

DIN EN 12183:2022-12 (E)

Manual wheelchairs - Requirements and test methods

Contents		Page
	European foreword	4
	Introduction	5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Test apparatus	8
5	General requirements	9
5.1	Risk management	9
5.2	Intended performance and technical documentation	9
5.3	Clinical evaluation and investigation	9
5.4	Wheelchairs that can be dismantled	9
5.5	Single-use fasteners	9
5.6	Biocompatibility and toxicity	10
5.7	Contaminants and residues	10
5.8	Infection and microbiological contamination	10
5.9	Overflow, spillage, leakage, and ingress of liquids	11
5.10	Safety of moving parts	12
5.11	Prevention of traps for parts of the human body	13
5.12	Folding and adjusting mechanisms	13
5.13	Surfaces, corners, edges and protruding parts	14
5.14	Ergonomic principles	14
5.15	Applicable provisions for specified types of wheelchair	15
5.16	Recommendations	15
6	Preparation for testing	15
6.1	General	15
6.2	Test dummy	15
7	Wheelchair performance	15
7.1	Static stability	15
7.2	Static, impact and fatigue strength	16
7.3	Tipping fatigue strength	16
7.4	Wheelchairs for use as seats in motor vehicles	17
7.5	Surface temperature	18
8	Component properties	19
8.1	Foot supports, lower leg support assemblies and arm supports	19
8.2	Component mass	20
8.3	Pneumatic tyres	20
8.4	Means for maintaining a sitting posture	20
8.5	Resistance to ignition	21
9	Propulsion and braking systems	21
9.1	Means for operating brakes	21
9.2	Braking functions	23
9.3	Pushing force	25

10	Operations	26
10.1	Operations intended to be carried out by the occupant and/or assistant	26
10.2	Controls intended for operation by the occupant	26
10.3	Controls intended for operation by an assistant	26
10.4	Push handles and handgrips	27
10.5	Operating forces	27
10.6	Seating adjustments for tilting and reclining	28
11	Electrical systems -- Electrically powered ancillary equipment	29
12	Information supplied by the manufacturer	29
12.1	General	29
12.2	Pre-sale information	29
12.3	User information	29
12.4	Service information	30
12.5	Labelling	31
13	Test report and figures	31
Annex A (informative) Recommendations for dimensions and manoeuvring space of manual wheelchairs		
		37
Annex B (informative) Recommended design features		
		39
Annex D (informative) Recommendations for caster stem angle		
		43
Annex E (informative) Hazardous substances		
		44
Annex F (normative) Applicable requirements for particular types of manual wheelchair		
		49
Bibliography		
		52