TEST REPORT FOR:

Avail Design
Calibre Grab Rail(R01AD45CDDA90°)
Test to 1100N loading force.

TEST DOCUMENTS:

AS 1428.1:2009

Design for access and mobility, Part 1 – General requirements for access – New building work, Section 17 - Grabrails

LABORATORY REFERENCE:

493565-1

This report is supplementary to 493565 dated 26th May 2022

8th November 2023

TEST REPORT

Job Number: 493565-1

PRODUCT

Name and Model No:
Avail Design Calibre Grab Rail(R01AD45CDDA90°)

Serial/Batch No:
NA

Maximum user mass:
Tested to 1100N / 112kgf

Documents used in report
AS 1428.1:2009 Section 17 - Grabrails

Isometric View of Sample

SUPPLIER

Name:
Avail Design

Address:
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Contact: David Sayers

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Email: dave@avail.design

Order no:

Order date:

TESTING AUTHORITY

Name: Novita Children's Services, NovitaTech Test Laboratory

Address: 1 South Road, Thebarton, South Australia 5031

Telephone: (08) 8243 8289

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Testing supervisor: Greg Paini
Senior test technician
Authorised signatory

Checked:

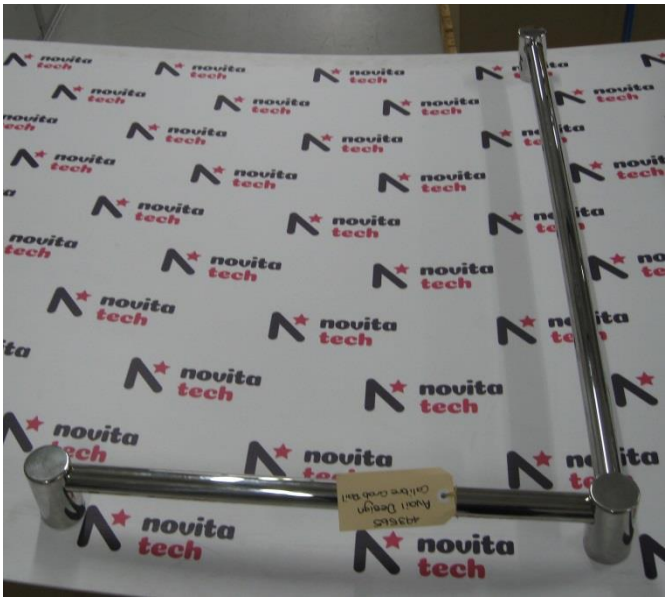
Dates of testing period:
May 2022

Date of issue of this report:
8th November 2023

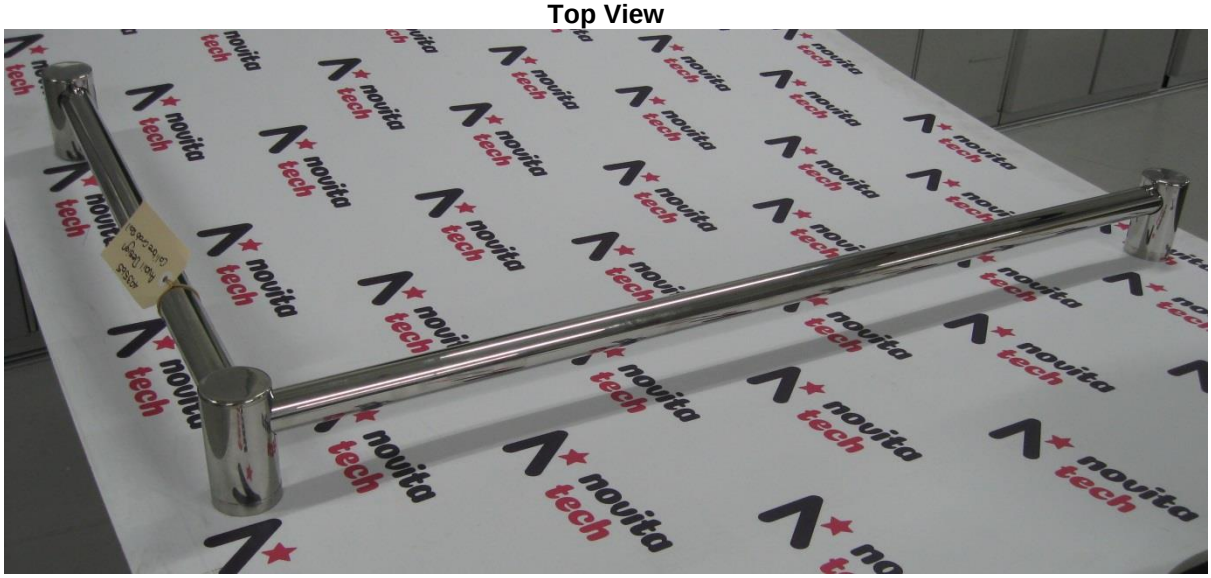
DETAILED PRODUCT DESCRIPTION

Name/model number:
Avail Design Calibre Grab Rail(R01AD45CDDA90°)
Production or prototype sample:
Production
Material:
Stainless steel tubular frame.
Fasteners supplied with rail:
12g x 50mm stainless steel counter sunk timber screws
Functional description:
90° 600mm x 1000mm grab rail
Pre-test Inspection:
OK to test

PHOTOS OF SAMPLE (BEFORE TESTING)



Top View



Isometric View

AS 1428.1:2009 DESIGN FOR ACCESS AND MOBILITY- SECTION 17

Reference	Test/Requirement	Specification	Result
Grabrails shall be in accordance with the following:			
17 (a)	Outside diameter or:	Not < 30 mm – Not > 40 mm	PASS
	Sectional shape	Within limits of 30 to 40 mm Ø	NA
17 (b)	Exposed edges and corners	Not less than 5 mm	PASS
17 (c)	Withstand a load of 1100N at any position and in any direction	Shall be no visible deformation, loosening or rotation	PASS
17 (d)	Clearance between a grab-rail and adjacent wall or any obstruction	50 mm – 60 mm	PASS
17 (e)	No obstruction to the passage of the hand	Top 270° arc	PASS

Remarks:

The grab rail was attached to a flat, rigid vertical surface using supplied 12g x 50mm stainless steel counter sunk timber screws, to simulate the normal mounting of a grab rail to the wall.
Forces were applied in the following directions:

1. Outwards away from the mounting surface at the centre point of each rail
2. Inwards towards the mounting surface at the centre point of each rail
3. Parallel to the mounting surface, at the mounting points left and right, on each point
4. Parallel to the mounting surface, at the mounting points up and down, on each point
5. Parallel to the mounting surface at the centre point of each rail

The Avail Design Calibre Grab Rail(R01AD45CDDA90°) was able to sustain the required 1100 N force in all directions without loosening or permanent deformation.

None. GP. End of remarks ----------

The sample submitted for this test satisfies the relevant requirements of AS 1428.1:2009 (Section 17) for grab-rails (except the methods indicated in this report as “not assessed” and/or tested with deviations).

PASS

Traceable Equipment Used For Measurements In This Report

Gauge #	Gauge Type		Gauge #	Gauge Type	
TLE004	Standard finger Probe	☐	TLE141	Tape Measure, 5 Metre	☐
TLE009	Cold Climate Chamber	☐	TLE144	Stop Watch	☐
TLE010	Test Rig (Static Load Drop)	☒	TLE148	Protractor, Vernier	☐
TLE011	2 Drum Durability Rig	☐	TLE151	Accelerometer	☐
TLE012	Stability Ramp - Static	☐	TLE167	Test Masses, 25kg	☐
TLE016	Square, Steel - Large	☐	TLE175	2 Drum Durability rig	☐
TLE018	Rule, Steel – 1,000 mm	☐	TLE176	Test Dummy	☐
TLE019	Reference Load Gauge	☐	TLE179	Test Rig Prosthetics, Foot	☐
TLE024	Stability Ramp, Dynamic	☐	TLE182	Multimeter	☐
TLE028	Spring Balance 0-100g	☐	TLE183	Impact Pendulum	☐
TLE029	Spring Balance 0– 5kg	☐	TLE184	Test Dummy	☐
TLE030	Spring Balance 0-20kg	☐	TLE185	Inclinometer	☐
TLE032	Thermometer	☐	TLE186	Inclinometer, small	☐
TLE049	Torque Wrench	☐	TLE196	Test Rig Prosthetics, Knee	☐
TLE067	Tyre Pressure Gauge	☐	TLE201	Load Cell	☒
TLE068	Impact Mass, 25 kg Soccer	☐	TLE203	Impactor	☐
TLE077	Force Gauge, RLG	☐	TLE204	Pendulum Impact Hammer	☐
TLE084	Rule, Steel – 300mm	☒	TLE205	Tape Measure, 8 Metre	☐
TLE087	Test Obstacles	☐	TLE210	Test Obstacle, Threshold	☐
TLE105	Thermohygrograph	☒	TLE211	Prosthetic Set up Gauge	☐
TLE106	Scales, Digital	☐	TLE212	Test Rig, Proof Test	☐
TLE112	Vernier Caliper, 200mm	☐	TLE216	Load Pad, Seat Base	☐
TLE114	Spring Balance, 50kg	☐	TLE218	Square, Steel - Small	☐
TLE131	Test Dummy	☐	TLE220	DC Wattmeter	☐
TLE132	Test Dummy	☐	TLE221	Temp/Humidity Meter	☐
TLE133	Test Dummy	☐	TLE225	Caliper, Digital 200mm	☒

NOTES:

1. Uncertainty of measurement (U_m) has been calculated for linear, angle, force, mass, temperature, cycles and count measurements and meets the referenced standards' specifications.
2. Kgf to N conversion calculations take into account any difference in standard gravity (g_n) to local measurement (g) obtained from the world geodetic system.
3. All testing was carried out in a controlled environment laboratory using methods set out in the Standards documents, all deviations and additions to the Standards' methods are noted in remarks.
4. All instruments either carried valid calibration certificates throughout the test period or were checked against traceable Standards before and after use.
5. The NovitaTech Test Laboratory has no control over the selection of test samples. Any extension of the findings of this report to cover production items must be based on production being truly represented by the sample(s).
6. Any non-conformances are indicated in red.

END OF REPORT