STEELITE LTD

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## STEELITE LINTEL BROCHURE



### Custom made Steel Lintels & Arches

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### Lintel Profile

Steelite Ltd is Ireland's market leader in the manufacture and supply of steel lintels.

The company's philosophy has always been to provide innovative and quality products with excellence of service. Steelite lintels have been manufactured from the company premises in Rathangan since its establishment in 1984. Innovation has played a big part in the company's success and by investing this knowledge and expertise in modern building techniques, Steelite have developed a modern and comprehensive range of steel lintels.

Steelite have always regarded quality as a prime concern and our policy includes load tests and quality control as part of its on going product development. Steelite have been awarded both the Irish and British agreement certificates for a quality an durable lintel.

Steelite lintels are manufactured by using the latest in CAD/CAM technology, and our experienced design team are available to assist with your current or proposed projects which involve the use of our products.

#### DESIGN

Steelite's lintel profile allows continuity of inner-leaf blockwork, thus reducing differential thermal movement and cracking at reveals and allows for easy curtain batten fixing. Its unique profile also allows complete continuation of 60mm insulation within the cavity therefore eliminating cold barriers.







#### INSULATION

Higher Thermal Value. Insulation fills the shape of the lintel. Continuous width insulation in cavity unlike other lintel types, therefore no cold barrier. Minumum thickness of insulation is 60mm. Satisfies Building Regulations. Contains no C.F.C. gases.





### **Technical** Data

#### USE

Steelite Lintels are used to provide support to vertical loads from walls, columns, floors and roofs or a combination of these, above window or door openings.

#### DESIGN

Steelite lintels have adequate strength and stiffness to sustain the uniformly distributed working loads as shown in the tables, provided that the defined clear spans, load ratios and loading eccentricities are not exceeded.

Concentrated loads may be applied, subject to the following:

1: Concentrated loads must spread through at least two courses (150mm) of brickwork or an equivalent height of blockwork.

2: The eccentricity of a concentrated load must be such that its effect does not exceed that created by applying the load at the centre of the leaf of the wall being loaded, without exceeding the stated load ratios.

3: The total applied loading must not produce bending movements, shear forces or reactions greater than than those produced by the uniformly distributed loads specified.

The specified loads in the tables relate to simply supported lintels, laterally and horizontally unrestrained.

In addition, buildings subject to relevant requirements to the building regulations should be constructed in accordance with I.S. 325: Part 1: 1986 Code of Practice for the Use of Masonry.

Guidance on the assessment of loads on lintels is given in B.S.5977:Part 1:1981(1986) Method of Assessment of Load.

#### DURABILITY

The service life of the lintel will not be less than 60 years when properly installed, and within the humidity and condensation conditions normally experienced in a habitable building.

#### MANUFACTURE

Steelite Lintels are manufactured from a galvanized steel (Grade Z.1 commercial quality) to B.S.2989: 1982, with a zinc coating (Type G600) giving a zinc coating weight of 600 g/m.

The expanded polystyrene has a density of 20Kg/m<sup>3</sup>. Minimum thickness of insulation is 60mm, in accordance with building regulations.

Stainless steel lintels, formed from Austenic Chromium Nickel Steel to B.S.1449 Part 2, can be provided on request.

#### TABLES

Where different total uniformly distributed loads are shown in the tables, the following load ratios apply:

- Load Ratio 1: Applies to an outer to inner ratio of 1:1 to 1:3.
- Load Ratio 2: Applies to an outer to inner ratio of 1:3 to 1:19.

It is the policy within Steelite to carry out load tests and quality control as part of its ongoing product development.

#### INSTALLATION

Lintels must be installed with at least the minimum end bearing of 150mm for spans up to 2250mm and 200mm end bearing for all other clear spans.

Lintels should be suitably propped during construction

Point loads and concrete floor units should not be applied without prior consultation with steelite technical department or a structural engineer.

The lintel must be used in conjunction with an appropriate damp-proof course to deflect any water running down the wall clear of the lintel.

The damp-proof course must be installed in accordance with normal good practice and B.S.5628: Part 3:1985.

It must fully protect the lintel, and extend a minimum of 100mm beyond the end of the lintel.

In cavity walls, the inner and outer leafs supported by the lintels must be raised together to avoid excessive eccentricity of loading.

#### FIRE TEST

The Steelite lintel has been subjected to a fire test by the Warrington Fire Research Station.

A one hour fire requirement was achieved. It is the first Irish manufactured lintel to achieve this standard.

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### Cavity Wall Lintels

### Available to suit 50 - 120mm cavity widths

This Stepped Type Lintel is best suited for a brickwork outer leaf, as it provides a stop-end for the window frame and provides better weathering protection.



Standard Loading condition	Standard Loading conditions									
Manufactured Lengths in 150 mm Increments	600 1650	1800 2100	2250 3000	3250 3500	3750 4000	4250 4750				
Height (h) (mm)	108	158	195	195	195	195				
Thickness (mm)	2.6	2.6	2.9	3.2	3.2	3.2				
Total U.D.L (kn) 1	19	24	27	29	26	20				
Total U.D.L (kn) 2	14	18	20	20	19	13				
Weight (kg/m)	9.4	11.4	14.4	15.7	15.7	15.7				

This Flat Type Lintel is best suited for a brickwork outer leaf, where the window or door frame is not positioned within the cavity.



#### Standard Loading conditions

Manufactured Lengths in 150 mm Increments	600 1650	1800 2100	2250 3000	3250 3500	3750 4000	4250 4750
Height (h) (mm)	99	150	188	188	188	188
Thickness (mm)	2.6	2.6	2.9	3.2	3.2	3.2
Total U.D.L (kn) 1	19	24	27	29	26	20
Total U.D.L (kn) 2	14	18	20	20	19	13
Weight (kg/m)	9.4	11.4	14.4	15.7	15.7	15.7

This FPK Type Lintel is best suited for a rendered outer leaf, as it provides a plaster key for both the inner and outer leafs.

#### **TYPE A FPK**



#### Standard Loading conditions

Clandara Ecading Contaition	0					
Manufactured Lengths in 150 mm Increments	600 1650	1800 2100	2250 3000	3250 3500	3750 4000	4250 4750
Height (h) (mm)	99	150	188	188	188	188
Thickness (mm)	2.6	2.6	2.9	3.2	3.2	3.2
Total U.D.L (kn) 1	19	24	27	29	26	20
Total U.D.L (kn) 2	14	18	20	20	19	13
Weight (kg/m)	9.4	11.4	14.4	15.7	15.7	15.7



## **Cavity Wall Lintels**

### Available to suit 50 - 120mm cavity widths

This HD Type Lintel is suitable for heavy duty loading conditions



Manufactured Lengths in 150 mm Increments	600 1650	1800 2100	2250* 3000*	3250* 3500*	3750* 4000*	
Height (h) (mm)	187	187	187	187	187	
Thickness (mm)	3.2	3.2	3.2	3.2	3.2	
Total U.D.L (kn) 1	35	33	30	29	24	
Total U.D.L (kn) 2	29	25	22	21	18	
Weight (kg/m)	15.7	15.7	15.7	15.7	15.7	

This CL Type Lintel is suitable for heavy duty loadings with concrete floor units. To achieve loading figures, lintel must be built in with blockwork as shown.



ricavy Daty Loading conditions					
Manufactured Lengths in 150 mm Increments	600* 1650*	1800* 2100*	2250* 3000*	3250° 4000°	* 4250* * 4750*
Height (h) (mm)	235	235	235	235	235
Thickness (mm)	3.2	3.2	3.2	3.2	3.2
Total U.D.L (kn)	52	50	47	39	35
Weight (kg/m)	22.5	22.5	22.5	22.5	22.5

This XCL Type Lintel is suitable for extra heavy duty loadings with concrete floor units. To achieve loading figures, lintel must be built in with blockwork as shown.

#### TYPE XCL



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#### Extra Heavy Duty Loading conditions

Heavy Duty Loading conditions

Extra ricavy Daty Loading con	antionio					
Manufactured Lengths in 150 mm Increments	1200* 4750*	5100*	5400*	5700*	6200*	6600*
Height (h) (mm)	235	235	235	235	235	235
Thickness (mm)	3.2	3.2	3.2	3.2	3.2	3.2
Total U.D.L. K.N	89	83	70	68	62	55
Weight (kg/m)	42.1	42.1	42.1	42.1	42.1	42.1

Manufactured using 229 x 89 x 32.76 kg/m PFC

\*CONTINUOUS U-PLATE



### **Cavity Wall Lintels**

### Available to suit 50 - 120mm cavity widths

This 225 I.L.Type Lintel is used to support an outer leaf of 100mm and an inner leaf of 225mm. Inner leaf constructed as shown.



Standard Loading conditions					
Manufactured Lengths in 150 mm Increments	600 1650	1800 2100	2250 3000	3250 3500	3750 4000
Height (h) (mm	97	148	186	186	186
Thickness (mm)	2.6	2.6	2.9	3.2	3.2
Total U.D.L (kn) 1	25	25	23	21	18
Total U.D.L (kn) 2	20	20	17	15	13
Weight (kg/m)	14.1	17.1	23.8	25.1	25.1

This CL 225 I.L.Type Lintel is used to support an outer leaf of 100mm and an inner leaf of 225mm. Inner leaf constructed as shown.



#### Heavy Duty Loading conditions

Manufactured Lengths in 150 mm Increments	600* 1650*	1800* 2100*	2250* 3000*	3250* 4000*	4250* 4750*
Height (h) (mm)	235	235	235	235	235
Thickness (mm)	3.2	3.2	3.2	3.2	3.2
Total U.D.L K.N.	30	30	28	26	23
Weight (kg/m)	30.9	30.9	30.9	30.9	30.9

This XCL 225 I.L Type lintel is used to support an outer leaf of 100mm and an inner leaf of 225mm. Inner leaf constructed as shown.

TYPE XCL 225 I.L.



#### Extra Heavy Duty Loading conditions

Extra ficary Daty Loading of	manuonio					
Manufactured Lengths in 150 mm Increments	1200* 4750*	5100*	5400*	5700*	6200*	6600*
Height (h) (mm)	235	235	235	235	235	235
Thickness (mm)	3.2	3.2	3.2	3.2	3.2	3.2
Total U.D.L. K.N	89	83	70	68	62	55
Weight (kg/m)	53.5	53.5	53.5	53.5	53.5	53.5

Manufactured from a 229 x 89 x 32.76 kg/m PFC

\*CONTINUOUS U-PLATE





## Single Leaf Lintels

TYPE L25	Standard Loading conditior support the outer leaf of cav construction.	Standard Loading conditions to upport the outer leaf of cavity wall construction.		engths ents	in	600 1650	1800 2100	2250 2700
Ī	*Lintel should be suitably pr	opped	Height (h) (mm)	)		125	176	214
(h) Cavity closer	during construction		Thickness (mm	1)		2.6	2.6	2.9
provided on request			Total U.D.L (kn	)		5	7	8
1 ← 95			Weight (kg/m)			4.7	5.7	7.2
TYPE L25/J	Heavy Duty loading conditions to support the outer leaf of cavity wall	Ma 150	nufactured Lengths 0 mm Increments	in	600 1650	1800 2100	2250 3000	3250 3500
	construction.	Hei	Height (h) (mm)		260	260	260	260
(h)	*Lintel should be suitably propped during	Thi	hickness (mm) 3		3.2	3.2	3.2	3.2
	construction	Tota	al U.D.L (kn)		16	14	12	10
95		Weig			9.4	9.4	9.4	9.4
TYPE L26	Used with timber frame construction.	Manufa 150 mm	ctured Lengths in n Increments	600 1650	1800 2100	2250 3000	3250 3500	4250 4750
	The L26 lintel must be used in conjunction with	Height (h) (mm)		130	164	20	262	262
	lateral restraint clips and a tight fitting timber	Thickness (mm)		2.6	2.6	2.9	3.2	3.2
	batten, as shown to prevent twisting.	Total U.D.L (kn)		8	8	8	12	10
		Weight (kg/m)		4.7	5.7	7.2	9.4	9.4
		Manufa	etured Lengths in	600	1900	2250	3250	4250
TYPE L38	The L38 lintel must be	150 mm	n Increments	1650	2100	3000	3500	4250 4750
ī	a concrete inner beam	Height	(h) (mm)	204	204	204	204	204
(h)	above 1800mm	Thickne	ess (mm)	2.9	2.9	2.9	3.2	3.2
	fixings at 300 centres.	Total U	J.D.L (kn)	14	16	23	30	35
		Weight	(kg/m)	13.5	13.5	13.5	14.6	14.6

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## Solid Wall Lintels

TYPE L31	Standard Loading conditions to suit 225mm solid wall construction.		Manufactured Lengths in 150 mm Increments			600 1650	1800 2100	2250 3000
T <b>I I I</b>			Height (h) (mm)	)		138	188	216
(h)	*To achieve loading figur	es h Block	Thickness (mm	1)		2.6	2.6	2.9
	or Brick-work as shown a suitably propped during	and be	Total U.D.L (kn	)		11	10	10
95 100	construction		Weight (kg/m)			9.4	11	14.4
TYPE L43	Heavy Duty loading conditions to suit 225mm solid wall	Manufactu 150 mm In	red Lengths in crements	600 1650	1800 2100	2250 3000	3250 3500	4250 4750
	construction. *To achieve loading	Height (h)	(mm)	225	225	225	225	225
(h)	figures lintel must be built in with Block or	Thickness	(mm)	3.2	3.2	3.2	3.2	3.2
	Brick-work as shown and be suitably propped	Total U.D.L (kn)		38	33	30	25	23
	during construction	Weight (kg	/m)	18.8	18.8	18.8	18.8	18.8
TYPE XL 43	Extra Heavy Duty Ma loading conditions to suit	Manufactu	red Lengths in	1200 4750	5400	5700	6200	6600
	225mm solid wall construction.	Height (h)	(mm)	235	235	235	235	235
<u></u>	*To achieve loading figures lintel must be	Thickness (mm)		3.2	3.2	3.2	3.2	3.2
	built in with Block or Brick-work as shown	Total U.D.L	K.N	89	70	68	62	55
	and be suitably propped during construction	Weight (kg	/m)	36.2	36.2	36.2	36.2	36.2
		Manufacture	ed using a 229 x 89 x					
BOX 200	Heavy Duty loading conditions to support	Manufactu 150 mm Ir	red Lengths in acrements	600 1650	1800 2100	2250 3000	3250 3500	4250 4750
	internal or external openings with 225mm	Height (h)	(mm)	225	225	225	225	225
(h)	wide wall.	Thickness	(mm)	3.2	3.2	3.2	3.2	3.2
				~~		00	00	
		Total U.D.	L (kn)	38	33	30	28	26
		Total U.D. Weight (kg	L (kn) j/m)	38 18.8	33 18.8	30 18.8	28 18.8	18.8





Steelite manufacture special lintels to suit a wide number of applications. All relevant information should be provided to ensure that your lintels are manufactured quickly and accurately.

#### INSTALLATION INSTRUCTIONS:

Steelite recommends the following practices:

Lintels are delivered to site or to the merchants yard and are labeled with delivery note no, which provides a description of the lintel and basic measurement details

Reasonable care should be taken during unloading stacking and storage to avoid damage to the lintel, plaster key and corrosion protective coating. Lintels should be stored off the ground in such a manor as to avoid the risk of either mechanical damage or contamination by corrosive substance. Lintels that have suffered deformation to the leafs, the plaster key or major damage to the protective coating must not be used until the lintel has been repaired.

Any operation likely to drain the protective coating or impair the strength of the lintels (e.g. cutting, welding or drilling) should not be undertaken.

Lintels must be installed with at least the minimum end bearing dimension of 150mm for spans up to 2250 and 200mm thereafter, be fully bedded on bricklaying mortar on full sized masonry unit. To avoid excessive eccentricities of loading, the lintels must only be used with nominal 100mm thick masonry units and nominal cavity width. Lintel up-stands should be located centrally within the cavity.

In cavity walls the inner and outer leafs supported by the lintel must be raised together to avoid excessive eccentricities. Normal precautions must be taken in cavity wall construction to prevent mortar dropping through the cavity and onto the lintels.

Lintels are supplied with a semi punched or expanded mesh to the appropriate lintels to provide a suitable substrate for plastering.

The lintels must be used in conjunction with an appropriate damp-proofing course, to deflect any water running down the wall clear of the lintel. The cavity tray must be installed in accordance with normal good practice and BS 5628: Part 3:1985. It must fully protect the lintel and extend the lintel by a minimum 100mm beyond the end of the lintel, or 25mm beyond any cavity closer, whichever is greater.

Lintels supplied in sections will have matching endplates at the join and should be bolted together when raised into position.

Lintels supplied with support posts are provided with location spigot to the underside of the lintel to locate the open end of the support posts within the cavity. The post should locate just inside the outer leaf as to line up with the outer window frame.

The support posts are supplied with an open end to locate over the lintel spigot and a base plate which is fixed to a solid pad. The solid pad can be made up of the 300mm cavity wall from the foundations filled with concrete or 300mm wide solid block work from the foundations.

The base plates should be bolted down on top of solid footings at least 300mm below finish floor level. The base plate is normally 10mm thick with 4 no.14mm dia holes for 4 no. M12 dia fixings. We recommend that the 4 no. fixings be used in order to secure the posts.

Provide 25mm insulation between the standard 75mm dia post and the inner leaf, where the post is inside the cavity.

Lateral restraint must be incorporated in the roof design.

For conservatory's greater in plan than 4m x 4m or carrying large or unusual loads, please contact the technical department as post sizes and lintel type may change.









Please provide all requested Information.

Measurements requested are taken from face of brickwork. Opening also to be included





Please provide all requested Information.

Measurements requested are taken from face of brickwork. Opening also to be included.





Please provide all requested Information.

Measurements requested are taken from face of brickwork. Opening also to be included.





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## **Extended Range**

#### STAINLESS STEEL LINTELS

Produced from Austenic Chromium Nickel steel are available upon request. A sample of these are shown below.



#### 225 OUTER LEAF LINTEL



For use with 225 outer leaf. Available to suit 50 - 120mm cavity.

#### **150 INNER LEAF LINTEL**



For use with 150 inner leaf. Available to suit 50 - 120mm cavity.

Examples of other lintel types available are shown below. Patents and copyrights apply.

	L2 _/L	L3		L5	
└ァ _ʃĹ	L8 _/L	L9 _/L	L10		L12
L13	L14	L15 _/_	L16 _/L		L18 _/L
L19	L20	L21	L22	L23	L24
L25	L26	L27	L28	L29	L30
L31	L32	L33	L34	L35 _/L	L36
L37	L38	L39	L40	L41	



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British Patent No.'s 2171430 & 213456. Other Patents Pending. Irish Patent No. 54407

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