

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