



- ▶ A1 Non-Combustible
- ▶ BBA Certified
- ▶ Suitable for all Building Heights & Types
- ▶ Accelerated Weather Tested
 - ▶ Saturated Freeze/Thaw
 - ▶ Bond Strength - Pre & Post Weathered
 - ▶ Impact Strength - Pre & Post Weathered
- ▶ Austenitic Stainless Steel
 - ▶ Grade 304 (1.4301), 316 (1.4404)
- ▶ CE Marked
- ▶ BS EN 845-2 Design and PD 6697 Specification



LUCIDEON

Brick Slip Bond Strength, Durability
and Lintels tested by Lucideon



Product Summary

The ACS Azure II™ Lintel Range is designed to allow an opening to be created in a single leaf of masonry, typically the external leaf of a cavity wall with an integrated brick slip soffit feature. The brick slip soffit feature is mechanically fixed to the lintel carrier in various bonds to create a brick feature at the soffits of windows or openings to the required visual effect. The system components consist of clay facing bricks, stainless steel and pointing mortar, all of which are classified as A1 non-combustible.

Design & Testing

Both the lintels and the brick slips have been independently tested by Notified and Technical Approval Bodies to evaluate and validate the load capacity, physical performance, and long term durability of all components. 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. The brick slips are 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 tests include the evaluation of bond strength and durability of the brick slips fixed to stainless steel where a service life of 60 years can be achieved. 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 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

inner strength in construction
ACS Stainless Steel Ltd.

For more information:

0844 850 0860 | www.acsstainless.co.uk/products/azure-ii | info@acsstainless.co.uk

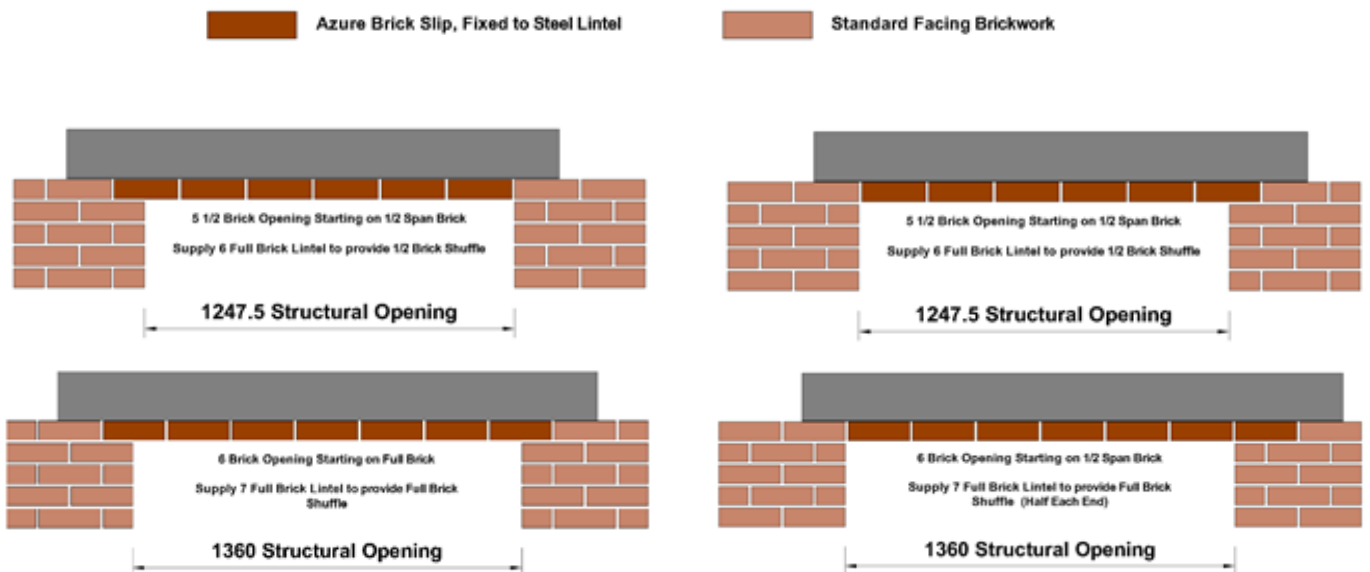
Bond Types

Stretcher Bond



Shuffle Brick

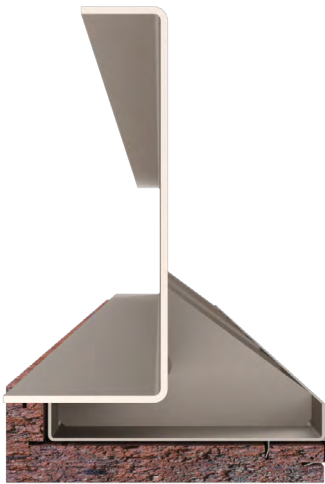
ACS Azure II™ Stretcher Bond Lintels are typically supplied with a 'Shuffle Brick' arrangement to allow the lintel to be coursed into the facing brickwork regardless of whether the opening starts on a half or full brick. Structural openings are most typically set at divisions of full or half brick dimensions.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



Soldier Bond

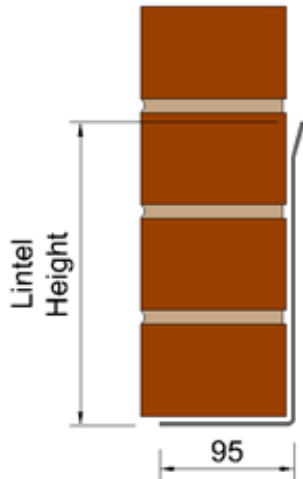


Header Bond



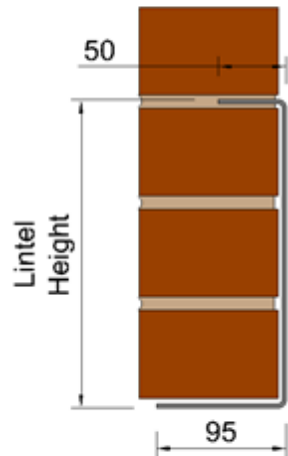
Safe Working Loads

Standard Duty 'L' Section Lintel



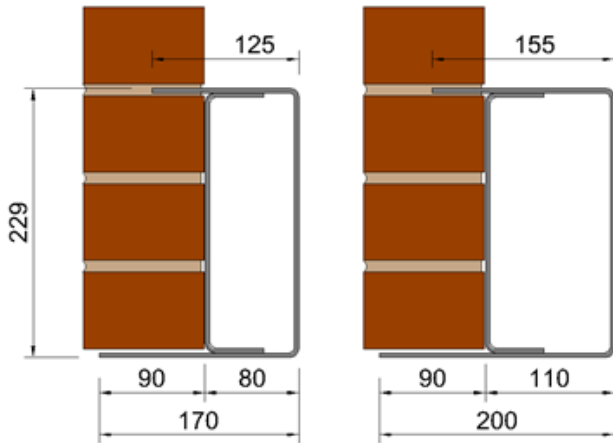
	'L' Section Lintels			
Standard Lengths (mm)	600-1200	1201-1500	1501-2100	2101-3000
Total UDL (kN)	3.40	4.60	6.20	11.50
Lintel Height (mm)	88	131	167	215
Weight / Metre (kg)	2.90	3.58	4.16	7.37

Heavy Duty 'C' Section Lintel



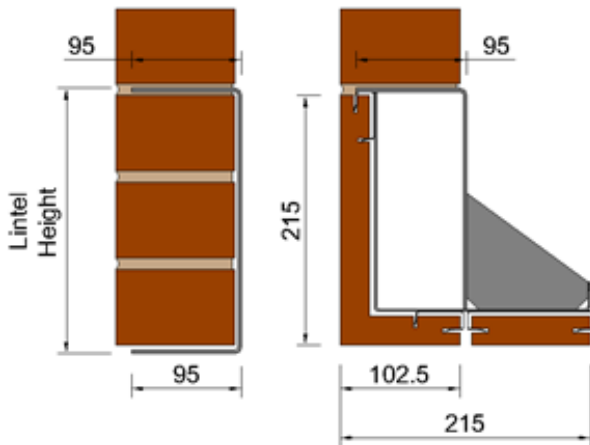
	'C' Section Lintels			
Standard Lengths (mm)	600-1200	1201-1500	1501-2100	2101-3000
Total UDL (kN)	8.60	16.00	16.00	16.00
Lintel Height (mm)	154	229	229	229
Weight / Metre (kg)	4.65	5.85	5.85	8.72
Standard Lengths (mm)	3001-3900	3901-4500		
Total UDL (kN)	20.00	20.00		
Lintel Height (mm)	229	229		
Weight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

Extra Heavy Duty 'XHD C2' Section Lintel



	'C2/170'	'C2/200'
Standard Lengths (mm)	4900	4900
Total UDL (kN)	28.00	32.00
Lintel Height (mm)	229	229
Weight / Metre (kg)	23.3	25.22

Standard 'CS' Section Lintel



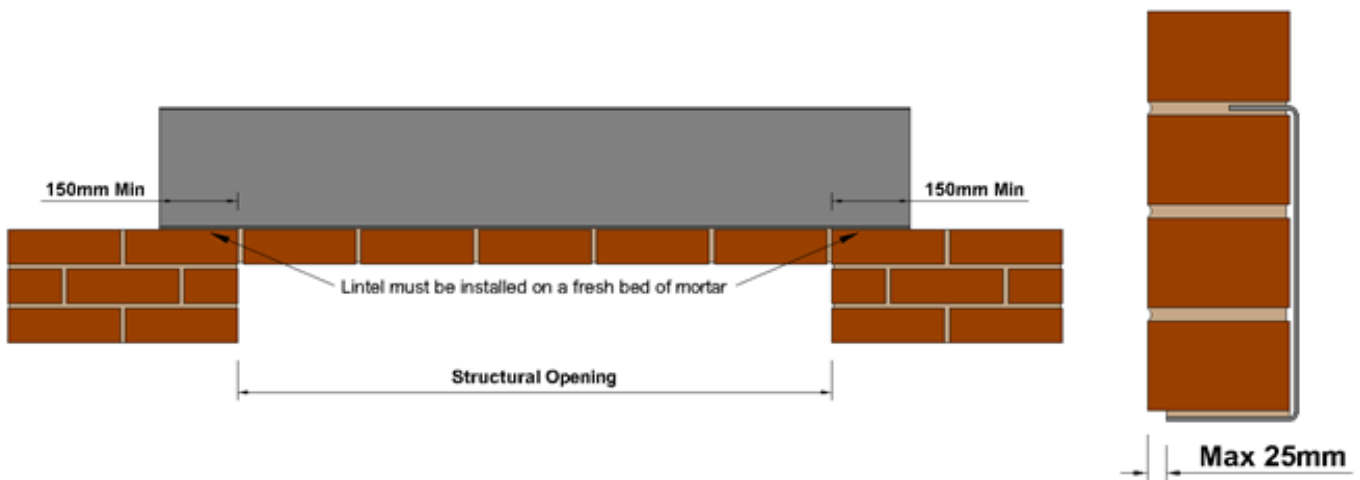
	'CS' Section Lintels	
Standard Lengths (mm)	600-1200	1201-1500
Total UDL (kN)	9.00	9.00
Lintel Height (mm)	229	229
Weight / Metre (kg)	4.65	5.85
Standard Lengths (mm)	1501-2100	2101-3000
Total UDL (kN)	9.00	9.00
Lintel Height (mm)	229	229
Weight / Metre (kg)	5.85	8.72
Standard Lengths (mm)	3001-3900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

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

Installation

Prior to installation, the lintel and bricks 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 is 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. The lintel must always bear onto a full brick/block below.



Lintels should always be propped during construction to achieve the safe working load capacities declared in the design tables below. A separate DPC is required above the lintel.

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.

The standard Azure II™ lintel range is supplied in a variety of lengths to suit project requirements. Lintels of alternative lengths and load capacities outside of the details provided in the load tables found within this document can be designed and supplied to meet with project specific requirements.

Lintels should be selected to ensure that a minimum of 150mm bearing either side of the opening is always achieved.

In accordance with NHBC requirements, lintels used in external walls should be installed with a separate flexible damp proof course. This should be combined with either stop ends or as an alternative the DPC should extend between 50 and 150mm beyond the end of the lintel bearing.

ACS design and supply an A1 fire rated stainless steel cavity tray, G-Tray.

Please contact the sales department for more details.

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 600 mm;
 - 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 600 mm 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 600 mm 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.