

Fig. 1

1. Description

The spring-applied twin-face brakes are only suitable for dry running. The compression springs (6,7) located within a stationary coil body (1) press the inner plate (4) against the outer plate (5) or the body of the machine by way of the armature ring (3). The armature ring and outer plate or machine body serve as frictional surfaces. The distance springs (12) and the cylindrical-head screws (9) installed in the regular model secure the armature ring peripherally. They make possible adjustment or re-adjustment of the air gap without disassembly of the brake. The exact adjustment is carried out by means of nuts (13) and cylindrical-head screws (9). The coil body attached directly to the machine section with screws, or by means of the support plate. The inner plate (4) glides along the tothing on the hub (10). When a current is applied, the magnetic coil (2) is excited, and the armature ring is pulled toward the coil body against the force of the springs, and against the coil body.

2. Versions

2.1 Cf. Fig. 2

The distance springs (12) can be replaced by spacers (8). Air gap adjustment during assembly is unnecessary, but a direct air gap readjustment is impossible.

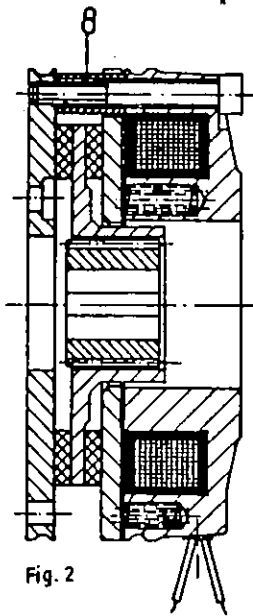


Fig. 2

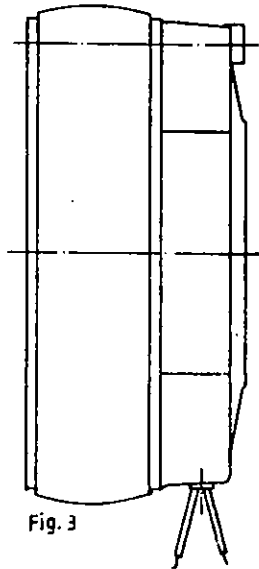


Fig. 3

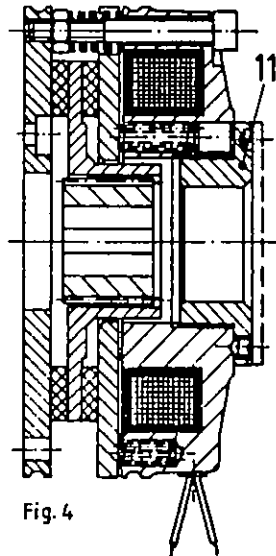


Fig. 4

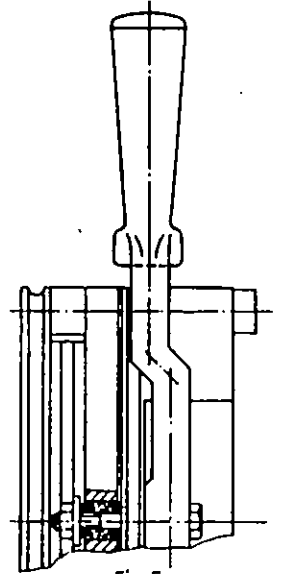


Fig. 5

2.2 Cf. Fig. 3

A dust protection ring held by grooves in the coil body and the support plate or machine section protects the armature ring and plates against the intrusion of moisture and foreign bodies.

2.3 Cf. Fig. 4

In the model with a central torque adjustment (11) the braking moment can be reduced up to 50% in an assembled condition. Note: after the adjustment has been carried out, resecure adjustment nut with a set screw.

2.4 Cf. Fig. 5

All brakes can be equipped with a hand lever, in

order to release the brake mechanically if -for instance- a power failure should occur.

3. Initial adjustment and Resetting

Due to use of a low-wear lining, resetting of the brake is normally unnecessary. If, however, there is lining wear and thus an excessive air gap as a result of extremely tough use, resetting must be carried out while the coil is in a relaxed state. After the nuts (13) are loosened, the cylindrical-head screws (9) can be tightened until the feeler gauge can be withdrawn with a slight resistance at three points at the circumference (cf. Table 1a for the feeler gauge thicknesses). The nuts must be retightened in order

Table 1	Brake size	03	07	11	15	17	23	31
a	Air gap ■ in ■	0.2	0.2	0.3	0.3	0.3	0.3	0.4
b	24 V DC at 20° C at 80° C Amps	1.08 0.87	1.25 1.01	1.66 1.34	2.12 1.74	2.53 2.05	2.74 2.22	2.91 2.36
c	Exterior diameter of coil body ■	100	125	145	160	185	212	250

to set them. Recheck the air gap after carrying out an initial or resetting operation.

4. Rectifier units (for 24 VDC connection to coil)

These rectifier units are set up for a primary of 220 V AC $\pm 10\%$, 50-60 Hz, and on the direct current side for 24 V DC $+ 2 \times 8\%$. Variations in the primary voltage can be compensated with positions 2 or 4; higher operating voltages are obtained with positions 6 or 7. The units must be connected so that the output line carries 24 V DC $+ 10\%$ when the brake is turned on. Fusing of the units is carried out by interposition of a fuse in the DC line.

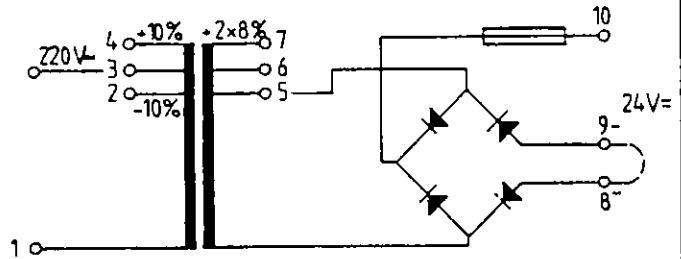


Fig. 6

4.1 Faults at rectifier units

Unit delivers no current: no mains voltage. Break on mains or on DC side. Fuse has blown.
Unit does not deliver full power: mains voltage too low (cf. 4).

5. Installation errors and their elimination

5.1 Braking excessively hard

The braking moment generated by the brake is too large. Regulation by even reduction of tension of the compression springs, or -if present- adjustment of the torque (cf. 2.3).

5.2 Brake slips

Braking ring or linings can be oiled. Clean surfaces carefully with carbon tetrachloride, trichlorethylene, or similar solvent.

5.3 Release time of brake becomes longer or brake does not release

Check air gap between coil body and armature ring (cf. Table 1a); if necessary, reset brake (cf. 3). Check connections:

Is the necessary $+ 10\%$ voltage on the coil/in the output line (Fig. 7)? Does the coil have an interruption? Connect an amperemeter into the circuit (Fig. 8); currents indicated in Table 1b are detected.

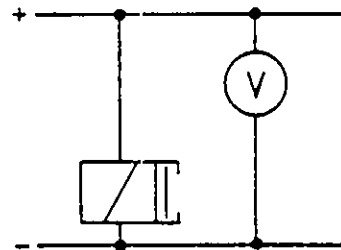


Fig. 7: Voltage measurement

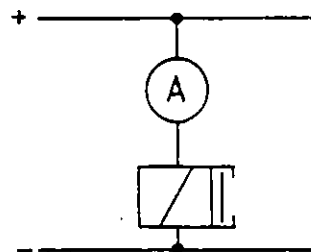


Fig. 8: Current measurement

6. Spare parts

The manufacturing number located on the coil body should be mentioned when spares are ordered. In order to avoid incorrect deliveries, we request all spare parts orders to be made in writing or by telex. The construction size of the brake can be determined from Table 1 c.