TEST REPORT FOR:

Avail Design Liberty DDA Toilet Backrest(R01R1W) Test to 1100 N loading force.

TEST DOCUMENTS:

AS 1428.1:2021

Design for access and mobility, Part 1 – General requirements for access – New building work, Section 12.2.4 - Backrests

LABORATORY REFERENCE:

493540

26th May 2022

TEST REPORT

Job Number: 493540

PRODUCT

Name and Model No:
Avail Design Liberty DDA Toilet Backrest(R01R1W)

Serial/Batch No:
NA

Maximum user mass:
Tested to 1100N / 112kgf

Documents used in report
AS 1428.1:2021 Section 14 - Grabrails

Isometric View of Sample

SUPPLIER

Name:
Avail Design

Address:
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Contact: David Sayers

Telephone: 0400 095 077

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

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Testing supervisor: Greg Paini
Senior test technician
Authorised signatory

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Reason: I attest to the accuracy and integrity of this document
Date: 2022.05.27 13:48:00 +09'30'

Checked: Leonie Rich Perrett
Assistive Technology Technical Specialist

Dates of testing period:
May 2022

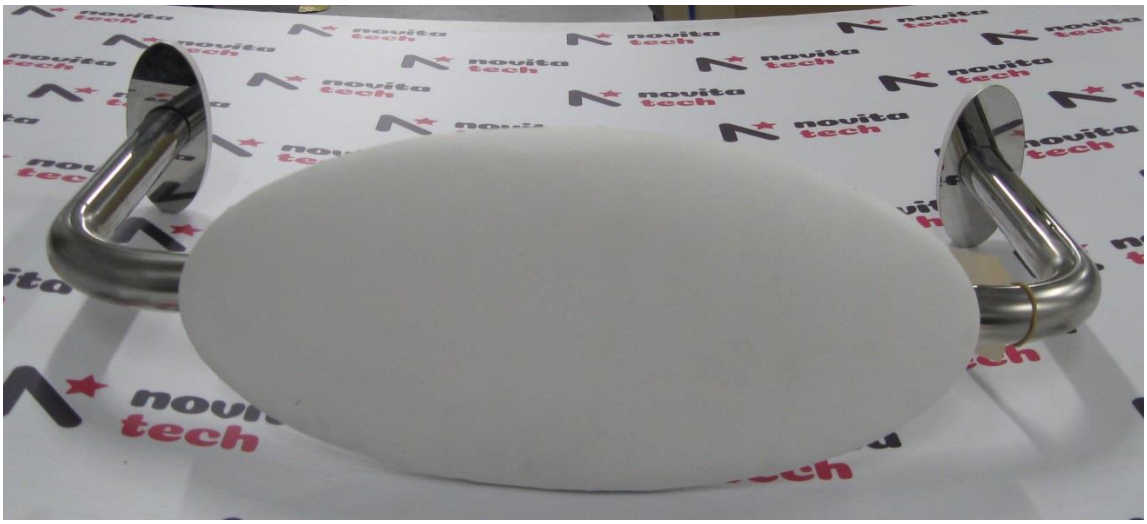
Date of issue of this report:
26th May 2022

DETAILED PRODUCT DESCRIPTION

Name/model number:
Avail Design Liberty DDA Toilet Backrest(R01R1W)
Production or prototype sample:
Production
Material:
Stainless steel tubular frame with padded vinyl covered pad.
Fasteners supplied with rail:
3 x 6mm x 75mm stainless steel bugles, 1 x 6mm x 65 mm stainless steel bugle
Functional description:
Padded toilet backrest
Pre-test Inspection:
OK to test

PHOTOS OF SAMPLE (BEFORE TESTING)

Side View



Front View

AS 1428.1:2021 DESIGN FOR ACCESS AND MOBILITY- SECTION 12.2.4

Reference	Test/Requirement	Specification	Result
Backrests Shall:			
12.2.4 (a)	Be capable of withstanding a force in any direction of 1100N	Shall be no visible deformation, loosening or rotation	PASS
12.2.4 (b)	Dimensions at the face of the pad	Vertical height of 150 to 200mm	PASS (See remarks)
		Width of 350 to 400mm	
12.2.4 (c)	Have its face inclined	95° to 100° to the horizontal	PASS
12.2.4 (d)	Be centred on the WC pan centre line	Installation requirements	Not assessed
12.2.4 (e)	Be located in the correct orientation to the top and front of the seat		
12.2.4 (f)	Be located to allow the seat to remain in the raised position		
12.2.4 (g)	Be capable of being removed and refitted		

Remarks:

Clause 12.2.4 (b) – Dimensions at the face of the pad comply with the requirements of the standard. It is the determination of this laboratory that the shape of the pad is not a requirement.

The backrest was attached to a flat, rigid vertical surface using supplied stainless steel 6mm x 75mm and 6mm x 65mm fasteners to simulate the normal mounting of the backrest grab rail to the wall.
Forces were applied in the following directions:

1. Outwards away from the mounting surface
2. Inwards towards the mounting surface
3. Horizontally towards the left
4. Horizontally towards the right
5. Vertically upwards
6. Vertically downwards

The Avail Design Liberty DDA Toilet Backrest(R01R1W) 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 AS1428.1 (Section 12.2.4) for backrests 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	☒

Testing to AS 1428.1:2021 Clause 12.2.4 – Backrests, is not covered by Novitatech Test Laboratory's scope of accreditation
Testing in this report is not NATA endorsed, however is conducted at the same facility, using the same quality and calibration systems, equipment and competent personnel.

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