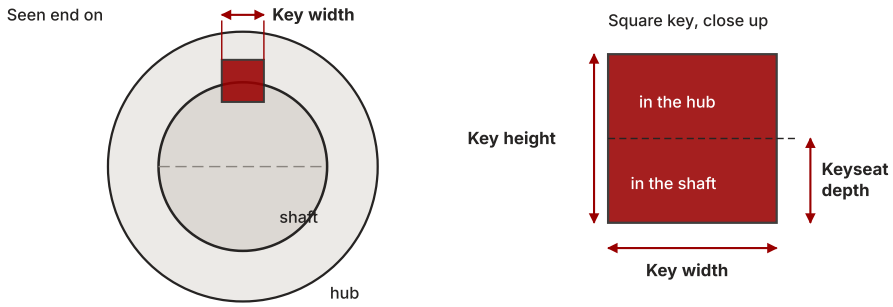
Key Stock Sizes

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J & E Supply & FASTENER CO.

Inch key stock by shaft size: which square or rectangular key a shaft takes, and how deep to cut the keyseat for it.

A **key** locks a hub — a gear, pulley, sprocket or coupling — to a shaft so the two turn together and the key carries the torque between them. It sits in a **keyseat**, a rectangular groove cut along the shaft, and in a matching groove (keyway) inside the hub. **Key stock** is the bar the keys are cut from, sold by its section: square (as wide as it is high) or rectangular. The key size goes by the shaft diameter where the key sits.



The labels match the table columns. Not to scale.

Parallel keys — key size by shaft diameter (ASME B17.1)

KEY WIDTH	SHAFTS OVER	THROUGH	SQUARE KEY	KEYSEAT DEPTH	RECTANGULAR KEY
3/32″	—	7/16″	3/32″ × 3/32″	3/64″	—
1/8″	7/16″	9/16″	1/8″ × 1/8″	1/16″	—
3/16″	9/16″	7/8″	3/16″ × 3/16″	3/32″	—
1/4″	7/8″	1-1/4″	1/4″ × 1/4″	1/8″	—
5/16″	1-1/4″	1-3/8″	5/16″ × 5/16″	—	—
3/8″	1-3/8″	1-3/4″	3/8″ × 3/8″	3/16″	—
1/2″	1-3/4″	2-1/4″	1/2″ × 1/2″	1/4″	—
5/8″	2-1/4″	2-3/4″	5/8″ × 5/8″	5/16″	—
3/4″	2-3/4″	3-1/4″	3/4″ × 3/4″	3/8″	—
7/8″	3-1/4″	3-3/4″	7/8″ × 7/8″	7/16″	—
1″	3-3/4″	4-1/2″	1″ × 1″	1/2″	—
1-1/4″	4-1/2″	5-1/2″	1-1/4″ × 1-1/4″	5/8″	—
1-1/2″	5-1/2″	6-1/2″	1-1/2″ × 1-1/2″	3/4″	—
1-3/4″	6-1/2″	7-1/2″	—	—	1-3/4″ × 1-1/2″
2″	7-1/2″	9″	—	—	2″ × 1-1/2″
2-1/2″	9″	11″	—	—	2-1/2″ × 1-3/4″

Inches, nominal. Key size by shaft diameter from ASME B17.1 (Machinery's Handbook), Martin's keyseat tables, Pooley's key and keyway table and AGMA 9002; printed where two or more agree. Keyseat depth is the nominal depth in the shaft for a square key (half its height). Rectangular key heights under 1-3/4″ wide are in only one of our sources, so they are left as a dash. A dash: our sources differ, or only one lists it — give us a call.

Step key stock — sections (Huyett and Precision Brand)

TYPE	FIRST STEP	SECOND STEP
Type 1	3/16″ × 3/32″	1/8″ × 1/16″
Type 1	3/8″ × 3/16″	5/16″ × 1/8″
Type 1	3/8″ × 3/16″	5/16″ × 5/32″
Type 1	1/2″ × 1/4″	7/16″ × 5/32″
Type 1	5/8″ × 5/16″	3/8″ × 3/16″
Type 1	3/4″ × 3/8″	1/2″ × 1/4″
Type 1	3/4″ × 3/8″	5/8″ × 3/16″
Type 1	3/4″ × 3/8″	5/8″ × 5/16″
Type 1	3/4″ × 3/8″	11/16″ × 1/4″

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TYPE	FIRST STEP	SECOND STEP
Type 1	1″ × 1/2″	7/8″ × 7/16″
Type 2	3/16″ × 3/32″	1/4″ × 3/32″
Type 2	3/16″ × 3/32″	1/4″ × 1/8″
Type 2	1/4″ × 1/8″	5/16″ × 1/8″
Type 2	1/4″ × 1/8″	3/8″ × 1/8″
Type 2	1/4″ × 1/8″	3/8″ × 3/16″
Type 2	3/8″ × 3/16″	7/16″ × 5/32″
Type 2	3/8″ × 3/16″	1/2″ × 3/16″
Type 2	3/8″ × 3/16″	1/2″ × 1/4″
Type 2	1/2″ × 1/4″	9/16″ × 3/16″
Type 2	1/2″ × 1/4″	5/8″ × 3/16″
Type 2	1/2″ × 1/4″	5/8″ × 5/16″
Type 2	1/2″ × 1/4″	11/16″ × 1/4″
Type 2	5/8″ × 5/16″	11/16″ × 1/4″
Type 2	3/4″ × 3/8″	13/16″ × 9/32″
Type 2	3/4″ × 3/8″	7/8″ × 7/16″
Type 2	3/4″ × 3/8″	15/16″ × 5/16″
Type 2	3/4″ × 3/8″	1″ × 1/2″

Inches, nominal, width × height of each step. No standard covers step key stock: these are the sections both Huyett and Precision Brand list, with the type each maker gives it.

Good to know

Size the key by the shaft. Find the shaft diameter in the two shaft columns; the key width on that row is the standard key for it. On a stepped shaft, go by the diameter where the key sits. A square key sits half in the shaft and half in the hub — the keyseat depth here is the half in the shaft.

Key stock is cut to length and fitted. The sizes here are nominal. Fit tolerances, and how tight the key should be in its keyseat, depend on the stock and the job — use the drawing or the equipment maker's spec for a critical fit, or give us a call.

Quick answers

What size key goes on a 1 inch shaft?

A **1/4″ square key** (1/4″ × 1/4″): ASME B17.1 lists it for shafts over 7/8″ through 1-1/4″. The keyseat in the shaft is cut 1/8″ deep.

What size key stock for a 2 inch shaft?

1/2″ square key stock (1/2″ × 1/2″) — for shafts over 1-3/4″ through 2-1/4″, in a keyseat 1/4″ deep in the shaft.

What shaft size does a 1/4 inch key fit?

A 1/4″ key is the standard size for shafts over **7/8″ through 1-1/4″**.

How deep is the keyseat for a 3/8 square key?

3/16″ in the shaft — half the key's height, so the other half of the key sits in the hub.

What is the difference between a key and a keyseat?

The **key** is the bar that locks a hub (gear, pulley, sprocket) to a shaft so they turn together. The **keyseat** is the rectangular groove cut along the shaft, or inside the hub, that the key sits in.

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