

# DIN EN 15723:2010-09 (E)

**Railway applications - Closing and locking devices for payload protecting devices against environmental influences - Requirements for durability, operation, indication, maintenance, recycling**

---

## Contents

Page

Foreword .....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Requirements .....	7
4.1 General .....	7
4.2 Strength of side doors and their locking devices, sliding doors and single and multi-leafed doors under transverse loading .....	8
4.3 Strength of sliding walls and their locking devices .....	8
4.4 Forces resulting from the passing of trains .....	8
4.4.1 General .....	8
4.4.2 Movable roofs .....	8
4.4.3 Side doors of high-sided open wagons and their closing and locking devices .....	8
4.4.4 Unloading doors of gravity discharge wagons and their closing and locking devices .....	8
4.5 Safeguards of movable protecting devices (i.e. doors, sliding walls, sliding roofs, flaps, hoods) .....	9
4.6 Verification of durability and functioning .....	9
4.7 Instructions for use .....	9
4.8 Environmental conditions .....	9
4.9 Recycling .....	9
5 Maintenance/repair .....	10
Annex A (normative) Strength requirements for wagon components and systems for payload protection .....	11
A.1 General .....	11
A.2 Strength of sliding walls .....	11
A.3 Forces resulting from the passing of trains .....	12
A.3.1 Individual strength requirements for sliding walls and their locking devices .....	12
A.4 Moveable roofs .....	13
A.5 Strength of the side doors of high sided open wagons .....	13
Annex B (informative) Specification tables .....	14
B.1 General .....	14
B.2 Application case "Movement of lever parallel to the level of symmetry of the human body, using both hands" .....	15
B.3 Application case "Pulling and pressing in vertical level, using one hand" .....	17
B.4 Application case "Pulling and pressing in horizontal level, using one hand" .....	19
B.5 Application case "Pulling and pressing in horizontal level, using both hands" .....	21
B.6 Application case "Applied forces for lifting, carrying or holding loads" .....	23

<b>B.7</b>	<b>Application case "Applied moments at cranks with horizontal rotation axis, parallel to the level of symmetry of the human body, using both hands" .....</b>	<b>25</b>
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC .....</b>	<b>28</b>
<b>Bibliography</b>	<b>.....</b>	<b>29</b>