

# EnverTec

Technical and Environmental Consultancy  
Comprehensive Development of Specific Solutions

Technical Doc. by ENVERTEC



## **BIRD PROTECTION SYSTEMS IN OVERHEAD M.V. LINES (24 kV – 36 kV)**

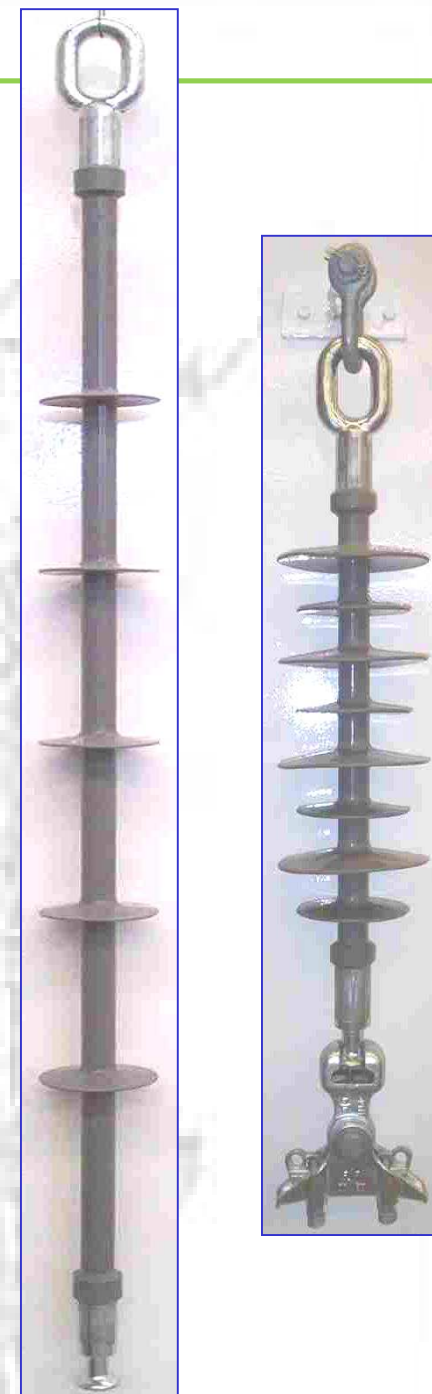
**INTEGRAL SOLUTION FOR NEW OVERHEAD LINES:**

**INSULATOR TYPE**

**C3670EBAV**

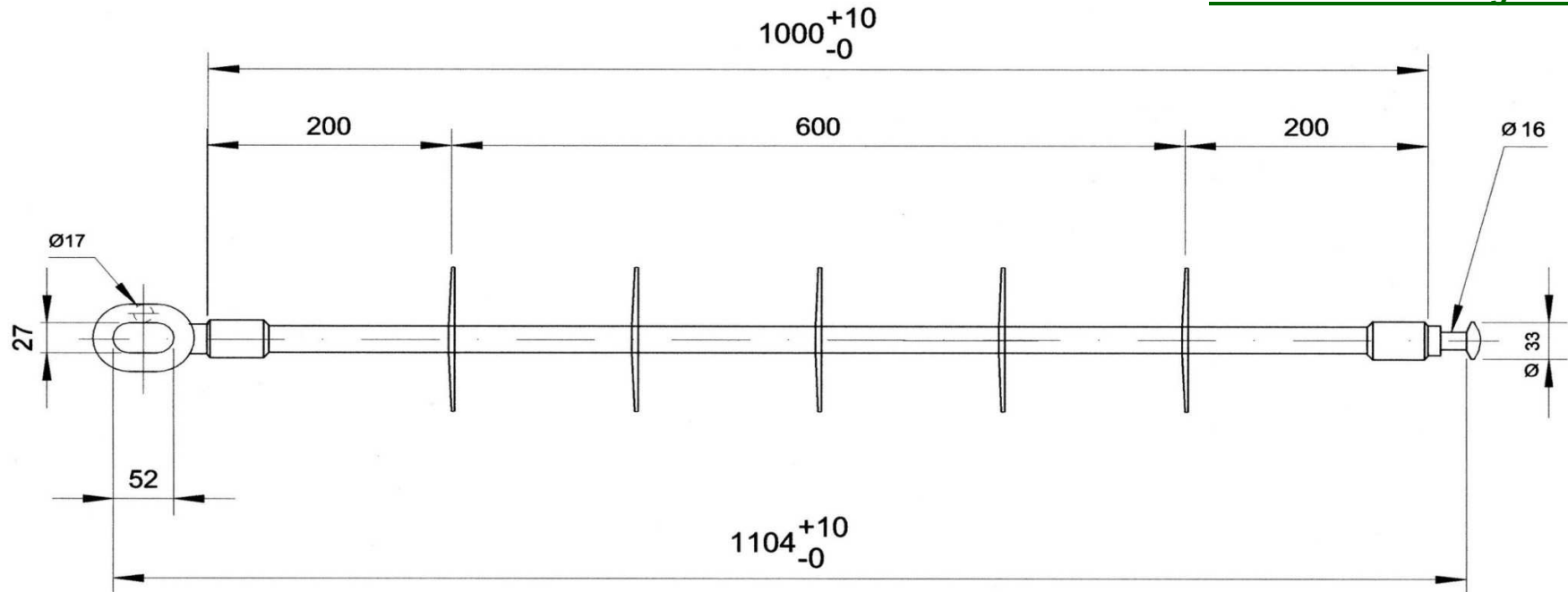
**INSULATOR TYPE**

**C3670EB A**



### POLYMERIC INSULATOR TYPE C3670EBAV

Use with anchoring clamps



| Type             | Rated Voltage<br>kV | Min. Leakage Distance<br>mm | Min. Protected Distance<br>mm | SML<br>kN | Test Voltages    |                   |
|------------------|---------------------|-----------------------------|-------------------------------|-----------|------------------|-------------------|
|                  |                     |                             |                               |           | 1,2/50 BIL<br>kV | 50 Hz (wet)<br>kV |
| <b>C3670EBAV</b> | <b>36</b>           | <b>1275</b>                 | <b>1005</b>                   | <b>70</b> | <b>200</b>       | <b>80</b>         |

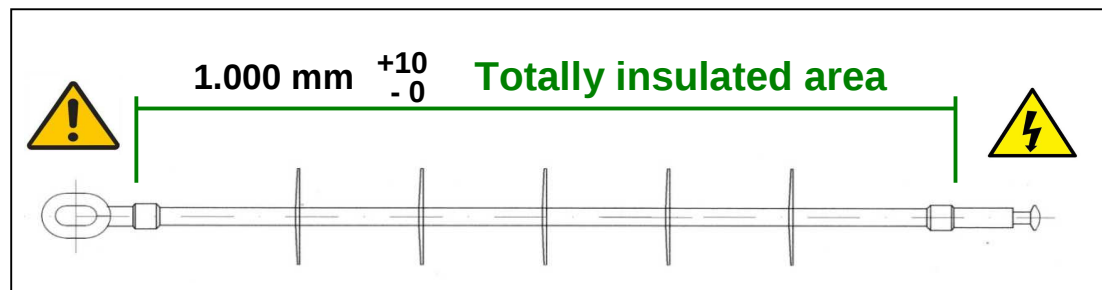
INSULATOR WEIGHT: 1.92 Kg

### POLYMERIC INSULATOR TYPE C3670EBAV

Use with anchoring clamps

#### MAIN ADVANTAGES

- ✓ SINGLE BODY INSULATION CHAIN WITHOUT METALLIC EXTENSIONS.
- ✓ OVER 1 000 mm CONTINUOUS INSULATION LENGTH.
- ✓ POLIMERIC INSULATION *HTV* TYPE.
- ✓ GOOD MECHANICAL BEHAVIOUR (SML 70 KN).
- ✓ LIGHTER SOLUTION (LESS THAN 4 Kg THE WHOLE CHAIN).
- ✓ EASIER TRANSPORTATION AND INSTALLATION (NON-ARTICULATED).
- ✓ ECONOMICAL SOLUTION (NO ADDITIONAL ELEMENTS REQUIRED).

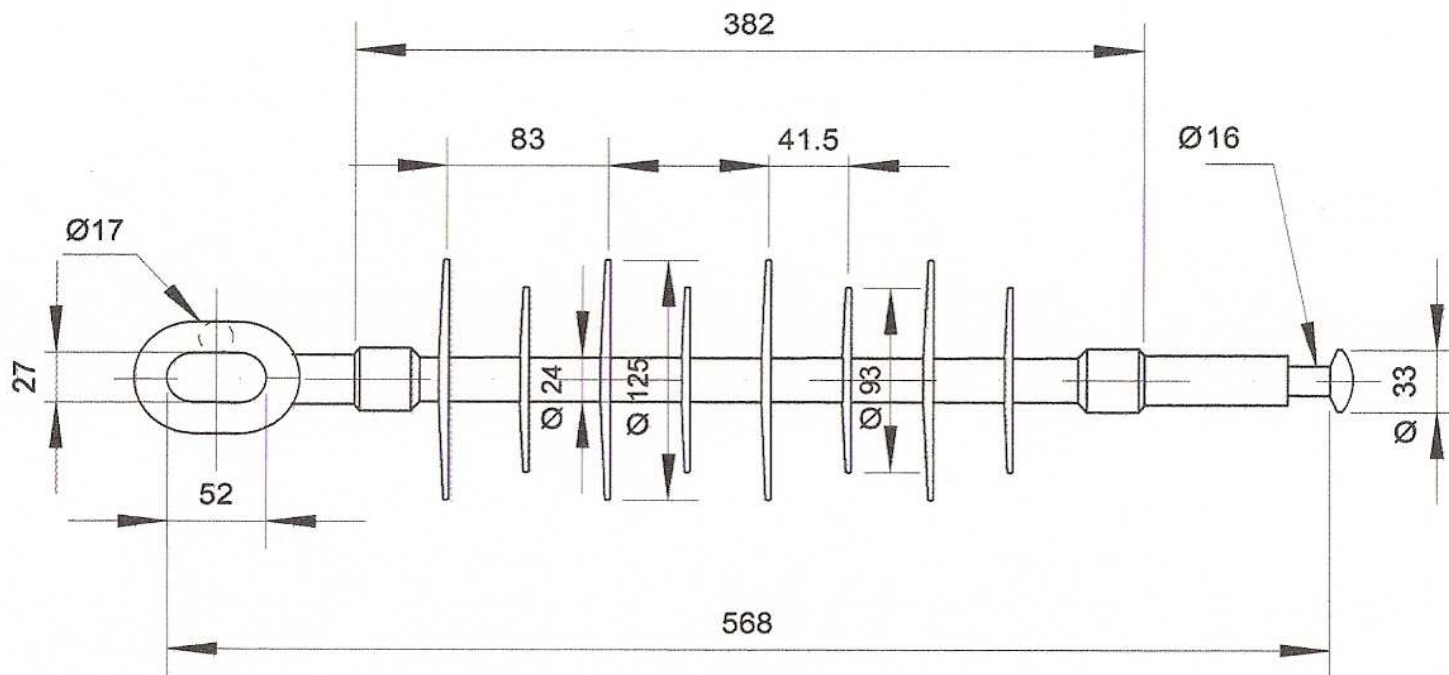


**C3670EBAV**

**Whole chain type CAD36AVPGA**

### POLYMERIC INSULATOR TYPE C3670EB A

Use with suspension clamps



| Type       | Rated<br>Voltage<br>kV | Min. Leakage<br>Distance<br>mm | Min. Protected<br>Distance<br>mm | Mechanical<br>Load<br>kN | Test Voltages    |                 |
|------------|------------------------|--------------------------------|----------------------------------|--------------------------|------------------|-----------------|
|            |                        |                                |                                  |                          | 1,2/50 BIL<br>kV | 50 Hz/Wet<br>kV |
| C3670 EB A | 36                     | 980                            | 415                              | 70                       | 170              | 70              |

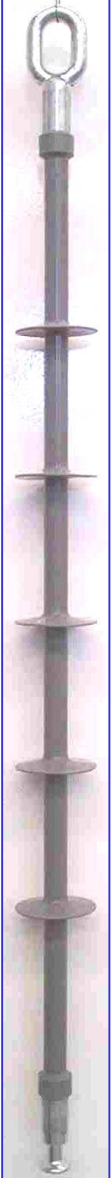
**INSULATORS TYPE C3670EBAV AND C3670EB A****QUALITY AND TRACEABILITY**

- ✓ DESIGN AND TYPE TESTS PERFORMED IN ACCREDITED LABORATORIES.
- ✓ INDELIBLE MARKING ON THE SILICONE BODY SURFACE INCLUDING:

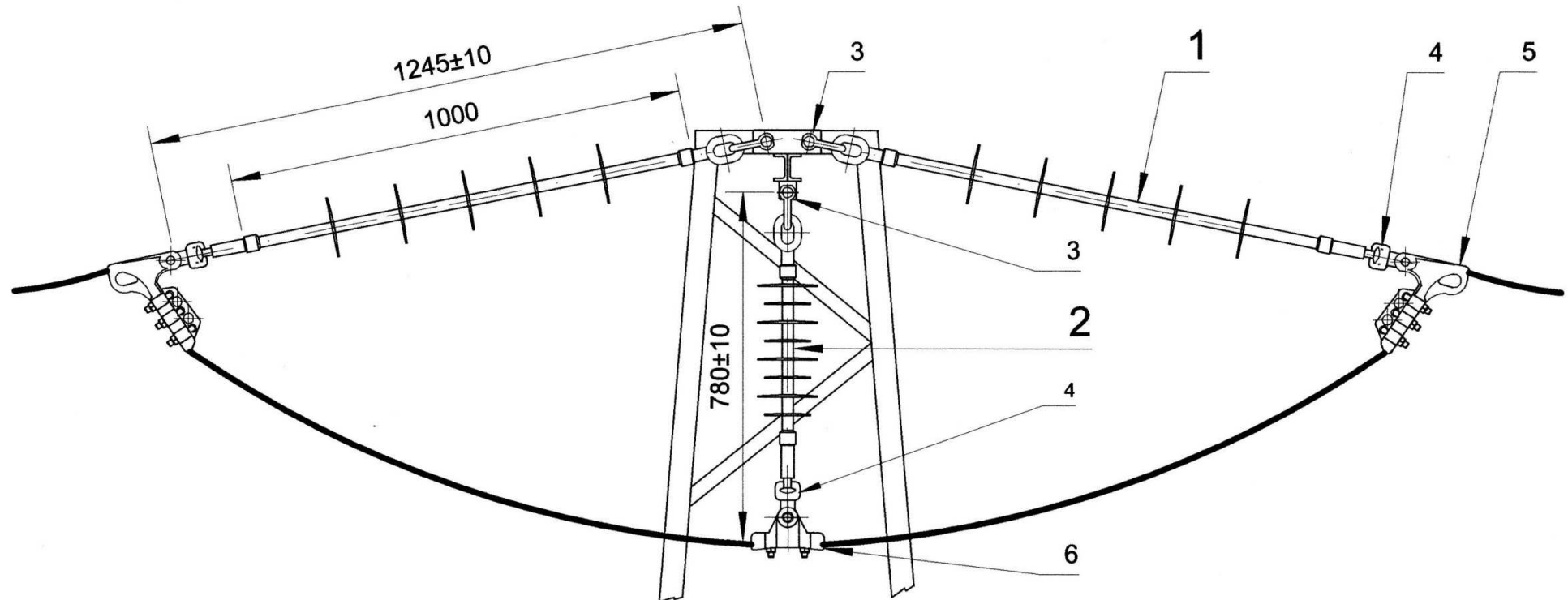
|                |                            |
|----------------|----------------------------|
| BRAND          | TYPE                       |
| YEAR AND MONTH | SPECIFIED MECHANICAL LOAD. |
| RATED VOLTAGE. | BATCH NUMBER.              |
- ✓ QUALITY AND TRACEABILITY EVALUATION REPORT FOR EACH SHIPPING.

**RELIABILITY**

- ✓ OUTSTANDING BEHAVIOUR AGAINST POLLUTION
  - RATED THICKNESS OF SILICONE BODY = 4.5 mm.
  - RATED GALVANIZING THICKNESS = 120 µm.
- ✓ EASIER HOT POINT DETECTION.
- ✓ WARRANTY: OVER 20 YEARS.
- ✓ MORE THAN **4 812** UNITS ALREADY INSTALLED.



### BIRD PROTECTION INTEGRAL SOLUTION BASED ON POLYMERIC INSULATORS TYPES C3670EBAV AND C3670EB A



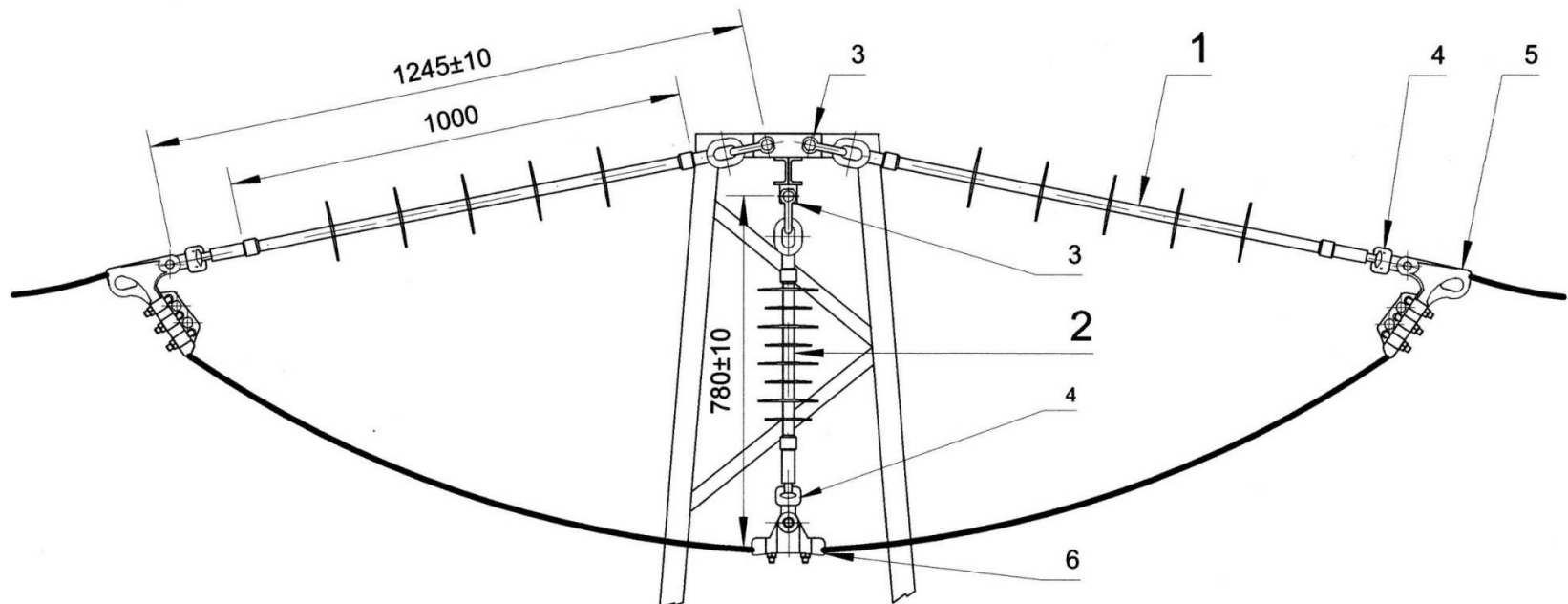
1. C3670EBAV INSULATOR.
2. C3670EB A INSULATOR.
3. BOND GN

4. JOINT R-16.
5. ANCHORING CLAMP.
6. SUSPENSION CLAMP.



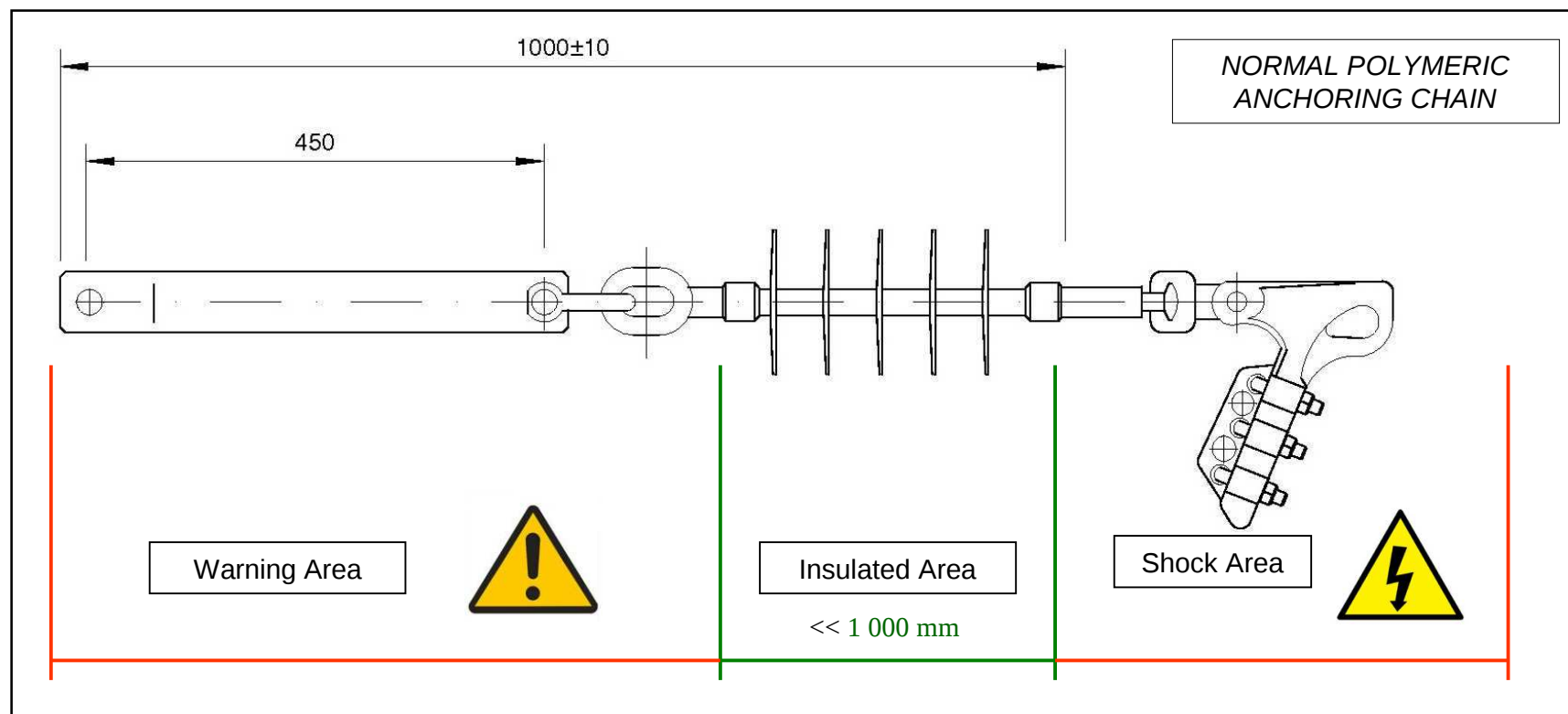
Installation platform prototype

### BIRD PROTECTION INTEGRAL SOLUTION BASED ON POLYMERIC INSULATORS TYPES C3670EBAV AND C3670EB A

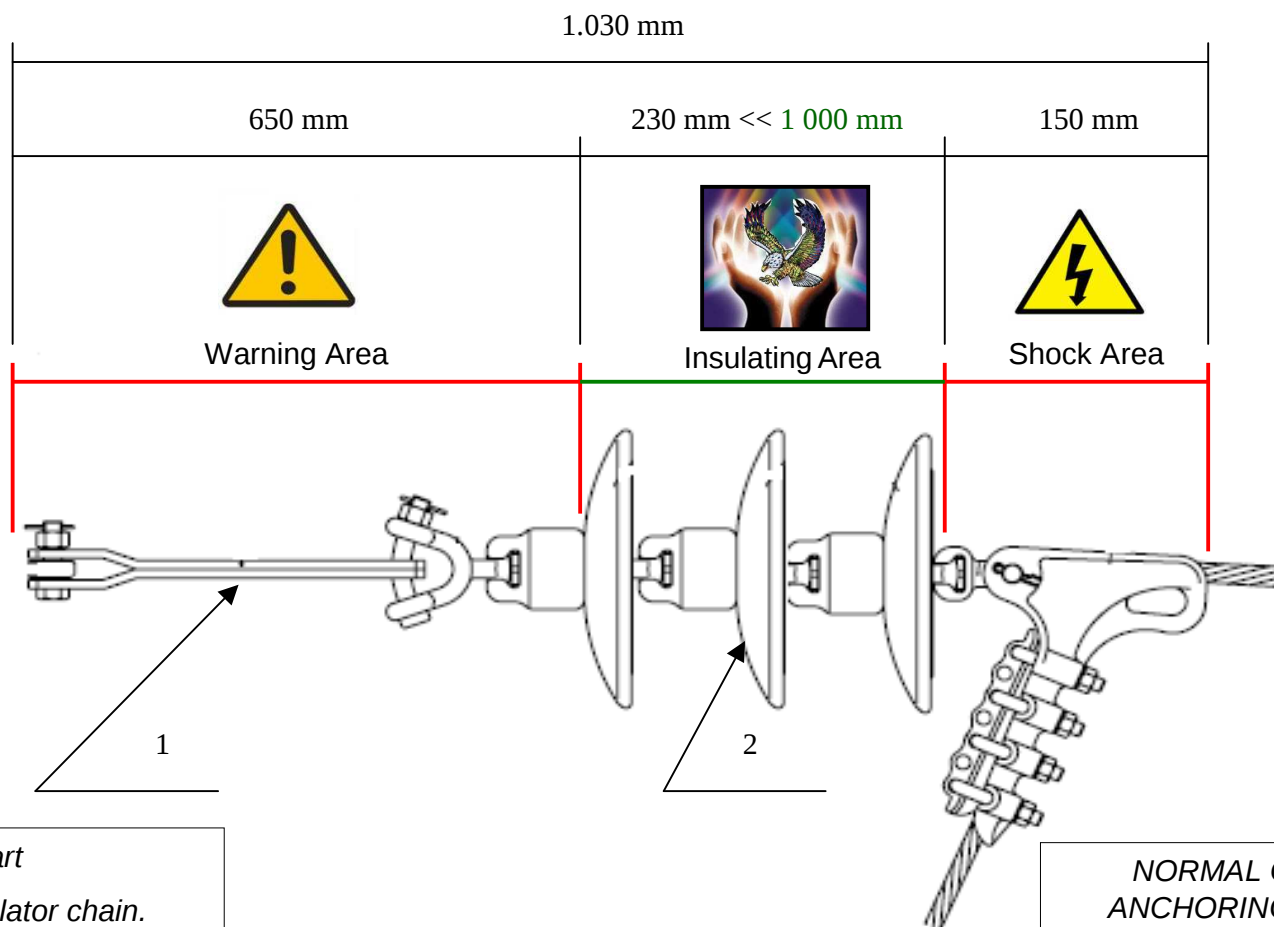


- ✓ **ACCORDING TO ELECTRICAL AND ENVIRONMENTAL REGULATION.**
- ✓ **BIRD PROTECTION AND FIRE RISK REDUCTION IN NATURAL PROTECTED AREAS.**
- ✓ **MINIMUM MAINTENANCE REQUIREMENTS.**
- ✓ **IMPROVES POWER SUPPLY QUALITY AND RELIABILITY.**

### MAIN ADVANTAGES IN PROTECTION: INTEGRAL SOLUTION BASED ON POLYMERIC INSULATORS TYPE C3670EBAV VERSUS EXISTING SYSTEMS



### MAIN ADVANTAGES IN PROTECTION: INTEGRAL SOLUTION BASED ON POLYMERIC INSULATORS TYPE C3670EBAV VERSUS EXISTING SYSTEMS



1. Metallic Part
2. Glass Insulator chain.

NORMAL GLASS  
ANCHORING CHAIN

**OUR MAIN TARGET : TO PROTECT THEIR LIFE**



**BIRD PROTECTION INTEGRAL SOLUTION BASED ON POLIMERIC INSULATORS**

**TYPES C3670EBAV AND C3670EB A. IT WORKS!**

