Brake Caliper Units

APPLICATIONS
Freight Cars | High-Speed Trains | Light Rail Vehicles | Locomotives | Metros | Passenger Coaches | Regional and Commuter Trains

KNORR-BREMSE
BRAKE CALIPER UNITS

BRAKE CALIPER UNITS SUITABLE FOR BOTH AXLE- AND WHEEL-MOUNTED BRAKE DISCS.
Depending on the application Knorr-Bremse conventional or compact brake calipers can be used. Both types are highly modularized to match any application, mounting space and operational conditions. This equipment incorporates a proven robust design delivering highest availability and low life-cycle costs.

CONVENTIONAL BRAKE CALIPER UNITS WITH HANGERS
- For axle- and wheel-mounted brake discs
- Wide variety of cylinder variants also with spring-operated parking brake and hand brake
- New compact cylinder available for minimum space requirements

COMPACT BRAKE CALIPER UNITS
Cost-effective single-point interface models for fast and easy bogie assembly. Highly compact design offering many advantages in weight, space, noise emissions and life-cycle costs.
- WZK for axle-mounted brake discs
- RZS and RZKK for wheel-mounted brake discs
- Suitable for use in combination with either a hand brake or a spring-operated parking brake
BRAKE CALIPER UNITS

COMPACT CALIPER UNITS – THE COMPACT FAMILY

**WZK/WZT**

**RZKK**

**RZS/RZT**

RZT and WZT are further developments of the service-proven Knorr-Bremse standard products RZS(S) and WZK, with optimized robustness and overhaul period.

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th></th>
<th>WZK/WZT</th>
<th>RZKK</th>
<th>RZS / RZT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total pad force</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- of service brake</td>
<td>max. 110 kN</td>
<td>max. 50 kN</td>
<td>max. 90 kN</td>
</tr>
<tr>
<td>- of spring-operated parking brake</td>
<td>max. 60 kN (4.8 bar)</td>
<td>max. 45 kN (4.8 bar)</td>
<td>max. 60 kN (4.5 bar)</td>
</tr>
<tr>
<td>- of hand brake</td>
<td>max. 110 kN</td>
<td>max. 50 kN</td>
<td>max. 60 kN</td>
</tr>
<tr>
<td>Lateral axle movement</td>
<td>max. +/- 25 mm</td>
<td>max. +/- 25 mm</td>
<td>max. +/- 25 mm</td>
</tr>
<tr>
<td>Axle tilting</td>
<td>max. +/- 2°</td>
<td>max. +/- 2°</td>
<td>max. +/- 2°</td>
</tr>
<tr>
<td>Maximum width</td>
<td>338 mm</td>
<td>338 mm</td>
<td>395 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>min. 60 kg</td>
<td>min. 68 kg</td>
<td>min. 90 kg</td>
</tr>
</tbody>
</table>

**ADVANTAGES**

- Suspension arrangement with single central pin and no hangers allows maximum lateral movement and tilting of the wheelset without usage constraints
- Simple standard interface to bogie for lighter and less cost-intensive bogie-side mounting brackets and easy mounting of brake caliper units
- Maximum brake force of service brake adjustable by changing the diaphragm cylinder
- Installation space independent of brake force
- Robust design for very harsh environmental conditions (ice, sand, low temperature -60 °C)
- Fewer, sealed needle and slide bearings for less wear, less noise and low maintenance
- Version with integrated spring-operated parking brake with mechanical quick-release device and automatic reset
- Version with integrated mechanical parking brake for flexible cable operation (hand brake)
- Versions with integrated electrical indication of brake status
- Versions with different pneumatic valves