

ABC Pro-Series Lintels

Above & Beyond Concepts' ABC Pro-Series Lintels are a newly-developed range of hot-dip galvanized structural steel supports for brickwork above door and window openings.



Above &
Beyond Concepts

ABC Pro-Series Lintels have been created through a combination of experience, industry knowledge, proven engineering design principles and a determination to build a quality product. The outcome is a series of robust, precision-engineered masonry support units that fit perfectly within Australian homes and are easy for builders to install.

Technical information covering ABC Pro-Series Lintels is provided in this publication. Included are references to various Australian/NZ standards, to which ABC Pro-Series Lintels comply, and a Selection Guide to assist in choosing the correct ABC Pro-Series Lintel for your building application.

Compliance for Inclusion in Masonry Structures

ABC Pro-Series Lintels comply with the Masonry structures standard (AS 3700-2001) concerning steel Lintels supporting brickwork over openings. ABC Pro-Series Lintels have been designed specifically for this purpose and should not be used for

other applications unless appropriate evaluations show that they are capable of performing the tasks required for those applications.

Protective Coating, Durability and Corrosion Resistance

ABC Pro-Series Lintels are hot-dip galvanized in accordance with the Australian Standard for Hot-dip Galvanized (zinc) coatings on fabricated ferrous articles (AS/NZS 4680:1999). The impact resistance of the galvanized coating complies with AS/NZS 2699.3:2002 (Built-in components for masonry construction, Part 3: Lintels and shelf angles (durability requirements)). The durability rating of the protective coating is R3 as described in AS/NZS 2699.3:2002 and all ABC Pro-Series Lintels are marked as

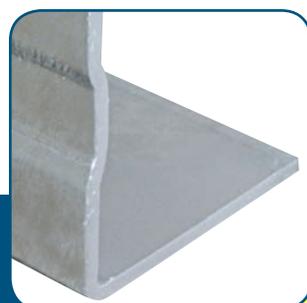
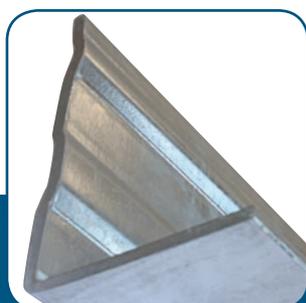
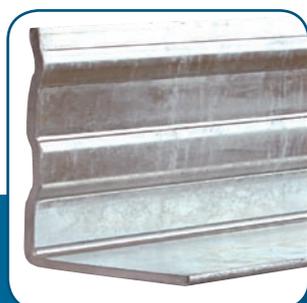
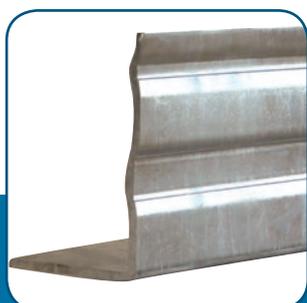
demanded by Section 4 of this standard. If required, a corrosion resistance rating of R4 (for galvanized duplex-coated lintels) can be achieved by applying a paint coating over the galvanized finish, as detailed in AS/NZS 2699.3:2002. Note that to meet the durability requirements for severe marine environments, as described in section 5 of the Masonry structures standard (AS 3700-2001), a corrosion resistance rating of R4 must be achieved.

Structural Integrity and Load-Bearing Capacity

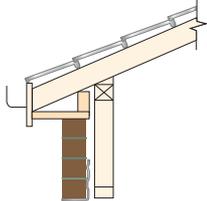
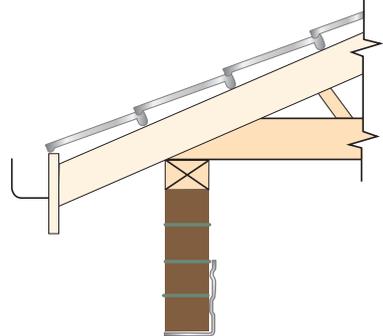
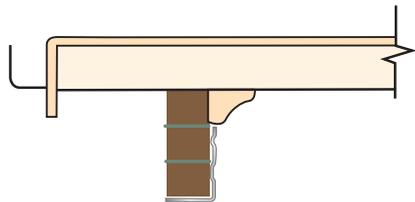
The load-bearing capacity of ABC Pro-Series Lintels was determined in line with industry practice and by reference to Australian Standards. The loads used in the preparation of the Selection Guide were in accordance with AS 1170.1-1989 and AS 1170.2-1989.

The Selection Guide in this publication covers Lintels supporting roof and/or brickwork loads that are encountered in residential

structures in installation types A, B and C as defined in AS 3700-2001. As many other structural configurations exist, a large range of sizes are produced, from which engineers and professional builders may choose, subject to appropriate certification.



Selection Guide

Construction Type	Rafter or Truss Span (metres)	Maximum Allowable Opening Span (mm)		
		ABC Pro-Series 100 (100x100x6mm* Lintel)	ABC Pro-Series 150 (150x100x6mm* Lintel)	
Type A  Brickwork Only.	Not Applicable	2000	3000	
Type B  Load-bearing single brickwork supporting a tiled roof.	3	1800	2800	
	4	1650	2500	
	5	1500	2100	
	6	1350	1850	
	7	1225	1600	
	8	1100	1450	
	9	1050	1325	
	10	1000	1200	
	Type C  Load-bearing single brickwork supporting a metal roof.	3	2000	3000
		4	1975	2950
5		1850	2800	
6		1750	2650	
7		1650	2450	
8		1550	2250	
9		1450	2000	
10		1350	1750	
Any floor of multi-storey construction with the exception of the uppermost floor.	Refer to an Engineer			

Note: The Selection Guide must be read in conjunction with all other information presented in this publication.

*Nominal dimensions

General Installation Notes

1. Lintels must be propped during construction, with the prop(s) remaining in place until the mortar is fully cured.
2. No allowance has been made in the Selection Guide for any additional loads bearing above the opening, such as those associated with water tanks, solar heating devices, roof cavity storage etc., hence, these additional loads must not bear on the opening unless approved and certified by a structural engineer.
3. The 'ribbed' leg of all ABC Pro-Series Lintels must be installed vertically upward.
4. A minimum of three courses of brickwork must be laid over the Lintel for all load-bearing brickwork.
5. As detailed in AS 3700-2001, the minimum bearing length (or individual end bearing) must be 100mm for Opening Spans up to 1 metre and 150mm for Opening Spans over 1 metre,
6. The construction of all brickwork must comply with the Masonry structures standard (AS 3700-2001) and approved building practices.

How to Use the Selection Guide

1. Determine the Construction Type for your application.
2. Determine the Rafter or Truss Span for the rafters or trusses that bear on the wall above the opening that is supported by the ABC Pro-Series Lintel. Note that for Construction Type A, the Rafter or Truss Span is not applicable.
3. Follow the row across from the Construction Type and matching Rafter or Truss Span and read the Maximum Allowable Opening Span to make your selection as to which ABC Pro-Series Lintel is suitable for your application.
4. When determining the length of the ABC Pro-Series Lintel for your application, add the following dimensions to your Opening Span to allow for the end bearing of the Lintel on each side of the span.
 - ▲ For Opening Spans up to 1 metre, add 200mm (equal to 100mm end bearing for each side of the Opening Span).
 - ▲ For Opening Spans over 1 metre, add 300mm (equal to 150mm end bearing for each side of the Opening Span).

Example Use of the Selection Guide

▲ **Example 1** - For Construction Type A, the Rafter or Truss Span is Not Applicable, therefore the Maximum Allowable Opening Span for the ABC Pro-Series 100 Lintel is 2000mm and the Maximum Allowable Opening Span for the ABC Pro-Series 150 Lintel is 3000mm.

As the Opening Spans are over 1 metre, add the end bearing dimension of 300mm to obtain the Lintel length for the application.

▲ **Example 2** - For Construction Type B, with a Rafter or Truss Span of 5 metres, the Maximum Allowable Opening Span for the ABC Pro-Series 100 Lintel is 1500mm and the Maximum Allowable Opening Span for the ABC Pro-Series 150 Lintel is 2100mm.

As the Opening Spans are over 1 metre, add the end bearing dimension of 300mm to obtain the Lintel length for the application.

Standard Stock Sizes and Lengths

Product / Section Size (mm)	Length (metres)*													
	0.8	0.9	1.0	1.1	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	4.0
ABC Pro-Series 85 Flat (85 x 7* Flat)	✓	✓	✓	✓	✓									
ABC Pro-Series 100 Lintel (100x100x6* Lintel)		✓			✓	✓	✓	✓	✓	✓				
ABC Pro-Series 150 Lintel (150x100x6* Lintel)							✓	✓	✓	✓	✓	✓	✓	✓

Note: Other lengths may be available subject to enquiry.

*Nominal dimensions

This publication has been proudly prepared by Above & Beyond Concepts Pty Limited (ABN 96 102 683 054) to assist professional builders and engineers in the selection and use of ABC Pro-Series Lintels. It is current at February 2004. As standards and building practices are constantly being reviewed, the information contained in this document is subject to change without notification. Users must check with their supplier to ensure that reference is being made to the current edition of any publication supplied by Above & Beyond Concepts Pty Limited. Prior to reliance on any information contained herein users of this publication must also check the information for its appropriateness and ensure its adequacy and accuracy for the intended purposes. Above & Beyond Concepts Pty Ltd does not accept any responsibility for any consequence, loss or damage arising from the use of this publication unless required by law.

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