

## CATALOGUE

# TYP QDS

7,2 - 25 kV

Unsere Handelsvertretung in Deutschland



ISO 9001:2009  
ISO 14001:2005



## GENERAL INFORMATION

The QDS disconnecter switches (load break switches) are switching devices used to switch electrical circuits in load operating state. They find usage in switchgear cabinets and MV switching stations of indoor type.

## STANDARDS AND REGULATIONS

The QDS conform with the following standards and regulations ČSN 62271-103, ČSN EN 62271-1, ČSN EN 62 271-102

## SPECIFICATION

|  |  |
|--|--|
| Rated voltage                              | 7,2 – 25 kV  |
| Rated current                              | 400 – 2000 A   |
| Rated shorttime current 1s (3s)            | 16 – 40 kA   |
| Rated dynamic current                      | 40 – 100 kA  |
| Rated short-circuit making current         | 12,5 kA  |
| Rated mainly active load-breaking current  | 630 A  |
| Rated closed-loop breaking current         | 400 A  |
| Rated no-load transformer breaking current | 4 A  |
| Rated frequency                            | 50 Hz  |
| Mechanical endurance                       | 2000 C-O   |
| Drive type                                 | Hand drive, Hand drive via gearbox, motor drive  |
| Motor type                                 | 12V DC, 24V DC, 48V DC, 60V DC, 110V DC, 220V DC, 230V AC, 400V AC   |
| Signaling positions                        | Limit switches per position, placed direct on main device shaft<br>Auxiliary cam-switch (high switch capacity) |
| Insulators type                            | Epoxy resin  |
| Design, number of poles, accessories       | upon request   |

## OPERATING CONDITIONS

The QDS disconnecter switches (load break switches) are designed as indoor switching devices and intended to be operated in normal operating conditions as specified by the ČSN 62271-103, ČSN EN 62271-1, ČSN EN 62 271-102 standards.

Highest ambient temperature + 40°C  
Lowest ambient temperature - 15°C (- 45 °C)  
Altitude up to 1000 m above sea level  
Average level of relative humidity over a period of 24 hours: not to exceed 95%

## DESCRIPTION AND OPERATION

The QDS disconnecter switches (load break switches) are of light-weight and, at the same time, rigid design.

The contact system equipped with quenching chambers provides for safe and proper switching during the whole service life of the switching device.

The arc quenching occurs under an insulation cover which provides for an instantaneous making and breaking of the circuit.

The arc arising inside of the quenching chamber is eliminated by using special gases that appear on a special thin plastic plate as a result of the heat effects of the arc. Special design of the arcing contact prevents the contacts to be welded together. This design is registered (trademarked) and it is able to sustain a high number of making operations.

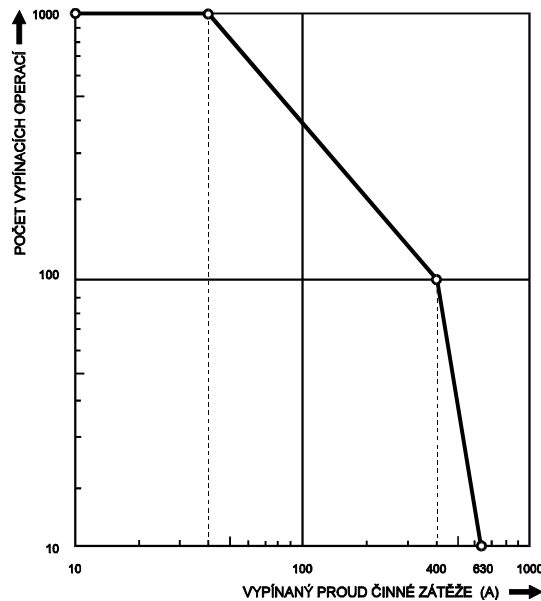
## WARRANTY PERIOD

By default the warranty period for the switching devices is 2 years.

Excluded from the warranty are occurrences of intentional mechanical damage (vandalism, natural hazards), the use of incorrect assembly procedures and operation of the device out of the guaranteed parameter range.

During the warranty period some changes in the surface finish may appear on the device, however without affect to its functionality.

## NPAK5 BREAKING CHAMBER – NUMBER OF BREAKING OPERATIONS IN DEPENDENCE OF MAINLY ACTIVE LOAD BREAKING CURRENT



## TRANSPORT, STORAGE, ASSEMBLY AND OPERATION

The QDS disconnecter switches (load break switches) are supplied individually as completely assembled devices, aligned and adjusted by the manufacturer. The dispatch takes place on wooden pallets

The transport, storage, assembly and maintenance of the QDS disconnecter switches must be done in accordance with directions contained in the accompanying documents, supplied along with the switching device. Careful and professional installation is one of the essential prerequisites for a defect-free operation of the switching device.

The accompanying documents include:

- certificate of quality and completeness
- packing, transport and storage instructions
- assembly procedures, completed with dimensional sketches of the corresponding disconnectors, wiring diagrams and emergency control data
- maintenance instructions to be conducted on regular basis

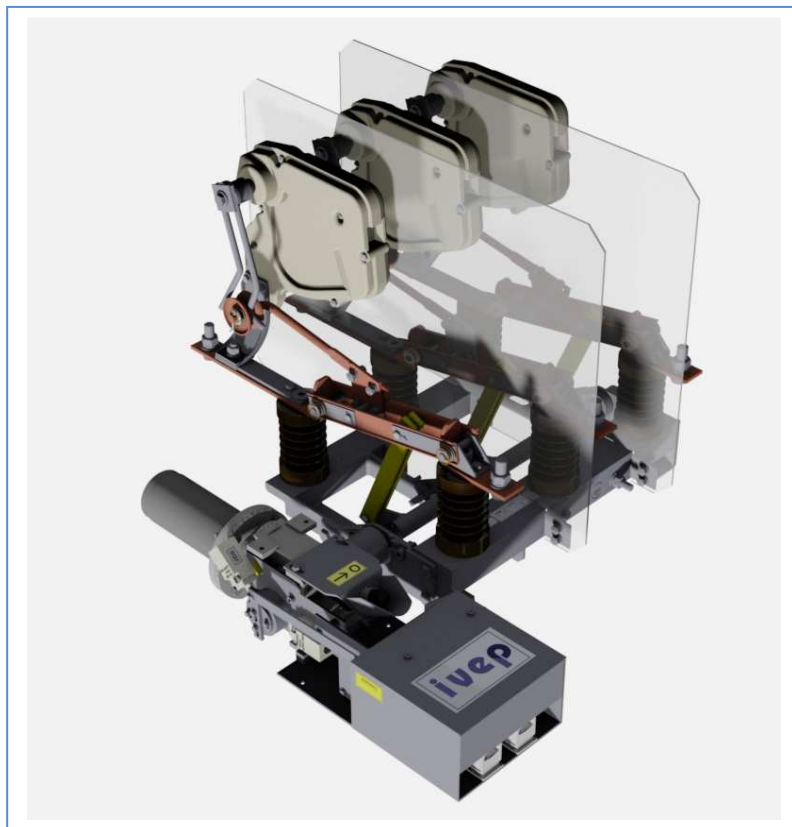
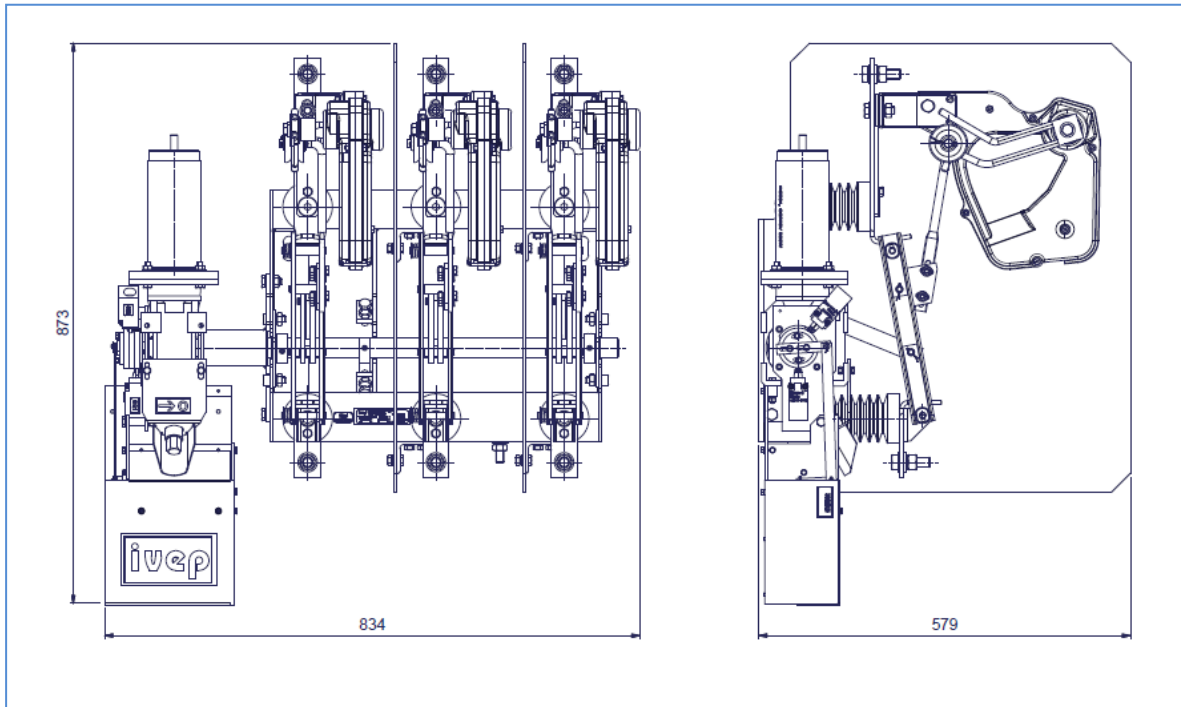
The handling and lifting of the switching devices does not require the use of special lifting equipment. During the manipulation the disconnecter is to be taken up by the supporting frame. By no means it is allowed to lift the disconnecter by taking it up at the insulators, current-carrying parts or the shaft.

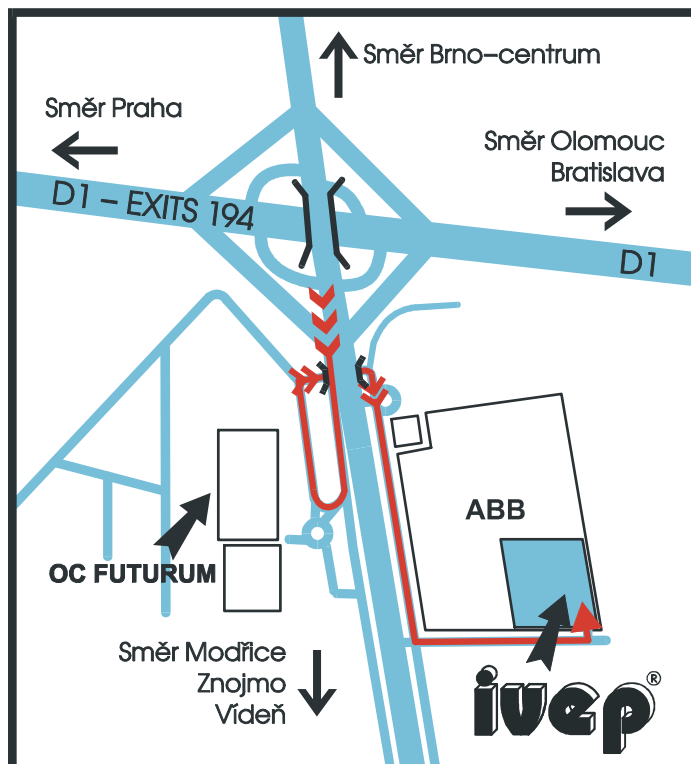
## TYPE DESIGNATION CODING OF THE QDS DISCONNECTOR SWITCH (LOAD BREAK SWITCH)

| - basic design  |  | QDS            |  |  |  |  |  |  |  |
|---|--|----------------|--|--|--|--|--|--|--|
| Rated voltage   | 7,2 – 25kV   | 7,2 - 25       |  |  |  |  |  |  |  |
| Rated current   | 400 – 2000 A   | 400 - 2000     |  |  |  |  |  |  |  |
| Rated short-time current/rated duration of short circuit  | 16 kA  | 16/1 (3)       |  |  |  |  |  |  |  |
|   | 20 kA  | 20/1 (3)       |  |  |  |  |  |  |  |
|   | 25 kA  | 25/1 (3)       |  |  |  |  |  |  |  |
|   | 31,5 kA  | 31/1 (3)       |  |  |  |  |  |  |  |
|   | 40 kA  | 40/1 (3)       |  |  |  |  |  |  |  |
| The disconnecter switch shaft extension                   |  |                |  |  |  |  |  |  |  |
| - to the left :   |  | L              |  |  |  |  |  |  |  |
| - to the right:   |  | P              |  |  |  |  |  |  |  |
| - drive of disconnecter: switch                           |  |                |  |  |  |  |  |  |  |
| - without drive   |  | -              |  |  |  |  |  |  |  |
| - hand drive  |  | R              |  |  |  |  |  |  |  |
| - motor drive:  |  |                |  |  |  |  |  |  |  |
| - 3 PEN 50 Hz 400 V                                       |  | 1              |  |  |  |  |  |  |  |
| - 110 V DC  |  | 2              |  |  |  |  |  |  |  |
| - 220 V DC  |  | 3              |  |  |  |  |  |  |  |
| - 230 V AC (220 V DC+usměrňovač (rectifier)               |  | 4              |  |  |  |  |  |  |  |
| - 24 V DC   |  | 5              |  |  |  |  |  |  |  |
| - 48 V DC   |  | 6              |  |  |  |  |  |  |  |
| - 60 V DC   |  | 7              |  |  |  |  |  |  |  |
| - 125 V DC  |  | 8              |  |  |  |  |  |  |  |
| Indication switch contacts of devices (eg.)               | 11C-11O-2P   | 11             |  |  |  |  |  |  |  |
|   | 7C-7O-2P   | 7              |  |  |  |  |  |  |  |
|   | 0  | -              |  |  |  |  |  |  |  |
| Implementation of motor drive of QDS disconnecter switch: | F- a drive mechanism and indication elements mounted separately on both sides of the frame<br>FP- a drive mechanism and indication elements mounted on the same side<br>FE- setting up the angular displacement of the drive as necessary<br>FM-minimized disconnecter width (pro 25 kV F= 275 mm) |                |  |  |  |  |  |  |  |
| Hand drive or other solution:                             | - (e.g. void)  |                |  |  |  |  |  |  |  |
| Pole centre distance in mm/ number of poles:              |  |                |  |  |  |  |  |  |  |
| - single-pole   |  | 0/1            |  |  |  |  |  |  |  |
| mm  |  | - upon request |  |  |  |  |  |  |  |
| - sample code:  |  |                |  |  |  |  |  |  |  |

**QDS 25.630.25/1.L.2.7.FE.300/3**

**INDOOR DISCONNECTOR SWITCH TYPE QDS WITH INSULATING BARRIERS**





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