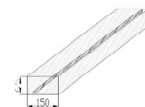


Prestressed Lintels



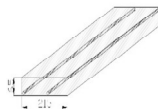
100x65mm

Depth of Composite Lintel	Span	1	1.2	1.4	1.5	1.8	2	2.5	3	3.3	3.6	4
65mm (No Blocks)	Load (kN/m)	2.6	1.89	1.43	1.26	0.86	0.71	0.47	0.34	x	x	x
290mm (1 Course/ +225mm)		8.93	6.48	4.91	4.34	2.95	2.44	1.62	1.15	x	x	x
390mm (To Ceiling/ +325mm)		17.2	12.48	9.47	8.36	5.69	4.7	3.12	2.22	x	x	x
515mm (2 Course/ + 450mm)		31.34	22.74	17.25	15.22	10.36	8.56	5.69	4.05	x	x	x



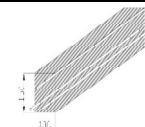
150x65mm

Depth of Composite Lintel	Span	1	1.2	1.4	1.5	1.8	2	2.5	3	3.3	3.6	4
65mm (No Blocks)	Load (kN/m)	2.99	2.17	1.64	1.45	0.99	0.82	0.54	0.39	x	x	x
290mm (1 Course/ +225mm)		13.39	9.72	7.37	6.5	4.43	3.66	2.43	1.73	x	x	x
390mm (To Ceiling/ +325mm)		25.81	18.73	14.21	12.54	8.53	7.05	4.68	3.33	x	x	x
515mm (2 Course/ + 450mm)		47.01	34.11	25.88	22.84	15.54	12.84	8.53	6.07	x	x	x



215x65mm

Depth of Composite Lintel	Span	1	1.2	1.4	1.5	1.8	2	2.5	3	3.3	3.6	4
65mm (No Blocks)	Load (kN/m)	5.32	3.86	2.93	2.59	1.76	1.45	0.97	0.69	x	x	x
290mm (1 Course/ +225mm)		19.19	13.93	10.56	9.32	6.34	5.24	3.48	2.48	x	x	x
390mm (To Ceiling/ +325mm)		36.99	26.84	20.36	17.97	12.23	10.11	6.71	4.78	x	x	x
515mm (2 Course/ + 450mm)		67.38	48.89	37.09	32.73	22.28	18.41	12.22	8.7	x	x	x



100x150mm

Depth of Composite Lintel	Span	1	1.2	1.4	1.5	1.8	2	2.5	3	3.3	3.6	4
65mm (No Blocks)	Load (kN/m)	16.8	12.19	9.25	8.16	5.55	4.59	3.05	2.17	1.81	1.54	1.26
290mm (1 Course/ +225mm)		13.22	9.59	7.28	6.42	4.37	3.61	2.4	1.71	1.43	1.21	0.99
390mm (To Ceiling/ +325mm)		39.02	28.32	21.48	18.96	12.9	10.66	7.08	5.04	4.21	3.57	2.93
515mm (2 Course/ + 450mm)		117.06	84.95	64.44	56.87	38.7	31.99	21.24	15.12	12.64	10.72	8.78

Recommended Fitting Procedure for Prestressed Concrete Lintels

Introduction

Concrete lintels are the most common way of supporting masonry over opes. On their own they support very little and are always used together with over head masonry in what is called a "Composite Lintel". Height, quality and strength of relevant masonry overhead dictates load bearing capacity of the composite lintel

Prestressed Lintels provide the tension element of the composite beam with multiple strands of high grade steel wire within. Prestressed wire has surrounding concrete in compression allowing it to expand under load without cracking. Pre-Stressed also ensures lintel stays intact during transport and positioning.

Common concerns is " which way to turn the lintel" ie. Rough side up or rough side down. The correct way is rough side up so the lintel can correctly fuse with the overhead masonry reducing the likelihood of tension crack appearing on masonry immediately over the lintel.

When analysing the load capacity of composite lintels, orientation of the lintel is not a factor as worst case case situation would be appearance of hairline tension crack on the blockwork immediately over the lintel. This is a cosmetic issue and not a structural one. In practice this never happens.

For a 100x150mm lintel always turn rough side down. Lintel has higher load capacity in this position ie. two wires at bottom

Recommended procedure for positioning lintel

1. Handle with care
2. Place lintel over ope with >150 bearing on each wall for opes up to 1.5m width and >200mm on ope width from 1.5 - 3.0m
3. If positioned "smooth side up" coat with scud ie. Cement/water mix and allow to cure. As stated always place 150x100mm lintel with rough side down.
4. Always prop bare lintel before placing masonry blocks overhead
5. Use good mortar 1:6 cement sand ratio and good quality blocks Regular block work assumed at 5Nmm²
6. Refer to load table to ensure composite lintel is adequate for imposed load.
7. Allow masonry to cure before removing prop

Note: Load capacities based on use of 5N blocks unless stated otherwise. Where 15N are quoted in table, M15 mortar must be used

