Brake Caliper Units

APPLICATIONS
Freight Cars | High-Speed Trains | Light Rail Vehicles | Locomotives | Metros | Passenger Coaches | Regional and Commuter Trains
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
- Axle-mounted brake discs
- Wheel-mounted brake discs
- Wide variety of cylinder variants also with spring-operated parking brake and hand brake

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 cost.
- WZK for axle-mounted brake discs
- RZS and RZKK for wheel-mounted brake discs
- Both suitable for use in combination with a hand brake or spring-operated parking brake

Conventional brake caliper unit

Compact brake caliper unit
COMPACT CALIPER UNITS – THE COMPACT FAMILY

WZK  RZKK  RZS

Axle-mounted  Low forces – wheel-mounted  High forces – wheel-mounted

TECHNICAL DATA

<table>
<thead>
<tr>
<th></th>
<th>WZK</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. 60 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>
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<tr>
<td>- of hand brake</td>
<td>max. 50 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>
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<tr>
<td>Maximum width</td>
<td>338 mm</td>
<td>338 mm</td>
<td>395 mm</td>
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</tbody>
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ADVANTAGES

- Suspension arrangement with single central pin and no hangers allow 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 (–60 °C)
- Fewer and 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