

DIN EN 1570-1:2024-07 (E)

Safety requirements for lifting tables - Part 1: Lifting tables serving up to two fixed landings

| Contents | | Page |
|-------------------------|---|-------------|
| European foreword | | 4 |
| Introduction | | 6 |
| 1 | Scope | 7 |
| 2 | Normative references | 8 |
| 3 | Terms and definitions | 10 |
| 4 | Safety requirements and/or protective/risk reduction measures | 14 |
| 4.1 | General | 14 |
| 4.2 | Calculations | 14 |
| 4.2.1 | Stresses | 14 |
| 4.2.2 | Platform deflection | 16 |
| 4.2.3 | Strength of the building/structure supporting the lifting table | 17 |
| 4.2.4 | Stability | 17 |
| 4.3 | General requirements for all lifting tables | 18 |
| 4.3.1 | Protection against crushing and shearing | 18 |
| 4.3.2 | High temperatures | 20 |
| 4.3.3 | Speed | 20 |
| 4.4 | Protection for the travel zone and for the platform | 20 |
| 4.4.1 | General | 20 |
| 4.4.2 | Protection from the travel zone at an upper landing | 21 |
| 4.4.3 | Protection for the area underneath the platform | 22 |
| 4.4.4 | Platform protection | 22 |
| 4.4.5 | Guard-rails | 23 |
| 4.4.6 | Screens | 24 |
| 4.4.7 | Opening protections within guard-rails or screens | 25 |
| 4.4.8 | Flexible guards | 31 |
| 4.4.9 | Deflectors | 31 |
| 4.5 | Design of the platform | 32 |
| 4.5.1 | General | 32 |
| 4.5.2 | Anchorage | 32 |
| 4.6 | Levels and clearances of fixed landings | 33 |
| 4.7 | Driving system | 33 |
| 4.7.1 | General | 33 |
| 4.7.2 | Hydraulic drive system | 35 |
| 4.7.3 | Mechanical drive systems | 36 |
| 4.7.4 | Rope drives | 37 |
| 4.7.5 | Tension chain drives | 38 |
| 4.7.6 | Rigid chain drives | 38 |
| 4.7.7 | Screw drives | 39 |
| 4.7.8 | Rack and pinion drives | 39 |
| 4.7.9 | Belt drives | 39 |
| 4.7.10 | Manual drives | 40 |
| 4.8 | Controls | 40 |
| 4.9 | Electrical system | 42 |
| 4.9.1 | General | 42 |
| 4.9.2 | Protection rating | 42 |
| 4.9.3 | Batteries | 43 |

| | | |
|--|---|----|
| 4.10 | Safety devices | 43 |
| 4.10.1 | General | 43 |
| 4.10.2 | Safety edges | 43 |
| 4.10.3 | Maintenance support | 44 |
| 4.11 | Additional requirements for mobile lifting tables | 44 |
| 4.12 | Additional requirements for lifting tables in AGVs and in skiliet-lines | 48 |
| 5 | Verification of the safety requirements and/or measures | 50 |
| 5.1 | General | 50 |
| 5.2 | Design check | 51 |
| 5.3 | Manufacturing check | 51 |
| 5.4 | Visual inspection | 51 |
| 5.5 | Practical test | 52 |
| 5.6 | Electrical tests | 52 |
| 6 | Instructions for the user | 52 |
| 6.1 | General | 52 |
| 6.2 | Marking | 52 |
| 6.3 | Instructions for use | 54 |
| 6.4 | Instructions for installation | 55 |
| 6.5 | Instructions for maintenance and inspection | 56 |
| Annex A (normative) Test procedures | | 58 |
| Annex B (informative) List of significant hazards | | 60 |
| Annex C (normative) Manual force measurements methods | | 64 |
| C.1 | Driving lifting tables | 64 |
| C.2 | Maximum allowable forces for raising and lowering manual lifting tables | 64 |
| Annex D (normative) Dimensions of steps and ladders | | 65 |
| Annex E (informative) Sign pictograms | | 67 |
| Annex F (informative) Controls and corresponding pictograms | | 69 |
| F.1 | General | 69 |
| F.2 | Requirements according to 4.8.3 | 69 |
| Annex G (informative) Risk when passing an upper landing | | 72 |
| Annex H (informative) Machines covered by this standard versus EN 280 machines | | 73 |
| Annex I (informative) Guide to travel zone risks | | 76 |
| I.1 | General | 76 |
| I.2 | Landing, risk question 1 | 77 |
| I.3 | Landing, risk question 2 and 3 | 78 |
| I.4 | Platform, risk question 4 | 79 |
| I.5 | Platform, risk question 5 and 6 | 80 |
| Annex ZA (informative) Relationship between this European Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered | | 81 |
| Bibliography | | 85 |