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Date 23.12.2011

TEST REPORT NO. *BR –243/L-349/2011*

Subject of testing:	*Assistive products for walking manipulated by one arm Elbow crutch*	**Classification according to PN-EN ISO 9999:2007 :** 12 03 06
Type / Model:	*315021*	**Factory ref. no.:** --
Manufacturer:	*MOBILEX A/S, Nørskovvej I, DK – 8660 Skanderborg*	**Number of specimens:** *2*
Applicant:	*A-Net s.c., ul. Łaskowice 174, 93-469 Łódź*	
Kind of testing	*Mechanical testing for conformity with clause 4,6; methods – clause. 5*	*PN-EN 11334-1:2007 -*

Test started: *5.12.2011*

Test finished: *23.12.2011*

Performed by:	**Checked by:**	**Approved by:**
Mirosław Szymański	*Ireneusz Czerwiński*	KIEROWNIK LABORATORIUM MECHANICZNEGO *mgr inż. Andrzej Tkaczyk*

Special comments / enclosures:

1) *labels, service manual*

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Test results refer only to tested units.
This test report shall be neither copied differently as in the whole nor be published without written consent of the Laboratory.
Constructional, material or technological modifications made in product require re-assessment of product conformity with requirements of above mentioned standards

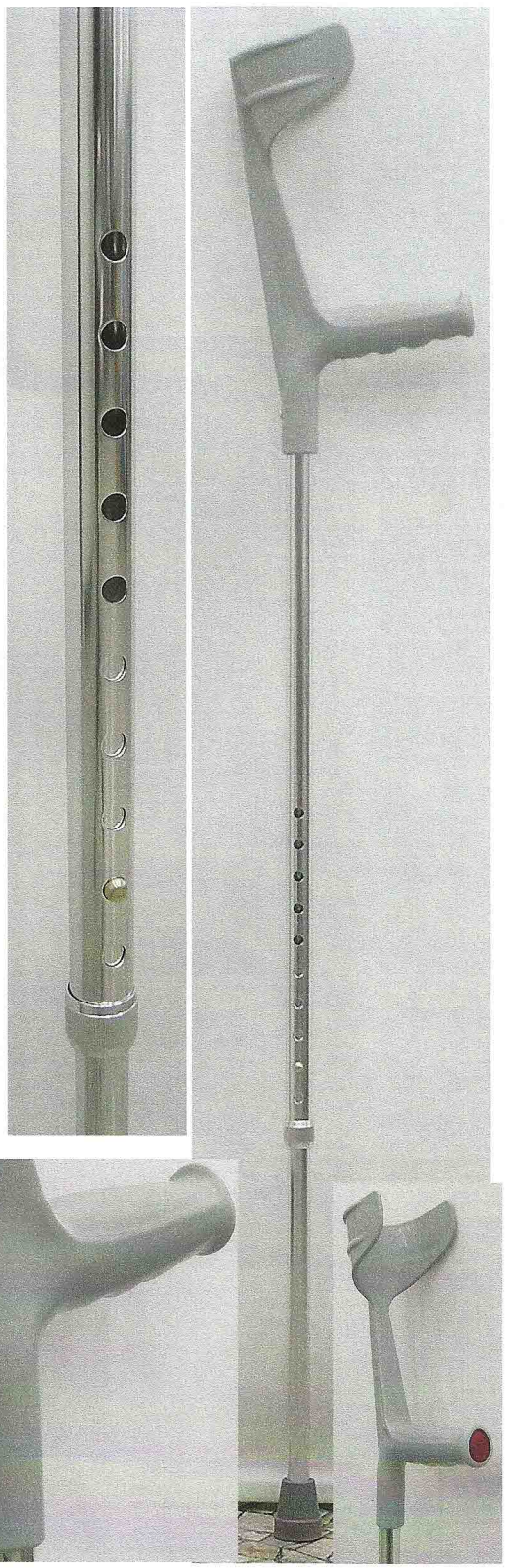
CHARACTERISTIC OF ELBOW CRUTCH

Name : *Elbow crutch*

Maximum permissible user mass: *150 kg* **Mass of crutch:** *0,55 kg*

	Description			Comments
Dimensions of crutch:	Overall height of crutch:	min.	*999 mm*	
		max.	*1230 mm*	
	Leg section length (l):	min.	*778 mm*	
		max.	*1006 mm*	
		number of fixing positions	*10*	
	Arm section length (a):	min.	*210 mm*	
		max.		
		number of fixing positions	--	
	Handgrip length (h):		*100 mm*	
	Handgrip width:		*35,6 mm*	
	Cuff internal width (y):		*80 mm*	
	Cuff internal depth (x):		*85 mm*	
	Cuff internal height (z):		*cuff and arm section are one element of the crutch*	
	Support angle (α):		*22°*	*According to figure 1*
	Grip angle (β):		*105°*	*According to figure 1*
	Tip diameter:		*Ø 39 mm*	
Material of	Leg section :		*Tubes – aluminum alloy Ø21,95 mm, Ø18,95 mm*	
	Handgrip :		*Plastic*	*Gray colour*
	Arm section:		*Plastic*	*Gray colour*
	Cuff:		*Plastic*	*Gray colour*
	Tip:		*Rubber*	*Gray colour*
	Reflective elements	back	*Not included*	
		front	*Included*	

PHOTO OF ELBOW CRUTCH:



Mobilex

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

Elbow crutch

Max. 150 kg

CE **Produced** _____ **Serial no.** _____

RESULT OF TESTS ACCORDING TO PN-EN ISO 11334-1:2007

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Real value	Test result	Comments
1	2	3		4	5	6
	Measur.	Dimensions of crutch	Overall height of crutch (min.)	*999 mm*	*N/R.*	
	Measur.		Overall height of crutch (max.)	*1230 mm*	*N/R.*	
	Measur.		Leg section length ($l_{min.}$)	*778 mm*	*N/R.*	
	Measur.		Leg section length ($l_{max.}$)	*1006 mm*	*N/R.*	
	Measur.		Arm section length ($a_{min.}$)	*210 mm*	*N/R.*	
	Measur.		Arm section length ($a_{max.}$)			
	Measur.		Handgrip length (h)	*100 mm*	*N/R.*	
	Measur.		Handgrip width (5)	*35,6mm*	*N/R.*	
	Measur.		Cuff internal depth (x)	*85 mm*	*N/R.*	
	Measur.		Cuff internal with (y)	*80 mm*	*N/R.*	
	Measur.		Cuff internal height (z)	--	*N/A*	*cuff and arm section are one element of the crutch*
	Measur.		Width of opening in cuff	--	*N/A*	
	Measur.		Support angle α	*22°*	*N/R.*	
	Measur.		Grip angle β	*105 °*	*N/R.*	
	Measur.		Tip diameter	*39 mm*	*N/R.*	
	Measur.	Mass of crutch		*0,55kg*	*0,55kg*	
4.1	**V/I**	Cuff	Securely fixing of cuff	*Conf.*	*Pos.*	
	V/I Measur.		Internal cuff dimensions	*Conf.*	*Pos.*	
	V/I Measur.		Position of internal cuff surface towards its suport line	*Conf.*	*Pos.*	
	Measur.		Relation of internal cuff depth to its internal width	*Conf.* *(y)- Cuff width 80mm* *(x)- Cuff depth 85mm*	*Pos.*	*Required internal depth of cuff more thant half o f its internal width*
	Measur.		Cuff internal height (z)	*N/A*	*Pos.*	*Required internal height of cuff ≥40mm Cuff and arm section are one element*
	5.4		Withdrawal test	*N/A*	*Pos.*	*Required withdrawal force not more than 120N*
4.2	**V/I Measur.**	Handgrip	Securely fixing of handgrip	*Conf.*	*Pos.*	
	V/I		Handgrip resistance to sliding of hand when crutch is in use	*Conf.*	*Pos.*	
	Measur.		Handgrip width :	*35,6 mm Conf.*	*Pos.*	*Handgrip width required ≥ 25mm i ≤ 50mm*
	V/I		Ease of clearing	*Conf.*	*Pos.*	
4.3	**5.3 V/I**	Leg section and tip	Construction, tip characteristics	*Conf.*	*Pos.*	
	Measur.		Tip diameter	*Ø 39 mm Conf.*	*Pos.*	*Tip diameter required ≥ 35mm*
4.4	**V/I**	Adjusting devices	Fastness to loosening of height adjustment elements	*Conf.*	*Pos.*	
	V/I		Maximum extension of the height adjust-ment, marked on the adjusting members	*Conf.*	*Pos.*	
	V/I		Possibility of adjustment elements operation without use of tools	*Conf.*	*Pos.*	
4.5	**V/I**	Materials		--	*N/T*	*Manufacturer's declaration*

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Real value	Test result	Comments
1	2	3		4	5	6
4.6	**5.5**	Mechanical durability	Crutch element separation test (including handgrip)	*Conf.*	*Pos.*	*loading 500N (handgrip 750N)*
	5.6		Static loading test	*Conf.*	*Pos.*	*loading 1500N*
	5.7		Fatigue strength of crutch	*1 000 000 cycles*	*Pos.*	*loading 825N*
	5.8		Low temperature falling test	*Conf.*	*Pos.*	
PN-EN 1041	**V/I**	Information supplied by the manufacturer		*Conf.*	*Pos.*	
6.2 6.3	**V/I**	Marking and labelling		*Conf.*	*Pos.*	

Test conditions:	Temperature of air	*21°C*	*Temperature required 21°C +/-2°C*
	Relative humidity of air:	*41%*	*N/R.*

Comments:

All tests were performed at maximum height of elbow crutches

Two elbow crutches of the same type and kind were tested: one was put to fatigue test and separation test, the other was put to static loading test and low temperature falling test.

Sequence of tests: measurements, separation test, static loading test, fatigue test, stability test, low temperature falling test.

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.

CONCLUSIONS:

*Test object **conforms** with requirements of PN-EN ISO 11334-1:2007 - „Assistive products for walking manipulated by one arm. Elbow crutches. Requirements and test methods" – clause 4, 6 (methods –clause. 5) excluding testing of biological conformity of material with human body according to PN-EN ISO 10993-1:2010.*

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INFORMATION SUPPLIED BY THE MANUFACTURER

Name of product: *Elbow crutch*

Applicant: *A-Net s.c.*
93-469 Łódź, ul. Łaskowice 174

Requirement according to PN-EN ISO 11334-1:2007		**Included**
6.2	**Information of product**	
6.2a	Maximum permissible user mass	*YES*
6.2b	Manufacturer`s name or trade name and address	*YES*
6.2c	Manufacturer`s model identification name and/or number	*YES*
6.2d	Month and year of manufacture	*YES*
6.2e	Maximum extension of the height adjustment, marked on the adjusting members	*YES*
Information in documentation, on tag or on product		
6.3a	Maximum arm section length a_{max}	*YES*
6.3b	Minimum arm section length a_{min}	*YES*
6.3c	Maximum leg section length l_{max}	*YES*
6.3d	Minimum leg section length. l_{min}	*YES*
6.3e	Support angle α	*YES*
6.3f	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 elbow crutch	*YES*
6.3g	Instructions for assembly, adjustment of all kinds, folding and unfolding, if applicable	*YES*
6.3h	Warnings and advice about precautions relating to safe distances between moving and stationary parts, if applicable (see EN 12182:2005, Clauses 12 and 13, for guidance)	*N/A*
CE Marking		*YES*

N/A- not applicable