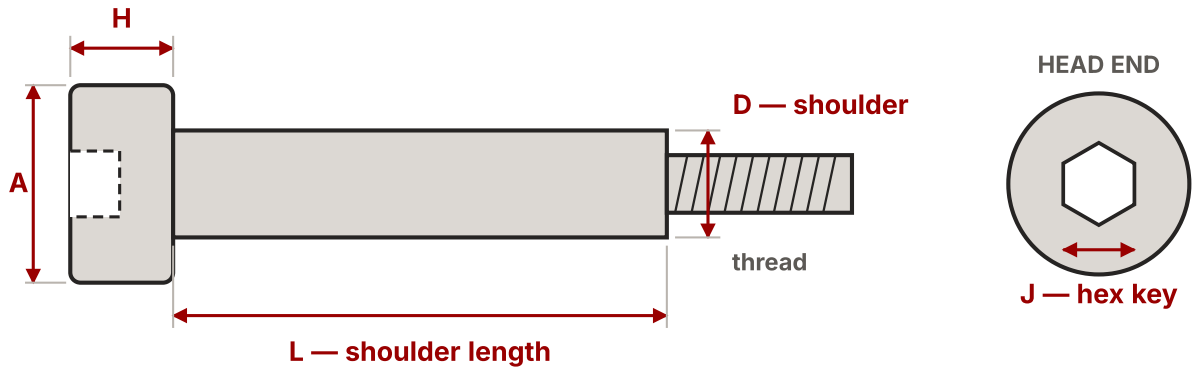
Shoulder Screw Dimensions

jandesupply.com/reference-shoulder-screw-dimensions.php

J & E Supply & FASTENER CO.

Shoulder diameter, thread size, head size and hex key for inch socket shoulder screws, 1/4″ to 2″. ASME B18.3.

A **shoulder screw** (“stripper bolt” or “shoulder bolt”) has a socket head, a smooth, close-tolerance **shoulder**, and a smaller thread on the end. It is sized by the **shoulder**: a 1/4″ × 7/8″ shoulder screw has a 1/4″ shoulder, 7/8″ long, and a #10-24 thread. The length is the shoulder length — from under the head to the end of the shoulder — and does not include the thread. **D** is the shoulder diameter, **A** the head diameter, **H** the head height, **J** the hex key. Inches throughout.



Letters match the table. Socket shown dashed.

Socket shoulder screws — ASME B18.3 (inches)

SHOULDER	D MAX	D MIN	THREAD	HEAD A MAX	A MIN	HEAD H MAX	H MIN	KEY J
1/4″	0.2480	0.2460	#10-24	0.375	0.357	0.188	0.177	1/8″
5/16″	0.3105	0.3085	1/4″-20	0.438	0.419	0.219	0.209	5/32″
3/8″	0.3730	0.3710	5/16″-18	0.562	0.543	0.250	0.240	3/16″
1/2″	0.4980	0.4960	3/8″-16	0.750	0.729	0.312	0.302	1/4″
5/8″	0.6230	0.6210	1/2″-13	0.875	0.853	0.375	0.365	5/16″
3/4″	0.7480	0.7460	5/8″-11	1.000	0.977	0.500	0.490	3/8″
1″	0.9980	0.9960	3/4″-10	1.312	1.287	0.625	0.610	1/2″
1-1/4″	1.2480	1.2460	7/8″-9	1.750	1.723	0.750	0.735	5/8″
1-1/2″	1.4980	1.4960	1-1/8″-7	2.125	2.095	1.000	0.980	7/8″
1-3/4″	1.7480	1.7460	1-1/4″-7	2.375	2.345	1.125	1.105	1″
2″	1.9980	1.9960	1-1/2″-6	2.750	2.720	1.250	1.230	1-1/4″

The thread is smaller than the shoulder, coarse (UNC). Thread pitches are on the thread pitch chart.

Where you’ll see them

Punch and die work — locating and holding stripper plates (hence “stripper bolt”) — and as guides, pivots and pulley shafts.

Quick answers

How are shoulder screws measured?

By the shoulder: its diameter and its length, measured from under the head to the end of the shoulder. The thread is not included.

What thread is on a 1/2" shoulder screw?

A 1/2″ shoulder screw has a **3/8″-16** thread and takes a 1/4″ hex key.

What thread goes with each shoulder size?

1/4″ shoulder – #10-24, 5/16″ shoulder – 1/4″-20, 3/8″ shoulder – 5/16″-18, 1/2″ shoulder – 3/8″-16, 5/8″ shoulder – 1/2″-13, 3/4″ shoulder – 5/8″-11, 1″ shoulder – 3/4″-10, 1-1/4″ shoulder – 7/8″-9, 1-1/2″ shoulder – 1-1/8″-7, 1-3/4″ shoulder – 1-1/4″-7, 2″ shoulder – 1-1/2″-6.

What is another name for a shoulder screw?

Stripper bolt, or shoulder bolt. The name comes from holding stripper plates in punch and die work.

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data. Technical information disclaimer →