Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710C00TRF Rev.01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Test sample: Type of test object: Trademark: Model and/or type reference:	Serie 200. Sanitary Items 0040SG**, 0041SG**, 0042SG**,0043SG**,0142SG**, 0242SG**, 0045SG**, 0046SG**,0047SG**,0048SG**, 0147SG, 0247SG**, 2345SG**, 2346SG**, 2347SG**, 2445SG**, 2446SG**, 2447SG**
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF
	☐ Partial test according to manufacturer's specifications
	☐ Preliminary test
	☐ Spot check
	☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 From 27.08.2021 to 02.09.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	

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0046SG**: Load Capacity: 100 kg

0041SG**: Load Capacity: 100 kg

0147SG**: Load Capacity: 100 kg

0142SG**: Load Capacity: 100 kg

2347SG**: Load Capacity: 100 kg

Attachments:

General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
The test results presented in this report relate only to the object tested.
This report shall not be reproduced except in full without the written approval of the testing laboratory.

Summary of testing:

☐ deviation(s) found

☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:

Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

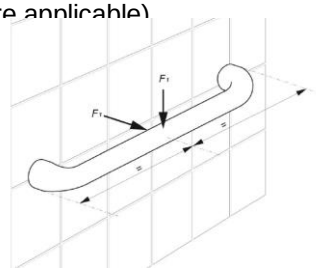
Possible test case verdicts:

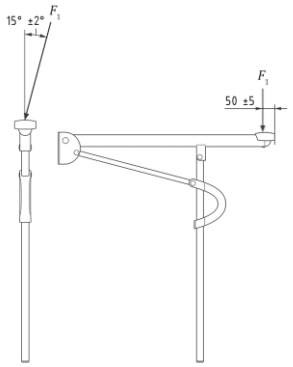
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

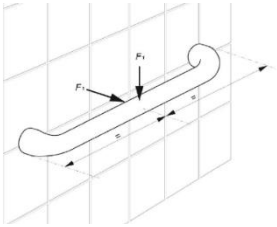
Possible suffixes to the verdicts:

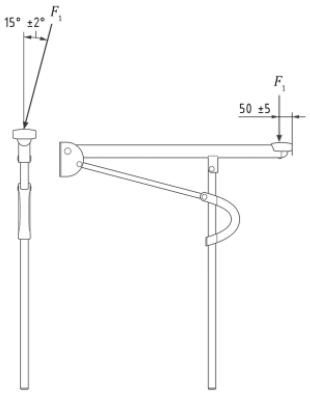
suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

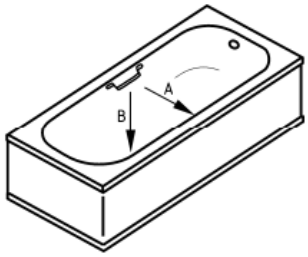
Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 		
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		N/A

Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	F: 762.4 N	P
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)		N/A
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		N/A

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day **Activity type** / **Home care**: Toilet activity: 5; Shower/bath activity: 2 tDL = 10 (designed life time, in years) 	F:203.2 N	P
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710B00TRF Rev.01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
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TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
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Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Test sample: Type of test object: Trademark: Model and/or type reference:	Series ANIMO/200. Sanitary Items (Wall mount grip) 0270BG, 0271BG, 0272BG, 0273BG, 0274BG, 0275BG, 0276BG, 0277BG, 0278BG, 0280BG, 0281BG, 0282BG, 0283BG, 0284BG, 0285BG, 0286BG, 0001SG**, 0002SG**, 0003SG**, 0004SG**, 0005SG**, 0006SG**, 0010SG**, 0011SG**, 0012SG**, 0015SG**, 0016SG**, 0017SG**, 0018SG**, 0020SG**, 0021SG**, 0025SG**, 0026SG**, 0030SG**, 0031SG**, 0050SG**, 0051SG**, 0055SG**, 0056SG**, 0057SG**, 0059SG**, 0060SG**, 0061SG**, 0062SG**, 0064SG**, 0065SG**, 0100SG**, 0105SG**, 0110SG**,0070SG**, 0075SG**
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF ☐ Partial test according to manufacturer's specifications ☐ Preliminary test ☐ Spot check ☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 From 27.08.2021 to 02.09.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	

TÜV®

0003SG**: Load Capacity: 150 kg

005SG**: Load Capacity: 150 kg

0012SG**: Load Capacity: 150 kg

0018SG**: Load Capacity: 150 kg

0026SG**: Load Capacity: 150 kg

Attachments:

General remarks:

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"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
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Summary of testing:

☐ deviation(s) found

☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:


Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

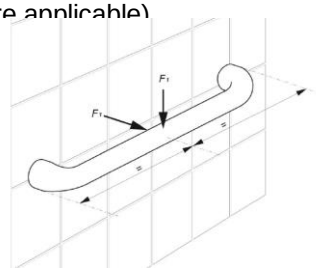
Possible test case verdicts:

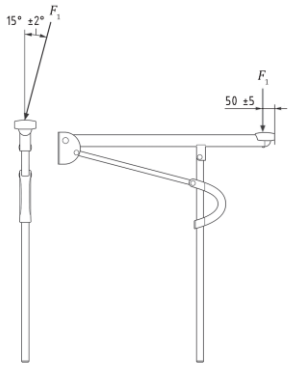
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

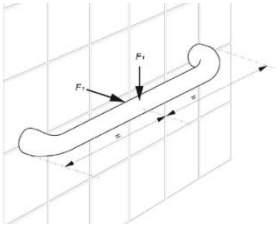
Possible suffixes to the verdicts:

suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 		
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Vertical: 225 kg Horizontal: 112,5 kg	P

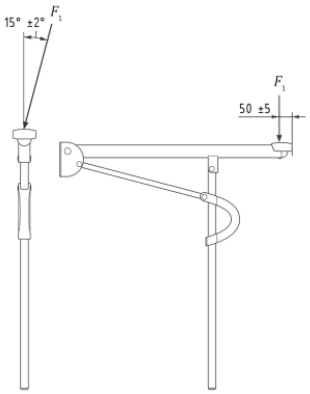
Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	Fixed grips	N/A
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Fixed grips	N/A

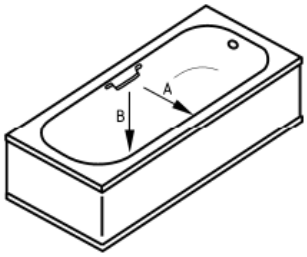
Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	Environmental conditions Room temperature = 22 °C ± 2 °C Relative humidity = 45 % ± 5 % Product designed for public use uTD = 5 Max. user mass: 150 kg Test force: 588.6 Lifetime: 5 years Test cycles TC: 18250	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day	Fixed grips	N/A
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Fixed grips	N/A

Activity type	**Home care**
Toilet activity	5
Shower/bath activity	2

tDL = 10 (designed life time, in years)



Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710A00TRF Rev.01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Test sample: Type of test object: Trademark: Model and/or type reference:	3004SG 01 Sanitary Items (Wall mount grip) 3001SG**, 3002SG**, 3003SG**, 3004SG**, 3005SG**, 3006SG**, 3007SG**, 3010SG**, 3011SG**, 3012SG**, 3015SG**, 3016SG**, 3017SG**, 3018SG**, 3020SG**, 3021SG**, 3025SG**, 3026SG**, 3028SG**, 3030SG**, 3031SG**, 3032SG**, 3040SG**, 3041SG**, 3042SG**, 3045SG**, 3046SG**, 3047SG**, 3050SG**, 3051SG**, 3055SG**, 3056SG**, 3057SG**, 3058SG**, 3059SG**, 3060SG**, 3061SG**, 3062SG**, 3064SG**, 3070SG**, 3071SG**, 3072SG**; 3110SG**,3245SG**, 3246SG**,3247SG**, 3240SG**, 3241SG**, 3242SG**.
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF ☐ Partial test according to manufacturer's specifications ☐ Preliminary test ☐ Spot check ☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 27.08.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	
Attachments:	

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General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
The test results presented in this report relate only to the object tested.
This report shall not be reproduced except in full without the written approval of the testing laboratory.

Summary of testing:

☐ deviation(s) found
☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:

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Name and address of factory (ies) *(only if certification is provided)*:
PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

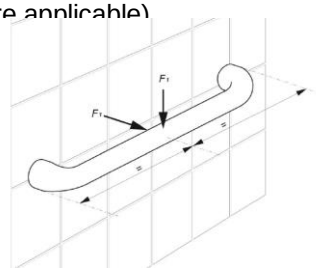
Possible test case verdicts:

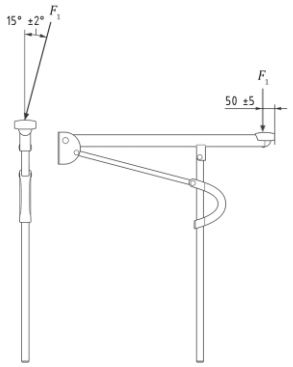
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

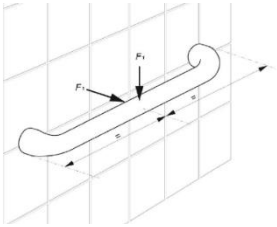
Possible suffixes to the verdicts:

suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	*P*
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	*P*
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		*N/A*
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		*N/A*
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	*P*

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 		
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Vertical: 195 kg Horizontal: 97.5 kg	*P*

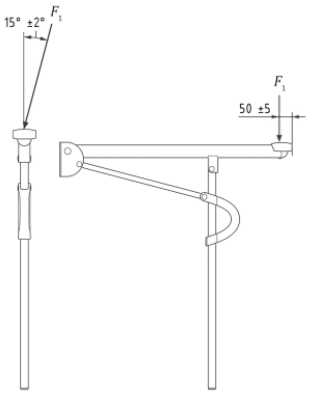
Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	Fixed grips	*N/A*
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Fixed grips	*N/A*

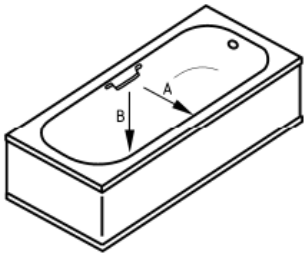
Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	Environmental conditions Room temperature = 22 °C ± 2 °C Relative humidity = 45 % ± 5 % Product designed for public use uTD = 5 Max. user mass: 130 kg Test force: 510 Lifetime: 5 years Test cycles TC: 18250	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day	Fixed grips	N/A
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	Fixed grips	N/A

Activity type	**Home care**
Toilet activity	5
Shower/bath activity	2

tDL = 10 (designed life time, in years)



Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710D00TRF Rev.01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Test sample: Type of test object: Trademark: Model and/or type reference:	Serie 250. Sanitary Items 2001HG**, 2002HG**, 2003HG**,2011HG**, 2012HG**, 2013HG**,2201HG,2202HG,2203HG,2211HG,2212HG,2213HG2020 HG**, 2021HG**, 2022HG**, 2023HG**, 2024HG**, 2025HG**, 2026HG**, 2030HG**, 2031HG**, 2032HG**, 2040HG**, 2041HG**, 2050HG**, 2051HG**, 2052HG**, 2060HG**, 2070HG**, 2072HG**, 2080HG**, 2081HG**, 2090HG**, 2091HG**, 2092HG**, 2100HG**, 2101HG**, 2102HG**, 2110HG**, 2111HG**, 2120HG**, 2121HG**, 2122HG**; 2130HG**
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF ☐ Partial test according to manufacturer's specifications ☐ Preliminary test ☐ Spot check ☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 From 27.08.2021 to 02.09.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	

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2002HG**: Load Capacity: 100 kg

2003HG**: Load Capacity: 100 kg

2012HG**: Load Capacity: 100 kg

2013HG**: Load Capacity: 100 kg

2026HG**: Load Capacity: 120 kg

2032HG**: Load Capacity: 120 Kg

2052HG**: Load Capacity: 120 Kg

2072HG**: Load Capacity: 120 Kg

20130HG**: Load Capacity: 120 Kg

Attachments:

General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
The test results presented in this report relate only to the object tested.

Summary of testing:

☐ deviation(s) found

☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:

Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

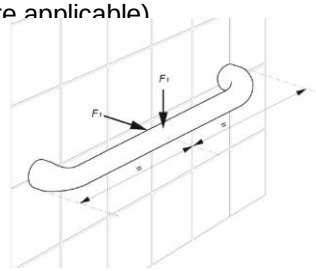
Possible test case verdicts:

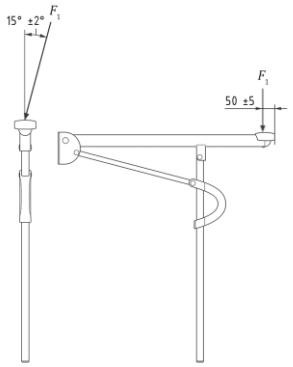
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

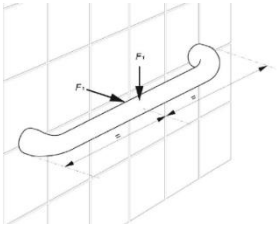
Possible suffixes to the verdicts:

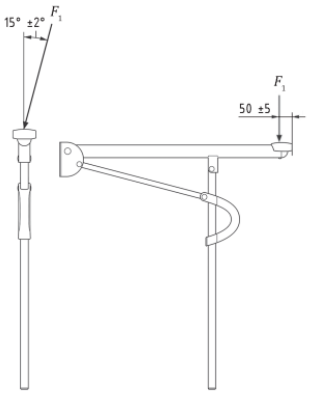
suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

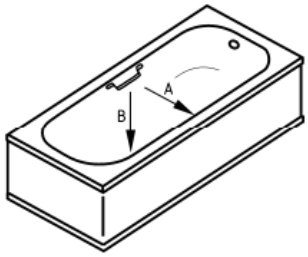
Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 		
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	All product pass this test	P

Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	All product pass this test	P
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	F:471 N Cycles: 18.250	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day **Activity type** / **Home care**: Toilet activity: 5; Shower/bath activity: 2 tDL = 10 (designed life time, in years)  		P
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710E00TRF Rev.01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Product Service

Test sample: Type of test object: Trademark: Model and/or type reference:	Serie 400. Sanitary Items 4001SG**, 4002SG**, 4003SG**, 4004SG**,4245SG, 4246SG,4247SG, 4240SG, 4241SG, 4242SG, 0262BG; 0055HW, 0050VH, 4005SG**, 4006SG**, 4007SG**, 4010SG**, 4011SG**, 4012SG**, 4015SG**, 4016SG**, 4017SG**, 4018SG**, 4020SG**, 4021SG**, 4025SG**, 4026SG**, 4028SG**, 4030SG**, 4032SG**; 4031SG**, 4040SG**, 4041SG**, 4042SG**, 4045SG**, 4046SG**, 4047SG**, 4050SG**, 4051SG**, 4055SG**, 4056SG**, 4057SG**, 4058SG**, 4059SG**, 4060SG**, 4061SG**, 4062SG**, 4064SG**, 4070SG**, 4071SG**, 4072SG**, 4110SG**, 4240SG**, 4241SG**, 4242SG**, 4245SG**, 4246SG**, 4247SG**
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF
	☐ Partial test according to manufacturer's specifications
	☐ Preliminary test
	☐ Spot check
	☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 From 27.08.2021 to 02.09.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	

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4004SG **: Load Capacity: 130 Kg
4015SG **: Load Capacity: 130 kg
4041SG **: Load Capacity: 130 Kg
4042SG **: Load Capacity: 130 kg
4046SG **: Load Capacity: 130 Kg
4047SG **: Load Capacity: 130 Kg
4110SG **: Load Capacity: 130 Kg

Attachments:

General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
The test results presented in this report relate only to the object tested.
This report shall not be reproduced except in full without the written approval of the testing laboratory.

Summary of testing:

☐ deviation(s) found
☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:

Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

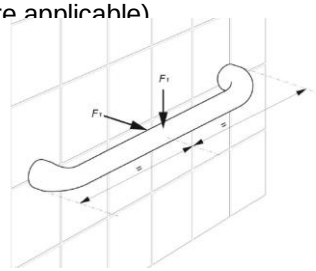
Possible test case verdicts:

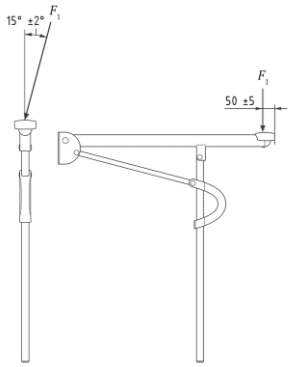
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

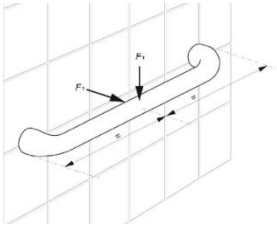
Possible suffixes to the verdicts:

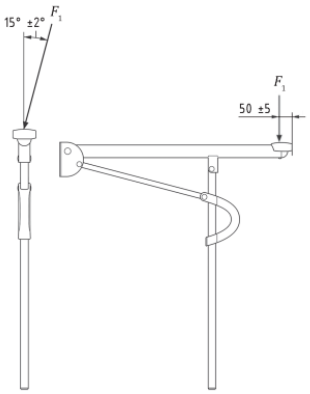
suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

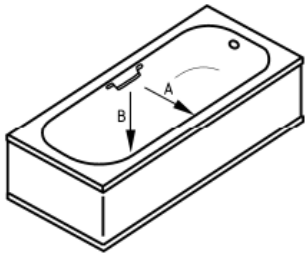
Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 	Fv: 195 kg Fo: 97.5 kg	
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	All product pass this test	P

Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	F: 950 N	P
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	F:510 N Cycles: 18.250	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day **Activity type** / **Home care**: Toilet activity: 5; Shower/bath activity: 2 tDL = 10 (designed life time, in years)  	F:264.3 N	P
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT

PPP 52018C:2019 Rev. 0

TUV SUD Test Report for sanitary handles for domestic use

Report No.: Date of issue: Project handler:	MES1763710F00TRF Rev. 01 27.08.2021 Fabio Murgia
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Fabio Murgia *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

TÜV®

Product Service

Test sample: Type of test object: Trademark: Model and/or type reference:	Serie 500. Sanitary Items 5020SG**, 5021SG**,5022SG**, 5023SG**, 5024SG**, 5025SG**, 5030SG**, 5031SG**,5032SG**, 5050SG**, 5051SG**, 5052SG**, 5053SG**, 5070SG**, 5071SG**, 5080SG**, 5081SG**, 5082SG**, 5090SG**, 5092SG**, 5100SG**,5101SG**, 5102SG**, 5120SG**, 5121SG**, 5122SG**, 5130SG**, 5131SG**, 5132SG**, 5150SG**, 5152SG**, 5154SG**
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF
	☐ Partial test according to manufacturer's specifications
	☐ Preliminary test
	☐ Spot check
	☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	16.07.2021 24.08.2021 From 27.08.2021 to 02.09.2021
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*:	

TÜV®

5023SG**, Load: 130 kg,
5025SG**, Load: 130 kg,
5032SG**, Load: 130 kg,
5053SG** Load: 130 kg,
5071SG**, Load: 130 kg,
5132SG**, Load: 130 kg,
5001SG**, Load: 100 kg,
5007SG** Load: 100 kg,

Attachments:

General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
*Throughout this report **a comma** is used as the decimal separator.*
The test results presented in this report relate only to the object tested.
This report shall not be reproduced except in full without the written approval of the testing laboratory.

Summary of testing:

☐ deviation(s) found
☒ no deviations found

Additional information on Non-standard test method(s)

Sub clause:

Page:

Rational:

If additional information is necessary, please provide

Copy of marking plate:

Picture of the product:

Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

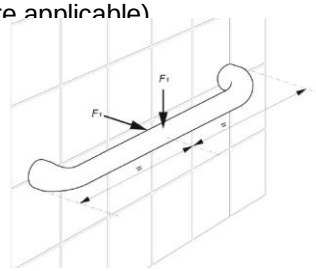
Possible test case verdicts:

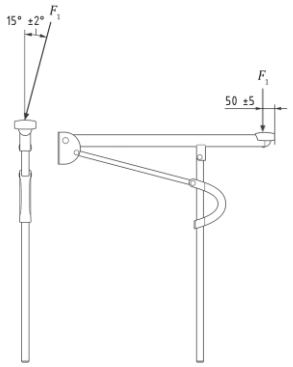
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

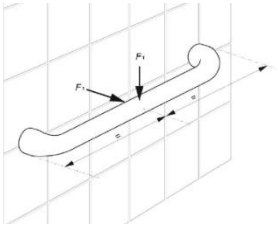
Possible suffixes to the verdicts:

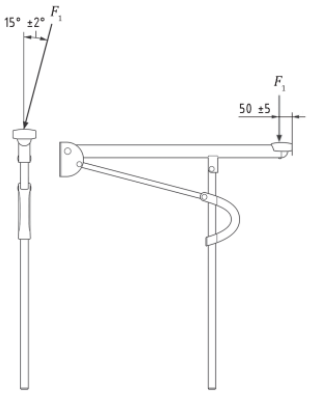
suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

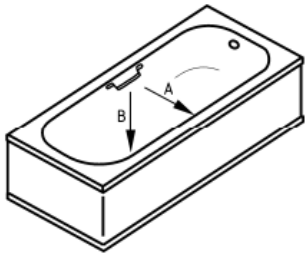
Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 		
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	All product pass this test	P

Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 	F: 950	P
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	F:510 N Cycles: 18.250	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day **Activity type** / **Home care**: Toilet activity: 5; Shower/bath activity: 2 tDL = 10 (designed life time, in years)  	F:264.3 N	P
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	After test no visible cracks, no loose connections, all adjustable parts function as intended, no deformations or gap, disturbing the function.	P

Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1	Wall mounted grip	N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity	Satisfied requirement	P
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity	Satisfied requirement	P

End of test report

Product Service

TEST REPORT PPP 52018C:2019 Rev. 0 TUV SUD Test Report for sanitary handles for domestic use	
Report No.: Date of issue: Project handler:	MES1927492A00TRF Rev. 00 27.05.2022 Simone Ferro
Testing laboratory: Address: Testing location:	TÜV Italia Via Brandizzo 123 – 10088 Volpiano (TO) as above
Client: Client number: Address: Contact person:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO Oswald Fischnaller
Standard:	This TUV SUD test report form is based on the following requirements: PPP 52018C:2019
TRF number and revision*:*	TRF PPP 52018C:2018 rev.0:2018
TRF originated by:	TUV SUD Product Service, Mr.Maurizio Leone *(product specialist)*
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
Scheme: Non-standard test method: National deviations:	☐ TUV Mark ☒ without certification ~~☐ GS Mark~~ ~~☐ NRTL Mark~~ ~~☐ EU-Directive~~ ☐ No ☐ Yes, see details under Summary of testing
Number of pages *(Report)*: Number of pages *(Attachments)*:	
Compiled by:	Simone Ferro *(Printed Name and Signature)*
Approved by:	Andrea Rotundo *(Printed Name and Signature)*

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Test sample: Type of test object: Trademark: Model and/or type reference:	Serie S350 Sanitary Items 3501SG**PM;3502SG**PM;3503SG**PM;3504SG**PM; 3506SG**PM;3510SG**PM;3511SG**PM;3515SG**PM; 3516SG**PM;3517SG**PM;3518SG**PM;3550SG**PM; 3552SG**PM;3555SG**PM;3556SG**PM;3557SG**PM; 3558SG**PM
Rating(s):	
Manufacturer: Manufacturer number: Address:	PROVEX INDUSTRIE S.r.l. 16804 Zona Industriale 10 – 39031 - BRUNICO
Sub-contractors/ tests (clause): Name:	
Order description:	☒ Complete test according to TRF ☐ Partial test according to manufacturer's specifications ☐ Preliminary test ☐ Spot check ☐ Others:
Date of order: Date of receipt of test item: Date(s) of performance of test:	02.05.2022 04.05.2022 From 09.05.2022 to 23.05.2022
Test item particulars: Wall mount grip	
Purpose of the product (Description of intended use): Sanitary Items	
Characteristic data *(not shown on the marking plate)*: 3501SG**PM;3502SG**PM;3503SG**PM;3504SG**PM;3506SG**PM; 3510SG**PM;3511SG**PM;3515SG**PM;3516SG**PM;3517SG**PM; 3518SG**PM;3550SG**PM;3552SG**PM;3555SG**PM;3556SG**PM; 3557SG**PM;3558SG**PM 150Kg load capacity	
Attachments:	

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General remarks: *"(see remark #)" refers to a remark appended to the report.* *"(see appended table)" refers to a table appended to the report.* *Throughout this report **a comma** is used as the decimal separator.* *The test results presented in this report relate only to the object tested.* *This report shall not be reproduced except in full without the written approval of the testing laboratory.*

Summary of testing:
☐ deviation(s) found ☒ no deviations found
Additional information on Non-standard test method(s) Sub clause: Page: Rational: **If additional information is necessary, please provide**
Copy of marking plate:

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Picture of the product:





Name and address of factory (ies) *(only if certification is provided)*:

PROVEX INDUSTRIE S.r.l.

Zona Industriale 10

39031 BRUNICO

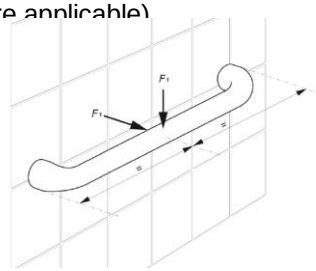
Possible test case verdicts:

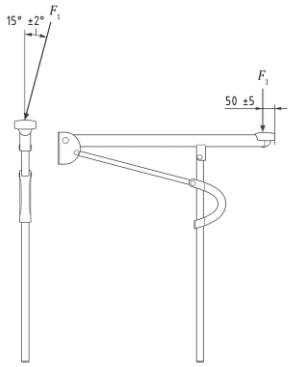
test case does not apply to the test object:	N/A (not applicable / not included in the order)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

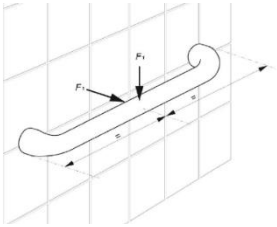
Possible suffixes to the verdicts:

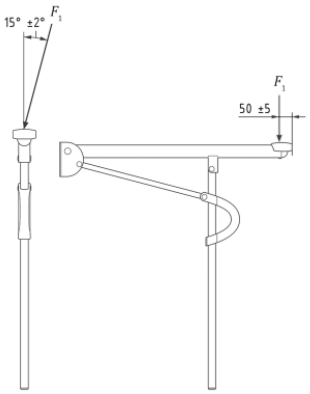
suffix for detailed information for the client:	C (Comment)
suffix for important information for factory inspection:	M (Manufacturing)

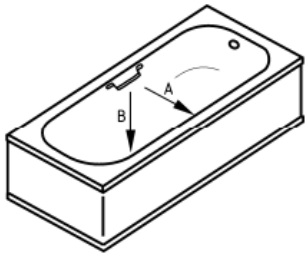
Clause	Requirement + Test	result – Remark	Verdict
1	**Scope** This test program includes safety requirements for sanitary handles for domestic use. It does not apply to sanitary handles in the field of rehabilitation and medically care for people.		
2	**Fasteners**		
	EK5/AK7 decision 06:2014 If mounting hardware is included, these shall be reviewed and meet the requirements. The limited area of these hardware must also be obvious to the consumer.	Satisfied requirement	P
3	**Safety of moving parts**		
3.1	(ISO 17966:2016 clause 23.9.2) Safety folding grips which are adjustable or can be moved from one position into another, must have devices for safe attachment in each intended operating position (e.g.: safety folding grips have to be secured against unintentional folding up / folding down, …).	The foldable safety handles, which can be adjusted or moved, have devices for secure attachment.	P
3.2	(EN 581-1:2017 clause 3.2) Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be more or equal than 7 mm and less or equal than 18 mm in any position during movement		N/A
3.3	(EN 581-1:2017 clause 5.2) Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.		N/A
3.4	(EN 581-1:2017 clause 5.3.1) Shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	Satisfied requirement	P

Clause	Requirement + Test	result – Remark	Verdict
4	**Static forces** Position the product in the least favorable position of intended use if not described.		
4.1	**Static strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.1) The wall-fastened handrail is loaded (F_1) vertically with 1,5 x max. load for at least 60s in the most adverse position and then horizontally using 50% of the vertically test force. Max. load (maximum user mass in kg. including additional load where applicable) 	Vertical Load: 2250 N Horizontal Load: 1125 N	
4.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	All product pass this test	P

Clause	Requirement + Test	result – Remark	Verdict
4.2	(ISO 17966:2016 clause 23.9.3) Support arms / folding grips are loaded (F_1) in a point 50 mm ± 5 mm from the front edge with an angle of 15° ± 2° outwards and downwards for at least 60s with a load calculated with the following formula: $$F = \frac{md \times 9{,}81 \times 1{,}5}{2 \times cos15°}$$ md is max. user mass The max. test force is limited to 950 N. 		N/A
4.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		N/A

Clause	Requirement + Test	result – Remark	Verdict
5	**Fatigue strength by safety grip systems** (ISO 17966:2016 clause 23.7.3.2)		
5.1	The wall-fastened handrail is loaded vertically and horizontally with 40% of the test force calculated with the following formula: F = md × 9,81 md is max. user mass Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL  with: uTD typical uses per day **Activity type** / **Home care** Toilet activity: 5 Shower/bath activity: 2 tDL = 10 (designed life time, in years)	Vertical Load: 588.6 N Horizontal Load: 588.6 N	P
5.1.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function	All product pass this test	P

Clause	Requirement + Test	result – Remark	Verdict
5.2	(ISO 117966:2016 clause 23.9.3.1) Support arms / folding grips are loaded (F_1) vertically at a point 50 mm ± 10 mm from the front edge under an angle of 15° ± 2° outward with 40 % with a test force calculated with the following formula: $$F = \frac{md \times 9{,}81}{2 \times \cos 15°}$$ md is max. user mass The max. test force is limited to 635 N. Frequency: 30 cycles/min. The test cycle (TC) shall be calculated according to the following formula. TC = uTD × 365 × tDL with: uTD typical uses per day **Activity type** / **Home care**: Toilet activity: 5; Shower/bath activity: 2 tDL = 10 (designed life time, in years)  		N/A
5.2.1	After performing the test following requirements have to be fulfilled: • no breaks and no visible cracks • no loose connections • all adjustable parts function as intended • no deformations or gap, disturbing the function		N/A

Clause	Requirement + Test	result – Remark	Verdict
6	Grips for fastening on the bath tube: The handles have to withstand a force of 500 N without visible permanent deformation or other demages. 1) The force is to be applied horizontally in the direction A in the middle of the handle for (5 ± 1) min (see picture 1). 2) The force is to be applied vertical down in the direction B in the middle of the handle for (5 ± 1) min (see picture 1).  Picture 1		N/A
7	**Materials**		
7.1	(EK5/TAK3 16-01:2016 clause 4.3) Statement of materials used. All materials used shall be suitable for their intended purpose and resistant to corrosion.		P
7.2	**Corrosion test**		
7.2.1	**(EK5/TAK3 16-01:2016 clause 4.3.1)** Sufficient corrosion protection is deemed to exist, when, for example, the test object does not display any surface changes indicating damage following a salt spray test performed in accordance with EN ISO 9227 (test procedure NSS, test duration 120 h).		P
7.2.2	Assessment level 8 pursuant to EN ISO 10289.		P
7.3	**Plastic** (EK5/TAK3 16-01:2016 Punkt 4.3.2) Plastics are regarded as corrosion-resistant. However, resistance to ageing and UV shall be verified. A datasheet (in German or English) from the granule manufacturer shall be supplied. If granules are obtained from multiple sources, a datasheet shall be obtained for each manufacturer.		P

Clause	Requirement + Test	result – Remark	Verdict
8	**Design**		
8.1	**Corners and Edges** (EK5/TAK3 16-01:2016 clause 4.4.1) The products shall be free from any sharp corners or edges.	Satisfied requirement	P
8.2	**Edge radius** (EK5/TAK3 16-01:2016 clause 4.4.2) Parts that are intended to be touched shall display an edge radius of > 2 mm or they shall be bevelled.	Satisfied requirement	P
8.3	**Edges** (EK5/TAK3 16-01:2016 clause 4.4.3) All other edges shall be free of burrs and either rounded or bevelled.	Satisfied requirement	P
9	**Marking**		
9.1	- The manufacturer or manufacturer's mark - Construction year - Material designation for handles made of solid plastic - Max.loading capacity		N/A
9.2	Testing - Marking (EK5/AK6 12-02-2012 clause 6.1) The markings required by the standard shall be clearly legible and durable. Compliance is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit. After all the tests of this standard, the marking shall be clearly legible. It shall not be easily possible to remove marking plates nor shall they show curling. NOTE 1 In considering the durability of the marking, the effect of normal use is taken into account. For example, marking by means of paint or enamel, other than vitreous enamel, on containers that are likely to be cleaned frequently, is not considered to be durable. NOTE 2 The petroleum spirit to be used for the test is aliphatic solvent hexane having a maximum aromatics content of 0.1 % by volume, a kauri-butanol value of 29, an initial boiling point of approximately 65 °C, a dry point of approximately 69 °C		N/A

Clause	Requirement + Test	result – Remark	Verdict
10	**User manual**		
	The user manual shall contains at least the following points: - name and address of the manufacturer or supplier - proper assembly and mounting hardware (requirements for at least one representative fixing case e.g. in concrete, brick, etc., and expertise in regard to unidentified substrates) - intended use - Maintenance - review of the attachment - not for use in the field of rehabilitation and medically care (or analogous) - max.load capacity		N/A

End of test report