



# POLISH CENTRE FOR TESTING AND CERTIFICATION

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FRL 15 – 03.09

Date 10. 11. 2010

**TEST REPORT NO. BR –175/L-203/2010**

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<b>Subject of testing:</b>	<i>Manually propelled wheelchair</i>	<b>Classification according to PN-EN ISO 9999:2007 :</b>	12 21 06
<b>Type / Model:</b>	<i>DOLPHIN</i>	<b>Factory ref. no.:</b>	<i>207851</i>
<b>Manufacturer:</b>	<i>MOBILEX A/S, Noerskovvej 1 DK - 8660 Skanderborg</i>	<b>Number of specimens:</b>	<i>1</i>
<b>Applicant:</b>	<i>A-Net s.c. 93-469 Łódź, ul. Łaskowice 174</i>		
<b>Kind of testing</b>	<i>Testing scope according to application of Client Mechanical testing for conformity with PN – ISO 7176 – 8:2002</i>		

Test started: 5.10.2010

Test finished: 10.11.2010

**Performed by:**

*Szymański*  
Miroslaw Szymański

**Checked by:**

*Ireneusz Czerwiński*  
Ireneusz Czerwiński

**Approved by:**

KIEROWNIK  
LABORATORIUM MECHANICZNEGO  
*mgr inż. Andrzej Tkaczyk*

**Special comments / enclosures:**

1) Annex 1: *Identyfication 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

Name of wheelchair: <i>DOLPHIN</i>		Factory ref. no. 207851	
Maximum load capacity: <i>150kg</i>		Overall mass of wheelchair: <i>18,4kg</i>	
Description			Comments
Dimensions:	Length:	<i>1030/1050/1070mm</i>	
	Height (max./min.):	<i>990mm - 1080mm</i>	
	Width:	<i>723mm</i>	
Construction of frame:	Material:	<i>Aluminum alloy</i>	
	Method of fastening frame elements:	<i>Welding</i>	
	Folding/unfolding:	<i>Folding</i>	
Drive wheels	Ø external:	<i>534mm</i>	
	Ø pipe:	<i>19mm</i>	
	Material:	<i>Aluminum alloy</i>	
	Way of fastening to driven wheel:	<i>Bolts, nuts</i>	
	Number of fastening points to driven wheel:	<i>6</i>	
Driving wheels	Material of ring of a wheel:	<i>Aluminum alloy</i>	
	Dimension of tyre:	<i>24"x1 3/8" (37x540mm)</i>	
	Pressure:	<i>N/A</i>	
	Way of fastening wheel to construction:	<i>Quick connector</i>	
	Vertical adjustment (number of fixing positions)	<i>YES 6</i>	
	Horizontal adjustment (number of fixing positions):	<i>YES 3</i>	
	Inclination angle adjustment:	<i>NO</i>	
	Inclination angle:	<i>0,8°</i>	
Castor wheels	Ø of wheel:	<i>198mm</i>	
	Width:	<i>44mm</i>	
	Material of ring of a wheel:	<i>Plastic</i>	
	Material of fork:	<i>Aluminum alloy</i>	
	Vertical adjustment (number of fixing positions)	<i>YES 4</i>	
	Horizontal adjustment (number of fixing positions):	<i>NO</i>	
	Adjustment of axis inclination angle:	<i>YES</i>	
Backrest	Folding/unfolding:	<i>Unfolding</i>	
	Backrest inclination adjustment	stepless:	<i>NO</i>
		number of fixing positions	<i>NO</i>
Tilt levers	Two singular:	<i>YES</i>	
	One lateral:	<i>NO</i>	
Push handles	Kind:	<i>Two separate</i>	
Parking brake	Left:	<i>YES</i>	
	Right:	<i>YES</i>	
	Kind:	<i>Lever</i>	
	Material of lever:	<i>Steel, plastic</i>	
	Fastening to frame:	<i>bolt, nut</i>	
	Way of adjustment:	<i>With screws and clamp stabilizing position of break towards tyre</i>	
Upholstery	Material:	<i>Nylon</i>	
	Colour:	<i>Black</i>	
Wheel space in forward direction position:		<i>375/395/415mm</i>	
Wheel space in backward direction position:		<i>475/495/515mm</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 5</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 Possibility of fixing seat belt</i>	<i>Note in service manual</i>
	<b>Service :</b>	<i>YES</i>	

**PHOTO OF WHEELCHAIR**

## TESTING

## NORMATIVE REFERENCES

	Applied
PN-EN 12182:2005 Technical aids for disabled persons – General requirements and test methods	NO
EN 12183:2009 Manually propelled wheelchairs – Requirements and test methods	NO
PN-EN 12184:2005 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	NO
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 (Electrotechnical Laboratory)
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: Wheelchair with adjustment elements regulated in a factory was performed

## TEST RESULTS according to PN-ISO 7176-8

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Real value	Test result	Comments
4.	8.4.	Armrest – resistance to forces acting downwards	Conf.	Pos.	loading 1140N
4.	8.5.	Footrests - resistance to forces acting upwards	Conf.	Pos.	loading 1500N
4.	8.6.	Anti-tip levers	Conf.	Pos.	loading 1500N
4.	8.7.	Grips	Conf.	Pos.	loading 1125N
4.	8.8.	Armrest – forces acting upwards	Conf.	Pos.	loading 1196N on each armrest (siderest)
4.	8.9.	Footrest – forces acting upwards	--	N/A	
4.	8.10.	Handle grips for pushing – load acting upwards	Conf.	Pos.	loading 1320N on each handle grip
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 (150kg)
4.	10.4.3.	Measurement of initial current for electrically powered wheelchair	--	N/A	
4.	10.4.4.	Testing of electrically powered wheelchair on two-drum machine	--	N/A	
4.	10.5.	Drop testing	Conf.	Pos.	6666 drops of wheelchair with full loading (150kg) from height of 50mm

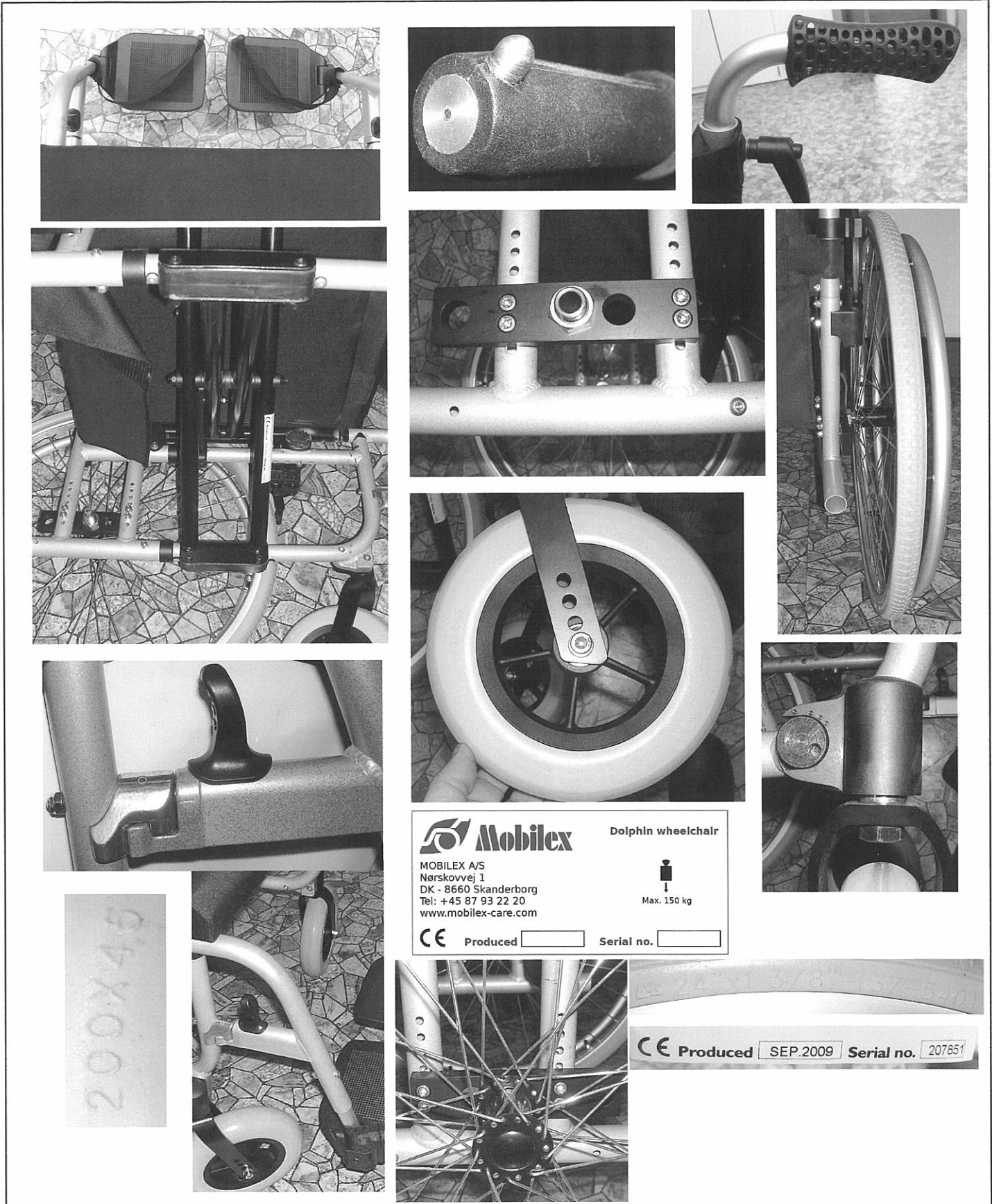
Pos. – positive; Neg – negative; N/T – not tested; N/A – not applicable; N/R – not required, N/O – not occurred, V/I.- visual inspection, Conf.- conformed.


<b>Final assessment</b>	
<b>PN-EN 12182:2005</b>	<i>N/T</i>
<b>EN 12183:2009</b>	<i>N/T</i>
<b>PN-EN 12184:2005</b>	<i>N/A</i>
<b>ISO 7176-1:1999</b>	<i>N/T</i>
<b>PN-ISO 7176-2:1998</b>	<i>N/A</i>
<b>PN-ISO 7176-3:1998</b>	<i>N/T</i>
<b>ISO 7176-4:1997</b>	<i>N/A</i>
<b>PN-ISO 7176-5:2001</b>	<i>N/T</i>
<b>PN-ISO 7176-6:1998</b>	<i>N/A</i>
<b>PN-ISO 7176-7:2001</b>	<i>N/T</i>
<b>PN-ISO 7176-8:2002</b>	<i>Pos.</i>
<b>ISO 7176-9:2001</b>	<i>N/A</i>
<b>PN-ISO 7176-10:1998</b>	<i>N/A</i>
<b>PN-ISO 7176-14:2001</b>	<i>N/A</i>
<b>PN-ISO 7176-15: 2002</b>	<i>N/T</i>
<b>PN-ISO 7176-16:2001</b>	<i>N/T</i>

Pos. – positive, N/T – not tested, N/A – not applicable

- END -

**ANNEX 1 TO TEST REPORT No. BR – 175/L-203/2010**  
**Identification of wheelchair elements**



 **Mobilex**      **Dolphin wheelchair**

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

 Max. 150 kg

CE    Produced     Serial no.

200X45

CE    Produced  SEP.2009    Serial no.  207851