Azure II™
by ACS

Technical Data Sheet

Azure II™ Lintels



Azure II™ Lintels

Check for updates



Product summary

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 19/5650

Exova

Fire Testing BS EN 1363-1

LUCIDEON

Brick Slip Bond Strength, Durability and Lintels tested by Lucideon

UKCA | CE UKNI

UKCA / CE+UKNI marked

ACS Azure II™ Lintels are brick-faced, prefabricated lintels that are manufactured offsite and supplied to projects with brick slips mechanically fixed to the stainless steel lintel, ensuring the system attains an A1 fire rating. The stainless steel carrier units are designed, welded and fabricated in-line with BS EN 1090 and a certified Factory Production Control system and can therefore be UKCA / CE+UKNI marked under the guidance of the Construction Products Regulations.

Azure II™ Lintels

Check for updates

Design & testing

Both the lintel and the brick slips have been independently tested by Notified and Technical Approval Bodies to evaluate and validate the physical performance and long term durability of all components. This resulted in the product attaining a BBA Agrément Certificate.

The lintels have been designed in-line with the requirements of BS EN 845-2 & PD 6697 and tested in-line with BS EN 846-9. In terms of the brick slips, these were tested using the guidance of EAD 090062-00-0404 to evaluate the accelerated freeze/thaw weather resistance both saturated and dried of the slips mechanically fixed to the stainless steel carrier. The connection strength and impact resistance of the brick slips were tested before and after the accelerated cyclic weather tests to validate the integrity and durability of the system. The results of these tests allowed the BBA to state that the product will have a service life of at least 60 years.

The tests included:

— Heat/rain weathering to EAD 090062-00-0404 (weathered samples only)

— Bond strength testing using EAD 090062-00-0404 as guidance (control and weathered samples)

— Impact testing to ISO 7892 (control and weathered samples)

Azure II™ Lintels

Check for updates

Product highlights

- **A1 non-combustible**
- **BBA certified**
- **Suitable for all heights and types of building**
- **Accelerated weather tested**
  Saturated freeze/thaw
  Bond strength - pre and post weathered
  Impact strength - pre and post weathered
- **Austenitic stainless steel**
  Grade 304 (1.4301), 316 (1.4404)
- **UKCA / CE+UKNI marked**
- **BS EN 845-2 Design and PD 6697 Specification**
- **100% mechanically fixed and resin free**



Fire resistance

Upon the update to Approved Document B in 2019, the regulations now state that in a 'relevant building' all materials which become part of an external wall must be of a European Classification A2-s1, d0 or A1, classified in accordance with BS EN 13501-1:2007+A1:2009. As stated in the product's BBA Agrément Certificate, all components used within the Azure II™ Lintels are of an A1 classification and so therefore adhere to the relevant standards.

Thermal performance

As more stringent requirements are brought in to increase the thermal performance of buildings, through the update to Approved Document L, it is important that all products are designed to minimise thermal transmittance. Within the product's BBA Agrément Certificate, example systems were calculated for a number of scenarios. For the majority of lintels specified, this gave a figure of 0.043W/mK.

Azure II™ Lintels

Check for updates

Bond types

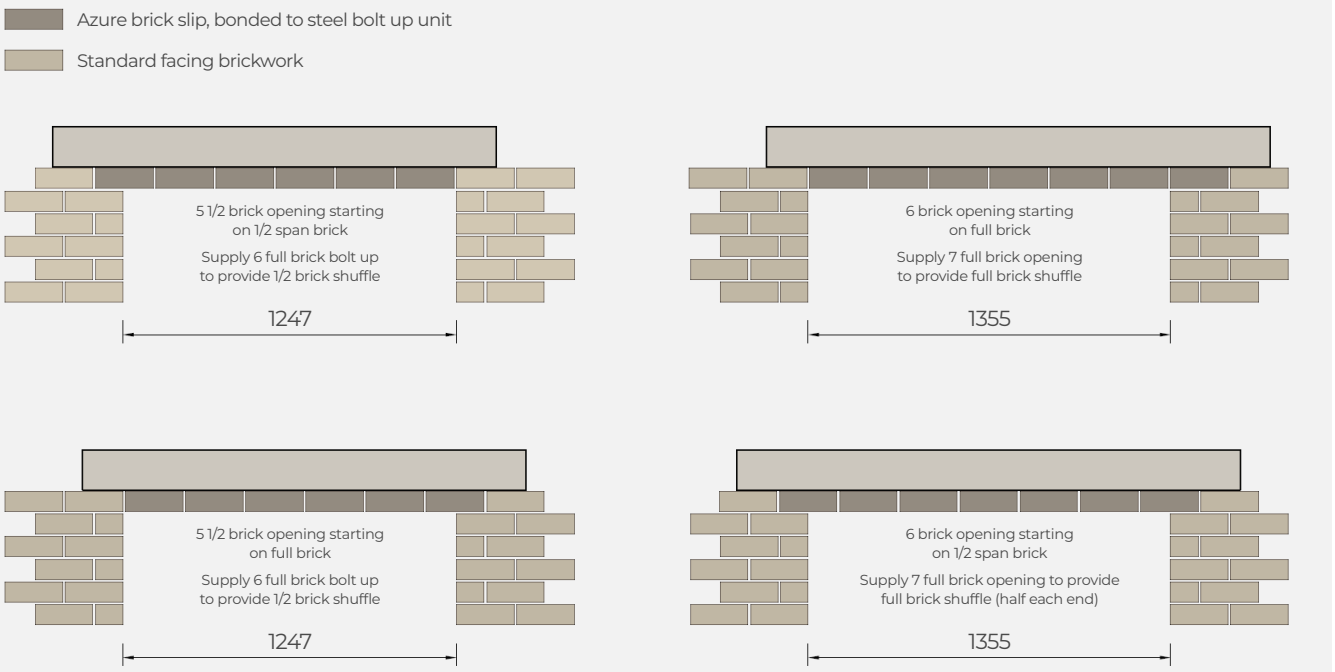
Stretcher Bond





Azure II™ Lintels

Check for updates



Shuffle Brick

ACS Azure II™ Stretcher Bond Lintels are typically supplied with a 'Shuffle Brick' arrangement to allow the lintel to be coursed into the facing brickwork regardless of the whether the opening starts on a half or full brick. Structural openings are typically set at divisions of full or half brick dimensions. The illustration below demonstrates how the stretcher bond lintel should be set to accommodate for the various coursing conditions.

Azure II™ Lintels

Check for updates

Soldier Bond



Header Bond

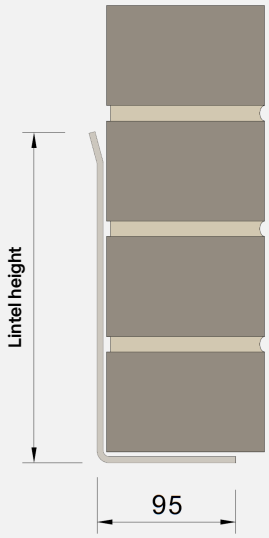






Azure II™ Lintels

Check for updates



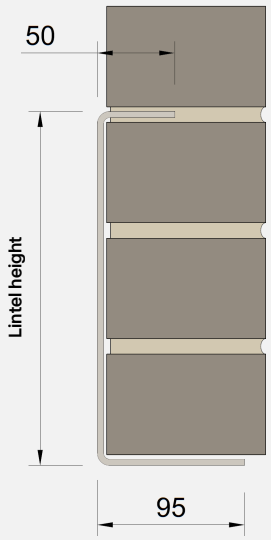
Safe working loads

Standard Duty 'L' Section Lintel

Standard lengths (mm)	600 - 1200	1201 - 1500	1501 - 2100	2101 - 3000
Total UDL (kN)	**3.40**	**4.60**	**6.20**	**11.50**
Lintel Height (mm)	88	131	167	215
Weight / Metre (kg)	2.90	3.58	4.16	7.37

Azure II™ Lintels

Check for updates

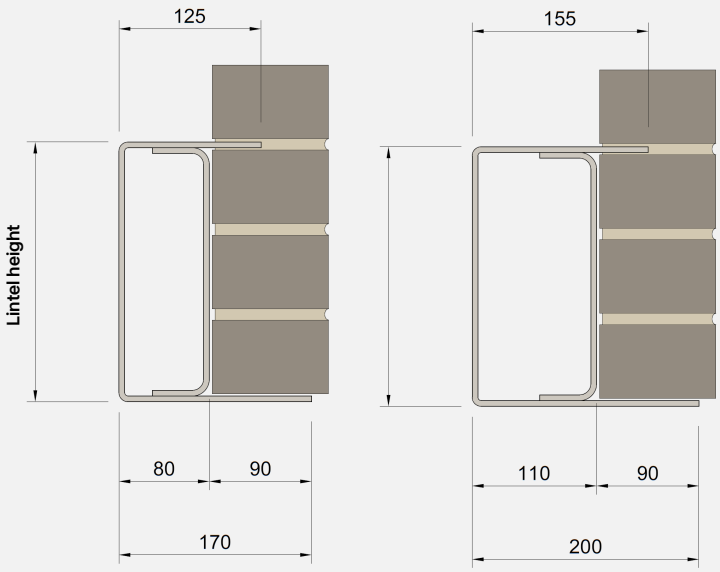


Heavy Duty 'C' Section Lintel

Standard lengths (mm)	600 - 1200	1201 - 1500	1501 - 2100	2101 - 3000	3001 - 3900	3901 - 4500
Total UDL (kN)	**8.60**	**16.00**	**16.00**	**16.00**	**20.00**	**20.00**
Lintel Height (mm)	154	229	229	229	229	229
Weight / Metre (kg)	4.65	5.85	5.85	8.72	11.49	14.27

Azure II™ Lintels

Check for updates

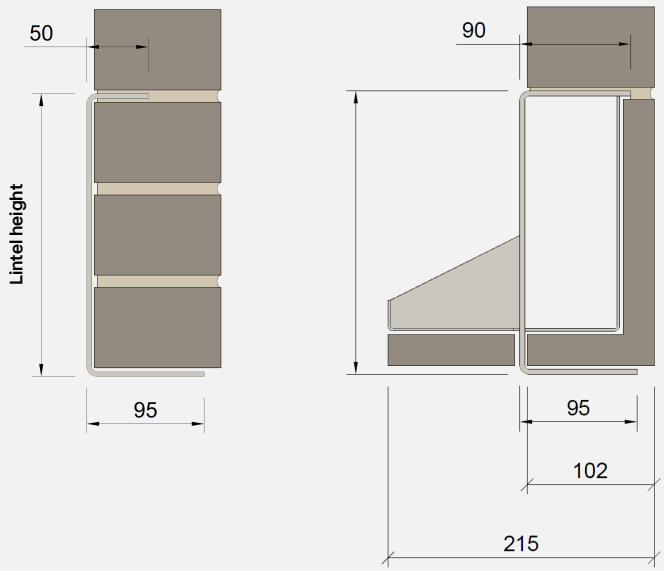


Extra Heavy Duty 'XHD C2' Section Lintel

	'C2/170'	'C2/200'
Lengths up to (mm)	4900	4900
Total UDL (kN)	**28.00**	**32.00**
Lintel Height (mm)	229	229
Weight / Metre (kg)	23.30	25.22

Azure II™ Lintels

Check for updates



Standard 'CS' Section Lintel

Standard lengths (mm)	600 - 1200	1201 - 1500	1501 - 2100	2101 - 3000	3001 - 3900	3901 - 4500
Total UDL (kN)	**9.00**	**9.00**	**9.00**	**9.00**	**8.00**	**8.00**
Lintel Height (mm)	229	229	229	229	229	229
Weight / Metre (kg)	4.65	5.85	5.85	8.72	11.49	14.27

Alternative lintels can be designed to suit specific loading requirements outside of the standard range detailed in the tables above.

Azure II™ Lintels

Check for updates









Installation

Prior to installation, the lintel and brick slips should be examined carefully for any defects or signs of damage. If any damage is present the lintel should not be installed and ACS should be contacted. The lintel should always be installed onto a bed of fresh mortar at the bearing ends. During the installation and bedding it is important to ensure that the lintel is levelled both along its length and across its width.

A minimum of 150mm end bearing must be achieved at either end of the lintel unless specified otherwise by ACS. A maximum masonry overhang of 25mm over the front edge of the lintel must also be maintained.

Lintels should always be propped during construction to achieve the safe working load capacities declared in the design tables found within this document.

The standard Azure II™ lintel range is supplied in a variety of lengths to suit project requirements. Lintels should be selected to ensure that a minimum of 150mm bearing either side of the opening is always achieved.

Lintels of alternative lengths and load capacities outside of the details provided in the load tables can be designed and supplied to meet with project specific requirements.

Wall ties should be installed within 300mm of the lintel at a maximum of 450mm centres to ensure that the masonry carried by the lintel is restrained and any potential overturning and deflection is minimised.

Please contact ACS for more details.

Azure II™ Lintels

Check for updates

Restrictions

1. Lintels must never be cut to length or modified in any way without prior permission from ACS.

2. No more than 1.5 metres of brickwork should be constructed upon the lintel in one day in accordance with PD 6697:2019.

3. Where the method for assessing the load carried by lintels is designed in accordance with BS EN 1996-1-1 it is assumed that:

a. The masonry is constructed following the recommendations of BS EN 1996-2;

b. The height of masonry above the lintel at mid-span is not less than 0.6 times the clear span of the lintel;

c. The height of masonry above the supports is not less than 600mm;

d. The masonry is continuous within the area defined by the conditions given in B and C;

e. Where there is a single opening spanned by the lintel, the width of masonry on either side of the opening is not less than 600mm or 0.2 times the clear span of the lintel, whichever is the greater;

f. Where there is a series of openings at the level of the opening spanned by the lintel, the length of masonry between the external corner of the wall and the side of the adjacent opening is not less than 600mm or 0.2 times the longest clear span, whichever is the greater.

Safety

Although every effort is made to remove sharp edges during the manufacture of the product, appropriate personal protective equipment should always be worn when handling and installing masonry support to avoid injury.

Materials

PD 6697:2019 states that austenitic stainless steel must be used for products in contact with or embedded in an external wall for all buildings exceeding three storeys in a non-aggressive environment. In aggressive environments, such as coastal sites, products in both leaves of an external wall should always be austenitic stainless steel.

ACS

Built on tradition. Driven by innovation.

Get in touch to learn more about how Azure II™ can help you deliver your next project.

0113 391 8200
info@acsstainless.co.uk
acsstainless.co.uk

ACS Stainless Steel Fixings Ltd
ACSStainlessSteelFixings