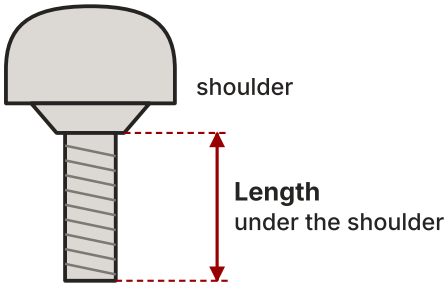
# Thumb Screw Dimensions

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

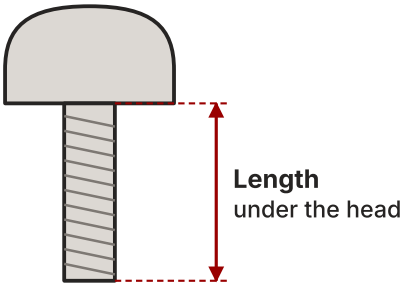
J & E Supply & FASTENER CO.

**Thumb screws: shoulder or plain pattern, how they are measured, the threads they come in and the hole to tap.**

A **thumb screw** has a flat, spade-shaped head you turn with your fingers — no wrench or driver. A **shoulder** (Type A) thumb screw has a collar under the head that seats on the part; a **plain** (Type B) one has none. Thumb screws have ordinary machine screw threads and go into a tapped hole or a nut.




Type A — shoulder




Type B — plain

Not to scale.

## Thumb screw types

| TYPE | ALSO CALLED | SHOULDER | LENGTH MEASURED |
|---|---|---|---|
| Type A | Shoulder pattern | Yes, just under the head | From under the shoulder to the tip |
| Type B | Plain pattern | No | From under the head to the tip |

From Machinery's Handbook (ASME B18.17-1968, withdrawn), Fastener Mart and the H&B / CDE thumb screw tables.

## Thumb screw threads and tap drills

| SIZE | THREADS PER INCH | SERIES | TAP DRILL | TAP DRILL (IN) |
|---|---|---|---|---|
| #6 | 32 | UNC | #36 | 0.1065 |
| #8 | 32 | UNC | #29 | 0.1360 |
| #10 | 24 | UNC | #25 | 0.1495 |
| #10 | 32 | UNF | #21 | 0.1590 |
| #12 | 24 | UNC | #16 | 0.1770 |
| ¼" | 20 | UNC | #7 | 0.2010 |
| 5/16" | 18 | UNC | F | 0.2570 |
| ⅜" | 16 | UNC | 5/16 | 0.3125 |
| ½" | 13 | UNC | 27/64 | 0.4219 |

Threads thumb screws come in, where Machinery's Handbook (ASME B18.17) and the maker tables (H&B / CDE) agree; the series and tap drill are our Thread Pitch chart's.

### Good to know

Length: measured from under the head, or under the shoulder, to the tip — the head is not counted (Machinery's Handbook, Fastener Mart).

Threads: Unified inch, Class 2A; the point is normally a plain sheared end (Machinery's Handbook, Fastener Mart).

Finger tight: thumb screws are for parts you adjust or take apart often, where finger pressure is enough to tighten them (Fastener Mart, H&B / CDE).

**Head sizes are not charted:** the handbook's ASME B18.17 table and the maker tables give different head sizes (head width, 1/4″ shoulder pattern: .52–.55″ in the handbook vs .48″ (reference) in the H&B / CDE table; head width, 1/4″ plain pattern: .80–.83″ in the handbook vs .81″ (reference) in the H&B / CDE table), and makers note their heads vary.

## Quick answers

**What is the difference between Type A and Type B thumb screws?**

**Type A** has a shoulder under the head (shoulder pattern) so the head seats flat on the part; **Type B** has no shoulder (plain pattern).

**How is a thumb screw measured?**

From under the head — or under the shoulder on a shoulder thumb screw — to the tip. The head is not counted.

**What drill for a 1/4-20 thumb screw hole?**

Tap the hole 1/4-20 UNC: the tap drill is **#7** (0.2010″).

**What thread is a 5/16 thumb screw?**

5/16″ thumb screws are **5/16-18 UNC**; tap the hole with a **F** drill (0.2570″).

**How tight can a thumb screw go?**

Finger tight — they are for parts you adjust or take apart often, where finger pressure is enough.

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