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Catnic has pioneered the steel lintel for more than four generations and designs, manufactures and supplies the construction industry with technically superior products.

Catnic was the first:

- Lintel manufacturer to be certified to BES 6001, maximise the potential for obtaining credits under the Responsible Sourcing of Materials sections of BREEAM, the Code for Sustainable Homes and CEEQUAL.
- To develop the steel lintel in the UK and the first to gain both BBA Approval and the coveted Kitemark to BS 5977
- Manufacturer to employ the revolutionary Duplex Corrosion Protection System on its lintel as a standard offering
- To incorporate a built-in damp proof course into its lintels
Catnic is committed to innovation and constant improvement to meet the changes in building regulations.

Leaders in Technical Innovation

Our rigid adherence to quality control & compliance is your guarantee of technical superiority.

Quality
Catnic are committed to quality control and is a BSI registered company with quality management systems in accordance with BS EN ISO 9001:2008, which provide a set of processes that ensure:
- Clarification and documentation of policies and objectives
- Reduce waste
- Relating to customers’ requirements to production with a view to achieving customer satisfaction
- Understanding how statutory and regulatory requirements impact on Catnic and our customers
- Clear responsibilities and authorities - increasing motivation and commitment
- Consistency and traceability of products and services
- High level of internal and external communications

Material Specification
Catnic’s standard lintels are manufactured from high quality grade galvanised steel to BS EN 10346:2009 Z275, with a black coloured polyester resin finish. Catnic’s CXL lintels and special lintels are manufactured from structural grade steel plate of grade S275 to BS EN 10025-2:2004 and hot-dip galvanised after manufacture to BS EN ISO 1461:1999. Catnic’s stainless steel lintels are manufactured from austenitic stainless steel (chromium nickel alloy) grade 1.4301 (304) and do not require any further corrosion protection.

Thermal Performance / Insulation
All Catnic lintels for traditional external cavity walls are supplied fully insulated. Insulation extends continuously along the full length of the lintel, leaving no potential thermal bridges and cannot be dislodged.

Structural Performance
The structural data published in the loading tables included in this technical guide, was achieved in accordance with the requirements of BS 5977: Part 2: 1983 and BS EN 845-2:2003.

Independent Testing
Extensive testing was undertaken at the following test houses:
- The University of Wales, School of Engineering
- The University of South Wales, Commercial Services Centre for Engineering, Research and Environmental Applications (CEREA)
- Ceram Building Technology, Stoke-on-Trent

Fire Testing
Catnic lintels have been independently tested in accordance with the relevant parts of BS 476, Methods of Determination of the Fire Resistance of Loadbearing Elements of Construction.

Environmental Applications (CEREA)

Environment and Sustainability
Catnic are committed to protecting the environment by minimising the impact of our operations and our products through the adoption of sustainable practices and through continuous improvement in environmental performance and control. Further details can be found on page 46.

Regulatory authorities approval
Catnic lintels have gained the approval of the regulatory authorities both in the domestic and international markets. Such wide-spread comprehensive approval is an assurance to designers, specifiers and builders of the reliability and state-of-the-art quality of the Catnic range.

Features of Catnic lintels

Catnic lintels offer many benefits to specifiers and builders through a combination of their design, thermal efficiency and corrosion protection. These major features ensure that Catnic lintels are widely used and respected, throughout the building industry.

Built-In Damp Proof Course (DPC) Profile

Features of Catnic lintels that combine with the unique Duplex Corrosion Protection or stainless steel to create an effective barrier that acts as a built-in DPC, meaning any water penetrating into the cavity automatically transfers across the sloping face of the lintel and is disposed of externally.

The ease of brick laying directly onto a solid surface eliminates the risk of damage while installing, or any possibility of incorrectly installing a separate DPC membrane. The result is an aesthetically pleasing, clean-line finish above the window head that saves time and cost. In areas of sheltered to medium exposed weather conditions there is no need to install a separate DPC.

Duplex Corrosion Protection System

Initially, Catnic standard lintels are manufactured from hot-dipped galvanised steel to BS EN 10346:2009 plus coating type Z275.

A coating of thermal setting polyester powder is then applied by an electrostatic process, further protecting the lintel. High temperature curing then produces a tough durable surface highly resistant to impact, abrasion and damage during rough on-site handling. This double method of protection gives Catnic lintels inherent benefits over those offered by other manufacturers using the more traditional pre- or post-galvanised steel techniques. The protection system complements fully with the chemical and physical test requirements outlined in Table 2 of BS 5977: Part 2: 1983 and table C.1 of BS EN 845-2:2009 for lintels effectively having their own built-in DPC.

Both of these processes rely on just a simple coating of zinc to provide cathodic protection. The zinc protects the steel, but it is itself liable to rust with aqueous alkaline solutions leaching from the building fabric and therefore corrodes. The famous black coating makes Catnic lintels instantly recognisable and provides an effective barrier against moisture and chemical attack leached from the mortar and masonry.

Integral Plaster Key

All Catnic CXL lintels and fabricated lintels are fully submerged in a zinc bath after manufacture, to BS EN ISO 1461:1999. Fully protecting every surface, cut edge and weld with a metallurgically bonded zinc coating. The post-galvanisation provides protection from corrosion and eliminates the need for on-site painting or maintenance. Hot-dipped post-galvanised lintels require a separate damp proof course, regardless of profile shape.

Stainless Steel Lintels

Catnic stainless steel lintels ensure a high degree of corrosion resistance without requiring additional protection. Manufactured from austenitic stainless steel (chromium nickel alloy) grade 1.4301 (304) to BS EN 10088-2:1.4301, they do not require any further corrosion protection and offer excellent corrosion resistance combined with high ductility and strength making it suitable for schools, hospitals and particularly aggressive environments. Stainless steel lintels incorporating our unique tray profile do not require a separate damp proof course.
**THERMAL PERFORMANCE**

**Open back lintel - design features:**

Suitability of cavity wall lintels to meet the stipulated thermal performance requirements of Part L1 and L2 of the Building Regulations Approved Document.

Fully-insulated, reducing heat loss

Catnic cavity wall lintels are supplied fully insulated. To further minimise any thermal bridging the lintels are designed without a base plate or with a perforated base plate.

Catnic undertook its own assessment using a two dimensional steady state heat flow analysis on the full standard range of cavity wall perforated lintels with the window frame overlapping the cavity by 30mm.

The results confirmed that the combination of a fully insulated lintel in conjunction with no base plate or perforated base plate ensures that Catnic Lintels comply with the necessary requirements of Part L of the Building Regulations 2010 where walls must have a U value of no more than 0.35 W/m²K.

For all applications a sealant should be provided at front and back of the window frame to improve air tightness. For designs incorporating lintels with unperforated base plates, suitable insulated lining is required.

Catnic’s standard range of open backed lintels fall into two categories:

1. **Open back lintels without base plate**
   - CG style lintel
     - Catnic CG lintels use unique, discrete brackets in place of a base. Depending on the wall construction, they can have a linear thermal transmittance ψ value of less than 0.21 W/m²K. BRE Information Paper 1/06 states that steel lintels without a base plate, such as the CG lintel, can use the default linear thermal transmittance ψ value of less than 0.50 W/m²K.

2. **Open back lintels with a perforated base plate**
   - CH and CX style lintel
     - Catnic CH and CX lintels incorporate a perforated steel base plate to help minimise cold bridging without affecting structural performance. The unique pattern of the perforated base plate provides and effective conductivity through the steel of less than 30 W/m²K. BRE Information Paper 1/06 states that steel lintels with a perforated base plate, such as the CH and CX lintel, can use the default linear thermal transmittance ψ value of less than 0.50 W/m²K.

**LINTEL PSI VALUES**

Part L1 of the Approved Building Regulations 2010 now takes into account non-repeating thermal bridging at junctions in the external wall of a dwelling and these thermal bridges need to be included in any SAP 2009 calculations through Psi values.

**Catnic lintel Psi values**

BRE IP 1/06 list the following default Psi values for cavity wall lintels covered under accredited construction details that can be used in SAP 2009 calculations.

Using these figures in the SAP calculation will give significantly improved values for the target emission rate TER and dwelling emission rate DER compared to the default Psi values shown above or the default y values within SAP 2009. This will make it easier for architects to design dwellings that comply with Part L1A of the 2010 Building Regulations. These Psi values can be entered directly into SAP 2009 without any additional penalties.

To limit the risk of surface condensation or mould growth the temperature factor for a detail used in the external wall of a dwelling must be greater than 0.75. The Catnic CG, CH and CX lintels all have temperature factors greater than 0.75.

**Psi Values for cavity wall lintels (BRE IP 1/06)**

<table>
<thead>
<tr>
<th>Junction detail in external wall</th>
<th>Default Psi value (W/m.K)</th>
<th>Catnic lintel style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel lintel with perforated base</td>
<td>0.5</td>
<td>CH, CH and Classics</td>
</tr>
<tr>
<td>Other Lintels</td>
<td>0.3</td>
<td>CG</td>
</tr>
</tbody>
</table>

These values are conservative to take account of the worst case scenario. However Catnic lintels have been designed to reduce thermal bridging and to illustrate this the following standard range of lintels have been independently thermally modelled. The results, shown in the table below, highlight that the Catnic lintels perform much better than the default figures given in BRE IP 1/06.

**Psi Values for cavity wall lintels**

<table>
<thead>
<tr>
<th>Lintel</th>
<th>Lengths</th>
<th>Psi Value (W/m.K)</th>
<th>Temperature factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG90/100</td>
<td>900-1500mm</td>
<td>0.20</td>
<td>0.891</td>
</tr>
<tr>
<td></td>
<td>1650-1800mm</td>
<td>0.21</td>
<td>0.879</td>
</tr>
<tr>
<td></td>
<td>1950-2100mm</td>
<td>0.20</td>
<td>0.887</td>
</tr>
<tr>
<td></td>
<td>2250-2400mm</td>
<td>0.19</td>
<td>0.894</td>
</tr>
<tr>
<td></td>
<td>2550-2700mm</td>
<td>0.18</td>
<td>0.901</td>
</tr>
<tr>
<td></td>
<td>2850-3600mm</td>
<td>0.17</td>
<td>0.902</td>
</tr>
<tr>
<td>CH90/100</td>
<td>900-1800mm</td>
<td>0.327</td>
<td>0.792</td>
</tr>
<tr>
<td></td>
<td>2100-2400mm</td>
<td>0.378</td>
<td>0.784</td>
</tr>
<tr>
<td></td>
<td>3300-4800mm</td>
<td>0.371</td>
<td>0.783</td>
</tr>
<tr>
<td>CE90/100</td>
<td>900-3000mm</td>
<td>0.361</td>
<td>0.785</td>
</tr>
<tr>
<td></td>
<td>3300-4800mm</td>
<td>0.371</td>
<td>0.783</td>
</tr>
</tbody>
</table>

For the CG90/100 lintel range the Psi values quoted take into account any additional heat loss that occurs through discreet brackets within the lintel.
HOW TO SELECT A LINTEL

1 Wall Construction

- **Cavity Wall**
  - If the construction is a cavity wall, see the Open Back lintel section on pages 10 - 11. You will need to know:  
    - the external leaf dimension  
    - the cavity dimension including insulation  
    - the internal leaf dimension

Once you have established these, you will be able to choose the correct lintel for your job by referring to the relevant tables in this guide.

**Lintel Product Selector**

With over 10,000 variations available to choose from, there's a design to suit any size, shape, length, breadth and depth of doorway, archway, window or aperture.

**Timber Frame**

For timber frame constructions, you need to know:
- the external leaf dimension  
- cavity dimension

Once you have these dimensions, please refer to the Timber Frame Lintels section on pages 24 - 28.

**External Solid Wall**

There are three forms of lintel for external solid walls:
- single element lintels for a single leaf of brickwork  
- two-piece lintels shaped to carry the two separate leaves of a 215mm thick brick wall  
- box profile lintels which have a toe for use in solid brick or block walls from 200mm – 215mm thick. External solid wall lintels can be found on pages 27 - 28.

**Internal Solid Wall**

Lintels for internal partitions and load bearing walls (pages 29 - 31) come in three styles:
- corrugated lintels for non-load bearing applications  
- channel section lintels for loadings involving blockwork and floor joists  
- box profile lintels for heavier loads including point loads and wider openings.

**Lintel Length**

The length of lintel required is calculated by establishing the total width of the structural opening and adding 150mm (200mm for CXL lintels) and allowing clearance for each end. For example, an 1000mm structural opening will require a 2100mm lintel (2200mm for CXL).

**Contact Catnic Technical Services on 029 2033 7900**

**Applied Load**

All lintels are designed to carry a specific safe working load (SWL). If you are not skilled in the method of load assessment, or the load has not been supplied to you by a third party, for advice please contact Catnic Technical Services.
CAVITY WALL LINTEL INSTALLATION GUIDE

Catnic is committed to trouble free installation.

- Ensure lintel is level along its length.
- Ensure lintel is fully bedded on bricklaying mortar.
- Structural opening or clear span.
- In cavity walls, raise inner and outer leaves supported by lintel together.†
- Masonry above lintels should be allowed to cure before applying floor or roof loads.
- Ensure that masonry overhang does not exceed 25mm.
- Ensure lintel is level along its width.
- Ensure lintel is fully bedded on bricklaying mortar.
- Ensure wall dimensions are correct.
- Ensure lintel is not damaged.
- Ensure a nominal 150mm end bearing at each end.*

Wide inner leaf lintels used with 140mm dense blocks

To ensure the flanges are equally loaded the Code of Practice should be strictly adhered to when building the masonry i.e. one row of blocks should be raised on the inner leaf, then three courses of brick on the outer leaf. Wall ties should then be installed and another row of blocks on the inner leaf followed by three courses of brick on the outer and so on. This process ensures that the lintel flanges are equally loaded and helps prevent rotation.

Proping
- When proping, a horizontal board should be placed along the underside of the lintel soffit, this will prevent any point loading, which could cause localised deformation of the lintel. On small openings a single prop should be placed centrally within the openings and wedged into place. The prop can be removed after the wall ties are effective. The number of props used should be increased for larger openings.
- The 140 mm dense blocks should be installed tight against the inner web of the lintel.
- Therefore, the overhang of blockwork on the lintels inner flange could be measured at 15mm.
- Ensure lintel is level along its length.
- Ensure lintel is fully bedded on bricklaying mortar.
- Structural opening or clear span.
- In cavity walls, raise inner and outer leaves supported by lintel together.†
- Masonry above lintels should be allowed to cure before applying floor or roof loads.
- Ensure that masonry overhang does not exceed 25mm.
- Ensure lintel is level along its width.
- Ensure wall dimensions are correct.
- Ensure lintel is not damaged.
- Ensure a nominal 150mm end bearing at each end.*

Installating a Lintel Supporting Concrete Floors

In addition to the Cavity Wall Installation Guide, please read the following for installing concrete floors with Catnic steel lintels.

- Check that the correct lintel is being used according to the manufacturer’s lintel schedule/design criteria.
- Bed the lintel on full blocks and allow mortar to cure before applying concrete floor loads.
- Raise both leaves of cavity wall together and allow masonry to cure sufficiently before applying heavy loads. Alternatively prop the lintel if large loads are to be applied to fresh masonry.
- When using the Catnic CH and CX open back range with concrete floors, always ensure that the blockwork is built tight against the inner vertical face of the lintel and that a mortar joint is added to the top of the blockwork so that the floor units have an even spread over the inner flange of the lintel.
- Avoid shock loading lintels during the installation of concrete floor units and also any sideways loading while being lifted into position.
- Precast flooring units should be laid on a mortar bearing of the full inner leaf wall width and should not be dragged over supports.
- Avoid loading newly laid floors with building materials.
-Lintels must be built in as illustrated, ensuring that the blockwork infill is well-jointed during construction and compatible with the strength of the masonry above.

* For advice on installations where end bearings can be reduced to not less than 100mm please contact our Technical Services Department on 029 2033 7900.
To achieve the optimum solution for your project, the suitability of the lintel being specified must be considered in conjunction with the building regulations. Suitable lintels are available from Catnic for use in cavity wall construction: 'CG (Cougar)’ lintels and ‘CH and CX’ lintels incorporate insulation, built-in plaster key and built-in DPC.

Open Back Lintels

Two styles are available from Catnic for use in cavity wall construction: ‘CG (Cougar)’ lintels and ‘CH and CX’ lintels incorporate insulation, built-in plaster key and built-in DPC.

Benefits

Easy-to-use open back profile

Allows masonry to be built up continuously on both outer and inner leaf

Materials used in Lintels

The CG, CH and CX ranges are formed from galvanised steel, then powder coated

Duplex corrosion protection

Ensures optimum durability and longevity

Built-in DPC

Saves time in construction and means cavity is easy to clean without risk of damage to DPC (refer to page 48)

Integral plaster key

With staggered slots applied to the inner range and ribbed underside of insulation (perforated steel baseplate on CH and CX range)

Continuous insulation

Maximising thermal efficiency, minimising cold bridging

Accessories

Arch Centres, Stop Ends, Cavity Weep Vents, Soffit Cladding (refer to page 43).

Where CH and CX lintels are required to support greater loads than the figures published please contact our Technical Services Department on 029 2033 7900.
The SWL (Safe Working Load) is based on the total UDL (uniformly distributed load) over maximum span using 150mm end bearings.

Concrete Floor Loads

When using the Catnic CH and CX open back ranges with concrete floors, always ensure that the blockwork is built tight against the inner vertical face of the lintel and that a mortar joint is added to the top of the blockwork so that the floor units have an even spread over the inner flange of the lintel. For guidance on installation refer to page 11.

Note: To achieve the CH and CX lintels are required to support greater loads or different wall constructions than the figures published, please contact our Technical Services Department on 029 2033 7900.
To achieve the SWL (safe working load) over maximum span using 150mm end bearings.

Concrete Floor Loads

When using the Catnic CH and CX open back ranges with concrete floors, always ensure that the blockwork is built tight against the inner vertical face of the lintel and that a mortar joint is added to the top of the blockwork so that the floor units have an even spread over the inner flange of the lintel. For guidance on installation refer to page 11.

Note: To achieve the ‘CH’ and ‘CX’ loading figures indicated, lintels must be built-in as illustrated, ensuring that the blockwork infill is well-jointed during construction and compatible with the strength of the masonry above.

Where CH and CX lintels are required to support greater loads or different wall constructions than the figures published, please contact our Technical Services Department on 029 2033 7900.
Cavity Wall Lintels

150-165mm Cavity Wall

**OPEN BACK LINTELS**

**Standard Duty**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths from 3000mm to 3600mm.

**CG150/100**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750-1500</td>
<td>12</td>
<td>6.9</td>
<td>146</td>
</tr>
<tr>
<td>1550-1800</td>
<td>17</td>
<td>9.2</td>
<td>146</td>
</tr>
<tr>
<td>1950-2100</td>
<td>20</td>
<td>11.0</td>
<td>146</td>
</tr>
<tr>
<td>2250-2400</td>
<td>22</td>
<td>13.8</td>
<td>146</td>
</tr>
<tr>
<td>2550-3000</td>
<td>26</td>
<td></td>
<td>146</td>
</tr>
</tbody>
</table>

**Heavy Duty**

- Standard lengths are available in 150mm increments.

**CN150/100**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-1800</td>
<td>32</td>
<td>13.1</td>
<td>140</td>
</tr>
<tr>
<td>1900-2100</td>
<td>48</td>
<td>15.6</td>
<td>140</td>
</tr>
<tr>
<td>2250-2400</td>
<td>49</td>
<td>15.6</td>
<td>140</td>
</tr>
</tbody>
</table>

**Extra Heavy Duty**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths from 3000mm to 4600mm (excluding 4575mm, but excluding 4500mm).

**CX150/100**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-2700</td>
<td>60</td>
<td>18.2</td>
<td>148</td>
</tr>
<tr>
<td>2850-3000</td>
<td>60</td>
<td>18.2</td>
<td>148</td>
</tr>
<tr>
<td>3300-3900</td>
<td>50</td>
<td>21.9</td>
<td>148</td>
</tr>
<tr>
<td>4200-4800</td>
<td>32</td>
<td>21.9</td>
<td>148</td>
</tr>
</tbody>
</table>

**Concrete Floor Loads**

When using the Catnic CH and CX open back ranges with concrete floors, always ensure that the blockwork is built tight against the inner vertical face of the lintel and that a mortar joint is added to the top of the blockwork so that the floor units have even spread over the inner flange of the lintel. For guidance on installation refer to page 11.

**Note:** To achieve the 'CH' and 'CX' loading figures indicated, lintels must be built-in as illustrated, ensuring that the blockwork infill is well jointed during construction and compatible with the strength of the masonry above.

**CLASSIC BOX**

**50-100mm Cavity**

140-150mm Wide Outer Leaf

**Standard Duty - 50mm Cavity**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths 3000mm to 4200mm.

**CH42C**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750-1200</td>
<td>12</td>
<td>7.1</td>
<td>140</td>
</tr>
<tr>
<td>1350-1800</td>
<td>17</td>
<td>10.1</td>
<td>140</td>
</tr>
<tr>
<td>2100-2400</td>
<td>20</td>
<td>14.2</td>
<td>140</td>
</tr>
<tr>
<td>2700-3000</td>
<td>26</td>
<td>14.2</td>
<td>140</td>
</tr>
</tbody>
</table>

**Heavy Duty**

- Standard lengths are available in 150mm increments.

**CH150/125**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-1800</td>
<td>32</td>
<td>13.3</td>
<td>140</td>
</tr>
<tr>
<td>1950-2100</td>
<td>48</td>
<td>15.9</td>
<td>140</td>
</tr>
<tr>
<td>2250-2400</td>
<td>45</td>
<td>15.9</td>
<td>140</td>
</tr>
</tbody>
</table>

**Extra Heavy Duty**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths from 3000mm to 4600mm (excluding 4575mm, but excluding 4500mm).

**CX150/125**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-1800</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
</tr>
<tr>
<td>1950-2100</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
</tr>
<tr>
<td>2250-2400</td>
<td>50</td>
<td>22.2</td>
<td>140</td>
</tr>
<tr>
<td>2550-3000</td>
<td>32</td>
<td>22.2</td>
<td>140</td>
</tr>
</tbody>
</table>

**Standard Duty - 75mm Cavity**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths 3000mm to 4800mm (including 4575mm, but excluding 4500mm).

**CN99/124C**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-2700</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
</tr>
<tr>
<td>2850-3000</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
</tr>
<tr>
<td>3300-3900</td>
<td>50</td>
<td>22.2</td>
<td>140</td>
</tr>
<tr>
<td>4200-4800</td>
<td>32</td>
<td>22.2</td>
<td>140</td>
</tr>
</tbody>
</table>

**Standard Duty - 100mm Cavity**

- Standard lengths are available in 150mm increments up to 3000mm, 100mm at lengths 3000mm to 4200mm.

**CN99/1644C**

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>SWL</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-2700</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
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<tr>
<td>2850-3000</td>
<td>60</td>
<td>18.5</td>
<td>140</td>
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<tr>
<td>3300-3900</td>
<td>50</td>
<td>22.2</td>
<td>140</td>
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<tr>
<td>4200-4800</td>
<td>32</td>
<td>22.2</td>
<td>140</td>
</tr>
</tbody>
</table>
CAVITY WALL EXTREME LOAD LINTELS

Designed for external cavity walls when extreme loads are imposed. Longer spans - high loads at longer spans. Varying widths - suits a variety of wall widths - with special widths on application.

50-65mm Cavity 100-115mm Inner Leaf

CXL240

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>2100-3000</th>
<th>3300-4000</th>
<th>5100</th>
<th>5400</th>
<th>5700</th>
<th>6000</th>
<th>6300</th>
<th>6600</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>56</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>41.7</td>
<td>41.9</td>
<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
</tr>
<tr>
<td>Serviceability moment (kNm)</td>
<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
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70-85mm Cavity 100-115mm Inner Leaf

CXL260

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>2100-3000</th>
<th>3300-4000</th>
<th>5100</th>
<th>5400</th>
<th>5700</th>
<th>6000</th>
<th>6300</th>
<th>6600</th>
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</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>56</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>41.7</td>
<td>41.9</td>
<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
</tr>
<tr>
<td>Serviceability moment (kNm)</td>
<td>50.6</td>
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<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
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90-105mm Cavity 100-115mm Inner Leaf

CXL290

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<th>Standard lengths (mm)</th>
<th>2100-3000</th>
<th>3300-4000</th>
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<th>5400</th>
<th>5700</th>
<th>6000</th>
<th>6300</th>
<th>6600</th>
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</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>56</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>41.7</td>
<td>41.9</td>
<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
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<tr>
<td>Serviceability moment (kNm)</td>
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<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
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110-125mm Cavity 100-115mm Inner Leaf

CXL310

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<th>2100-3000</th>
<th>3300-4000</th>
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<th>5400</th>
<th>5700</th>
<th>6000</th>
<th>6300</th>
<th>6600</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>56</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>41.7</td>
<td>41.9</td>
<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
</tr>
<tr>
<td>Serviceability moment (kNm)</td>
<td>50.6</td>
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<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
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130-145mm Cavity 100-115mm Inner Leaf

CXL330

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>2100-3000</th>
<th>3300-4000</th>
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<th>5400</th>
<th>5700</th>
<th>6000</th>
<th>6300</th>
<th>6600</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
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<td>47</td>
</tr>
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<td>Weight (kg/m)</td>
<td>41.7</td>
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<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
</tr>
<tr>
<td>Serviceability moment (kNm)</td>
<td>50.6</td>
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150-165mm Cavity 100-115mm Inner Leaf

CXL350

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<th>Standard lengths (mm)</th>
<th>2100-3000</th>
<th>3300-4000</th>
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<th>5700</th>
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</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>86</td>
<td>83</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>56</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>41.7</td>
<td>41.9</td>
<td>42.3</td>
<td>42.6</td>
<td>43</td>
<td>43.5</td>
<td>43.8</td>
<td>44.2</td>
</tr>
<tr>
<td>Serviceability moment (kNm)</td>
<td>50.6</td>
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<td>50.6</td>
<td>50.6</td>
<td>50.6</td>
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</tr>
</tbody>
</table>

CAVITY WALL CLOSED EAVES LINTELS

For use in cavity wall construction for closed eaves applications. Closed eaves lintels are manufactured from galvanised steel and powder coated for extra protection.

50-85mm Cavity 100-115mm Inner Leaf

CGE50/100

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>900-1500</th>
<th>1800-2100</th>
<th>2400-2700</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>25</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>7.3</td>
<td>8.1</td>
<td>10.0</td>
</tr>
<tr>
<td>Nominal height ‘h’ (mm)</td>
<td>96</td>
<td>119</td>
<td>118</td>
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</tbody>
</table>

90-125mm Cavity 100-115mm Inner Leaf

CGE90/100

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>900-1500</th>
<th>1800-2100</th>
<th>2400-2700</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL 1:1/19 kN</td>
<td>25</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>7.6</td>
<td>8.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Nominal height ‘h’ (mm)</td>
<td>95</td>
<td>115</td>
<td>115</td>
</tr>
</tbody>
</table>

Benefits

- Duplex Corrosion Protection System
- Ensures optimum durability and longevity
- Continuous insulation
- Maximising thermal efficiency, minimising cold bridging
- Integral plaster key
- With staggered slots to the inner flange and ribbed underside of insulation

To achieve the stated safe working load (SWL), closed eaves lintels must be built in with solid blockwork and continuous timber wall plates. Allow 150mm at each end for bearing support.

Where lintels are required to support greater loads than the figures published please contact our Technical Services Department on 029 2033 7900

Note: For heavy duty application or lintel in excess of 2.7m please refer to the SNN71 and CN81 range of lintels on page 29.
Thin joint construction is used extensively across Europe, and as UK building regulations are updated, the benefits of this efficient and highly effective system are evident.

Utilising almost 50 years experience in the design and manufacture of steel lintels, Catnic has designed two thin joint solutions for the UK construction industry: ‘CTJ90’ and ‘Box and Angle’ lintels.

1 CTJ90

The new CTJ90 lintel is designed specifically for use with thin joint construction.

The new CTJ90 lintel has been designed to suit the requirements of 162mm outer leaf with 90mm to 105mm cavity. Inner leaf support is achieved through a standard Catnic box lintel and propping during construction is eliminated thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²). Hot dipped galvanised sheet steel coil to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Standard Insulated Box Lintel

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

2 Box and Angle

The Catnic box and angle lintel system has been designed to accommodate the requirements of all thin joint wall construction.

This standard product provides the following benefits:

• Suitable for all possible cavity widths
• Reduced thermal bridging at window head
• Standard product

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick.

Benefits

Reduced build time

Within minutes the thin joint mortar is set and the next course can be laid. This permits continued laying and avoids settlement problems commonly associated with conventional mortar.

Quick weatherproofing

The CG, CH and CX ranges are formed from galvanised steel, then powder coated.

Flexible construction

Thin joint can be used on both external cavity walls and internal partition walls, as well as party wall construction.

Note: Whilst the above information is intended to offer general guidance regarding typical applications, it should not be considered as comprehensive. Requirements not fully covered by the above should be referred to our technical services department for individual consideration.

90-105mm Cavity

CTJ90 Lintels

CTJ90 Lintel is designed specifically for

average 102mm outer leaf with

90mm to 105mm cavity. Inner leaf support is

achieved through a standard Catnic box lintel

and propping during construction is eliminated

thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the

need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick for lintels, angle lintels up to

3000mm are Z600 silver.

Where lintels are required to support greater loads or different wall constructions than the

figures published please contact our Technical Services Department on

029 2033 7900.

Note: Use Catnic box lintels only for inner leaf support and ensure that the nominal height of the box is the same or higher than the

outer leaf CTJ-style lintel to be used. This will ensure that the plastic connectors align with the holes in the box lintel. ANG

lintels must be propped during installation.

All Cavity Widths

Standard Box and Angle Lintels

Thin joint can be used on both external

cavity walls and internal partition walls, as well as party wall construction.

Note: Please refer to our technical

services department for further

consideration.

The new CTJ90 lintel is designed specifically for use with thin joint construction.

100mm Inner Leaf

CTJ90

CTJ90 Lintel

Thin joint construction is used extensively across Europe, and as UK building regulations are updated, the benefits of this efficient and highly effective system are evident.

Utilising almost 50 years experience in the design and manufacture of steel lintels, Catnic has designed two thin joint solutions for the UK construction industry: ‘CTJ90’ and ‘Box and Angle’ lintels.

1 CTJ90

The new CTJ90 lintel is designed specifically for use with thin joint construction.

The new CTJ90 lintel has been designed to suit the requirements of 162mm outer leaf with 90mm to 105mm cavity. Inner leaf support is achieved through a standard Catnic box lintel and propping during construction is eliminated thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick.

Benefits

Reduced build time

Within minutes the thin joint mortar is set and the next course can be laid. This permits continued laying and avoids settlement problems commonly associated with conventional mortar.

Quick weatherproofing

The CG, CH and CX ranges are formed from galvanised steel, then powder coated.

Flexible construction

Thin joint can be used on both external cavity walls and internal partition walls, as well as party wall construction.

Note: Whilst the above information is intended to offer general guidance regarding typical applications, it should not be considered as comprehensive. Requirements not fully covered by the above should be referred to our technical services department for individual consideration.

90-105mm Cavity

CTJ90 Lintels

CTJ90 Lintel is designed specifically for

average 102mm outer leaf with

90mm to 105mm cavity. Inner leaf support is

achieved through a standard Catnic box lintel

and propping during construction is eliminated

thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the

need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick for lintels, angle lintels up to

3000mm are Z600 silver.

Where lintels are required to support greater loads or different wall constructions than the

figures published please contact our Technical Services Department on

029 2033 7900.

Note: Use Catnic box lintels only for inner leaf support and ensure that the nominal height of the box is the same or higher than the

outer leaf CTJ-style lintel to be used. This will ensure that the plastic connectors align with the holes in the box lintel. ANG

lintels must be propped during installation.

All Cavity Widths

Standard Box and Angle Lintels

Thin joint can be used on both external

cavity walls and internal partition walls, as well as party wall construction.

Note: Please refer to our technical

services department for further

consideration.

The new CTJ90 lintel is designed specifically for use with thin joint construction.

The new CTJ90 lintel has been designed to suit the requirements of 162mm outer leaf with 90mm to 105mm cavity. Inner leaf support is achieved through a standard Catnic box lintel and propping during construction is eliminated thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick.

Benefits

Reduced build time

Within minutes the thin joint mortar is set and the next course can be laid. This permits continued laying and avoids settlement problems commonly associated with conventional mortar.

Quick weatherproofing

The CG, CH and CX ranges are formed from galvanised steel, then powder coated.

Flexible construction

Thin joint can be used on both external cavity walls and internal partition walls, as well as party wall construction.

Note: Whilst the above information is intended to offer general guidance regarding typical applications, it should not be considered as comprehensive. Requirements not fully covered by the above should be referred to our technical services department for individual consideration.

90-105mm Cavity

CTJ90 Lintels

CTJ90 Lintel is designed specifically for use with thin joint construction.

The new CTJ90 lintel has been designed to suit the requirements of 162mm outer leaf with 90mm to 105mm cavity. Inner leaf support is achieved through a standard Catnic box lintel and propping during construction is eliminated thanks to a unique plastic fixings connection.

CTJ90 closes the cavity and removes the need for an additional cavity closer.

Material

Hot dipped galvanised sheet steel to BS EN10346: 2009 and Z275 (min yield stress – 250N/mm²).

Finish

Black polyester powder coating 0.035 - 0.005mm thick for lintels, angle lintels up to

3000mm are Z600 silver.

Where lintels are required to support greater loads or different wall constructions than the

figures published please contact our Technical Services Department on

029 2033 7900.

Note: Use Catnic box lintels only for inner leaf support and ensure that the nominal height of the box is the same or higher than the

outer leaf CTJ-style lintel to be used. This will ensure that the plastic connectors align with the holes in the box lintel. ANG

lintels must be propped during installation.
Timber frame lintels

The timber frame range consists of single elements lintels with a sloping outer face and duplex corrosion protection, which together provide a built-in DPC.

CTF

Restraint clips

Allows vertical differential movement of timber frame.

All timber frame models must be secured with restraint clips (supplied) and a batten (not supplied) to prevent lateral deflection (twist) during the building stage and to achieve the loading figures shown.

Benefits

Duplex corrosion protection

Ensures optimum durability and longevity.

Built-in damp proof course

Sloping outer face and duplex corrosion protection together provide a built-in DPC.

Note: Lintels should be suitably propped during construction. Lintels for timber frame construction are supplied with lintel restraint clips (free of charge), which must be screw or nail fixed to the timber frame to allow for differential movement between the timber structure and the brick facing.

The SWL (safe working load) is based on the total UDL (uniform distributed load) over maximum span using 150mm end bearings.

Installing a timber frame lintel

In addition to the cavity wall installation guide, please read the following for Catnic timber frame lintel installation.

Position of lintel restraint clips

Where lintels are required to support greater loads than the figures published please contact our Technical Services Department on 029 2033 7900

- When propping, a horizontal board should be placed along the flat underside of the lintel soffit; this will prevent any point loading, which could cause localised deformation of the lintel flange.
- On small openings a single prop should be placed centrally within the opening and gently wedged into place.
- The number of props should be increased for larger openings. Generally props should be installed at maximum centres of 1 metre.
- The prop can be removed after the mortar has cured and the wall ties become effective.
- A timber pinch batten should be fixed at the heel of the timber frame lintel in order to minimise any rotation.
- Catic timber frame lintels (e.g. CTF) are intended only to support an outer skin of brickwork where it is tied to an inner skin of timber frame and must be suitably propped during construction.

<table>
<thead>
<tr>
<th>Lintel Length (mm)</th>
<th>Number of Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-1800</td>
<td>3</td>
</tr>
<tr>
<td>1950-2500</td>
<td>5</td>
</tr>
<tr>
<td>3300-4200</td>
<td>7</td>
</tr>
<tr>
<td>4575-4800</td>
<td>9</td>
</tr>
</tbody>
</table>

Clip Fixings

<table>
<thead>
<tr>
<th>Lintel Product Code</th>
<th>Length (mm)</th>
<th>Clip Fixings</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTF5, CTF7 &amp; CTF9</td>
<td>750-3600</td>
<td>50mm x 3.35mm diameter flat head galvanised nails.</td>
</tr>
<tr>
<td>CTF5, CTF7 &amp; CTF9</td>
<td>3900-4800</td>
<td>38mm x No.10 BD142 sherardised wood screws.</td>
</tr>
</tbody>
</table>
TIMBER FRAME LINTELS

50-65mm Cavity 102mm Outer Leaf

Standard Duty

Standard lengths are available in 150mm increments up to 1000mm, 300mm at lengths from 1000mm to 4800mm (including 4575mm but excluding 4500mm).

CTF5

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750</th>
<th>1200</th>
<th>1350</th>
<th>1500</th>
<th>1650</th>
<th>2400</th>
<th>2550</th>
<th>3000</th>
<th>3300</th>
<th>3600</th>
<th>3900</th>
<th>4800</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
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<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>3.8</td>
<td>4.8</td>
<td>5.6</td>
<td>7.2</td>
<td>8.0</td>
<td>9.6</td>
<td>9.0</td>
<td>9.6</td>
<td>9.0</td>
<td>9.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal height (mm)</td>
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<td>128</td>
<td>183</td>
<td>183</td>
<td>218</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

70-85mm Cavity 102mm Outer Leaf

Standard Duty

Standard lengths are available in 150mm increments up to 1000mm, 300mm at lengths from 1000mm to 4800mm (including 4575mm but excluding 4500mm).

CTF7

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750</th>
<th>1200</th>
<th>1350</th>
<th>1500</th>
<th>1650</th>
<th>2400</th>
<th>2550</th>
<th>3000</th>
<th>3300</th>
<th>3600</th>
<th>3900</th>
<th>4800</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>4.2</td>
<td>5.2</td>
<td>5.9</td>
<td>7.5</td>
<td>8.3</td>
<td>9.9</td>
<td>9.6</td>
<td>9.9</td>
<td>9.6</td>
<td>9.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal height (mm)</td>
<td>145</td>
<td>145</td>
<td>187</td>
<td>187</td>
<td>218</td>
<td>260</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

90-105mm Cavity 102mm Outer Leaf

Standard Duty

Standard lengths are available in 150mm increments up to 1000mm, 300mm at lengths from 1000mm to 4800mm (including 4575mm but excluding 4500mm).

CTF9

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750</th>
<th>1500</th>
<th>1650</th>
<th>2400</th>
<th>2550</th>
<th>3000</th>
<th>3300</th>
<th>3600</th>
<th>3900</th>
<th>4800</th>
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</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>4.7</td>
<td>5.9</td>
<td>8.1</td>
<td>8.4</td>
<td>9.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal height (mm)</td>
<td>146</td>
<td>146</td>
<td>200</td>
<td>220</td>
<td>271</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

SOLID WALLS

SINGLE LEAF WALL LINTELS

For use in solid or block walls. Available in an ‘angle’ and ‘channel’ profile to accommodate meter boxes and single leaf face brick or block walls.

Single leaf wall lintels

1 Angle

For use in 102mm exterior walls

MBA are suitable for meter boxes only. ANG suitable for Standard Duty loading applications

2 Channel Section

For use in 102mm exterior walls

CCS lintels are fully built into wall construction for use with single leaf face brick or block walls.

Benefits

- Duplex Comosion Protection System
- Ensures optimum durability and longevity

CTF 50-105mm CAVITY WALL

MBA, ANG & CCS 102mm EXTERIOR WALL

Heavy duty ANG and CCS lintels are available on request, please contact our Technical Services Department on 029 2033 7900

Meter Box Lintels

Light Duty

MBA

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750</th>
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<tr>
<td>SWL (kN)</td>
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<td>3</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
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<td>2.2</td>
</tr>
<tr>
<td>Nominal height (mm)</td>
<td>88</td>
<td>88</td>
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</table>

Angle Lintels

Standard Duty

ANG

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>900-1200</th>
<th>1350</th>
<th>1650</th>
<th>2100</th>
<th>2250-2400</th>
<th>2550-3000</th>
<th>3300-3900</th>
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</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>2.7</td>
<td>3.4</td>
<td>4.0</td>
<td>4.7</td>
<td>7.3</td>
<td>9.4</td>
<td>11.7</td>
</tr>
<tr>
<td>Nominal height (mm)</td>
<td>88</td>
<td>131</td>
<td>167</td>
<td>215</td>
<td>215</td>
<td>215</td>
<td>215</td>
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</table>

Channel Sections

Standard Duty

CCS

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750-1800</th>
<th>1950-3000</th>
<th>3300-4800</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
<td>15</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>4.7</td>
<td>7.3</td>
<td>11.7</td>
</tr>
<tr>
<td>Nominal height (mm)</td>
<td>154</td>
<td>229</td>
<td>229</td>
</tr>
</tbody>
</table>
External solid wall lintels

External solid wall lintels are manufactured from galvanised steel and powder coated for extra protection. Available in ‘classic box’ or two-piece inverted ‘T’ styles.

1 Classic box
For use in 200mm and 215mm solid exterior walls

Benefits
- Duplex Corrosion Protection System
- Ensures optimum durability and longevity
- Continuous insulation
- Maximising thermal efficiency, minimising cold bridging
- Integral plaster key
- With staggered slots to the inner flange and ribbed underside of insulation

Instant full load use
Box profile is designed to carry full load of wet masonry as soon as it is installed

2 Two-piece inverted ‘T’
Designed to carry two separate leaves of 215mm fairface brick wall

Benefits
- Duplex Corrosion Protection System
- Ensures optimum durability and longevity

For solid wall construction in excess of 250mm an appropriate Cougar open back lintel can be utilised.

Box profile can be used in tile hanging applications on exterior solid walls.

Other typical external solid wall lintel applications

CG lintel installed in solid wall construction

For two separate leaves of a 215mm fairface brick wall

200mm and 215mm Exterior Solid Walls

Standard Duty

Standard lengths are available in 150mm increments.

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750-1500</th>
<th>1650-2100</th>
<th>2250-2700</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
<td>29</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Weight (kg/m)</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
<tr>
<td>Nominal height ‘h’ (mm)</td>
<td>143</td>
<td>143</td>
<td>143</td>
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</table>

CN71A

Heavy Duty

Standard lengths are available in 150mm increments.

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>900-1500</th>
<th>1650-1950</th>
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</thead>
<tbody>
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<td>SWL (kN)</td>
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<tr>
<td>Weight (kg/m)</td>
<td>14.6</td>
<td>14.6</td>
</tr>
<tr>
<td>Nominal height ‘h’ (mm)</td>
<td>143</td>
<td>143</td>
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</tbody>
</table>

CN71C

For two separate leaves of a 215mm fairface brick wall

200mm and 215mm Exterior Solid Walls

Standard Duty

Standard lengths are available in 150mm increments.

<table>
<thead>
<tr>
<th>Standard lengths (mm)</th>
<th>750-1500</th>
<th>1650-2100</th>
<th>2250-2700</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL (kN)</td>
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<td>12</td>
<td>12.7</td>
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<tr>
<td>Weight (kg/m)</td>
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<td>11.7</td>
<td></td>
</tr>
<tr>
<td>Nominal height ‘h’ (mm)</td>
<td>91</td>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>

CN50C

CN81 lintel

The SWL (safe working load) is based on the total UDL (uniform distributed load) over maximum span using 150mm end bearings.

Where lintels are required to support greater loads than the figures published please contact our Technical Services Department on 029 2033 7900

Note: CN71 and CN81 lintels can also be used as heavy duty wall eaves lintels for 70mm to 100mm cavities.
### Internal Wall Lintels

#### Catnic lintels for internal partitions and loadbearing walls are available in either ‘corrugated’, ‘channel’ or ‘box section’ to accommodate different loads and openings.

1. **Corrugated**
   - For use in solid or block walls.
   - Suitable for nominal domestic loading.

2. **Channel**
   - For use in solid or block walls.

3. **Classic Box**
   - For use in solid or block walls.

#### Benefits
- Integral plaster key
- Duplex Corrosion Protection System

### Internal Wall Lintel Dimensions

#### 75mm and 100mm

<table>
<thead>
<tr>
<th>Lintel Type</th>
<th>SWL (kN)</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CN92</strong></td>
<td>7</td>
<td>1.2</td>
<td>25</td>
</tr>
<tr>
<td><strong>CN102</strong></td>
<td>7</td>
<td>1.8</td>
<td>25</td>
</tr>
</tbody>
</table>

**Note:** When using CN92 and CN102 lintels normal building practice should be observed, in that one course of blockwork should be laid on the lintel and the mortar allowed to harden for at least 24 hours before additional loads are applied.

#### 100mm

<table>
<thead>
<tr>
<th>Lintel Type</th>
<th>SWL (kN)</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CN100</strong></td>
<td>10</td>
<td>3.7</td>
<td>50</td>
</tr>
</tbody>
</table>

**Note:** Not suitable for floor loads.

#### 140mm

<table>
<thead>
<tr>
<th>Lintel Type</th>
<th>SWL (kN)</th>
<th>Weight (kg/m)</th>
<th>Nominal height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BSD140</strong></td>
<td>1.8</td>
<td>7.5</td>
<td>7</td>
</tr>
</tbody>
</table>

General conditions:
- Direct roof or floor load
- Supports concrete floor loads
- Supports point loads e.g. steel beams

**BSL, BHD and BXD**
- As previous plus
- Suitable for 140mm blockwork

**Benefits**
- Integral plaster key
- Duplex Corrosion Protection System

*Standard lengths are available in increments of 150mm.*

### Interior Wall Lintels

- **CN92** and **CN102**
- **CN100**
- **BSD, BHD and BXD**

**CN92** and **CN102**
- Offers a cost effective solution for extra light duty loads.

**CN100**
- Offers a cost effective solution for light duty loads.

**BSD, BHD and BXD**
- Offers a cost effective solution for standard duty and heavy duty loads.

- As corrugated lintel plus
- Suitable for masonry/timber floor loads.

**Benefits**
- Integral plaster key
- Duplex Corrosion Protection System
- Integral plaster key
- Duplex Corrosion Protection System

**BSL, BHD and BXD**
- With holes to all sides of channel profile

**Note:** When using **CN92** and **CN102** lintels normal building practice should be observed, in that one course of blockwork should be laid on the lintel and the mortar allowed to harden for at least 24 hours before additional loads are applied.

**BSL, BHD and BXD**
- With staggered holes to three sides of box profile

*Not suitable for floor loads*

**Note:** When using **CN92** and **CN102** lintels normal building practice should be observed, in that one course of blockwork should be laid on the lintel and the mortar allowed to harden for at least 24 hours before additional loads are applied.

**BSL, BHD and BXD**
- With holes to all sides of channel profile

For use in internal partition and loadbearing walls 75mm, 100mm and 140mm.
STAINLESS STEEL LINTELS
Available in any Catnic lintel profile to accommodate any possible wall construction.

Stainless Steel Lintels
The standard duplex corrosion protection system used on Catnic’s range of lintels provides class leading protection against corrosion in all normal circumstances. However there may be instances when, particularly aggressive environments or to increase the expected life of the lintel, a stainless steel lintel may be required.

Product Range
- All Catnic stainless steel lintels are manufactured from austenitic stainless steel, grade 304S15 to BS EN 10088-2 1.4301
- Other grades of stainless steel are available upon request.
- All Catnic galvanised steel loading tables apply.
- All stainless steel lintel lengths are manufactured to order, price and delivery on application.
- All standard stainless steel lintels from Catnic are BBA Approved under Agrément Certificate No. 91/2638
- Special lintels in stainless steel are available manufactured to order.

Special lintel
Timber frame lintel
Box lintel
Single element lintel

Eurocode 6 – Design of masonry structures Part2: Design considerations, selection of materials and execution of masonry implies that the lintel material/coating specifications should be limited to austenitic stainless steel for two exposure classes – MX4 and MX5.
- MX4 – Exposure to saturated salt air or seawater (i.e. coastal areas, buildings adjacent to roads that are salted during the winter).
- MX5 – Exposure to the aggressive chemical environment (i.e. industrial areas where aggressive chemicals are airborne, harsh coastal areas where lintels are exposed to airborne chlorides seawater spray or mist).

For buildings the MX5 exposure class higher than 304 grade stainless steel is recommended, due to the risk of severe pitting corrosion.

The outstanding anti-corrosion properties of stainless steel also make it suitable for specialist laboratory or medical applications, hospitals, residential care homes, schools, military buildings and prisons where the whole life expectancy and maintenance programme becomes key design considerations. Stainless steel is also a solution for high buildings, where lintels maintenance would be difficult.

Periodic cleaning is advisable on stainless steel, as with most building exterior materials. The frequency will depend on local conditions and the ‘visibility’ of the steelwork. Where cleaning and maintenance is difficult or costly, e.g. the outside of high rise buildings, then a more resistant grade may be appropriate.

Universal Beams
Universal beams are available cut to size.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Serial Size (mm)</th>
<th>Weight (kg/m)</th>
<th>Depth (D) (mm)</th>
<th>Width (B) (mm)</th>
<th>Web Thk (t) (mm)</th>
<th>Flange Thk (T) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UB1710/19</td>
<td>178 x 102</td>
<td>19.0</td>
<td>177.8</td>
<td>101.2</td>
<td>4.8</td>
<td>7.9</td>
</tr>
<tr>
<td>UB2013/23</td>
<td>203 x 133</td>
<td>30.0</td>
<td>209.8</td>
<td>133.9</td>
<td>6.4</td>
<td>9.6</td>
</tr>
<tr>
<td>UB2514/33</td>
<td>254 x 146</td>
<td>43.0</td>
<td>259.6</td>
<td>147.3</td>
<td>7.2</td>
<td>12.7</td>
</tr>
</tbody>
</table>

Universal Columns
Universal columns are available cut to size.

<table>
<thead>
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<th>Product Code</th>
<th>Serial Size (mm)</th>
<th>Weight (kg/m)</th>
<th>Depth (D) (mm)</th>
<th>Width (B) (mm)</th>
<th>Web Thk (t) (mm)</th>
<th>Flange Thk (T) (mm)</th>
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</thead>
<tbody>
<tr>
<td>UC1515/23</td>
<td>152 x 152</td>
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<td>152.4</td>
<td>152.2</td>
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<td>6.8</td>
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<tr>
<td>UC1515/30</td>
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<td>UC2120/46</td>
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<td>14.2</td>
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</table>

Channels
Channels are available cut to size.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Serial Size (mm)</th>
<th>Weight (kg/m)</th>
<th>Depth (D) (mm)</th>
<th>Width (B) (mm)</th>
<th>Web Thk (t) (mm)</th>
<th>Flange Thk (T) (mm)</th>
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<tr>
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<td>230.0</td>
<td>90.0</td>
<td>7.5</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Manufactured from grade S275 steel plate, all steelwork sections are supplied cut to length with holes drilled as required. A primed finish is offered as standard with hot dipped post galvanised finish available on request.

In addition to the range depicted below, Catnic can also accommodate requests for composite bolted beams complete with the necessary bolts and spacers.

Other standard sections are available on request, please contact our Technical Services Department on 029 2033 7900.

Lintel Product Selector: Stainless Steel Lintels

STEELWORK
When loading conditions exceed our standard range of lintels Catnic offer a selection of steelwork beams, columns and channels.
**SPECIAL LINTELS**

Catnic is committed to delivering a range of exciting shapes for unique designs and feature brickwork to inspire today’s architects and builders... the only constraint is your imagination.

### Bespoke Designs

When a building requires a more unconventional support solution, Catnic is again, one step ahead and has an experienced team of feature design engineers dedicated to providing innovative design solutions to achieve the architect’s vision.

Naturally, Catnic’s technical support team has the breadth of knowledge and expertise to design lintels for the most creative of openings, with in-house facilities and skill to manufacture fabricated lintels to suit countless configurations.

Various styles of bay window, gothic and apex arches, bull’s-eye and corner feature lintels for domestic and commercial applications are hand welded and post galvanised for extra corrosion protection, assuring lasting quality.

Although the majority of arches are semi-circular, Catnic also offer gothic arches for Victorian styled buildings and apex designs for triangular or diamond shaped openings, curved on-plan for bays, in curved walls and also elliptical, parabolic, Arabian and segmental. The list is endless and there are limitless variations which Catnic have the capacity to fabricate virtually any arch specification required.

A fast and cost-effective fabrication service from a unique and specialised fabrication facility - means that bespoke lintels can often be delivered along with standard lintels minimising delays on site. Each lintel, as always, is manufactured to a high quality standard; hot dip galvanised after manufacture to BS EN ISO 1461: 1999.

### Feature lintels

While your imagination runs wild with creative openings, why not be inventive with brickwork too?

Catnic has the expertise to design and manufacture lintels for decorative brick and stone work, for example reduced toe lintels for discrete use with cant bricks.

A fast and cost-effective fabrication service from a unique and specialised fabrication facility - means that bespoke lintels can often be delivered along with standard lintels minimising delays on site. Each lintel, as always, is manufactured to a high quality standard; hot dip galvanised after manufacture to BS EN ISO 1461: 1999.

### Arches

When you want to make a feature of brickwork you may need more than a standard lintel, so Catnic offers both standard and innovative bespoke designs.

#### Standard Arch Lintels

Catnic have a standard range of ten semi-circular arches specifically designed and manufactured for domestic housing applications with nominal loadings. These arches offer considerable flexibility for feature brickwork with clear spans ranging from 600mm to 1200mm and are available from stock.

<table>
<thead>
<tr>
<th>Lintel Type</th>
<th>Clear Span (mm)</th>
<th>Weight (kg)</th>
</tr>
</thead>
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<td>CCA/600</td>
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<tr>
<td>CCA/630</td>
<td>630</td>
<td>12.26</td>
</tr>
<tr>
<td>CCA/900</td>
<td>900</td>
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<td>16.77</td>
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<td>CCA/1200</td>
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<td>21.37</td>
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<table>
<thead>
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<th>Lintel Type</th>
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<th>Weight (kg)</th>
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</thead>
<tbody>
<tr>
<td>CCB/600</td>
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<td>12.96</td>
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<td>CCB/630</td>
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<tr>
<td>CCB/1200</td>
<td>1200</td>
<td>23.43</td>
</tr>
</tbody>
</table>

### Application

All arch lintels require a separate DPC installed over 20mm maximum overhang.

**Typical application showing semi-circular arched lintel in facing brickwork**

Standard sem-circular arches available for domestic housing applications. For alternative cavity and masonry widths, please contact our Technical Services Department on 029 2033 7900.
SPECIAL LINTELS

**Semi-Circular Arch Lintel**
The semi-circular arch lintel is the most common feature brickwork opening providing a classical design line for any window or door. Catnic have ten different size semi-circular arch lintels available from stock.

For alternative cavity and masonry widths or to request a quotation please visit www.catnic.com/semi_circular_arch

**Segmental Arch Lintel**
The segmental arch lintel enables the creation of an opening where the arch whose profile comprises an arc smaller than a semi-circle. The segmental arch lintel is made up of part of a circle, the centre of which is below its springing line.

To request a quotation please visit www.catnic.com/semental_arch

**Apex Arch Lintel**
The apex arch lintel enables the creation of triangular or diamond shaped openings. Commonly used with high vaulted ceilings enhancing the flood of daylight and perception of grandeur.

To request a quotation please visit www.catnic.com/apex_arch

**Gothic Arch Lintel**
The gothic arch lintel enables the creation of pointed window and door openings to complement strong vertical lines, high vaulted ceilings, minimal wall space and buttressed walls often found in Victorian and gothic architecture. Gothic or pointed arches are formed from two segmental arches leaning together to form a point.

To request a quotation please visit www.catnic.com/gothic_arch

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**Note:** All times quoted as working days, include delivery, calculated from receipt of order and approved drawing (where applicable). All products are subject to availability.
SPECIAL LINTELS

All Catnic special fabricated lintels are hot-dip galvanised after manufacture for complete protection from corrosion, eliminating the need for on-site painting or maintenance. Available in ten working days from receipt of order and approved drawing.

Venetian Arch Lintel

The Venetian arch lintel enables the formation of a classic design consisting of a three-part window composed of a large, arched central section flanked by two narrower, shorter sections having square tops.

To request a quotation please visit www.catnic.com/venetian_arch

Elliptical Arch Lintel

The elliptical arch lintel enables the creation of a wider, shallower arch opening compared to that offered by the traditional steeper semi-circular arch. The elliptical arch is formed by multiple arcs each of which is drawn from its own centre compared to a roman arch which is a semi-circular arc drawn from a single centre point.

To request a quotation please visit www.catnic.com/elliptical_arch

Bull’s-Eye Lintel

The bull’s-eye lintel enables the creation of circular window openings and portholes.

To request a quotation please visit www.catnic.com/bulls_eye

Parabolic Arch Lintel

The parabolic arch lintel enables the creation of openings with an artistically distinctive softer curvature than offered by a traditional, elliptical or gothic arch. The parabolic arch is formed by the creation of an arch in the form of the intersection of a cone with a plane parallel to the side of the cone, like a three-centred arch. To construct a parabolic curve please see the illustration above.

To request a quotation please visit www.catnic.com/parabolic_arch

Note: All times quoted as working days, include delivery, calculated from receipt of order and approved drawing (where applicable). All products are subject to availability.

If you require further information please contact our Technical Services Department on 029 2033 7900

If you require further information please contact our Technical Services Department on 029 2033 7900
**SPECIAL LINTELS**

All Catnic special fabricated lintels, spigot posts and base plates are hot-dip galvanised after manufacture for complete protection from corrosion, eliminating the need for on-site painting or maintenance. Available in ten working days from receipt of order and approved drawing.

**Curved On-Plan Lintel**

The curved on-plan lintel (sometimes known as radius lintel or bow lintel) enables the creation of curved walls with openings. Curved lintels can be manufactured to suit customer specified radii.

**Corner Lintel**

The mitered corner lintel enables the appearance of an unspoiled window openings on two perpendicular walls of a room. Corner lintels come complete with support posts (spigot post) and base plate. Support posts are available in standard lengths to allow for site cutting to actual requirements.

**Square Bay Lintel**

The square bay lintel uses perpendicular returns (90° angle) compared to the splayed bay lintel (greater than 90° angle) to create a window opening with three aspects. Square bay lintels come complete with support posts (spigot post) and base plate. Support posts are available in standard lengths to allow for site cutting to actual requirements.

**Splayed Bay Lintel**

The splayed bay lintel projects the wall forward from the confines of the rest of the room to create an opening that attempts to make use of every last ray of sunshine. Introduced during the Georgian period, made popular in Victorian times and carried on in Edwardian housing the bay window is a realisation by architects that windows with three aspects could improve the outlook of living rooms. Splayed bay lintels come complete with support posts (spigot post) and base plate. Support posts are available in standard lengths to allow for site cutting to actual requirements.

To request a quotation please visit www.catnic.com/curved_on_plan

If you require further information please contact our Technical Services Department on 029 2033 7900

Note: All times quoted as working days, include delivery, calculated from receipt of order and approved drawing (where applicable). All products are subject to availability.

To request a quotation please visit www.catnic.com/corner

To request a quotation please visit www.catnic.com/square_bay

To request a quotation please visit www.catnic.com/splayed_bay

Note: All times quoted as working days, include delivery, calculated from receipt of order and approved drawing (where applicable). All products are subject to availability.
Splayed Bay Lintel with return bearings

All Catnic special fabricated lintels, spigot posts and base plates are hot-dip galvanised after manufacture for complete protection from corrosion, eliminating the need for on-site painting or maintenance. Available in ten working days from receipt of order and approved drawing.

Splayed Lintels

The splayed bay lintel with bearings projects the wall forward from the confines of the rest of the room to create an opening that attempts to make use of every last ray of sunshine. Introduced during the Georgian period, made popular in Victorian times and carried on in Edwardian housing, the bay window is a realisation by architects that windows with three aspects could improve the outlook of living rooms.

Lintel Arch Centres

A PVC-u arch unit for use over openings in external cavity walls – traditional and timber frame – providing permanent centring for brick arch construction.

Allows easy construction of segmental arches. Includes integral weep vent.

Materials

Extruded from PVC-u for greater UV stability. Catnic Lintel Arch Centres are designed to weather in accordance with the PVC-u windows. The design incorporates built-in weep vents for discharging the wind-driven rain that penetrates the external skin of a cavity wall.

Lintel Arch Centres – Type AC

A PVC-u arch unit for use over openings in external cavity walls – traditional and timber frame – providing permanent centring for brick arch construction.

Installation notes

- Do not use damaged Arch Centres.
- Remove the Arch Centre from its protective wrapping.
- Check that the Arch Centre is correct for application (refer to the lintel specification).
- Ensure the Arch Centre and lintel mounting surfaces are clean and dry.
- Locate the unit centrally over the opening to determine the position on the lintel. The front drip section should be trimmed off at the bearing end to allow for the mortar joints and to enhance the appearance.
- Locate the unit on the lintel at position previously determined, ensuring a tight fit to the edge of lintel toe.

Note:

- Do not allow for end bearings, this will be calculated by Catnic Technical Services.
- All times quoted as working days, include delivery, calculated from receipt of order and approved drawing (where applicable).

If you require further information please contact our Technical Services Department on 029 2033 7900

Special Arch Centres available, for details please contact our Technical Services Department on 029 2033 7900

Lintel Arch Centre Code | Arch Centre Span (mm) | Rise (mm) | Opening Sizes (mm) Min | Max
---|---|---|---|---
ACA0475 | 450 | 75 | 450 | 500
ACA0625 | 600 | 75 | 600 | 650
ACA0875 | 850 | 75 | 850 | 900
ACA0925 | 900 | 75 | 900 | 950
ACA1075 | 1050 | 75 | 1050 | 1100
ACA1125 | 1200 | 75 | 1200 | 1250
ACA1225 | 1350 | 75 | 1350 | 1400
ACA1425 | 1450 | 75 | 1450 | 1500
ACA1625 | 1600 | 75 | 1600 | 1650
ACA1775 | 1750 | 75 | 1750 | 1800
ACB2125 | 2100 | 150 | 2100 | 2150
ACB2325 | 2300 | 150 | 2300 | 2350
ACB2425 | 2400 | 150 | 2400 | 2450

Note:

- Each length of Arch Centre will cover a structural opening with a tolerance of plus or minus 25mm. All lengths between 425mm and 3175mm are available in standard 50mm increments to suit a 75mm or 150mm rise.
ACCESSORIES

Lintel Soffit Cladding – Type RC and FC

For improved protection
Lintel Soffit Cladding also provides extra protection, especially in coastal regions and in situations where much of the lintel soffit is exposed.

Material
A PVC-u pre-cut unit, supplied in white (FC and RC) or brown (FC only).

For improved appearance
An optional cladding, particularly suitable for use with PVC-u windows. The cladding was originally designed to give a more aesthetically pleasing appearance to rebated combined box lintels. These advantages have now been extended to cover all flush soffit lintels.

Important Note: All external wall lintels fitted with lintel cladding must be installed with a flexible damp proof course (DPC) ensuring that the DPC projects beyond the front face of the cladding.

Figure 1: Lintel Stop End type CL3
Figure 2: Lintel Stop End type C90

Lintel Stop Ends – Type CL3 and C90

For eliminating problems associated with moisture penetration. Wind-driven rain that penetrates the external skin of a cavity wall will, under normal conditions, discharge off the ends of conventional lintels.

However, with full fill cavity insulation and in areas of severe exposure, large volumes of water can be released from lintel ends into and through insulation, creating dampness at internal reveals. Catnic Stop Ends prevent this problem.

Use CL3 Stop Ends (see Figure 1) for lintels with a fully inclined face within the cavity (combined lintels or CH and CX lintels).

Use C90 Stop Ends (see Figure 2) for all lintels with a 90° brickwork/brickwork support flange (for use with Cougar CG lintels).

Technical requirements
NHBC Standards: Where fairfaced masonry is supported by lintels: weep holes should be provided at maximum 450mm intervals. Each opening should have at least two weep holes.

Zurich Municipal: In localities of moderate exposure or worse, or where full cavity fill is used, cavity trays should be adequately drained through weep holes spaced at no more than 1 metre apart, with at least two per opening.

Cavity Weep Vents – Type WV

For ensuring removal of water from cavities. DPC and cavity tray installations over openings require weeps to discharge collected water from the cavity above. Cavity Weep Vents also assist in draining interstitial condensation, which can contribute to moisture tracking across the cavity.

The design of Cavity/Wall Vents type WV also provides an aesthetically pleasing solution, as the front face of the weep vent blends unobtrusively into the masonry.

Technical requirements
NHBC Standards: Where fairfaced masonry is supported by lintels: weep holes should be provided at maximum 450mm intervals. Each opening should have at least two weep holes.

Material
BS Polypropylene in grey, beige and terracotta to match mortar.

Important Note: Cavity weep holes should be provided over all lintels fitted with stop ends or separate DPC tray supplied by other manufacturer.

External Plaster Key - Type PKS87

Manufactured from galvanized steel to BS EN 10346:2009 of grade Z275 the external plaster key provides a secure key for a rendered finish.

Application
Suitable for use with Cougar lintels (CG, CH, CX) timber frame lintels (CTF3, CTF7, CTF9, CN23) and External solid wall lintels (CN71 and CN81).

Storage
Unless required immediate use on site the product should be stored in a clean dry environment.

Installation notes
External plaster key simply clips into place and is secured using a full length of adhesive bead (supplied by others). The PKS87 Plaster Key MUST be fitted to the lintel before the lintel is installed.

i) Ensure plaster key mounting surface and underside of lintel is clean, dry and free from grease and dirt.

Figure 1: Lintel Stop End type CL3 for use with combined lintels or CH and CX lintels

Figure 2: Lintel Stop End type C90 for use with CG lintels and external solid lintels
Catnic is committed to providing architects, designers and builders with useful information and terminology relevant to the specification of Catnic lintels.

We consider care for the environment to be essential both in terms of our duty to society and to ensure the continuity of our business.

- Communicate our environmental policy to all interested internal and external parties and respond appropriately to requests for information.
- We will seek to reduce our environmental impacts and improve sustainability through improvements in:
  - Energy efficiency and water consumption.
  - Waste management and in particular a reduction in the amount of waste we send to landfill.
  - Contract management and purchasing.

This policy will be reviewed at least annually and will form the basis of all future environmental improvements.

Global Warming Potential (GWP)
The expanded polystyrene (EPS) incorporated into our pre-insulated lintels does not use, contain or produce formaldehyde, CFCs or indeed any so-called soft CFCs (i.e. HCFCs and HFA). The manufacturer of our insulation product has quoted a GWP < 5 for the finished product.

Ozone Depletion Potential (ODP)
The product conforms to the Montreal Protocol and has an ozone depletion potential of zero. The material content and manufacture of EPS has no major negative impact on the environment.

Health and Safety Policy
Catnic actively work towards Tata Steel’s own international safety rating system and have one of the highest scores amongst all Tata Steel manufacturing sites in the UK.

- We believe that all our activities can be undertaken safely and we will never compromise safety.
- We will conduct our business in a way that ensures the health and well-being of our employees, contractors and any person affected by our activities.
- Everyone in Tata Steel has responsibility for their own and others’ health and safety.
- We know that continuous improvement of our health and safety performance is essential for a successful company.
- We will encourage a health and safety culture in Tata Steel. Copies of the Catnic Environmental Policy are available on request or can be downloaded at www.catnic.com/environmental.

Environmental Policy
In 2010 Catnic achieved the Environmental Management Standard ISO 14001 recognition of its environmental management policy. Our products are durable, adaptable, reusable and recyclable. Through our research and development activities, we are continuing to develop products that give additional social and environmental benefits to our customers and society as a whole. However, Catnic recognises that in our day to day operations we impact upon the environment in a number of ways. Therefore we are committed to achieving continual improvement in our environmental performance and pollution prevention and in supporting government policy for sustainable development.

In particular we will:
- Integrate environmental management into all our business activities.
- Ensure compliance with all relevant local, national and international legislation and regulations.
- Ensure all staff, including contractors, actively supports our environmental programmes.

CE Marking
On 1st July 2013 the Construction Product Regulation came into force.

This meant that where a Harmonised European Standard exists for a construction product, there is now a legal obligation to CE Mark that product. It is to be sold in the UK or Europe. If there is no current Harmonised European Standard in existence then there is no requirement to CE Mark the product.

All Catnic products manufactured from 1st July 2013 now carry a CE Mark wherever applicable. The CE mark is clearly displayed on product labels that are applied directly to each product or in the case of plaster beads on the packaging.

As well as this, all CE marked products must have a declaration of performance (DoP) document that is available to download from www.catnic.com/dop.

Construction products manufactured before 1st July 2013 can still be sold providing there is evidence to show the product was manufactured before this date and is perfectly acceptable under the Construction Product Directive. All Catnic products contain a date stamp on the label stating the time of manufacture. Catnic will CE Mark all UK (and European) lintels that fall under EN 845 Part 1. This will include galvanised and stainless steel lintels.

The following lintels are not covered by EN 845 Part 2 and will therefore not be CE Marked:
- Arches
- Mitred lintels, and mitred and welded lintels
- Beam and plate lintels

The following lintels are not covered by EN 845 Part 2 and will therefore not be CE Marked:
- PVC-u beads
- Wall starters
- Juliet balconies
- Ogee post
- Arch formers
- Coil mesh

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- PVC-u beads
- Wall starters
- Juliet balconies
- Ogee post
- Arch formers
- Coil mesh

BES 6001
Catnic is the first lintel manufacturer to be certified to BES 6001 so you can rest assured that you are specifying using a sustainable product and can maximise the potential for obtaining credits under the Responsible Sourcing of Materials sections of BREEAM, the Code for Sustainable Homes and CEEQUAL. Certification of all our steel construction products to BES 6001 provides independent verification of our corporate responsibility, including the way we drive sustainability considerations up the supply chain to the point of raw material extraction. It delivers a method for us to benchmark and show that we are continuously improving our sustainability credentials.

Catnic’s sales and technical teams are dedicated to matching the quality of our products with the excellence of our service, from the professional voice at the end of the telephone to our on-site consultation.

The Service Package
The Catnic service package includes:
- Experienced and dedicated team of lintel sales representatives
- Fully trained, professional internal customer support team for all your needs; from placing orders, to enquiring about prices or deliveries
- Comprehensive range of back-up literature
- On-line help via www.catnic.com
- CAD details available on-line providing instant access to lintel drawings
- Technical enquiry forms on-line providing instant access to lintel drawings
- On-site sales and technical support
- Technical hotline for all queries
- Dedicated hauliers for all your deliveries
- On-site sales and technical support
- Consultation at every stage of your job
- Lintel scheduling and specification via CLASS
- Next day delivery available on selected items
- Extensive range of standard and bespoke lintels

CEX service support for customers
Catnic has been at the forefront of lintel design for over 40 years. Our reputation for exceptional quality and technical expertise has ensured customers satisfaction and loyalty in the products and services that we offer.

Catnic’s team:
- Are professional and experienced
- Are extensively trained
- Have comprehensive product and industry knowledge
- Have a committed parent company - Tata Steel.

Technical Support
To access the benefits of CLASS free of charge, simply send your project drawings (dimensional plans, sections and elevations), floor and carcase layout, along with a copy of the technical enquiry form in the back of this Product Selector to our Technical team.

Design service for bespoke lintels
In addition to its standard range, Catnic design and manufacture a huge range of ‘specials’. The bespoke range is designed and fabricated to satisfy features such as long spans, chamfered brickwork, reduced toe lintels for cant bricks, arched openings and other applications where non-standard construction is utilised. For further information please turn to page 14 of this guide.

Free scheduling service
CLASS - The Catnic Lintel Advanced Scheduling System is the most comprehensive, enivable lintel scheduling service available.

One concise document leaves no room for confusion or misunderstanding.

CLASS clearly provides:
- A description of each lintel, its location, price and delivery time
- Guaranteed structural accuracy
- A site summary

Contact Catnic
Technical Services on 029 2033 7900
WHERE TO USE A SEPARATE DPC

To satisfy NHBC and Zurich Municipal technical requirements, Catnic lintels only require a separate DPC in severe exposure zones i.e. zones 3 and 4 of the map and as determined by BS 8104.

NHBC Amendments Oct 1992 require a separate damp proof protection for all lintels in Scotland, Northern Ireland, the Isle of Man and in areas of severe or very severe exposure to driving rain, as defined under BS EN 1996-1-2: 2010 and BD6097: 2010. The map indicates typical exposure categories. In such cases, a cavity tray/damp proof protection should provide an impervious barrier draining water outwards. It should have an overall minimum upstand of 140mm, returned to the inner leaf masonry and be so shaped that there is not less than 100mm vertical protection above a point where mortar could collect.

Where exposure conditions or local building regulations demand a separate DPC, Cavity cavity wall lintels not only provide additional protection against the elements but also act as a support and template for the DPC, making it easier to install and with less risk of damage. The DPC should project at least 25mm beyond the outer face of the cavity closer and vertical DPC.

It should provide drip protection for the door and window heads and cover the ends of the lintel to ensure moisture is shed clear of the reveals. For all coastal site applications where the soffit of the lintel is exposed, the use of a soft/ttad/ding in conjunction with a separate DPC is highly recommended to improve appearance and extend normal maintenance periods.

<table>
<thead>
<tr>
<th>Exposure zones</th>
<th>Approximate wind driven rain (kN/m² per spell)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (sheltered)</td>
<td>Less than 33</td>
</tr>
<tr>
<td>2 (moderate)</td>
<td>33 to less than 56.5</td>
</tr>
<tr>
<td>3 (severe)</td>
<td>56.5 to less than 100</td>
</tr>
<tr>
<td>4 (very severe)</td>
<td>100 or more</td>
</tr>
</tbody>
</table>

GUIDE TO SAFE STORAGE AND HANDLING

All products should be used in accordance with their specific instructions to prevent failure.

Storage  • All products should be stored in a clean and dry environment on a firm even surface, clear of the ground.  • Single lintels should be stored on pallets or suitable racking and prevented from being accidently displaced.  • Remove all metal packaging with care and discard safely and responsibly.

Handling  • Gloves should be worn to avoid injury from any sharp edges.  • When lifting or carrying a lintel, under take a personal risk assessment paying attention to the size and weight details found on the product label.  • Processes such as welding, burning, cutting or grinding can result in vapourising the metal or generating airborne particles that may present additional hazards.

Application  • Do not use damaged goods.  • Refer to Installation Guides detailed on pages 10 and 11.

Disposal  • When disposing of any Catinic products or packaging, due consideration must be given to the environmental impact of the method of disposal.

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1994 (COSHH)  • All products are considered non-hazardous to health under normal conditions of use.  • Copies of COSHH sheets are available on request.

GLOSSARY OF TECHNICAL TERMS

Lintel  A structural member spanning an opening in a wall.

Clear span or Clear opening  The clear distance between lintel supports.

Safe working load (SWL)  The total uniformly distributed load (UDL) that the lintel is designed to support, whilst providing an appropriate safety factor.


Uniformly Distributed Load (UDL)  A load that is uniformly spread along the entire length of the lintel.

Moment of inertia (Ixx)  Represents the moment of inertia or second moment of area of the lintel section about a horizontal axis through the lintel centroid, indicating the stiffness of a lintel under a given load and indicative of the lintel shape. The greater the Ixx value, the stiffer the lintel will be and hence the less a lintel will deflect.

Threshold: Vertical horizontal displacement of the lintel due to bending about the vertical horizontal axis.

Modulus of elasticity (E:xx min)  The section Modulus of the lintel about a horizontal axis, when multiplied by the permissible working stress, the resultant value is the serviceability moment.

TECHNICAL INFORMATION

The Research, Development and Technology business of Tata Steel combines top class innovation and cutting edge technology to deliver ‘metals solutions’ in a constantly changing world.

Structural performance  The structural data published in the loading tables included in this technical guide, was achieved in accordance with the requirements of BS 5977: Part 2: 1983 and BS EN 845-2: 2003. Extensive testing was undertaken at the following test houses:

• The University of Wales, School of Engineering
• The University of South Wales, Commercial Services Centre for Engineering, Research and Environmental Applications (CEREA)
• Ceram Building Technology, Stoke-on-Trent

Safe working loads (SWL) as defined by BS 5977: Part 2: 1983 for cavity wall lintels refer to uniform distributed loads applied in the inner to outer load ratio:

• 1:1 for lintels supporting masonry only
• 3:1 for lintels normally carrying timber floors
• 5:1 for lintels normally carrying concrete floors

The CH and CX lintel range refers to uniformly distributed loads in the ratio of 19:1 when non-standard or unusual loading conditions occur.

A lintel should not exceed a maximum vertical deflection of 0.003 x the effective span (effective span = distance between centre of bearings) when subjected to the safe working load (SWL).

Fire tests  Catnic lintels have been independently tested in accordance with the relevant parts of BS 476, Methods of Determination of the Fire Resistance of Load-bearing Elements of Construction.

Details of the test results can be found in TRADA (Timber Research and Development Association) Nos. FR234, 275, 639, 863, 1662 and BR94011 and FR50 (Fire Research Organisation) No. 5001.

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Report available from CRC Ltd on 020 7935 6622.
## MATERIAL SPECIFICATIONS AND CLAUSES

### Steel Lintels

#### Cavity Walls

**Provide insulated steel lintel with built in damp proof course and integral plaster key, manufactured and designed in accordance with BS EN 845-2: 2003.**

### Single Leaf Walls

**Provide steel lintel with built in damp proof course, manufactured and designed in accordance with BS EN 845-2: 2003.**

### MBB and ANG

The lintels up to 2400mm are manufactured from galvanised steel to BS EN 10346: 2009 (continuously hot-dipped coated strip and sheet of low carbon steels and cold forming - technical delivery conditions) of grade Z275, but with a minimum yield stress of 250N/mm². The lintels are further protected against corrosion by a black coloured polyester resin coating applied to all external surfaces. The MBB or ANG range is provided with Duplex corrosion protection system.

**Provide insulated stainless steel lintel with built in damp proof course and integral plaster key, manufactured and designed in accordance with BS EN 845-2: 2003.**

### Stainless Steel Lintels

**Provide insulated stainless steel lintel with built in damp proof course and integral plaster key, manufactured and designed in accordance with BS EN 845-2: 2003.**

### Special Lintels

**Provide insulated stainless steel lintel with built in damp proof course and integral plaster key, manufactured and designed in accordance with BS EN 845-2: 2003.**

### Special Lintels

**Provide insulated stainless steel lintel with built in damp proof course and integral plaster key, manufactured and designed in accordance with BS EN 845-2: 2003.**

### Lintel Accessories

**Please indicate the following (please tick)**

- Plans/dimensions
- Elevations (all)
- Sections (all)
- Site plan (for summary)
- Structural engineers steelwork arrangements

**Please include the following (where appropriate)**

- Front elevation
- Rear elevation
- Roof levels
- Plan views
- Structural details
- Section views
- Steelwork details

**Please indicate any fairfaced internal areas on drawings**

**NOTE: FOR A QUICK TURNAROUND IT IS IMPORTANT THAT ALL BOXES ARE COMPLETED CORRECTLY BY REFERRING TO THE DRAWINGS BEFORE SENDING TO OUR TECHNICAL SERVICES DEPARTMENT.**