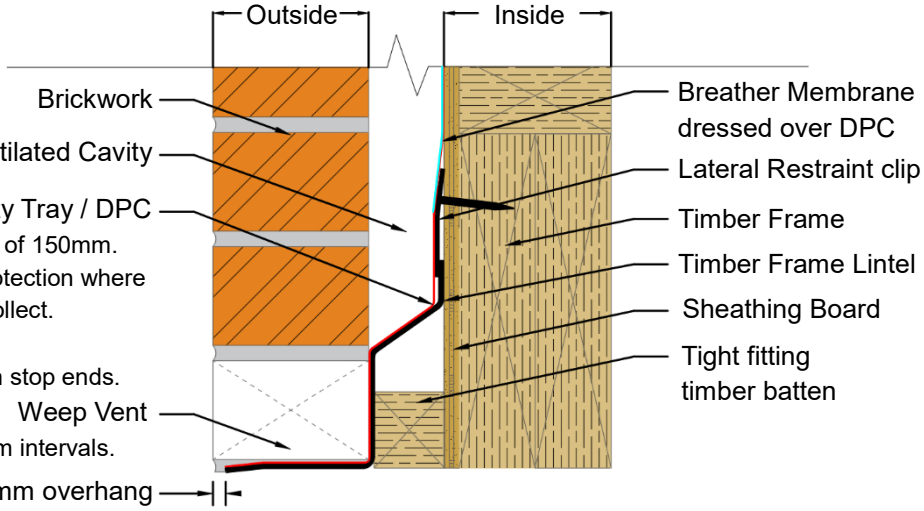
Technical Data Sheet

Timber Frame Lintels



- To have min overall rise of 150mm.
- To have min 100mm protection where mortar droppings can collect.
- DPC to oversail lintel.
- Always be provided with stop ends.
- At a maximum of 450mm intervals.

Installation Instructions:

- Lintels should be installed with adequate end bearing, bedded on mortar and levelled across its length and width.
- The masonry above the lintel should be built in accordance with BS EN 1996-2:2006.
- All Timber frame lintels must be installed with restraining clips and a timber pinch batten to prevent rotation of the lintel. Restraint clips (supplied) must be fixed to the timber frame structure by 3.3 mm x 50 mm galvanised nails. A single pinch batten (not supplied) 300mm long at mid span will be sufficient to prevent lateral deflection (rotation). Lateral restraint clips should be placed at 500mm max centres each side of mid span.
- Allowance should be made for the movement of the timber frame structure due to settlement and shrinkage.
- Masonry should be laid on a mortar bed and all perpendicular joints should be filled.
- Temporary propping can be used to facilitate speed of construction.
  (Refer to Keystone Lintels Technical Guidance “Propping Lintels”)
- NHBC recommends DPCs or cavity trays be installed over all openings in external cavity walls.
- Point loads should not be applied directly onto the lintel flange. Lintels should have a minimum of 150mm masonry between the flange and the application level of any form of loading.
  Consult Keystone Lintels technical team if applying a point load above a lintel.
- The lintel flange must project beyond the window/door frame and it is recommended that a flexible sealing compound is used between the underside of the lintel flange and the frame.
- When the underside of a lintel is exposed, its appearance can be enhanced by the addition of lintel soffit cladding.
- Do not cut lintels to length or modify in any way without consulting a Keystone engineer.

End Bearing:

- Refer to Keystone Lintels Technical Guidance “Steel Lintel End Bearing”

Handling and Storage:

- Exercise caution when handling lintels to prevent injury to oneself; suitable personal protective equipment (PPE) should be utilised.
- Handle lintels with reasonable care during unloading, stacking and storage to avoid damage (damaged lintels must not be used). Lintels may be handled by site personnel (except for the longer span lintels) and can generally be lifted by a single operative or mechanical lifting devices – care must be taken to ensure any forks, slings or chains do not damage any coatings or finishes.
- The lintels must be stored off the ground in such a manner to prevent the risk of either mechanical damage or contamination by corrosive substances. It is considered best practice to implement a stock rotation system.

Testing:

In accordance with the requirements of BS EN 845-2 and BS EN 846-9.

Steel Properties:

Material Coating Reference	L1	L3	L14 (As Standard)
Material	Austenitic Stainless Steel (molybdenum chrome nickel alloys)	Austenitic Stainless Steel (chrome nickel alloys)	Zinc coated steel – Z600 with organic coating on cut edges.
Steel Grade	316 / 316L EU(1.4401 / 1.4404)	304 / 304L EU(1.4301 / 1.4307)	DX51D
Specification for material	EN 10088-Part 2	EN 10088-Part 2	EN 10346
Mass per two sides (g/m²)	-	-	600
Coating Thickness (µm)	-	-	42
Organic Coating Thickness (µm)	-	-	25
Elastic modulus (N/mm²)	200,000	200,000	210,000
Yield strength (N/mm²)	220	210 / 200	250 (min)
Thermal Conductivity (W/mK)	15	15	50
Combustibility	A1	A1	A1
Lifespan	60+ Years Refer to Keystone Lintels Technical Guidance “Durability”		
Fire Resistance	Consult with Keystone Lintels technical department “Behaviour in Relation to Fire”		
Recommended Coastal Proximity Limits (m)	Refer to Keystone Lintels Technical Data Sheet “Steel Lintels for Use in Coastal Locations”		

Insulation Properties (where applicable):

Insulation	EPS	Mineral Wool	Mineral Wool
Specification	EPS 70 (White)	Superwall 36	DriTherm Cavity Slab 37
Thermal Conductivity (W/mK)	0.038	0.036	0.037
Combustibility	NPD	A1	A1

NPD = No Performance Declared

Environmental Impact:

Steel	100% recyclable
	Mild Steel = 15-25% recycled content
	Stainless Steel = 65% recycled content
EPS	100% recyclable
	CFC-free profiled polystyrene insulation conforming to BS EN 13163.
	15-20% recycled content
Mineral Wool	Superwall 36 = 84% recycled content
	DriTherm Cavity Slab 37 = 80% recycled content

BRE Environmental Product Declaration (EPD) Available Upon Request