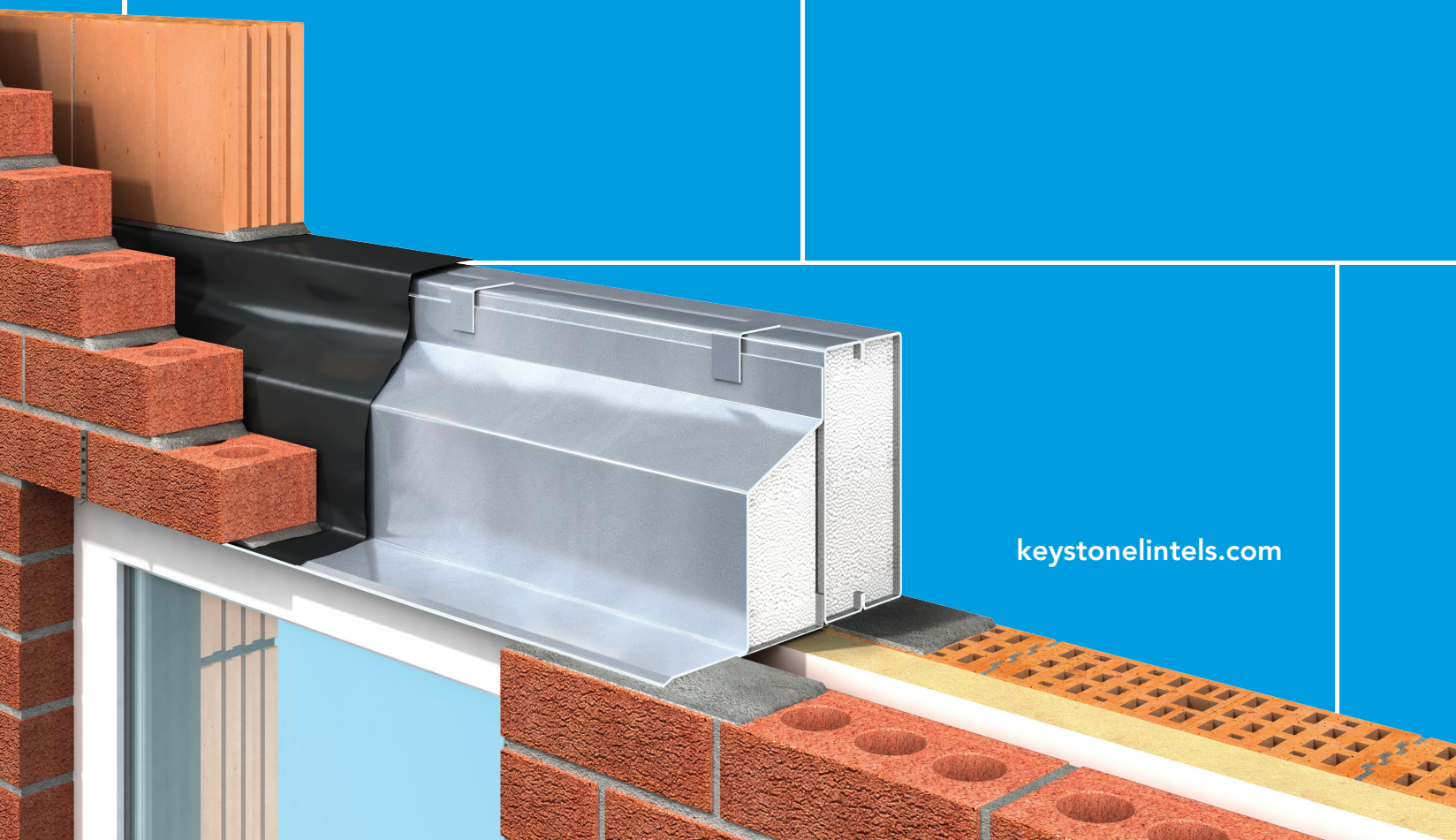




GREATER  
SUPPORT

# Poro Lintel System Range

Unique to the Porotherm® Masonry System



[keystonelintels.com](http://keystonelintels.com)

## Finding better ways to build for tomorrow

The Keystone Group are Europe's leading steel lintel manufacturer. Keystone have worked closely with Wienerberger to design, test and manufacture a bespoke range of lintels for the Porotherm masonry system.



Porotherm is a registered Trademark of Wienerberger AG and is used with their permission

### What is Porotherm?

Porotherm is a precision engineered modern clay block walling system. The system has revolutionised the construction industry through fast and dry construction with the benefits of high strength and thermal performance. Through the use of 1mm mortar beds using the special adhesive in comparison to the conventional 10mm joints, the Porotherm System brings many benefits associated with efficiency, quality and value retention.

With the continuous updates to UK regulations and the target for zero carbon homes, the benefits of using the Porotherm System will be rewarding through the enhancement of thermal performance and the reduction of Carbon emissions through the buildings life. The Porotherm system enables accelerated construction where fast, dry construction is required with the retention of higher strength, thermal and acoustic efficiency properties.

### What are the benefits of using the Porotherm?

#### Speed of the process

Virtually dry construction, using the special adhesive utilising minimal water, results in rapid drying with less shrinkage and cracking and fewer movement joints allowing for no delay for the finishing trades.

#### Efficiency

Porotherm evens out temperature variations through thermal capacity effects, to protect against cold in winter and ensure a comfortable and healthy room in summer. The fast drying properties optimise thermal protection, whilst the gradual release of passive solar energy reduces heating costs.

#### Strength and Flexibility

The Porotherm block has the compressive strength of  $\geq 10 \text{ N/mm}^2$  which results in high stability performance. Achieving such strength, the Porotherm system can be used on both external cavity walls and internal partition walls.



#### Safety

The Porotherm blocks are lightweight in comparison to aggregate allowing for the ease of use and handling. Reduced dermatological risk is offered with the Porotherm system as the clay block material is less irritant.

# POROTHERM MASONRY LINTEL RANGE

Keystone have developed two Lintels that can be used with the Porotherm Masonry System. These unique lintels offer a perfect cost effective solution that also enhance the thermal performance of a building. Both of these Lintel options have been specifically designed to allow construction of the inner skin independently of the outer leaf. The Poro Lintels unique design enables this retrospective connection between the inner and outer leaf support lintels.

## Poro-Cav Lintel

The Poro-Cav lintel features a unique, patented 'thermal break plate' that aids to ensure the thermal performance of the wall is maintained.

The inner leaf is supported through a standard Keystone Box lintel whilst the outer leaf support comes from the specially designed outer lintel. As it is a two part lintel, the outer leaf can then be installed without the need for supportive propping.

With the outer part of the lintel fully insulated, it closes the cavity removing the need for additional cavity closers.

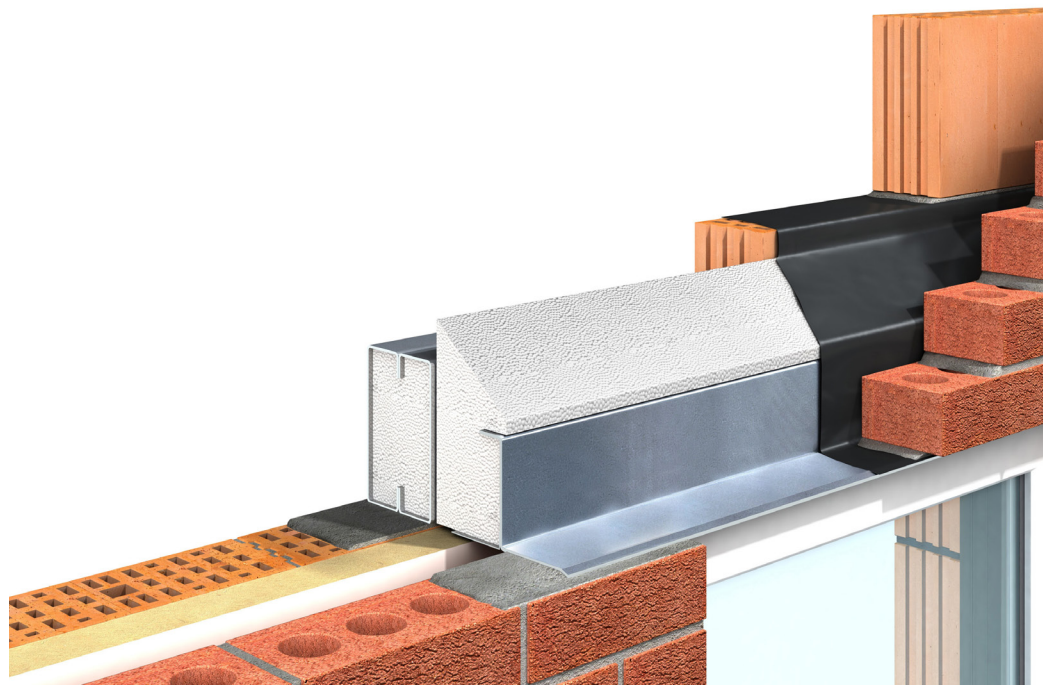


## Z/K Lintel

The Z/K lintel is made up of a box lintel inner and a specially designed Z/K outer which offers more stability and rigidity than the conventional angle lintels.

The Z/K outer is fitted with profiled integral insulation ensuring continuity of insulation in the cavity with no air voids. The insulation also eliminates the need for additional cavity closers, saving time and money.

The Z/K Lintel system has a remarkable thermal performance with a Psi value of **0.032w/mk**.

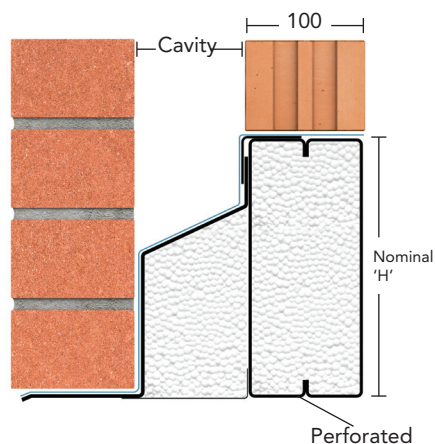




# PORO LINTEL SYSTEM

## Porocav Lintel 100 Wide Inner Leaf

### Cavity Walls



Manufactured Length	600	1950	2550	2850
Manufactured Length	1800	2400	2700	3000
Height 'H'	150	150	150	220
<b>Internal Leaf</b>				
Total UDL (Kn)	16	19	22	25
<b>External Leaf</b>				
Total UDL (Kn)	5	8	9	12

#### Specify

Porocav/50mm (for 50 to 65mm Cavity)

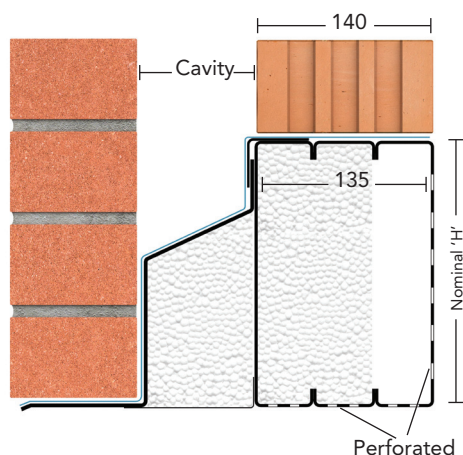
Porocav/75mm (for 70 to 85mm Cavity)

Porocav/100mm (for 80 to 100mm Cavity)

Porocav lintels also available for wider cavities and in heavy duty

## Porocav Lintel 140 Wide Inner Leaf

### Cavity Walls



Manufactured Length	600	1950	2550	2850
Manufactured Length	1800	2400	2700	3000
Height 'H'	150	150	150	220
<b>Internal Leaf</b>				
Total UDL (Kn)	18	25	30	35
<b>External Leaf</b>				
Total UDL (Kn)	5	8	9	12

#### Specify

Porocav/50mm/140WIL (for 50 to 65mm Cavity)

Porocav/75mm/140WIL (for 70 to 85mm Cavity)

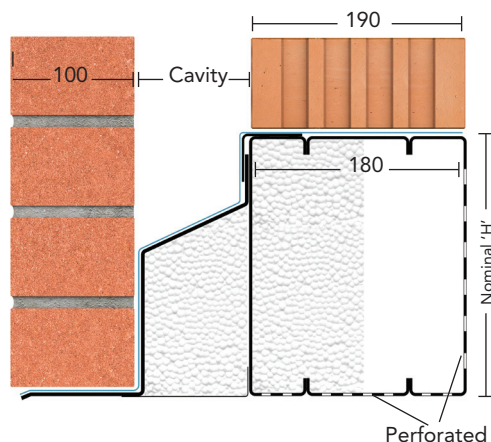
Porocav/100mm/140WIL (for 80 to 100mm Cavity)

WIL = Wide Inner Leaf

Porocav lintels also available for wider cavities and in heavy duty

## Porocav Lintel 190 Wide Inner Leaf

### Cavity Walls



Manufactured Length	600	1950	2550	2850
Manufactured Length	1800	2400	2700	3000
Height 'H'	150	150	150	220
<b>Internal Leaf</b>				
Total UDL (Kn)	18	25	30	35
<b>External Leaf</b>				
Total UDL (Kn)	5	8	9	12

#### Specify

Porocav/50mm/190WIL (for 50 to 65mm Cavity)

Porocav/75mm/190WIL (for 70 to 85mm Cavity)

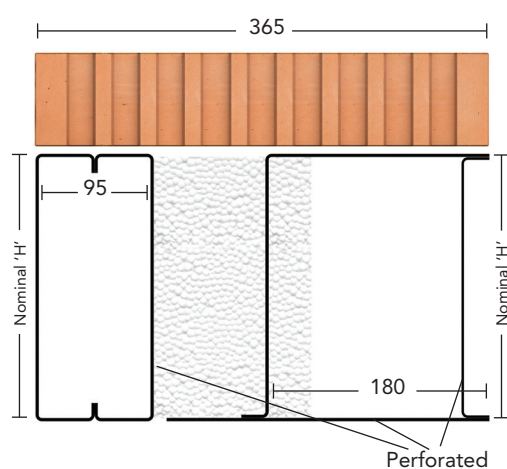
Porocav/100mm/190WIL (for 80 to 100mm Cavity)

WIL = Wide Inner Leaf

Porocav lintels also available for wider cavities and in heavy duty

## Poro-Box/365

## External Solid Walls



Manufactured Length	600	1950	2550	2850
Manufactured Length	1800	2400	2700	3000
Height 'H'	150	150	150	220
<b>Internal Leaf</b>				
Total UDL (Kn)	18	25	30	35
<b>External Leaf</b>				
Total UDL (Kn)	18	25	20	35

Combination of 2 Box Lintels arranged as per the diagram opposite.  
 Also available to suit other solid wall situations, please contact Keystone  
 Technical Department.

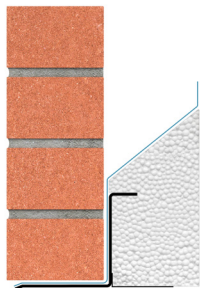
**Specify**  
 Poro-Box/365

Z/K LINTEL SYSTEM

Consisting of an internal and external lintel

Z/K Outer Lintel

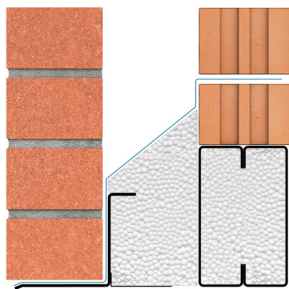
Cavity Walls



Internal leaf can be individually specified to suit loading and wall construction.

Manufactured Length in 150mm increments	600	1950		
	1800	2700		
Height 'H'	100	175		
Thickness	3.2	3.2		
Total UDL (Kn)	8	10		

For use to support the outer leaf of cavity wall construction. (The Z/K outer leaf should be suitably propped during construction).

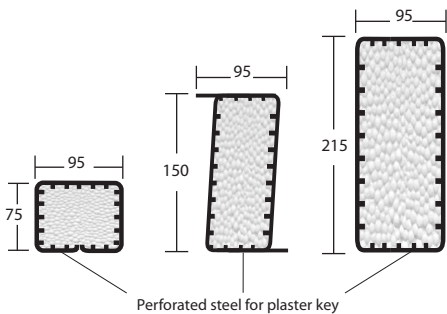


Example of the Z/K Outer in-situ

Z/K Inner Lintel

Cavity Walls

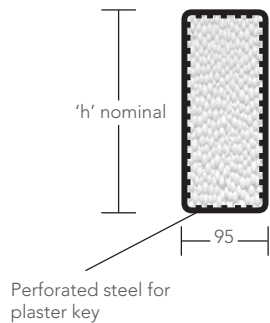
BOX/K-100



Manufactured Length in 150mm increments	600	1650	1950	2550	2850	3750	4200
	1500	1800	2400	2700	3600	4000	4800
Height 'H'	75	150	150	150	215	215	215
Thickness	2	1.6	2	2	2.5	2.5	2.5
Total UDL (Kn)	18	18	25	20	35	30	24

Used to support internal or external openings with 100mm wide walls (Can be insulated as optional extra).

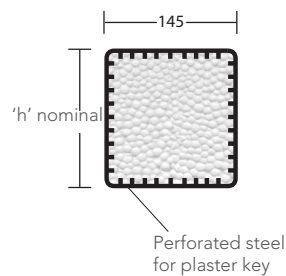
## HDBOX/K-100



Manufactured Length in 150mm increments	600	1350	1950	
	1200	1800	2700	
Height 'H'	150	150	215	
Thickness	2.5	2.5	2.5	
Total UDL (Kn)	50	45	40	

For heavy duty loading conditions to support internal or external openings with 100mm wide wall (Can be insulated as optional extra).

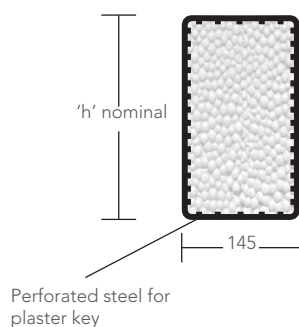
## BOX/K-150



Manufactured Length in 150mm increments	600	1950	2550	285	1950	2550
	1800	2400	2700	3600	4000	4800
Height 'H'	150	150	150	215	215	215
Thickness	1.6	2	2	2.5	2.5	2.5
Total UDL (Kn)	18	25	20	35	30	24

Used to support internal or external openings with 150mm wide walls (Can be insulated as optional extra).

## HDBOX/K-150



Manufactured Length	600	1350	1950	
Manufactured Length	1800	2400	2700	
Height 'H'	150	150	150	
Thickness	2.5	2.5	2.5	
Total UDL (Kn)	50	45	40	

For heavy duty loading conditions to support internal or external openings with 100mm wide wall (Can be insulated as optional extra).

## Quality

Keystone devote extensive resources to quality. Lintels are manufactured to the highest quality and continually assessed by the BSI to ensure our quality complies with BS EN ISO 9002:1994. Keystone has also received Investors in People Accreditation. Keystone Lintels are designed and manufactured in accordance with BS EN 845-2:2003.

## Testing

CERAM have carried out independent testing on the Poro-Cav Lintel Range to confirm the information given in the Technical Report and Design Guide for the PoroTherm Walling System.

## Environment

Keystone are devoted to contributing to the protection of the environment. Keystone aim to minimise the impact of the manufacturing processes through the use of sustainable practices and continuous improvement in accordance with ISO 14001.

### GB Sales & Service

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### NI/ROI Sales & Service

#### KEYSTONE - IRELAND

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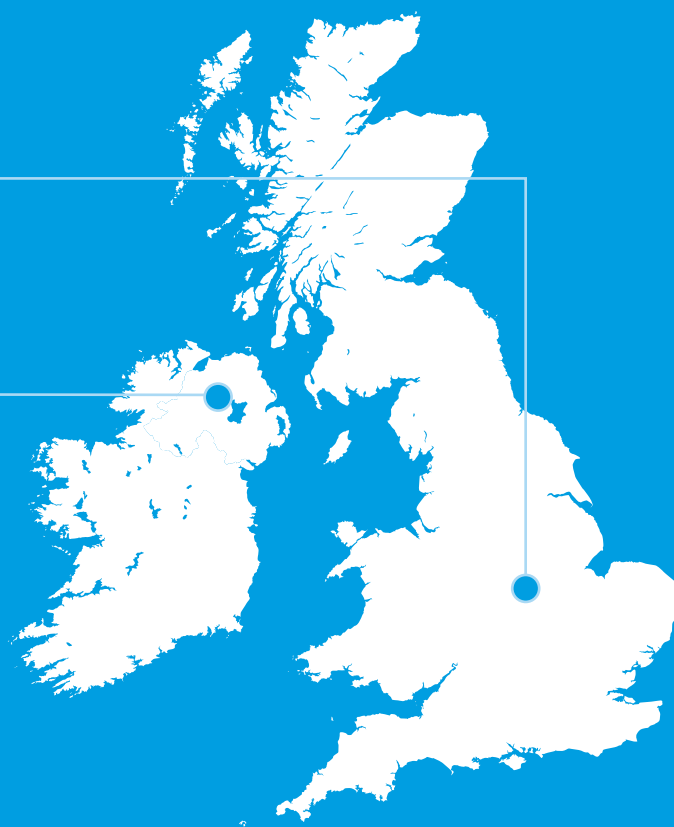
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