

Keystone Lintels
Experience in
design, innovation,
and specification.

Product Standards

EN 845-2

Specification for ancillary components for masonry: Lintels

EN 846-9

Methods of test for ancillary components for masonry. Determination of flexural resistance and shear resistance of lintels

PD 6697

Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2

Product Certification

UKCA Marking: Lucideon – 1289
CE Marking: TZUS - 1020
Agrément: BBA – 98/3493
Agrément: BBA – 18/5499
Agrément: BBA – 24/7284
Agrément: BBA – 23/6860
ISO 9001: BBA – 18/Q059
ISO 14001: BBA – 18/E019
EN 1090 UKCA: BBA – 0836
EN 1090 CE: EuroFins – 0809

EN 845-2 Table C.1

L1 – Stainless Steel 316
L3 – Stainless Steel 304
L10 – Galvanised Steel 100 µm
L11 – Galvanised Steel 65 µm
L12.1 – Galvanised Steel 42 µm
L14 – Galvanised Steel 42 µm
L16.1 – Galvanised Steel 20 µm
L16.2 – Galvanised Steel 20 µm



Technical Guidance

Steel Lintel End Bearing

A lintel is a form of beam spanning an opening in a wall that can safely support the applied loads over. These loads supported by the lintel are transferred to the structure below via the lintel bearing onto piers, jambs, reveals or abutments on both sides of the opening (Fig 1). It is important that the lintel and end bearing are adequately specified as failure to do so may cause cracking in decorations or in the structure itself.

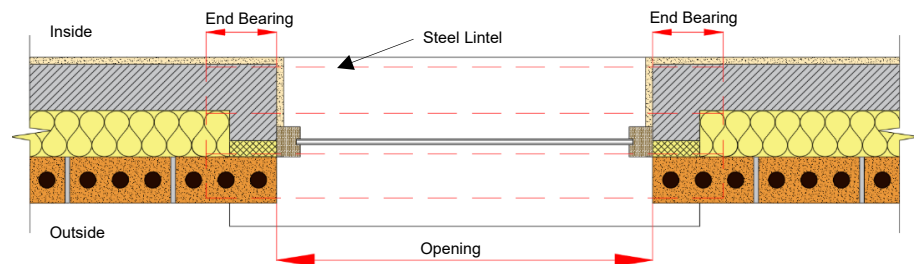


Figure 1

Keystone Lintels are designed and tested to EN 845-2 and EN 846-9.

Safe working loads are determined from tests while having a method of support at each end on a firm base with a minimum end bearing of 100 mm.

A Lintel end bearing of either 150 mm or 200 mm is recommended, and for extreme loading conditions a bearing of 200 mm or greater with the use of pad stones is advised.

In the event that a lintel end bearing rests onto a perpendicular wall, the lintel must not bridge the cavity.

Recommendations:

Lintels must be installed according to our published guidelines (Refer to the Keystone lintel manual):

- Lintels should have sufficient end bearing.
- Lintels should be placed onto a mortar bed having a firm seating to prevent movement under load.
- Off-cut masonry should not be used as end bearing as it can permit local movement.
- Ensure the lintel is level along its length and width.
- Lintels may need to be propped until the mortar under the bearings has cured.

Lintel Length Calculation:

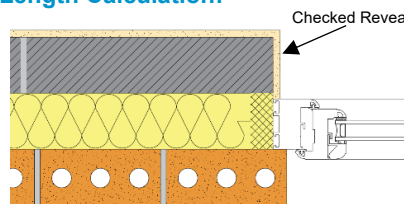


Figure 2

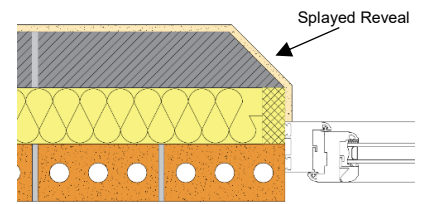


Figure 3

The length of the steel lintel must be sufficient to provide the specified bearing at each end. The lintel length is calculated by taking the opening span (Fig 1, Fig 2 or Fig 3) and adding the required minimum bearing to each end. When outer and inner leaf opening spans are different, always opt for the larger opening span.

For further information please contact Keystone Lintels technical team.