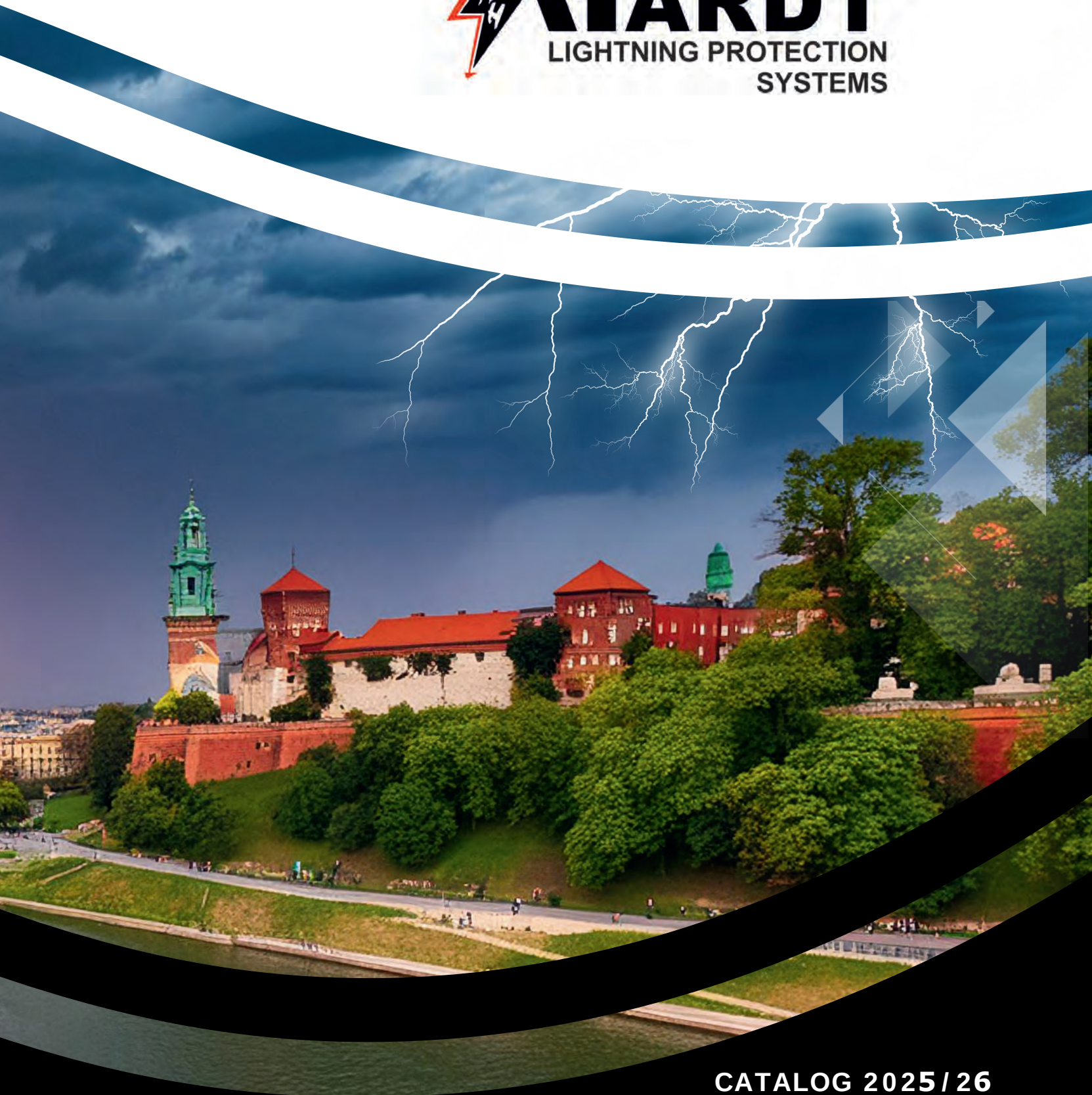




CATALOG 2025/26

Effective and reliable lightning protection!

Dear customers!

We are the oldest and most experienced manufacturer of lightning protection systems in Poland. Our systems meet the highest required quality, aesthetic and technical - confirmed by tests in certified research units.

The Management System we have implemented

ISO 9001:2015

ISO 14001:2015

in its broadest scope includes:

DESIGN, PRODUCTION, SALE AND INSTALATION OF COMPONENTS OF THE LIGHTNING PROTECTION STSTEM, EARTHING, MASTS. DESIGN OF PROFESSIONAL LIGHTNING PROTECTION SYSTEMS.

As the only Polish company, we have our own certified high-voltage cable, which, in accordance with the SEP-BBJ certificate, withstands a current surge of 200kA and can be used in lightning protection class I, as well as masts, fasteners and groundings.

AH Hardt installations protect many prestigious historic, public, commercial, office buildings, etc. We support customers at every stage of cooperation, from installation design, product selection, technical assistance to sales and assembly.

Safety and quality at the highest level!

Owners of

AH Hardt sp.j.



SEP - BBJ

ISO 9001:2015

BUREAU VERITAS
Certification



www.en.ah.com.pl

Examples of projects implemented using AH Hardt lightning protection systems



Office buildings

CU Office – Wrocław
Tischnera Office – Krakow
Metropolitan in Warsaw
WARSAW HUB Warsaw
Mennica Legacy Tower Warsaw
Unity Tower – Krakow
Eternum Gdańsk



Commercial buildings

Galeria Młociny in Warsaw
IKEA Targówek
Galeria Serenada in Krakow
LIDL Kałuszyn
IKEA in Lublin
Bielany Wrocławskie
Leroy Merlin in Bełchatow



Industrial buildings

Orlen Płock – engine room and boiler room
Mondi Świecie – tanks
Azoty Puławy – industrial and warehouse buildings
Opole Power Plant – blocks 5 and 6
PGE GIEK S.A. Bełchatów – modernization of warehouse buildings
NITROERG S.A. – munitions storage in Krupski Młyn
The sarcophagus of the Chernobyl nuclear power plant



Public facilities

EXPO facilities in Kazakhstan
Tauron Arena in Krakow
Białoleka Hospital – Warsaw
Prokocim Hospital in Krakow
Academy buildings
National Stadium in Warsaw
AGH University of Science and Technology in Krakow



Historic buildings

Wawel Royal Castle in Krakow
Churches:
Corpus Christi, St. Mary's in Krakow
The Faustine and Norbertine Monasteries, the Benedictine Abbey in Tyniec
Wieliczka Salt Mine
Copper-Roof Palace in Warsaw
Przegorzały Castle in Krakow



Residential buildings

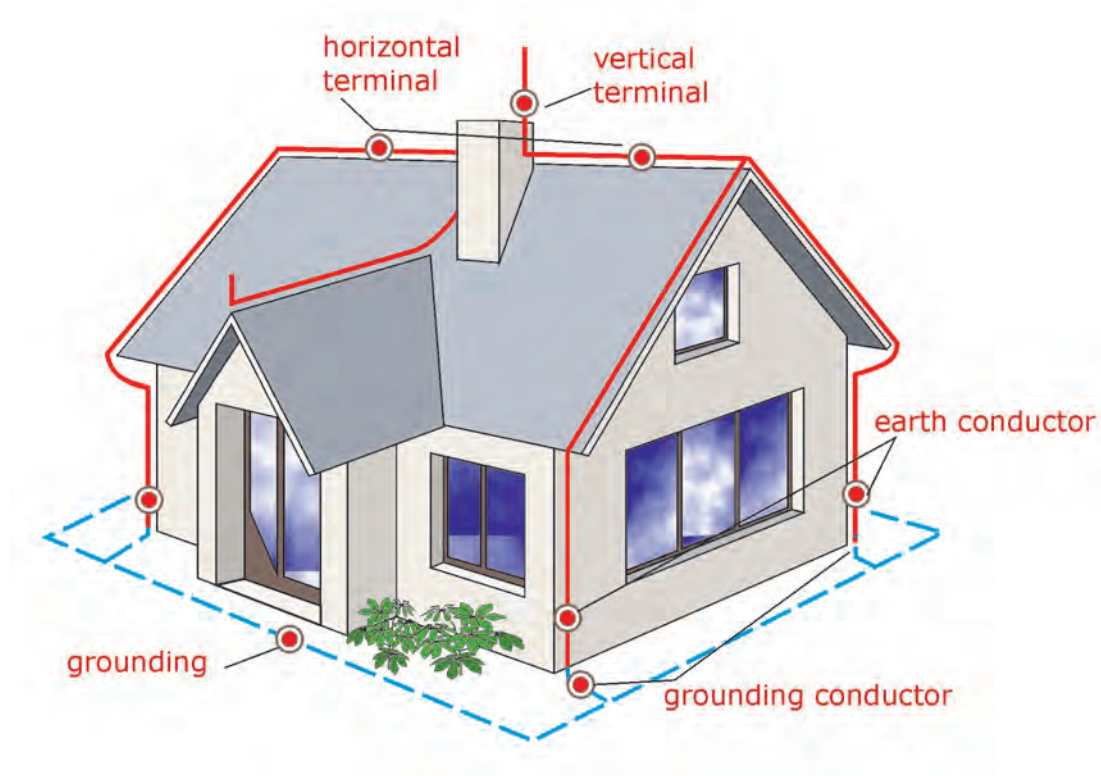
Nowy Nikiszowiec in Katowice
Mangalia Mokotów housing estate in Warsaw
Wilanów housing estate in Warsaw
Atal Czyżyny in Krakow

Lightning protection

An external lightning protection system (LPS) aims to protect the building, including living beings and the equipment therein, against the effects of a direct lightning strike. The task of LPS is to capture the atmospheric discharge directed at the building using a system of terminals, and then discharge the lightning current securely through the discharge wires and disperse it into the ground using a grounding system.

The building's lightning protection system (LPS) consists of a ground part in the form of:

- **terminals** – intended for absorbing direct lightning discharge
- **discharge wires** – connecting the ground part to the ground wire
- **ground wires** – connecting the discharge wire to ground
- **grounding** – metal parts or their assemblies located in the ground or in the building's foundations and used to disperse the lightning discharge into the ground.



Lightning protection class characteristic

lightning protection class	horizontal terminal grid	clearance between discharge wires	sphere radius R
I	5x5m	every 10m	20m
II	10x10m	every 10m	30m
III	15x15m	every 15m	45m
IV	20x20m	every 20m	60m

The lightning protection class is determined by performing a risk analysis in accordance with PN-EN 62305-2.

Designing

Our company assists in the design of professional lightning protection systems based on our products.

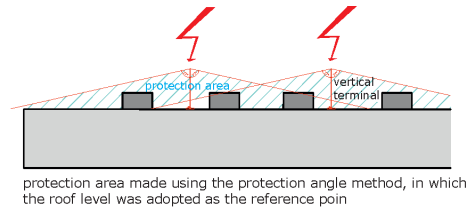
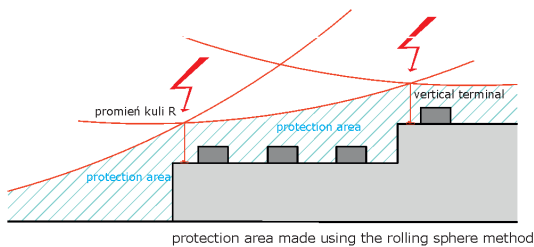
A request for quote should contain the following information:

- the building's lightning protection class
- roof projection or sketch of the building's body with basic dimensions
- dimensions of the protected devices and their location on the roof
- information about the material the roof is made of
- company name, address and contact details

If possible, please send plans in dwg files.

Methods for determining the position of terminals:

- rolling sphere method – suitable in any case
- protection angle method – suitable for buildings with simple shapes
- stray current method – suitable for flat surfaces



Insulation clearance – the distance that must be ensured so that there is no spark jump between the earthing and the protected device

$$s = k_i \frac{k_c}{k_m} I$$

where:

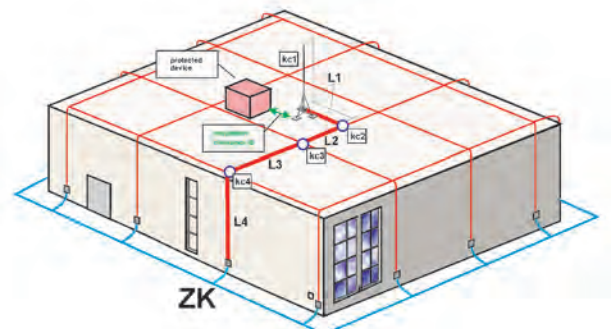
s – separation clearance in m

k_i – factor depending on the LPS class

k_m – factor depending on the electrical insulation material

k_c – factor depending on the lightning current distribution

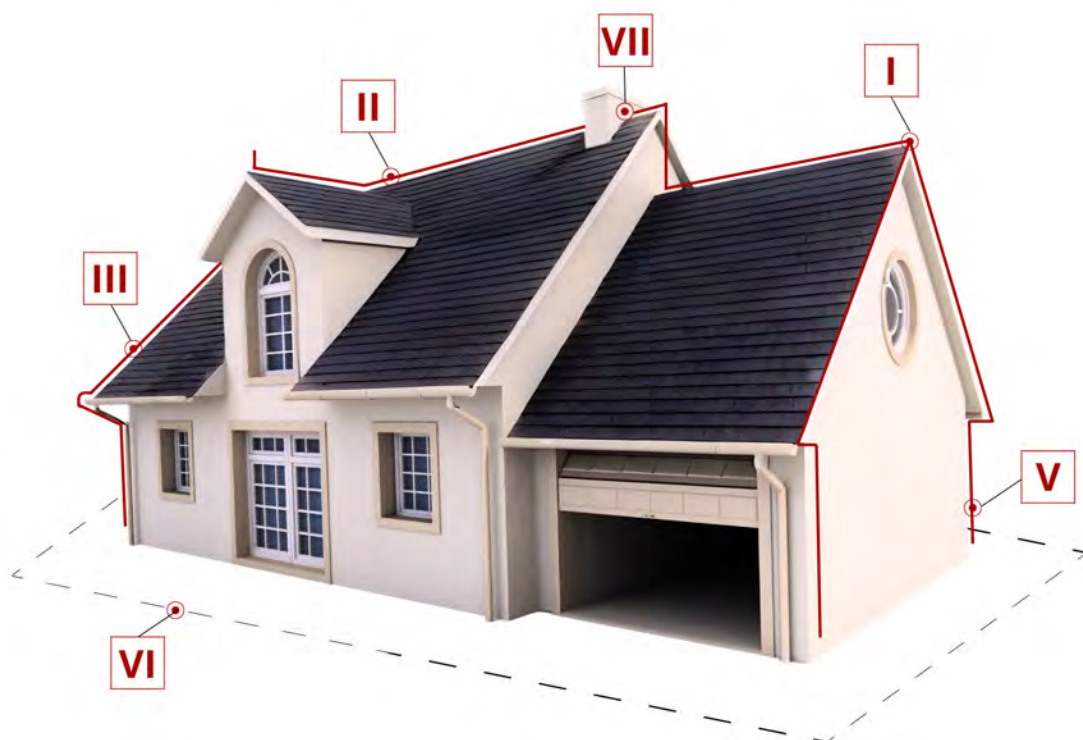
I – length in meters, measured along the LPS conductors from the point where the separation clearance is considered, to the point of the nearest equipotential bonding, or to the earthing



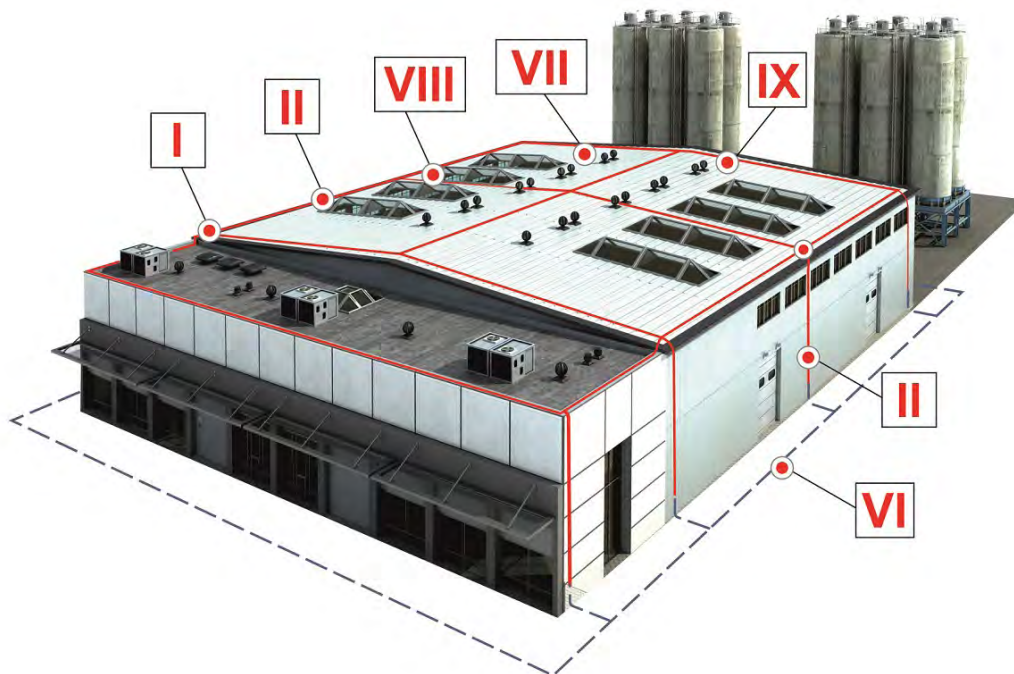
Material connections

	steel	aluminum	copper	stainless steel
steel	+	+	-	+
aluminum	+	+	-	+
copper	-	-	+	+
stainless steel	+	+	+	+

RESIDENTIAL BUILDING



INDUSTRIAL BUILDING



EFFECTIVE AND RELIABLE LIGHTNING PROTECTION



Selection of certified products



Lightning protection system design



Professional advice



Free quotes



Installation of lightning protection system

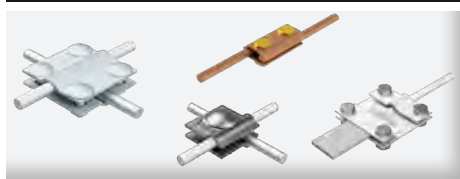
Together we will take care of your safety!

CONTACT

biuro@ah.com.pl



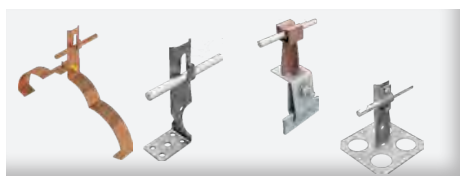
TABLE OF CONTENTS



CONNECTORS

p. 10-13

group I



LIGHTNING HOLDERS

p. 14-38

group II



LIGHTNING CONDUCTORS

p. 39

group III



STRAIGHTENERS

p. 40-41

group IV



LIGHTNING PROTECTION PIPES

p. 42-43

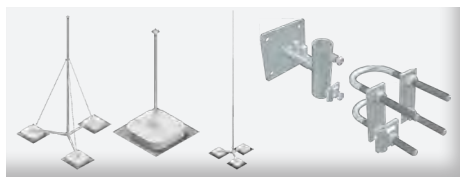
group V



EARTHINGS AND EARTHING ELEMENTS

p. 44-51

group VI



AIR TERMINATION SYSTEM

p. 52-79

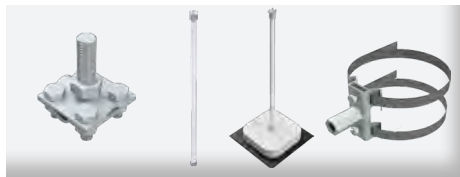
group VII



HIGH VOLTAGE CABLE AND ACCESSORIES

p. 80-83

group VIII



INSULATED RODS AND BRACKETS

p. 84-86

group IX



OTHER PRODUCTS

p. 87-90

group X



CONNECTORS

they are used for cross connections
grounding wire and steel tape in the layout:

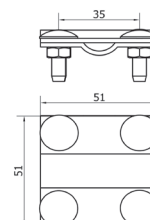
- parallel
- cross
- T

CROSS CONNECTORS

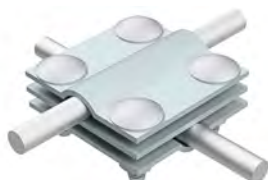
4-hole cross connector, 2-plate



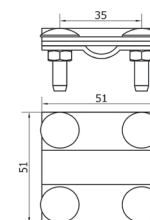
catalog No.	material	cable range	bolts
AH01031	electro galvanized steel	Ø 8mm tape up to 30 mm	4xM6x20
AH01030G	hot-dip galvanized steel		
AH01032	Cu/Mo		
AH01033	INOX		
AH01034	Al/INOX		



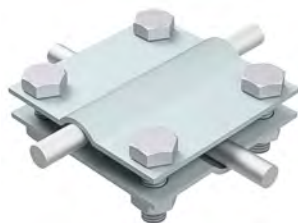
4-hole cross connector, 3-plate



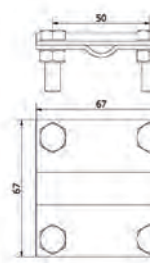
catalog No.	material	cable range	bolts
AH01041	electro galvanized steel	Ø 8mm tape up to 30 mm	4xM6x25
AH01040G	hot-dip galvanized steel		
AH01042	Cu/Mo		
AH01043	INOX		
AH01044	Al/INOX		



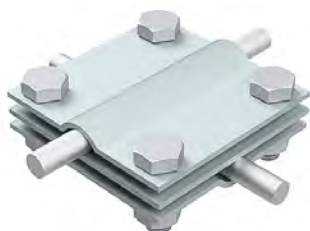
4-hole cross connector, 2-plate



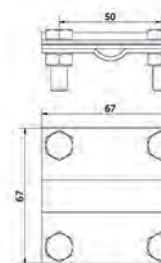
catalog No.	material	cable range	bolts
AH01051	electro galvanized steel	Ø 8-10mm tape up to 40 mm	4xM8x25
AH01050G	hot-dip galvanized steel		
AH01052	Cu/Mo		
AH01053	INOX		
AH01054	Al/INOX		



4-hole cross connector, 3-plate



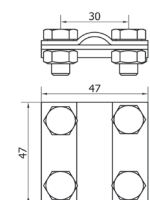
catalog No.	material	cable range	bolts
AH01061	electro galvanized steel	Ø 8-10mm tape up to 40 mm	4xM8x30
AH01060G	hot-dip galvanized steel		
AH01062	Cu/Mo		
AH01063	INOX		
AH01064	Al/INOX		



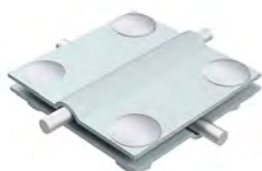
4-hole cross connector, 2-plate



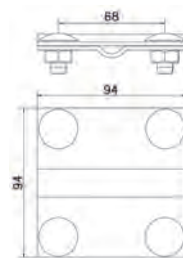
catalog No.	material	cable range	bolts
AH01101	electro galvanized steel	Ø 8mm	4xM8x20
AH01100G	hot-dip galvanized steel		
AH01102	Cu/Mo		
AH01103	INOX		
AH01104	Al/INOX		



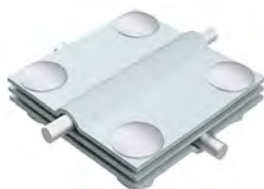
4-hole cross connector, 2-plate



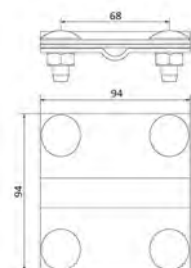
catalog No.	material	cable range	bolts
AH01171	electro galvanized steel	Ø 8-10mm tape up to 50 mm	4xM10x25
01170G	hot-dip galvanized steel		
01172	Cu/Mo		
01173	INOX		
01174	Al/INOX		



4-hole cross connector, 3-plate



catalog No.	material	cable range	bolts
AH01181	electro galvanized steel	Ø 8-10mm tape up to 50 mm	4xM10x30
AH01180G	hot-dip galvanized steel		
AH01182	Cu/Mo		
AH01183	INOX		
AH01184	Al/INOX		

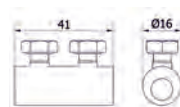


CONNECTION SLEEVES

2-hole through connector



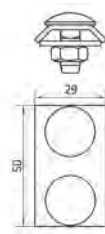
catalog No.	material	cable range	bolts
AH02011	electro galvanized steel	Ø 8mm	2xM8x10
AH02012	Cu/Mo		
AH02013	INOX		



2-hole through connector, single



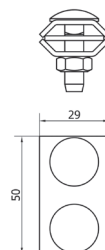
catalog No.	material	cable range	bolts
AH02021	electro galvanized steel	Ø 8mm	2xM8x20
AH02020G	hot-dip galvanized steel		
AH02022	Cu/Mo		
AH02023	INOX		
AH02024	Al/INOX		



2-hole through connector, double



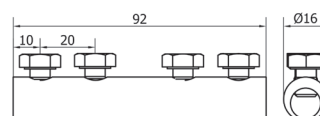
catalog No.	material	cable range	bolts
AH02031	electro galvanized steel	Ø 8mm	2xM8x30
AH02030G	hot-dip galvanized steel		
AH02032	Cu/Mo		
AH02033	INOX		
AH02034	Al/INOX		



4-hole through connector



catalog No.	material	cable range	bolts
AH02041	electro galvanized steel	Ø 8mm	4xM8x10
AH02042	Cu/Mo		
AH02043	INOX		

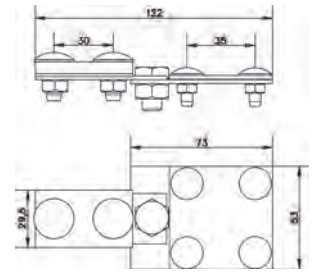


TEST CONNECTORS

4-hole test connector; wire-tape



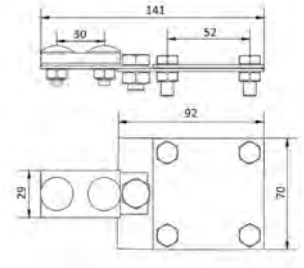
catalog No.	material	cable range	bolts
AH03021	electro galvanized steel	Ø 8mm tape up to 30mm	4xM6x16 1xM10x16 2xM8x20
AH03020G	hot-dip galvanized steel		
AH03022	Cu/Mo		
AH03023	INOX		
AH03024	Al/INOX		



4-hole test connector; wire-tape



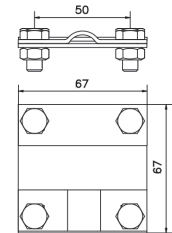
catalog No.	material	cable range	bolts
AH03031	electro galvanized steel	Ø 8mm tape up to 40mm	4xM8x20 1xM10x16 2xM8x20
AH03030G	hot-dip galvanized steel		
AH03032	Cu/Mo		
AH03033	INOX		
AH03034	Al/INOX		



4-hole test connector; wire-tape



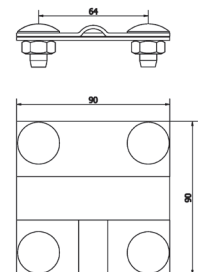
catalog No.	material	cable range	bolts
AH03051	electro galvanized steel	Ø 8-10mm tape up to 40mm	4xM8x20
AH03050G	hot-dip galvanized steel		
AH03052	Cu/Mo		
AH03053	INOX		
AH03054	Al/INOX		



4-hole test connector; wire-tape

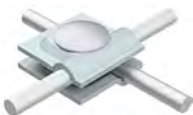


catalog No.	material	cable range	bolts
AH03091	electro galvanized steel	Ø 8-10mm tape up to 50mm	4xM10x20
AH03090G	hot-dip galvanized steel		
AH03092	Cu/Mo		
AH03093	INOX		
AH03094	Al/INOX		

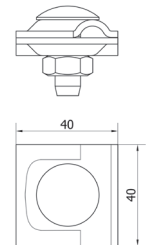


UNIVERSAL CLAMPS

Universal DIN connector; double



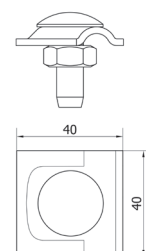
catalog No.	material	cable range	bolts
AH16011	electro galvanized steel	Ø 8-10mm	1xM10x30
AH16010G	hot-dip galvanized steel		
AH16012	Cu/Mo		
AH16013	INOX		
AH16014	Al/INOX		



Universal DIN connector; single



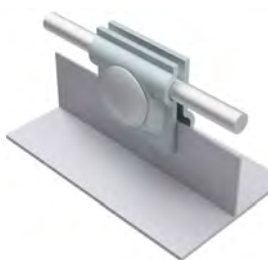
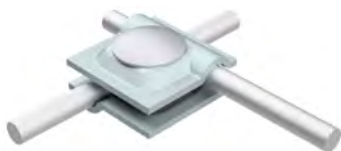
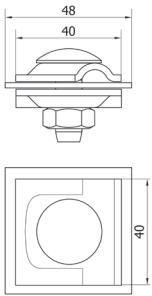
catalog No.	material	cable range	bolts
AH16021	electro galvanized steel	Ø 8-10mm	1xM10x30
AH16020G	hot-dip galvanized steel		
AH16022	Cu/Mo		
AH16023	INOX		
AH16024	Al/INOX		



Universal DIN connector; 3-plate



catalog No.	material	cable range	bolts
AH16031	electro galvanized steel	Ø 8-10mm	1xM10x30
AH1603OG	hot-dip galvanized steel		
AH16032	Cu/Mo		
AH16033	INOX		
AH16034	Al		



AHARDT
LIGHTNING PROTECTION SYSTEMS

group I
connectors

group II
lightning
holders

group III
lightning
conductors

group IV
straighteners

group V
lightning protection
pipes

group VI
earthings and
earthing elements

group VII
lightning protection
masts

group VIII
high voltage
cable

group IX
insulated rods
and brackets

group X
other products

LIGHTNING HOLDERS

they are used for laying the grounding wire and the tape iron on:

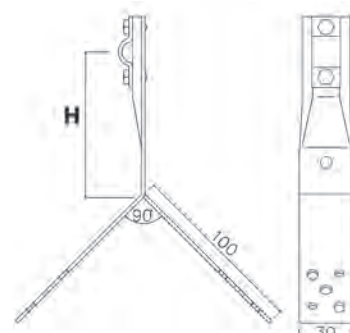
- roofs
- facades
- foundations

TOP HOLDERS

Top holder, screwed



catalog No.	H [cm]	material	cable range	bolts
AH21011	8	electro galvanized steel	Ø 8-10mm	2xM5x16
AH21021	10			
AH21010G	8	hot-dip galvanized steel		
AH21020G	10			
AH21012	8	Cu/Mo		
AH21022	10			
AH21013	8	INOX		
AH21023	10			
AH21014	8	Al		
AH21024	10			

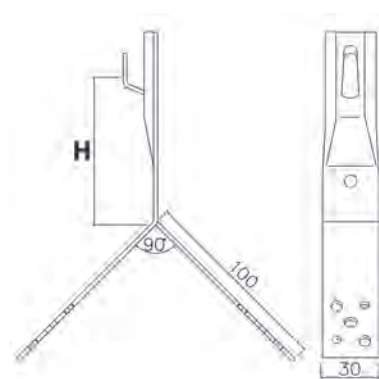


*At the customer's request we bend at any angle

Top holder



catalog No.	H [cm]	material	cable range
AH21031	8	electro galvanized steel	Ø 8-10mm
AH21041	10		
AH21030G	8	hot-dip galvanized steel	
AH21040G	10		
AH21032	8	Cu	
AH21042	10		
AH21033	8	INOX	
AH21043	10		
AH21034	8	Al	
AH21044	10		

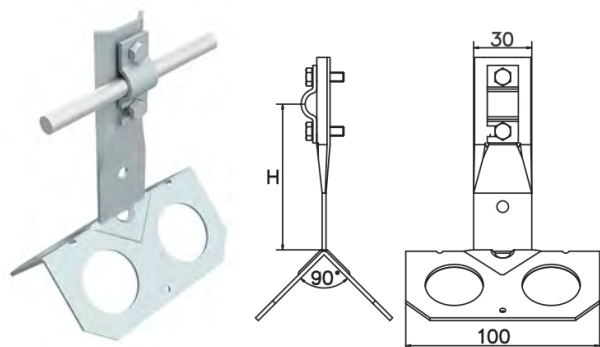


*At the customer's request we bend at any angle

Top holder, screwed

catalog No.	H [cm]	material	cable range	bolts
AH21071	8	electro galvanized steel	Ø 8-10mm	2xM5x16
AH21081	10			
AH2107OG	8	hot-dip galvanized steel		
AH2108OG	10			
AH21072	8	Cu/Mo		
AH21082	10			
AH21073	8	INOX		
AH21083	10			
AH21074	8	Al		
AH21084	10			

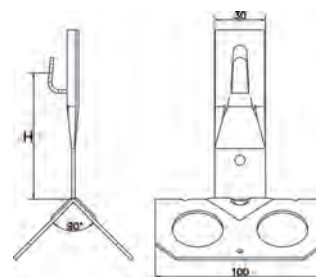
*At the customer's request we bend at any angle



Top holder



catalog No.	H [cm]	material	cable range
AH21051	8	electro galvanized steel	Ø 8-10mm
AH21061	10		
AH21050G	8	hot-dip galvanized steel	
AH21060G	10		
AH21052	8	Cu	
AH21062	10		
AH21053	8	INOX	
AH21063	10		
AH21054	8	Al	
AH21064	10		



*At the customer's request we bend at any angle

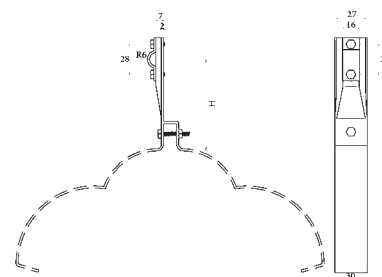
HOLDERS FOR RIDGE TILES

Profiled ridge tile holder, screwed



catalog No.	H [cm]	material	cable range	bolts
AH04141	8	electro galvanized steel	Ø 8-10mm	2xM5x16 1xM6x30
AH04151	10			
AH04140G	8	hot-dip galvanized steel		
AH04150G	10			
AH04142	8	Cu/Mo		
AH04152	10			

*Bend handle (before galvanizing) based on a ridge tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.

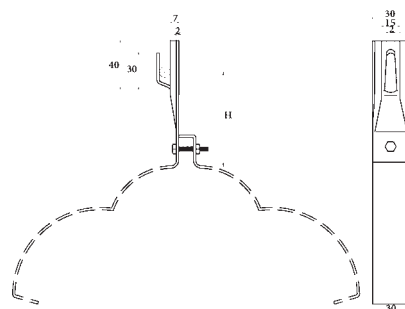


Profiled ridge tile holder



catalog No.	H [cm]	material	cable range	bolts
AH04161	8	electro galvanized steel	Ø 8-10mm	1xM6x30
AH04171	10			
AH04160G	8	hot-dip galvanized steel		
AH04170G	10			
AH04162	8	Cu/Mo		
AH04172	10			
AH04163	8	INOX		
AH04173	10			
AH04164	8	Al		
AH04174	10			

*Bend handle (before galvanizing) based on a ridge tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.



❖ Profiled ridge tile holder, with post



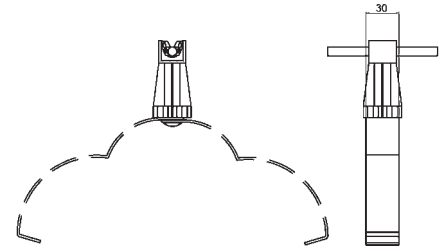
catalog No.	material	cable range	bolts
AH04401...	electro galvanized steel, plastic	Ø 8mm	1xM6x16
AH0440OG...	hot-dip galvanized steel plastic		
AH04402...	Cu/Mo plastic		
AH04403...	INOX plastic		
AH04404...	Al plastic		

* to choose the color, add a letter to the last digit of the catalog number:

B – brown
C – brick
A – black



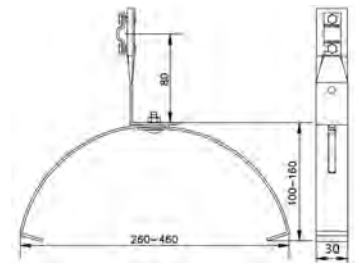
*Bend handle (before galvanizing) based on a ridge tile provided by the customer. This solution greatly improves the installation's aesthetics and makes assembly easier.



❖ Universal ridge tile holder, screwed



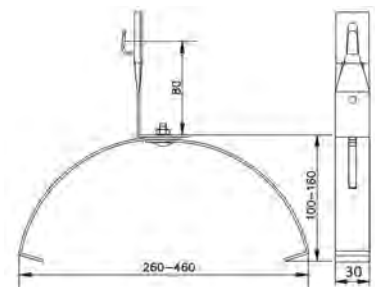
catalog No.	material	cable range	bolts
AH04331	electro galvanized steel	Ø 8-10mm	2xM5x16 1xM6x16
AH0433OG	hot-dip galvanized steel		
AH04332	Cu/Mo		



❖ Universal ridge tile holder

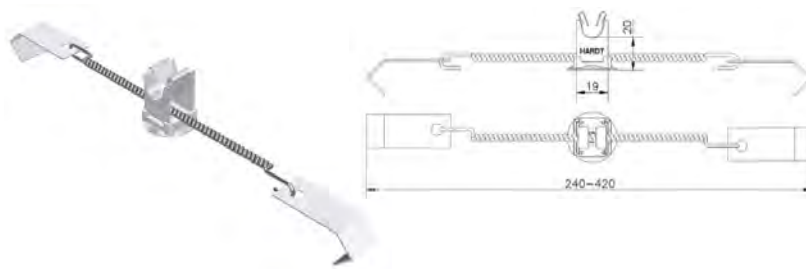


catalog No.	material	cable range	bolts
AH04321	electro galvanized steel	Ø 8-10mm	1xM6x16
AH0432OG	hot-dip galvanized steel		
AH04322	Cu/Mo		
AH04323	INOX		
AH04324	Al		



Universal spring ridge clamp

catalog No.	material	cable range
AH0200011N	INOX	Ø 8mm

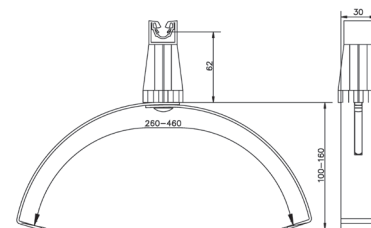


Universal ridge tile holder, with post



catalog No.	material	cable range	bolts
AH04201...	electro galvanized steel, plastic	Ø 8mm	1xM6x16
AH04200G...	hot-dip galvanized steel plastic		
AH04202...	Cu/Mo plastic		
AH04203...	INOX plastic		
AH04204...	Al plastic		

* to choose the color, add a letter to the last digit of the catalog number:
 B – brown
 C – brick
 A – black

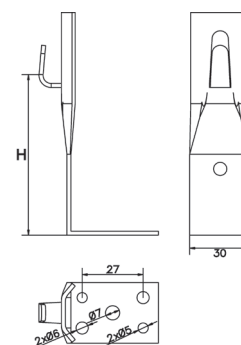


ANGULAR HOLDERS

Angular holder



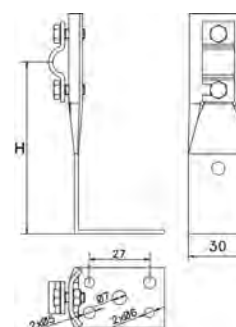
catalog No.	H [cm]	material	cable range
AH05011	6	electro galvanized steel	Ø 8-10mm
AH05031	8		
AH05051	15		
AH05010G	6	hot-dip galvanized steel	
AH05030G	8		
AH05050G	15		
AH05012	6	Cu	
AH05032	8		
AH05052	15		
AH05013	6	INOX	
AH05033	8		
AH05053	15		
AH05014	6	Al	
AH05034	8		



Angular holder, screwed



catalog No.	H [cm]	material	cable range	bolts
AH05021	6	electro galvanized steel	Ø 8-10mm	2xM5x16
AH05041	8			
AH05061	15			
AH0502OG	6	hot-dip galvanized steel		
AH0504OG	8			
AH0506OG	15			
AH05022	6	Cu/Mo		
AH05042	8			
AH05062	15			

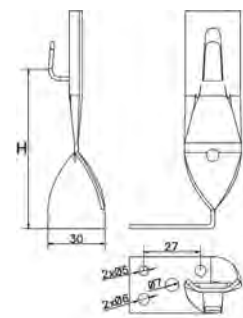




Angular holder, twisted



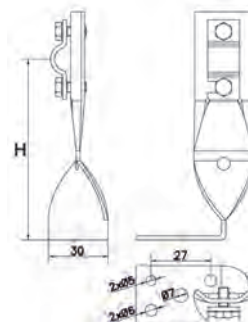
catalog No.	H [cm]	material	cable range
AH05071	7	electro galvanized steel	Ø 8-10mm
AH05091	14		
AH0507OG	7	hot-dip galvanized steel	
AH0509OG	14		
AH05072	7	Cu	
AH05092	14		
AH05073	7	INOX	
AH05093	14		
AH05074	7	Al	



Angular holder, screwed, twisted



catalog No.	H [cm]	material	cable range	bolts
AH05081	7	electro galvanized steel	Ø 8-10mm	2xM5x16
AH05101	14			
AH0508OG	7	hot-dip galvanized steel		
AH0510OG	14			
AH05082	7	Cu/Mo		
AH05102	14			


ROUND CONDUCTOR HOLDERS Wire holder

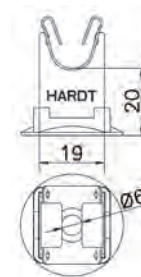
catalog No.	H [mm]	material	cable range
AH020003IN	15	INOX	Ø 8mm



 Wire holder with stand

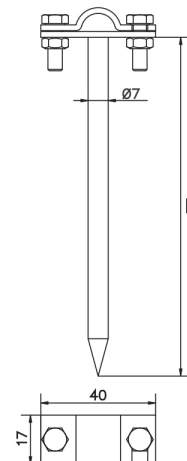
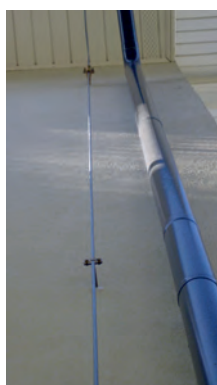


catalog No.	H [mm]	material	cable range
AH020004IN	20	INOX plastic	Ø 8mm

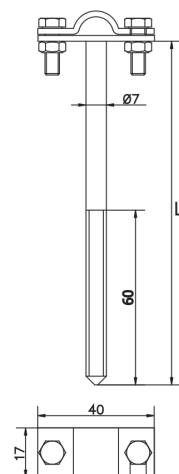


 Wire holder, hammer in


catalog No.	L [cm]	material	cable range	bolts
AH07061	8	electro galvanized steel	Ø 8-10mm	2xM5x16
AH07071	12			
AH07081	18			
AH07091	25			
AH07361	33			
AH0706OG	8	hot-dip galvanized steel		
AH0707OG	12			
AH0708OG	18			
AH0709OG	25			
AH0736OG	33			
AH07062	8	Cu/Mo		
AH07072	12			
AH07082	18			
AH07092	25			
AH07362	33			
AH07063	8	INOX		
AH07073	12			
AH07083	18			
AH07093	25			
AH07363	33			


 Wire holder, thread


catalog No.	L [cm]	material	cable range	bolts
AH07111	8	electro galvanized steel	Ø 8-10mm	2xM5x16
AH07121	12			
AH07131	18			
AH07141	25			
AH07371	33			
AH07151	50			
AH0711OG	8	hot-dip galvanized steel		
AH0712OG	12			
AH0713OG	18			
AH0714OG	25			
AH0737OG	33			
AH0715OG	50			
AH07112	8	Cu/Mo		
AH07122	12			
AH07132	18			
AH07142	25			
AH07372	33			
AH07152	50			
AH07113	8	INOX		
AH07123	12			
AH07133	18			
AH07143	25			
AH07373	33			
AH07153	50			

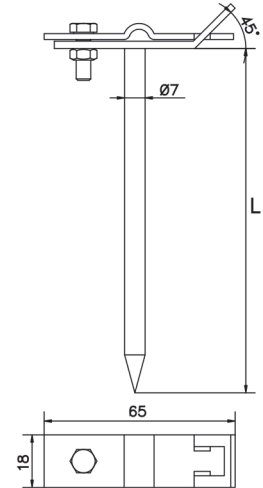


UNIVERSAL HOLDERS

Universal holder, hammer in



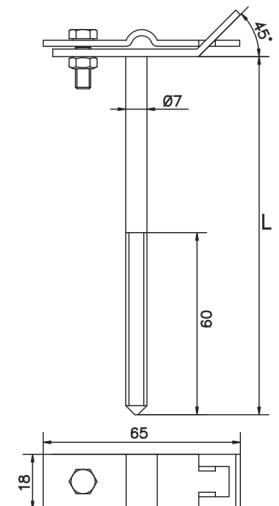
catalog No.	L [cm]	material	cable range	bolts
AH06011	8	electro galvanized steel	Ø 8-10mm tape up to 30 mm	1xM5x16
AH06021	12			
AH06031	18			
AH06041	25			
AH06331	33			
AH0601OG	8	hot-dip galvanized steel		
AH0602OG	12			
AH0603OG	18			
AH0604OG	25			
AH0633OG	33			
AH06012	8	Cu/Mo		
AH06022	12			
AH06032	18			
AH06042	25			
AH06332	33			
AH06013	8	INOX		
AH06023	12			
AH06033	18			
AH06043	25			
AH06333	33			



Universal holder, thread



catalog No.	L [cm]	material	cable range	bolts
AH06121	8	electro galvanized steel	Ø 8-10mm tape up to 30 mm	1xM5x16
AH06131	12			
AH06141	18			
AH06151	25			
AH06351	33			
AH0612OG	8	hot-dip galvanized steel		
AH0613OG	12			
AH0614OG	18			
AH0615OG	25			
AH0635OG	33			
AH06122	8	Cu/Mo		
AH06132	12			
AH06142	18			
AH06152	25			
AH06352	33			
AH06123	8	INOX		
AH06133	12			
AH06143	18			
AH06153	25			
AH06353	33			

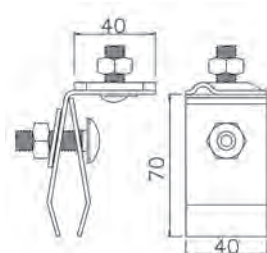


HOLDERS FOR METAL ROOF

Universal holder



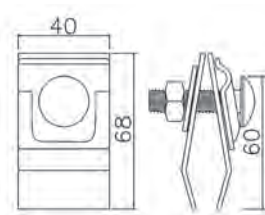
catalog No.	material	cable range	bolts
AH08051	electro galvanized steel	Ø 8-10mm	1xM10x30 2xM10x20
AH08050G	hot-dip galvanized steel		
AH08052	Cu/Mo		
AH08053	INOX		



Sheet metal holder



catalog No.	material	cable range	bolts
AH08061	electro galvanized steel	Ø 8-10mm	1xM10x40
AH08060G	hot-dip galvanized steel		
AH08062	Cu/Mo		
AH08063	INOX		

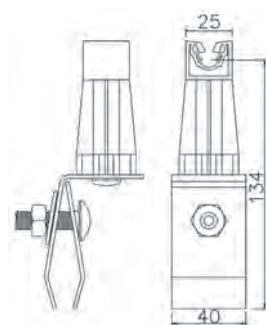


Holder with post



catalog No.	material	cable range	bolts
AH08071...	electro galvanized steel plastic	Ø 8mm	1xM10x30 1xM6x10
AH08070G...	hot-dip galvanized steel plastic		
AH08072...	Cu/Mo; plastic		
AH08073...	INOX; plastic		

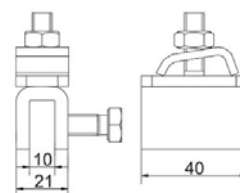
* to choose the color, add a letter to the last digit of the catalog number:
 B – brown
 C – brick
 A – black



Wire holder for structures



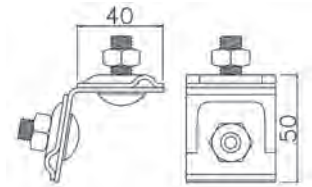
catalog No.	material	cable range	bolts
AH020002OG	hot-dip galvanized steel	Ø 8-10mm	2xM8x20



Universal holder



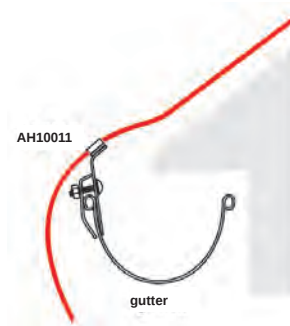
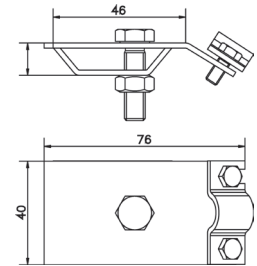
catalog No.	material	cable range	bolts
AH08101	electro galvanized steel	Ø 8-10mm	2xM10x20
AH08100G	hot-dip galvanized steel		
AH08102	Cu/Mo		
AH08103	INOX		



Gutter clamp



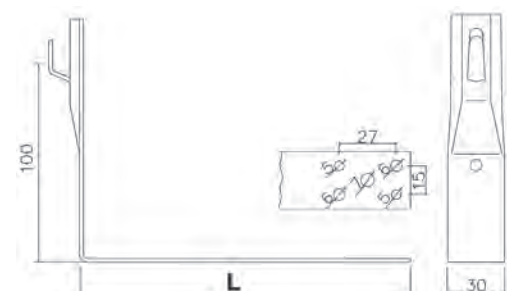
catalog No.	material	cable range	bolts
AH10011	electro galvanized steel	Ø 8-10mm	2xM5x16 1xM8x30
AH10010G	hot-dip galvanized steel		
AH10012	Cu/Mo		
AH10013	INOX		
AH10014	Al		



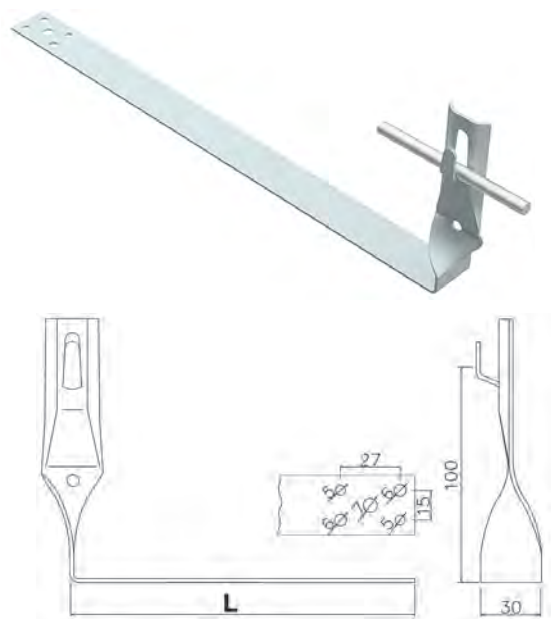
TILE HOLDERS

Tile holder screwed to the lath

catalog No.	L [cm]	material	cable range
AH09011	38	electro galvanized steel	Ø 8-10mm
AH09161	43		
AH09010G	38	hot-dip galvanized steel	
AH09160G	43		
AH09012	38	Cu	
AH09162	43		
AH09163	38	INOX	
AH09353	43		
AH09014	38	Al	
AH09164	43		

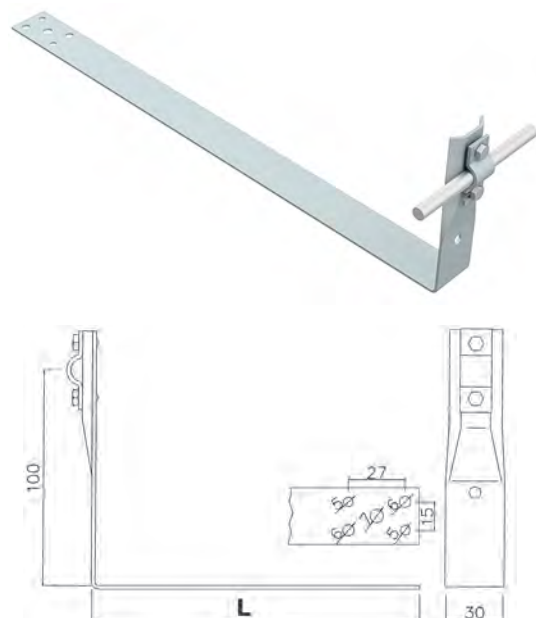


Tile bracket screwed to the lath, twisted



catalog No.	L [cm]	material	cable range
AH09021	38	electro galvanized steel	Ø 8-10mm
AH09171	43		
AH09020G	38	hot-dip galvanized steel	
AH09170G	43		
AH09022	38	Cu	
AH09172	43		
AH09173	38	INOX	
AH09363	43		
AH09024	38	Al	
AH09174	43		

Tile holder screwed to the lath



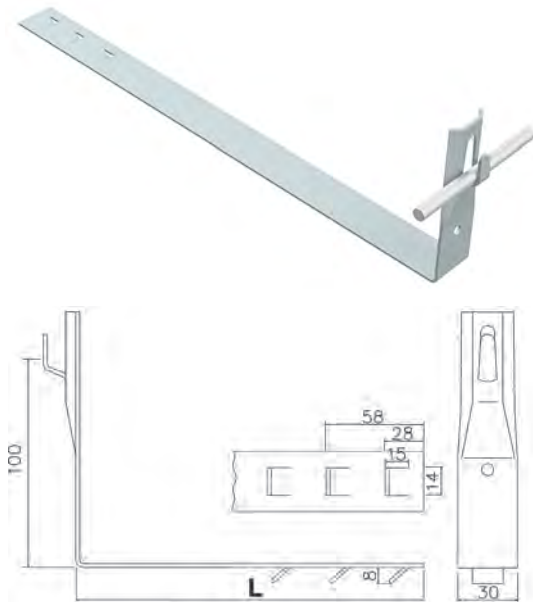
catalog No.	L [cm]	material	cable range	bolts
AH09031	38	electro galvanized steel	Ø 8-10mm	2xM5x16
AH09181	43			
AH09030G	38	hot-dip galvanized steel		
AH09180G	43			
AH09032	38	Cu/Mo		
AH09182	43			

Tile bracket screwed to the lath, twisted



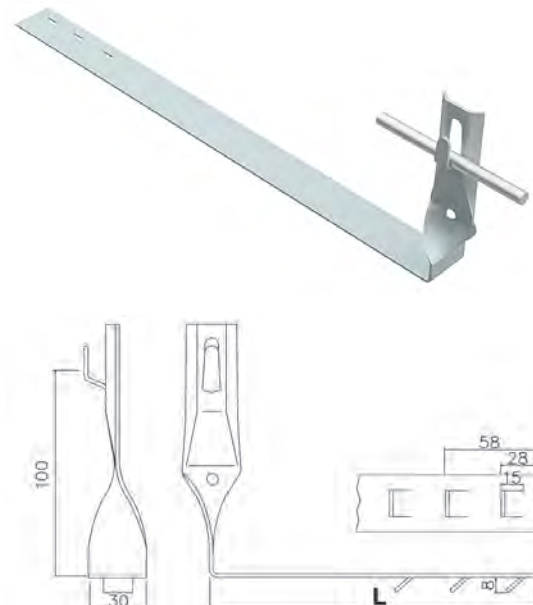
catalog No.	L [cm]	material	cable range	bolts
AH09041	38	electro galvanized steel	Ø 8-10mm	2xM5x16
AH09191	43			
AH09040G	38	hot-dip galvanized steel		
AH09190G	43			
AH09042	38	Cu/Mo		
AH09192	43			

Adjustable tile holder



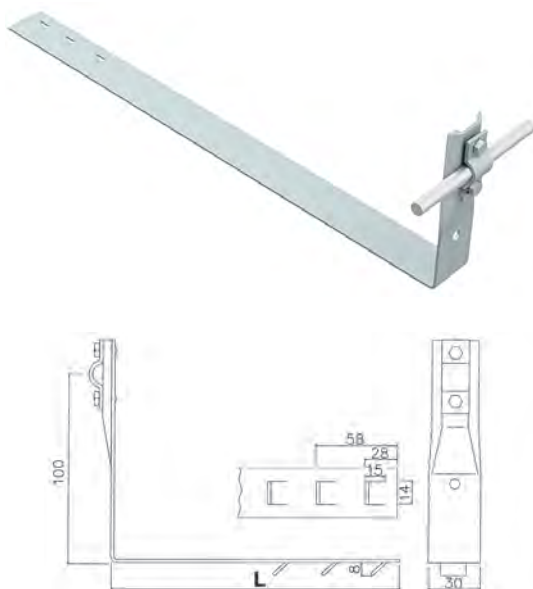
catalog No.	L [cm]	material	cable range
AH09051	38	electro galvanized steel	Ø 8-10mm
AH09201	43		
AH09050G	38	hot-dip galvanized steel	
AH09200G	43		
AH09052	38	Cu	
AH09202	43		
AH09053	38	INOX	
AH09203	43		
AH09054	38	Al	
AH09204	43		

Adjustable tile holder, twisted



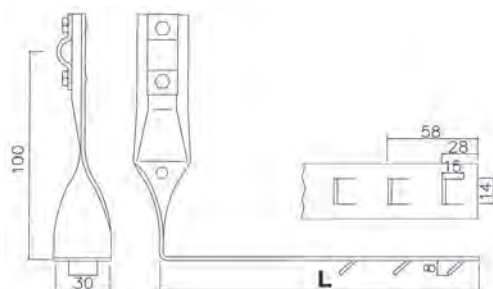
catalog No.	L [cm]	material	cable range
AH09061	38	electro galvanized steel	Ø 8-10mm
AH09211	43		
AH09060G	38	hot-dip galvanized steel	
AH09210G	43		
AH09062	38	Cu	
AH09212	43		
AH09063	38	INOX	
AH09213	43		
AH09064	38	Al	
AH09214	43		

Adjustable tile holder



catalog No.	L [cm]	material	cable range	bolts
AH09071	38	electro galvanized steel	Ø 8-10mm	2xM5x16
AH09221	43			
AH09070G	38	hot-dip galvanized steel		
AH09220G	43			
AH09072	38	Cu/Mo		
AH09222	43			

Adjustable tile holder, screwed, twisted



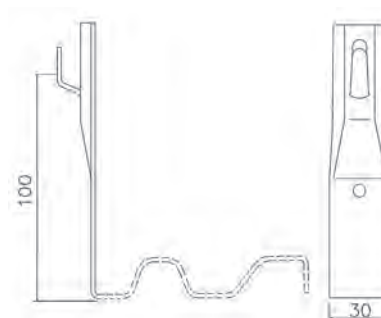
catalog No.	L [cm]	material	cable range	bolts
AH09081	38	electro galvanized steel	Ø 8-10mm	2xM5x16
AH09231	43			
AH0908OG	38	hot-dip galvanized steel		
AH0923OG	43			
AH09082	38	Cu/Mo		
AH09232	43			

Profiled tile holder



catalog No.	material	cable range
AH09251	electro galvanized steel	Ø 8-10mm
AH0925OG	hot-dip galvanized steel	
AH09252	Cu	
AH09253	INOX	
AH09254	Al	

*Bend handle (before galvanizing) based on a roof tile provided by the customer. This solution greatly improves the installation's aesthetics and makes assembly easier.

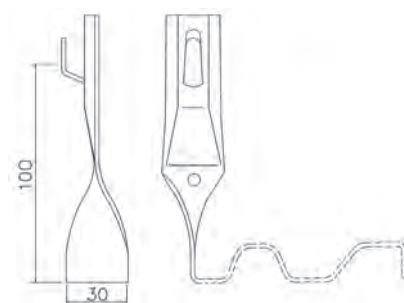


Profiled tile holder, twisted



catalog No.	material	cable range
AH09261	electro galvanized steel	Ø 8-10mm
AH0926OG	hot-dip galvanized steel	
AH09262	Cu	
AH09263	INOX	
AH09264	Al	

*Bend handle (before galvanizing) based on a roof tile provided by the customer. This solution greatly improves the installation's aesthetics and makes assembly easier.

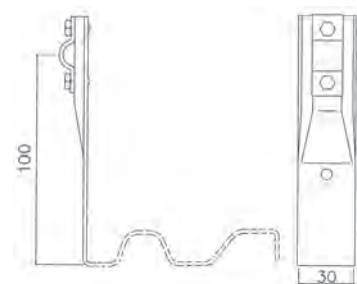


Profiled tile holder, screwed



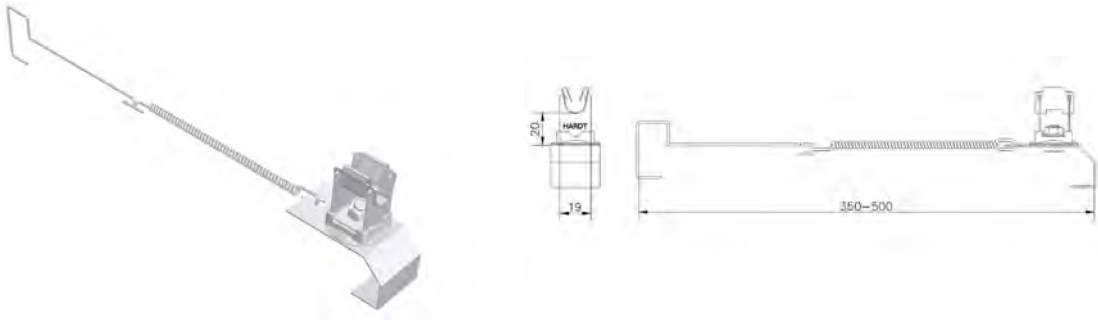
catalog No.	material	cable range	bolts
AH09271	electro galvanized steel	Ø 8-10mm	2xM5x16
AH0927OG	hot-dip galvanized steel		
AH09272	Cu/Mo		

*Bend handle (before galvanizing) based on a roof tile provided by the customer. This solution greatly improves the installation's aesthetics and makes assembly easier.



Universal spring roof bracket

catalog No.	material	cable range
AH020008IN	INOX	Ø 8-10mm

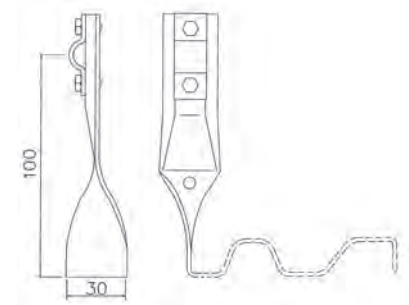


Profiled tile holder, screwed, twisted



catalog No.	material	cable range	bolts
AH09281	electro galvanized steel	Ø 8-10mm	2xM5x16
AH09280G	hot-dip galvanized steel		
AH09282	Cu/Mo		

*Bend handle (before galvanizing) based on a roof tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.



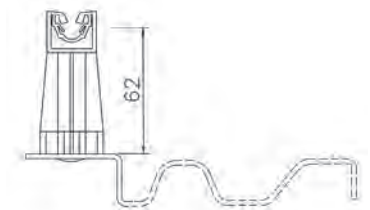
Profiled tile holder, with post



catalog No.	material	cable range	bolts
AH09341...	electro galvanized steel, plastic	Ø 8mm	1xM6x10
AH09340G...	hot-dip galvanized steel plastic		
AH09342	Cu/Mo plastic		
AH09343...	INOX plastic		
AH09344...	Al plastic		

* to choose the color, add a letter to the last digit of the catalog number:
B – brown
C – brick
A – black

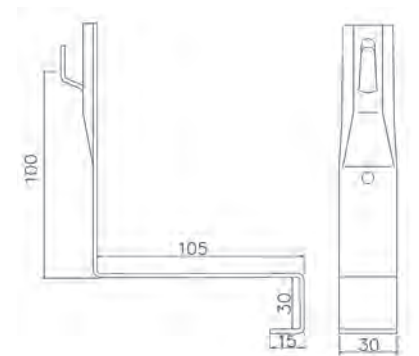
*Bend handle (before galvanizing) based on a ridge tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.



Universal tile holder



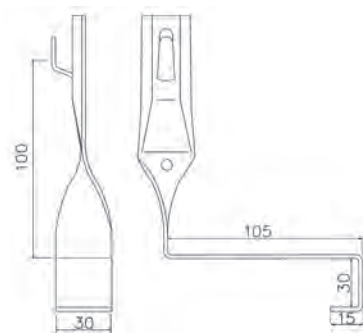
catalog No.	material	cable range
AH09291	electro galvanized steel	Ø 8-10mm
AH09290G	hot-dip galvanized steel	
AH09292	Cu	
AH09293	INOX	
AH09294	Al	



Universal tile holder, twisted



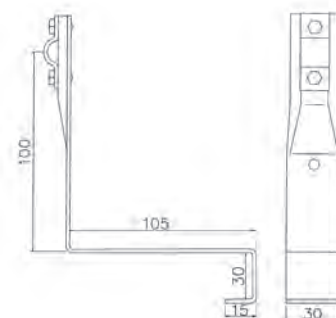
catalog No.	material	cable range
AH09301	electro galvanized steel	Ø 8-10mm
AH0930OG	hot-dip galvanized steel	
AH09302	Cu	
AH09303	INOX	
AH09304	Al	



Universal tile holder, screwed



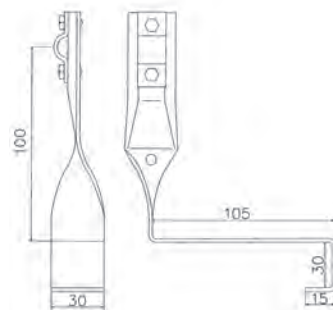
catalog No.	material	cable range	bolts
AH09311	electro galvanized steel	Ø 8-10mm	2xM5x16
AH0931OG	hot-dip galvanized steel		
AH09312	Cu/Mo		



Universal tile holder, screwed, twisted



catalog No.	material	cable range	bolts
AH09321	electro galvanized steel	Ø 8-10mm	2xM5x16
AH0932OG	hot-dip galvanized steel		
AH09322	Cu/Mo		

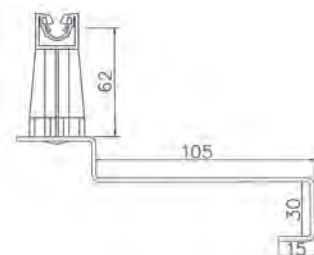


Universal tile bracket, with post



catalog No.	material	cable range	bolts
AH09331...	electro galvanized steel plastic	Ø 8mm	1xM6x10
AH0933OG...	hot-dip galvanized steel plastic		
AH09332...	Cu/Mo plastic		
AH09333...	INOX plastic		
AH09334...	Al plastic		

* to choose the color, add a letter to the last digit of the catalog number:
B – brown
C – brick
A – black

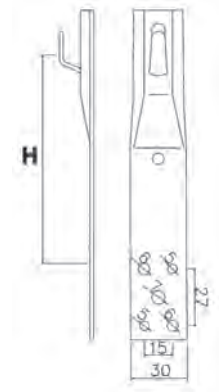


STRAIGHT HOLDERS

Straight holder



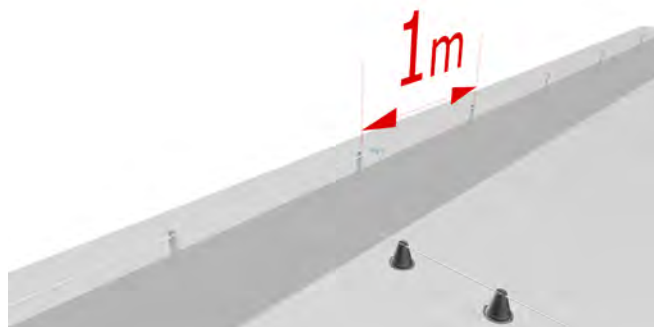
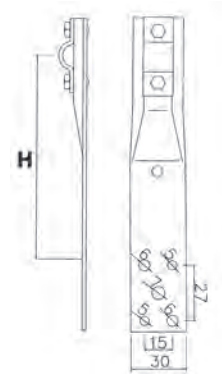
catalog No.	H [cm]	material	cable range
AH11011	6	electro galvanized steel	Ø 8-10mm
AH11031	8		
AH11051	15		
AH11010G	6	hot-dip galvanized steel	
AH11030G	8		
AH11050G	15		
AH11012	6	Cu	
AH11032	8		
AH11052	15		
AH11013	6	INOX	
AH11033	8		
AH11053	15		
AH11014	6	Al	
AH11034	8		
AH11054	15		



Straight holder, screwed



catalog No.	H [cm]	material	cable range	bolts
AH11021	6	electro galvanized steel	Ø 8-10mm	2xM5x16
AH11041	8			
AH11061	15			
AH1102OG	6	hot-dip galvanized steel		
AH1104OG	8			
AH1106OG	15			
AH11022	6	Cu/Mo		
AH11042	8			
AH11062	15			

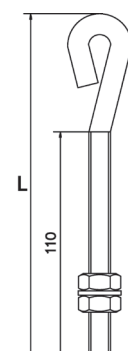


TENSION HOLDERS

Tension bracket, loop



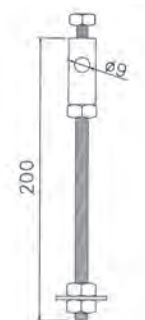
catalog No.	L [cm]	material	cable range	bolts
AH13011	16	electro galvanized steel	Ø 8-10mm	M10x110
AH13021	25			
AH13031	40			
AH13013	16	INOX		
AH13023	25			
AH13033	40			



Tension holder, with lock



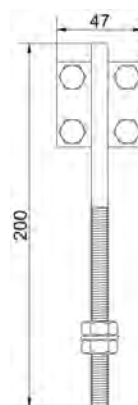
catalog No.	material	cable range	bolts
AH13081	electro galvanized steel	Ø 8mm	M10x110
AH13082	Mo electro galvanized steel		



Tension holder, reel



catalog No.	material	cable range	bolts
AH13051	electro galvanized steel	Ø 8-10mm	M10x110

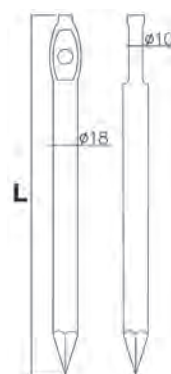


ANCHORS

Single hammer in anchor



catalog No.	L [cm]	material	cable range
AH15011	35	electro galvanized steel	Ø 8mm
AH15041	50		
AH15111	70		
AH1501OG	35	hot-dip galvanized steel	
AH1504OG	50		
AH1511OG	70		
AH15013	35	INOX	
AH15043	50		
AH15113	70		



Hammer in anchor with lock



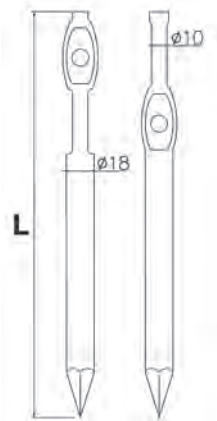
catalog No.	L [cm]	material	cable range
AH15021	35	electro galvanized steel	Ø 8mm
AH15051	50		
AH15121	70		
AH1502OG	35	hot-dip galvanized steel	
AH1505OG	50		
AH1512OG	70		
AH15022	35	Cu/Mo	
AH15052	50		
AH15122	70		
AH15023	35	INOX	
AH15053	50		
AH15123	70		



Double hammer in anchor



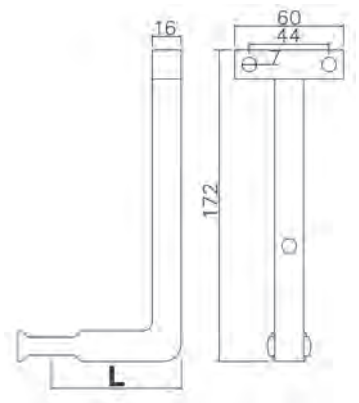
catalog No.	L [cm]	material	cable range
AH15031	35	electro galvanized steel	Ø 8mm
AH15061	50		
AH15131	70		
AH1503OG	35	hot-dip galvanized steel	
AH1506OG	50		
AH1513OG	70		
AH15033	35	INOX	
AH15063	50		
AH15133	70		



Screw anchor



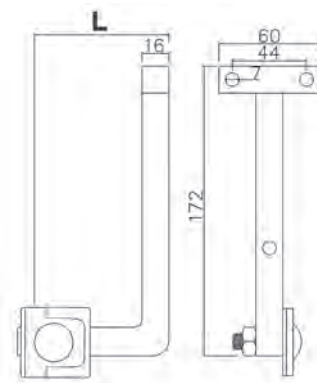
catalog No.	L [cm]	material	cable range
AH15071	7	electro galvanized steel	Ø 8mm
AH15091	15		
AH1507OG	7	hot-dip galvanized steel	
AH1509OG	15		
AH15073	7	INOX	
AH15093	15		



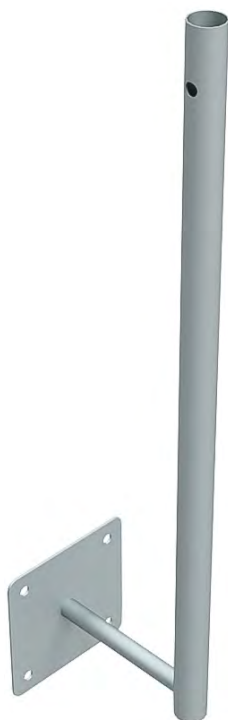
Screw anchor with lock



catalog No.	L [cm]	material	cable range
AH15081	7	electro galvanized steel	Ø 8mm
AH15101	15		
AH1508OG	7	hot-dip galvanized steel	
AH1510OG	15		
AH15082	7	Cu/Mo	
AH15102	15		
AH15083	7	INOX	
AH15103	15		

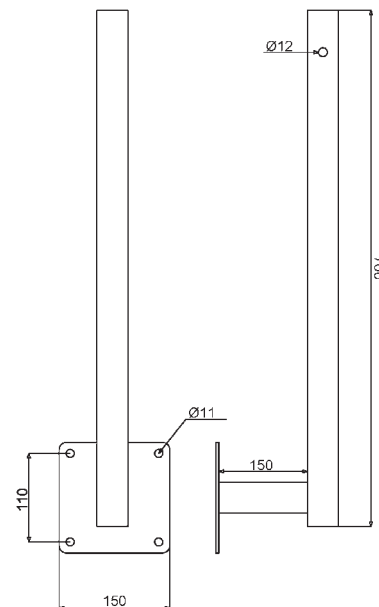


Tension holder



catalog No.	material	cable range
AH15171	electro galvanized steel	Ø 8-10mm
AH1517OG	hot-dip galvanized steel	
AH15173	INOX	

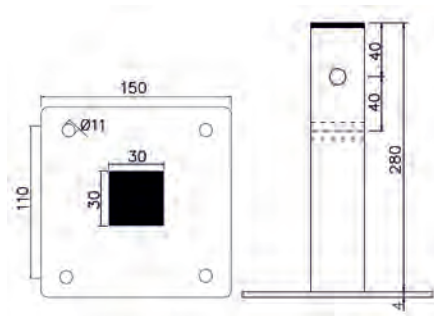
*NOTE
the holes in plates are rounds for size M10



Tension holder (screw anchor)



catalog No.	material	cable range
AH1518OG	hot-dip galvanized steel	Ø 8-10mm

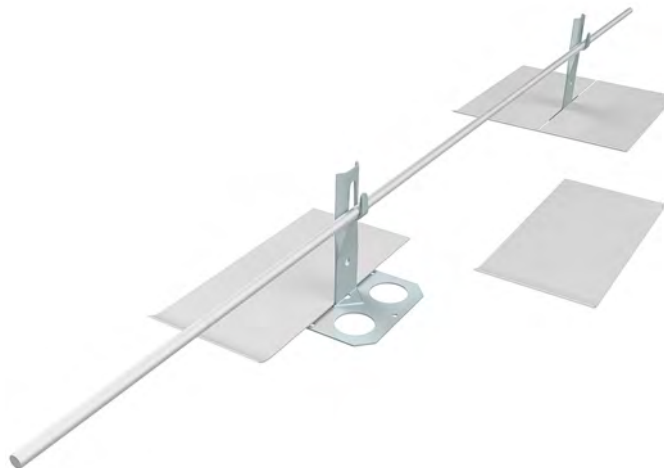
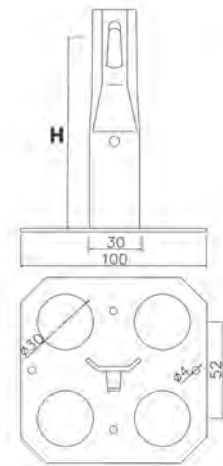


❖ HOLDERS WITH A METAL BASE

❖ Glued holder on a metal base with holes, screwed



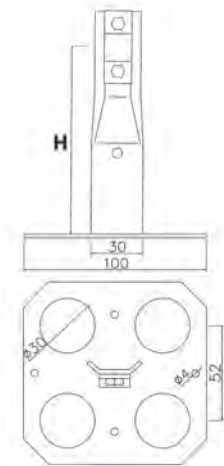
catalog No.	H [cm]	material	cable range
AH12061	9	electro galvanized steel	Ø 8-10mm
AH12101	15	electro galvanized steel	
AH1206OG	9	hot-dip galvanized steel	
AH1210OG	15	hot-dip galvanized steel	
AH12062	9	Cu	
AH12102	15	Cu	
AH12063	9	INOX	
AH12103	15	INOX	



❖ Glued holder on a metal base with holes



catalog No.	H [cm]	material	cable range	bolts
AH12071	9	electro galvanized steel	Ø 8-10mm	2xM5x16
AH12111	15	electro galvanized steel		
AH1207OG	9	hot-dip galvanized steel		
AH1211OG	15	hot-dip galvanized steel		
AH12072	9	Cu/Mo		
AH12112	15	Cu/Mo		

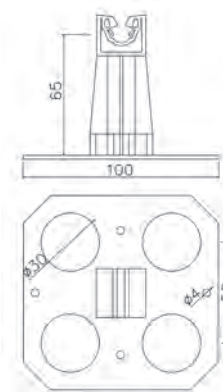


❖ Glued holder on a metal base with holes, with post



catalog No.	material	cable range
AH12131...	electro galvanized steel	Ø 8mm
AH1213OG...	hot-dip galvanized steel	
AH12132...	Cu	
AH12133...	INOX	
AH12134...	Al	

* to choose the color, add a letter to the last digit of the catalog number:
 B – brown
 C – brick
 A – black



CONCRETE HOLDERS IN PLASTIC

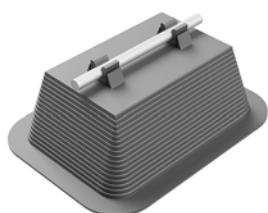
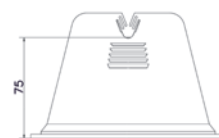
Concrete holder in plastic – (weight ~1kg)



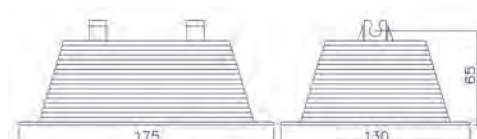
catalog No.	material	cable range
AH12140P	polypropylene concrete	Ø 8-10mm



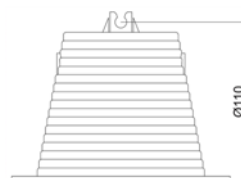
catalog No.	material	cable range
AH12140A	polypropylene concrete	Ø 8mm



catalog No.	material	cable range
AH12170	polypropylene concrete	Ø 8mm



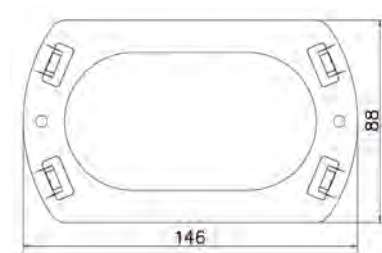
catalog No.	material	cable range
AH020001TWB	polypropylene concrete	Ø 8mm



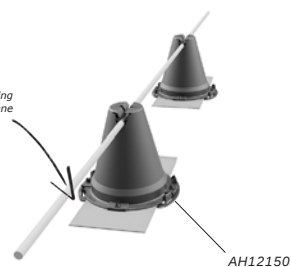
Plastic base



catalog No.	material
AH12150	polypropylene



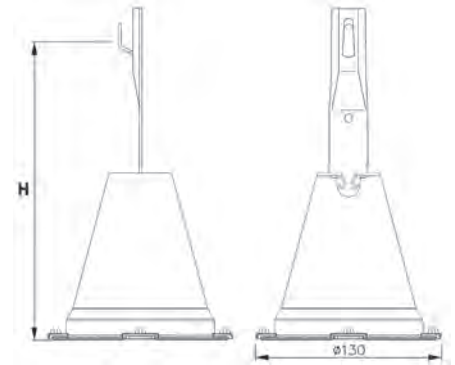
a strip of heat-welded roofing felt or roofing membrane



Concrete holder in plastic



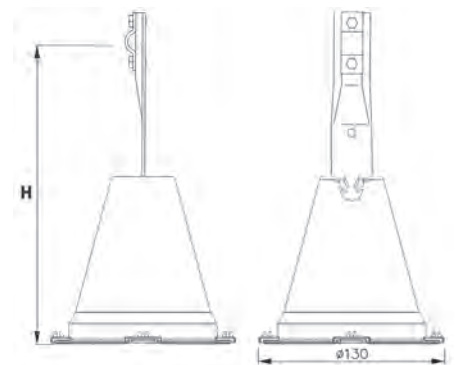
catalog No.	H [cm]	material	cable range
AH12201P	19	electro galvanized steel polypropylene concrete	Ø 8-10mm
AH12221P	21		
AH12241P	28		
AH1220OGP	19	hot-dip galvanized steel polypropylene concrete	
AH1222OGP	21		
AH1224OGP	28		
AH12202P	19	Cu/Mo polypropylene concrete	
AH12222P	21		
AH12242P	28		
AH12203P	19	INOX polypropylene concrete	
AH12223P	21		
AH12243P	28		
AH12204P	19	Al polypropylene concrete	
AH12224P	21		
AH12244P	28		



Concrete holder in plastic, screwed



catalog No.	H [cm]	material	cable range
AH12211P	19	electro galvanized steel polypropylene concrete	Ø 8-10mm
AH12231P	21		
AH12251P	28		
AH1221OGP	19	hot-dip galvanized steel polypropylene concrete	
AH1223OGP	21		
AH1225OGP	28		
AH12212P	19	Cu/Mo polypropylene concrete	
AH12232P	21		
AH12252P	28		



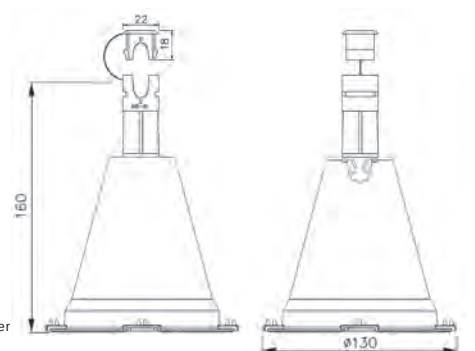
Concrete holder in plastic with post



catalog No.	material	cable range
AH12190P...	polypropylene plastic concrete	Ø 8mm

* to choose the color, add a letter to the last digit of the catalog number

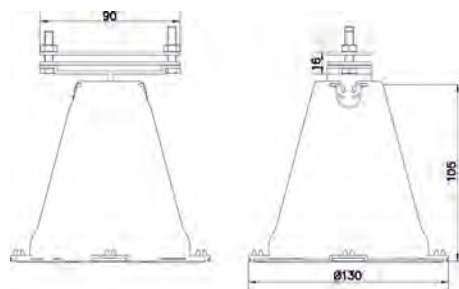
B – brown
C – brick
A – black



Concrete tape holder; horizontally



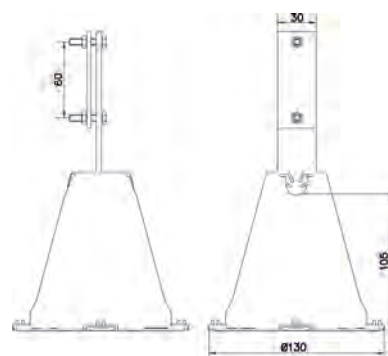
catalog No.	material	cable range
AH12261P	electro galvanized steel polypropylene	tape up to 50 mm
AH12260GP	hot-dip galvanized steel polypropylene	
AH12262P	Cu polypropylene	
AH12263P	INOX polypropylene	
AH12264P	Al polypropylene	



Concrete holder in plastic for the tape; vertically



catalog No.	material	cable range
AH12271P	electro galvanized steel polypropylene	tape up to 50 mm
AH12270GP	hot-dip galvanized steel polypropylene	
AH12272P	Cu polypropylene	



TURNBUCKLES SCREWS

Turnbuckle screw, hook-loop



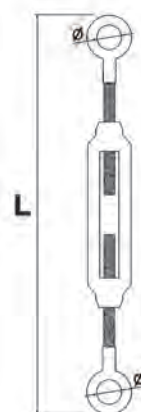
catalog No.	H [mm]	Ø [mm]	material	cable range	bolts
AH18001	205-295	14	electro galvanized steel	Ø 8-10mm	M10x125
AH18051	233-310	16			M12x125



Turnbuckle screw, loop-loop



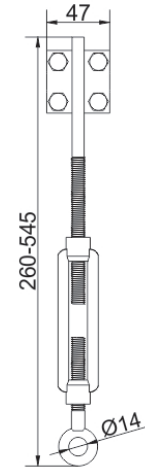
catalog No.	H [mm]	Ø [mm]	material	cable range	bolts
AH18011	205-295	14	electro galvanized steel	Ø 8-10mm	M10x125
AH18021	233-310	16			M12x125



Turnbuckle screw, reel-loop



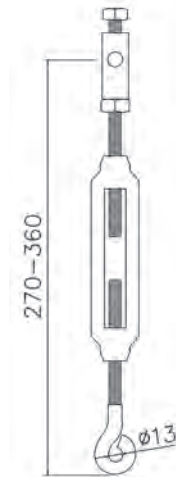
catalog No.	material	cable range	bolts
AH18031	electro galvanized steel	Ø 8-10mm	M10x125



Turnbuckle screw, sleeve-loop



catalog No.	material	cable range	bolts
AH18042	electro galvanized steel Mo	Ø 8mm	M10x125



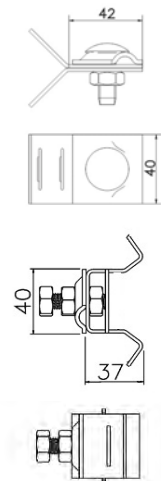
UNIVERSAL PIPE HOLDERS

Universal holder



catalog No.	material	cable range	bolts
AH020001OC	electro galvanized steel	Ø 8mm	M10x30
AH19091			

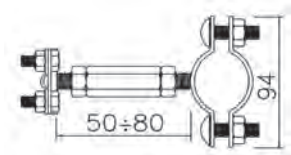
*No stainless tape included. Dedicated product: stainless steel tape 23x0,3mm nr AH23063.



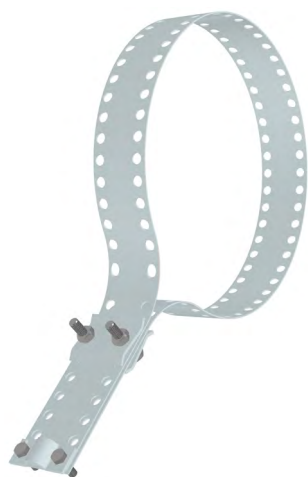
Wire holder for railing/pipe Ø30-45 mm



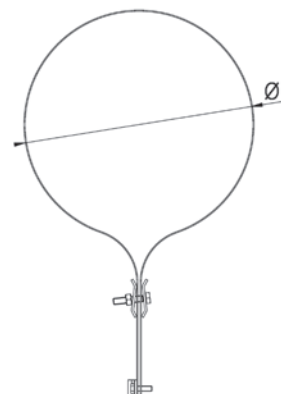
catalog No.	material	cable range	bolts
AH41681	electro galvanized steel	Ø 8-10mm tape up to 20 mm	4xM8x16



Universal holder– belt



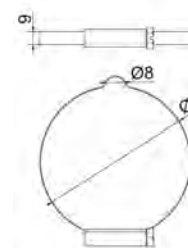
Catalog No.	Ø[mm]	material	cable range	bolts
AH19012	do 30	Cu/Mo	Ø8-10mm	2xM5x16 2xM6x30
AH19022	do 92			
AH19032	62-156			
AH19042	124-222			
AH19052	220-570			
AH19013	do 30	INOX		
AH19023	do 92			
AH19033	62-156			
AH19043	124-222			
AH19053	220-570			
AH19014	do 30	aluminum		
AH19024	do 92			
AH19034	62-156			
AH19044	124-222			
AH19054	220-570			



Pipe clamp



Catalog No.	Ø[mm]	material	cable range
AH020009IN	80-100	acid-resistant stainless steel	Ø8
AH020010IN	100-120		



Pipe clamp with connector



Catalog No.	Ø[mm]	material	cable range
AH020011IN	80-100	acid-resistant stainless steel	Ø8
AH020012IN	100-120		



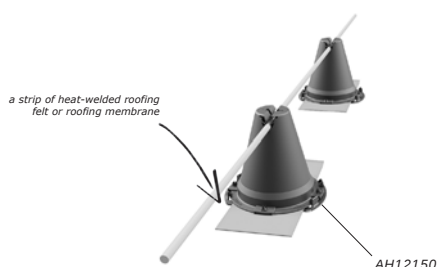
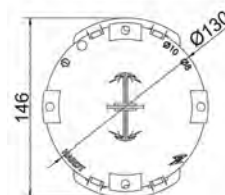
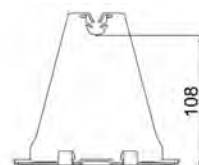
PLASTIC HOLDERS

Holder in plastic



Catalog No.	material	cable range	weight
AH020001TW	plastic	Ø 8-10mm	0,1 kg

Fastening to the substrate with a strip of membrane / roof felt by gluing.
Holder without bottom and without base, with product AH 12150 included.

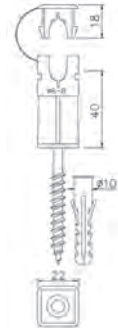


Post with wall plug



catalog No.	material	cable range	pin
AH29020...	plastic electro galvanized steel	Ø 8mm	Ø 10x50mm

* to choose the color, add a letter to the last digit of the catalog number:
B – brown
C – brick
A – black



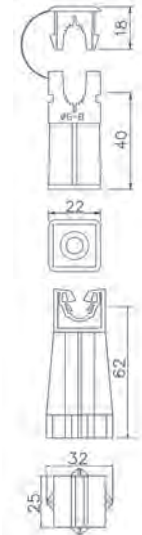
Post



catalog No.	material	cable range
AH29010...	plastic	Ø 8mm

catalog No.	material	cable range	thread
AH29060...	plastic	Ø 8mm	M6

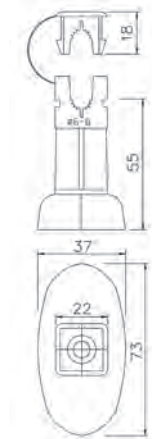
* to choose the color, add a letter to the last digit of the catalog number:
B – brown
C – brick
A – black



Post with a ceramic base



catalog No.	material	cable range	color of the base
AH29040	plastic ceramics	Ø 8mm	brick
AH29070			brown

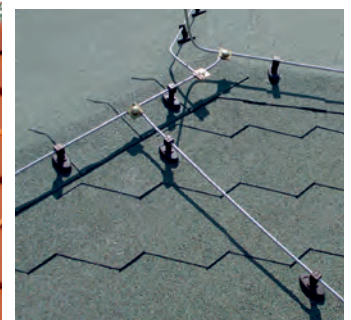
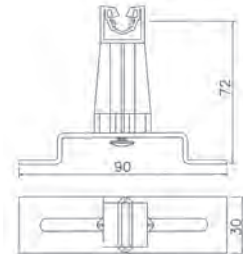


Post with a steel base



catalog No.	material	cable range	bolts
AH29061...	plastic electro galvanized steel	Ø 8mm	1xM6x10

* to choose the color, add a letter to the last digit of the catalog number:
B – brown
C – brick
A – black



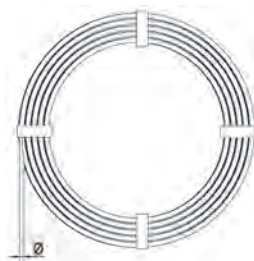
LIGHTNING CONDUCTORS

ROUND CONDUCTORS

Lightning protection conductor – wire



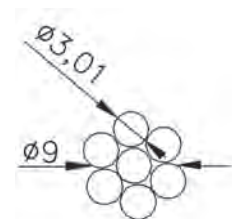
catalog No.	Ø [mm]	converter	material	section [mm ²]
AH22021	8	0.4 kg/m	hot-dip galvanized steel	50
AH22031	10	0.62 kg/m		78
AH22022	8	0.448 kg/m	Cu	50
AH22032	10	0.7 kg/m		78
AH22023	8	0.4 kg/m	INOX	50
AH22024	8	7.5mb/kg	Al	50
AH22034	10	4.75 mb/kg		78



Lightning conductor – wire



catalog No.	material	section [mm ²]
AH22044	Al	50

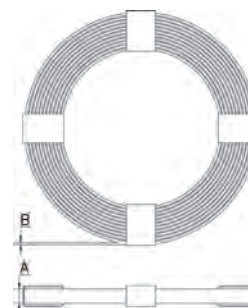


FLAT CABLES

Lightning protection conductor – tape



catalog No.	A x B [mm]	converter	material
AH23021	25x4	0.79 kg/m	hot-dip galvanized steel
AH23041	30x4	0.94 kg/m	
AH23061	40x4	1.26 kg/m	
AH23071	50x4	1.573 kg/m	
AH23022	25x4	0.9 kg/m	Cu
AH23042	30x4	1.07 kg/m	
AH23053	30x3.5	0.82 kg/m	INOX



STRAIGHTENERS

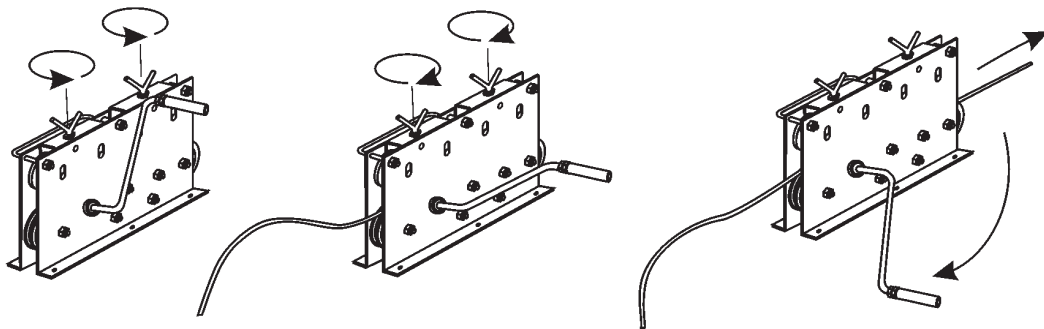
they are used for straightening
grounding wire
and the tape iron

STRAIGHTENERS WITH MANUAL DRIVE

- 7-roller straightener with manual drive



catalog No.	cable range	material	weight [kg]
AH040001OC	Ø 8-10mm tape 20x3 - 40x4	electro galva- nized steel	~ 11



STRAIGHTENER WITH ELECTRIC DRIVE

- 9-roller straightener with electric drive



catalog No.	cable range	material	weight [kg]
AH24051	Ø 8-10mm tape 20x3 - 30x4	electro galva- nized steel	25

Three-legged base with roller (folded)



catalog No.	material	weight [kg]
AH24091	electro galvanized steel	11

AHARDT
LIGHTNING PROTECTION SYSTEMS

group I
connectors

group II
lightning
holders

group III
lightning
conductors

group IV
straighteners

group V
lightning protection
pipes

group VI
earthings and
earthing elements

group VII
lightning protection
masts

group VIII
high voltage
cable

group IX
insulated rods
and brackets

group X
other products

LIGHTNING PROTECTION PIPES

they are used to protect the lightning conductors

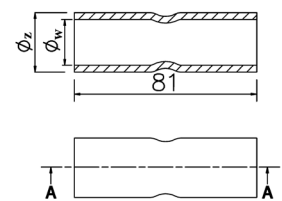
LIGHTNING PROTECTION PIPES

Lightning protection pipe

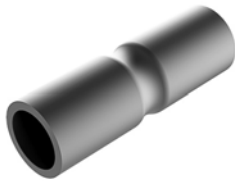


catalog No.	cable range	$\varnothing_z$ [mm]	$\varnothing_w$ [mm]	material
AH36010	Ø up to 12 mm	20	14	PCV
AH36020	tape up to 30	40	34	

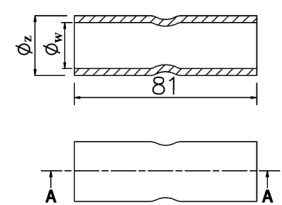
*Pipes are sold in sections 3 m in length.



Coupling for connecting lightning protection pipes



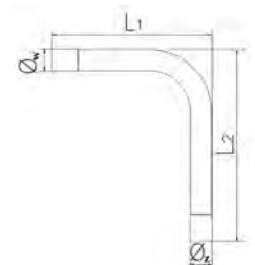
catalog No.	cable range	$\varnothing_z$ [mm]	$\varnothing_w$ [mm]	material
AH36030	Ø up to 12 mm	26	20	PCV
AH36040	tape up to 30	46	40	



Lightning pipe elbow



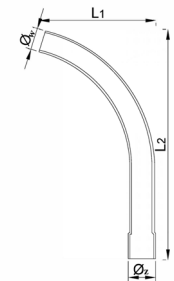
catalog No.	L1 [mm]	L2 [mm]	$\varnothing_z$ [mm]	$\varnothing_w$ [mm]	cable range	material
AH36050	125	200	26	23	Ø up to 12 mm	PCV
AH36060	170	255	46	44	tape up to 30	



Lightning pipe elbow 30°



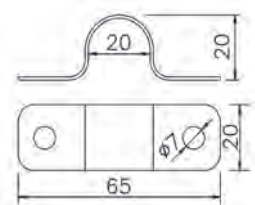
catalog No.	L1 [mm]	L2 [mm]	$\varnothing_z$ [mm]	$\varnothing_w$ [mm]	cable range	material
AH36080	160	360	26	23	Ø up to 12 mm	PCV
AH36090	170	420	46	44	tape up to 30	



Lightning pipe clamp Ø20



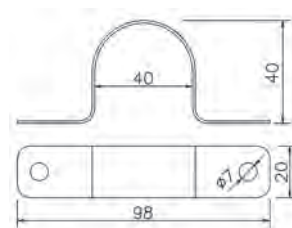
catalog No.	cable range	material
AH36011	Ø up to 20 mm	electro galvanized steel



Lightning pipe clamp Ø40



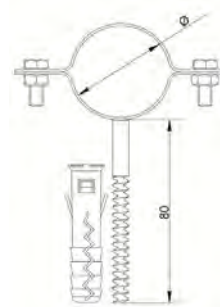
catalog No.	cable range	material
AH36021	Ø up to 40 mm	electro galvanized steel



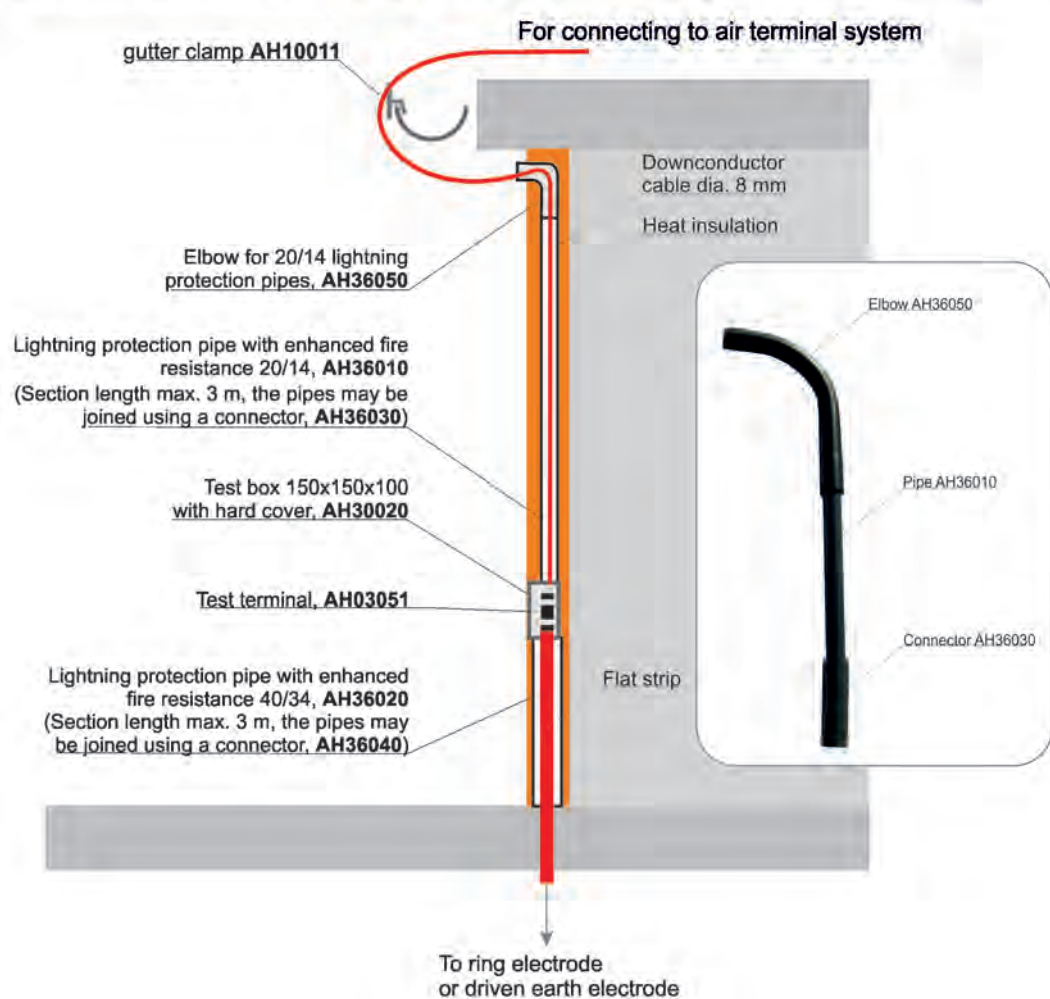
Clamp for lightning protection pipe - screw-in



catalog No.	material	cable range	bolts
AH050001OC	electro galvanized steel	Ø20mm	2xM6x16
AH050002OC	electro galvanized steel	Ø40mm	2xM6x16



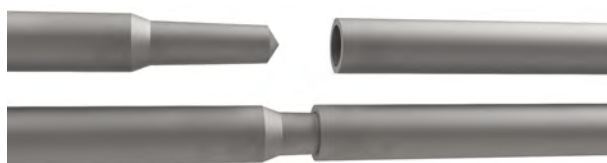
Conductor cable installation diagram in a downconductor pipe in heat insulation layer



EARTHINGS AND ELEMENTS TO GROUND

they are used to make vertical earthings, supply and dissipate lightning current in the ground

All hot-dip galvanized earthings (according to PN-EN ISO 1461) have a zinc layer not less than 70 μm . The masts on a concrete foundation are galvanized the same way. Earthing diameter $\varnothing 14, \varnothing 16, \varnothing 18$ and $\varnothing 20$ allows using ordinary impact hammers and does not require specialized driving equipment. The same diameter makes it possible to measure the resistance during driving and if necessary, tapping another earthing. Earthing length tolerance $+20\text{mm}/- 5\text{mm}$.



Advantages of our folded earthings (machine taper lock):

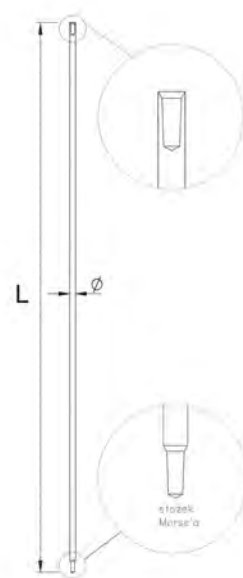
- **connection method** – machine taper, push-in, permanent mechanical and electrical connection clearly superior to threaded connection or one with a foreign filler (lead); lack of connectors reduces the price of the earthing
- **equal diameter** – possibility of measuring resistance during driving (measurement impossible while driving an earthing with connectors)
- **no separate tip** – reduces earthing price, enough for the most common applications; for very hard soils, we recommend using AH14031
- **ease of driving** – small diameters require ordinary impact hammers, no specialist driving equipment is needed

EARTHINGS

Earthing rod- Morse taper shank



catalog No.	$\varnothing$ [mm]	material	weight [kg]	L [mm]
AH14011	14	hot-dip galvanized steel	1,9	1500
AH14021	16		2,4	1500
AH14041	18		3	1500
AH14101	20		3,7	1500
AH25023	18	INOX	3	1500
AH25033	16		2,4	1500
AH25043	20		3,7	1500



Steel copper bonded earth rod



catalog No.	Ø [mm]	material	weight [kg]	L [mm]
AH060001STCU	16	steel copper bonded	2,4	1500

* upon request



Driving device for steel copper bonded rod with SDS tip



catalog No.	material	weight [kg]
AH060001ST	steel	0,5

* upon request



The driving stud stabilizer to embed forged rods



catalog No.	material	weight [kg]
AH060001TW	teflon	0,12

* upon request



Driving stud for forged rod



catalog No.	material	weight [kg]
AH060002ST	steel	0,06

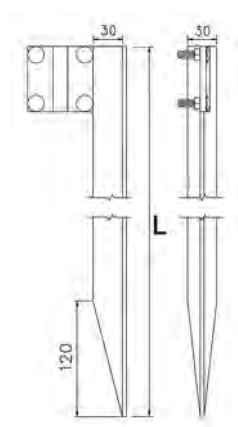
* upon request



Uniform earthing "T"



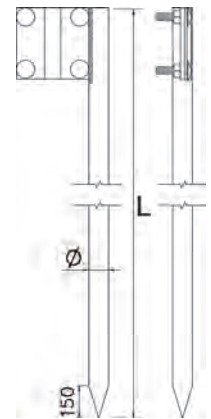
catalog No.	L [mm]	material	cable range	weight [kg]
AH14301	2000	hot-dip galvanized steel	tape up to 30 mm	3.8
AH14311	2700			5.8



Uniform earthing



catalog No.	L [mm]	Ø [mm]	material	cable range	weight [kg]
AH14321	2700	20	hot-dip galvanized steel	tape up to 30 mm	6.7
AH14331	2000	16			3.1
AH14341	2000	18			4
AH14351	2700	18			5.4

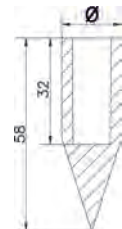


TIPS, MALLET, CONNECTIONS

Hard soil tip



catalog No.	earthing AH	material
AH14031	Ø 16-20mm	electro galvanized steel
AH060003OC	Ø 14mm	



Driving device with SDS tip



catalog No.	earthing AH	material
AH14161	Ø 16-20mm	selectro galvanized steel
AH060001OC	Ø 14mm	



Hand mallet for earthings



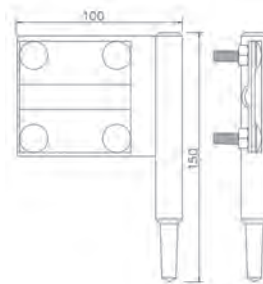
catalog No.	earthing AH	material
AH14071	Ø 16-20mm	electro galvanized steel
AH060002OC	Ø 14mm	



Connection with a cross connector



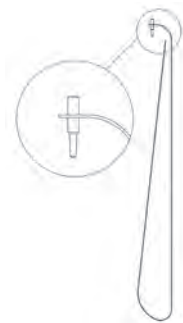
catalog No.	earthing	material	cable range
AH14151	Ø 16-20 mm	electro galvanized steel	tape up to 30 mm



Connection with welded tape



catalog No.	earthing	material	cable range
AH14061	Ø 16-20 mm	electro galvanized steel	tape up to 30 mm length 3000 mm

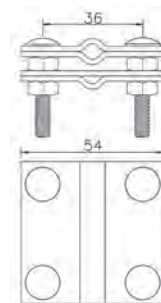


EARTHING CONNECTORS

4-plate earth connector, small



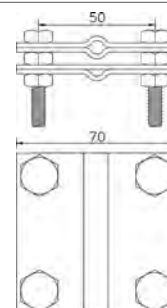
catalog No.	material	cable range	bolts
AH14231	electro galvanized steel	Ø 8-10 mm Ø rod 14-20 mm tape up to 30 min	4xM6x40
AH1423OG	hot-dip galvanized steel		
AH14234	Al/INOX		



4-plate earth connector, large



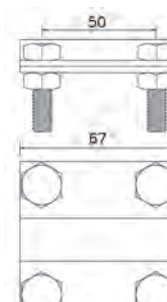
catalog No.	material	cable range	bolts
AH14241	electro galvanized steel	Ø 8-10 mm Ø rod 14-20 mm tape up to 40 min	4xM8x40
AH1424OG	hot-dip galvanized steel		
AH14243	INOX		
AH14244	Al/INOX		



2-plate earth connector, rod-tape



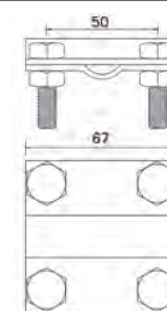
catalog No.	material	cable range	bolts
AH01211	electro galvanized steel	Ø rod 14-20 mm tape up to 40 min	4xM8x25
AH0121OG	hot-dip galvanized steel		
AH01212	Cu/Mo		
AH01214	Al/INOX		
AH01213	INOX		



2-plate earth connector, rod-wire



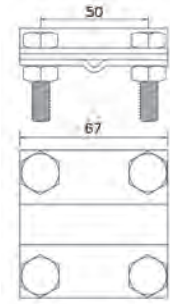
catalog No.	material	cable range	bolts
AH01221	electro galvanized steel	Ø 8-10 mm Ø rod 14-20 mm tape up to 40 min	4xM8x25
AH0122OG	hot-dip galvanized steel		
AH01222	Cu/Mo		
AH01224	Al/INOX		
AH01223	INOX		



❖ 3-plate earth connector



catalog No.	material	cable range	bolts
AH01231	electro galvanized steel	Ø 8-10mm Ø rod 14-20 mm tape up to 40 mm	4xM8x30
AH0123OG	hot-dip galvanized steel		
AH01234	Al/INOX		
AH01233	INOX		



AHARDT
LIGHTNING PROTECTION SYSTEMS

group I
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straighteners

group V
lightning protection
pipes

group VI
earthing and
earthing elements

group VII
lightning protection
masts

group VIII
high voltage
cable

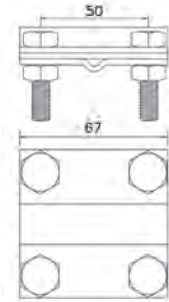
group IX
insulated rods
and brackets

group X
other products

❖ 3-plate earth connector



catalog No.	material	cable range	bolts
AH01232	copper, brass, electro-galvanized steel, inox-bolts	Ø 8-10mm Ø rod 14-20 mm tape up to 40 mm	4xM8x30

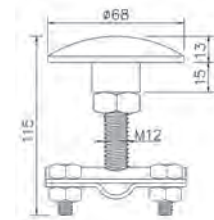


❖ COMPONENTS MOUNTED IN THE BUILDING'S REINFORCEMENT

❖ Mushroom



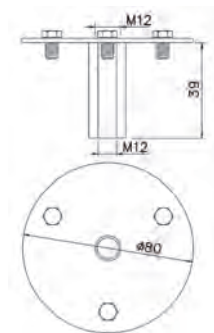
catalog No.	material	cable range	bolts
AH32011	electro galvanized steel	tape up to 30 mm	4xM8x16
AH3201OG	hot-dip galvanized steel		
AH32013	INOX		



❖ Ground connection



catalog No.	material	bolts
AH32031	electro galvanized steel	3xM5x16
AH3203OG	hot-dip galvanized steel	
AH32033	INOX	



❖ Threaded rod



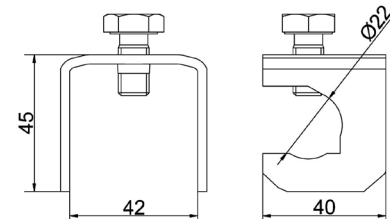
catalog No.	material
AH32041	electro galvanized steel
AH3204OG	hot-dip galvanized steel



❖ Connection clamp for reinforcement



catalog No.	material
AH060002OG	hot-dip galvanized steel

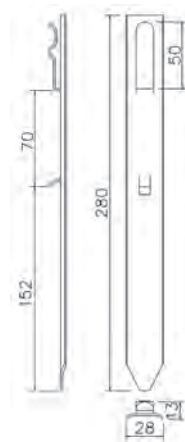


TAPE BRACKETS

Steel foundation tape bracket



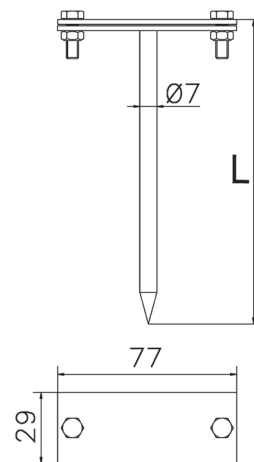
catalog No.	material	cable range
AH17011	electro galvanized steel	Ø 8-10mm tape up to 30 min
AH17010G	hot-dip galvanized steel	
AH17012	Cu	
AH17013	INOX	



Universal knock in tape bracket



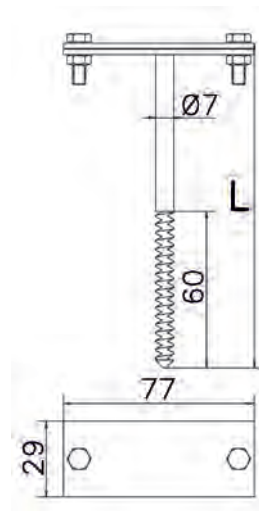
catalog No.	L [cm]	material	cable range	bolts
AH06061	8	electro galvanized steel	tape up to 50 mm	2xM5x16
AH06071	12			
AH06081	18			
AH06060G	8	hot-dip galvanized steel		
AH06070G	12			
AH06080G	18			
AH06062	8	Cu/Mo		
AH06072	12			
AH06082	18			
AH06063	8	INOX		
AH06073	12			
AH06083	18			



Universal screwed in tape bracket



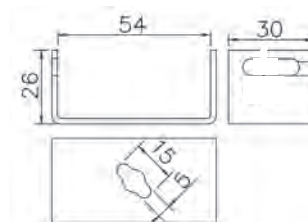
catalog No.	L [cm]	material	cable range	bolts
AH06171	8	electro galvanized steel	tape up to 50 mm	2xM5x16
AH06181	12			
AH06391	18			
AH06170G	8	hot-dip galvanized steel		
AH06180G	12			
AH06390G	18			
AH06172	8	Cu/Mo		
AH06182	12			
AH06392	18			
AH06173	8	INOX		
AH06183	12			
AH06393	18			



Steel tape bracket



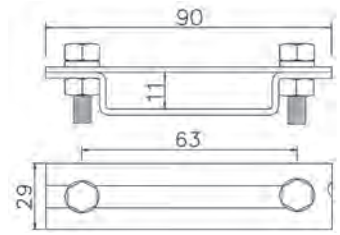
catalog No.	material	cable range
AH26011P	electro galvanized steel	tape up to 50x5mm
AH26011	hot-dip galvanized steel	tape up to 50x4mm
AH26010G	hot-dip galvanized steel	
AH26012	Cu/Mo	
AH26013	INOX	



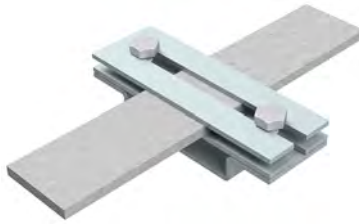
Steel tape holder, 2-plate



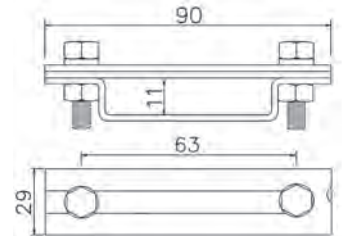
catalog No.	material	cable range	bolts
AH26031	electro galvanized steel	tape up to 50 mm	2xM6x20
AH2603OG	hot-dip galvanized steel		
AH26032	Cu/Mo		
AH26033	INOX		



Steel tape holder, 3-plate



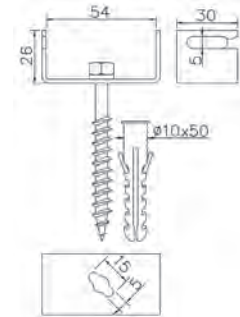
catalog No.	material	cable range	bolts
AH26051	electro galvanized steel	tape up to 50 mm	2xM6x20
AH2605OG	hot-dip galvanized steel		
AH26052	Cu/Mo		
AH26053	INOX		



Steel tape holder with wall plug



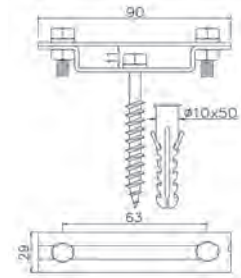
catalog No.	material	cable range
AH26021	electro galvanized steel	tape up to 50 mm
AH2602OG	hot-dip galvanized steel	
AH26022	Cu/Mo	
AH26023	INOX	



Steel tape holder with wall plug, 2-plate



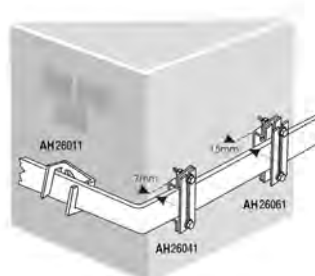
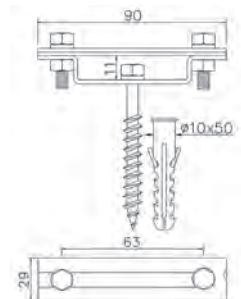
catalog No.	material	cable range
AH26041	electro galvanized steel	tape up to 50 mm
AH2604OG	hot-dip galvanized steel	
AH26042	Cu/Mo	
AH26043	INOX	



Steel holder bracket with wall plug, 3-plate



catalog No.	material	cable range
AH26061	electro galvanized steel	tape up to 50 mm
AH2606OG	hot-dip galvanized steel	
AH26062	Cu/Mo	
AH26063	INOX	



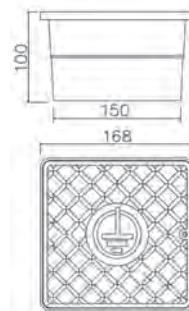
CONTROL BOXES

Wall-mounted control boxes



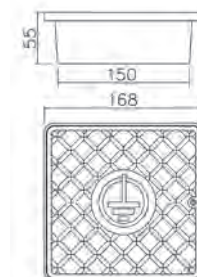
catalog No.	material	color
AH30020...	plastic	grey white

* to choose the color, add a letter to the last digit of the catalog number:
B – white
S – grey



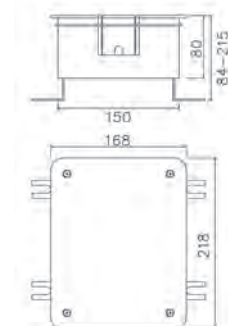
catalog No.	material	color
AH30040...	plastic	grey white

* to choose the color, add a letter to the last digit of the catalog number:
B – white
S – grey



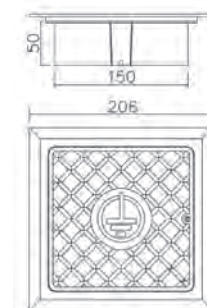
catalog No.	material	color
AH30050	plastic	white/ orange

* one color available



catalog No.	material	color
AH30080...	plastic	grey white

* to choose the color, add a letter to the last digit of the catalog number:
B – white
S – grey



Ground control boxes



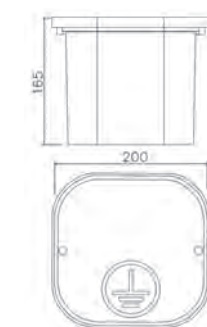
catalog No.	material	color
AH30060	plastic	grey

* one color available



catalog No.	material	color
AH30070	plastic	grey

* one color available



EQUIPOTENTIAL CONNECTIONS

Grounding bands



catalog No.	mounting range	cable range [mm ²]	material
AH060001INOC	1/8-4 cala	from 2,5 to 10	stainless steel - band galvanised steel
AH060002INOC	1/8-6 cala	from 2,5 to 16	
AH060001IN	1/8-4 cala	from 2,5 to 10	acid-resistant stainless steel

Equipotential rails



catalog No.	cables	material
AHK1309	7x do 25mm ² 1x 8-10mm 1x do 30mm	Mo nickel-coated steel galvanized

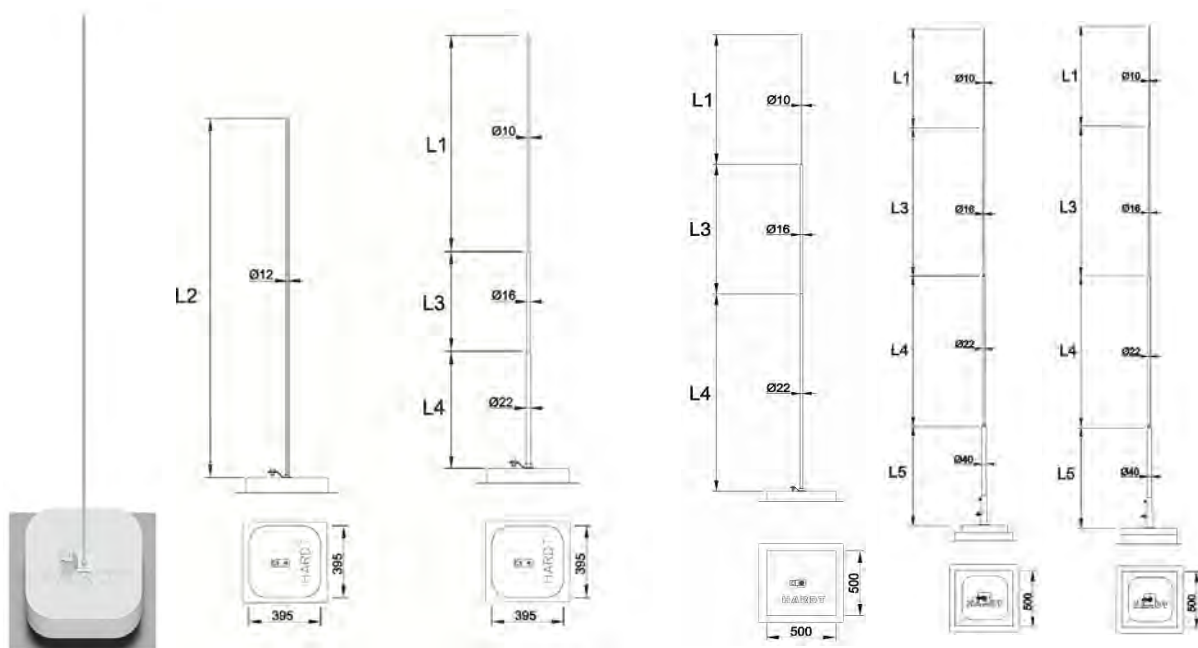
catalog No.	cables	material
AHSWPG1	10x 4-35mm ² 1x 30x4mm	Mo steel galvanized

AIR TERMINATION SYSTEM

they are used to protect devices and metal roof elements by absorbing direct lightning current and discharging it into the grid of terminals

FREE-STANDING VERTICAL AIR TERMINALS

Free-standing vertical air terminal

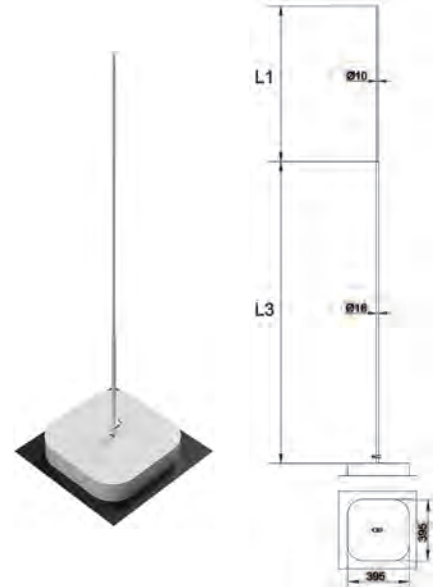


catalog No.	height [mm]	vertical air terminal components					concrete [pc]	material	weight [kg]	wind zone		
		L1 (Ø10) [mm]	L2 (Ø12) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	L5 (Ø40) [mm]						
AH40001	1000	-	1000	-	-	-	1x24	Al (spire) steel galvanized	24,4	I,II,III		
AH40011	1500	-	1500	-	-	-			24,6			
AH40021	2000	-	2000	-	-	-			24,8			
AH40031	2500	1000	-	1000	500	-			25,3			
AH40041	3000	1000	-	1000	1000	-			25,8			
AH40271	3500	1000	-	1000	1500	-	1x42	weight concrete	44,3			
AH40281	4000	1000	-	1000	2000	-			44,8			
AH070001AL	4500	1000	-	1500	1500	500			1x42 1x24		rug made of rubber	53
AH070002AL	5000	1000	-	1500	1500	1000						78
AH070003AL	5500	1000	-	1500	1500	1500						97
AH40003	1000	-	1000	-	-	-	1x24	INOX weight concrete	24,9	I,II,III		
AH40013	1500	-	1500	-	-	-			25,4			
AH40023	2000	-	2000	-	-	-			25,8			
AH40033	2500	1000	-	1000	500	-			27,7			
AH40043	3000	1000	-	1000	1000	-			29,2			
AH40273	3500	1000	-	1000	1500	-	1x42	rug made of rubber	48,7			
AH40283	4000	1000	-	1000	2000	-			50,2			

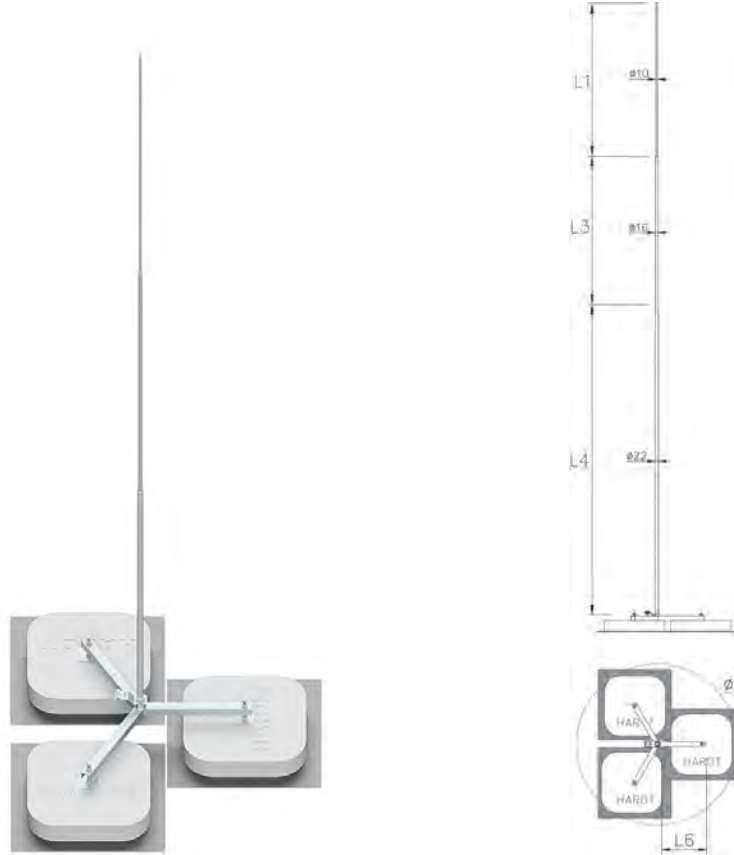
Free-standing vertical air terminal, wedge - **NEW!**

catalog No.	height [mm]	vertical air terminal components		material	wind zone
		L1 (Ø10) [mm]	L3 (Ø16) [mm]		
AH070004AL	1000	-	1000	aluminum	I,II,III
AH070005AL	1500	1000	500	steel galvanized	
AH070006AL	2000	1000	1000	weight concrete	
AH070007AL	2500	1000	1500	rug made of rubber	
AH070008AL	3000	1000	2000		

* installation using a wedge for the weight



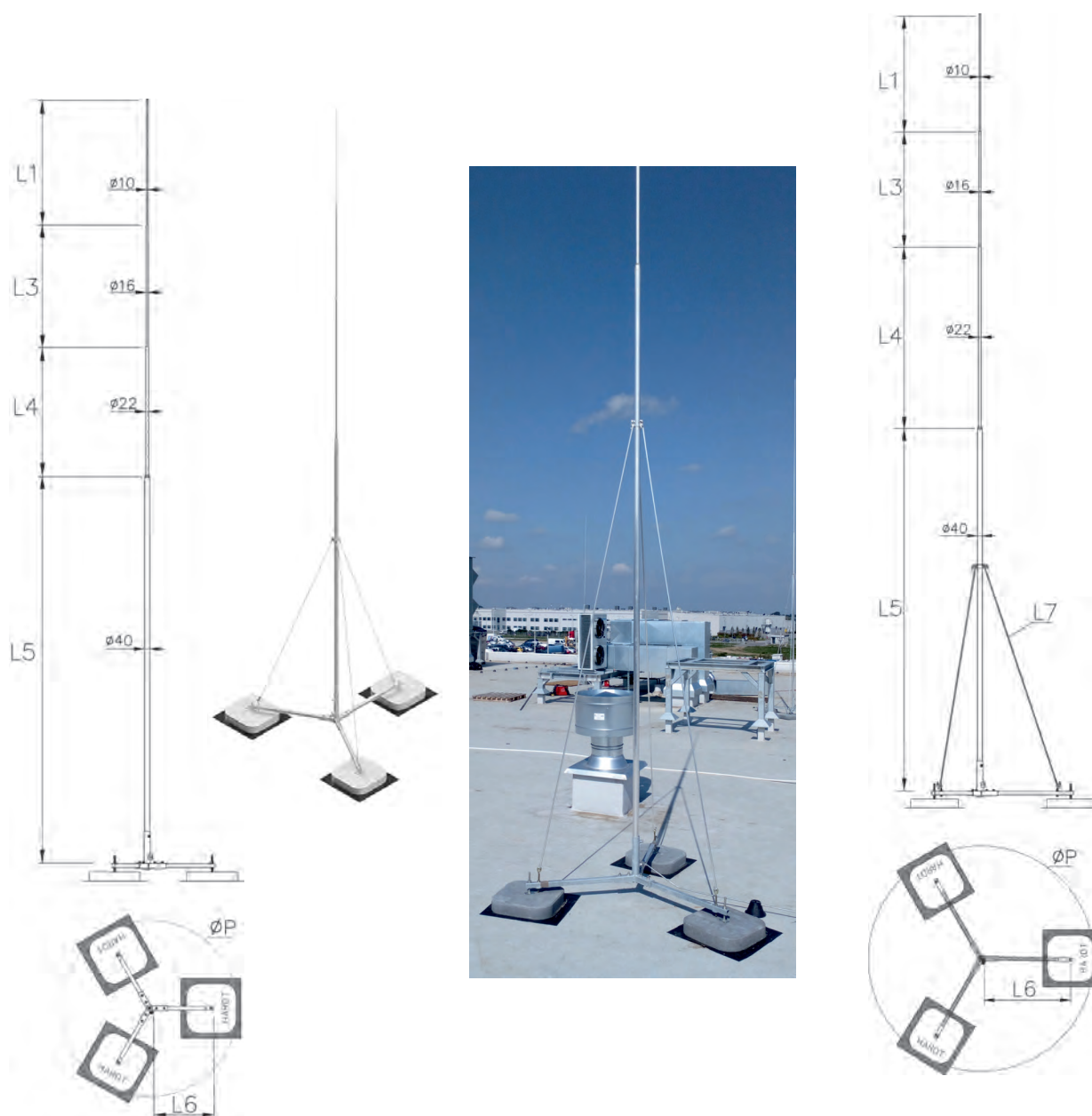
Free-standing vertical air terminal on a small tripod



catalog No.	height [mm]	vertical air terminal components				ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	L6 (leg) [mm]					
AH40741	2500	1000	1000	500	300	1040	3x24	Al (spire)	75,8	I,II,III
AH40751	3000	1000	1000	1000				galvanized steel	76,3	
AH40761	3500	1000	1000	1500				weight concrete	76,8	
AH40771	4000	1000	1000	2000				rug made of rubber	77,3	
AH40743	2500	1000	1000	500	300	1040		INOX weight concrete rug made of rubber	78,2	I,II,III
AH40753	3000	1000	1000	1000					79,7	
AH40763	3500	1000	1000	1500					81,2	
AH40773	4000	1000	1000	2000					82,7	

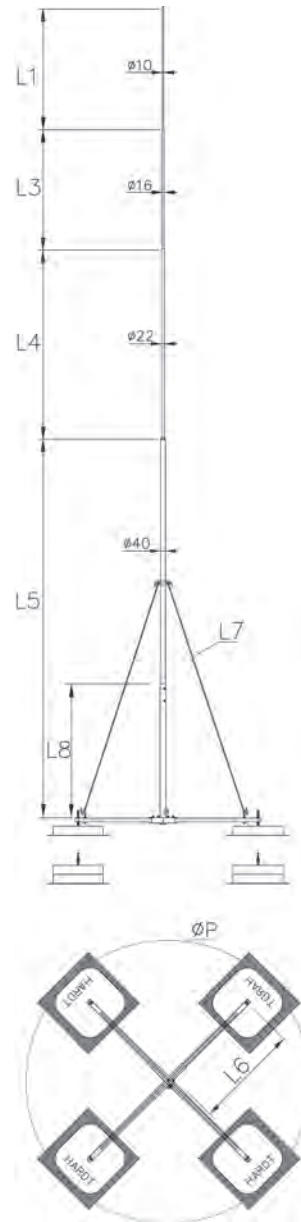


Free-standing vertical air terminal on a tripod



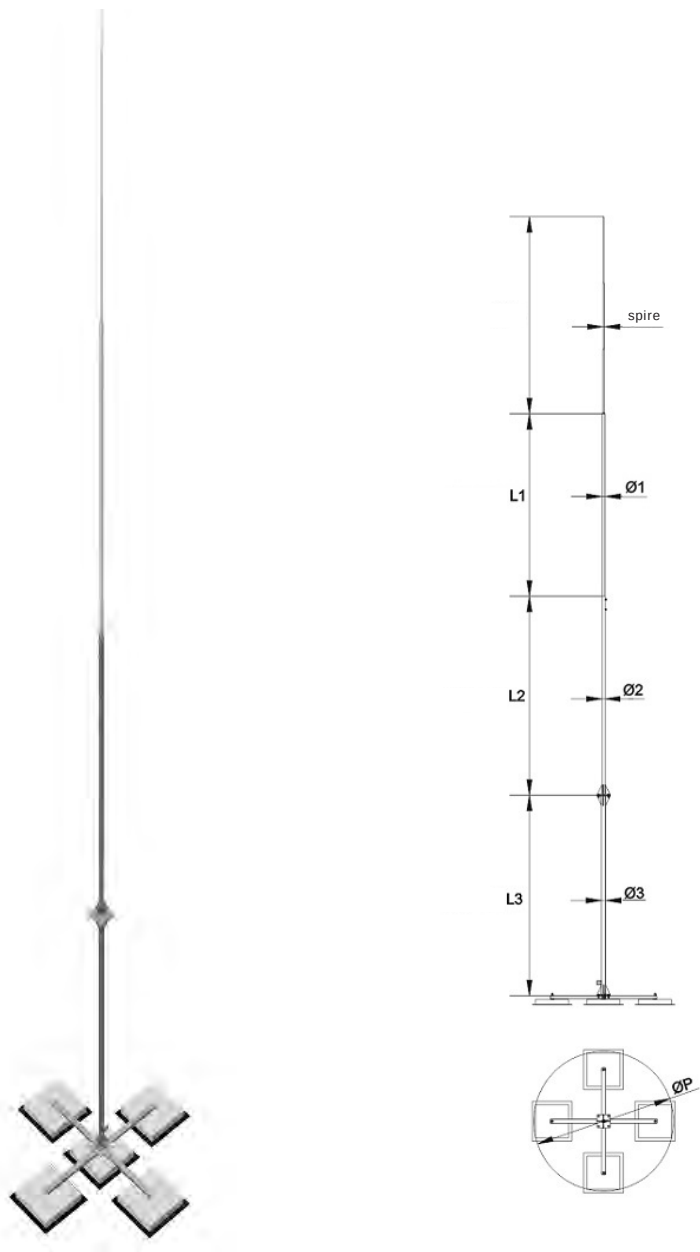
catalog No.	height [mm]	vertical air terminal components						ØP [mm]	concrete weight [pc/kg]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	L5 (Ø40) [mm]	L6 (noga) [mm]	L7 (brace) Ø10 [mm]					
AH40081	4500	1000	1500	1500	500	500	-	1430	3x24	aluminium (iglica, rura wsporcza)	83,2	I, II, III
AH40091	5000	1000	1500	1500	1000	500	-				86,0	
AH40101	5500	1000	1500	1500	1500	500	-				86,5	
AH40111	6000	1000	1000	2000	2000	500	-				87	
AH40121	6500	1000	1000	1500	3000	750	2000	1930		obciążnik betonowy	95,8	
AH40131	7000	1000	1000	2000	3000	750	2000				96,3	
AH40401	8000	1000	1000	2000	4000	1000	3000	2400		dywanik gumowy	103	I

Free-standing vertical air terminal with four-legged support



catalog No.	height [mm]	vertical air terminal components							ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 Ø10 [mm]	L3 Ø16 [mm]	L4 Ø22 [mm]	L5 Ø40 [mm]	L6 (leg) [mm]	L7 (brace) Ø10 [mm]	L8 (quadripod) [mm]					
AH40141	8000	1000	1000	2000	4000	750	3000	-	1930	4x24	Al (spire, support tube)	125,5	I, II, III
AH40151	9000	1000	1000	2000	4000	1000	3000	2000	2400	8x24	steel galvanized	230,7	
AH40161	10000	1000	1000	2000	4000	1000	3000	3000			weight concrete	236,8	
AH40411	9000	1000	1000	2000	4000	1000	3000	2000	2400	4x24	rug made of rubber	134,7	I
AH40421	10000	1000	1000	2000	4000	1000	3000	3000				140,8	

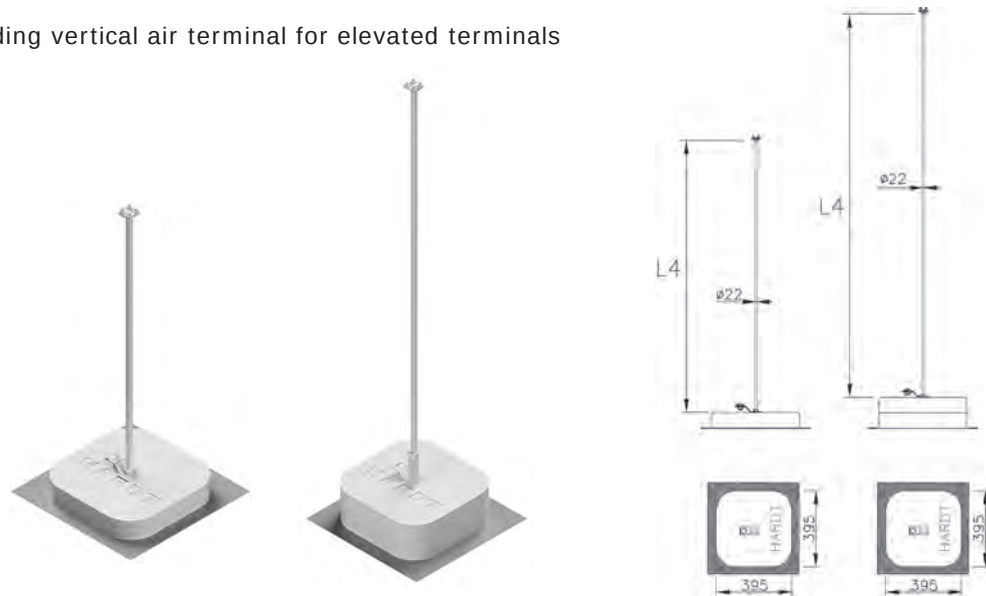
Free-standing vertical air terminal with four-legged support



catalog No.	height [mm]	vertical air terminal components					concrete weight [pc]	material	weight [kg]	wind zone
		pipe seg- ment L4 [mm]	pipe seg- ment L3 [mm]	pipe seg- ment L2 [mm]	pipe seg- ment L1 [mm]	spire [mm]				
AH070001OGAL	12000	-	3000	3000	3000	3000	5x24	steel galvanized weight concrete rug made of rubber	285	I,II,III

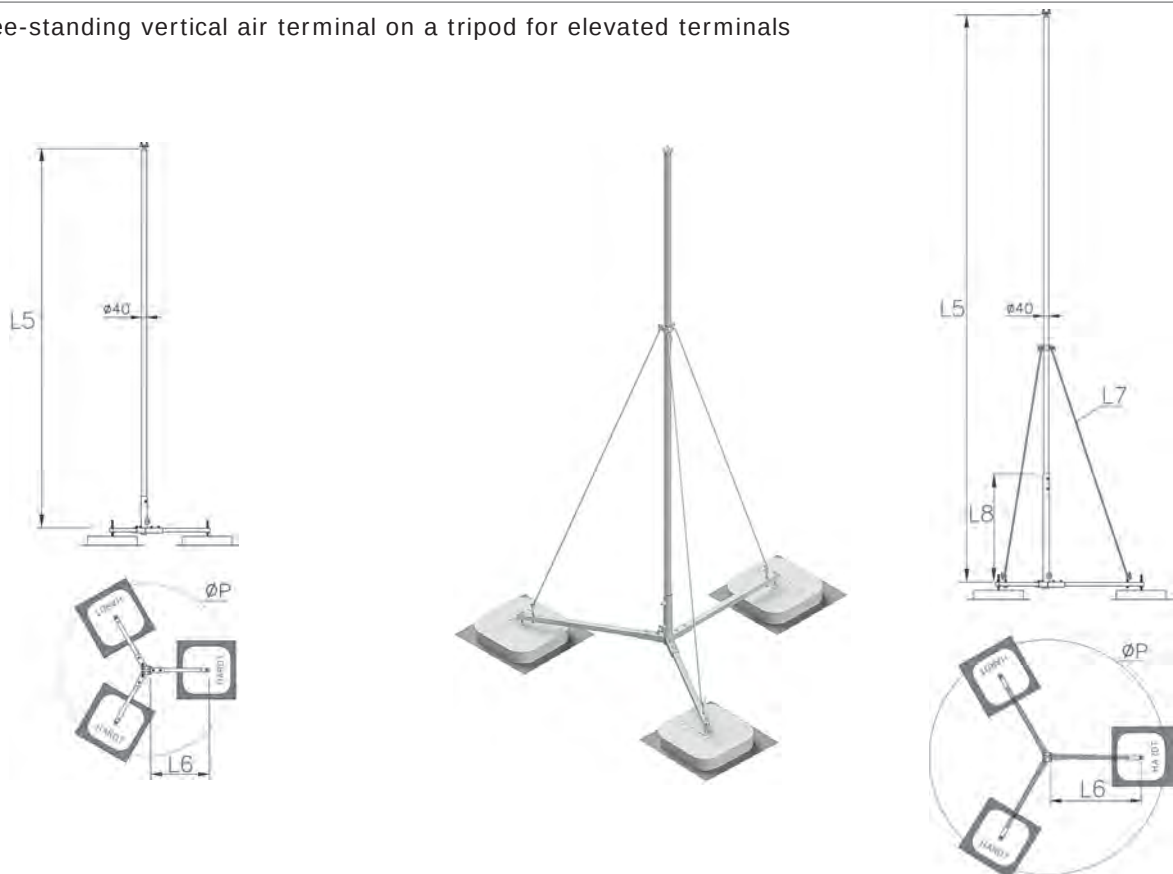
❖ FREE-STANDING VERTICAL AIR TERMINALS FOR ELEVATED TERMINALS

❖ Free-standing vertical air terminal for elevated terminals



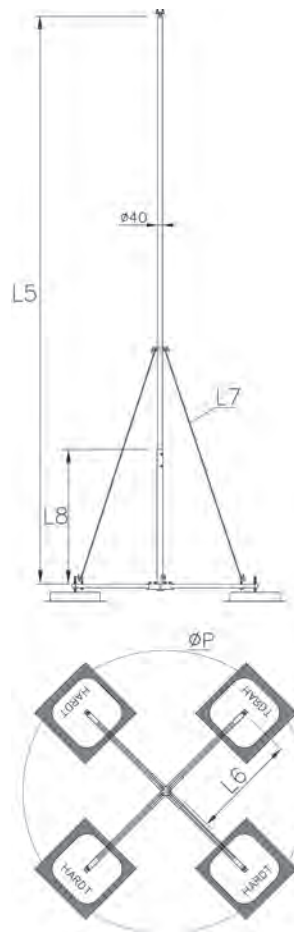
catalog No.	height [mm]	vertical air terminal components	concrete weight [pc]	material	weight [kg]	wind zone
		L4 (ø22) [mm]				
AH40201	1000	1000	1x24	Al (spire) galvanized steel weight concrete	25	I, II, III
AH40211	1500	1500	2x24	rug made of rubber	49,5	

❖ Free-standing vertical air terminal on a tripod for elevated terminals



catalog No.	height [mm]	vertical air terminal components				ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L5 (Ø40) [mm]	L6 (leg) [mm]	L7(brace) Ø10 [mm]	L8 (tripod) [mm]					
AH40221	2000	2000	500	-	-	1430	3x24	Al (spire, support tube) galvanized steel weight concrete rug made of rubber	80	I,II,III
AH40231	3000	3000	750	2000	-	1930			87,5	
AH40241	4000	4000		2000	-				89	
AH40251	5000	4000		3000	2000				99,9	

Free-standing vertical air terminal with four-legged support for elevated terminals

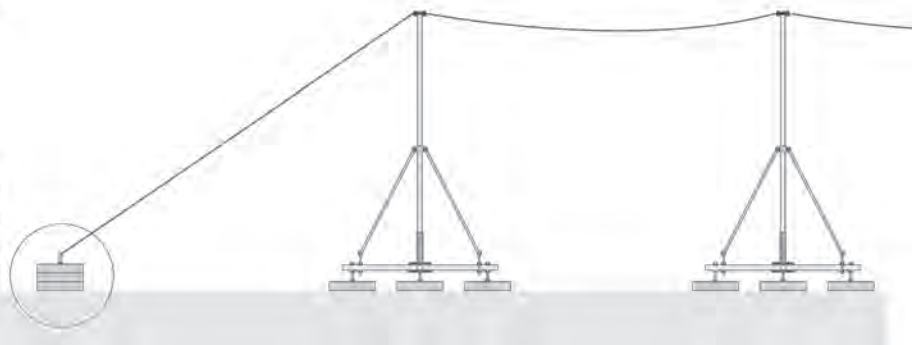
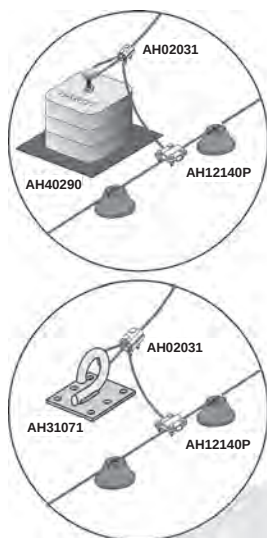


catalog No.	height [mm]	vertical air terminal components				ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L5 (Ø40) [mm]	L6 (leg) [mm]	L7 (brace) Ø10 [mm]	L8 (quadripod) [mm]					
AH40261	6000	4000	750	2000	3000	1930	4x24	Al (spire, support tube) galvanized steel weight concrete rug made of rubber	131,8	I,II,III
AH42271	7000	4000	1000	4000	4000	2400			137,8	

*In order to reduce the load on the vertical air terminals and stiffen the masts for elevated terminals you can apply::

- stay attached to the weight (**AH40290**)
- hook handle (**AH31071**) screwed to the roof, attic or structural elements.

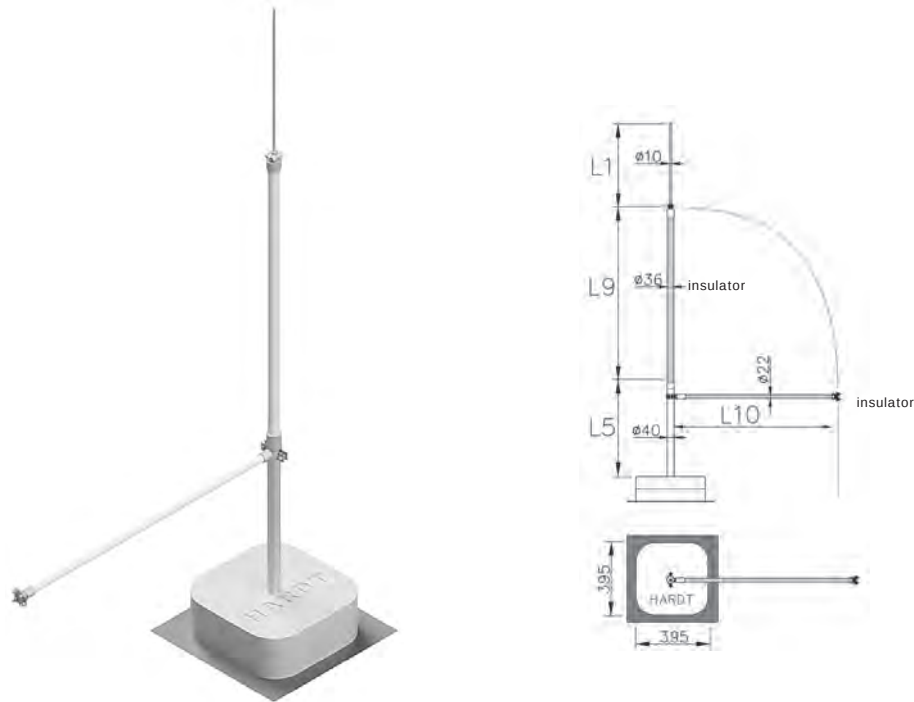
The stay should be connected to the nearest terminal system.





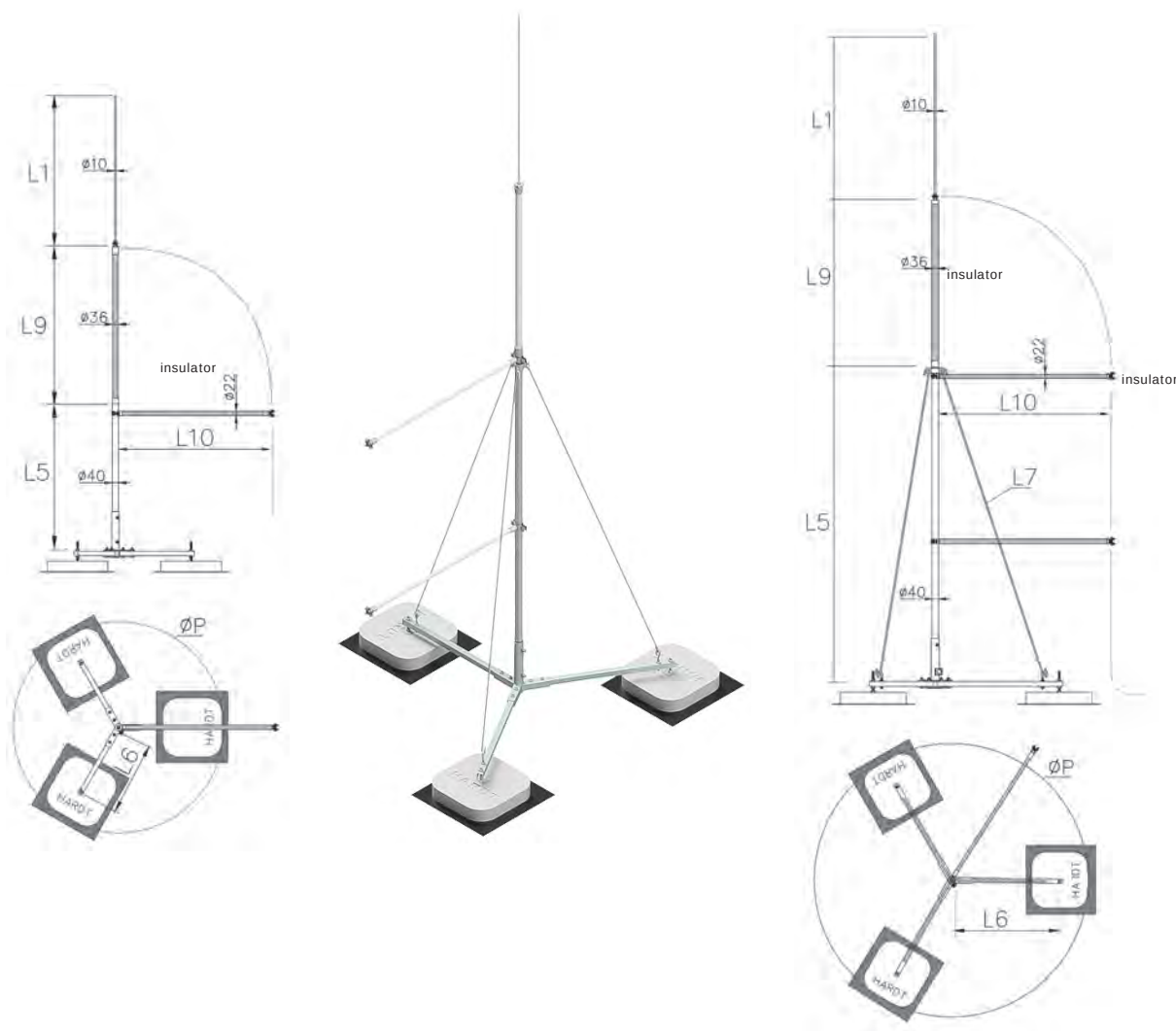
❖ INSULATED FREE-STANDING VERTICAL AIR TERMINALS

- ❖ Insulated free-standing vertical air terminal



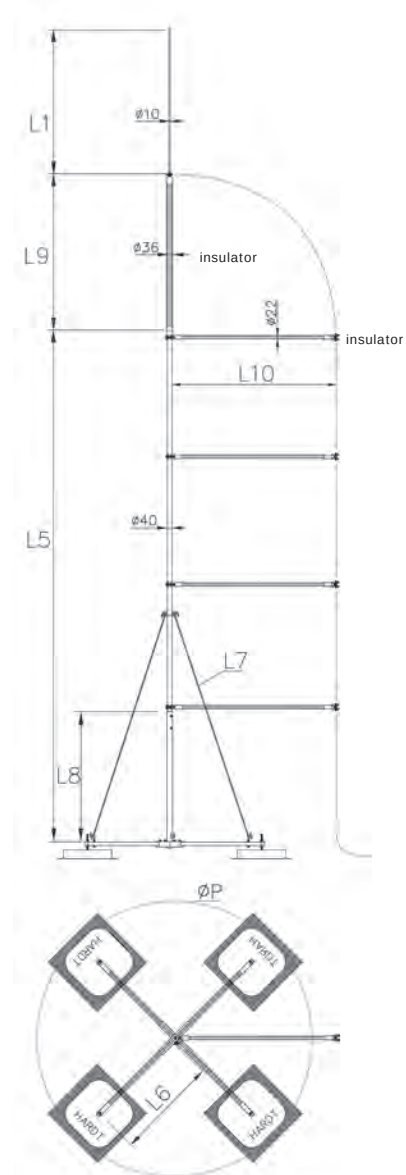
catalog No.	height [mm]	vertical air terminal components				concrete weight [pc]	material	weight [kg]	wind zone
		L1 (ø10) [mm]	L5 (ø40) [mm]	L9 insulator (ø36) [mm]	L10 insulator (ø22) [mm]				
AH40431	2000	500	500	1000	1000	2x24	Al (spire, support tube) galvanized steel fiberglass (insulator) concrete weight rubber rug	52,3	I,II,III

Insulated free-standing vertical air terminal on a tripod



catalog No.	height [mm]	vertical air terminal components						ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L6 (leg) [mm]	L7 (brace) Ø10 [mm]	L9 insulator(Ø36) [mm]	L10 insulator(Ø22) [mm]					
AH40441	3000	1000	1000	500	-	1000	1000	1430	3x24	Al (spire, support tube)	82,3	I,II,III
AH40451	4000	1000	2000	750	2000	1000	1000 (2 pcs)	1930		galvanized steel	90,8	
AH40461	5000	1000	3000	750	2000	1000	1000 (3 pcs)			fiberglass (insulator)	93,8	
AH40291	6000	1000	4000	750	2000	1000	1000 (4 pcs)			weight concrete	95,8	I
										rug made of rubber		

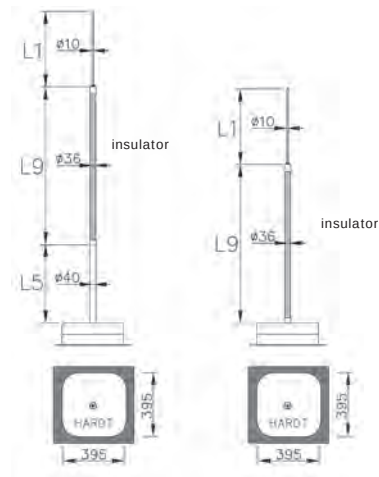
Insulated free-standing vertical air terminal with four-legged support



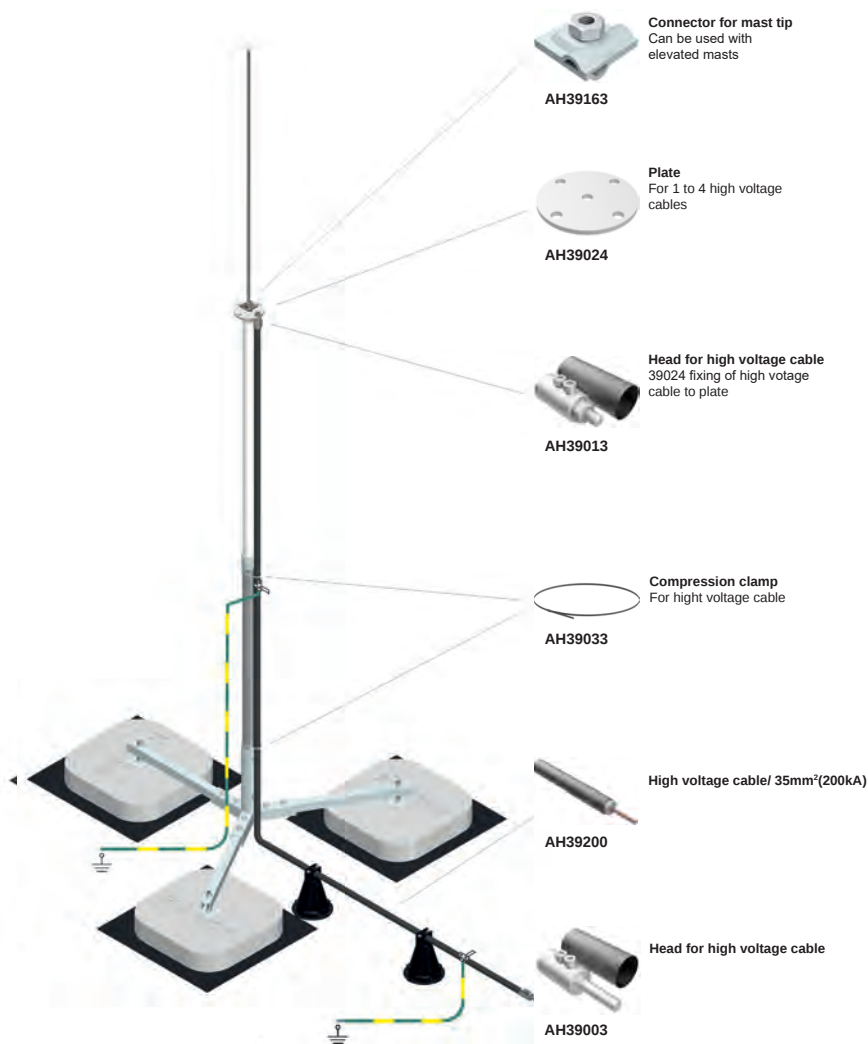
no. catalog	height [mm]	vertical air terminal components							ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L6 (leg) [mm]	L7 (brace)Ø10 [mm]	L8 (quadri- pod) [mm]	L9 insulator Ø36 [mm]	L10 insulator Ø22 [mm]					
AH40471	6000	1000	4000	750	2000	-	1000	1000 (4 pcs)	1930	4x24	Al (spire, sup- port tube)	120,8	I,II,III
AH40481	7000	1000	4000	750	2000	2000	1000	1000 (5 pcs)			galvanized steel	130,8	
AH40491	8000	1000	4000	750	3000	3000	1000	1000 (6 pcs)			fiberglass (insulator) weight concrete rug made of rubber	137,8	

FREE-STANDING VERTICAL AIR TERMINALS INSULATED FOR HIGH-VOLTAGE CABLE

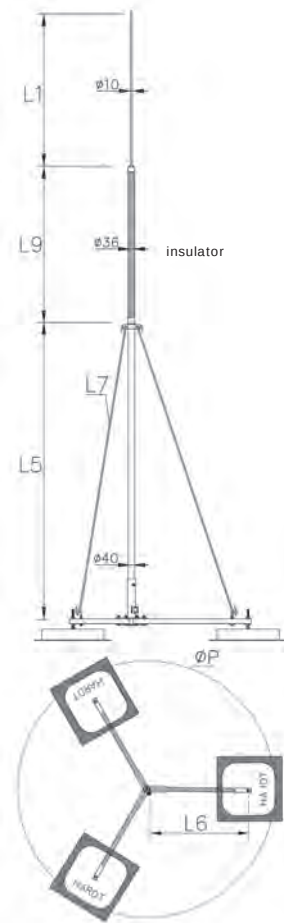
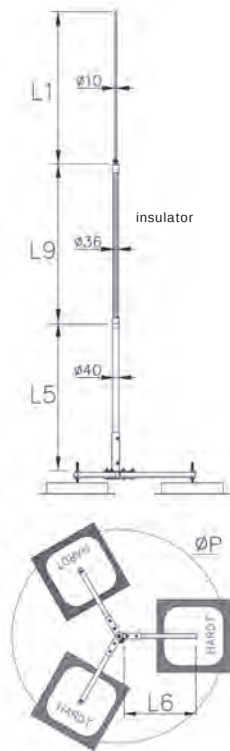
Insulated free-standing vertical air terminal for high-voltage cable



catalog No.	height [mm]	vertical air terminal components			concrete weight [pc]	material	weight [kg]	wind zone
		L1 (ø10) [mm]	L5 (ø40) [mm]	L9 insulator (ø36) [mm]				
AH40501	1500	500	-	1000	2	Al (spire, support tube) galvanized steel fiberglass (insulator) concrete weight rubber rug	49,5	I,II,III
AH40511	2000	500	500	1000			50,3	

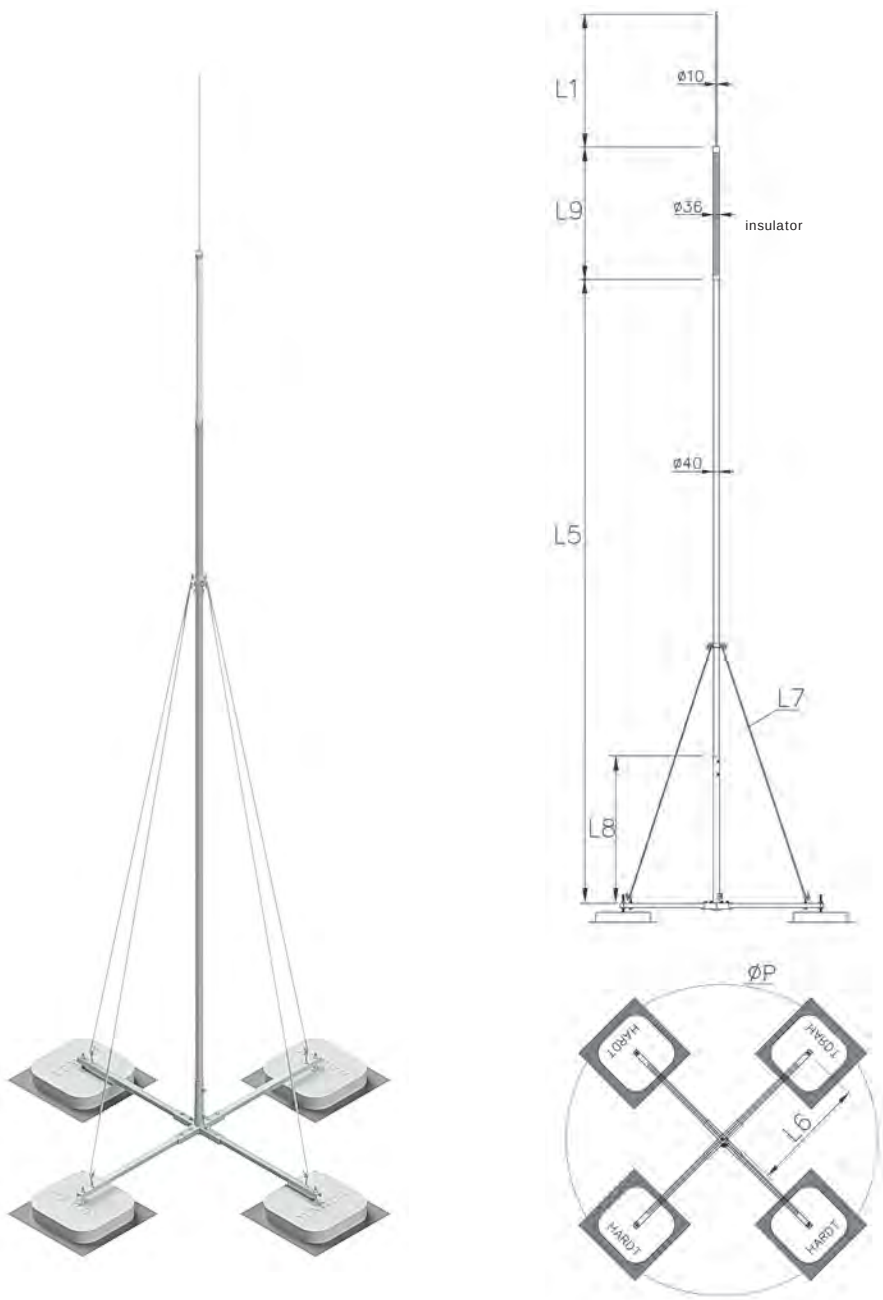


Free-standing vertical air terminal insulated for high voltage cable on a tripod



catalog No.	height [mm]	vertical air terminal components					ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L6 (leg) [mm]	L7 (brace) Ø10 [mm]	L9 insulator (Ø36) [mm]					
AH40521	2000	500	500	500	-	1000	1430	3x24	Al (spire, support tube)	78,3	I,II,III
AH40531	3000	1000	1000	500	-	1000			galvanized steel	79,5	
AH40541	4000	1000	2000	750	2000	1000	1930		weight concrete	86,7	
AH40551	5000	1000	3000	750	2000	1000			rug made of rubber	88,2	

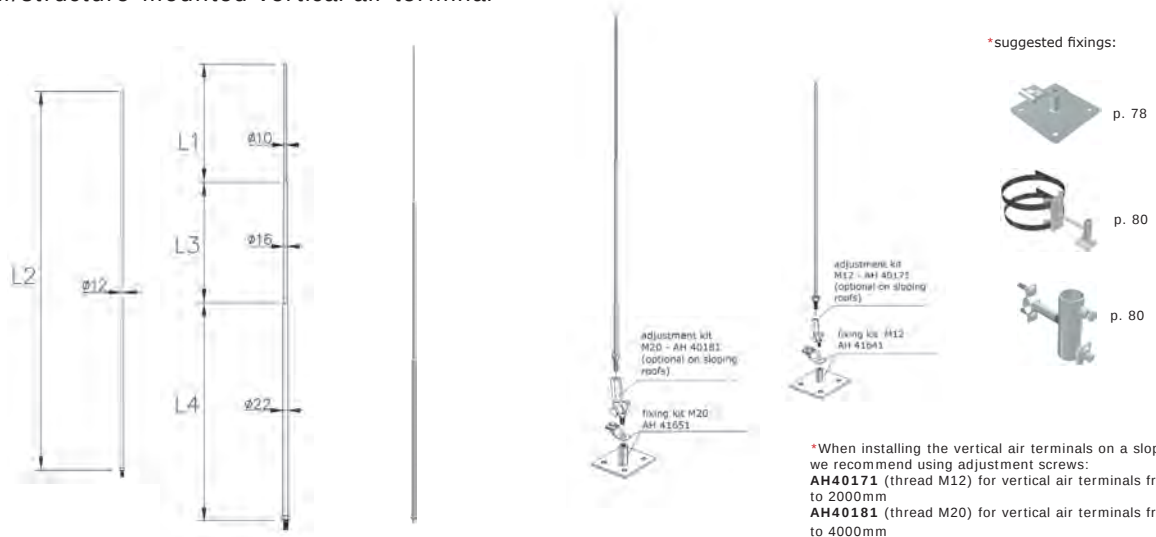
Insulated free-standing vertical air terminal with four-legged support for high-voltage cable



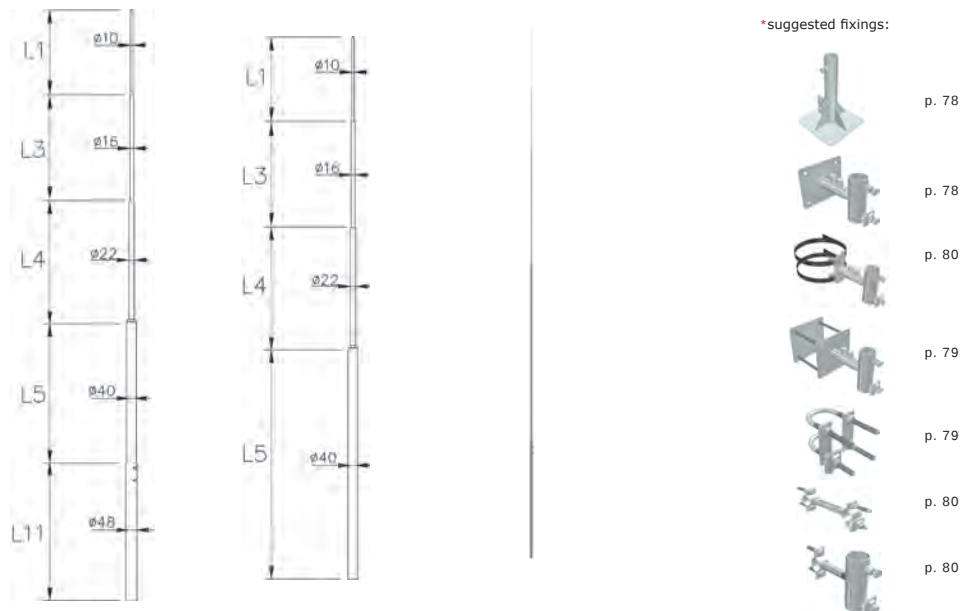
catalog No.	height [mm]	vertical air terminal components						ØP [mm]	concrete weight [pc]	material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L6 (leg) [mm]	L7 (brace) Ø10 [mm]	L8 (quadripod) [mm]	L9 insulator (Ø36) [mm]					
AH40561	6000	1000	4000	750	3000	-	1000	1930	4x24	Al (spire, support tube) galvanized steel fiberglass (insulator) weight concrete rug made of rubber	118,2	I,II,III
AH40571	7000	1000	4000	750	3000	2000	1000				125,2	
AH40581	8000	1000	4000	1000	3000	3000	1000	2400			134,7	

WALL / STRUCTURE-MOUNTED VERTICAL AIR TERMINALS

Wall/structure-mounted vertical air terminal



catalog No.	height [mm]	vertical air terminal components					material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L2 (Ø12) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	thread			
AH40811	1000	-	1000	-	-	M12	Al (spire)	0,3	I, II, III
AH40821	1500	-	1500	-	-			0,5	
AH40831	2000	-	2000	-	-			0,7	
AH40841	2500	1000	-	1000	500	M20	steel electro galvanized	1,3	
AH40851	3000	1000	-	1000	1000			1,8	
AH40861	3500	1000	-	1000	1500			2,3	
AH40871	4000	1000	-	1000	2000			2,8	



catalog No.	height [mm]	vertical air terminal components					material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	L5 (Ø40) [mm]	L11 (Ø48) [mm]			
AH40881	4000	1000	1000	1000	1000	-	Al (spire, support tube)	3,3	I, II, III
AH40891	4500	1000	1000	1500	1000	-		3,8	
AH40901	5000	1000	1000	2000	1000	-	steel electro galvanized	4,3	
AH40911	6000	1000	1000	2000	2000	-		5,8	
AH40921	7000	1000	1000	2000	3000	-	hot-dip galvanized steel (support pipe Ø48)	7,3	
AH40931	8000	1000	1000	2000	4000	-		8,8	I, II
AH40941	9000	1000	1000	2000	4000	2000		16,2	

Wall/structure-mounted vertical air terminal for elevated terminals

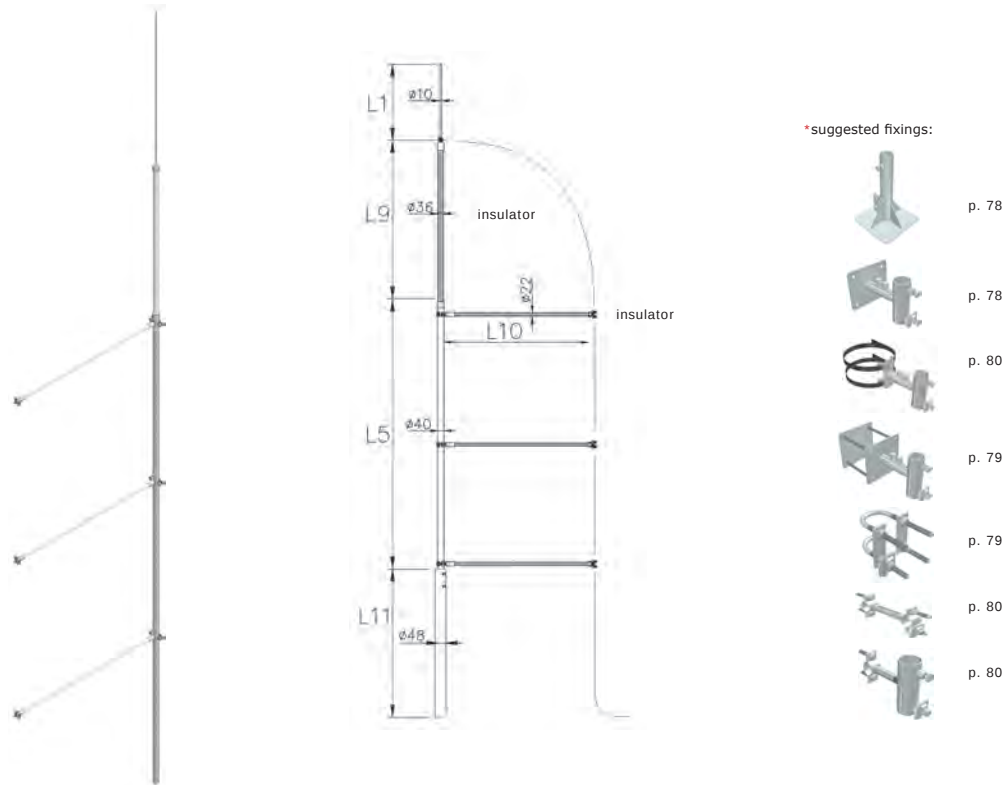
*suggested fixings:



catalog No.	height [mm]	vertical air terminal components		material	weight [kg]	wind zone
		L5 (Ø40) [mm]	L11 (Ø48) [mm]			
AH41001	500	500	-	Al (spire, support tube) electro galvanized steel hot-dip galvanized steel (support pipe Ø48)	1,1	I,II,III
AH41011	1000	1000	-		1,9	
AH41021	2000	2000	-		3,4	
AH41031	3000	3000	-		4,9	
AH41041	4000	4000	-		6,4	
AH41051	5000	4000	2000		13,5	
AH41061	6000	4000	3000		16,5	



Wall/structure-mounted insulated vertical air terminal for elevated air terminals



catalog No.	height [mm]	vertical air terminal components					material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L9 insulator (Ø36) [mm]	L10 insulator (Ø22) [mm]	L11 (Ø48) [mm]			
AH41101	2000	500	500	1000	1000 (1 pc)	-	Al (spire, support tube) electro galvanized steel hot-dip galvanized steel (support pipe Ø48) fiberglass (insulator)	3,95	I,II,III
AH41111	3000	1000	1000	1000	1000 (1 pc)	-		4,8	
AH41121	4000	1000	2000	1000	1000 (2 pcs)	-		7,3	
AH41131	5000	1000	3000	1000	1000 (3 pcs)	-		9,8	
AH41141	6000	1000	4000	1000	1000 (4 pcs)	-		12,3	
AH41151	7000	1000	4000	1000	1000 (5 pcs)	2000		20,4	
AH41161	8000	1000	4000	1000	1000 (6 pcs)	3000		23,5	

Wall/structure-mounted insulated vertical air terminal for high-voltage cable

*suggested fixings:



p. 78



p. 78



p. 80



p. 79



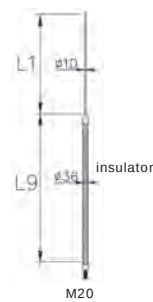
p. 79



p. 80

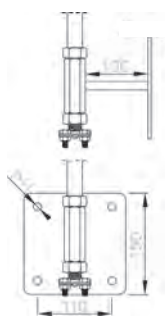


p. 80



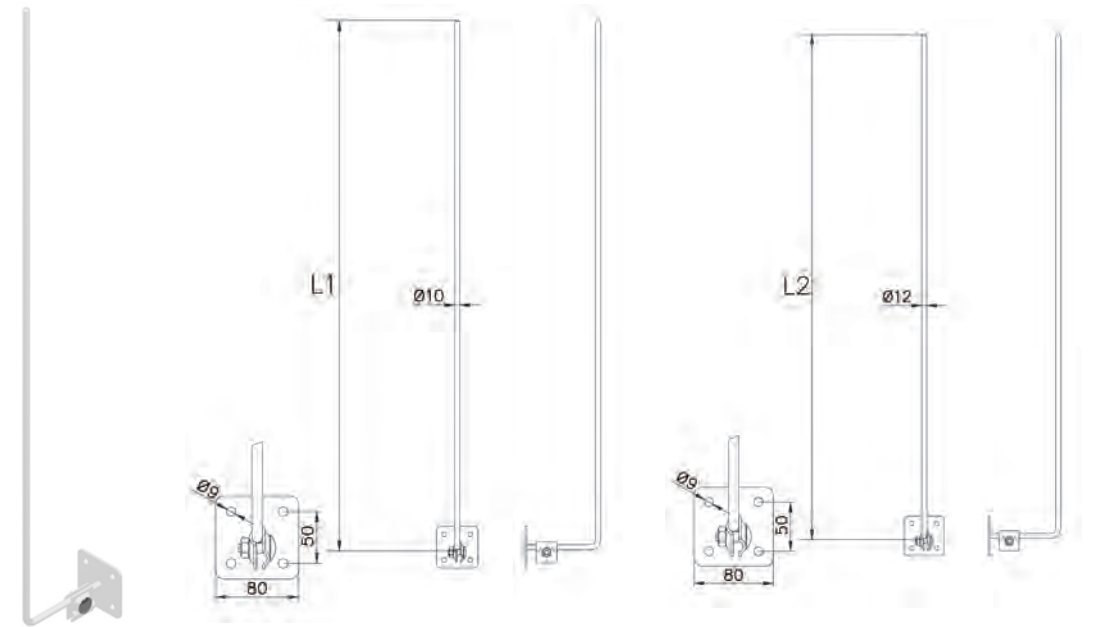
catalog No.	height [mm]	vertical air terminal components				material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L9 insulator (Ø36) [mm]	L11 (Ø48) [mm]			
AH40601	1500	500	-	1000	-	Al (spire, support tube)	2,1	I,II,III
AH40611	2000	500	500	1000	-		2,8	
AH40621	3000	1000	1000	1000	-		3,7	
AH40631	4000	1000	2000	1000	-	hot-dip gal- vanized steel (support pipe Ø48)	5,2	
AH40641	5000	1000	3000	1000	-		6,7	
AH40651	6000	1000	4000	1000	-	fiberglass (insulator)	8,2	
AH40661	7000	1000	4000	1000	2000		15,4	
AH40671	8000	1000	4000	1000	3000		18,9	

Chimney vertical air terminal



catalog No.	height [mm]	vertical air terminal components					material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L2 (Ø12) [mm]	L3(Ø16) [mm]	L4 (Ø22) [mm]	sleeve			
AH40301	1000	-	1000	-	-	M12	Al (spire) electro galva- nized steel	1.6	I,II,III
AH40311	1500	-	1500	-	-			1.8	
AH40321	2000	-	2000	-	-			2.1	
AH40331	2500	1000	-	1000	500	M20		2.4	
AH40341	3000	1000	-	1000	1000			2.8	
AH40351	3500	1000	-	1000	1500			3.1	

Chimney vertical air terminal



catalog No.	height [mm]	vertical air terminal components		material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L2 (Ø12) [mm]			
AH40304	1000	1000	-	Al	0,3	I,II,III
AH40314	1500	-	1500		0,6	
AH40324	2000	-	2000		1,8	



AHARDT
LIGHTNING PROTECTION
SYSTEMS

group I
connectors

group II
lightning
holders

group III
lightning
conductors

group IV
straighteners

group V
lightning protection pipes

group VI
earthings and
earthing elements

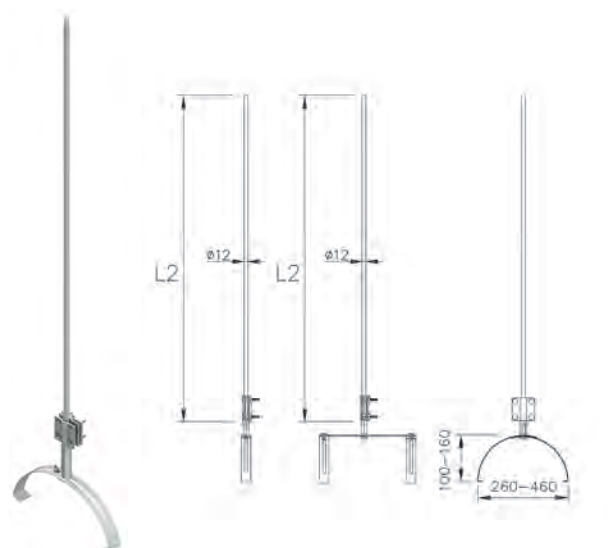
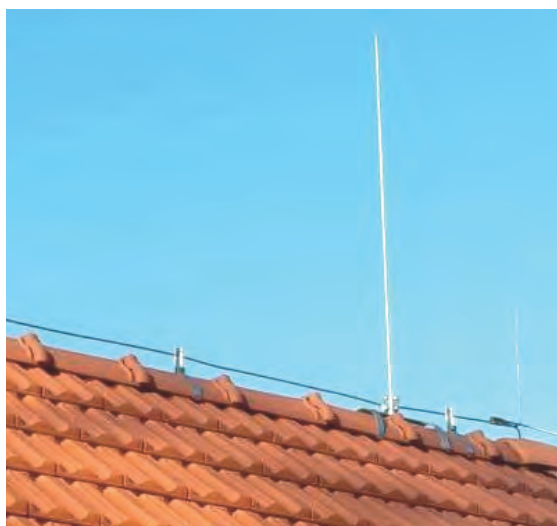
group VII
air termination
system

group VIII
high voltage
cable

group IX
insulated rods
and brackets

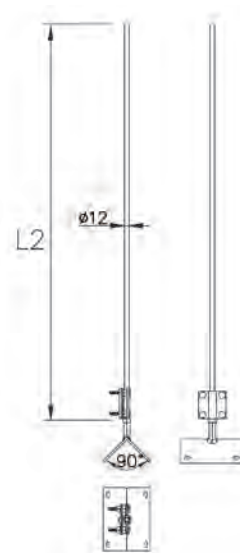
group X
other products

Ridge tile vertical air terminal



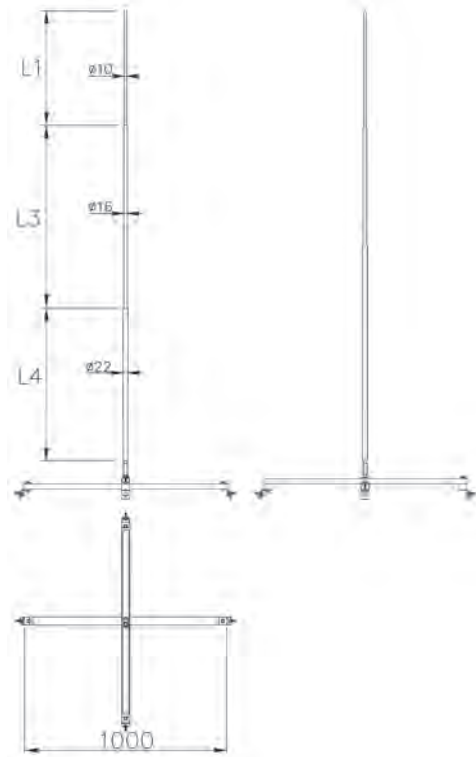
catalog No.	height [mm]	vertical air terminal components	number of ridge tiles	material	weight [kg]	wind zone
		L2 (Ø12) [mm]				
AH41321	1000	1000	1	Al (spire)	0,8	I,II,III
AH41331	1000	1000	2	steel electro galva- nized	1,6	
AH41341	1500	1500			1,8	

Top vertical air terminal



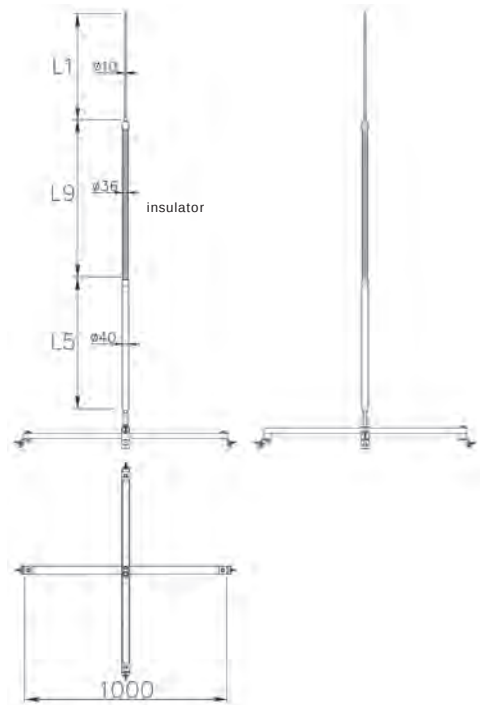
catalog No.	height [mm]	vertical air terminal components	material	weight [kg]	wind zone
		L2 (Ø12) [mm]			
AH41301	1000	1000	Al (spire)	1,6	I,II,III
AH41311	1500	1500	electro galvanized steel	1,8	

❖ Vertical air terminal fixed to the double standing seam



catalog No.	height [mm]	vertical air terminal components				material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L2 (Ø12) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]			
AH41201	1000	-	1000	-	-	Al (spire) electro galva- nized steel	3.7	I,II,III
AH41211	1500	-	1500	-	-		3.9	
AH41221	2000	-	2000	-	-		4.4	
AH41231	2500	1000	-	1000	500		4.7	

❖ Insulated high-voltage cable vertical air terminal fixed to the double standing seam



catalog No.	height [mm]	vertical air terminal components			material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L5 (Ø40) [mm]	L9 insulator (Ø36) [mm]			
AH41241	1500	500	-	1000	Al (spire, support tube) galvanized steel fiberglass (insulator)	5,2	I,II,III
AH41251	2000	500	500	1000		5,95	

VERTICAL AIR TERMINALS ON CONCRETE FOUNDATION

Free-standing vertical air terminal on concrete foundation

NEW VERTICAL AIR TERMINALS FOUNDATION
– view them at en.ah.com.pl



*** DISCONTINUED** as of 1 April 2026



catalog No.	height [mm]	vertical air terminal components					foundation	material	weight [kg]	wind zone
		pipe seg- ment L4 [mm]	pipe seg- ment L3 [mm]	pipe seg- ment L2 [mm]	pipe seg- ment L1 [mm]	spire [mm]				
AH35011	6000	-	-	-	3500	2500	250x250x1000 mm, 100 kg	hot-dip galva- nized steel (pipe segments, spire)	118	I,II,III
AH35021	7500	-	-	-	3500	4000			121	
AH35031	9000	-	-	-	3500	5500			126	
AH35041	10500	-	-	-	6000	4500			138	
AH35051	12000	-	-	-	6000	6000			164	
AH35061	13500	-	-	6000	1500	6000	350x350x1200 mm, 220 kg		291	
AH35071	15000	-	-	6000	3000	6000			299	
AH35081	16500	-	-	6000	6000	4500			366	
AH35091	18000	-	-	6000	6000	6000	430x430x1600 mm, 335kg		487	
AH35101	19500	-	6000	6000	1500	6000			580	
AH35111	21000	-	6000	6000	3000	6000	470x470x2000mm, 780kg		1044	
AH35121	22500	-	6000	4500	6000	6000			1061	
AH35131	24000	-	6000	6000	6000	6000	600(900)x600(900) x1500mm, 1500kg		1840	
AH35171	25000	6000	6000	6000	3000	4000			1945	
AH35141	27000	6000	6000	6000	3000	6000			1948	



Free-standing vertical air terminal on concrete foundations for elevated terminals

NEW VERTICAL AIR TERMINALS ON CONCRETE FOUNDATIONS FOR ELEVATED TERMINALS – view them at en.ah.com.pl

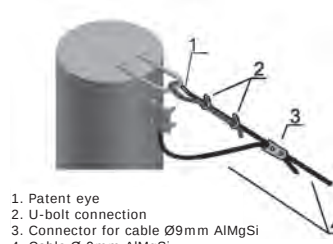


*** DISCONTINUED** as of 1 October 2026

catalog No.	height [mm]	vertical air terminal components					foundation	material	weight [kg]	wind zone
		pipe segment L4 [mm]	pipe segment L3 [mm]	pipe segment L2 [mm]	pipe segment L1 [mm]	connector				
AH35201	3500	-	-	-	3500	wire Ø8-10 mm tape up to 40 mm	250x250x1000 mm, 100 kg	hot-dip galvanized steel (pipe segments)	130	I,II,III
AH35211	6000	-	-	-	6000				166	
AH35221	7500	-	-	6000	1500		350x350x1200 mm, 220 kg		230	
AH35231	9000	-	-	6000	3000				267	
AH35241	12000	-	-	6000	6000		430x430x1600 mm, 335 kg	electro galvanized steel	521	
AH35251	13500	-	6000	6000	1500				528	
AH35261	15000	-	6000	6000	3000		470x470x2000mm, 780 kg	foundation concrete	1012	
AH35271	16500	-	6000	4500	6000				1030	
AH35281	18000	-	6000	6000	6000				1904	
AH35291	21000	6000	6000	6000	3000		600(900)x600(900) x1500mm, 1500kg		1921	

Lightning protection vertical air terminal with anchor flange

Detail A



1. Patent eye
2. U-bolt connection
3. Connector for cable Ø9mm AlMgSi
4. Cable Ø 9mm AlMgSi
1-4 (not included)

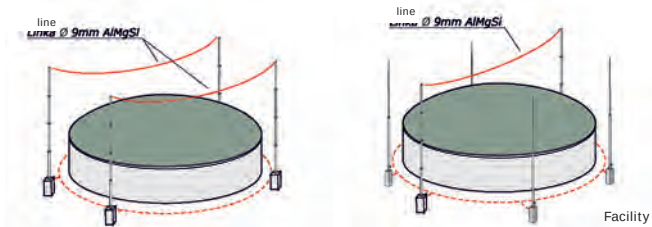
Detail A



catalog No.	height [mm]	vertical air terminal components						material	weight [kg]	wind zone	Others
		pipe seg- ment L5 [mm]	pipe seg- ment L4 [mm]	pipe seg- ment L3 [mm]	pipe seg- ment L2 [mm]	pipe seg- ment L1 [mm]	spire [mm]				
AH070001W	24000	6000	6000	6000	6000	-	-	hot-dip galvanized steel	1130	I, II, III	for elevated terminals with a maxi- mum spacing of 46m
AH070002W	36000	6000	6000	6000	6000	6000	6000		1250		-

* on request

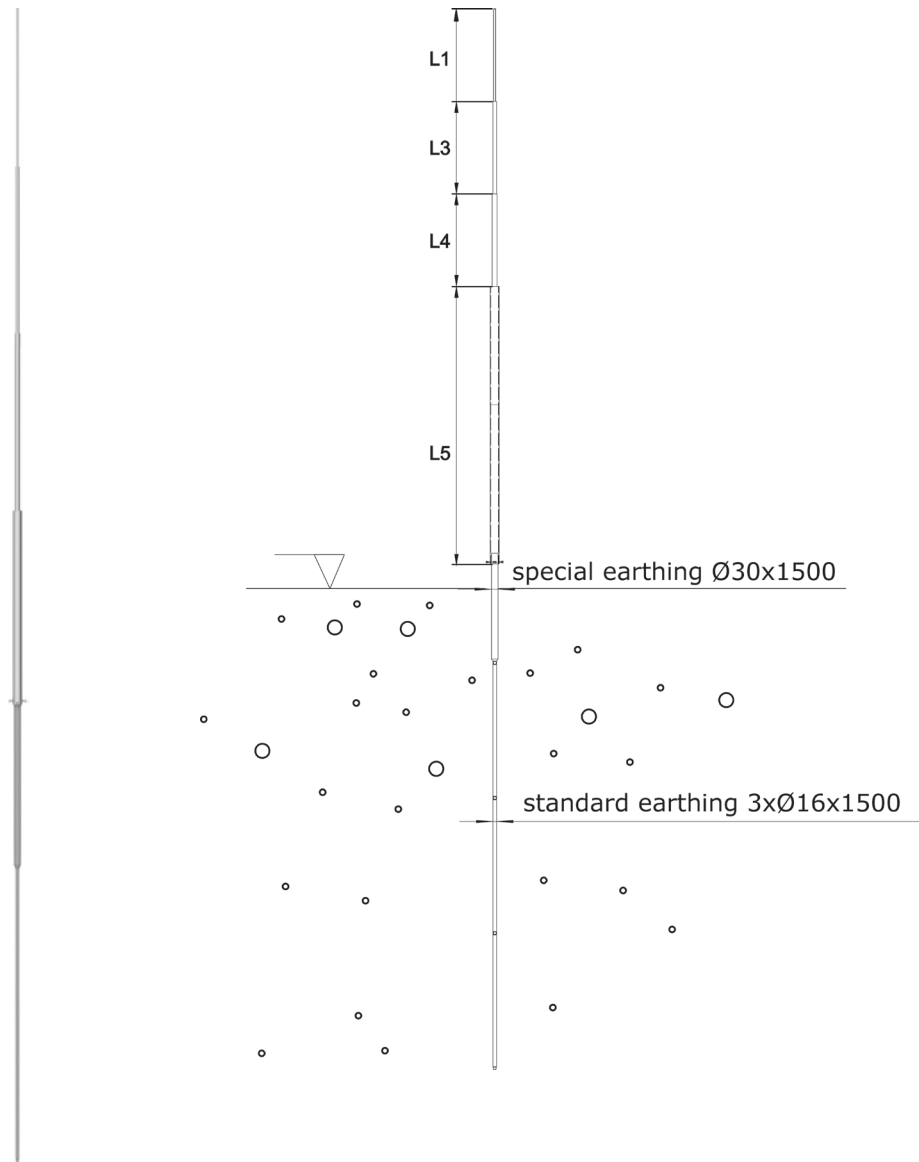
The structure has been calculated to mount a single elevated terminal on two vertical air terminals. Example use of lightning protection vertical air terminal AH070001W.



For vertical air terminals with anchor construction for foundation, we can provide the base design of the well foundation. For technical assistance or product selection, please contact the technical department: [www.en.ah.com.pl/technical department](http://www.en.ah.com.pl/technical%20department)

VERTICAL AIR TERMINALS DEDICATED TO THE PROTECTION OF PHOTOVOLTAIC PANELS

- Vertical air terminal put on individual (single) earthing rod



catalog No.	height [mm]	vertical air terminal components				material	weight [kg]	wind zone
		L1 (Ø10) [mm]	L3 (Ø16) [mm]	L4 (Ø22) [mm]	L5 (Ø40) [mm]			
AH35361	5000	1000	500	500	3000	Al (spire, support tube)	3,8	I,II,III
AH35331	6000	1000	1000	5000	3000	galvanized steel (earthing)	4,1	

If the catalog doesn't include the vertical air terminal you are looking for, please contact our technical department.
We make vertical air terminals to special order.



Insulated mast for elevated air terminals with high voltage cables

A system of elevated downconductors ensures taking over and of load distribution at the safe distance from the protected devices.

The insulator on top of a mast prevents the load from flowing down the mast to devices and structures. The lightning current is conducted to grounding using a high voltage conductor to protect both the devices located on the roof and the structures which otherwise could act as conductors through which the currents would be able to enter the building.



Bent masts to increase the protection angle of tank explosion zone..



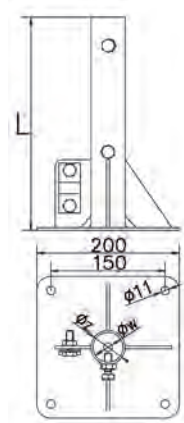
Insulated masts fixed to the structure of a sports hall to protect a LED screen.

FIXINGS FOR LIGHTNING PROTECTION MASTS AND ACCESSORIES

Vertical air terminal installation – pipe



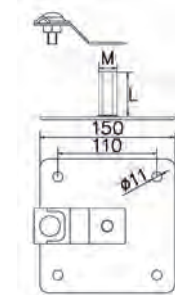
catalog No.	L [mm]	Øw [mm]	Øz [mm]	cable range	material	weight [kg]
AH41621	300	42	48	Ø 8-10mm	hot-dip galvanized steel	2.7
AH51111		52	60			3
AH51121	1000	42	48			5.3
AH51131		52	60			6.2



Vertical air terminal installation – sleeve



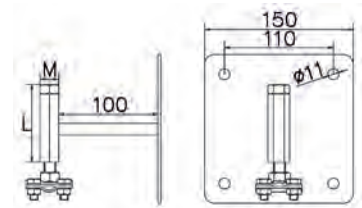
catalog No.	L [mm]	M	cable range	material	weight [kg]
AH41641	50	12	Ø 8-10mm	electro galvanized steel	0.8
AH41651	60	20			0.9



Side mounting bracket

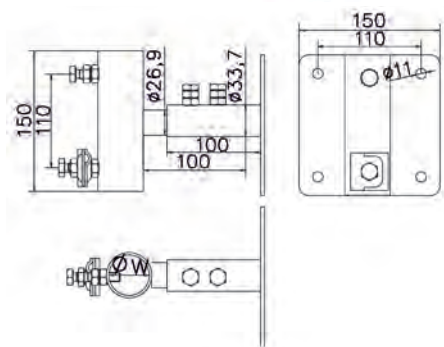
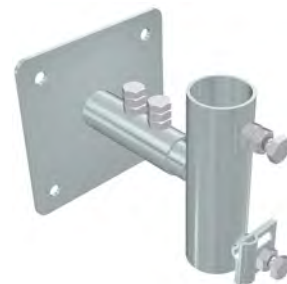


catalog No.	M	L [mm]	cable range	material
AH50191	M12	50	Ø 8-10mm	electro galvanized steel
AH41691	M20	60		



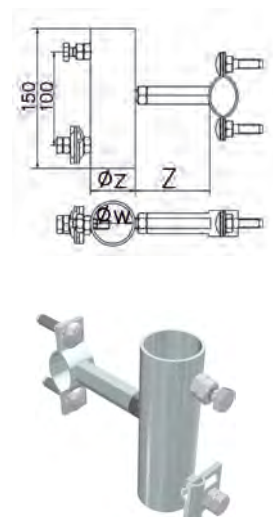
Side vertical air terminal installation – pipe

catalog No.	Øw [mm]	Øz [mm]	cable range	material	weight [kg]
AH41601	42	48	Ø 8-10mm	electro galvanized steel	1.5
AH51141	52	60			1.8



Vertical air terminal attachment to railing/pipe Ø30-45 mm – pipe

catalog No.	Øw [mm]	Øz [mm]	Z [mm]	cable range	material	weight [kg]
AH41611	29	34	60÷90	Ø 8-10mm	electro galvanized steel	1,2
AH51191	42	48				1,4
AH51211	52	60				1,6



Installing vertical air terminal with a band – pipe

catalog No.	ØA [mm]	Øw [mm]	Øz [mm]	cable range	material	weight [kg]
AH41431	without tape	42	48	Ø8-10mm	electro galvanized steel	1,5
AH51251		52	60			1,8
AH070001OC		42	48			1
AH070002OC		52	60			1

*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)



Installing vertical air terminal with a band – sleeve

catalog No.	ØA [mm]	M [mm]	L [mm]	cable range	material	weight [kg]
AH41531	without tape	M12	50	Ø8-10mm	electro galvanized steel	0,8
AH41571		M20	60			0,9
AH070003OC		M12	50			0,3
AH070004OC		M20	60			0,4

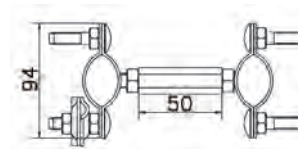
*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)



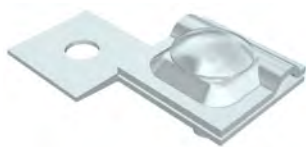
Vertical air terminal attachment to railing/pipe Ø30-45 mm



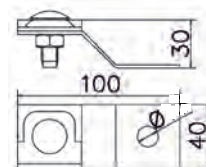
catalog No.	material	cable range	weight [kg]
AH41891	electro galva- nized steel	Ø 8-10mm	0,6



Wire cross connector



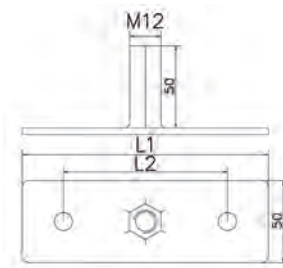
catalog No.	Ø [mm]	material	cable range	bolts
AH51291	13	stal ocynkowana elektrolitycznie	Ø 8-10mm	M10x30
AH070005OC	21			



Fixing plate M12



catalog No.	L1 [mm]	L2 [mm]	material	cable range
AH51261	80	50	electro galvanized steel	Ø 8-10mm
AH51271	150	100		
AH51281	240	190		

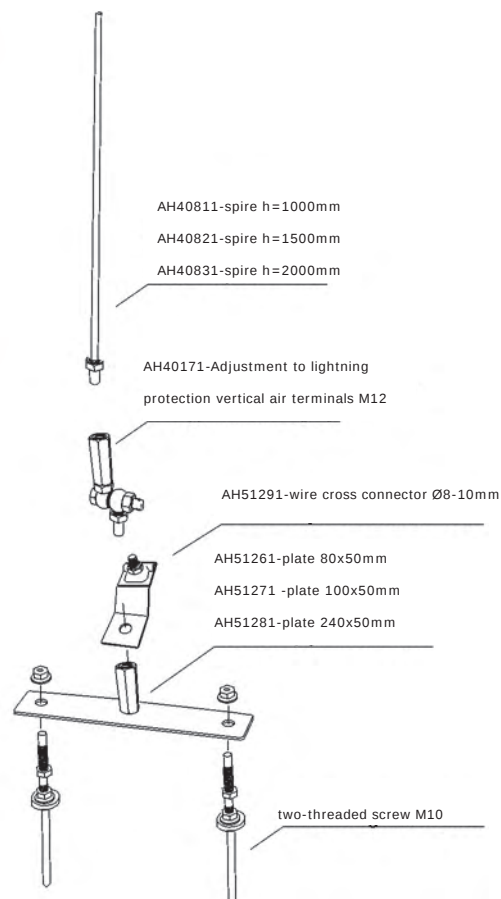
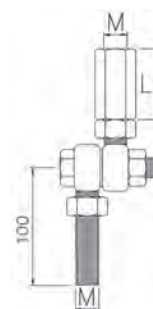


Adjustment to lightning protection vertical air terminals

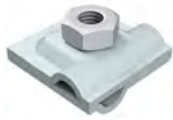


catalog No.	M [mm]	L [mm]	material	weight [kg]
AH40171	12	50	electro galvanized steel	0.3
AH40181	20	60		1.0

*Following assembly, the set should be secured with acid-free technical vaseline.



Vertical air terminal connector for elevated terminals



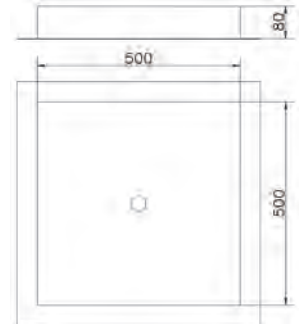
catalog No.	thread	cable range	material
AH39163	M10	Ø 8-10mm	INOX



Concrete weight large



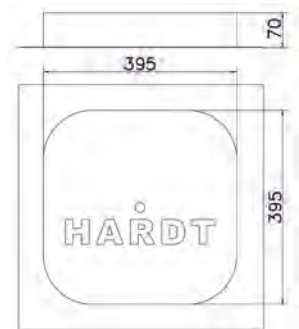
catalog No.	material	weight [kg]
AH100001B	concrete weight rubber rug	42



Concrete weight



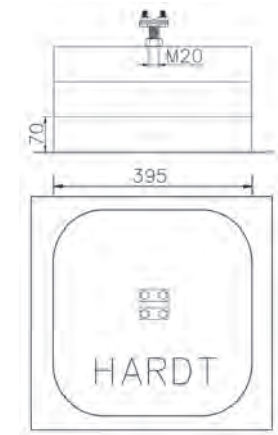
catalog No.	material	weight [kg]
AH40270	concrete weight rubber rug	24



Weight for stay in elevated terminals



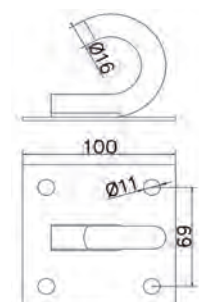
catalog No.	material	cable range	weight [kg]
AH40290	electro galvanized steel concrete weight rubber rug	Ø 8-10mm	72



Hook handle



catalog No.	material	weight [kg]
AH31071	electro galvanized steel	0.5



HIGH VOLTAGE CABLE AND ACCESSORIES

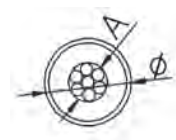
used to discharge lightning current in places where it is not possible to keep an insulation clearance

HIGH VOLTAGE CABLE

High-voltage cable (HVC)



catalog No.	Ø [mm]	insulation clearance	section A [mm²]	material
AH39000	20.5	75	50	cross-linked polyethylene Al
AH39100	18.5	75	35	cross-linked polyethylene Cu
AH39200	18.5	75	35	

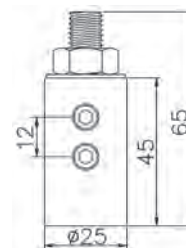


HVC EQUIPMENT

Vertical air terminal head with heat shrink band



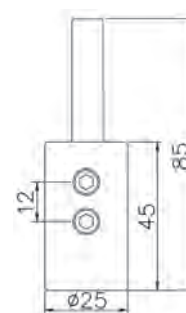
catalog No.	Allen screws	band	material
AH39014	2xM8x6	28x100 mm	polyethylene Al
AH39012			polyethylene Mo
AH39013			polyethylene INOX



HVC head with heat shrink band



catalog No.	Allen screws	band	material
AH39004	2xM8x6	28x100 mm	polyethylene Al
AH39002			polyethylene Mo
AH39003			polyethylene INOX



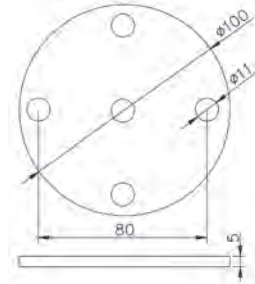
Types of high voltage cables and dedicated heads:

catalog No.	material	catalog No. head / material	catalog No. head / material	others
AH39000	aluminium 50 mm²	AH39014/Al	AH39004/Al	
AH39100	copper 35 mm²	AH39012/Mo	AH39002/Mo	150kA
AH39200	copper 35 mm²	AH39013/INOX	AH39003/INOX	200kA

HVC mounting plate



catalog No.	material
AH39024	Al



HVC cable band



catalog No.	size [mm]	material
AH39033	360x4.5x0.3	INOX

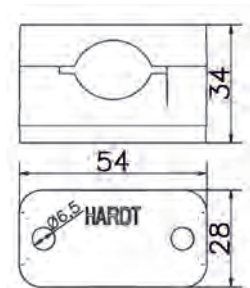


HVC HANDLES

Plastic bracket for HVC



catalog No.	material	cable range
AH39080	plastic	Ø 17-23mm

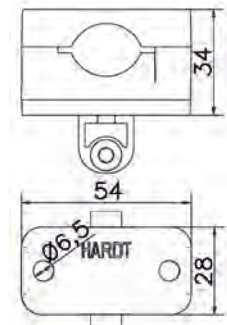


Plastic bracket for HVC with connector



catalog No.	material	cable range
AH39090	plastic	Ø 17-23mm

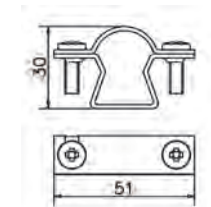
* the bracket is dedicated to AH 12140P and AH 12140P+



Screw-in bracket for mounting HCV



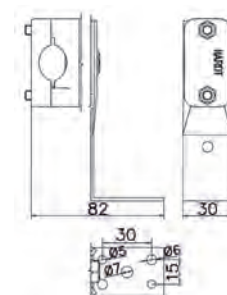
catalog No.	material	cable range	bolts
AH39071	electro galvanized steel	Ø 19-23mm	2xM5x16



Straight angle bracket for HVC



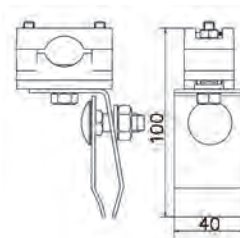
catalog No.	material	cable range	bolts
AH39091	electro galvanized steel	Ø 17-23mm	1xM8x16 2xM6x30



Universal sheet metal bracket for HVC



catalog No.	material	cable range	bolts
AH39051	electro galvanized steel	Ø 17-23mm	1xM18x16 2xM6x30 1xM10x30

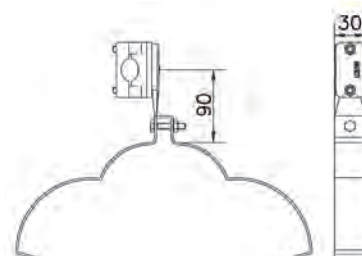


Profiled ridge tile bracket for HVC



catalog No.	material	cable range	bolts
AH39061	electro galvanized steel	Ø 17-23mm	1xM8x16 3xM6x30

*Bend handle (before galvanizing) based on a ridge tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.

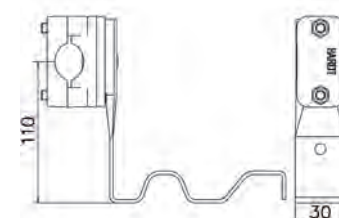


Profiled tile bracket for HVC



catalog No.	material	cable range	bolts
AH39031	electro galvanized steel	Ø 17-23mm	1xM8x16 2xM6x30

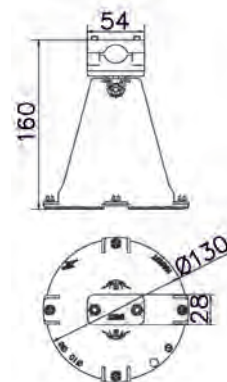
*Bend handle (before galvanizing) based on a roof tile provided by the customer.
This solution greatly improves the installation's aesthetics and makes assembly easier.



Concrete holder in plastic for the HVC



catalog No.	material	cable range	bolts
AH39060P	plastic/concrete electro galvanized steel	Ø 17-23mm	2xM6x30



Screw-in bracket for mounting HCV



catalog No.	L [mm]	material	cable range	bolts
AH39081	305	plastic electro galvanized steel	Ø 17-23mm	2xM6x30
AH39111	265			
AH39121	105			

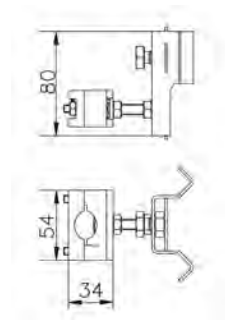


HVC pipe bracket



catalog No.	Ø [mm]	material	cable range	bolts
AH39441	without tape	electro galva- nized steel tplate	Ø17-23mm	2xM8x16 4xM6x30 1xM10x30

*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)

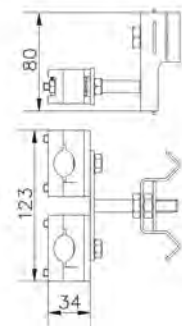


Double HVC pipe bracket



catalog No.	Ø [mm]	material	cable range	bolts
AH39541	without tape	electro galva- nized steel plastic	Ø17-23mm	2xM8x16 4xM6x30 1xM10x30

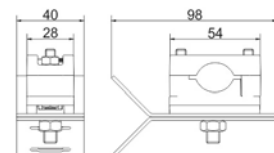
*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)



HVC pipe bracket

catalog No.	Ø [mm]	material	cable range	bolts
AH080001TWOC	without tape	electro galva- nized steel plastic	Ø17-23mm	2xM6x30

*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)

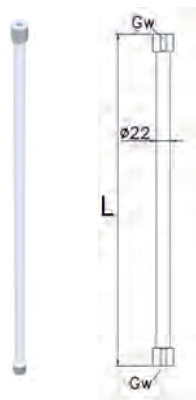


INSULATED RODS AND BRACKETS

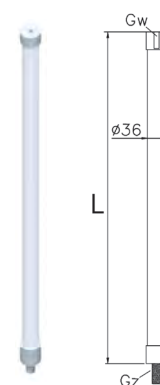
they are used to isolate and provide the required isolation distance from the protected device

INSULATED BARS

Insulated bars

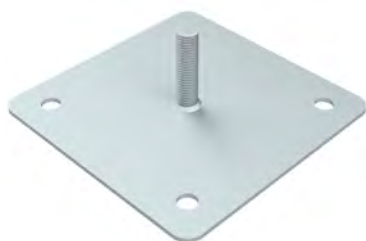


catalog No.	L [mm]	Ø [mm]	G _w	G _z	material
AH41741	500	22	M12x2	-	fiberglass Al
AH41801	1000				
AH41751	1000	36	M10	M20	
AH41761	1500				

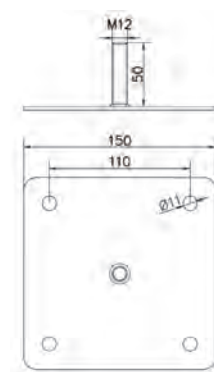


BRACKETS AND CONNECTORS

Vertical mounting bracket – thread



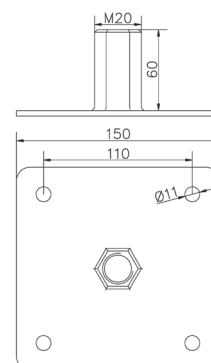
catalog No.	material
AH41781	electro galvanized steel



Vertical mounting bracket – sleeve



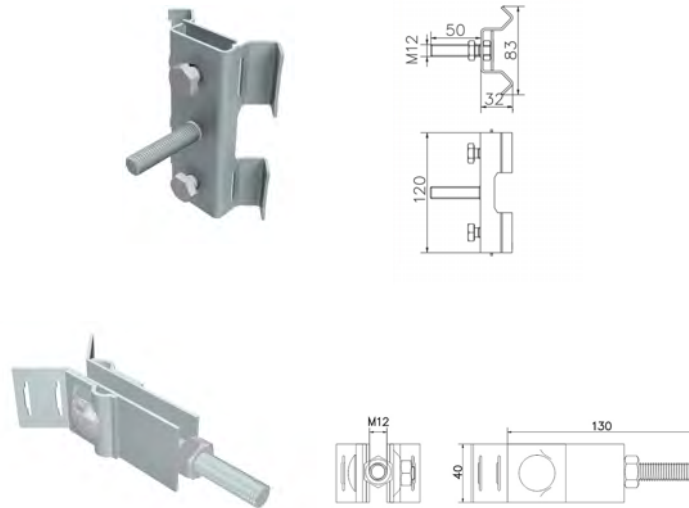
catalog No.	material
AH41771	electro galvanized steel



Pipe mounting bracket – thread

catalog No.	Ø [mm]	bolts	material
AH50141	without tape	2xM10x30	electro galvanized steel
AH090001OC		M10x40	

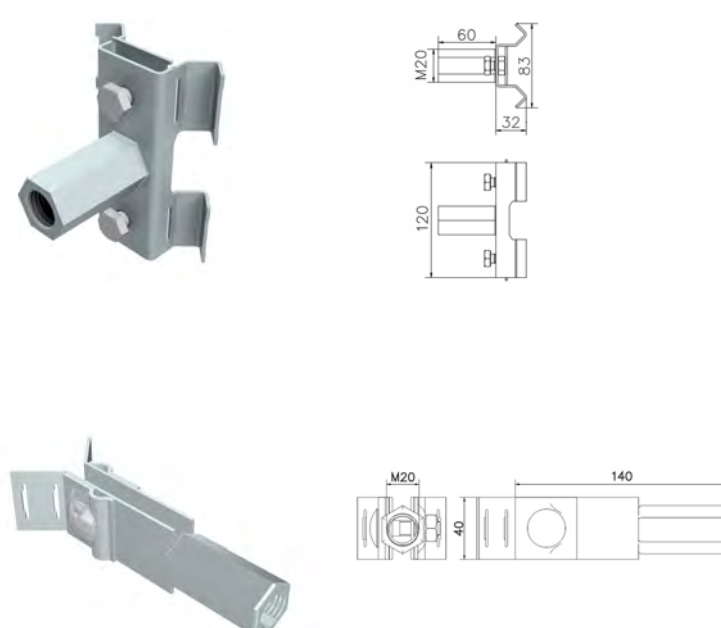
*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)



Pipe mounting bracket – sleeve

catalog No.	Ø [mm]	bolts	material
AH50181	without tape	2xM10x30	electro galvanized steel
AH090002OC		M10x40	

*Handle without tape. Dedicated product: stainless steel tape (cat.no. AH23063)

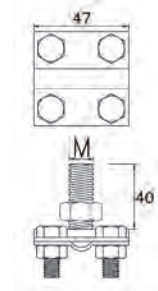


4-hole threaded connector



catalog No.	material	cable range	bolts
AH38271...	electro galvanized steel	Ø 8mm	4xM8x20

* to choose thread diameter, add a symbol to the last digit of the catalog number:
M10 – thread M10
M12 – thread M12
M20 – thread M20

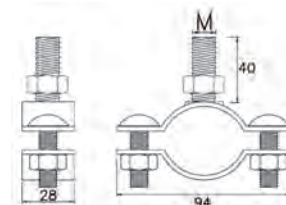


2-hole threaded connector



catalog No.	material	cable range	bolts
AH28401...	electro galvanized steel	Ø 30-45mm	2xM8x25

* to choose thread diameter, add a symbol to the last digit of the catalog number:
M10 – thread M10
M12 – thread M12
M20 – thread M20

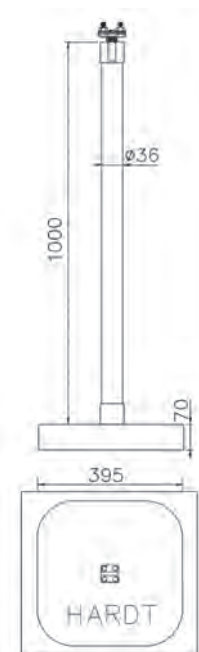


INSULATED BRACKET

Insulated bracket with weight



catalog No.	material	cable range	bolts
AH41791	electro galvanized steel fiberglass Al concrete weight rubber rug	Ø 8mm	4xM8x20



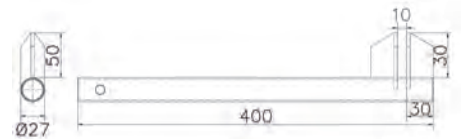
OTHER PRODUCTS

❖ WIRE BENDING DEVICE

❖ Wire bending device

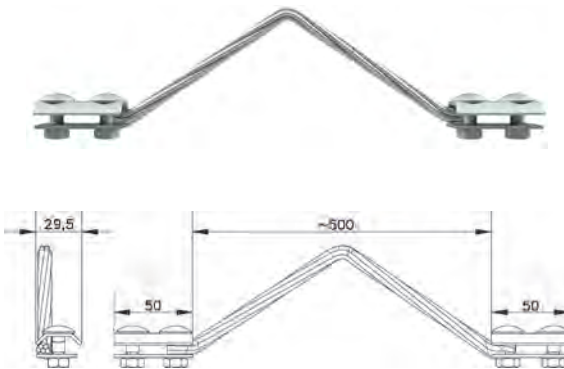


catalog No.	material
AH34011	electro galvanized steel



❖ COMPENSATION JOINTS

❖ Wire/wire compensation joint



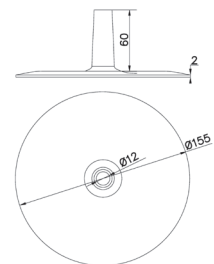
catalog No.	material	cable range	bolts
AH33031	electro galvanized steel Al cord	Ø 8mm	4xM8x20
AH33030G	hot-dip galvanized steel Al cord		
AH33032	Mo Al cord		
AH33033	INOX Al cord		

❖ LIGHTNING PROTECTION PENETRATIONS

❖ Plastic lightning penetration



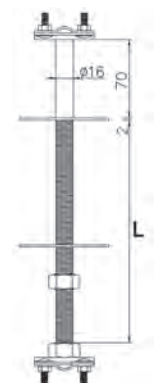
catalog No.	material	other
AH38500	PVC plastic	dedicated to PVC membrane covering
AH100001TW	TPO plastic	dedicated to TPO-membrane covering



❖ Steel lightning penetration



catalog No.	L [mm]	material	cable range	bolts
AH38511	200	electro galvanized steel	Ø 8mm tape up to 40 mm	4xM8x20
AH38521	300			
AH38531	400			

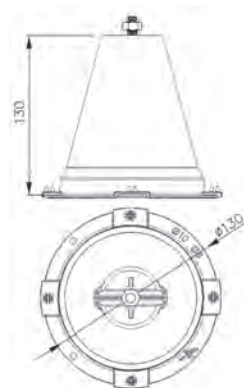


SUPPORTS AND CABLE TRAY BRACKETS

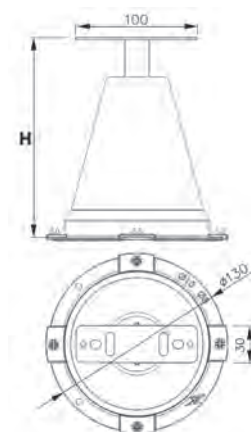
Cable tray bracket



catalog No.	material	weight [kg]
AH38541P	electro galvanized steel polypropylene/ concrete	0,95-1,05



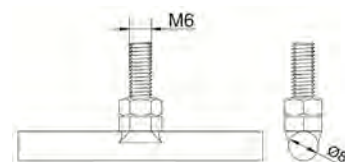
catalog No.	H [cm]	material	hole in the plate	weight [kg]
AH38551P	15	electro galvanized steel polypropylene/ concrete	M6	1-1,1
AH38561P	20			1,05-1,15



Adapter for mounting cable trays



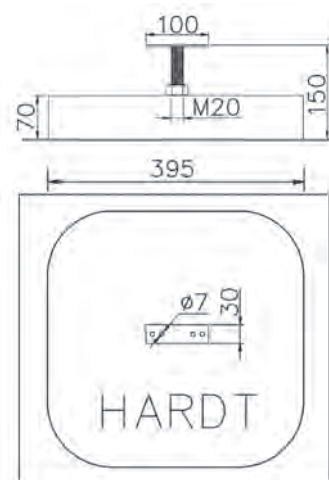
catalog No.	material
AH1000010C	electro galvanized steel



Cable tray support



catalog No.	material	weight [kg]
AH38571	electro galvanized steel concrete weight rubber rug	24



ACCESSORIES

Warning plates

catalog No.	material
AH12310	plastic



catalog No.	material
AH12320	plastic



Mounting adhesive for ceramic brackets

catalog No.	volume [ml]
AH29090	310



Acid-free technical vaseline

catalog No.	consumption	weight [kg]
AH12300	up to 100 brackets	0.9



Anti-corrosion tape

catalog No.	width [mm]	length [m]	thickness [mm]	weight [kg]
AH14250	30	10	2.5	0.44
AH14260	50	10		1.14



Membrane adhesive paste

catalog No.	consumption	weight [kg]
AH12330	up to 500 brackets	10



Adhesive for plastics, PVC, PV, PC

catalog No.	consumption	volume [l]
AH12340	up to 200 brackets	5

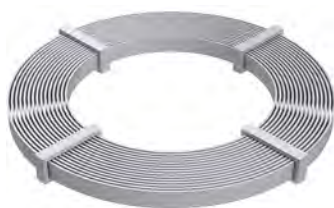


Sleeve Ø12x60 mm

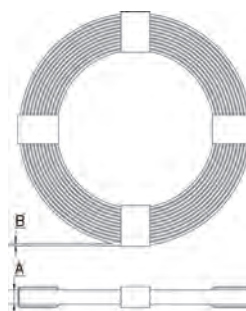
catalog No.	material
AH29050	plastic



23x0.3 mm stainless steel tape



catalog No.	A x B [mm]	material
AH23063	23x0,3	INOX
AH030001IN	12,7x0,7	INOX





NOTES



NOTES





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