

No. 070

# Tapping tripod mounting screw

Cutting taps

## 【Consultaion】



I received an order for camera components.  
In the drawing there was an internal thread statement  
"Tripod mounting screw 1/4"-20". Is this a special internal  
screw? What kind of tap should I use?

## 【Answer】

A 1/4"-20 Tripod mounting screw is a Camera tripod  
installation screw as stipulated in the JIS B 7103 standard.  
This thread is considered to be a special internal thread  
with standard specifications so you will need a special  
tripod tap to process the component. YAMAWA has a  
tripod hand tap, HT TRI 1 / 4-20 and a tripod spiral tap: SP  
TRI 1 / 4-20 for your job order.



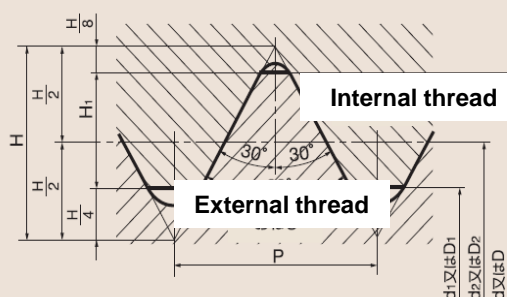
HT TRI 1/4-20



SP TRI 1/4-20

## 【Description】

The thread form of a JIS B 7103  
1/4"-20 camera tripod mounting  
screw is the same as a Unified  
screw, but the internal thread is  
about 0.14 mm larger on the pitch  
diameter compared with the 1/4"-  
20 UNC 2B Unified screw.

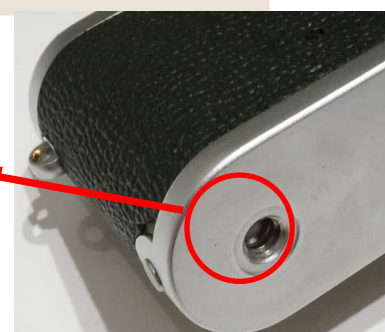


$$\begin{aligned} H &= 0.866025P \\ H_1 &= 0.541266P \\ d_2 &= d - 0.649519P \\ d_1 &= d - 1.082532P \end{aligned} \quad \begin{aligned} D &= d \\ D_2 &= d_2 \\ D_1 &= d_1 \end{aligned} \quad \begin{aligned} P &= 25.4/n \\ n &= \text{山数} \end{aligned}$$

Comparison of internal thread specification of tripod r

Size	Pitch (P)		Major Diameter (D)	Pitch Diameter (D2)	Minor Diameter (D1)
Tripod mounting screw 1/4"-20	1.270	REFERENCE DIMENSION	6.350	5.525	4.975
		Max. allowable size	~	5.820	5.267
		Min. allowable size	6.460	5.635	4.975
Unified 2B screw 1/4"-20 UNC	1.270	REFERENCE DIMENSION	6.350	5.524	4.976
		Max. allowable size	~	5.648	5.257
		Min. allowable size	~	5.525	4.979

Unit: mm



## 【Advice】



A 5.19mm diameter drill is recommended for the bored hole diameter when tapping the internal screw for a camera tripod mounting which is the same as a Unified screw. Although used less frequently, there is also a 3/8"-16 standard thread used in the tripod mounting screw in addition to the 1/4"-20 thread.