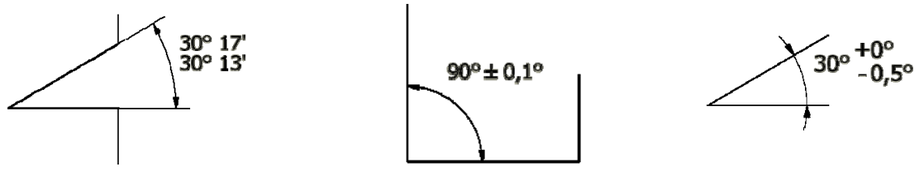
Tolerances - Information Sheet 4

Angular Dimensions

The methods shown below can be used to tolerance angular dimensions;

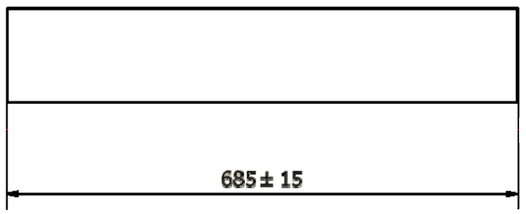


(a) (b) (c)

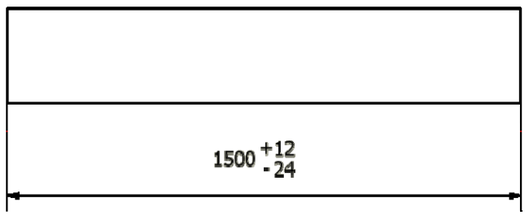
Functional and other tolerances which differ from the general tolerances are shown on drawings in this manner. These tolerances are often referred to as 'specific tolerances'.
Both general and specific tolerances appear on the same drawing as shown in the worked example on Information Sheet 5. Further examples of the application of dimensional tolerances are included in BS 8888: 2006.

Construction Drawings

In construction drawing it is not normal practice to specify tolerances on drawings - they are normally given in the text specification of the building project. Tolerances applying to critical dimensions however, can be given prominence by indicating them on the drawing. A tolerance should be indicated by means of permitted deviations of equal value from the basic size. See the examples below:



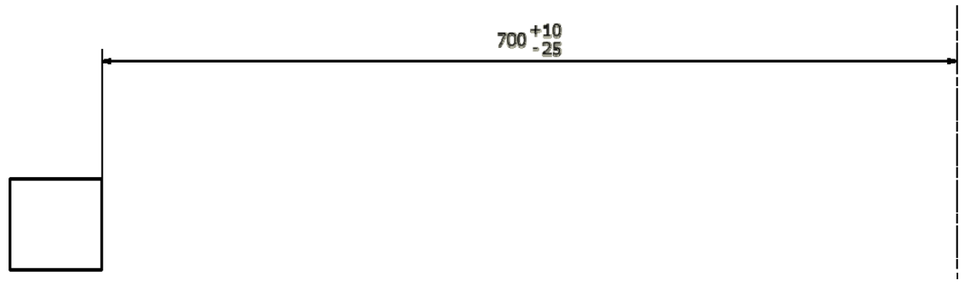
(a) Symmetrical Tolerance



(b) Asymmetrical Tolerance

Tolerances on Size and Location

Tolerances on size and location dimensions should be indicated by permitted deviations from the basic size, shown in the example below. The unit used for permitted deviations should be that used for the basic size. Where the unit is the millimetre the abbreviation mm should be omitted. Example of tolerances on location dimensions:



Plan view of a concrete column dimensioned and with a suitable tolerance to a reference line.

Repetitive Tolerances

To avoid repetition, on engineering or construction drawings, tolerances on critical dimensions that are repeated more than once need only be indicated once. These tolerances can be shown either in the notes column of the border or a table on the sheet, or can be indicated by a caption with a leader line to the relevant feature. The important thing is that the information is clearly and concisely displayed as it is necessary for the correct operation or manufacture of an item.

Dimension and Tolerance Example Sheet

The Tolerance Information Sheet 5 illustrates the correct practice, to BS 8888, for laying out, labelling, dimensioning and applying tolerances to drawings. The third angle projection symbol, an appropriate border and title block, the correct line types and an appropriate size of font are also shown. Any computer aided drawings you produce for your thematic presentation should follow this example, as appropriate.