

Operating Instructions No. 2150 (EN)
(Appendix to Operating Instructions No. 2136)

Device:	Center-Break Disconnect
Type:	D
Rated Voltage:	72.5, 123, 145, or 170 kV
Rated Normal Current:	1250 - 3150 A
Rated Short-Time Current:	31.5 or 40 kA

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Note: Please read the operating instructions carefully before
beginning assembly, installation, or commissioning.

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1. Assembly

1.1 General Information

Only personnel familiar with the contents of this operating manual shall be permitted to assemble this equipment.

These instructions describe only the assembly of shipped assembly units to form complete disconnecter poles. Installation and adjustment of disconnecter poles is described in Operating Instructions No. 2136. These instructions must be used in conjunction with Operating Instructions No. 2136.

1.2 Bolted Joints

Bolted joints must be lubricated before assembly with Molykote BR 2 plus, a lubricating grease. It should be applied to the thread flanks and to the contact surfaces between nut and washer.

All bolted joints must be tightened using a torque wrench. The torque shall normally be applied to the nut. The required tightening torques are given in the following table.

Thread	Tightening Torque in Nm Strength Class		
	8.8	A2-70	A2-80
M6	10	10	14
M8	25	25	33
M10	49	49	65
M12	86	83	110
M14 x 1,5	---	140	---
M16	210	202	270
M20	410	394	525
M24	710	377	---

1.3 Assembly

The assembly units for center-break disconnectors consist of the following components, which are pre-assembled at the factory (see Fig. 1.1 and 1.2 in Operating Instructions No. 2136):

- Base frame (1) with rotary units (2), drive linkage (9), diagonal linkage (10), and one or two add-on earthing switches (8)
- Support porcelains (3)
- Main pole unit (5)
- Connecting linkage (11) and accessories
- Drives

Before the disconnecter poles can be erected as described in Section 4.4 of Operating Instructions No. 2136, the disconnectors must be assembled.

- Mount the base frame on the support or a suitable pre-installation surface. If the base frame is being mounted on the support, make sure that the base frame is correctly oriented with respect to the opening direction. Check this by referring to the dimension drawing. The rotary unit with the 2 stop bolts (2.1) should be on the left with respect to the viewing direction – the disconnecter opens away from the body.
- Place the support porcelains (3) on top and align them flush with the flanges of the rotary units (2). Use the bolts already pre-assembled to the flanges to fasten the support porcelains (Figure 1).

Note: Do not change the configuration of the stops (2.2) and actuating levers (9.1, 11.1).

There are various possibilities for preventing this.

1. Mark the position of the actuating lever before unscrewing the bolts.
 2. Re-position the actuating lever as shown in Figure 2.
 3. Fabricate a fixture as shown in Figure 3 for positioning the actuating lever with respect to the bracket of the rotary unit.
- Then fasten the arms of the current path (5) to the support porcelains using M12x90 bolts (38) and tighten the bolts until they are finger-tight. Fasten arm I of the current path (with contact tip) above the rotary unit using one stop bolt (2.2) and fasten arm II of the current path (with contact fingers) above the rotary unit using 2 stop bolts.
 - Close the disconnecter and align the arms of the current path so that they are in alignment both horizontally and longitudinally. Check the run-in depth, namely the distance covered by the contact tip before contact with the contact fingers (see Figure 2 in Operating Instructions 2136), and adjust this dimension by moving the two arms of the current path. Tighten the bolts.
 - Open the disconnecter and check the clearance to make sure it corresponds to the support porcelain spacing on the dimension drawing. If necessary, readjust the clearance by adjusting the stop bolts (2.1).

The fasteners required for assembly are included among the accessories.

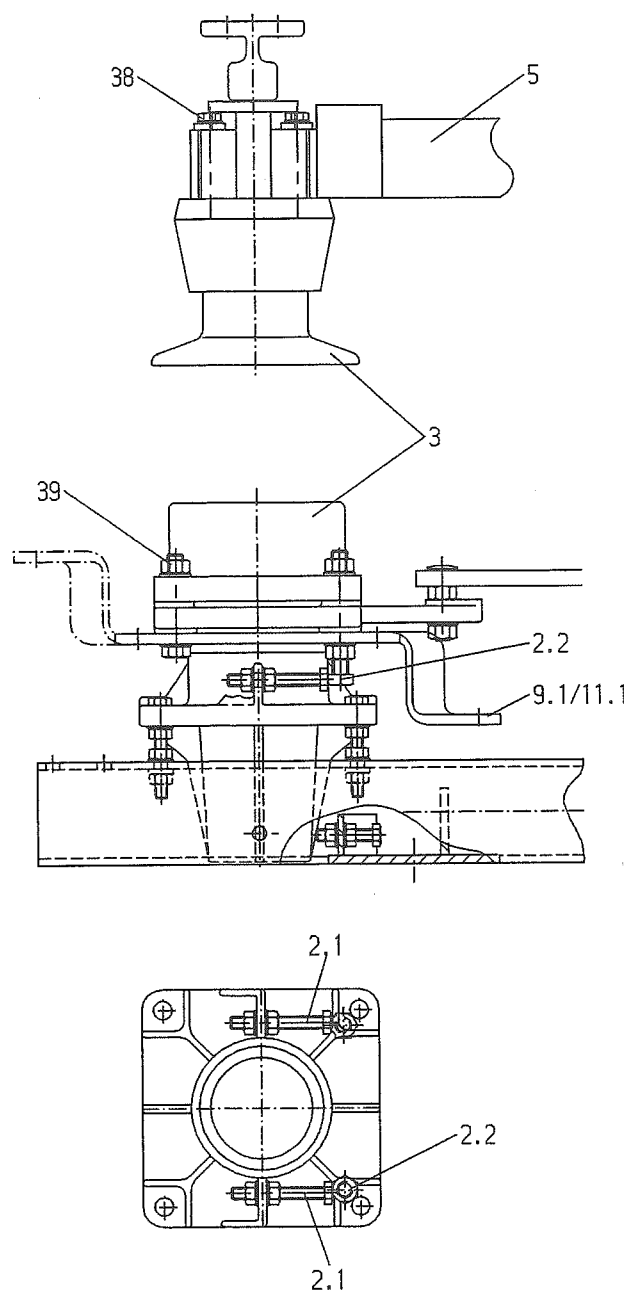


Figure 1: Assembling the assembly units

- 2.1 Stop bolt
- 2.2 Stop
- 3 Support porcelain
- 5 Main pole unit
- 9.1 Drive lever
- 11.1 Connecting linkage lever
- 38 M12x90 hexagon bolt with washer (t = 6) + washer (t = 2.5) or
M16x90 hexagon bolt with washer (t = 6)
- 39 M16x80 hexagon bolt with washer and hexagon nut
(for mounting drive lever 9.1 or connecting linkage lever 11.1)

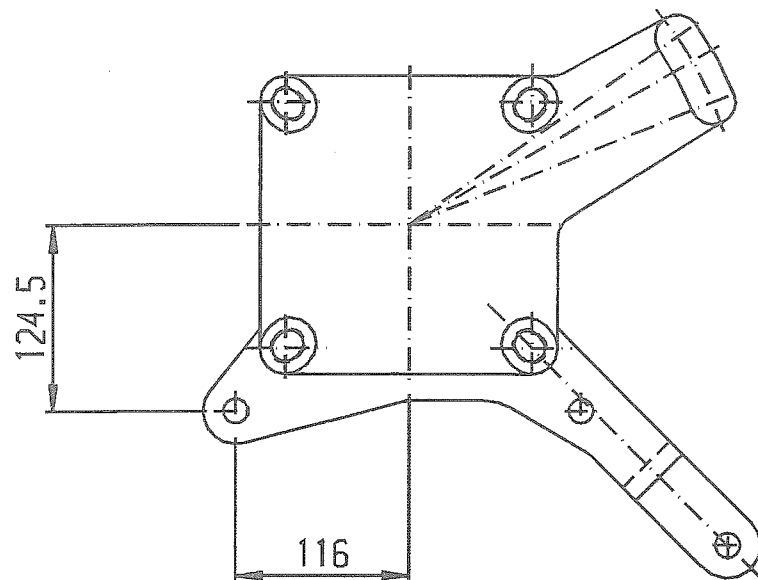


Figure 2: Position of actuating lever

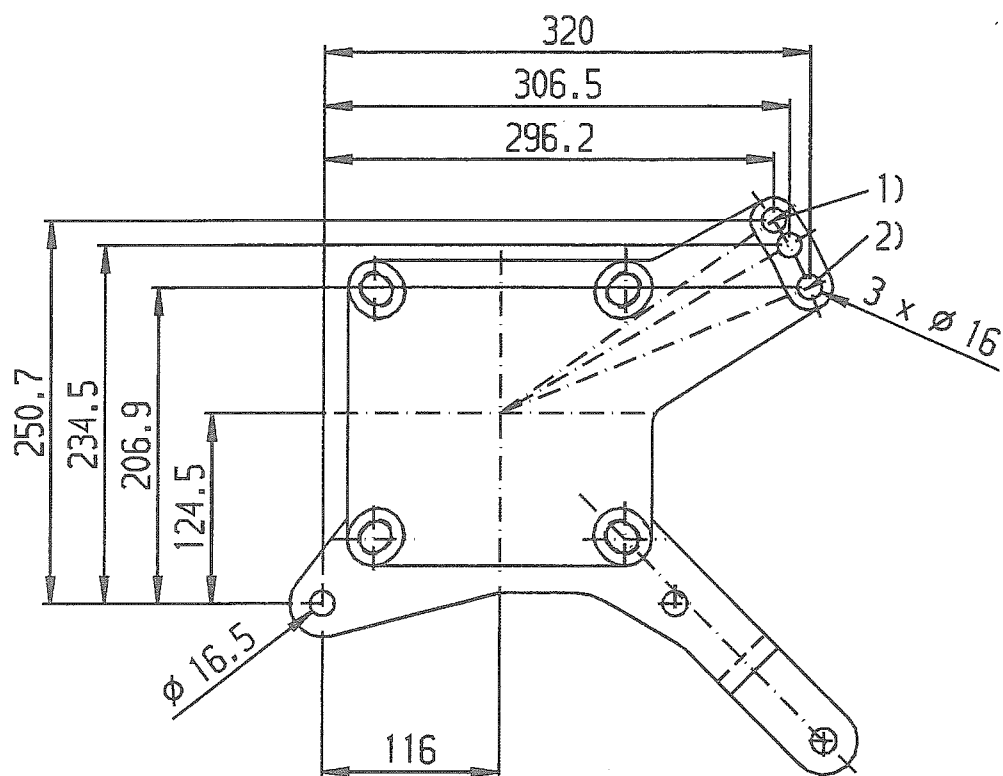


Figure 3: Dimensions for fixture

- 1 Position of diagonal linkage for 123-170 kV
- 2 Position of diagonal linkage for 72.5 kV

In the event of questions, orders for replacement parts, or equipment malfunction, please contact your nearest AREVA representative, citing the information listed on the nameplate.