Brakes - Requirements of friction test benches for the international certification of brake pads and brake blocks

Appendix I

UIC approved friction test benches

The tables given in this appendix:
- are updated regularly,
- correspond to the above date of update.
## Appendix I – UIC approved friction test benches

<table>
<thead>
<tr>
<th>Owner</th>
<th>Location</th>
<th>Designation</th>
<th>Category of bench</th>
<th>Vmax(^1) Kph</th>
<th>rpm</th>
<th>Documentation</th>
<th>Date of approval</th>
<th>Expiry date</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB</td>
<td>Minden</td>
<td>X X</td>
<td>D K</td>
<td>370</td>
<td>2200</td>
<td>B 126/RP 47</td>
<td>January 1998</td>
<td>January 2020</td>
</tr>
<tr>
<td>RTA</td>
<td>Vienna</td>
<td></td>
<td>D K</td>
<td>280</td>
<td>1250</td>
<td>B 126 RP W1</td>
<td>January 2015</td>
<td>January 2020</td>
</tr>
<tr>
<td>CARS</td>
<td>Beijing</td>
<td>281975</td>
<td>X</td>
<td>500</td>
<td>3100</td>
<td>B 126 RP V1</td>
<td>June 2018</td>
<td>June 2023</td>
</tr>
</tbody>
</table>

### Independent test benches (railway benches)

<table>
<thead>
<tr>
<th>Owner</th>
<th>Location</th>
<th>Designation</th>
<th>Category of bench</th>
<th>Vmax(^1) Kph</th>
<th>rpm</th>
<th>Documentation</th>
<th>Date of approval</th>
<th>Expiry date</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB</td>
<td>Minden</td>
<td>Ik 3/3</td>
<td>D K</td>
<td>220</td>
<td>1325</td>
<td>B 126 RP N15</td>
<td>June 2011</td>
<td>June 2021</td>
</tr>
<tr>
<td>Wabtec</td>
<td>Avellino</td>
<td>3.5.6</td>
<td>D K</td>
<td>210</td>
<td>1250</td>
<td>B 126 RP C2</td>
<td>January 2012</td>
<td>January 2022</td>
</tr>
<tr>
<td>FlerTex Sinter</td>
<td>Gennevilliers</td>
<td>01</td>
<td>D K</td>
<td>500</td>
<td>2400</td>
<td>B 126 RP L5</td>
<td>April 2013</td>
<td>April 2024</td>
</tr>
<tr>
<td>Wabtec</td>
<td>Avellino</td>
<td>065</td>
<td>D K</td>
<td>500</td>
<td>3400</td>
<td>B 126 RP C6</td>
<td>June 2013</td>
<td>June 2023</td>
</tr>
<tr>
<td>ICER</td>
<td>Pamplona</td>
<td>A0004083.01</td>
<td>D K</td>
<td>200</td>
<td>1250</td>
<td>B 126 RP P2</td>
<td>April 2015</td>
<td>April 2020</td>
</tr>
<tr>
<td>Knorr-Bremse</td>
<td>Munich</td>
<td>KBM-RPS 1</td>
<td>D K</td>
<td>500</td>
<td>3000</td>
<td>B 126 RP G5B</td>
<td>January 2013</td>
<td>January 2023</td>
</tr>
</tbody>
</table>

### Manufacturers’ test benches \(^{(3)}\)

- **Federal Mogul**
- **Glinde**
- **Ik 3/3**
- **X**
- **220**
- **1325**
- **B 126 RP N15**
- **June 2011**
- **June 2021**

- **Federal Mogul**
- **Glinde**
- **Ik 3/8**
- **X**
- **500**
- **3000**
- **B 126 RP N15**
- **January 2012**
- **June 2021**

- **Wabtec**
- **Avellino** \(^{(4)}\)
- **X**
- **210**
- **1250**
- **B 126 RP C2**
- **January 2012**
- **January 2022**

- **Flertex Sinter**
- **Gennevilliers**
- **01**
- **X**
- **500**
- **2400**
- **B 126 RP L5**
- **April 2013**
- **April 2024**

- **Wabtec**
- **Avellino**
- **065**
- **X**
- **500**
- **3400**
- **B 126 RP C6**
- **June 2013**
- **June 2023**

- **ICER**
- **Pamplona**
- **A0004083.01**
- **X**
- **200**
- **1250**
- **B 126 RP P2**
- **April 2015**
- **April 2020**

- **Knorr-Bremse**
- **Munich**
- **KBM-RPS 1**
- **X**
- **500**
- **3000**
- **B 126 RP G5B 126/RP G15**
- **January 2013**
- **January 2023**

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1. Maximum speed to be simulated
2. Approved only to perform brake tests of composite brake blocks under winter conditions as requested by test program A5 of Leaflet 541-4
3. not approved for the certification of own friction products
4. mechanical flywheel simulation only

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**Contact:** DB AG, Mr. Frank Minde, Pionierstraße 10, D 32423 Minden  
**Tel:** +49 (0) 571 393 5100  
**E-Mail:** Frank.Minde@deutschebahn.com
## Notes concerning updates:

<table>
<thead>
<tr>
<th>Date of update</th>
<th>Body</th>
<th>Decision</th>
</tr>
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<tbody>
<tr>
<td>07.04.2004</td>
<td>CTR Steering Committee</td>
<td>Creation of a UIC webpage for UIC-approved components; Removal of the corresponding appendices from the relevant UIC leaflets</td>
</tr>
<tr>
<td>01.09.2004</td>
<td>SC 5, “Braking and Running Gear” Session of July 2004</td>
<td>First publication on UIC website of the tables extracted from UIC Leaflet 541-3, 5th edition, Appendix H.6; Details added of the tests since repeated for the Bucharest, Prague, Minden, Florence, Vitry MF1 and Vitry MF3 test benches (SC 04, session of January 2004, points 18.1 to 18.5).</td>
</tr>
<tr>
<td>01.04.2006</td>
<td>SG 5, “Braking and Running Gear” Session of January 2006 Point 3.5</td>
<td>Execution of the tests repeated for the purpose of extending approval for the Warsaw and Zilina test benches</td>
</tr>
<tr>
<td>01.05.2010</td>
<td>SET 7, “Braking” Session of January 2010 Point 3.1.2</td>
<td>Confirmation of the tests repeated for the purpose of extending approval for the Bucharest, Minden, Florence, Warsaw, Vitry and Zilina test benches</td>
</tr>
<tr>
<td>26.07.2010</td>
<td>SET 7, “Braking” Session of January 2010 Point 3.1.2</td>
<td>Correction of the details of the owner of the Zilina bench</td>
</tr>
<tr>
<td>24.01.2013</td>
<td>SET 7, “Braking” Session of January 2013 Point 3.1.7</td>
<td>Recast of appendix and addition of manufacturers’ test benches</td>
</tr>
<tr>
<td>18.06.2013</td>
<td>SET 7, “Braking” Session of June 2013 Point 3.2.5</td>
<td>Introduction of the CoFren test bench 065 in Avellino</td>
</tr>
<tr>
<td>22.01.2015</td>
<td>SET 7, “Braking” Session of January 2015 Point 3.2.3 &amp; 3.4.2</td>
<td>Introduction of winter brake test facilities for composite brake shoes of RTA in Vienna. Renewal of certification of test benches of DB, FS, PKP, SNCF (MF3) and ZSSK</td>
</tr>
<tr>
<td>15.04.2015</td>
<td>SET 7, “Braking” E-Mail-inquiry from 23.3.2015</td>
<td>Introduction of the ICER Brakes test bench A0004083.01 in Pamplona</td>
</tr>
<tr>
<td>02.07.2015</td>
<td>SET 7, “Braking” Session of July 2015 Point 3.4.2</td>
<td>Extension of the certification of test benches of FS and SNCF (MF1 &amp; MF3) for the certification of brake blocks</td>
</tr>
<tr>
<td>01.03.2016</td>
<td>SET 7, “Braking” Session of January 2016 Point 2.11</td>
<td>Extension of the certification of the test bench of SNCF (MF1) for the certification of brake pads</td>
</tr>
<tr>
<td>01.07.2016</td>
<td>SET 7, “Braking” Session of July 2015 Point 2.9 Point 3.4.2</td>
<td>Conversion of Appendix H.6 of UIC Leaflet 541-3 into Appendix I of UIC Leaflet 548; Extension of the certification of the test benches of Federal Mogul for brake blocks (Ik 3/3) and brake pads (Ik 3/8) in Glinde/Germany</td>
</tr>
<tr>
<td>01.02.2017</td>
<td>SET 7, “Braking” Session of January 2017 Point 3.2.6</td>
<td>Renewal of certification of the test bench 3.5.6 for brake blocks of CoFren in Avellino/Italy</td>
</tr>
<tr>
<td>01.02.2018</td>
<td>SET 7, “Braking” Session of January 2018 Point 3.2.4</td>
<td>Renewal of the certification of the test bench KBM RPS1 of Knorr-Bremse for the certification of brake pads</td>
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19.07.2018  SET 7, “Braking” Session of June 2018  Renewal of the certification of the test bench No 065 of CoFren for the certification of brake pads 
Point 3.2.5 Certification of test bench No 281975 of CARS for the certification of brake pads 
Point 3.2.6  

08.04.2019  SET 7 „Braking” E-Mail-inquiry from 21.3.2019 Renewal of the certification of the test bench no. 01 of Flertex Sinter for the certification of brake pads