

【Consultation】



I understand the nominal size of Metric threads but can you tell me the meaning of 1/4-20UNC for taps listed in your

【Answer】

"UNC" is the abbreviation for "Unified Coarse Threads". "1/4" indicates that the nominal diameter (major diameter) of a 1/4 inch tap (or 6.35 mm). "20" indicates the number of threads per inch or pitch which converted is "1.27mm". Unlike Metric threads such as M8X1.25, you will need to calculate to convert to metric. For more information,

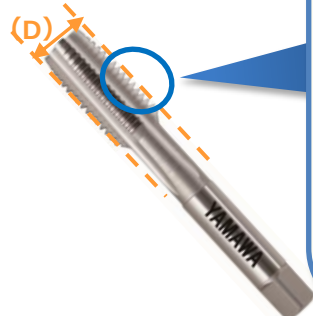


【Explanation】

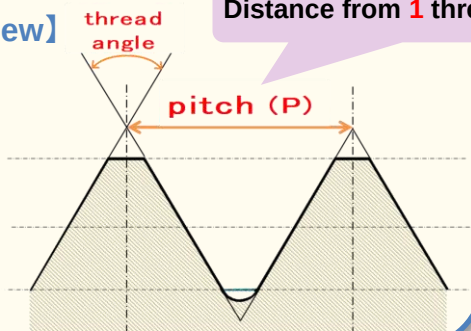


Let me explain about "major diameter" and "pitch" for taps with Unified threads with a simple diagram. As shown in the diagram below, the "major diameter" is the largest diameter of threads on a tap. In the case of fractional sizes, you can calculate the major diameter by "1 inch (25.4 mm) x fraction". For example, in the case of "1/4", "25.4mm x 1/4 = 6.35mm" which is the major diameter. Also, the meaning of "Number of threads: 20" indicates that there are 20 threads per 1 inch. The pitch is the distance from each thread to the next thread, so in case of the "number of threads: 20", the pitch is calculated as $25.4\text{mm} \div 20 = 1.27\text{mm}$ ". The symbol will indicate that the thread angel is 60 degrees.

Major diameter (D)



【Enlarged view】



Distance from 1 thread to the next

Major diameter (mm)
=25.4mm x (nominal size) fractions

Pitch (mm)
=25.4 mm ÷ number of threads



In this article, we used 1/4-20UNC as an example, but there are many other types of threads that show the major diameter in fraction and pitch in threads per inch.

Examples of thread type symbols

Category	Thread type	Symbol	Thread angle	Indication
Threads with major diameter in fractions and pitch in TPI	Unified coarse threads	UNC	60°	1/4 - 20UNC
	Unified fine threads	UNF	60°	1/4 - 28UNF
	Whitworth threads	W	55°	1/4 W 20
	Sewing machine threads	SM	60°	1/4 SM 24