TECHNICAL INFORMATION **B10**

Ibstock Brick

SITE PRACTICE AND TROUBLESHOOTING

DIMENSIONS AND TOLERANCES
PAS 70- SITE SIZE TEST (MEAN DIMENSIONS)

BS EN771-1 requires that the dimensions of a clay masonry unit shall be declared by the manufacturer in millimetres for length, width and height, in that order.

BS EN 771 measuring procedure is complex and involves varying metrology methods, the measuring equipment used for this is not readily amenable to site use. Consequently, the PAS (publicly available specification) has been designed to produce a simple test that can be utilised on site to resolve any size disputes should they arise.

QUICK GUIDE TO MEAN SIZE TOLERANCES FOR STANDARD BRICK DIMENSIONS.

Declared Size mm	T1 Lower & upper limits	Tolerances mm
40	37-43	±3
50	47-53	±3
65	62-68	±3
68	65-71	±3
73	70-76	±3
80	76-84	±4
90	86-94	±4
102	98-106	±4
190	184-196	±6
215	209-221	±6
225	219-231	±6
227	221-233	±6
290	283-297	±7

T2 Lower & upper limits	Tolerances mm	Tm
38-42	±2	
48-52	±2	
63-67	±2	Deviation in mm
66-70	±2	
71-75	±2	Deviation in mm declared by the manufacturer may be wider or closer than other categories. Please refer to the product data for Ibstock's quoted figures.
78-82	±2	
88-92	±2	
99-105	±3	
186-194	±4	
211-219	±4	
221-229	±4	
223-231	±4	
286-294	±4	

On construction sites, should a concern be raised on size and to assess whether bricks conform to the quoted tolerance, first establish which tolerance the product has been supplied to.

Sample 10 bricks by randomly choosing from a consignment and taking the selection from a minimum 6 packs where possible. Remove any superfluous material, blisters or loose particles of clay adhering to each brick.

In practice, it may not be necessary to demonstrate that all dimensions are within the tolerances stated.

Place the bricks in contact with each other in a straight line upon a level, flat surface, as shown in the diagram below, ensuring that all bricks are in the same direction. DO NOT fit bricks together by alternately turning them around.

Measure the overall dimension to the nearest millimetre using a retractable steel pocket rule. Then divide the figure by 10 to give the mean value for each dimension to the nearest whole mm. Compare the figure against our stated tolerance for that product.

LENGTH ARRANGEMENT A - Faces forward (frog up if applicable).

Length measurement to nearest round mm.

Divide by 10 rounding to the nearest whole mm

further information or advice regarding this topic please contact
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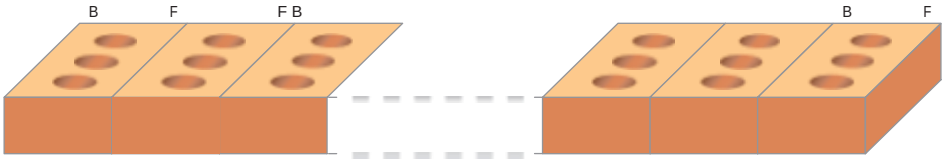
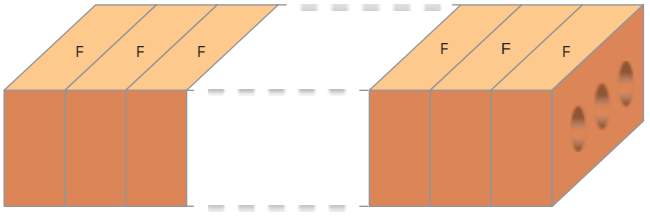
WIDTH ARRANGEMENT B - Face to back (frog up if applicable).



Since Ibstock supplies bricks to 102mm and not 102.5mm, measurements should be rounded to the nearest whole mm.

Width measurement to nearest round mm.	Divide by 10 rounding to the nearest whole mm

HEIGHT ARRANGEMENT C - Faces up (frog to one common side, if applicable).



Height measurement to nearest round mm.	Divide by 10 rounding to the nearest whole mm
The tolerance on height for 73mm products is the same as for T1 and T2 on 65mm.	

RANGE VALUE

The range tolerance covers the overall difference within a sample between the largest brick and the smallest and may be called upon to resolve problems with significant size variation within a consignment.

	H 65	68	73	80	90	W 102		L 215			
R2 4	4	5	5	5	5	6	6	7	8	9	9	10
R1 2	2	2	3	3	3	3	3	4	4	4	5	5
Rm	A range in mm declared by the manufacturer (may be wider or closer than the other categories). Please refer to the product data sheet for quoted figure.											

The manufacturer shall declare also which of the tolerance categories the mean values fulfill. This will take the form of T2 (generally the smallest deviation from the stated work size) ,T1 or Tm (manufacturers declared deviation from the stated work size, it may be wider or closer than the other categories). The tolerance is the difference between the stated work size and the average actual size.

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