

# Tapco Inspire Slate - Measuring Guide

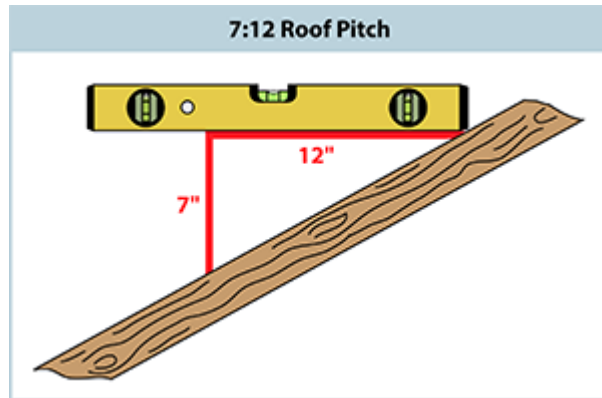
When you contact us, our representative will guide you as to how many slate units you will need to cover your roofing project. However, the general idea is to measure how many square metres your roof covers and what pitch (and therefore which gauge) your roof is. The following table explains how this is calculated:

ROOF PITCH	GAUGE	SLATES PER M <sup>2</sup>
14.5* to 25 degrees (fully boarded or felt & battens)	6" (152mm)	22
25 to 27.5 degrees (fully boarded or felt & battens)	6.5" (165mm)	20
27.5 to 30 degrees (fully boarded or felt & battens)	7" (178mm)	19
above 30 degrees (fully boarded or felt & battens)	7.5" (191mm)	18

\* The minimum recommended pitch and lap may be influenced by special circumstances, please contact our technical department for advice.

**Note:** Advice from our technical department should also be sought when installing on high buildings and/or in exceptionally windy areas.

## Roof Pitch



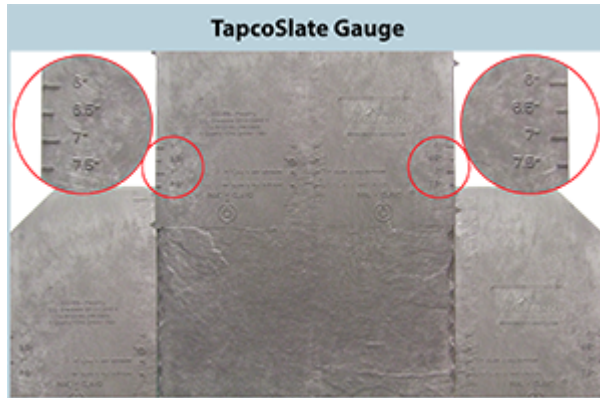
Roof pitch (slope really, but it is known as pitch) refers to the amount of **rise** a roof has compared to the horizontal measurement of the roof. The picture opposite shows the pitch of a 7:12 roof slope meaning that for 12" of horizontal measurement (roof run) the vertical measurement (roof rise) is 7". This measurement is best done on a bare roof, but if this isn't practical then perform the same measurement on the underside of the roof (loft).

So what does the 7:12 in the example to the right mean? The 7 means that the roof rises 7" for every 12" it runs, simply mark a level at 12", hold it perfectly level and measure from the roof surface to your 12" mark, this will give you the rise. To convert this measurement to degrees, please see the table below:

## Roof Pitch – Rise and Degrees

**Rise:** 1:12 2:12 3:12 4:12 5:12 6:12 7:12 8:12 9:12 10:12 11:12 12:12  
**Degrees:** 4.76° 9.46° 14.04° 18.43° 22.62° 26.57° 30.26° 33.69° 36.87° 39.81° 42.51° 45°

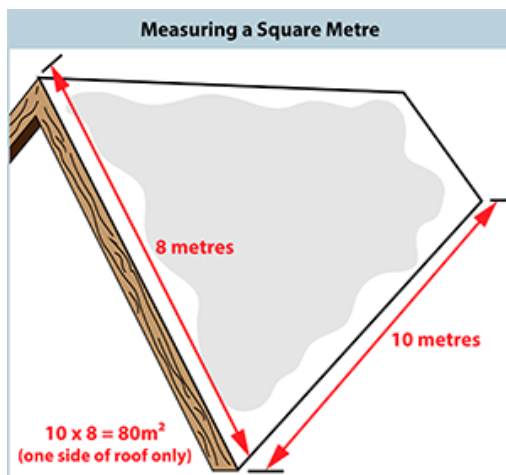
## Gauge



Each slate is marked with a fitting gauge which is determined by the Roof Pitch (see above). The gauge is pictured on the right. How many slates you need to cover your roof per square metre depends on the gauge and increments according to your roof pitch.

Once that you have the first layer of slates on your battens, the next layer (and onwards to the ridge) should be layered on top. The gauge, on both sides of the slate, is then placed onto the very top of the laid slate and moved up or down according to your roof pitch. The gauge has 4 markers – 6" (14 to 25 degree pitch), 6.5" (25 to 27.5 degree pitch), 7" (27.5 to 30 degree pitch), and 7.5" (above 30 degree pitch).

## Square Metres



A square metre is a metric measurement of area. If the area involved in your roofing project is square or a rectangular, measure the length and width of the area, using a metric tape measure or a meter stick. Multiply the length, in metres, times the width, in metres. That will give you the area of the square or rectangle in square metres.

If the area involved is not square or rectangular, sketch the area to scale on a piece of graph paper. You can make sure that it is to scale by allowing each division on the grid to equal a certain number of metres.

Break up the sketch into rectangles, squares, triangles, and even circles, if necessary.

Apply the appropriate metre-based formulas to each shape on the graph to determine the area of each shape in square metres.

Multiply length times width for squares and rectangles. Multiply base times height and divide by two for triangles.

Measure from the centre of a circle to its outer edge to find the radius; then multiply the radius times itself and multiply that figure by 3.14, which is “pi.”

Add the areas of each shape to find the square metres of the entire area.

**To recap**, if your roof is 8 metres high by 10 metres long, this equals 80 square metres, times this by 2 sides of the roof equals 160 square metres in total. If your roof is 24 degrees, and therefore the gauge is set at 6” increments, you will fit 22 slates to every square metre – 160 x 22 – you will therefore require 3,520 slates in total.

Inspire slates are bundled in packs of 25 and so you will need 141 bundles (in total 3,525 units would then be ordered). Please note that you will also need a starter or eaves course.

Tapco recommend using a cut three-quarter slate tile (see fixing instructions) at the rate of 3.5 tiles per linear metre, so in this example you would also need to cover  $2 \times 10\text{m} = 20$  linear metres, times 3.5 tiles per metre = 70 extra slates to use as starter tiles.

These are sold in bundles of 25 so you will need 3 bundles (in total 75 starter tiles would then be ordered). Overall this example roof would need 166 bundles (3600 units) of slates.

**Please Note:** The details on this page are for guidance only, and the Tapco Group will not be held responsible for any incorrect measurements undertaken by you or your architect or roofing contractor. It is your sole responsibility to ensure that any measurements and quantities ordered are correct.