

Operating notes

The **automatic wear adjustment** is mounted in a dust-protected enclosure and ensures

- a constant braking torque,
- a constant reserve stroke of the releasing device, and
- together with the shoe clamp springs and the synchronous releasing mechanism (or spring-loaded stops), essentially maintenance-free operation of the brake without adjustment work over the full wear rate of the brake linings



Automatic wear adjustment AWA

The drum brakes of standard series RT and EB are designed for upright installation and side mounted thrusters. The basic version uses electro-hydraulic releasing devices according to DIN 15430 (Elhy/Eldro), but any other common releasing devices can also be used. From this the resulting application of the **RT and EB series** are illustrated in **overview sheets T1 to T7**. Specific dimension and data sheets are available by SHB on request.

To ensure the proper and safe function the drum brakes according to DIN 15435 must be **calculated and designed** according to DIN 15434, part 1 and **used and monitored in operation** according to DIN 15434, part 2.

The selection of the suitable brake can be provided by SHB by means of a computer program on request. The required input data should be provided by the customer on the questionnaire (available for download in pdf format). In case of using **holding brakes** it is enough to calculate the required braking torque only. In case of using **stop brakes** thermal calculation, calculation of the braking time and the stopping distance are necessary in addition, as may have to be calculated the brake lining wear. Besides, the permissible sliding (circumferential) speed at the brake linings as specified in the supplier's data sheet must not be exceeded. Particularly when using **stop brakes and emergency stop brakes** the **overspeed** of the brake drum must be taken into consideration which results from the load effect during the brake engage time (dead time of the releasing device + applying time of the brake). The increased sliding speed as a result of overspeed during lowering after **emergency stop** must be verified during TÜF testing under test load particularly if the brake is mounted to a hoisting gear of a crane with electric motor control and low inertia of the drive.

The **braking torque values** in our documents represent empirical friction values between $\mu = 0.3$ and 0.4 which are valid only for the following **operating conditions**:

- sufficient calculation of the brake by the user;
- mounted brake drum according to DIN 15431 and DIN 15437; clean, grease-free brake drum surface;
- brake drum material GG 26, GGG 40, GS 52 or St 52, depending on proposed operation;
- seated brake linings with full contact pattern (at least 70 % surface);
- rubbing speed of max. 30 m/s at full contact pressure;
- max. 5 s braking time;
- brake drum steady-state temperature max. 180 °C

The above maximum stress data must not occur simultaneously !

Other operating conditions can change the friction value of the brake linings and as a result of this also the braking torque!

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SHB Saalfelder
Hebezeugbau GmbH
Unternehmensbereich Komponenten

Phone: (03671) 44 1341,
44 1342

Fax: (03671) 44 1343

E-mail: komponenten@shb-net.de