

DIN EN 14033-4:2019-06 (E)

Railway applications - Track - Railbound construction and maintenance machines - Part 4: Technical requirements for running, travelling and working on urban rail

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
1.1	General	6
1.2	Scope of urban rail systems	6
2	Normative references	7
3	Terms and definitions	8
4	Machines designed for running on urban rail systems	8
4.1	Compliance with EN 14033-1:2017	8
4.2	Exceptions to compliance with EN 14033-1:2017	8
4.2.1	Rolling stock gauge - General rules, EN 14033-1:2017, 5.1	8
4.2.2	Frame, EN 14033-1:2017, 6.1	8
4.2.3	Bogie and running gear, general, EN 14033-1:2017, 7.1	9
4.2.4	Bogie and running gear, other components, EN 14033-1:2017, 7.2.2	9
4.2.5	Static axle loads, EN 14033-1:2017, 7.4	9
4.2.6	Wheel profile, EN 14033-1:2017, 7.5	9
4.2.7	Shape and dimensions of the axles and wheelsets, EN 14033-1:2017, 7.6	9
4.2.8	Axle arrangement and axle loads, EN 14033-1:2017, 7.7.1	9
4.2.9	Design for longitudinal compressive forces, EN 14033-1:2017, 7.8	9
4.2.10	Lifeguards, EN 14033-1:2017, 7.9	9
4.2.11	Running safety, EN 14033-1:2017, Clause 8	9
4.2.12	Brakes, EN 14033-1:2017, Clause 9	10
4.2.13	Buffing and draw gear, EN 14033-1:2017, Clause 10	10
4.2.14	Operation of track circuits, axle counters, treadles for level crossings, hot box detectors and unreleased brake detectors, EN 14033-1:2017, Clause 11	10
4.2.15	Warning horns, EN 14033-1:2017, 13.1	10
4.2.16	Headlights and marker lights, EN 14033-1:2017, 13.2 to 13.3	10
4.2.17	Access to cab, EN 14033-1:2017, 14.2	11
4.2.18	Windscreens and forward facing windows, EN 14033-1:2017, 14.3.4	11
4.2.19	Area of visibility, EN 14033-1:2017, 14.6	11
4.2.20	Fire protection - material requirements, EN 14033-1:2017, 15.3.1	11
4.2.21	Electromagnetic compatibility, EN 14033-1:2017, 15.5	12
4.2.22	Fuel tanks and pipework, EN 14033-1:2017, 16.3.1	12
4.2.23	Power equipment, EN 14033-1:2017, 16.4	12
4.2.24	Design for recovery purposes, EN 14033-1:2017, Clause 18	12
4.2.25	Marking and numbering EN 14033-1:2017, Clause 19	12
4.3	Additional requirements for machines running on urban rail systems	12
4.3.1	Route selection	12
4.3.2	Communication	12
4.3.3	Traction systems	12
4.3.4	Equipment powered by electrical traction supply systems	13
4.3.5	Noise	13
5	Machines designed for travelling and working on urban rail systems	13
5.1	Compliance with EN 14033-2:2017	13
5.2	Exceptions to compliance with EN 14033-2:2017	13

5.2.1	Maximum wheel loads, EN 14033-2:2017, 5.1.4	13
5.2.2	Safety against derailment, EN 14033-2:2017, 5.2.2 and 5.2.3	13
5.2.3	Working gauge, EN 14033-2:2017, 5.3.2	13
5.2.4	Access to working places, EN 14033-2:2017, 5.5.2	13
5.2.5	Electromagnetic compatibility, EN 14033-2:2017, 5.7	13
5.2.6	Protection from live overhead lines, EN 14033-2:2017, 5.8.2	14
5.2.7	Minimum safety distance between machine parts and conductor rail, EN 14033- 2:2017, 5.8.4	14
5.2.8	Pantographs, EN 14033-2:2017, 5.8.6	14
5.2.9	Fire protection - material requirements, EN 14033-2:2017, 5.9.1	14
5.2.10	Marker lights for warning in travelling mode, EN 14033-2:2017, 5.11.1	14
5.2.11	Stopping distances, EN 14033-2:2017, 5.12.2	15
5.2.12	Holding on gradients, EN 14033-2:2017, 5.12.3	15
5.2.13	System for warning in travelling mode, EN 14033-2:2017, 5.13.2	15
5.2.14	Recovery conditions, EN 14033-2:2017, 5.14	15
5.2.15	Parameters which influence ground based systems, EN 14033-2:2017, 5.16	15
5.2.16	Remote control, EN 14033-2:2017, 5.19	15
5.3	Equipment powered by electrical traction supply systems	15
6	General safety requirements for machines designed for use on urban rail systems	16
6.1	Compliance with EN 14033-3:2017	16
6.2	Exceptions to compliance with EN 14033-3:2017	16
6.2.1	Additional requirements introduced by an Urban Rail Manager	16
6.2.2	Windows, EN 14033-3:2017, 5.4.8	16
6.2.3	Exhaust gasses, EN 14033-3:2017, 5.20.1	16
6.2.4	Warning systems, EN 14033-3:2017, 5.29	16
7	Instruction handbook	16
Annex A (normative)	Special national conditions	18
Annex B (informative)	Structure of European Standards for track construction and maintenance machines	20
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC aimed to be covered	23
Bibliography	24