insulation up to 50 mm, with screw length of 100 mm and a wall plug Φ 10 mm; the conductor is **screwed** to the fastener.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	20222	50
1	Rf*H4-V		$\Phi = 8 - 10$	20227	50
1	Rf/PVC-V	white	$\Phi = 8 - 10$	20201	50
1	Rf/PVC-V	brown	$\Phi = 8 - 10$	202010	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 25 x 4	20225	50
2	Rf*H4-V		P up to 25 x 4	20228	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 30 x 3,5	202250	50
2	Rf*H4-V		P up to 30 x 3,5	20229	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V		P up to 40 x 4	202251	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-KD		$\Phi = 8$	20244	80



ZON02 N-N Wall fastener

On-wall conductor fastener, made of a synthetic material sustainable to atmospheric influences (N), appropriate for hollow walls with insulation up to 50 mm, with screw length of 100 mm and a wall plug Φ 10 mm, the conductor is fixed to the fastener **without screwing**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	$\Phi = 8$	22222	50
N-N	brown	$\Phi = 8$	22233	50
N-N	brick red	$\Phi = 8$	22244	50



ZON01 Wall fastener

On-wall conductor fastener, made of stainless steel is appropriate for hollow walls with insulation up to 100 mm, with screw length of 160 mm and a wall plug $\Phi 10$ mm, the conductor is screwed to the fastener.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	20122	50
1	Rf*H4-V		$\Phi = 8 - 10$	20127	50
1	Rf/PVC-V	white	$\Phi = 8 - 10$	20101	50
1	Rf/PVC-V	brown	$\Phi = 8 - 10$	201010	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 25 x 4	20125	50
2	Rf*H4-V		P up to 25 x 4	20128	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 30 x 3,5	201250	50
2	Rf*H4-V		P up to 30 x 3,5	20129	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V		P up to 40 x 4	201251	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-KD		$\Phi = 8 - 10$	20144	50



ZON01 N-N Wall fastener

on-wall conductor fastener, made of a synthetic material sustainable to atmospheric influences (N), appropriate for hollow walls with insulation up to 100 mm, with screw length of 160 mm and a wall plug $\Phi 10$ mm, the conductor is fixed to the fastener without screwing.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	$\Phi = 8$	22122	50
N-N	brown	$\Phi = 8$	22133	50
N-N	brick red	$\Phi = 8$	22144	50



* upon request



ZON08 Wall fastener

On-wall conductor fastener, made of stainless steel is appropriate for hollow walls with insulation up to 140 mm, with screw length of 200 mm and a wall plug $\Phi 10$ mm, the conductor is **screwed** to the fastener.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	20822	50
1	Rf*H4-V		$\Phi = 8 - 10$	20827	50
1	Rf/PVC-V	white	$\Phi = 8 - 10$	20801	50
1	Rf/PVC-V	brown	$\Phi = 8 - 10$	20802	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 25 x 4	20825	50
2	Rf*H4-V		P up to 25 x 4	20828	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 30 x 3,5	20826	50
2	Rf*H4-V		P up to 30 x 3,5	20829	50

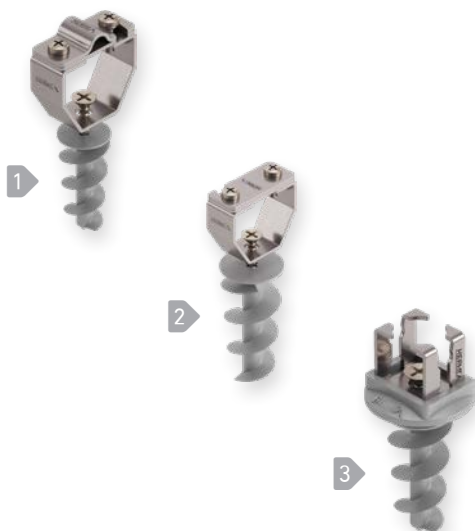
TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V		P up to 40 x 4	20830	50



ZON08 N-N Wall fastener

On-wall conductor fastener, made of a synthetic material sustainable to atmospheric influences (N), appropriate for hollow walls with insulation up to 140 mm, with screw length of 200 mm and a wall plug $\Phi 10$ mm, the conductor is fixed to the fastener **without screwing**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	$\Phi = 8$	22822	50
N-N	brown	$\Phi = 8$	22833	50
N-N	brick red	$\Phi = 8$	22844	50



ZON09 Wall fastener

On-wall conductor fastener, made of stainless steel is appropriate for fixing on thermal insulation lining (outdoor facade) from foamed or extruded polystyrene (styrofoam or styrodur) with thickness of 50 mm or more. The conductor is **screwed** to the fastener.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	22306	40
2	Rf-V		PL 25x3	22309	40

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-KD		$\Phi = 8$	22310	50
3	Rf-KDS		$\Phi = 8$	22311	50

* upon request



ZON09 N-N Wall fastener

On-wall conductor fastener, made of a synthetic material sustainable to atmospheric influences (N) is appropriate for fixing on thermal insulation lining (outdoor facade) from foamed or extruded polystyrene (styrofoam or styrodur) with thickness of 50 mm or more. The conductor is fixed to the fastener **without screwing**.



MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	Φ = 8	22305	40
N-N	brown	Φ = 8	22307	40
N-N	brick red	Φ = 8	22308	40

ZON10 Wall fastener

Wall bracket, made of stainless steel (Rf), suitable for hollow walls with isolation up to 200 mm, with a 300 mm screw and Φ10 mm PVC insert, **the lead is attached to bracket with screws**.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		Φ = 8 - 10	21022	50
1	Rf*H4-V		Φ = 8 - 10	21027	50
1	Rf/PVC-V	white	Φ = 8 - 10	21020	50
1	Rf/PVC-V	brown	Φ = 8 - 10	21021	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 25 x 4	21025	50
2	Rf*H4-V		P up to 25 x 4	21028	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V		P up to 30 x 3,5	21026	50
2	Rf*H4-V		P up to 30 x 3,5	21029	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
3	Rf-V		P up to 40 x 4	21030	50

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
4	Rf-KD		Φ = 8	21034	50



ZON10 N-N Wall fastener

Wall bracket, made of stainless steel (Rf), suitable for hollow walls with isolation up to 200 mm, with a 300 mm screw and Φ10 mm PVC insert, **the lead is attached to bracket with screws**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	Φ = 8	21031	50
N-N	brown	Φ = 8	21032	50
N-N	brick red	Φ = 8	21033	50



* upon request



ZON03 DIREKT Wall fastener

On-wall conductor fastener, made of stainless steel (Rf) is appropriate for fixing a lightning conductor directly to a concrete wall if the conductor is installed under roughcast, with screw length of 50 mm and a wall plug $\Phi 8$ mm; the conductor is **screwed to the fastener**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V		$\Phi = 8 - 10$	21322	200



ZON04 Wall fastener

On-wall conductor fastener, made of stainless steel (Rf), is appropriate for wooden and flammable walls, the conductor is **screwed to the fastener**.

TYPE	MAT. / FIXING	HEIGHT (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V	100	$\Phi = 8 - 10$	20422	50
1	Rf-V	upon request	$\Phi = 8 - 10$	* 20421 *	50
1	Rf*H4-V	100	$\Phi = 8 - 10$	20427	50

TYPE	MAT. / FIXING	HEIGHT (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
2	Rf-V	100	P up to 25 x 4	20425	50
2	Rf-V	100	P up to 30x3,5	20426	50



ZON04 N-N Wall fastener

Wall bracket, made of artificial material, durable in atmosphere (N), suitable for wooden, flammable walls, the lead is attached to bracket **without screws**.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
N-N	grey	$\Phi = 8$	20435	50
N-N	brown	$\Phi = 8$	20436	50
N-N	brick red	$\Phi = 8$	20437	50

* upon request



ZON04 P Wall fastener

Wall bracket, made of stainless steel (Rf), suitable for sheet metal roofs and similar, the lead is attached to bracket with screws.

TYPE	MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf-V		$\Phi = 8 - 10$	20433	25
2	Rf-V		P up to 25 x 4	20434	25



ZON04 L Wall fastener

On-wall conductor fastener, made of oak tree wood is appropriate for wooden and flammable walls, the conductor is screwed to the fastener.

MAT. / FIXING	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
wood/Rf-V		$\Phi = 8 - 10$	20432	32

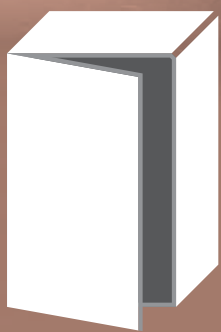


ZON20 Wall fastener

ZON20 is intended as an earth rod/grounding holder. The brackets are mounted at a distance of up to 1m with a screw M6x50 and a wall insert. Suitable for earth rods/groundings of $\Phi 16 - 20$ mm.

MAT. / FIXING	DIMENSION (mm)	PROD. CODE	PACKAGE
Rf-V	$\Phi = 16$	20366	50
Rf-V	$\Phi = 20$	20360	50





ZON MEASURING CABINETS

ZON measuring cabinets are designed for carrying out measuring joints in the wall of a building or in the ground when lightning protection is under roughcast. The frame of the cabinet is made of stainless steel or synthetic materials sustainable to atmospheric influences (PE, PVC). The covering of the cabinet is made of stainless steel with an option of plastic coating in white colour, of cast iron or a synthetic material sustainable to atmospheric influences (PE, PVC).



ZON05 In-wall measuring cabinet

In-wall measuring cabinet, 200 mm x 150 mm x 100 mm (D x W x H), the frame and cover are made of stainless steel (Rf) in one piece.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
Rf-V		20522	4
Rf/PVC-V	white	* 20722 *	4
Rf*H4		* 20527 *	4

! Coloring according to RAL color scale



ZON05-1 In-wall measuring cabinet

In-wall measuring cabinet, 200 mm x 300 mm x 100 mm (D x W x H), the frame and cover are made of stainless steel (Rf) in one piece.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
Rf		20500	4

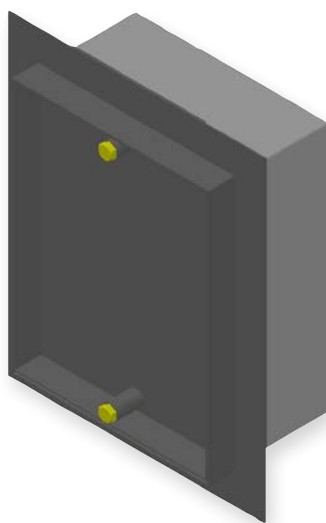




ZON05 A In-wall measuring cabinet

In-wall measuring cabinet, 200 mm x 150 mm x 100 mm (D x W x H), the frame of the cabinet is made of a synthetic material sustainable to atmospheric influences (PVC) and is installed when the wall is being built. The cover of the cabinet is made of stainless steel with an option of plastic coating in white color. The cover is mounted after the facade is finished and can be totally adjusted to the wall with a screw.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
■ PVC/Rf		20524	4
■ PVC/Rf - with a lock		20538	4
■ PVC/Rf/PVC	white	20528	4



ZON05 B In-wall measuring cabinet

In-wall measuring cabinet, 200 mm x 150 mm x 100 mm (D x W x H), the frame of the cabinet is made of a synthetic material sustainable to atmospheric influences (PVC) and is installed when the wall is being built. The cover of the cabinet is made of stainless steel. It is adapted to GLUEING STONE to the cover of the cabinet.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
■ PVC/Rf		* 900907 *	1

* upon request



ZON06 Drivable measuring cabinet

Drivable measuring cabinet, 325 mm x 225 mm x 150 mm (D x W x H), bearing capacity 5t, the frame of the cabinet is made of a synthetic material sustainable to atmospheric influences (PE). Its cover is made of cast iron.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
■ PE-cast iron	black	20525	1



ZON07 Drivable measuring cabinet

Drivable measuring cabinet, 225 mm x 125 mm x 100 mm (D x W x H), the frame of the cabinet is made of a synthetic material sustainable to atmospheric influences (PE). Its cover is made of cast iron.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
■ PE-cast iron	black	20526	1



ZON11 Inspection door

Inspection door, 200 mm x 150 mm (D x W), the frame and cover are made of stainless steel (Rf) in one piece.

MAT. / FIXING	COLOUR	PROD. CODE	PACKAGE
■ FeZn		20521	1
■ Rf		20540	1





VZ

VERTICAL PROTECTION

VZ vertical protection equipment with dimensions 1500 mm x 50 mm x 1 mm is used for mechanical protection of earth lead-in conductors to a measuring joint. It is made of stainless steel or it is plastic coated in white or brown colour. The protection consists of a bare protection frame (Product code 10, 17, 20, 30) and two support holders of vertical protection (Product code 301, 302, 303, 305, 306, 307, 308, 309, 310, 311, 312, 313, 316, 317, 318, 319).



VZ01 Vertical protection

Vertical protection, 1,5 m length, appropriate for hollow walls with insulation up to 100 mm, together with holders, screws, length 160 mm, and a wall plug \varnothing 10 mm. Vertical protection consists of 1x VZ Bare protection frames + 2x VZ Holder 01.

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
RfPVC	white	
RfPVC	brown	



VZ02 Vertical protection

Vertical protection, 1,5 m length, appropriate for hollow walls with insulation up to 50 mm, together with holders, screws, length 100 mm, and a wall plug \varnothing 10 mm. Vertical protection consists of 1x VZ Bare protection frames + 2x VZ Holder 02.

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	



VZ03 Vertical protection

Vertical protection, 1,5 m length, appropriate for non-insulated walls, with holders, screws, length 50 mm, and a wall plug \varnothing 8 mm. Vertical protection consists of 1x VZ Bare protection frames + 2x VZ Holder 03.

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf*/PVC	white	
Rf/PVC	brown	



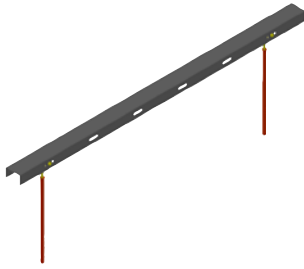
VZ08 Vertical protection

Vertical protection, 1,5 m length, appropriate for hollow walls with insulation up to 140 mm, together with holders, screws, length 200 mm, and a wall plug \varnothing 10 mm. Vertical protection consists of 1x VZ Bare protection frames + 2x VZ Holder 08.

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	



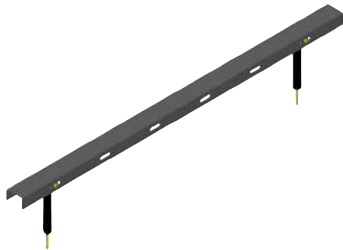
* upon request



VZ10 Vertical protection

Vertical protection, 1,5 m in length, suitable for hollow walls with isolation of up to 200 mm, along with brackets, 300 mm screws and Ø10 mm PVC inserts. Vertical protection consists of **1x VZ Bare protection frames + 2x VZ Holder 10.**

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	



VZ04 Vertical protection

Vertical protection, 1,5 m length, appropriate for wooden, flammable walls, together with holders. Vertical protection consists of **1x VZ Bare protection frames + 2x VZ Holder 04.**

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	



VZ09 Vertical protection

Vertical protection, length 1,5 m, appropriate for fixing on thermal insulation lining (outdoor facade) from foamed or extruded polystyrene (styrofoam or styrodur) with thickness of 50 mm or more. Vertical protection consists of **1x VZ Bare protection frames + 2x VZ Holder 09.**

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	



VZ16 Vertical protection

Vertical protection, length 1,5 m, appropriate for fixing on sheet metal walls and the like. Vertical protection consists of **1x VZ Bare protection frames + 2x VZ Holder 16.**

MATERIAL	COLOUR	PROD. CODE
Rf		
Rf*H4-V		
Rf/PVC	white	
Rf/PVC	brown	

* upon request



VZ vertical protection consists of: VZ VERTICAL PROTECTION FRAMES and VZ VERTICAL PROTECTION HOLDERS:

VZ Bare protection frames

Length 1,5 m, made of stainless steel or plastic coated in white or brown colour.

MATERIAL	LABEL	COLOUR	PROD. CODE	PACKAGE
Rf	VZ Rf 1,5 m		10	1
Rf	VZ Rf 2,0 m		299	10
Rf*H4	VZ Rf*H4 1,5 m		17	1
Rf/PVC	VZ Rf WHITE 1,5 m	white	20	1
Rf/PVC	VZ Rf BROWN 1,5 m	brown	30	1

! Coloring according to RAL color scale



VZ Vertical protection

Vertical protection is used for protection without the use of additional mounting brackets.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
Rf	1500	* 290 *	2
Rf	2000	* 291 *	2
Rf*H4	1500	* 296 *	2



VZ Holder 01

Holder for vertical protection, made of stainless steel, appropriate for hollow walls with insulation up to 100 mm.

MATERIAL	LABEL	SCREW (mm)	PROD. CODE	PACKAGE
Rf	VZ HOLDER 01	160	301	50
Rf*H4	VZ HOLDER 01	160	310	50



VZ Holder 02

Holder for vertical protection, made of stainless steel, appropriate for hollow walls with insulation up to 50 mm.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf	100	302	50
Rf*H4	100	311	50

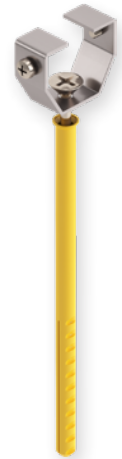


* upon request

**VZ HOLDER 03**

Holder for **vertical protection**, made of stainless steel, appropriate for non-insulated walls.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf	50	303	100
Rf*H4	50	307	100

**VZ HOLDER 08**

Holder for **vertical protection**, made of stainless steel, appropriate for hollow walls with insulation up to 140 mm.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf	200	308	50
Rf*H4	200	309	50

**VZ HOLDER 10**

Holder for **vertical protection**, made of stainless steel, appropriate for hollow walls with insulation up to 200 mm.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf	300	312	50
Rf*H4	300	313	50

* upon request



VZ HOLDER 09

Holder for **vertical protection**, made of stainless steel (Rf), appropriate for fixing on thermal insulation lining (outdoor facade) from foamed or extruded polystyrene (styrofoam or styrodur) with thickness of 50 mm or more.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf		305	50
Rf*H4		306	50



VZ HOLDER 16

Holder for **vertical protection**, made of stainless steel, appropriate for fixing on metal sheet walls and the like.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf		316	100
Rf*H4		317	100



VZ HOLDER 04

Holder for **vertical protection**, made of stainless steel, appropriate for fixing on wooden, flammable walls.

MATERIAL	SCREW (mm)	PROD. CODE	PACKAGE
Rf		318	50
Rf*H4		319	50





KON PIPE BONDING CLAMPS

KON pipe bonding clamps are designed for the installation of down conductors to the downpipe and for downpipe grounding. The conductors can be round or flat. With regard to the pipe material pipe bonding clamps can be made of copper or stainless steel or plastic coated in brown. Other colours are available upon order.



KON10 A Pipe bonding clamp

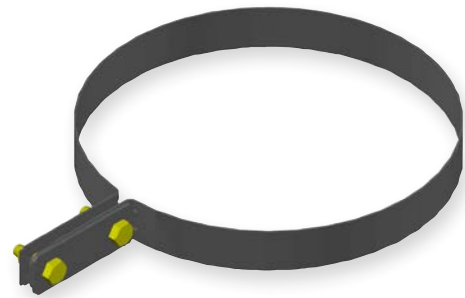
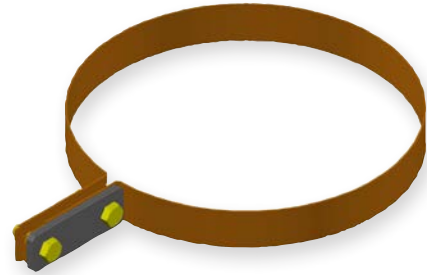
Pipe bonding clamps, made in one piece, designed for grounding of downpipes and attaching rolled steel earthing conductor to downpipes of different dimensions. The conductor is screwed to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	Φ = 80	P 30 x 4	700150	50
Cu-V	Φ = 100	P 30 x 4	700154	50
Cu-V	Φ = 110	P 30 x 4	700156	40
Cu-V	Φ = 120	P 30 x 4	700158	40
Cu-V	Φ = 130	P 30 x 4	700160	20
Cu-V	Φ = 140	P 30 x 4	700162	20
Cu-V	Φ = 150	P 30 x 4	700164	20
Cu-V	Φ = 160	P 30 x 4	700166	20
Cu-V	Φ = 170	P 30 x 4	700168	1
Cu-V	Φ = 180	P 30 x 4	700170	1
Cu-V	Φ = 190	P 30 x 4	700172	1
Cu-V	Φ = 200	P 30 x 4	700174	1
Cu-V	Φ = 210	P 30 x 4	700176	1
Cu-V	Φ = 220	P 30 x 4	700178	1
Cu-V	Φ = 230	P 30 x 4	700180	1
Cu-V	Φ = 240	P 30 x 4	700182	1
Cu-V	Φ = 250	P 30 x 4	700184	1
Rf-V	Φ = 80	P 30 x 4	700350	50
Rf-V	Φ = 100	P 30 x 4	700354	50
Rf-V	Φ = 110	P 30 x 4	700356	40
Rf-V	Φ = 120	P 30 x 4	700358	40
Rf-V	Φ = 130	P 30 x 4	700360	20
Rf-V	Φ = 140	P 30 x 4	700362	20
Rf-V	Φ = 150	P 30 x 4	700364	20
Rf-V	Φ = 160	P 30 x 4	700366	20
Rf-V	Φ = 170	P 30 x 4	700368	1
Rf-V	Φ = 180	P 30 x 4	700370	1
Rf-V	Φ = 190	P 30 x 4	700372	1
Rf-V	Φ = 200	P 30 x 4	700374	1
Rf-V	Φ = 210	P 30 x 4	700376	1
Rf-V	Φ = 220	P 30 x 4	700378	1
Rf-V	Φ = 230	P 30 x 4	700380	1
Rf-V	Φ = 240	P 30 x 4	700382	1
Rf-V	Φ = 250	P 30 x 4	700384	1

MAT. / FIXING	DIMENSION (mm)	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf/PVC-V	Φ = 100	brown	P 30 x 4	700474	50
Rf/PVC-V	Φ = 120	brown	P 30 x 4	700475	40

* Other dimensions of pipe bonding clamps are available upon order.

* Different colours are available, according to RAL color scale.



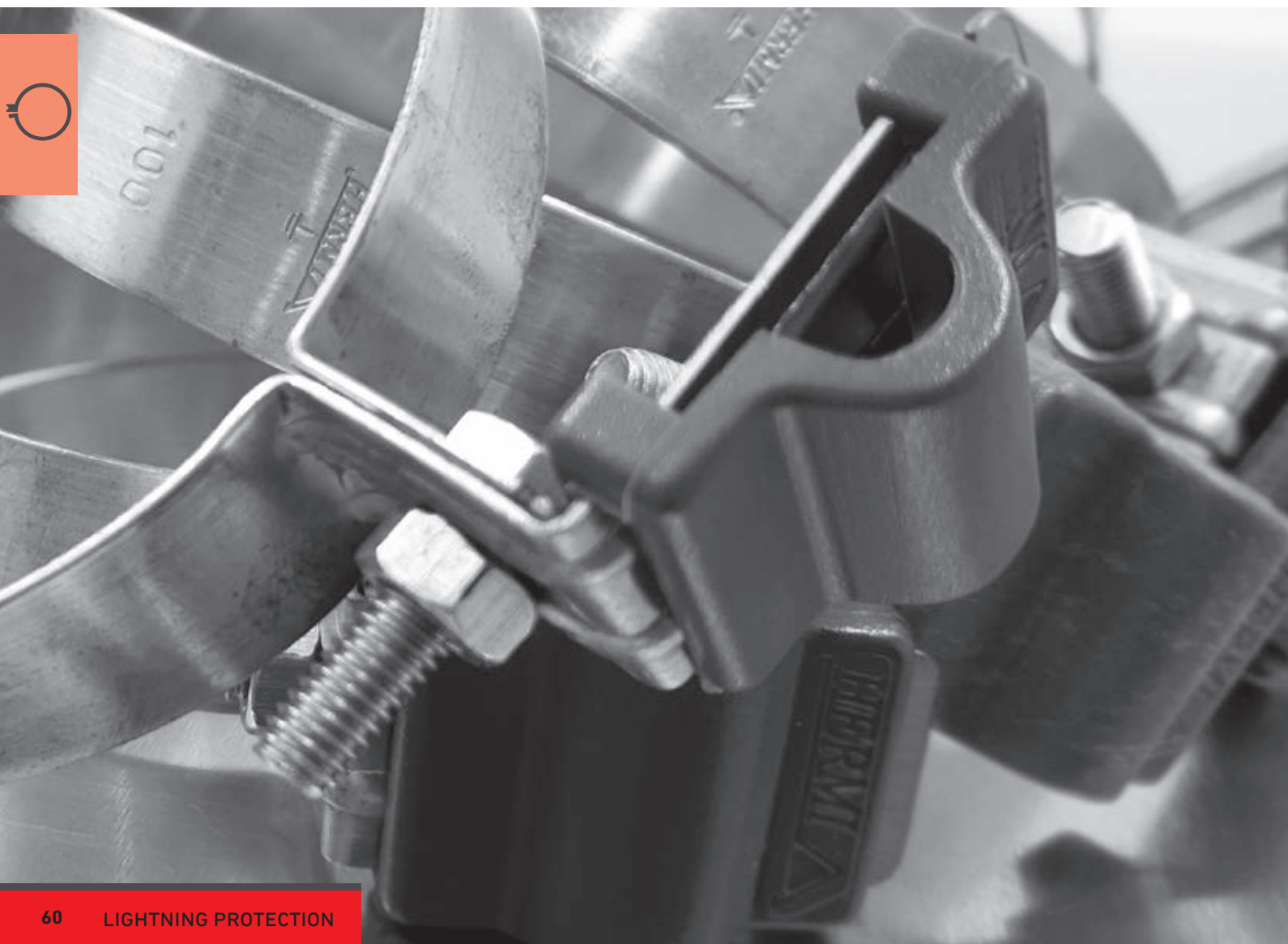


KON10 A Pipe bonding clamp

Pipe bonding clamps, designed for grounding of smaller diameter pipes. The conductor is **screwed** to the pipe bonding clamp.



MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	Φ = 10(1/8")	P up to 30	700137	50
Cu-V	Φ = 13(1/4")	P up to 30	700138	50
Cu-V	Φ = 17(3/8")	P up to 30	700139	50
Cu-V	Φ = 21(1/2")	P up to 30	700140	50
Cu-V	Φ = 27(3/4")	P up to 30	700141	50
Cu-V	Φ = 34(1")	P up to 30	700142	50
Cu-V	Φ = 42(5/4")	P up to 30	700143	50
Cu-V	Φ = 48(6/4")	P up to 30	700144	50
Rf-V	Φ = 10(1/8")	P up to 30	700526	50
Rf-V	Φ = 13(1/4")	P up to 30	700527	50
Rf-V	Φ = 17(3/8")	P up to 30	700528	50
Rf-V	Φ = 21(1/2")	P up to 30	700529	50
Rf-V	Φ = 27(3/4")	P up to 30	700530	50
Rf-V	Φ = 34(1")	P up to 30	700342	50
Rf-V	Φ = 42(5/4")	P up to 30	700343	50
Rf-V	Φ = 48(6/4")	P up to 30	700344	50
Rf-V	Φ = 60(2")	P up to 30	700346	50





KON11 A Pipe bonding clamp

Pipe bonding clamps, **made in one piece**, designed for the attachment of round conductors to downpipes of different dimensions. The conductor is **screwed** to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	Φ = 80	Φ = 8 - 10	700100	50
Cu-V	Φ = 100	Φ = 8 - 10	700104	50
Cu-V	Φ = 110	Φ = 8 - 10	700106	40
Cu-V	Φ = 120	Φ = 8 - 10	700108	40
Cu-V	Φ = 130	Φ = 8 - 10	700110	20
Cu-V	Φ = 140	Φ = 8 - 10	700112	20
Cu-V	Φ = 150	Φ = 8 - 10	700114	20
Cu-V	Φ = 160	Φ = 8 - 10	700116	20
Cu-V	Φ = 170	Φ = 8 - 10	700118	1
Cu-V	Φ = 180	Φ = 8 - 10	700120	1
Cu-V	Φ = 190	Φ = 8 - 10	700122	1
Cu-V	Φ = 200	Φ = 8 - 10	700124	1
Cu-V	Φ = 210	Φ = 8 - 10	700126	1
Cu-V	Φ = 220	Φ = 8 - 10	700128	1
Cu-V	Φ = 230	Φ = 8 - 10	700130	1
Cu-V	Φ = 240	Φ = 8 - 10	700132	1
Cu-V	Φ = 250	Φ = 8 - 10	700134	1
Rf-V	Φ = 80	Φ = 8 - 10	700300	50
Rf-V	Φ = 100	Φ = 8 - 10	700304	50
Rf-V	Φ = 110	Φ = 8 - 10	700306	40
Rf-V	Φ = 120	Φ = 8 - 10	700308	40
Rf-V	Φ = 130	Φ = 8 - 10	700310	20
Rf-V	Φ = 140	Φ = 8 - 10	700312	20
Rf-V	Φ = 150	Φ = 8 - 10	700314	20
Rf-V	Φ = 160	Φ = 8 - 10	700316	20
Rf-V	Φ = 170	Φ = 8 - 10	700318	1
Rf-V	Φ = 180	Φ = 8 - 10	700320	1
Rf-V	Φ = 190	Φ = 8 - 10	700322	1
Rf-V	Φ = 200	Φ = 8 - 10	700324	1
Rf-V	Φ = 210	Φ = 8 - 10	700326	1
Rf-V	Φ = 220	Φ = 8 - 10	700328	1
Rf-V	Φ = 230	Φ = 8 - 10	700330	1
Rf-V	Φ = 240	Φ = 8 - 10	700332	1
Rf-V	Φ = 250	Φ = 8 - 10	700334	1
Rf*H4	Φ = 21 (1/2")	16 - 35 mm ²	700525	50

MAT. / FIXING	DIMENSION (mm)	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf/PVC-V	Φ = 100	brown	Φ = 8 - 10	700476	50
Rf/PVC-V	Φ = 120		Φ = 8 - 10	700477	40

* Other dimensions of pipe bonding clamps are available upon order.

* Different colours are available, according to RAL color scale.





KON12 A Pipe bonding clamp

Pipe bonding fastener, **made in one piece**, designed for the attachment of round conductors to downpipes of different dimensions; attachment **without screwing** (N - nylon holder).

MAT. / FIXING	DIMENSION (mm)	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-N	Φ = 100		Φ = 8	700204	50
Cu-N	Φ = 110		Φ = 8	700206	40
Cu-N	Φ = 120		Φ = 8	700208	40
Rf-N	Φ = 100		Φ = 8	700404	50
Rf-N	Φ = 110		Φ = 8	700406	40
Rf-N	Φ = 120		Φ = 8	700408	40
Rf-N	Φ = 100		Φ = 10	700454	50
Rf-N	Φ = 110		Φ = 10	700456	40
Rf-N	Φ = 120		Φ = 10	700458	40
Rf/PVC-N	Φ = 100	brown	Φ = 8	700459	50
Rf/PVC-N	Φ = 120	brown	Φ = 8	700465	40

* Other dimensions of pipe bonding clamps are available upon order.
* Different colours are available, according to RAL color scale.



KON10 Pipe bonding clamp

Pipe bonding clamps, **consisting of two parts**, designed for grounding of downpipes and attaching a rolled steel earthing conductor to downpipes of different dimensions. The conductor is **screwed** to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	Φ = 100	P 30 x 4	* 70309 *	40
Cu-V	Φ = 120	P 30 x 4	* 70109 *	40
Rf-V	Φ = 100	P 30 x 4	* 72122 *	40
Rf-V	Φ = 120	P 30 x 4	* 71922 *	40

* Other dimensions of pipe bonding clamps are available upon order.



KON11 Pipe bonding clamp

Pipe bonding clamps, consisting of two parts, designed for grounding of downpipes and attaching round conductors to downpipes of different dimensions. The conductor is screwed to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-V	Φ = 100	Φ = 8 - 10	* 703090 *	40
Cu-V	Φ = 120	Φ = 8 - 10	* 701090 *	40
Rf-V	Φ = 100	Φ = 8 - 10	* 721220 *	40
Rf-V	Φ = 120	Φ = 8 - 10	* 719220 *	40

* Other dimensions of pipe bonding clamps are available upon order.



KON11 C Pipe bonding clamp

Pipe bonding fastener, made in one piece, designed for the attachment of round conductors to downpipes of different dimensions; attachment without screwing.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	Φ = 100	Φ = 8 - 10	700604	40
Rf-V	Φ = 120	Φ = 8 - 10	700608	40
Al-V	Φ = 100	Φ = 8 - 10	700704	40
FeZn-V	Φ = 100	Φ = 8 - 10	700804	40



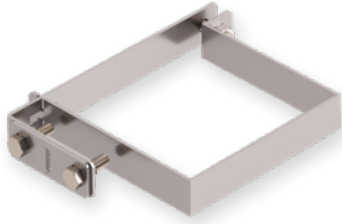
KON12 Pipe bonding clamp

Pipe bonding fastener, consisting of two parts, designed for the attachment of round conductors to downpipes of different dimensions; attachment without screwing (N - nylon holder).

MAT. / FIXING	DIMENSION (mm)	COLOUR	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu-N	Φ = 100		Φ = 8	* 70712 *	40
Cu-N	Φ = 120		Φ = 8	* 70512 *	40
Rf-N	Φ = 100		Φ = 8	* 71413 *	40
Rf-N	Φ = 120		Φ = 8	* 71213 *	40
Rf-N	Φ = 100		Φ = 10	* 71414 *	40
Rf-N	Φ = 120		Φ = 10	* 71214 *	40
Rf/PVC-N	Φ = 100	brown	Φ = 8	* 71415 *	40
Rf/PVC-N	Φ = 120	brown	Φ = 10	* 71215 *	40

* Other dimensions of pipe bonding clamps are available upon order.



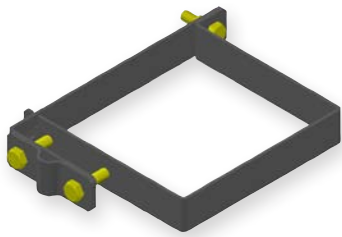


KON10 Pipe bonding clamp

Pipe bonding clamps, **consisting of two parts**, designed for grounding of square downpipes and attaching a rolled steel earthing conductor to downpipes of different dimensions. The conductor is **screwed** to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	100x100	P 30 x 4	90806	40

* Other dimensions of pipe bonding clamps are available upon order.



KON11 Pipe bonding clamp

Pipe bonding clamps, **consisting of two parts**, designed for grounding of square downpipes and attaching round conductors to downpipes of different dimensions. The conductor is **screwed** to the pipe bonding clamp.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf-V	100x100	Φ = 8 - 10	908062	40

* Other dimensions of pipe bonding clamps are available upon order.





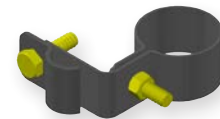
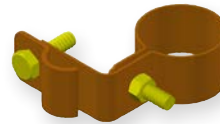
KON Pipe bonding clamps for grounding of smaller dimension pipes

KON11 A Pipe bonding clamp

Pipe bonding clamps, made in one piece, designed for grounding of smaller dimension pipes made of metal. The conductor is screwed to the pipe bonding clamps.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm ²)	PROD. CODE	PACKAGE
Cu-V	Φ = 10(1/8")	16–35mm ²	700087	100
Cu-V	Φ = 13(1/4")	16–35mm ²	700088	50
Cu-V	Φ = 17(3/8")	16–35mm ²	700089	50
Cu-V	Φ = 21(1/2")	16–35mm ²	700090	50
Cu-V	Φ = 27(3/4")	16–35mm ²	700091	50
Cu-V	Φ = 34 (1")	16–35mm ²	700092	50
Cu-V	Φ = 42(1 1/4")	16–35mm ²	700093	80
Cu-V	Φ = 48 (1 1/2")	16–35mm ²	700094	80
Cu-V	Φ = 60 (2")	16–35mm ²	700096	50
Rf-V	Φ = 10(1/8")	16–35mm ²	700287	100
Rf-V	Φ = 13(1/4")	16–35mm ²	700288	50
Rf-V	Φ = 17 (3/8")	16–35mm ²	700289	50
Rf-V	Φ = 21 (1/2")	16–35mm ²	700290	50
Rf-V	Φ = 27 (3/4")	16–35mm ²	700291	50
Rf-V	Φ = 34 (1")	16–35mm ²	700292	50
Rf-V	Φ = 42 (1 1/4")	16–35mm ²	700293	80
Rf-V	Φ = 48 (1 1/2")	16–35mm ²	700294	80
Rf-V	Φ = 60 (2")	16–35mm ²	700296	50

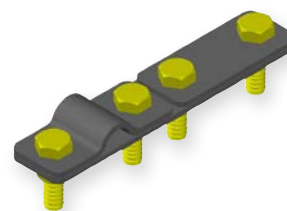
* Other dimensions of pipe bonding clamps are available upon order.



KON11 B Pipe bonding clamp

Pipe clamp, intended for earthing of steel pipes of smaller diameters, attachment of leads to pipe clamp with screws.

MAT. / FIXING	DIMENSION (mm)	CONDUCTOR (mm ²)	PROD. CODE	PACKAGE
Rf-V	Φ = 10(1/8")	4–6 mm ²	*700280*	100
Rf-V	Φ = 12(1/4")	4–6 mm ²	*700281*	100

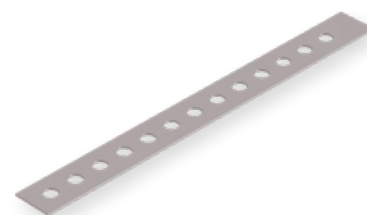


KON13 TAPE Rf Perforated tape

Perforated tape, Φ7 mm holes, designed for making pipe bonding clamps.

MAT. / FIXING	DIMENSION (mm)	LENGTH (mm)	PROD. CODE	PACKAGE
Rf-V	20	1000	9	50
Rf-V	20	upon request	* 90714 *	*
Rf-H4	20	1000	90736	50
Rf-H4	20	2000		

The tape can be bought in various lengths (1,0 m – 50,0 m or more).



* upon request



KON CONTACT CLAMPS

KON contact clamps are designed for the connection of different parts of lightning protection elements together and for joining of a lightning conductor with different metal elements. The joint between separate conductors and metal parts must be properly made. We must also pay attention to the appropriateness of materials to avoid the so-called galvanic coupling.



KON01 Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 58 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between square conductors of up to 30 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	P up to 30	P up to 30	400110	120
Rf	P up to 30	P up to 30	50422	120
Rf*H4	P up to 30	P up to 30	50423	120
FeZn-H	P up to 30	P up to 30	50421	120
Cu/Rf	P up to 30	P up to 30	400611	50



KON01 S Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 68 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between square conductors of up to 30 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	P up to 30	P up to 30	50412	80
FeZn-H	P up to 30	P up to 30	50411	80



KON01 A Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 68 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between square conductors of up to 42 mm width.

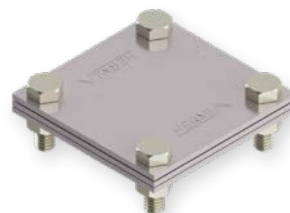
MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	P up to 42	P up to 42	540109	50
Rf	P up to 42	P up to 42	500422	50
Rf*H4	P up to 42	P up to 42	500423	50



KON01 B Clamp

Measuring cross clamp, consisting of 3 plates 78 mm x 78 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between square conductors of up to 50 mm width.

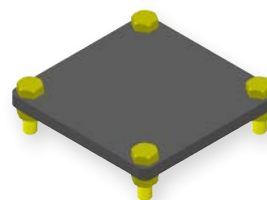
MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	P up to 50	P up to 50	400612	40
Rf	P up to 50	P up to 50	400610	40



KON01 B Clamp

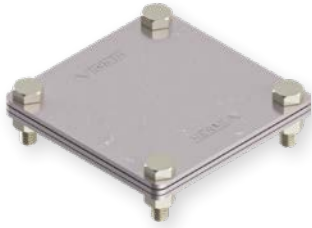
Measuring cross clamp, consisting of 3 plates 100 mm x 100 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between square conductors of up to 70 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf*H4	P up to 50	P up to 50	400685	40



* upon request

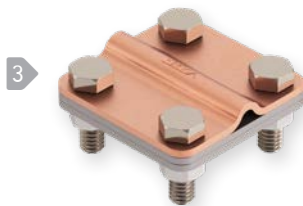
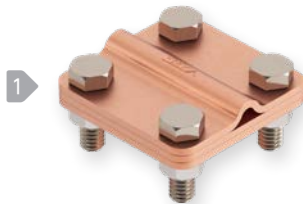




KON01 C Clamp

Measuring cross clamp, consisting of **3 plates 100 mm x 100 mm** and **4 screws and M8 nuts**, designed for carrying out measurement and others joints in the ground and above it **between square conductors** of up to **70 mm** width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu/Rf/Rf	P up to 70	P up to 70	400623	25
Rf	P up to 70	P up to 70	400614	25
Rf*H4	P up to 70	P up to 70	400605	25



KON02 Clamp

Measuring cross clamp, consisting of **3 plates 58 mm x 58 mm** and **4 screws and M8 nuts**, designed for carrying out measurement and others joints in the ground and above it **between round conductors and square conductors** of up to **30 mm** width.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Cu	Φ = 8	P up to 30	40109	65
1	Cu	Φ = 16	P up to 30	40619	50
1	Cu	Φ = 20	P up to 30	40617	50
2	Rf	Φ = 8 - 10	P up to 30	40122	65
2	Rf	Φ = 16	P up to 30	40644	50
2	Rf	Φ = 20	P up to 30	40620	50
2	Rf	Φ = 10	LOP-P	40613	65
2	Rf	Φ = 16	LOP-P	40612	50
2	Rf*H4	Φ = 8 - 10	P up to 30	40127	65
1	Cu	16-35 mm ²	P up to 30	40621	65
1	Cu	50 mm ²	P up to 30	40622	65
1	Cu	70 mm ²	P up to 30	40623	65
1	Cu	95 mm ²	P up to 30	40624	50
1	Cu	120 mm ²	P up to 30	40625	50
1	Cu	150 mm ²	P up to 30	40626	50
1	Cu	185 mm ²	P up to 30	40627	50
1	Cu	240 mm ²	P up to 30	40628	50
3	Cu/Rf/Rf	16 – 35 mm ²	P up to 30	40615	50
3	Cu/Rf/Rf	50 mm ²	P up to 30	40629	65
3	Cu/Rf/Rf	70 mm ²	P up to 30	40630	65
3	Cu/Rf/Rf	95 mm ²	P up to 30	40507	50
3	Cu/Rf/Rf	120 mm ²	P up to 30	40607	50
3	Cu/Rf/Rf	150 mm ²	P up to 30	40608	50
3	Cu/Rf/Rf	185 mm ²	P up to 30	40631	50
3	Cu/Rf/Rf	240 mm ²	P up to 30	40632	50
4	Rf	16-35 mm ²	P up to 30	40633	65
4	Rf	50 mm ²	P up to 30	40634	65
4	Rf	70 mm ²	P up to 30	40635	65
4	Rf	95 mm ²	P up to 30	40636	50
4	Rf	120 mm ²	P up to 30	40637	50
4	Rf	150 mm ²	P up to 30	40638	50
4	Rf	185 mm ²	P up to 30	40639	50
4	Rf	240 mm ²	P up to 30	40640	50
4	Rf*H4	Φ = 20	P up to 30	40727	50

* upon request



KON02 S Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 58 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between round conductors and square conductors of up to 30 mm width.

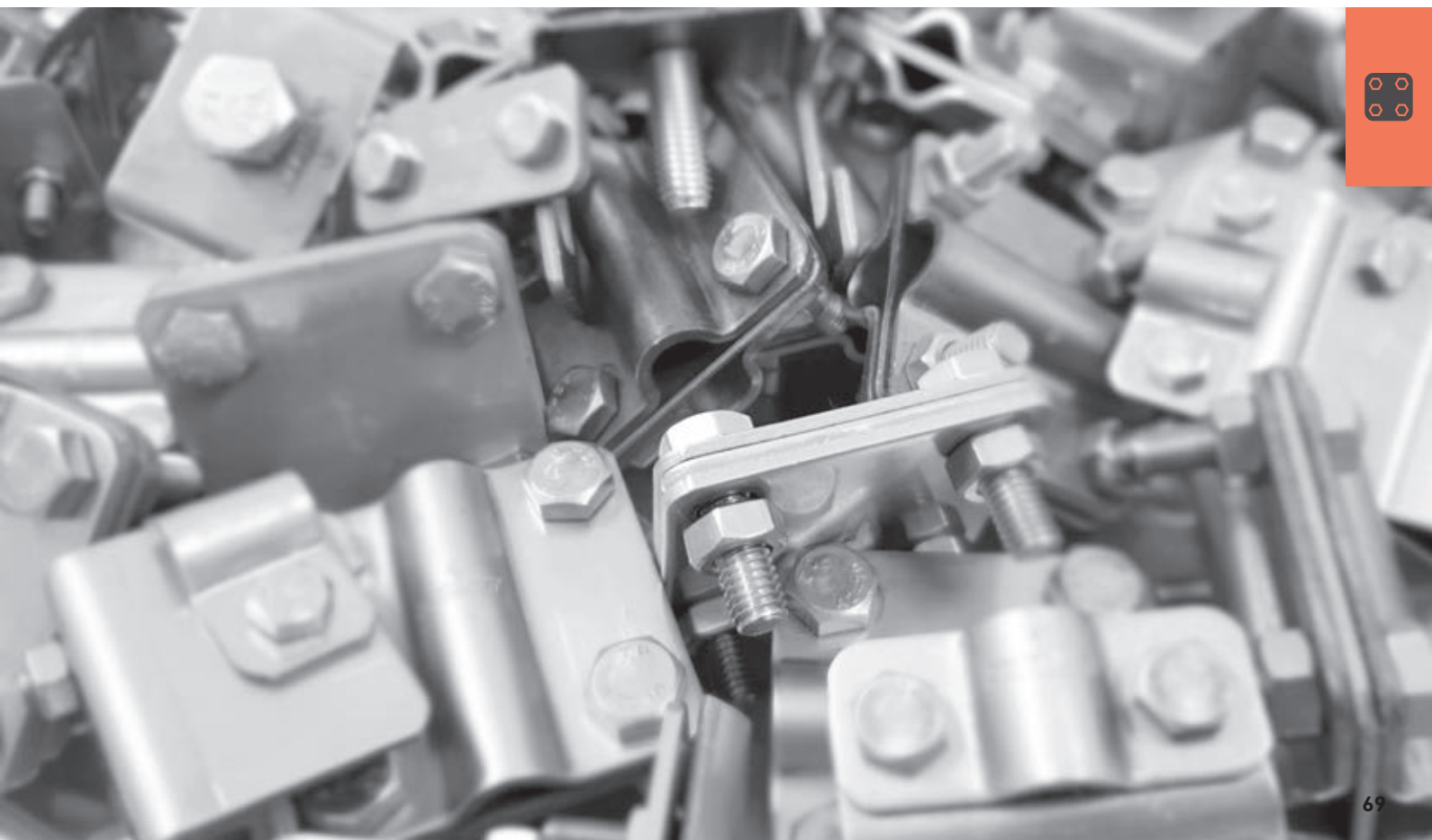


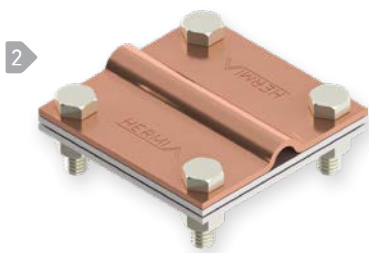
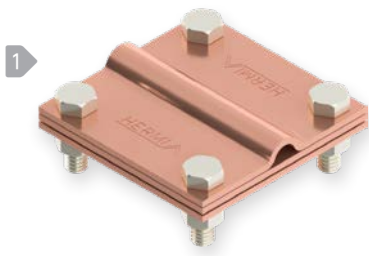
MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10	P up to 30	40102	65
FeZn-H	Φ = 8 - 10	P up to 30	40101	65

KON02 A Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 68 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between round conductors and square conductors of up to 42 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	95 mm ²	P up to 42	400613	50
Cu/Rf	Φ = 20	P up to 42	400505	50
Cu/Rf/Rf	Φ = 8	P up to 42	400109	50
Cu/Rf/Rf	95 mm ²	P up to 42	400507	50
Cu/Rf/Rf	120 mm ²	P up to 42	400607	50
Cu/Rf/Rf	150 mm ²	P up to 42	400616	50
Rf	Φ = 8 - 10	P up to 42	400122	50
Rf	Φ = 30	P up to 42	400508	50
Rf*H4	Φ = 8 - 10	P up to 42	400604	50





KON02 B Clamp

Measuring cross clamp, consisting of 3 plates 78 mm x 78 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between round conductors and square conductors of up to 50 mm width.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Cu	$\Phi = 8$	P up to 50	400606	40
2	Cu/Rf/Rf	$\Phi = 8 - 10$	P up to 50	400621	40
3	Rf	$\Phi = 8 - 10$	P up to 50	400609	40
3	Rf	$\Phi = 16$	P up to 50	400625	50
3	Rf*H4	$\Phi = 8 - 10$	P up to 50	400684	40
3	FeZn-H	$\Phi = 8 - 10$	P up to 50	400683	40

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Cu	16-35 mm ²	P up to 50	400626	40
1	Cu	50 mm ²	P up to 50	400627	40
1	Cu	70 mm ²	P up to 50	400628	40
1	Cu	95 mm ²	P up to 50	400629	40
1	Cu	120 mm ²	P up to 50	400630	40
1	Cu	150 mm ²	P up to 50	400631	40
1	Cu	185 mm ²	P up to 50	400632	40
1	Cu	240 mm ²	P up to 50	400633	40
2	Cu/Rf/Rf	16 – 35 mm ²	P up to 50	400641	40
2	Cu/Rf/Rf	50 mm ²	P up to 50	400642	40
2	Cu/Rf/Rf	70 mm ²	P up to 50	400643	40
2	Cu/Rf/Rf	95 mm ²	P up to 50	400644	40
2	Cu/Rf/Rf	120 mm ²	P up to 50	400645	40
2	Cu/Rf/Rf	150 mm ²	P up to 50	400646	40
2	Cu/Rf/Rf	185 mm ²	P up to 50	400647	40
2	Cu/Rf/Rf	240 mm ²	P up to 50	400648	40
3	Rf	16-35 mm ²	P up to 50	400657	40
3	Rf	50 mm ²	P up to 50	400658	40
3	Rf	70 mm ²	P up to 50	400659	40
3	Rf	95 mm ²	P up to 50	400660	40
3	Rf	120 mm ²	P up to 50	400661	40
3	Rf	150 mm ²	P up to 50	400662	40
3	Rf	185 mm ²	P up to 50	400663	40
3	Rf	240 mm ²	P up to 50	400664	40
3	Rf*H4	95 mm ²	P up to 50	400680	40



KON02 B Clamp

Measuring cross clamp, consisting of 2 plates 78 mm x 78 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it between round conductors and square conductors of up to 50 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
FeZn-H	$\Phi = 8 - 10$	P up to 50	400682	40

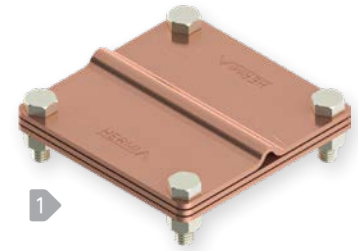
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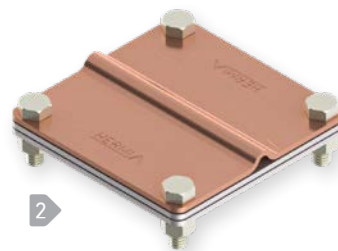
KON02 C Clamp

Measuring cross clamp, consisting of 3 plates 100 mm x 100 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it **between round conductors and square conductors** of up to 70 mm width.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Cu	16-35 mm ²	P up to 70	400634	40
1	Cu	50 mm ²	P up to 70	400635	40
1	Cu	70 mm ²	P up to 70	400636	40
1	Cu	95 mm ²	P up to 70	400637	40
1	Cu	120 mm ²	P up to 70	400638	40
1	Cu	150 mm ²	P up to 70	400639	40
1	Cu	185 mm ²	P up to 70	400622	40
1	Cu	240 mm ²	P up to 70	400640	40
2	Cu/Rf/Rf	16 - 35 mm ²	P up to 70	400649	40
2	Cu/Rf/Rf	50 mm ²	P up to 70	400650	40
2	Cu/Rf/Rf	70 mm ²	P up to 70	400651	40
2	Cu/Rf/Rf	95 mm ²	P up to 70	400652	40
2	Cu/Rf/Rf	120 mm ²	P up to 70	400653	40
2	Cu/Rf/Rf	150 mm ²	P up to 70	400654	40
2	Cu/Rf/Rf	185 mm ²	P up to 70	400655	40
2	Cu/Rf/Rf	240 mm ²	P up to 70	400656	40
3	Rf	16-35 mm ²	P up to 70	400665	40
3	Rf	50 mm ²	P up to 70	400666	40
3	Rf	70 mm ²	P up to 70	400667	40
3	Rf	95 mm ²	P up to 70	400668	40
3	Rf	120 mm ²	P up to 70	400669	40
3	Rf	150 mm ²	P up to 70	400670	40
3	Rf	185 mm ²	P up to 70	400671	40
3	Rf	240 mm ²	P up to 70	400672	40



1



2



3



KON02 D Clamp

Measuring cross clamp, consisting of 3 plates 58 mm x 90 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it **between round conductors and square conductors** of up to 20 mm width.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	120 mm ²	P up to 60	400608	40



* upon request



KON03 Clamp

Measuring cross clamp, consisting of 3 plates 48 mm x 48 mm and 4 screws and M8 nuts, designed for carrying out measurement and others joints in the ground and above it **between round conductors and square conductors of up to 20 mm width.**

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu/Rf/Rf	Φ = 8	P up to 20	50207	140
Cu/Rf/Rf	16-35 mm ²	P up to 20	50307	140
Rf	Φ = 8 - 10	P up to 20	50222	140
Rf	16-35 mm ²	P up to 20	30122	140



KON04 Clamp

Bonding clamp, consisting of 2 plates 48 mm x 48 mm and 4 screws and M6 nuts, designed for carrying out joints above the ground **between round conductors Φ8 – Φ10 mm.**

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Cu	Φ = 8	Φ = 8	50107	140
1	Rf	Φ = 8 - 10	Φ = 8 - 10	50122	140
1	Rf*H4	Φ = 8 - 10	Φ = 8 - 10	50127	140

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
2	Rf	P up to 20	P up to 20	50322	140



KON04 B Clamp

Bonding clamp, made of stainless steel, length 100 mm, designed for carrying out joints above the ground **between round conductors 8 – 10 mm.**

MATERIAL	LENGTH (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Rf	100	Φ = 8 - 10	50530	120
Al	80	Φ = 8 - 10	50529	120

* upon request



KON04 A SIMPLE Clamp

Bonding clamp, consisting of 2 plates 40 mm x 40 mm, screw and M10 nut, designed for carrying out joints above the ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	$\Phi = 8$	$\Phi = 8$	50507	120
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50522	120
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50527	120



KON04 C SIMPLE Clamp

Bonding clamp, consisting of 3 plates 40 mm x 40 mm, screw and M10 nut, designed for carrying out joints above the ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	$\Phi = 8$	$\Phi = 8$	50508	120
Cu/Rf/Rf	$\Phi = 8$	$\Phi = 8 - 10$	50509	
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50523	120



KON04 D SIMPLE Clamp

Bonding clamp, consisting of 2 plates 40 mm x 40 mm, M10 bolt and M10 nut, designed for carrying out joints between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	SCREW	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x35	50524	120
Rf	$\Phi = 10$	$\Phi = 10$	M10x35	50536	100
Rf	$\Phi = 10$	$\Phi = 10$	M10x45	50533	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x35	50538	120
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x45	50539	120
Rf*H4	$\Phi = 10$	$\Phi = 10$	M10x45	50534	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x35	50521	120
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x40	50537	120
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	M10x45	50520	120
FeZn-H	$\Phi = 10$	$\Phi = 10$	M10x45	50532	100





KON04 E SIMPLE Clamp

Bonding clamp, consisting of 2 plates 40 mm x 40 mm, M10 bolt and M10 nut, designed for carrying out joints between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MAT.	CONDUCTOR 1 (mm)	SCREW	PROD. CODE	PACKAGE
Cu/Rf	$\Phi = 8 - 10$	M10x35	50535	120

KON04 F SIMPLE Clamp

Bonding clamp, consisting of 3 plates 50 mm x 50 mm and M10 bolt, designed for carrying out joints above ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.



MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	$\Phi = 16$	50544	100
Rf	$\Phi = 10$	$\Phi = 16$	50545	100
Rf	$\Phi = 10$	$\Phi = 10$	50546	100
Rf	$\Phi = 8 - 10$	$\Phi = 10$	50547	100
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50548	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 16$	50549	100
FeZn-H	$\Phi = 10$	$\Phi = 16$	50550	100
FeZn-H	$\Phi = 10$	$\Phi = 10$	50551	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 10$	50552	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50553	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 16$	50554	100
Rf*H4	$\Phi = 10$	$\Phi = 16$	50555	100
Rf*H4	$\Phi = 10$	$\Phi = 10$	50556	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 10$	50557	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50558	100
Cu	$\Phi = 8 - 10$	$\Phi = 16$	50559	100
Cu	$\Phi = 10$	$\Phi = 16$	50560	100
Cu	$\Phi = 10$	$\Phi = 10$	50561	100
Cu	$\Phi = 8 - 10$	$\Phi = 10$	50562	100
Cu	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50563	100
Rf/Cu	$\Phi = 8$	$\Phi = 16$	50564	100
Rf/Cu	$\Phi = 8$	$\Phi = 8 - 10$	50565	100
Rf/Cu	$\Phi = 8$	$\Phi = 10$	50566	100
Rf*H4/Cu	$\Phi = 8$	$\Phi = 16$	50567	100
Rf*H4/Cu	$\Phi = 8$	$\Phi = 8 - 10$	50568	100
Rf*H4/Cu	$\Phi = 8$	$\Phi = 10$	50569	100
Cu/Rf	$\Phi = 8$	$\Phi = 16$	50570	100
Cu/Rf	$\Phi = 8$	$\Phi = 8 - 10$	50571	100
Cu/Rf	$\Phi = 8$	$\Phi = 10$	50572	100
Cu/Rf*H4	$\Phi = 8$	$\Phi = 16$	50573	100
Cu/Rf*H4	$\Phi = 8$	$\Phi = 8 - 10$	50574	100
Cu/Rf*H4	$\Phi = 8$	$\Phi = 10$	50575	100

* upon request



KON44 A SIMPLE Clamp

Bonding clamp, consisting of 2 plates 32 mm x 32 mm and M10 bolt, designed for carrying out joints above ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50580	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50581	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50582	100
Al	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50583	100
Cu	$\Phi = 8$	$\Phi = 8$	50584	100



KON44 B SIMPLE Clamp

Bonding clamp, consisting of 3 plates 32 mm x 32 mm and M10 bolt, designed for carrying out joints above ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50590	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50591	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50592	100
Al	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50593	100
Cu	$\Phi = 8$	$\Phi = 8$	50594	100
Cu/Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50595	100
Cu/FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50596	100
Cu/Rf*H4	$\Phi = 8$	$\Phi = 8$	50597	100
Cu/Al	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50598	100



KON44 C SIMPLE Clamp

Bonding clamp, consisting of 2 plates 32 mm x 32 mm and M10 bolt, designed for carrying out joints above ground between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50585	100
FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50586	100
Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50587	100
Al	$\Phi = 8 - 10$	$\Phi = 8 - 10$	50588	100
Cu	$\Phi = 8$	$\Phi = 8$	50589	100



KON05 Clamp

Contact clamp, consisting of 3 plates 20 mm x 48 mm and 2 screws and M6 nuts, designed for carrying out joints between round conductors $\Phi 8 - \Phi 10$ mm and metal parts.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
1	Cu/Rf/Rf	$\Phi = 8$	80107	100
1	Rf	$\Phi = 8 - 10$	80518	100
1	Rf*H4	$\Phi = 8 - 10$	80527	100

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
2	Rf	P up to 25 mm	80525	100
2	Rf*H4	P up to 25 mm	80531	100



* upon request



KON05 A Clamp

Contact clamp, consisting of 3 plates 20 mm x 58 mm and 2 screws and M6 nuts, designed for carrying out joints between square conductors 30 mm and metal parts.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
1	Cu	120 mm ²	80532	100
1	Rf	Φ = 8 - 10	80528	100
2	Rf	PL 30x3,5	80526	80
2	R*H4	P up to 30	80529	100



KON05-1 Bridging clamp

Bridging cable clamp, 16 mm², length 150 mm, consisting of 2 cable bonding lugs with a screw and a nut, designed for bridging of different metal parts of a lightning protection installation and for equalizing potentials.

MATERIAL	CONDUCTOR 1 (mm)	SHEET METAL PARTS	PROD. CODE	PACKAGE
Cu	16 mm ²		90211	10

! Various lengths are available upon order.



KON05-2 Flexible connecting element

Flexible connecting element, 200 x 3 x 22 mm – 25 mm² and 230 x 4 x 20 mm – 50 mm², designed for connection between different metal parts of a lightning protection installation which are not fixed connected and for joining of on-roof conductors where materials are stretching because of temperature differences.

MATERIAL	CONDUCTOR 1 (mm)	HOLE (mm)	CROSS-SECTION (mm ²)	PROD. CODE	PACKAGE
CuSn	200	Φ = 8	25	90210	10
CuSn	200	Φ = 10	50	90212	10
CuSn	250	Φ = 10	50	90221	10
CuSn	500	Φ = 10	50	90214	20



KON05 C Clamp

Contact clamp designed for grounding and for equalizing potential between round conductors 8 – 10 mm and metal parts.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
FeZn	Φ = 8 – 10 mm	80519	100

* upon request



KON05 D Clamp

Contact clip consisting of 2 plates sized 20 mm x 32 mm and the screw and nut M6, intended for contacts between sheet metal parts of round dimensions 10 - 16 mm². The contact is made with the aid of item KON05-1 (e.g. earthing / equalisation of potential of a wire fence).



MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
Rf	10 - 16 mm ²	80520	100

KON06 Gutter clamp

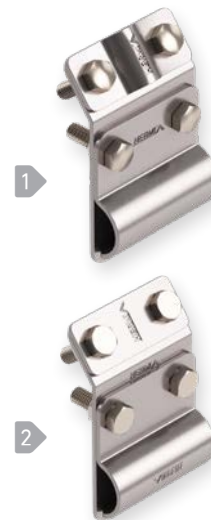
Gutter clamp, consisting of plates 48 mm x 85 mm and screws and M6 nuts.

For carrying out contact joints between round conductors and gutter.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
1	Cu	Φ = 8	60107	80
1	Rf	Φ = 8 - 10	60122	80
1	Rf*H4	Φ = 8 - 10	60127	80
1	FeZn-H	Φ = 8 - 10	60121	80

For carrying out contact joints between flat conductors up to 25 mm width and gutter.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
2	Rf	P up to 25	60222	80
2	Rf*H4	P up to 25	* 60228 *	80



KON06 A Gutter clamp

Gutter clamp, designed for carrying out contact joints between round conductors Φ8 - Φ10 mm and gutter with M8 bolt.

MAT.	CONDUCTOR 1 (mm)	GUTTER	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10		60123	60
FeZn-H	Φ = 8 - 10		60120	60



KON06 DB Gutter clamp

Gutter clamp, consisting of plates 48 mm x 68 mm and M10 bolt, designed for carrying out contact joints between round conductors Φ8 - Φ10 mm and gutter.

MAT.	CONDUCTOR 1 (mm)	GUTTER	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10		60112	60
FeZn-H	Φ = 8 - 10		60113	60
Rf*H4	Φ = 8 - 10		60114	60
Cu	Φ = 8 - 10		60115	60



* upon request



KON07 Clamp

Clamp, consisting of 3 plates 58 mm x 58 mm, screws and M8 nuts, designed for carrying out contact joints in the ground and above it between round conductors of different dimensions.

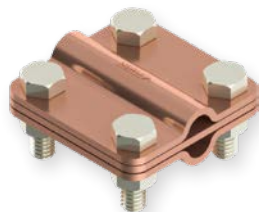
Designed for carrying out contact joints in the ground and above it between round conductors of different dimensions.



MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	Φ = 8	Φ = 8	40110	65
Cu	Φ = 8	Φ = 16	400127	50
Cu	Φ = 8 - 10	95 mm ²	40610	50
Cu	Φ = 8 - 10	120 mm ²	400310	50
Cu/Rf/Rf	Φ = 8	Φ = 8 - 10	40112	65
Rf	Φ = 8 - 10	Φ = 8 - 10	40111	65
Rf	Φ = 8 - 10	120 mm ²	400111	50
Rf	Φ = 8 - 10	150 mm ²	4000111	50
Rf	Φ = 8 - 10	Φ = 16	40611	50
Rf	Φ = 8 - 10	Φ = 20	40711	50
Rf*H4	Φ = 8 - 10	Φ = 8 - 10	40726	65
Rf*H4	Φ = 8 - 10	Φ = 16	40614	50
Rf*H4	Φ = 8 - 10	Φ = 20	40725	50

Designed for carrying out contact joints in the ground and above it, 16-35 mm² / 240 mm².

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	16-35 mm ²	16-35 mm ²	400128	50
Cu	50 mm ²	16-35 mm ²	400129	50
Cu	50 mm ²	50 mm ²	400130	50
Cu	70 mm ²	16-35 mm ²	400131	50
Cu	70 mm ²	50 mm ²	400132	50
Cu	70 mm ²	70 mm ²	400133	50
Cu	95 mm ²	16-35 mm ²	400134	50
Cu	95 mm ²	50 mm ²	400135	50
Cu	95 mm ²	70 mm ²	400136	50
Cu	95 mm ²	95 mm ²	40410	50
Cu	120 mm ²	16-35 mm ²	40311	50
Cu	120 mm ²	50 mm ²	400137	50
Cu	120 mm ²	70 mm ²	400138	50
Cu	120 mm ²	95 mm ²	40510	50
Cu	120 mm ²	120 mm ²	40310	50
Cu	150 mm ²	16-35 mm ²	400615	50
Cu	150 mm ²	50 mm ²	400139	50
Cu	150 mm ²	70 mm ²	400140	50
Cu	150 mm ²	95 mm ²	400141	50
Cu	150 mm ²	120 mm ²	400142	50
Cu	150 mm ²	150 mm ²	400116	50
Cu	185 mm ²	16-35 mm ²	400143	50
Cu	185 mm ²	50 mm ²	400144	50
Cu	185 mm ²	70 mm ²	400145	50
Cu	185 mm ²	95 mm ²	400146	50
Cu	185 mm ²	120 mm ²	400147	50
Cu	185 mm ²	150 mm ²	400148	50
Cu	185 mm ²	185 mm ²	400118	50
Cu	240 mm ²	16-35 mm ²	400149	50
Cu	240 mm ²	50 mm ²	400150	50
Cu	240 mm ²	70 mm ²	400151	50



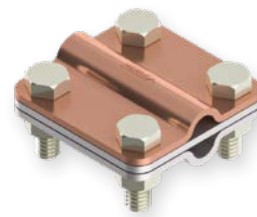
* upon request



>> KON07 Clamp

Designed for carrying out contact joints in the ground and above it,
16-35 mm² / 240 mm².

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	240 mm ²	95 mm ²	400125	50
Cu	240 mm ²	120 mm ²	400152	50
Cu	240 mm ²	150 mm ²	400153	50
Cu	240 mm ²	185 mm ²	400154	50
Cu	240 mm ²	240 mm ²	400123	50
Cu/Rf	16 - 35 mm ²	Φ = 8 - 10	400196	50
Cu/Rf	95 mm ²	Φ = 8 - 10	400114	50
Cu/Rf	120 mm ²	Φ = 8 - 10	400115	50
Cu/Rf	240 mm ²	185 mm ²	400194	50
Cu/Rf/Rf	16-35 mm ²	16-35 mm ²	400160	50
Cu/Rf/Rf	50 mm ²	16-35 mm ²	400161	50
Cu/Rf/Rf	50 mm ²	50 mm ²	400162	50
Cu/Rf/Rf	70 mm ²	16-35 mm ²	400163	50
Cu/Rf/Rf	70 mm ²	50 mm ²	400164	50
Cu/Rf/Rf	70 mm ²	70 mm ²	400165	50
Cu/Rf/Rf	95 mm ²	16-35 mm ²	400166	50
Cu/Rf/Rf	95 mm ²	50 mm ²	400167	50
Cu/Rf/Rf	95 mm ²	70 mm ²	400168	50
Cu/Rf/Rf	95 mm ²	95 mm ²	400169	50
Cu/Rf/Rf	120 mm ²	16-35 mm ²	400170	50
Cu/Rf/Rf	120 mm ²	50 mm ²	400171	50
Cu/Rf/Rf	120 mm ²	70 mm ²	400172	50
Cu/Rf/Rf	120 mm ²	95 mm ²	400173	50
Cu/Rf/Rf	120 mm ²	120 mm ²	400174	50
Cu/Rf/Rf	150 mm ²	16-35 mm ²	400175	50
Cu/Rf/Rf	150 mm ²	50 mm ²	400176	50
Cu/Rf/Rf	150 mm ²	70 mm ²	400177	50
Cu/Rf/Rf	150 mm ²	95 mm ²	400178	50
Cu/Rf/Rf	150 mm ²	120 mm ²	400179	50
Cu/Rf/Rf	150 mm ²	150 mm ²	400180	50
Cu/Rf/Rf	185 mm ²	16-35 mm ²	400181	50
Cu/Rf/Rf	185 mm ²	50 mm ²	400182	50
Cu/Rf/Rf	185 mm ²	70 mm ²	400183	50
Cu/Rf/Rf	185 mm ²	95 mm ²	400184	50
Cu/Rf/Rf	185 mm ²	120 mm ²	400185	50
Cu/Rf/Rf	185 mm ²	150 mm ²	400186	50
Cu/Rf/Rf	185 mm ²	185 mm ²	400187	50
Cu/Rf/Rf	240 mm ²	16-35 mm ²	400188	50
Cu/Rf/Rf	240 mm ²	50 mm ²	400189	50
Cu/Rf/Rf	240 mm ²	70 mm ²	400190	50
Cu/Rf/Rf	240 mm ²	95 mm ²	400191	50
Cu/Rf/Rf	240 mm ²	120 mm ²	400192	50
Cu/Rf/Rf	240 mm ²	150 mm ²	400193	50
Cu/Rf/Rf	240 mm ²	185 mm ²	400194	50
Cu/Rf/Rf	240 mm ²	240 mm ²	400195	50
Rf	16-35 mm ²	16-35 mm ²	400200	50
Rf	50 mm ²	16-35 mm ²	400201	50



**>> KON07 Clamp**

Designed for carrying out contact joints in the ground and above it,
16-35 mm² / 240 mm².



MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	50 mm ²	50 mm ²	400202	50
Rf	70 mm ²	16-35 mm ²	400203	50
Rf	70 mm ²	50 mm ²	400204	50
Rf	70 mm ²	70 mm ²	400205	50
Rf	95 mm ²	16-35 mm ²	400206	50
Rf	95 mm ²	50 mm ²	400207	50
Rf	95 mm ²	70 mm ²	400208	50
Rf	95 mm ²	95 mm ²	400113	50
Rf	120 mm ²	16-35 mm ²	400209	50
Rf	120 mm ²	50 mm ²	400210	50
Rf	120 mm ²	70 mm ²	400211	50
Rf	120 mm ²	95 mm ²	400212	50
Rf	120 mm ²	120 mm ²	400113	50
Rf	150 mm ²	16-35 mm ²	400214	50
Rf	150 mm ²	50 mm ²	400215	50
Rf	150 mm ²	70 mm ²	400216	50
Rf	150 mm ²	95 mm ²	400217	50
Rf	150 mm ²	120 mm ²	400218	50
Rf	150 mm ²	150 mm ²	400117	50
Rf	185 mm ²	16-35 mm ²	400219	50
Rf	185 mm ²	50 mm ²	400220	50
Rf	185 mm ²	70 mm ²	400221	50
Rf	185 mm ²	95 mm ²	400222	50
Rf	185 mm ²	120 mm ²	400223	50
Rf	185 mm ²	150 mm ²	400224	50
Rf	185 mm ²	185 mm ²	400225	50
Rf	240 mm ²	16-35 mm ²	400226	50
Rf	240 mm ²	50 mm ²	400227	50
Rf	240 mm ²	70 mm ²	400228	50
Rf	240 mm ²	95 mm ²	400229	50

Designed for carrying out contact joints between conductors of different

* upon request

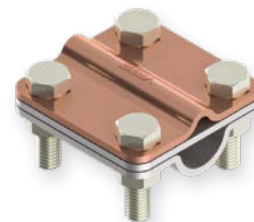
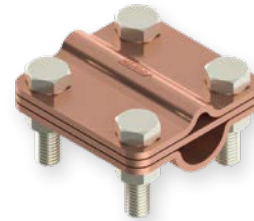




>> KON07 Clamp

dimensions 16-35 mm² / 240 mm² and earth rod Φ 16 - Φ 20 mm.

MATERIAL	CONDUCTOR 1 (mm ²)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	16-35 mm ²	Φ = 20	400235	50
Cu	50 mm ²	Φ = 20	400236	50
Cu	70 mm ²	Φ = 20	400237	50
Cu	95 mm ²	Φ = 20	400238	50
Cu	120 mm ²	Φ = 20	400239	50
Cu	150 mm ²	Φ = 20	400240	50
Cu	185 mm ²	Φ = 20	400241	50
Cu	240 mm ²	Φ = 20	400124	50
Cu/Rf/Rf	16-35 mm ²	Φ = 20	400250	50
Cu/Rf/Rf	50 mm ²	Φ = 20	400251	50
Cu/Rf/Rf	70 mm ²	Φ = 20	400252	50
Cu/Rf/Rf	95 mm ²	Φ = 20	400253	50
Cu/Rf/Rf	120 mm ²	Φ = 20	400254	50
Cu/Rf/Rf	150 mm ²	Φ = 20	400255	50
Cu/Rf/Rf	185 mm ²	Φ = 20	400119	50
Cu/Rf/Rf	240 mm ²	Φ = 20	400256	50
Rf	16-35 mm ²	Φ = 20	400270	50
Rf	50 mm ²	Φ = 20	400271	50
Rf	70 mm ²	Φ = 20	400272	50
Rf	95 mm ²	Φ = 20	400273	50
Rf	120 mm ²	Φ = 20	400274	50
Rf	150 mm ²	Φ = 20	400275	50
Rf	185 mm ²	Φ = 20	400276	50
Rf	240 mm ²	Φ = 20	400277	50
Cu	16-35 mm ²	Φ = 16	400242	50
Cu	50 mm ²	Φ = 16	400243	50
Cu	70 mm ²	Φ = 16	400244	50
Cu	95 mm ²	Φ = 16	400245	50
Cu	120 mm ²	Φ = 16	400246	50
Cu	150 mm ²	Φ = 16	400247	50
Cu	185 mm ²	Φ = 16	400248	50
Cu	240 mm ²	Φ = 16	400249	50
Cu/Rf/Rf	16-35 mm ²	Φ = 16	400257	50
Cu/Rf/Rf	50 mm ²	Φ = 16	400258	50
Cu/Rf/Rf	70 mm ²	Φ = 16	400259	50
Cu/Rf/Rf	95 mm ²	Φ = 16	400260	50
Cu/Rf/Rf	120 mm ²	Φ = 16	400261	50
Cu/Rf/Rf	150 mm ²	Φ = 16	400262	50
Cu/Rf/Rf	185 mm ²	Φ = 16	400263	50
Cu/Rf/Rf	240 mm ²	Φ = 16	400264	50
Rf	16-35 mm ²	Φ = 16	400278	50
Rf	50 mm ²	Φ = 16	400279	50
Rf	70 mm ²	Φ = 16	400280	50
Rf	95 mm ²	Φ = 16	400281	50
Rf	120 mm ²	Φ = 16	400282	50
Rf	150 mm ²	Φ = 16	400283	50
Rf	185 mm ²	Φ = 16	400284	50
Rf	240 mm ²	Φ = 16	400285	50





KON07 Clamp

Clamp, consisting of 2 plates 58 mm x 58 mm, screws and M8 nuts, designed for carrying out contact joints in the ground and above it between round conductors of different dimensions.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf*H4	Φ = 8 - 10	Φ = 8 - 10	77900	65
FeZn-H	Φ = 8 - 10	Φ = 8 - 10	78000	65



KON07 A Clamp

Clamp, consisting of 3 plates 58 mm x 68 mm, screws and M8 nuts, designed for carrying out contact joints in the ground and above it between round conductors of different dimensions.

MAT.	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	95 mm ²	95 mm ²	400120	50
Cu	95 mm ²	95 mm ²	400121	50
Rf	Φ = 8 - 10	Φ = 30	400509	50
Rf*H4	Φ = 8 - 10	Φ = 30	400510	50



KON08 Clamp

Clamp, consisting of 3 plates 48 mm x 48 mm, screws and M6 nuts, designed for carrying out contact joints in the ground and above it between round conductors of different dimensions.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Cu	Φ = 8	Φ = 8	50110	140
Cu	Φ = 8	16-35 mm ²	50310	140
Cu	16-35 mm ²	16-35 mm ²	50311	140
Cu/Rf/Rf	16-35 mm ²	Φ = 8 - 10	50313	140
Rf	Φ = 8 - 10	Φ = 8 - 10	50111	140
Rf	Φ = 8 - 10	16-35 mm ²	50112	140
Rf	16-35 mm ²	16-35 mm ²	50312	140
Rf*H4	Φ = 8 - 10	Φ = 8 - 10	50117	140



KON09 Clamp

Clamp, consisting of plates 40 mm x 30 mm and a M10 screw, designed for carrying out contact joints between square ground conductors of up to 40 mm width and reinforced steel armature of up to Φ20 in concrete.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Fe	P up to 40	< Φ = 20	90122	100
Fe	P up to 40	< Φ = 32	78123	100
FeZn-H	P up to 40	< Φ = 20	78122	100

* upon request



KON09 A Clamp

Clamp, consisting of plates 50 mm x 35 mm x 45 mm, 40 mm x 40 mm and a M10 screw, designed for carrying out contact joints between square ground conductors of up to 40 mm width, clamp KON30 and reinforced steel armature of up to $\Phi 20$ in concrete.

MATERIAL	CONDUCTOR 1 (mm)	SHEET METAL	PROD. CODE	PACKAGE
■ Fe	P up to 40	< $\Phi = 20$	90123	100



KON20 Clamp

Clamp, consisting of plates 48 mm x 83 mm and M6 screws, designed for carrying out contact joints between round conductors 8 - 10 mm and metal parts or as a holder of round conductors on sheet metal roofs.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
■ Cu	$\Phi = 8$	200107	80
■ Rf	$\Phi = 8 - 10$	200122	80
■ Rf*H4	$\Phi = 8 - 10$	200127	80



KON20 B Clamp

Clamp, consisting of plates 20 mm x 52 mm and M6 bolts, intended as a holder of round conductors on sheet metal roofs.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
■ Rf	$\Phi = 8 - 10$	200123	100



KON20 I Clamp

Clamp, intended as a holder of round conductors on sheet metal roofs.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
■ Rf	$\Phi = 8 - 10$	200124	80



* upon request



K0N21 Wet-preventing clamp

Wet-preventing clamp consisting of plates 48 mm x 85 mm, screws and M6 nuts, prevents wetting over a lightning conductor.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
1	Cu	Φ = 8	200207	100
1	Rf	Φ = 8 - 10	200212	100

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
2	Rf	PL 25 x 4	200213	100

TYPE	MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
3	N-N grey	Φ = 8	200214	100



K0N22 Clamp

Construction clamp, made of Al 50 x 58 x 78 mm, designed for grounding of constructions of up to 20 mm thickness with round or square conductors.

MATERIAL	CONDUCTOR 1 (mm)	CONSTRUCTION	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10	up to 20 mm	200222	50



K0N25 Clamp

Clamp, consisting of 2 plates 25 mm x 58 mm, screws and M8 nuts, designed for grounding of constructions with round or flat conductors.

TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONSTRUCTION	PROD. CODE	PACKAGE
1	Rf	Φ = 8 - 10		80540	50
2	Rf	P 30 x 5		80541	50



K0N25 A Clamp

Clamp, consisting of 2 plates 25 mm x 58 mm, bolts and M8 nuts, designed for carrying out contact joints between round conductors.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10	Φ = 16	80544	50
FeZn-H	Φ = 8 - 10	Φ = 16	80545	50

* upon request



KON26 Clamp

Clamp, intended for mounting a **round and flat conductor** or for mounting the lightning rod **LOP0,5 - LOP1,0** to the construction.

MATERIAL	CONDUCTOR 1 (mm)	CONSTRUCTION	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$		80542	40



KON26 B Clamp

Clamp, intended for grounding the constructions of the thickness **up to 20 mm** with a round conductor or for mounting the lightning rod **LOP2,0 - LOP4,0** to the construction.

MATERIAL	CONDUCTOR 1 (mm)	CONSTRUCTION	PROD. CODE	PACKAGE
Rf	$\Phi = 16$	20 mm	80543	1



KON27 Clamp

Clamp, intended for grounding of the constructions. For mounting a round and flat conductor together with a dedicated clamp (KON01, KON05 C, KON04 A SIMPLE, ...) or for mounting the lightning rod to the construction.

MATERIAL	CONSTRUCTION	PROD. CODE	PACKAGE
Rf	up to 30 mm	200234	40



KON27 B Clamp

Clamp, intended for grounding of the constructions. For mounting a round and flat conductor together with a dedicated clamp (KON01, KON05 C, KON04 A SIMPLE, ...) or for mounting the lightning rod to the construction.

MATERIAL	CONSTRUCTION	PROD. CODE	PACKAGE
Rf	up to 20 mm	200239	40





KON28 Clamp

Clamp, intended for joining the earth rod (max. $\Phi 20$ mm) with a round conductor ($\Phi 8-10$ mm) or a flat conductor and joining the lightning rod with a round or flat conductor.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$ / P up to 30 x 3,5	up to $\Phi = 20$	200235	100
Rf*H4	$\Phi = 8 - 10$ / P up to 30 x 3,5	up to $\Phi = 20$	200236	100



KON28 A Clamp

Clamp, intended for joining the earth rod (max. $\Phi 20$ mm) with a round conductor ($\Phi 8-10$ mm) or a flat conductor and joining the lightning rod with a round or flat conductor.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf*H4	$\Phi = 8 - 10$ / P up to 30 x 3,5	up to $\Phi = 25$	200237	100



KON71 Clamp

Clamp, intended for carrying out contact joints between round and flat conductors of different dimensions. Suitable for joining reinforced steel armature of up to $\Phi 30$ and grounding conductors.



TYPE	MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
1	Rf	$\Phi = 8 - 10$	$\Phi = 8 - 10$	400712	50
1	Rf	$\Phi = 8 - 10$	$\Phi = 16 - 30$	400711	50
2	Rf	$\Phi = 8 - 10$	P 25 - 50	400710	50
2	Rf	$\Phi = 16 - 30$	P 25 - 50	400713	50
1	Rf*H4	$\Phi = 8 - 10$	$\Phi = 8 - 10$	400732	50
1	Rf*H4	$\Phi = 8 - 10$	$\Phi = 16 - 30$	400731	50
2	Rf*H4	$\Phi = 8 - 10$	P 25 - 50	400730	50
2	Rf*H4	$\Phi = 16 - 30$	P 25 - 50	400733	50
1	FeZn-H	$\Phi = 8 - 10$	$\Phi = 8 - 10$	400702	50
1	FeZn-H	$\Phi = 8 - 10$	$\Phi = 16 - 30$	400701	50
2	FeZn-H	$\Phi = 8 - 10$	P 25 - 50	400700	50
2	FeZn-H	$\Phi = 16 - 30$	P 25 - 50	400703	50



KON71 P Clamp

Clamp, intended for carrying out contact joints **between flat conductors of 25-40 mm width.**

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
Rf	P 25 - 40	P 25 - 40	400714	50
Rf*H4	P 25 - 40	P 25 - 40	400734	50
FeZn-H	P 25 - 40	P 25 - 40	400704	50



MS Measuring number

Measuring number designed for marking measuring points.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
Rf	Φ = 8 - 10	80122	1
Rf*H4	Φ = 8 - 10	80127	1




MS Standard cap

A connecting clamp: its body is made of brass and put and installed into the ground, a stainless steel screw and a nut are used for joining metal masses. The clamp is designed to connect metal masses with the purpose of equalizing electric potentials (metal shelves, furniture, machines etc.) in shopping centres, warehouses etc.

MATERIAL	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
Me/Rf	16 mm ²	110022	200





ON-ROOF AND DOWNLEAD CONDUCTOR INSTALLATIONS, EARTHING AND EQUIPOTENTIAL BONDINGS

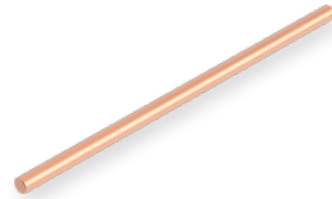
On-roof and down conductor installations are designed for the interception and diversion of lightning currents. On-roof and down conductor installations are made with different conductors. Conductors are made of different materials and are fixed to roof coverings with SON roof conductor fasteners or fixed to walls with ZON wall fasteners. The chosen conductor material depends on the roof covering material, metal parts on the roof, gutter material, technical conditions, architecture of the building and the purpose of the building.



CH 1 Conductor

Round conductor made of copper, $\Phi 8$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Cu	$\Phi = 8$	90100	40-80 m
Cu	$\Phi = 8$	90099	kg



RH 3 Conductor

Round conductor made of stainless steel, $\Phi 8$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 8$	90300	40-120 m
Rf*H4	$\Phi = 8$	90301	40-120 m
Rf*H4	$\Phi = 8$	90304	20-25 kg



RH 5 Conductor

Round conductor made of stainless steel, $\Phi 10$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Rf	$\Phi = 10$	90160	40-120 m
Rf*H4	$\Phi = 10$	90302	40-120 m
Rf*H4	$\Phi = 10$	90303	20-25 kg



AH 1 Conductor

Round conductor made of an aluminium alloy, $\Phi 8$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Al	$\Phi = 8$	90250	40-120 m
Al	$\Phi = 8$	90250	15-20 kg



AH 2 Conductor

Round conductor made of an aluminium alloy, $\Phi 10$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Al	$\Phi = 10$	90200	40-120 m



AH 3 Conductor

Round conductor made of an aluminium alloy, 100 mm².

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Al	100 mm ²	90252	40-120 m



FeZn-H $\Phi 8$ mm Conductor

Round conductor made of galvanized steel, $\Phi 8$ mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
FeZn-H	$\Phi = 8$	90310	40-120 m
FeZn-H	$\Phi = 8$	90309	approx 25 kg

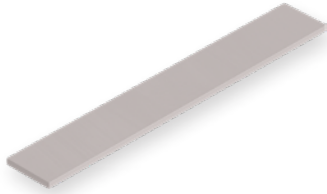


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**FeZn-H Ø10mm Conductor**

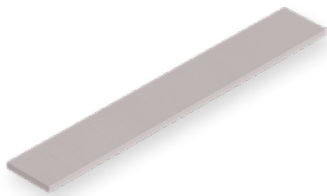
Round conductor made of galvanized steel, Ø10 mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeZn-H	Φ = 10	90600	40-120 m
■ FeZn-H	Φ = 10	90601	cca. 25 kg

**RH1 Conductor**

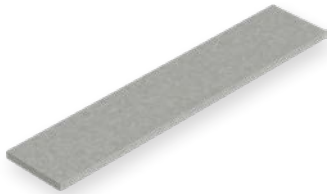
Flat stainless steel conductor, 30 mm x 3,5 mm, to install different types of earthings.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ Rf	P 30 x 3,5	90701	≈ 50 m
■ Rf*H4	P 30 x 3,5	90704	≈ 50 m
■ Rf*H4	P 30 x 3,5	90694	35 - 40 kg

**RH6 Conductor**

Flat stainless steel conductor, 40 mm x 4 mm.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ Rf	P 40 x 4	* 90693 *	40 m
■ Rf*H4	P 40 x 4	* 90695 *	40 m

**FeZn-H Conductor**

Flat galvanized steel conductor, 25mm x 4mm, 30mm x 4mm, 40mm x 4mm, to install different types of earthings.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeZn-H	P 25 x 4	90400	
■ FeZn-H	P 25 x 3	90403	25 or 50 kg
■ FeZn-H	P 25 x 3,5	90404	25 or 50 kg
■ FeZn-H	P 30 x 4	90402	
■ FeZn-H	P 40 x 4	90401	

**COPPER WIRE Conductor**

Copper wire for making different earthing or equipotentialisation.

MATERIAL	DIMENSION (mm ²)	PROD. CODE	PACKAGE
■ Cu	240	* 90124 *	
■ Cu	185	* 90119 *	
■ Cu	150	* 90107 *	
■ Cu	120	* 90103 *	
■ Cu	95	*90101*	
■ Cu	70	*90102*	
■ Cu	50	*90105*	
■ Cu	35	*90104*	
■ Cu	25	*90120*	
■ Cu	16	*90108*	

* upon request



BONDING BAR Cu

Bonding bar Cu for making different earthing or equipotentialisation.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Cu	P 60 x 5	* 90144 *	
Cu	P 50 x 5	* 90111 *	
Cu	P 40 x 5	* 90112 *	
Cu	P 40 x 4	* 90148 *	
Cu	P 30 x 5	* 90110 *	
Cu	P 30 x 4	* 90118 *	
Cu	P 30 x 3	* 90146 *	
Cu	P 25 x 5	* 90113 *	
Cu	P 25 x 4	* 90109 *	
Cu	P 25 x 3	* 90135 *	



ZP ProCap Protective cap

ZP ProCap is designed to cover the ends of flat or round conductors of various dimensions on the construction site. It is made of plastic. The ZP ProCap protective cap is fully adapted to round and flat conductors and allows easy installation. The product is reusable.

DIMENSION (mm)	PROD. CODE	PACKAGE
Φ = 8 - 10 / P 20 - 40	110045	50

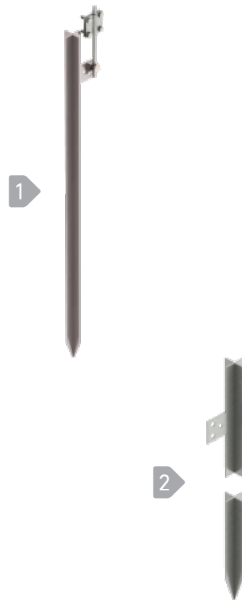


VTB Sealing collar

VTB Sealing collar prevents water and moisture from entering the foundation via round or flat conductor. The sealing collar is suitable for mounting on a round conductor Φ10mm or a flat conductor of dimension 30x3,5mm.

TYPE	DIMENSION (mm)	PROD. CODE	PACKAGE
1	Φ = 10	110043	1
2	30 x 3,5	110044	1





POS FeZn-H Earth rod

Earth rod, made of hot galvanized steel with cross-section dimensions 50 mm x 50 mm x 5 mm, together with a connecting clamp for flat conductor up to 30 mm width, intended for staff earthing, repairs of worn earthings.

With connection clamp

TYPE	MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
1	■ FeZn-H	1000	50 x 50 x 5	90708	1
1	■ FeZn-H	1500	50 x 50 x 5	90707	1
1	■ FeZn-H	2000	50 x 50 x 5	90706	1
1	■ FeZn-H	3000	50 x 50 x 5	90716	1

Without connection clamp

TYPE	MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
2	■ FeZn-H	1000	50 x 50 x 5	90719	1
2	■ FeZn-H	1500	50 x 50 x 5	90720	1
2	■ FeZn-H	2000	50 x 50 x 5	90721	1
2	■ FeZn-H	3000	50 x 50 x 5	90722	1



POS FeZn-H Earth rod

Earth rod, made of hot galvanized steel with a diameter of $\Phi 16$ mm, together with a welded connection plate, intended for staff earthing, repairs of worn earthings. Expansion is not possible. Without connecting clamp.

MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeZn-H	1000	$\Phi = 16$	* 90764 *	1
■ FeZn-H	1500	$\Phi = 16$	* 90763 *	1
■ FeZn-H	2000	$\Phi = 16$	90762	1



POS FeZn-H Earth rod

Earth rod, made of hot galvanized steel with cross-section dimensions 50 mm x 50 mm x 5 mm, intended for staff earthing, repairs of worn earthings. Without connecting clamp.

MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeZn-H	1000	50 x 50 x 3	90767	1
■ FeZn-H	1500	50 x 50 x 3	90766	1
■ FeZn-H	2000	50 x 50 x 3	90765	1



KS Tip for POS FeCu-P

Tip for POS FeCu-P made of steel, is mounted onto the POS FeCu-P, where a hole for the tip can be found.

MATERIAL	PROD. CODE	PACKAGE
■ Fe	* 90729 *	1

* upon request



POS FeCu-P Earth rod

Earth rod, steel covered in copper, different dimensions, intended for staff earthing, repairs of worn earthings...

NOTE: Contact between earthing probe POS FeCu-P and earthing lead is carried out with the connection clip KON02 or KON07 of the appropriate dimension. The clips KON02 or KON07 can be found in the *KON Contact equipment* section (p. 66).

MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeCu	1500	Φ = 17,2 mm (3/4")	90730	1
■ FeCu	1500	Φ = 20 mm	90732	1
■ FeCu	2100	Φ = 14,2 mm	90733	1
■ FeCu	3000	Φ = 17,2 mm (3/4")	90734	1



PS Connector for POS FeCu-P

Connector for connecting POS FeCu-P probes.

MATERIAL	PROD. CODE	PACKAGE
■ CuZn	90727	1



POS Rf Earth rod

Earth rod made of stainless steel, Ø20 mm, to install rod earthings and reconstruction of damaged earthings; the rod can be extended with a special element; another rod is placed on the previous rod and hammered into it thus being pushed deeper into the ground.

NOTE: Contact between earthing probe POS Rf and earthing lead is carried out with the connection clip KON02 or KON07 of the appropriate dimension. The clips KON02 or KON07 can be found in the *KON Contact equipment* section (p. 66).

MATERIAL	LENGTH (mm)	DIMENSION (mm)	PROD. CODE	PACKAGE
■ Rf	1500	Φ = 20	90711	1
■ Rf*H4	1500	Φ = 20	90725	1
■ Rf*H4	1000	Φ = 20	90758	1



NRZ Nozzle for POS Rf

Tool for manual driving in POS Rf lightning rods.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	90713	1



NIB for POS Rf

Nib made of stainless steel and placed on the hole prepared on the POS Rf rod.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	90712	1
■ Rf*H4	90726	1



* upon request



AH Expansion element

Expansion element Al Ø8mm, designed for the compensation of temperature expansion of lightning conductors. We recommend expansion elements in lightning protection installations where the distance of conductor installations exceeds 20 m.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ Al	Φ = 8	90213	1



SON Air termination stud

Air termination stud element for fixing onto drivable or walkable surfaces as the lightning strike spot.

MATERIAL	CONDUCTOR (mm)	PROD. CODE	PACKAGE
■ ■ Al/Rf	P up to 30mm	40000	12
■ ■ Al/Rf	Φ = 8 - 10	40001	12



SON Extension for LIGHTNING PROTECTION DISC

An extension for mounting on drivable or walkable surfaces as striking point.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	39999	12



LOV Lightning protection nib

An element for carrying out lightning strike spots on the ends of on-roof conductors.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ Cu	Φ = 8	300398	100
■ Al	Φ = 8 - 10	300397	100
■ Rf	Φ = 8 - 10	300400	100
■ Rf*H4	Φ = 8 - 10	300399	100



DV Rolled conductor holder

Holder for rolled conductor designed for upright installation of earthing in the ground.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	110020	30

* upon request



Grounding pillar Rf

Grounding pillar made of stainless steel, 1130 x 80 x 60 mm, designed for grounding the vehicle while pumping fuel at petrol stations.

MATERIAL	PROD. CODE	PACKAGE
Rf	110027	1



H/RIP Equipotential bonding bar

Equipotential bonding bar 145 mm x 190 mm x 75 mm (D x W x H), for main equipotential bonding and lightning equipotential bonding.

MATERIAL	CONDUCTOR 1 (mm)	CONDUCTOR 2 (mm)	PROD. CODE	PACKAGE
PVC/Rf	P up to 30	4x16 mm ²	20550	4
PVC/Rf	7x16 mm ²		20551	4



H/RIP-PO Equipotential bonding bar

Equipotential bonding bar 200 mm x 150 mm x 70 mm (D x W x H), for main equipotential bonding and lightning equipotential bonding.

MATERIAL	USE WITH	CONDUCTOR 1 (mm)	PROD. CODE	PACKAGE
PVC/Rf	in-wall	16x16 mm ²	20553	4



H-ZIP Collector for potential equalisation

Collector for potential equalisation, for potential equalisation and connection to earthing.

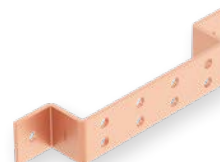
MATERIAL	PROD. CODE	PACKAGE
Cu	90143	1
Rf	90076	1
Rf*H4	90077	10



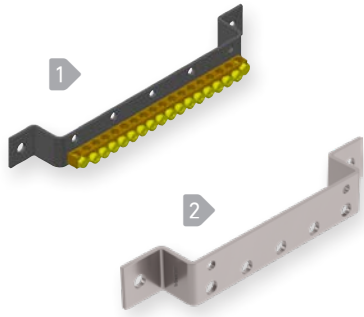
H-ZIP A Potential equalisation collector

Collector for potential equalisation, 300 mm x 50 mm x 5 mm, (L x W x H), for potential equalisation and connection to earthing.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
Cu	300 x 50	90117	1
Rf	300 x 50	90115	1
Rf*H4	300 x 50	90078	10



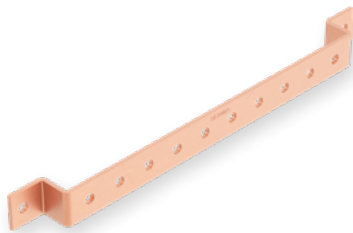
* upon request



H-ZIP B Collector for potential equalisation

Collector for potential equalisation, 210 mm x 30 mm x 3 mm (D x W x H), for potential equalisation and connection to earthing.

TIP	MATERIAL	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
1	Rf	210 x 30 x 3	16 x 16 mm ²	90079	1
2	Rf	210 x 30 x 3	8 x 16-32 mm ²	90080	1



H-ZIP C Collector for potential equalisation

Collector for potential equalisation and connection to earthing.

MATERIAL	DIMENSION (mm)	CONDUCTOR (mm)	PROD. CODE	PACKAGE
Cu	500 x 40 x 5	10 x $\Phi = 11$	90074	1
Cu	200 x 25 x 4	10 x $\Phi = 11$	90075	1

KON30

Bonding connector M10 and M12, for making connections to earthing on the wall.



MATERIAL	DIMENSION	PROD. CODE	PACKAGE
Rf	M10	110021	20
Rf*H4	M10	110029	20
Rf	M12	110034	20
Rf*H4	M12	110035	20
Rf*H4	M16	110049	20

KON31 Clamp

Clamp, consisting of three plates sized 58 mm x 58 mm with threaded bolt M10 and M12, intended for potential equalisation.



MATERIAL	DIMENSION	PROD. CODE	PACKAGE
Rf	M8	40647	40
Rf	M10	40642	20
Rf*H4	M10	40643	20
Rf	M12	40616	20
Rf*H4	M12	40641	20

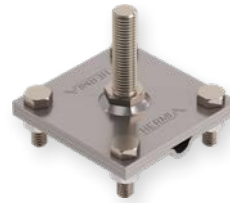
* upon request



KON31 B Clamp

Clamp, consisting of three plates sized 78 mm x 78 mm with threaded bolt M12, intended for potential equalisation.

MATERIAL	DIMENSION	PROD. CODE	PACKAGE
Rf	M12	40646	20
Rf*H4	M12	40648	20



KON31 M Clamp

Clamp, consisting of three plates sized 58 mm x 58 mm with M10 nut, intended for potential equalisation.

MATERIAL	DIMENSION	PROD. CODE	PACKAGE
Rf	M10	40645	50



KON32 Clip

Clip, intended for potential equalisation. The clamp serves as a connection between KON30 or KON33 and the potential equalisation conductor. The conductor is attached with the KON05 C clamp, KON02 clamp or another suitable clamp (depending on conductor).

MATERIAL	CONDUCTOR	PROD. CODE	PACKAGE
Rf	$\Phi = 8 - 10$	40618	20



KON32 C Clip

Clamp, consisting of three plates sized 58 mm x 58 mm with M10 nut, intended for potential equalisation. The clamp serves as a connection between KON30 or KON33 and the potential equalisation conductor. The conductor is attached with the KON05 C clamp, which is a constituent part of the product.

MATERIAL	CONDUCTOR	PROD. CODE	PACKAGE
Rf/FeZn	$\Phi = 8 - 10$	40649	50
FeZn-H/FeZn	$\Phi = 8 - 10$	40650	50



KON33 Fixed attachment

Fixed attachment for potential equalisation M10 and M12, without an axis, intended for the equalisation of potential between walls.

MATERIAL	DIMENSION	PROD. CODE	PACKAGE
Rf	M10	110031	20
Rf*H4	M10	110030	20
Rf	M12	110033	20
Rf*H4	M12	110032	20





INSULATED AIR TERMINATION SYSTEMS

Insulated lightning protection systems are designed for protection of metal and nonmetal devices with sensitive installs (electrical devices) as well as for protection of metal devices or parts of buildings which should be protected against lightning strikes but are not suitable for the installation of common lightning conductor holders. Learn more about protection with insulated lightning protection systems in the catalogue's introduction.



LOP1,0 ... 13,0 Lightning rods

LOP Lightning rods are designed for lightning protection of smaller air conditioning devices, light cupolas or parts of roofs which cannot be effectively protected with the installation of common lightning protection conductors.

NAME	MATERIAL	LENGTH (m)	DIMENSION (mm)	INDIVIDUAL LENGTHS (m)	PROD. CODE	PACKAGE
LOP0,5	■ Al	0,5	Φ = 10	0,5	300510	1
LOP1,0	■ Al	1,0	Φ = 10	1,0	300501	1
LOP1,5	■ Al	1,5	Φ = 16 / Φ = 10	1,0+0,5	300511	1
LOP2,0	■ Al	2,0	Φ = 16 / Φ = 10	1,0+1,0	300502	1
LOP2,5	■ Al	2,5	Φ = 16 / Φ = 10	2,0+0,5	300512	1
LOP3,0	■ Al	3,0	Φ = 16 / Φ = 10	2,0+1,0	300503	1
LOP3,5	■ Al	3,5	Φ = 16 / Φ = 10	3,0+0,5	300513	1
LOP4,0	■ Al	4,0	Φ = 16 / Φ = 10	3,0+1,0	300504	1
LOP4,5	■ Al	4,5	Φ = 16 / Φ = 10	4,0+0,5	300514	1
LOP5,0	■ Al	5,0	Φ = 35 / Φ = 25 / Φ = 10	2,0+2,0+1,0	300505	1
LOP5,5	■ Al	5,5	Φ = 35 / Φ = 25 / Φ = 10	3,0+2,0+0,5	300515	1
LOP6,0	■ Al	6,0	Φ = 35 / Φ = 25 / Φ = 10	3,0+2,0+1,0	300506	1
LOP6,5	■ Al	6,5	Φ = 35 / Φ = 25 / Φ = 10	2,5+2,0+1,5+0,5	300516	1
LOP7,0	■ Al	7,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	2,5+2,0+1,5+1,0	300507	1
LOP7,5	■ Al	7,5	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	3,0+2,0+2,0+0,5	300517	1
LOP8,0	■ Al	8,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	3,0+2,0+2,0+1,0	300508	1
LOP8,5	■ Al	8,5	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	3,0+3,0+2,0+0,5	300518	1
LOP9,0	■ Al	9,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	3,0+3,0+2,0+1,0	300509	1
LOP10,0	■ Al	10,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	4,0+3,0+2,0+1,0	300490	1
LOP11,0	■ Al	11,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	5,0+3,0+2,0+1,0	300491	1
LOP12,0	■ Al	12,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	6,0+3,0+2,0+1,0	300492	1
LOP13,0	■ Al	13,0	Φ = 50 / Φ = 35 / Φ = 25 / Φ = 10	6,0+4,0+2,0+1,0	300493	1

LOP1,0 ... 2,5 B Lightning rods

NAME	MATERIAL	LENGTH (m)	DIMENSION (mm)	INDIVIDUAL LENGTHS (m)	PROD. CODE	PACKAGE
LOP1,0 B	■ Al	1,0	Φ = 16 / Φ = 10	0,5+0,5	300581	1
LOP1,5 B	■ Al	1,5	Φ = 16 / Φ = 10	0,5+1,0	300582	1
LOP2,0 B	■ Al	2,0	Φ = 16 / Φ = 10	1,0+1,0	300583	1
LOP2,5 B	■ Al	2,5	Φ = 16 / Φ = 10	1,5+1,0	300584	1

LOP09 A ... 30 A Interception pillar

LOP interception pillar is intended for the protection of larger buildings... or those parts of buildings, which cannot be efficiently protected with lightning rod leads.

NAME	LENGTH (m)	PROD. CODE	PACKAGE
LOP09 A	9,0	300235	1
LOP10 A	10,0	300210	1
LOP11 A	11,0	300211	1
LOP12 A	12,0	300212	1
LOP13 A	13,0	300213	1
LOP14 A	14,0	300238	1
LOP15 A	15,0	300234	1
LOP16 A	16,0	300231	1
LOP17 A	17,0	300223	1
LOP18 A	18,0	300232	1
LOP20 A	20,0	300233	1
LOP21 A	21,0	300236	1
LOP22 A	22,0	300222	1
LOP24 A	24,0	300224	1
LOP25 A	25,0	300225	1
LOP26 A	26,0	300239	1
LOP27 A	27,0	300227	1
LOP29 A	29,0	300229	1
LOP30 A	30,0	300237	1

* upon request





LOP ATTACHMENT KITS are designed for installing and fixing lightning rods to buildings or their roofs. LOP attachment kits are adapted to all kinds of roof coverings and surfaces intended for fixing lightning rods.

LOP-PB1 Attachment kit



Attachment kit **LOP-PB1** is suitable for placing lightning rods **LOP0,5 - LOP1,0 and LOP4,5 - LOP13,0** on flat roofs together with base plate **PBP350**. For mounting of lightning rod **LOP0,5** and **LOP1,0**, concrete base **LOP-PB1/M10** with M10 thread is used.

For mounting of lightning rod **LOP4,5** and **LOP13,0**, attachment kit which consists concrete base **LOP-PB1/M8** with M8 thread, together with suitable distance element **LOP-"V" DIST** or **LOP-"I" DIST** is used.

For mounting of free-standing lightning rod **LOP4,5** and **LOP13,0**, attachment kit which consists of concrete base **LOP-PB1/M8** with M8 thread, concrete base **LOP-PB2** with prepared hole together with suitable attachment kit **LOP-P03** or **LOP-P04**, is used. The use of base plate **PBP350** is mandatory.

NAME	MATERIAL	LIGHTNING RODS LOP (m)	DIMENSION (mm)	WEIGHT (kg)	PROD. CODE	PACKAGE
LOP-PB1/M10	■ concrete/M10	0,5 - 1,0	Φ = 350	18	301491	1
LOP-PB1/M8	■ concrete/M8	4,5 - 13	Φ = 350	18	301493	1

LOP-PB2 Attachment kit



Attachment kit **LOP-PB2** is suitable for placing lightning rods **LOP1,5 - LOP4,0** on flat roofs. For mounting lightning rod **LOP1,5 - LOP4,0**, concrete base **LOP-PB2/M16** with M16 thread is used. The use of base plate **PBP350** is mandatory.

NAME	MATERIAL	LIGHTNING RODS LOP (m)	DIMENSION (mm)	WEIGHT (kg)	PROD. CODE	PACKAGE
LOP-PB2/M16	■ concrete/M16	1,5 - 4,0	Φ = 350	18	301492	1
LOP-PB2	■ concrete/hole	4,5 - 13	Φ = 350	18	301494	1

PBP350 Base plate



Base plate **PBP350** is used to protect the roofing when mounting lightning rods **LOP/insulated supporting posts IZO** on flat roofs, where concrete bases **LOP-PB** are used.

MATERIAL	DIMENSION (mm)	PROD. CODE	PACKAGE
■ PE	Φ = 350	301490	1

LOP-P12 Attachment kit



Attachment kit for placing lightning rods **LOP1,0, LOP2,0, LOP3,0, LOP4,0**, etc. on concrete or fire-baked roof coverings. The lightning rod is fixed to the attachment element with the appropriate clamp **KON02**. The fixing construction is fixed to the attachment element with the appropriate screw. Lightning rods must be additionally anchored with "V" or "I" distance elements.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	301512	1

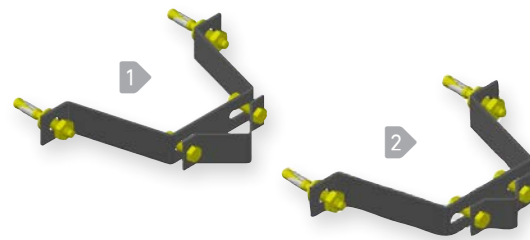
* upon request



LOP-P13/LOP-P13 A Attachment kit

An attachment kit for fixing lightning rods LOP1,0 – LOP9,0 on solid wall (wall, chimney,...). The lightning rod is fixed to the attachment element with the appropriate plate and screws. Lightning rods must be additionally anchored with "V" or "I" distance elements. For different rod heights, appropriate amount of attachment kits is required (2 x LOP-P13 A; 3 x LOP-P13).

TYPE	MATERIAL	USE WITH	PROD. CODE	PACKAGE
1	Rf	LOP5,0 - LOP 9,0	301513	1
2	Rf	LOP2,0 - LOP4,0	301515	1



LOP-P14 Attachment kit

Attachment kit for placing lightning rods LOP5,0 – LOP9,0, etc. on concrete or fire-baked roof coverings. The lightning rod is fixed to the attachment element with the appropriate screw. The fixing construction is fixed to the attachment element with the appropriate screw. Lightning rods must be additionally anchored with "V" or "I" distance elements.

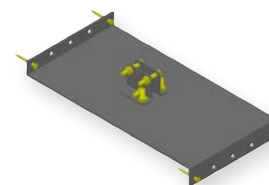
MATERIAL	PROD. CODE	PACKAGE
Rf	301514	1



LOP-P15 Attachment set

Attachment set for the placement of interception rod LOP2,0, LOP3,0, LOP4,0 onto sheet metal roofings with litter. Attachment of plate through roofing onto roof lathes. Penetration point is sealed with appropriate sealing mass. Interception rods must be additionally anchored with a suitable number of »V« or »I« distancing elements.

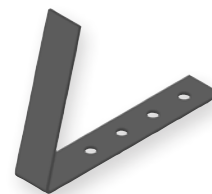
MATERIAL	PROD. CODE	PACKAGE
Rf	301525	1



LOP-P16 Attachment kit

Attachment kit for placing lightning rod LOP1,0 on sheet metal coverings. The lightning rod is fixed to the attachment element with clamp KON02. The fixing construction is fixed to the attachment element with the appropriate screw. Lightning rods LOP2,0, LOP3,0, LOP4,0 must be additionally anchored with "V" or "I" distance elements.

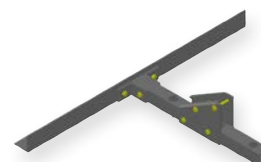
MATERIAL	PROD. CODE	PACKAGE
Rf	301516	1

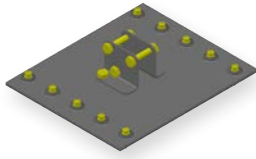


LOP-P16 A Attachment kit

Attachment kit for placing lightning rods LOP2,0, LOP3,0, LOP4,0 on sheet metal coverings. The fixing element enables inclination to be adapted to the inclination of the roof.

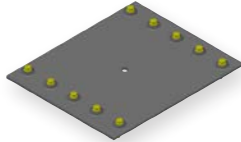
MATERIAL	PROD. CODE	PACKAGE
Al	301507	1



**LOP-P16 B Fixing element**

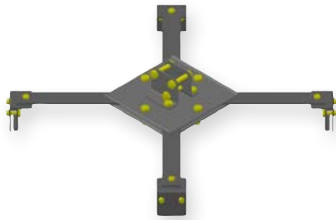
Fixing element for placing lightning rods LOP2,0, LOP3,0, LOP4,0, LOP5,0, LOP6,0, LOP7,0, LOP8,0, LOP9,0 on metal sheet coverings. Lightning rods must be additionally anchored with "V" or "I" distance elements.

MATERIAL	PROD. CODE	PACKAGE
■ Al	301509	1

**LOP-P16 C Fixing element**

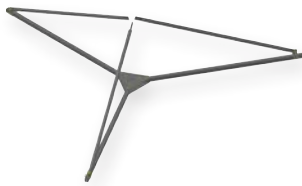
Fixing element for placing lightning rods LOP5,0, LOP6,0, LOP7,0, LOP8,0, LOP9,0 on metal sheet coverings. Lightning rods must be additionally anchored with "V" or "I" distance elements.

MATERIAL	PROD. CODE	PACKAGE
■ Al	301522	1

**LOP-P16 D Attachment kit**

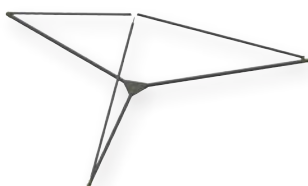
Attachment kit for the installation of the LOP1,0, LOP2,0, LOP3,0, LOP4,0 on sheet metal roofs, which are compressed with each other by "stiches". The lightning rods must be anchored with "V" or "I" distance elements.

MATERIAL	PROD. CODE	PACKAGE
■ Rf	301510	1

**LOP-P03 Fixing construction**

Fixing construction for fixing lightning rods LOP3,0, LOP4,0, LOP5,0. The kit consists of a fixing construction for fixing a lightning rod. The construction is fixed to the roof with attachment kits LOP-P suitable for the roof covering or the fixing area.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Al	1350	301503	1

**LOP-P04 Fixing construction**

Fixing construction for fixing lightning rods LOP6,0, LOP7,0, LOP8,0, LOP9,0. The kit consists of a fixing construction for fixing a lightning rod. The construction is fixed to the roof with attachment kits LOP-P suitable for the roof covering or the fixing area.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Al	1850	301504	1

* upon request



LOP-P31 Supporting element

Supporting element for mounting lightning rod LOP3,0 - LOP6,0 on trapezoidal tin sheet roofing. Intended to be used together with fixing element LOP-P16 C.

MATERIAL	PROD. CODE	PACKAGE
■ Al	301526	1



LOP-"V" DIST Distance element

Distance element for fixing lightning rods LOP4,0, LOP5,0, LOP6,0, LOP7,0, LOP8,0, LOP9,0. The kit consists of two distance elements which are fixed to the lightning rod in a 'V' shape. Lightning rods with a height of 7, 8 or 9 m need to have two distance elements fixed to ensure stability.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Rf/P-SV	1000	301505	1



LOP-"I" DIST Distance element

Distance element for fixing lightning rods LOP4,0, LOP5,0, LOP6,0, LOP7,0, LOP8,0, LOP9,0. The kit consists of a distance element which is fixed to the lightning rod. Lightning rods with a height of 7, 8 or 9 m need to have two distance elements fixed to ensure stability.

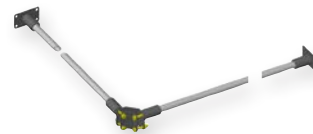
MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Rf/P-SV	1000	301506	1



LOP-"V" DIST upon order distancing element

Distancing elements of various lengths by order for the placement of interception rod LOP2,0, LOP3,0, LOP4,0. The set contains two distancing elements, which are attached onto the interception rod in a "V" shape. For interception rods of 7, 8 or 9 m, achievement of suitable stability requires the use of two distancing elements.

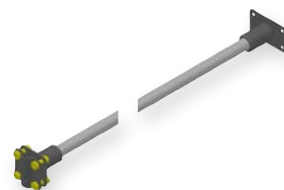
MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Rf/P-SV	upon request	*301530*	1



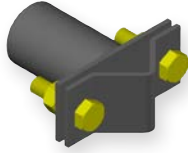
LOP-"I" DIST upon order distancing element

Distancing elements of various lengths by order for the placement of interception rod LOP2,0, LOP3,0, LOP4,0. The set contains one distancing element. For interception rods of 7, 8 or 9 m, achievement of suitable stability requires the use of two distancing elements.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Rf/P-SV	upon request	*301531*	1



* upon request

**LOP-P34 Bracket / attachment element**

Bracket / attachment element for connection between bars LOP-"I" DIST by order.

MATERIAL	PROD. CODE	PACKAGE
■ Al/Rf	*301533*	1

**LOP-P34 A Bracket / attachment element**

Bracket/attachment element for connection between construction/protected object and LOP "I" DIST distance element. Suitable composition LOP-P34 + LOP-P34 A + LOP "I" DIST.

MATERIAL	PROD. CODE	PACKAGE
■ Al/Rf	301537	1

**LOP-P34 B Bracket / attachment element**

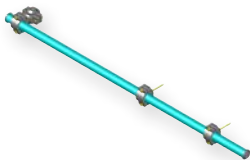
Bracket/attachment element for connection between conductor and LOP "I" DIST distance element.

MATERIAL	CONDUCTOR (mm)	PROD. CODE	PACKAGE
■ Al/Rf	Φ = 8 - 10	301558	20

**LOP-P34 C Attachment element**

Component for isolated distance.

MATERIAL	PROD. CODE	PACKAGE
■ Al/Rf	301559	20

**LOP-P30 Insulated fastening element**

Insulated fastening element for installation of the LOP2,0, LOP3,0, LOP4,0, on wooden structures. The lightning rod is fastened to the fastening element by screwing.

MATERIAL	LENGTH (mm)	PROD. CODE	PACKAGE
■ Al/P-SV	1500	301521	1

**LOP-P20 Clamp**

Clamp for fastening the LOP4,0 to the LOP-P03 attachment kit.

MATERIAL	PROD. CODE	PACKAGE
■ Al	301523	1

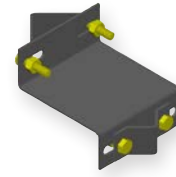
* upon request



LOP-P32 Attachment element

Attachment element for the placement of interception rods LOP2,0 - LOP9,0 onto various types of fences, pillars,...

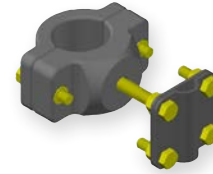
The quantity of elements depends on the height of the rod, manufacture by order.



MATERIAL	PROD. CODE	PACKAGE
Rf	*301527*	1

LOP-P36 Attachment element

Attachment element for the placement of interception rods LOP2,0, LOP3,0, LOP4,0, onto the earthing probe POS. Placement is suitable for ground solar power plants.



MATERIAL	PROD. CODE	PACKAGE
Rf-Al	300217	1

SON02 Adjustable attachment kit

Adjustable attachment kit for fixing lightning rods on roof ridges. The kit contains an adjustable coupling fastener and a lightning rod with length of 0,5 m or 1,0 m.

MATERIAL	LENGTH (m)	PROD. CODE	PACKAGE
Rf/Al	0,5	2440	1
Rf/Al	1,0	2441	1
Rf/Al	1,5	2442	1



IZO20 ... 60 Insulated supporting post

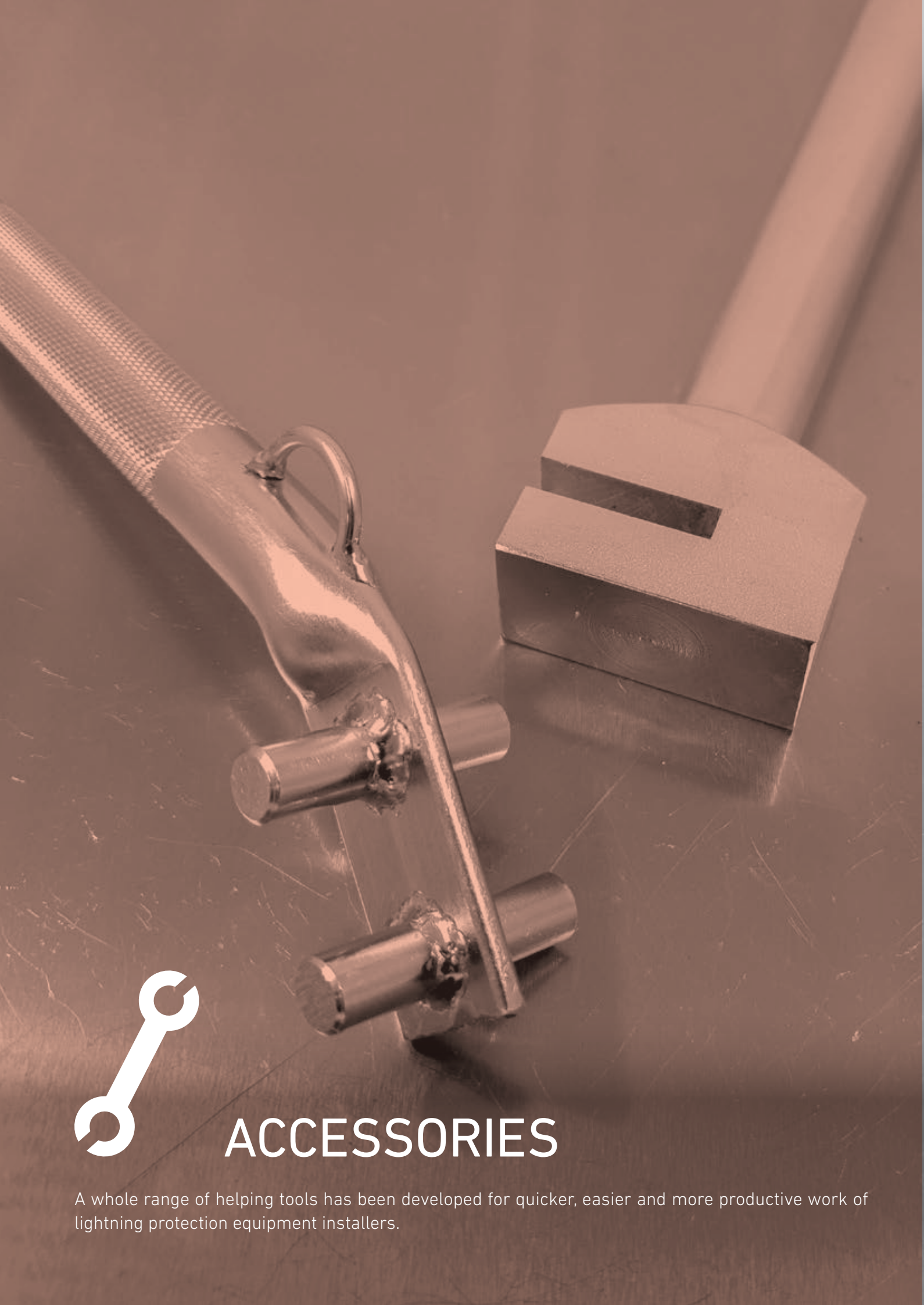
IZO INSULATED SUPPORTING POSTS are designed for lightning protection of bigger electric devices or parts of buildings (Ex zones) fitted on exposed places. Insulated holding rods are holding elements for lightning protection mesh over the protected devices. The insulated part of the rod assures safe distance between the device and lightning mesh.

NAME	MATERIAL	DIMENSION (mm)	LENGTH (m) LENGTH / LENGTH Φ	PROD. CODE	PACKAGE
IZO20	P-SV/Al	$\Phi = 42 / \Phi = 10$	2,0 + 0,5	300020	1
IZO30	P-SV/Al	$\Phi = 42 / \Phi = 10$	3,0 + 0,5	300030	1
IZO45	P-SV/Al	$\Phi = 42 / \Phi = 10$	4,5 + 0,5	300045	1
IZO60	P-SV/Al	$\Phi = 42 / \Phi = 10$	6,0 + 0,5	300060	1



* upon request





ACCESSORIES

A whole range of helping tools has been developed for quicker, easier and more productive work of lightning protection equipment installers.



RRZ Straightening device

Straightening device enables effective and quick straightening of round conductors with dimensions from $\text{Ø}6 \text{ mm}$ to $\text{Ø}10 \text{ mm}$.

MATERIAL	CONDUCTOR DIMENSION (mm)	PROD. CODE	PACKAGE
■ Fe	$\text{Ø} = 6 - 10$	110025	1



ROZ Manual unwinding device

Manual unwinding device for round conductors enables fast and effective unwinding of round conductors.

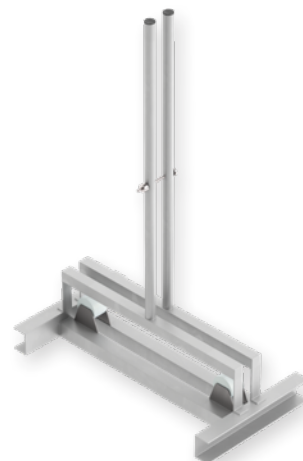
MATERIAL	CONDUCTOR DIMENSION (mm)	PROD. CODE	PACKAGE
■ Fe	$\text{Ø} = 6 - 10$	110028	1



ROT Unwinding device

Unwinding device for rolled steel conductors, enables effective and quick unwinding of earthing conductors of 25 to 30 mm width.

MATERIAL	CONDUCTOR DIMENSION (mm)	PROD. CODE	PACKAGE
■ Fe	P 25 - 30	110026	1





RP Manual tool

Manual tool, designed for making curves and manual straightening of round conductors.

MATERIAL	CONDUCTOR DIMENSION (mm)	PROD. CODE	PACKAGE
■ FeZn	Φ = 8 - 10	110024	1



RPV Manual tool

Manual tool, designed for making curves and manual straightening of rolled steel conductors.

MATERIAL	CONDUCTOR DIMENSION (mm)	PROD. CODE	PACKAGE
■ KFe	P 40 x 4	110023	1



ZP ProCap Protective cap

ProCap is designed to cover the ends of flat or round conductors of various dimensions on the construction site. It is made of plastic. The ZP ProCap protective cap is fully adapted to round and flat conductors and allows easy installation. The product is reusable.

DIMENSION (mm)	PROD. CODE	PACKAGE
Φ = 8 - 10 / P 20 - 40	110045	50



VTB Sealing collar

The VTB Sealing collar prevents water and moisture from entering the foundation via round or flat conductor. The sealing collar is suitable for mounting on a round conductor Φ10 mm or a flat conductor of dimension 30x3,5mm.

TYPE	DIMENSION (mm)	PROD. CODE	PACKAGE
1	Φ = 10	110043	1
2	30 x 3,5	110044	1

* upon request







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50591	KON44 B SIMPLE Clamp	75
50592	KON44 B SIMPLE Clamp	75
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300501	LOP1,0 ... 13,0 Lightning rods	99
300502	LOP1,0 ... 13,0 Lightning rods	99
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400216	KON07 Clamp	80
400217	KON07 Clamp	80
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400223	KON07 Clamp	80
400224	KON07 Clamp	80
400225	KON07 Clamp	80
400226	KON07 Clamp	80
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400241	KON07 Clamp	81
400242	KON07 Clamp	81
400243	KON07 Clamp	81
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400248	KON07 Clamp	81
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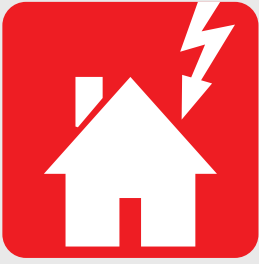
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LIGHTNING PROTECTION

Lightning protection installation protects a building against direct lightning strikes. Only correctly positioned lightning protection conductors on a building are intended to conduct lightning current, not damaging the building. By installing lightning protection we successfully protect a building

against mechanical damage or fire.

Hermi lightning protection systems have low, standard fasteners adapted to all types of roof coverings and are creatively adjusted to the architecture of the building. They are made of durable materials – stainless steel, copper or aluminium – and provide the highest level of protection against damages caused by lightning strikes.



SURGE PROTECTION

Protection which effectively protects the electrical installations and equipment in the building is called surge protection – protection of electrical installations and data lines against overvoltages.

Correctly installed surge protection does not protect the building against a direct lightning strike, but only electrical installations in it.

Hermi surge protection provides quality protection of your devices with three levels of surge protecting elements. We produce surge protection for low-voltage electrical installations, photovoltaic systems, IT systems, computer networks, video system and coaxial cables for high-frequency applications.



CABLE TRAYS AND CABLE LADDERS

They are made of quality materials which provide sustainable and quality cable paths. The range includes many options and colours depending on the environment and investor's wishes. We also offer fire-resistant E90 cable trays.

They are distinguished for their simple, quick and efficient installation, quality coupling, rounded tray edges, type covers, sophisticated system of perforation, wide selection of standard elements, different thickness of metal sheet, precise and careful production and ingenious shape.

The highlight of the range are cable trays and cable ladders made of acid-resistant stainless steel which are suitable for use in the most demanding conditions.



MOUNTING SYSTEMS

HERMI mounting systems are designed for rapid, simple and efficient installation of structures. The sub-structure of a solar power station encompasses load bearing construction profiles, roof fasteners and connecting/mounting profiles. The joining of elements is performed using screw connections which provide the adjustment of sub-structure or levelling of uneven parts of the roof.

Elements are made of quality stainless steel and aluminium.





Power of Nature, Supremacy of Knowledge

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