

Bag full of wisdom when you are in trouble

№ 174

【Question】



I am looking at YAMAWA's general catalog and found that there are unfamiliar markings like JIS, DIN, and ANSI. Could you explain what does this refer to?

Japan has a national standard known as the Japanese Industrial Standards(JIS). Likewise, other countries have their own standardized regulations. ANSI is the standard adopted in North America, whereas Europe uses DIN standard. Please choose a product that is compatible with the standard of your holder and collet.



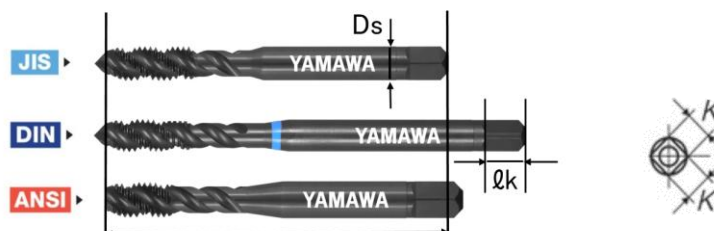
【Answer】



"ANSI" is an abbreviation of the "American National Standards Institute." It is a standardization organization in the United States that is responsible for the approval of various standards in the industrial sector, facilitating public consensus. The standards defined by "ANSI" are referred to as ANSI standards. "DIN" is an abbreviation of "Deutsche Industrie Normen", which translates to "German Industrial Standards." Just as Japan has "JIS", each country uses its own required standards.

Even for taps with the same nominal sizes such as M6X1, the overall length, shank diameter, and square section dimensions are different depending on the standard. Please confirm first that it is compatible with the holder you have. Also, since there are slight differences in the thread limits, please refer to the technical data section "14. Tap, Thread Limits" in the general catalog for more details.

Difference in Tap Shape Ex) M6 X 1



(mm)

Standard	OAL (L)	Shank Dia (Ds)	Square Width (K)	Square Length (ℓk)
JIS	62	6	4.5	7
DIN	80	6	4.9	8
ANSI	63.5	6.47	4.85	7.9

【Industrial Standardization】

In the case of the M6 thread standard, specifications such as the major diameter, thread height, pitch diameter, and pitch are defined by industrial standards. These thread standards ensure compatibility among components including automotive parts. For instance, an M6X1 bolt (external threads) mass-produced in China can be assembled with an M6X1 nut (internal threads) manufactured in Japan or North America, owing to standardized threading.

The taps we manufacture are available in three main thread standard types: JIS for the Japanese and Asian markets, DIN for the European market, and ANSI for the US market.

Although the overall length and shank diameter may vary, as long as the nominal size is M6X1 and the thread accuracy is within specification, any of the taps conforming to the different standard shapes can be used to machine the corresponding internal thread of M6X1 in the respective market's industrial standards.