

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

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

---

<b>Contents</b>		<b>Page</b>
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