WS-004 Sharpening-stone sliding cradle

Keep one measured hand-sharpening stone from sliding on a workbench.

Controlling dimensions: US inches and feet. Metric equivalents are references. Original editorial design; no physical build, animal trial or load certification is claimed.

Before marking and cutting

US inches; feet where appropriate. Metric values are rounded references. Written inch values control.

3/4 in means measured 0.750 in actual thickness wherever used. Recalculate mating lengths for other sheet thicknesses; do not substitute nominal stock blindly.

Use limits

For the bounded stated manual task. Do not install it on a powered machine or use it to replace a guard.

No load, measurement-certification or protective-equipment claim.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
A Reference board	1	12 × 6 × 3/4 in 304.8 × 152.4 × 19.05 mm	Exterior-bond birch plywood, smooth sanded faces; no preservative treatment. Measured actual thickness 3/4 in.
B Fixed end cleat	1	6 × 1 × 3/4 in 152.4 × 25.4 × 19.05 mm	Clear solid hard maple, straight grain along the listed length. Measured actual thickness 3/4 in.
C Removable end cleat	1	6 × 1 × 3/4 in 152.4 × 25.4 × 19.05 mm	Clear solid hard maple, straight grain along the listed length. Measured actual thickness 3/4 in.

Hardware and consumables

4 × Compatible wood screws. Selected length, pilots and locations are stated in the instructions; test on actual scrap.

Tools

Rule with fractional inches; Pencil or appropriate material marker; Reliable square; Saw suited to the specified stock; Clamps; Abrasive and dust-removal brush; Drill with the specified bit and depth stop where needed; Driver matching selected fasteners

Primary context and design record

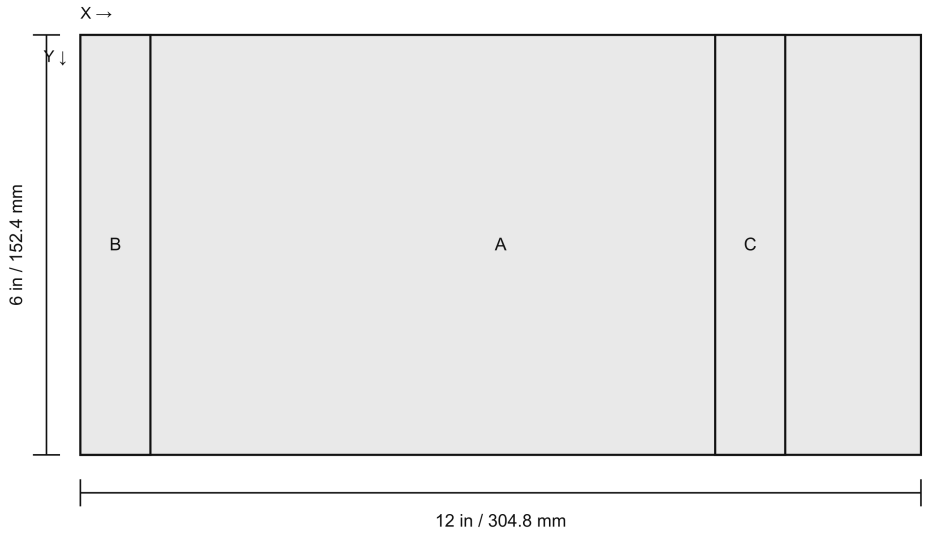
Context references; not design endorsements or certifications.

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Assembly and first checks

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PLAN / reference origin at front-left; not to scale. Inch values control.



Part letters identify the cut-list pieces. Dashed outline = underside part.
Coordinates in the method use the same X/Y reference.
Do not drill from the graphic: transfer the written center coordinates.
Original editorial design; no physical construction trial or certified load rating.

01 Use an 8 × 2 in hand stone as the example; measure its actual body before proceeding. This cradle locates a stone and does not prescribe a sharpening angle.

02 Cut A to 12 in / 304.8 mm by 6 in / 152.4 mm from flat measured 3/4 in stock. Mark one face UP and mark front-left X0 Y0; remove only the splinters, not the reference edges.

03 Draw the centerline and attachment footprints from the part positions below. Measure from the reference faces each time; do not add a chain of rounded conversions.

04 Cut B and C each 6 × 1 × 3/4 in. Their 6 in length runs along Y. Lay B across the left end of A at X = 0–1 in, Y = 0–6 in.

05 Rotate C to run across Y as well. Locate it at X = 9 1/16–10 1/16 in for an 8 in stone plus 1/16 in length clearance between the inside cleat faces.

06 Dry-fit and clamp the assembly on a stable surface. Check the intended article against the clearances before drilling or gluing; correct the layout on paper if it does not fit.

Complete the assembly

WS-004 Component dimensions

Orthographic component reference. Quantities shown; not a sheet nesting plan or full-size template.



12 × 6 in

A Reference board QTY 1

12 in / 304.8 mm × 6 in / 152.4 mm
thickness 3/4 in / 19.0 mm



6 × 1 in

B Fixed end cleat QTY 1

6 in / 152.4 mm × 1 in / 25.4 mm
thickness 3/4 in / 19.0 mm



6 × 1 in

C Removable end cleat QTY 1

6 in / 152.4 mm × 1 in / 25.4 mm
thickness 3/4 in / 19.0 mm

Measured actual stock controls. Read the written assembly sequence before cutting or fastening.

07 Fit B from below A using two #8 × 1 1/4 in screws at X = 1/2, Y = 1 and 5 in. Drill clearance through A and centered pilots into B.

08 Ease exposed corners and all edges that the operator will touch. Remove dust and any projecting point; countersink only to a flush head.

09 For C, mark two holes through A at X = 9 9/16, Y = 1 and 5 in. Fit two identical screws from beneath; leave removable without stripping the pilot holes.

10 Center the stone across Y = 3 in. If its body rocks, correct the supporting surface or use the stone maker’s supplied base; do not wedge a cracked stone.

11 Clamp A securely to a bench outside the knife path. Use the lubricant specified by the stone manufacturer and keep electrical tools away from the wet area.

12 Perform one slow hand sharpening pass with fingers away from the edge. Stop if the stone slides sideways; this two-cleat version requires a sound flat nonslip support supplied by the stone maker.

Acceptance and intermediate checks

Inside end gap 8 1/16 in for the stated stone; C coordinates must be remade for another actual stone.

The stone seats flat without length binding; no cleat screw reaches the stone contact surface.

Assembly is flat and free of splinters, exposed tips and loose parts.

A second operator can repeat the intended light-duty operation without being coached.

Cleaning and maintenance

Brush or wipe the unloaded assembly clean after use.

Inspect attachment fit and fasteners before each new task.

Replace a damaged contact surface; recheck the reference dimensions after repair.