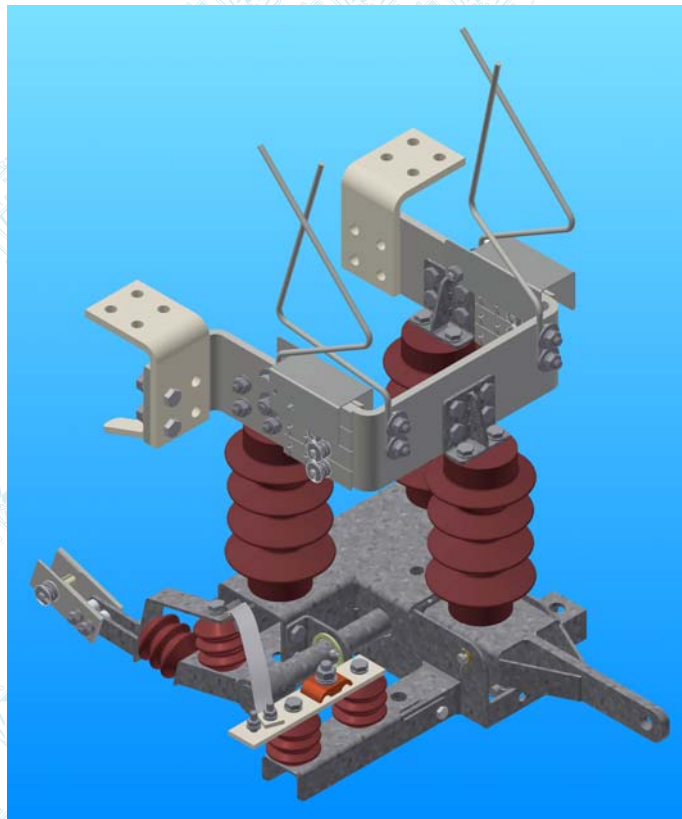


Outdoor disconnectors for railway lines FTr 3-.../31,5

single-pole design
rated voltage 3 kV DC
rated current 2000 and 3150 A



DRIBO, spol. s r.o.

Pražákova 36
619 00 Brno
Czech Republic

Tel.: +420 533 101 111, Fax: +420 543 216 619, E-mail: dribo@dribo.cz, Internet: <http://www.dribo.eu>

ISO 9001
ISO 14001
BUREAU VERITAS
Certification



General

The switching devices referred to in this document are designed in particular for traction applications. They meet the requirements of EN 50123-1 and EN 50123-4 standards.

The disconnectors are manufactured with or without earthing switch, or with individually separated earthing switch. There is a mechanical link between the drives of the earthing switch and that of the disconnector. The earthing takes place automatically at the moment the disconnector becomes switched OFF. On customer request the earthing switch can be controlled separately. The contacts of insulated earthing switch are insulated from the earthing switch's frame.

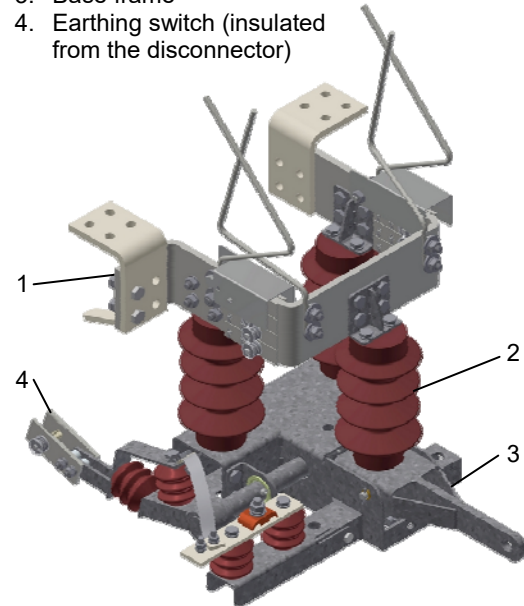
Each of the disconnectors is equipped with earthing terminal. In addition, the disconnectors with insulated earthing switch are equipped with a separate contact to connect the earthing switch.

The current carrying parts are made from electroplated silver-coated copper. All steel parts are hot-dip galvanized. Thanks to the usage of stainless steel materials and the surface finish applied the devices feature increased resistance to corrosion. The disconnectors are equipped with supports made from cycloaliphatic epoxy resin.

The drive mechanism of the disconnector is supplied as an independent unit.

The FTr 3-2000/31,5 and FTr 3-3150/31,5 disconnectors consist of the following main structural parts:

1. Current-carrying path with contacts and horns for arc quenching
2. Insulators
3. Base frame
4. Earthing switch (insulated from the disconnector)



Operating conditions

The switching devices are designed for use in altitudes of up to 1000 m above the sea level. When using them at higher altitudes the rated insulation level has to be adjusted accordingly.

The disconnectors are intended for use under normal operating conditions as per EN 62271-1 standard.

This standard specifies the following limit values for ambient temperature:

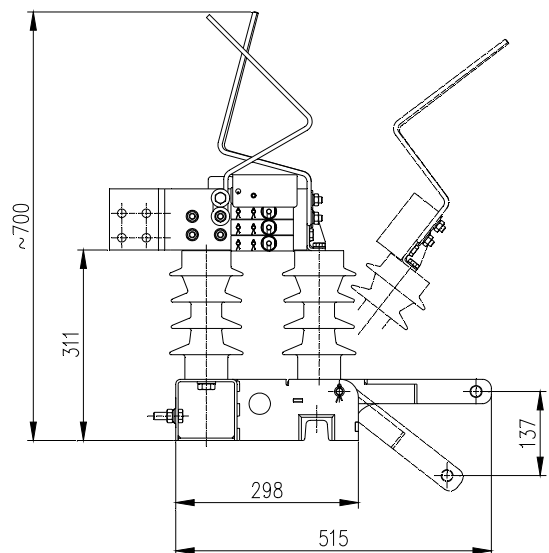
- highest ambient temperature: + 40°C,
- 24 h temperature average: max. + 35°C,
- lowest ambient temperature: - 40°C.

Engineering data

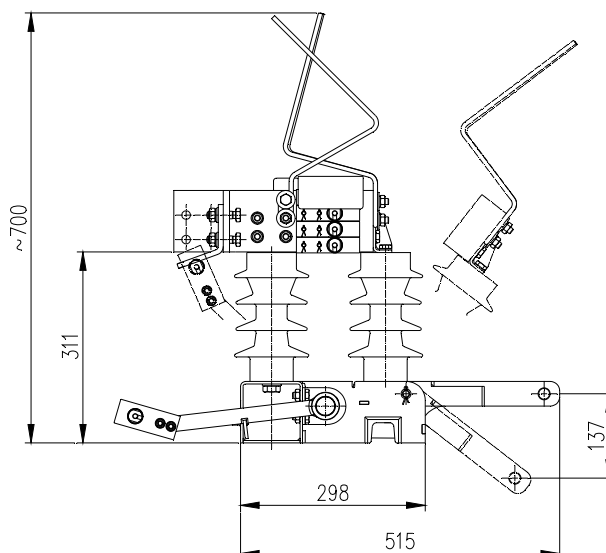
	FTr 3-2000/31,5	FTr 3-3150/31,5
Rated voltage	U_n	3 kV DC
Rated operating current	I_{ne}	2000 A 3150 A
Rated voltage of the equipment	U_{Ne}	3,6 kV DC
Rated insulation voltage	U_{Nm}	4,8 kV
Rated power frequency withstand voltage 50 Hz/1 min., against the earth	U_a	40 kV
Rated power frequency withstand voltage 50 Hz/1 min., at the isolating distance	U_a	48 kV
Rated lightning impulse withstand voltage, against the earth	U_{Ni}	125 kV
Rated lightning impulse withstand voltage, at the isolating distance	U_{Ni}	145 kV
Rated short-time withstand current	I_{Ncw}	31,5 kA
Rated making and breaking capacity		200 A
Class of use, as per EN 50123-4		category I
Insulator creepage distance	s	600 mm
Mechanical service life		3000 x CO

Dimensional drawings of FT_r 3-2000/31,5 and FT_r 3-3150/31,5 disconnectors

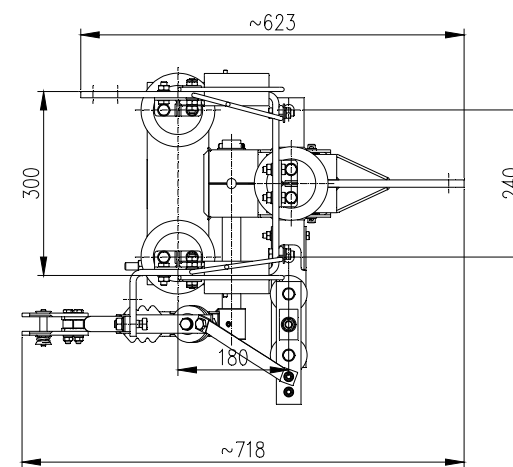
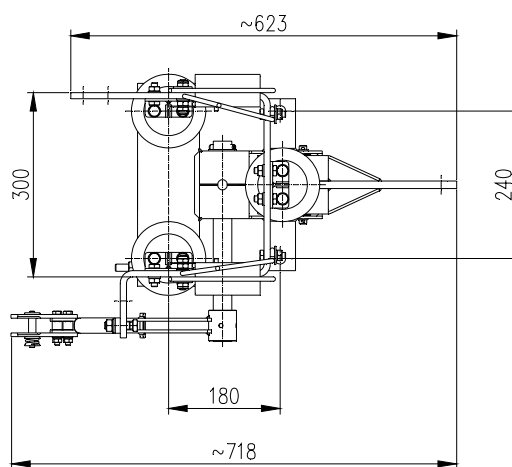
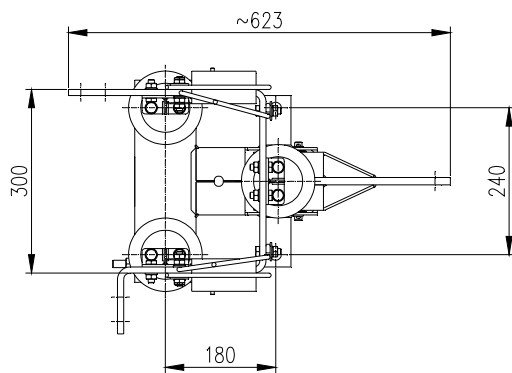
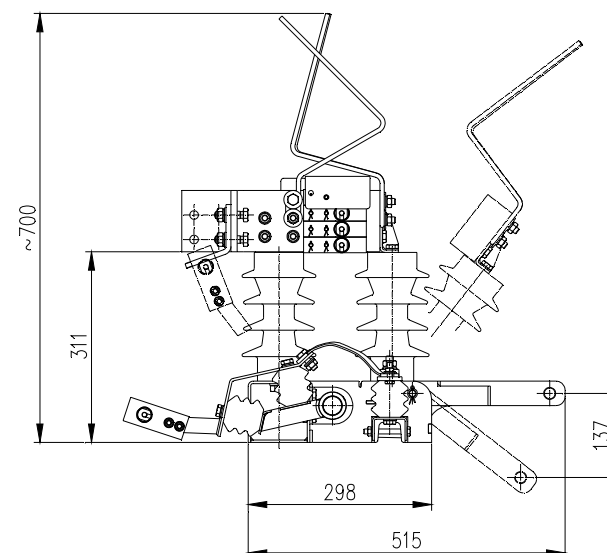
Without earthing switch



With earthing switch



Individually separated earthing switch



Specifications are subject to change without notice.

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