

MODOLUX — STANDARDS SUMMARY

AS/NZS 1170

STRUCTURAL DESIGN ACTIONS

Overview

AS/NZS 1170, Structural design actions, is a joint Australian/New Zealand Standard published in five parts. It sets out the loads ("actions") that a structure and its components must be designed to withstand — including permanent (dead) loads, imposed (live) loads, wind, snow/ice and earthquake actions — and the combination factors used to apply them together under limit state design.

Relevance to Modulux

For balustrades and screens, AS/NZS 1170.1 is the standard that sets the horizontal barrier loads a balustrade system's posts, rails and fixings must resist, and AS/NZS 1170.2 sets the wind actions that drive both structural framing design and glass thickness selection (in conjunction with AS 1288) for exposed locations. Every Modulux balustrade and screen system is engineered against this loading framework.

The AS/NZS 1170 Series

PART	TITLE	CURRENT EDITION	RELEVANCE TO BALUSTRADES & SCREENS
1170.0	General principles	2002 (+ amdts)	Sets combination factors used to apply barrier, wind and other loads together for design.
1170.1	Permanent, imposed & other actions	2002 (+ amdts)	Sets the horizontal barrier loads (line, point and infill) that balustrade and screen framing must withstand — Clause 3.6, Table 3.3.
1170.2	Wind actions	2021 (+ amdts)	Determines site wind classification and pressures, which drive glass thickness (with AS 1288) and framing/fixing design for exposed balustrades and screens.
1170.3	Snow and ice actions	2003 (+ amdts)	Relevant only to alpine-region projects; generally not applicable to standard Modulux installations.
1170.4	Earthquake actions	2007 (+ amdts)	Applies to overall building structural design; balustrade fixings must accommodate any resulting building movement.

Key Requirements — Barrier Loads (AS/NZS 1170.1)

- **Horizontal line load:** A distributed load applied along the top of the barrier — commonly 0.75 kN/m for typical residential occupancies, increasing for public, communal or "crowd" situations (up to 1.5 kN/m or more in special cases), as set out in Clause 3.6 and Table 3.3.
- **Concentrated load:** A point load (commonly 0.6 kN) applied at the top edge of the barrier at the most severe position, to check local strength of rails, posts and fixings.
- **Infill pressure:** An outward pressure applied to infill panels — glass, mesh or balusters — between the barrier's structural members, sized to the applicable occupancy category.
- **Combination with wind actions:** Barrier loads and wind actions (from AS/NZS 1170.2) are not simply added together — they are combined using the load factors and combinations set out in AS/NZS 1170.0, Section 4, for both ultimate and serviceability limit states.

How Modulux Complies

Modulux balustrade and screen systems — posts, top and bottom rails, internal chords, connection plates, fixings and glass infill — are engineered to satisfy the barrier loads of AS/NZS 1170.1 and the wind actions of AS/NZS 1170.2 for the applicable site wind classification and occupancy. Site-specific wind classification and load combinations should always be confirmed by a suitably qualified structural engineer prior to installation, particularly for coastal, elevated or high-wind sites.

Accessing the Standards

The AS/NZS 1170 series is published by Standards Australia / Standards New Zealand and is available for purchase through the official Standards Australia Store:

<https://store.standards.org.au/product/as-nzs-1170-0-2002>

<https://store.standards.org.au/product/as-nzs-1170-1-2002>

<https://www.standards.org.au/standards-catalogue/standard-details?designation=AS-NZS-1170-2-2021>

This document summarises publicly available information about the AS/NZS 1170 series for general reference only. It is not a substitute for the full text of the Standards, for project-specific structural engineering advice, or for confirmation of the current amendment level applicable to your project. Modulux recommends obtaining the full Standards from Standards Australia and engaging a qualified structural engineer for project-specific load design and compliance. Current at time of writing, August 2026.