

Prüfbericht Test report

343161000-Rev. 1

**Auftraggeber /
Client:** Ferral - José Luís & Ca. Lda.
655 Rua dos Sobrais
3885-307 Cortegaca
Portugal

**Produkt /
Product:** Mobile Podestleitern /
Mobile Ladders with platform

Typ / Type: PROTECT / PROTECT FLEX
(no. of rungs: 2-8 / 3-4, 4-6, 5-8)

**Aufgabenstellung /
Task:** Normkonformitätsprüfung
Standard conformity test

**Prüfgrundlage /
Test specification:** EN 131-7: 2013
EN 131-2: 2010 + A2: 2017
EN 131-3: 2018

Datum / Date: 13.05.2024

**Prüfergebnis /
Test result:** Das vorgestellte Produkt erfüllt die Anforderungen der aufgeführten
Prüfgrundlage. /
The presented product meets the requirements of the given test specification.

1 Produktbeschreibung / Product description

1.1 Beschreibung, Funktion, Technische Daten / Description, Function, Technical data

Type:	PROTECT	PROTECT FLEX
Art.-no.:	5604620060021, -38, -45, -52, -69, -76, -83	5604620060137, -144, -151
Number of rungs:	2-8	3-4, 4-6, 5-8
Platform height:	470, 700, 940, 1170, 1410, 1640, 1880 mm	690-930, 930-1400, 1160- 1870 mm
Rung:	60 mm x 45,6 mm, length 490 mm	
Stile:	65,8 x 24,9 x 1,3 mm	65,8 x 24,9 x 1,3 mm C-stile: 72x32x2 mm
Podest	455 x 600 mm	
Railing:	Ø35x1,5 mm	
Roll:	Ø150x30 mm	
Weight:	17,20 – 26,73 kg	24,23 – 31,52 kg
Rated Load:	150 kg	
Intended Use:	Mobile Ladders with platform for professional use.	



Example: Test sample Protect 3 with labelling



Example: Test sample Protect Flex 8 (climbing legs / support legs)

1.2 Verantwortlicher Inverkehrbringer und Fertigungsstätte / responsible market operator and factory location

Ferral - José Luís & Ca. Lda.
655 Rua dos Sobrais
3885-307 Cortegaca
Portugal

2 Prüfung und Prüfergebnisse / Test and test results

Die Prüfergebnisse beziehen sich nur auf die geprüften Muster bzw. mit dem Muster übereinstimmenden Produkte aus der gleichen Fertigungsstätte./

The test results only refer to the tested samples respectively products of the same manufacturing site that are identical to the sample.

2.1 Dokumente vom Auftraggeber / Client's documents

- Auftrag vom 23.08.2023 / Order dated August 23, 2023
- Gebrauchsanleitung / Instruction manual
- Stückliste, Zeichnungen / parts list, drawings
- Kennzeichnung, Typenschild / Marking, nameplate
- Werkstoffdatenblätter / Material data sheets
- Schweißerbefähigungsnachweis / Welding qualification certificate

2.2 Ort und Datum der Prüfung / Testing location and date

The product testing was on the 27th/28th. September 2023 at Ferral-Jose Luis & Ca. Lda. carried out in Cortegaca (Portugal). The documents were checked in September-November 2023 at DEKRA Testing and Certification GmbH in Stuttgart.

Sofern nicht anders angegeben erfolgen alle Prüfungen bei folgenden Umgebungsbedingungen / If not otherwise recorded all tests are performed at room conditions of: $20 \pm 5^\circ\text{C}$, 40-65%rH.

2.3 Entscheidungsregel / Decision rule

Regel, die beschreibt, wie die Messunsicherheit berücksichtigt wird, wenn Aussagen zur Konformität mit einer festgelegten Anforderung getätigt werden / Rule that describes how measurement uncertainty is accounted for when stating conformity with a specified requirement.

Angewandte Entscheidungsregel / Selected decision rule:

☒	a)	Wenn die anzuwendenden Standards Vorgaben zur Berücksichtigung der Messunsicherheit enthalten, werden diese Vorgaben eingehalten
☒	b)	Wenn die anzuwendenden Standards keine konkreten Anforderungen enthalten und der Kunde keine anderweitige Regel fordert, wird die Messunsicherheit bei der Aussage zur Konformität nicht beachtet.
☐	c)	Wenn die anzuwendenden Standards keine konkreten Anforderungen enthalten und ein erhöhter Sicherheitslevel oder eine andere Forderung vorliegt, wird eine positive Konformitätsaussage getätigt, wenn die Messwerte inklusive der ermittelten Messunsicherheit innerhalb der vorgegebenen Grenzwerte liegen.
☐	d)	Auf Kundenanforderung wurden andere Regelungen getroffen, diese sind:

2.4 Prüfergebnisse / test results

Legende Bewertung / legend rating:

P = in Ordnung ~~ passed;

F = nicht in Ordnung ~~ failed;

N/A = nicht anwendbar ~~ not applicable;

N/T = nicht geprüft ~~ not tested; N/E = nicht bewertet ~~ not evaluated

H = Hinweis / hint, remark

2.4.1 Testing according to EN 131-7

Section EN 131-7	Test criterion	Determination	Result
1	Scope: -max. load 150 kg (1 user + tools) -max. platform height 5 m -max. platform area 1 m ²	150 kg 1,9 m 0,28 m ²	P

Section EN 131-7	Test criterion	Determination	Result
4	Requirements		
4.1	General -prevent accidental slips (user + product) -horizontal rungs/steps -marking legible and durable	P P P	P
4.2	Surface finishes-EN 131-2	See EN 131-2 cl. 4.4	H
4.3	Materials		
4.3.1	General, material according EN 131-2	See EN 131-2 cl. 4.2	H
4.3.2	Wood -Surface shall be slip resistant	Platform: 15 mm screen printing plate	P
4.4	Stabiliser -supplied with the ladder -Specific safety instructions visible on the ladder / stabiliser	Pictogram	P
4.5	Ballast		N/A
5	Dimensional requirements		
5.1.1	Ascending legs with 60-75° -inner width min. 400 mm -max. platform height h max. 5 m -rung depth min. 20 mm -wide rung depth min. 50-80 mm -height lowest rung l4 (min 0,5x l5, max. l5+15) -distance between rungs l5: 230-300 mm	Measured angle: 70,5° 475 mm (420 mm gate) 1,90 m --- 60 mm 240-245 mm 236 mm	P
5.1.2	Ascending legs with 45-60°		N/A
5.2	Supporting legs -Projection of the platform with distance 100 mm to contact points with the ground		P
5.3	Platform and toe board -dimension l6xl7: 400x400 – 1000x1000 mm -toe board height: min. 50 mm -no toe board on the access side allowed -dimension b max. 50 mm	455 x 610 mm 105 mm P 0 mm	P
5.4	Working area -height of guardrail w 950-1100 mm -depth of guardrail x min. 400 mm -interior distance between guardrails y min. 400 mm -clear between platform and guardrail z max. 80 mm	1050 mm 750 mm 470 mm max. 80 mm	P
5.5	Wheels and castors -no movement of mobile ladders	Rolls when using the ladder without contact with the ground	P
5.6	Prevention of falls: Guardrails, Middle rails -height guardrail 950-1100 mm -Opening below and above middle rails < ball with a diameter of 470 mm -ascending sides are optional to fit guard rails	1050 mm <470 mm N/A	P

Section EN 131-7	Test criterion	Determination	Result
5.7	Handrails -if angle of ascending legs 45-60°		N/A
6	Testing		
6.1	All tests in most unfavourable position		H
6.2	Torsion test of steps, rungs and wide rungs with 50 Nm	See EN 131-2 cl. 5.7	H
6.3	Bending test for steps, rungs and wide rungs with 2600 N	See EN 131-2 cl. 5.6	H
6.4	Platform and complete product test		
6.4.1.1	Test for all platform sizes platformloading 2600 N (EN 131-2 cl. 5.6.3) -measuring point 1, middle - mp 2, middle of front edge - mp 3, middle of rear edge - mp 4, front corner	Allowed deformation: 0,5% x b1 (mm): 2,25 Platform width b1: 455 mm Measured value (mm): <1 NA (15 mm screen printing NA plate) <1	P
6.4.1.2	Platform area > 0,5 m²	approx. 0,28 m²	N/A
6.4.2	Complete product test -Load 3500 N in the middle of the ascending Leg on the rung/step, t=1 min -no disassembly, cracking or rupture	Tested at type Protect and Protect Flex with 8 rungs with load 3500 N on the 4 th or 5 th rung	P
6.5	Protection bending test		
6.5.1	Tests on guardrails -preload 20 N -horizontally load 300 N on most unfavourable position Requirement: -max. deflection under load 35 mm -vertically load 1250 N Requirement: no disassembly, cracking or rupture	Tube diameter 35x1,5 mm Gate 33 mm, front side 30 mm, side 30 mm P P	P
6.5.2	Test on middle rail -vertically load 1250 N Requirement: no disassembly, cracking or rupture		P
6.6	Side handrail testing	See EN 131-2 cl. 5.12.2	H
6.7	Stability test		

Section EN 131-7	Test criterion	Determination	Result
6.7.1	Platform < 0,5 m² -platform ladder in position of use, most unfavourable position -750 N on 200x200 mm steel plate in centre of the platform -horizontally force 300 N on the level of the platform in most unfavourable position and direction Requirement: Mobile platform ladder shall not overturn	Protect: 8 rungs: with a stabilizer spacing of 1.96 m, the horizontal force of approx. 300 N is acceptable. 7 rungs: distance 1.67 m, clearly > 300 N 6 rungs: width changed from 1.36 m to 1.60 m, approx. 310 N 5 rungs: width 1.2 m, approx. 305 N 4 rungs: width 0.9 m, approx. 310 N 3 rungs: width 0.9 m, approx. 350 N 2 rungs: b2=0.55 m, approx. 315 N Protect Flex: 5-8 rungs: width changed from 1.68 to 1.78 m, approx. 320 N 4-6 rungs: width increased from 1.2 to 1.4 m, approx. 320 N 3-4 rungs: without stabilizer approx. 330 N N/A	P P N/A
6.7.2	Platform > 0,5 m ²	0,27 m ²	N/A
6.8	Stiffness test -750 N load on steel plate 200x200 mm in the centre of platform -horizontally force 300 N in height of platform -allowed deformation d under load $D \leq 10 \text{ mm} + 0,01 \times h$	A horizontal tensile force of 300 N does not lead to any significant deformation of the platform ladder.	P
6.9	Test for products equipped with spring wheels		N/A
6.10	Kick-up test of the platform with 100 N	See EN 131-2 cl. 5.10	H
6.11	Test of opening restraint devices with 2600 N	See EN 131-2 cl. 5.8	H
6.12	Test of hooks with 3500 N	See EN 131-2 cl. 5.9	H
6.13	Bottom stile end test with 1100 N	See EN 131-2 cl. 5.5	H
6.14	Feet pull test with 150 N	See EN 131-2 cl. 5.11	H
6.15	Test of Plastic ladders	See EN 131-2 cl. 5.16	H
6.16	Marking durability	See EN 131-2 cl. 6	H

Section EN 131-7	Test criterion	Determination	Result
7	Marking, User and safety instruction		
7.1	Marking, EN 131-3 Additionally markings when required: -comply with EN 131-7 -use only with stabiliser -use only with ballast -for outdoor use caution to the wind -use only with activated brakes -Platform > 2,5 m: no outdoor use if the product passes the required stability test	See EN 131-3	H P
7.2	User instruction Additionally safety instructions when required: -use only with stabiliser -use only with ballast -for outdoor use caution to the wind -use only with activated brakes -Platform > 2,5 m: no outdoor use if the product passes the required stability test	See EN 131-3	H P

2.4.2 Testing according to EN 131-2

Section EN 131-2	Test criterion	Determination	Result
4	Requirements		
4.1	Requirement applies to max. load capacity of 150 kg and 1 person	150 kg, 1 person	P
4.2.1	Aluminum alloys: - Min. elongation at break: 5% - Min. wall thickness: 1.2 mm	Stile + wide rung with material datasheet ≥1.2 mm	P
4.2.2	Steel - Ratio of 0.2% yield point to breaking strength < 0.92 Load-carrying parts ≥ 1.0 mm thick	Aluminium	N/A
4.2.3	Plastic - Smooth surface - Glass-fiber-reinforced plastic, protected Load-carrying parts: ≥ 2 mm thick	Railing corner connectors N/A >2 mm	P
4.2.4	Wood: - Wood type Requirements as per Table 1 fulfilled		N/A
4.3	Execution: - No shearing/crushing points (7–18 mm) - Durable connections - Bolts and nuts secured - Suitable welding personnel and methods		

Section EN 131-2	Test criterion	Determination	Result
4.4	Surface condition: - Edges, corners, projecting parts: burr-free, broken or rounded - Sufficient corrosion protection - Wooden parts treated and suitable coating applied	Aluminium	P
4.6	Spreader lock - Spreader lock present - Chain links move unimpeded - Sufficient strength (see 5.8.)	platform	P
4.7	Rungs/steps - Non-slip design - Permanently attached to stiles - Wooden rungs: See standard text	P Weldet / flanged N/A	P
4.9	Non-slip systems - Non-slip foot ends	Rubber ladder shoe	P
5	Check		
5.5	Buckling test of bottom stile ends with 1100 N (this test is not necessary if a bar is fitted) Ascending leg: - Upper stile (inward load): - Lower stile (outward load): Supporting leg: - Upper stile (inward load): - Lower stile (outward load):	180 mm free stile-length Stile 66x25 + C-stile <1,5 mm <1,5 mm Stile 66x25 + C-stile <2 mm <2 mm	P
5.6	Vertical load Pre-load: 200 N; test load: 2600 N for 1 min		P
	Step/rung	Wide rung, length 490 mm: No Permanent Deformation	P
	- Platform -Measuring point 1, center -Measuring point 2, corner	Screen printing plate, 15 mm thick: no permanent deformation	P
5.7	Twist test on step/rung at 50 Nm (permissible remaining deformation 1°)	Wide rung flanged	P
5.8	Spreader lock test at 2600 N (2 x 1300 N)	Tested products: -Protect 5 rungs -Protect Flex 8 rungs Each climbing and supporting side	P P
5.9	Hook test at 3500 N / 1 min.		N/A
5.10	Upward tilt test on platform at 100 N		N/A
5.11	Tensile test of ladder feet - at 150 N No detachment; max. loosening: 4 mm		
5.11.1	Single-section ladder feet	Rubber shoe srewed	P
5.11.2	Single-section ladder feet with stabilizer provided by manufacturer		N/A
5.11.3	Ladder feet and feet comprising stabilizer boards made from multiple sections		N/A

Section EN 131-2	Test criterion	Determination	Result
5.12	Test on hand/knee rail		
5.12.2	Side rail		N/A
5.16	Plastic ladder (see standard text)		N/A
6	Labeling / user information Specification of standards with standard part including issue date (recommendation)	Specification of EN 131	P
	- Indelible - Test with water- and gasoline-soaked cloth (15 s in each case) - Labels do not come loose Good legibility	Test completed w/o problems (n-hexane and water)	P
	As per EN 131-3	All information available	P

2.4.3 Testing according to EN 131-3

Section EN 131-3	Test criterion	Determination	Result
6	Labeling and instructions for use		
6.1	General - Indelible labeling - Points to be tested: see appendix A - Supplied with ladder - Including website address	P P P P	P
6.2	Basic labeling on ladder a) Name and address of manufacturer/distributor, including website address for information about ladder b) Delivery type and possible application (description of type, number and length of parts, max. length of ladder when in use, max. standing height) c) Usage types: "professional use" and "non-professional use" d) Number of general standard EN 131 or, if a specific standard applies, number of this standard (e.g. EN 131-4) e) Month and year of manufacture and/or serial number f) Weight of ladder (in kg) and max. load capacity (in kg) g) Insulation (if applicable) Information as per a, b, c, f must be visible before purchase	P P P P P P N/A	P
6.3	Safety labeling and instructions for use		
6.3.1	General		P
6.3.2	Safety labeling (min. size: 15 mm)	Measured value: 15 mm	P
6.3.3.	Basic safety labeling and instructions for use for all ladders	Required labeling/information present	
	1 Warning: fall from the ladder.		P
	2 Refer to the instruction manual/booklet.		P
	3 Inspect the ladder as soon as you take delivery of it. Before use, always perform a visual check to ensure that the ladder is undamaged and safe to use. Do not use the ladder if it is damaged.		P

Section EN 131-3	Test criterion	Determination	Result
	4 Max. load capacity		P
	5 Do not use the ladder on uneven or unstable surfaces.		P
	6 Do not lean out to the side.		P
	7 Do not use the ladder on dirty/contaminated ground.		P
	8 Max. no. of users		P
	9 Always face the ladder when ascending/descending.		P
	10 Hold the ladder firmly when ascending, descending and working.		P
	11 Avoid any work that places the ladder under a lateral load (e.g. side-on drilling through a solid surface/material).		P
	12 When using a ladder, do not carry any extra equipment that is heavy or difficult to handle.		P
	13 Wear suitable footwear when using the ladder.		P
	14 Do not use the ladder if you have any physical limitations. Certain health conditions, medication or alcohol/drug abuse can represent safety risks when the ladder is used.		P
	15 Do not spend long periods on the ladder without regular breaks (tiredness is a risk).		P
	16 Avoid damaging the ladder when transporting it (e.g. use the proper lashing) and make sure that it is properly secured/attached.		P
	17 Make sure that the ladder is suitable for the task.		P
	18 Do not use the ladder if it is dirty/contaminated (e.g. wet paint, dirt, oil, snow, etc.).		P
	19 Do not use the ladder outdoors in adverse weather conditions (e.g. strong winds).		P
	20 To ensure proper use, you must perform a risk assessment under consideration of the legislation applicable in the country of use.		P
	21 When positioning the ladder, make sure that there is no risk of collision (e.g. with passers-by, vehicles, doors, etc.). Secure any doors (but not fire exits) and windows in your working area (if possible).		P
	22 Warning: electrical hazard. Identify any potential electrical hazards in your working area (e.g. overhead power lines or other exposed electrical equipment) and do not use the ladder where electrical hazards are present.		P
	23 Use non-conductive ladders for unavoidable live electrical work.		P
	24 Do not use the ladder as a bridge.		P
	25 Do not structurally modify the ladder in any way.		P
	26 Do not move a ladder while standing on it.		P
	27 Be careful of wind when using the ladder outdoors.		P
	28 If applicable: installation instructions for stabilizer bar		N/A
	29 Ladder for non-professional use		P
	30 Ladder for professional use		P

Section EN 131-3	Test criterion	Determination	Result
6.3.4	Single ladders		N/A
6.3.5	Stepladders		N/A
6.3.6	Multipurpose ladders		N/A
6.3.7	Extension ladders		N/A
6.3.8	Single- or multi-joint ladders		N/A
6.3.9	Teleskopic ladders		N/A
6.3.10	Mobile platform ladders		
	1 Do not step off the side of the platform ladder onto another surface.		P
	2 Open fully before use (foldable mobile platform ladders).		P
	3 Use the ladder only with the spreader lock engaged.		N/A
	4 Any horizontal surfaces that resemble the platform on a stepladder but are not designed for standing on	 pictogram	P
	5 Use only with a stabilizer (if part of the ladder).		P
	6 Use only with ballast (if part of the ladder).		N/A
	7 Use only with activated brakes (if part of the ladder).		N/A
	8 Do not use ladders outdoors if they are not designed for this purpose.		N/A
7	Repair, maintenance and storage	The required information is provided in the instructions.	P
	Ladder repairs and maintenance must be performed by a skilled person and in accordance with the manufacturer's instructions.		P
	For the repair and maintenance of parts (e.g. feet), contact the manufacturer/distributor.		P
	Ladders should be stored as described in the manufacturer's instructions.		P
Appendix A	List of parts to be inspected	required information under Section 12 ("Inspection List") in the instructions for use.	P

Projektingenieur ~~ Engineer


Dipl.-Ing. Franz Dühren



--Ende des Prüfberichts / End of test report--