

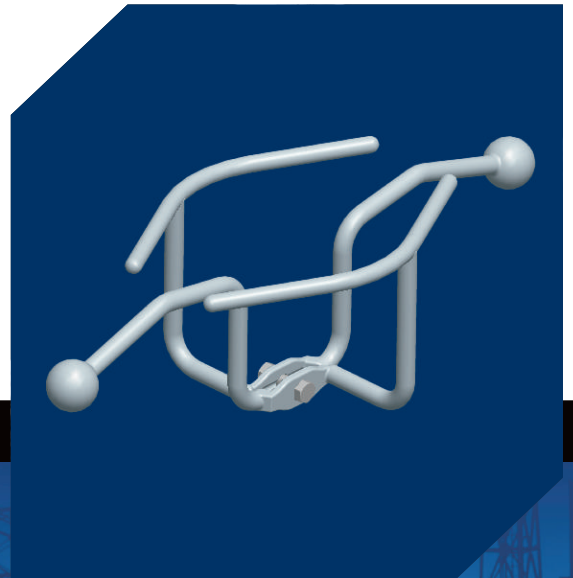


OSPRZĘT
ENERGETYCZNY

OSPRZĘT
TELEKOMUNIKACYJNY

URZĄDZENIA
PRZEMYSŁOWE

SYSTEMY
SOLARNE



ENERGY
PRODUCTS

COMMUNICATION
PRODUCTS

SPECIAL
INDUSTRIES

SOLAR

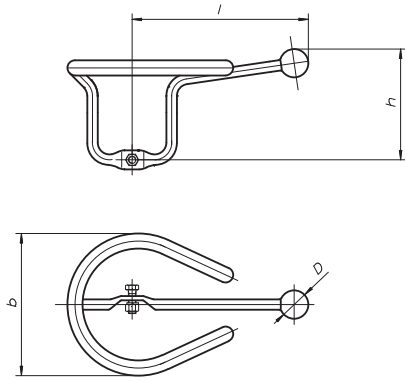
OSPRZĘT OCHRONNY Protective fittings

3

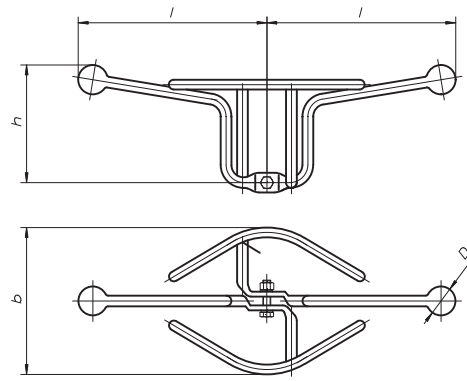
OSPRZĘT OCHRONNY
Protective fittings

| | | |
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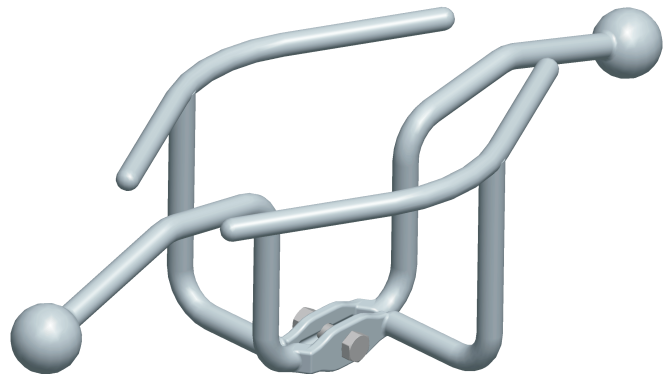
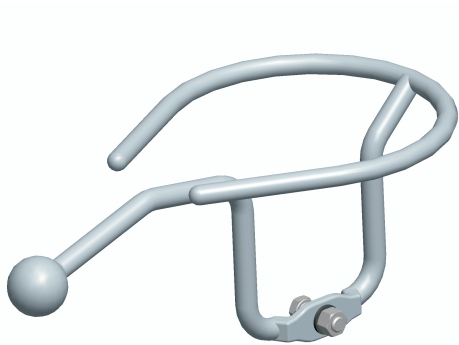
Pierścienie elektrodowe - dolne
Electrode arcing rings - lower



1- jednoelektrodowy/one-electrode



2- dwuelektrodowy/ two-electrode



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|----|------------------------|------------------------|-----------------------|----------------------|-------------------------------|
| | | h | l | b | D | | | | | |
| 1 | 32955 | 152 | 380 | 300 | 30 | 110 | 31,5 | 0,7 | 4,68 | 3-03 |
| | 32955/S | 227 | 380 | 300 | 30 | 110 | 31,5 | 0,7 | 4,68 | |
| | 32956 | 170 | 385 | 300 | 60 | 220 | 31,5 | 0,7 | 5,57 | |
| | 32956/S | 240 | 385 | 300 | 60 | 220 | 31,5 | 0,7 | 5,57 | |
| | 32957 | 250 | 395 | 320 | 90 | 400 | 40 | 0,4 | 7,19 | |
| 2 | 329461 | 170 | 385 | 300 | 60 | 110;220 | 31,5 | 0,7 | 9,30 | 3-16 |
| | 329461/S | 240 | 385 | 300 | 60 | 110;220 | 31,5 | 0,7 | 9,30 | |
| | 32947 | 250 | 395 | 320 | 80 | 400 | 40 | 0,4 | 10,56 | |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów przelotowych (1,2) i odciągowych (1) z izolatorami długopionowymi

Material:

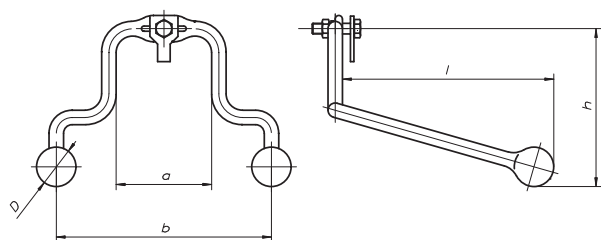
Steel, hot dip galvanized

Application:

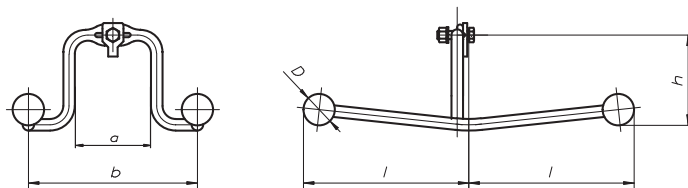
These arcing horns are used for suspension (1,2) and tension (1) insulator strings of the long-rod type

Rożki górne

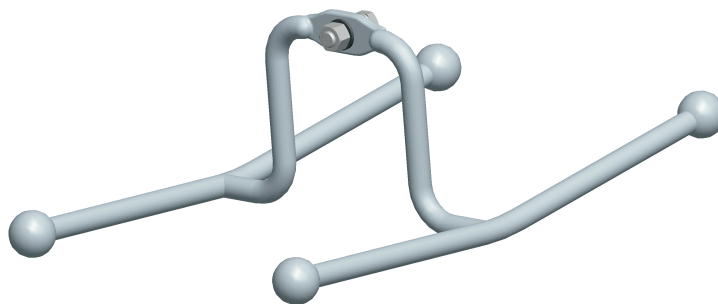
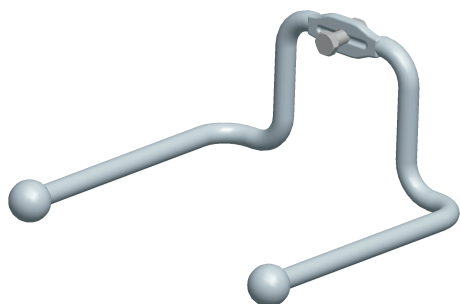
Arcing horns - upper



1- jednostronny/one-sided



2 - dwustronny/ two-sided



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|-----|----|------------------------|------------------------|-----------------------|----------------------|-------------------------------|
| | | a | b | h | l | D | | | | | |
| 1 | 32256 | 145 | 325 | 165 | 315 | 45 | 110;220 | 31,5 | 0,7 | 4,50 | 3-01 |
| | 32256/S | 145 | 325 | 235 | 315 | 45 | 110;220 | 31,5 | 0,7 | 4,50 | |
| | 32257 | 145 | 325 | 240 | 320 | 60 | 400 | 40 | 0,4 | 5,00 | |
| 2 | 32266 | 145 | 325 | 165 | 315 | 45 | 110;220 | 31,5 | 0,7 | 6,75 | 3-04 |
| | 32266/S | 145 | 325 | 235 | 315 | 45 | 110;220 | 31,5 | 0,7 | 6,75 | |
| | 32267 | 145 | 325 | 240 | 320 | 60 | 400 | 40 | 0,4 | 6,80 | |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów przelotowych i odciągowych z izolatorami długopniowymi

W łańcuchach przelotowych 110kV jako górny i dolny

Material:

Steel, hot dip galvanized

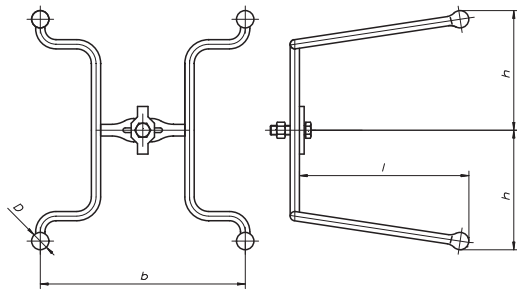
Application:

These arcing horns are used for suspension and tension insulator strings of the long-rod type

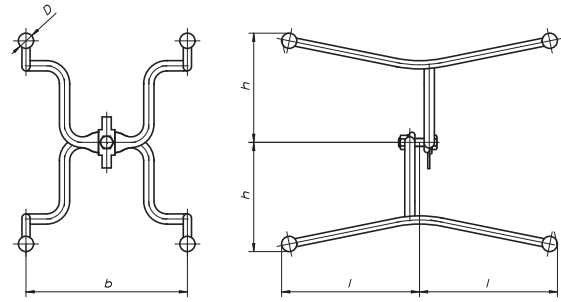
In the 110kV or special shaped suspension insulator strings the arcing horns are used also as lower horns.

Rożki środkowe

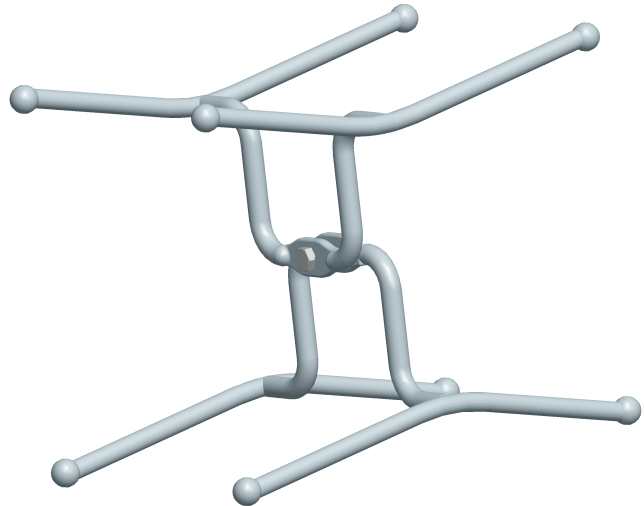
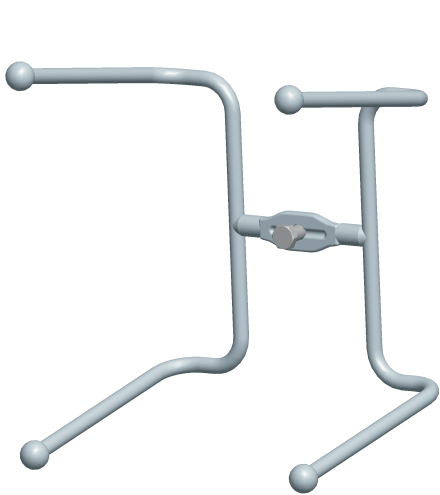
Arcing horns - middle



1- jednostronny/one-sided



2 – dwustronny/ two-sided



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | U_n [kV] | I_n [kA] | t_z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|----|---------------|---------------|--------------|----------------------|-------------------------------|
| | | h | l | b | D | | | | | |
| 1 | 32276 | 210 | 255 | 325 | 30 | 110 | 25 | 1,0 | 4,00 | 3-02 |
| | | | | | | 220 | 31,5 | 0,7 | | |
| | | | | | | 400 | 40 | 0,4 | | |
| | 32276/S | 110 | 255 | 325 | 30 | 110 | 25 | 1,0 | 3,36 | 3-30 |
| | | | | | | 220 | 31,5 | 0,7 | | |
| | | | | | | 400 | 40 | 0,4 | | |
| 2 | 32286 | 210 | 255 | 325 | 30 | 110 | 25 | 1,0 | 8,70 | 3-05 |
| | | | | | | 220 | 31,5 | 0,7 | | |
| | | | | | | 400 | 40 | 0,4 | | |
| | 32286/S | 110 | 255 | 325 | 30 | 110 | 25 | 1,0 | 7,70 | 3-31 |
| | | | | | | 220 | 31,5 | 0,7 | | |
| | | | | | | 400 | 40 | 0,4 | | |

Materiał:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów przelotowych (1,2) i odciągowych (1) z izolatorami długopniowymi

Material:

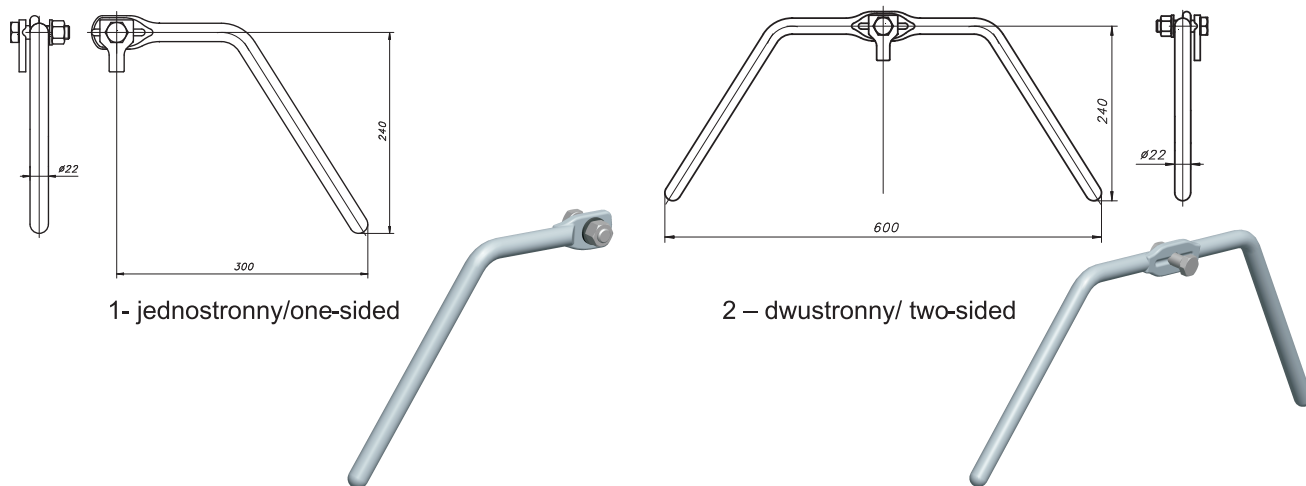
Steel, hot dip galvanized

Application:

These arcing horns are used as protective for suspension (1,2) and tension (1) insulator strings of the long-rod type

Rożki górne

Arcing horns - upper



1- jednostronny/one-sided

2 – dwustronny/ two-sided

| Rys. Draw. | Nr kat. Cat. No. | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|------------|------------------|---------------------|---------------------|--------------------|----------------|----------------------|
| 1 | 32216 | 400 | 40 | 0,4 | 1,75 | 3-20 |
| 2 | 32226 | 400 | 40 | 0,4 | 2,88 | 3-21 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów z izolatorami kołpakowymi

Material:

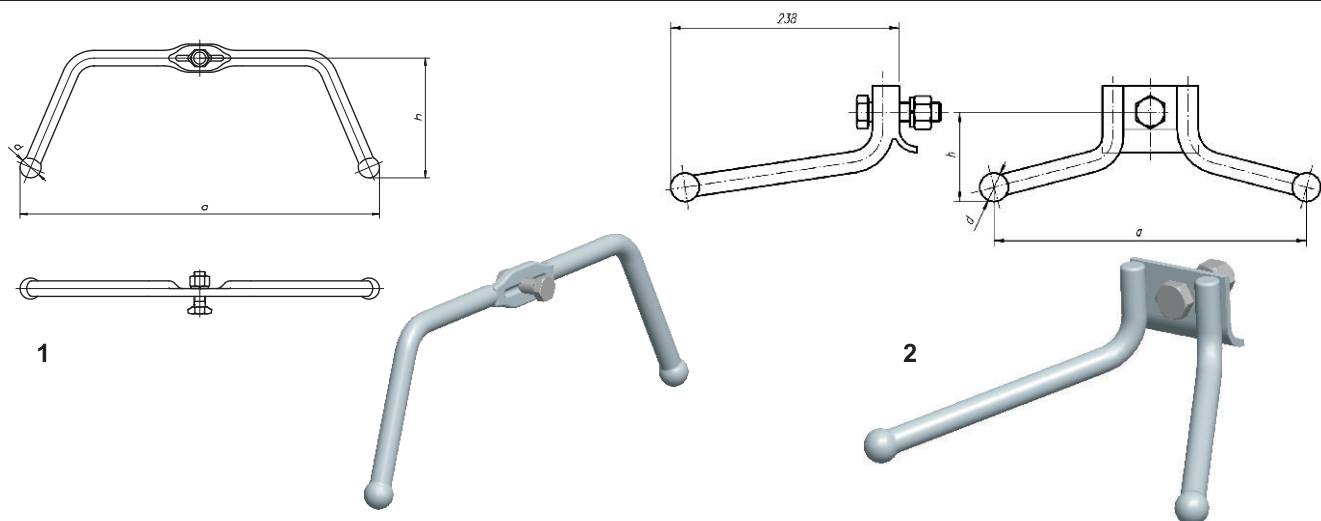
Steel, hot dip galvanized

Application:

These arcing horns are used as upper protective fittings in suspension for and tension insulator strings of the cap type up to 440 kV

Rożki dwustronne

Two-sides arcing horns



1

2

| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|------------|------------------|-------------------------|-----|----|---------------------|---------------------|--------------------|----------------|----------------------|
| | | a | h | d | | | | | |
| 1 | 32100 | 510 | 170 | 30 | 110 | 25 | 1 | 2,37 | 3-22 |
| 2 | 32110 | 325 | 93 | 30 | 110 | 25 | 1 | 2,64 | 3-23 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

1. W łańcuchach przelotowych 110 kV jako dolny i górny
2. W łańcuchach odciągowych Ł02
Współpracuje z orczykiem NK 3826, 38260

Material:

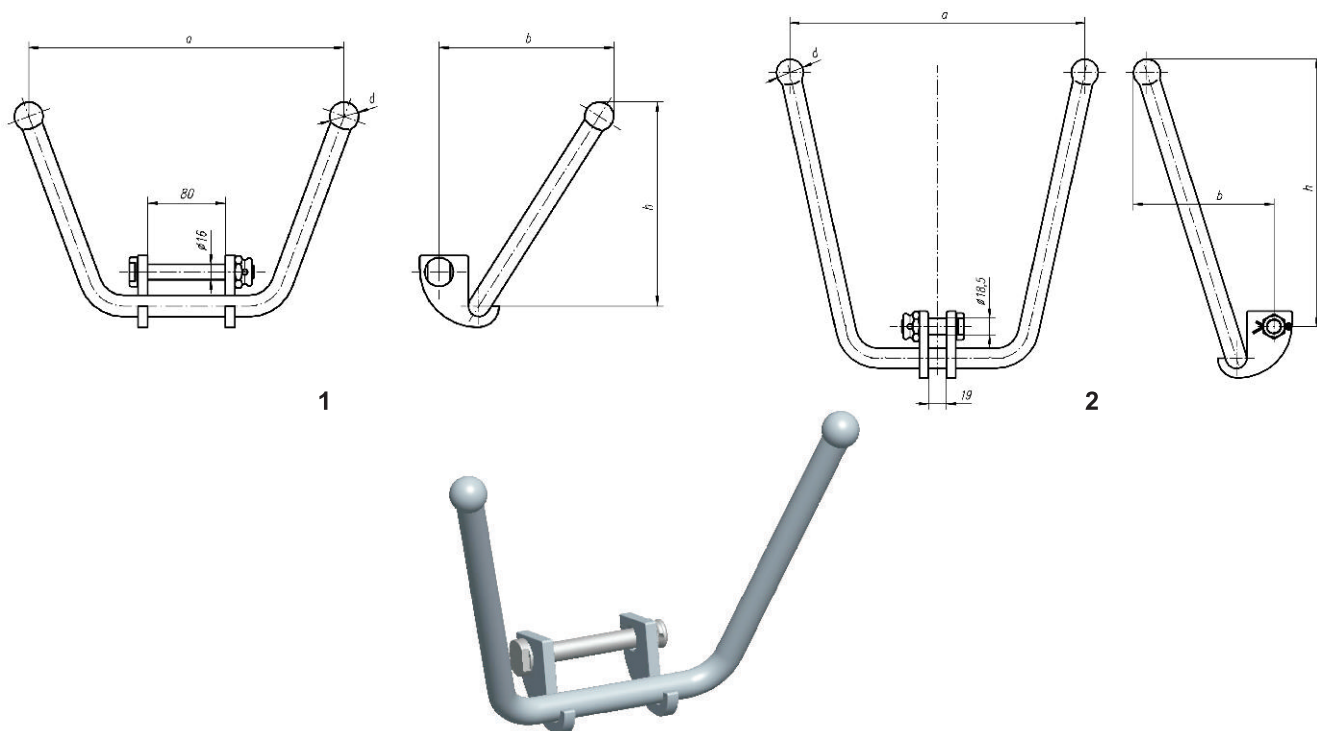
Steel, hot dip galvanized

Application:

- These two-sides arcing horns are used as protective fittings for:
1. suspension insulator strings of cap type for 110 kV as lower and upper
 2. tension insulator strings Ł02
collaborates with yokes 3826, 38260

Rożki dwustronne

Two-sides arcing horns



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|----|------------------------|------------------------|-----------------------|----------------------|----------------------------|
| | | a | b | h | d | | | | | |
| 1 | 32120 | 325 | 180 | 210 | 30 | 110 | 25 | 1 | 2,84 | 3-24 |
| 2 | 32130 | 325 | 155 | 295 | 30 | 110 | 25 | 1 | 3,32 | 3-25 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

W liniach 110 kV do ochrony izolatora mostka

Material:

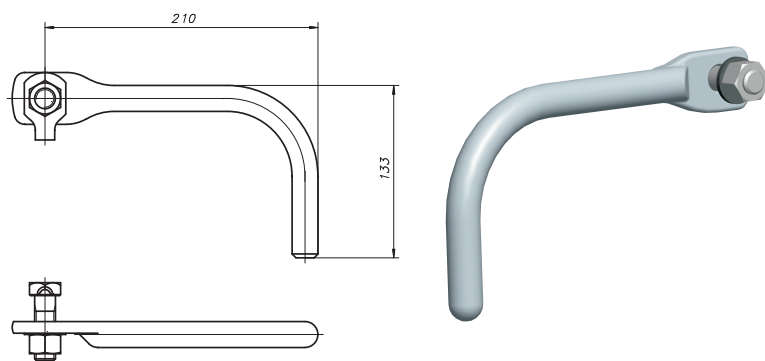
Steel, hot dip galvanized

Application:

These arcing horns are used to protect the electric bridge insulator on 110 kV line

Rożek

Horn



| Nr kat. Cat. No. | Masa Mass [kg] | Karta kat. Cat. card |
|---------------------|----------------------|-------------------------|
| 3237 | 0,94 | 3-06 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Jako górny i dolny element iskiernika izolowanych zawiesi przewodów odgromowych

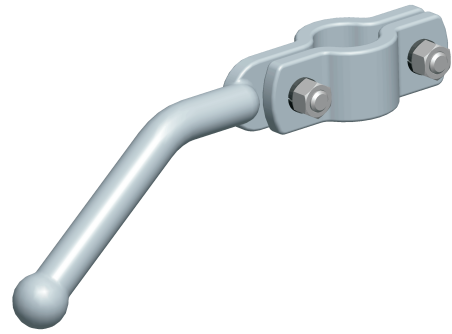
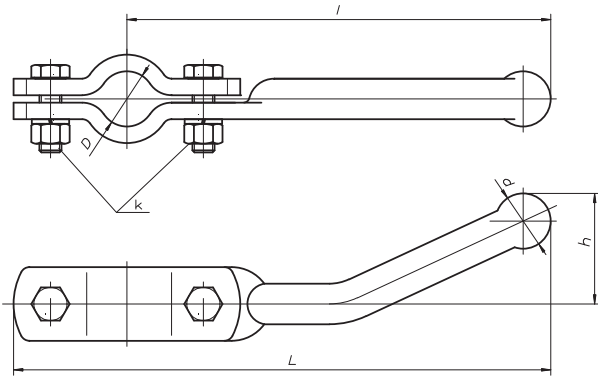
Material:

Steel, hot dip galvanized

Application:

This horn is used as upper and lower spark-gap element of insulated suspension of earth conductor

Rożek ochronny Arcing horn



| Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | | | U _n [kV] | I _n [kA] | t _z [s] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------------|-------------------------------|----|-----|-----|-----|-----|------------------------|------------------------|-----------------------|----------------------|-------------------------------|
| | D | d | k | L | l | h | | | | | |
| 32002 | 25 | 30 | M12 | 290 | 230 | 90 | 110 | 25 | 1,0 | 1,48 | 3-19 |
| 32003 | 25 | 30 | M12 | 290 | 230 | 60 | 110 | 25 | 1,0 | 1,20 | |
| 32004 | 25 | 30 | M12 | 290 | 230 | 110 | 110 | 25 | 1,0 | 1,38 | |
| 32005 | 30 | 30 | M12 | 290 | 230 | 60 | 110 | 25 | 1,0 | 1,30 | |
| 32010 | 35 | 30 | M12 | 290 | 230 | 90 | 110 | 25 | 1,0 | 1,48 | |
| 32014 | 38 | 30 | M12 | 300 | 240 | 80 | 110 | 25 | 1,0 | 1,50 | |
| 32020 | 44 | 30 | M12 | 320 | 255 | 40 | 110 | 25 | 1,0 | 1,44 | |
| 32025 | 46 | 30 | M12 | 305 | 240 | 75 | 110 | 25 | 1,0 | 1,70 | |

Material:

Stal z powłoką cynkową

Zastosowanie:

Do izolatorów kompozytowych

Material:

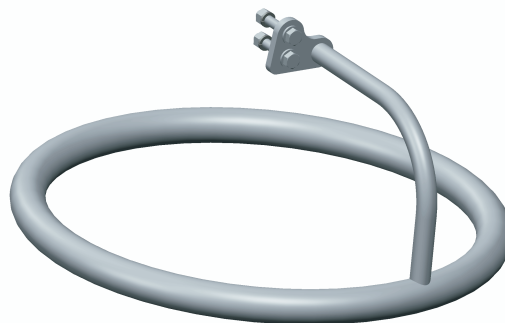
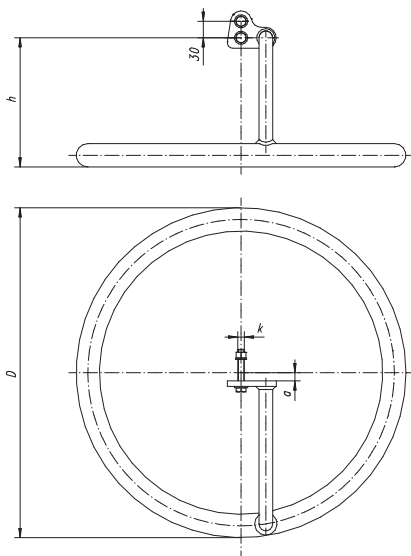
Steel, hot dip galvanized

Application:

These arcing horns are used for insulator strings of the composite type

Pierścień ochronny ekranujący \varnothing 600

Grading ring



| Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | Obciążenie prądowe Short circuit current [kA] | Masa Mass [kg] | Karta kat. Cat.card |
|---------------------|-------------------------------|-----|----|-----|---|----------------------|------------------------|
| | D | h | a | k | | | |
| 32534 | 600 | 235 | 20 | M12 | 40 | 7,00 | 3-08 |

Material:

Stal cynkowana ogniowo wg PN- EN ISO 1461

Zastosowanie:

Do łańcuchów przelotowych z wiązką potrójną 400 kV

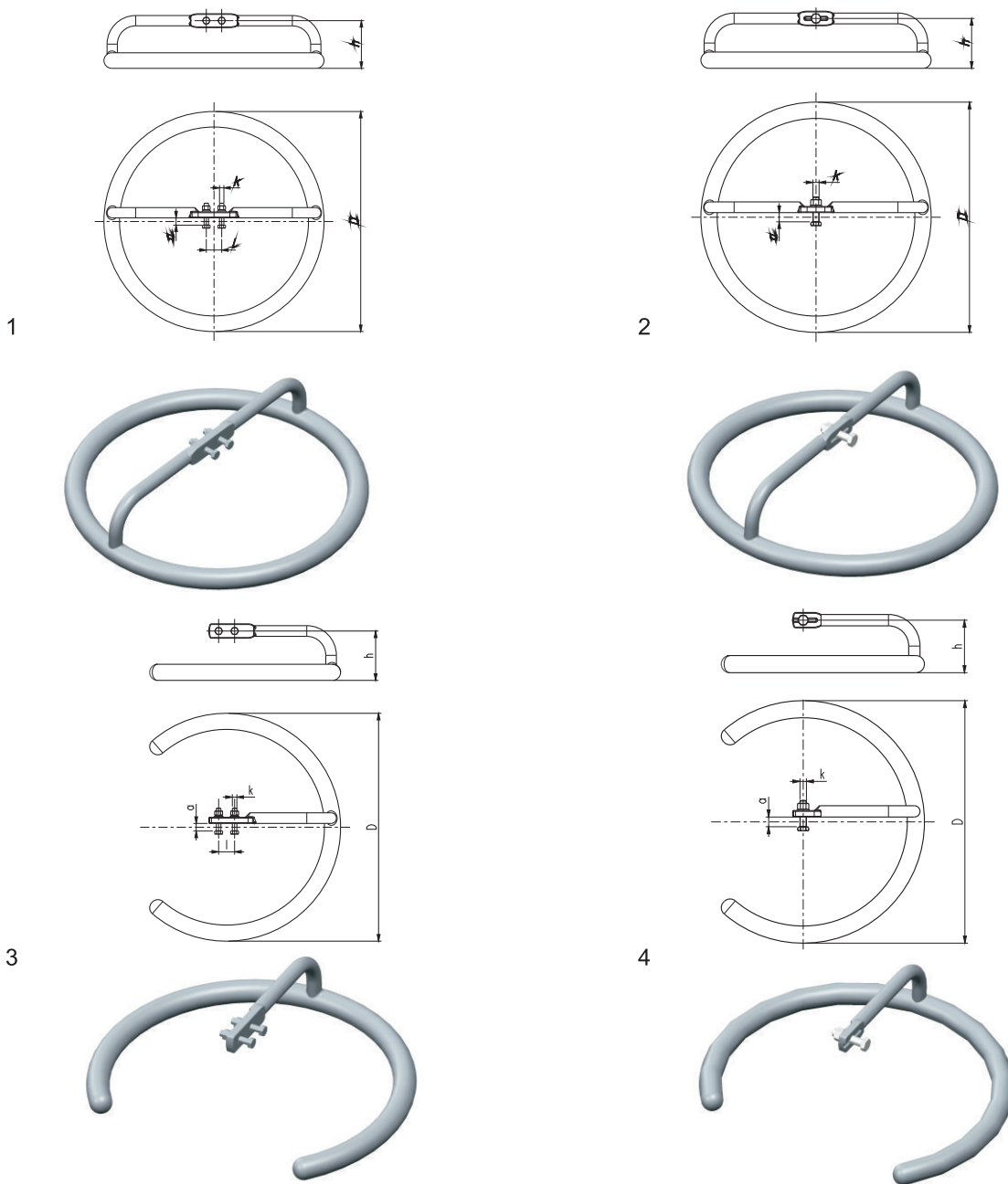
Material:

Steel, hot dip galvanized

Application:

These grading rings are used for shielding of the conductor bundle connectors in tension glass insulator strings of the cap type to 400 kV

Pierścienie ochronne Grading rings



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | | Obciążenie prądowe Short circuit current [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|----|----|-----|---|----------------------|-------------------------|
| | | D | h | l | a | k | | | |
| 1 | 32531 | 600 | 130 | 42 | 20 | M12 | 40 | 8,76 | 3-42 |
| 2 | 325311 | 600 | 130 | - | 24 | M16 | 40 | 8,86 | 3-43 |
| 3 | 32532 | 600 | 130 | 42 | 20 | M12 | 40 | 5,86 | 3-44 |
| 4 | 325321 | 600 | 130 | - | 24 | M16 | 40 | 5,75 | 3-45 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów z izolatorami kołpakowymi szklanymi w liniach 220kV i 400 kV
2 i 4 współpracuje z łącznikiem 34221 oraz 36221

Material:

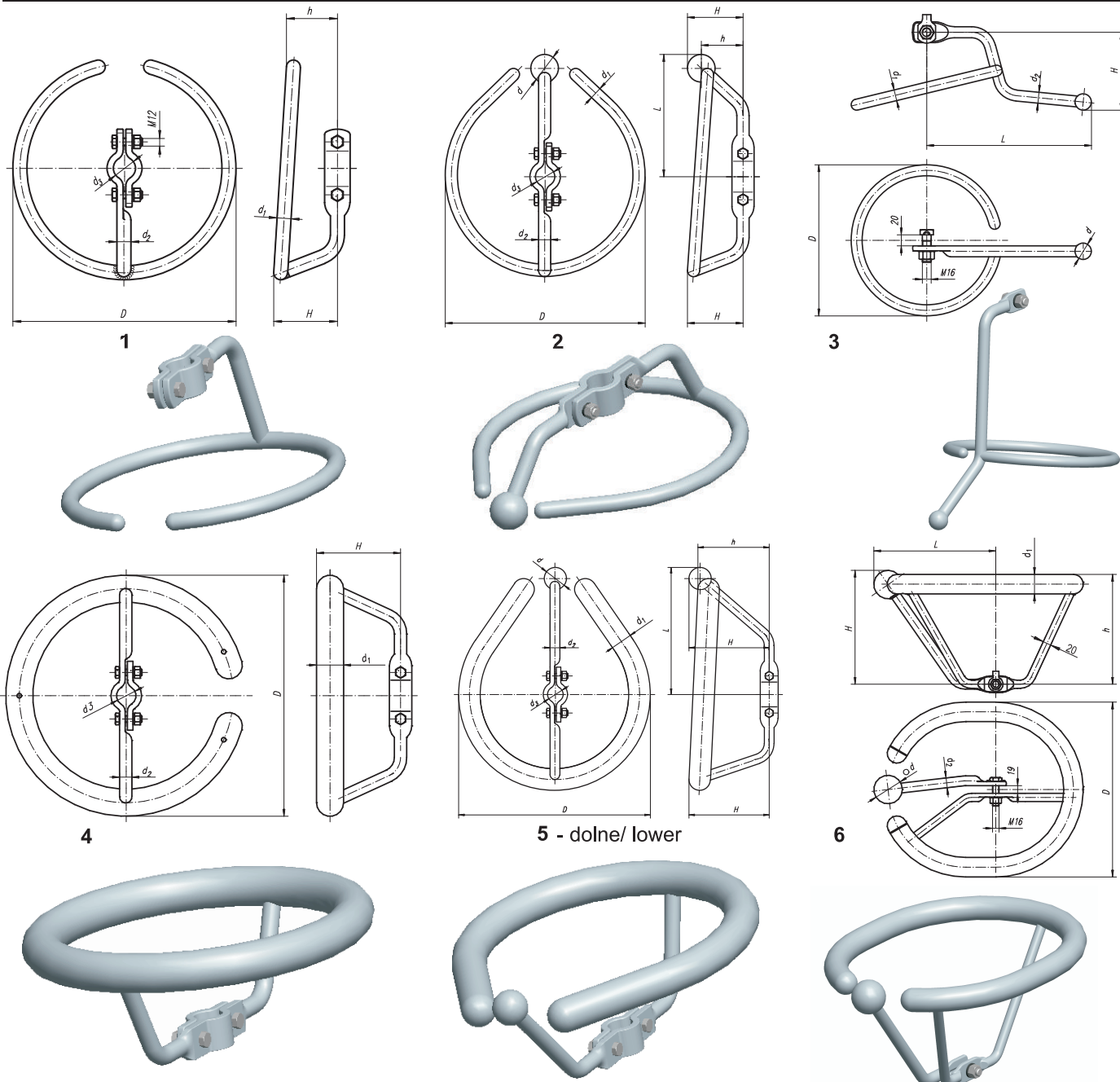
Steel, hot dip galvanized

Application:

These grading rings are used for shielding of the conductor bundle connectors in tension glass insulator strings of the cap type to 220 and 400 kV

2 and 4 collaborates with yoke Cat. No. 34221, 36221

Pierścienie ochronne Grading rings

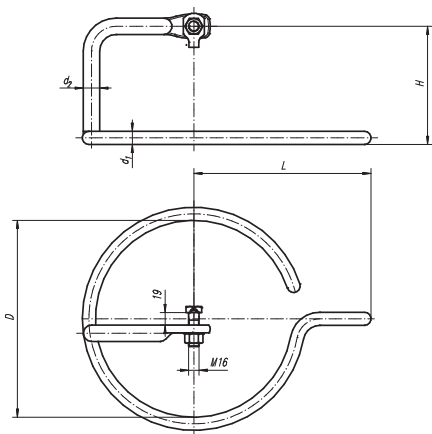


| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | | | | | Obciążenie prądowe Short circuit current [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|-----|----|----------------|----------------|----------------|---|----------------------|-------------------------|
| | | D | H | h | L | d | d ₁ | d ₂ | d ₃ | | | |
| 1 | 10500 | 360 | 160 | 140 | - | - | 22 | 22 | 35 | 30 | 4,40 | 3-38 |
| | 10507 | 360 | 100 | 80 | - | - | 22 | 22 | 35 | 30 | 4,13 | |
| | 10512 | 350 | 100 | 80 | - | - | 22 | 22 | 35 | 30 | 4,37 | |
| 2 | 10506 | 360 | 100 | 75 | 220 | 50 | 22 | 22 | 35 | 30 | 5,30 | 3-32 |
| | 10506/30 | 360 | 100 | 75 | 220 | 50 | 22 | 22 | 30 | 30 | 5,27 | |
| | 10511 | 350 | 150 | 130 | 220 | 50 | 22 | 22 | 35 | 30 | 5,33 | |
| 3 | 32310 | 275 | 142 | 142 | 300 | 30 | 20 | 20 | - | 25 | 3,05 | 3-39 |
| | 32480 | 316 | 400 | 380 | 320 | 40 | 22 | 24 | - | 30 | 5,25 | |
| 4 | 10501 | 430 | 150 | - | - | - | 48,3 | 22 | 35 | 30 | 6,78 | 3-29 |
| 5 | 10508 | 430 | 180 | 160 | 285 | 50 | 48,3 | 22 | 35 | 30 | 8,80 | 3-34 |
| 6 | 32490 | 430 | 280 | 270 | 300 | 70 | 48,3 | 24 | - | 40 | 9,51 | 3-36 |

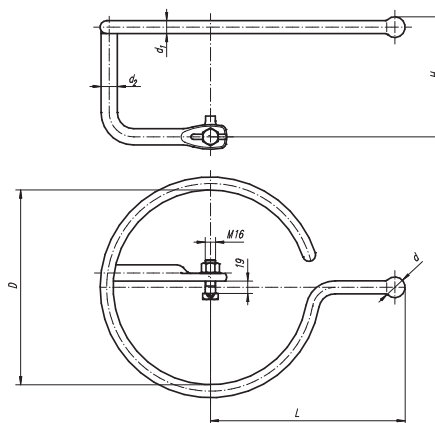
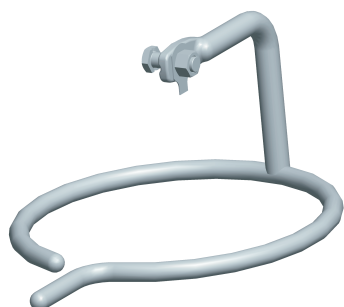
Material:
Stal cynkowana ogniowo
Zastosowanie:
Do izolatorów kompozytowych

Material:
Steel, hot dip galvanized
Application:
These rings are used for composite insulators

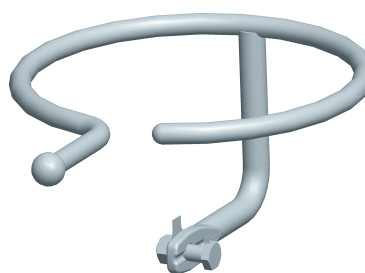
Pierścienie ochronne Grading rings



1
górny / upper



2
dolny / lower



| Rys. Draw. | Nr kat. Cat. No. | Wymiary Dimensions [mm] | | | | | | Obciążenie prądowe Short circuit current [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------|---------------------|-------------------------------|-----|-----|----|----------------|----------------|---|----------------------|-------------------------|
| | | D | H | L | d | d ₁ | d ₂ | | | |
| 1 | 33110 | 300 | 180 | 270 | - | 20 | 25 | 40 | 4,10 | 3-40 |
| 2 | 33111 | 300 | 185 | 300 | 32 | 20 | 25 | 40 | 4,20 | 3-41 |

Material:

Stal cynkowana ogniowo

Zastosowanie:

Do łańcuchów przelotowych i odciągowych z izolatorami długopniowymi w liniach 110 kV

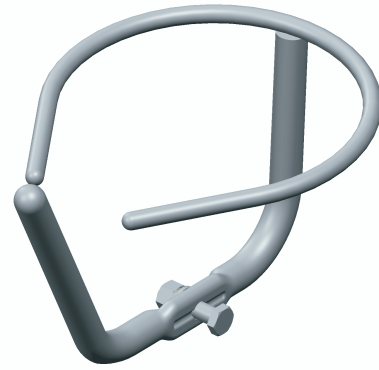
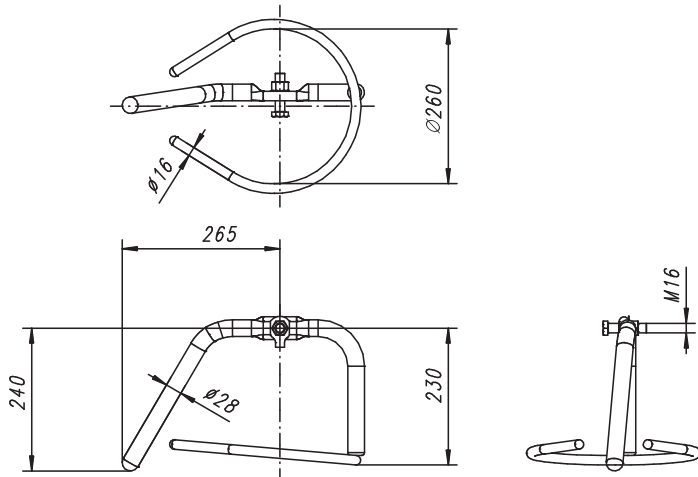
Material:

Steel, hot dip galvanized

Application:

These rings are used for suspension and tension insulator strings of the long-rod type in 110kV lines

Pierścień ochronny górny Grading ring



| Nr kat. Cat. No. | U _n [kV] | I _n [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------------|------------------------|------------------------|----------------------|-------------------------|
| 32357 | 400 | 50 | 4,8 | 3-46 |

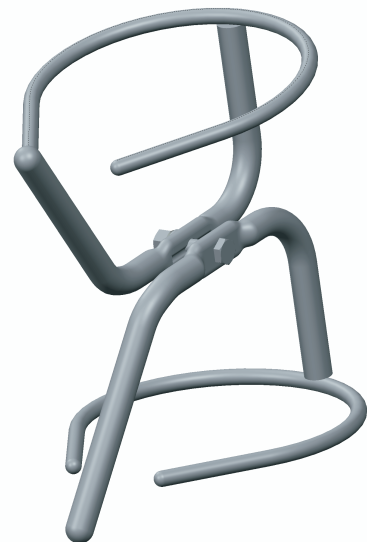
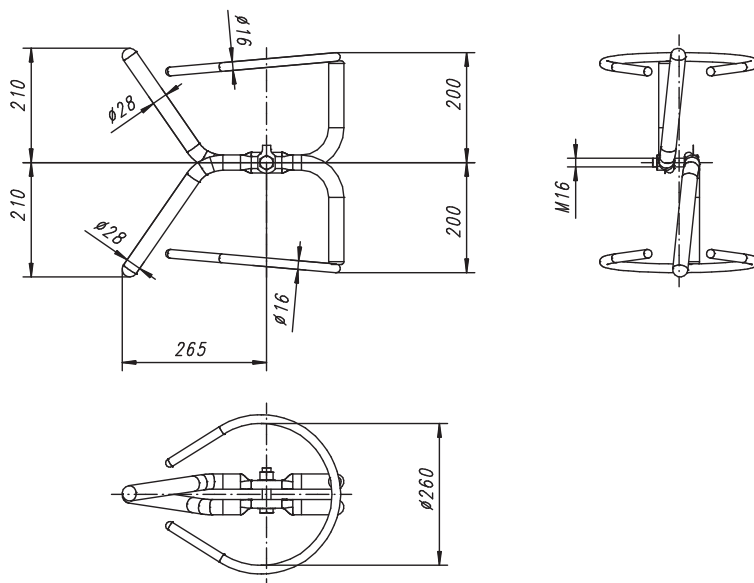
Materiał:

Stal cynkowana ogniowo wg PN-EN ISO 1461

Zastosowanie:

Do łańcuchów przelotowych i odciągowych z izolatorami długopniowymi.

Pierścień ochronny środkowy Grading ring



| Nr kat. Cat. No. | U _n [kV] | I _n [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------------|------------------------|------------------------|----------------------|-------------------------|
| 32386 | 400 | 50 | 9,50 | 3-48 |

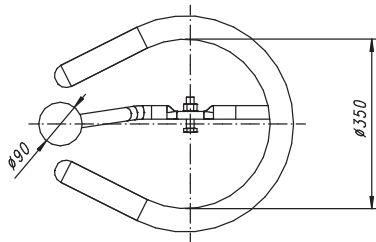
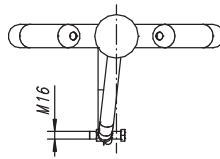
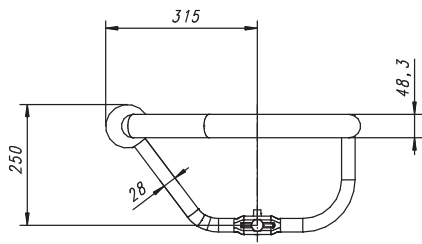
Materiał:

Stal cynkowana ogniowo wg PN-EN ISO 1461

Zastosowanie:

Do łańcuchów przelotowych i odciągowych z izolatorami długopniowymi.

Pierścień ochronny dolny Grading ring



| Nr kat. Cat. No. | U_n [kV] | I_n [kA] | Masa Mass [kg] | Karta kat. Cat. card |
|---------------------|---------------|---------------|----------------------|-------------------------|
| 323957 | 400 | 50 | 10,6 | 3-48 |

Materiał:

Stal cynkowana ogniowo wg PN-EN ISO 1461

Zastosowanie:

Do łańcuchów przelotowych i odciągowych z izolatorami długopniowymi.