

BRIDGERAIL™ AS5100.2 CL12.5 and NZTA Compliant Balustrade

Level - Standard 2.0 Mtr Spacing with Offset Cycle Rail and Handrail



Key features

- › Modular flexibility
- › No-weld assembly
- › Flat pack delivery
- › Reduced corrosion
- › Colour options
- › BIM & CAD Support

Applications suited to

- › Cycle paths and bikeways
- › Shared pedestrian paths
- › Protection over culverts
- › Footbridges
- › Refer to applicable Aust and NZ Standards and Building Codes.

Specification Summary

Supply and install the proprietary Bridgerail™ BR45 barrier system to substrate according to Moddex specifications, or by a Moddex accredited installer.

Technical Data

Material

Stanchions, rails & balustrades	Steel/grade 250 & C350
Clamp fittings	Ductile iron
Clamp locking screws	Stainless steel (304)

Protective coating

Stanchions, rails and balustrades	G390 Hot-dip Galvanized (min 390g/m ²)
Clamp fittings	Hot-dip Galvanized with patented protective coating on threads
Optional	Powder coating and paint specs

*The standard process for Powder Coated and Painted handrail products is as follows: black steel is used for fabrication and then hot-dipped galvanized. Product is then de-gassed and pre-treated before powder coating is applied on top of galvanising.

Dimensions

Variable depending on building/application/code

Stanchions

Dimensions	1400mm high
Nominal Thickness	16.0mm plate

Rails (Balustrade Panel)

Diameter	48.3mm OD
Nominal Thickness	3.25mm

Rails (Top Rail)

Diameter	60.3mm OD
Nominal Thickness	4.5mm

Base Plate

Nominal Thickness	16.0mm
--------------------------	--------

Balustrade

Heavy Duty Baluster	16mm
Baluster Centres	100mm (84mm gap)

Clamp fittings

Thickness	5.0mm (approx)
Locking screws	M12 x 1.75 x 11mm - DEXX® Drive

Expansion Joint

Diameter	48 mm
Length	300.0mm
Material	Steel Hollow Bar

Fixings

Stanchion attachment to

Concrete	M16 mechanical concrete anchors or cast in studs/ferrules as specified.
Structural steel	M16 galvanized high tensile bolt set

*Other Fixing options are available on request

Compliance

Moddex balustrades and handrails are designed and manufactured in accordance with Austroroads Guide to Road Design, relevant statutory WHS Codes of Practice/Guidelines, including AS5100.2:2017 CL12.5, and the NZTA Bridge Manual B6.4*. Galvanized to AS 4792 and AS/NZS 4680:2006 (where applicable).

The manufacture of Bridgerail proprietary systems is in accordance with Moddex specifications and manufacturing processes, and this may differ to some jurisdictional specifications for steelwork fabrication, bridges and related structures. *Excluding where the road controlling authority requires the barrier to restrain crowds or people under panic conditions

Testing

Stringent vibration endurance tests have been performed and independent testing has been carried out to confirm the suitability of the Moddex system in maritime conditions.

Warranty

5 years from date of purchase subject to correct installation, use and maintenance in accordance with manufacturer's specifications and recommendations, unless otherwise negotiated at the time of purchase.

— Refer maintenance manual

Inspection & Maintenance

Visual inspection for any damage or loose fixings must be done periodically and prior to use. No certified maintenance required. Basic wear and tear preventative maintenance is recommended, as per manufacturer's specifications and recommendations.

— Refer maintenance manual

Design Life

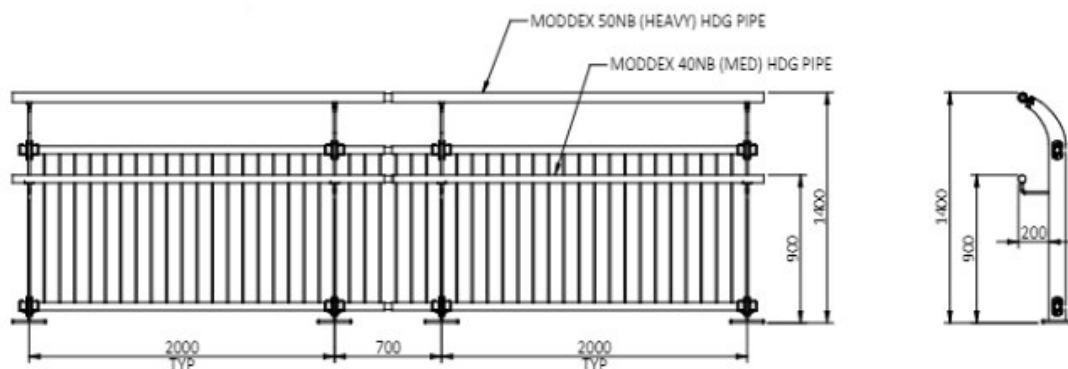
Standard design life of barrier is 100 years in C2 corrosivity zones.

BPIR

BPIR, set new minimum requirements for the level of information required about building products supplied to the New Zealand market. Moddex is committed to meeting these requirements - download the latest information here:

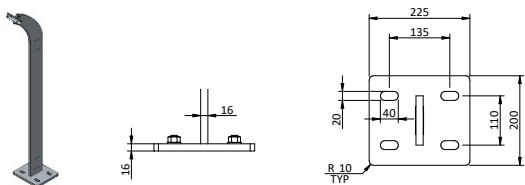
<https://moddex.com/resources/downloads/#bpir-sheets>

Technical Information



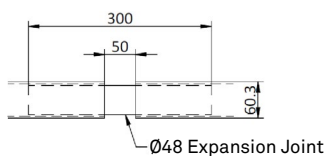
Mount Dimensions

T4 - Top Mount (4 Fixings)



*Face mount and custom mounting options available.

Expansion Detail



Standard References

Austrroads Guide To Road Design; Part 6A

5.5.3 The installation of a fence at the side of a path used by cyclists is desirable where:

- there is a steep batter or large vertical drop located in close proximity to the path
- the path is adjacent to an arterial road and it is necessary to restrict cyclist access to the road
- a bridge or culvert exists on a path
- a hazard exists adjacent to a particular bicycle facility
- cyclists are likely to be 'blazing a separate trail' at an intersection between paths or around a path terminal.

Australian Standard Bridge Design; Part 2

This Standard was prepared by the Standards Australia Committee BD-090, Bridge Design, to supersede AS 5100.2—2004. This Standard is also designated as Austrroads publication AP-G51.2-17.

The objectives of the AS(AS/NZS) 5100 series are to provide nationally acceptable requirements for—

- (a) the design of road, rail, pedestrian and cyclist path bridges;
- (b) the specific application of concrete, steel, timber and composite construction, which embody principles that may be applied to other materials in association with relevant standards;
- (c) the assessment of the load capacity of existing bridges; and
- (d) the strengthening and rehabilitation of existing bridges.

The objective of this Part (AS 5100.2) is to specify minimum design loads and load effects for road, rail, pedestrian and cyclist path bridges, and other associated structures.

The requirements of the AS(AS/NZS) 5100 series are based on the principles of structural mechanics and knowledge of material properties, for both the conceptual and detailed design, to achieve acceptable probabilities that the bridge or associated structure being designed will not become unfit for use during its design life.

NZTA Bridge Manual Clause B6.4*

Pedestrian, cyclist and equestrian barriers shall be designed for the most extreme of the following loads:

- a. horizontal and vertical service loads of 1.75kN/m applied to the top rail
- b. a horizontal service load of 1.5kN/m² applied to the gross area of the barrier
- c. a point load of 0.5kN in any direction at any point.

*Excluding where the road controlling authority requires the barrier to restrain crowds or people under panic conditions

Important Note: Failure to supply and/or install proprietary product in accordance with above Standards and codes and the Moddex PS1, voids complete system certification and/or warranty.

Designed and manufactured by Moddex. ©Moddex Group. All Rights Reserved.

For information or technical support please contact us

T 1800 663 339 (AU)

T 0800 663 339 (NZ)

moddex.com