



Date 28.06.2023

TEST REPORT NO. CBC-089/2023

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Subject of testing:	<i>Manual lightweight wheelchair</i>	Classification according to
		PN-EN ISO 9999:2017-02: 12 21 03
Type / Model:	<i>Commode and shower chair "KAKADU" (Standard) + 24" Plastic wheels with quick release</i>	SN.: 0001 REF: 302018 302017
Manufacturer:	<i>MOBILEX A/S Grønlandsvej 5, DK-8660 Skanderborg</i>	Number of specimens: 1
Applicant:	<i>A-Net s.c., ul. Łaskowice 174, 93-469 Łódź</i>	
Kind of testing	<i>Testing scope according to application of Client Mechanical testing for conformity with PN-EN 12183 : 2023-02; PN-EN ISO 21856:2023-01; ISO 7176-part 1, 3, 5, 7, 8,</i>	

Test started: 12.06.2023

Test finished: 28.06.2023

Approved by:

DYREKTOR
Tkaczyk
mgr inż. Andrzej Tkaczyk

Special comments / enclosures:

- 1) Annex 1-2 – Identification of wheelchair elements

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Test results refer only to tested units.

Test results reported here are not applicable to the further modifications of the product affecting its structure, material or technology.

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CHARACTERISTIC OF MANUALLY PROPELLED WHEELCHAIR

Maximum load capacity: 150 kg		Overall mass of wheelchair: 12,7 kg / 17,1 kg	
	Description	4 x wheels A	2 wh. A+2 wh. B
Dimensions:	Length:	930 mm	1123 mm
	Height (max.)	972 - 1023 mm	972 mm
	Width:	560 mm	656 mm
Construction of frame:	Material:	Aliminium	Aliminium
	Method of fastening frame elements:	Welding/rivets/bolts	Welding/rivets/bolts
	Folding/unfolding:	Unfolding	Unfolding
Drive wheels	Ø external:	--	540 mm
	Ø pipe:	--	19 mm
	Material:	--	Plastic
	Way of fastening to driven wheel:	--	Bolts
	Number of fastening points to driven wheel:	--	7
Driving wheels	Material of ring of a wheel:	Plastic	Plastic
	Dimension of tyre:	ø124mm, width 31,5mm	24" x 1 3/8" (ø602x29,5mm)
	Pressure:	--	--
	Way of fastening wheel to construction:	Permanently	Quick connector
	Vertical adjustment (number of fixing positions)	YES 3	NO
	Horizontal adjustment (number of fixing positions):	NO	NO
	Inclination angle adjustment:	NO	NO
	Inclination angle:	0°	0°
Castor wheels	Ø of wheel:	124mm	124mm
	Width:	31,5 mm	31,5 mm
	Material of ring of a wheel:	Plastic	Plastic
	Material of fork:	Plastic	Plastic
	Vertical adjustment (number of fixing positions)	YES 3	YES 3
	Horizontal adjustment (number of fixing positions):	NO	NO
	Adjustment of axis inclination angle:	NO	NO
Backrest	Folding/unfolding:	Unfolding	Unfolding
	Backrest inclination adjustment	NO	NO
	stepless:	NO	NO
	number of fixing positions		
Tilt levers	Two singular:	NO	NO
	One lateral:	NO	NO
Push handles	Kind:	One transverse	One transverse
Parking brake	Left:	YES	YES
	Right:	YES	YES
	Kind:	4 x foot	2 x foot + 2 x Lever
	Material of lever:	Plastic	Aluminum/Plastic
	Fastening to frame:	--	Using the clamp
	Way of adjustment:		With screws and clamp stabilizing position of break towards tyre
Upholstery	Material:	Plastic	Plastic
	Colour:	Black	Black
	Wheel space in forward direction position:	465 mm	452 mm
	Wheel space in backward direction position:	465 mm	517 mm

NOTE. Measurements were made in the wheelchair with factory regulations (photo)

Legrests	Common for both legs:	NO	
	Separate for each leg:	YES	
	Stationary:	NO	
	Folding:	YES	
	Vertical adjustment (number of fixing positions)	YES	stepless
	Horizontal adjustment (number of fixing positions):	NO	
	Angle adjustment (number of fixing positions):	YES	
Accessories	Material of legrest:	Aluminum, plastic	
	Seat belt	NO	
	Anti-overturn device:	NO	
	Anterior pelvic support:	NO	
	Service :	YES	

PHOTO OF WHEELCHAIR



TESTING

NORMATIVE REFERENCES

		Applied
PN-EN ISO 21856:2023-01	Assistive products – General requirements and test methods	YES
PN-EN 12183:2023-02	Manually propelled wheelchairs – Requirements and test methods	YES
PN-EN 12184:2023-02	Electrically powered wheelchairs, scooters and their chargers – Requirements and test method	NO
ISO 7176-1:2014	Wheelchairs – Determination of static stability	YES
ISO 7176-2:2001	Wheelchairs – Determination of dynamic stability of electric wheelchairs	NO
ISO 7176-3:2012	Wheelchairs – Determination of efficiency of brakes	YES
ISO 7176-4:2008	Wheelchairs – Energy consumption of electric wheelchairs and scooters and determination of theoretical distance	NO
ISO 7176-5:2008	Wheelchairs – Determination of overall dimensions, mass and turning space	YES
ISO 7176-6:2001	Wheelchairs – Determination of maximum speed, acceleration and retardation of electric wheelchairs	NO
PN-ISO 7176-7:2001	Wheelchairs – Measurement of seating and wheel dimensions	YES
ISO 7176-8:2014	Wheelchairs – Requirements and test methods for static, impact and fatigue strengths	YES
ISO 7176-9:2009	Wheelchairs – Climatic test for electric wheelchairs	NO
ISO 7176-10:2008	Wheelchairs – Determination of obstacle-climbing ability of electric wheelchairs	NO
PN-ISO 7176-14:2001	Wheelchairs – Power and control systems for electric wheelchairs – Requirements and test methods	NO
PN-ISO 7176-15: 2002	Wheelchairs – Requirements for informative disclosure, documentation and labelling	NO
PN-EN 1021-1:2014-12	Furniture. Assessment of the ignitability of upholstered furniture. Ignition source: smouldering cigarette.	NO
PN-EN 1021-2:2014-12	Furniture. Assessment of the ignitability of upholstered furniture. Ignition source: math flame equivalent	NO
PN-ISO 7176-16:2001 equivalent: PN-90/P-04823	Wheelchairs. Resistance to ignition of upholstered parts – Requirements and test methods	NO
ISO 7176-16:2012	Wheelchairs. Resistance to ignition of upholstered parts – Requirements and test methods	NO
PN-ISO 7176-19:2008	Wheelchairs. Wheeled mobility devices for use in motor vehicles	NO

RESULT OF MECHANICAL TESTS ACCORDING TO PN-EN ISO 21856:2023-01

Requirement s according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
4.1	4.8, 5.2, 5.4.2, 5.5, 6, 8.2.1, 9.4, 10, 22, 24 i EN 1441	Risk analysis	--	N/T	
4.2	V/I	Intended performance and technical documentation	Conf.	Pos.	
4.3	EN ISO 14155	Clinical evaluation and investigation	--	N/T	
4.4	V/I	Assistive products that can be dismantled	Conf.	Pos.	
4.5	V/I	Fasteners	Conf.	Pos.	
4.6	V/I	Load limits	Conf.	Pos.	
4.7	V/I	Immobilising means	Conf.	Pos.	
4.8	60601-1-6 62366-1:2015	Usability	--	N/A	
4.9	V/I	Design requirements in relation to persons with sensory and cognitive	--	N/T	
4.10	Annex C	Considerations for accessibility	--	N/T	
4.11	ISO 3746	Feedback	--	N/T	
5		Materials			
5.1	EN 60601-1-9	Recycling	--	N/T	
5.2	V/I, B 5.2	Flammability	--	N/T	
5.2.2	V/I	Upholstered parts, mattresses, bed bases and bedding	--	N/A	
5.2.3		Polymeric parts	--	N/A	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments	
5.2.4		Electrical components	--	N/A		
5.2.5		Wiring	--	N/A		
5.3	EN ISO 10993-1 Annex. B	Biocompatibility and toxicity	--	N/T		
5.4	V/I	Contaminants and residues	--	N/A		
5.5	V/I.,B.5.5.1	Microbiological infections and contamination	Cleaning	Conf.	Pos.	<i>Comments in service manual</i>
	V/I.,B.5.5.1		Disinfection	--	N/A	
	V/I., EN ISO 22442-1 B.5.5.2		Animal tissue	--	N/A	
5.6	EN ISO 9227	Resistance to corrosion	--	N/T		
6		Emitted sound and vibration				
6.1	EN ISO 3746 A6.1	Noise and vibration	--	N/A		
6.2	EN ISO 3746	Sound levels and frequencies of audible warning devices	--	N/A		
7	EN 60601-1-2 A.7	Electromagnetic compatibility	--	N/A		
8		Electrical safety	--	N/A		
9	V/I	Overflow, spillage, leakage, and ingress of liquids	--	N/A		
10	V/I. Measur.	Surface temperature	--	N/A	$\ell \leq 41^\circ C$ ■ requirement does not concern heat of direct solar radiation – ■ requirement concerns only persons with insensitiveness of skin (who do not feel heat)	
11	V/I	Sterility	--	N/A		
12	V/I. Measur.	Safety of moving parts	Conf.	Pos.	<i>Comments in service manual</i>	
13	V/I. Measur.	Means to prevent falling out	--	N/A		
14	V/I. Measur.	Prevention of traps for parts of the human body	Conf.	Pos.	<i>Comments in service manual</i>	
14.1	V/I. Measur.	Holes and clearances	Conf.	Pos.	<i>Comments in service manual</i>	
14.2	V/I. Measur.	V-shaped openings	Conf.	Pos.	<i>Comments in service manual</i>	
15	V/I	Folding and locking mechanisms	Conf.	Pos.	<i>Comments in service manual</i>	
15.2	V/I	Locking mechanisms	Conf.	Pos.		
15.3	V/I	Prevention of trap and squeeze hazards	Conf.	Pos.	<i>Comments in service manual</i>	
16	V/I. Measur.	Carrying handles	Conf.	Pos.	<i>Comments in service manual</i>	
17	V/I. Measur.	Assistive products that support or suspend users	Conf.	Pos.	were tested by ISO 7176-8:2014	
17.4	V/I. Measur.	Tips	--	N/A		
18	V/I. Measur.	Portable and mobile assistive products	--	N/A		
19	V/I A19	Surfaces, corners, edges and protruding parts	Conf.	Pos.		
20	A 20	Hand-held assistive products	--	N/A		
21	V/I	Assistive products for children	Conf.	Pos.	<i>Comments in service manual</i>	
22	V/I. Measur. EN 60601-1	Stability	--	N/R	were tested by ISO 7176-1:2014	
23	V/I A23	Forces in soft tissues of the human body	Conf.	Pos.		
24	V/I. EN 614-1	Ergonomic principles	--	N/T	<i>The requirements relate to the design process</i>	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
25	V/I	Requirements for information supplied by the manufacturer	--	N/T	
25.2	V/I	Instructions for use	--	N/T	
25.2.2	V/I	Pre-sale information	--	N/T	
	V/I	a) information on how to obtain the user information in a format appropriate for use by people with visual, reading or cognitive disabilities	--	N/T	
	V/I	b) as far as possible, a description of the intended use, the intended user group and the intended environment	--	N/T	
	V/I	c) maximum and minimum user mass and maximum load	--	N/T	
	V/I	d) maintenance instructions, if applicable	--	N/T	
	V/I	e) if an assistive product is intended to be cleaned, a description of the method and suitable cleaning materials, including precautions needed to avoid corrosion, if applicable	--	N/T	
	V/I	f) if an assistive product is intended to be disinfected, a description of the method and suitable materials, including any precautions needed to avoid corrosion, if applicable	--	N/T	
	V/I	g) the overall dimensions of the assistive product, expressed in mm, and its mass, expressed in kg., when it is ready for use and, if applicable, when it is folded or dismantled	--	N/T	
	V/I	h) if the assistive product can be dismantled or has any removable parts, the mass expressed in kg. of each part that has a mass of more than 10 kg	--	N/T	
	V/I	i) if the assistive product is supposed to be used in combination with other products, the manufacturer shall state to which products, and how this can be done in a safe way	--	N/T	
	V/I	j) warning about dangerous combinations of devices and combinations of flame resistant and non-flameresistant material	--	N/T	
	V/I	k) a list of accessories, detachable parts and materials that the manufacturer has determined as being intended for use with the assistive product	--	N/T	
	V/I	l) if a programmable controller is fitted, information on the method of programming, the competence required to carry out the programming and the effects on performance	--	N/T	
	V/I	m) operator control adjustments	--	N/T	
	V/I	n) whether and how the assistive product can be folded or dismantled to assist in storage or transport	--	N/T	
	V/I	o) instructions regarding transport of the assistive product	--	N/T	
	V/I	p) measured sound power level	--	N/T	
25.2.3	V/I	User information	--	N/T	
	V/I	a) the location and the type of identification number/word on the assistive product shall be given for the unique identification number of the assistive product	--	N/T	
	V/I	b) the intended user	--	N/T	
	V/I	c) any adjustment or settings required before the assistive product can be used and information on how adjustments or settings affect the assistive product	--	N/T	
	V/I	d) information on adjustment possibilities and the competence required to carry out these adjustments	--	N/T	
	V/I	e) instructions on operation of all controls	--	N/T	
	V/I	f) the battery type and nominal voltage	--	N/T	
	V/I	g) instructions for battery maintenance	--	N/T	
	V/I	h) instructions for operating the battery charger, including warnings regarding any potential safety hazards	--	N/T	
	V/I	i) instructions on dismantling and re-assembly of the assistive product or any removable parts	--	N/T	
	V/I	j) the positions of points where the component parts can be gripped for safe moving and handling and/or a method for handling during dismantling, assembly or carrying	--	N/T	
	V/I	k) a warning if surface temperatures can increase / decrease when exposed to external sources of heat or cold	--	N/T	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
	V/I	l) a warning if the assistive product might disturb the operation of devices in its environment that emit electromagnetic fields	--	N/T	
	V/I	m) a warning if the performance of the assistive product can be influenced by electro-magnetic fields	--	N/T	
	V/I	n) if the intended purpose of an assistive product cannot be met without a hazard, a warning and instructions on how to operate the assistive product safety	--	N/T	
	V/I	o) if the intended purpose of an assistive product cannot be met without a hazard due to moving parts such as squeezing, a warning and instructions on how to operate the assistive product safety	--	N/T	
	V/I	p) the level of resistance to ignition of materials and assemblies	--	N/T	
	V/I	q) information on the recycling of used batteries and other parts of the assistive product	--	N/T	
	V/I	r) expected lifetime of the assistive product	--	N/T	
25.2.4	V/I	Service information	--	N/T	
	V/I	- pre-sale information - user information - instructions necessary for the maintenance, adjustment and repair of the assistive product and their placement of parts	--	N/T	
25.3	V/I	Labeling	--	N/T	
	V/I	a) name and address of the manufacturer and, in addition, name and address of the supplier if different from the manufacturer	--	N/T	
	V/I	b) model definition	--	N/T	
	V/I	c) lot or batch and/or serial number	--	N/T	
	V/I	d) year and month of manufacture	--	N/T	
	V/I	e) Unique Device Identification	--	N/T	
	V/I	f) electrical details in accordance with IEC 60601-1:2005+AMD1:2012+AMD2:2020	--	N/T	
	V/I	g) product IP rating	--	N/T	
	V/I	h) details of any other energy source used	--	N/T	
	V/I	i) maximum and minimum user mass	--	N/T	
	V/I	j) maximum load	--	N/T	
	V/I	k) assistive products and detachable parts with a mass of more than 10 kg. shall be marked with an appropriate symbol (fig. 5)	--	N/T	
26	V/I A26	Packaging	--	N/T	

TEST RESULTS ACCORDING TO PN-EN 12183:2023-02

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
5.10	V/I Measur.	Safety of moving parts	Conf.	Pos.	Tab. 1
5.11	V/I Measur.	Prevention of traps for parts of the human body	Conf.	Pos.	Tab. 2
5.11.2	V/I Measur.	V-shaped openings	Conf.	Pos.	
5.12	V/I Measur.	Folding and adjusting mechanisms	Conf.	Pos.	
5.12.2	V/I Measur.	Locking mechanisms	Conf.	Pos.	
5.13	V/I Measur.	Surfaces, corners, edges and protruding parts	Conf.	Pos.	
5.14	V/I Measur.	Ergonomic principles	Conf.	Pos.	
	V/I Measur.	a) the distance between any handle (part intended to be gripped) requiring an operating force of more than 10N and any other part of the wheelchair shall not be less than 35mm	Conf.	Pos.	
	V/I Measur.	b) the vertical distance between the upper surface of a foot support or pedal in its operating position and any other part of the wheelchair shall not be less than 75mm	Conf.	Pos.	
	V/I Measur.	c) the diameter of any operating handle or knob requiring an operating force of more than 10N shall be between 19mm and 43mm	Conf.	Pos.	

TEST RESULTS ACCORDING TO PN-EN 12183:2023-02

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
	V/I Measur.	d) the upper surface of any pedal intended for operation by an assistant shall not be more than 300mm above the ground	--	N/A	
5.15	V/I Measur.	Applicable provisions for specified types of wheelchair	--	N/A	
5.16	V/I Measur.	Recomendations	Conf.	Pos.	
	V/I Measur.	dimensions and manoeuvring space	Conf.	Pos.	Annex A
	V/I Measur.	design features	Conf.	Pos.	Annex B
	V/I Measur.	castor stem angles	Conf.	Pos.	Annex D

7 WHEELCHAIR PERFORMANCE

7.1.1	ISO 7176-1	Static stability	15,0°/16,0° 14,0°/14,5° 12,0°/15,0°	N/R.	Anti-tip supports required at static stability backwards less than 10°
7.2.1	ISO 7176-8	Static, impact and fatigue strength	Conf.	Pos.	
7.3.1	7.3.3	Tilting fatigue strength	Conf.	Pos.	20 000 of cycles with full loading of wheelchair
7.4	PN-ISO 7176-19	Wheelchairs for use as seats in motor vehicles	--	N/T	
7.5	ISO 21856	Surface temperature	--	N/A	• $\ell \leq 41^{\circ}\text{C}$ ■ requirement does not concern heat of direct solar radiation ■ requirement concerns only persons with insensitivity of skin (who do not feel heat)

8 COMPONENT PROPERTIES

8.1.1	8.1.2 V/I	Foot supports, lower leg supports and arm supports			
		Foot supports	Possibility to position the occupant's feet at the required height Presence of the technical means to prevent the occupant's feet from sliding	Conf. Conf.	Pos. Pos.
		Foot supports, lower leg supports and arm supports	a) Incorporate a means to locate it securely in any intended operating position	Conf.	Pos.
			b) Be adjustable in increments not exceeding 25mm	Conf.	Pos.
			c) Be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair	Conf.	Pos.
			d) Be within the reach space shown in Figure 1	Conf.	Pos.
			e) Be operable without the use of tools	Conf.	Pos.
			f) Means to prevent the occupant's feet from sliding into the gap shall be provided, or	Conf.	Pos.
			g) The gap between the footrests <35mm for adults and <25mm for children	--	N/A
8.2	V/I Measur.	Component mass	Presence of the handling devices (e.g. handles) in components of mass greater than 10 kg, or	N/O Conf.	-- Pos.
		Information indicating the points where components can be lifted and describing how they shall be handled during disassembly, lifting, carrying and assembly available			
8.3	V/I	Pneumatic tyres	Presence of the same type of valve connection on all tyres Valves should be readily accessible when using the intended inflating tool.	-- --	N/A N/A
		Presence of the marking of the tyres or the rims with the maximum pressure in kPa, bar or PSI		--	N/A
8.4	V/I	Anterior pelvic support		--	N/A
8.5.1	PN-EN 1021-1	Resistance to ignition of upholstered composition parts		--	N/T
8.5.2		Resistance to ignition of foam materials		--	N/T
8.5.3		Resistance to ignition of other parts		--	N/T

9 PROPULSION AND BRAKING SYSTEM

9.1.1.a	V/I	1. Accessibility and possibility to be operated	Conf.	Pos.	
	V/I	2. Location of brake operation mechanism in the region of access by the occupants (fig.1)	Conf.	Pos.	If the wheelchair is intended to be operated and driven only by user
	V/I	3. Location of brake operation mechanism in the region of access by an assistant (fig.2)	Conf.	Pos.	If the wheelchair is intended to be operated and driven only by an assistant
9.1.2		4. Engaging and disengaging force 60/25N // 60/45N	Conf.	Pos.	requirements on force – see table 3
9.1.1.b		1. For wheelchairs with a maximum occupant mass not greater than 150kg, the force applied to each lever to hold the loaded wheelchair stationary on the maximum slope specified by the manufacturer for parking brake use shall not exceed 60N	--	N/A	
Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
9.1.1.b		2. For wheelchairs with a maximum occupant mass $\geq 150\text{kg}$, the force applied to each lever to hold the loaded wheelchair stationary on the maximum slope specified by the manufacturer for parking brake use should not exceed 60N	--	N/A	
		3. The handgrip width of such brake levers when no force is applied, measured 15mm from the end of the brake lever, shall not be greater than 100mm and should not be greater than 80mm (fig. 4)	--	N/A	$\leq 100\text{ mm}$ recommended $\leq 80\text{ mm}$
9.2		Braking functions			
9.2.1	9.2.2 ISO7176-3	a. Engaging and disengaging force 60/25N // 60/45N	Conf	Pos.	requirements on force – see table 1
		b. Possibility of adjustment and/or replacement of brake	Conf.	Pos.	
		c. No components that protrude above the level of the unoccupied seat when brake is engaged in the wheelchair fitted with movable or removable arm supports	Conf.	Pos.	
		d. No deformation, free play or loss of adjustment that adversely affects the function of the wheelchair	Conf.	Pos.	60 000 cycles
		e. Fatigue strength of parking brake	Conf.	Pos.	$60\ 000\ \text{cycles}$ $f \leq 0,5\ \text{Hz}$ $40\text{N} (m \leq 100\text{kg})$ $60\text{N} (100 < m \leq 150\text{kg})$ $70\text{N} (150 < m \leq 200\text{kg})$ $80\text{N} (200 < m \leq 250\text{kg})$
9.3.1	Measur.	Pushing force	Conf. 60 N	Pos.	
10.1	V/I	Operations intended to be carried out by the occupant and/or assistant	Conf.	Pos.	
10.2	V/I	Controls intended for operation by the occupant	Conf.	Pos.	
10.3	V/I	Controls intended for operation by an assistant	Conf.	Pos.	
10.4	V/I	Push handles and handgrips			
	V/I	Location of handles	Conf.	Pos.	according to Fig. 5
	V/I Measur	Dimensions of handles	Conf.	Pos.	$length \geq 75\text{ mm}$, $\varnothing \geq 20\text{mm}$ and $\leq 50\text{mm}$
	V/I Measur	Width of grip (length of grip region)	--	N/A	$\leq 100\text{ mm}$ recommended $\leq 80\text{ mm}$
10.5.1	10.5.2	Operating forces	Conf.	Pos.	requirements on force – see table 3
10.6.1	10.6.2	Seating adjustments for tilt and recline systems	--	N/A	required warning and/or mechanism precluding seating adjustment while the occupant is seating
		Accessibility of controls for seating adjustment operated by the occupant	--	N/A	
11	EN 12184	Electrical systems – Electrically powered ancillary equipment	--	N/A	
12	V/I	Information supplied by the manufacturer			
	V/I	Information and marking conforming EN 12182 available	--	N/T	
	V/I	Information and marking conforming ISO7176-15 available	--	N/T	
	12.2	Pre-sale information available	--	N/T	
	12.3	User information available	--	N/T	
	12.4	Service information available	--	N/T	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
12.1	V/I	General			
12.2	V/I	Pre-sale Information			
	V/I	a) information on how to obtain the user information in a format appropriate for use by visually impaired people	--	N/T	
	V/I	b) a description of the intended occupant of the wheelchair, including the occupant's mass	--	N/T	
	V/I	c) the intended operator (occupant, assistant or both), intended use and intended environment	--	N/T	
	V/I	d) the overall dimensions of the wheelchair and its mass when it is ready for use and, if applicable, when it is folded and/or dismantled for storage or transportation	--	N/T	
	V/I	e) the pivot width	--	N/T	
	V/I	f) the maximum slope for use of parking brakes, expressed in degrees	--	N/T	
	V/I	g) the standard options that are available for the wheelchair	--	N/T	
	V/I	h) the type(s) of tyres that can be used on the wheelchair	--	N/T	
	V/I	i) if the wheelchair can be dismantled or has any removable parts, the mass of the heaviest part	--	N/T	
	V/I	j) a statement that the wheelchair is intended to be used as a seat in a motor vehicle, or a warning that the wheelchair is not intended to be used as a seat in a motor vehicle	--	N/T	
12.3	V/I	User information	--	N/T	
	V/I	a) the unique identification number of the wheelchair or information on the location of the unique identification number on the wheelchair	--	N/T	
	V/I	b) any adjustment or settings required before the wheelchair can be used and warnings of how adjustments or settings affect stability	--	N/T	
	V/I	c) where applicable, information on any adjustments that can be made, and the competency required to carry out these adjustments	--	N/T	
	V/I	d) instructions on operation of all controls, including brakes	--	N/T	
	V/I	e) the wheelchair manufacturer's recommended tyre pressure(s), expressed in kPa, bar or PSI	--	N/T	
	V/I	f) instructions for dealing with tyre punctures	--	N/T	
	V/I	g) instructions on whether and how the wheelchair can be folded to assist in storage or transport	--	N/T	
	V/I	h) instructions on dismantling and re-assembly of the wheelchair or any removable parts	--	N/T	
	V/I	i) instructions regarding transport of the wheelchair when it is unoccupied	--	N/T	
	V/I	j) if the manufacturer specifies that the wheelchair is intended for use as a seat in a motor vehicle, the method of attaching wheelchair tiedown and occupant restraints, and recommendations about suitable tiedown and restraint systems	--	N/T	
	V/I	k) if the manufacturer specifies that the wheelchair is not intended for use in the motor vehicle, a warning to that effect	--	N/T	
	V/I	l) instructions on how to use the means for maintaining a sitting posture, and the circumstances in which it should be used	--	N/T	
	V/I	m) instructions on how to obtain and fit the means for maintaining a sitting posture if it is not supplied with the wheelchair	--	N/T	
	V/I	n) the positions of points intended to carry additional loads	--	N/T	
	V/I	o) information on the recycling of the wheelchair	--	N/T	
	V/I	p) if the characteristics of the wheelchair exceed the limits specified in Appendix M of Regulation (EU) No 1300/2014, a statement to that effect	--	N/T	
	V/I	q) information on how to find out about product safety notices and product recalls, for example by ensuring the supplier has up-to-date contact details	--	N/T	
	V/I	r) the expected service life of the wheelchair	--	N/T	
	V/I	s) information on how to get repairs and servicing	--	N/T	
	V/I	t) warranty information	--	N/T	
12.4	V/I	Service information	--	N/T	
	V/I	The service information shall contain instructions necessary for the maintenance, adjustment and repair of the wheelchair and for the replacement of parts	--	N/T	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
12.5	V/I	Labeling			
	V/I	a) the maximum load of the wheelchair, i.e. the total of the maximum occupant mass and the maximum mass of any other items intended to be carried by the wheelchair	--	N/T	
	V/I	b) for wheelchairs where the intended use includes use as a seat in a motor vehicle, the position of attachment points for wheelchair tie-down and occupant restraint systems	--	N/T	
	V/I	c) for wheelchairs not intended to be used as a seat in a motor vehicle, a warning to that effect	--	N/T	

TEST RESULTS according to ISO 7176-1

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
PN-EN 12183	10.	Static stability of wheelchair facing up to the slope (backwards) – <i>factory regulations</i> *)	15,0°/16,0°	N/R	When static stability backwards is below 10° anti-overturn supports are required
	8.	Static stability of wheelchair positioned backwards up to the slope - <i>factory regulations</i> *)	14,0°/14,5°	N/R	
	12.	Static stability of wheelchair positioned sideward up to the slope	12,0°/15,0°	N/R	

*) Measurements were made in the wheelchair with *factory regulations* (photo)**TEST RESULTS according to PN-ISO 7176-2**

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
4.	7.1.	Stability during start and stop when wheelchair drives forwards up to the slope Force required to operate hand (or foot) steering mechanism	-	N/A N/A	Testing relates electrically powered wheelchairs
4.	7.2.	Stability of braking during drive forwards and backwards down the slope	-	N/A	
4.	7.3.	Stability during turning	-	N/A	

TEST RESULTS according to PN-ISO 7176-3

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments	
PN-EN 12183 9.2 Tab. 1	7.2 V/I Measur.	Parking brake	Effectiveness of parking brake of wheelchair positioned forwards down the slope	Conf. 23,0°/23,0° wheelchair slides down	Pos.	No rotation or wheel spin when wheelchair is on inclined plane of 7° slope (requirements of PN-EN 12183 cl. 14 Tab. 1)
PN-EN 12183 9.2 Tab. 1	7.2 V/I Measur.		Effectiveness of parking brake of wheelchair positioned backwards down the slope	Conf. 25,0°/25,0° wheelchair slides down	Pos.	
PN-EN 12183 9.2 Tab. 1	PN-EN 12183 cl.14 fig5 Measur.		Measurement of force acting on brake lever	60/25N/60/45N Conf.	Pos.	Below 60 N force engaging hand-brake is required (requirements of PN-EN 12183 cl. 14, Tab. 1)

NOTE: Measurements were made in the wheelchair with *factory regulations* (photo)

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.3	V/I Measur.	Service brake	Braking distance during drive with maximum speed forwards on horizontal plane	-	N/A Testing relates electrically powered wheelchairs
7.4	V/I Measur.		Braking distance during drive backwards on horizontal plane	-	N/A Testing relates electrically powered wheelchairs
7.3	V/I Measur.		Braking distance of wheelchair during drive forwards on slope of 5°	-	N/A Testing relates electrically powered wheelchairs
7.3	V/I Measur.		Resistance of braking system to increased temperature caused by long braking during drive forwards on horizontal plane	-	N/A Testing relates electrically powered wheelchairs

7.5	V/I Measur.	Emergency brake	Braking distance of wheelchair during drive with maximum speed forwards on horizontal slope	-	N/A	Testing relates electrically powered wheelchairs
7.3	V/I Measur.	Automatic brake	Braking distance of wheelchair during drive with maximum speed forwards on horizontal slope	-	N/A	Testing relates electrically powered wheelchairs
7.3	V/I Measur.		Braking distance of wheelchair during drive with maximum speed forwards on slope of 5°	-	N/A	Testing relates electrically powered wheelchairs

TEST RESULTS according to ISO 7176-4

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
PN-EN 12184 Tabl. 2	7	Theoretical energy range	-	N/A	Testing relates electrically powered wheelchairs

TEST RESULTS according to PN-ISO 7176-5

Test method according to clause	Checked characteristics/assemblies/parameters	Test result 4 x wheels A	Test result 2 wh. A + 2 wh. B	Opinion	Comments
8.2	Overall length of wheelchair with legrest and footrest	930 mm	1123 mm	N/R.	
8.3	Overall width	560 mm	656 mm	N/R.	
8.4	Height of grips above the ground	955-1006 mm	955 mm	N/R.	
8.5	Minimum length of folded wheelchair	524 mm	524 mm	N/R.	
8.6	Minimum overall width of folded wheelchair	484 mm	484 mm	N/R.	
8.7	Minimum height of folded wheelchair	533 mm	533 mm	N/R.	
8.8	Castor wheels lift height in the wheelchair with anti-overturn device	--	--	N/A	
8.9	Mass	12,7 kg	17,1 kg	N/R.	
8.10	Mass of the heaviest parts	7,2 kg	6,5 kg	N/R.	
8.11	Pivot width (fig. 9)	955 mm	1200 mm	N/R.	
8.12	Width of U-turn limited by spacing of walls	1100 mm	1350 mm	N/R.	
8.13	Diameter of the rotation (fig. C3)	1740 mm	1700 mm	N/R.	
8.14	Ground clearance (fig. 5)	195 mm	195 mm	N/R.	
8.15	Required width of angled corridor (fig. 15)	700 mm	850 mm	N/R.	
8.16	Required doorway entry depth (fig. 14)	1010 mm	1250 mm	N/R.	
8.17	Required corridor width for side opening (fig. 13)	700 mm	920 mm	N/R.	

According to PN-EN 12183 Annex.B and PN-ISO 7193 recommended max overall dimensions: length: 1200mm, width: 700mm, height: 1200mm

TEST RESULTS according to PN-ISO 7176-6

Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.1.	Maximum speed during drive forwards	-	N/A	Testing relates electrically powered wheelchairs
7.2.	Maximum speed during drive backwards	-	N/A	
8.1.	Maximum acceleration	-	N/A	
8.2.	Maximum deceleration	-	N/A	

TEST RESULTS according to PN-ISO 7176-7

Test method according to clause	Checked characteristics/assemblies/parameters	Test result 4 x wheels A	Test result 2 wh. A + 2 wh. B	Opinion	Comments
7.3.2.	Angle of seat plane	0,0°	0,0°	N/R.	
7.3.3.	Effective depth of seat	420 mm	420 mm	N/R.	
7.3.4.	Width of seat	450 mm	420 mm	N/R.	
7.3.5.	Effective width of seat	450 mm	450 mm	N/R.	
7.3.6.	Height of front edge of seat plane	500-551 mm	500 mm	N/R.	
7.3.7.	Angle of backrest	11,0°	11,0°	N/R.	
7.3.8.	Height of backrest	455 mm	455 mm	N/R.	
7.3.9.	Width of backrest	440 mm	440 mm	N/R.	
7.3.10.	Moving forward of headrest	--	--	N/A	
7.3.11.	Height of headrest over the seat	--	--	N/A.	
7.3.12.	Distance of footrest from seat	390-470 mm	390-470 mm	N/R.	
7.3.13.	Clearance of footrest	50 - 125 mm	50 - 125 mm	N/R.	

Test method according to clause	Checked characteristics/assemblies/parameters	Test result 4 x wheels A	Test result 2 wh. A + 2 wh. B	Opinion	Comments
7.3.14.	Length of footrest	152 mm	152 mm	N/R	
7.3.15.	Angle of footrest	103°	103°	N/R	
7.3.16.	Angle of legrest	113°	113°	N/R	
7.3.17.	Height of armrests	202 mm	202 mm	N/R	
7.3.18.	Moving forward of armrests	310 mm	310 mm	N/R	
7.3.19.	Length of armrests	240 mm	240 mm	N/R	
7.3.20.	Width of armrests	49 mm	49 mm	N/R	
7.3.21.	Angle of armrests	0,0°	0,0°	N/R	
7.3.22.	Distance between armrests	463 mm	463 mm	N/R	
7.3.23.	Position of the front of armrests	310 mm	310 mm	N/R	
7.3.24.	Diameter of drive wheel	--	540 mm	N/R	
7.3.25.	Diameter of driving wheel	124 mm	602 mm	N/R	
7.3.26.	Displacement of wheel axis horizontally	40 mm	40 mm	N/R	
7.3.27.	Displacement of wheel axis vertically	438 mm	200 mm	N/R	
7.3.28.	Diameter of castor/front wheel	124 mm	124 mm	N/R	

NOTE 1: Measurements were made in the wheelchair with factory regulations (photo)
(refer to ISO 7176-5, PN-ISO 7176-7)

NOTE 2: Measurements were made burdening the wheelchair with dummy RLG – refers to PN-ISO 7176-7

TEST RESULTS according to ISO 7176-8

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
4.	8.4.	Armrest – resistance to forces acting downwards	Conf.	Pos.	loading 888 N
4.	8.5.	Footrests - resistance to forces acting upwards	Conf.	Pos.	loading 1226 N
4.	8.6.	Anti-tip levers	--	N/A	
4.	8.7.	Grips	--	N/A	
4.	8.8.	Armrest – forces acting upwards	--	N/A	
4.	8.9.	Footrest – forces acting upwards	Conf.	Pos.	loading 824 N
4.	8.10.	Handle grips for pushing – load acting upwards	Conf.	Pos.	loading 1760 N
4.	8.11.	Scooter steering handles: Resistance to forward forces	--	N/A	
4.	8.12.	Scooter steering handles: Resistance to rearward forces	--	N/A	
4.	8.13.	Scooter steering handles: Resistance to downward forces	--	N/A	
4.	8.14.	Scooter steering handles: Resistance to upward forces	--	N/A	
4.	9.3.	Backrest – impact strength	Conf.	Pos.	25kg pendulum impact
4.	9.4.	Driving wheel – impact strength	Conf.	Pos.	10kg pendulum impact
4.	9.5.	Castor/front wheel – impact strength	Conf.	Pos.	10kg pendulum impact
4.	9.6.3.	Footrest – side impact	Conf.	Pos.	10kg pendulum impact
4.	9.6.4.	Footrest – in-line impact	Conf.	Pos.	10kg pendulum impact
4.	9.7.1.	Upward impacts on anti-tip devices	--	N/A	10kg pendulum impact
4.	9.7.2.	Forward or rearward impacts on anti-tip devices	--	N/A	10kg pendulum impact
4.	9.7.3.	Lateral impacts on anti-tip devices	--	N/A	10kg pendulum impact
4.	10.3.2.	Testing of manually propelled wheelchair on two-drum machine	Conf.	Pos.	200 000 of cycles with full loading of wheelchair (150kg)
4.	10.3.3.	Measurement of initial current for electrically powered wheelchair	-	N/A	
4.	10.3.4.	Testing of electrically powered wheelchair on two-drum machine	-	N/A	
4.	10.4.	Drop testing	Conf.	Pos.	6666 drops of wheelchair with full loading (150kg) from height of 50mm
4.	10.5.	Fatigue test of manually operated parking brakes	Conf.	Pos.	60 000 cycles

NOTE: For cl. 9.3 – angle $\Theta = 30^\circ$, for cl. 9.4 – angle $\Theta = 45^\circ$, for cl. 9.5, 9.6.3, 9.6.4 – angle $\Theta = 56^\circ$

TEST RESULTS according to ISO 7176-9

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
8	7.3	Water resistance	-	N/A	Testing concerns electrically powered wheelchairs

TEST RESULTS according to PN-ISO 7176 –10

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
PN-EN 12184: Tab. 1	7.1.	Ability to overcome obstacle during drive forwards	—	N/A	Testing concerns electrically powered wheelchairs
	7.2.	Ability to overcome obstacle during drive backwards	—	N/A	Testing concerns electrically powered wheelchairs

TEST RESULTS according to PN-ISO 7176 –14

NOTE. Testing concerns electrically propeller wheelchairs – performed by Electrotechnical Laboratory

TEST RESULTS according to PN-ISO 7176 –15

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.3		Content of service manual			
7.3.a	V/I	Data concerning guarantee	—	N/T	
7.3.b	V/I	General characteristics:			
		- description of wheelchair with photos or drawings and description of utilization	—	N/T	
		- description of user with maximum mass stated	—	N/T	
		- description of environment of intended utilization	—	N/T	
		- value of recommended pressure in pneumatic tyres	—	N/T	
7.3.c	V/I	When wheelchair is sold in elements for individual assembly			
		- list of components	—	N/T	
		- information on tools necessary to fold wheelchair	—	N/T	
		- instruction of bringing lacking or damaged parts	—	N/T	
		- assembly, installation and disassembly instruction of parts delivered by manufacturer	—	N/T	
		- instructions for preparing wheelchair to storage, transport	—	N/T	
7.3.d	V/I	Service manual of wheelchair			
		- use of wheelchair on surfaces where user moves	—	N/T	
		- get on and get off wheelchair	—	N/T	
		- illustrations explaining these instructions	—	N/T	
		- Descriptions of feasible improper use of wheelchair	—	N/T	
7.3.e	V/I	Maintenance instruction			
		<ul style="list-style-type: none">● Details of maintenance:<ul style="list-style-type: none">- service, maintenance/detection of damages, for which user is responsible- tools necessary for repair and service of wheelchair- maintenance frequency- list of parts (with numbers) and way of purchase- conditions when manufacturer, supplier takes action	—	N/T	
		<ul style="list-style-type: none">● Ways of cleaning	—	N/T	
		<ul style="list-style-type: none">● Elements intended to easy replacement:<ul style="list-style-type: none">- information on orders- instruction of disassembly- information on replacement and testing of parts- illustration of parts and their placement	—	N/T	
		<ul style="list-style-type: none">● Ways of performance dangerous activities	—	N/T	
7.3.f	V/I	Performing of parameters control	—	N/T	
7.3.g	V/I	Repair of wheelchair			
		- Identification of parts to be repaired by user	—	N/T	
		- Identification of parts operated by manufacturer or service to maintain guarantee	—	N/T	
		- Identification of parts removable and sent to manufacturer/service	—	N/T	
		- Conditions under which manufacturer/service is obliged to perform repair	—	N/T	
		- List of authorized service workshops	—	N/T	
		- Information if spare parts can be purchased	—	N/T	
		- Way of package and transport, if necessary	—	N/T	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
		Content of specification sheets of manufacturer			
Annex A	V/I	Manufacturer	--	N/T	
Annex A	V/I	Address	--	N/T	
Annex A	V/I	Model	--	N/T	
Annex A	V/I	Maximum mass of user	--	N/T	
Annex A	V/I	Overall length with legrest	--	N/T	
Annex A	V/I	Overall width	--	N/T	
Annex A	V/I	Length after assembly	--	N/T	
Annex A	V/I	Width after assembly	--	N/T	
Annex A	V/I	Height after assembly	--	N/T	
Annex A	V/I	Total mass	--	N/T	
Annex A	V/I	Mass of the heaviest part	--	N/T	
Annex A	V/I	Static stability downhill	--	N/T	
Annex A	V/I	Static stability uphill	--	N/T	
Annex A	V/I	Side static stability	--	N/T	
Annex A	V/I	Energy range	--	N/T	
Annex A	V/I	Dynamic stability uphill	--	N/T	
Annex A	V/I	Determination of obstacles	--	N/T	
Annex A	V/I	Maximum speed forward	--	N/T	
Annex A	V/I	Minimum braking distance at maximum speed	--	N/T	
Annex A	V/I	Seat plane angle	--	N/T	
Annex A	V/I	Effective depth of seat	--	N/T	
Annex A	V/I	Effective width of seat	--	N/T	
Annex A	V/I	Height of seat to front edge	--	N/T	
Annex A	V/I	Backrest angle	--	N/T	
Annex A	V/I	Height of backrest	--	N/T	
Annex A	V/I	Distance of seat from footrest	--	N/T	
Annex A	V/I	Angle between seat plane and legs	--	N/T	
Annex A	V/I	Height of armrest from seat	--	N/T	
Annex A	V/I	Distance of front part of armrest from rear rest	--	N/T	
Annex A	V/I	Diameter of drive wheel	--	N/T	
Annex A	V/I	Position of wheel axis horizontally	--	N/T	
Annex A	V/I	Width of turning	--	N/T	

Pos. – positive; Neg – negative; N/T – not tested; N/A – not applicable; N/R – not required, N/O – not occurred, V/I – visual inspection, Conf. – conformed.

NOTE 1: During visual inspection before testing any visible defects that can have an effect on test results were not stated.

NOTE 2: Sample/object for testing was delivered to the Laboratory by the Orderer.

NOTE 3: Test dummy of mass 150 kg and person of required mass were used for testing.

NOTE 4: Environment temperature for testing – 19°C.

Final assessment			
PN-EN ISO 21856:2023-01	Pos.	PN-ISO 7176-7:2001	Tested*
PN-EN 12183:2023-02	Pos.	ISO 7176-8:2014	Pos.
PN-EN 12184:2023-02	N/A	ISO 7176-9:2009	N/A
ISO 7176-1:2014	Tested*	ISO 7176-10:2008	N/A
ISO 7176-2:2001	N/A	PN-ISO 7176-14:2001	N/A
ISO 7176-3:2012	Pos.	PN-ISO 7176-15: 2002	N/T
ISO 7176-4:2008	N/A	ISO 7176-16: 2012	N/T
ISO 7176-5:2008	Tested*	PN-EN 1021-1:2014-12	N/T
ISO 7176-6:2001	N/A	PN-ISO 7176-19:2008	N/T

*) The standard does not specify requirements towards tested parameters of product

Note: Conformity assessment of product according to standard requirements refer to the scope of mechanical tests ordered by client, excluding testing of material biocompatibility with human body according to PN-EN ISO 10993-1:2010

MARKING VERIFICATION

Name of product: *Manual lightweight wheelchair*

*Commode and shower chair
"KAKADU" (Standard) +
24" Plastic wheels with quick release*

Applicant: *MOBILEX A/S
Grønlandsvej 5,
DK-8660 Skanderborg*

Requirement according to PN-ISO 7176-15:2002		Durable marking on wheelchair
8.1.a	Name and address of manufacturer	<i>N/T</i>
8.1.b	Identification of model and serial number	<i>N/T</i>
8.1.c	Year of production	<i>N/T</i>
8.1.d	Information on likely driver constraints	<i>N/T</i>
8.1.e	Maximum mass of user	<i>N/T</i>
8.2	Marking of dimension on tyres	<i>N/T</i>
Requirement according to PN-EN 12183:2023-02		Durable marking on wheelchair
12.5	a) the maximum load of the wheelchair, i.e. the total of the maximum occupant mass and the maximum mass of any other items intended to be carried by the wheelchair b) for wheelchairs where the intended use includes use as a seat in a motor vehicle, the position of attachment points for wheelchair tie-down and occupant restraint systems c) for wheelchairs not intended to be used as a seat in a motor vehicle, a warning to that effect	<i>N/T</i> <i>N/T</i> <i>N/T</i>
CE marking		<i>N/T</i>

N/A – not applicable

- END -



CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST

Mechanical Laboratory

05-077 Warszawa-Wesoła, ul. Klonowa 22
tel.: +48 603 23-26-45, e-mail: cbc.mech.test@gmail.com

ANNEX 1 TO TEST REPORT No. CBC-089/2023

Identification of wheelchair elements





CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST

Mechanical Laboratory

05-077 Warszawa-Wesoła, ul. Klonowa 22
tel.: +48 603 23-26-45, e-mail: cbc.mech.test@gmail.com

ANNEX 2 TO TEST REPORT No. CBC-089/2023

Identification of wheelchair elements

