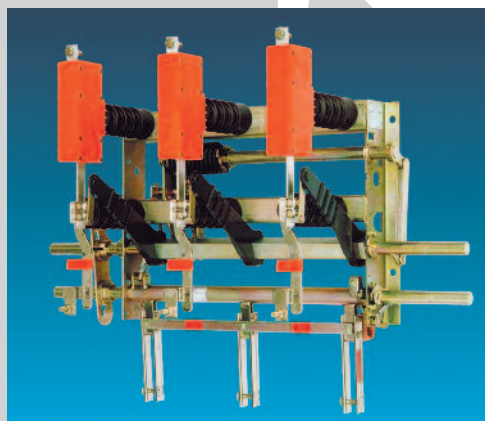
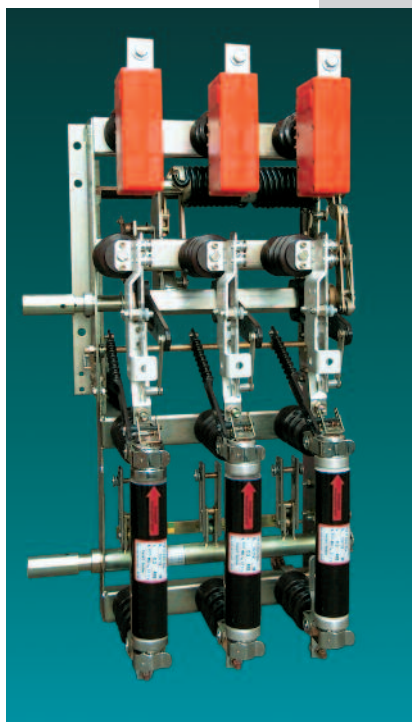


## Instructions for Assembly, Operation and Maintenance of DRIESCHER - Indoor Switch-Disconnecter H 27

- Three-pole
- Rated voltage  
12 kV and 24 kV
- Rated current  
400 A and 630 A



# H 27

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## Transport and storage

Once you have received the delivery please carefully unpack the switching devices and check for any transportation damage. Should you determine any damage please report this immediately and indicate the carrier.

After unpacking, clean the switching devices and accessories to remove any contamination from packing material and protect against moisture and

contamination prior to installation. To transport the switching devices only hold at the frame and never touch the contact blades etc.

Thoroughly clean the switches and actuator elements prior to putting into operation to remove dust and installation swarf and wipe all insulating parts with a clean dry cloth.

## Operating conditions

The switches are designed for normal operating conditions in compliance with EN 62271-1 up to  $-40^{\circ}\text{C}$ . The max. ambient temperature is  $40^{\circ}\text{C}$ ; the average value over 24 hours is max.  $35^{\circ}\text{C}$ . The values on insulation strength are related to sea level. For altitudes of up to 1000 m any reduction in insulation caused by the reduced insulating property of the air is insignificant and can be ignored.

For installation at altitudes above 1000 m it is necessary to correct the values given for the rated power-frequency withstand voltage and the rated lightning impulse withstand voltage.

According to EN 62271-1 the insulating property of the clearance at an altitude of e.g. 2000 m is reduced by the factor 0.81.

## Assembly



Unless otherwise specified the switches SEA and EA can be operated in all positions. The EK switches must be fitted with an additional spring (not in the case of vertical installation). Please observe the following for the assembly of the H 27 switch-disconnector:

- Make sure not to distort the base frame of the switch when tightening the fixing screws.
- Do not fasten wall-mounting switching devices directly to the wall as its surface is usually uneven. We recommend mounting the switches on accurately aligned cross arms set up in front of the wall or to accurately adjust the switching devices on four ragbolts inserted in the wall, using two lock nuts respectively.
- When connecting cables and rails make sure to avoid any tension, thrust or torsion at the connecting contacts.

- If using circular conductors with conical terminals the clamping cones must be tightened **prior** to connections with the connecting contacts.
- The arcing chambers are not to be distorted, otherwise the central striking of the lagging contacts in the arcing chambers is no longer guaranteed.
- Hold the fixing screws in place with a second wrench when tightening the nuts.

When touching up any damaged paint surfaces, always make sure not to apply paint to bearings and joints, springs and plastic parts or parts with galvanized protective coating.

When switching on and off in wall-mounted switching devices, the applied operating mechanism must reach the stop position without causing any overtravel in the operating mechanism.

**Observe direction of rotation!** (refer to 774 and 776)

## Commissioning and operation

The operation or ON and OFF switching of the disconnecting switch and earthing switch is by means of an operating mechanism which can be optionally installed to the right or to the left of the operating shafts (Fig. ③, ⑥). For instructions on the actuation of all operating mechanisms please refer to 774 (Actuators) and 776 (Motor-Operated Mechanisms).

The switching instant has already been correctly adjusted prior to delivery.

Each and every switch is adjusted and tested prior to leaving the factory!

Nevertheless, satisfactory operation of the switch should be checked prior to commissioning.

When doing this, please observe the following points:

## Commissioning and operation

1. The stops of the operating shafts must always reach the respective end position ④ . The switching angle for load-break and earthing switches is  $90^\circ$  (for wall-mounted switchgears).
2. The switch blades ⑧ must strike centrally in the arcing chamber ① , the disconnecting blades ⑬ must strike exactly in the contact jaws ⑪ .
3. Check attached trip coils and signalling contacts for satisfactory operation.
4. For load-break switches with fuse tripping actuator

linkage h.v.h.b.c. fuse links are installed with a tripping impact force of 80 N.

**Always carry out a fuse tripping function test using a DRIESCHER dummy cartridge with a tripping impact force of 70 N.**



**For all switches with trip-free mechanism (EA, SEA versions) always ensure that the switch can disconnect unexpectedly when the release mechanism is touched (Fig. ② , ⑤ , ⑨ )**

**In the event of trip free release, actuate the shaft of the switch ( ③ ) back to position OFF.**

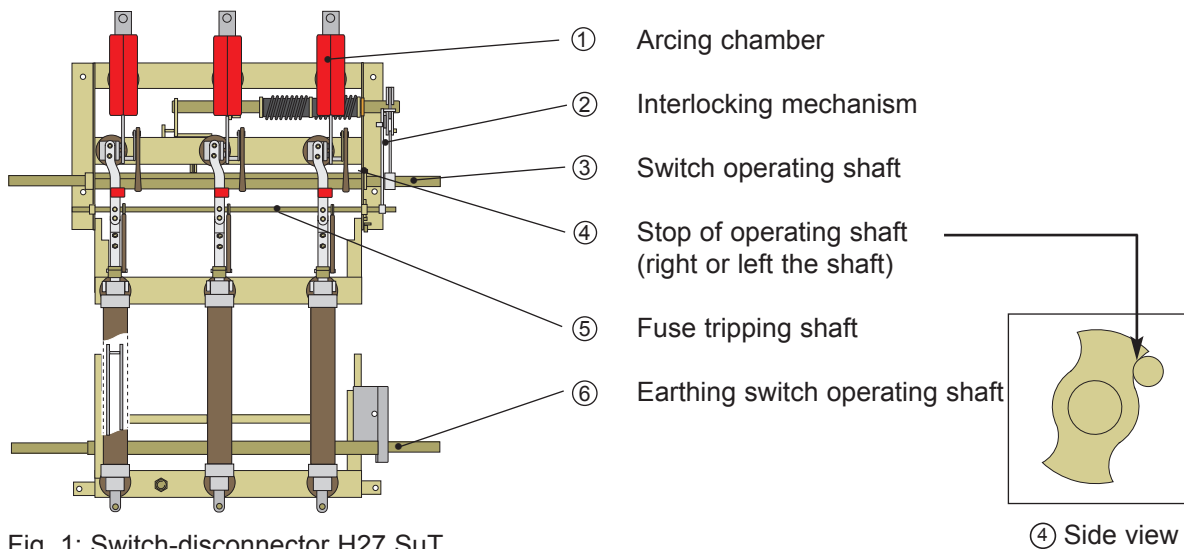


Fig. 1: Switch-disconnector H27 SuT

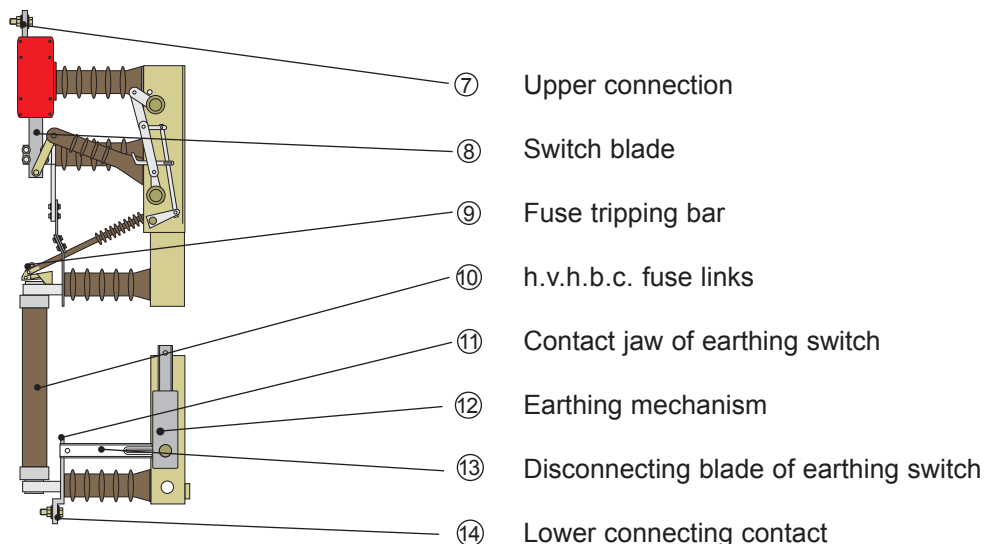


Fig. 2: Switch-disconnector H27 SuT  
(side view)

### Note:

In order to be able to guarantee the satisfactory operation of the disconnecting and earthing switch we kindly ask you to contact our trained staff for adjustments or subsequent attachment of accessories.

## General

Our products have been on the market for many years and hundreds of thousands of these switching devices are used successfully. We are able to say that the quality of our products is distinguished by a high level of ruggedness and operational safety and reliability. To guarantee that the requirements put to the switching devices are met and to avoid any possible power failures, appropriate maintenance, inspection and possible repair measures are necessary to provide a reliable power supply, wherein the measures taken depend on the age of the switching devices, its switching frequency and the level of the operated rated current.

## Inspection

Inspection should be carried out on disconnecting and earthing switches after approx. 10 years of operation in addition to annual visual checks, even if the switch is only operated with small loads and not very often. Shorter intervals between inspections may be necessary in the event of:

- negative impact from the environment, such as:
  - corrosive atmospheres, air with a high dust content, damp plant facilities etc.
  - high switching frequency

## Maintenance (refer to Fig. 1 and 2)

- a) The arcing chambers ① are maintenance free.
- b) Clean contacts depending on degree of contamination (use naphtha or cleaning agent) and apply a **thin coat** of contact grease Rivolta S.K.D. 4002 of Bremer & Leguil to the contact jaws ⑪ of the earthing switch. Do **not** grease the switch blades ⑧.
- c) Check ease of movement of all bearings and joints and lubricate with Rivolta S.K.D. 16. Particular attention is required by the h.v.h.b.c. tripping shaft ⑤ and the latching mechanism ② of every switch-disconnector.
- d) Clean insulators.
- e) Check switchgear for correct operation by carrying out several switching operations.

## Repair

**Only mount and remove switch parts and accessories after disconnecting the switch and after isolating and safeguarding the working area in accordance with VBG 4 regulations.**



**Disassembly as well as removal and installation of the switch (parts) are only to be carried out by DRIESCHER personnel or appropriately instructed skilled personnel, this being due in particular to the expertise required for the correct adjustment.**

## Insertion and replacement of h.v.h.b.c. fuse links

Switch off the switch-disconnector positioned above the fuse links.

Take up the h.v.h.b.c. fuse links with handling tongs (Order no. 77212001, *List 773*) and insert in the fuse mounting contacts in such a way that the striker pin

can operate the tripping mechanism.

(Observe marking on h.v.h.b.c. fuse link)

When a h.v.h.b.c. fuse blows we recommend also replacing the two other fuses due to possible ageing caused by overcurrent.

**You can reach our trained personnel at any time, also outside office hours, under Tel. +49 87 61 6 81-0, for assistance in troubleshooting or information on compatibility, assembly or maintenance.**

Dimensions, weights, diagrams and descriptions in this brochure are non-binding. Subject to change without notice.

switching • electricity • safely

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