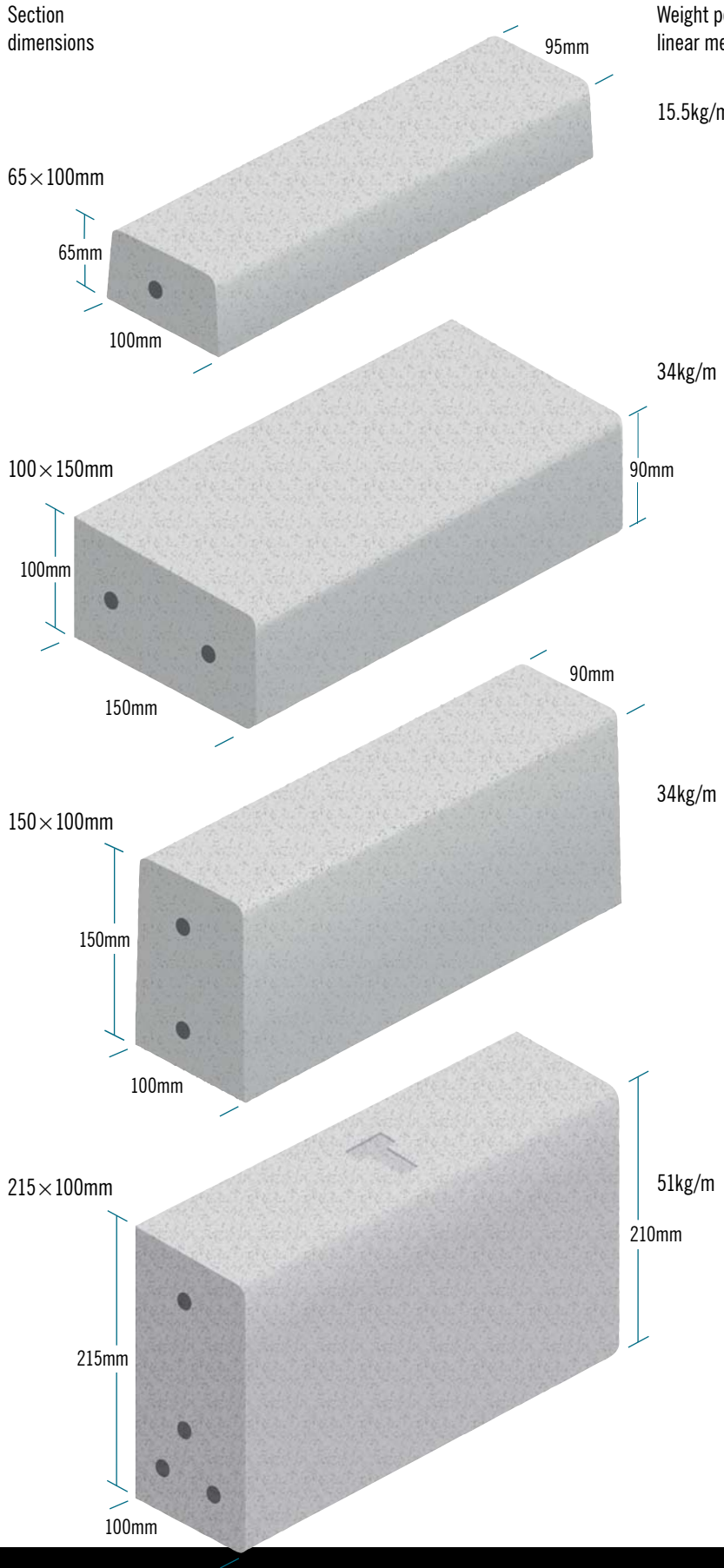
Precast concrete lintels to BS EN 845-2

pre-stressed composite / pre-stressed non-composite / reinforced



PRE-STRESSED COMPOSITE LINTELS

These lintels utilise the composite action of the concrete and brick/blockwork together to provide their load-bearing capacities as shown in the table overleaf.

Three courses of brickwork are equivalent to two courses of blockwork. As the brickwork mortar matures, lintels of over 1200mm spans should be propped at 1200mm centres. Bearings at each end must be at least 150mm. A damp-proof course, when used, must be strong and plastic enough to avoid cracking and be placed so as not to break the lintel/blockwork bond. Ideally the d.p.c. should not be included in the composite wall joist at all, but if essential then it should be only tucked in 30mm.

PRE-STRESSED NON-COMPOSITE LINTELS

Where a higher load-bearing capacity is required, or there is insufficient brickwork above to allow adequate composite action, non-composite lintels are the solution.

No propping is necessary during construction and also wall plates, trusses and floor joists can be accommodated as directly imposed load in accordance with the table opposite. Bearings at each end must be at least 150mm and for lintels of over 3 metres, 200mm long bearings are recommended.

Non-composite 215mm × 100mm lintels must be installed with the triangle of reinforcement in the bottom the lintel.

REINFORCED LINTELS

Reinforced 0.6m 100mm × 65mm lintels are normally used to bridge services in blockwork foundations.

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Precast pre-stressed concrete lintels and reinforced lintels

COMPOSITE LINTEL maximum uniformly distributed load kN/m

Lintel length (m)	0.90	1.05	1.20	1.35	1.50	1.80	2.10	2.40	2.70	3.00
Effective span (m)	0.75	0.90	1.05	1.20	1.35	1.65	1.95	2.25	2.55	2.85
Clear span (m)	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.10	2.40	2.70
65×100mm	5.9	4.8	4.0	3.4	2.9	2.2	1.8	1.4	1.2	1.0
65×100mm 2 courses	19.9	13.8	10.1	7.7	6.0	4.0	2.8	2.1	1.6	1.2
65×100mm 5 courses	26.9	18.6	13.6	10.4	8.2	5.4	3.8	2.9	2.2	1.7
65×100mm 8 courses	40.8	28.3	20.8	15.9	12.5	8.3	5.9	4.4	3.4	2.7

Section h×w (mm)	65×100
Weight/linear metre (kg)	16
Linear metre/tonne	62
No per pack	27*

The table above is for safe working, uniformly distributed loads applied to the composite construction in kN/m exclusive of self weight of brickwork within the construction and the weight of the lintel. The design is based on the brickwork having a limiting crushing strength of 10.4 N/mm^2.

* 0.6m 100×65mm reinforced lintels are packed in multiples of 108 per pallet.

NON-COMPOSITE LINTEL maximum uniformly distributed load kN/m

Lintel length (m)	0.90	1.05	1.20	1.35	1.50	1.80	2.10†	2.40	2.70†	3.00	3.30†	3.60
Effective span (m)	0.75	0.90	1.05	1.20	1.35	1.65	1.95	2.25	2.55	2.85	3.10	3.40
Clear span (m)	0.60	0.75	0.90	1.05	1.20	1.50	1.80	2.10	2.40	2.70	2.90	3.20
150×100mm	18.0	14.7	12.3	10.5	9.1	7.0	5.6	4.6	3.8	3.2	2.7	2.3
100×150mm	11.9	9.7	8.1	6.9	6.0	4.7	3.8	3.1	2.6	2.2	1.9	1.6
215×100mm	–	–	–	–	–	29.9	24.9	21.3	18.5	16.3	14.8	13.3

The table above is for safe working, uniformly distributed loads applied to the non-composite lintels in kN/m exclusive of the weight of the lintel.

† 215×100mm lintels in 2.1m, 2.7m and 3.3m lengths are non-stock items.

Section h×w (mm)	150×100	100×150	215×100
Weight/linear metre (kg)	34	34	51
Linear metre/tonne	29	29	19
No per pack	16	16	5

All products available ex works. Prices on application. Telephone the sales office for further information and a quotation.

STOWELL CONCRETE LIMITED

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