



# BEAM AND BLOCK FLOORING GUIDE

## THE GUIDE

Our beam and block flooring guide has been created with you in mind.

Refer to this guide when cutting, loading and storing our beam and block flooring solutions

## CONTACT US

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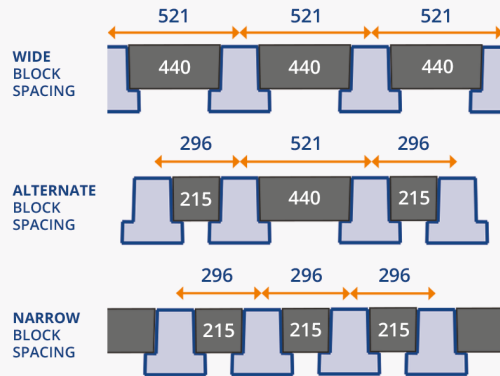
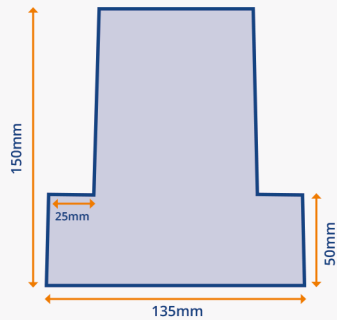
Established in 2001, TT Concrete Products Limited has become a prominent manufacturer of prestressed concrete flooring beams throughout the Midlands and the South of England.



The method of calculating the quantity of beams, blocks & accessories is simple. However you need to consider the following prior to order:

- Beams must have a minimum bearing of 100mm at each end and this should be added to the clear span of floor between the inner walls. i.e. for a clear span of 3700mm, beams of 3900mm need to be ordered.
- For normal domestic spaces without timber stud partitioning or internal block walls with a clear span up to 4100mm, beams can be laid using full block spacings. Areas with greater spans or partitioning loads, beams must be laid using alternative or narrow block spacings and may require an additional beam directly under any partitions that are running parallel with the beams
- Please see the Span Load table opposite for further information and note that TT Concrete Products cannot provide drawings or calculations for beams ordered from merchants stock.

### 150mm Beam Section



## EXAMPLE

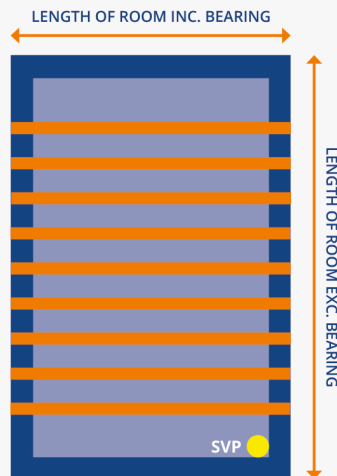
Measure room size including bearings. Allow one extra beam if either the SVP is not tight in a corner or if the 1st beam is tight on the end wall. One extra beam per SVP will be required to ensure there is no clash of position.

**Beam Length** = Clear Span + min 100mm bearing each end

**Slip Bricks** = Slips are 175mm x 90mm x 40mm  
 2No Slips per 440mm spacing per beam end  
 1No Slip per 215mm spacing per beam end  
 6No Slips per 1000mm run of end walls

**Blocks** = Quantity of Blocks can be calculated as follows;  
**Wide Block Spacing** = 87% of floor area  
**Alternate Block Spacing** = 82% of floor area  
**Narrow Block Spacing** = 75% of floor area

i.e. - floor area of 26.7m<sup>2</sup> on alternate block spacing  
 $26.7 / 100 = 0.267 \times 82 = 21.9\text{m}^2$   
 $21.9 / 0.1$  (area of block) = 219No Blocks Required



## LOAD SPAN CHART USING 150mm BEAM

USING 75mm SCREED + INSULATION & FINISHES = 1.90 kN/m<sup>2</sup>

		150mm PRESTRESSED CONCRETE FLOOR BEAM						
		Super Imposed Load kN/m <sup>2</sup>						
Application (Condition)	Block Density	1.5	2	2.5	3	4	5	Garage with 75mm Reinforced Screed
(S521)	650	4.63	4.484	4.35	4.228	4.011	3.777	4.298
	1350	4.31	4.191	4.081	3.979	3.795	3.625	3.993
	1900	4.1	3.996	3.9	3.81	3.648	3.504	3.796
(S409)	650	5.137	4.981	4.838	4.707	4.473	4.23	4.648
	1350	4.811	4.681	4.562	4.451	4.251	4.072	4.355
	1900	4.593	4.48	4.375	4.276	4.097	3.939	4.161
(S296)	650	5.851	5.685	5.532	5.39	5.136	4.892	5.107
	1350	5.532	5.391	5.259	5.137	4.915	4.72	4.843
	1900	5.315	5.189	5.071	4.961	4.76	4.582	4.663
(D656)	650	5.525	5.37	5.226	5.094	4.855	4.628	5.175
	1350	5.248	5.114	4.989	4.873	4.663	4.477	4.909
	1900	5.057	4.936	4.824	4.718	4.526	4.355	4.727
(D544)	650	5.932	5.772	5.625	5.488	5.242	5.021	5.46
	1350	5.675	5.534	5.404	5.282	5.061	4.865	5.223
	1900	5.494	5.366	5.247	5.135	4.931	4.749	5.057
(D431)	650	6.000*	6.000*	6.000*	5.989	5.735	5.511	5.8
	1350	6.000*	6.000*	5.94	5.812	5.579	5.371	5.609
	1900	6.000*	5.931	5.802	5.683	5.464	5.269	5.472
(T566)	650	6.000*	6.000*	6.000*	6.000*	5.986	5.762	6.000*
	1350	6.000*	6.000*	6.000*	6.000*	5.866	5.655	6.000*
	1900	6.000*	6.000*	6.000*	6.000*	5.777	5.575	6.000*

\*Maximum Effective Span in Metres

## STORAGE

- The ground should be firm, level and wherever possible, stacking should be on compacted hardcore or concrete
- They should be stacked with bearers 150mm – 250mm from each end and in line with each other as vertically as possible, to a maximum of chest height
- Similar length T-beams should be stacked together
- All T-beams should be stacked as near as possible to their final fixed positions to avoid damage or other hazards
- T-beams should be inspected and any damage reported immediately

The ground condition will influence the height of the stack



- For further technical advice, contact our drawing & estimating office on 01993 706688

## THINGS TO REMEMBER

- Beams must be stacked on firm level ground using timber bearers
- Weight of Beams – beam weight can be calculated at 35kgs per metre.
- Void beneath beam & block floor should be minimum 150mm
- Telescopic vents should be installed to ventilate void below the floor
- Once floor is laid, brush in 3:1 coarse sand / cement grout between the blocks and beams
- Beams can be cut using Stihl Saw and appropriate cutting disc. Appropriate PPE for the task must be adopted
- Do not put excessive loads onto the floor. i.e. Packs of Bricks or Blocks
- If you are building blockwork partitions off the floor, please contact our drawing / estimating office on 01993 706688
- For all of your beam, block and associated ancillary requirements, please speak to a member of your merchant sales / trade counter team

## CONTACT US

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## CUTTING BEAMS

- When cutting beams, the below procedure MUST be followed to ensure that beams do not split or break whilst cutting. Do NOT in any circumstance cut straight down from the top of the beam and through the top wire as, being pre-stressed, this will result in the beams splitting and breaking.
- The correct way is to cut down approx. 10-15mm to just touch the top wire, then cut approx. 15mm off the side of the beam, including cutting one of the bottom 3 wires. The beam can then be cut straight through from the opposite side.
- In all instances, the correct PPE and equipment must be used, with cutting carried out by trained, competent operatives, in accordance with your own H&S guidelines and procedures.

## CORRECT CUTTING METHOD



Stockist