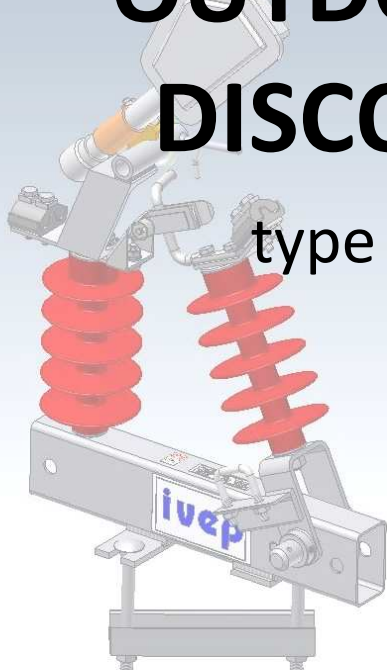
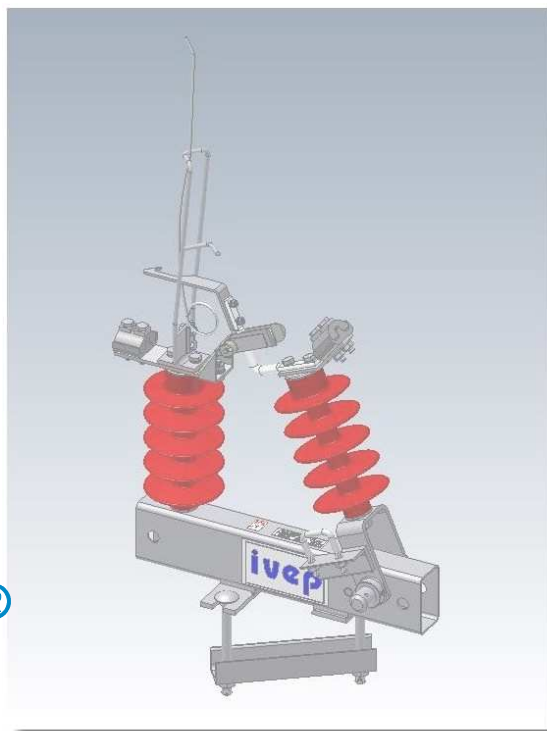


# OUTDOOR SWITCH DISCONNECTORS

type CUB S2, LEV S2



ISO 9001:2009  
ISO 14001:2005



**IVEP, a.s.**

Vídeňská 117a, 619 00, Brno, Czech Republic  
[www.ivep.cz](http://www.ivep.cz)

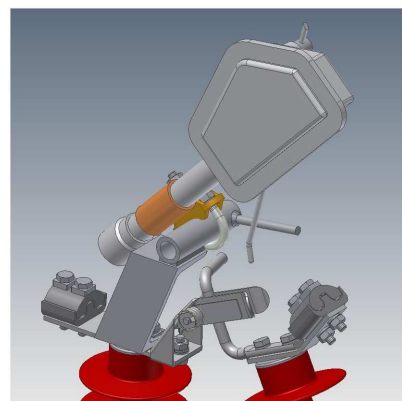
## STANDARDS AND REGULATIONS

IEC 60265-1:1998  
IEC 60694:1996  
IEC 62271-102:2001.

The insulation level of the switching device complies with degree I without maintenance, and III, IV as defined by ČSN 33 0405 standard. As regards the design and its adequacy for the erection of power feeding lines the switch meets the requirements of ČSN 33 3300 standard.

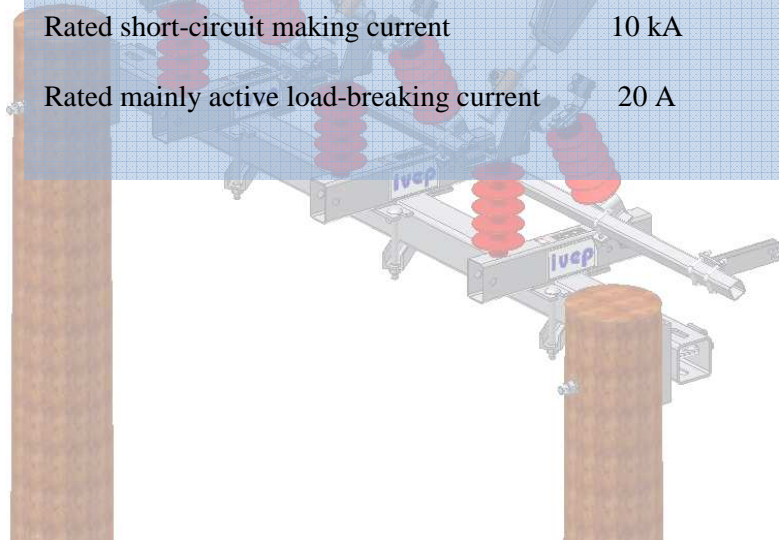
### Outdoor switch disconnector type CUB

|   |                |
|---|----------------|
| Rated voltage   | 25 kV, 38,5 kV |
| Rated current   | 400 A, 630 A   |
| Rated short-time withstand current of 1 sec. duration | 20 kA          |
| Rated peak withstand current                          | 50 kA          |
| Rated short-circuit making current                    | 11 kA          |
| Rated mainly active load-breaking current             | 400 A, 630 A   |



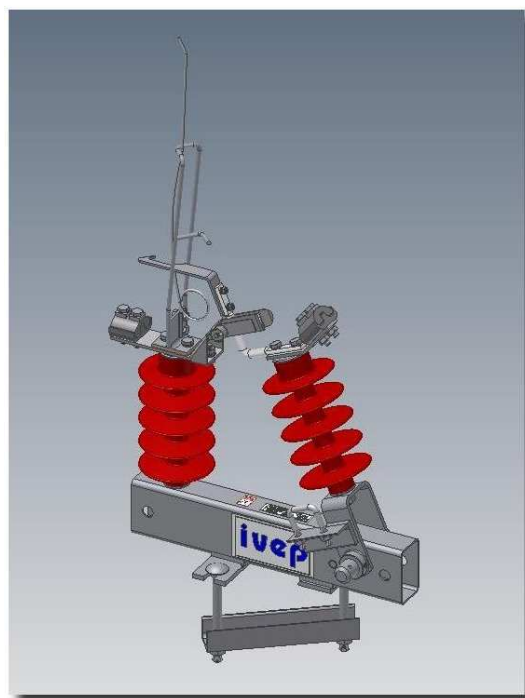
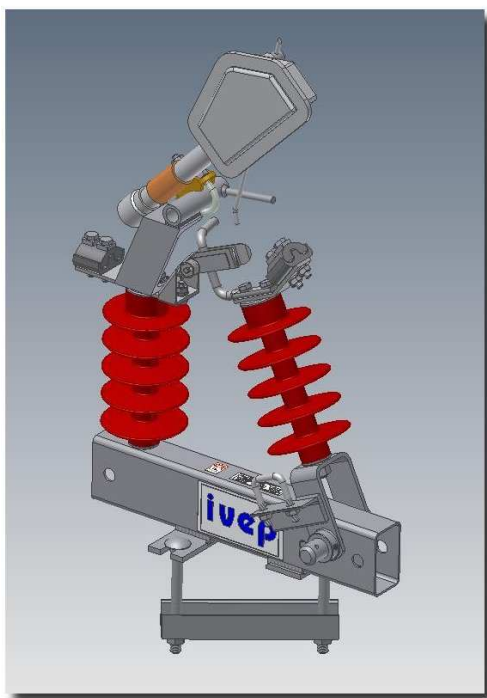
### Outdoor switch disconnector type LEV

|   |              |
|---|--------------|
| Rated voltage   | 25 kV        |
| Rated current   | 400 A, 630 A |
| Rated short-time withstand current of 1 sec. duration | 20 kA        |
| Rated peak withstand current                          | 50 kA        |
| Rated short-circuit making current                    | 10 kA        |
| Rated mainly active load-breaking current             | 20 A         |



## OPERATING CONDITIONS

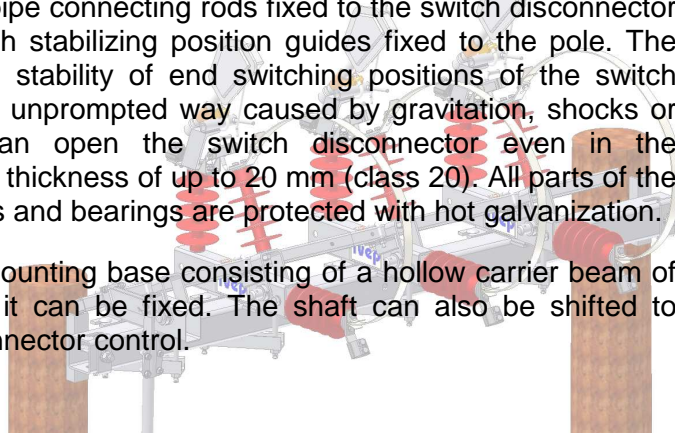
|  |                                 |
|--|---------------------------------|
| Highest ambient temperature  | + 50 °C                         |
| Lowest ambient temperature   | - 50 °C                         |
| Relative air humidity  | 100 %                           |
| Air pressure not to exceed   | 700 Pa (34 m/s)                 |
| Thickness of ice accretion on the switch body is not allowed to exceed | 20 mm (class 20)                |
| Altitude up to   | 1000 m above sea level          |
| Degree of contamination according to ČSN 33 0405                       | I. without maintenance, III; IV |



## OPERATION

The outdoor switch disconnectors are controlled from the ground level using a hand operated drive mechanism. The design of the manual drive is tailored for its attachment to a wooden, concrete or lattice-type steel column. The movement of the drive mechanism is transferred onto the operating lever via pipe connecting rods fixed to the switch disconnector shaft. The connecting rods pass through stabilizing position guides fixed to the pole. The drive and the pull rods provide for the stability of end switching positions of the switch disconnector. These cannot move in an unprompted way caused by gravitation, shocks or earthquake. The drive mechanism can open the switch disconnector even in the occurrences of ice accretion, with the ice thickness of up to 20 mm (class 20). All parts of the driving mechanism including the pull rods and bearings are protected with hot galvanization.

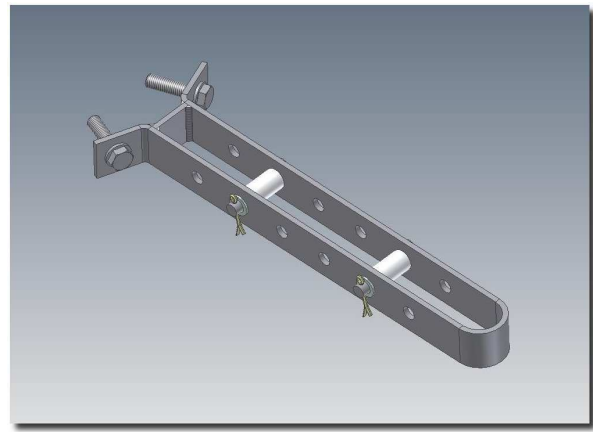
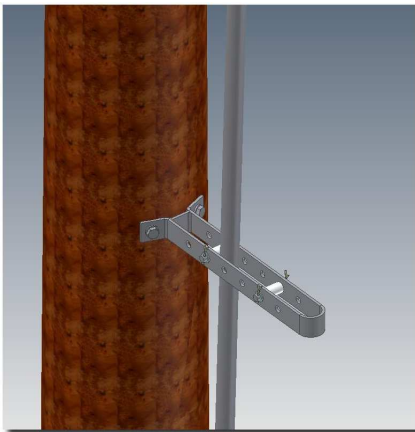
The switch can slide freely across the mounting base consisting of a hollow carrier beam of 100x100 mm or 100x60 mm to which it can be fixed. The shaft can also be shifted to positions as needed for the switch disconnector control.



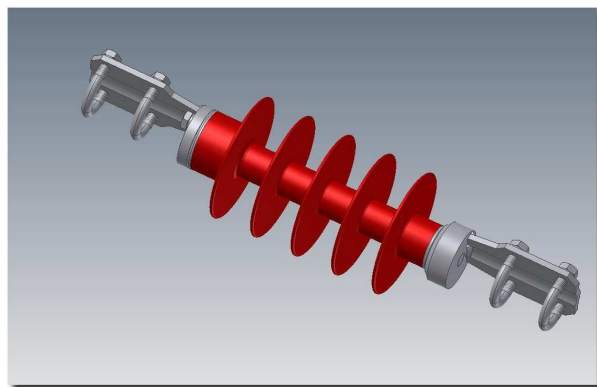
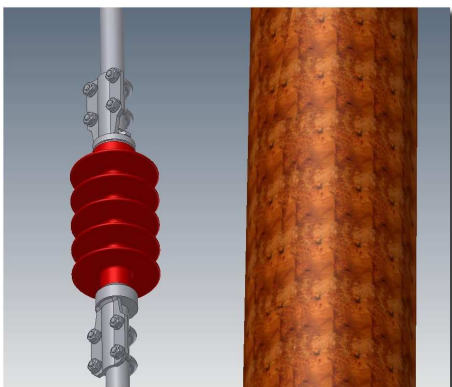
**I. Manual drive mechanism** - provides for mechanical control of the switch and ensures its operation reliability in any operating condition. The drive can be locked in two positions with clear visual indication and its mounting to the wooden poles occurs through three wood screws. The drive linkage to the connecting rods is made via a clamping end piece. The manual drive can be suitable for montage on concrete pole on steel pole on request.



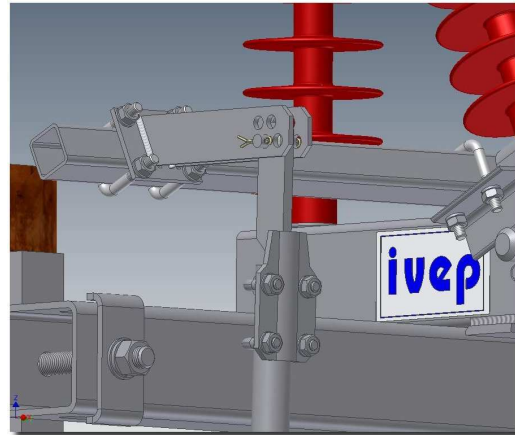
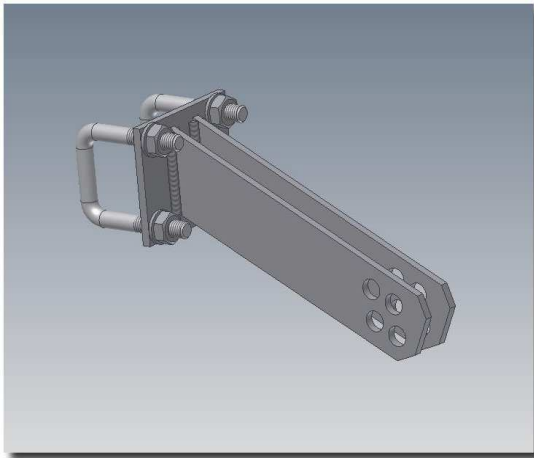
**II. Connecting rod guides** - these support the connecting rods along the wooden pole when operating the switch and prevent excessive cambering of the connecting rods during the handling operations. The guides are fixed to the pole using wood screws. Also rod guides can be suitable for montage on an other types of poles.



**III. Connecting rod insulator** – this component is inserted in the connecting rod assembly for the purpose of increasing the safety level of the operators during the switching operations. The insulator can be mounted at any elevation and fixed using clamping pieces.



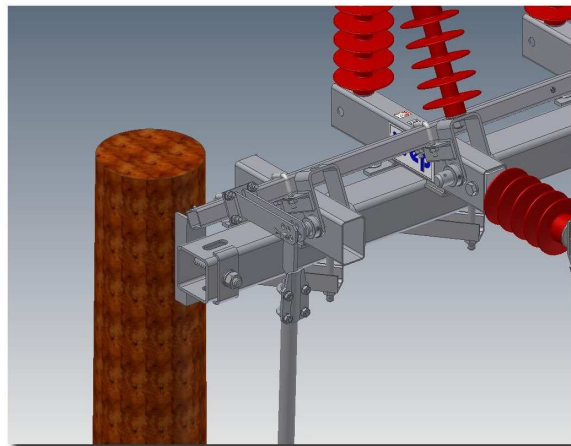
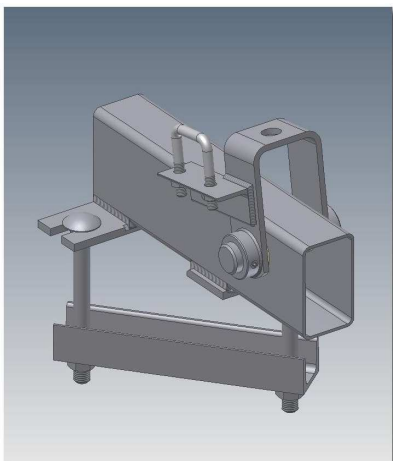
**IV. Control lever** – transfers the vertical movement of the connecting rods onto rotational movement of the switch disconnector shaft. The lever can be moved and fixed to any position on the four-square operating shaft.



**V. Four-square shaft** – establishes mechanical interconnection between the drive mechanism and the respective poles of the switch. The shaft, which consists of two parts, can be freely moved, and linked via an internal clutch.

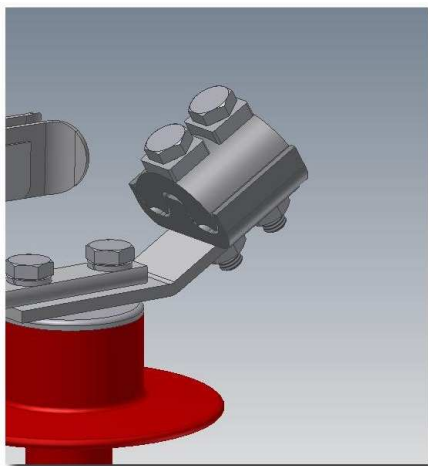


**VI. Main shaft interbearing** – is used to underprop long control shaft. The interbearing can slide freely along the main carrier beam (100x100 mm, 100x60 mm) and be fixed to the latter.

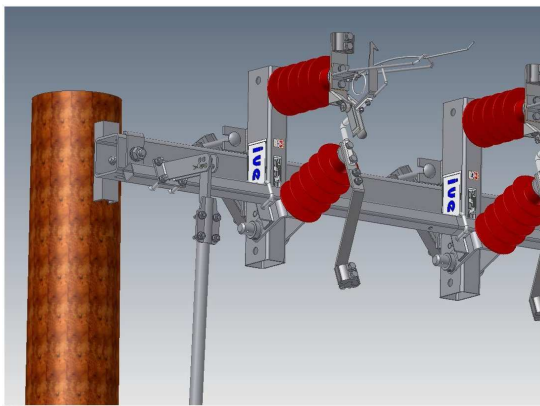
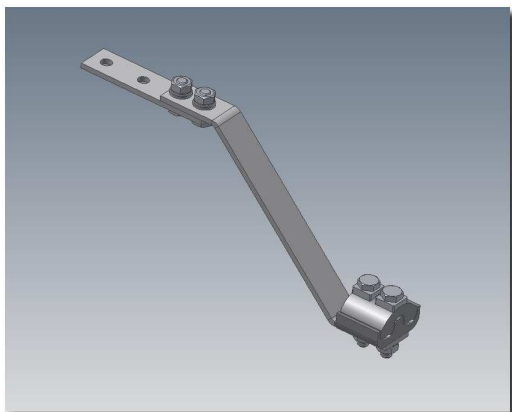




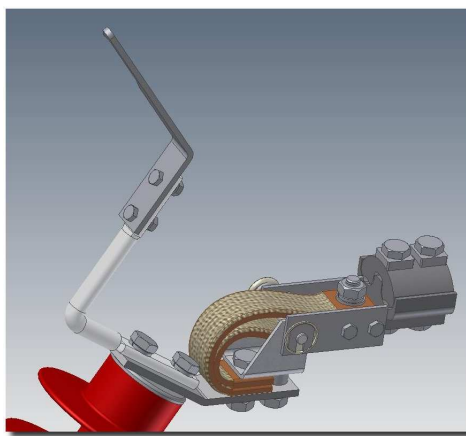
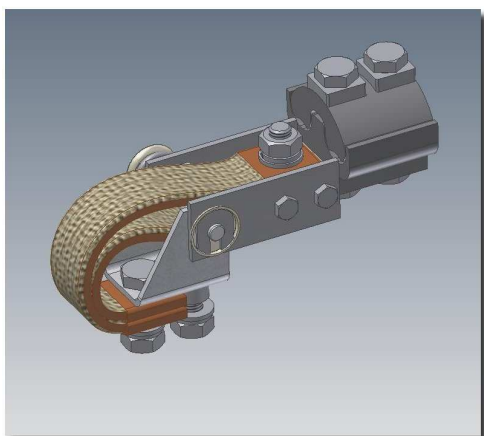
**VII. Clamp** - type KG43 (ENSTO). This component serves as a fixture for the connection of incoming cables to the switch. The clamp is designed for cable cross-sections ranging from 50 to 240 mm<sup>2</sup>.



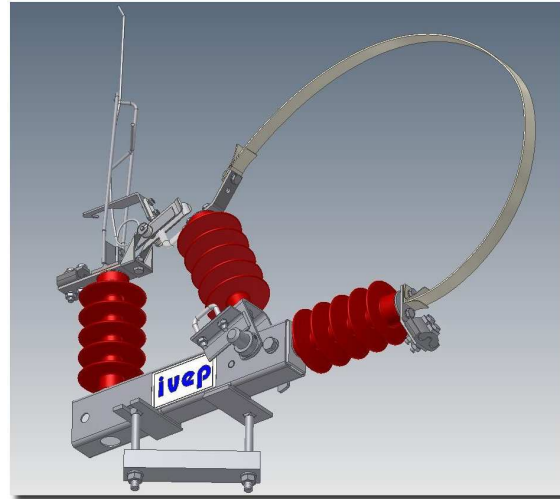
**VIII. Flag contact extension** – is used to push forward the connecting point of the incoming cables, primarily on vertically mounted assemblies. The extension piece can be mounted at a later time to the basic version of switch disconnector.

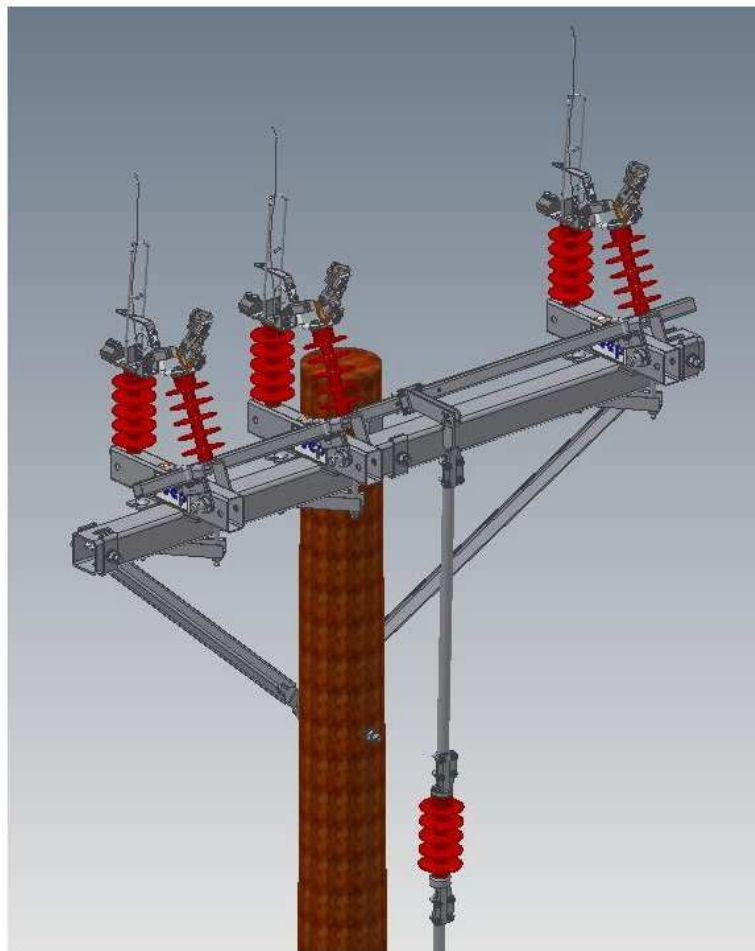
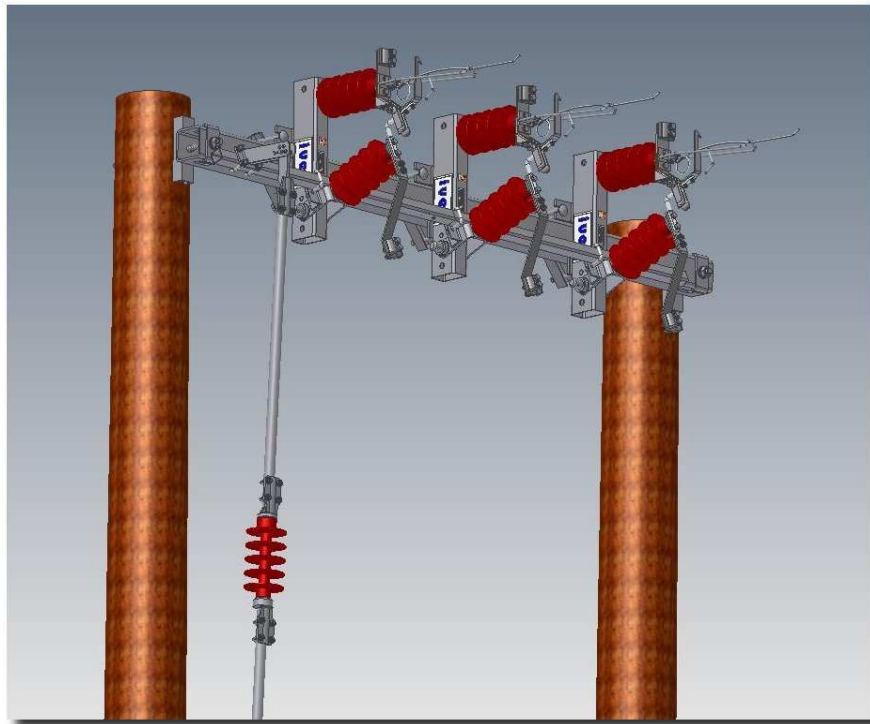


**IX. Flexible flag contact** – eliminates excessive stress and bends acting on the cables or conductors. The flag contact is terminated with the KG43 clamp and can be mounted at a later time to the basic version of switch disconnector.

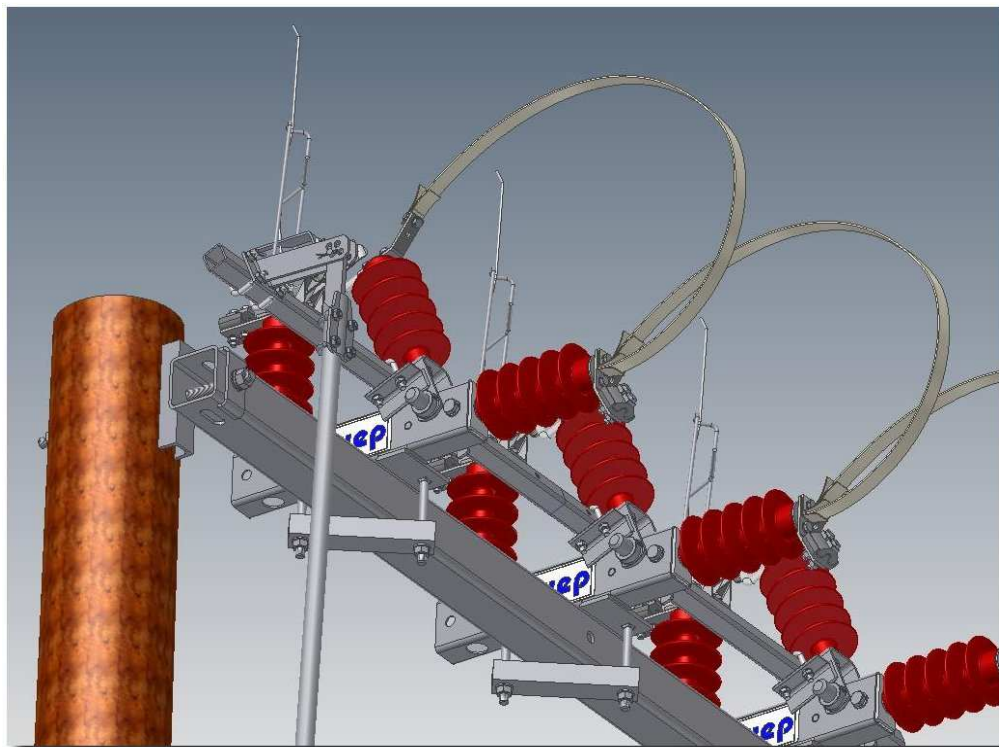
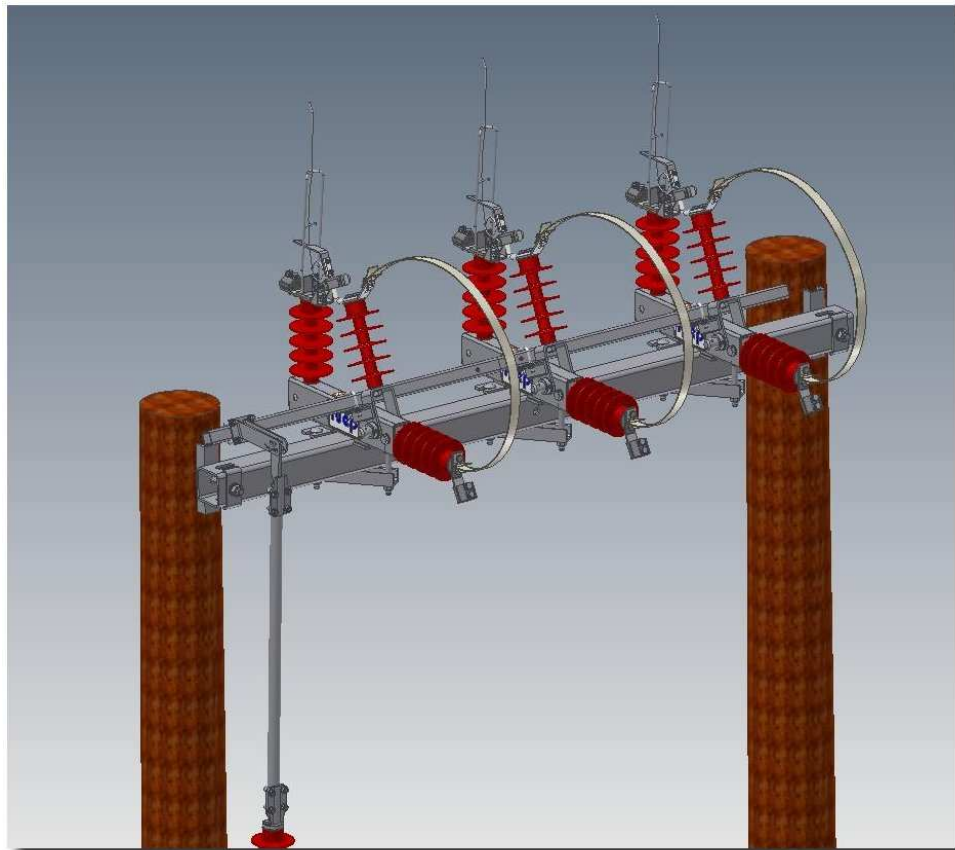


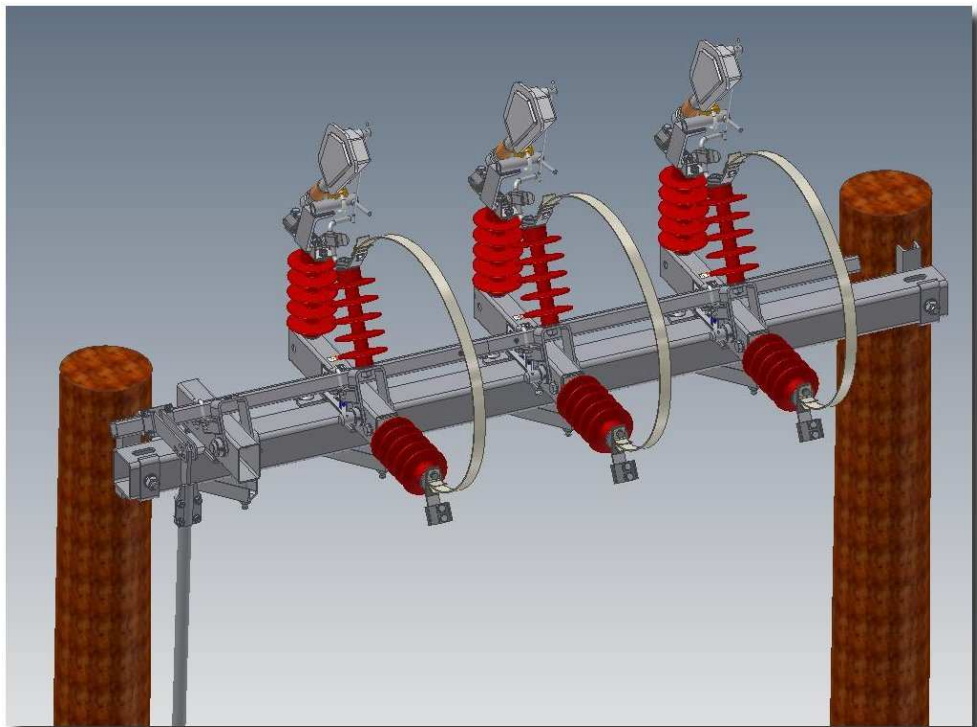
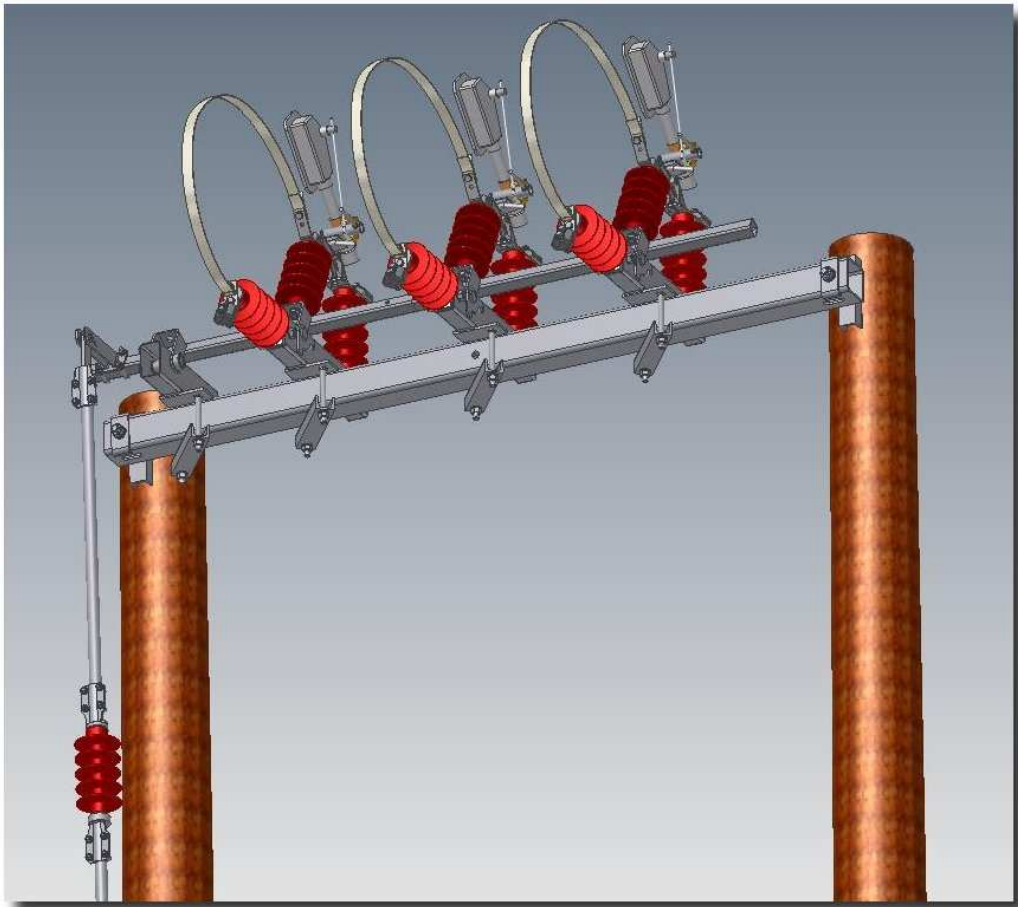
**X. Third supporting insulator** – if such is used it establishes a fixed connecting point on the switch disconnector and its purpose is to eliminate any stresses acting on the incoming power cables during the switch disconnector operations. The installation of the insulator to the switch disconnector can be done at a later stage.

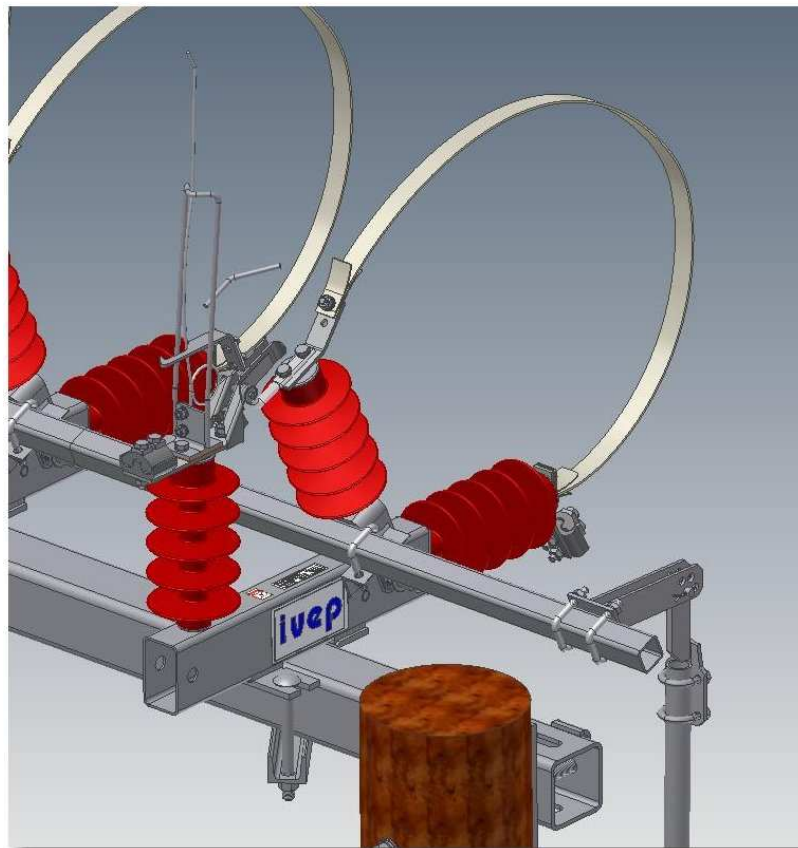
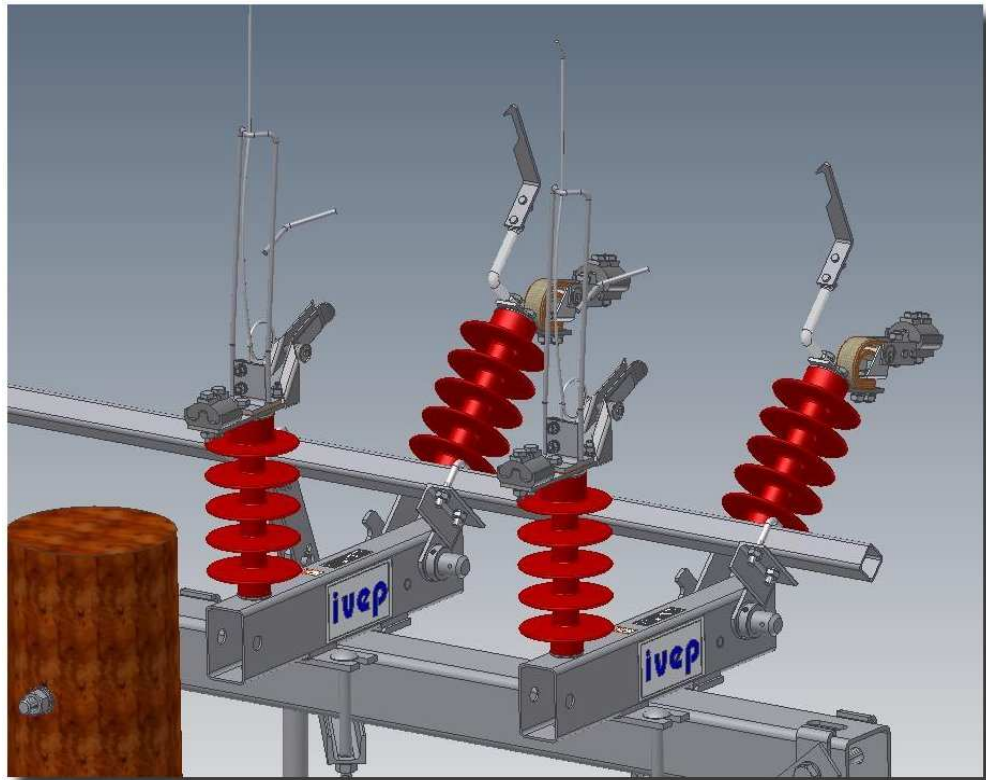


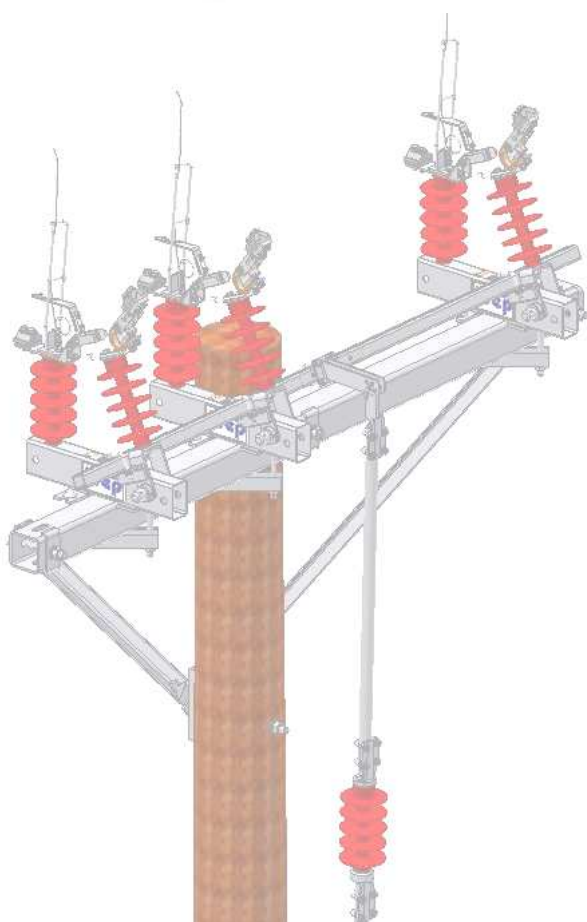
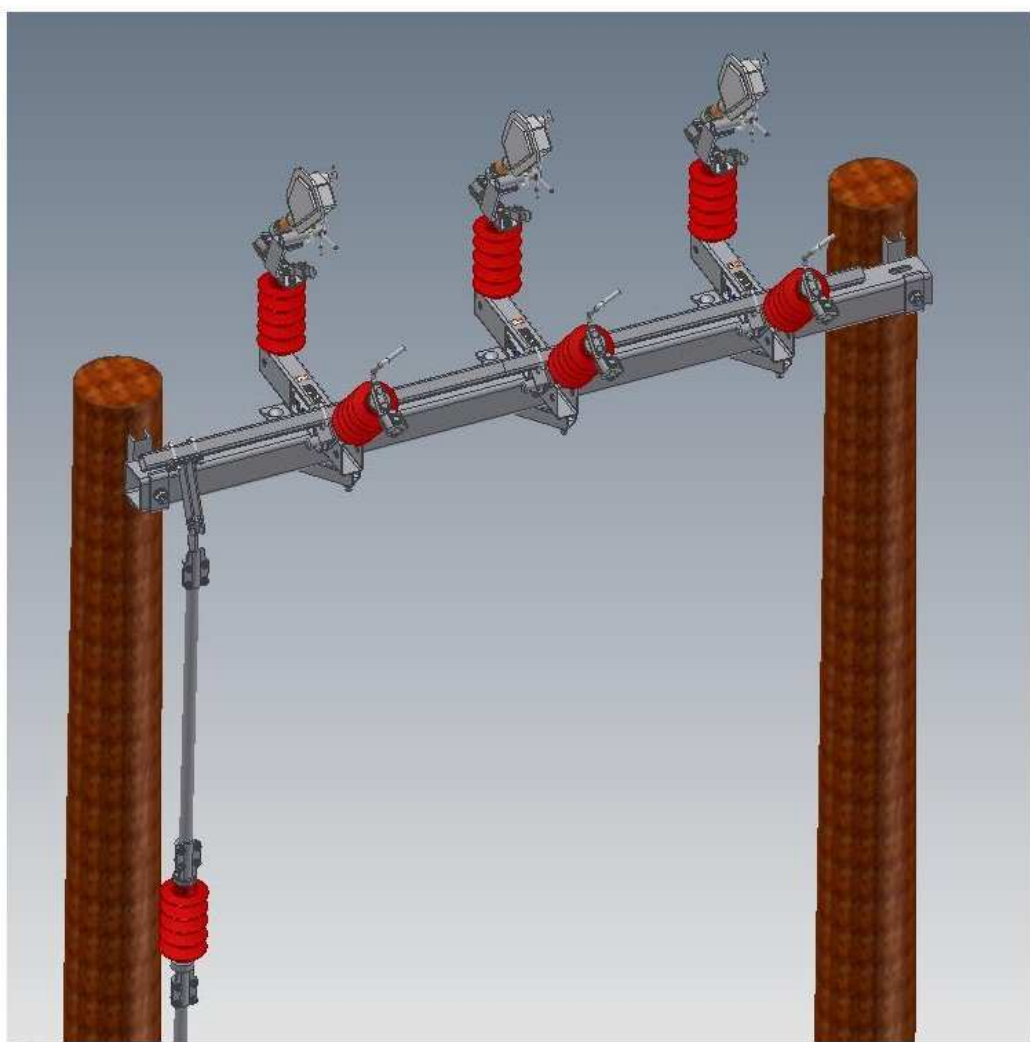




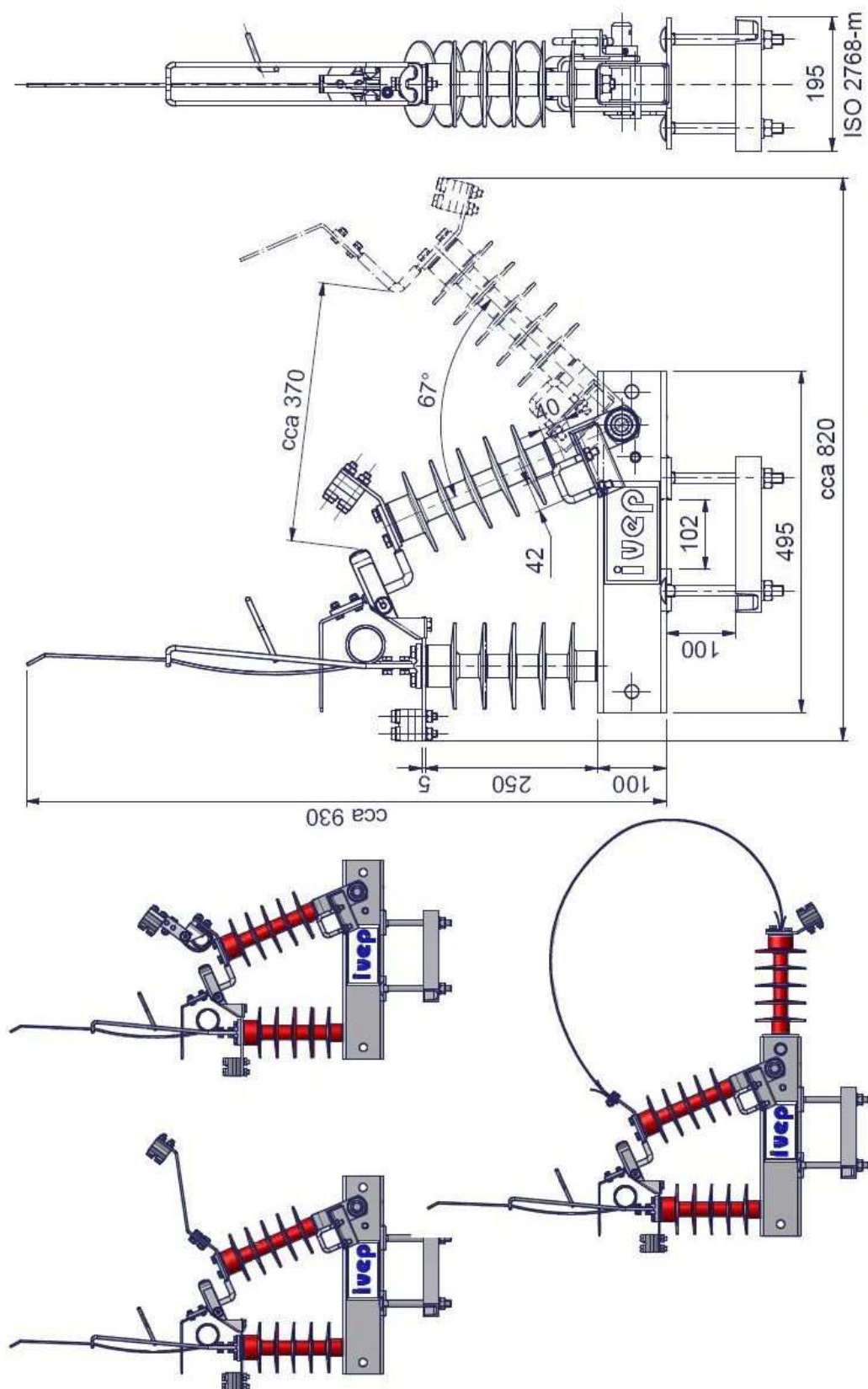








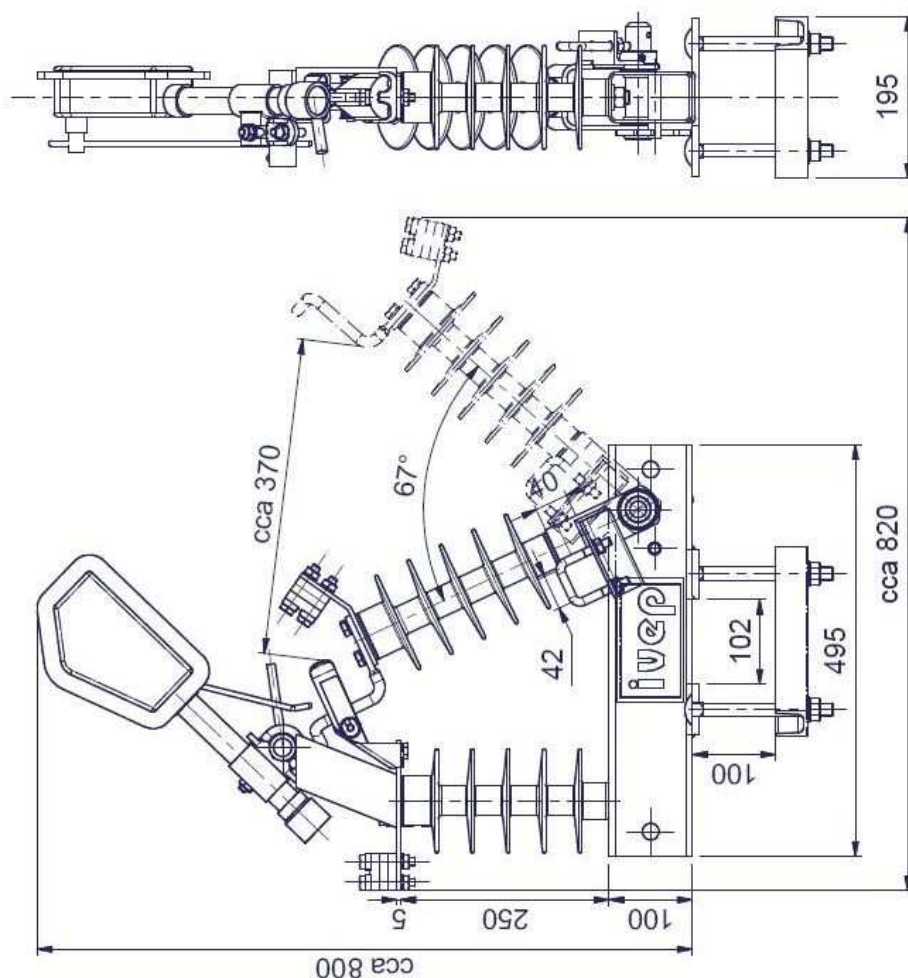
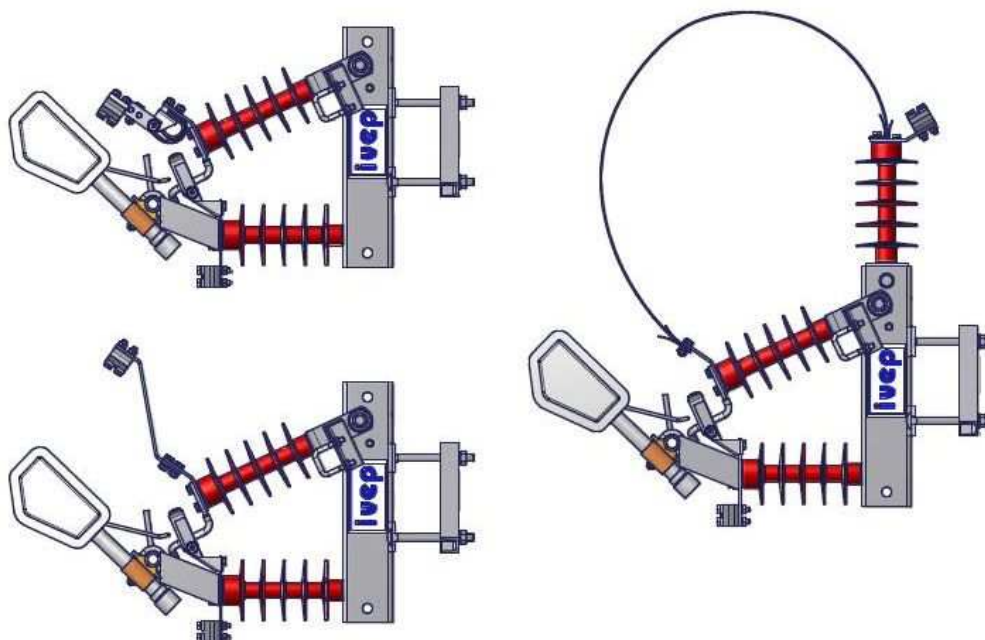




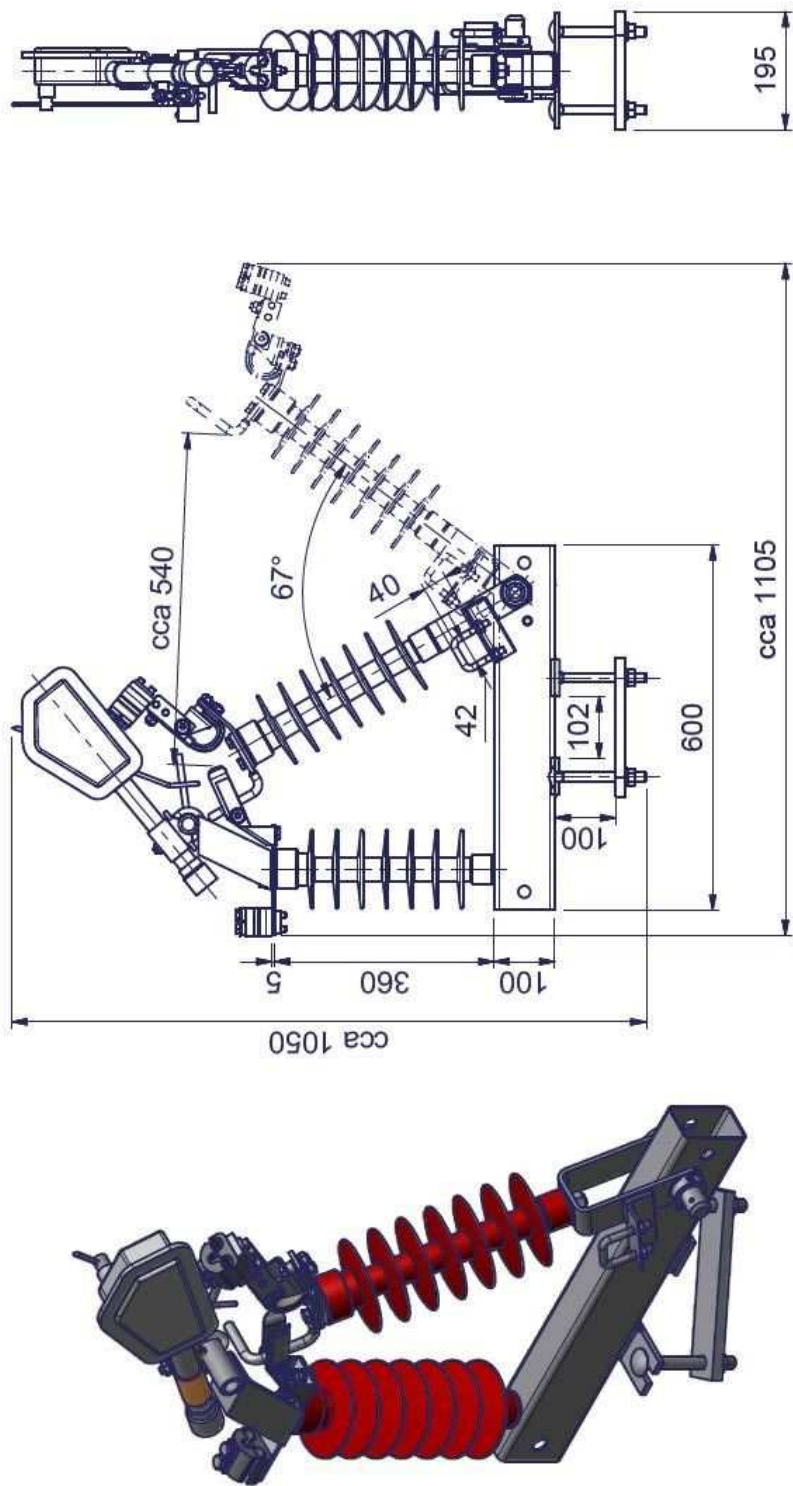
|   |  |               |  |         |
|---|--|---------------|--|---------|
|  |  | Návrh         | Overview of modifications of LEV 2...-type devices |         |
|   |  | Návrh výtvar  | 20.10.2009   | 72-1254 |
| Prizkoude   |  | Cislo výtvaru |  | Lib     |

LEV .S2.25...





|                 |  |            |                 |   |            |      |
|-----------------|--|------------|-----------------|---|------------|------|
| <div>ivep</div> |  | MBRNO      | Nahrazení výřez | Název   | ISO 2768-m |      |
|                 |  | Kresili    | 20.10.2009      | Overview of modifications of CUB 2....-type devices | 72-1255    | List |
|                 |  | Přezkoušel |                 |   |            |      |



ISO 2768-m

|      |              |  |                |          |              |   |
|------|--------------|--|----------------|----------|--------------|---|
| ivep | Měřičko      |  | Nahrnuje výřez | 12-1817  | Název        | Overview of modifications of CUB 2.38... - type devices |
|      | Téma         |  |                |          |              |   |
|      | Kreslí       |  |                | 3.5.2010 | Číslo výřezu | 72-1392   |
|      | Překontrošel |  | Datum          |          |              | List  |

CUB S2.38...

## WARRANTY PERIOD

The switching devices are normally covered with a warranty period of **10 years.**

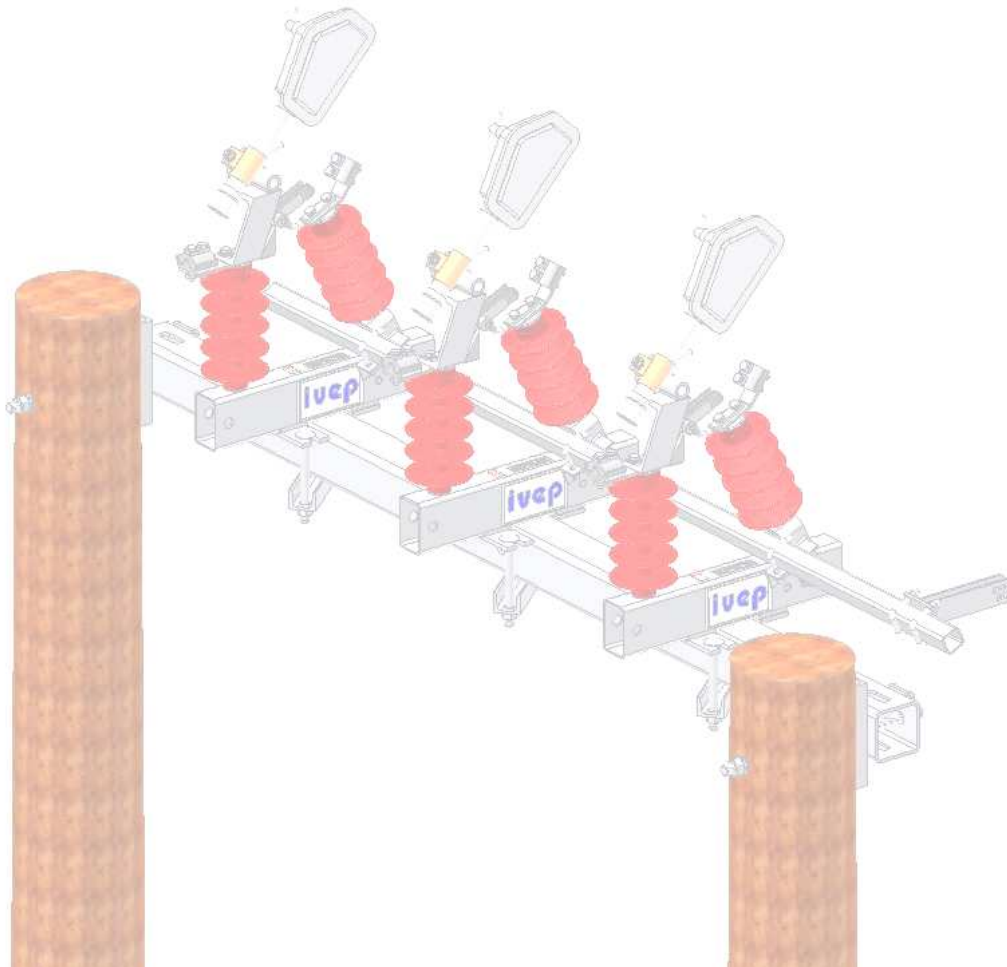
Exempt from the warranty are all cases of mechanical damage (vandalism, intention, natural disaster), improper mounting and operating the switching device beyond the guaranteed performance level.

During the warranty period some slight changes on the surface painting can take effect. These do not affect in any way the functionality of the device.

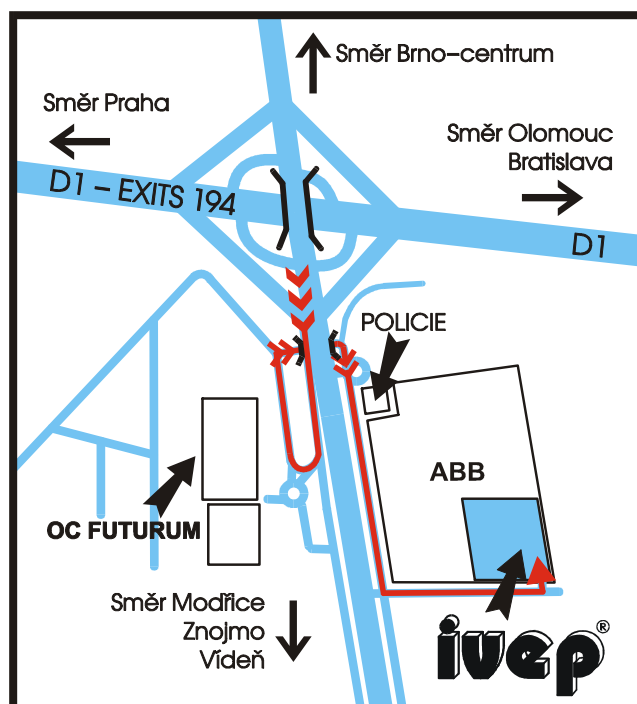
The switching device is designed for a service life of 40 years.

## PACKING, TRANSPORT, STORAGE

The switching devices, including all the accessories, are dispatched in a disassembled state and placed on a pallet in a reinforced carton box with cover. The packing is to be protected from climatic influences during the transport. It is not allowed to store the package in outdoor environments and at places with high humidity level. The packing materials can fully be recycled.







Manufactured and supplied by:

**IVEP, a. s.**  
**Vídeňská 117a, 619 00 Brno, Czech Republic**

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 Fax: +420 547136 402 [http:// www.ivep.cz](http://www.ivep.cz)

