



# POLISH CENTRE FOR TESTING AND CERTIFICATION

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## Mechanical Laboratory

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Date 24.09.2009

TEST REPORT NO. *BR-151/L-274/2009*

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Subject of testing: *Toilet chair*

Classification according to PN-EN ISO 9999:2001 :  
09 33 03

Type / Model: *KAKADU*

Factory ref. no.: *8120840085*

Manufacturer: *MOBILEX A/S, Noerskovvej 1  
DK - 8660 Skanderborg*

Number of specimens: *1*

Applicant: *BEO MedConsulting GmbH  
Helmholtzstr. 2, D-10585 Berlin*

Kind of testing *Testing scope according to application of Client  
Mechanical testing for conformity with PN-EN 12183 : 2002 cl. 7.1, 7.2.1, 7.2.2;  
PN - ISO 7176 -3:1998; PN - ISO 7176 -8:2002*

Test started: *16. 09 .2009 r.*

Test finished: *24.09.2009 r.*

Performed by:

*Mirosław Szymański*

Checked by:

*Ireneusz Czerwiński*

Approved by:

KIEROWNIK  
LABORATORIUM MECHANICZNEGO

*mgr inż. Andrzej Tkaczyk*

### Special comments / enclosures:

*Annex 1: Identification of toilet chair 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 his structure, material or technology.

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AB 010



**CHARACTERISTIC OF TOILET CHAIR  
KAKADU**

<b>Name of toilet chair:</b> <i>KAKADU</i>		<b>Factory ref. no.</b> <i>8120840085</i>		
<b>Maximum load capacity:</b> <i>130kg</i>		<b>Overall mass of toilet chair:</b> <i>12,9 kg</i>		
Description			Comments	
<b>Dimensions:</b>	<b>Length (footboard in maximum extension position):</b>		<i>915mm</i>	
	<b>Height :</b>		<i>967mm</i>	
	<b>Width:</b>		<i>547mm</i>	
<b>Construction of frame:</b>	<b>Material:</b>		<i>Aluminum alloy</i>	
	<b>Method of fastening frame elements:</b>		<i>Welding</i>	
	<b>Folding/unfolding:</b>		<i>Unfolding</i>	
<b>Castor wheels</b>	<b>Ø of wheel:</b>		<i>125mm</i>	
	<b>Width:</b>		<i>32mm</i>	
	<b>Material of ring of a wheel:</b>		<i>Plastic</i>	
	<b>Material of fork:</b>		<i>Plastic</i>	
	<b>Vertical adjustment (number of fixing positions)</b>		<i>NO</i>	
	<b>Horizontal adjustment (number of fixing positions):</b>		<i>NO</i>	
	<b>Adjustment of axis inclination angle:</b>		<i>NO</i>	
<b>Backrest</b>	<b>Folding/unfolding:</b>		<i>Unfolding</i>	
	<b>Backrest inclination adjustment</b>	<b>stepless:</b>	<i>NO</i>	
		<b>number of fixing positions</b>	<i>NO</i>	
<b>Tilt levers</b>	<b>Two singular:</b>		<i>NO</i>	
	<b>One lateral:</b>		<i>NO</i>	
<b>Push handles</b>	<b>Kind:</b>		<i>One transverse handle</i>	
<b>Parking brake</b>	<b>Left:</b>		<i>YES</i>	<i>Number: 2</i>
	<b>Right:</b>		<i>YES</i>	<i>Number: 2</i>
	<b>Kind:</b>		<i>Lever , foot-push brake, wheel-mounted</i>	
	<b>Material of lever:</b>		<i>Plastic</i>	
	<b>Fastening to frame:</b>		<i>Non-adjustable brake</i>	
<b>Upholstery</b>	<b>Material:</b>		<i>Soft Plastic</i>	
	<b>Colour:</b>		<i>Black</i>	
<b>Wheel space in forward direction position:</b>			<i>467mm</i>	
<b>Wheel space in backward direction position:</b>			<i>467mm</i>	
<b>Legrests</b>	<b>Common for both legs:</b>		<i>NO</i>	
	<b>Separate for each leg:</b>		<i>YES</i>	
	<b>Stationary:</b>		<i>NO</i>	
	<b>Folding:</b>		<i>YES</i>	
	<b>Vertical adjustment (number of fixing positions)</b>		<i>YES</i>	<i>stepless</i>
	<b>Horizontal adjustment (number of fixing positions):</b>		<i>NO</i>	
	<b>Angle adjustment (number of fixing positions):</b>		<i>NO</i>	
	<b>Material of legrest:</b>		<i>Aluminum alloy Plastic</i>	
<b>Accessories</b>	<b>Seat belt</b>		<i>NO</i>	
	<b>Service :</b>		<i>YES</i>	

PHOTO OF TOILET CHAIR



**Mobilex** Bath chair  
MOBILEX A/S  
Noerskovvej 1  
DK - 8660 Skanderborg  
Tel: +45 87 93 22 20  
www.mobilex-care.com

↓  
Max. 130kg

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CE produced 02/2009 Serial no. 8120840085

POLSKIE CENTRUM BADAŃ I CERTYFIKACJI S.A.  
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## TESTING

NORMATIVE REFERENCES		Applied
PN-EN 12182:2002	Technical aids for disabled persons – General requirements and test methods	NO
PN-EN 12183:2002	Manually propelled wheelchairs – Requirements and test methods	YES
PN-EN 12184:2002	Electrically powered wheelchairs, scooters and their chargers – Requirements and test method	NO
ISO 7176-1:1999	Wheelchairs – Determination of static stability	NO
PN-ISO 7176-2:1998	Wheelchairs – Determination of dynamic stability of electric wheelchairs	NO
PN-ISO 7176-3:1998	Wheelchairs – Determination of efficiency of brakes	YES
ISO 7176-4:1997	Wheelchairs – Energy consumption of electric wheelchairs and scooters and determination of theoretical distance	NO
PN-ISO 7176-5:2001	Wheelchairs – Determination of overall dimensions, mass and turning space	NO
PN-ISO 7176-6:1998	Wheelchairs – Determination of maximum speed, acceleration and retardation of electric wheelchairs	NO
PN-ISO 7176-7:2001	Wheelchairs – Measurement of seating and wheel dimensions	NO
PN-ISO 7176-8:2002	Wheelchairs – Requirements and test methods for static, impact and fatigue strengths	YES
ISO 7176-9:2001	Wheelchairs – Climatic test for electric wheelchairs	NO
PN-ISO 7176-10:1998	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-ISO 7176-16:2001	equivalent: PN-90/P-04823 Wheelchairs. Resistance to ignition of upholstered parts – Requirements and test methods	NO

Note: Toilet chair with adjustment elements regulated in a factory was performed

## TEST RESULTS according to PN-EN 12183

## DESIGN REQUIREMENTS

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Real value	Test result	Comments
6.1.1.	6.1.2	Legrests and footrests	--	N/T	
6.2.	V/I	Pneumatic tyres	--	N/T	
6.3.	V/I	Fastening of seat belt	--	N/T	
6.4.	V/I	Side and back rests	--	N/T	
6.5.	V/I	Wheelchairs to be used as seats in motor vehicle	--	N/T	
6.6.	V/I	Brakes	--	N/T	
6.7.	V/I	Mass of components Mass of the biggest component:	--	N/T	
6.8.	V/I	Anti-tilting devices Backwards static stability:	--	N/T	

## FUNCTIONAL PROPERTIES

7.1.	PN-ISO 7176-8	Static, fatigue and impact strength	Conf.	Pos.	
7.2.1.	7.2.3	Parking brake efficiency	Conf.	Pos.	For foot-push brake, the engagement force below 100 N is required
		- force applied to hand brakes:	--	N/A	
		- force applied to pushed in foot brake:	90 N	N/A	
7.2.1.	PN-ISO 7176-3 clause 7	- effectiveness of braking wheelchair facing up to the slope:	Conf.	Pos.	No rotation or wheel spin when wheelchair is on inclined plane of 7° slope
		- effectiveness of braking wheelchair positioned sideward down the slope	Conf.	Pos.	
		- effectiveness of braking wheelchair facing down the slope:	Conf.	Pos.	
7.2.2.	7.2.4	Fatigue strength of parking brake	Conf.	Pos.	60000 cycles

7.3	PN-ISO 7176-16	Resistance to ignition of upholstery parts	--	N/T	
7.5.1.	7.5.2	Push force	--	N/T	
7.6.1.	7.6.2	Characteristics of tracks of wheelchair wheels	--	N/T	
8.2.	Ogl.	Service manual	--	N/T	
8.3.	Ogl.	Marking	--	N/T	

## TEST RESULTS according to PN-ISO 7176-3

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Real value	Test result	Comments
PN-EN 12183 cl. 7.2.1	7.1 V/I Measur.	Parking brake	Effectiveness of parking brake of wheelchair positioned forwards down the slope	Conf. 15° Wheelchair loses stability	Pos.	No rotation or wheel spin when wheelchair is on inclined plane of 7° slope (requirements of PN-EN 12183 p. 7.2.1)
PN-EN 12183 cl. 7.2.1	7.1 V/I Measur.		Effectiveness of parking brake of wheelchair positioned backwards down the slope	Conf. 15° Wheelchair loses stability	Pos.	
PN-EN 12183 cl. 7.2.1	PN-EN 12183 cl. 7.2.3 Measur.		Measurement of force acting on brake lever	90N	Pos.	For foot-push brake, the engagement force below 100 N is required (requirements of PN-EN 12183 cl. 7.2.1)
7.2.1.a	V/I Measur.	Service brake	Braking distance during drive with maximum speed forwards on horizontal plane	-	N/A	Testing relates electrically powered wheelchairs
7.2.1.b	V/I Measur.		Braking distance during drive backwards on horizontal plane	-	N/A	Testing relates electrically powered wheelchairs
7.2.1.c	V/I Measur.		Braking distance of wheelchair during drive forwards on slope of 5°	-	N/A	Testing relates electrically powered wheelchairs
7.2.2.	V/I Measur.		Resistance of braking system to increased temperature caused by long braking during drive forwards on horizontal plane	-	N/A	badanie dotyczy wózków inwalidzkich napędzanych elektr.
7.2.3.a	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
7.2.3.b	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 PN-ISO 7176-8

Wymagania wg.pkt.	Metoda bad. wg.pkt.	Checked characteristics/assemblies/parameters		Real value	Test result	Comments
4.	8.4.	Armrest – resistance to forces acting downwards		Conf.	Pos.	loading 988N
4.	8.5.	Footrests - resistance to forces acting upwards		Conf.	Pos.	loading 1300N
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		--	N/A	
4.	8.10.	Handle grips for pushing – load acting upwards		Conf.	Pos.	loading 2280N
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.	9.7.2.	Frontal part of wheelchair – directly impact		Conf.	Pos.	10kg pendulum impact
4.	9.7.3.	Frontal part of wheelchair – displaced impact		Conf.	Pos.	10kg pendulum impact
4.	10.4.2.	Testing of manually propelled wheelchair on two-drum machine		Conf.	Pos.	200 000 of cycles with full loading of wheelchair (130kg *)
4.	10.4.3.	Measurement of initial current for electrically powered wheelchair		--	N/A	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Real value	Test result	Comments
4.	10.4.4.	Testing of electrically powered wheelchair on two-drum machine	--	N/A	
4.	10.5.	Drop testing	--	N/A	**)

\*) – According to the client's demand, the test was performed on a testing stand non equipped with obstacles.

\*\*\*) – According to the client's demand, the drop test was not performed.

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.

Final assessment	
PN-EN 12182:2002	N/T
PN-EN 12183:2002	Pos.
PN-EN 12184:2002	N/A
ISO 7176-1:1999	N/T
PN-ISO 7176-2:1998	N/A
PN-ISO 7176-3:1998	Pos.
ISO 7176-4:1997	N/A
PN-ISO 7176-5:2001	N/T
PN-ISO 7176-6:1998	N/A
PN-ISO 7176-7:2001	N/T
PN-ISO 7176-8:2002	Pos.
ISO 7176-9:2001	N/A
PN-ISO 7176-10:1998	N/A
PN-ISO 7176-14:2001	N/A
PN-ISO 7176-15: 2002	N/T
PN-ISO 7176-16:2001	N/T

*Note: Conformity assessment of product according to standard requirements refer to the scope of mechanical tests ordered by client*

- END -