

## 【Inquiry】

I thought that the tolerance class of a YAMAWA PO M4X 0.7 P3 was 20  $\mu\text{m}$  larger than a standard class for a P2 tap. When each tap increases by one P class number, does it always mean each tap becomes larger by 20  $\mu\text{m}$  than the previous P class number?

## 【Answer】

Not all tap sizes are 20  $\mu\text{m}$  larger in diameter for each P class number increase or decrease.

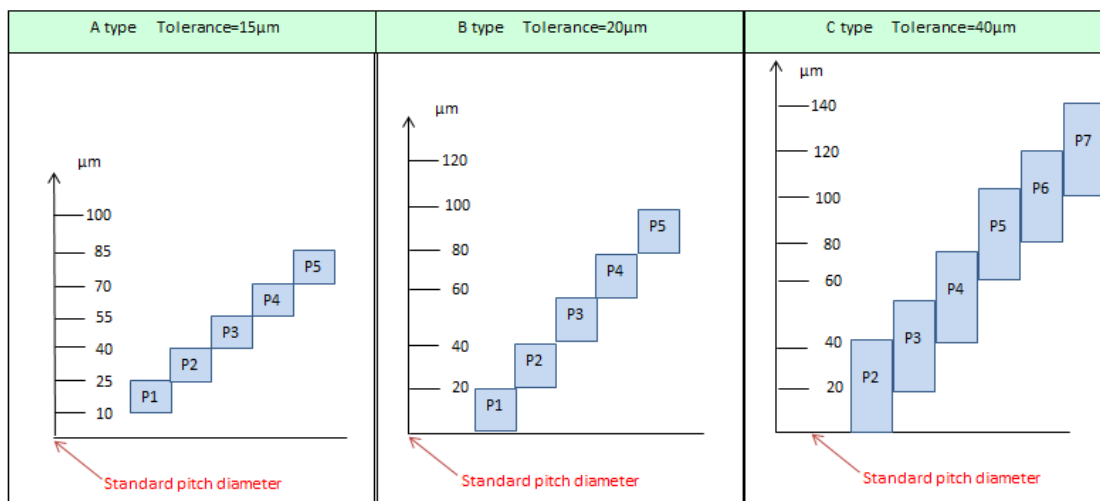
There are three types of P class sizes for taps depending on the nominal diameter and the pitch diameter. An A type tap increases in diameter by 15  $\mu\text{m}$ , a B type increases in diameter by 20  $\mu\text{m}$  and a C type increases in diameter 40  $\mu\text{m}$  for each increase in P class number. For details, please see the explanation below.

## 【Description】

There are three P class types as shown below according to nominal diameter and pitch diameter.

Pitch \ Size	1mm or more, 24mm(7/8) or less	24mm(7/8) or more, 30mm(1'1/4) or less	30mm(1'1/4) or more, 25mm(2) or less
0.6mm(40 threads) or less	A type	B type	B type
0.6mm(40 threads) or more, 1.75mm(14 threads) or less	B type	B type	B type
1.75mm(14 threads) or more, 2mm(11 threads) or less	B type	B type	C type
2mm(11 threads) or more, 5mm(5 threads) or less	B type	C type	C type

Tolerance and tolerance range of an A type. B type. C type tap.



## 【Advice】

Considering the size of each tap, the following class tolerance will apply:

- Smaller diameter taps M3 X 0.5 or less are mostly A type with a 15  $\mu\text{m}$  tolerance.
- All coarse pitch taps from M4 X 0.7 to M 24 X 3 are B type with a 20  $\mu\text{m}$  tolerance. Please note, when the pitch is 0.6 or less like a M4X0.5 the tolerance becomes an A type.
- Large diameter taps like a M36X4 or bigger will be a C type with a tolerance of 40 $\mu\text{m}$ . Please note, when the pitch becomes finer like a M36X1.5, the tolerance becomes a B type.

Pay attention to the tolerance of the internal thread to be machined. The tolerance of the tap should be adjusted to the diameter and pitch of the thread.