CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST
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Date 31.08.2020

TEST REPORT NO. *CBC-090/2020*

Subject of testing: *Electric drive for a wheelchair*

Classification according to PN-EN ISO 9999:2017-02: 12 21 24

Type / Model: *PAWS*
TOURER

SN.: *(01)05907467803494*
(11)200717(21)0001
Product Code: *RPT20AAS00*

Manufacturer: *REHASENSE Sp. z o.o..*
ul. Sulejowska 45 G
97-300 Piotrków Trybunalski

Number of specimens: *1*

Applicant: *A-Net s.c.*
ul. Łaskowice174
93-469 Łódź,

Kind of testing *Testing scope according to application of Client*
Mechanical testing for conformity with PN-EN 12184 : 2014;
PN-EN 12182:2012; ISO 7176-part 1, 2, 3, 4, 5, 6, 8, 9,10

Test started: *3.08.2020*

Test finished: *31.08.2020*

Approved by:

DYREKTOR
mgr inż. Andrzej Tkaczyk

Special comments / enclosures:

1) *Annex 1-6 – Identyfication of wheelchair elements*

CHARACTERISTIC OF ELECTRICALLY PROPELLED WHEELCHAIR

Name of wheelchair: *PAWS Tourer*	**SN** *(01)05907467803494(11)200717(21)0001*	
Maximum load capacity: *120 kg*	**Overall mass of wheelchair:** *41,71 kg*	**Class:** *A*

Electric drive for a wheelchair

Mass of the drive: *32,2 kg*	**Length of the drive:** *1005 mm*	**Height of the drive:** *955 mm*
Width of the drive: *530 mm*	**Wheel diameter:** *569 mm*	**Wheel width:** *99 mm*
Wheel size: *(100-406)20 x 4*	**Pressure:** *30 PSI/200 kPa*	**Material of the drive:** *alum., steel, plastic*

Description			Wheelchair	Wheelchair+ electric drive
Dimensions:	**Length:**		*778 mm*	*1490 mm*
	Height (max.)		*780 mm*	*1065 mm*
	Width:		*555 mm*	*555 mm*
Construction of frame:	**Material:**		*Aluminum*	*Aluminum*
	Method of fastening frame elements:		*Welding/rivets/bolts*	*Welding/rivets/bolts*
	Folding/unfolding:		*Unfolding*	*Unfolding*
Drive wheels	**Ø external:**		*533 mm*	--
	Ø pipe:		*19 mm*	--
	Material:		*Aluminum*	--
	Way of fastening to driven wheel:		*Bolts*	--
	Number of fastening points to driven wheel:		*6*	--
Driving wheels	**Material of ring of a wheel:**		*Aluminum*	*Aluminum*
	Dimension of tyre:		*24"x1"(25x540mm)*	*20x4(98x569mm)*
	Pressure:		*110 PSI,755 kPa, 7,5 bar*	*30 PSI, 200 kPa*
	Way of fastening wheel to construction:		*Quick connector*	*Permanent*
	Vertical adjustment (number of fixing positions)		*YES 3*	*NO*
	Horizontal adjustment (number of fixing positions):		*YES 5*	*NO*
	Inclination angle adjustment:		*NO*	*NO*
	Inclination angle:		*0,0°*	--
Castor wheels	**Ø of wheel:**		*98 mm*	*569 mm*
	Width:		*34 mm*	*98 mm*
	Material of ring of a wheel:		*Aluminum*	*Aluminum*
	Material of fork:		*Aluminum*	*Steel*
	Vertical adjustment (number of fixing positions)		*YES 3*	*No*
	Horizontal adjustment (number of fixing positions):		*NO*	*NO*
	Adjustment of axis inclination angle:		*YES*	*NO*
Backrest	**Folding/unfolding:**		*Folding*	*Folding*
	Backrest inclination adjustment	**stepless:**	*NO*	*NO*
		number of fixing positions	*4*	*4*
Tilt levers	**Two singular:**		*NO*	*NO*
	One lateral:		*NO*	*NO*
Push handles	**Kind:**		*One lateral*	*One lateral*
Parking brake	**Left:**		*YES*	*YES*
	Right:		*YES*	
	Kind:		*Lever*	*Disc brake*
	Material of lever:		*Plastic*	*Plastic*
	Fastening to frame:		*With screws*	*With screws*
	Way of adjustment:		*With screws and clamp stabilizing position of break towards tyre*	
Upholstery	**Material:**		*Nylon*	*Nylon*
	Colour:		*Black*	*Black*

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

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

PHOTO OF WHEELCHAIR

TESTING

NORMATIVE REFERENCES	Applied
PN-EN 12182:2012 Technical aids for disabled persons – General requirements and test methods	*YES*
PN-EN 12183:2014 Manually propelled wheelchairs – Requirements and test methods	*NO*
PN-EN 12184:2014 Electrically powered wheelchairs, scooters and their chargers – Requirements and test method	*YES*
ISO 7176-1:2014 Wheelchairs – Determination of static stability	*YES*
ISO 7176-2:2001 Wheelchairs – Determination of dynamic stability of electric wheelchairs	*YES*
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	*YES*
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	*YES*
PN-ISO 7176-7:2001 Wheelchairs – Measurement of seating and wheel dimensions	*NO*
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	*YES*
ISO 7176-10:2008 Wheelchairs – Determination of obstacle-climbing ability of electric wheelchairs	*YES*
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 1021-1:2007 Furniture. Assessment of ignitability o upholstered furniture. Ignition source: smouldering cigarette.	*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 7176-19:2007 Wheelchairs. Wheeled mobility devices for use in motor vehicles	*NO*

RESULT OF MECHANICAL TESTS ACCORDING TO PN-EN 12182:2012

Requirements 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 and EN 1441	Risk analysis	–	*N/T*	
4.2	V/I	Expected characteristics and technical documentation	*Conf.*	*Pos.*	
4.3	EN ISO 14155	Clinic assessment	–	*N/T*	
4.4	V/I	Technical support which can be dismantled	*Conf.*	*Pos.*	
4.5	V/I	Single use connections	*Conf.*	*Pos.*	
4.6	V/I	Boundary values of user weight	*Conf.*	*Pos.*	
4.7	V/I	Immobilising means	*Conf.*	*Pos.*	
4.8	V/I, C5	Suitability of the product for people with cognitive impairment	–	*N/T*	
		The presence of the description in the manufacturer's documentation	–	*N/T*	
		Materials			
5.1	EN 60601-1-9	Recycling	–	*N/T*	
5.2	V/I, B 5.2	Flammability (*PN-EN 1021-1:2007)*	–	*N/T*	*NOTE 9*
5.2.2	V/I	Upholstered parts, mattresses, bed bases and bedding	–	*N/A*	
5.2.3	V/I, EN 1021	Upholstered parts	–	*N/A*	
5.2.4	V/I, EN 597	Mattresses and bed bases	–	*N/A*	
5.2.5	V/I. EN ISO 12952	Bedding	–	*N/A*	
5.2.6	V/I. EN 60695-11-10	Moulded parts	–	*N/T*	
5.3	EN ISO 10993-1 Annex. D	Biological conformity and toxicity	–	*N/T*	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Test result	Opinion	Comments
5.4	V/I	Contaminants and residues		—	N/A	
5.5	V/L,B.5.5.1	Microbiological infections and contamination	Cleaning	Conf.	Pos.	Comments in service manual
	V/L,B.5.5.1		Disinfection	—	N/A	
	V/L, 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 B6	Noise and vibration		Conf.	Pos.	
6.2	EN ISO 3746	Sound levels and frequencies of audible warning devices		Conf.	Pos.	
6.3	EN ISO 3746	Feeedback		—	N/A	
7	EN 60601-1-2 7.2, 7.3, 7.4	Electromagnetic compatibility		—	N/T	
8		Electrical safety		—	N/T	
9	V/I	Overflow, spillage, leakage, and ingress of liquids		—	N/A	
10	V/L Measur.	Surface temperature		—	N/A	$t^{\circ} \leq 41^{\circ}C$ ■ requirement does not concern heat of direct solar radiation - PN-EN 12182,clause 10a ■ requirement concerns only persons with insensitiveness of skin (who do not feel heat) - PN-EN 12182 clause 10d
11	V/I	Sterility		—	N/A	
12	V/L Measur.	Safety of moving parts		Conf.	Pos.	Comments in service manual
13	V/L Measur.	Prevention of traps for parts of the human body		Conf.	Pos.	Comments in service manual
14	V/I	Folding and adjusting mechanisms		Conf.	Pos.	Comments in service manual
15	V/L Measur.	Carrying handles		Conf.	Pos.	Comments in service manual
16	V/L Measur.	Assistive products which support or suspend users		Conf.	Pos.	were tested by PN-ISO 7176-8:2014
17	V/L Measur.	Portable and mobile assistive products		Conf.	Pos.	were tested by PN-ISO 7176-8:2014
18	V/I, B 18	Surfaces, corners, edges and protruding parts		Conf.	Pos.	
19	B 19	Hand held assistive products		—	N/A	
20	B 20	Small Parts		Conf.	Pos.	Comments in service manual
21	V/L Measur. EN 60601-1	Stability		Conf.	Pos.	were tested by ISO 7176-1:2014
22	B 22, V/I	Forces in soft tissues of the human body		Conf.	Pos.	
23	V/L EN 614-1	Ergonomic principles		—	N/T	The requirements relate to the design process

TEST RESULTS ACCORDING TO PN-EN 12184:2014

7 WHEELCHAIR PERFORMANCE

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters		Test result	Opinion	Comments
		Driving charakteristics				
8.1.1		Meeting the requirements of the table 1 and 2		Conf.	Pos.	
8.1.2	8.1.2.2	Ability to climb rated slope	NOTE 6	3° Conf.	Pos.	Tab.1 (cl.A $\beta \geq 3^{\circ}$) Tab.1 (cl.B $\beta \geq 6^{\circ}$)
8.1.3.2	8.1.3.3	Ground unevenness		—	N/A	3 support points
8.1.4.1	8.1.4.2	Maximum downhill speed		—	N/A	$\leq 125\% V_{max}$
8.1.5.1	8.1.5.2	Dynamic stability	NOTE 7	3° Conf.	Pos.	Tab.1 (cl.A $\beta \geq 3^{\circ}$) Tab.1 (cl.B $\beta \geq 6^{\circ}$)
8.1.6.1	8.1.6.2 ISO7176-10	Obstacle climbing and descending	NOTE 8	15mm Conf.	Pos.	(cl.A h≥15mm) (cl.B h≥50mm)

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
8.1.7.1	8.1.7.2 ISO7176-1	Static stability	*Conf.*	*Pos.*	*Tab. 1 (cl.A $\beta \geq 6^0$) Tab. 1 (cl.B $\beta \geq 9^0$)*
8.1.8.1	8.1.8.2 ISO7176-6	Maximum speed	*Conf.*	*Pos.*	
8.1.9.1	8.1.9.2 ISO7176-4	Distance range	*Conf.*	*Pos.*	
8.2.1	8.2.2 ISO7176-8	Static, impact and fatique strength	*Conf.*	*Pos.*	
8.3	ISO7176-19	Wheelchairs for use as seats in motor vehicles	–	*N/T*	
8.4	ISO7176-9	Climatic performance	*Conf.*	*Pos.*	
		Component properties			
9.1.1	9.1.2.1	Foot supports,lower leg support assemblies and arm supports	–	*N/A*	
		Possibility to position the occupant's feet at the required height Presence of the technical means to prevent the occupant's feet from sliding	–	*N/A*	
		Foot supports,lower leg support assemblies and arm supports should:	–	*N/A*	
		-Incorporate a means to locate it securely in any intended operating position	–	*N/A*	
		-Be adjustable in increments not exceeding 25mm	–	*N/A*	
		-Be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair	–	*N/A*	
		-Be within the reach space shown in Figure 1	–	*N/A*	
		-Be operable without the use of tools	–	*N/A*	
		-Means to prevent the occupant's feet from sliding into the gap shall be provided, or	–	*N/A*	
		-The gap between the footrests ≤35mm or ≥100mm for adults and ≤25mm or ≥45mm for children	–	*N/A*	
9.2	V/I Measur.	**Component mass**			
		Presence of the handling devices (e.g. handles) in components of mass greater than 10 kg, or	–	*N/O*	*Required for wheelchairs intended to be dismantled for storage or transportation*
		Information indicating the points where components can be lifted and describing how they shall be handled during disassembly, lifting, carrying and assembly available	*Conf.*	*Pos.*	*mass of the heaviest parts 32,2 kg*
9.3	V/I	**Pneumatic tyres**			
		Presence of the same type of valve connection on all tyres	*Conf.*	*Pos.*	
		Valves should be readily accessible when using the intended inflating tool.	*Conf.*	*Pos.*	
		Presence of the marking of the tyres or the rims with the maximum pressure in kPa, bar or PSI	*Conf.*	*Pos.*	
9.4		Anterior pelvic support	–	*N/A*	
9.5.1	EN 1021-1 EN 1021-2	Resistance to ignition of upholstered composition parts *NOTE 9*	–	*N/T*	
9.5.2		Resistance to ignition of foam materials *NOTE 9*	–	*N/T*	
9.5.3		Resistance to ignition of other parts *NOTE 9*	–	*N/T*	
9.5.4		Power and control systems	–	*N/T*	
10		**PROPULSION AND BRAKING SYSTEM**			
10.1.1	V/I Meas.	**Means for operating brake**	*Conf.*	*Pos.*	
		Means for operating brakes shall:			
		-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.*	
		-be within the reach space shown in Figure 1, if the wheelchair is intended to be operated by the occupant	*Conf.*	*Pos.*	
		-be within the reach space shown in Figure 3, if the wheelchair is intended to be operated solely by an assistant	–	*N/A*	
		-have operating forces for engaging and disengaging that do not exceed those stated in Table 1 when tested in accordance with 10.1.2	*Conf.*	*Pos.*	
		If one or more brake levers are fitted to a wheelchair in the form used on bicycles and mopeds:			
		-for wheelchairs with a maximum occupant mass not greater than 150 kg, the force applied to each lever to hold the loaded wheelchair stationary on the rated slope shall not exceed 60 N	*Conf.*	*Pos.*	
10.1.1	V/I Meas.	- for wheelchairs with a maximum occupant mass greater than 150 kg, the force applied to each lever to hold the loaded wheelchair stationary on the rated slope should not exceed 60 N	*Conf.*	*Pos.*	
		-the handgrip width of such brake levers when no force is applied, measured 15 mm from the end of the brake lever, shall not be greater than 100 mm and should not be greater than 80 mm (see Figure 4).	*Conf.*	*Pos.*	*90 mm*
		-Means for releasing parking brakes shall be protected against activation caused by accidental contact	*Conf.*	*Pos.*	

10.2.1	10.2.2.1 10.2.2.2 10.2.2.3 10.2.2.4 ISO7176-3	**Braking functions**			
		a)The wheelchair shall have a running brake which operates independently of tyre wear and tyre inflation pressure and which does not exceed the maximum stopping distance specified in Table 2 when tested in accordance with 10.2.2.1.	*Conf.*	*Pos.*	
		b)The wheelchair shall have a running brake which, when operated after the wheelchair has been put into freewheel mode, shall bring the wheelchair to a stop	*Conf.*	*Pos.*	
		c)The wheelchair shall have an automatic brake, which operates independently of tyre wear and tyre inflation pressure and which is operated by releasing the control device to achieve a zero speed command (e.g. spring loaded disc brake)	–	*N/T*	
		d)The wheelchair shall have a parking brake which operates independently of tyre wear and tyre inflation pressure (e.g. drum brake in wheels, spring loaded disc brake)	*Conf.*	*Pos.*	
		e)Parking brakes shall meet the parking brake effectiveness requirement in Table 1 when tested in accordance with 10.2.2.2	*Conf.*	*Pos.*	
		f)Parking brakes shall be operable when there is no power from the battery supplying the drive system	*Conf.*	*Pos.*	
		g)Parking brakes shall be operable when the wheelchair is in freewheel mode (see NOTE 1)	*Conf.*	*Pos.*	
		h)If they are subject to wear, parking brakes shall have provision for adjustment and/or replacement as specified by the manufacturer	*Conf.*	*Pos.*	
		i) If the wheelchair is fitted with arm supports that can be moved or removed to enable transfer, when tested in accordance with 10.2.2.3, engaged parking brakes shall not have parts that protrude above the level of the occupied seat	–	*N/A*	
		j)When parking brakes are tested in accordance with 10.2.2.4, no parking brake mechanism shall move from the pre-set position and no component or assembly of parts shall show visible signs of cracks, breakages, gross deformations, free play, loss of adjustment or any other damage that adversely affects the function of the wheelchair	*Conf.*	*Pos.*	
		k)Following testing of the parking brake in accordance with 10.2.2.4, parking brakes shall meet the parking brake effectiveness requirement in Table 1 when tested again in accordance with 10.2.2.2	*Conf.*	*Pos.*	
10,3	V/I,Meas.	**Freewheel device**			
		The wheelchair shall be fitted with a freewheel device that shall:	–	*N/T*	
		-be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair	–	*N/T*	
		-be within the reach space shown in Figure 1, if the wheelchair is intended to be operated by the occupant	–	*N/T*	
		-be within the reach space shown in Figure 3, if the wheelchair is intended to be operated solely by an assistant	–	*N/T*	
		-have operating forces for engaging and disengaging that do not exceed those stated in Table 1	–	*N/T*	
		-be operable without detaching any parts	–	*N/T*	
		-not depend on the battery power supplying the motor drive system	–	*N/T*	
		-have two defined positions including clear indication of freewheel mode and drive mode	–	*N/T*	
		-prevent use of the wheelchair's drive system, if the freewheel device is activated.	–	*N/T*	
11.1	V/I	Operations intended to be carried out by the occupant and/or assistant	*Conf.*	*Pos.*	
11.2	V/I	Controls intended for operation by the occupant	*Conf.*	*Pos.*	
11.3	V/I	Controls intended for operation by an assistant	–	*N/A*	
11.4.1	11.4.2	Assistant control unit, push handles and handgrips	–	*N/A*	
11.5.1	11.5.2	Operating forces	*Conf.*	*Pos.*	
11.6.1	11.6.2	Seating adjustments for tilt and recline systems *NOTE: required warning **and/or mechanism** precluding seating adjustment **while the** occupant **is seating***	–	*N/A*	
		Controls for seating adjustments intended to be operated by the occupant shall be accessible to the occupant from all seating positions	–	*N/A*	
12		**Electrical systems**			
12.1	7176-14 7176-21 60601-1	General requirements	–	*N/T*	
12.2	V/I,Meas.	Circuit protection	–	*N/T*	
12.3	7176-14 EN 60529 EN60335-1	Battery chargers	–	*N/T*	
12.4	V/I	Charging connector	–	*N/T*	
12.5	V/I	Battery enclosures and containers	–	*N/T*	
12.6	7176-14	Emergency stop	–	*N/T*	
12.7	2006/42/WE 76/756/EWG 97/28/WE	Lighting	–	*N/T*	
12.8	7176-14	Switching off while driving	–	*N/T*	
12.9	EN62304	Software	–	*N/T*	
			–	*N/T*	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
13	**V/I**	**Information supplied by the manufacturer**			
		Information and marking conforming EN 12182 available	–	*N/T*	
		Information and marking conforming ISO7176-15 available	–	*N/T*	
	13.2	Pre-sale information available	–	*N/T*	
	13.3	User information available	–	*N/T*	
	13.4	Service information available	–	*N/T*	
12184	**V/I**	**Instructions for use**			
13.3		**Pre-sale Information**			
		a)information on how to obtain the user information in a format appropriate for use by visually impaired people	–	*N/T*	
		b)a description of the intended use and the intended environment	–	*N/T*	
		c)the intended operator (occupant, assistant or both)	–	*N/T*	
		d)a description of the intended use and the intended environment	–	*N/T*	
		e)the type class of the wheelchair: Class A, B or C	–	*N/T*	
		f)the overall dimensions (width, length and height) of the assistive product, expressed in millimetres, and its mass, expressed in kilograms, when it is ready for use and, if applicable, when it is folded or dismantled	–	*N/T*	
		g)if the overall dimensions of the wheelchair when it is ready for use exceed the values recommended in A.1.1, a clear statement that the wheelchair is larger than the recommended dimensions	–	*N/T*	
		h)the minimum width of corridor in which the wheelchair can be turned to face the opposite direction	–	*N/T*	
		i)the rated slope, expressed in degrees	–	*N/T*	
		j)the standard options that are available for the wheelchair	–	*N/T*	
		k)the type(s) of tyres that can be used on the eheelchair	–	*N/T*	
		l)operator adjustments	–	*N/T*	
		m)the mass expressed in kilograms if the assistive product can be disman-tled or has any removable parts that has a mass which is heavier than 10 kg	–	*N/T*	
		n)information concerning whether the removal of parts or accessories intended by the manufacturer to be removed without the use of tools will have adverse or beneficial effects on the wheelchair	–	*N/T*	
		o)information on whether or not the wheelchair is intended to be used as a seat in a motor vehicle, and whether and how this depends on the standard options referred to in j)	–	*N/T*	
		p)instructions regarding transport of the assistive product (e.g. in a car or aeroplane)	–	*N/T*	
		q)the theoretical continous driving distance range, expresssed in kilometres, that the wheelchair can travel under its own power on the horizontal when tested in accordance with ISO 7176-4:2008, with the addition of a note explaining that the distance will be reduced if the wheelchair is used frequently on slopes, rough ground or to climb kerbs, etc.	–	*N/T*	
		r)the maximum height of kerb which the wheelchair can descend safely	–	*N/T*	
		s)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*	
12184	**V/I**	**User information**			
13.3		User information shall be provided by the manufacturer with each assistive product. Information shall contain all pre-sale warnings and informations and the following as applicable for each assistive product	–	*N/T*	
		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*	
		b)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*	
		c)information on adjustment possibilities and the competence required to carry out these adjustments	–	*N/T*	
		d)instructions on operation of all controls, including brakes	–	*N/T*	
		e)instructions on how to engage and disengage the drive system	–	*N/T*	
		f)the wheelchair manufacturer's recommended tyre pressure(s), expressed in kPa, bar, or PSI	–	*N/T*	
		g)instructions for dealing with tyre punctures, where pneumatic tyres are fitted	–	*N/T*	
		h)the battery type and nominal voltage	–	*N/T*	
		i)instructions for battery maintenance	–	*N/T*	

12184 13.3	V/I	j)instructions for operating the battery charger, including warnings regarding any potential safety hazards (e.g. a possibility of gas accumulating in the charging area);	–	*N/T*	
		k) if required by the risk analysis, instructions for fitting an additional emergency stop device where the intended occupant has an impairment which could restrict their ability to operate one	–	*N/T*	
		l)instructions on whether and how the wheelchair can be folded to assist in storage or transport	–	*N/T*	
		m)instructions on dismantting and re-assembly of the assistive product or any removable parts;	–	*N/T*	
		n)instructions regarding transport of the assistive product (e.g. in a car or aeroplane)	–	*N/T*	
		o)the masses of parts of the wheelchair that are expected to be handled during dismantling, reassembly, or carrying	–	*N/T*	
		p)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*	
		q)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*	
		r) if the manufacturer specifies that the wheelchair is not intended for use in the motor vehicle, a warning to that effect, together with the symbol shown in Figure 7	–	*N/T*	
		s) instructions on how to obtain and fit the optional anterior pelvic support (see 9.4) if it is not supplied with the wheelchair;	–	*N/T*	
		t) the positions of points intended to carry additional loads (grocery basket, backpack hook)	–	*N/T*	
		u) instructions for preparing the wheelchair for long-term storage (e.g. longer than four months) and for preparing it for use afterward	–	*N/T*	
		v) a warning that the wheelchair might disturb the operation of devices in its environment that emit electromagnetic fields (e.g. alarm systems of shops, automatic doors, etc.);	–	*N/T*	
		w) a warning that the driving performance of the wheelchair can be influenced by electromagnetic fields (e.g. those emitted by portable telephones, electricity generators or high power sources)	–	*N/T*	
		x) a warning that the stopping distance on slopes can be significantly greater than on level ground	–	*N/T*	
		y) a warning that surface temperatures can increase when exposed to external sources of heat (e.g. sunlight);	–	*N/T*	
		z)if the intended purpose of an assistive product cannot be met without a hazard due to moving parts such as sgueezing, a warning and instructions on how to operate the assistive product safely	–	*N/T*	
		aa) a warning if driving characteristics can be adjusted outside the limits specified in Table 1 and Table 2	–	*N/T*	
		bb) a warning if the adjustments of seating or wheel positions can be set outside safe limits	–	*N/T*	
		cc) if the overall width or overall length of the wheelchair when it is ready for use exceed the applicable values recommended in A. 1.1, a warning concerning access to emergency escape routes	–	*N/T*	
		dd) the level of resistance to ignition of materials and assemblies	–	*N/T*	
		ee) information on the recycling of used batteries and of the wheelchair	–	*N/T*	
		ff) if the characteristics of the wheelchair (including occupant as applicable) exceed the limits specified in Annex M of the Technical Specification for Interoperability relating to Accessibility for Persons with Reduced Mobility (PRM-TSI), a statement to that effect (see Annex D);	–	*N/T*	
		gg) information on how to find out about product safety notices and product recalls, for example by ensuring the supplier has up-to-date contact information	–	*N/T*	
		hh) the expected service life of the wheelchair	–	*N/T*	
		ii) the name and address of the manufacturer	–	*N/T*	
		jj) the name and address of the authorised representative, where the manufacturer does not have a registered place of business in the European Union	–	*N/T*	
12184 13.4	V/I	**Service information**			
		The service information shall contain all the pre-sale information, user information and instructions necessary for the maintenance, adjustment and repair of the assistive product and for the replacement of parts.	–	*N/T*	
		The service information shall contain all the pre-sale information and the user information.	–	*N/T*	
		The service information shall be sufficiently detailed concerning preventive inspection, maintenance and calibration, including the frequency of such maintenance.	–	*N/T*	

12184 13.4	**V/I**	**The service information shall provide information for the safe performance of such routine maintenance necessary to ensure the continued safe use of the assistive product.**	**–**	***N/T***	
		Additionalty, the service information shall identify the parts on which preventive inspection and maintenance shall be performed by service personnel, including the periods to be applied and details about the actual performance of such maintenance.	**–**	***N/T***	
13.5	**V/I**	**Labelling**			
		Compatibility with EN 12182 and ISO 7176-15 and:	**–**	***N/T***	
		- devices for disengagement of the drive system, showing engaged and disengaged positions, including a warning that the drive system should be re-engaged before an occupant is left unattended or attempts to operate the wheelchair	**–**	***N/T***	
		for wheelchairs where yhe intended use includes use as a seat in a motor vehicle, the position of attachment points for wheelchair tie-down and occupant restraint systems (WTORS)	**–**	***N/T***	
		for wheelchairs not intended to be used as a seat in a motor vehicle, a warning to that effect, including the symbol shown in fig. 7 with a diameter not less than 15mm, in the same location as the labelling required by ISO 7176-15:1996	**–**	***N/T***	
		for battery chargers that are not on-board chargers, information and connection details specified in clause 9 of ISO 7176-14:1997	**–**	***N/T***	
		for Class A wheelchairs not intended for use outdoors, 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 12184	**10.**	**Static stability of wheelchair facing up to the slope (backwards) – *factory regulations* *)**	***18°***	***Pos.***	***Tab. 1 (cl.A β≥6°) Tab. 1 (cl.B β≥9°) Tab1 (cl.C β≥15°)***
	8.	**Static stability of wheelchair positioned backwards up to the slope - *factory regulations* *)**	***30°***	***Pos.***	
	12.	**Static stability of wheelchair positioned sideward up to the slope**	***16°***	***Pos.***	

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

TEST RESULTS according to 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**	***5,2° Cl.A***	***Pos.***	***Tab. 1 Cl.A (β≥ 3°) Cl.B (β≥ 6°) NOTE 7***
		Force required to operate hand (or foot) steering mechanism	***14 N***	***Pos.***	
4.	**7.2.**	**Stability of braking during drive forwards and backwards down the slope**	***6° Cl.B***	***Pos.***	
4.	**7.3.**	**Stability during turning**	***6° Cl.B***	***Pos.***	

TEST RESULTS according to ISO 7176-3

Requirements according to clause	Test method according to clause		Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
PN-EN 12184 10.2.1.c Tab. 1	**7.1, V/I Measur. PN-EN 12184 10.2.2.2 Tab. 1**	**Parking brake**	**Effectiveness of parking brake of wheelchair positioned forwards down the slope**	***Conf. 14,5° (Cl. B) wheel rotate***	***Pos.***	***≥ 6° (Cl. A) ≥ 9° (Cl. B) ≥ 15° (Cl. C) Tab. 1 PN-EN 12184***
PN-EN 12184 10.2.1.c Tab. 1	**7.1, V/I Measur. PN-EN 12184 10.2.2.2 Tab. 1**		**Effectiveness of parking brake of wheelchair positioned backwards down the slope**	***Conf. 8,5° (Cl. A) wheelchair slides down***	***Pos.***	
PN-EN 12184 10.1.1.4 Tab. 1	**PN-EN 12184 cl.10.1.2 Measur.**		**Measurement of force acting on brake lever**	***35 N***	***Pos.***	

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
7.2.1.a	V/I Measur.	Service brake	Braking distance during drive with maximum speed forwards on horizontal plane *(Vmax=15km/h)*	*3,6 m*	*Pos.*	
7.2.1.b	V/I Measur.		Braking distance during drive backwards on horizontal plane	*0,58 m*	*N/A*	
7.2.1.c	V/I Measur.		Braking distance of wheelchair during drive forwards on slope of 5°	*4,5 m*	*N/A*	
7.2.2.	V/I Measur.	Resistance of braking system to increased temperature caused by long braking during drive forwards on horizontal plane		*Conf.*	*Pos..*	
7.2.3.a	V/I Measur.	Automatic brake	Braking distance of wheelchair during drive with maximum speed forwards on horizontal slope	–	*N/T*	
7.2.3.b	V/I Measur.		Braking distance of wheelchair during drive with maximum speed forwards on slope of 5°	–	*N/T*	

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	*30,1 km cl. B*	*Pos.*	

NOTE: Range wheelchair was tested in road conditions. The average range of 5 attempts - ***30,5km***

TEST RESULTS according to ISO 7176-5

Test method according to clause	Checked characteristics/assemblies/parameters	Test result wheelchair	Wheelchair + electric drive	*) Eletric drive	Opinion
8.2	Overall length of wheelchair with legrest and footrest	*778 mm*	*1490 mm*	*1005 mm*	*N/R.*
8.3	Overall width	*555 mm*	*555 mm*	*530 mm*	*N/R.*
8.4	Height of grips above the ground	*625 mm*	*600 mm*	*N/A*	*N/R.*
8.5	Minimum length of folded wheelchair	*790 mm*	*N/A*	*1230 mm*	*N/R.*
8.6	Minimum overall width of folded wheelchair	*500 mm*	*N/A*	*495 mm*	*N/R.*
8.7	Minimum height of folded wheelchair	*410 mm*	*N/A*	*720 mm*	*N/R.*
8.8	Castor wheels lift height in the wheelchair with anti-overturn device	*N/A*	*N/A*	*N/A*	*N/R.*
8.9	Mass	*9,51 kg*	*41,71 kg*	*32,2 kg*	*N/R.*
8.10	Mass of the heaviest parts	*7,02 kg*	–	*32,2 kg*	*N/R.*
8.11	Pivot width (fig. 9)	*877 mm*	*1200 mm*	–	*N/R.*
8.12	Width of U-turn limited by spacing of walls	*950 mm*	*1600 mm*	–	*N/R.*
8.13	Diameter of the rotation (fig. C3)	*1020 mm*	*2500 mm*	–	*N/R.*
8.14	Ground clearance (fig. 5)	*200 mm*	*45 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)	*820 mm*	*1490 mm*	–	*N/R.*
8.17	Required corridor width for side opening (fig. 13)	*700 mm*	*1250 mm*	–	*N/R.*

According to PN-EN 12183 Annex.B and PN-ISO 7193 recommended max overall dimensions: length: 1200mm, width: 700mm, height: 1200mm
**) Electric drive for a wheelchair standing, supported on supports*

TEST RESULTS according to ISO 7176 –6

Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.1.	Maximum speed during drive forwards	*15,0km/h*	*Pos.*	
7.2.	Maximum speed during drive backwards	*4,6 km/h*	*Pos.*	
8.1.	Maximum acceleration	*0,64 m/s²*	*N/R*	
8.2.	Maximum deceleration	*2,4 m/s²*	*Pos.*	

TEST RESULTS according to PN-ISO 7176 –7

Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.3.2.	Angle of seat plane	–	*N/T*	
7.3.3.	Effective depth of seat	–	*N/T*	
7.3.4.	Width of seat	–	*N/T*	
7.3.5.	Effective width of seat	–	*N/T*	
7.3.6.	Height of front edge of seat plane	–	*N/T*	
7.3.7.	Angle of backrest	–	*N/T*	
7.3.8.	Height of backrest	–	*N/T*	
7.3.9.	Width of backrest	–	*N/T*	
7.3.10.	Moving forward of headrest	–	*N/T*	
7.3.11.	Height of headrest over the seat	–	*N/T*	
7.3.12.	Distance of footrest from seat	–	*N/T*	
7.3.13.	Clearance of footrest	–	*N/T*	
7.3.14.	Length of footrest	–	*N/T*	
7.3.15.	Angle of footrest	–	*N/T*	
7.3.16.	Angle of legrest	–	*N/T*	
7.3.17.	Height of armrests	–	*N/T*	
7.3.18.	Moving forward of armrests	–	*N/T*	
7.3.19.	Length of armrests	–	*N/T*	
7.3.20.	Width of armrests	–	*N/T*	
7.3.21.	Angle of armrests	–	*N/T*	
7.3.22.	Distance between armrests	–	*N/T*	
7.3.23.	Position of the front of armrests	–	*N/T*	
7.3.24.	Diameter of drive wheel	–	*N/T*	
7.3.25.	Diameter of driving wheel	–	*N/T*	
7.3.26.	Displacement of wheel axis horizontally	–	*N/T*	
7.3.27.	Displacement of wheel axis vertically	–	*N/T*	
7.3.28.	Diameter of castor/front wheel	–	*N/T*	

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	–	*N/T*	
4.	8.5.	Footrests - resistance to forces acting upwards	–	*N/T*	
4.	8.6.	Anti-tip levers	–	*N/A*	
4.	8.7.	Grips	–	*N/A*	
4.	8.8.	Armrest – forces acting upwards	–	*N/T*	
4.	8.9.	Footrest – forces acting upwards	–	*N/T*	
4.	8.10.	Handle grips for pushing – load acting upwards	–	*N/T*	
4.	8.11.	Scooter steering handles: Resistance to forward forces	*Conf.*	*Pos.*	*loading 2 x 450N*
4.	8.12.	Scooter steering handles: Resistance to rearward forces	*Conf.*	*Pos.*	*loading 2 x 450N*
4.	8.13.	Scooter steering handles: Resistance to downward forces	*Conf.*	*Pos.*	*loading 952 N*
4.	8.14.	Scooter steering handles: Resistance to upward forces	*Conf.*	*Pos.*	*loading 952 N*
4.	9.3.	Backrest – impact strength	–	*N/T*	
4.	9.4.	Driving wheel – impact strength	–	*N/A*	
4.	9.5.	Castor/front wheel – impact strength	*Conf.*	*Pos.*	*10kg pendulum impact*
4.	9.6.3.	Footrest – side impact	–	*N/T*	
4.	9.6.4.	Footrest – in-line impact	–	*N/T*	
4.	9.7.1.	Upward impacts on anti-tip devices	–	*N/A*	
4.	9.7.2.	Forward or rearward impacts on anti-tip devices	–	*N/A*	
4.	9.7.3.	Lateral impacts on anti-tip devices	–	*N/A*	
4.	10.3.2.	Testing of manually propelled wheelchair on two-drum machine *h=6mm→M≤75kg, h=9mm→100kg≤M>75kg,h=12mm→M>100kg*	–	*N/A*	
4.	10.3.3.	Measurement of initial current for electrically powered wheelchair	–	*N/R*	
4.	10.3.4.	Testing of electrically powered wheelchair on two-drum machine *h=6mm→M≤75kg, h=9mm→100kg≤M>75kg,h=12mm→M>100kg*	*Conf.*	*Pos.*	*200 000 of cycles with full loading of wheelchair (120kg)*

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
4.	10.4.	Drop testing	*Conf.*	*Pos.*	*6666 drops of wheelchair with full loading (120kg) from height of 50mm*
4.	10.5.	Fatigue test of manually operated parking brakes	*Conf.*	*Pos.*	*60 000 cycles*

UWAGA: Dla p. 9.5 - kąt $\Theta = 55^0$

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	*Conf.*	*Pos.*	

TEST RESULTS according to ISO 7176 –10 (*NOTE 8*)

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
PN-EN 12184:2014 Tab. 2	7.1.	Driving forward when the wheels contact an obstacle (drive onto an obstacle)	*Conf. cl.A*	*Pos.*	*Tab. 1 (cl.A h≥15mm) (cl.B h≥50mm)*
	7.2.	Driving forward from a distance of 500mm from the obstacle (drive onto an obstacle)	*Conf. cl.A*	*Pos.*	
	7.3.	Driving backwards when the wheels contact an obstacle. (drive onto an obstacle)	*Conf. cl.A*	*Pos.*	
	7.4.	Driving backwards from a distance of 500mm from the obstacle (drive onto an obstacle)	*Conf. cl.A*	*Pos.*	
	7.5.	Riding off an obstacle while driving forward (downhill from an obstacle)	*Conf. cl.A*	*Pos.*	
	7.6.	Driving backwards from an obstacle (downhill from an obstacle).	*Conf. cl.A*	*Pos.*	

TEST RESULTS according to PN-ISO 7176 –14

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments

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*	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
7.3.e	**V/I**	**Maintenance instruction**			
		• Details of maintenance: - 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 is purchase - conditions when manufacturer, supplier takes action	 – – – – –	 *N/T* *N/T* *N/T* *N/T* *N/T*	
		• Ways of cleaning	–	*N/T*	
		• Elements intended to easy replacement: - information on orders - instruction of disassembly - information on replacement and testing of parts - illustration of parts and their placement	 – – – –	 *N/T* *N/T* *N/T* *N/T*	
		• Ways of performance dangerous activities	–	*N/T*	
7.3.f	**V/I**	Performing of parameters control	–	*N/T*	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
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*	

Requirements according to clause	Test method according to clause	Checked characteristics/assemblies/parameters	Test result	Opinion	Comments
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 120 kg and person of required mass were used for testing.

NOTE 4: Environment temperature for testing - 19^0C.

*NOTE 6: A loaded wheelchair (120kg) on a ramp with a slope 3^0, after driving a road of 5m uphill, it obtained a speed of 4,5 km/h (minimum 2 km/h required). **Positive test result.***

NOTE 7: For class A wheelchair, dynamic stability was tested on a ramp with an incline of 3^0.

- *Dynamic stability in forward hill starts. **Positive test result.***
- *Dynamic stability when braking forward when going uphill. **Positive test result.***
- *Dynamic stability when braking forward when driving downhill. **Positive test result.***
- *Dynamic stability when braking backwards when driving downhill. **Positive test result.***
- *Dynamic stability when turning when driving on a ramp 3^0. **Positive test result.***

*NOTE 8: For class B wheelchair, the ability to negotiate obstacles with a height of **50mm** was tested. (according to ISO 7176-10)*

- *cl. 7.1. Driving forward when the wheels contact an obstacle (drive onto an obstacle 50mm). **Negative test result.***
- *cl. 7.2 Driving forward from a distance of 500mm from the obstacle (drive onto an obstacle 50mm). **Positive test result.***
- *cl. 7.3. Driving backwards when the wheels contact an obstacle. (drive onto an obstacle 50mm). **Negative test result.***
- *cl. 7.4. Driving backwards from a distance of 500mm from the obstacle (drive onto an obstacle 50mm). **Negative test result.***
- *cl. 7.5. Riding off an obstacle while driving forward (downhill from an obstacle 50mm). **Positive test result.***
- *cl. 7.6. Driving backwards from an obstacle (downhill from an obstacle 50mm). **Positive test result.***

The tests were repeated for a class A wheelchair.
*For class A wheelchair, the ability to negotiate obstacles with a height of **15mm** was tested. (according to ISO 7176-10)*

- *cl. 7.1 Driving forward when the wheels contact an obstacle (drive onto an obstacle 15mm). **Positive test result.***
- *cl. 7.2 Driving forward from a distance of 500mm from the obstacle (drive onto an obstacle 15mm). **Positive test result.***
- *cl. 7.3 Driving backwards when the wheels contact an obstacle (drive onto an obstacle 15mm). **Positive test result.***
- *cl. 7.4 Driving backwards from a distance of 500mm from the obstacle (drive onto an obstacle 15mm). **Positive test result.***
- *cl. 7.5 Riding off an obstacle while driving forward (downhill from an obstacle 15mm). **Positive test result.***
- *cl. 7.6 Driving backwards from an obstacle (downhill from an obstacle 15mm). **Positive test result.***

NOTE 9: The wheelchair drive is not equipped with a seat (fabric + filling).

Final assessment			
PN-EN 12182:2012	***Pos.***	**ISO 7176-8:2014**	***Pos.***
PN-EN 12183:2014	***N/A***	**ISO 7176-9:2009**	***Pos.***
PN-EN 12184:2014	***Pos.***	**ISO 7176-10:2008**	***Pos.***
ISO 7176-1:2014	***Pos.***	**PN-ISO 7176-14:2001**	***N/T***
ISO 7176-2:2001	***Pos.***	**PN-ISO 7176-15: 2002**	***N/T***
ISO 7176-3:2012	***Pos.***	**PN-EN 1021-1:2007**	***N/T***
ISO 7176-4:2008	***Pos.***	**PN-ISO 7176-16:2001**	***N/T***
ISO 7176-5:2008	***Tested****	**ISO 7176-16:2012**	***N/T***
ISO 7176-6:2001	***Pos.***	**PN-ISO 7176-19:2007**	***N/T***
PN-ISO 7176-7:2001	***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

PN-EN 12184:2014 - Tab. 1 Requirements and tests for driving characteristics of type classes

Driving characteristics	Test	Requirement Class			Test result Opinion
		A	B	C	
Rated slope	**8.1.2.2**	**min. 3°**	**min. 6°**	**min.10°**	**Cl. A**
Dynamic stability	**8.1.5.2**				
- starting forwards uphill		**min. 3°**	**min. 6°**	**min.10°**	**Cl. A**
- stopping forwards uphill		**min. 3°**	**min. 6°**	**min.10°**	**Cl. A**
- stopping forwards downhill		**min. 3°**	**min. 6°**	**min.10°**	**Cl. A**
- stopping backwards downhill		**min. 3°**	**min. 6°**	**min.10°**	**Cl. A**
Static stability	**8.1.7.2**				
- all directions		**min. 6°**	**min. 9°**	**min.15°**	**Cl. C**
Maximum operating forces					
Brake levers	**10.1.2**				
Freewheel lever and controls	**11.5.2**				
- single finger operation		**5 N**	**5 N**	**5 N**	
- more than one finger operation		**13,5 N**	**13,5 N**	**13,5 N**	
- whole hand operation		**60 N**	**60 N**	**60 N**	
- combined hand and arm operation		**60 N**	**60 N**	**60 N**	
- foot operation, pushing operation		**100 N**	**100 N**	**100 N**	
- foot operation, pulling operation		**60 N**	**60 N**	**60 N**	
Parking brake effectiveness	**10.2.2.2**	**6°**	**9°**	**15°**	**Cl. A**
Maximum speed	**8.1.8**				
- forwards horizontal		**15 km/h**	**15 km/h**	**15 km/h**	
- reverse horizontal		**70%V_{max} or 5 km/h**	**70%V_{max} or 5 km/h**	**70%V_{max} or 5 km/h**	
Obstacle climbing and descending ability	**8.1.6.2**	**15 mm**	**50 mm**	**100 mm**	**Cl. A**
Continuose driving distance range	**8.1.9.2**	**15 km**	**25 km**	**35 km**	**Cl. B**
Ground unevenness	**8.1.3.3**	**10 mm**	**30 mm**	**50 mm**	**N/A**

PN-EN 12184:2014 Tab. 2 (cl. 10.2.2.2) Requirements and tests for driving characteristics on the horizontal for all type classess

Driving characteristics and requirements												**Test**
The maximum value of the delay lasting longer than a 0,03s = 4m/s²:							2,4m/s² (Pos.)					PN-ISO 7176-6
Maximum stopping distance (ot Vmax=15,0km/h)							3,6m (Pos.)					PN-ISO 7176-6
Speed (km/h):	4,0	5,0	6,0	7,0	8,0	9,0	10,0	11,0	12,0	13,0	14,0	15,0
Requiredbraking distance max.(m)	0,6	0,8	1,0	1,2	1,5	1,8	2,1	2,5	2,9	3,4	3,9	4,5
The actual value of the braking distance (m)	0,50	0,65	0,85	1,10	1,30	1,55	1,80	2,15	2,50	2,80	3,20	3,60

NOTE:

After the measurements of braking the wheelchair **PAWS TOURER** found that it meets the requirements of PN-EN 12184: 2014

MARKING VERIFICATION

Name of product: *Electric drive for a wheelchair*
PAWS TOURER

Manufacturer: *REHASENSE Sp. z o.o..*
ul. Sulejowska 45 G
97-300 Piotrków Trybunalski

Requirement according to PN-ISO 7176-15:2002		**Durable marking on wheelchair**
8.1.a	Name and address of manufacturer	***N/T***
8.1.b	Identification of model and serial number	***N/T***
8.1.c	Year of production	***N/T***
8.1.d	Information on likely driver constraints	***N/T***
8.1.e	Maximum mass of user	***N/T***
8.2	Marking of dimension on tyres	***N/T***
Requirement according to PN-EN 12184:2014		**Durable marking on wheelchair**
13.5	Compatibility with EN 12182 and ISO 7176-15	***N/T***
	- devices for disengagement of the drive system, showing engaged and disengaged positions, including a warning that the drive system should be re-engaged before an occupant is left unattended or attempts to operate the wheelchair	***N/T***
	for wheelchairs where yhe intended use includes use as a seat in a motor vehicle, the position of attachment points for wheelchair tie-down and occupant restraint systems (WTORS)	***N/T***
	for wheelchairs not intended to be used as a seat in a motor vehicle, a warning to that effect, including the symbol shown in fig. 7 with a diameter not less than 15mm, in the same location as the labelling required by ISO 7176-15:1996	***N/T***
	for battery chargers that are not on-board chargers, information and connection details specified in clause 9 of ISO 7176-14:1997	***N/T***
	for Class A wheelchairs not intended for use outdoors, a warning to that effect	***N/T***
	CE marking	***N/T***

N/A – not applicable

- END -

CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST
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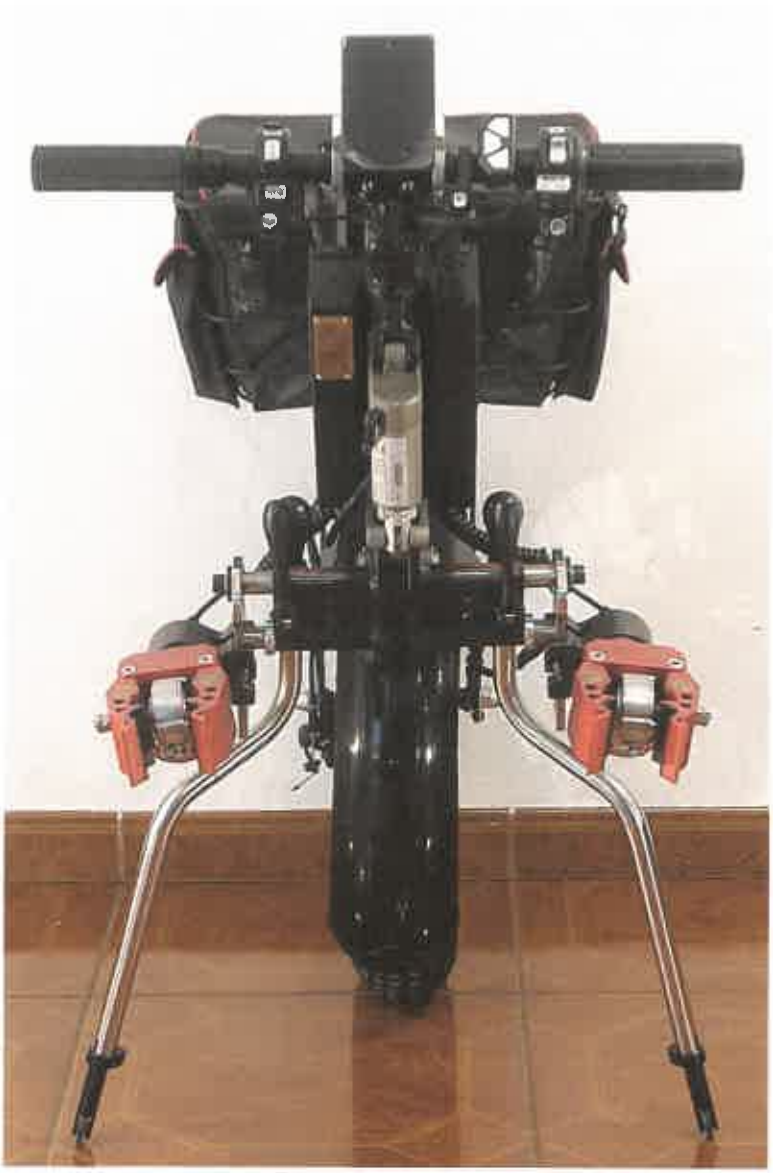
ANNEX 1 TO TEST REPORT No. CBC-090/2020

Identification of wheelchair elements



CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST
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ANNEX 2 TO TEST REPORT No. CBC-090/2020

Identification of wheelchair elements

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ANNEX 3 TO TEST REPORT No. CBC-090/2020

Identification of wheelchair elements

CENTRE FOR TESTING AND CERTIFICATION - MECH-TEST
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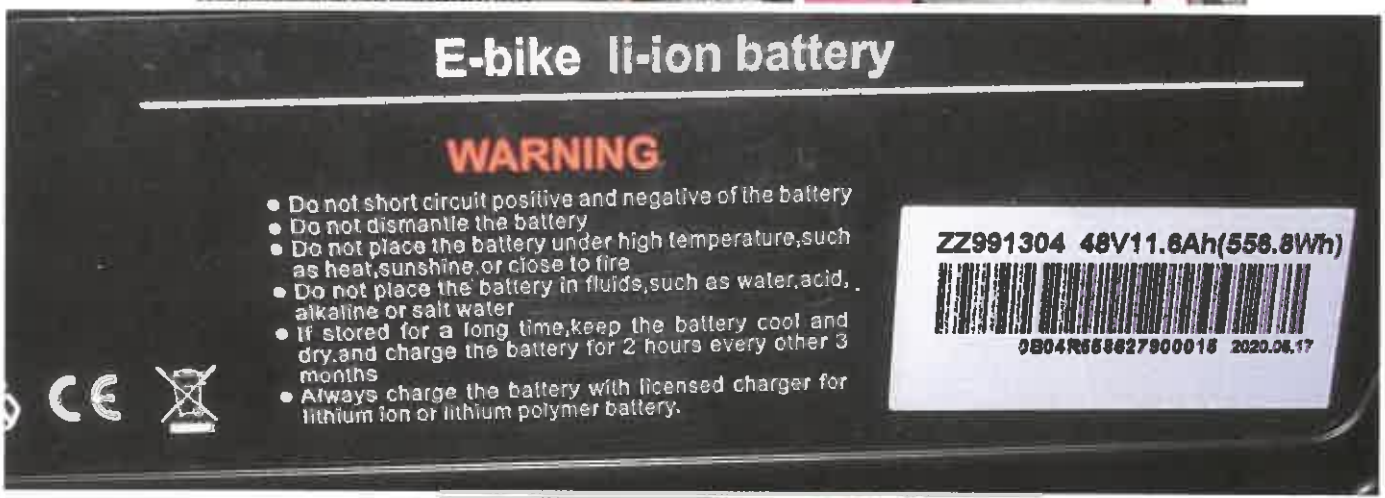
ANNEX 4 TO TEST REPORT No. CBC-090/2020

Identification of wheelchair elements



ANNEX 5 TO TEST REPORT No. CBC-090/2020

Specification

Best Ebike Specification List

	City - 12" Wheel	Cruiser -16" Wheel	Tourer - 20" Wheel
Overall Dimension:(MM)(LxWxH)	800x490x810	820x490x860	1000x520x920
Packing Dimension:(MM)(LxWxH)	1100x550x260	1100x550x260	1200x650x300
Max weight of person:(KG)	120kg	120kg	120kg
Max. permissible overall weight:(KG)	140.8kg	143.8kg	148.8kg
Total weight without battery pack:(KG)	17.5kg	20.5kg	25.5kg
Battery Weight:(KG)	3.3kg	3.3kg	3.3kg
Total weight :(KG)	20.8kg	23.8kg	28.8kg
Motor Power:(W)	350w	500w	500w
Motor Voltage:(V)	48v	48v	48v
Reverse Gear	Yes	Yes	Yes
Battery Capacity:(Ah)	11.6Ah	11.6Ah	11.6Ah
Battery Rated Energy:(Wh)	557Wh	557Wh	557Wh
Battery Dimension:(MM)(LxWxH)	371X130X86	371X130X86	371X130X86
Battery Charger	Yes	Yes	Yes
Charge time:(Hour)	5h	5h	5h
Manual or Auto Operation	Option	Option	Option
Brake Solution	Disk brake + E brake	Disk brake + E brake	Disk brake + E brake
Parking Brake	Yes	Yes	Yes
Turning Radius:(M)	1m	1.2m	1.5m
Climbing capability up to	10 degree	10 degree	10 degree
Max Overriding Height	50mm	40mm	55mm
Range On flat terrian:(Km)	40km	38km	35km
Max Speed:(Km/h)	28km/h	28km/h	32km/h
Drive Mode:(Km/h)	5 modes(10,15,20,25,28)	5 modes(10,15,20,25,28)	5 modes(10,15,20,25,32)
Cruise Control	Yes	Yes	Yes
Walking Mode	Yes	Yes	Yes
Tetra Function	Option	Option	Option
Frame Material	Steel and aluminum	Steel and aluminum	Steel and aluminum
Tire:(Inch)	12-1/2 x2-1/4 (57-203)	16 x 3.0 (76-305)	20 x4.0 (100-406)
Suggested Tire Pressure:(Bar)	2.8BAR	2.4-3.1BAR	2.0BAR
Rim	24 X 203	50 X305	73 X406
Bell or Horn	Horn	Horn	Horn
Front Light	Yes	Yes	Yes
Basket	N/A	N/A	Yes
Installing Requirements of Wheelchair (Seat Width Range)	Possibility of covering all seat width range,ready for customizing as well.		
Installing Requirements of Wheelchair (Seat Height Range)	Possibility of covering all seat height range,ready for customizing as well.		

ANNEX 6 TO TEST REPORT No. CBC-090/2020
Product configuration

PAWS TOURER
product number: RPT20AAS00

PAWS
TOURER 20”
AUTOMATIC CLAMP & LIFT
Fat tyre 20”x 4” –
Lifter and automatic clamp
standard steering rods