

Product Technical Statement



Company;	Protector Aluminium Pty Ltd				
Product Name;	Aluminium Balustrade				
Type and/ or use of Product;	Certified for use as Aluminium Balustrade				
Description of Product;	Aluminium UltiM8 Balustrade Panel				
Performance Requirements;	AS/NZS 1170.0:2002 Structural Design Actions		General Principles (Clause 4.2 and Appendix B – Table B1)		
	AS/NZS 1170.1:2002 Structural design actions		Permanent, imposed and other actions (Clause 3.6, Table 3.3)		
	AS 4055:2012 Wind Actions		Wind Class N3		
BCA (2019);	No.	Date	Title	Volume One	Volume Two
	AS/NZS 1170 Part 0	2002	Structural design actions – General principles (incorporating amendments 1, 3 and 4)	BV1 B1.1 Spec B1.2	V2.1.1 3.0.2 3.5.1.0
	AS/NZS 1170 Part 1	2002	Structural design actions – Permanent, imposed and other actions (incorporating amendments 1 and 2)	B 1.2	3.0.3 3.0.4 3.9.1.2 3.9.1.3 3.9.2 3.9.2.3

Limitations and Conditions

With regards to strength and/or rigidity of Balustrade, this Supplier Statement limits compliance to the following extent:

1	<p>Table 3.3 of AS/NZS 1170-2002 for the following classifications;</p> <ul style="list-style-type: none"> For a Category 'A' Domestic and residential activities- Other Residential (see C3). For a Category 'B, E' Offices and work areas not included elsewhere including storage areas- Fixed platforms, walkways, stairways and ladders for access (see NOTE 2). For a Category 'C3" Areas without obstacles for moving people and not susceptible to overcrowding- Stairs, landings, external balconies, edges of roofs etc.
Note	All classifications with equal or lower load specifications may be applied to this sample. For more information as to their specific use please see Table 3.3 of AS/NZS 1170.1-2002
2	<p>Limitations- Not suitable for use as a pool barrier as per AS1926.1-2012</p> <p>- Not suitable for use above 4 meters in height</p>
3	This Product Technical Statement is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Product Technical Statement is outside of this documents

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	scope and the installation of the certified product/ system will not be covered by this PCME Supplier Statement. This may result in product being classified as a non-conforming building product/ system
4	This Product Technical Statement is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Product Technical Statement is outside of this documents scope and the installation of the certified product/ system will not be covered by this PCME Supplier Statement. This may result in product being classified as a non-conforming building product/ system.

Product Technical Data																																																																								
Building Classification/s;	1a, 2, 3, 4, 5, 6, 7, 8, 9, 10																																																																							
Type and intended use of a product;	As per Page 1 (Protector Aluminium Balustrade System Product Technical Statement)																																																																							
Description of product;	Aluminium Balustrade																																																																							
Product specification;	As per AS/NZS 1170.1 Table 3.3; Type A Type B & E Type C3 As per AS/NZS 1170.0 Wind Actions This barrier is suitable for wind speeds up to 51 m/s Wind Class N3 as per AS 4055																																																																							
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	<p>Topography Effect</p> <table border="1"> <thead> <tr> <th rowspan="2">Maximum Slopes</th> <th colspan="7">Location On Hill (Zone)</th> </tr> <tr> <th>Lower Third</th> <th>Mid Third</th> <th colspan="3">Top Third</th> <th colspan="2">Over Top</th> </tr> <tr> <th></th> <th></th> <th></th> <th>H < 10m</th> <th>10m < H < 30m</th> <th>H > 30m</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>≤ 1:20 Very Flat</td> <td>TO</td> <td>TO</td> <td>TO</td> <td>TO</td> <td>TO</td> <td>TO</td> <td>TO</td> </tr> <tr> <td>≥ 1:20 to ≤ 1:10 Flat</td> <td>TO</td> <td>TO</td> <td>T1</td> <td>T1</td> <td>T1</td> <td>T1</td> <td>TO</td> </tr> <tr> <td>≥ 1:10 to ≤ 1:7.5 Small Hill</td> <td>TO</td> <td>T1</td> <td>T1</td> <td>T2</td> <td>T2</td> <td>T2</td> <td>TO</td> </tr> <tr> <td>≥ 1:7.5 to ≤ 1:5 Medium Hill</td> <td>TO</td> <td>T1</td> <td>T2</td> <td>T2</td> <td>T3</td> <td>T3</td> <td>T1</td> </tr> <tr> <td>≥ 1:5 to ≤ 1:3 Big Hill</td> <td>TO</td> <td>T2</td> <td>T2</td> <td>T3</td> <td>T4</td> <td>T4</td> <td>T2</td> </tr> <tr> <td>≥ 1:3 Cliff</td> <td>TO</td> <td>T2</td> <td>T3</td> <td>T4</td> <td>T5</td> <td>T5</td> <td>T3</td> </tr> </tbody> </table> <p>H = height of the hill, ridge or escarpment (m)</p>	Maximum Slopes	Location On Hill (Zone)							Lower Third	Mid Third	Top Third			Over Top					H < 10m	10m < H < 30m	H > 30m			≤ 1:20 Very Flat	TO	TO	TO	TO	TO	TO	TO	≥ 1:20 to ≤ 1:10 Flat	TO	TO	T1	T1	T1	T1	TO	≥ 1:10 to ≤ 1:7.5 Small Hill	TO	T1	T1	T2	T2	T2	TO	≥ 1:7.5 to ≤ 1:5 Medium Hill	TO	T1	T2	T2	T3	T3	T1	≥ 1:5 to ≤ 1:3 Big Hill	TO	T2	T2	T3	T4	T4	T2	≥ 1:3 Cliff	TO	T2	T3	T4	T5	T5	T3
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Wind Classification System from AS 4055:2012 Wind Loads for Housing

Wind region	Terrain Category	Topographic class													
		T0			T1			T2			T3		T4	T5	
		FS	PS	NS	FS	PS	NS	FS	PS	NS	PS	NS	NS	NS	
A	3	N1	N1	N1	N1	N2	N2	N2	N2	N2	N3	N3	N3	N4	
	2.5	N1	N1	N2	N1	N2	N2	N2	N3	N3	N3	N3	N4	N4	
	2	N1	N2	N2	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4	
	1.5	N2	N2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N4	N5	
	1	N2	N3	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	N5	
B	3	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	N5	
	2.5	N2	N3	N3	N3	N3	N3	N3	N4	N4	N4	N4	N5	N5	
	2	N2	N3	N3	N3	N3	N4	N3	N4	N4	N4	N5	N5	N6	
	1.5	N3	N3	N4	N3	N4	N4	N4	N4	N4	N5	N5	N5	N6	
	1	N3	N4	N4	N4	N4	N4	N4	N5	N5	N5	N5	N6	N6	
C	3	C1	C1	C2	C1	C2	C2	C2	C2	C3	C3	C3	C3	C4	
	2.5	C1	C2	C2	C2	C2	C2	C2	C3	C3	C3	C3	C4	N/A	
	2	C1	C2	C2	C2	C2	C3	C2	C3	C3	C3	C4	C4	N/A	
	1.5	C2	C2	C3	C2	C3	C3	C3	C3	C4	C4	C4	N/A	N/A	
	1	C2	C3	C3	C3	C3	C3	C3	C4	C4	C4	N/A	N/A	N/A	
D	3	C2	C3	C3	C2	C3	C3	C3	C4	C4	C4	C4	N/A	N/A	
	2.5	C2	C3	C3	C3	C3	C4	C3	C4	C4	C4	N/A	N/A	N/A	
	2	C3	C3	C4	C3	C4	C4	C4	C4	N/A	N/A	N/A	N/A	N/A	
	1.5	C3	C4	C4	C4	C4	C4	C4	N/A	N/A	N/A	N/A	N/A	N/A	
	1	C3	C4	C4	C4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Legend: FS = Full Shielding
 PS = Partial Shielding
 NS = Non-Shielding
 N = Non-Cyclonic
 C = Cyclonic
 N/A = Not available, refer to AS1170.2:2002

Wind Regions of Australia

Design working life 25yrs/ Max avg height of 10m				
Australian Wind Region	Ultimate Regional Wind Speed (m/s)	Importance Level	Terrain Category	Design Wind Speed (m/s)
Region A	45	1	2	41.11
		2	2	43.06
Region B	56.94	1	2	45.56
		2	2	49.44
Region C	68.89	1	2	56.11
		2	2	60.83
Region D	87.78	1	2	69.44
		2	2	75.83

UltiM8 Balustrade Panel with Post 2000 wide (including fixed post) x 1010mm high

Spacings for Balustrade Panels with post;

- 19 pickets per panel
- Pickets – 16mm x 1.6mm tube
- 98.6mm space between picket centres
- Top Rail – 50mm x 25mm
- Bottom Rail – 38mm x 25mm

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- Post – 50mm x 50mm
- Base Plate – 100mm x 100mm x 8mm



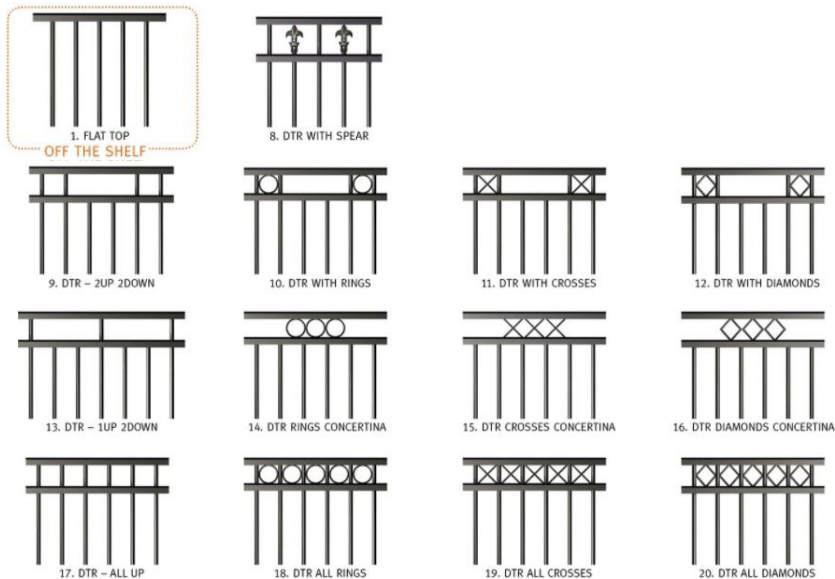
UltiM8 Balustrade Custom Panels

Note;

- Any panel that exceeds 2000mm wide must have a fixed centre post
- Panels can be manufactured as infill panels not exceeding 2000mm width (without a fixed post)

Spacings for Balustrade Panels:

- Pickets – 16mm x 1.6mm tube
- 98.6mm space between picket centres
- Top Rail – 50mm x 25mm
- Bottom Rail – 38mm x 25mm
- Post – 50mm x 50mm
- Base Plate – 100mm x 100mm x 8mm



Accessories for UltiM8 Balustrades

Posts;

- 50 x 50 x 1010mm End Post (Flanged)
- 50 x 50 x 1010mm Corner Post (Flanged)

Panel Brackets;

- 50 x 25mm Handrail

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38 x 25mm Bottom Rail



End Post Flanged



Corner Post Flanged



50 x 25mm Panel Bracket
(Top Rail)



38 x 25mm Panel Bracket
(Bottom Rail)

Installation requirements;

Installations of these products are outside the scope of this Product Technical Statement. Each State in Australia has its own regulations regarding balustrade and must be installed in accordance to the relevant Structural/ Civil Engineers specifications, Building Codes, Australian/ New Zealand Standards, Regulations and Legislations. It is recommended that this product be installed by a suitably qualified tradesperson or competent DIY Persons. The finished balustrade must be inspected and approved by a certified Building Inspector/ Surveyor or Building Authority.

Protector Aluminium Balustrade Installation Guide
<https://www.protectoraluminium.com.au/pdf/howtoinstallbalustrades105x297mmAUS-2020v1Web.pdf>

Josh and Jenna "How to Install Balustrades" Installation Video
https://www.youtube.com/watch?list=PL57vNA5uoTrKZcMZ_KZ2AKf2-MO_676&v=5li8JyR2Usq

Fixings for UltiM8 Balustrades refer BVT Engineering "Design of Balustrade Systems"

Substrate Material	Fixing/per base plate	Minimum Geometric Distance
Steel	4x Stainless Steel 316 M10 Bolt	15 mm (edge distance)
Timber	4x Stainless Steel 316 M10 Bolt with minimum 46x46x4mm Washer	40 mm (from edge of member) 100 mm (from end of member)
	4x Stainless Steel 316 M10 Coach Bolt	50 mm (from edge of member) 80 mm (from end of member) 80 mm (embedment depth)
Concrete	4x M10 Hilti HSA-F Concrete Anchor or equivalent	50 mm (embedment depth) 100 mm (concrete thickness) 50 mm (edge distance) Specific design required for overall size
	4x M10 Hilti HUS3-H10 Concrete Anchor or equivalent	55 mm (embedment depth) 100 mm (concrete thickness) 50 mm (edge distance) Specific design required for overall size
	4x M10 Hilti HAS-U Concrete Anchor with HIT-HY 170 or equivalent	90 mm (embedment depth) 120 mm (concrete thickness) 45 mm (edge distance) Specific design required for overall size

Table 2. Fixing Details

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Evaluation Statements

Evaluation methods;

PCME Certifications has followed the following procedures for compiling of Protector Balustrade Product Technical Statement;

- Assessment of the Protector Aluminium products
- Assessing a product quality plan for the Protector Group (Protector Aluminium Pty Ltd) that conforms to ISO10005; and
- Reviewing testing of samples supplied to ascertain whether the product meets the performance requirements specified on this Technical Statement; and
- Conducting site audits of the Protector Group Head Office to verify compliance of the Protector UltiM8 Balustrade system

Note; *The Product Technical Statement Holder has chosen not to make the above evidence of compliance publicly available, due to the documents being considered commercial confidence. For validation of the mentioned test reports Building Authority must contact the Technical Statement Holder directly.*

Reports;

- a) BVT Engineering Professional Services
Design of Balustrade Systems

Project Name: 1.0m Balustrade
Aluminium Balustrade System
Test Report: 20030326-03B

Test samples as per loads specified in 'Clause 3.6, Table 3.3 of AS 1170.1-2002' and combination factors as specified in Clause 4.2 of AS/NZS 1170.0:2002

Certificate of Compliance
Date: 20th November 2020
Result: PASS

- b) Scope Testing
NATA Accreditation: 170076
Report Number: STS-0055-01

Test samples as per loads specified in 'Clause 3.6, Table 3.3 of AS 1170.1-2002' and combination factors as specified in Clause 4.2 of AS/NZS 1170.0:2002 by the test methods specified in specified in Appendix B + C of AS1656-2018

Date: 6th March 2017
Result: PASS

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Scope of Supplier Technical Statement:

The PCME (Product Compliance Made Easy) Product Technical Statement is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed have been met. The responsibility for the product performance and its fitness for the intended use remain with the Supplier Technical Statement Holder. PCME Certification ensures all requirements to be classed as "Product Technical Statement", as per the National Construction Code for demonstrating compliance are fulfilled.

Disclaimer:

The scheme Owner, Scheme Administrator do not make any representations, warranties or guarantees, and accepts no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; the Scheme Owner, Scheme Administrator disclaim to the extent permitted by law, all liability (including negligence) for any claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Supplier Technical Statement.

Note: This Product Technical Statement is only valid when reproduced in its entirety.

Stefan Ossenberg

A handwritten signature in blue ink, appearing to read 'Stefan Ossenberg', is written over a light blue circular stamp.

PCME Certifications Representative Name

Signature

Certification Company Name: PCME Certifications

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