



【Question】



Is it possible to process a 6H internal thread and a second grade internal thread with the same YAMAWA standard grade cutting tap?

【Answer】

Yes, of course you can process both threads with the same YAMAWA standard grade tap. The YAMAWA standard grade of cutting tap is ground for processing a 6H internal thread and second calss internal thread. Below, I listed one example of the pitch diameter tolerance range of the grade 6H internal screw thread and the second internal screw thread. I have also listed the tap grade and the gauge position relationship, so please take a look at the reference.



【Description】

Example: An M10X1.5 internal thread pitch diameter tolerance and a tap P class with the thread gauge position relationship is shown below.

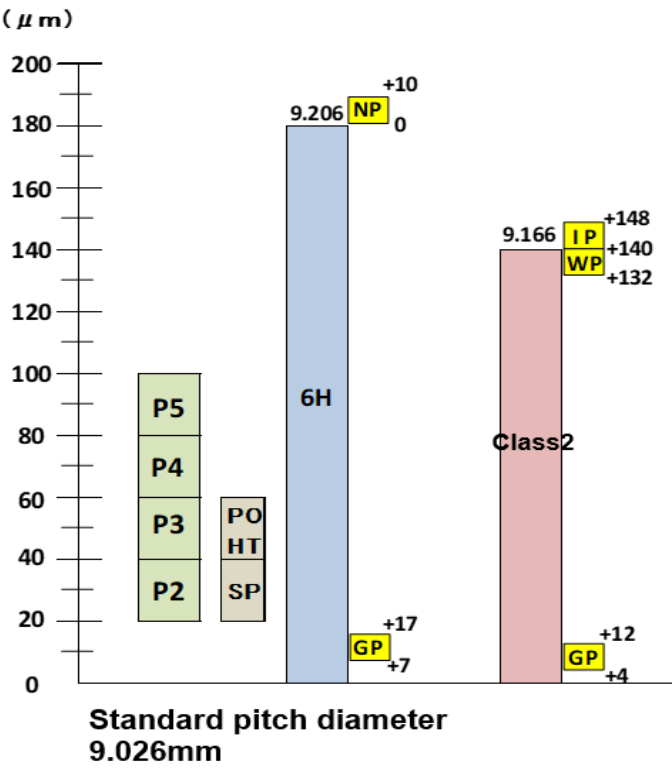
Tap class(P2/P3/P4/P5)

M10 x 1.5 standard class of cutting tap(SP/PO/HT)

Pitch diameter tolerance of a 6H internal thread

Pitch diameter tolerance of a class 2 internal thread

Go thread plug gauge




( μ m )

Standard pitch diameter 9.026mm

For a M10X1.5 YAMAWA standard class of cutting tap, a SP spiral flute tap is ground to a P2 tolerance class, a PO spiral point tap and a HT hand tap are ground to a P3 tolerance class. The standard grades P2 and P3 of these taps are within the pitch diameter tolerance range of a 6H internal thread and a secondary internal thread tolerance. Also, taking into account the superb performance of a YAMAWA cutting tap, it is ground to a tighter tolerance than the full tolerance of any individual P class range. If there is no big unevenness or runout in the machine's spindle, a 6H internal screw thread and a 2nd internal screw thread can be machined without problems with the standard grade tap.

I now understand the relationship between internal thread calss and a taps tolerance limits. It is much easier to understand when shown in a diagram.

【Advice】



Depending on the processing environment, internal threads machined with the cutting tap can cause problems with the thread cutting oversize, so it is important to perform an inspection with a GO thread plug gauge after tapping.