



# CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST

## Mechanical Laboratory

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Date 5.01.2016

### TEST REPORT NO. **CBC-151/2015**

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<b>Subject of testing:</b>	<i>Walking aids with built-in handgrips and three or more legs of which two or more are having wheels, which provide support whilst walking</i>	<b>Classification according to</b> PN-EN ISO 9999:2011 : 12 06 06
<b>Type / Model:</b>	<i>Kudu Rollator SMALL</i>	<b>Nr kat.:</b> 312077 <b>SN:</b> G-549191
<b>Manufacturer:</b>	<i>MOBILEX A/S Nørskovvej 1 DK-8660 Skanderborg</i>	<b>Number of specimens:</b> 1
<b>Applicant:</b>	<i>A-Net s.c. 93-469 Łódź, ul. Łaskowice174</i>	
<b>Kind of testing</b>	<i>Mechanical testing for conformity with PN-EN ISO 11199-2 : 2005 excluding clause 4.10, 6.2, 6.3</i>	
<b>Test started:</b>	17.12.2015	
<b>Test finished:</b>	5.01.2016	

Approved by:

**DYREKTOR**  
  
mgr inż. Andrzej Tkaczyk

Special comments / enclosures:

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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 PRODUCT

<b>Name :</b> <i>Kudu - SMALL</i>	<b>Dimension of rollator:</b> --
<b>Nr. kat:</b> <i>312077</i>	<b>Product code:</b> --
<b>Maximum permissible user mass:</b> <i>150 kg</i>	<b>Mass of rollator:</b> <i>7,745 kg</i>

Description		Comments	
Elements/parameters/materials/dimensions			
Dimensions of walking rollator (fig. 2 PN-EN ISO 11199-2)	Distance between handgrips (dimension 2)	455 mm	
	Angle between of handgrip axis and direction of movement ( $\alpha$ )	0°	
	Height of rollator (dimension 6)	692 mm	min.
		795 mm	max.
	Width of rollator (dimension 5)	603 mm	
	Turning width (dimension 1)	827 mm	
	Length of rollator (dimension 4)	700 mm	
Dimensions of folded rollator (mm)		674 x 725 x 275	
Fig. 3	Handgrip - diameter	33 mm	Anatomical handgrip
	Handgrip - length	100 mm	
Wheels of rollator	Front wheels - quantity	2	castor wheels
	Front wheels - diameter	201 mm	
	Front wheels - width	34 mm	
	Front wheels - brake	none	
	Rear wheels - quantity	2	
	Rear wheels - diameter	201 mm	
	Rear wheels - width	34 mm	
	Rear wheels - brake	Included	
Tip	Diameter		
	Material	Not any	
	Colour		
Material of rollator (fig. 1)	Front legs	Aluminum,	
	Bracing member (no. 8)	steel, plastic,	
	Rear legs	Bolts, nuts	
	Height adjusting device (no. 4)		
	Handgrip (no 5), Brake elements	plastic	



**Mobilex** *Kudu rollator*  
For outdoor and indoor use

MOBILEX A/S  
Nørskovvej 1  
DK - 8660 Skanderborg  
Nørskovvej 1  
Tel: +45 87 93 22 20  
www.mobilex.dk

Max. 160 kg  
Max. width = 63 cm  
Max. load in bag = 5 kg

CE Produced Sep. 2013



## RESULT OF TESTS ACCORDING TO PN-EN ISO 11199-2:2005

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Real value	Test result	Comments
4.1	Measur.	Manoeuvrability		$\varnothing$ 201 mm width 34 mm Conf.	Pos.	$\varnothing$ front wheels $\geq 75$ mm <u>outdoor intended rollator:</u> $\varnothing$ front wheels $\geq 180$ mm width of wheels $\geq 22$ mm
4.2	5.3	Forward-direction stability		26,4 <sup>0</sup> Conf.	Pos.	Stability required $\geq 15^{\circ}$
4.2	5.4	Backward-direction stability		15,5 <sup>0</sup> Conf.	Pos.	Stability required $\geq 7^{\circ}$
4.2	5.5	Sideway-direction stability		5,3 <sup>0</sup> Conf.	Pos.	Stability required $\geq 3,5^{\circ}$
4.2	5.6	Stability – with loaded bag, /+tray	forwards	24,0 <sup>0</sup> /23,2 <sup>0</sup> Conf.	Pos.	Stability required $\geq 15^{\circ}$
			backwards	21,5 <sup>0</sup> /24,5 <sup>0</sup> Conf.	Pos.	Stability required $\geq 7^{\circ}$
			side	7,5 <sup>0</sup> /9,5 <sup>0</sup> Conf.	Pos.	Stability required $\geq 3,5^{\circ}$
4.3	V/I	Brakes	Servicing facility during rollator motion with more than 2 wheels	Conf.	Pos.	
	V/I		Parking brakes in rollator with more than 2 wheels and resting seat or intended for outdoor use	Conf.	Pos.	
	5.7.1.1		Brake grip distance (fig. 4, dimension 1)	75 mm Conf.	Pos.	$\leq 75$ mm
	5.7.1		Running brake effectiveness	Conf.	Pos.	Movement of rollator $\leq 10$ mm in 1 minute
	Measur.		Force to set parking brake	30N Conf.	Pos.	$\leq 60$ N
	Measur.		Force to release parking brake	20N Conf.	Pos.	$\leq 40$ N
	5.7.2		Parking brake effectiveness	Conf.	Pos.	Movement of rollator $\leq 10$ mm in 1 minute
	V/I		Possibility to compensate brake wear	Conf.	Pos.	
V/I	Brake not adversely affected by folding, unfolding or adjusting actions of rollator	Conf.	Pos.			
4.4	Measur. V/I	Handgrip		33 mm Conf.	Pos.	Width of handgrip $\geq 20$ mm and $\leq 50$ mm
4.5	Measur. V/I	Leg section and tip		--	N/A	$\varnothing$ tip $\geq 35$ mm (tested rollator is equipped in four wheels)
4.6	5.10	Resting seat – static loading durability		Conf.	Pos.	1 minute under load 1,2 x user's weight $\pm 2\%$ (180kg)
4.7	5.12	Mechanical durability	Fatigue test	Conf.	Pos.	200 000 cycles with load. 120kg $\pm 2\%$ , f=1Hz
4.7	5.11		Static loading test	Conf.	Pos.	loading 180kg $\pm 2\%$ , 5sek.
4.8	V/I	Adjusting devices		Conf.	Pos.	
4.9	5.14	Folding mechanism		Conf.	Pos.	
4.11	ISO 10993-1	Materials and finish	Biocompatibility of material with human body		--	N/T
	V/I		Free of discolouring of skin or clothing in contact with rollator materials		Conf.	Pos.
	V/I		Burs, shar edges, projections		Conf.	Pos.
Marking and labelling of product						
6.2	V/I	a) Maximum user mass		--	N/T	
		b) Maximum safe working load (SWL) to be marked on accessories		--	N/T	
		c) Maximum allowed angle between the longitudinal centreline of the handle and the direction of motion, if the handles are sideways adjustable		--	N/T	
		d) Manufacturer's name or trade name and address		--	N/T	
		e) Manufacturer's model identification name and/or number		--	N/T	
		f) Month and year of manufacture		--	N/T	
		g) Maximum extension of the height adjustment, marked on the adjusting members		--	N/T	
		h) Maximum width of the rollator		--	N/T	
		i) Rollator intended for outdoor/indoor use		--	N/T	
4.10	V/I	Warning showing allowed angle between handle axis and direction of movement or physical stop of angle adjusting		--	N/T	

## Contents of user manual and/or assembly manual or clear and indelible marking of product

6.3	V/I	a) Maximum rollator height	--	N/T
		b) Minimum rollator height	--	N/T
		c) maintenance and cleaning instructions, including a description of the method and suitable cleaning agents and any precautions needed to avoid corrosion and/or ageing of the materials used in construction of the rollator	--	N/T
		d) Instructions for assembly, adjustment of all kinds, folding and unfolding	--	N/T
		e) Warnings and advice about precautions relating to safe distances between moving and stationary parts (see EN 12182, Clauses 12 and 13, for guidance)	--	N/T
		f) Maximum safe working load (SWL) for load carrying accessories such as basket, tray, shopping bag, etc.	--	N/T
4.10	V/I	Warning in user manual on consequences of such an adjustment of angle between handle longitudinal axis and direction of movement outside allowed value (when handles are adjustable aside).	--	N/T

## TEST CONDITIONS

Ambient temperature	19°C	Required temperature 21°C ±5°C
Relative humidity of air:	55 %	Not required
<b>Comments:</b>		
All tests performed with maximum height adjustment of rollator.		
All tests performed in the least stable position of self-adjusting wheels.		
Tests performed with handles positioned at their maximum (allowed) angle to the direction of motion (when adjustment is possible).		
Sequence of tests: stability test, static loading test, fatigue test.		
One rollator was tested.		
During visual inspection before testing any visible defects that could have influence on test results were not stated.		

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: Deformation – 47 mm, elastic deformation – 45 mm, permanent deformation – 2 mm.

NOTE 2: An additional fatigue tests on the two-drum stand with obstacles of a height of 12mm, according to ISO 7176-8: 2002, cl. 10.4.2., was performed.

- ▶ The handles were loaded with a load of 120 kg. After 15 000 cycles, the rollator was not damaged. The test result was positive.
- ▶ The seat was loaded with a load of 100 kg. After a further 35 000 cycles, the rollator was not damaged. The test result positive

NOTE 3: Additional Drop Pouch tests were performed. The seat was loaded with a mass of 100 kg.

Rear of the rollator was dropped (on wheels) 5 times from a height of 100mm. Rollator was not damaged. The test result positive.

## CONCLUSIONS:

Testing object **conforms** with requirements of PN-EN ISO 11199-2 : 2005, excluding clause 4.10, 6.2, 6.3 in scope of mechanical testing ordered by client, excluding biocompatibility tests of material with human body according to PN-EN ISO 10993-1:2010.

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