

【Consultation】



Here is the external tripod thread.



We received an order for producing the external camera tripod threads. The thread size is a 1/4-20 and I remember that I used a special tap for producing the internal camera tripod threads in the past. Do I also need a special dies for producing external camera tripod threads?

【Answer】

For producing external camera tripod threads, you can use a conventional round die for Unified threads. Please use a YAMAWA standard solid round die such as "D" 1/4-20UNC. Please refer to the explanation below for the reason why you can use a standard round die.



【Description】

The basic profile of the camera tripod threads is the same as JIS B 0206 Unified coarse threads. The tolerance for the external camera tripod threads are almost the same as JIS B 0210 class 1A external Unified coarse threads. Therefore, it is possible to produce the tripod threads with a YAMAWA standard solid round die D 1/4-20UNC which are designed for producing a 2A class external threads.

※ The 2A class of external threads are more precise than the 1A class of threads, which have a tighter tolerance.

Dimension comparison table of a 1/4-20 external Tripod thread and a external Unified thread

Unit : mm

External Threads	Size	Class	Major Diameter			Pitch Diameter			Minor Diameter		
			Max	Min	Tol.	Max	Min	Tol.	Max	Min	Tol.
External Tripod Threads	1/4-20	-	6.322	6.012	0.310	5.497	5.355	0.142	4.763	-	-
External Unified Thread	1/4-20UNC	2A	6.322	6.117	0.205	5.496	5.403	0.093	4.765	-	-



You can use the round dies for the Unified thread because the basic profile of the tripod threads is the same as the Unified threads and the tolerances for the major diameter and pitch diameter of the tripod threads is larger than those of Unified threads.

There is also a 3/8-16 size for external tripod threads as well. You can also use the round dies for 3/8-16UNC Unified threads to produce a external tripod threads with 3/8-16 threads.

Dimension comparison table of a 3/8-16 external Tripod thread and external Unified thread

Unit : mm

External Threads	Size	Class	Major Diameter			Pitch Diameter			Minor Diameter		
			Max	Min	Tol.	Max	Min	Tol.	Max	Min	Tol.
External Tripod Threads	3/8-16	-	9.492	9.132	0.360	8.461	8.295	0.166	7.544	-	-
External Unified Threads	3/8-16UNC	2A	9.491	9.254	0.237	8.460	8.349	0.111	7.543	-	-

【Advice】



We hope you understand that YAMAWA solid round dies "D" can produce the external tripod threads. On the other hand, the taps for Unified threads can not produce the internal tripod threads.

For more information, please refer to the "Bag full of wisdom when you are in trouble No.069 The difference between tripod threads and Unified threads".