

How to choose correct Thread Mill Diameter

When thread milling, the diameter of the tool has to be smaller than the thread diameter. The reason for this is that the thread has a helix angle, but the tool is straight. If the tool is too big there will be a deviation on the thread profile. The size of this deviation depends on several parameters.

- 1) Thread diameter
- 2) Cutter diameter
- 3) Profile angle
- 4) Pitch

Big cutter diameter compared with thread diameter, small profile angle and big pitch. These are parameters that gives bigger deviation.



There are three alternatives too choose correct thread mill diameter.

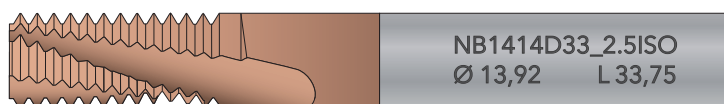
- 1) SmiCut Catalogue
- 2) SmiCut Online Store, www.smicutstore.se (see page 8)
- 3) SmiProg Software, www.smicut.se (see page 9)

How to get correct Thread Diameter

The pitch diameter has become optically measured on thread mills from SmiCut and the theoretical external diameter has been individually laser marked on each cutter. This diameter is what you should use in your program to get a correct diameter on your thread.

For coarse threads you are normally in the middle of the tolerance if you use the laser marked value.

Fine threads may be a little bit tight as you get a very small thread profile deviation on these threads (see above). If this is the case you can mill again after adjusting the diameter in your program.



How to get a burr free Thread

Thread Mills from SmiCut (ThreadBurr) will give you a nice entry and a burr free thread. The cutting length is laser marked on the tool and you can find it as well in the catalogue. This is the distance you should go in to the hole from the surface to get a perfect entry.