

AXIAL Thread Rolling

For producing long threads, or threads without run-out restriction, then RSVP axial rolling heads are the ideal selection. Axial heads feed on from the end of the part and require one revolution of the spindle for each pitch of thread to be produced. Controlled forward axial motion, either by cam or CNC feed, are recommended although manually operated lathes can also give excellent results. RSVP axial heads are self opening and normally require an external closing action to reset them for the next pass. Right hand rolling heads are required for rolling right hand threads and the spindle direction must also be right hand. Left hand threads require corresponding heads and spindle rotation.

How To Order

Selecting The Correct Thread Rolling Head

There are two main factors that govern the choice of thread rolling head:

1. The thread size has to be within the standard capacity of the thread rolling head.
2. There must be sufficient clearance within the machine for the head to operate.

On pages 34 to 47 the range of axial thread rolling heads is illustrated, showing the outline dimensions and standard thread sizes for each head. Left hand and rotating versions of these heads are available in all the standard sizes. Special high-helix heads can also be supplied to accommodate Acme and multi-start threads.

Example:

In order to produce a 7/16 - 14 UNC stud, there is a choice between the A1, A2 and A3 heads. This choice may be limited by the clearance on the machine so it is most important to know the maximum diameter and projection available. If the maximum diameter that will clear when the machine turret indexes is 3.75", then the A3 head, at 4.60" diameter, is no longer a viable option. The choice between the A1 or the A2 should then be made with consideration given to any other threads that may need to be produced on the chosen head. If 7/16 UNC is the maximum thread size required then the A1, with a range of 1/4 UNC up to 7/16 UNC would be the recommended choice. However, if thread sizes above 7/16 UNC are required then the A2, with a range of 5/16 UNC up to 5/8 UNC, should be selected. Having selected the appropriate thread rolling head, please specify the required shank diameter from the options available.

RSVP Thread Rolling System Advantages	31
Thread Rolling Introduction	32
Applications	33
A0 - Overview & Components	34
A001 - Overview & Components	35
A01 - Overview & Components	36
A1 - Overview & Components	37
A12 - Overview & Components	38
A2 - Overview & Components	39
A23 - Overview & Components	40
A233400 - Overview & Components	41
A3 - Overview & Components	42
A34 - Overview & Components	43
A4 - Overview & Components	44
A45 - Overview & Components	45
A5 - Overview & Components	46
A56 - Overview & Components	47
Operation.....	48 - 50
Problem Solving	51
Lead Angles	52 - 54
Recommended Blank Diameters.....	55 - 57
Rolling Speeds	58

Selecting Thread Rolls

When ordering thread rolls it is important to specify as much information as possible about the rolls and the application so that the correct rolls may be promptly supplied. The minimum details required are as follows:

The full thread specification (e.g. 3/8 - 16 UNC, 7/16 - 20 UNF, 1/2 - 14 NPSM, 1/4 - 19 BSP)

The thread rolling head for which the rolls are required (A1, A23, A01 Etc.)

The lead required on the rolls (1K standard short lead, 2K standard long lead, or other special lead)

Using the 7/16 - 14 UNC stud example, to be produced using the A2 head, the final order would read as follows:

Quantity	Description
1	A2 THREAD ROLLING HEAD, 1" DIAMETER SHANK
2 SETS	7/16 - 14 UNC ROLLS WITH 2K LEAD, TO SUIT A2 HEAD

Should there be any doubt about the type of lead required on the rolls, or the size of head to be used, please provide our technical department with a component drawing so that we may make our own recommendations. Test samples may be produced with customer's material on special request.