

**The Appendix is an integral part of
Certificate of Accreditation No. 285/2023 of 01/06/2023**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

VÚKV a.s.

CAB number 1085, Testing Laboratory for Railway Vehicles and Containers
Bucharova 1314/8, Stodůlky, 158 00 Praha 5

Testing laboratory locations:

1. **Workplace Praha** (Not carrying out the tests) Bucharova 1314/8, Stodůlky, 158 00 Praha 5
2. **Workplace Cerhenice** Nad Dráhou 586, 281 02 Cerhenice

The Laboratory applies a flexible approach to the scope of accreditation.

The current list of activities carried out within the flexible scope is publicly available at the Laboratory on the Laboratory website <https://www.vukv.cz/zkusebna/flexibilita> in the form "List of activities within the flexible scope of accreditation".

2. Workplace Cerhenice

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
1	Static strength test	12-F 12 (WAG TSI, p. 4.2.2.2 ; LOC&PAS TSI, p. 4.2.2.4 ; ČSN EN 12663-1+A1; ČSN EN 12663-2; ČSN EN 15227; ČSN 28 1300, p. 5.2.4; ČSN 28 1310, p. 9.2.3; UIC 566, p. 4.1; UIC 577, 1; ERRI B12/RP17; VDV 152, p. 7.2.3)	Railway vehicles – shell construction of railway vehicle body	A, D
2*	Static strength test	12-F 14 (WAG TSI, p. 4.2.2.2 ; LOC&PAS TSI, p. 4.2.2.4 ; ČSN EN 12663-1+A1, p. 8.2; ČSN EN 12663-2, p. 7; UIC 566, p. 4.2; UIC 577, 3; ERRI B12/RP17)	Railway vehicle – railway vehicle subassemblies (walls, floor, roof, valve, stan, beam, container fixtures, doors, steps, linking bridge, seats, shelves, hanger, walls)	A, D
3*	Test of tow hook	12-F 23 (WAG TSI, Appendix C; UIC 535-2)	Railway vehicles	A, D
4	Crash test	12-F 09 (WAG TSI, Appendix C ; LOC&PAS TSI, p. 4.2.2.4 ; ČSN EN 12663-1+A1, p. 8.4; ČSN EN 12663-2, p. 8; ČSN EN 15227; ČSN EN 15551, p. 5.5.3, 7; UIC 566, p. 4.1.3; UIC 577, p. 2.2; ERRI B12/RP17, section 3.1)	Railway vehicles	A, D

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
5	Dynamic test	12-F 27 (ČSN EN 15551 Annex E)	Railway vehicles – railway vehicle buffers	A, D
6*	Test of deformation resistance	12-F 01 (LOC&PAS TSI, p. 4.2.2.5 ; ČSN EN 15227; ČSN EN 15551; VDV 152, p. 5.4)	Railway vehicles – front parts	A, D
7*	Running strength test	12-F 10 (WAG TSI, p. 4.2.2.2 ; LOC&PAS TSI, p. 4.2.2.4 ; ČSN EN 12663-1+A1, p. 8.3; ČSN EN 12663-2, p. 9.2; ČSN EN 13749, p. 6.2.5; ČSN 28 1300, p. 5.2.5; ČSN 28 1310, p. 9.2.4; ERRI B12/RP17; DVS 1608; DVS 1612; FKM Guideline; VDV 152, p. 7.5)	Railway vehicles	A, D
8*	Strength test	12-F 11 (WAG TSI, p. 4.2.3.6; LOC&PAS TSI, p. 4.2.3.5 ; ČSN EN 13749, p. 6.2.3; and p. 6.2.4; UIC 510-3; UIC 515-4; UIC 615-4; VDV 152, p. 7.2.4 and 7.3.2)	Railway vehicles – bogie frames and their components	A, D
9*	Curve passability test, ferry boat and traverser entry test	12-F 15 (ČSN 28 1300, p. 5.2.8 ČSN 28 1310, p. 9.2.7 UIC 510-1 ERRI B12/DT135)	Railway vehicles	A, D
10*	Measurement of torsional rigidity	12-F 21 (WAG TSI, Appendix B 2.1 and 2.3; ČSN EN 15839+A1, cl. 5; ČSN EN 14363+A2, cl. 6.3; ERRI B12/RP 17; ERRI B12/DT135, Annex E)	Railway vehicles	A, D
11*	Measurement of rotational resistance by simulation on a measuring turntable	12-F 16 (WAG TSI, p. 6.2.3.2; LOC&PAS TSI, p. 6.2.3.3; ČSN EN 14363+A2, p. 6.1.5.3.3)	Railway vehicles	A, D

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
12*	Determination of running safety against derailing on a distorted track	12-F 20 (WAG TSI, p. 4.2.3.5.1; LOC&PAS TSI, p. 4.2.3.4.2 ; ČSN 28 1300, p. 5.2.6; ČSN 28 1310, p. 9.2.8 and 9.2.9; ČSN EN 14363+A2, p. 6.1; ERRI B55/RP8)	Railway vehicles	A, D
13*	Determination of running safety, effect of vehicle on a track and running properties	12-F 18 (WAG TSI, p. 4.2.3.5.2 and 6.2.2.3; LOC&PAS TSI, p. 4.2.3.4.2; ČSN EN 14363+A2, p. 7; ČSN EN 15302; UIC 518)	Railway vehicles	A, D
14*	Determination of maximum longitudinal force transferred by propelled vehicles	12-F 19 (WAG TSI, Appendix C p. 8; ČSN EN 14363+A2, p. 6.2; ČSN EN 15839+A1; UIC 530-2)	Railway vehicles	A, D
15*	Operational test and measurement of vibrations	12-F 08 (ČSN ISO 2631-1; ČSN EN ISO 5349-1; ČSN EN ISO 5349-2; ČSN 28 1300, p. 5.2.7 and 5.2.10; ČSN 28 1310, p. 9.2.10 and 9.2.15; ČSN EN 12299; UIC 513)	Railway vehicles	A, D
16*	Determination of key parameters for the determination of gauge	12-F 13 (WAG TSI, p. 4.2.3.1; LOC&PAS TSI, p. 4.2.3.1 ; ČSN 28 0312; ČSN 28 0338; ČSN 28 0318; ČSN EN 15273-2+A1; ČSN EN 14363+A2, p. 6.4; UIC 505-5)	Railway vehicles	A, D
17 *	Measurement of running resistance	12-F 07 (ČSN EN 14067-4+A1, p. 6.4; ČSN EN 50215, p. 9.6; ČSN EN IEC 61133, p. 9.6)	Railway vehicles	A, D

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
18*	Test of brakes	12-F 24 (WAG TSI, p. 4.2.4; LOC&PAS TSI, p. 4.2.4; ČSN EN 14198+A2; ČSN EN 15806; UIC 540; ČSN EN 16834; UIC 541-05; UIC 543; UIC 544-1; UIC 546; UIC 547; EBA test modules within the meaning of EBO § 32)	Railway vehicles	A, D
19*	Measurement of noise	12-F 06 (NOI TSI; NF S31-010; ČSN EN 15892; ČSN EN 15153-2; ČSN EN 17285; ČSN EN ISO 3381; ČSN EN ISO 3095)	Railway vehicles - interior and exterior	A, D
20*	Aerodynamic test	10-F 07 (LOC&PAS TSI, p. 4.2.6.2.1, 4.2.6.2.2 and 4.2.6.2.3; ČSN EN 14067-4+A1, p. 6.1.2.1 and 6.2.2.1; ČSN EN 14067-5, p. 7.2.2)	Railway vehicles	A, D
21*	Test of earthing	12-F 17 (WAG TSI, p. 4.2.6.2 ČSN EN 50153; UIC 533)	Railway vehicles	A, D
22*	Test of air conditioning	12-F 03 (ČSN EN 13129; ČSN EN 14750-2; ČSN EN 14813-2+A1; UIC 553-1)	Railway vehicles	A, D
23*	Test of air handling	12-F 04 (ČSN EN 13129; ČSN EN 14750-2; ČSN EN 14813-2+A1; UIC 553-1)	Railway vehicles	A, D

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
24*	Test of thermal insulation properties - determination of thermal transmission coefficient	12-F 05 (ČSN EN 13129, p. 14.1; ČSN EN 14750-2, p. 9.1; ČSN EN 14813-2+A1, p. 9.1; UIC 553-1, p. 7.2)	Railway vehicles	A, D
25*	Test of interior lighting	12-F 26 (LOC&PAS TSI, p. 4.2.9.1.8 and 4.2.10.4.1; ČSN EN 13272-1; ČSN EN 13272-2)	Railway vehicles	A, D
26*	Testing of water penetration resistance	12-F 22 (ČSN 28 1300, p. 5.2.3; ČSN 28 1310, p. 9.2.12; ERRI B12/RP17, p. 4.1.6)	Railway vehicles	A, D
27	Determination of dimensions	18-F 01, chap 4.3.1 (ČSN ISO 668; ČSN 26 9340)	Containers – Universal series 1 containers (ISO)	A, D
28	Determination of the resistance to weathering	18-F 01, chap 4.3.3 (ČSN EN 283; ČSN ISO 1496-1; ČSN ISO 1496-2; ČSN ISO 1496-4; ČSN ISO 1496-5)	Containers – Universal series 1 containers (ISO)	A, D
29	Longitudinal resistance test (dynamic test)	18-F 01, chap 4.3.2 (ČSN EN 283; ČSN 26 9340; ČSN 1432; ČSN ISO 1496-1; ČSN ISO 1496-2; ČSN ISO 1496-4; ČSN ISO 1496-5)	Containers – Universal series 1 containers (ISO)	A, D
30	Determination of dimensions	18-F 02, chap 4.3.1 (ČSN ISO 668; ČSN 26 9340)	Containers - ISO Series 1 Tank Containers	A, D
31	Determination of the resistance to weathering	18-F 02, chap 4.3.3 (ČSN ISO 1496-3)	Containers - ISO Series 1 Tank Containers	A, D
32	Longitudinal resistance test (dynamic test)	18-F 02, chap. 4.3.2 (ČSN ISO 1496-3)	Containers - ISO Series 1 Tank Containers	A, D
33*	Measurement of dynamic properties	14-F 02 (NOI TSI; ČSN EN 15461+A1; ČSN EN ISO 3095)	Track	A, D
34*	Roughness measurement related to rolling noise generation	14-F 03 (NOI TSI; ČSN EN 15610; ČSN EN ISO 3095)	Track – rails and wheels	A, D

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- ¹ asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises
- ² if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest edition of the specified procedure is used (including any changes)
- ³ Degree of freedom: A - Flexibility concerning materials/products (test object), B - Flexibility concerning components/parameters/properties, C - Flexibility concerning method performance, D - Flexibility concerning method

The Laboratory is allowed to modify the test procedures with the specified degree of freedom within the specified scope of accreditation provided the measuring principle is observed. If no degree of flexibility is specified, the laboratory cannot take a flexible approach to the scope of accreditation for the test.

Explanations:

ERRI	European Rail Research Institute
UIC	International Union of Railways
TNŽ Railways)	Technical standards of Railways issued by České dráhy, a.s. (Czech
EBO	Railway Construction and Operating Regulations issued by the Federal Railway Authority in Bonn
UIC xxx	Regulations issued by the International Union of Railways
ERRI Bxxx/RPxx	Reports issued by the European Rail Research Institute
Railway vehicles	Propelling and propelled railway vehicles operating on national, regional and local tracks, special railway vehicles (metro) and tram vehicles
NOI TSI	technical specification of interoperability relating to the subsystem "rolling stock - noise" (Commission Regulation (EU) No. 1302/2014)
WAG TSI	technical specification of interoperability relating to the subsystem "rolling stock – freight wagons" of the rail system in the European Union (Commission Decision (EU) No. 321/2013 as amended by the Commission Decision (EU) No. 1236/2013)
LOC&PAS TSI	technical specification for interoperability relating to the "rolling stock – locomotives and passenger rolling stock" subsystem of the rail system in the European Union (Commission Regulation (EU) No. 1302/2014)
rr-F xxx	internal document (test method) of the VÚKV a.s. Testing Laboratory