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SAFETY IN POWER



BPS
BIRD
PROTECTION
SYSTEM

Birds use overhead power lines poles as: observation points, hideouts, places to rest or to build nests. Lines with a voltage of 15, 20 and 30 kV, popularly known as MV lines, due to their design pose the greatest threat to them.

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The Polish Society for the Protection of Birds (Polskie Towarzystwo Ochrony Ptaków - PTO) recommends the use of electrical insulating separators manufactured by Hubix sp. z o.o. as an effective method of limiting the mortality of birds with large body sizes on electrical insulating overhead LV and MV lines.

BPS ON THE POWER LINES

The BPS is designed to fill the space between the insulators, making it difficult sitting on the construction elements of MV line poles: crosspieces, connectors as well as at overhead stations. The uninsulated cables on these structures are routed above the head of the pole, which means that birds landing on them may have direct contact with live cables and, at the same time, with earthed metal supporting structures. This creates favorable conditions for the electric current to flow through the bird's body and, as a result, its death.

BPS protects birds against electrocution. BPS parts are made of insulating material, they do not affect the operating parameters and safety of the line.

The BPS is designed to be mounted and dismantled multiple times in the live work technique from ground level using an insulating telescopic pole. The BPS is attached to the overhead line structure with a clamp equipped with a bolt and a pressure foot. Special grippers have been designed for this operation: tightening for assembly and unscrewing for disassembly, and a 10 Nm torque head, enabling the clamp to be tightened with the appropriate torque.

Step by step assembly:

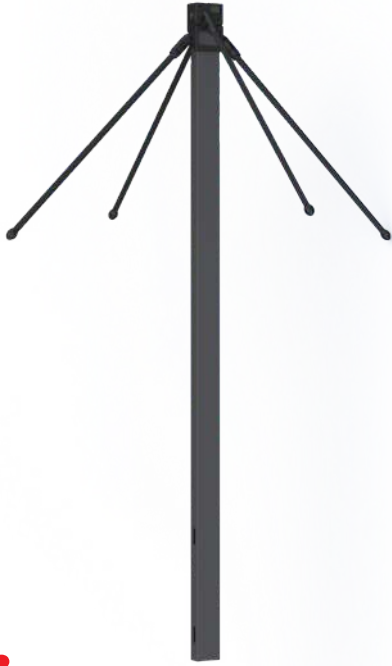
- placing the BPS in the gripper mounted on a telescopic rod,
- lifting the BPS on the line structure,
- initial embedding of the BPS on the structure,
- tightening to a torque of 10 Nm, confirmed by a characteristic click of the torque head clutch,
- unscrewing the gripper from the BPS clamp.

Does BPS meet the above requirements? Below, courtesy of Mr. Kamil Piwowarczyk from the Association Chance for a Stork, we present the effectiveness of BPS.



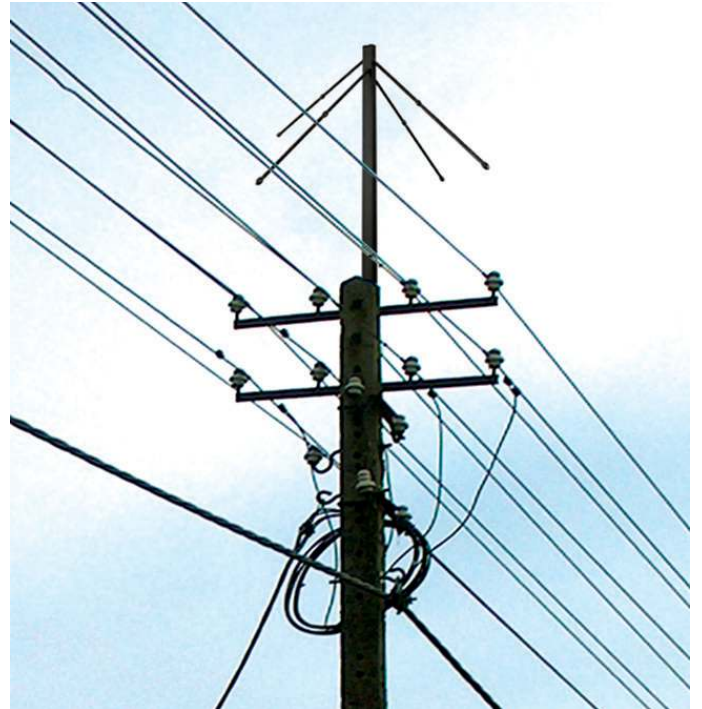
There are stork nests huge and very heavy – year by year extended by birds can reach even two tons weight and a width of two meters.

M111.N001



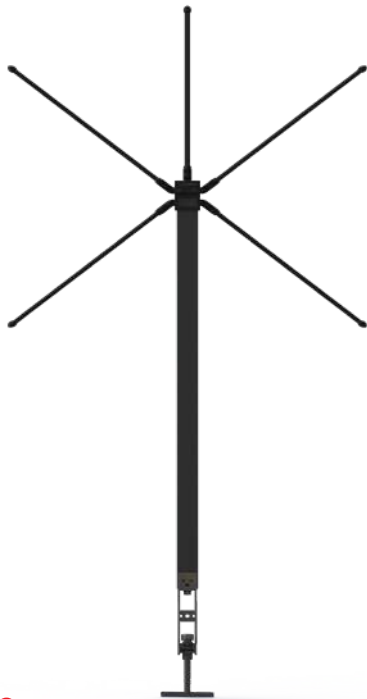
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N-type BPS (umbrella-shaped variant, bars angled downwards). Designed for installation on low voltage power line poles, after removing bird nests from them.



BPS-N prevents the birds from rebuilding nests on these poles. It is attached with bands (bands are not included in the set).

M221.A00X



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BPS type A (variant in the shape of St. Andrew's cross, rods inclined up and down). Used to protect birds against electric shock on medium voltage overhead line connectors. BPS-A prevents larger birds from sitting on the above-mentioned devices by building up the free



space between the bridges. Thus, BPS-A protects them against lethal threat and at the same time prevents line shutdowns caused by bird infestation (when ordering, the size of the clamp mounted to the structure is required - Table 1).

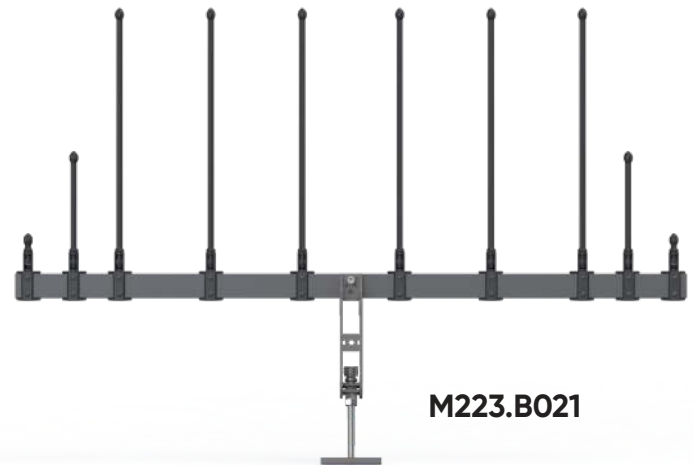
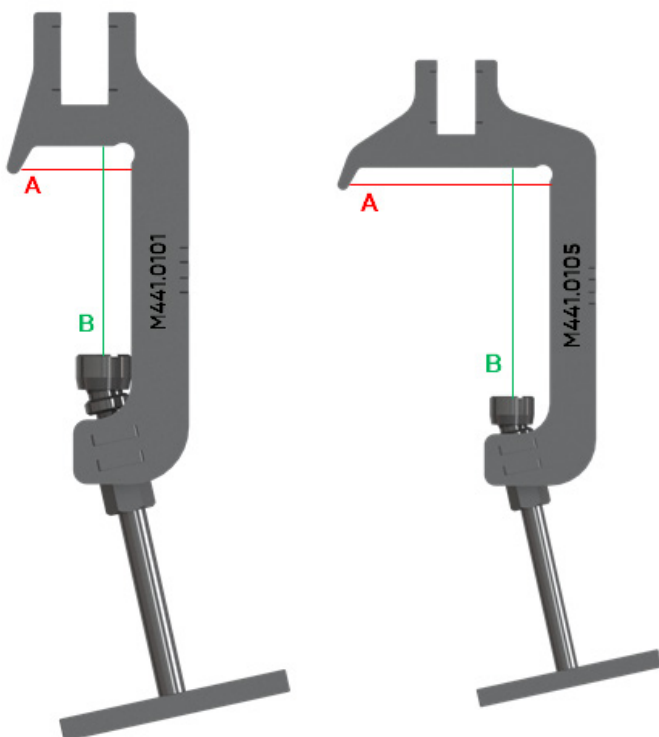
BPS type B (horizontal beam with vertical bars up).
 Used to protect birds against electric shock on the cross members of medium voltage overhead lines. BSP-B prevents larger birds from sitting on the cross-arms of poles in both the flat and triangular configuration. BPS-B protects them against lethal threat and at the same time prevents line shutdowns caused by bird infestation (when ordering, the size of the clamp mounted to the structure is required - Table 1).

code	beam length
M442.0101	600 mm
M442.0102	800 mm
M442.0104	1400 mm
M442.0105	1600 mm

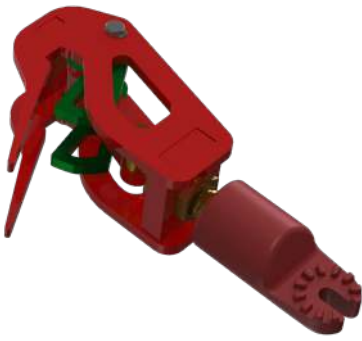
Other dimensions available on request.

Clamps for mounting BPS on structures.
 Standard dimensions of the clamp (due to the shape of the clamp, only one maximum dimension, A or B, can be selected). Other dimensions available on request.

code	A max	B min	B max
M441.0101	48 mm	35 mm	97 mm
M441.0102	68 mm	35 mm	97 mm
M441.0103	88 mm	5 mm	67 mm
M441.0104	108 mm	0 mm	62 mm
M441.0105	108 mm	60 mm	122 mm



EQUIPMENT FOR ASSEMBLY AND DEMONTAGE BPS ON MV POWER LINES



A224.0301
H096 Gripper for
unscrewing

A224.0401
Torque head with
overload clutch
A224.03XX, torque 10 Nm



A224.0302
H096 Gripper for
tightening



B221.0401
Insulating rule



Relatively low price, in relation to other activities consisting in reducing mortality of storks on MV lines, possibility of multiple use, installation without switching off the power, and confirmed effectiveness are the most important features of the separators.

K332.A205
ANTYAMPER Footwear
electrical insulating
overshoes class 2,
S5 (46-49)



B224.0106
T Telescopic heavy duty
stick 7 segments,
triangular, length 9710 mm,
up to 110 kV AC



*The stork is a rather “reticent” bird.
The most known noise it makes is a clatter
produced by beak snapping.
In addition, adult birds sometimes hiss, but it is
a quiet sound that is hardly audible to humans.*

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