

## CATALOGUE

TRACTION OUTDOOR DISCONNECTORS

# TYP QAD 35

35 kV; 2000; 3000 A

Unser Handelspartner in Deutschland



ISO 9001:2009  
ISO 14001:2005

**ivep**<sup>®</sup>

## APPLICATION

The QAD 35 and QADZ 35 disconnectors are used in single-phase AC traction lines and feeding stations of 25 kV rated voltage (to ČSN 34 1500). They allow a disconnection of circuit under load, in emergency situations. The disconnectors can be operated by electric motors or hand operated drives.

## STANDARDS AND REGULATIONS

The disconnectors comply with the ČSN 35 4210 eqv IEC 129, the ČSN 34 1500 standards and related regulations.

## OPERATING CONDITIONS

**The disconnector design complies with requirements on outdoor operating environment.**

|  |         |
|--|---------|
| Highest ambient temperature                      | + 50 °C |
| Lowest ambient temperature                       | - 50 °C |
| Relative air humidity                            | 100 %   |
| Altitude up to                                   | 1000 m  |
| Degree of contamination according to ČSN 33 0405 | IV      |

## DESCRIPTION

- current-carrying path with two interruption points when in disconnected state
- knife-type contacts
- arcing tips (protecting the main current-carrying path against damage in case of unintended disconnection of the respective circuit under load)
- connecting plate (connecting flag) with "railway" type of clamps, used for the fastening of up to 6 power leads of up to 120 mm<sup>2</sup> cross section. Design of the input parts
- the connection of leads may be arranged in two perpendicular directions, with any two leads fastened by two clamps
- possibility to connect busbars or cables
- parts of the current-carrying path made of silver coated copper
- supporting insulators made of plastics or ceramic (the latter to be agreed upon with the customer)
- connecting parts and other small parts manufactured of stainless steel
- hot galvanized frame and other steel parts
- the QADZ 35 disconnector equipped with earthing knife contact, the movement of which depends on the travel of the contacts of disconnector. In the disconnector OFF position one side of the power line is earthed.
- disconnectors with isolating earthing switch are designed for use in the AC traction systems with a nominal voltage of 38,5kV. In the switch-off state, the disconnector QADZI 35 will connect a disconnected section with isolating grounding system, which is isolated from the supporting frame of a device.

## PACKING, TRANSPORT, STORAGE

Outdoor horn disconnectors for electric traction are supplied as separate devices, attached to wooden pallets. The system is not be exposed to excessive vibrations during transport.

All used packing materials are fully recyclable.

## INSTALATION AND

One of the prerequisites for a reliable and defect-free operation of a switching device is the installation which is to be carried out with care and in a professional manner. The assembly, servicing and operating instructions are shown in the accompanying documents being an integral part of the delivery.

## SPECIFICATION

|  |    | QAD 35     | QADZ 35<br>QADZI 35 |
|--|----|------------|---------------------|
| Rated frequency  | Hz | 50         |                     |
| Rated voltage (to ČSN 35 4210)   | kV | 38,5       |                     |
| Lightning impulse test voltage   | kV | 180        |                     |
| Lightning impulse test voltage applied across the insulating distance  | kV | 210        |                     |
| Short-time test withstand AC voltage, 50 Hz, 1 minute (in both dry and wet conditions)   | kV | 85         |                     |
| Short-time test withstand AC voltage, 50 Hz, 1 minute, applied across the insulating distance (in both dry and wet conditions) | kV | 100        |                     |
| Rated current  | A  | 2000, 3000 |                     |
| Rated short-time current   | kA | 20; 31,5   |                     |
| <sup>J</sup><br>Rated dynamic current  | kA | 50; 80     |                     |
| Stroke of the operating handle   |    | 140        |                     |

The disconnector insulation level meets the requirements of the ČSN 34 1500 standard, Table No. 3.  
The apparatus is to be mounted in horizontal position.

## TYPE DESIGNATION CODING – basic design

| Basic design   | QAD              |              |  |  |  |
|--|------------------|--------------|--|--|--|
| Rated voltage  | 38,5 kV          | 35           |  |  |  |
| Rated current  | 2500 A<br>3000 A | 2500<br>3000 |  |  |  |
| Rated short-time withstand current of 1 sec. Durativ |                  | 20/1<br>31/1 |  |  |  |
| Design: side left „L“                                |                  |              |  |  |  |
| Disconnecter inputs without clamps and splice bars   | L                |              |  |  |  |
| Disconnecter inputs with splice bars and clamps      | LA               |              |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     | LB               |              |  |  |  |
| Design: side right „R“                               |                  |              |  |  |  |
| Disconnecter inputs without clamps and splice bars   | R                |              |  |  |  |
| Disconnecter inputs with splice bars and clamps      | RA               |              |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     | RB               |              |  |  |  |

Example of coding when placing and order:  
QAD 35.3000.20/1.LA.RA

**TYPE DESIGNATION CODING – disconnecter with earthing switch**

| Basic design   |                   | QADZ         |  |  |  |  |  |
|--|-------------------|--------------|--|--|--|--|--|
| Rated voltage  | 38,5 kV           | 35           |  |  |  |  |  |
| Rated current  | 2500 A<br>3000 A  | 2500<br>3000 |  |  |  |  |  |
| Rated short-time withstand current of 1 sec. Durativ |                   | 20/1<br>31/1 |  |  |  |  |  |
| Design: side left „L“                                |                   |              |  |  |  |  |  |
| Disconnecter inputs without clamps and splice bars   |                   | L            |  |  |  |  |  |
| Disconnecter inputs with splice bars and clamps      |                   | LA           |  |  |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     |                   | LB           |  |  |  |  |  |
| Design: side right „R“                               |                   |              |  |  |  |  |  |
| Disconnecter inputs without clamps and splice bars   |                   | R            |  |  |  |  |  |
| Disconnecter inputs with splice bars and clamps      |                   | RA           |  |  |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     |                   | RB           |  |  |  |  |  |
| Location of earthing switch                          | (left)<br>(right) | L<br>R       |  |  |  |  |  |

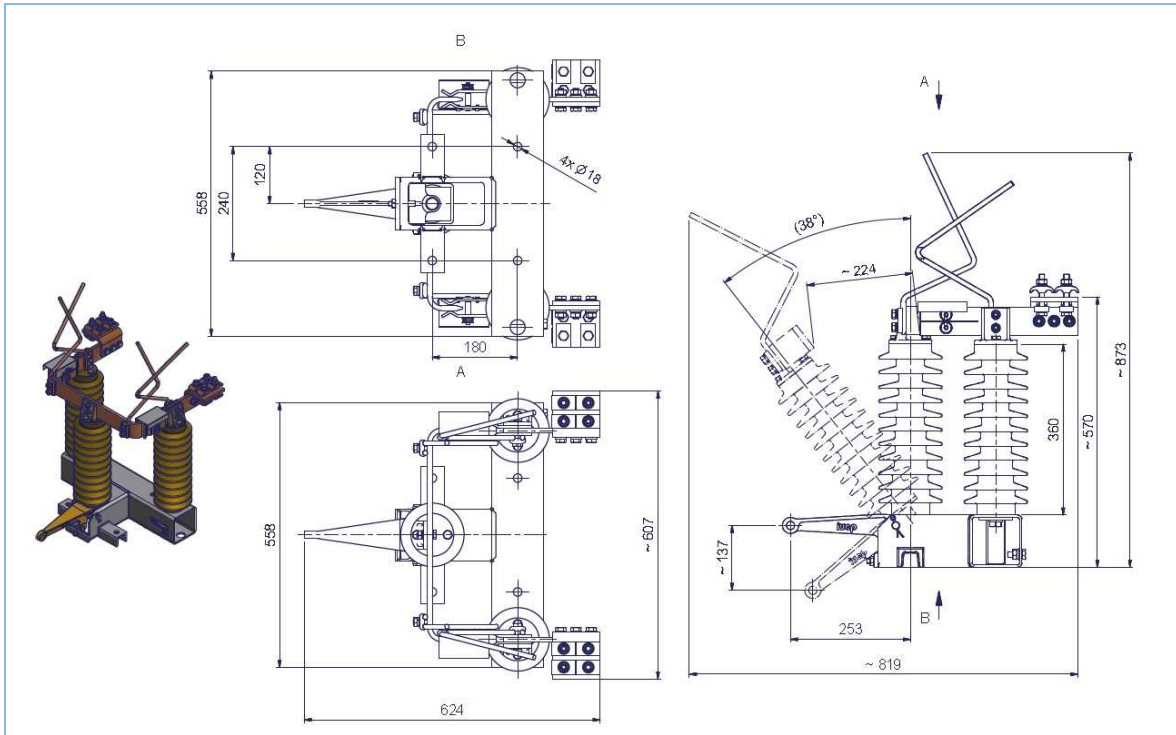
Example of coding when placing and order:  
QADZ 35.3000.20/1.LA.RA.L

## TYPE DESIGNATION CODING – DISCONNECTOR WITH INSULATED EARTHING SWITCH

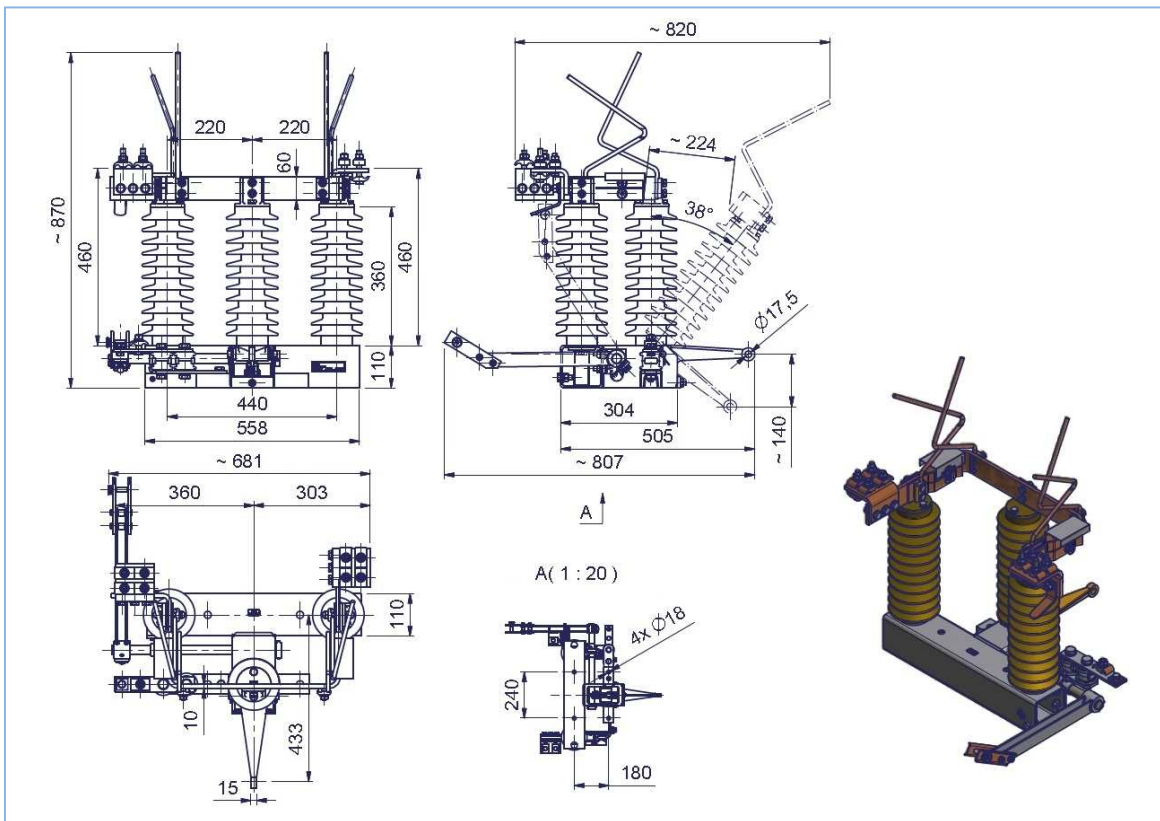
| Basic design   |                   |              |  |  |  |  |  |
|--|-------------------|--------------|--|--|--|--|--|
| Rated voltage  | 38,5 kV           | 35           |  |  |  |  |  |
| Rated current  | 2500 A<br>3000 A  | 2500<br>3000 |  |  |  |  |  |
| Rated short-time withstand current of 1 sec. Durativ |                   | 20/1<br>31/1 |  |  |  |  |  |
| Design: side left „L“                                |                   |              |  |  |  |  |  |
| Disconnecter inputs without clamps and splice bars   |                   | L            |  |  |  |  |  |
| Disconnecter inputs with splice bars and clamps      |                   | LA           |  |  |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     |                   | LB           |  |  |  |  |  |
| Design: side right „R“                               |                   |              |  |  |  |  |  |
| Disconnecter inputs without clamps and splice bars   |                   | R            |  |  |  |  |  |
| Disconnecter inputs with splice bars and clamps      |                   | RA           |  |  |  |  |  |
| Disconnecter equipped with IVEP "railway" clamps     |                   | RB           |  |  |  |  |  |
| Location of earthing switch                          | (left)<br>(right) | L<br>R       |  |  |  |  |  |

Example of coding when placing and order:  
QADZI 35.3000.20/1.LA.RA.L

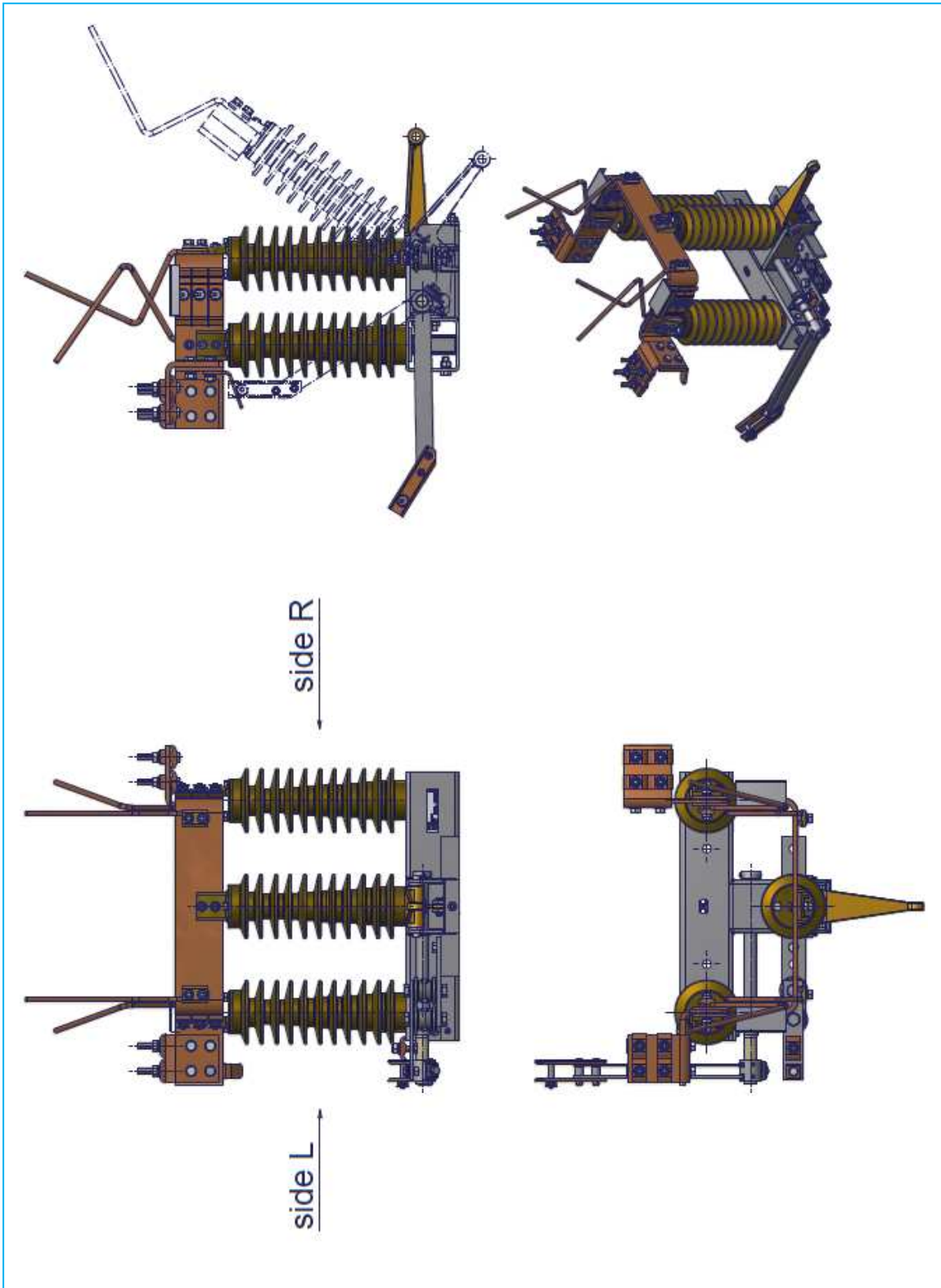
**DISCONNECTOR TYPE QAD 35 3000.20/1.LA.RA**



**DISCONNECTOR WITH EARTHING SWITCH TYPE QADZ 35 3000...L**

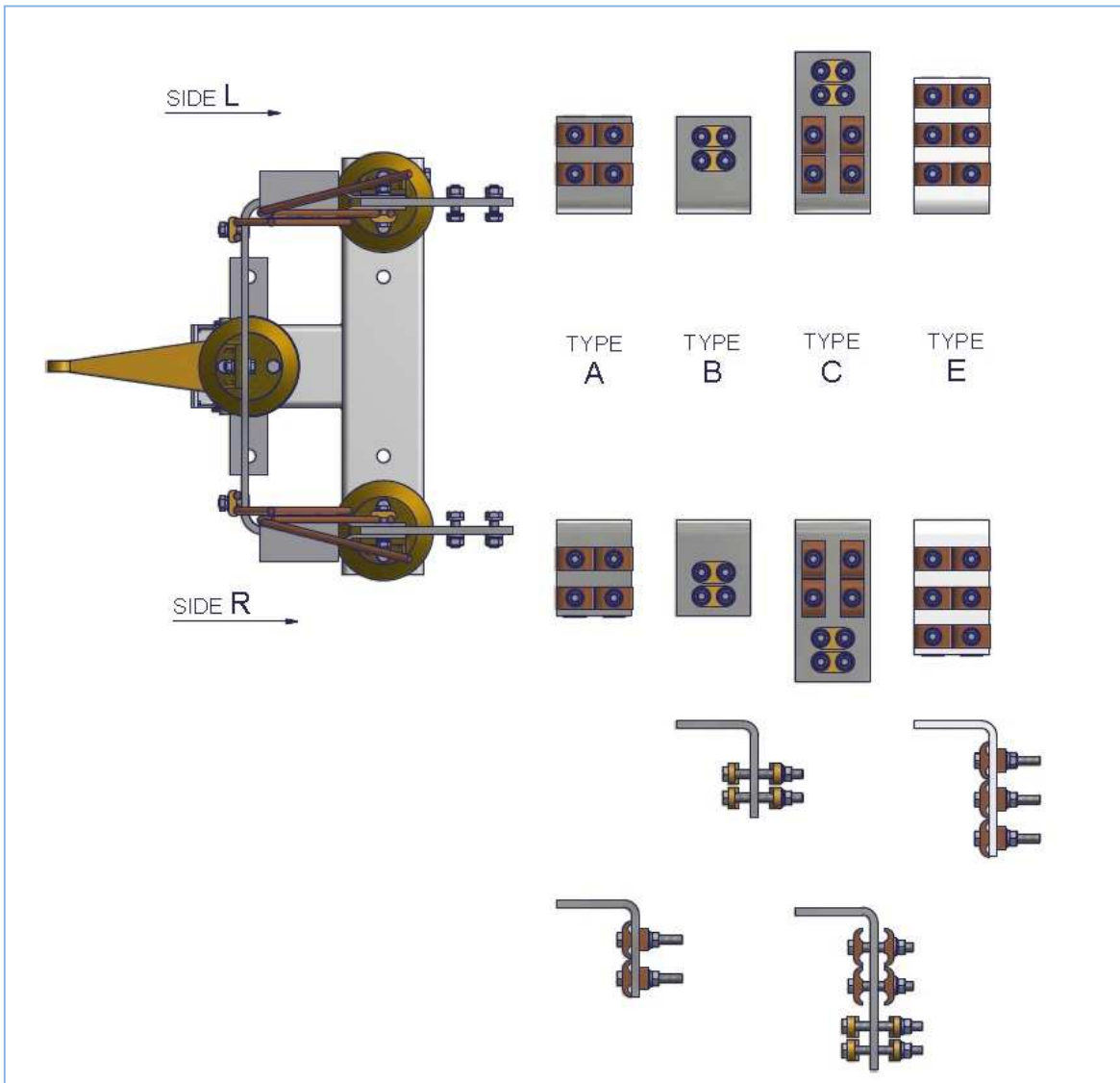


DISCONNECTOR WITH EARTHING SWITCH TYPE QADZ 35 3000...L

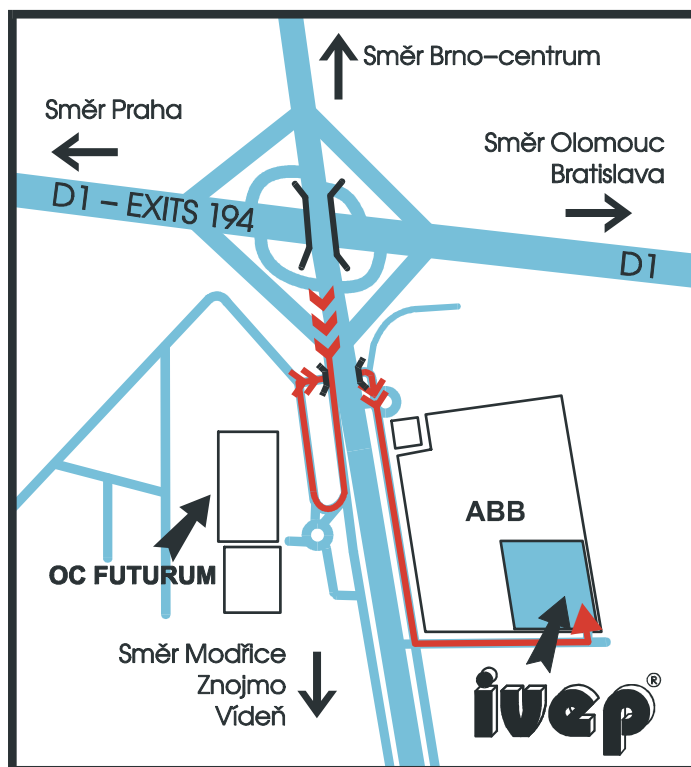




## CONNECTING FLAGS – OPTIONS



*Due to continuous development of the products some dimensions, weights, drawings and descriptions may differ from that shown in this data sheet. In order to satisfy the ever increasing needs of the customers the manufacturer reserves the right to provide modifications to the product described, without previous notice.*



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