

DIN EN 1501-2:2021-05 (E)

Refuse collection vehicles - General requirements and safety requirements - Part 2: Side loaded refuse collection vehicles

Contents		Page
European foreword		4
Introduction		6
1	Scope	8
2	Normative references	9
3	Terms and definitions	11
4	List of significant hazards	18
5	Safety requirements and protective measures	21
5.1	General	21
5.2	Danger Zones	21
5.2.1	General	21
5.2.2	Verification	23
5.3	Compaction mechanism	23
5.3.1	General	23
5.3.2	Interaction between bodywork and compaction mechanism	23
5.3.3	Hopper	24
5.3.4	Relationship between the compaction mechanism and the rake rail	24
5.3.5	Guide flap	24
5.3.6	Additional equipment(s)	24
5.3.7	Guards	24
5.3.8	Electro-sensitive protective equipment (ESPE)	25
5.3.9	Side loaded RCV with rotation drum body	25
5.3.10	Controls for the compaction mechanism	25
5.3.11	Rear of the cab protection	25
5.4	Discharge system	26
5.4.1	Controls for discharge system	26
5.4.2	Operation conditions for the tailgate or discharge door	27
5.4.3	Operation conditions for emptying the body	27
5.4.4	Laterally hinged discharge door	27
5.5	Requirements for refuse container lifting device(s) and interfaces	27
5.6	Top door(s) (if present)	27
5.6.1	Opening and closing of the top door	27
5.6.2	Top door warning	27
5.7	Hydraulic, pneumatic and electric systems	27
5.7.1	Hydraulic system	27
5.7.2	Pneumatic system	28
5.7.3	Electric system	28
5.8	Operating symbols	28
5.9	Riding on side loaded RCV by operator	30
5.9.1	General	30
5.9.2	Cab	30
5.10	Control systems	30
5.10.1	General requirements for safety circuits	30
5.10.2	Emergency stop devices	30
5.10.3	Control devices	31
5.11	Monitoring and warning	33

5.11.1	Closed-circuit television system	33
5.11.2	Communication	33
5.11.3	Warnings	33
5.12	Electrical components	35
5.12.1	General	35
5.12.2	Protective interlocks	35
5.12.3	Two-hand operating controls	35
5.12.4	Overload protection	35
5.12.5	Energy interruption	35
5.12.6	Position sensors	35
5.12.7	Terminals and wire connections	35
5.12.8	Electric cables and wiring harness	35
5.12.9	Working lights	36
5.13	Requirements for maintenance	36
5.13.1	Unexpected start-up	36
5.13.2	Raised discharge door or tilting body	36
5.13.3	Access and inspection door(s)	36
5.13.4	Requirements to avoid blockages	36
5.13.5	Cleaning	36
5.14	Stability and driving security	37
5.14.1	General	37
5.14.2	Stability in container lifting mode	37
5.14.3	Stability in discharging mode	37
5.14.4	Lateral stability	37
5.14.5	Minimum front axle mass	37
5.15	Exhaust pipe	37
5.16	Ventilation of the body	37
5.17	Vibration	38
5.17.1	Hand-arm vibration	38
5.17.2	Whole-body vibration	38
5.17.3	Uncertainty of vibration measurements	38
5.18	Noise control	38
6	Verification	39
7	Information for use	39
7.1	Instruction handbook	39
7.2	Maintenance	41
7.3	Spare parts list	42
7.4	Data sheet	42
7.5	Marking	42
Annex A(normative) Components of the vehicle		43
Annex B(informative) Volumes		45
Annex C(normative) Basic scenarios of different danger zones		46
Annex D(informative) Illuminated areas		54
Annex E(normative) Warning signals		55
Annex ZA(informative) Relationship between this Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered		56
Bibliography		61