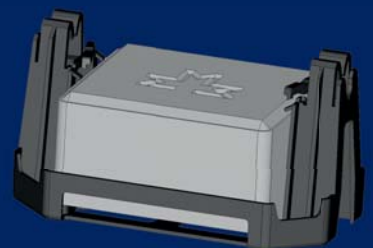
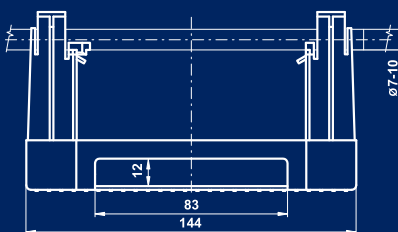




## LIGHTNING CONDUCTORS AND GROUNDING SYSTEM'S PARTS **2019**



## CLAMPS

|                                                               |    |
|---------------------------------------------------------------|----|
| universal (SU, SUA, SUB, SUBz)                                | 4  |
| parallel (SS, SSp)                                            | 5  |
| test (SZa, SZb, SZc)                                          | 5  |
| attaching (SP, SPb, SPc, SPd, SPE)                            | 6  |
| cross (SK, SKv, SK+1, SKv+1)                                  | 7  |
| cross (SK E, SK+1 E)                                          | 7  |
| cross diagonal (SKd)                                          | 7  |
| for receiving rod (SJ 1, SJ 1b, SJ 1c, SJ 1e, SJ 1f)          | 8  |
| for rod diagonal (SJ 1d, SJ 1g)                               | 8  |
| for grounding rod (SJ 2, SJ 2b)                               | 9  |
| gutter (SOa, SOb, SOc)                                        | 9  |
| downpipe (ST)                                                 | 10 |
| pipeline (ST 1-9)                                             | 10 |
| grounding tape – tape (SR 2a, SR 2a+1)                        | 11 |
| grounding tape – tape (SR 2b, SR 2v, SR 2b+1, SR 2v+1)        | 11 |
| grounding tape – tape diagonal (SR 2dm, SR 2dv)               | 11 |
| grounding tape – wire (SR 3a, SR 3b, SR 3v, SR 3b+1, SR 3v+1) | 12 |
| grounding tape – wire (SR 3b E, SR 3 b+1 E)                   | 12 |
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| grounding tape – wire diagonal (SR 3d)                        | 13 |
| parallel (SSR)                                                | 13 |
| grounding tape – wire (SKT, SKTp, SKTz, SKTzp, SKTm)          | 14 |
| point (ZB, ZB 12/10, ZB 16)                                   | 15 |
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| to grounding point (ZBSRm, ZBSRv)                             | 15 |

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|                                                        |    |
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| under ridge tile (PV 14)                               | 18 |
| at the top of ridge tile (PV 15a, PV 15b, PV 15c)      | 19 |
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| for corrugated surface (PV 17)                         | 20 |
| to wooden constructions (PV 18)                        | 20 |
| for flat roofs (PV 21c, attachment PV 21c, lid PV 21c) | 20 |
| for flat roofs (PV 21d, PV 21d - plastic)              | 21 |
| under roofing (PV 22a, PV 22ap, PV 22b)                | 21 |
| for sheet metal roofs (PV 23)                          | 21 |
| for sheet metal roofs (PV 23b)                         | 22 |
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## HOLDERS, RODS

|                                                                   |    |
|-------------------------------------------------------------------|----|
| of protective angle steel (DOUa, DUDa, DUDb, DUS, DUZ)            | 23 |
| of receiving rod and protective pipe (DJT, DJD, DJDb, DJDc, DJDe) | 24 |
| of receiving rod and protective pipe (DJSb)                       | 25 |
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## ISOLATED AIR-TERMINATION SYSTEM

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**The company Tremis s.r.o.** produces components for installation of lightning protection system and grounding which meet the requirements of lightning protection according to standards ČSN EN 62305. Each single component in lightning and grounding system is solved as per its use and according standards for components lightning protection ČSN EN 62561.

**The company Tremis s.r.o.** provides for its own products certification according to European standards in Electrotechnical testing institute in Prague. On the base of testing protocols are issued certificates for each category of products. The category of clamps also has testing datasheet with complete information about each product.

**The company Tremis s.r.o.** recommends to investors to solve design of grounding and lightning system with authorized designer, who has enough experiences and has technical support from us as producer. For realization, we recommend specialized and qualified companies. Outcome would be not only functional lightning protection but architecturally clean design too.

**The company Tremis s.r.o.** has established Quality Management System according to ČSN EN ISO 9001:2016. Certificate has been issued by TÜV SÜD Czech s.r.o. for range of activity: development, production and selling of components for lightning protection and grounding.

**The company Tremis s.r.o.** offers range of product in galvanized, stainless steel, copper and aluminium alloy.

#### **Components for lightning protection and grounding in hot dip galvanized steel**

Used material are: steel S235 or DD11, malleable cast iron and plastic with UV stabilization.

For ballast anchor is used gravel or concrete blocks resistant to temperature changes.

Surface finish of Steel products are made by hot dip galvanizing, where zinc layer guarantee long-life and anti-electrochemical protection. The thickness zinc layer is according to the technical conditions of standards ČSN EN ISO 1461.

Fasteners M8 and M10 are hot dip galvanized and meet quality according to the standard ČSN EN ISO10684. For economic variant is used electro-galvanized fasteners M6.

#### **Components for lightning protection and grounding in copper – Cu**

The material used for the production of clamps is copper of standard E-Cu 57 (Cu-ETP/CW004A), other products are made from copper without a requirement for guaranteed conductivity.

Fasteners M8 and M10 are from copper, welded products with wood screws 6/50, 8/100, 8/160 and 8/200 are from stainless steel, A2 grade.

#### **Components for lightning protection and grounding in stainless steel – Inox (Inox V4A)**

Used material is stainless steel DIN 1.4301 (AISI 304) with marking N (A2) and stainless steel DIN 1.4404 (AISI 316L) with marking V4A (used for clamps and wire buried in the earth). Fasteners M6, M8, M10 and wood screws are in quality A2 or A4 by type of products.

#### **Components for lightning protection and grounding in Aluminium alloy – AlMgSi**

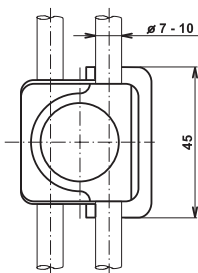
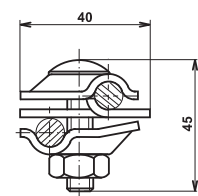
Used material is aluminium alloy AlMgSi, the wires and receiving rods are supplied from material EN AW 6101B. Fasteners M8 and M10 including spring washer are made from stainless steel in quality A2.

#### **Components for installation isolated air-termination system**

Isolating rod, which guaranteed safe distance from the protected equipment, is made from composite material (GFK), clamping components and fasteners M8 are from hot dip galvanized steel.

**The company Tremis s.r.o.** recommends the assembly of their products with conductors according to the applicable standards. Comments of products and recommendations you will find on page 38 of this catalogue.

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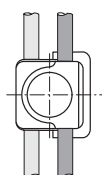
## UNIVERSAL CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SU      | 0,131       | 100           | V001   |
| Copper    | SU Cu   | 0,141       | 1             | V600   |
| Aluminium | SU Al   | 0,076       | 1             | VN3200 |
| Inox      | SU N    | 0,112       | 1             | VN2000 |

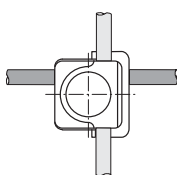
**Application:** Use only one screw with a square under the head considerably accelerates and simplifies assembly. Shaped clamp ensures sufficient strength and conductivity of the connection. In connection with the sheet of material is needed fortress secured deflection of one of the liners.

### Methods application:

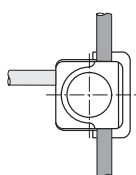
Parallel connection



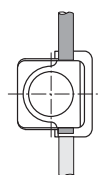
Cross connection



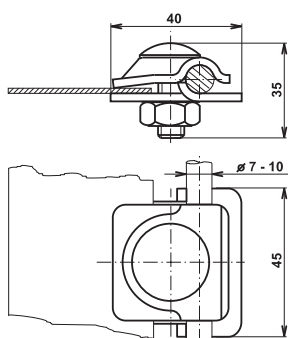
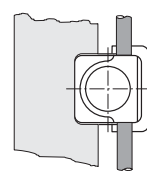
„T“ connection



Coaxial connection



Flat material connection

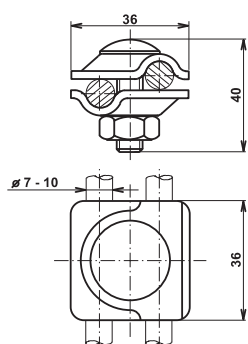


## UNIVERSAL CLAMP WITH ONE SPLICE

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SUA     | 0,099       | 100           | V005   |
| Copper    | SUA Cu  | 0,105       | 1             | V605   |
| Aluminium | SUA Al  | 0,060       | 1             | VN3205 |
| Inox      | SUA N   | 0,085       | 1             | VN2005 |

**Application:** Connection of round conductor with flat material.

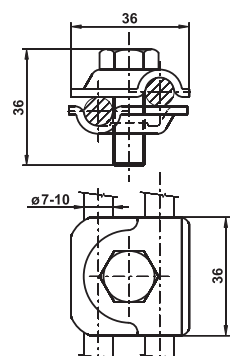
## UNIVERSAL CLAMP WITHOUT INTERMEDIATE PLATE



| Made of   | Marking   | Weight (kg) | Package (pcs) | Code   |
|-----------|-----------|-------------|---------------|--------|
| H.D.G.    | SUB       | 0,100       | 100           | V010   |
| Copper    | SUB Cu    | 0,106       | 1             | V610   |
| Aluminium | SUB Al    | 0,062       | 1             | VN3210 |
| Inox      | SUB N     | 0,085       | 1             | VN2010 |
| Inox V4A  | SUB N V4A | 0,087       | 1             | VN2011 |

**Application:** Same as with universal clamp SU, except of connection with flat material. Recommended tightening torque for SUB is 25 Nm.

## UNIVERSAL CLAMP WITH THREAD



| Made of   | Marking    | Weight (kg) | Package (pcs) | Code   |
|-----------|------------|-------------|---------------|--------|
| H.D.G.    | SUBz       | 0,100       | 100           | VT001  |
| Copper    | SUBz Cu    | 0,900       | 1             | V611   |
| Aluminium | SUBz Al    | 0,062       | 1             | VN3211 |
| Inox      | SUBz N     | 0,087       | 1             | VT100  |
| Inox V4A  | SUBz N V4A | 0,087       | 1             | VT300  |

**Application:** Same as with universal clamp SU, except of connection with flat material. Cooper variant has inox steel bolt.



## PARALLEL CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SS      | 0,107       | 150           | V015   |
| Copper    | SS Cu   | 0,120       | 1             | V615   |
| Aluminium | SS Al   | 0,065       | 1             | VN3215 |
| Inox      | SS N    | 0,086       | 1             | VN2015 |

**Application:** Connection of round conductors and connection with flat material. Recommended tightening torque for SS Cu is 17 Nm.

## PARALLEL CLAMP WITH SPLICE

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SSp     | 0,138       | 100           | V020 |
| Copper  | SSp Cu  | 0,155       | 1             | V620 |

**Application:** Connection of round conductors and connection with flat material. Recommended tightening torque for SSp Cu is 17 Nm.

## TEST CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SZa     | 0,193       | 100           | V025   |
| Copper    | SZa Cu  | 0,206       | 1             | V625   |
| Aluminium | SZa Al  | 0,116       | 1             | VN3220 |
| Inox      | SZa N   | 0,162       | 1             | VN2025 |

**Application:** Connection of above ground lightning conductor with grounding.

**Material:** Hot dip galvanized steel, brass nuts.

## TEST CLAMP

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SZb     | 0,180       | 100           | V030 |

**Application:** Connection of above ground lightning conductor with grounding.

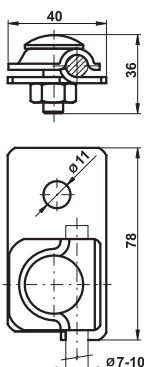
**Material:** Hot dip galvanized malleable cast iron, brass nuts, the stirrups are made of hot dip galvanized steel.

## TEST CLAMP

| Made of | Marking | Weight (kg) | Package (pcs) | Code   |
|---------|---------|-------------|---------------|--------|
| H.D.G.  | SZc     | 0,120       | 100           | V035   |
| Copper  | SZc Cu  | 0,140       | 1             | V627   |
| Inox    | SZc N   | 0,118       | 1             | VN2027 |

**Application:** Connection of above ground lightning conductor with grounding.

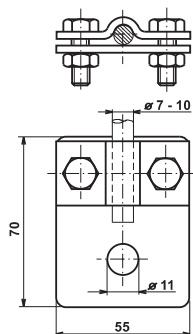
**Material:** Hot dip galvanized steel, brass nuts.



## ATTACHING CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SP      | 0,125       | 100           | V040   |
| Copper    | SP Cu   | 0,134       | 1             | V630   |
| Aluminium | SP Al   | 0,075       | 1             | VN3225 |
| Inox      | SP N    | 0,108       | 1             | VN2030 |

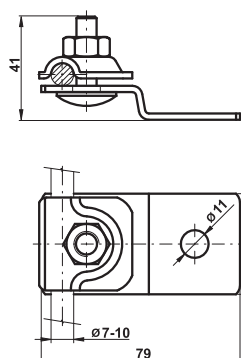
**Application:** Attaching the round conductor to metal parts of the premises.



## ATTACHING CLAMP

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SPb     | 0,146       | 50            | V045 |
| Copper  | SPb Cu  | 0,160       | 1             | V635 |

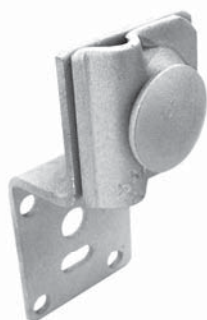
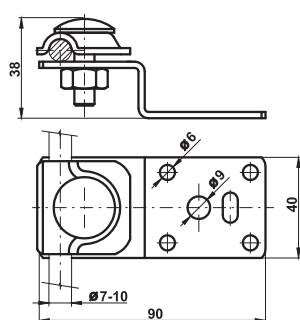
**Application:** Attaching the round conductor to metal parts of the premises.



## ATTACHING CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SPc     | 0,129       | 100           | V046   |
| Aluminium | SPc Al  | 0,078       | 1             | VN3230 |
| Inox      | SPc N   | 0,112       | 1             | VN2032 |

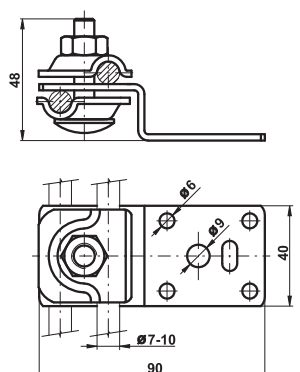
**Application:** Attaching the round conductor to metal parts of the premises.



## ATTACHING CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SPd     | 0,144       | 100           | V047   |
| Aluminium | SPd Al  | 0,087       | 1             | VN3235 |
| Inox      | SPd N   | 0,124       | 1             | VN2033 |

**Application:** Attaching the round conductor to metal parts of the premises with screws or rivets.

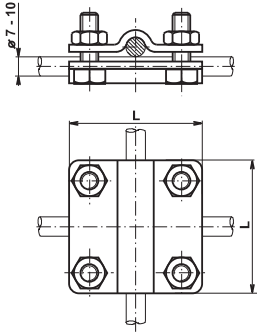


## ATTACHING CLAMP

| Made of   | Marking | Weight (kg) | Package (pcs) | Code   |
|-----------|---------|-------------|---------------|--------|
| H.D.G.    | SPe     | 0,180       | 100           | V048   |
| Aluminium | SPe Al  | 0,108       | 1             | VN3240 |
| Inox      | SPe N   | 0,152       | 1             | VN2034 |

**Application:** Attaching the round conductors to metal parts of the premises with screws or rivets.

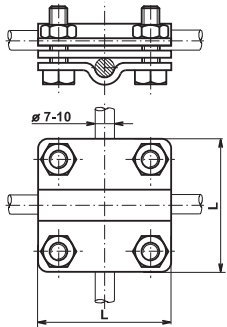
## CROSS CLAMP



| Made of  | Marking   | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|-----------|--------|-------------|---------------|--------|
| H.D.G.   | SK        | 55     | 0,216       | 50            | V050   |
| Copper   | SK Cu     | 55     | 0,236       | 1             | V640   |
| Inox     | SK N      | 55     | 0,186       | 1             | VN2040 |
| Inox V4A | SK N V4A  | 55     | 0,186       | 1             | VN2041 |
| H.D.G.   | SKv       | 65     | 0,344       | 50            | V049   |
| Inox V4A | SKv N V4A | 65     | 0,268       | 1             | VN2047 |

**Application:** Cross connection of round conductors.

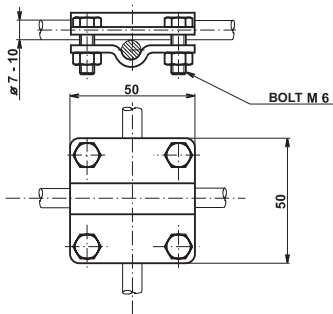
## CROSS CLAMP + INTERMEDIATE PLATE



| Made of  | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|-------------|--------|-------------|---------------|--------|
| H.D.G.   | SK+1        | 55     | 0,284       | 50            | V051   |
| Inox     | SK+1 N      | 55     | 0,246       | 1             | VN2049 |
| Inox V4A | SK+1 N V4A  | 55     | 0,246       | 1             | VN2044 |
| H.D.G.   | SKv+1       | 65     | 0,475       | 1             | V074   |
| Inox V4A | SKv+1 N V4A | 65     | 0,363       | 1             | VN2048 |

**Application:** Cross connection of round conductors.

## CROSS CLAMP M6

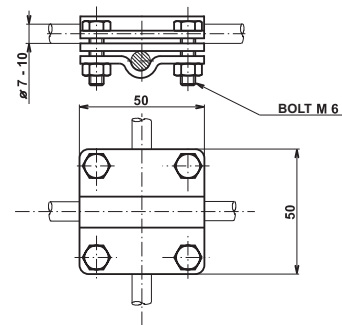


| Made of  | Marking    | Weight (kg) | Package (pcs) | Code   |
|----------|------------|-------------|---------------|--------|
| H.D.G.   | SK E       | 0,152       | 50            | V052   |
| Inox     | SK E N     | 0,120       | 50            | VN2042 |
| Inox V4A | SK E N V4A | 0,120       | 50            | VN2043 |

**Application:** Cross connection of round conductors.

**Material:** Hot dip galvanized steel, galvanized bolts.

## CROSS CLAMP + INTERMEDIATE PLATE M6

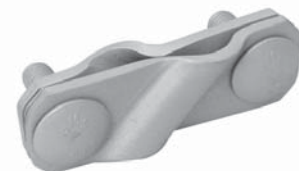
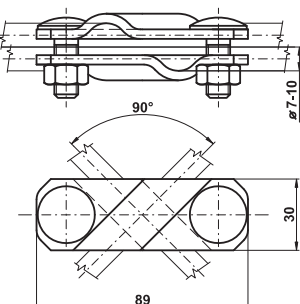


| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SK+1 E  | 0,211       | 50            | V053 |

**Application:** Cross connection of round conductors.

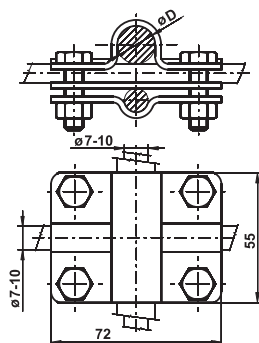
**Material:** Hot dip galvanized steel, galvanized bolts.

## CROSS DIAGONAL CLAMP



| Made of  | Marking   | Weight (kg) | Package (pcs) | Code   |
|----------|-----------|-------------|---------------|--------|
| H.D.G.   | SKd       | 0,235       | 50            | V054   |
| Inox     | SKd N     | 0,188       | 1             | VN2045 |
| Inox V4A | SKd N V4A | 0,188       | 1             | VN2046 |

**Application:** Cross connection of round conductors.



## CLAMP FOR RECEIVING ROD

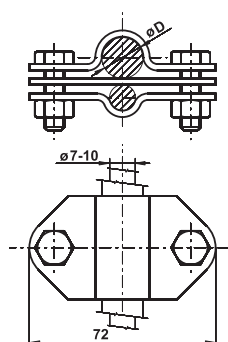
| Made of | Marking        | Ø D | Weight (kg) | Package (pcs) | Code   |
|---------|----------------|-----|-------------|---------------|--------|
| H.D.G.  | <b>SJ 1</b>    | 18  | 0,387       | 50            | V055   |
| Copper  | <b>SJ 1 Cu</b> | 18  | 0,421       | 1             | V645   |
| H.D.G.  | <b>SJ 1e</b>   | 16  | 0,354       | 50            | V071   |
| Inox    | <b>SJ 1e N</b> | 16  | 0,294       | 1             | VN2055 |

**Application:** Connecting the round conductor with receiving rod. Variant SJ 1 is determined for receiving rod Ø 18 mm, SJ 1e for receiving rod Ø 16 mm.

## CLAMP FOR RECEIVING ROD

| Made of   | Marking         | Ø D | Weight (kg) | Package (pcs) | Code   |
|-----------|-----------------|-----|-------------|---------------|--------|
| H.D.G.    | <b>SJ 1b</b>    | 18  | 0,228       | 50            | V060   |
| Copper    | <b>SJ 1b Cu</b> | 18  | 0,244       | 1             | V650   |
| Aluminium | <b>SJ 1b Al</b> | 18  | 0,091       | 1             | VN3245 |
| Inox      | <b>SJ 1b N</b>  | 18  | 0,168       | 1             | VN2050 |
| H.D.G.    | <b>SJ 1f</b>    | 16  | 0,209       | 50            | V072   |
| Inox      | <b>SJ 1f N</b>  | 16  | 0,145       | 1             | VN2057 |

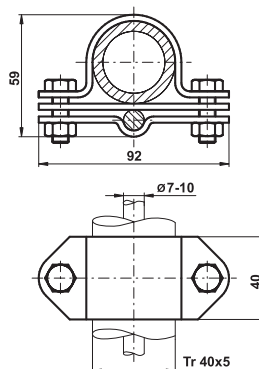
**Application:** Connecting the round conductor with receiving rod. Variant SJ 1 b is determined for receiving rod Ø 18 mm, SJ 1 f for receiving rod Ø 16 mm.



## CLAMP FOR RECEIVING ROD JT

| Made of   | Marking         | Weight (kg) | Package (pcs) | Code   |
|-----------|-----------------|-------------|---------------|--------|
| H.D.G.    | <b>SJ 1c</b>    | 0,304       | 50            | V061   |
| Aluminium | <b>SJ 1c Al</b> | 0,183       | 1             | VN3250 |
| Inox      | <b>SJ 1c N</b>  | 0,207       | 1             | VN2051 |

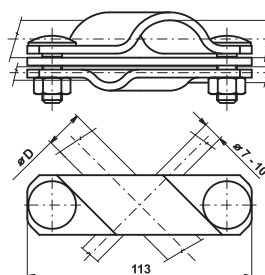
**Application:** Connecting the round conductor with receiving rod JT (Ø 40 mm).



## CLAMP FOR ROD DIAGONAL

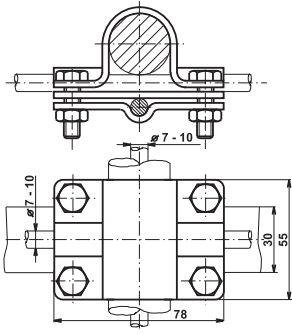
| Made of  | Marking            | Ø D     | Weight (kg) | Package (pcs) | Code   |
|----------|--------------------|---------|-------------|---------------|--------|
| H.D.G.   | <b>SJ 1d</b>       | 18 - 20 | 0,382       | 50            | V063   |
| Inox V4A | <b>SJ 1d N V4A</b> | 18 - 20 | 0,302       | 1             | VN2053 |
| H.D.G.   | <b>SJ 1g</b>       | 16      | 0,380       | 1             | V073   |
| Inox V4A | <b>SJ 1g N V4A</b> | 16      | 0,300       | 1             | VN2059 |

**Application:** Connecting the grounding tape and round conductor to insertion rods (TZ).





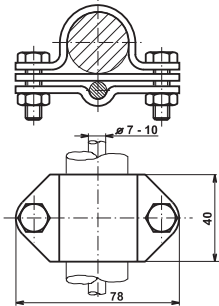
## CLAMP FOR GROUNDING ROD



| Made of | Marking        | Weight (kg) | Package (pcs) | Code |
|---------|----------------|-------------|---------------|------|
| H.D.G.  | <b>SJ 2</b>    | 0,417       | 50            | V065 |
| Copper  | <b>SJ 2 Cu</b> | 0,459       | 1             | V655 |

**Application:** Connecting the grounding tape and round conductor to grounding rod. Connecting the grounding tape in both the longitudinal and transverse direction.

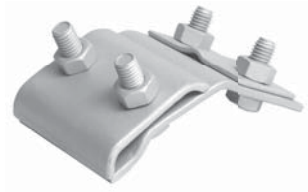
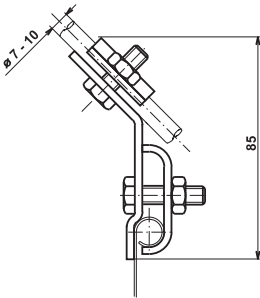
## CLAMP FOR GROUNDING ROD



| Made of | Marking         | Weight (kg) | Package (pcs) | Code |
|---------|-----------------|-------------|---------------|------|
| H.D.G.  | <b>SJ 2b</b>    | 0,255       | 50            | V070 |
| Copper  | <b>SJ 2b Cu</b> | 0,285       | 1             | V660 |

**Application:** Connecting the grounding tape and round conductor to grounding rod.

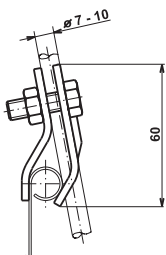
## GUTTER CLAMP



| Made of | Marking       | Weight (kg) | Package (pcs) | Code |
|---------|---------------|-------------|---------------|------|
| H.D.G.  | <b>SOa</b>    | 0,280       | 50            | V075 |
| Copper  | <b>SOa Cu</b> | 0,308       | 1             | V665 |

**Application:** Connects the round conductor to the gutter.

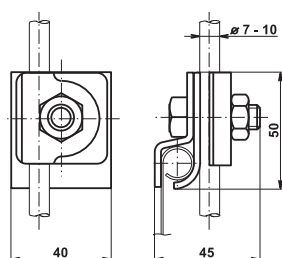
## GUTTER CLAMP



| Made of | Marking       | Weight (kg) | Package (pcs) | Code |
|---------|---------------|-------------|---------------|------|
| H.D.G.  | <b>SOb</b>    | 0,150       | 100           | V080 |
| Copper  | <b>SOb Cu</b> | 0,168       | 1             | V670 |

**Application:** Connects the round conductor to the gutter.

## GUTTER CLAMP



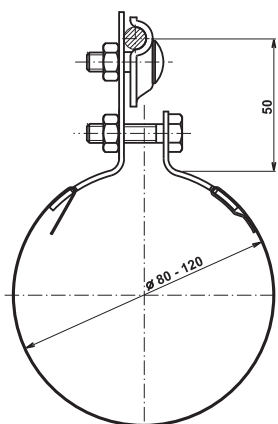
| Made of   | Marking       | Weight (kg) | Package (pcs) | Code   |
|-----------|---------------|-------------|---------------|--------|
| H.D.G.    | <b>SOc</b>    | 0,147       | 100           | V085   |
| Copper    | <b>SOc Cu</b> | 0,160       | 1             | V675   |
| Aluminium | <b>SOc Al</b> | 0,081       | 1             | VN3255 |
| Inox      | <b>SOc N</b>  | 0,128       | 1             | VN2075 |

**Application:** Connects the round conductor to the gutter.

## DOWNPIPE CLAMP

| Made of | Marking        | Weight (kg) | Package (pcs) | Code   |
|---------|----------------|-------------|---------------|--------|
| H.D.G.  | ST             | 0,218       | 100           | V095   |
|         | ST w/o tape    | 0,192       | 100           | V090   |
|         | Tape Inox      | 0,060       | 1m            | V105   |
| Copper  | ST Cu          | 0,228       | 1             | V685   |
|         | ST w/o tape Cu | 0,205       | 1             | V680   |
|         | Tape Cu        | 0,065       | 1m            | V690   |
| Inox    | ST N           | 0,184       | 1             | VN2080 |
|         | ST w/o tape N  | 0,159       | 1             | VN2079 |

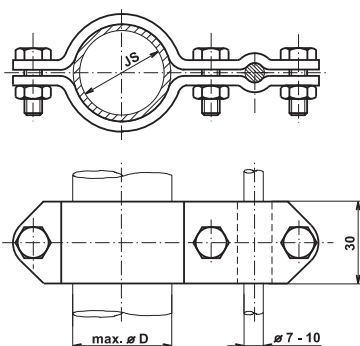
**Application:** Connects the eavestrough to the round conductor.  
Use of flexible stainless steel tape enables universal use of this kind of clamp for several diameters of downpipe or other pipes.



## PIPELINE CLAMP

| Made of | Marking | øD (mm)   | Js (") | Weight (kg) | Package (pcs) | Code   |
|---------|---------|-----------|--------|-------------|---------------|--------|
| H.D.G.  | ST 1    | 18 - 22   | 1/2    | 0,208       | 50            | V096   |
|         | ST 2    | 23 - 27   | 3/4    | 0,255       | 50            | V097   |
|         | ST 3    | 28 - 34   | 1      | 0,275       | 50            | V098   |
|         | ST 4    | 35 - 43   | 1 1/4  | 0,295       | 50            | V099   |
|         | ST 5    | 44 - 50   | 1 1/2  | 0,315       | 50            | V100   |
|         | ST 6    | 54 - 61   | 2      | 0,345       | 50            | V101   |
|         | ST 7    | 69 - 77   | 2 1/2  | 0,373       | 50            | V102   |
|         | ST 8    | 81 - 90   | 3      | 0,405       | 50            | V103   |
|         | ST 9    | 106 - 115 | 4      | 0,497       | 50            | V104   |
| Copper  | ST 1 Cu | 18 - 22   | 1/2    | 0,237       | 1             | V691   |
|         | ST 2 Cu | 23 - 27   | 3/4    | 0,289       | 1             | V692   |
|         | ST 3 Cu | 28 - 34   | 1      | 0,313       | 1             | V693   |
|         | ST 4 Cu | 35 - 43   | 1 1/4  | 0,336       | 1             | V694   |
| Inox    | ST 1 N  | 18 - 22   | 1/2    | 0,167       | 1             | VN2081 |
|         | ST 2 N  | 23 - 27   | 3/4    | 0,203       | 1             | VN2082 |
|         | ST 3 N  | 28 - 34   | 1      | 0,218       | 1             | VN2083 |
|         | ST 4 N  | 35 - 43   | 1 1/4  | 0,233       | 1             | VN2084 |
|         | ST 5 N  | 44 - 50   | 1 1/2  | 0,248       | 1             | VN2085 |
|         | ST 6 N  | 54 - 61   | 2      | 0,271       | 1             | VN2086 |
|         | ST 7 N  | 69 - 77   | 2 1/2  | 0,292       | 1             | VN2087 |
|         | ST 8 N  | 81 - 90   | 3      | 0,315       | 1             | VN2088 |
|         | ST 9 N  | 106 - 115 | 4      | 0,384       | 1             | VN2089 |

**Application:** Connects pipelines and eavestroughs with round conductor.

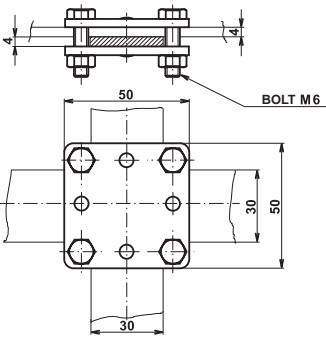


## GROUNDING TAPE – TAPE CLAMP M6

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SR 2a   | 0,146       | 100           | V108 |

**Application:** Cross and parallel connection of grounding tape conductor.

**Material:** Hot dip galvanized steel, galvanized bolts.

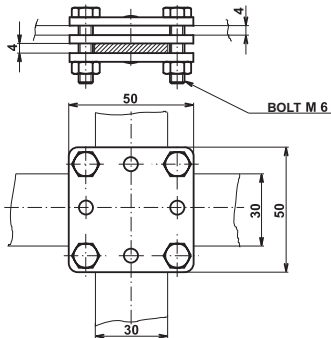


## GROUNDING TAPE - TAPE CLAMP + INTERMEDIATE PLATE M6

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SR 2a+1 | 0,202       | 50            | V109 |

**Application:** Cross and parallel connection of grounding tape conductor.

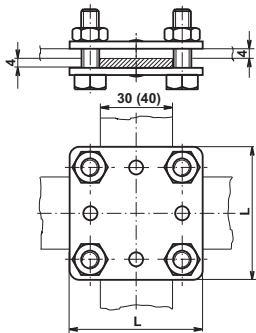
**Material:** Hot dip galvanized steel, galvanized bolts.



## GROUNDING TAPE – TAPE CLAMP

| Made of  | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|-------------|--------|-------------|---------------|--------|
| H.D.G.   | SR 2b       | 55     | 0,208       | 50            | V110   |
| Copper   | SR 2b Cu    | 55     | 0,228       | 1             | V710   |
| Inox     | SR 2b N     | 55     | 0,196       | 1             | VN2090 |
| Inox V4A | SR 2b N V4A | 55     | 0,196       | 1             | VN2091 |
| H.D.G.   | SR 2v       | 65     | 0,328       | 50            | V106   |
| Inox V4A | SR 2v N V4A | 65     | 0,258       | 1             | VN2092 |

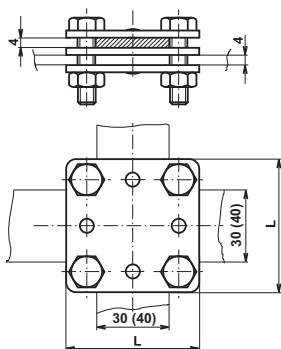
**Application:** Cross and parallel connection of grounding tape conductor. Version SR 2b is for tape conductor 30 x 4 (3,5) mm, SR 2v is for tape conductor 40 x 4 (5) mm.



## GROUNDING TAPE - TAPE CLAMP + INTERMEDIATE PLATE

| Made of  | Marking       | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|---------------|--------|-------------|---------------|--------|
| H.D.G.   | SR 2b+1       | 55     | 0,275       | 50            | V111   |
| Inox     | SR 2b+1 N     | 55     | 0,239       | 1             | VN2099 |
| Inox V4A | SR 2b+1 N V4A | 55     | 0,239       | 1             | VN2097 |
| H.D.G.   | SR 2v+1       | 65     | 0,466       | 1             | V107   |
| Inox V4A | SR 2v+1 N V4A | 65     | 0,353       | 1             | VN2098 |

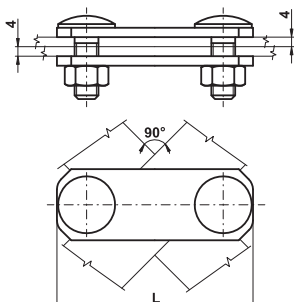
**Application:** Cross and parallel connection of grounding tape conductors. Version SR 2b+1 is for tape conductor 30 x 4 (3,5) mm, SR 2v+1 is for tape conductor 40 x 4 (5) mm.

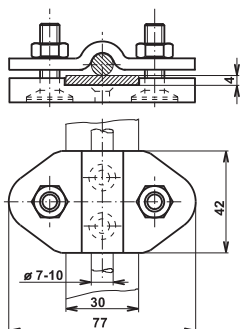


## GROUNDING TAPE – TAPE DIAGONAL CLAMP

| Made of  | Marking      | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|--------------|--------|-------------|---------------|--------|
| H.D.G.   | SR 2dv       | 96     | 0,247       | 50            | V112   |
| Inox     | SR 2dv N     | 96     | 0,193       | 1             | VN2100 |
| Inox V4A | SR 2dv N V4A | 96     | 0,193       | 1             | VN2101 |
| H.D.G.   | SR 2dm       | 82,5   | 0,217       | 50            | V113   |

**Application:** Cross and parallel connection of grounding tape conductor. Version SR 2dv is for tape conductor 40 x 4 (5) mm, SR 2dm is for tape conductor 30 x 4 (3,5) mm.



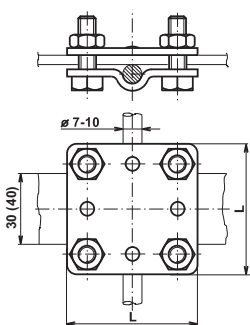


## GROUNDING TAPE - WIRE CLAMP

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SR 3a   | 0,249       | 50            | V115 |

**Application:** Parallel connection of grounding tape and round conductor.

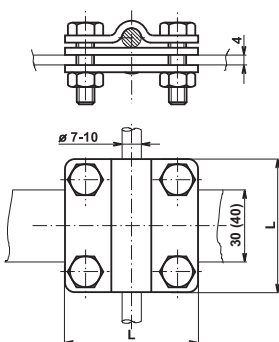
**Material:** Hot dip galvanized malleable cast iron, splice is made of hot dip galvanized steel.



## GROUNDING TAPE - WIRE CLAMP

| Made of  | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|-------------|--------|-------------|---------------|--------|
| H.D.G.   | SR 3b       | 55     | 0,214       | 50            | V120   |
| Copper   | SR 3b Cu    | 55     | 0,232       | 1             | V715   |
| Inox     | SR 3b N     | 55     | 0,201       | 1             | VN2093 |
| Inox V4A | SR 3b N V4A | 55     | 0,201       | 1             | VN2095 |
| H.D.G.   | SR 3v       | 65     | 0,336       | 50            | V119   |
| Inox V4A | SR 3v N V4A | 65     | 0,263       | 1             | VN2112 |

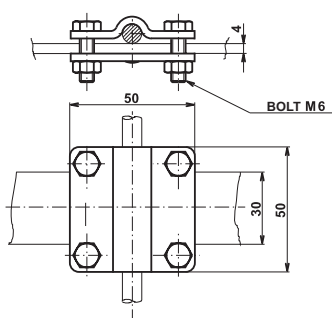
**Application:** Cross and parallel connection of grounding tape conductor and round conductor. Version SR 3b is for tape conductor 30 x 4 (3,5) mm, SR 3v is for tape conductor 40 x 4 (5) mm.



## GROUNDING TAPE - WIRE CLAMP + INTERMEDIATE PLATE

| Made of  | Marking       | L (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|---------------|--------|-------------|---------------|--------|
| H.D.G.   | SR 3b+1       | 55     | 0,281       | 50            | V121   |
| Inox     | SR 3b+1 N     | 55     | 0,243       | 1             | VN2094 |
| Inox V4A | SR 3b+1 N V4A | 55     | 0,243       | 1             | VN2096 |
| H.D.G.   | SR 3v+1       | 65     | 0,472       | 1             | V089   |
| Inox V4A | SR 3v+1 N V4A | 65     | 0,360       | 1             | VN2113 |

**Application:** Cross and parallel connection of grounding tape conductor and round conductor. Version SR 3b+1 is for tape conductor 30 x 4 (3,5) mm, SR 3v+1 is for tape conductor 40 x 4 (5) mm.

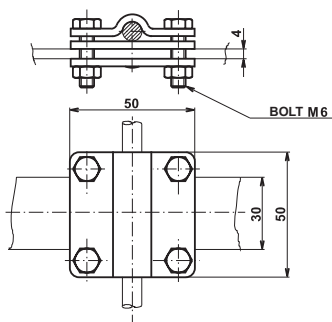


## GROUNDING TAPE - WIRE CLAMP M6

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SR 3b E | 0,149       | 50            | V122 |

**Application:** Parallel and cross connection of grounding tape and round conductor.

**Material:** Hot dip galvanized steel, galvanized bolts.



## GROUNDING TAPE - WIRE CLAMP + INTERMEDIATE PLATE M6

| Made of | Marking   | Weight (kg) | Package (pcs) | Code |
|---------|-----------|-------------|---------------|------|
| H.D.G.  | SR 3b+1 E | 0,209       | 50            | V123 |

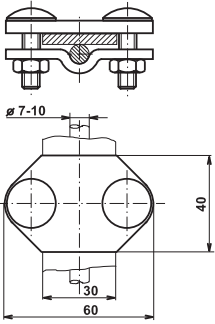
**Application:** Parallel and cross connection of grounding tape and round conductor.

**Material:** Hot dip galvanized steel, galvanized bolts.

## GROUNDING TAPE - WIRE CLAMP

| Made of | Marking  | Weight (kg) | Package (pcs) | Code |
|---------|----------|-------------|---------------|------|
| H.D.G.  | SR 3c    | 0,163       | 100           | V125 |
| Copper  | SR 3c Cu | 0,172       | 1             | V720 |

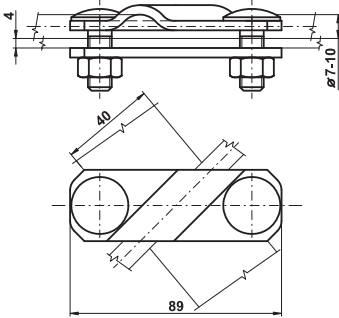
**Application:** Parallel connection of grounding tape and round conductor.



## GROUNDING TAPE-WIRE DIAGONAL CLAMP

| Made of  | Marking     | Weight (kg) | Package (pcs) | Code   |
|----------|-------------|-------------|---------------|--------|
| H.D.G.   | SR 3d       | 0,234       | 50            | V126   |
| Inox     | SR 3d N     | 0,186       | 1             | VN2110 |
| Inox V4A | SR 3d N V4A | 0,186       | 1             | VN2111 |

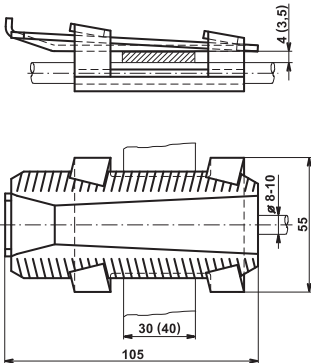
**Application:** Cross and parallel connection of grounding tape and round conductor.



## GROUNDING TAPE - TAPE - WIRE CLAMP (WEDGE)

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | SRK     | 0,208       | 50            | V127 |

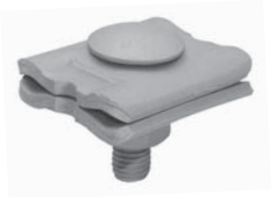
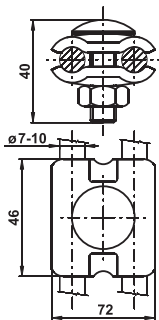
**Application:** Parallel and cross connection of grounding tape or grounding tape and round conductor in concrete. Easy and fast assembly without fasteners.



## PARALLEL CLAMP

| Made of  | Marking   | Weight (kg) | Package (pcs) | Code  |
|----------|-----------|-------------|---------------|-------|
| H.D.G.   | SSR       | 0,149       | 50            | VT030 |
| Inox V4A | SSR N V4A | 0,120       | 1             | VT400 |

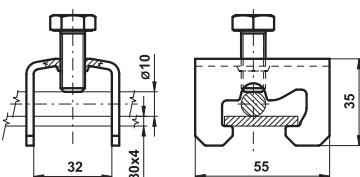
**Application:** Parallel connection of round conductors. Thicker material of clamp allow used in earth.



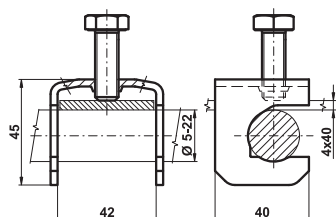
## GROUNDING TAPE-TAPE-WIRE CLAMP (WITH SCREW)

| Made of  | Marking   | Weight (kg) | Package (pcs) | Code   |
|----------|-----------|-------------|---------------|--------|
| H.D.G.   | SRT       | 0,119       | 50            | V114   |
| Inox V4A | SRT N V4A | 0,101       | 1             | VN2150 |

**Application:** Cross and parallel connections of grounding tape or for parallel connecting of grounding tape with the concrete reinforcement and terminal lugs  $\varnothing 10$  mm in concrete. Fast connection using a single screw for fixation.



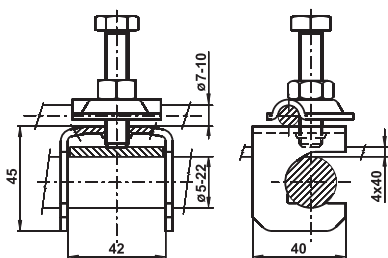




## GROUNDING TAPE-TAPE-WIRE CLAMP (WITH SCREW)

| Made of  | Marking   | Weight (kg) | Package (pcs) | Code  |
|----------|-----------|-------------|---------------|-------|
| H.D.G.   | SKT       | 0,111       | 50            | V128  |
| Inox V4A | SKT N V4A | 0,100       | 1             | VT340 |

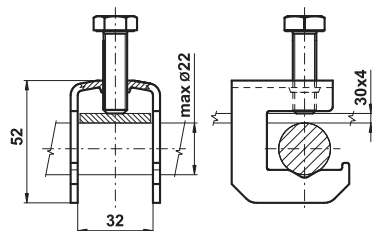
**Application:** Cross and parallel connections of grounding tape or grounding tape and round conductor with concrete reinforcement. Fast connection using a single screw for fixation.



## GROUNDING TAPE - TAPE - WIRE CLAMP (WITH SCREW + SPLICE)

| Made of  | Marking    | Weight (kg) | Package (pcs) | Code  |
|----------|------------|-------------|---------------|-------|
| H.D.G.   | SKTp       | 0,182       | 50            | VT010 |
| Inox V4A | SKTp N V4A | 0,140       | 1             | VT360 |

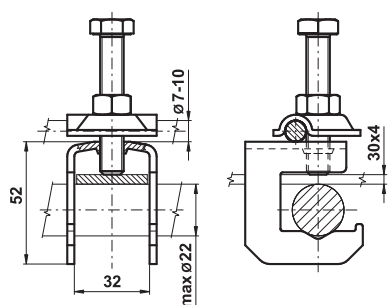
**Application:** Cross and parallel connections of grounding tape or grounding tape and round conductor with concrete reinforcement and for connecting of grounding point to concrete reinforcement. Fast connection using a single screw and nut for fixation.



## GROUNDING TAPE - TAPE - WIRE CLAMP (WITH SCREW)

| Made of  | Marking    | Weight (kg) | Package (pcs) | Code   |
|----------|------------|-------------|---------------|--------|
| H.D.G.   | SKTz       | 0,127       | 50            | V124   |
| Inox V4A | SKTz N V4A | 0,110       | 1             | VN2140 |

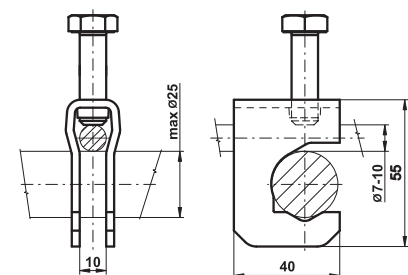
**Application:** Cross and parallel connections of grounding tape or grounding tape and round conductor with concrete reinforcement. Fast connection using a single screw for fixation.



## GROUNDING TAPE - TAPE - WIRE CLAMP (WITH SCREW + SPLICE)

| Made of  | Marking     | Weight (kg) | Package (pcs) | Code   |
|----------|-------------|-------------|---------------|--------|
| H.D.G.   | SKTzp       | 0,182       | 50            | V116   |
| Inox V4A | SKTzp N V4A | 0,153       | 1             | VN2145 |

**Application:** Cross and parallel connections of grounding tape or grounding tape and round conductor with concrete reinforcement and for connecting of grounding point to concrete reinforcement. Fast connection using a single screw and nut for fixation.

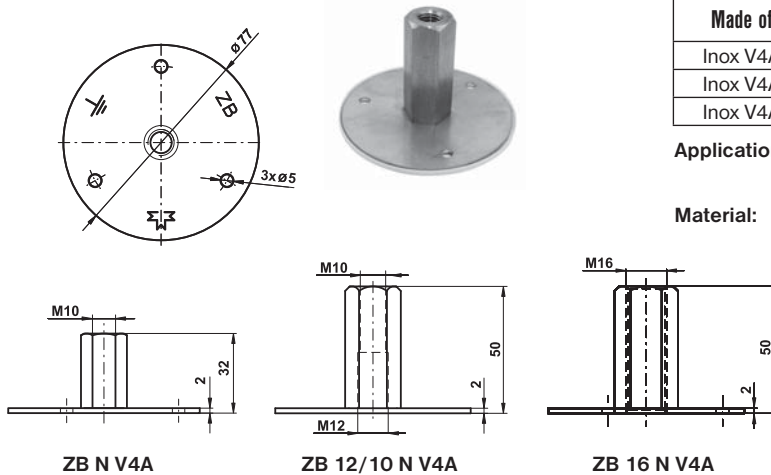


## GROUNDING WIRE - WIRE - TAPE CLAMP (WITH SCREW)

| Made of  | Marking    | Weight (kg) | Package (pcs) | Code   |
|----------|------------|-------------|---------------|--------|
| H.D.G.   | SKTm       | 0,103       | 50            | V088   |
| Inox V4A | SKTm N V4A | 0,091       | 1             | VN2142 |

**Application:** Cross connections of round conductors, grounding tape and round conductor or parallel connections grounding tape with concrete reinforcement.

## GROUNDING POINT

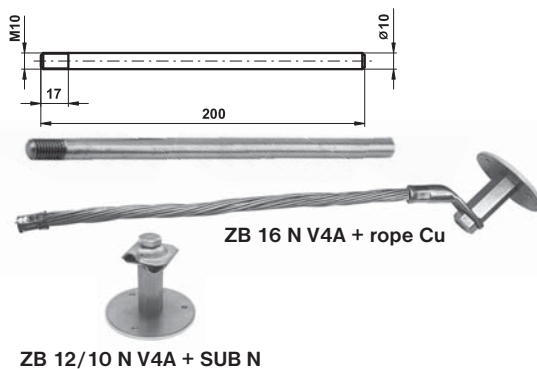


| Made of  | Marking        | Weight (kg) | Package (pcs) | Code   |
|----------|----------------|-------------|---------------|--------|
| Inox V4A | ZB N V4A       | 0,118       | 1             | VN2115 |
| Inox V4A | ZB 12/10 N V4A | 0,164       | 1             | VN2116 |
| Inox V4A | ZB 16 N V4A    | 0,168       | 1             | VT380  |

**Application:** Used with equipment for grounding point to connections down – conductor system to foundation earthing electrode.

**Material:** Stainless steel V4A, cap yellow plastic.

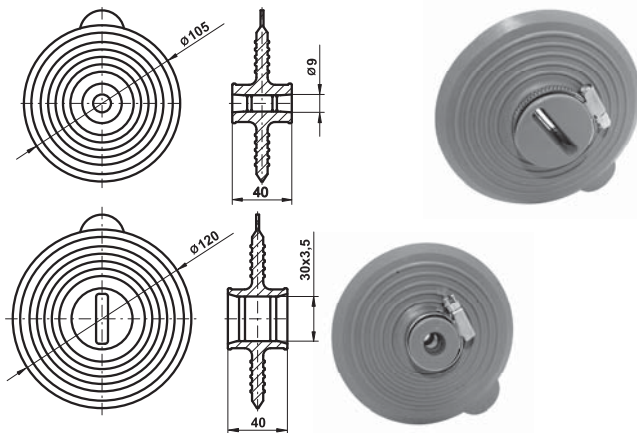
## ACCESSORIES FOR GROUNDING POINT



| Made of           | Marking                | Weight (kg) | Package (pcs) | Code   |
|-------------------|------------------------|-------------|---------------|--------|
| H.D.G.            | Axis M10               | 0,123       | 1             | V580   |
| Inox V4A          | Axis M10 N V4A         | 0,123       | 1             | VN2120 |
| Inox              | ZB 12/10 N V4A + SUB N | 0,232       | 1             | VT440  |
| Inox V4A + Copper | ZB 16 N V4A + rope CU  | 0,662       | 1             | VT460  |

**Application:** Accessories for grounding point.

## WATERPROOF SEAL

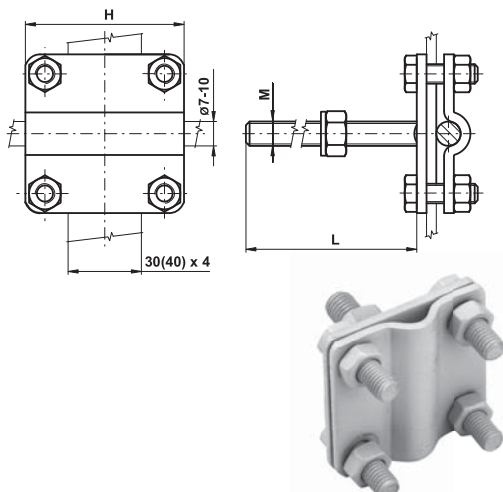


| Marking              | Weight (kg) | Package (pcs) | Code |
|----------------------|-------------|---------------|------|
| Waterproof seal 10   | 0,124       | 1             | Z440 |
| Waterproof seal 30/4 | 0,173       | 1             | Z445 |

**Application:** Seals prevent penetration of water in to the wall along grounding point axis or along outputs the earthing system made of round conductor Ø 10 mm or tape conductor 30 x 4 (3,5) mm.

**Material:** Rubber, fastening tapes Stainless steel.

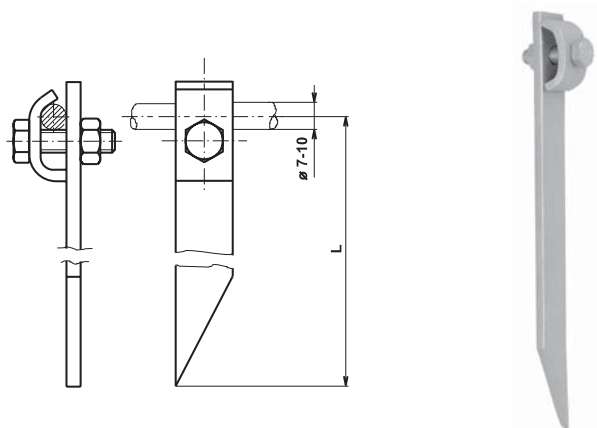
## GROUNDING POINT TAPE – WIRE CLAMP



| Made of  | Marking        | H (mm) | L (mm) | M (mm) | Weight (kg) | Package (pcs) | Code   |
|----------|----------------|--------|--------|--------|-------------|---------------|--------|
| H.D.G.   | ZBSRm          | 55     | 40     | 10     | 0,244       | 1             | V117   |
| Inox V4A | ZBSRm N V4A    | 55     | 40     | 10     | 0,217       | 1             | VN2130 |
| H.D.G.   | ZBSRv          | 65     | 70     | 10     | 0,376       | 1             | V118   |
| Inox V4A | ZBSRv N V4A    | 65     | 70     | 10     | 0,310       | 1             | VN2135 |
| Inox V4A | ZBSRv 16 N V4A | 65     | 30     | 16     | 0,296       | 1             | VT320  |

**Application:** Connections grounding tape or round conductor with grounding point. Version ZBSRm is for tape conductor 30 x 4 (3,5) mm, ZBSRv is for tape conductor 40 x 4 (5) mm.

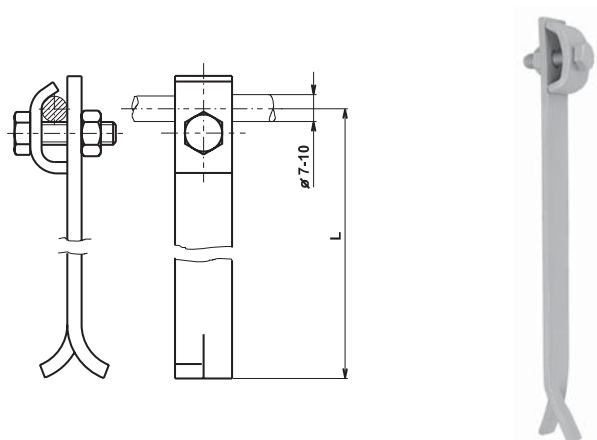
## CONDUCTOR SUPPORT



| Made of | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|-------------|--------|-------------|---------------|------|
| H.D.G.  | PV 1a-15    | 150    | 0,154       | 50            | V130 |
|         | PV 1a-20    | 200    | 0,194       | 50            | V135 |
|         | PV 1a-25    | 250    | 0,236       | 50            | V140 |
|         | PV 1a-30    | 300    | 0,278       | 50            | V145 |
| Copper  | PV 1a-15 Cu | 150    | 0,166       | 1             | V725 |
|         | PV 1a-20 Cu | 200    | 0,210       | 1             | V730 |
|         | PV 1a-25 Cu | 250    | 0,254       | 1             | V735 |
|         | PV 1a-30 Cu | 300    | 0,297       | 1             | V740 |

**Application:** Fastening the lightning conductor on masonry or wood.

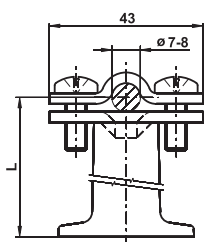
## CONDUCTOR SUPPORT FOR MASONRY



| Made of | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|-------------|--------|-------------|---------------|------|
| H.D.G.  | PV 1b-15    | 150    | 0,146       | 50            | V150 |
|         | PV 1b-20    | 200    | 0,178       | 50            | V155 |
|         | PV 1b-25    | 250    | 0,218       | 50            | V160 |
| Copper  | PV 1b-15 Cu | 150    | 0,154       | 1             | V745 |
|         | PV 1b-20 Cu | 200    | 0,189       | 1             | V750 |
|         | PV 1b-25 Cu | 250    | 0,227       | 1             | V755 |

**Application:** Fastening the lightning conductor on masonry.

## CONDUCTOR SUPPORT FOR MANSORY

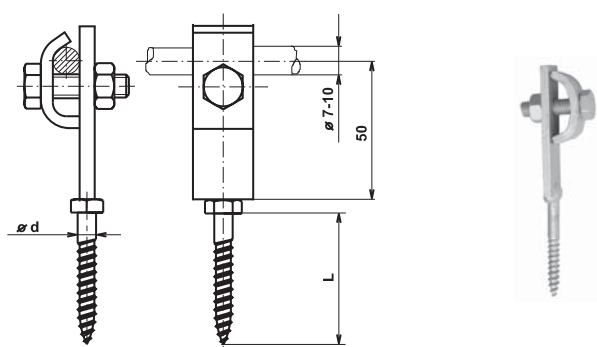


| Made of | Marking    | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|------------|--------|-------------|---------------|--------|
| H.D.G.  | PV 1c 25   | 25     | 0,048       | 20            | V161   |
|         | PV 1c 40   | 40     | 0,051       | 20            | V162   |
|         | PV 1c 55   | 55     | 0,053       | 20            | V163   |
| Inox    | PV 1c 25 N | 25     | 0,047       | 1             | VN2156 |
|         | PV 1c 40 N | 40     | 0,050       | 1             | VN2157 |
|         | PV 1c 55 N | 55     | 0,053       | 1             | VN2158 |

**Application:** Fastening the lightning round conductor on the walls of building using a screw or self-tapping screw with countersunk head.

**Material:** Hot-dip galvanized or stainless steel, plastic (stabilized PE against UV radiation) grey color. Bolts M6 are inox.

## CONDUCTOR SUPPORT DOWEL MOUNTED

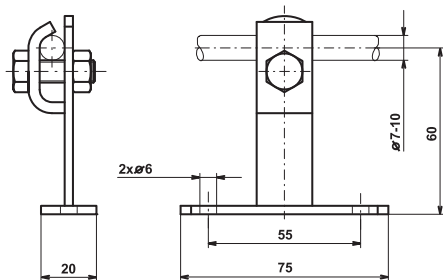


| Made of | Marking  | ød/L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|----------|-----------|-------------|---------------|--------|
| H.D.G.  | PV 1h    | 6/50      | 0,094       | 100           | V165   |
| Copper  | PV 1h Cu | 6/50      | 0,109       | 1             | V760   |
| Inox    | PV 1h N  | 6/50      | 0,088       | 1             | VN2160 |

**Application:** Fastening the lightning conductor on masonry structure using dowel.

**Material:** Versions PV 1h Cu are with wood screw of stainless steel.

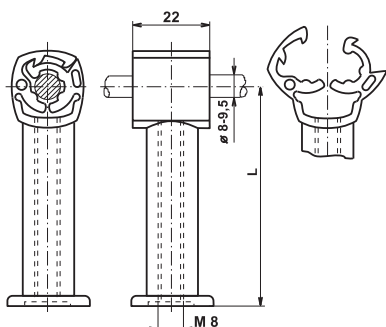
## CONDUCTOR SUPPORT FOR WALL



| Made of | Marking | Weight (kg) | Package (pcs) | Code   |
|---------|---------|-------------|---------------|--------|
| H.D.G.  | PV 1s   | 0,110       | 100           | V167   |
| Inox    | PV 1s N | 0,095       | 1             | VN2165 |

**Application:** Fastening the lightning conductor for wall with screws or rivets.

## CONDUCTOR SUPPORT FOR MASONRY

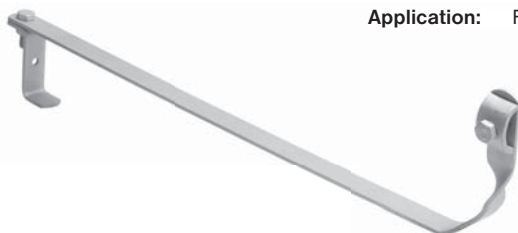
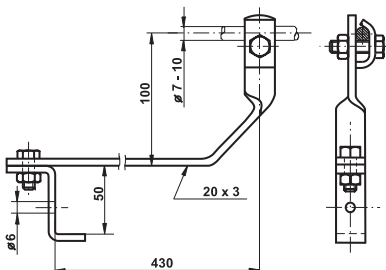


| Marking     | L (mm) | Weight (kg) | Package (pcs) | Code |
|-------------|--------|-------------|---------------|------|
| PV 1p-20    | 20     | 0,008       | 50            | Z600 |
| PV 1p-30    | 30     | 0,009       | 50            | Z605 |
| PV 1p-55    | 55     | 0,010       | 50            | Z610 |
| PV 1p-20 Cu | 20     | 0,008       | 50            | Z615 |
| PV 1p-30 Cu | 30     | 0,009       | 50            | Z620 |
| PV 1p-55 Cu | 55     | 0,010       | 50            | Z625 |

**Application:** Fastening the lightning conductor (ø 8 mm wire or ø 9,5 mm rope) to masonry structure using a screws and a dowels.

**Material:** Plastic grey color, marking CU – plastic copper color.

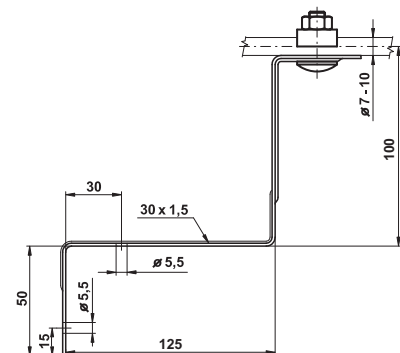
## CONDUCTOR SUPPORT UNDER ROOFING TILE



| Made of | Marking  | Weight (kg) | Package (pcs) | Code |
|---------|----------|-------------|---------------|------|
| H.D.G.  | PV 11    | 0,378       | 25            | V170 |
| Copper  | PV 11 Cu | 0,417       | 1             | V765 |

**Application:** Fastening the conductor on tiled roofs.

## CONDUCTOR SUPPORT UNDER ROOFING TILE



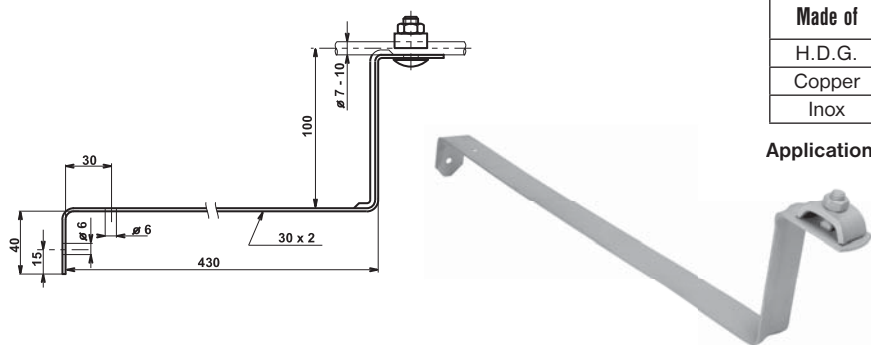
| Made of | Marking   | Weight (kg) | Package (pcs) | Code   |
|---------|-----------|-------------|---------------|--------|
| H.D.G.  | PV 11b    | 0,191       | 50            | V175   |
| Copper  | PV 11b Cu | 0,200       | 1             | V770   |
| Inox    | PV 11b N  | 0,150       | 1             | VN2170 |

**Application:** Fastening the conductor on tiled roofs (fastening the support behind the first roofing lath).

## CONDUCTOR SUPPORT UNDER ROOFING TILE

| Made of | Marking          | Weight (kg) | Package (pcs) | Code   |
|---------|------------------|-------------|---------------|--------|
| H.D.G.  | <b>PV 11c</b>    | 0,329       | 25            | V177   |
| Copper  | <b>PV 11c Cu</b> | 0,345       | 1             | V772   |
| Inox    | <b>PV 11c N</b>  | 0,234       | 1             | VN2172 |

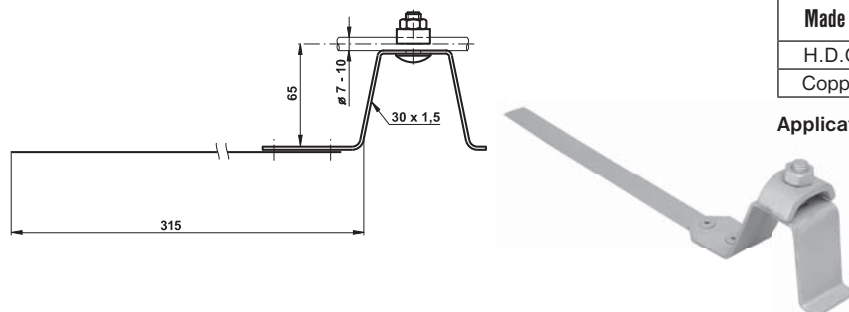
**Application:** Fastening the conductor on tiled roofs.



## CONDUCTOR SUPPORT UNDER ROOFING TILE

| Made of | Marking          | Weight (kg) | Package (pcs) | Code |
|---------|------------------|-------------|---------------|------|
| H.D.G.  | <b>PV 11d</b>    | 0,191       | 50            | V178 |
| Copper  | <b>PV 11d Cu</b> | 0,200       | 1             | V773 |

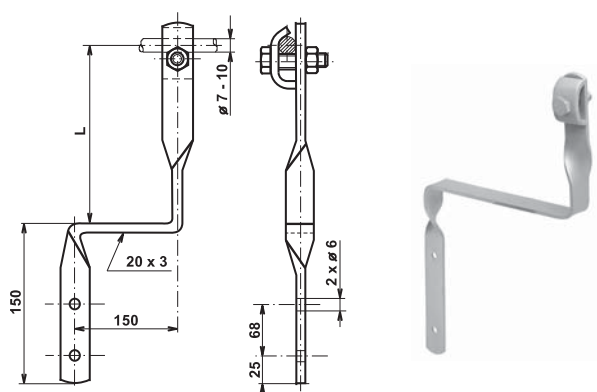
**Application:** Fastening the conductor on tiled roofs (fastening the support behind the first roofing lath).



## CONDUCTOR SUPPORT UNDER SLOPED ROOFING TILE

| Made of | Marking         | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|-----------------|--------|-------------|---------------|------|
| H.D.G.  | <b>PV 12</b>    | 100    | 0,243       | 50            | V180 |
| Copper  | <b>PV 12 Cu</b> | 100    | 0,272       | 1             | V775 |
| H.D.G.  | <b>PV 13</b>    | 150    | 0,270       | 50            | V185 |
| Copper  | <b>PV 13 Cu</b> | 150    | 0,326       | 1             | V780 |

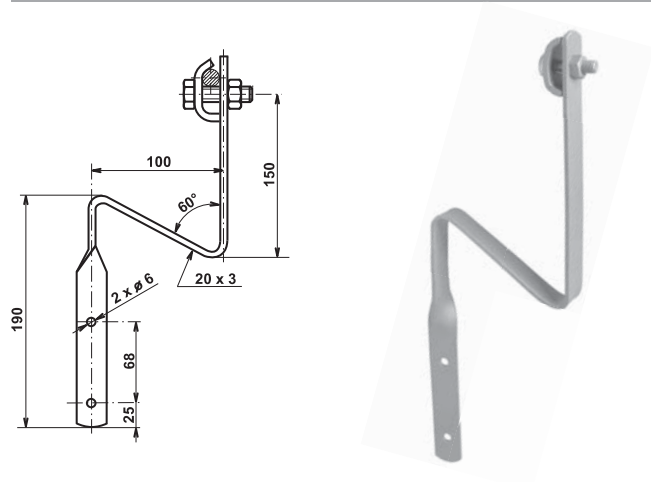
**Application:** Fastening the conductor on tiled roofs.



## CONDUCTOR SUPPORT UNDER RIDGE TILE

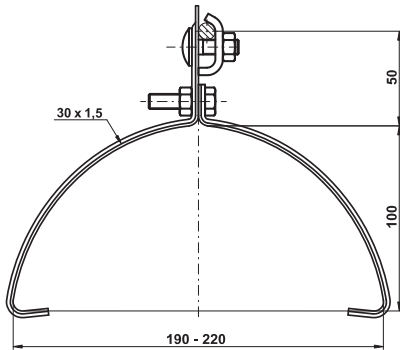
| Made of | Marking         | Weight (kg) | Package (pcs) | Code |
|---------|-----------------|-------------|---------------|------|
| H.D.G.  | <b>PV 14</b>    | 0,273       | 50            | V190 |
| Copper  | <b>PV 14 Cu</b> | 0,290       | 1             | V785 |

**Application:** Fastening the lightning conductor at the top of the roof.





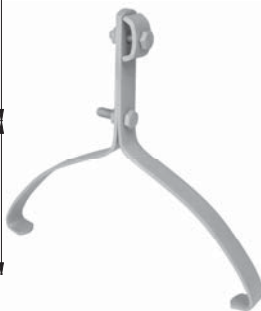
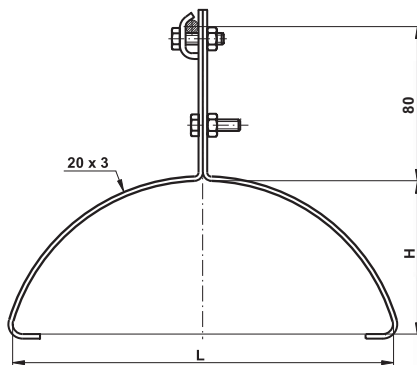
## CONDUCTOR SUPPORT AT THE TOP OF RIDGE TILE



| Made of | Marking          | Weight (kg) | Package (pcs) | Code   |
|---------|------------------|-------------|---------------|--------|
| H.D.G.  | <b>PV 15a</b>    | 0,265       | 50            | V195   |
| Copper  | <b>PV 15a Cu</b> | 0,288       | 1             | V790   |
| Inox    | <b>PV 15a N</b>  | 0,200       | 1             | VN2190 |

**Application:** Fastening the lightning conductor at the top of the roof.

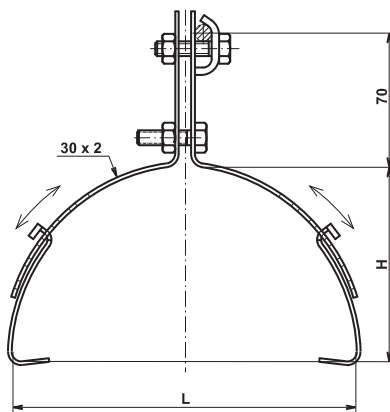
## CONDUCTOR SUPPORT AT THE TOP OF RIDGE TILE



| Made of | Marking          | L/H (mm)    | Weight (kg) | Package (pcs) | Code   |
|---------|------------------|-------------|-------------|---------------|--------|
| H.D.G.  | <b>PV 15b</b>    | 250-270/100 | 0,350       | 50            | V200   |
| Copper  | <b>PV 15b Cu</b> | 250-270/100 | 0,384       | 1             | V795   |
| Inox    | <b>PV 15b N</b>  | 250-270/100 | 0,345       | 1             | VN2195 |
| H.D.G.  | <b>PV 15c</b>    | 190-220/70  | 0,310       | 50            | V205   |
| Copper  | <b>PV 15c Cu</b> | 190-220/70  | 0,334       | 1             | V800   |
| Inox    | <b>PV 15c N</b>  | 190-220/70  | 0,332       | 1             | VN2200 |

**Application:** Fastening the lightning conductor at the top of the roof.

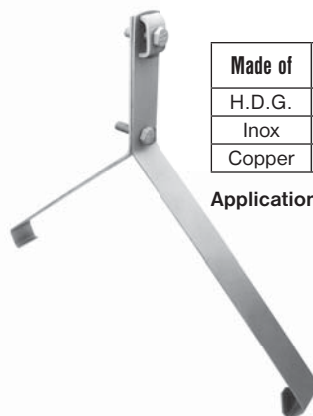
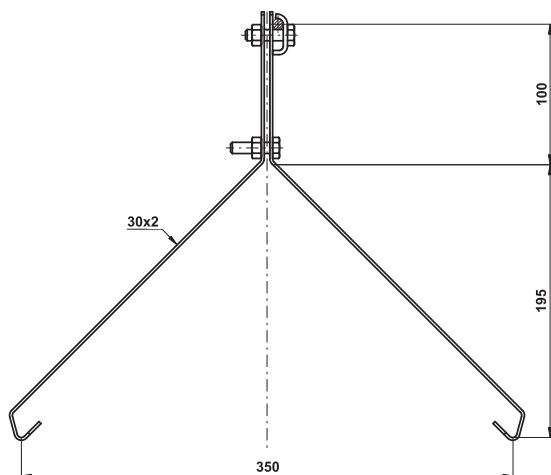
## ADJUSTABLE CONDUCTOR SUPPORT AT THE TOP OF RIDGE TILE



| Made of | Marking          | L/H (mm)       | Weight (kg) | Package (pcs) | Code   |
|---------|------------------|----------------|-------------|---------------|--------|
| H.D.G.  | <b>PV 15d</b>    | 155-210/55-85  | 0,260       | 50            | V210   |
| H.D.G.  | <b>PV 15e</b>    | 215-245/95-145 | 0,329       | 40            | V215   |
| Copper  | <b>PV 15d Cu</b> | 155-210/55-85  | 0,282       | 1             | V805   |
| Copper  | <b>PV 15e Cu</b> | 215-245/95-145 | 0,360       | 1             | V810   |
| Inox    | <b>PV 15d N</b>  | 155-210/55-85  | 0,200       | 1             | VN2205 |
| Inox    | <b>PV 15e N</b>  | 215-245/95-145 | 0,247       | 1             | VN2210 |

**Application:** Fastening the lightning conductor at the top of the roof (various ridge tiles). Easy assembly, adjustable, integral system.

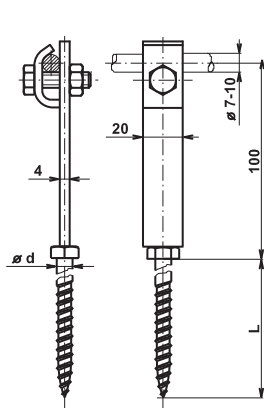
## CONDUCTOR SUPPORT AT THE TOP OF RIDGE TILE



| Made of | Marking          | Weight (kg) | Package (pcs) | Code   |
|---------|------------------|-------------|---------------|--------|
| H.D.G.  | <b>PV 15f</b>    | 0,429       | 25            | V216   |
| Inox    | <b>PV 15f N</b>  | 0,321       | 1             | VN2211 |
| Copper  | <b>PV 15f Cu</b> | 0,468       | 1             | V811   |

**Application:** Fastening the lightning conductor at the top of the plastic shingle roofs.

## CONDUCTOR SUPPORT

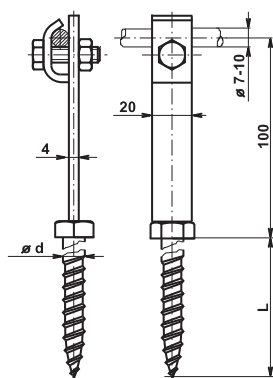


| Made of | Marking    | Screw ød / L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|------------|-------------------|-------------|---------------|--------|
| H.D.G.  | PV 17      | 8 / 100           | 0,147       | 100           | V220   |
|         | PV 17p     | 8 / 160           | 0,163       | 50            | V225   |
|         | PV 17pp    | 8 / 200           | 0,175       | 50            | V230   |
|         | PV 17ppp   | 8 / 250           | 0,179       | 50            | V231   |
|         | PV 17pppp  | 8 / 300           | 0,192       | 50            | V232   |
| Copper  | PV 17 Cu   | 8 / 100           | 0,175       | 1             | V815   |
|         | PV 17p Cu  | 8 / 160           | 0,194       | 1             | V816   |
|         | PV 17pp Cu | 8 / 200           | 0,205       | 1             | V817   |
| Inox    | PV 17 N    | 8 / 100           | 0,145       | 1             | VN2215 |
|         | PV 17p N   | 8 / 160           | 0,160       | 1             | VN2216 |
|         | PV 17pp N  | 8 / 200           | 0,173       | 1             | VN2217 |

**Application:** Fastening the conductor on corrugated surface (eternite) or using the dowels to structure walls.

**Material:** Versions PV 17p Cu and PV 17pp Cu are with wood screw of stainless steel.

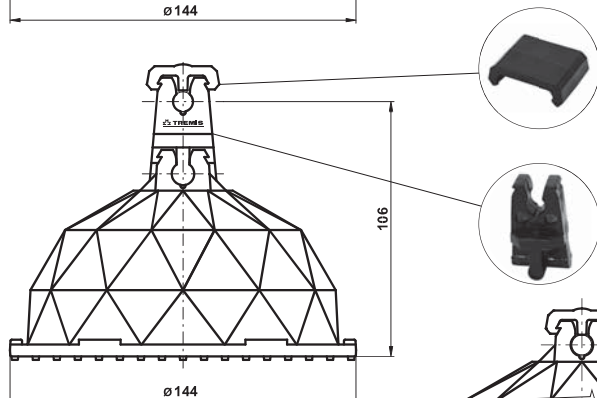
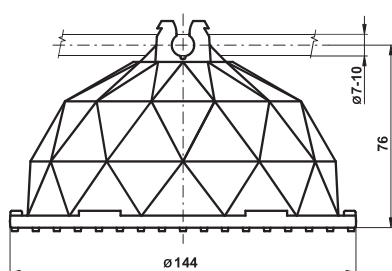
## CONDUCTOR SUPPORT TO WOODEN CONSTRUCTIONS



| Made of | Marking | Screw ød / L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------------|-------------|---------------|------|
| H.D.G.  | PV 18   | 12 / 100          | 0,200       | 50            | V235 |

**Application:** Fastening the conductor to wooden construction.

## CONDUCTOR SUPPORT FOR FLAT ROOFS



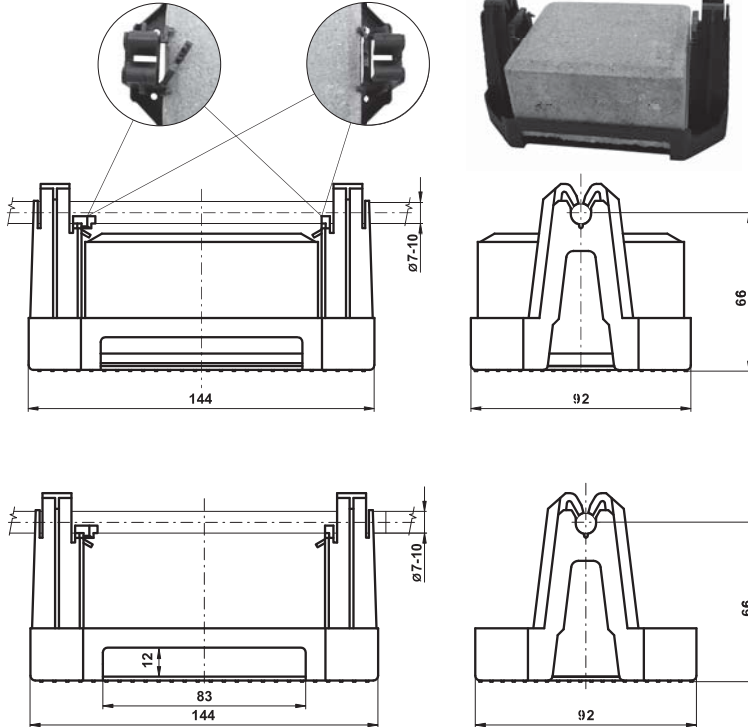
| Marking           | Weight (kg) | Package (pcs) | Code  |
|-------------------|-------------|---------------|-------|
| PV 21c            | 0,910       | 25            | V250  |
| Attachment PV 21c | 0,010       | 20            | VS100 |
| Lid PV 21c        | 0,002       | 50            | VS105 |

**Application:** Fastening the conductor on flat roofs. Fixing wires ø 7-8 mm and ø 9-10 mm. Using the Adapter PV 21c, conductor support meets the prescribed distance of 100 mm from flammable materials. Lid is for additional fixing round conductor in the conductor support.

**Material:** Plastic (PE with UV stabilization) with gravel filling.

Flexible mounting  
of wire  $\varnothing$  8 mm.

Fixed mounting  
of wire  $\varnothing$  8 mm.



## CONDUCTOR SUPPORT FOR FLAT ROOFS

| Marking          | Weight (kg) | Package (pcs) | Code |
|------------------|-------------|---------------|------|
| PV 21d           | 0,957       | 10            | V251 |
| PV 21d - plastic | 0,038       | 10            | V252 |

**Application:** Fixing the wire on flat roofs. Variant PV 21d-plastic is intended to be glued or welded to the covering by the strip of applied roofing. Allows free and fix mounting of wire  $\varnothing$  8 mm. For free mounting the struts remain not locked. After mounting of wire the connection allows wire dilatation around the longitudinal axis. For fix mounting the struts are inserted into grooves (locked). After mounting of wire the connection is fixed.

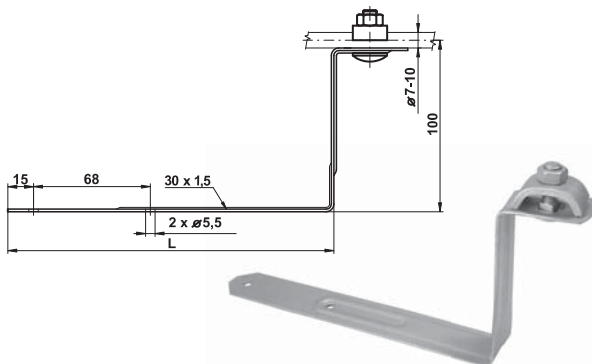
**Material:** Plastic (stabilized PE against UV radiation) with inserted concrete block.



## CONDUCTOR SUPPORT UNDER ROOFING TILE

| Made of | Marking    | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|------------|--------|-------------|---------------|--------|
| H.D.G.  | PV 22a     | 190    | 0,206       | 50            | V255   |
|         | PV 22ap    | 290    | 0,251       | 50            | V260   |
| Copper  | PV 22a Cu  | 190    | 0,220       | 1             | V820   |
|         | PV 22ap Cu | 290    | 0,273       | 1             | V825   |
| Inox    | PV 22a N   | 190    | 0,167       | 1             | VN2220 |
|         | PV 22ap N  | 290    | 0,203       | 1             | VN2225 |

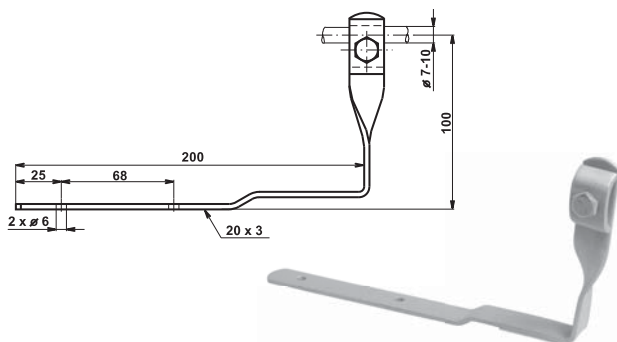
**Application:** Fastening the conductor on roofing tiles, shingles and eternite roofs. Lightning conductor can be entrapped from roof under selected angle.



## CONDUCTOR SUPPORT UNDER ROOFING TILE

| Made of | Marking   | Weight (kg) | Package (pcs) | Code   |
|---------|-----------|-------------|---------------|--------|
| H.D.G.  | PV 22b    | 0,195       | 50            | V265   |
| Copper  | PV 22b Cu | 0,212       | 1             | V830   |
| Inox    | PV 22b N  | 0,190       | 1             | VN2230 |

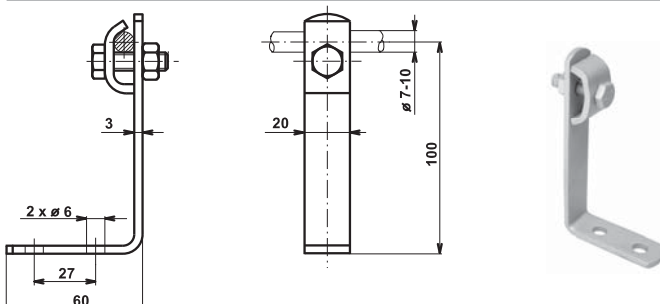
**Application:** Fastening the conductor on roofing tiles and eternite roofs.



## CONDUCTOR SUPPORT FOR SHEET METAL ROOFS

| Made of | Marking  | Weight (kg) | Package (pcs) | Code   |
|---------|----------|-------------|---------------|--------|
| H.D.G.  | PV 23    | 0,147       | 100           | V270   |
| Copper  | PV 23 Cu | 0,154       | 1             | V835   |
| Inox    | PV 23 N  | 0,140       | 1             | VN2235 |

**Application:** Fastening the conductor on sheet metal roofs.



## CONDUCTOR SUPPORT FOR SHEET METAL ROOFS

| Made of | Marking  | Weight (kg) | Package (pcs) | Code   |
|---------|----------|-------------|---------------|--------|
| H.D.G.  | PV 23b   | 0,147       | 100           | V272   |
| Inox    | PV 23b N | 0,140       | 1             | VN2237 |

**Application:** Parallel fastening of the conductor on sheet metal roofs.

## CONDUCTOR SUPPORT FOR A METAL CONSTRUCTIONS

| Made of | Marking  | Weight (kg) | Package (pcs) | Code   |
|---------|----------|-------------|---------------|--------|
| H.D.G.  | PV 32    | 0,171       | 100           | V275   |
| Copper  | PV 32 Cu | 0,187       | 1             | V840   |
| Inox    | PV 32 N  | 0,165       | 1             | VN2240 |

**Application:** Fastening the conductor to metal constructions.

## TAPE CONDUCTOR SUPPORT FOR MASONRY

| Made of | Marking  | Weight (kg) | Package (pcs) | Code |
|---------|----------|-------------|---------------|------|
| H.D.G.  | PV 42    | 0,112       | 100           | V280 |
| Copper  | PV 42 Cu | 0,122       | 1             | V845 |

**Application:** Fastening the grounding tape to masonry structure.

## TAPE CONDUCTOR SUPPORT FOR CONSTRUCTIONS

| Made of | Marking  | Weight (kg) | Package (pcs) | Code |
|---------|----------|-------------|---------------|------|
| H.D.G.  | PV 44    | 0,091       | 100           | V285 |
| Copper  | PV 44 Cu | 0,102       | 1             | V895 |

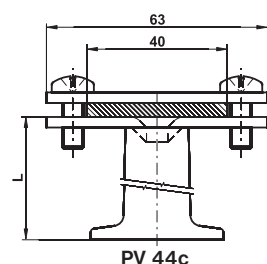
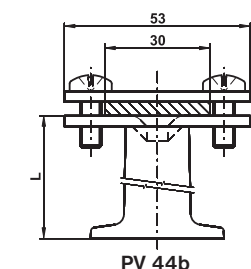
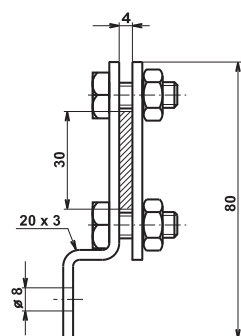
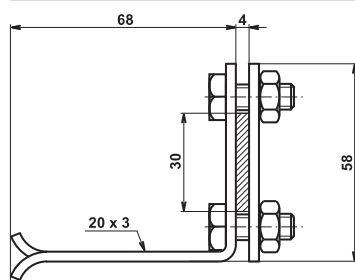
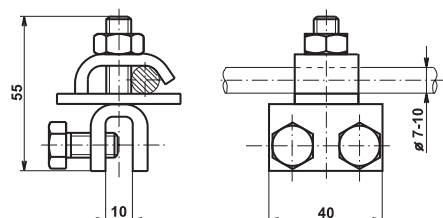
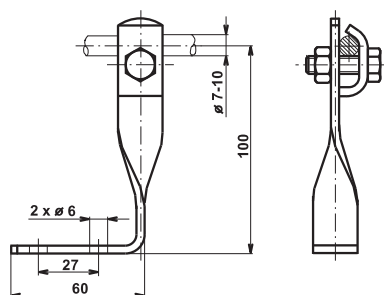
**Application:** Fastening the grounding tape to steel constructions.

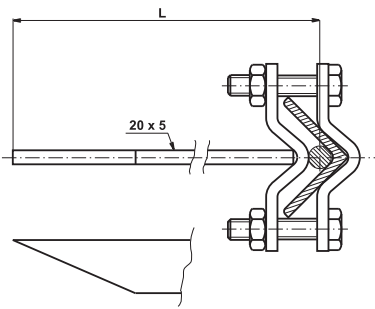
## TAPE CONDUCTOR SUPPORT

| Made of | Marking     | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|-------------|--------|-------------|---------------|--------|
| H.D.G.  | PV 44b 20   | 20     | 0,056       | 20            | V287   |
|         | PV 44b 35   | 35     | 0,058       | 20            | V288   |
|         | PV 44b 50   | 50     | 0,061       | 20            | V289   |
|         | PV 44c 20   | 20     | 0,067       | 20            | V282   |
|         | PV 44c 35   | 35     | 0,068       | 20            | V283   |
|         | PV 44c 50   | 50     | 0,070       | 20            | V284   |
| Inox    | PV 44b 20 N | 20     | 0,054       | 1             | VN2250 |
|         | PV 44b 35 N | 35     | 0,057       | 1             | VN2251 |
|         | PV 44b 50 N | 50     | 0,060       | 1             | VN2252 |
|         | PV 44c 20 N | 20     | 0,064       | 1             | VN2253 |
|         | PV 44c 35 N | 35     | 0,065       | 1             | VN2254 |
|         | PV 44c 50 N | 50     | 0,067       | 1             | VN2255 |

**Application:** Fastening the grounding tape on the walls of building using a screw or self-tapping screw with countersunk head. Supports PV 44c are for tape 40 x 4 mm and supports PV 44b are for 30 x 4 (3,5) mm.

**Material:** Hot-dip galvanized or stainless steel, plastic (stabilized PE against UV radiation) grey color. Bolts M6 are inox.

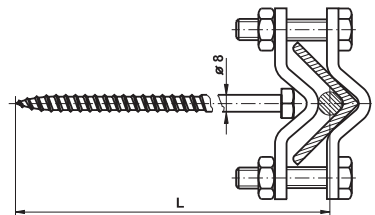




## HOLDER OF PROTECTIVE ANGLE STEEL

| Made of | Marking    | Length L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|------------|---------------|-------------|---------------|------|
| H.D.G.  | DOUa-15    | 150           | 0,238       | 50            | V290 |
|         | DOUa-20    | 200           | 0,282       | 50            | V295 |
|         | DOUa-25    | 250           | 0,317       | 50            | V300 |
| Copper  | DOUa-15 Cu | 150           | 0,253       | 1             | V900 |
|         | DOUa-20 Cu | 200           | 0,297       | 1             | V905 |
|         | DOUa-25 Cu | 250           | 0,336       | 1             | V910 |

**Application:** Fastening the protective angle steel to a various wall structure.

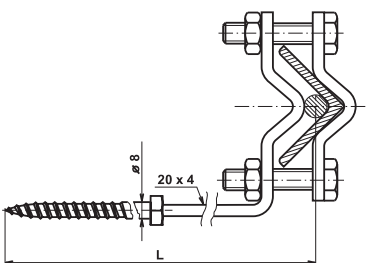
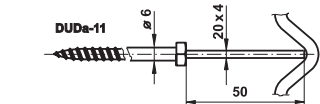
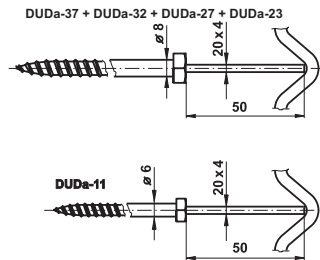


## HOLDER OF PROTECTIVE ANGLE STEEL

| Made of | Marking    | Length L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|------------|---------------|-------------|---------------|--------|
| H.D.G.  | DUDa-11    | 110           | 0,187       | 100           | V302   |
|         | DUDa-18    | 180           | 0,189       | 50            | V305   |
|         | DUDa-22    | 220           | 0,204       | 50            | V310   |
|         | DUDa-27    | 270           | 0,239       | 50            | V312   |
|         | DUDa-32    | 320           | 0,247       | 50            | V313   |
|         | DUDa-37    | 370           | 0,259       | 50            | V311   |
| Copper  | DUDa-18 Cu | 180           | 0,225       | 1             | V913   |
|         | DUDa-22 Cu | 220           | 0,230       | 1             | V916   |
|         | DUDa-23 Cu | 230           | 0,237       | 1             | V914   |
|         | DUDa-27 Cu | 270           | 0,248       | 1             | V917   |
| Inox    | DUDa-18 N  | 180           | 0,152       | 1             | VN2313 |
|         | DUDa-22 N  | 220           | 0,169       | 1             | VN2314 |
|         | DUDa-23 N  | 230           | 0,189       | 1             | VN2315 |
|         | DUDa-27 N  | 270           | 0,236       | 1             | VN2316 |

**Application:** Fastening the protective angle steel to masonry structures using dowels.

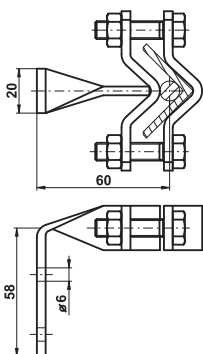
**Material :** Versions DUDa-18 Cu, DUDa-22 Cu, DUDa-23 Cu and DUDa-27 Cu are with wood screw of stainless steel. Version DUDa-11 is with wood screw  $\varnothing$  6/50 mm.



## HOLDER OF PROTECTIVE ANGLE STEEL

| Made of | Marking | Length L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|---------------|-------------|---------------|------|
| H.D.G.  | DUDb    | 200           | 0,228       | 50            | V315 |
| Copper  | DUDb Cu | 200           | 0,272       | 1             | V915 |

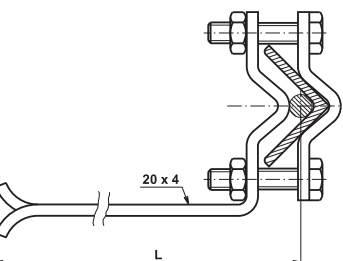
**Application:** Fastening the protective angle steel to masonry structures using dowels.



## HOLDER OF PROTECTIVE ANGLE STEEL FOR THE WALL

| Made of | Marking | Length L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|---------|---------------|-------------|---------------|--------|
| H.D.G.  | DUS     | 60            | 0,191       | 100           | V314   |
| Inox    | DUS N   | 60            | 0,159       | 1             | VN2325 |

**Application:** Fastening the protective angle steel to a various wall structure using self-tapping screws or rivets.

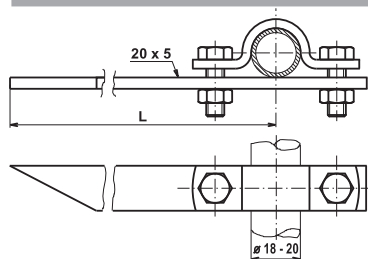


## HOLDER OF PROTECTIVE ANGLE STEEL FOR MASONRY

| Made of | Marking | Length L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|---------------|-------------|---------------|------|
| H.D.G.  | DUZ     | 170           | 0,235       | 50            | V320 |
| Copper  | DUZ Cu  | 170           | 0,251       | 1             | V920 |

**Application:** Fastening the protective angle steel to masonry structures.



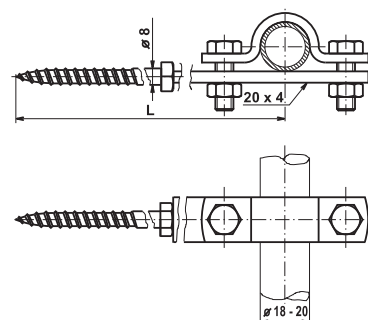


## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE

| Made of | Marking | Length L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|---------------|-------------|---------------|------|
| H.D.G.  | DJT     | 200           | 0,250       | 50            | V325 |
| Copper  | DJT Cu  | 200           | 0,276       | 1             | V925 |

**Application:** Fastening of receiving rods or protective pipes to a various wall structure.

## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE

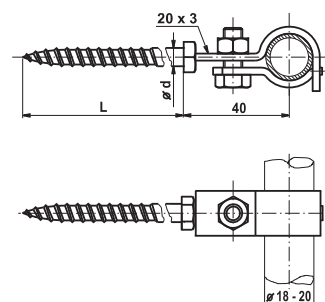


| Made of | Marking  | Length L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|----------|---------------|-------------|---------------|--------|
| H.D.G.  | DJD      | 200           | 0,174       | 50            | V330   |
|         | DJDp     | 260           | 0,190       | 50            | V335   |
|         | DJDpp    | 300           | 0,204       | 50            | V340   |
|         | DJDppp   | 350           | 0,218       | 50            | V339   |
|         | DJDpppp  | 400           | 0,234       | 50            | V338   |
| Copper  | DJD Cu   | 200           | 0,238       | 1             | V930   |
|         | DJDp Cu  | 260           | 0,257       | 1             | V931   |
|         | DJDpp Cu | 300           | 0,269       | 1             | V936   |
| Inox    | DJD N    | 200           | 0,156       | 1             | VN2330 |
|         | DJDp N   | 260           | 0,174       | 1             | VN2331 |
|         | DJDpp N  | 300           | 0,188       | 1             | VN2332 |

**Application:** Fastening of receiving rods or protective pipes to wooden structures or masonry structures using dowels.

**Material:** Versions DJDp Cu and DJDpp Cu are with wood screw of stainless steel.

## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE

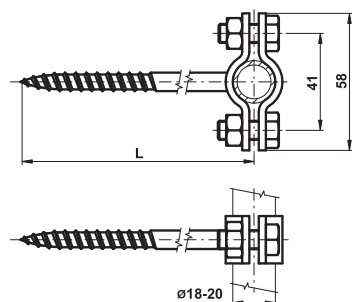


| Made of | Marking   | Screw ød / L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|-----------|-------------------|-------------|---------------|------|
| H.D.G.  | DJDh      | 6 / 50            | 0,090       | 50            | V341 |
|         | DJDh      | 8 / 100           | 0,116       | 50            | V342 |
|         | DJDbp     | 8 / 160           | 0,132       | 50            | V343 |
|         | DJDbpp    | 8 / 200           | 0,143       | 50            | V344 |
|         | DJDbppp   | 8 / 250           | 0,141       | 50            | V326 |
|         | DJDbpppp  | 8 / 300           | 0,156       | 50            | V327 |
| Copper  | DJDh Cu   | 6 / 50            | 0,131       | 1             | V932 |
|         | DJDh Cu   | 8 / 100           | 0,148       | 1             | V933 |
|         | DJDbp Cu  | 8 / 160           | 0,161       | 1             | V934 |
|         | DJDbpp Cu | 8 / 200           | 0,170       | 1             | V937 |

**Application:** Fastening of receiving rods or protective pipes to wooden structures or masonry structures using dowels.

**Material:** Versions DJDh Cu, DJDbp Cu and DJDbpp are with wood screw of stainless steel.

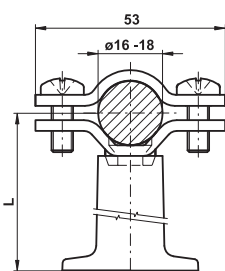
## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE



| Made of | Marking  | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|----------|--------|-------------|---------------|--------|
| H.D.G.  | DJDc     | 110    | 0,111       | 50            | V347   |
|         | DJDcp    | 170    | 0,128       | 50            | V348   |
|         | DJDcpp   | 210    | 0,139       | 50            | V349   |
|         | DJDcppp  | 260    | 0,156       | 50            | V328   |
|         | DJDcpppp | 310    | 0,168       | 50            | V329   |
| Inox    | DJDc N   | 110    | 0,105       | 1             | VN2340 |
|         | DJDcp N  | 170    | 0,121       | 1             | VN2341 |
|         | DJDcpp N | 210    | 0,131       | 1             | VN2342 |

**Application:** Fastening of receiving rods, protective pipes and insertion rods to masonry structures using dowels.

## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE

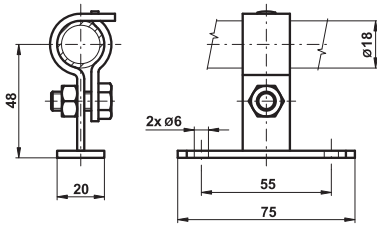


| Made of | Marking   | L (mm) | Weight (kg) | Package (ks) | Code   |
|---------|-----------|--------|-------------|--------------|--------|
| H.D.G.  | DJDe 30   | 30     | 0,063       | 20           | V317   |
|         | DJDe 45   | 45     | 0,064       | 20           | V318   |
|         | DJDe 60   | 60     | 0,066       | 20           | V319   |
| Inox    | DJDe 30 N | 20     | 0,059       | 1            | VN2333 |
|         | DJDe 45 N | 35     | 0,061       | 1            | VN2334 |
|         | DJDe 60 N | 50     | 0,063       | 1            | VN2335 |

**Použití:** Fastening of receiving rods, protective pipes and insertion rods on the walls of building using a screw or self-tapping screw with countersunk head.

**Material:** Hot-dip galvanized or stainless steel, plastic (stabilized PE against UV radiation) grey color. Bolts M6 are inox.

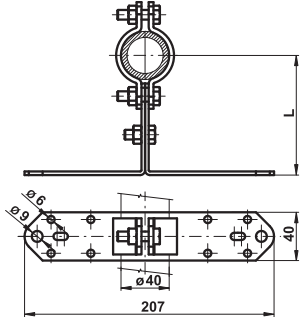
## HOLDER OF RECEIVING ROD AND PROTECTIVE PIPE



| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|---------|--------|-------------|---------------|--------|
| H.D.G.  | DJSb    | 50     | 0,110       | 50            | V346   |
| Inox    | DJSb N  | 50     | 0,097       | 1             | VN2338 |

**Application:** Fastening of receiving rods, protective pipes and insertion rods to a various wall structure.

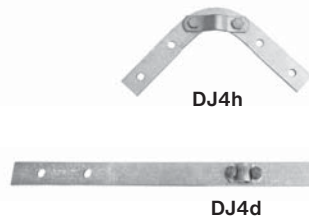
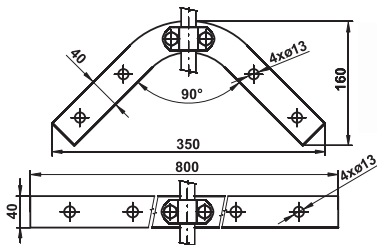
## HOLDER FOR RECEIVING ROD



| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|--------|-------------|---------------|------|
| FeZn    | DJSc    | 100    | 0,530       | 1             | V321 |

**Application:** Fastening receiving rods in the execution JT on the building wall.

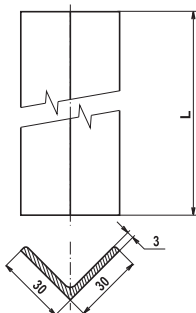
## HOLDER FOR RECEIVING ROD TO ROOF TRUSSES



| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | DJ4h    | 1,280       | 1             | V322 |
|         | DJ4d    | 2,182       | 1             | V323 |

**Application:** Fastening of receiving rods to roof trusses.

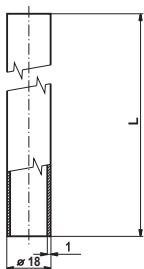
## PROTECTIVE ANGLE STEEL



| Made of | Marking   | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|-----------|--------|-------------|---------------|--------|
| H.D.G.  | OU 1,7    | 1700   | 2,55        | 1             | V360   |
|         | OU 2,0    | 2000   | 3,00        | 1             | V365   |
| Copper  | OU 1,7 Cu | 1700   | 1,67        | 1             | V950   |
|         | OU 2,0 Cu | 2000   | 1,99        | 1             | V955   |
| Inox    | OU 1,7 N  | 1700   | 1,45        | 1             | VN2350 |

**Application:** Protects the conductor in the area just above the ground against mechanical damage.

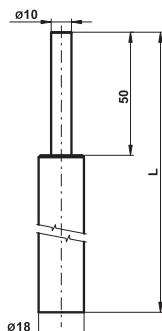
## PROTECTIVE PIPE



| Made of | Marking   | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|-----------|--------|-------------|---------------|--------|
| H.D.G.  | OT 1,7    | 1700   | 0,80        | 1             | V370   |
| Copper  | OT 1,7 Cu | 1670   | 0,91        | 1             | V960   |
| Inox    | OT 1,7 N  | 1700   | 0,91        | 1             | VN2360 |

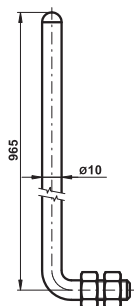
**Application:** Protects the conductor in the area just above the ground against mechanical damage.

## INSERTION ROD



| Made of    | Marking      | L (mm) | Weight (kg) | Package (pcs) | Code   |
|------------|--------------|--------|-------------|---------------|--------|
| H.D.G.     | TZ 1,5       | 1500   | 3,0         | 1             | V375   |
|            | TZ 2,0       | 2000   | 4,0         | 1             | V377   |
| Inox N V4A | TZ 1,5 N V4A | 1500   | 2,9         | 1             | VN2380 |

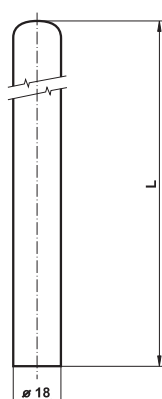
**Application:** Connecting down conductors to the earth-termination system.



## RECEIVING ROD FOR RIDGE TILE

| Made of | Marking  | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|----------|--------|-------------|---------------|--------|
| AlMgSi  | JR PV 15 | 965    | 0,233       | 1             | VN2950 |

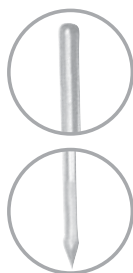
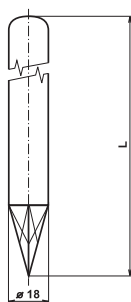
**Application:** Air termination rod located above the protected premises on stainless steel conductor supports of the ridge tile (PV 15a, b, c, d, e).  
Conductor supports are not part of the receiving rods.



## RECEIVING ROD WITH STRAIGHT END

| Made of | Marking       | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|---------------|--------|-------------|---------------|--------|
| H.D.G.  | JR 1,0        | 1000   | 2,05        | 1             | V380   |
|         | JR 1,5        | 1500   | 3,08        | 1             | V385   |
|         | JR 2,0        | 2000   | 4,10        | 1             | V390   |
|         | JR 3,0        | 3000   | 6,15        | 1             | V395   |
|         | JR 4,0        | 4000   | 8,20        | 1             | V396   |
|         | JR 5,0        | 5000   | 10,25       | 1             | V397   |
| Copper  | JR 6,0        | 6000   | 12,30       | 1             | V398   |
|         | JR 1,0 Cu     | 1000   | 2,26        | 1             | V970   |
|         | JR 1,5 Cu     | 1500   | 3,38        | 1             | V972   |
|         | JR 2,0 Cu     | 2000   | 4,51        | 1             | V974   |
|         | JR 3,0 Cu     | 3000   | 6,76        | 1             | V975   |
| Inox    | JR 4,0 Cu     | 4000   | 9,04        | 1             | V981   |
|         | JR 1,0 N      | 1000   | 2,01        | 1             | VN2400 |
|         | JR 1,5 N      | 1500   | 3,02        | 1             | VN2405 |
|         | JR 2,0 N      | 2000   | 4,02        | 1             | VN2410 |
| AlMgSi  | JR 3,0 N      | 3000   | 6,03        | 1             | VN2411 |
|         | JR 1,0 AlMgSi | 1000   | 0,70        | 1             | VN3000 |
|         | JR 1,5 AlMgSi | 1500   | 1,05        | 1             | VN3005 |
|         | JR 2,0 AlMgSi | 2000   | 1,40        | 1             | VN3010 |
|         | JR 2,5 AlMgSi | 2500   | 1,75        | 1             | VN3012 |
|         | JR 3,0 AlMgSi | 3000   | 2,10        | 1             | VN3015 |
|         | JR 4,0 AlMgSi | 4000   | 2,80        | 1             | VN3020 |
|         | JR 5,0 AlMgSi | 5000   | 3,50        | 1             | VN3025 |
|         | JR 6,0 AlMgSi | 6000   | 4,20        | 1             | VN3030 |

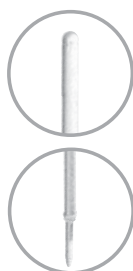
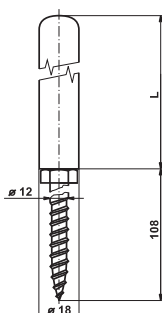
**Application:** Air termination rod located above the protected premises.



## RECEIVING ROD WITH FORGED TANG

| Made of | Marking   | L (mm) | Weight (kg) | Package (pcs) | Code   |
|---------|-----------|--------|-------------|---------------|--------|
| H.D.G.  | JK 1,0    | 1000   | 2,05        | 1             | V400   |
|         | JK 1,5    | 1500   | 3,08        | 1             | V405   |
|         | JK 2,0    | 2000   | 4,10        | 1             | V410   |
| Copper  | JK 1,0 Cu | 1000   | 2,26        | 1             | V976   |
|         | JK 1,5 Cu | 1500   | 3,38        | 1             | V978   |
|         | JK 2,0 Cu | 2000   | 4,51        | 1             | V980   |
| Inox    | JK 1,0 N  | 1000   | 2,01        | 1             | VN2415 |
|         | JK 1,5 N  | 1500   | 3,02        | 1             | VN2420 |
|         | JK 2,0 N  | 2000   | 4,02        | 1             | VN2425 |

**Application:** Air termination rod located above the protected premises.

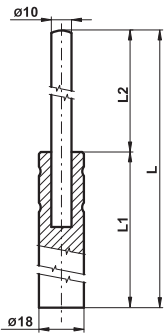


## RECEIVING ROD WITH SCREW

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|--------|-------------|---------------|------|
| H.D.G.  | JV 1,0  | 1000   | 2,15        | 1             | V415 |
|         | JV 1,5  | 1500   | 3,18        | 1             | V420 |
|         | JV 2,0  | 2000   | 4,21        | 1             | V425 |

**Application:** Air termination rod located above the protected premises.

## RECEIVING ROD WITH STRAIGHT END 18/10

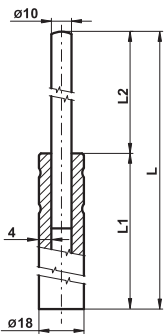


| Made of | Marking             | L (mm) | L1 /L2(mm) | Weight (kg) | Package (pcs) | Code   |
|---------|---------------------|--------|------------|-------------|---------------|--------|
| AlMgSi  | JR 1,5 18/10 AlMgSi | 1500   | 500/1000   | 0,56        | 1             | VN3055 |
|         | JR 2,0 18/10 AlMgSi | 2000   | 1000/1000  | 0,90        | 1             | VN3060 |
|         | JR 2,5 18/10 AlMgSi | 2500   | 1500/1000  | 1,25        | 1             | VN3065 |
|         | JR 3,0 18/10 AlMgSi | 3000   | 2000/1000  | 1,59        | 1             | VN3070 |
|         | JR 4,0 18/10 AlMgSi | 4000   | 3000/1000  | 2,28        | 1             | VN3080 |

**Application:** Air termination rod located above the protected premises.

**Material:** Rod ø 18 mm AlMgSi with pressed rod ø 10 mm AlMgSi.

## RECEIVING ROD WITH STRAIGHT END 18/10 - PIPE

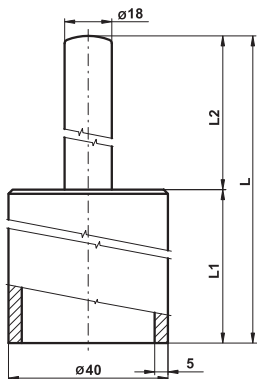


| Made of | Marking              | L (mm) | L1 /L2(mm) | Weight (kg) | Package (pcs) | Code   |
|---------|----------------------|--------|------------|-------------|---------------|--------|
| AlMgSi  | JR 1,5 18/10t AlMgSi | 1500   | 500/1000   | 0,45        | 1             | VN3095 |
|         | JR 2,0 18/10t AlMgSi | 2000   | 1000/1000  | 0,69        | 1             | VN3100 |
|         | JR 2,5 18/10t AlMgSi | 2500   | 1500/1000  | 0,93        | 1             | VN3105 |
|         | JR 3,0 18/10t AlMgSi | 3000   | 2000/1000  | 1,17        | 1             | VN3110 |
|         | JR 4,0 18/10t AlMgSi | 4000   | 3000/1000  | 1,65        | 1             | VN3120 |

**Application:** Air termination rod located above the protected premises.

**Material:** Pipe ø 18 mm AlMgSi with pressed rod ø 10 mm AlMgSi.

## RECEIVING ROD WITH STRAIGHT END - PIPE

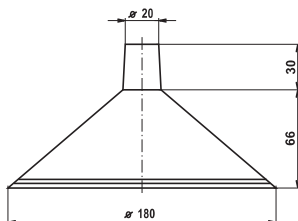


| Made of | Marking       | L (mm) | L1 /L2(mm) | Weight (kg) | Package (pcs) | Code   |
|---------|---------------|--------|------------|-------------|---------------|--------|
| AlMgSi  | JT 4,0 AlMgSi | 4000   | 2000/2000  | 4,40        | 1             | VN3035 |
|         | JT 5,0 AlMgSi | 5000   | 3000/2000  | 5,90        | 1             | VN3040 |
|         | JT 5,5 AlMgSi | 5500   | 3000/2500  | 6,30        | 1             | VN3045 |
|         | JT 6,0 AlMgSi | 6000   | 3000/3000  | 6,60        | 1             | VN3050 |

**Application:** Air termination rod located above the protected premises fastened to support stand SJ on flat roofs.

**Material:** Pipe ø 40 x 5 mm AlMgSi with pressed rod ø 18 mm AlMgSi.

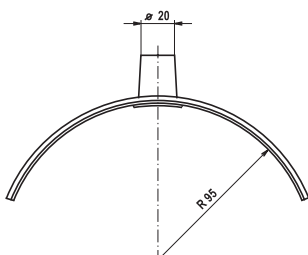
## UPPER PROTECTIVE ROOF



| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | OSH     | 0,183       | 1             | V350 |
| Copper  | OSH Cu  | 0,174       | 1             | V940 |

**Application:** Protects the clamp on receiving rod against weather conditions.

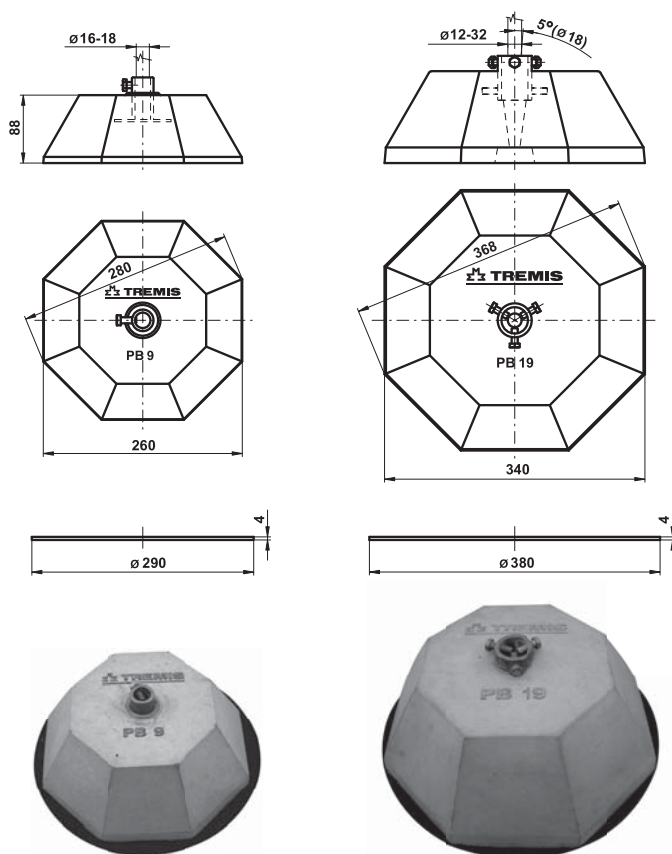
## LOWER PROTECTIVE ROOF



| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | OSD     | 0,230       | 1             | V355 |
| Copper  | OSD Cu  | 0,219       | 1             | V945 |

**Application:** Protects the double sloping roof against bunging up in the place of fastening the receiving rod.

## CONCRETE STAND

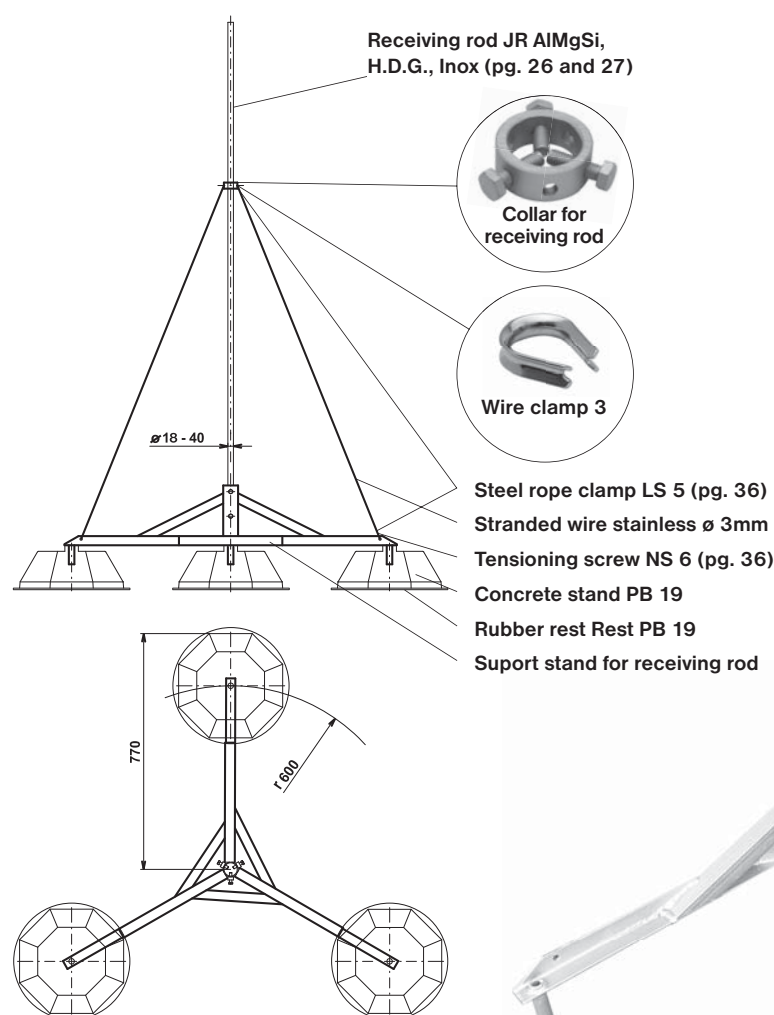


| Marking    | Weight (kg) | Package (pcs) | Code |
|------------|-------------|---------------|------|
| PB 9       | 9           | 1             | V535 |
| Rest PB 9  | 0,249       | 1             | V530 |
| PB 19      | 19          | 1             | V545 |
| Rest PB 19 | 0,326       | 1             | V540 |

**Application:** PB 9 – Fastening isolating rod or receiving rod  $\leq 2$  m on flat roofs.  
For fastening receiving rod 2 m we recommend receiving rod type JR 18/10 (18/10t) AIMgSi.  
PB 19 – Fastening isolating rod  $\leq 3$  m on flat roofs and as ballast anchor for SJ.  
For fastening receiving rod 3 m we recommend receiving rod type JR 18/10 (18/10t) AIMgSi.  
Rubber rest PB 9 and PB 19 protect roof surface against damage. The fastening system of PB 19 allows vertical alignment for roof pitch till 5 deg.

**Material:** Vibrating floated concrete, hot dip galvanized steel.  
Washer is from recycled rubber.

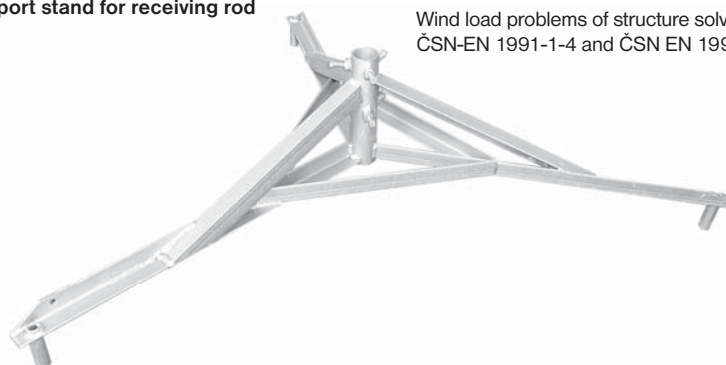
## SUPPORT STAND FOR RECEIVING ROD



| Made of | Marking           | Weight (kg) | Package (pcs) | Code |
|---------|-------------------|-------------|---------------|------|
| H.D.G.  | SJ                | 8,000       | 1             | V546 |
|         | OJ                | 0,132       | 1             | V547 |
|         | TS                | 0,176       | 1             | V548 |
| Inox    | Wire clamp 3 N    | 0,002       | 1             | Z985 |
|         | Stranded wire 3 N | 0,032       | 1 m           | Z980 |

**Application:** Fastening of receiving rod on flat roofs. For fastening or receiving rod  $\geq 4$  m we recommend to use a set of auxiliary system:  
1 pcs support stand for receiving rod SJ  
3 pcs concrete stand PB 19  
3 pcs rest PB 19  
1 pcs collar for receiving rod OJ  
3 pcs wire clamp 3 mm  
6 pcs steel rope clamp LS 5 (page 36)  
10 m stranded wire stainless  $\varnothing 3$  mm  
3 pcs tensioning screw NS 6 (page 36)  
For fastening of receiving rod  $\geq 5$  m we recommend receiving rod JT and set of auxiliary system for receiving rod  $\geq 4$  m complemented by the double burden of the stands (PB19). For connections the double burden of the stands (PB19) with the support stand for receiving rod SJ serve connecting rod TS (3 pcs).

Wind load problems of structure solve Standards ČSN-EN 1991-1-4 and ČSN EN 1993-3-1.





## GROUNDING ROD

| Made of | Marking   | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|-----------|--------|-------------|---------------|------|
| H.D.G.  | ZT 1,0    | 1000   | 3,78        | 1             | V430 |
|         | ZT 1,5    | 1500   | 5,93        | 1             | V435 |
|         | ZT 2,0    | 2000   | 7,77        | 1             | V440 |
| Copper  | ZT 1,0 Cu | 1000   | 4,26        | 1             | V985 |
|         | ZT 1,5 Cu | 1500   | 6,45        | 1             | V988 |
|         | ZT 2,0 Cu | 2000   | 8,57        | 1             | V990 |

**Application:** Enables the discharge to pass to the conductive ground layers.

## GROUNDING ROD WITH CLAMP

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|--------|-------------|---------------|------|
| H.D.G.  | ZT 1,0s | 1000   | 4,03        | 1             | V445 |
|         | ZT 1,5s | 1500   | 5,98        | 1             | V450 |
|         | ZT 2,0s | 2000   | 7,86        | 1             | V455 |

**Application:** Enables the discharge to pass to the conductive ground layers.  
Saves the clamps for grounding rods.  
Enables the parallel as well as cross connections with tape or round conductors.

## "T" PROFILE GROUNDING ROD

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|--------|-------------|---------------|------|
| H.D.G.  | ZT 1,0t | 1000   | 2,06        | 1             | V460 |
|         | ZT 1,5t | 1500   | 2,97        | 1             | V465 |
|         | ZT 2,0t | 2000   | 3,92        | 1             | V470 |

**Application:** Enables the discharge to pass to the conductive ground layers.  
Larger connection surface in comparison with round rod of the same length (1,4x). The value of ground resistance depends on the size of connection surface.

## CROSS PROFILE GROUNDING ROD

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------|--------|-------------|---------------|------|
| H.D.G.  | ZT 1,0k | 1000   | 2,54        | 1             | V471 |
|         | ZT 1,5k | 1500   | 3,81        | 1             | V472 |
|         | ZT 2,0k | 2000   | 5,08        | 1             | V473 |

**Application:** Enables the discharge to pass to the conductive ground layers.  
Significantly larger connection surface in comparison with round rod of the same length (2,4x) and in comparison to T profile rod of the same length (1,7x). The value of ground resistance depends on the size of connection surface.

## GROUNDING PLATE

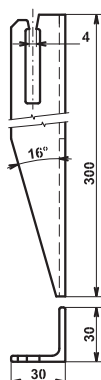
| Made of | Marking | L (mm)   | Weight (kg) | Package (pcs) | Code |
|---------|---------|----------|-------------|---------------|------|
| H.D.G.  | ZD 01   | 2000x250 | 14,50       | 1             | V475 |
|         | ZD 01a  | 2000x250 | 8,27        | 1             | V480 |

**Application:** Enables the discharge to pass to the conductive ground layers.

## GROUNDING PLATE

| Made of | Marking | L (mm)   | Weight (kg) | Package (pcs) | Code |
|---------|---------|----------|-------------|---------------|------|
| H.D.G.  | ZD 02   | 1000x500 | 8,27        | 1             | V485 |

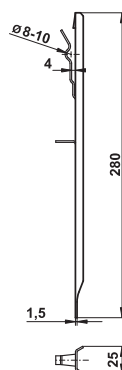
**Application:** Enables the discharge to pass to the conductive ground layers.



## TAPE HOLDER

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | DP      | 0,383       | 50            | V570 |

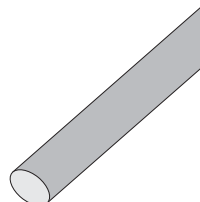
**Application:** Installing earth tape 30 x 4 (3,5) mm in the foundation level.



## TAPE HOLDER

| Made of | Marking | Weight (kg) | Package (pcs) | Code |
|---------|---------|-------------|---------------|------|
| H.D.G.  | DPb     | 0,094       | 50            | V571 |

**Application:** Fastening earth tape conductor 30 (40) x 4 mm or round conductor  $\varnothing$  10 (8) mm in grounding system at concrete foundation.

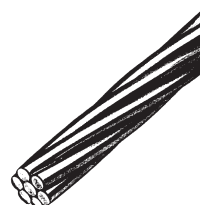


## ROUND CONDUCTOR

| Made of  | Marking              | $\varnothing$ (mm) | Package (kg) | Code |
|----------|----------------------|--------------------|--------------|------|
| H.D.G.   | Wire 8               | 8                  | 50           | Z205 |
|          | Wire 10              | 10                 | 50           | Z215 |
|          | Wire 10/13 PVC       | 10                 | 50           | Z217 |
| Copper   | Wire 7 Cu            | 7                  | 1-25         | Z400 |
|          | Wire 8 Cu T/2        | 8                  | 1-25         | Z405 |
|          | Wire 8 Cu T/4        | 8                  | 1-25         | Z406 |
| AlMgSi   | Wire 8 AlMgSi T/2    | 8                  | 1-20         | Z414 |
|          | Wire 8 AlMgSi T/4    | 8                  | 1-20         | Z415 |
|          | Wire 8/11 AlMgSi PVC | 8                  | 1-20         | Z417 |
| Inox     | Wire 8 N             | 8                  | 1-50         | Z420 |
| Inox V4A | Wire 10 V4A          | 10                 | 1-50         | Z425 |

**Application:** Conductor for lightning conductor construction.

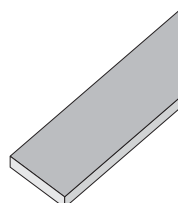
**Material :** The sign of wire T/2 – semi-hard. The sign of wire T/4 – soft.



## STRANDED CONDUCTOR

| Made of | Marking | $\varnothing$ (mm) | Package (kg) | Code |
|---------|---------|--------------------|--------------|------|
| H.D.G.  | Rope 25 | 6,8                | 200 - 250    | Z226 |
|         | Rope 35 | 7,8                | 200 - 250    | Z228 |
|         | Rope 50 | 9,5                | 200          | Z230 |
|         | Rope 70 | 11,5               | 200 - 250    | Z232 |

**Application:** Conductor for lightning conductor construction.



## TAPE CONDUCTOR

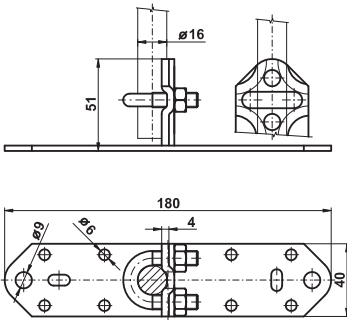
| Made of  | Marking           | Size (mm) | Package (kg)  | Code |
|----------|-------------------|-----------|---------------|------|
| H.D.G.   | Tape 20x3         | 20x3      | 50            | Z260 |
|          | Tape 30x4         | 30x4      | 20-25 (45-50) | Z250 |
| Inox     | Tape 30x3,5 N     | 30x3,5    | 20            | Z430 |
| Inox V4A | Tape 30x3,5 N V4A | 30x3,5    | 20            | Z435 |

**Application:** Construction bonding grounding system.

## “T” HOLDER FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHS    | 0,238       | 50            | VP001 |

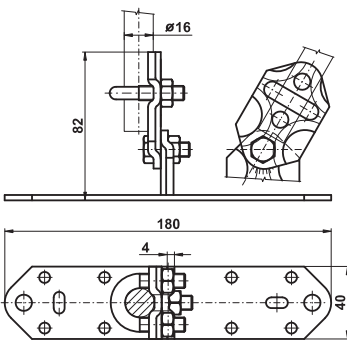
**Application:** Fixing plate for spacer bar parallel or across to the wall of building.



## “T” HOLDER WITH HINGE FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHSK   | 0,303       | 50            | VP005 |

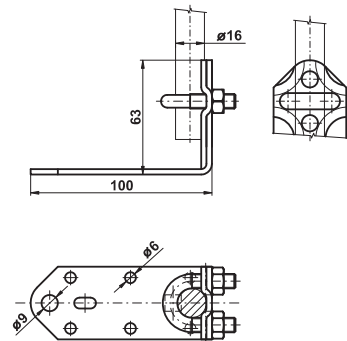
**Application:** Fixing plate for spacer bar to the wall of building with adjustable angle.



## “L” HOLDER FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHL    | 0,153       | 50            | VP010 |

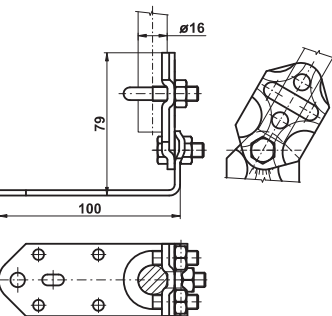
**Application:** Fixing plate for spacer bar parallel or across to the wall of building.

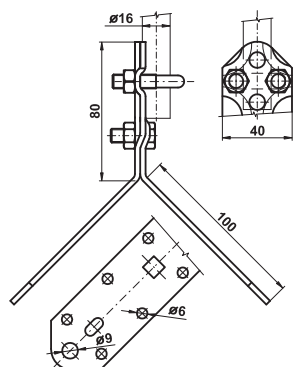


## “L” HOLDER WITH HINGE FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHLK   | 0,213       | 50            | VP015 |

**Application:** Fixing plate for spacer bar to the wall of building with adjustable angle.

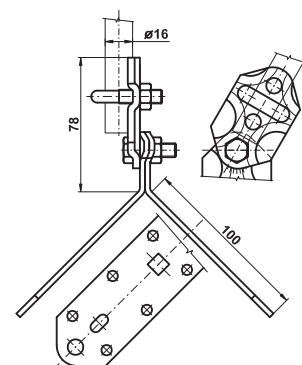




## HOLDER CORNER FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHR    | 0,285       | 50            | VP020 |

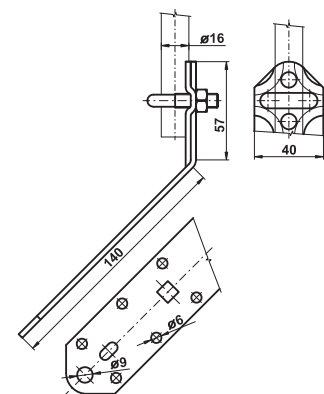
**Application:** Fixing plate for spacer bar parallel or across to the corner of building.



## HOLDER CORNER WITH HINGE FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHRK   | 0,319       | 50            | VP025 |

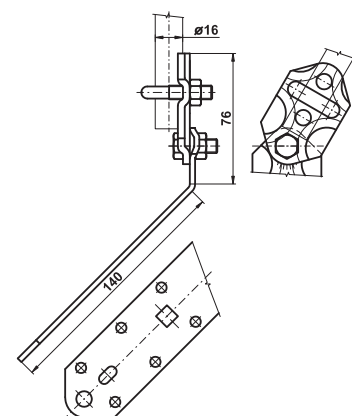
**Application:** Fixing plate for spacer bar parallel or across to the corner of building with adjustable angle.



## HOLDER ANGLE FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHU    | 0,188       | 50            | VP030 |

**Application:** Fixing plate for spacer bar parallel or across to the corner of building.

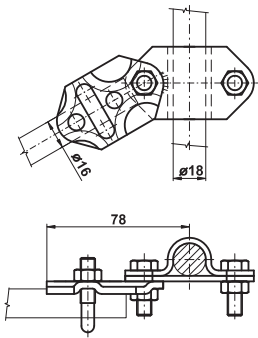


## HOLDER ANGLE WITH HINGE FOR ISOLATED AIR-TERMINATION SYSTEM

| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHUK   | 0,251       | 50            | VP035 |

**Application:** Fixing plate for spacer bar parallel or across to the corner of building with adjustable angle.

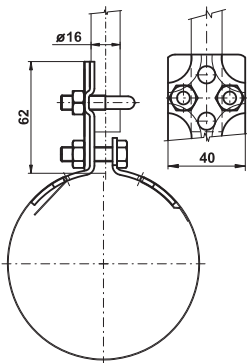
## HOLDER FOR RECEIVING RODE WITH HINGE FOR ISOLATED AIR-TERMINATION SYSTEM



| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | DOHJK   | 0,268       | 50            | VP040 |

**Application:** Rod holder for spacer bar with adjustable angle.

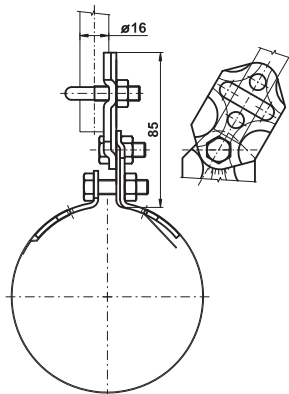
## HOLDER OF PIPE FOR ISOLATED AIR-TERMINATION SYSTEM



| Made of | Marking   | Weight (kg) | Package (pcs) | Code  |
|---------|-----------|-------------|---------------|-------|
| H.D.G.  | DOHT      | 0,150       | 50            | VP045 |
|         | Tape Inox | 0,060       | 1 m           | V105  |

**Application:** Fixing plate for spacer bar parallel or across to the pipe. Use of flexible stainless steel tape enables universal use of this kind of clamp for several diameters of pipe.

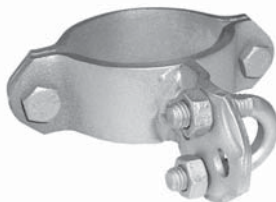
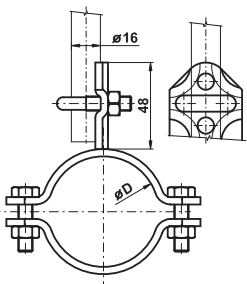
## HOLDER WITH HINGE OF PIPE FOR ISOLATED AIR-TERMINATION SYSTEM



| Made of | Marking   | Weight (kg) | Package (pcs) | Code  |
|---------|-----------|-------------|---------------|-------|
| H.D.G.  | DOHTK     | 0,209       | 50            | VP050 |
|         | Tape Inox | 0,060       | 1 m           | V105  |

**Application:** Fixing plate for spacer bar parallel or across to the pipe with adjustable angle. Use of flexible stainless steel tape enables universal use of this kind of clamp for several diameters of pipe.

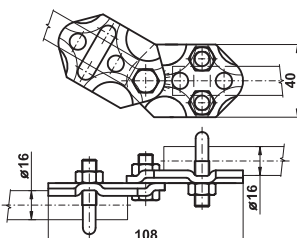
## HOLDER OF PIPE FOR ISOLATED AIR-TERMINATION SYSTEM



| Made of | Marking | øD (mm)   | Js (") | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-----------|--------|-------------|---------------|-------|
| H.D.G.  | DOHT 1  | 18 - 22   | 1/2    | 0,229       | 50            | VP055 |
|         | DOHT 2  | 23 - 27   | 3/4    | 0,243       | 50            | VP060 |
|         | DOHT 3  | 28 - 34   | 1      | 0,264       | 50            | VP065 |
|         | DOHT 4  | 35 - 43   | 1 1/4  | 0,295       | 50            | VP070 |
|         | DOHT 5  | 44 - 50   | 1 1/2  | 0,314       | 50            | VP075 |
|         | DOHT 6  | 54 - 61   | 2      | 0,343       | 50            | VP080 |
|         | DOHT 7  | 69 - 77   | 2 1/2  | 0,393       | 50            | VP085 |
|         | DOHT 8  | 81 - 90   | 3      | 0,427       | 50            | VP090 |
|         | DOHT 9  | 106 - 115 | 4      | 0,511       | 50            | VP095 |

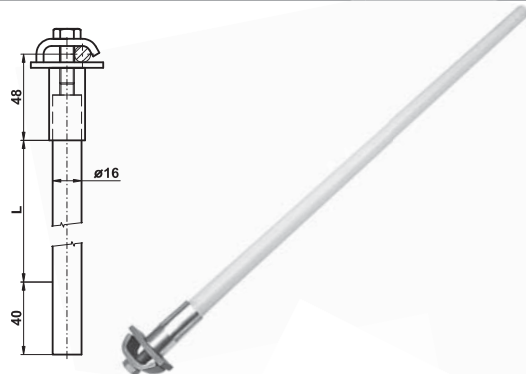
**Application:** Fixing plate for spacer bar parallel or across to the pipe.

## HINGE FOR ISOLATED AIR-TERMINATION SYSTEM



| Made of | Marking | Weight (kg) | Package (pcs) | Code  |
|---------|---------|-------------|---------------|-------|
| H.D.G.  | KOH     | 0,202       | 50            | VP100 |

**Application:** Bar holder for bracing bar between spacers.

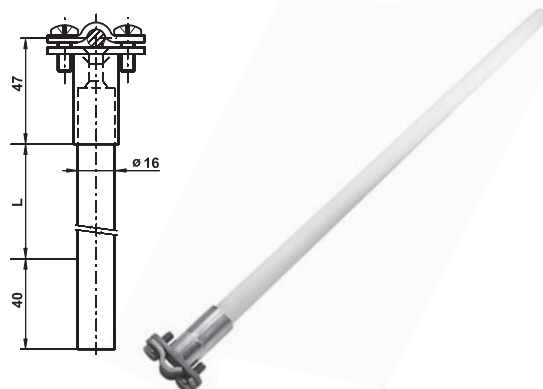


## ISOLATING ROD FOR CONDUCTOR

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code  |
|---------|---------|--------|-------------|---------------|-------|
| H.D.G.  | ITV 43  | 430    | 0,276       | 1             | VP105 |
|         | ITV 68  | 680    | 0,374       | 1             | VP110 |
|         | ITV 93  | 930    | 0,473       | 1             | VP115 |

**Application:** Fastening conductor for construction isolated air-termination system.

**Material:** Isolating rod made of glass fibre reinforced plastic (GFK), tips made of aluminium alloy, other parts made of H.D.G. steel.

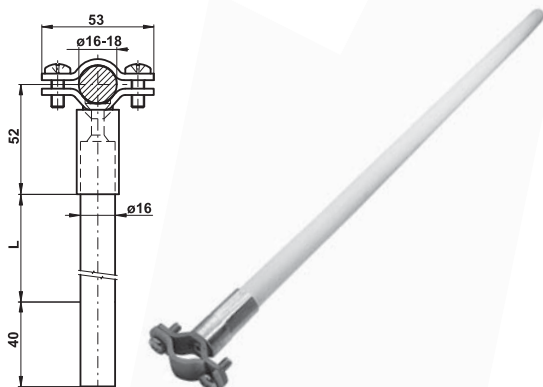


## ISOLATING FOR CONDUCTOR

| Made of | Marking   | L (mm) | Weight (kg) | Package (ks) | Code  |
|---------|-----------|--------|-------------|--------------|-------|
| H.D.G.  | ITVc 43   | 430    | 0,274       | 1            | VP140 |
|         | ITVc 68   | 680    | 0,380       | 1            | VP145 |
|         | ITVc 93   | 930    | 0,477       | 1            | VP150 |
| Inox    | ITVc 43 N | 430    | 0,266       | 1            | VP170 |
|         | ITVc 68 N | 680    | 0,374       | 1            | VP175 |
|         | ITVc 93 N | 930    | 0,474       | 1            | VP180 |

**Application:** Fastening conductor for construction isolated air-termination system.

**Material:** Isolating rod made of glass fibre reinforced plastic (GFK), tips made of aluminium alloy, other parts of H.D.G. steel or inox. Bolts M6 are inox.

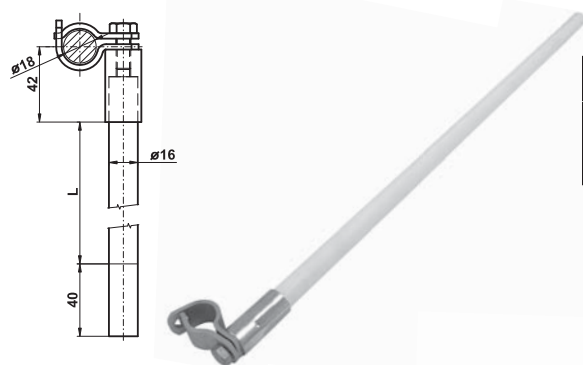


## ISOLATING ROD FOR RECEIVING ROD

| Made of | Marking   | L (mm) | Weight (kg) | Package (ks) | Code  |
|---------|-----------|--------|-------------|--------------|-------|
| H.D.G.  | ITJc 43   | 430    | 0,284       | 1            | VP155 |
|         | ITJc 68   | 680    | 0,390       | 1            | VP160 |
|         | ITJc 93   | 930    | 0,488       | 1            | VP165 |
| Inox    | ITJc 43 N | 430    | 0,276       | 1            | VP185 |
|         | ITJc 68 N | 680    | 0,386       | 1            | VP190 |
|         | ITJc 93 N | 930    | 0,484       | 1            | VP195 |

**Application:** Fastening receiving rod for construction isolated air-termination system.

**Material:** Isolating rod made of glass fibre reinforced plastic (GFK), tips made of aluminium alloy, other parts made of H.D.G. steel.

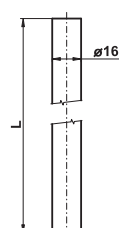


## ISOLATING ROD FOR RECEIVING ROD

| Made of | Marking | L (mm) | Weight (kg) | Package (pcs) | Code  |
|---------|---------|--------|-------------|---------------|-------|
| H.D.G.  | ITJ 43  | 430    | 0,277       | 1             | VP120 |
|         | ITJ 68  | 680    | 0,375       | 1             | VP125 |
|         | ITJ 93  | 930    | 0,474       | 1             | VP130 |

**Application:** Fastening receiving rod for construction isolated air-termination system.

**Material:** Isolating rod made of glass fibre reinforced plastic (GFK), tips made of aluminium alloy, other parts made of H.D.G. steel.



## ISOLATING ROD

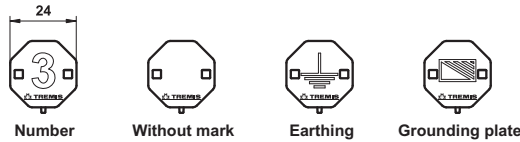
| Made of     | Marking | L (mm) | Weight (kg) | Package (pcs) | Code  |
|-------------|---------|--------|-------------|---------------|-------|
| Plastic GFK | IT      | 1000   | 0,394       | 1             | VP135 |

**Application:** Installation of bracing bars between spacers for construction isolated air-termination system.

**Material:** Isolating rod made of glass fibre reinforced plastic (GFK).



## MARKING PLATE

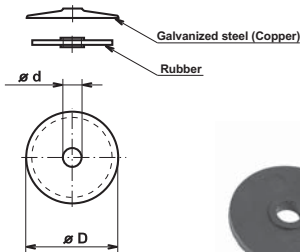


| Marking                | Weight (kg) | Package (pcs) | Code  |
|------------------------|-------------|---------------|-------|
| Nr. 1                  | 0,001       | 50            | VS001 |
| Nr. 2                  | 0,001       | 50            | VS005 |
| Nr. 3                  | 0,001       | 50            | VS010 |
| Nr. 4                  | 0,001       | 50            | VS015 |
| Nr. 5                  | 0,001       | 50            | VS020 |
| Nr. 6                  | 0,001       | 50            | VS025 |
| Nr. 7                  | 0,001       | 50            | VS030 |
| Nr. 8                  | 0,001       | 50            | VS035 |
| Nr. 9                  | 0,001       | 50            | VS040 |
| Nr. 0                  | 0,001       | 50            | VS045 |
| Without mark           | 0,001       | 50            | VS050 |
| Earthing               | 0,001       | 50            | VS055 |
| Grounding plate        | 0,001       | 50            | VS060 |
| Grounding rod          | 0,001       | 50            | VS065 |
| Grounding tape         | 0,001       | 50            | VS070 |
| Left direction         | 0,001       | 50            | VS075 |
| Right direction        | 0,001       | 50            | VS076 |
| Double sided direction | 0,001       | 50            | VS080 |
| Revision               | 0,001       | 50            | VS085 |

**Application:** Marks the conductor and grounding.

**Material:** Plastic (stabilized PE against UV radiation) grey color.

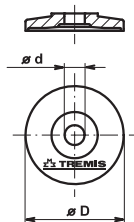
## WASHER



| Made of          | Marking           | ø D / ø d (mm) | Weight (kg) | Package (pcs) | Code  |
|------------------|-------------------|----------------|-------------|---------------|-------|
| Galvanized steel | Washer 8          | 38 / 8         | 0,008       | 100           | Z 105 |
|                  | Washer 6          | 26 / 6         | 0,004       | 100           | Z 100 |
| Copper           | Washer 8 Cu       | 38 / 8         | 0,008       | 1             | Z 305 |
|                  | Washer 6 Cu       | 26 / 6         | 0,004       | 1             | Z300  |
| Inox             | Washer 8 N        | 38 / 8         | 0,008       | 1             | Z 107 |
|                  | Washer 6 N        | 26 / 6         | 0,004       | 1             | Z 102 |
| Rubber           | Washer 8 - rubber | 38 / 8         | 0,003       | 100           | Z106  |
|                  | Washer 6 - rubber | 25 / 6         | 0,001       | 100           | Z101  |

**Application:** Screw gasket for PV 17, PV 1h, DUD and DJD.

## WASHER PE

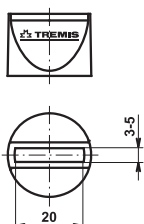


| Marking     | ø D / ø d (mm) | Weight (kg) | Package (pcs) | Code  |
|-------------|----------------|-------------|---------------|-------|
| Washer 8 PE | 37 / 8         | 0,003       | 50            | VS115 |
| Washer 6 PE | 27 / 6         | 0,001       | 100           | VS110 |

**Application:** Screw gasket for PV 17, PV 1h, DUD and DJD.

**Material:** Plastic (stabilized PE against UV radiation) grey color.

## COVERING PE



| Marking     | Weight (kg) | Package (pcs) | Code  |
|-------------|-------------|---------------|-------|
| Covering PE | 0,002       | 50            | VS120 |

**Application:** Covering weld for PV 17, PV 1h and DJD.

**Material:** Plastic (stabilized PE against UV radiation) grey color.



## LEAD SHEET

| Marking  | Size (mm) | Package (kg) | Code |
|----------|-----------|--------------|------|
| Plate Pb | 250x0,5   | 20-25        | Z450 |

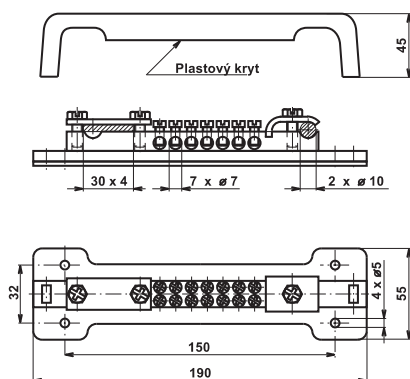
**Application:** Corrosion - resistant connection of hot dip galvanized steel or aluminium and copper.

## TERMINAL BOARD FOR MAIN CONNECTION

| Marking        | Weight (kg) | Package (pcs) | Code |
|----------------|-------------|---------------|------|
| Terminal board | 0,252       | 1             | Z780 |

**Application:** Main connection of neutral conductors and grounding.

**Material:** Terminal board, tin-coated brass, cover plastic.

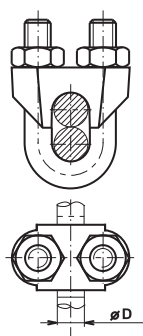


## STEEL ROPE CLAMP

| Marking | Rope $\varnothing$ D (mm) | Weight (kg) | Package (pcs) | Code |
|---------|---------------------------|-------------|---------------|------|
| LS 5    | 3 - 5                     | 0,014       | 25            | Z695 |
| LS 6    | 4 - 6                     | 0,017       | 25            | Z700 |
| LS 8    | 6 - 8                     | 0,030       | 10            | Z705 |
| LS 10   | 8 - 10                    | 0,062       | 10            | Z710 |

**Application:** Creation of clamping connections of ropes and wires.

**Material:** Galvanized malleable cast iron, the stirrup and nuts galvanized steel.

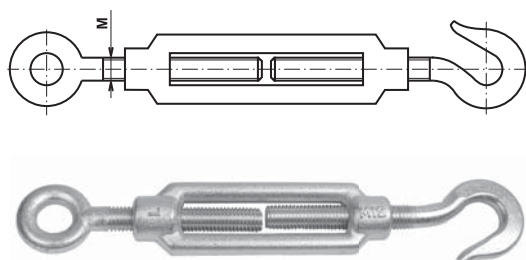


## TENSIONING SCREW

| Marking | Worm | Weight (kg) | Package (pcs) | Code |
|---------|------|-------------|---------------|------|
| NS 6    | M 6  | 0,131       | 1             | Z745 |
| NS 10   | M 10 | 0,336       | 1             | Z750 |
| NS 12   | M 12 | 0,530       | 1             | Z755 |
| NS 16   | M 16 | 0,879       | 1             | Z760 |

**Application:** Tensioning of ropes and wires.

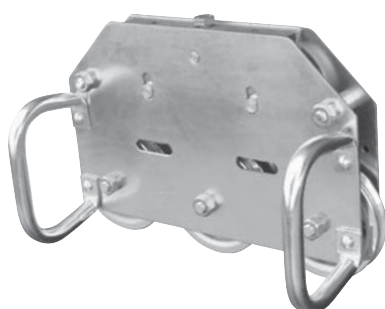
**Material:** Galvanized malleable cast iron.



## WIRE STRAIGHTENER

| Marking      | Weight (kg) | Package (pcs) | Code |
|--------------|-------------|---------------|------|
| Straightener | 5,900       | 1             | Z785 |

**Application:** Wire straightener is used for straightening of wire of diameter from 7 to 10 mm made of materials H.D.G., Copper, AlMgSi. The overall amount of pulleys is 5, where 2 of these are adjustable.



## STRAIGHTENER TOOLED – 2 pegs



| Marking      | Weight (kg) | Package (pcs) | Code |
|--------------|-------------|---------------|------|
| Str. 2k FeZn | 0,374       | 1             | V550 |
| Str. 2k Cr   | 0,361       | 1             | V560 |

**Application:** Straightener is used for straightening and inflexion conductors.

**Material:** Hot dip galvanized or stainless steel.

## STRAIGHTENER TOOLED – 3 pegs



| Marking      | Weight (kg) | Package (pcs) | Code |
|--------------|-------------|---------------|------|
| Str. 3k FeZn | 0,398       | 1             | V555 |
| Str. 3k Cr   | 0,384       | 1             | V565 |

**Application:** Straightener is used for straightening and inflexion conductors.

**Material:** Hot dip galvanized or stainless steel.

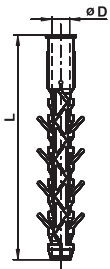
## TOOLS



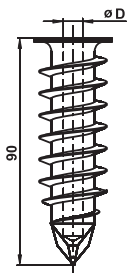
| Marking  | Weight (kg) | Package (pcs) | Code |
|----------|-------------|---------------|------|
| Tools 13 | 0,102       | 1             | Z970 |
| Tools 17 | 0,214       | 1             | Z975 |

**Application:** Assembly element lightning protection and grounding.

## DOWELS TO WALL



| Marking   | øD | L (mm) | Weight (kg) | Package (pcs) | Code |
|-----------|----|--------|-------------|---------------|------|
| H 10/50   | 6  | 50     | 0,002       | 1             | Z900 |
| H 10/50 L | 6  | 50     | 0,002       | 1             | Z901 |
| H 12/100  | 8  | 100    | 0,007       | 1             | Z905 |
| H 12/160  | 8  | 160    | 0,010       | 1             | Z910 |
| H 12/200  | 8  | 200    | 0,013       | 1             | Z915 |



## DOWELS TO POLYSTYRENE

| Marking    | øD | Weight (kg) | Package (pcs) | Code |
|------------|----|-------------|---------------|------|
| H FID 90/6 | 6  | 0,012       | 1             | Z916 |
| H FID 90/8 | 8  | 0,020       | 1             | Z917 |

## SECURITY TABLE

| Made of       | Marking | Size (mm) | Weight (kg) | Package (pcs) | Code |
|---------------|---------|-----------|-------------|---------------|------|
| Plastic       | BT P A5 | 148 × 210 | 0,016       | 1             | Z996 |
| Self-adhesive | BT S A5 | 148 × 210 | 0,009       | 1             | Z997 |
| Plastic       | BT P A4 | 210 × 297 | 0,032       | 1             | Z998 |
| Self-adhesive | BT S A4 | 210 × 297 | 0,016       | 1             | Z999 |



## Standards

|                  |                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| ČSN EN 62561-1   | Lightning Protection System Components (LPC) – Part 1: Requirements for connection components                                                 |
| ČSN EN 62561-2   | Lightning Protection System Components (LPC) – Part 2: Requirements for conductors and earth electrodes                                       |
| ČSN EN 62561-4   | Lightning Protection System Components (LPC) – Part 4: Requirements for conductors fasteners                                                  |
| ČSN 33 2000-5-54 | Electrical equipment. Part 5: Selection and erection of electrical equipment.<br>Chapter 54: Earthing arrangements and protective conductors. |
| ČSN EN 62305-1   | Protection against lightning - Part 1: General principles                                                                                     |
| ČSN EN 62305-2   | Protection against lightning - Part 2: Risk management                                                                                        |
| ČSN EN 62305-3   | Protection against lightning - Part 3: Physical damage to structures and life hazard                                                          |
| ČSN EN 62305-4   | Protection against lightning - Part 4: Electrical and electronic system within structures                                                     |

## Technical information

Table count weight and length conductors:

| Material                     | Dimension                        | Weight 1 m (kg) | Length 1 kg (m) |
|------------------------------|----------------------------------|-----------------|-----------------|
| H.D.G. round conductor       | ø 8 mm                           | 0,40            | 2,50            |
| H.D.G. round conductor       | ø 10 mm                          | 0,62            | 1,61            |
| H.D.G. + PVC round conductor | ø 10/13 mm                       | 0,695           | 1,44            |
| H.D.G. stranded conductor    | cross section 25 mm <sup>2</sup> | 0,226           | 4,42            |
| H.D.G. stranded conductor    | cross section 35 mm <sup>2</sup> | 0,28            | 3,57            |
| H.D.G. stranded conductor    | cross section 50 mm <sup>2</sup> | 0,40            | 2,50            |
| H.D.G. stranded conductor    | cross section 70 mm <sup>2</sup> | 0,617           | 1,62            |
| H.D.G. tape conductor        | 20 x 3 mm                        | 0,48            | 2,08            |
| H.D.G. tape conductor        | 30 x 4 mm                        | 0,95            | 1,05            |
| Cooper round conductor       | ø 7 mm                           | 0,35            | 2,86            |
| Cooper round conductor       | ø 8 mm                           | 0,45            | 2,22            |
| Lead sheet                   | 250 x 0,6 mm                     | 1,70            | 0,59            |
| AlMgSi round conductor       | ø 8 mm                           | 0,135           | 7,40            |
| AlMgSi+PVC round conductor   | ø 8/11 mm                        | 0,200           | 5,00            |
| Inox round conductor         | ø 8 mm                           | 0,40            | 2,50            |
| Inox round conductor         | ø 10 mm                          | 0,62            | 1,62            |
| Inox tape conductor          | 30 x 3,5 mm                      | 0,84            | 1,19            |

Table recommended tightening torques (unless otherwise indicated):

| Screw size | Made of      |        |                 |                  |
|------------|--------------|--------|-----------------|------------------|
|            | H.D.G. steel | Copper | Stainless steel | Galvanized steel |
| M 6        | -            | -      | 8 Nm            | 8 Nm             |
| M 8        | 10 Nm        | 10 Nm  | 10 Nm           | -                |
| M 10       | 20 Nm        | 15 Nm  | 20 Nm           | -                |

**Sorting (by ČSN EN 62561-1) – Connecting components (clamps) in terms of the ability to withstand electric current of lightning classified as Class N (50kA) for normal strain.**

Table recommended material combinations:

| material        | H.D.G. steel | Copper | Aluminium | Stainless steel |
|-----------------|--------------|--------|-----------|-----------------|
| H.D.G. steel    | yes          | no     | yes       | yes             |
| Copper          | no           | yes    | no        | yes             |
| Aluminium       | yes          | no     | yes       | yes             |
| Stainless steel | yes          | yes    | yes       | yes             |

**We don't perform designing of lightning protection system and therefore our technical advice is not binding.  
We recommend to check that the products are suitable for the particular case of the proposed system lightning protection.  
Subject to print errors. The pictures in this catalogue are for illustration only.**



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