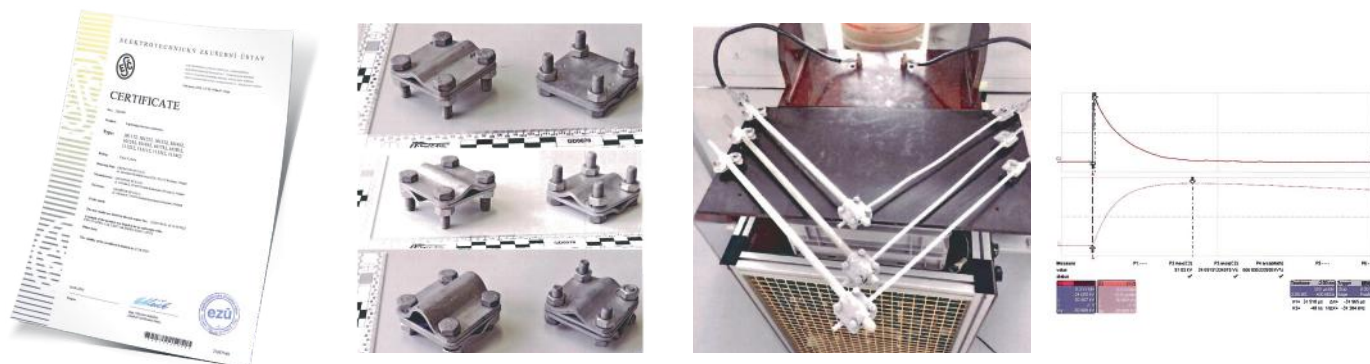


Our products meet Polish and European standards.

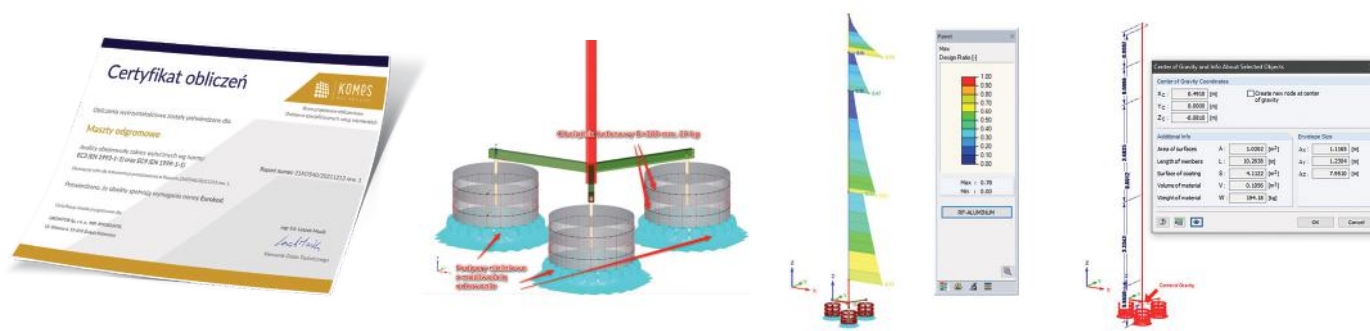
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION



Lightning connectors tested according to IEC 62561-1 for current carrying capacity and corrosion.



The strength of the air-termination rods was confirmed by studies taking into account the maximum wind speeds. According to PN-EN 1991-1-4.



Conductors insulated with high-voltage insulation have been tested in accordance with IEC 62651-8 standard. Reputable research institutes have confirmed guaranteed insulation gaps of 750 mm and 900 mm, as well as the highest current strength class H₂, which makes it possible to install in all classes of lightning protection.



LIGHTNING PROTECTION SYSTEMS

GROMTOR is a Polish manufacturer of lightning protection systems. We work in our country and in international markets, which mobilizes us to constantly develop products and maintain high quality logistics services. Constantly developing offer, high quality, immediate response to market needs, efficient service are our advantages.

GROMTOR is the main support of our partners, the responsibility and partnership of all participants in the investment market. Our openness and experience are appreciated by both large contractors building huge facilities and private investors, building one of the most important things in life — their own house.

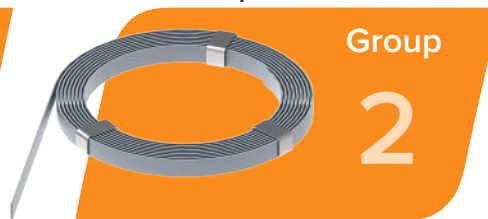
GROMTOR is a team of experienced people, traders, designers, production workers, engineers and managers who perfectly understand the needs of the market, for whom working in a young, dynamically developing company is a challenge for the constant development and improvement of their skills.

CHECK OUT OUR CATALOGUE

Clamps and connectors



Earthing system and potential equalization



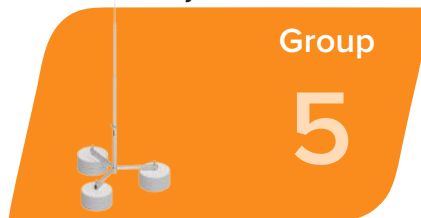
Vertical holders for conductors



Horizontal holders for conductors



Air-termination rods and isolated systems



Accessories of lightning protection systems



Product Code Description

1 Group **011** Product number **12** Material

Material			
12	StZn	OG	Hot dip galvanized steel
13	Inox V2A	V2A	Stainless steel V2A
14	Cu	Cu	Copper
15	Inox V4A	V4A	Stainless steel V4A
16	StCu	MI	Copper plated steel
17	Alu	AL	Aluminium
18	PI	PL	Plastic
19			Other

CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION RODS

ACCESSORIES

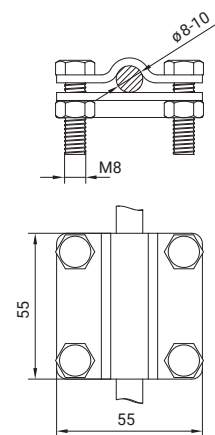
TECHNICAL INFORMATION

GT Cross connector L-55 for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	55x55	4 pcs. M8x25	101112
wire Ø(8-10)mm	Inox V2A			101113
wire Ø(8-10)mm	Inox V4A			101115
wire Ø(8-10)mm	Cu			101114

- Application: cross and type- T connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

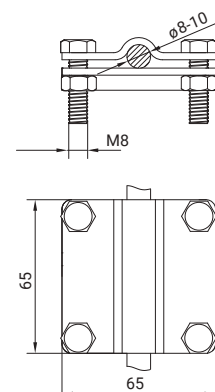


GT Cross connector L-65 for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	65x65	4 pcs. M8x25	101212
wire Ø(8-10)mm	Inox V2A			101213
wire Ø(8-10)mm	Inox V4A			101215
wire Ø(8-10)mm	Cu			101214

- Application: cross and type-T connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

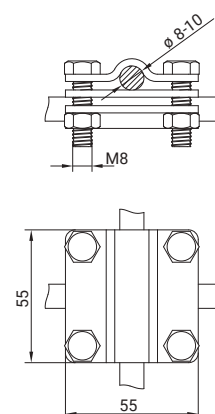


GT Cross connector L-55 with intermediate plate for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	55x55	4 pcs. M8x25	101312
wire Ø(8-10)mm	Inox V2A			101313
wire Ø(8-10)mm	Inox V4A			101315
wire Ø(8-10)mm	Cu			101314

- Application: cross and type-T connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

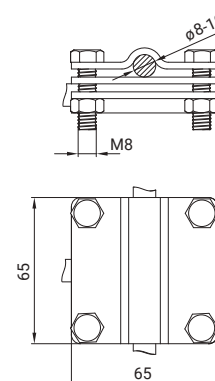


GT Cross connector L-65 with intermediate plate for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	65x65	4 pcs. M8x25	101412
wire Ø(8-10)mm	Inox V2A			101413
wire Ø(8-10)mm	Inox V4A			101415
wire Ø(8-10)mm	Cu			101414

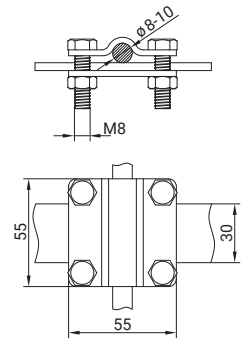
- Application: cross and type-T connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



GT Cross-connector L-55 for wire and flat conductor



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 30 mm	StZn	55x55	4 pcs. M8x25	101512
wire Ø(8-10)mm flat conductor ≤ 30 mm	Inox V2A			101513
wire Ø(8-10)mm flat conductor ≤ 30 mm	Inox V4A			101515
wire Ø(8-10)mm flat conductor ≤ 30 mm	Cu			101514

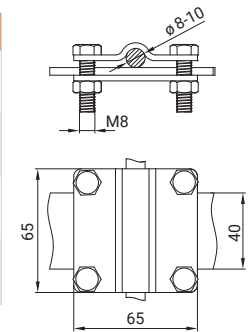


- Application: cross and type-T connection of wire and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Cross connector L-65 for wire and flat conductor



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	101612
wire Ø(8-10)mm flat conductor ≤ 40 mm	Inox V2A			101613
wire Ø(8-10)mm flat conductor ≤ 40 mm	Inox V4A			101615
wire Ø(8-10)mm flat conductor ≤ 40 mm	Cu			101614

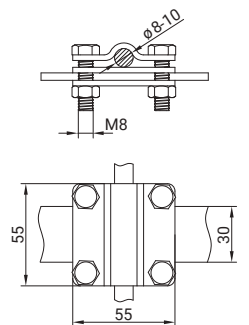


- Application: cross and type-T connection of wire and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Cross connector L-55 with intermediate plate for wire and flat conductor



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 30 mm	StZn	55x55	4 pcs. M8x25	101712
wire Ø(8-10)mm flat conductor ≤ 30 mm	Inox V2A			101713
wire Ø(8-10)mm flat conductor ≤ 30 mm	Inox V4A			101715
wire Ø(8-10)mm flat conductor ≤ 30 mm	Cu			101714

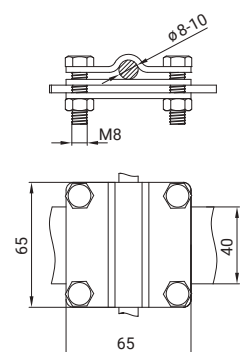


- Application: cross and type-T connection of wire and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Cross connector L-65 with intermediate plate for wire and flat conductor



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	101812
wire Ø(8-10)mm flat conductor ≤ 40 mm	Inox V2A			101813
wire Ø(8-10)mm flat conductor ≤ 40 mm	Inox V4A			101815
wire Ø(8-10)mm flat conductor ≤ 40 mm	Cu			101814



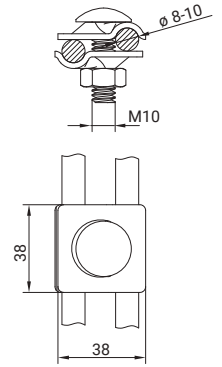
- Application: cross and type-T connection of wire and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Universal connector for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	38x38	M10x30	102112
wire Ø(8-10)mm	Inox V2A			102113
wire Ø(8-10)mm	Inox V4A			102115
wire Ø(8-10)mm	Cu			102114
wire Ø(8-10)mm	Alu			102117

- Application: cross, parallel and type-T connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

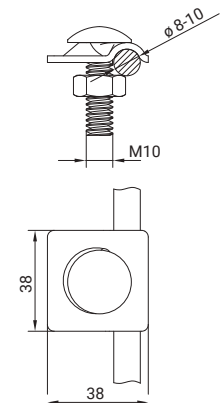


GT Clamp for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	38x38	M10x30	102212

- Application: connection of wire and metal structure.

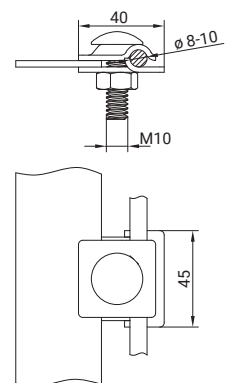


GT Connector for sheet metal and wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm, sheet metal ≤ 5 mm	StZn	45x40	M10x30	103112
wire Ø(8-10)mm, sheet metal ≤ 5 mm	Inox V2A			103113
wire Ø(8-10)mm, sheet metal ≤ 5 mm	Cu			103114
wire Ø(8-10)mm, sheet metal ≤ 5 mm	Alu			103117

- Application: parallel connection of wire and sheet metal up to 5mm thick.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

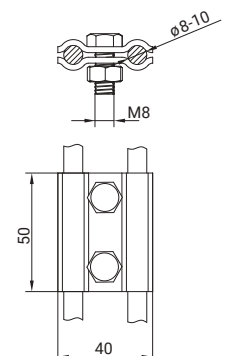


GT Through connector for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	50x40	2 pcs. M8x20	104112
wire Ø(8-10)mm	Inox V2A			104113
wire Ø(8-10)mm	Cu			104114
wire Ø(8-10)mm	Alu			104117

- Application: parallel or through connection of wire.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

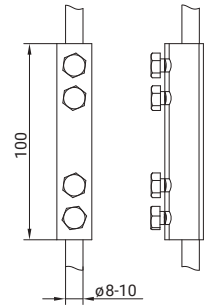


GT Through-pipe connector for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	100	4 pcs. M6x10	105112
wire Ø(8-10)mm	Inox V2A			105113
wire Ø(8-10)mm	Cu			105114

- Application: through connection of wire.

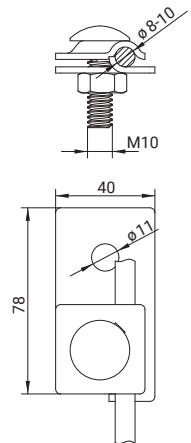


GT Single-screw test connector with mounting hole



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor	StZn	78x40	M10x30	106112
wire Ø(8-10)mm flat conductor	Inox V2A			106113
wire Ø(8-10)mm flat conductor	Cu			106114

- Application: control connector of wire and flat conductor.

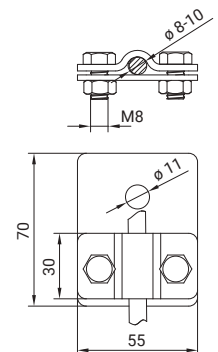


GT Two-screw test connector with mounting hole



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor	StZn	70x55	2 pcs. M8x25	107112
wire Ø(8-10)mm flat conductor	Inox V2A			107113
wire Ø(8-10)mm flat conductor	Cu			107114

- Application: control connector of wire and flat conductor.

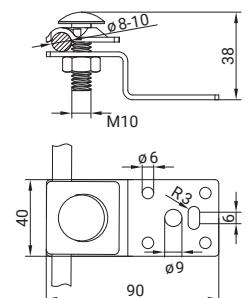


GT Connection clamp for wire and sheet metal



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm sheet metal	StZn	90x40x38	M10x30	108112
wire Ø(8-10)mm sheet metal	Inox V2A			108113
wire Ø(8-10)mm sheet metal	Alu			108117

- Application: connection of wire and metal structure or sheet.

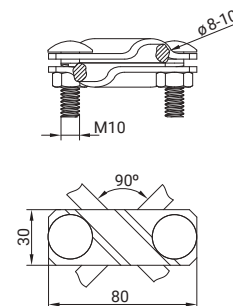


GT Diagonal connector for wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm	StZn	80x30	2 pcs. M10x30	109112
wire Ø(8-10)mm	Inox V2A			109113

- Application: cross connection of wire.

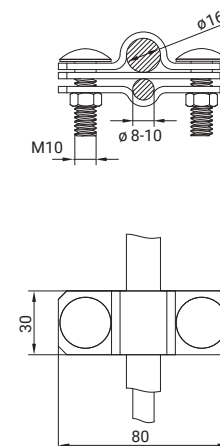


GT Through connector for wire, flat conductor and rod Ø16mm



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	StZn	80x30	2 pcs. M10x30	110112
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	Inox V2A			110113

- Application: parallel connection of wire, rod and flat conductor.

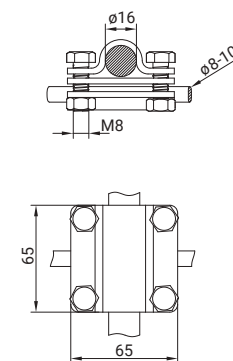


GT Cross-connector for wire, flat conductor and rod Ø16mm

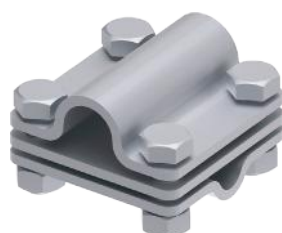


Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	111112
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	Inox V2A			111113
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	Cu			111114

- Application: parallel and cross connection of wire, rod and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

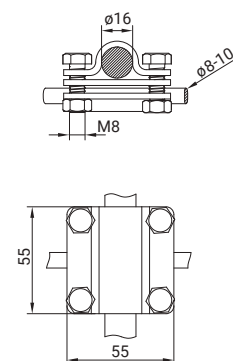


GT Cross-connector L-55 for wire, flat conductor and rod Ø16mm



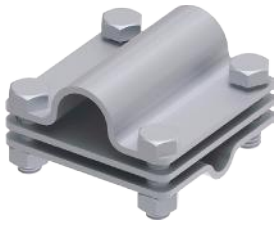
Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 30 mm	StZn	55x55	4 pcs. M8x25	111212
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 30 mm	Inox V2A			111213
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 30 mm	Cu			111214

- Application: parallel and cross connection of wire, rod and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



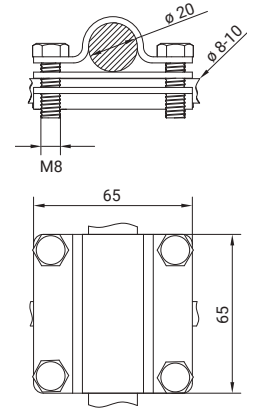
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Cross-connector L-65 for wire, flat conductor and rod Ø20mm

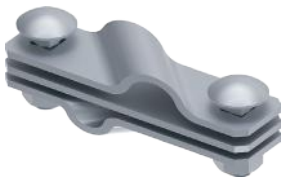


Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø20 mm flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	111312
wire Ø(8-10)mm / rod Ø20 mm flat conductor ≤ 40 mm	Inox V2A			111313
wire Ø(8-10)mm / rod Ø20 mm flat conductor ≤ 40 mm	Cu			111314

- Application: parallel and cross connection of wire, rod and flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

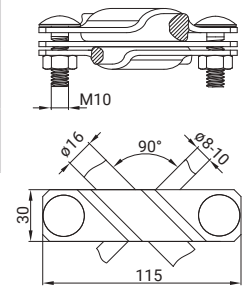


GT Diagonal connector for wire, flat conductor and rod Ø16mm

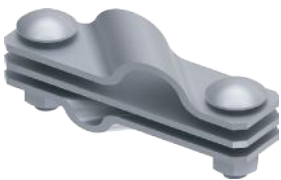


Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	StZn	115x30	2 pcs. M10x30	112212
wire Ø(8-10)mm / rod Ø16 mm flat conductor ≤ 40 mm	Inox V4A			112215

- Application: cross connection of wire, rod and flat conductor.

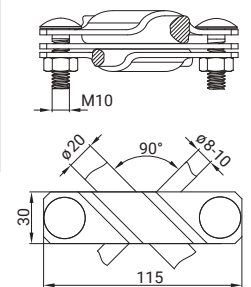


GT Diagonal connector for wire, flat conductor and rod Ø20mm



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / rod Ø20 mm flat conductor ≤ 40 mm	StZn	115x30	2 pcs. M10x30	112112
wire Ø(8-10)mm / rod Ø20 mm flat conductor ≤ 40 mm	Inox V4A			112115

- Application: cross connection of wire, rod and flat conductor.

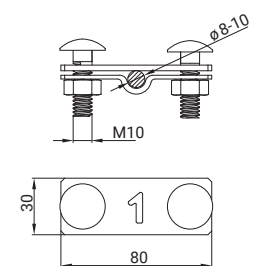


GT Marking connection clamp



Description	Material	Size [mm]	Screw	Code
wire Ø8	Alu	80x30	2 pcs. M10x30	109917
wire Ø8	Cu			109914

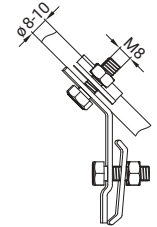
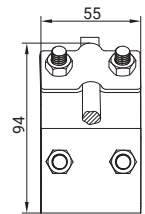
- Application: numbering of the control connector, when ordering, it is necessary to specify the numbering for embossing.



 Four-screws gutter connector for wire

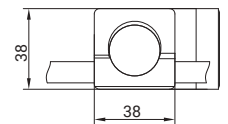
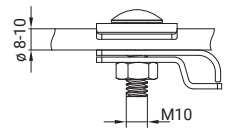

Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / gutter	StZn	94x55	2 pcs. M8x25	113112
wire Ø(8-10)mm / gutter	Inox V2A			113113
wire Ø(8-10)mm / gutter	Cu			113114

- Application: connection of wire and gutter.


 Single-screw gutter connector for wire

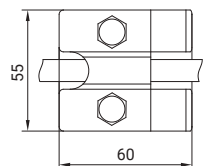
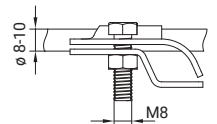

Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / gutter	StZn	38x38	M10x35	114112
wire Ø(8-10)mm / gutter	Inox V2A			114113
wire Ø(8-10)mm / gutter	Cu			114114
wire Ø(8-10)mm / gutter	Alu			114117

- Application: connection of wire and gutter.


 Two-screw gutter connector for wire

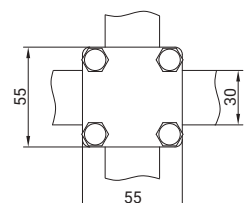
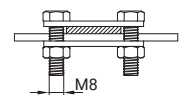

Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm / gutter	StZn	60x55	2 pcs. M8x25	114212
wire Ø(8-10)mm / gutter	Inox V2A			114213
wire Ø(8-10)mm / gutter	Cu			114214

- Application: connection of wire and gutter.


 Cross-connector L-55 for flat conductor


Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 30 mm	StZn	55x55	4 pcs. M8x25	115112
flat conductor ≤ 30 mm	Inox V4A			115115
flat conductor ≤ 30 mm	Cu			115114

- Application: cross and type-T connection of flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

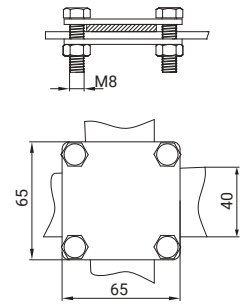


GT Cross-connector L-65 for flat conductor

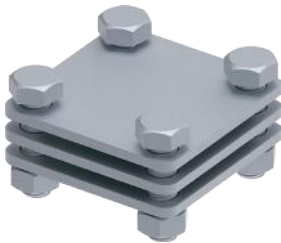


Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	115212
flat conductor ≤ 40 mm	Inox V4A			115215
flat conductor ≤ 40 mm	Cu			115214

- Application: cross and type-T connection of flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

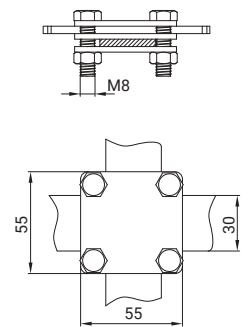


GT Cross-connector L-55 with intermediate plate for flat conductor

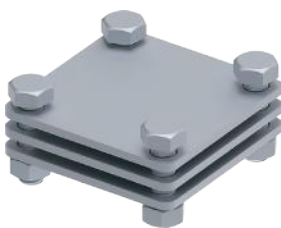


Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 30 mm	StZn	55x55	4 pcs. M8x25	116112
flat conductor ≤ 30 mm	Inox V4A			116115
flat conductor ≤ 30 mm	Cu			116114

- Application: cross and type-T connection of flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

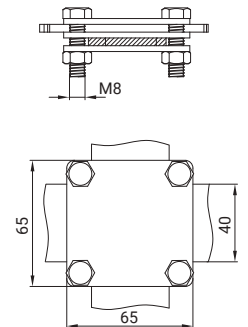


GT Cross-connector L-65 with intermediate plate for flat conductor



Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 40 mm	StZn	65x65	4 pcs. M8x25	116212
flat conductor ≤ 40 mm	Inox V4A			116215
flat conductor ≤ 40 mm	Cu			116214

- Application: cross and type-T connection of flat conductor.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

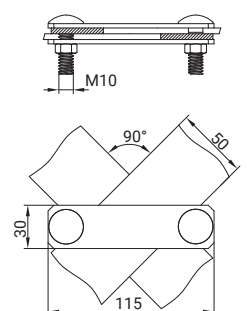


GT Diagonal connector for flat conductor



Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 50 mm	StZn	115x30	2 pcs. M10x30	117112
flat conductor ≤ 50 mm	Inox V2A			117113
flat conductor ≤ 50 mm	Inox V4A			117115

- Application: cross connection of flat conductor.

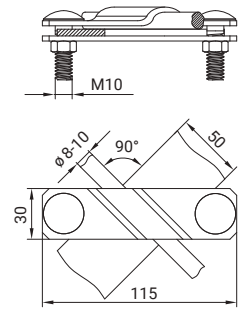


GT Diagonal connector for flat conductor and wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 50 mm	StZn	115x30	2 pcs. M10x30	118112
wire Ø(8-10)mm flat conductor ≤ 50 mm	Inox V2A			118113
wire Ø(8-10)mm flat conductor ≤ 50 mm	Inox V4A			118115

- Application: cross connection of flat conductor and wire.

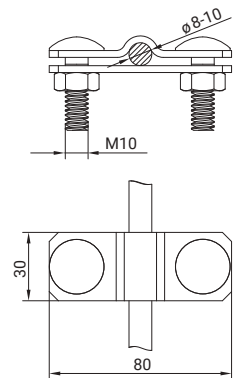


GT Through connection for wire and flat conductor



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 40 mm	StZn	80x30	2 pcs. M10x30	118212
wire Ø(8-10)mm flat conductor ≤ 40 mm	Inox V2A			118213

- Application: control connector of wire and flat conductor.

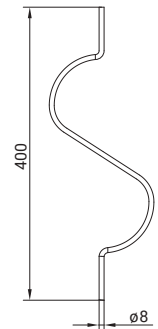


GT Compensation connection



Description	Size [mm]	Material	Code
wire Ø8 mm	400	Alu	109018

- Application: reduces the effect of thermal expansion of lightning protection wire when temperature changes.
- It is recommended to use a connection every 30 meters of lightning protection wire section.

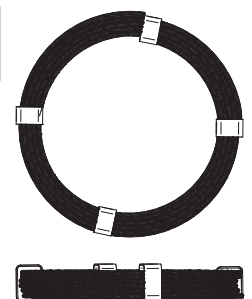


GT Aldrey lightning protection rope



Description	Size [mm]	Material	Code
cross-section 50 mm ²	19x1,8	Alu	109118

- Application: Raised horizontal lightning protection rope. Mounted on support masts.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



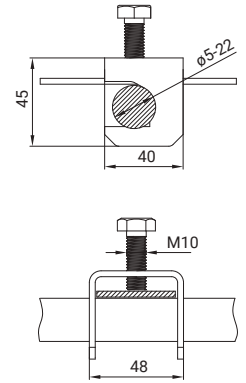
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Cross-connector for rebar and flat conductor



Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 40 mm rebar Ø(5-22)mm	StZn	48x40x45	M10x30	119112
flat conductor ≤ 40 mm rebar Ø(5-22)mm	Inox V2A			119113

- Application: cross connection of flat conductor with reinforcing bar.

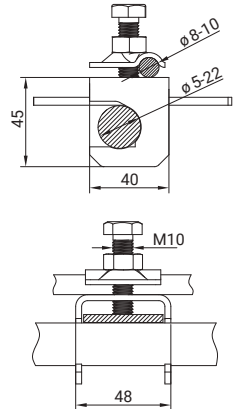


GT Cross-connector for rebar, wire and flat conductor



Description	Material	Size [mm]	Screw	Code
flat conductor ≤ 40 mm wire Ø(8-10)mm / rebar Ø(5-22)mm	StZn	48x48x45	M10x40	120112
flat conductor ≤ 40 mm wire Ø(8-10)mm / rebar Ø(5-22)mm	Inox V4A			120115

- Application: cross connection of flat conductor and wire with reinforcing bar.

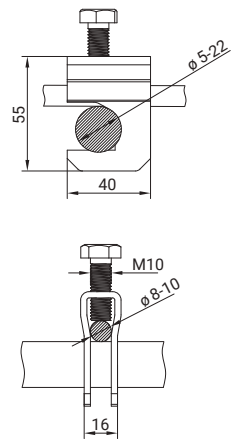


GT Cross-connector for rebar and wire



Description	Material	Size [mm]	Screw	Code
wire Ø(8-10)mm rebar Ø(5-22)mm	StZn	16x40x55	M10x35	121112
wire Ø(8-10)mm rebar Ø(5-22)mm	Inox V4A			121115

- Application: cross connection of wire with reinforcing bar.

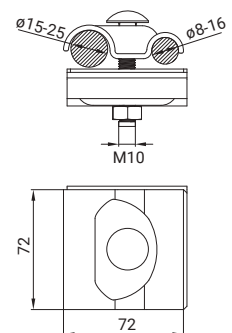


GT Clamp-connector for rebar



Description	Material	Size [mm]	Screw	Code
Rod Ø(8-16)/rebar Ø(15-25)	StZn	72x72	M10x35	122112

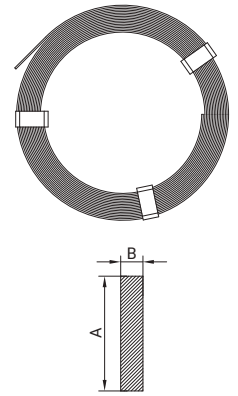
- Application: cross connection of flat conductor and wire with reinforcing bar.



Hot dip galvanized steel flat conductor



Size AxB [mm]	[kg]/[m]	Material	Code
25x3	50/84	StZn	225312
25x4	50/63	StZn	225412
30x3	50/69	StZn	230312
30x3,5	50/60	StZn	233512
30x3,5	25/30	StZn	293512
30x4	50/52	StZn	230412
40x4	50/39	StZn	240412
40x4	25/19,5	StZn	290412
50x4	50/31	StZn	250412
50x4	25/15,5	StZn	259412

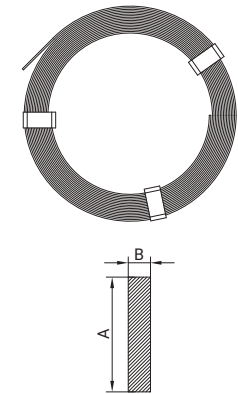


- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer is compatible with PN-EN ISO 1461: 500 g/m².
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

Copper plated steel flat conductor



Size AxB [mm]	[kg]/[m]	Material	Code
25x4	25/30	StCu	225416
30x4	27,5/30	StCu	230416
40x4	27/20	StCu	240416
40x5	33/20	StCu	245416
50x4	50/31,5	StCu	250416

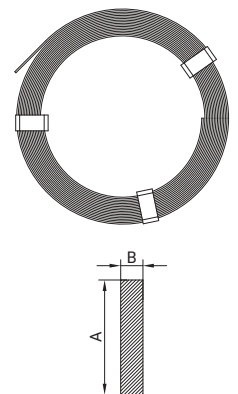


- Application: lightning protection, earthing and potential equalization systems.
- Thickness of copper layer: 500 g/m².
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

Copper flat conductor



Size AxB [mm]	[kg]/[m]	Material	Code
20x4	50/70,5	Cu	220414
25x3	50/74,6	Cu	225314
25x4	50/56,2	Cu	225414
30x4	50/50	Cu	230414
40x4	50/35	Cu	240414
40x5	70/39,5	Cu	245414

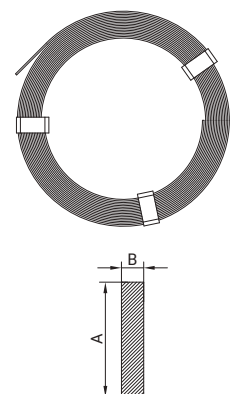


- Application: lightning protection, earthing and potential equalization systems.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

Stainless steel flat conductor



Size AxB [mm]	[kg]/[m]	Material	Code
30x3,5	50/60	Inox V2A	233513
30x4	50/52	Inox V2A	230413
40x4	50/40	Inox V2A	240413
30x3,5	50/60	Inox V4A	233515
30x4	50/52	Inox V4A	230415
40x4	50/40	Inox V4A	240415



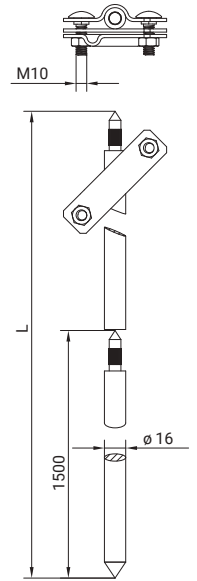
- Application: lightning protection, earthing and potential equalization systems.
- Used in places with a high risk of corrosion.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Set of earth rod Ø16 mm for quick assembly with diagonal connector



Description	Size [mm]	Material	Code
set of earth rods	L-3000 / Ø16	StZn	231612
set of earth rods	L-4500 / Ø16	StZn	232612
set of earth rods	L-6000 / Ø16	StZn	233612
set of earth rods	L-7500 / Ø16	StZn	234612

- Set of earth rod = 216012 + 226612 + 112212.
- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

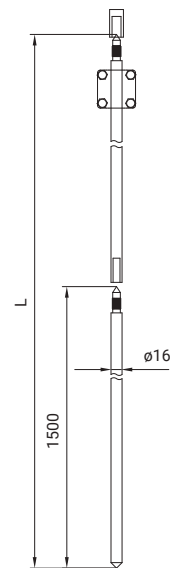


GT Set of earth rod Ø16 mm for quick assembly with cross-connector



Description	Size [mm]	Material	Code
set of earth rod with head	L-3000 / Ø16	StZn	241612
set of earth rod with head	L-4500 / Ø16	StZn	241712
set of earth rod with head	L-6000 / Ø16	StZn	241812
set of earth rod with head	L-7500 / Ø16	StZn	241912

- Set of earth rod = 216012 + 226612 + 111212 + 220411.
- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

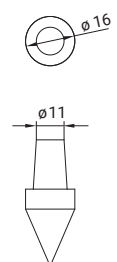


GT Spike of earth rod



Description	Size [mm]	Material	Code
spike of earth rod	16	StZn	216512
spike of earth rod	16	Inox V4A	216515
spike of earth rod	18	StZn	218512
spike of earth rod	18	Inox V4A	218515
spike of earth rod	20	StZn	220512
spike of earth rod	20	Inox V4A	220515

- Application: tip of earth rod with thread.

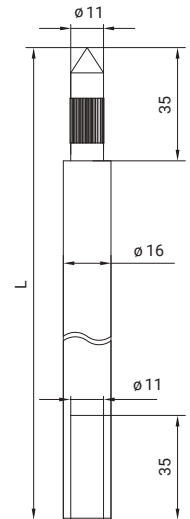


Earth rod Ø16 with pin for quick assembly



Description	Size [mm]	Material	Code
earth rod with pin	L-1200 / Ø16	StZn	215012
earth rod with pin	L-1200 / Ø16	Inox V4A	215015
earth rod with pin	L-1500 / Ø16	StZn	216012
earth rod with pin	L-1500 / Ø16	Inox V4A	216015

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

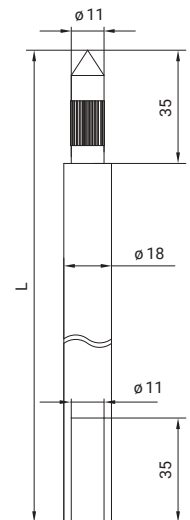


Earth rod Ø18 with pin for quick assembly



Description	Size [mm]	Material	Code
earth rod with pin	L-1500 / Ø18	StZn	218012
earth rod with pin	L-1500 / Ø18	Inox V4A	218015

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

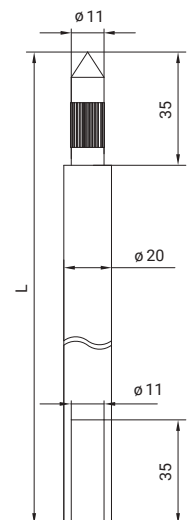


Earth rod Ø20 with pin for quick assembly



Description	Size [mm]	Material	Code
earth rod with pin	L-1000 / Ø20	StZn	221012
earth rod with pin	L-1000 / Ø20	Inox V4A	221015
earth rod with pin	L-1500 / Ø20	StZn	220012
earth rod with pin	L-1500 / Ø20	Inox V4A	220015

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

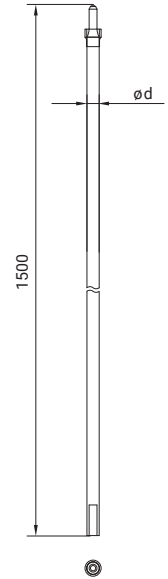


GT Forged copper plated steel earth rod with pin



Description	Size Ød [mm]	Material	Code
earth rod with pin	14,2	StCu	214916
earth rod with pin	16	StCu	215916
earth rod with pin	17,2	StCu	216916

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of copper layer: ≤ 250 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



CONNECTORS AND CLAMPS

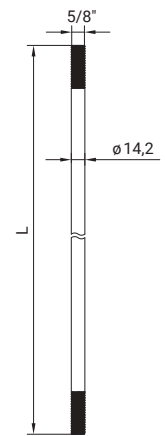
EARTHING

GT Copper plated steel earth rod with thread 5/8"



Description	Size L [mm]/[in]	Material	Code
earth rod with thread	1200/5/8"	StCu	214116
earth rod with thread	1500/5/8"	StCu	214216
earth rod with thread	2000/5/8"	StCu	214316

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of copper layer: ≤ 250 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



VERTICAL HOLDERS

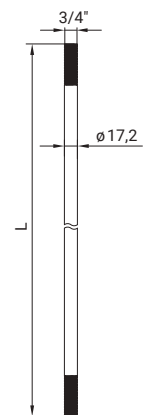
HORIZONTAL HOLDERS

GT Copper plated steel earth rod with thread 3/4"



Description	Size L [mm]/[in]	Material	Code
earth rod with thread	1200/3/4"	StCu	217116
earth rod with thread	1500/3/4"	StCu	217216
earth rod with thread	2000/3/4"	StCu	217316

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of copper layer: ≤ 250 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



AIR-TERMINATION RODS

ACCESSORIES

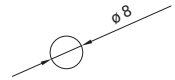
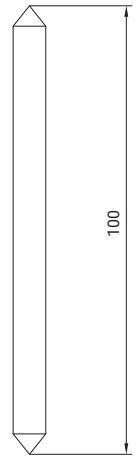
TECHNICAL INFORMATION

Shank for embedding forged earth rods



Description	Size [mm]	Material	Code
shank for earth rods Ø14,2	100	St	215119
shank for earth rods Ø16	100	St	215219
shank for earth rods Ø17,2	100	St	215319

- Application: shank that transmits force from beater to earth rod.

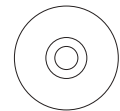
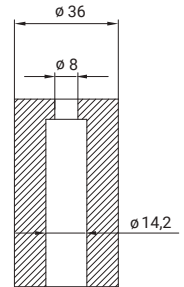


Shank stabilizer for embedding forged earth rods



Description	Size Ød [mm]	Material	Code
shank stabilizer for earth rod Ø14,2	14,2	Other	218119
shank stabilizer for earth rod Ø16	16	Other	218219
shank stabilizer for earth rod Ø17,2	17,2	Other	218319

- Application: shank stabilizer that transmits force from beater to earth rod.

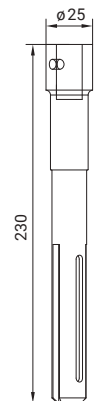


Head for embedding forged earth rods



Description	Size Ød [mm]	Material	Code
head for earth rod Ø14,2	14,2	St	221411
head for earth rod Ø16	16	St	221511
head for earth rod Ø17,2	17,2	St	221611

- Application: forged head for earth rod, transmitting force from the impact hammer to the grounding core.

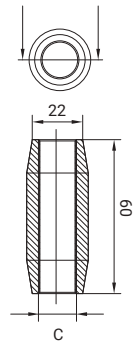


GT Earth rod connector with thread



Description	Size C [in]	Material	Code
earth rod connector	5/8"	CuZn	214319
earth rod connector	3/4"	CuZn	217319

- Application: connecting sleeve for earth rods with thread.



CONNECTORS AND CLAMPS

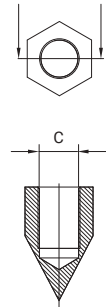
EARTHING

GT Spike for earth rod with thread



Description	Size C [in]	Material	Code
spike for earth rod	5/8"	St	214519
spike for earth rod	3/4"	St	217519

- Application: tip of earth rod with thread.



VERTICAL HOLDERS

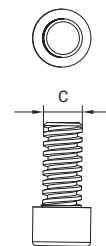
HORIZONTAL HOLDERS

GT Head for embedding earth rod with thread



Description	Size C [in]	Material	Code
head for embedding	5/8"	St	214411
head for embedding	3/4"	St	217411

- Application: embedding earth rods with thread.



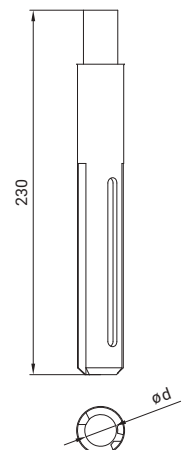
AIR-TERMINATION RODS

GT Beater for embedding earth rod with thread



Description	Size [in]	Material	Code
beater for embedding	5/8" ; 3/4"	St	225411

- Application: beater that transmits force from hammer to earth rod core through the head.



ACCESSORIES

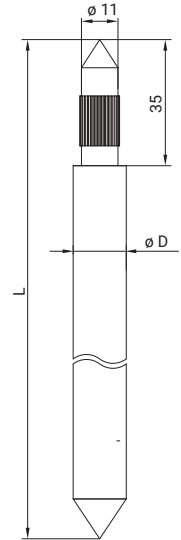
TECHNICAL INFORMATION

Sharpened earth rod for quick assembly



Description	Size L/ØD [mm]	Material	Code
earth rod sharpened	1200/16	StZn	225612
earth rod sharpened	1500/16	StZn	226612
earth rod sharpened	1500/18	StZn	218112

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

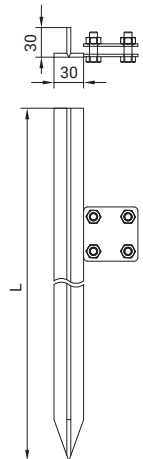


Profile earth rod with cross-connector



Description	Size L [mm]	Material	Code
profile type T	1000	StZn	201012
profile type T	1500	StZn	201512
profile type T	2000	StZn	202012

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

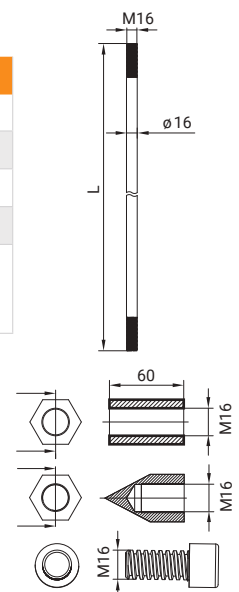


Earth rod Ø16 with thread



For	Size [mm]	Material	Code
earth rod with thread	L-1500 / Ø16	StZn	216112
earth rod connector	M16 x 60	StZn	216212
spike of earth rod	M16	StZn	216312
head for embedding	M16 x 40	St	216411
cross connector of rod, flat conductor and wire	rod Ø16 / flat conductor ≤ 40 wire Ø(8-10)	StZn	112212

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc layer in accordance with PN-EN ISO 1461: ≤ 70 micrometers (µm).
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

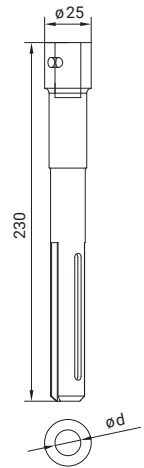


GT SDS MAX head for hammering the earth rod



Description	Size Ød [mm]	Material	Code
head for earth rod Ø16 mm	12	St 40CR	220411
head for earth rod Ø20 mm	13	St 40CR	222411

- Application: for embedding earth rods with use of vibration hammer.

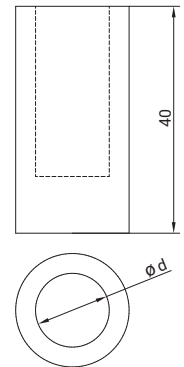


GT MECH head for embedding earth rods



Description	Size Ød [mm]	Material	Code
head for earth rod Ø16 mm	12	StZn	220511
head for earth rod Ø20 mm	13	StZn	222511

- Application: for embedding earth rods with use of vibration hammer.

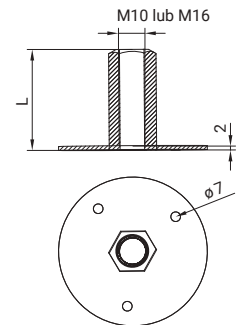


GT Fixed earthing terminal



Description	Size L [mm]	Material	Code
M10 thread both side	32	Inox V4A	291015
M10 and M12 thread	50	Inox V4A	291115
M16 thread both side	50	Inox V4A	291215

- Application: connection of lightning protection with reinforcing bars located in structure of the building.

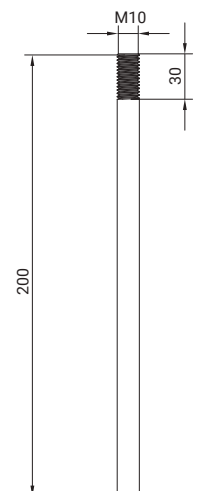


GT Rod for fixed earthing terminal



Description	Size [mm]	Material	Code
rod with thread	M10x200	StZn	291312
rod with thread	M10x200	Inox V4A	291315
rope for earthing with connector	M16x200	Cu/Inox V4A	291319

- Application: connection of lightning protection with reinforcing bars located in structure of the building.

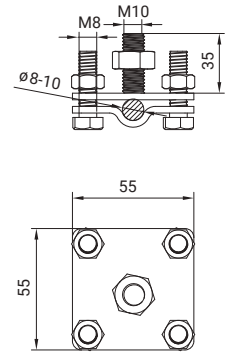


Cross connector of fixed earthing terminal L-55



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 30 mm	55x55	StZn	M10x40 4 pcs. M8x30	292012
wire Ø(8-10)mm flat conductor ≤ 30 mm		Inox V4A	M10x40 4 pcs. M8x30	292015

- Application: connection of lightning protection with reinforcing bars located in structure of the building.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

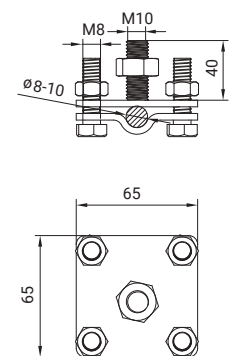


Cross connector of fixed earthing terminal L-65



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm flat conductor ≤ 40 mm	65x65	StZn	M10x40 4 pcs. M8x30	292112
wire Ø(8-10)mm flat conductor ≤ 40 mm		Inox V4A	M10x40 4 pcs. M8x30	292115
wire Ø(8-10)mm flat conductor ≤ 40 mm		Inox V4A	M16x40 4 pcs. M8x30	292215

- Application: connection of lightning protection with reinforcing bars located in structure of the building.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

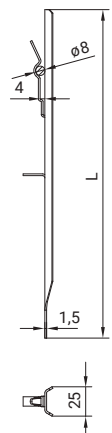


Stabilisation bracket for wire and flat conductor



Description	Size L [mm]	Material	Code
wire Ø(8-10)mm flat conductor of thick ≤ 4 mm	280	StZn	292912

- Application: installation of flat conductor in the ground or concrete.

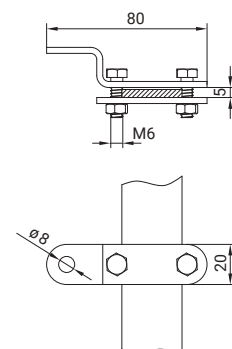


Holder for flat conductor with mounting hole



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 30 mm	80x20	StZn	2 pcs. M8x25	281012
flat conductor ≤ 30 mm	80x20	Cu	2 pcs. M8x25	281014
flat conductor ≤ 30 mm	80x20	Inox	2 pcs. M8x25	281015

- Application: installation of flat conductor on a wall or metal structures.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

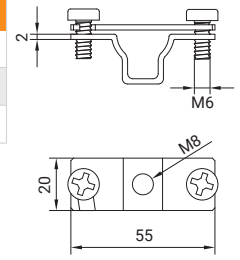


GT Screw-on holder for flat conductor 30 mm



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 30 mm	55x20	StZn	2 pcs. M6x16	281112
flat conductor ≤ 30 mm		Cu	2 pcs. M6x16	281114
flat conductor ≤ 30 mm		Inox V4A	2 pcs. M6x16	281115

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

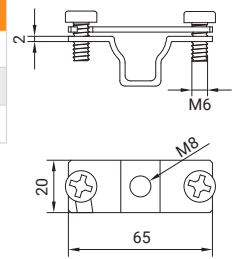


GT Screw-on holder for flat conductor 40 mm



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 40 mm	65x20	StZn	2 pcs. M6x16	281212
flat conductor ≤ 40 mm		Cu	2 pcs. M6x16	281214
flat conductor ≤ 40 mm		Inox V4A	2 pcs. M6x16	281215

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

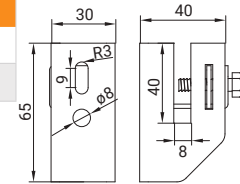


GT Holder for flat conductor 50 mm with pressure screw



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 50 mm	65x40	StZn	M8x30	283012
flat conductor ≤ 50 mm		Inox V2A	M8x30	283013

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

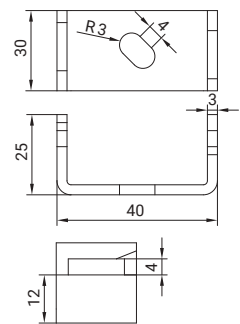


GT Turned-on holder for flat conductor 30x4 mm

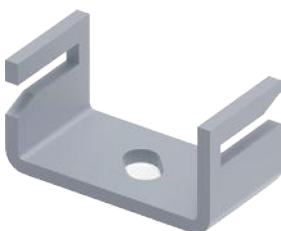


Description	Size [mm]	Material	Code
flat conductor ≤ 30x4 mm	40	StZn	282112
flat conductor ≤ 30x4 mm		Cu	282114
flat conductor ≤ 30x4 mm		Inox V2A	282113
flat conductor ≤ 30x4 mm		Inox V4A	282115

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

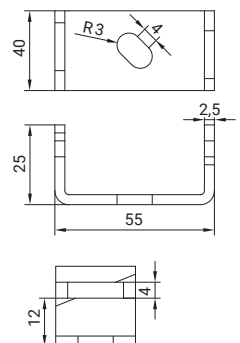


GT Turned-on holder for flat conductor 50x4 mm



Description	Size [mm]	Material	Code
flat conductor ≤ 50x4 mm	55	StZn	282212
flat conductor ≤ 50x4 mm		Cu	282214
flat conductor ≤ 50x4 mm		Inox V2A	282213
flat conductor ≤ 50x4 mm		Inox V4A	282215

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

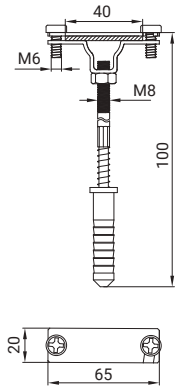


Holder for flat conductor 40mm with expansion bolt L-100



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 40 mm	100	StZn	2 pcs. M6x16	211112
flat conductor ≤ 40 mm		Cu	2 pcs. M6x16	211114
flat conductor ≤ 40 mm		Inox V4A	2 pcs. M6x16	211115

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

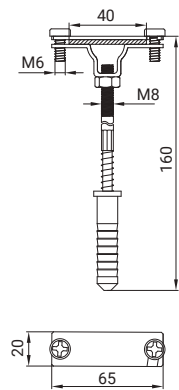


Holder for flat conductor 40mm with expansion bolt L-160



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 40 mm	160	StZn	2 pcs. M6x16	211312
flat conductor ≤ 40 mm		Cu	2 pcs. M6x16	211314
flat conductor ≤ 40 mm		Inox V4A	2 pcs. M6x16	211315

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

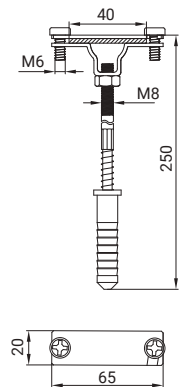


Holder for flat conductor 40mm with expansion bolt L-250



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 40 mm	250	StZn	2 pcs. M6x16	211412
flat conductor ≤ 40 mm		Cu	2 pcs. M6x16	211414
flat conductor ≤ 40 mm		Inox V4A	2 pcs. M6x16	211415

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

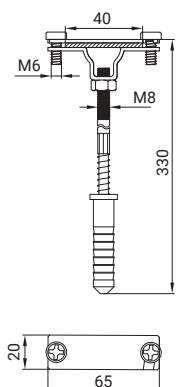


Holder for flat conductor 40mm with expansion bolt L-330



Description	Size [mm]	Material	Screw	Code
flat conductor ≤ 40 mm	330	StZn	2 pcs. M6x16	211512
flat conductor ≤ 40 mm		Cu	2 pcs. M6x16	211514
flat conductor ≤ 40 mm		Inox V4A	2 pcs. M6x16	211515

- Application: installation of flat conductor on the wall.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

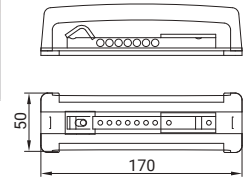


GT Local equipotential busbar



Description	Size [mm]	Material	Code
cable clamp 16 mm ² - 7 pcs. / cable clamp 50 mm ² - 1 pcs. / flat conductor ≤ 30 mm	170x50	StGI	283019

- Application: connecting wires in grounding installations and bonding equipotentials.



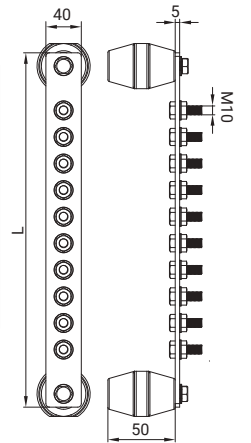
CONNECTORS AND CLAMPS

GT Main equipotential busbar stainless



Description	Size L [mm]	Material	Code
amount of connections 5 pcs. - M10x25	250	Inox V2A	292113
amount of connections 6 pcs. - M10x25	280	Inox V2A	292213
amount of connections 8 pcs. - M10x25	340	Inox V2A	292313
amount of connections 10 pcs. - M10x25	400	Inox V2A	292413
amount of connections 12 pcs. - M10x25	460	Inox V2A	292513
amount of connections 14 pcs. - M10x25	520	Inox V2A	292613

- Application: connecting wires in grounding installations and bonding equipotentials.



EARTHING

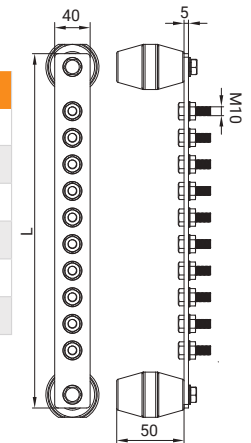
VERTICAL HOLDERS

GT Main equipotential busbar copper



Description	Size L [mm]	Material	Code
amount of connections 5 pcs. - M10x25	250	Cu	292114
amount of connections 6 pcs. - M10x25	280	Cu	292214
amount of connections 8 pcs. - M10x25	340	Cu	292314
amount of connections 10 pcs. - M10x25	400	Cu	292414
amount of connections 12 pcs. - M10x25	460	Cu	292514
amount of connections 14 pcs. - M10x25	520	Cu	292614

- Application: connecting wires in grounding installations and bonding equipotentials.



HORIZONTAL HOLDERS

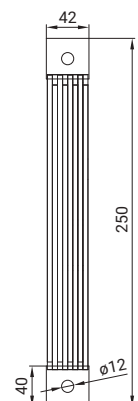
AIR-TERMINATION RODS

GT Connection and expansion strip



Description	Size [mm ²]	Material	Code
Connection and expansion strip	25	tin plated copper	294119
Connection and expansion strip	35	tin m plated copper	294114

- Application: for flexible and compensating connections in lightning protection systems.



ACCESSORIES

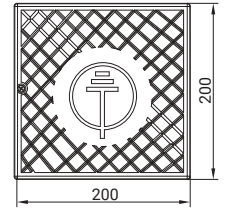
TECHNICAL INFORMATION

Ground inspection pit – Type I



Description	Size [mm]	Material	Code
inspection pit	200x200x165	PI	293018

- Application: installation of control connectors in the ground.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

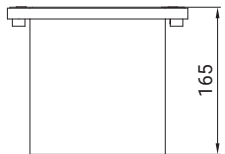
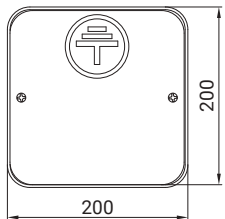


Ground inspection pit – Type II



Description	Size [mm]	Material	Code
inspection pit	200x200x165	PI	294018

- Application: installation of control connectors in the ground.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

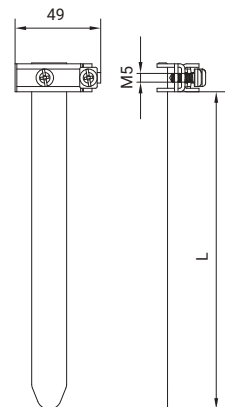


Grounding clamp



Description	Size L [mm]	Material	Screw	Code
for round profile Ø(16-54)mm	190	Inox	2 pcs. M5x10	294113
for round profile Ø(16-124)mm	410	Inox		294213
for round profile Ø(16-180)mm	585	Inox		294313

- Application: connection of grounding wires for potential equalization (connection of the installation to the terminal, maximum 2 wires 2.5 – 10 mm²).
- Meets the requirements of the IEC 62305 standard.

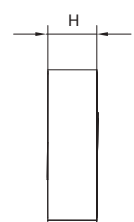
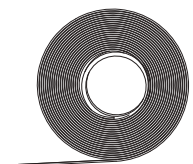


Anti-corrosion tape



Description	Size H [mm]	Material	Code
length 10 m	30	-	295019
length 10 m	50	-	295119

- Application: for corrosion protection of lightning and grounding rods.

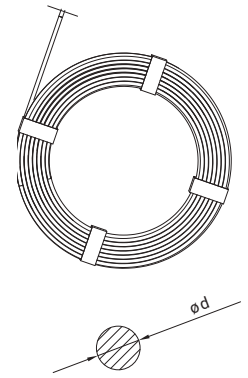


Aluminum wire conductor



Size Ød [mm]	[kg]/[m]	Material	Code
diameter Ø8	20/154	Alu	300817
diameter Ø8	20/154	Alu hard	320817
diameter Ø8	6,7/50	Alu	310817
diameter Ø10	20/100	Alu	301017

- Application: lightning protection, earthing and potential equalization systems.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

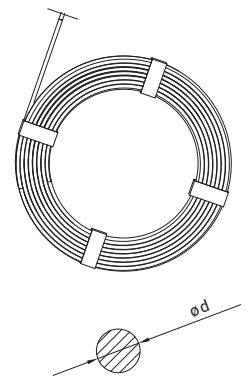


Hot dip galvanized steel wire conductor

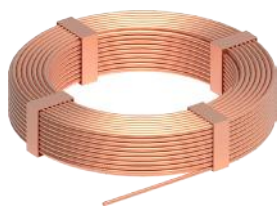


Size Ød [mm]	[kg]/[m]	Material	Code
diameter Ø8	50/127	StZn	300812
diameter Ø8	25/63,5	StZn	390812
diameter Ø10	50/81	StZn	301012
diameter Ø10	25/40,5	StZn	391012

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of zinc coating according to EN ISO 1461: 350 g/m².
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

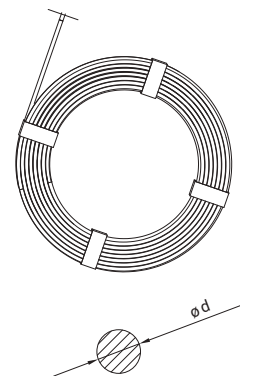


Copper plated steel wire conductor

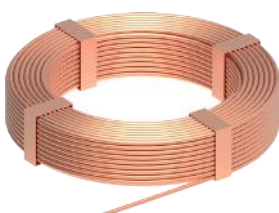


Size Ød [mm]	[kg]/[m]	Material	Code
diameter Ø8	25/62	StCu	300816
diameter Ø10	50/81	StCu	301016

- Application: lightning protection, earthing and potential equalization systems.
- Thickness of copper layer: 350 g/m².
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

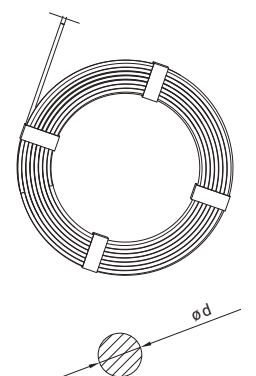


Copper wire conductor



Size Ød [mm]	[kg]/[m]	Material	Code
diameter Ø6	50/198	Cu	300614
diameter Ø8	50/112	Cu	300814
diameter Ø10	50/71,5	Cu	301014

- Application: lightning protection, earthing and potential equalization systems.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

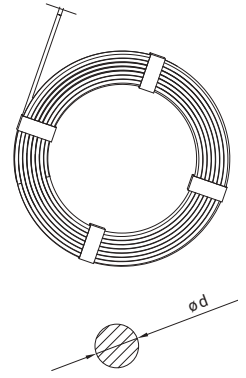


GT Stainless steel wire conductor



Size $\varnothing d$ [mm]	[kg]/[m]	Material	Code
diameter $\varnothing 8$	50/125	Inox V2A	300813
diameter $\varnothing 8$	50/125	Inox V4A	300815
diameter $\varnothing 10$	50/80	Inox V2A	301013
diameter $\varnothing 10$	50/80	Inox V4A	301015
diameter $\varnothing 10$	25/40	Inox V4A	301115

- Application: lightning protection, earthing and potential equalization systems.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

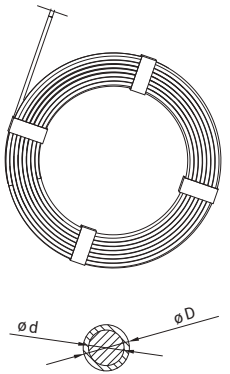


GT Aluminum PVC black-covered



Size $\varnothing d/\varnothing D$ [mm]	[kg]/[m]	Material	Code
diameter $\varnothing 8/\varnothing 11$	10/50	Alu/PVC	300818

- Application: lightning protection, earthing and potential equalization systems.

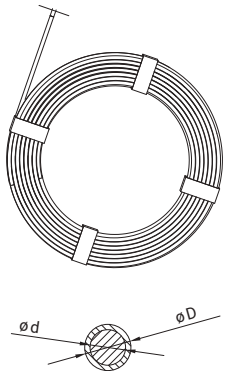


GT Aluminum PVC white-covered wire conductor



Size $\varnothing d/\varnothing D$ [mm]	[kg]/[m]	Material	Code
diameter $\varnothing 8/\varnothing 11$	10/50	Alu/PVC	300918

- Application: lightning protection, earthing and potential equalization systems.

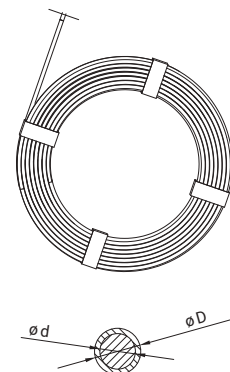


GT Hot dip galvanized steel PVC black-covered wire conductor



Size $\varnothing d/\varnothing D$ [mm]	[kg]/[m]	Material	Code
diameter $\varnothing 10/\varnothing 13$	50/75	StZn/PVC	301018

- Application: lightning protection, earthing and potential equalization systems.



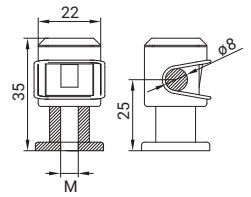
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Plastic holder for wire Ø8 mm



Description	Size thread M	Colour	Material	Code
wire Ø8 mm	M6	light grey	PI	311118
wire Ø8 mm	M8	light grey	PI	311318

- Application: mounting wire.
- Weatherproof and UV resistant..
- Product in RAL color:



CONNECTORS AND CLAMPS

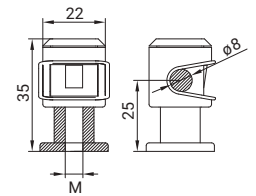
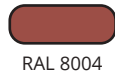
EARTHING

GT Plastic holder for wire Ø8 mm



Description	Size thread M	Colour	Material	Code
wire Ø8 mm	M6	brown	PI	310218
wire Ø8 mm	M8	brown	PI	310418

- Application: mounting wire.
- Weatherproof and UV resistant..
- Product in RAL color:



VERTICAL HOLDERS

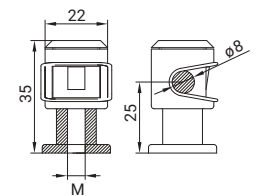
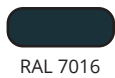
HORIZONTAL HOLDERS

GT Plastic holder for wire Ø8 mm



Description	Size thread M	Colour	Material	Code
wire Ø8 mm	M6	grey	PI	310118
wire Ø8 mm	M8	grey	PI	310318

- Application: mounting wire.
- Weatherproof and UV resistant..
- Product in RAL color:



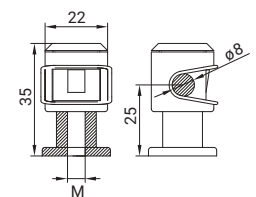
AIR-TERMINATION RODS

GT Plastic holder for wire Ø8 mm



Description	Size thread M	Colour	Material	Code
wire Ø8 mm	M6	brown-red	PI	311218
wire Ø8 mm	M8	brown-red	PI	311418

- Application: mounting wire.
- Weatherproof and UV resistant..
- Product in RAL color:



ACCESSORIES

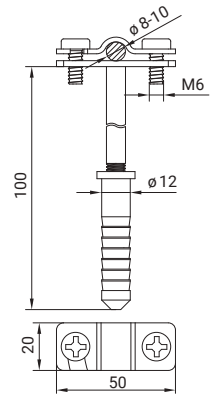
TECHNICAL INFORMATION

Holder for wire with expansion bolt L-100



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm / pin 60 mm	100	StZn	2 pcs. M6x16	311112
wire Ø(8-10)mm / pin 60 mm		Inox		311113
wire Ø(8-10)mm / pin 60 mm		Cu		311114

- Application: installation of wire on the wall.
- Quick installation.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

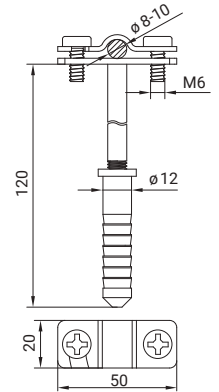


Holder for wire with expansion bolt L-120



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm / pin 60 mm	120	StZn	2 pcs. M6x16	311212
wire Ø(8-10)mm / pin 60 mm		Inox		311213
wire Ø(8-10)mm / pin 60 mm		Cu		311214

- Application: installation of wire on the wall.
- Quick installation.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

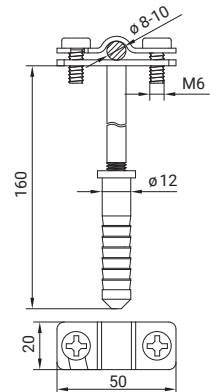


Holder for wire with expansion bolt L-160



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm / pin 60 mm	160	StZn	2 pcs. M6x16	311312
wire Ø(8-10)mm / pin 60 mm		Inox		311313
wire Ø(8-10)mm / pin 60 mm		Cu		311314

- Application: installation of wire on the wall.
- Quick installation.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

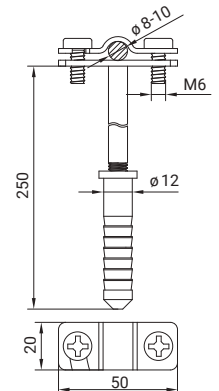


Holder for wire with expansion bolt L-250



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm / pin 60 mm	250	StZn	2 pcs. M6x16	311412
wire Ø(8-10)mm / pin 60 mm		Inox		311413
wire Ø(8-10)mm / pin 60 mm		Cu		311414

- Application: installation of wire on the wall.
- Quick installation.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

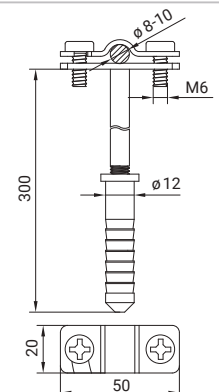


Holder for wire with expansion bolt L-300



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm / pin 60 mm	300	StZn	2 pcs. M6x16	311612
wire Ø(8-10)mm / pin 60 mm		Inox		311613
wire Ø(8-10)mm / pin 60 mm		Cu		311614

- Application: installation of wire on the wall.
- Quick installation.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

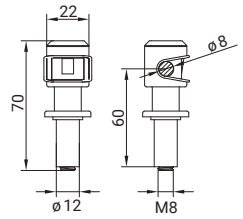


GT Holder for wire Ø8mm with rubber seal



Description	Size [mm]	Kolor	Material	Screw	Code
wire Ø8 mm	70x22	grey	PI	M6x35	310918
wire Ø8 mm		brown-red	PI		310818

- Application: installation of wire to sheet metal.
- Weatherproof and UV resistant.
- Product is available in RAL colors:



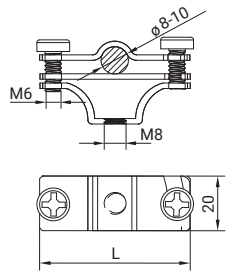
CONNECTORS AND CLAMPS

GT Screw-on holder for wire



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	55	StZn	2 pcs. M6x16	312012
wire Ø(8-10)mm	65	StZn	2 pcs. M6x16	312112

- Application: installation of wire to a wall or structure.



EARTHING

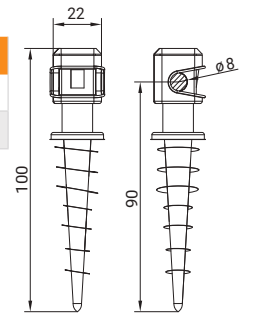
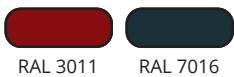
VERTICAL HOLDERS

GT Plastic holder for wire Ø8mm screwed into polystyrene foam



Description	Size [mm]	Colour	Material	Code
wire Ø8 mm	100x22	grey	PI	310518
wire Ø8 mm		brown-red	PI	310618

- Application: installation of wire on the wall, screwed directly into polystyrene foam.
- Weatherproof and UV resistant.
- Quick installation.
- Product in RAL color.



HORIZONTAL HOLDERS

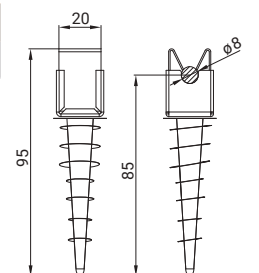
AIR-TERMINATION RODS

GT Click holder for wire Ø8mm screwed into polystyrene foam



Description	Size [mm]	Colour	Material	Code
wire Ø8 mm, click	95x20	silver	Inox	314113

- Application: installation of wire on the wall, screwed directly into polystyrene foam.
- Weatherproof and UV resistant.
- Quick installation.



ACCESSORIES

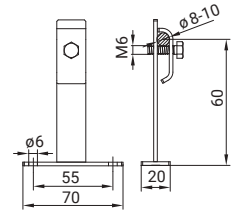
TECHNICAL INFORMATION

GT Holder for wire on base L-60



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	60	StZn	M6x25	313012
wire Ø(8-10)mm		Inox		313013

- Application: installation of wire to a wall or structure.

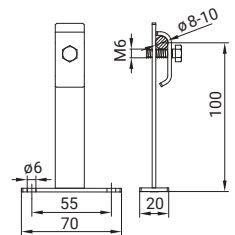


GT Holder for wire on base L-100



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	100	StZn	M6x25	313112
wire Ø(8-10)mm		Inox		313113

- Application: installation of wire to a wall or structure.

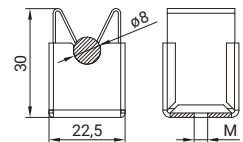


GT Holder for wire Ø8mm click system



Description	Size thread M	Kolor	Material	Code
wire Ø8 mm	M6	silver	Inox	314013
wire Ø8 mm	M6	bricky	StCu	314016

- Application: installation of wire on the wall.
- Quick installation.

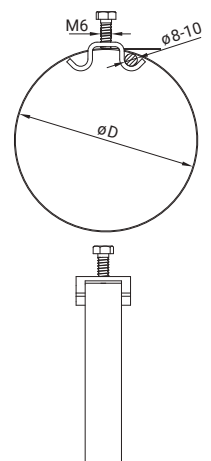


GT Universal pipe clamp for wire



Description	Size ØD [mm]	Material	Screw	Code
wire Ø(8-10)mm	100	Inox	M8x20	315013
wire Ø(8-10)mm	160	Inox		315113
wire Ø(8-10)mm	300	Inox		315213
wire Ø(8-10)mm	100	Cu		315014

- Application: installation of wire on a drainpipe.

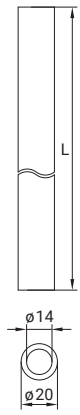


GT Lightning protection installation pipe Ø20mm



Description	Size Ø [mm]	Material	Code
pipe length L-2000 mm	14/20	PI	316118
pipe length L-3000 mm		PI	316218
flexible connector length 160 mm		PI	316318
flexible straight connector length 75 mm		PI	316518

- Application: installation of wire inside the elevation.
- Black polyethylene weatherproof and UV resistant pipe.



CONNECTORS AND CLAMPS

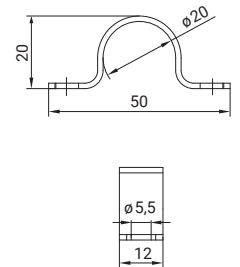
EARTHING

GT Holder for lightning protection installation pipe



Description	Size [mm]	Material	Code
pipe Ø20 mm	50x12x20	StZn	316112

- Application: installation of pipe to the wall.



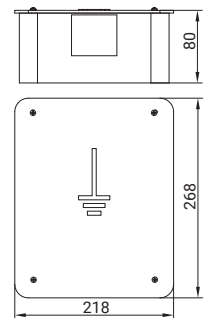
VERTICAL HOLDERS

GT Test joint box - Type I



Description	Size [mm]	Material	Code
stainless steel cover	268x218x80	Inox/PI	317113
plastic cover - white		PI	317118

- Application: installation of control connector inside the elevation.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



HORIZONTAL HOLDERS

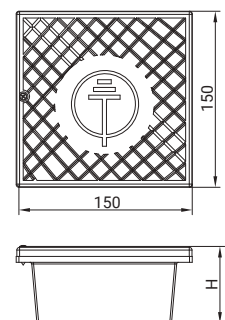
AIR-TERMINATION RODS

GT Test joint box - Type II



Description	Size H [mm]	Kolor	Material	Code
plastic cover	100	grey	PI	317218
plastic cover	100	white	PI	317318
plastic cover	55	grey	PI	317418
plastic cover	55	white	PI	317518

- Application: installation of control connector inside the elevation.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



ACCESSORIES

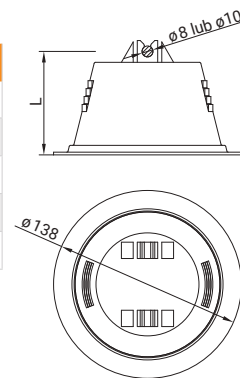
TECHNICAL INFORMATION

CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Plastic holder with concrete for wire



Description	Size L [mm]	Material	Code
wire Ø8 mm, concrete bottom	70	Pl/concrete	401018
wire Ø8 mm, plastic bottom	70	Pl/concrete	401118
wire Ø10 mm, concrete bottom	70	Pl/concrete	401218
wire Ø10 mm, plastic bottom	70	Pl/concrete	401318
wire Ø8 mm, plastic bottom	110	Pl/concrete	401918

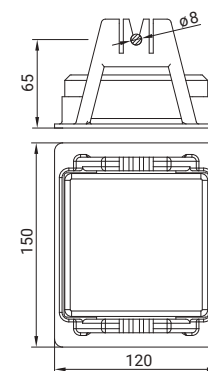


- Application: installation of wire on flat roofs.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Plastic holder H-65 with concrete for wire



Description	Size [mm]	Material	Code
wire Ø8 mm, plastic bottom	150x120x65	Pl/concrete	401818

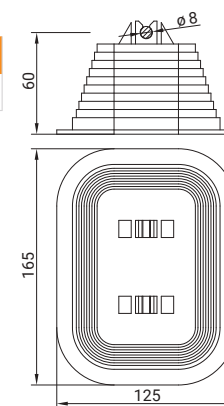


- Application: installation of wire on flat roofs.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Plastic holder H-60 with concrete for wire



Description	Size [mm]	Material	Code
wire Ø8 mm, plastic bottom	60	Pl/concrete	401418

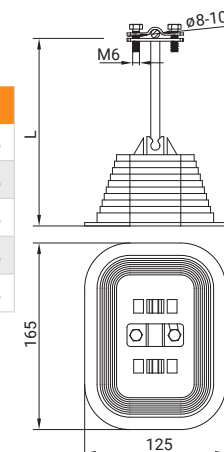


- Application: installation of wire on flat roofs.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Plastic holder increased with concrete for wire



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	120	Pl/StZn/concrete	2 pcs. M6x16	401518
wire Ø(8-10)mm	160	Pl/StZn/concrete		401718
wire Ø(8-10)mm	200	Pl/StZn/concrete		411718
wire Ø(8-10)mm	250	Pl/StZn/concrete		421718
wire Ø(8-10)mm	400	Pl/StZn/concrete		421818

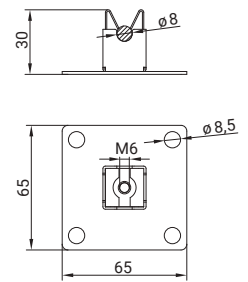


- Application: installation of wire on flat roofs covered for example with gravel.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.

GT Click holder for wire on metal base



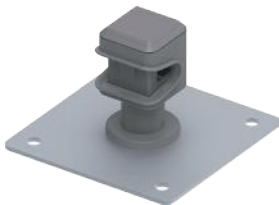
Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	65x65x30	StZn/Inox	M6x10	402012
wire Ø8 mm		Inox		402013
wire Ø8 mm		Cu		402014
wire Ø8 mm		lacquered		402019



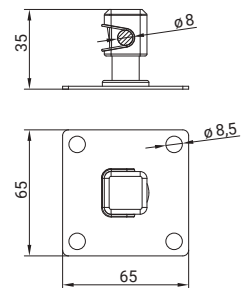
- Application: installation wire on roofs covered with sheet metal.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



GT Plastic holder for wire on metal base



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	65x65x35	StZn/PI	M6x10	402112
wire Ø8 mm		Inox/PI		402113
wire Ø8 mm		Cu/PI		402114
wire Ø8 mm		lacquered		402119



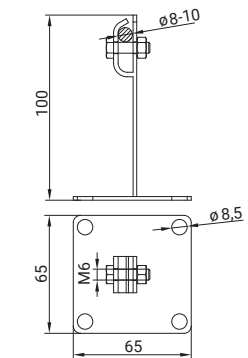
- Application: installation of wire on roofs covered with sheet metal.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



GT Holder for wire on metal base



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	65x65x100	StZn	M6x25	402212
wire Ø(8-10)mm		Inox		402213
wire Ø(8-10)mm		Cu		402214
wire Ø(8-10)mm		lacquered		402219



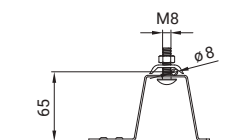
- Application: installation of wire on roofs covered with sheet metal.
- After selecting the lacquered position, product can be selected in following RAL colors:



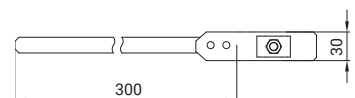
GT Holder for wire on flexible tape



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	300	Alu/Inox	M8x20	403117
wire Ø(8-10)mm	300	lacquered	M8x20	403119



- Application: installation on roofs with flat tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:

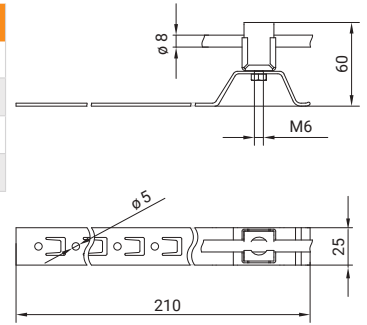


GT Click holder for wire L-210 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	210	StZn	M6x10	405012
wire Ø8 mm		Inox		405013
wire Ø8 mm		Cu		405014
wire Ø8 mm		lacquered		405019

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

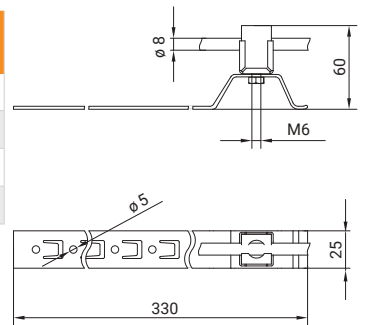


GT Click holder for wire L-330 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	330	StZn	M6x10	405112
wire Ø8 mm		Inox		405113
wire Ø8 mm		Cu		405114
wire Ø8 mm		lacquered		405119

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

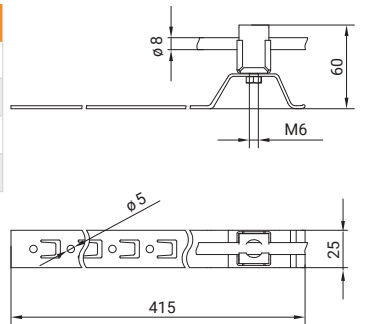


GT Click holder for wire L-415 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	415	StZn	M6x10	405212
wire Ø8 mm		Inox		405213
wire Ø8 mm		Cu		405214
wire Ø8 mm		lacquered		405219

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

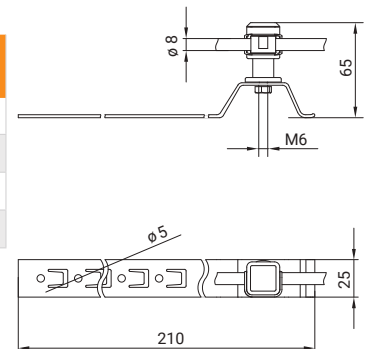


GT plastic holder for wire L-210 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	210	StZn	M6x10	405312
wire Ø8 mm		Inox		405313
wire Ø8 mm		Cu		405314
wire Ø8 mm		lacquered		405319

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



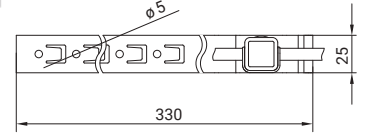
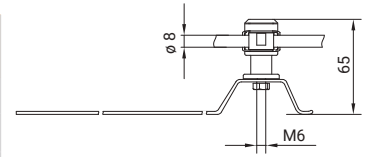
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Plastic holder for wire L-330 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	330	StZn	M6x10	405412
wire Ø8 mm		Inox		405413
wire Ø8 mm		Cu		405414
wire Ø8 mm		lacquered		405419

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

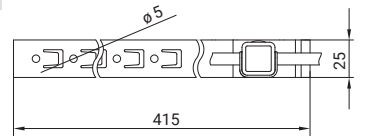
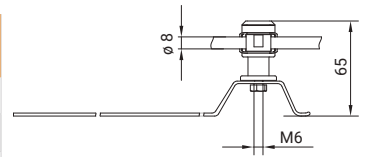


GT Plastic holder for wire L-415 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	415	StZn	M6x10	405512
wire Ø8 mm		Inox		405513
wire Ø8 mm		Cu		405514
wire Ø8 mm		lacquered		405519

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

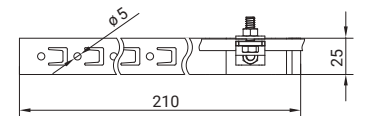
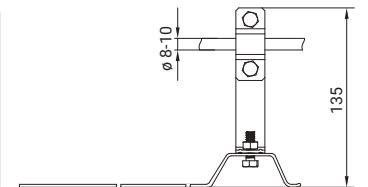


GT Holder for wire L-210 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	210	StZn	M6x10	405612
wire Ø(8-10)mm		Inox		405613
wire Ø(8-10)mm		Cu	2pcs. M6x16	405614
wire Ø(8-10)mm		lacquered		405619

- Application: installation of wire on roofs covered with flat tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:

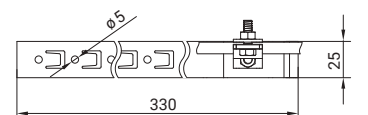
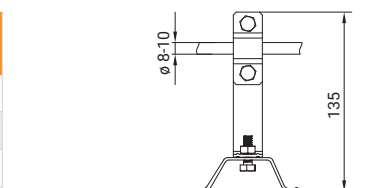


GT Holder for wire L-330 with tile hook



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	330	StZn	M6x10	405712
wire Ø(8-10)mm		Inox		405713
wire Ø(8-10)mm		Cu	2pcs. M6x16	405714
wire Ø(8-10)mm		lacquered		405719

- Application: installation of wire on roofs covered with flat tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:



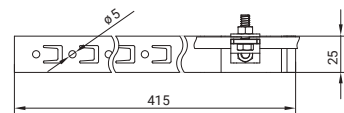
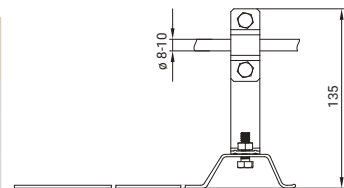
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Holder for wire with tile hook L-415



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	415	StZn	M6x10	405812
wire Ø(8-10)mm		Inox		405813
wire Ø(8-10)mm		Cu	2pcs. M6x16	405814
wire Ø(8-10)mm		lacquered	M6x16	405819

- Application: installation of wire on roofs covered with flat tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:

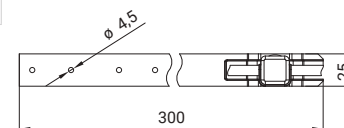
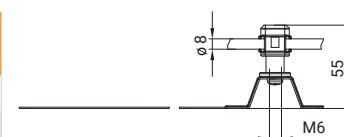


GT Plastic holder for wire on tape L-265



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	265	StZn/Pl	M6x10	403812
wire Ø8 mm		Pl/Inox		403813
wire Ø8 mm		lacquered	M6x10	403819

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

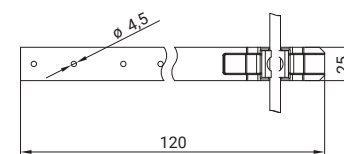
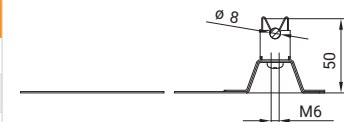


GT Click holder for wire on tape L-120



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	120	StZn	M6x10	403712
wire Ø8 mm		Inox		403713
wire Ø8 mm		lacquered	M6x10	403719

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

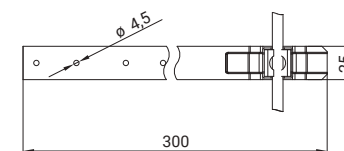
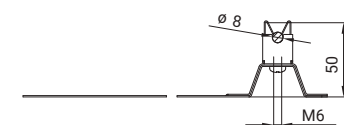


GT Click holder for wire on tape L-265



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	265	StZn	M6x10	413712
wire Ø8 mm		Inox		413713
wire Ø8 mm		lacquered	M6x10	413719

- Application: installation of wire on roofs covered with flat tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

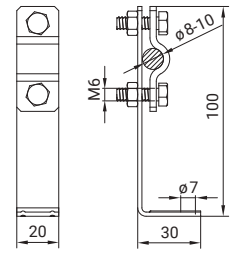


GT Screw-on holder for wire



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	100	StZn	M6x16	404012
wire Ø(8-10)mm		Inox		404013
wire Ø(8-10)mm		Cu		404014
wire Ø(8-10)mm		lacquered		404019

- Application: installation wire on diagonal roof covered with trapezoidal steel tinware, tinware tiles or shingles..
- After selecting the lacquered position, product can be selected in following RAL colors:



CONNECTORS AND CLAMPS

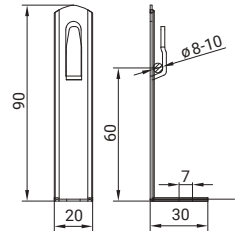
EARTHING

GT Press-on universal holder for wire L-60



Description	Size [mm]	Material	Code
wire Ø(8-10)mm	60	StZn	404112
wire Ø(8-10)mm		Inox	404113
wire Ø(8-10)mm		Cu	404114
wire Ø(8-10)mm		lacquered	404119

- Application: installation wire on diagonal roof covered with trapezoidal steel tinware, tinware tiles or shingles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



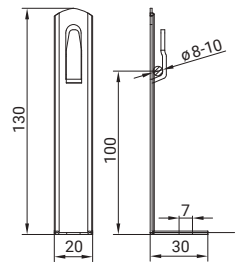
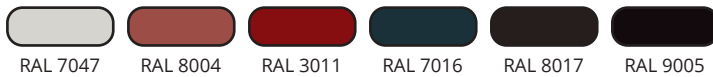
VERTICAL HOLDERS

GT Press-on universal holder for wire L-100



Description	Size [mm]	Material	Code
wire Ø(8-10)mm	100	StZn	414112
wire Ø(8-10)mm		Inox	414113
wire Ø(8-10)mm		Cu	414114
wire Ø(8-10)mm		lacquered	414119

- Application: installation wire on diagonal roof covered with trapezoidal steel tinware, tinware tiles or shingles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



HORIZONTAL HOLDERS

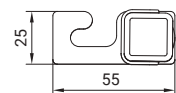
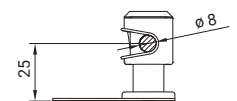
AIR-TERMINATION RODS

GT Plastic holder for wire with hook



Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	25	PI/Inox	M6x10	404218
wire Ø8 mm	25	lacquered	M6x10	404219

- Application: installation wire on diagonal roof covered with trapezoidal steel tinware, tinware tiles or shingles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



ACCESSORIES

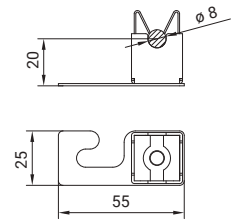
TECHNICAL INFORMATION

GT Click holder for wire with hook

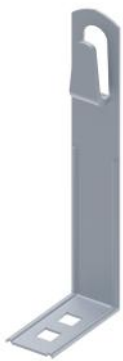


Description	Size [mm]	Material	Screw	Code
wire Ø8 mm	20	Inox	M6x10	404313
wire Ø8 mm	20	lacquered	M6x10	404319

- Application: installation of wire on diagonal roof covered with trapezoidal steel tinware, tinware tiles or shingles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

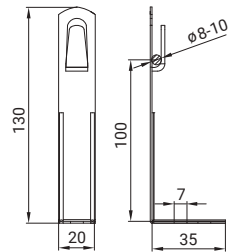


GT Press-on holder for wire on metal base



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	60	StZn	M6x25	413012
wire Ø(8-10)mm	60	lacquered		413019
wire Ø(8-10)mm	100	StZn		413112
wire Ø(8-10)mm	100	lacquered		413119

- Application: installation of wire on roofs covered with sheet metal.
- After selecting the lacquered position, product can be selected in following RAL colors:

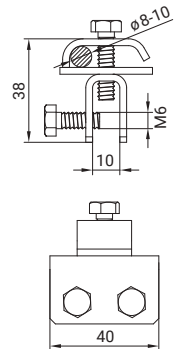


GT Seam holder for wire



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	40x38	StZn	M8x20	404912
wire Ø(8-10)mm		Inox	2 pcs.	404913
wire Ø(8-10)mm		Cu	M6x16	404914

- Application: installation of wire on overlapping profiles of roofing sheets or structures.

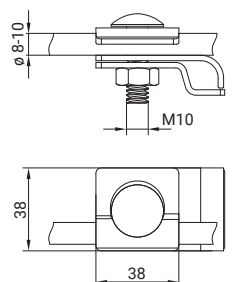


GT Seam clamp for wire



Description	Size [mm]	Material	Screw	Code
wire Ø(8-10)mm	38x38	StZn	M10x35	404812
wire Ø(8-10)mm		Inox		404813
wire Ø(8-10)mm		Cu		404814
wire Ø(8-10)mm		Alu		404817

- Application: installation of wire on profiles of roofing sheets.

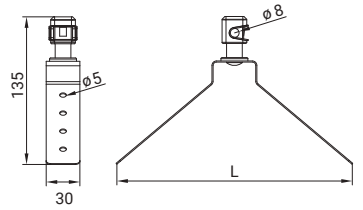


CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Plastic holder for wire on gable



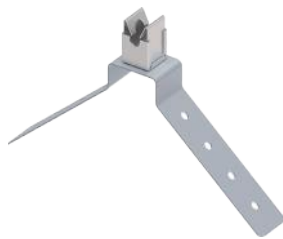
Description	Size L [mm]	Material	Screw	Code
wire Ø8 mm	(200-260)	StZn/PI	M6x10	406012
wire Ø8 mm		Inox/PI		406013
wire Ø8 mm		Cu/PI		406014
wire Ø8 mm		lacquered		406019



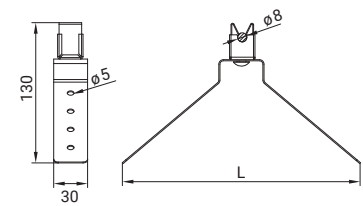
- Application: installation of wire on roofs covered with metal sheet.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



GT Click holder for wire on gable



Description	Size L [mm]	Material	Screw	Code
wire Ø8 mm	(200-260)	StZn/Inox	M6x10	406112
wire Ø8 mm		Inox		406113
wire Ø8 mm		Cu/Inox		406114
wire Ø8 mm		lacquered		406119



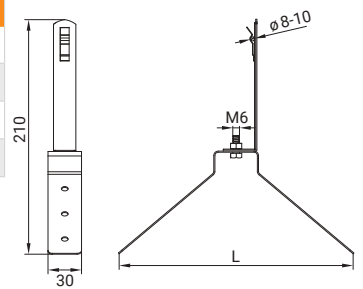
- Application: installation of wire on roofs covered with metal sheet.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



GT Press-on holder for wire on gable



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	(200-260)	StZn	M6x10	406212
wire Ø(8-10)mm		Inox		406213
wire Ø(8-10)mm		Cu		406214
wire Ø(8-10)mm		lacquered		406219



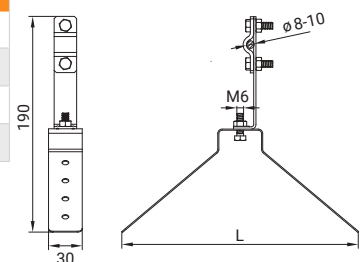
- Application: installation of wire on roofs covered with metal sheet.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



GT Screw-on holder for wire on gable



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	(200-260)	StZn	M6x10	406312
wire Ø(8-10)mm		Inox		406313
wire Ø(8-10)mm		Cu	2 pcs. M6x16	406314
wire Ø(8-10)mm		lacquered		406319



- Application: installation of wire on roofs covered with metal sheet.
- After selecting the lacquered position, product can be selected in following RAL colors:

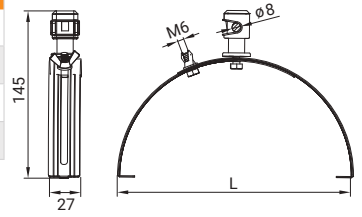


GT Plastic holder for wire on ridge



Description	Size L [mm]	Material	Screw	Code
wire Ø8 mm	(200-280)	StZn/PI	2 pcs. M6x16	407012
wire Ø8 mm		Inox/PI		407013
wire Ø8 mm		Cu/PI		407014
wire Ø8 mm		lacquered		407019

- Application: installation of wire on roofs round peak covered with tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

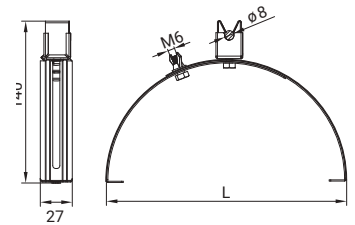


GT Click holder for wire on ridge



Description	Size L [mm]	Material	Screw	Code
wire Ø8 mm	(200-280)	StZn/Inox	2 pcs. M6x16	407112
wire Ø8 mm		Inox		407113
wire Ø8 mm		Cu/Inox		407114
wire Ø8 mm		lacquered		407119

- Application: installation of wire on roofs round peak covered with tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

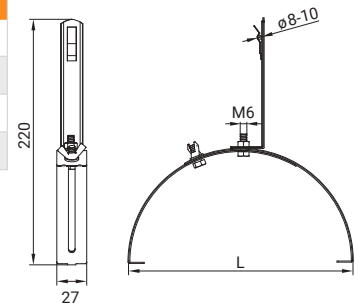


GT Press-on holder for wire on ridge



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	(200-280)	StZn	2 pcs. M6x16	407212
wire Ø(8-10)mm		Inox		407213
wire Ø(8-10)mm		Cu		407214
wire Ø(8-10)mm		lacquered		407219

- Application: installation of wire on roofs round peak covered with tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:

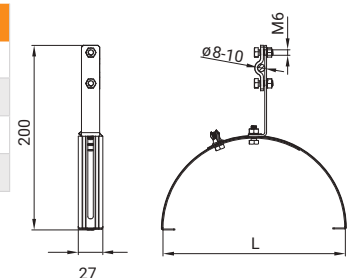


GT Screw-on holder for wire on ridge



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	(200-280)	StZn	4 pcs. M6x16	407312
wire Ø(8-10)mm		Inox		407313
wire Ø(8-10)mm		Cu		407314
wire Ø(8-10)mm		lacquered		407319

- Application: installation of wire on roofs round peak covered with tiles.
- Quick installation.
- After selecting the lacquered position, product can be selected in following RAL colors:



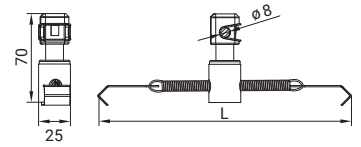
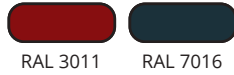
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Plastic holder for wire on ridge with spring



Description	Size L [mm]	Colour	Material	Screw	Code
wire Ø8 mm	(200-320)	grey	Inox/PI	M6x10	407713
wire Ø8 mm		brown	Inox/PI		407813

- Application: installation of wire on roofs round peak covered with tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:



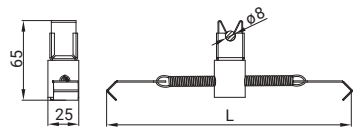
CONNECTORS AND CLAMPS

GT Click holder for wire on ridge with spring



Description	Size L [mm]	Material	Screw	Code
wire Ø8 mm, click	(200-320)	Inox	M6x10	407913
wire Ø8 mm, click		lacquered		407919

- Application: installation of wire on roofs round peak covered with tiles.
- After selecting the lacquered position, product can be selected in following RAL colors:



EARTHING

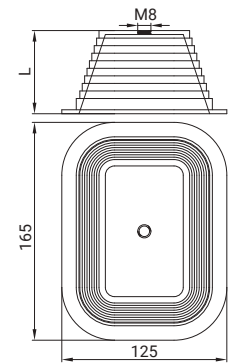
VERTICAL HOLDERS

GT Plastic holder H-60 with concrete for cable trays



Description	Size L [mm]	Material	Code
cable trays, plastic bottom	60	PI/concrete	491418
cable trays, plastic bottom	90	PI/concrete	491518

- Application: installation of cable trays on flat roofs.
- Made of polyethylene, weatherproof and UV resistant.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.



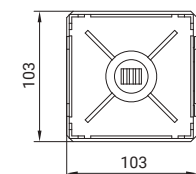
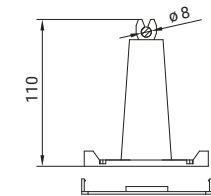
HORIZONTAL HOLDERS

GT Holder for wire for gluing



Description	Size [mm]	Colour	Material	Code
wire Ø8 mm	103x103x100	black	PI	408018
wire Ø8 mm	103x103x100	grey	PI	408418

- Application: installation of wire on roofs covered with roofing felt or membrane, suitable for bonding. Bonding with tapes 408118 or 408218.
- In accordance with IEC 62561 standard.
- Meets the requirements of the IEC 62305 standard.
- After selecting the lacquered position, product can be selected in following RAL colors:



AIR-TERMINATION RODS

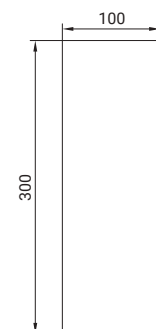
ACCESSORIES

GT Tape for gluing holder



Description	Size [mm]	Material	Code
roofing felt tape	300x100	Other	408118
membrane tape	300x100	Other	408218

- Application: mounting holder 408018 on roofs covered with roofing felt or membrane, suitable for gluing or welding.

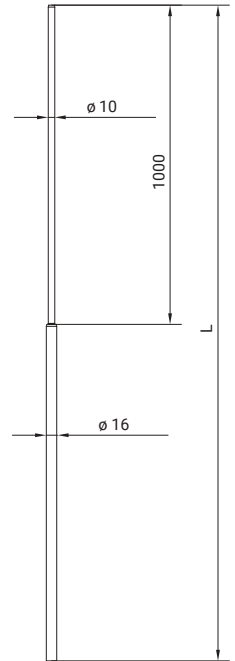


TECHNICAL INFORMATION

Air-termination rod Ø16mm

Height L [mm]	Diameter Ø [mm]	Material	Code
1000	16	Alu	501017
1500	16/10	Alu	501517
2000	16/10	Alu	502017
2500	16/10	Alu	502517
3000	16/10	Alu	503017
3500	16/10	Alu	503517
4000	16/10	Alu	504017
4500	16/10	Alu	504517

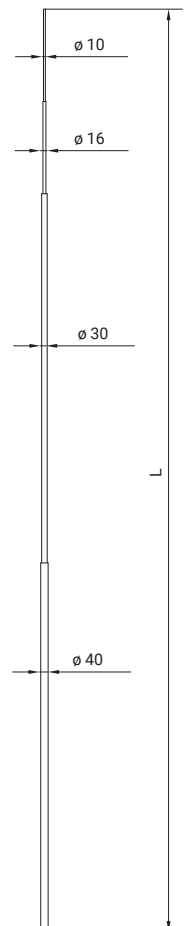
- Application: lightning protection of equipment and objects on the roof.
- Resistance to wind load in accordance with EN 1993-1-1 and EN 1999-1-1.
- Meets the requirements of the IEC 62305 standard.



Air-termination rod Ø40mm

Height L [mm]	Diameter Ø [mm]	Material	Code
4000	40/30/16	Alu	514017
4500	40/30/16	Alu	514517
5000	40/30/16	Alu	515017
5500	40/30/16/10	Alu	515517
6000	40/30/16/10	Alu	516017
6500	40/30/16/10	Alu	516517
7000	40/30/16/10	Alu	517017
7500	40/30/16/10	Alu	517517
8000	40/30/16/10	Alu	518017

- Application: lightning protection of equipment and objects on the roof.
- Resistance to wind load in accordance with EN 1993-1-1 and EN 1999-1-1.
- Meets the requirements of the IEC 62305 standard.

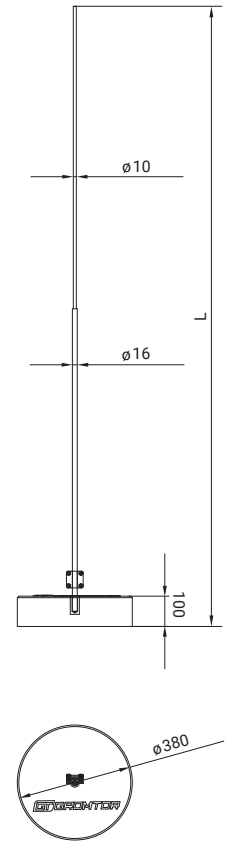


GT Air-termination rod Ø16mm on concrete base



Height L [mm]	Diameter Ø [mm]	Material	Bases [pcs]	Code
1000	16	Alu/StZn/concrete	1	501019
1500	16/10	Alu/StZn/concrete	1	501519
2000	16/10	Alu/StZn/concrete	1	502019
2500	16/10	Alu/StZn/concrete	1	502519
3000	16/10	Alu/StZn/concrete	1	503019
3500	16/10	Alu/StZn/concrete	2	503519
4000	16/10	Alu/StZn/concrete	2	504019
4500	16/10	Alu/StZn/concrete	3	504519

- Composition of set: air-termination rod, concrete base/bases, cross-connector 111212.
- Application: lightning protection of equipment and objects on the roof.
- Resistance to wind load in accordance with EN 1993-1-1 and EN 1999-1-1.
- Meets the requirements of the IEC 62305 standard.
- Recommended to order separately pad 500119.

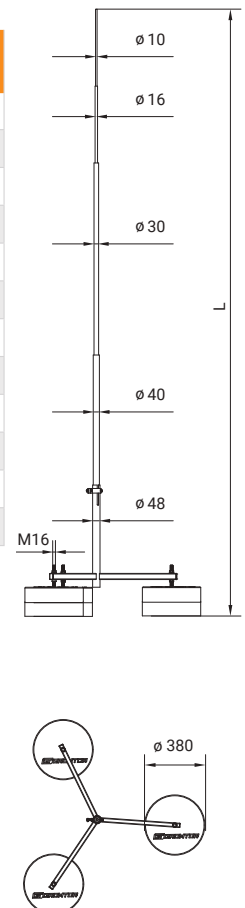


GT Air-termination rod Ø40mm on tripod



Height L [mm]	Diameter Ø [mm]	Material	Screw	Bases [szt]	Code
3000	40/30/16	Alu/StZn/concrete	3 pcs. M16x200	3x1	513019
3500	40/30/16	Alu/StZn/concrete		3x1	513519
4000	40/30/16	Alu/StZn/concrete		3x1	514019
4500	40/30/16	Alu/StZn/concrete		3x1	514519
5000	40/30/16	Alu/StZn/concrete		3x1	515019
5500	40/30/16/10	Alu/StZn/concrete		3x1	515519
6000	40/30/16/10	Alu/StZn/concrete		3x1	516019
6500	40/30/16/10	Alu/StZn/concrete		3x2	516519
7000	40/30/16/10	Alu/StZn/concrete		3x2	517019
7500	40/30/16/10	Alu/StZn/concrete		3x2	517519
8000	40/30/16/10	Alu/StZn/concrete		3x2	518019
9000	40/30/16/10	Alu/StZn/concrete		3x3	519019

- Composition of set: air-termination rod, concrete base/bases, tripod, cross-connector 510212.
- Application: lightning protection of equipment and objects on the roof.
- Resistance to wind load in accordance with EN 1993-1-1 and EN 1999-1-1.
- Meets the requirements of the IEC 62305 standard.
- Recommended to order separately pad 500119.



CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

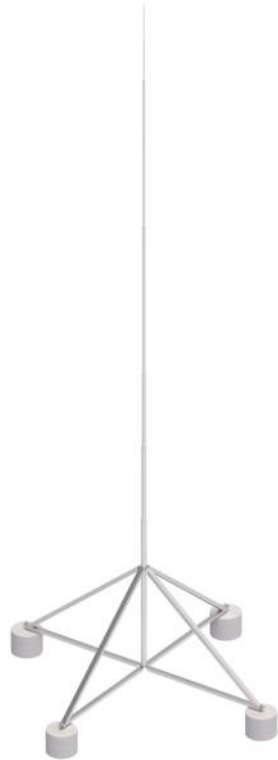
HORIZONTAL HOLDERS

AIR-TERMINATION RODS

ACCESSORIES

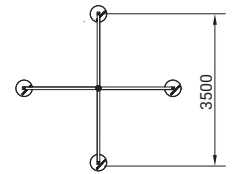
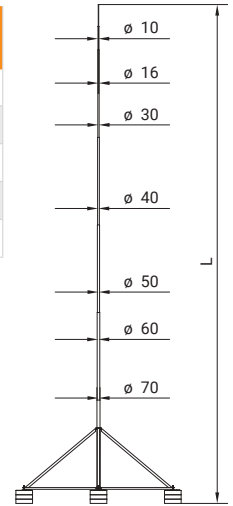
TECHNICAL INFORMATION

GT Air-termination rod on four armed stand



Height L [mm]	Diameter Ø [mm]	Material	Bases [szt]	Code
9000	50/40/30/16/10	Alu/StZn/concrete	4x2	511119
10000	50/40/30/16/10	Alu/StZn/concrete	4x2	511219
11000	60/50/40/30/16/10	Alu/StZn/concrete	4x2	511319
12000	70/60/50/40/30/16/10	Alu/StZn/concrete	4x2	511419
14000	70/60/50/40/30/16/10	Alu/StZn/concrete	4x3	511619

- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62305 standard.
- Recommended to order separately pad 500119.

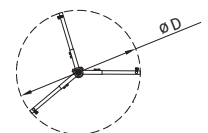
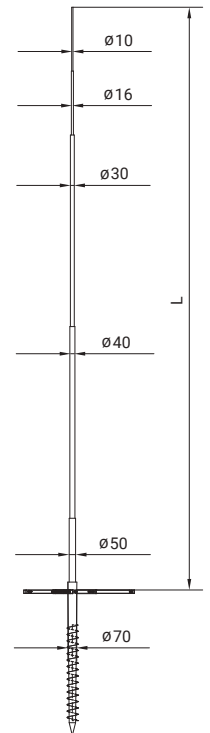


GT Free standing air-termination rod screwed into ground



Height L [mm]	Size ØD [mm]	Diameter Ø [mm]	Material	Code
5000	1100	50/40/30/16/10	StZn/Alu	598112
6000		50/40/30/16/10	StZn/Alu	598212
7000		60/50/40/30/16/10	StZn/Alu	598312
8000		60/50/40/30/16/10	StZn/Alu	598412
9000		60/50/40/30/16/10	StZn/Alu	598512
10000		70/60/50/40/30/16/10	StZn/Alu	598612
11000		70/60/50/40/30/16/10	StZn/Alu	598712
12000		70/60/50/40/30/16/10	StZn/Alu	598812
14000		70/60/50/40/30/16/10	StZn/Alu	598912

- Application: lightning protection of equipment and objects located on the ground.
- Meets the requirements of the IEC 62305 standard.



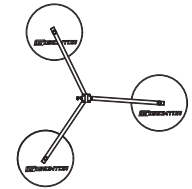
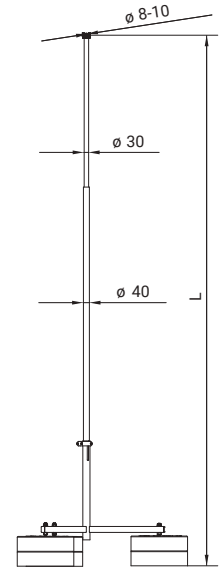
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Supporting air-termination rod on tripod



Height L [mm]	Diameter Ø [mm]	Material	Bases [szt]	Code
3000	40/30	Alu/StZn/concrete	3x2	581119
3500	40/30	Alu/StZn/concrete	3x2	582119
4000	40/30	Alu/StZn/concrete	3x2	581219
4500	40/30	Alu/StZn/concrete	3x2	582219
5000	40/30	Alu/StZn/concrete	3x3	581319
5500	40/30	Alu/StZn/concrete	3x3	582319
6000	40/30	Alu/StZn/concrete	3x3	583319

- Application: lightning protection of equipment and objects on the roof using horizontal elevated lightning protection system in the form of Aldrey rope.
- Included is a top cross-connector for Aldrey rope.
- Meets the requirements of the IEC 62305 standard.
- Recommended to order separately pad 500119.

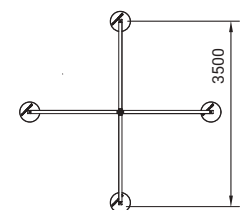
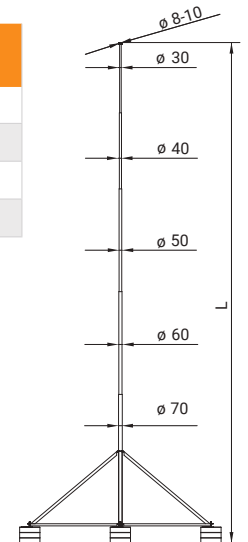


GT Supporting air-termination rod on four armed stand



Height L [mm]	Diameter Ø [mm]	Material	Bases [szt]	Code
5000	50/40/30	Alu/StZn/concrete	4x1	581619
6000	50/40/30	Alu/StZn/concrete	4x1	581719
7000	60/50/40/30	Alu/StZn/concrete	4x2	581819
8000	60/50/40/30	Alu/StZn/concrete	4x2	581919

- Application: lightning protection of equipment and objects on the roof using horizontal elevated lightning protection system in the form of Aldrey rope.
- Included is a top cross-connector for Aldrey rope.
- Meets the requirements of the IEC 62305 standard.
- Recommended to order separately pad 500119.



CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION RODS

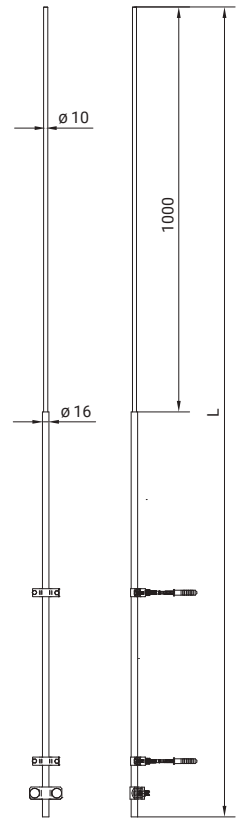
ACCESSORIES

TECHNICAL INFORMATION

Set of lightning protection spire $\varnothing 16\text{mm}$

Height L [mm]	Diameter \varnothing [mm]	Material	Code
1000	16	Alu/StZn	501018
1500	16/10	Alu/StZn	501518
2000	16/10	Alu/StZn	502018
2500	16/10	Alu/StZn	502518
3000	16/10	Alu/StZn	503018
3500	16/10	Alu/StZn	503518
4000	16/10	Alu/StZn	504018
4500	16/10	Alu/StZn	504518

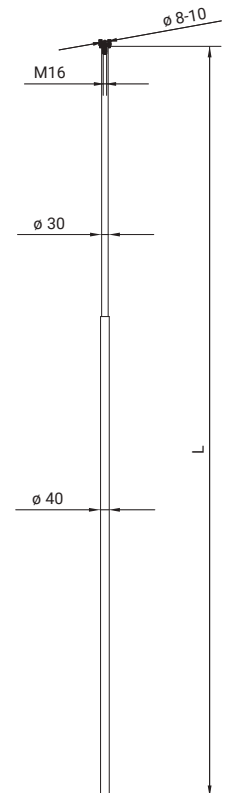
- Application: lightning protection of equipment and objects on the roof.
- Resistance to wind load in accordance with EN 1993-1-1 and EN 1999-1-1.
- Meets the requirements of the IEC 62305 standard.
- Composition of set: rod, holders, cross-connector.



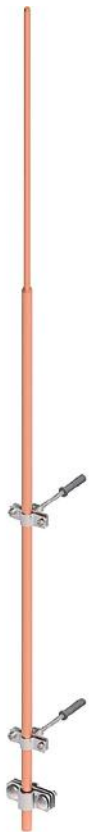
Supporting air-termination rod

Height L [mm]	Diameter \varnothing [mm]	Material	Code
2500	40/30	Alu/StZn	582517
3000	40/30	Alu/StZn	583017
4000	40/30	Alu/StZn	584017
5000	40/30	Alu/StZn	585017
6000	40/30	Alu/StZn	586017

- Application: lightning protection of equipment and objects on the roof using horizontal elevated lightning protection system in the form of Aldrey rope.
- Included is a top cross-connector for Aldrey rope.
- Meets the requirements of the IEC 62305 standard.

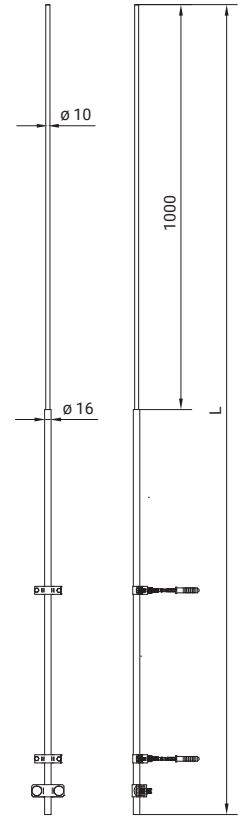


GT Copper plated set of lightning protection spire Ø16mm



Height L [mm]	Diameter Ø [mm]	Material	Code
1000	16	StCu/Inox	501416
1500	16/10	StCu/Inox	501516
2000	16/10	StCu/Inox	501616

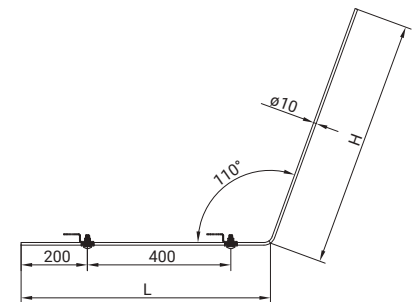
- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62305 standard.
- Composition of set: rod, holders, cross-connector.



GT Air-termination rod Ø10mm for photovoltaic

Length L / Height H - [mm]	Diameter Ø [mm]	Material	Code
750/750	10	Alu/StZn	580517
750/1250	10	Alu/StZn	581017

- Application: lightning protection of photovoltaic panels.
- Meets the requirements of the IEC 62305 standard.

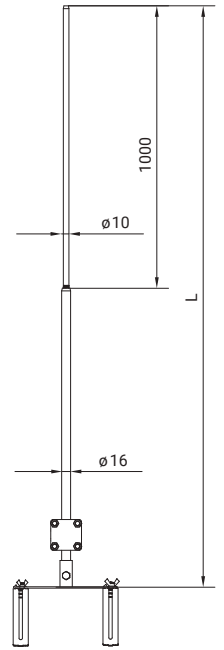


GT Air-termination rod on ridge stand



Size L [mm]	Diameter Ø [mm]	Material	Code
1000	16	Alu/StZn	516113
1500	16/10	Alu/StZn	516213
2000	16/10	Alu/StZn	516313
2500	16/10	Alu/StZn	516413
3000	16/10	Alu/StZn	516513

- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62305 standard.

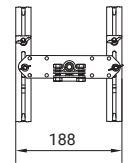


GT Ridge stand for air-termination rod



Description	Size [mm]	Material	Code
ridge stand for mast	188	StZn	526112

- Application: ridge stand for air-termination rod Ø16mm.

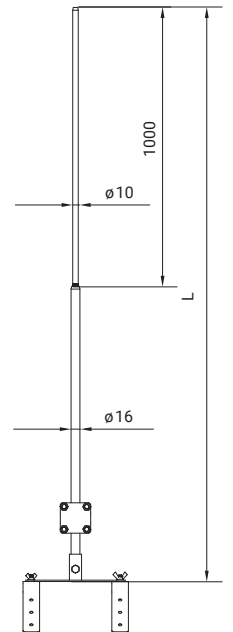


GT Air-termination rod on gable stand



Size L [mm]	Diameter Ø [mm]	Material	Code
1000	16	Alu/StZn	517113
1500	16/10	Alu/StZn	517213
2000	16/10	Alu/StZn	517313
2500	16/10	Alu/StZn	517413
3000	16/10	Alu/StZn	517513

- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62305 standard.

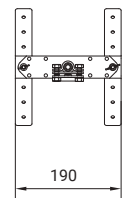


GT Gable stand for air-termination rod



Description	Size [mm]	Material	Code
gable stand for mast	190	Alu/StZn	527113

- Application: gable stand for air-termination rod Ø16mm.

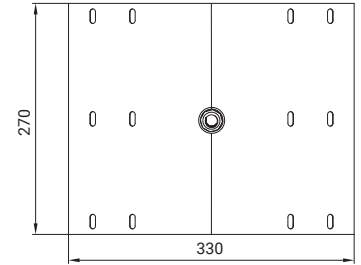
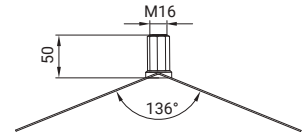


CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Gable metal stand for air-termination rod

Description	Size [mm]	Material	Code
gable metal stand	270x300	Inox	511313

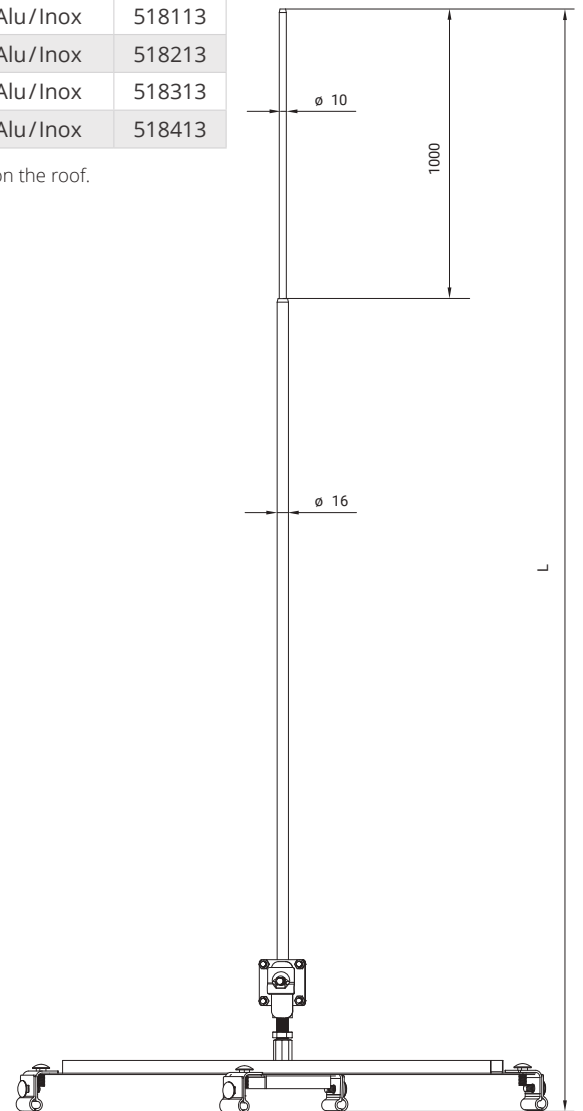
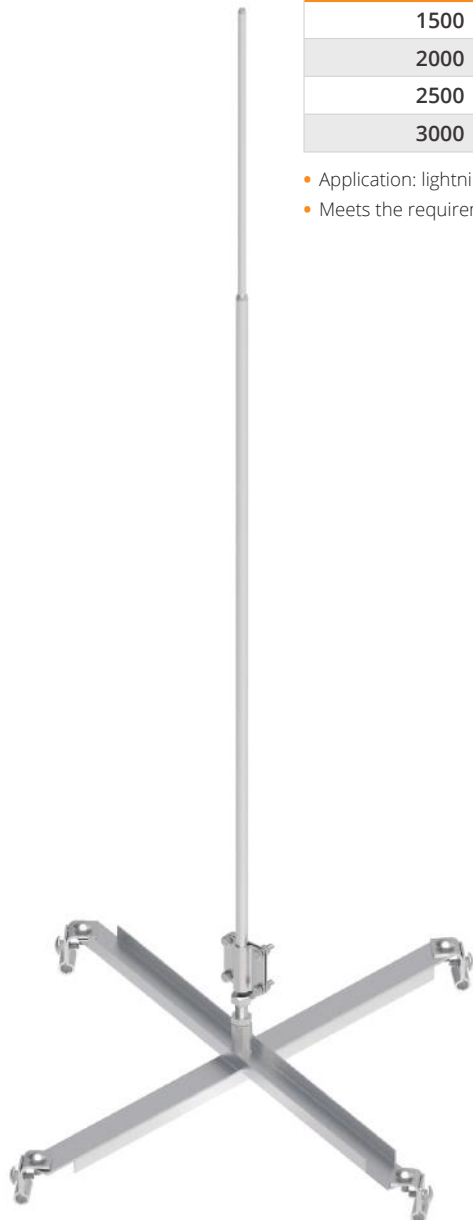
- Application: gable metal stand for air-termination rod $\varnothing 16\text{mm}$.



GT Air-termination rods on seam stand

Size L [mm]	Diameter \varnothing [mm]	Material	Code
1500	16/10	Alu/Inox	518113
2000	16/10	Alu/Inox	518213
2500	16/10	Alu/Inox	518313
3000	16/10	Alu/Inox	518413

- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62305 standard.

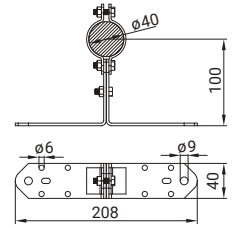


GT Holder for air-termination rod Ø40 mm



Description	Size [mm]	Material	Screw	Code
holder for mast Ø40 mm	100	StZn	3 pcs. M8x25	510312

- Application: installation of mast on a wall or metal structure.

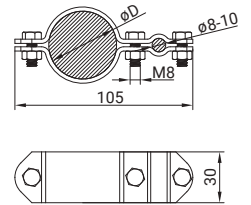


GT Clamp for connection of wire with air-termination rod or pipe



Description	Diameter ØD [mm]	Material	Screw	Code
wire Ø(8-10)mm	40	StZn	3 pcs. M8x25	510212
wire Ø(8-10)mm	60	StZn		513212
wire Ø(8-10)mm	76	StZn		514212
wire Ø(8-10)mm	90	StZn		515212
wire Ø(8-10)mm	115	StZn		516212
wire Ø(8-10)mm	120	StZn		517212

- Application: installation of wire to mast or pipe.

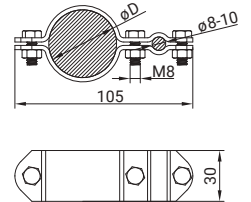


GT Clamp for connection of wire with air-termination rod or pipe



Description	Diameter ØD [mm]	Material	Screw	Code
wire Ø(8-10)mm	40	Inox	3 pcs. M8x25	510215
wire Ø(8-10)mm	60	Inox		513215
wire Ø(8-10)mm	76	Inox		514215
wire Ø(8-10)mm	90	Inox		515215
wire Ø(8-10)mm	115	Inox		516215
wire Ø(8-10)mm	120	Inox		517215

- Application: installation of wire to mast or pipe.

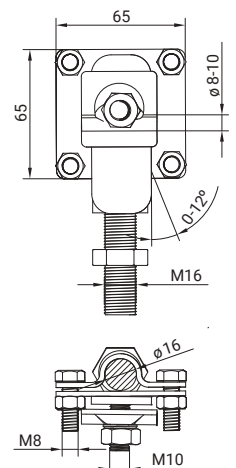


GT Stabilizer for air-termination rod Ø16 mm



Description	Material	Screw	Code
for mast Ø16 mm with 1 concrete base	Inox	M16x50 M10x25	500013
for mast Ø16 mm with 2 concrete bases	Inox	4 pcs. M8x25	501013

- Application: adjusting the tilt of lightning protection masts from 0 to 12°.



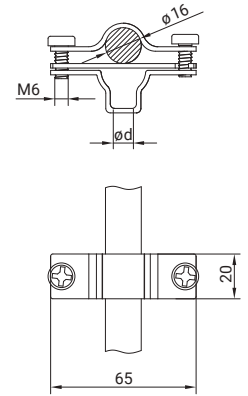
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Holder for air-termination rod Ø16 mm



Description	Size d [mm]	Material	Screw	Code
holder for mast Ø16 mm	M8	StZn	2 pcs. M6x16	500112
holder for mast Ø16 mm	M8	Inox	2 pcs. M6x16	500113
holder for mast Ø16 mm	Ø7	StZn	2 pcs. M6x16	501112
holder for mast Ø16 mm	Ø7	Inox	2 pcs. M6x16	501113

- Application: installation of mast on a wall or metal structure.

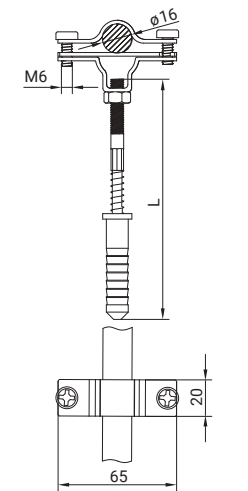


GT Holder for air-termination rod Ø16 mm with expansion bolt



Description	Size L [mm]	Material	Screw	Code
holder for mast Ø16 mm	100	Inox/StZn	2 pcs. M6x16	500213
holder for mast Ø16 mm	160	Inox/StZn		500313
holder for mast Ø16 mm	200	Inox/StZn		500413

- Application: installation of mast on a wall or metal structure.

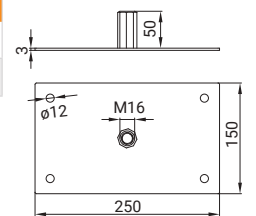


GT Metal stand for air-termination rod Ø16 mm



Description	Size [mm]	Material	Code
metal base with thread M16	250x150x50	StZn	511212
metal base with thread M16	250x150x50	Inox	511213

- Application: installation of mast on slopes of metal roofs.

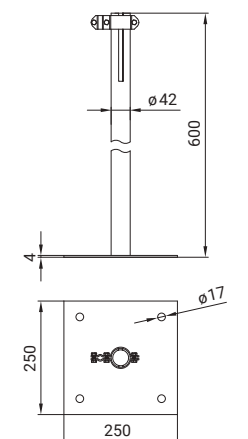


GT Metal stand for air-termination rod Ø40 mm



Description	Size [mm]	Material	Screw	Code
metal base for mast Ø40 mm	250x250x600	StZn	3 pcs. M8x25	511112
metal base for mast Ø40 mm		Inox	3 pcs. M8x25	511113

- Application: installation of mast on slopes of metal roofs.

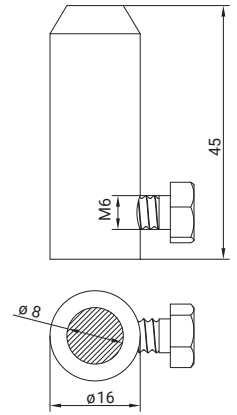


GT Tip for air-termination rods Ø8mm with screw



Description	Diameter Ø [mm]	Material	Screw	Code
wire Ø8 mm	16	Alu	M6x10	500917

- Application: termination of wire.

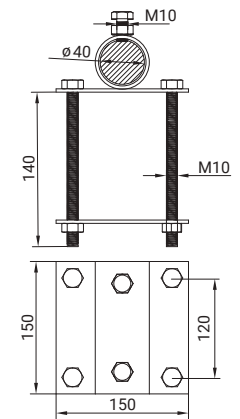


GT Holder for air-termination rod Ø40 mm for profile



Description	Screw	Material	Code
holder for mast Ø40 mm rectangular profile ≤ 100 mm	2 pcs. M10x20	StZn	599812
holder for mast Ø40 mm rectangular profile ≤ 100 mm	4 pcs. M10x140	Inox	599813

- Application: installation of mast for a rectangular profile.

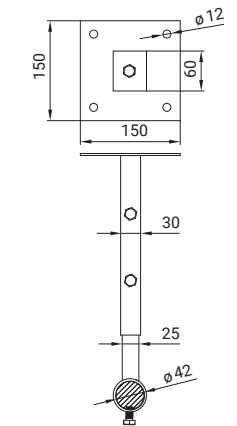


GT Holder for air-termination rod Ø40 mm on adjustable stand



Description	Screw	Material	Code
holder for mast Ø40 mm adjustable stand 300-500 mm	3 pcs. M10x20	Inox	599613

- Application: installation of mast on the wall.

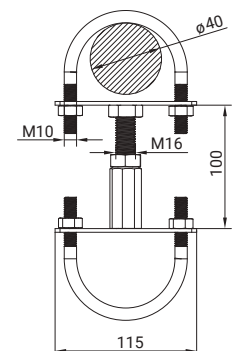


GT Holder for air-termination rod Ø40 mm for railings or pipes



Description	Screw	Material	Code
holder for mast Ø40 mm round profile ≤ 70 mm	2 pcs. M10x40 M16x100	Inox	599713

- Application: installation of mast for a round profile.



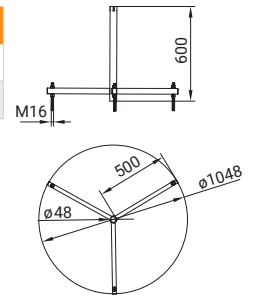
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Tripod for air-termination rod Ø40 mm



Description	Height [mm]	Material	Screw	Code
for mast Ø40 mm	600	StZn	3 pcs. M16x200	510112
for mast Ø40 mm	600	Inox	M16x200	510113

- Application: installation a mast on concrete stands.
- The set includes threaded rods used to adjust the mast.

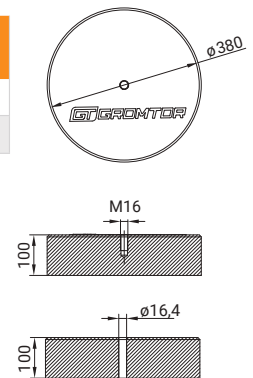


GT Concrete base for air-termination rod



Description	Diameter Ø [mm]	Weight [kg]	Material	Code
concrete base with thread M16	380	20	concrete	500019
concrete base with hole Ø16 mm	380	20	concrete	550019

- Application: mounting a threaded mast or mounting a tripod.
- The system allows you to install concrete stands on top of each other.

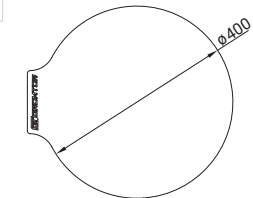


GT Pad under a concrete stand



Description	Diameter Ø [mm]	Material	Code
for roofing felt and membrane	400	other	500119

- Application: provides roof covering under a concrete stand of a mast.

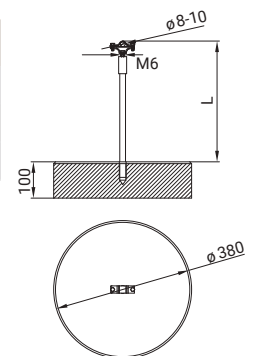


GT Separation rod for wire on a concrete base



Description	Size L [mm]	Material	Code
wire Ø(8-10)mm	500	StZn/GFK/concrete	592119
wire Ø(8-10)mm	750	StZn/GFK/concrete	592219
wire Ø(8-10)mm	1000	StZn/GFK/concrete	592319

- Application: installation of wire over cable trays.

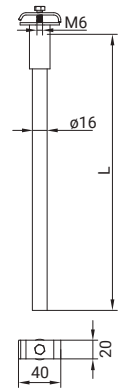


Separation rod Ø16 mm for wire



Description	Size L [mm]	Material	Screw	Code
wire Ø(8-10)mm	500	StZn/GFK	M8x20	590119
wire Ø(8-10)mm	750	StZn/GFK		590219
wire Ø(8-10)mm	1000	StZn/GFK		590319
wire Ø(8-10)mm	2000	StZn/GFK		590519

- Application: providing an insulating gap of lightning protection system from the protected device.
- Made of fiberglass, UV resistant.

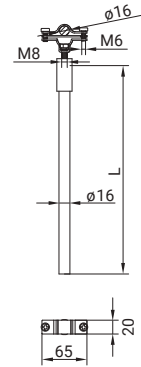


Separation rod Ø16 mm for air-termination rod



Description	Size L [mm]	Material	Screw	Code
for mast Ø16 mm	500	StZn/GFK	M8x20	591119
for mast Ø16 mm	750	StZn/GFK		591219
for mast Ø16 mm	1000	StZn/GFK		591319
for mast Ø16 mm	2000	StZn/GFK		591519

- Application: providing an insulating gap of lightning protection system from the protected device.
- Made of fiberglass, UV resistant.

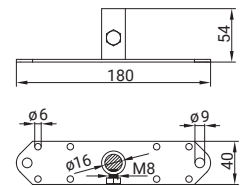


Holder for separation rod Ø16 mm



Description	Size [mm]	Material	Screw	Code
for mast Ø16 mm	180x40x54	StZn	M8x20	592012

- Application: installation separation rod on a wall or structure.

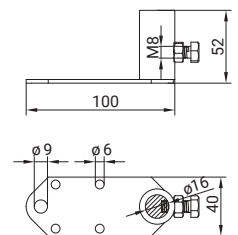


Small holder for separation rod Ø16 mm



Description	Size [mm]	Material	Screw	Code
for mast Ø16 mm	100x40x52	StZn	M8x20	592112

- Application: installation separation rod on a wall or structure.

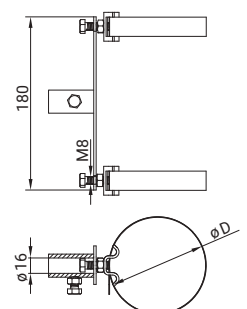


Pipe clamp for separation rod Ø16 mm



Description	Diameter ØD [mm]	Material	Screw	Code
for mast Ø16 mm	≤ 120	StZn	3 pcs. M8x20	593112
for mast Ø16 mm	≤ 200	StZn		593212
for mast Ø16 mm	≤ 300	StZn		593312

- Application: installation separation rod on a round profile.

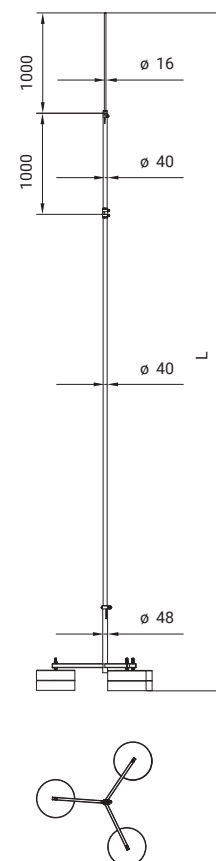


Isolated air-termination rod for conductor on tripod



Height L [mm]	Diameter \varnothing [mm]	Material	Bases [szt]	Code
3000	40/16	GFK/Inox/Alu	3x1	593017
3500	40/16	GFK/Inox/Alu	3x1	593517
4000	40/16	GFK/Inox/Alu	3x1	594017
4500	40/16	GFK/Inox/Alu	3x1	594517
5000	40/16	GFK/Inox/Alu	3x1	595017
5500	40/16	GFK/Inox/Alu	3x1	595517
6000	40/16	GFK/Inox/Alu	3x2	596017
6500	40/16	GFK/Inox/Alu	3x2	596517
7000	40/16	GFK/Inox/Alu	3x2	597017
8000	40/16	GFK/Inox/Alu	3x3	598017

- Composition of set: Isolated air-termination rod with GFK, concrete bases, tripod, clamp 510212, connector for the end of conductor and connection elements (screws, gbs clamps).
- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62561 standard.



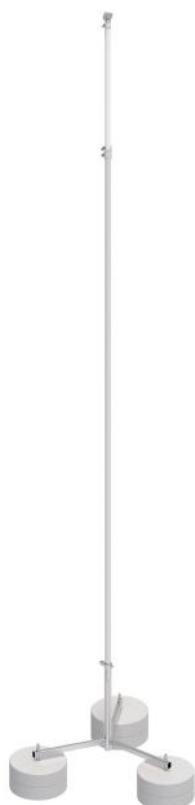
CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

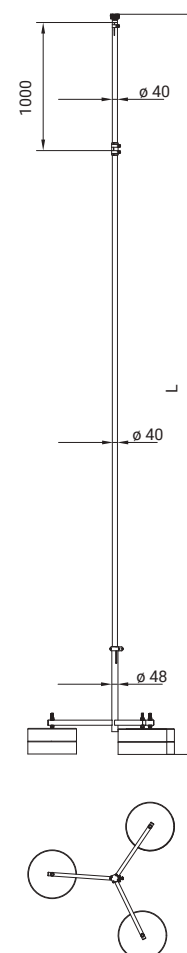
HORIZONTAL HOLDERS

Isolated air-termination rod for conductor on tripod for Aldrey rope



Height L [mm]	Diameter \varnothing [mm]	Material	Bases [szt]	Code
3000	40/16	GFK/Inox/Alu	3x1	573019
3500	40/16	GFK/Inox/Alu	3x1	573519
4000	40/16	GFK/Inox/Alu	3x1	574019
4500	40/16	GFK/Inox/Alu	3x1	574519
5000	40/16	GFK/Inox/Alu	3x1	575019
5500	40/16	GFK/Inox/Alu	3x2	575519
6000	40/16	GFK/Inox/Alu	3x2	576019
6500	40/16	GFK/Inox/Alu	3x2	576519
7000	40/16	GFK/Inox/Alu	3x3	577019

- Composition of set: Isolated air-termination rod with GFK, concrete bases, tripod, clamp 510212, connector for the end of conductor, cross-connector for Aldrey and connection elements (screws, gbs clamps).
- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62561 standard.



AIR-TERMINATION RODS

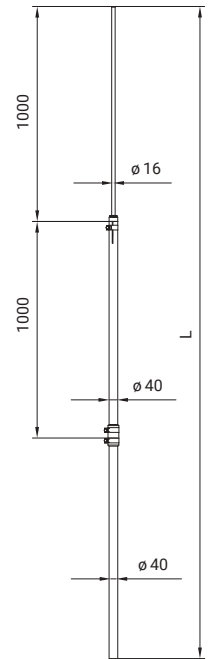
ACCESSORIES

TECHNICAL INFORMATION

GT Isolated air-termination rod for conductor



Height L [mm]	Diameter Ø [mm]	Material	Code
3000	40/16	GFK/Inox/Alu	593019
3500	40/16	GFK/Inox/Alu	593519
4000	40/16	GFK/Inox/Alu	594019
4500	40/16	GFK/Inox/Alu	594519
5000	40/16	GFK/Inox/Alu	595019
5500	40/16	GFK/Inox/Alu	595519
6000	40/16	GFK/Inox/Alu	596019
6500	40/16	GFK/Inox/Alu	596519
7000	40/16	GFK/Inox/Alu	597019
8000	40/16	GFK/Inox/Alu	598019

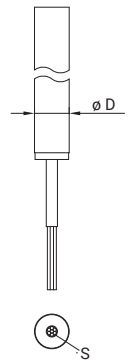


- Application: lightning protection of equipment and objects on the roof.
- Meets the requirements of the IEC 62561 standard.

GT Lightning protection conductor covered with high voltage isolation



Description	Diameter ØD [mm]	Section S [mm ²]	Isolation distance [mm]	Material	Code
conductor 75	23	35	750	Cu	590019
conductor PRO 90	27	25	900	Cu	599019

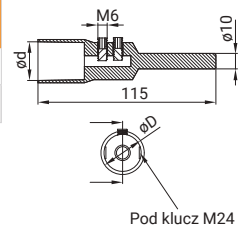


- Application: to improve the insulation gap between the discharge conductor, and the protected electrical equipment.
- Meets the requirements of the IEC 62561 standard.
- The strength of the conductor to the impact of lightning current 200 kA - class H₂.

GT Connector for the end of conductor



Description	Diameter ØD [mm]	Material	Screw	Code
for 75	23	Inox V4A	2 pcs. M6x8	590115
for PRO 90	27	Inox V4A		599115

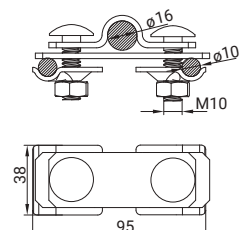


- Application: connection of high-voltage insulated wires to non-insulated wires (using connectors, for example 101413).
- Meets the requirements of the IEC 62561 standard.

GT Isolated air-termination rod adapter for connecting the conductor



Description	Diameter Ø [mm]	Material	Screw	Code
for high-voltage insulated cable	16/10	Inox	2 pcs. M10x35	599913



- Application: installation of additional two high-voltage insulated cables on insulated mast.
- Meets the requirements of the IEC 62561 standard.

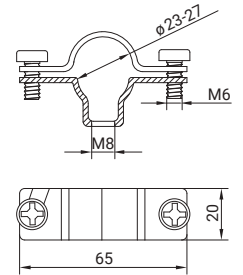
CONNECTORS AND CLAMPS
EARTHING
VERTICAL HOLDERS
HORIZONTAL HOLDERS
AIR-TERMINATION RODS
ACCESSORIES
TECHNICAL INFORMATION

GT Holder for high-voltage insulated cable



Description	Diameter Ø [mm]	Material	Screw	Code
for high-voltage insulated cable	(23-27)	StZn	2 pcs. M6x16	590212
	(23-27)	Inox		590213

- Application: installation of high-voltage insulated cable to a wall or structure.

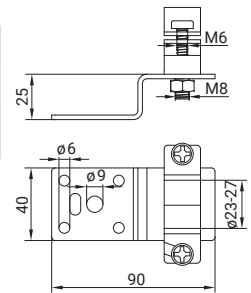


GT Holder for high-voltage insulated cable on metal base



Description	Diameter Ø [mm]	Material	Screw	Code
for high-voltage insulated cable	(23-27)	StZn	M8x25	590312
	(23-27)	Inox	2 pcs. M6x16	590313

- Application: installation of high-voltage insulated cable to metal structure.

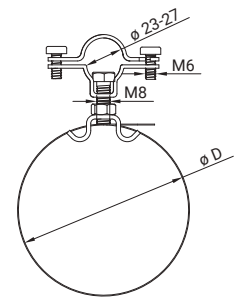


GT Clamp pipe for high-voltage insulated cable



Description	Diameter ØD [mm]	Material	Screw	Code
for high-voltage insulated cable	≤ 100	Inox/StZn	M8x25	595013
	≤ 160	Inox/StZn	2 pcs. M6x16	595113
	≤ 300	Inox/StZn	M6x16	595213

- Application: installation of high-voltage insulated cable to round profile.

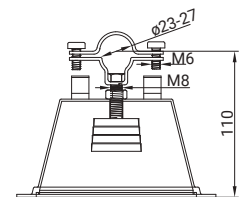


GT Plastic holder with concrete for high-voltage insulated cable



Description	Diameter Ø [mm]	Material	Screw	Code
for high-voltage insulated cable	(23-27)	PI/StZn	M8x25 2 pcs. M6x16	590419

- Application: installation of high-voltage insulated cable on flat roofs.

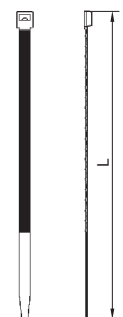


GT Clip for mounting high-voltage insulated cable on mast



Description	Length [mm]	Material	Code
for high-voltage insulated cable	380	PI	599918

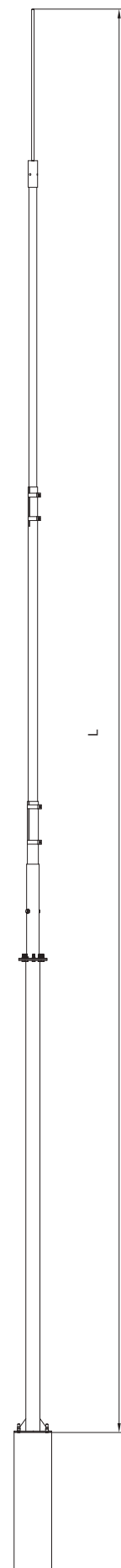
- Application: installation of high-voltage insulated cable on isolated mast.



Free-standing air-termination rods on concrete foundation 6-12m

Height L [mm]	Material	Code
6000	Inox/Alu/concrete	510618
7000	Inox/Alu/concrete	510718
8000	Inox/Alu/concrete	510818
9000	Inox/Alu/concrete	510918
10000	Inox/Alu/concrete	511018
11000	Inox/Alu/concrete	511118
12000	Inox/Alu/concrete	511218

- Composition of set: air-termination rod with concrete foundation and connection elements (screws, gbs clamps).
- Application: lightning protection of devices and objects located on the ground.
- Meets the requirements of the IEC 62305 standard.



CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION RODS

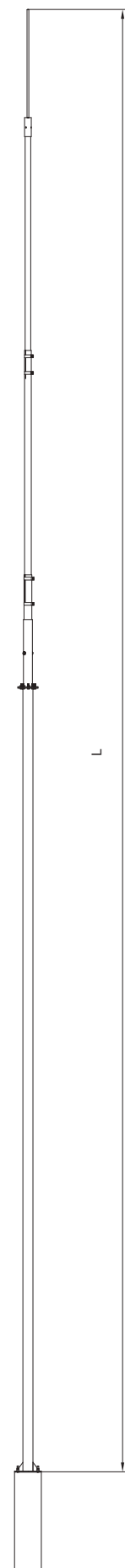
ACCESSORIES

TECHNICAL INFORMATION

 Free-standing air-termination rods on concrete foundation 13-19m

Height L [mm]	Material	Code
13000	Inox/Alu/concrete	511318
14000	Inox/Alu/concrete	511418
15000	Inox/Alu/concrete	511518
16000	Inox/Alu/concrete	511618
17000	Inox/Alu/concrete	511718
18000	Inox/Alu/concrete	511818
19000	Inox/Alu/concrete	511918

- Composition of set: air-termination rod with concrete foundation and connection elements (screws, gbs clamps).
- Application: lightning protection of devices and objects located on the ground.
- Meets the requirements of the IEC 62305 standard.

CONNECTORS AND
CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION
RODS

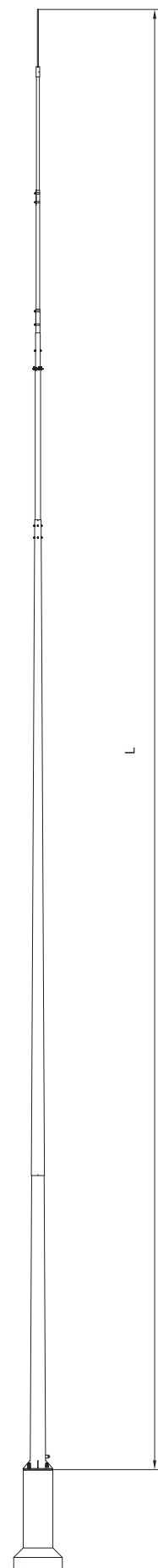
ACCESSORIES

TECHNICAL
INFORMATION

Free-standing air-termination rods on concrete foundation 20-25m

Height L [mm]	Material	Code
20000	Inox/Alu/concrete	512018
21000	Inox/Alu/concrete	512118
22000	Inox/Alu/concrete	512218
23000	Inox/Alu/concrete	512318
24000	Inox/Alu/concrete	512418
25000	Inox/Alu/concrete	512518

- Composition of set: air-termination rod with concrete foundation and connection elements (screws, gbs clamps).
- Application: lightning protection of devices and objects located on the ground.
- Meets the requirements of the IEC 62305 standard.



CONNECTORS AND CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION RODS

ACCESSORIES

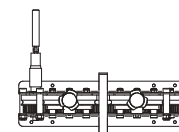
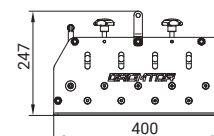
TECHNICAL INFORMATION

Straightener for lightning protection conductors



Description	Material	Code
wire Ø(8-10)mm	StGl	600011
wire Ø(8-10)mm and flat conductor ≤ 50 mm	StGl	600111

- Application: straightening lightning protection conductors

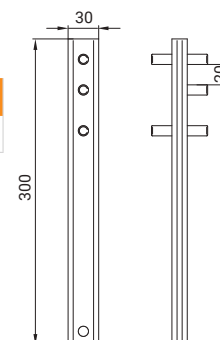
CONNECTORS AND
CLAMPS

Holder for straightening lightning protection conductors



Description	Size [mm]	Material	Code
wire Ø(8-10)mm and flat conductor ≤ 40 mm	300	StZn	600212

- Application: manual straightening of lightning protection conductors.
- Use two holders to straighten the wires.



EARTHING

VERTICAL HOLDERS

Zinc in spray



Description	Capacity [ml]	Material	Code
zinc in spray	400	Other	600319

- Application: corrosion protection of metal parts.

HORIZONTAL HOLDERS

Montage glue



Description	Capacity [ml]	Material	Code
montage glue	290	Other	600419

- Application: bonding of various materials (concrete, steel, PVC, etc., except PE, PP and teflon).

AIR-TERMINATION
RODS

Adhesive mass for roofing felt



Description	Weight [kg]	Material	Code
adhesive mass	10	Other	600519

- Application: for gluing holders on roofs covered with bitumic roofing felt.

ACCESSORIES

TECHNICAL
INFORMATION

Glue for PCV membrane



Description	Weight [kg]	Material	Code
glue for PVC membrane	5	Other	600619

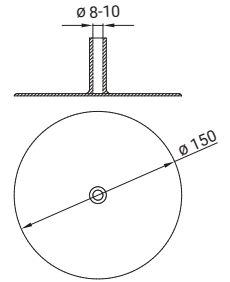
- Application: bonding of holders on membrane roofs.

Gasket for lightning protection conductors



Description	Size Ø [mm]	Material	Code
wire Ø(8-10)mm, membrane PVC	150	Other	600719
wire Ø(8-10)mm, membrane TPO	150	Other	601719

- Application: sealing of culverts on roof.

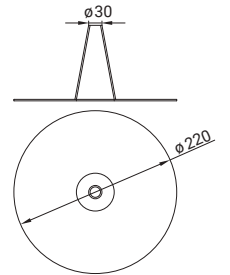


Gasket for flat conductor



Description	Size Ø [mm]	Material	Code
flat conductor ≤ 30 mm	220	Other	600819

- Application: sealing of culverts on roof.

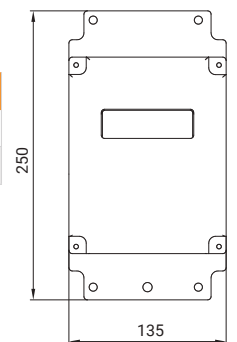


Counter of atmospheric discharges



Description	Weight [kg]	Material	Code
PLW-03a	0,5	Other	600919
PLW-02b	0,2	Other	601019

- Application: registration of atmospheric discharges in lightning protection installation of protected object.



Technical vaseline



Description	Weight [kg]	Material	Code
technical vaseline	0,5	Other	601119

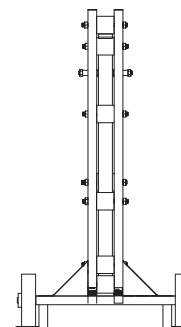
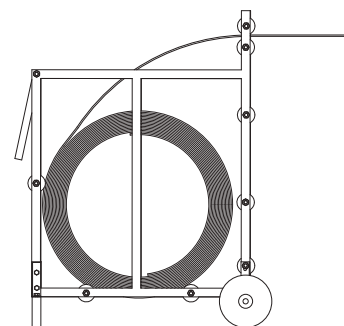
- Application: protection of screw connections.

GT Uncoiler for flat conductor up to 50 mm



Description	Material	Code
portable uncoiler	Inox	602013

- Application: auxiliary device for working with a rectifier (number 600011) for flat conductor with a width of up to 50 mm.



CONNECTORS AND
CLAMPS

EARTHING

VERTICAL HOLDERS

HORIZONTAL HOLDERS

AIR-TERMINATION
RODS

ACCESSORIES

TECHNICAL
INFORMATION

1. Introduction

Storms are an unbridled element of nature, amazing, fascinating, inspiring humility and horror. Despite many studies and inventions, it is impossible to completely eliminate the effects of the destructive force of lightning. Still, these phenomena contain many secrets and pose a great challenge for scientists. At the level of today's knowledge, regulations on the design and execution of lightning protection systems have been developed, which, according to statistical studies, provide a very high level of lightning protection and legally protect investors and users of facilities in claims for damages.

Table 1. Reliability of lightning protection.

Category of thunder protection	Maximum lightning peak value	Reliability of protection by PUM
	[kA]	[%]
I	200	98
II	150	95
III	100	90
IV	100	80

2. Lightning phenomena

Source: *Lightning Protection and earlier methods of protection against atmospheric discharges, dr. Stefan Gierlotka.*

Storms arise as a result of the movement of air masses of different humidity and temperature. As a result of these movements, strong electric field intensities are created, which naturally lead to the equalization of potentials by lightning discharges. Lightning chooses the path with the least resistance. The target of a lightning discharge can be a tall building, surrounded by a strong electric field. It has been observed that lightning often chooses a lower but wellgrounded object. The structure, geological composition and soil moisture are important. Lightning strikes are more frequent in watercourses, for example, rivers, streams. According to observations, lightning strikes deciduous trees such as poplars, willows, sycamores, mulberries and ash trees, because they contain a lot of starch. Trees saturated with nutrients such as walnut, birch, fir, spruce have greater resistance to lightning. It was noticed that lightning strikes brick towers more often than stone. It was found that the most resistant to lightning discharges are roofs made of rock slate, which is non-absorbent and the mica contained in it causes its high electrical resistivity. The crosses on the sacred buildings, the tops of which are a natural spark accumulating electric charges, were protected by the placement of a rooster scattering an electrostatic field. In Muslim countries, crescents were installed on the tops of temples, which also performed this function.

3. History-calendar

Source: https://www.wikiwand.com/pl/Urządzenie_piorunochronne

- 1746 – Benjamin Franklin inventor of lightning protection in America in Philadelphia
- 1750 – Václav Prokop Diviš inventor of lightning protection in Europe
- 1760 – William Watson installs a lightning rod in London
- 1783 – installation of the first lightning protection in Poland in Rawicz on the town hall building
- 1784 – Father Józef Herman Osieński published the first textbook of Electrical Engineering a way to insure life and property against lightning

4. Legal basis

The implementation of thunderstorm investments should comply with the Polish standards set out in the annex to the regulation on the technical conditions to which buildings and their location should correspond. Other non-mandatory standards and regulations may be applied on the basis of technical knowledge, as long as they do not conflict with mandatory rules. Industry guidelines and standards are also important.

Scope of standards for lightning protection:

- PN-EN 62305-1:2011 Lightning protection - **Part 1:** General requirements.
- PN-EN 62305-2:2012 Lightning protection - **Part 2:** Risk management.
- PN-EN 62305-3:2011 Lightning protection - **Part 3:** Physical damage to objects and danger to life.
- PN-EN 62305-4:2011 Lightning protection - **Part 4:** Electrical and electronic equipment in facilities.
- PN-HD 60364-5-54:2011 Low voltage electrical installations.
Part 5-54: Selection and installation of electrical equipment – Grounding systems and protective wires.
- PN-EN 50522:2011 Grounding of AC power plants with a voltage higher than 1 kV.

Current standards for LPS components:

- EN 62561-1:2012 (formerly PN-EN 50164-1) Lightning protection system components (LPSC)
Part 1: Connection element requirements - English version.
- EN 62561-2:2012 (formerly PN-EN 50164-2) Lightning protection system components (LPSC)
Part 2: Wire and grounding rod requirements-English version.
- EN 62561-3:2012 (formerly PN-EN 50164-3) Lightning protection system components (LPSC)
Part 3: Insulation spark plugs requirements - English version.
- EN 62561-4:2011 (formerly PN-EN 50164-4) Lightning protection system components (LPSC)
Part 4: Holder requirements - English version.
- EN 62561-5:2011 (formerly PN-EN 50164-5) Lightning protection system components (LPSC)
Część 5: Requirements for ground inspection wells and their seals – English version.
- EN 62561-6:2011 (formerly PN-EN 50164-6) Lightning protection system components (LPSC)
Part 6: Lightning strike counters (LSC) requirements - English version.
- EN 62561-7:2012 (formerly PN-EN 50164-7) Lightning protection system components (LPSC)
Part 7: Requirements for substances that improve the quality of grounding - English version.
- IEC 62561-8 2018 Part 8: Requirements for components of insulated lightning protection

5. Qualification of construction objects to the class of lightning protection

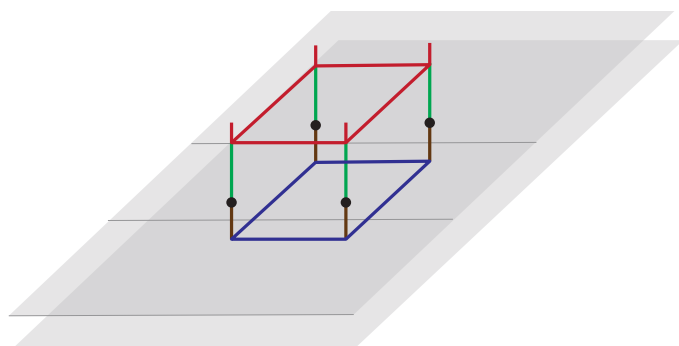
The only valid way to determine the class of lightning protection is to perform a risk analysis according to PN-EN 62305-2. This method consists in performing iterative calculations using increasingly higher reduction measures (including thunder protection classes) until the risk is calculated below the tolerated risk. Examples of the qualification of construction works to the lightning protection class after the risk analysis calculations are given below.

Table 2. Examples of object Lightning Protection Equipment Qualification to LPS classes.

LPS I Objects with explosive zones Air traffic control Intensive care facilities Factories and warehouses of explosives	LPS III/ IV Single and multi-family buildings, commercial Administrative buildings Garages Warehouses Office facilities Gastronomic facilities Exhibition halls Markets Closed sports facilities Swimming pools Cinemas, theatres, schools, kindergartens Museums and historical and cultural objects Production facilities
LPS II Buildings higher than 30 m Large hotels Care homes and nursing homes Hostels and accommodation Churches with a tower over 20 m Energy facilities Telecommunications facilities IT facilities Technical supervision centres	

6. Typical installation model

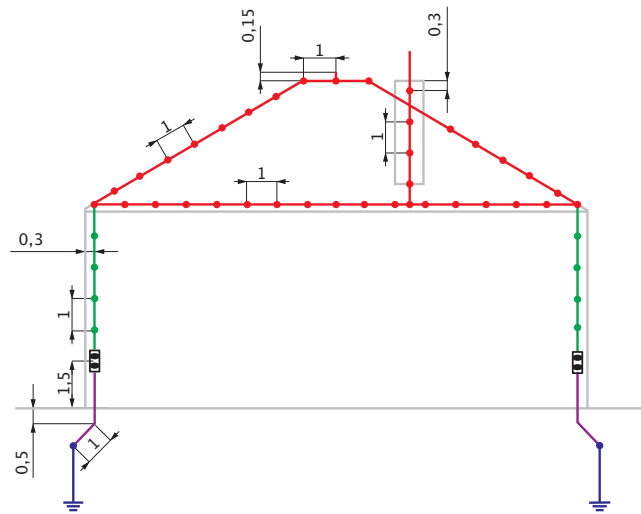
Horizontal reels (colour red) are designed to receive lightning discharge. Conductors (colour green) conduct lightning currents along the walls of the object in the direction of grounding. Control connectors (colour black) allow disconnection of the installation for measuring purposes. Ground wires (colour brown) connect the control connectors to the ground. By grounding (colour navy blue) lightning currents are dispersed in the ground.



Picture 1. Typical installation model.

7. Installation dimensions

The following are typical installation dimensions for a single-family residential building. Horizontal leads and discharge wires made of wire $\Phi 8$, grounding wires from the FeZn 25x4 box, Class A grounding rods $\Phi 20$.



Picture 2. Installation dimensions for a single-family residential building

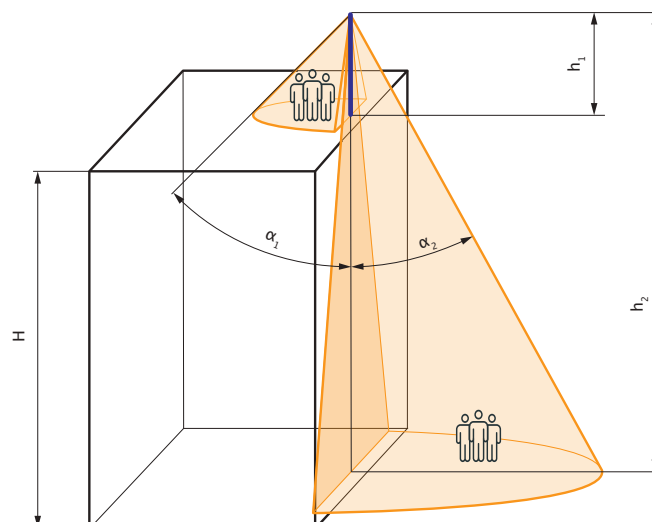
8. Methods for dimensioning protection zones

The rolling ball method is universal for use in all cases where it is possible to rely on lightning protection devices and the ground during rolling. Mesh method is suitable for flat roof surfaces.

Table 3. Parameters in mesh and rolling ball methods.

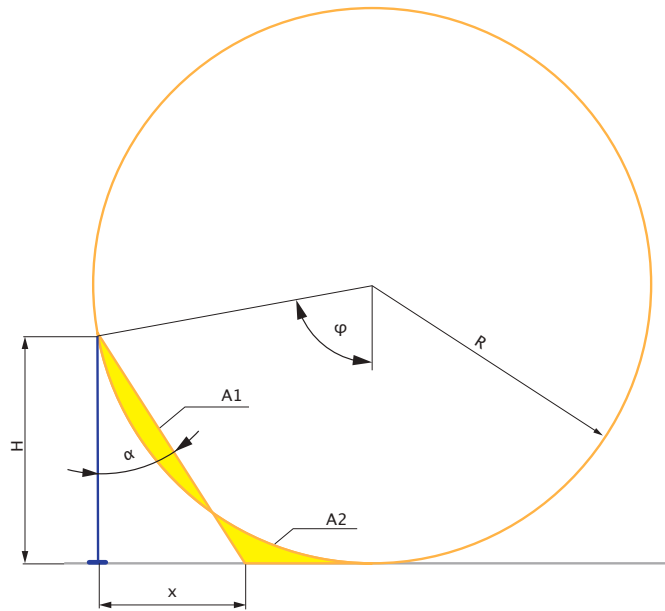
Lightning protection class LPS	Methods for dimensioning	
	Mesh	The rolling ball
	Mesh size [m]	Ball radius [m]
I	5 x 5	20
II	10 x 10	30
III	15 x 15	45
IV	20 x 20	60

The protective angle method is dedicated to simple objects, with a restriction on the height of the lightning protection from the reference plane. The reference plane is at the level of the horizontal slope on the building or ground, allowing the base of the cone to be supported, forming a protective zone around its axis.



Picture 3. Protective steffs in the method of protective angle for different reference planes .

The protective angle is calculated on the geometric assumptions of the mutual relation of the zones by the method of the rolling ball and the protective angle equal to the volumes underestimated and overestimated at a given height of the lightning protection device and a given class of LPS.



Picture 4. The relationship between the rolling ball method and the protective angle.

$$A_1 = A_2$$

$$\alpha = \arctan\left(\frac{x}{h}\right)$$

$$\varphi = \arccos\left(1 - \frac{h}{R}\right)$$

$$\frac{x}{h} = \frac{R}{h} \sin\varphi - \left(\frac{R}{h}\right)^2 (\varphi - \sin\varphi)$$

- A₁ – area overestimated in the protective angle method, underestimated in the rolling ball method
- A₂ – area undervalued in the protective angle method, overvalued in the rolling ball method
- α – protective angle
- R – radius of the ball
- H – reference plane height
- x – radius of base of cone defined by protective angle α

Table 4. GROMTOR CALC protective zone dimensioning calculator.

DATE	
Lightning protection class LPS III	III
Ball radius [m]	45
Height of lightning protection device [m]	15,0
Protective angle [°]	54,0
Height of protected object [m]	2,0
X-axis mast distance [m]	15,0
Y-axis mast distance [m]	12,0
DIMENSIONING OF PROTECTIVE ZONES IN 1 MAST SYSTEM	
Radius of protective zone - ROLLING BALL [m]	20,3
Radius of protective zone - PROTECTIVE angle [m]	17,9

ROLLING BALL PENETRATION FROM TOP IN A 4-MAST SYSTEM	
Depth of penetration	1,0
Height of protection zone [m]	14,0
ROLLING BALL SIDE PENETRATION IN A 4-MAST SYSTEM	
Max depth of penetration of the ball in the X-axis	0,8
Radius of protection zone -protective angle [m]	0,5
REDUCTION OF SHADOW AREA AT PV CELLS	
Mast diameter [mm]	40
Mast distance to PV module [m]	4,3

Table 5. Parameters in the protective angle method for selected heights of the reference plane.

H [m]	CLASS LPS I		CLASS LPS II		CLASS LPS III		CLASS LPS IV	
	Protective angle	Protective radius	Protective angle	Protective radius	Protective angle	Protective radius	Protective angle	Protective radius
	α [°]	[m]	α [°]	[m]	α [°]	[m]	α [°]	[m]
1	71	2,90	74	3,49	77	4,33	79	5,14
2	71	5,81	74	6,97	77	8,66	79	10,29
3	66	6,74	71	8,71	74	10,46	76	12,03
4	62	7,52	68	9,90	72	12,31	74	13,95
5	59	8,32	65	10,72	70	13,74	72	15,39
6	56	8,90	62	11,28	68	14,85	71	17,43
7	53	9,29	60	12,12	66	15,72	69	18,24
8	50	9,53	58	12,80	64	16,40	68	19,80
9	48	10,00	56	13,34	62	16,93	66	20,21
10	45	10,00	54	13,76	61	18,04	65	21,45
11	43	10,26	52	14,08	59	18,31	64	22,55
12	40	10,07	50	14,30	58	19,20	62	22,57
13	38	10,16	49	14,95	57	20,02	61	23,45
14	36	10,17	47	15,01	55	19,99	60	24,25
15	34	10,12	45	15,00	54	20,65	59	24,96
16	32	10,00	44	15,45	53	21,23	58	25,61
17	30	9,81	42	15,31	51	20,99	57	26,18
18	27	9,17	40	15,10	50	21,45	56	26,69
19	25	8,86	39	15,39	49	21,86	55	27,13
20	23	8,49	37	15,07	48	22,21	54	27,53
21			36	15,26	47	22,52	53	27,87
22			35	15,40	46	22,78	52	28,16
23			36	16,71	47	24,66	53	30,52
24			32	15,00	44	23,18	50	28,60
25			30	14,43	43	23,31	49	28,76
26			29	14,41	41	22,60	49	29,91
27			27	13,76	40	22,66	48	29,99
28			26	13,66	39	22,67	47	30,03
29			25	13,52	38	22,66	46	30,03
30			23	12,73	37	22,61	45	30,00
31					36	22,52	44	29,94
32					35	22,41	44	30,90
33					35	23,11	43	30,77
34					34	22,93	42	30,61
35					33	22,73	41	30,43
36					32	22,50	40	30,21
37					31	22,23	40	31,50
38					30	21,94	39	30,77
39					29	21,62	38	30,47
40					28	21,27	37	30,14
41					27	20,89	37	30,90
42					26	20,48	36	30,51
43					25	20,05	35	30,11
44					24	19,59	35	30,81
45					23	19,10	34	30,35
46							33	29,87
47							32	29,37
48							32	29,99
49							31	29,44
50							30	28,87
51							30	29,44
52							29	28,82
53							28	28,18
54							27	27,51
55							27	28,02
56							26	27,31
57							25	26,58
58							25	27,05
59							24	26,27
60							23	25,47

9. Isolation gaps

In the case of lightning current flow through a lightning rod located at a distance below the required isolation distance from the protected object, an increase in the electric field strength and a spark jump may occur. Therefore, maintaining the necessary separation intervals can prevent a post-heat explosion.

The method of calculating the insulation gap is to count the individual sections from the lightning element protecting the object (zone), through the mesh nodes of the lightning installation to the nearest wire returning to the ground. The counted sections are multiplied by coefficients depending on the class of LPS, the insulating material between the lead and the protected object and the number of discharge wires.

$$s = \frac{k_i}{k_m} \times (k_{c1} \times I_1 + k_{c2} \times I_2 + \dots + k_{cn} \times I_n)$$

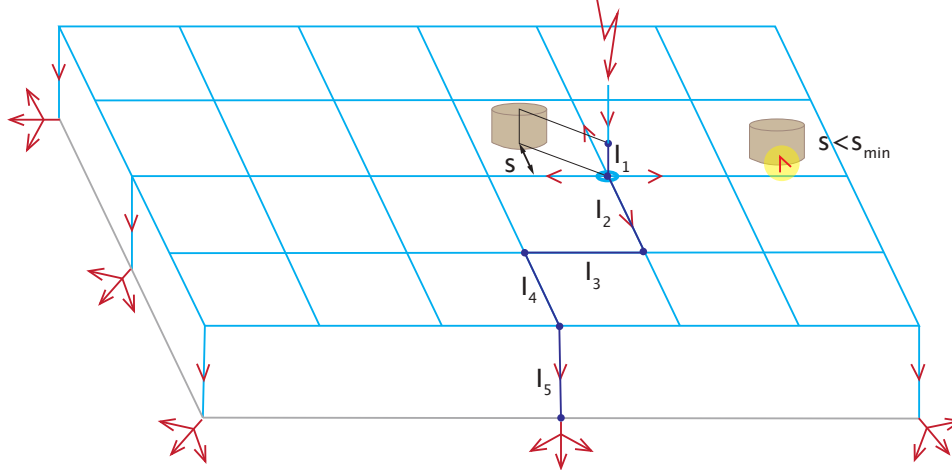
s – minimum separation distance to prevent spark jumps

li – the length of the *i*-th section on the road from the lightning element protecting the object to the nearest rod

ki – LPS class dependent factor (0.1 -LPS I; 0.075-LPS II; 0.05-LPS III; 0.05-LPS IV)

km – coefficient depending on insulation material (1-Air; 0.5-concrete/brick)

kc – coefficient depending on the number of discharge lines



Picture 5. Example of lightning protection system sections for insulation spacing calculation.

Table 6. GROMTOR CALC insulation spacing calculator.

Episode number	LIGHTNING PROTECTION CLASS LPL				III
	Object 1	Object 2	Object 3	Object 4	Object 5
	Length [m]				
1	4,0	4,0	4,0	4,0	4,0
2	25,0	10,0	10,0	10,0	10,0
3	6,0	10,0	10,0	10,0	10,0
4	0,0	6,0	10,0	10,0	10,0
5	0,0	0,0	6,0	10,0	10,0
6	0,0	0,0	0,0	6,0	10,0
7	0,0	0,0	0,0	0,0	6,0
8	0,0	0,0	0,0	0,0	0,0
9	0,0	0,0	0,0	0,0	0,0
10	0,0	0,0	0,0	0,0	0,0
<i>k_i</i>	0,04	0,04	0,04	0,04	0,04
<i>k_m</i>	1	1	1	1	1
<i>N₁</i>	8	5	5	5	5
<i>N₂</i>	2	2	2	2	2
<i>s_{min}</i> [m]	0,72	0,49	0,54	0,58	0,60

10. Compatibility of materials

In lightning protection systems are used: hot-dip galvanized steel, stainless steel, copper and aluminium. Joining together elements from different metals can cause corrosion, which is the inevitable process of returning to the state in which they occur in ores. This may result in interruptions in the continuity of the lightning protection system and its inefficiency.

The greater the potential difference of the electrochemical elements connected to each other, the faster the corrosion process.

Table 7. A comparative table of possible metal compounds in a normal industrial atmosphere.

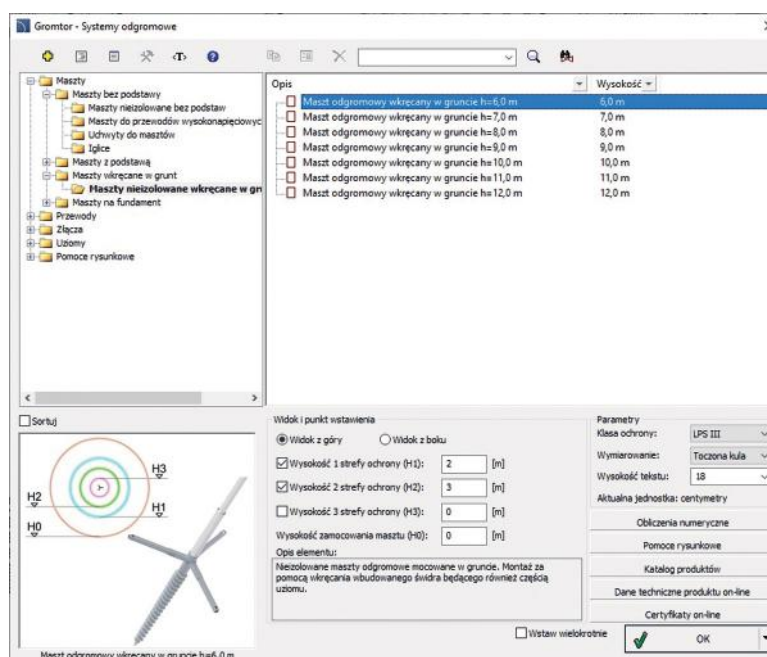
Type of metal		Al	Pb	Cu	Zn	Inox	FeZn
Aluminum	Al	+	+	-	+	+	+
Lead	Pb	+	+	+	+	+	+
Copper	Cu	-	+	+	-	+	-
Zinc	Zn	+	+	-	+	+	+
Stainless steel	Inox	+	+	+	+	+	+
Hot-dip galvanized	FeZn	+	+	-	+	+	+

+	- metal compounds possible
-	- metal compounds prohibited

11. Computer-aided design of lightning protection systems – GROMTOR CAD

An application that, as a few, has freed itself from links with the manufacturer's product databases. This universal tool for designers provides great transparency and simplicity in the selection of elements. It makes very intuitive use of standard CAD program techniques and commands. Calculation modules support in determining the necessary parameters. Graphical programming tools increase the efficiency of your projects. Automatically generated material list with the option to export to a file in Excel, where you can make the final selection of products. The program contains a drawing library of typical elements and their associations with the Thunderbolt installation.

Image 1. Window for selecting elements in GROMTOR CAD.



GROMTOR provides support to its customers through the implementation of the GROMTOR CAD program design proposals and formal-legal and technical projects for external lightning protection systems.