How I can calculate the hole size before tapping when I use a Spiral Fluted Tap size M12 x 1.5?

The best way is to check the hole size in a drill/tap table. (See the table below)

You can also calculate it with a simple formula if there is no such table available. Note: The following suggestion is based on how to calculate the hole size of a Cutting Tap such as Spiral Fluted Taps (SP).

In case of Cutting Taps (SP, HT, and PO), the hole size can be calculated by using the following formula.

Hole size = Thread Size Major Diameter minus Thread Pitch

For a M12 x 1.5 Spiral Flute SP tap, the hole size before tapping can be calculated as 12mm - 1.5mm = 10.5mm

The formula above should not be used when tapping with Roll Taps.

The hole sizes for Roll Taps are defined differently from those used for Cutting Taps as Roll Taps produce internal threads through material deformation.

The hole sizes for tapping with Roll Taps can be calculated by using a different formula, but we will explain this at another time as it is a