The Creature Corner

ENCLOSURE BUILD GUIDE

P06-03 | Tall double-door wooden enclosure

36″ × 24″ × 48″ nominal shell (W × D × H) · 914 × 610 × 1219 mm

Two broad glazed doors with independent keyless latches, a removable screened roof and a supported lamp area at the left. Build the shell, then select and commission animal-specific equipment.

Contents

Before cutting

Tools and preparation

Guided saw/table saw, drill with depth stop and countersink, router or sharp chisels, square, tape/calipers, clamps and flat cauls, guarded thin-stock milling setup and mesh snips. Use eye/hearing protection and suitable dust extraction. Use a helper and temporary braces when handling panels or doors.

One set of fit gauges

Measure and keep offcuts of the actual floor, roof and side panels. Make a width gauge from 36 inches less the two side thicknesses; make a height gauge from 48 inches less the floor and roof thicknesses. Transfer mating lengths from these gauges and dry-fitted receivers.

Use a 48-inch height story stick alongside the shell: its bottom aligns with the floor underside. A 36-inch width stick aligns with the outside left/right edges. Where a local pattern names the stick, transfer its ordinary inch marks through the clamped assembly. Elsewhere measure from the named part edge.

Fastening method

Clamp first. Clearance-drill the first wood member; pilot the receiving wood with a bit matched to the actual screw root and pine. Use a depth stop, then countersink wood heads flush. Metal hinges have their own countersinks: check the selected head seats without bottoming. Never bury a head to pull an ill-fitting joint closed.

Glue and finish

Titebond III: work above 47°F; at 70°F/50% RH, open assembly time is 8–10 minutes and total assembly time 20–25 minutes. Bring clean, bare mating faces tightly together. Keep new joints unstressed at least 24 hours; follow the label for clamping and conditions. Do not use glue as a substitute for mechanical support.

One 16-ounce bottle covers the calculated laminations with a separate shop allowance. Keep glue faces bare until bonded. Finish later with the selected one-coat Varathane system and its full seven-day reference cure; details are in step 19.

Materials and hardware

Use the exact linked model and variant. Check received dimensions and package contents before cutting. Out-of-stock selections are retained; local availability varies.

EXACT PRODUCT · RETAILER	USE AND BUY
☐ **Rubber-Cal solid neoprene 40A sheet** 30-004-062-012-036 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	1 needed; buy 1 pack(s) of 1
☐ **Hillman stainless #10-24 pan machine screw** 126953 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	38 needed; buy 8 pack(s) of 5
☐ **Hillman stainless fender washer** 882073 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	76 needed; buy 16 pack(s) of 5
☐ **Hillman stainless #10-24 nylon-insert locknut** 126896 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	38 needed; buy 5 pack(s) of 8
☐ **Hillman stainless #10-24 closed cap nut** 126888 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	38 needed; buy 13 pack(s) of 3
☐ **Varathane Triple Thick clear satin polyurethane** 284473-7482; manufacturer 284473 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	3 needed; buy 2 pack(s) of 2
☐ **Hillman Simple Mount Anti-Tip Kit** 9976524 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	2 needed; buy 2 pack(s) of 1
☐ **Birch plywood** 712849 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	2 needed; buy 2 pack(s) of 1
☐ **Clear eastern white pine** PLSEL 1.000 6.000 8.000D4S · Lowe's Official catalog evidence only; no store/ZIP inventory verified	8 needed; buy 8 pack(s) of 1
☐ **OPTIX clear acrylic** 21232102 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	1 needed; buy 1 pack(s) of 1
☐ **RELIABILT solid clear pine** 2X2 8 RPC · Lowe's Official catalog evidence only; no store/ZIP inventory verified	5 needed; buy 5 pack(s) of 1
☐ **Acorn galvanized hardware cloth** HC2245 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	1 needed; buy 1 pack(s) of 1
☐ **McMaster surface-mount removable-pin hinges** 1798A21 · McMaster-Carr Official catalog evidence only; no store/ZIP inventory verified	6 needed; buy 3 pack(s) of 2

EXACT PRODUCT · RETAILER	USE AND BUY
☐ **Titebond III Ultimate** 1414 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	1 needed; buy 1 pack(s) of 1
☐ **#8 × 1.25" flat-head wood screw** 35054 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	96 needed; buy 1 pack(s) of 100
☐ **#8 × 1.75" flat-head wood screw** 35056 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	88 needed; buy 2 pack(s) of 75
☐ **#8 × 2.5" flat-head wood screw** 35058 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	23 needed; buy 1 pack(s) of 50
☐ **#6 × 1.25" flat-head wood screw** 490007 · Lowe's Official catalog evidence only; no store/ZIP inventory verified	24 needed; buy 3 pack(s) of 10
☐ **National Hardware black swivel-staple safety hasp, 3-1/4 inch** N305-979 · Lowe’s	2 needed; buy 2 pack(s) of 1
☐ **Everbilt #10 × 5/8-inch zinc-plated Phillips flat-head wood screws, 12-pack** 825391 · Home Depot	14 needed; buy 2 pack(s) of 12
☐ **Hillman steel flat, 1 × 1/8 × 36 inches** 11653 · Lowe’s	1 needed; buy 1 pack(s) of 1
☐ **Fluker Mini Sun Dome — optional screen-top fixture** 27004 · Fluker	Optional equipment: 1 needed; buy 1 pack(s) of 1

Check received stock and hardware

Keep the shell's outside dimensions at 36″ × 24″ × 48″ (914.4 × 609.6 × 1219.2 mm). RT adds ¾″ (19.05 mm) behind it, plus cable and service space. Panel calculations use .703″ (17.856 mm) plywood as a reference; actual stock and shared fit gauges govern mating cuts.

Glazing coupon

1. Before milling final Q spacers, make a short complete glazing coupon from the received acrylic, plain solid neoprene, frame offcut, spacer and bead. Keep adhesive off the pane and cushions. Start with a ⅜″ spacer blank, then fit it to the measured contact stack.
2. The fully cured pocket between front wood bearing and retaining bead must equal the actual pane plus two actual 1/16″ face cushions in light contact. The nominal .220″ pane gives .345″ (8.763 mm); this is not a compression target. Account for finish on the bearing and spacer surfaces.
3. Hand-seat the bead on its wood lands. The pane must stay flat and free at its edges without rattling. Correct spacer thickness or an uneven contact before committing the other spacers. Extra screw torque must not force an oversized stack. Keep the accepted coupon and setting gauge for final assembly.

Keyless hasp trial

1. Receive the two National Hardware N305-979 swivel hasps and Everbilt 825391 #10 × ⅝″ flat-head wood screws before drilling. Make a matching ¾″ pine door/post trial with a ⅛″ gap and the intended 3° latch-edge back bevel. Both front faces are flush.
2. Place the narrow hinged base on the moving door stile and the square swivel plate on the fixed post, with the flap pointing toward the post. Support every plate edge and all seven holes. Transfer the actual holes; use a screw-root-matched pine pilot and a stopped depth. Check the flat heads seat in the supplied holes without modifying metal countersinks.
3. Use seven specified screws per hasp. The nominal .070″ plate leaves .555″ entry and .195″ wood behind the tip in the ¾″ front layer. Prove at least 1/16″ back cover on the received trial, including the point. Turn the swivel into alignment, lift the flap clear and open the door. Close the flap and turn the swivel across its slot. Repeat after full finish cure; a key is unnecessary. A padlock is optional secondary security.

Restraint trial

Before fitting RT, trial one complete Hillman 9976524 bracket, eye, cable and pin on a ¾″ × 2½″ RT offcut. Use the kit's ⅝″ furniture screws, keep the whole footprint on wood and retain at least ⅛″ back cover. Confirm the eye/cable can assemble and release entirely outside the enclosure. The final wall attachment follows the kit's wood-stud method; site-specific alternatives need their own supported fastening method.

Cut and fit schedule

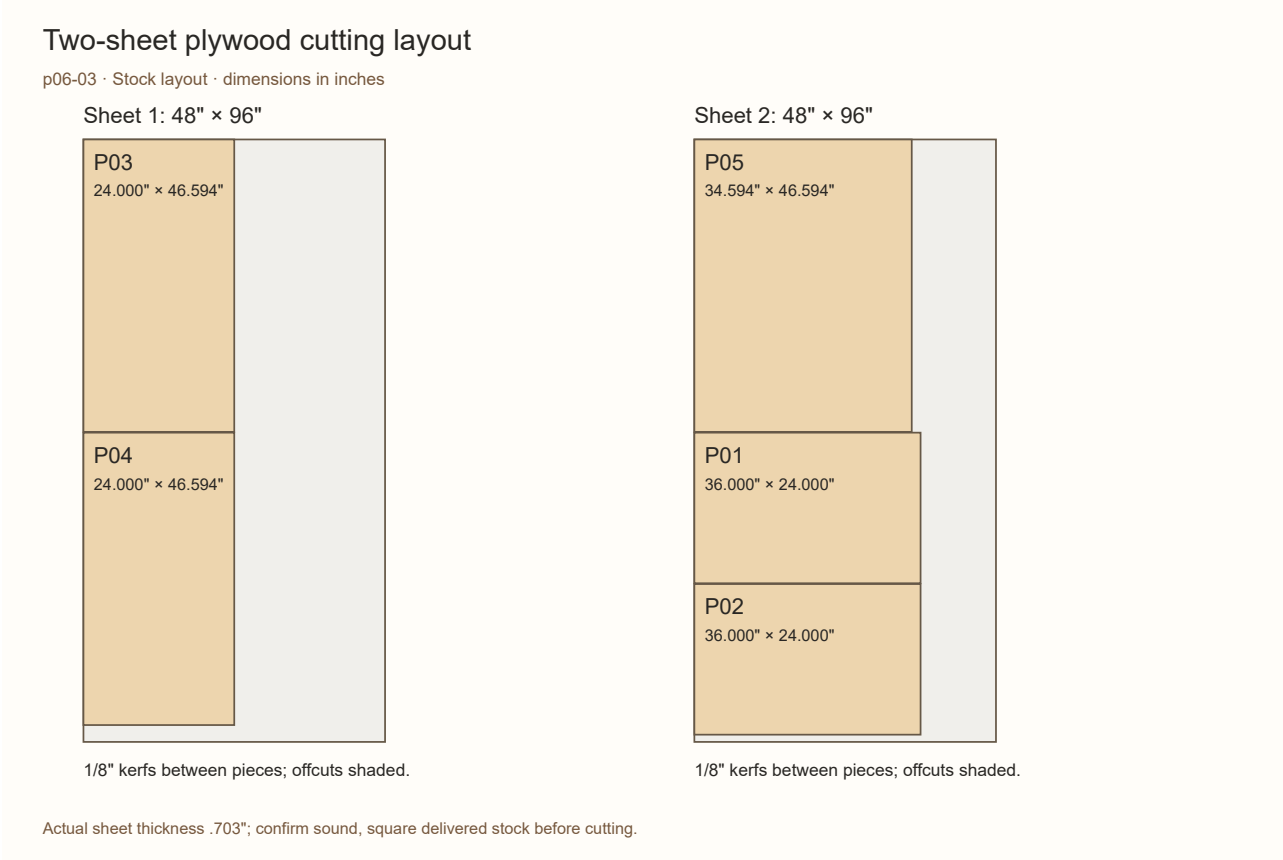
Imperial-first dimensions. The fit rule is the working instruction; the adjacent sizes describe the exact nominal source. Keep source decimals for registered holes and measured stacks. Use common gauges rather than separately rounding mating parts. Purchased hinges and hasps are complete assemblies, not cuts.

PART IDS	QTY	PRACTICAL CUT OR FIT RULE	NOMINAL SOURCE SIZE · METRIC EQUIVALENT
P01, P02	2	36″ × 24″; actual sheet thickness	36″ (914.4 mm) × 24″ (609.6 mm) × 0.703″ (17.856 mm)
P03, P04	2	24″ deep × height gauge	46.594″ (1183.488 mm) × 24″ (609.6 mm) × 0.703″ (17.856 mm)
P05	1	Width gauge × height gauge	46.594″ (1183.488 mm) × 34.594″ (878.688 mm) × 0.703″ (17.856 mm)
FA, FB, FF	3	Height gauge × 2½″ × ¾″	46.594″ (1183.488 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
FC	1	Fit between FA/FB × 5½″ × ¾″	29.594″ (751.688 mm) × 5 1/2″ (139.7 mm) × 3/4″ (19.05 mm)
FD	1	Fit between FA/FB × 2½″ × ¾″	29.594″ (751.688 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
FE, FI, FJ	3	Fit between sill/head × 2½″ × ¾″	38.594″ (980.288 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
FGL, FGR	2	Outer frame edge to centre-stile edge × 5½″ × ¾″	16.047″ (407.594 mm) × 5 1/2″ (139.7 mm) × 3/4″ (19.05 mm)
FHL, FHR	2	Outer frame edge to centre-stile edge × 2½″ × ¾″	16.047″ (407.594 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
D1A, D2B	2	Fitted leaf height × 1 1/2″ × ¾″	38.344″ (973.938 mm) × 1 1/2″ (38.1 mm) × 3/4″ (19.05 mm)
D1B, D2A	2	Fitted leaf height × 2″ × ¾″	38.344″ (973.938 mm) × 2″ (50.8 mm) × 3/4″ (19.05 mm)
D1C, D1D, D2C, D2D	4	Between front stiles × 1½″ × ¾″	9.797″ (248.844 mm) × 1 1/2″ (38.1 mm) × 3/4″ (19.05 mm)
D1E, D1F, D2E, D2F	4	Fitted leaf width × 1½″ × ¾″	13.297″ (337.744 mm) × 1 1/2″ (38.1 mm) × 3/4″ (19.05 mm)
D1G, D2H	2	Between rear rails × 1 1/2″ × ¾″	35.344″ (897.738 mm) × 1 1/2″ (38.1 mm) × 3/4″ (19.05 mm)
D1H, D2G	2	Between rear rails × 2″ × ¾″	35.344″ (897.738 mm) × 2″ (50.8 mm) × 3/4″ (19.05 mm)
G1, G2	2	Visible opening width/height + ¾″ each; actual pane thickness	36.094″ (916.788 mm) × 10.547″ (267.894 mm) × 0.22″ (5.588 mm)
N1FB, N1FT, N1RB, N1RT, N2FB, N2FT, N2RB, N2RT	8	Pane width − ⅛″ × ¼″ × 1/16″	10.422″ (264.719 mm) × 1/4″ (6.35 mm) × 1/16″ (1.587 mm)
N1FL, N1FR, N1RL, N1RR, N2FL, N2FR, N2RL, N2RR	8	Pane height − ⅝″ × ¼″ × 1/16″	35.469″ (900.913 mm) × 1/4″ (6.35 mm) × 1/16″ (1.587 mm)
N1S00, N1S01, N1S10, N1S11, N2S00, N2S01, N2S10, N2S11	8	1″ × actual pane thickness × 1/16″; stack two at each lower support	1″ (25.4 mm) × 0.22″ (5.588 mm) × 1/16″ (1.587 mm)
Q1B, Q1T, Q2B, Q2T	4	Pane width + ¼″ × ¾″; thickness = fitted coated pocket	10.797″ (274.244 mm) × 3/4″ (19.05 mm) × 0.345″ (8.763 mm)

PART IDS	QTY	PRACTICAL CUT OR FIT RULE	NOMINAL SOURCE SIZE · METRIC EQUIVALENT
Q1L, Q1R, Q2L, Q2R	4	Pane height + 1¾″ × ¾″; thickness = fitted coated pocket	37.844″ (961.238 mm) × 3/4″ (19.05 mm) × 0.345″ (8.763 mm)
B1B, B1T, B2B, B2T	4	Pane width + 1¾″ × 1¼″ × ¼″	12.297″ (312.344 mm) × 1 1/4″ (31.75 mm) × 1/4″ (6.35 mm)
B1L, B1R, B2L, B2R	4	Pane height − ¾″ × 1¼″ × ¼″	35.344″ (897.738 mm) × 1 1/4″ (31.75 mm) × 1/4″ (6.35 mm)
CLB, CLT, CRB, CRT	4	24″ less 4½″ and back thickness × 1½″ square	18.797″ (477.444 mm) × 1 1/2″ (38.1 mm) × 1 1/2″ (38.1 mm)
CLV, CRV	2	Height gauge × 1½″ square	46.594″ (1183.488 mm) × 1 1/2″ (38.1 mm) × 1 1/2″ (38.1 mm)
CFB, CBB, RF, RB	4	Width gauge less 3″ × 1½″ square; RF has stop relief	31.594″ (802.488 mm) × 1 1/2″ (38.1 mm) × 1 1/2″ (38.1 mm)
CCa, CCb	2	Fit floor-cleat top to RF underside × 2½″ × ¾″	42.26″ (1073.404 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
RC	1	24″ less 1½″ and back thickness × 1½″ wide × 1¼″ high	21.797″ (553.644 mm) × 1 1/2″ (38.1 mm) × 1 1/4″ (31.75 mm)
M01	1	30″ × 14″; trim to capture	30″ (762 mm) × 14″ (355.6 mm) × 0.084″ (2.134 mm)
RB1L, RB1R, RB2L, RB2R	4	14 1/4″ × 1″ × 3/4″	14 1/4″ (361.95 mm) × 1″ (25.4 mm) × 3/4″ (19.05 mm)
RB3, RB4	2	12″ × 1″ × 3/4″	12″ (304.8 mm) × 1″ (25.4 mm) × 3/4″ (19.05 mm)
ML, MR	2	14″ × 4″; trim to capture	14″ (355.6 mm) × 4″ (101.6 mm) × 0.084″ (2.134 mm)
VLB, VLT, VRB, VRT	4	14″ × 1″ × 3/4″	14″ (355.6 mm) × 1″ (25.4 mm) × 3/4″ (19.05 mm)
VLF, VLR, VRF, VRR	4	2″ × 1″ × 3/4″	2″ (50.8 mm) × 1″ (25.4 mm) × 3/4″ (19.05 mm)
S10, S11, S20, S21	4	1″ × 1″ × 3/4″	1″ (25.4 mm) × 1″ (25.4 mm) × 3/4″ (19.05 mm)
RT	1	Width gauge less 3″ × 2½″ × ¾″; adds ¾″ behind shell	31.594″ (802.488 mm) × 2 1/2″ (63.5 mm) × 3/4″ (19.05 mm)
LB1, LB2	2	Cut two 14″ lengths from one 36″ × 1″ × ⅛″ steel bar. Drill and seat as step 13.	14″ (355.6 mm) × 1″ (25.4 mm) × 1/8″ (3.175 mm)

Plywood stock layout

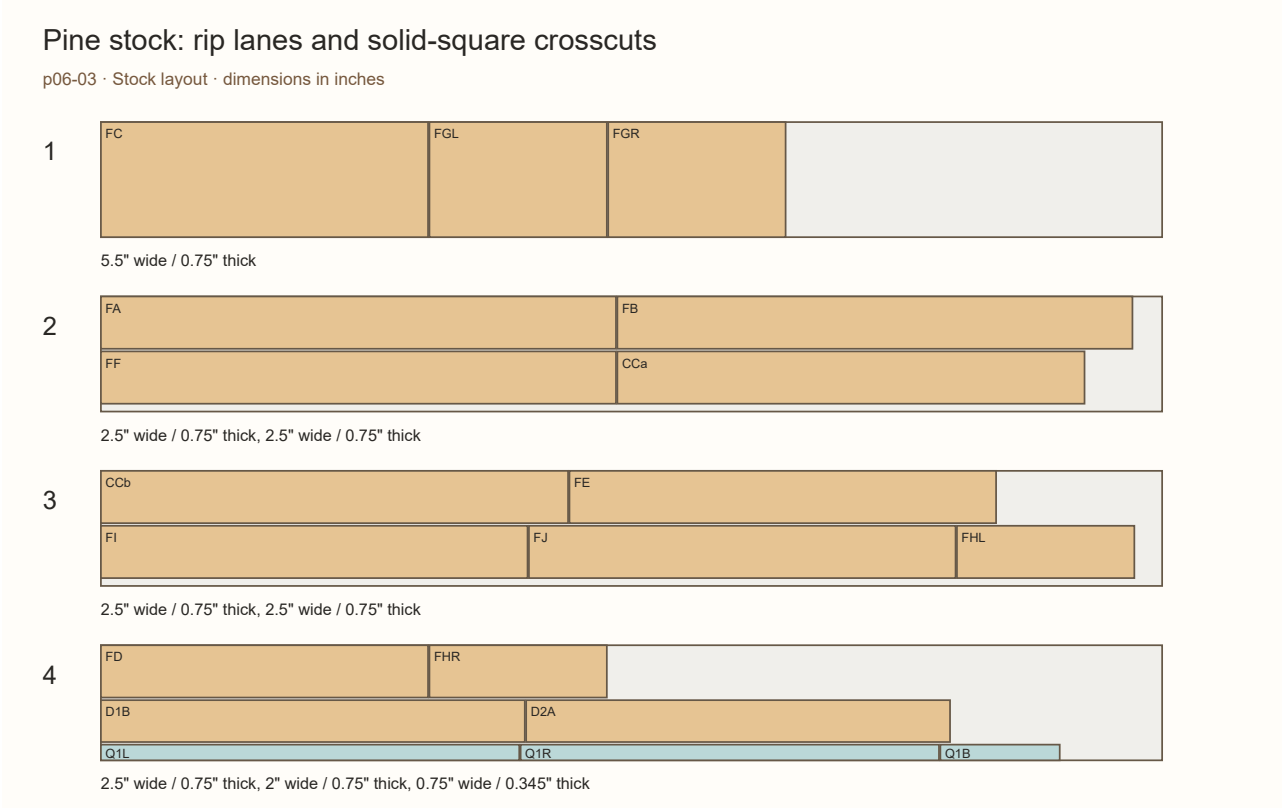
Two 48″ × 96″ sheets (1219.2 × 2438.4 mm). Keep a measured kerf between cuts and leave the floor solid. Nominal diagram sizes follow .703″ sheet thickness; use the fit gauges for the actual received sheet.



Cut the five panels from two sheets; preserve their reference edges.

Pine stock layout · boards 1–4

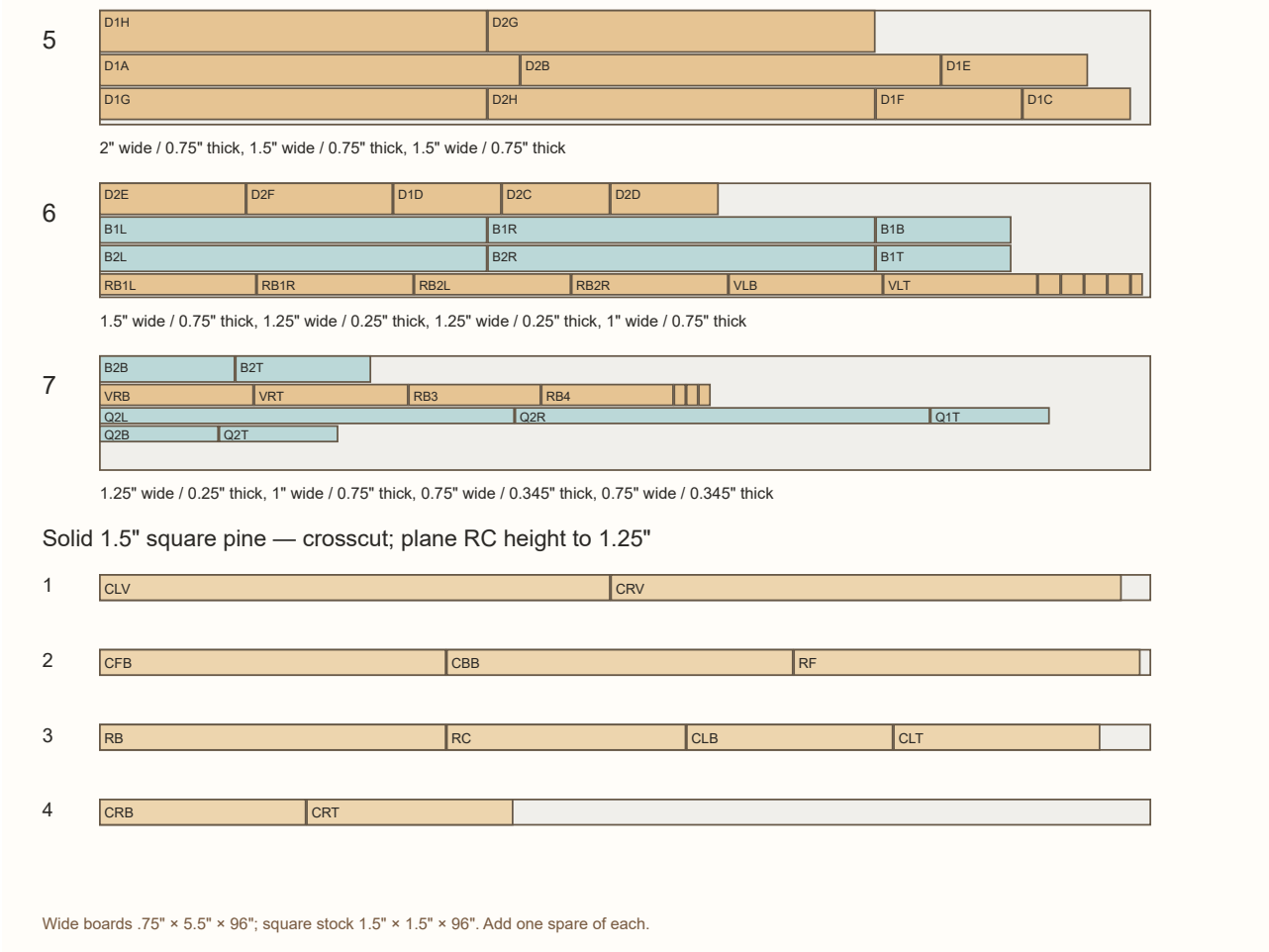
The buying list supplies eight clear nominal 1 × 6 × 8 ft boards and five clear 1½″ square × 8 ft sticks. Mill repeated widths while stock is long, then crosscut with supported tooling. Reserve offcuts for hardware and glazing trials.



Boards 1–4: grouped lengths and rip widths. Match part IDs to the cut schedule.

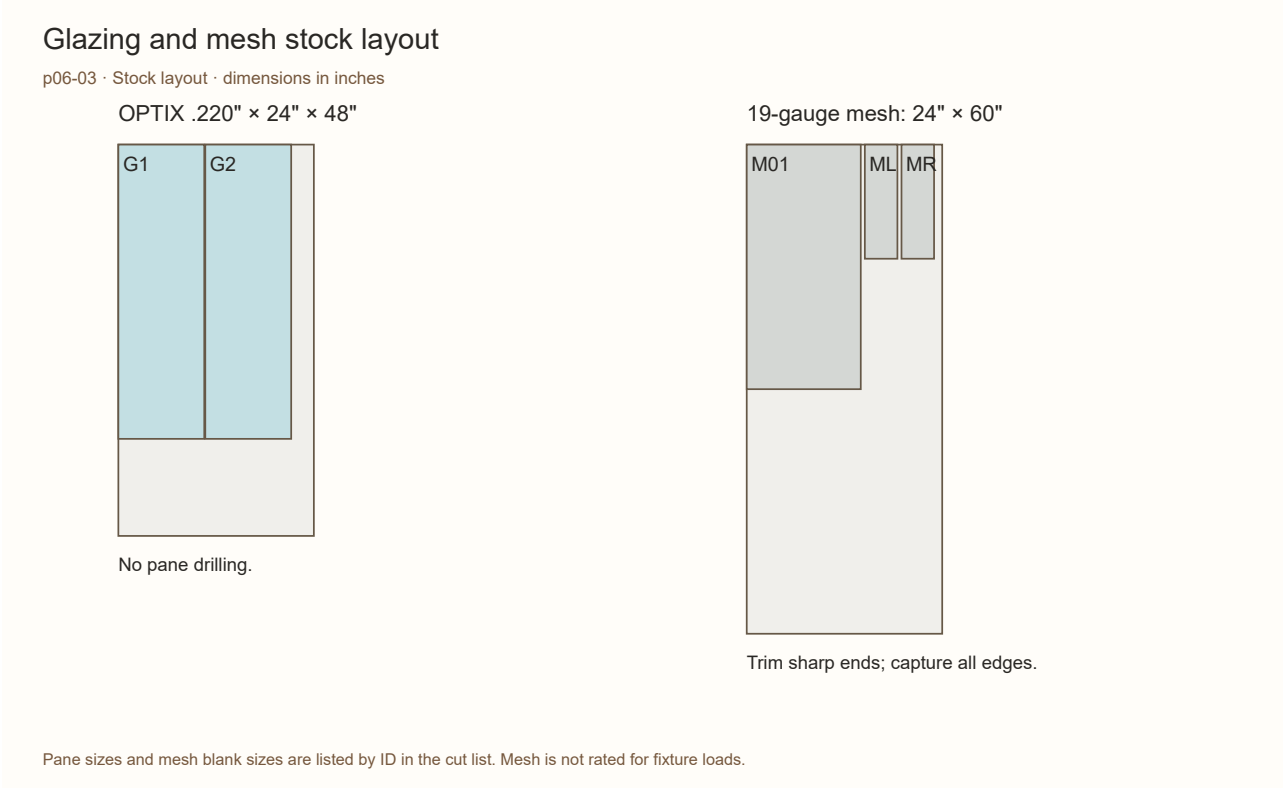
Pine stock layout · remaining boards

Boards 5–7 and the four primary square sticks are shown below. Cut RT from the eighth wide board: width gauge less 3″, by 2½″ wide and ¾″ thick. Its remaining stock and the fifth square stick provide fitting reserve. The cut schedule identifies every small part, including short battens and stops.



Boards 5–7 and solid-square crosscuts; keep the rib’s planed height and the measured glazing spacer setting.

Acrylic, screen and cushioning



Cut acrylic and mesh from the selected stock; fit actual panes to their completed leaves.

One 12″ × 36″ neoprene sheet supplies sixteen ¼″-wide face strips and eight setting-pad layers. Lay eight long and eight short strips in parallel lanes along the 36″ length, with ⅛″ knife-layout separation; this takes less than 6″ total width. The eight 1″-long setting layers fit in a separate 1″ lane. Cut to the actual fitted pane, as step 7.

Drilling and screw selection

Clamp and transfer from the actual receiver. Clearance-drill the first wood member and any intermediate member that the screw must pass through; pilot only the receiver, with a depth stop matched to the actual screw point. Keep hardware holes unmodified and check head seating on the trial.

FASTENER	USE
#8 × 1¼″ · 96	32 fixed-frame screws, 24 door-lamination screws, 36 hinge screws and four stop screws.
#8 × 1¾″ · 88	Panel, floor, front and roof attachment at the local schedules.
#8 × 2½″ · 23	Centre-column, rib and external-receiver attachments at the local schedules.
#6 × 1¼″ · 24	Twelve glazing-bead screws per leaf.
#10 × ⅝″ · 14	Seven screws for each keyless hasp; received head/point fit governs.
#10-24 complete bolt stacks · 38	Sixteen side-screen stations and 22 roof-screen stations. Each has two 1″ washers, a nylon-insert locknut and a closed cap; buy 2½″ screws and trim after the actual stack trial.

PHASE A

Prepare the parts

STEP 1 OF 22 · PHASE A

1 Receive stock and prepare fit gauges

Receive stock and prepare fit gauges

1. Use a flat, continuous 36″ × 24″ support and a helper for tall panels and glazed doors. Prepare accurate ripping, shallow stop-face relief and supported thin-strip milling.
2. Tools: guided saw/table saw, drill with depth stop and countersink, router or sharp chisels, clamps and straight cauls, square, tape/calipers, supported planer setup, mesh snips, eye/hearing protection and suitable dust extraction. Follow each tool's instructions.
3. Measure plywood, pine, mesh crossings and acrylic before cutting. Keep labeled panel offcuts as thickness gauges. Nominal pine is ¾ inch or 1½ inches square; pane thickness follows the purchased sheet.
4. Before dependent cuts, complete the glazing, keyless hasp and restraint trials in “Check received stock and hardware.” Trial a received hinge and selected screw in matching scrap too; verify countersink seating, the pin-removal space and stopped tip cover.
5. Record actual plywood, pane, neoprene, relaxed wire-crossing and steel thicknesses. Mark the chosen support, its full 36″ × 24″ footprint and the wood-stud restraint location before assembling this tall shell.

CHECK BEFORE YOU MOVE ON

Reference faces, actual thickness gauges and received-hardware trials are ready before their dependent cuts.

STEP 2 OF 22 · PHASE A

2 Cut the plywood panels and real ventilation apertures

Panels separated for clarity; the real inlet and roof cutouts remain visible.

1. Mark P01–P05 using the two-sheet layout. Keep 1/8" between cuts for the assumed saw kerf; measure your blade's actual kerf. Keep the floor and roof 36" × 24".
2. Cut each 12″ × 2″ inlet 5 inches behind the side front. For its lower edge, shorten a 7½-inch gauge by the floor-offcut thickness and mark up from the side bottom. Make a mirrored pair.
3. On the roof, mark the first opening 4 inches from the left edge and the second 18¾ inches from that edge; both start 5 inches from the front. Each opening is 13¼″ × 12″. Support the waste and smooth the edges.

CHECK BEFORE YOU MOVE ON

Measure both diagonals of every rectangular panel; preserve the 1.5" centre roof strip.

STEP 3 OF 22 · PHASE A

3 Rip and mill pine components

Rip and mill pine components

1. Use the grouped cut list in “Cut and fit schedule”. Prepare repeated widths while stock is long, then cut to length with a stop block. Keep labeled offcuts for machine setup and hinge trials.
2. Prepare glazing spacer stock 3/4" wide × 3/8" thick and retaining bead stock 1 1/4" wide × 1/4" thick using a supported carrier or suitable guarded tooling. Do not feed short thin pieces freehand.
3. Crosscut the solid-square cleats to the fit schedule. Plane the roof rib to 1¼ inches high while the stock is long, then fit its length between the front frame back and the back-panel inside face. Allow the listed spare stock.

CHECK BEFORE YOU MOVE ON

All piece IDs and grain-aligned lengths match the grouped cut list.

STEP 4 OF 22 · PHASE A

4 Laminate the fixed front frame

Rear layer lifted for clarity; assemble flat on a protected caul.

1. Make width and height gauges: shorten a 36-inch stick by both side-panel thicknesses and a 48-inch stick by floor and roof thicknesses. Use the same gauges for mating parts; do not round separate cuts.
2. Lay FA/FB face down to the gauges. Fit FC/FD between them and FE between the rails, centred with equal opening gauges. Transfer the joints to the rear layer with staggered laps; compare diagonals and clamp flat.
3. Use the local receiver pattern. Clearance-drill the rear layer and depth-stop the front pilots. Lift, spread Titebond III on bare mating faces, refit and drive 32 #8 × 1¼-inch screws from the rear. Seat flush; follow clamp conditions and leave unstressed at least 24 hours.

Local marking and receiver pattern

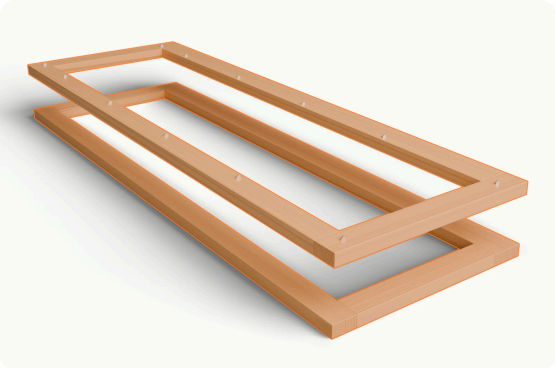
RECEIVER / ROW	PLACEMENT
Three stile lines · 8 each	Extend stile centrelines across sill/head. Mark 1¼″ from both frame ends and 4¼″ from the bottom. First middle mark: 10″ less floor thickness from bottom, then four more every 8″.
Sill/head · 4 more each	Sill centreline; head line 1¼″ below top. From each outer edge: 6″ less side thickness, then another 5″ inward. Mirror on the other side.

CHECK BEFORE YOU MOVE ON

Gauges fit, diagonals and openings match, laps bridge joints, and no screw breaks the front face.

STEP 5 OF 22 · PHASE A

5 Laminate the wide-view doors



One mirrored leaf shown; rear layer lifted to expose staggered joints.

1. Fit each door to its actual opening using ⅛-inch spacers on all four edges. Transfer its width and height to a jig. Use 1½-inch hinge stiles/rails and 2-inch latch stiles; mirror the doors.
2. Fit the front rails between full-height stiles. Rear full-width rails bridge those joints; rear short stiles fit between rails. Glue with Titebond III, clamp square and fit 12 #8 × 1¼-inch rear-entry screws per leaf using the local pattern.
3. After the surface-hinge layout check, plane a 3° back bevel on each latch edge only. Keep its front arris at the fitted width; remove material toward the rear. Work on the supported unglazed frame, never against acrylic.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Two rows per leaf · 6 each	Lines ⅜″ outboard of the front stiles' inner edges. From leaf bottom: ¾″, 5″, 13″, 21″, 29″; last mark ¾″ below leaf top. Drive from rear.

CHECK BEFORE YOU MOVE ON

Equal diagonals; unchanged front arrises and glazing receivers. Keep new glue joints unstressed at least 24 hours under maker conditions.

STEP 6 OF 22 · PHASE A

6 Make the cleats and roof ledgers

Solid cleats and roof ledgers in their installed relationship.

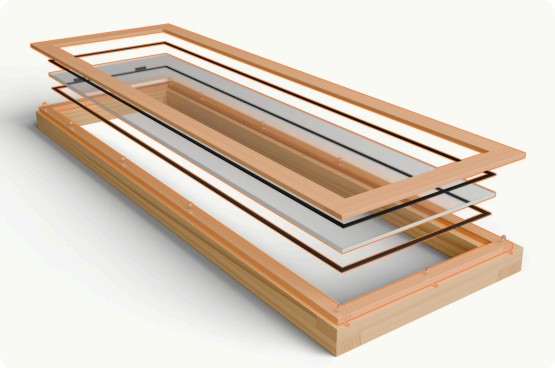
1. Sort solid CLB/CLT/CRB/CRT side cleats, CLV/CRV rear corner cleats, CFB/CBB floor cleats and RF/RB roof ledgers. Mark front/back and top/bottom; no cleat glue-up is needed.
2. Glue the two 2½-inch-wide CC layers into a 1½-inch-deep column. Fit its length between the front floor cleat and roof ledger after checking the finished roof/cloth stack. Do not force a long column under the roof.
3. Dry-place supports before drilling. Leave the side cleats clear of rear corner cleats. On RF only, relieve the bottom ¼ inch of its front face by 1/32 inch for door clearance; keep the upper screw receiver and top bearing face intact.

CHECK BEFORE YOU MOVE ON

Keep every bearing face flat. Do not substitute a knotted furring strip for the specified clear square stock.

STEP 7 OF 22 · PHASE A

7 Prepare the captured glazing



Rear glazing layers separated: cushions, pane, spacers and removable beads.

1. With protective film retained, cut each pane from its actual leaf: visible opening width and height plus ¾ inch. This gives ⅜-inch overlap all around. Use acrylic tooling and supported edges; remove burrs without flame polishing.
2. Make the pocket ¼ inch larger than the pane in both directions, leaving ⅛ inch per edge. Mill Q spacers from ⅜-inch blanks so the coated pocket equals the actual pane plus two 1/16-inch solid-neoprene face cushions. Include cured film in the fit; retaining beads overlap by ⅜ inch.
3. Cut the 16 face strips and eight setting-pad layers from one Rubber-Cal 2837423 sheet. Use 1/4-inch-wide face strips, two stacked pads at each lower support, no adhesive on acrylic, and light contact rather than forced compression. Leave beads removable and the pane free to move; do not drill acrylic.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Side bead rows · 5 each	Rows ½″ outside pane edges. Heights: ½″ below pane bottom; 5″, 14″, 23″ above pane bottom; ½″ above pane top.
Upper/lower beads · 1 each	Centre each screw across its bead, ½″ outside the corresponding pane edge. Twelve #6 × 1¼″ screws per leaf; keep tips outside acrylic.

CHECK BEFORE YOU MOVE ON

The finished short-section fit must neither rattle nor bow the pane. Correct spacer thickness instead of tightening the bead onto an oversized stack.

STEP 8 OF 22 · PHASE A

8 Capture the lower inlet mesh

Inside face of the left inlet with its captured screen and fastening stacks.

1. Cut two 14" × 4" side mesh blanks. Deburr and fold/trim protruding wire ends so every edge remains under a capture batten; wear gloves when handling cut cloth.
2. Use eight stations per side: #10-24 stainless pan screws, 1-inch washers, nylon-insert locknuts and closed caps. Buy 2½-inch screws; trim from the measured stack after checking one complete fastening.
3. Keep heads/washers inside; locknuts and caps outside. Before drilling, check each shank clears an actual mesh opening and each washer bears fully on its batten. Record any required station correction. Fully engage nylon and cap threads without bottoming the cap or crushing wood/cloth; deburr away from the shell.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Top/bottom battens · 3 each	Centre the rows across the 1″ battens. Along each 14″ blank, mark ½″ from each end and at its midpoint.
End battens · 1 each	Choose the actual mesh opening nearest the short-batten midpoint. Keep each 1″ washer fully on wood. Shift cloth registration before drilling; never drill a welded crossing.

CHECK BEFORE YOU MOVE ON

Inspect all cut edges from both sides. Sample one actual stack to establish nut height, cap usable depth and head/washer bearing before cutting all screws.

PHASE B

Dry-assemble and fit everything

9

STEP 9 OF 22 · PHASE B

Dry-fit side and back panels

Supported wall/cleat arrangement before floor and front are secured.

1. Support the back and sides upright with temporary braces and a helper. Fit rear corner cleats inside the two back corners; set their bottoms at the panel bottoms.
2. Install side floor/top cleats with their lower/upper faces at the side-panel edges. Fit front/rear receivers at the elevations in the support drawing.
3. Drive #8 × 1¾-inch screws through panel clearance holes into stopped pine pilots. Use the local receiver schedule and a 48-inch height story stick. Keep perpendicular side/back rows offset; transfer the clamped receivers before drilling.

Local marking and receiver pattern

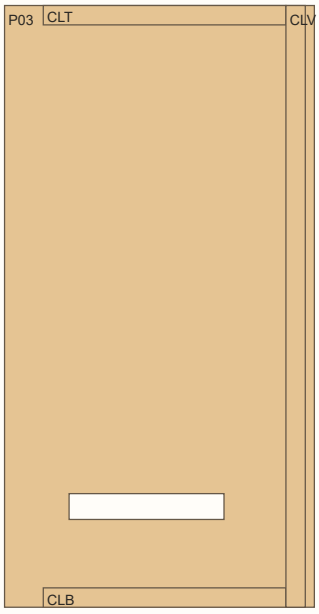
RECEIVER / ROW	PLACEMENT
Side front/rear rows	Front row ⅜″ behind side front; rear row back thickness + ¾″ forward from rear. Height-stick marks: 3″, 12″, 21″, 30″, 39″, 45″.
Side top/bottom rows	¾″ from side-panel top/bottom. Along depth from front: 5″, 11″, 17″, 20″.
Back corner rows	7/16″ from each back-panel side edge. Height-stick marks: 5″, 14″, 23″, 32″, 41″, 46″.
Back cleat/ledger rows	¾″ above back bottom; 2¼″ below back top. Width-stick marks: 5″, 10″, 15″, 21″, 26″, 31″. Transfer actual solid receivers; preserve the offset from side rows.

CHECK BEFORE YOU MOVE ON

Check the box is square and the supports meet cleanly. Keep braces until the floor and front secure the shell.

Tall-shell supports and inlet placement

p06-03 · inches · Construction detail



Side: 24" × 46.594" × .703"

Panel bottom rests on floor.

Lower/top cleats: 18.797" long

Front ends at y = 3".

Rear corner: 1.5" square

Ledger tops support the roof rib.

Front column stands on CFB.

Full-footprint floor support required.

Inlet bottom: 7.5" above floor underside; maximum fill top: 4.703".

Support arrangement and reference elevations; use actual-stock fit gauges and the finished bearing detail.

STEP 10 OF 22 · PHASE B

10 Fasten the floor on full support

Floor separated for access clarity; support the shell safely during fastening.

1. Lay the floor on its full, level support. Bring the braced wall assembly onto it with help; align the outside edges flush.
2. Fit the front and back floor cleats between the side supports. Drive the 14 floor screws from below only while the assembly is safely supported for access; do not work beneath an unstable tipped shell.
3. Use the same stopped pilot/clearance method as the panel joints. Keep finished heads flush to avoid rocking on the permanent support.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Two side rows · 3 each	Side thickness + 7/16″ inward from floor edges. Depth marks from front: 6½″, 13½″, 19″.
Front/back rows · 4 each	Front line 2″ from floor front; back line about 7/16″ forward of the inside back face. Width marks: 6″, 12″, 24″, 30″. Clamp and verify solid receivers before drilling upward.

CHECK BEFORE YOU MOVE ON

Check the floor perimeter bears continuously and the shell diagonals remain equal.

STEP 11 OF 22 · PHASE B

11 Fit the front and bearing column

Front and bearing column fitted into the wall/floor assembly.

1. Fit the laminated front between the sides, bottom on the floor and face flush with the side fronts. Clamp and transfer the front receiver screw rows from the solid cleats/ledger.
2. Stand CC on the front floor cleat and beneath RF, with full bearing at both ends. Fit its five #8 × 2½-inch front-entry screws using the local height pattern.
3. Fit four bottom stops behind the aperture corners. Relieve only the upper ¼ inch of each front face by 1/32 inch; the lower mounting face stays in contact with the fixed frame. Fit one #8 × 1¼-inch screw per stop, below the relief.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Front cleat/ledger · 6 each	¾″ above frame bottom and 2¼″ below frame top. Use width-stick marks 5″, 10″, 15″, 21″, 26″, 31″.
Column · 5	Column centreline; height-stick marks 8″, 16″, 24″, 32″, 40″.
Bottom stops · 4	One rear-entry screw per stop: centred across its 1″ width and ⅜″ above its bottom. Keep the screw below the shallow top relief.

CHECK BEFORE YOU MOVE ON

The 5.5" sill height is measured above the inside floor. Check both door apertures before proceeding.

STEP 12 OF 22 · PHASE B

12 Seat the roof rib on its ledgers

Rib on full end bearing; roof and cloth omitted to reveal contact faces.

1. Centre RC across RF and RB. Both rib ends bear on the full 1½-inch depth of the ledgers; the shallow front stop relief is below this bearing face.
2. Fasten the rib downward with two #8 × 2½-inch screws: mark 1/2 inch from each rib end and 5/16 inch to the right of its centreline. Use the local detail; both screws remain outside the mesh blank. Drill before the roof is fitted.
3. Set the rib top one relaxed mesh-crossing thickness below the coated roof underside. Use the bearing detail to transfer ledger and column heights from actual finished surfaces. At the ends, where there is no mesh above RC, that same height difference is an intentional air gap.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Two rib ends	½″ from each end, in the right half of the rib (about 5/16″ right of centre). #8 × 2½″ downward into the ledgers. No fastener through cloth.

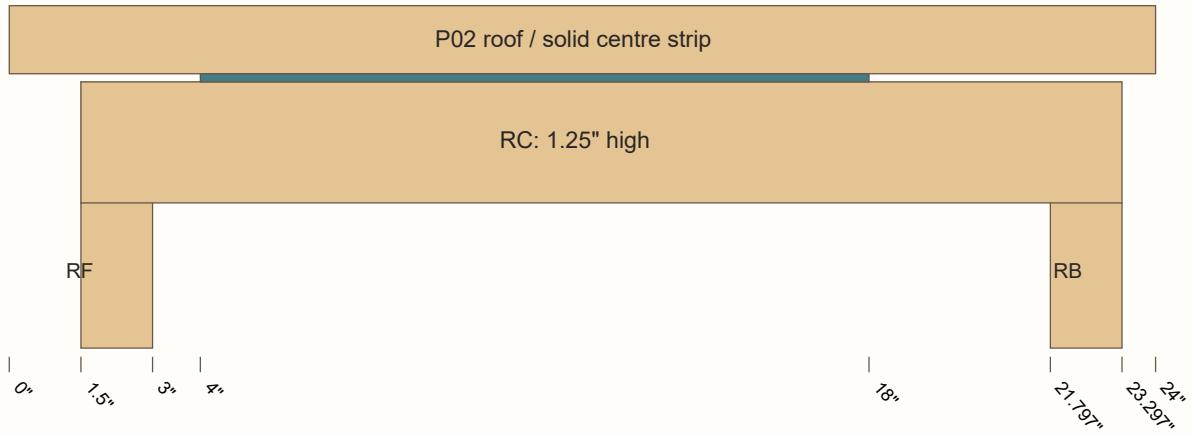
CHECK BEFORE YOU MOVE ON

There are no roof-to-rib screws through the mesh. The rib is retained at its end bearings and is not a fixture-support beam.

Roof / cloth / rib / end-ledger bearing section

p06-03 · inches · Construction detail

Section at x = 18"; front left, back right. Vertical scale exaggerated.



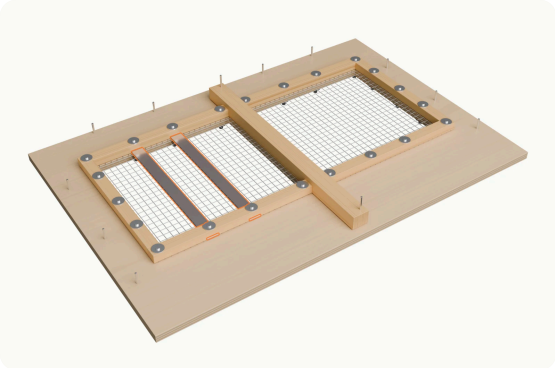
Y stations: roof 0–24; rib 1.5–23.297; cloth 4–18; end bearings 1.5–3 / 21.797–23.297.

Full wood-to-wood end bearing: 1.5" × 1.5" at RF and RB, below the rib.
At both ends, no cloth is present: a deliberate .084" nominal gap is ABOVE the rib.
Between y = 4" and 18", cloth crossings fill that gap under the solid roof strip.
Rib and roof have continuous flat faces; wire contact is discrete, not a solid bearing layer.
Nominal Z: roof underside 47.297; rib top 47.213; rib/ledger contact 45.963;
ledger bottom / column top 44.463. Column: 42.260" from floor-cleat top 2.203.
Rib end screws: x = 18.3; y = 2 and 22.797; #8 × 2.5", heads flush, outside cloth.
Finished fit: U = actual coated roof underside; m = relaxed cloth crossing thickness;
R = finished rib height; L = finished ledger height; F = finished floor-cleat top.
Set ledger top = U − m − R; ledger bottom = U − m − R − L;
fit column contact length = U − m − R − L − F. Recheck after full coating cure.
Keep the roof on its side/front supports. Do not lift it or crush cloth to close the stack.
Bare-wood example uses m = .084, R = 1.25, L = 1.5. Measured finished fits govern.
Section resolves contact geometry only. Rib is not a lamp support. See step 13 for the separate left steel supports.

Transfer finished roof, mesh, rib and ledger surfaces with one set of fit gauges.

STEP 13 OF 22 · PHASE B

13 Capture the roof mesh and dry-fit the roof



Roof underside: the left steel strips sit below the mesh and in the capture-batten end seats.

1. Lay the roof inside face up, with left/front labels visible. Position the 30″ × 14″ mesh 3″ from the left and 4″ from the front. Deburr all cut wires; the six capture battens must cover every cut edge.
2. Cut LB1 and LB2, each 14″ × 1″ × ⅛″, from one Hillman 11653 36″ bar. File all edges. Drill two ¼″ bores on each strip's width centreline, ½″ from each end: 13″ between centres. Use a clamped backing block and deburr both bore faces.
3. Keep the strip width centrelines at 7.973″ and 11.767″ from the roof LEFT; the ends run from 4″ to 18″ from the FRONT. This preserves the existing four registered screen-bolt positions. Use the exact decimal marks or transfer a single full-size jig; do not independently round the centres.
4. Transfer each steel end's actual footprint to RB1L and RB2L. Cut a seat across the 1″ batten width, nominally 1″ wide and ⅛″ deep, so steel lies directly below the wire. Keep at least ⅝″ wood beneath each end. Trial roof offcut, mesh, steel and batten together: both steel ends must seat fully and neither strip may rock.
5. Clamp the fitted stack. At BR02, BR03, BR10 and BR11, transfer the steel bores through the wood, using the actual mesh cells without a trapped wire or clipped loose end. Front bolt row is 4½″ from FRONT; rear row is 17½″. Each row uses the two exact left-edge centres above. Clear wood for the #10 shank, keep the selected mesh registration and retain full washer bearing.
6. Fit all 22 roof bolt stacks with heads and first washers under the battens, through wood/steel where present, mesh and roof, then the outer washers, nylon-insert locknuts and closed caps above. Measure actual wood, wire, washers, nut height and usable cap depth before trimming the purchased 2½″ screws. Fully engage nylon and cap threads without bottoming caps or crushing wood; deburr off the shell.
7. Fit the roof to the supported shell, with the central cloth captured against RC. Install six side-cleat and four front-head #8 × 1¾″ screws at the local pattern. RC has its own end screws; never add a wood screw through the cloth.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Wood roof screws · 10	Side rows: side thickness + 7/16″ inward, at depths 6½″, 13½″, 19″. Front row: ⅜″ behind front, at widths 6″, 12″, 24″, 30″.
Mesh bolts · 22	Four existing stations also capture steel: X = 7.973″ / 11.767″; Y = 4½″ / 17½″ from roof LEFT / FRONT. Keep their registered mesh cells. Other stations follow the actual mesh and full washer-bearing rule; preserve separated holes and edge capture.

DETAIL	IMPERIAL AND METRIC
Strip centres from LEFT	7.973″ (202.514 mm) / 11.767″ (298.882 mm)
Bolt rows from FRONT	4 1/2″ (114.3 mm) / 17 1/2″ (444.5 mm)
Steel size	14″ (355.6 mm) × 1″ (25.4 mm) × 1/8″ (3.175 mm)

CHECK BEFORE YOU MOVE ON

Both steel strips have full end support and four captured bolt stations. The right roof remains clear of heat fixtures. This is a proposed support geometry, not a tested roof-load rating; complete step 22 before operating equipment.

STEP 14 OF 22 · PHASE B

14 Fit the surface hinges

Three visible removable-pin hinges per leaf. Transfer the received hole pattern.

1. Use six McMaster1798A21 surface hinges, three per leaf, with 36 #8 × 1¼-inch flat-head screws. Both leaf backs sit flat on the front faces; do not mortise or pack them. Block the unglazed door flush at ⅛-inch bare perimeter gaps.
2. Place hinge centres 4 inches from the door bottom and top, with the third halfway between. Align all pin axes over the hinge-side gap with one straightedge. Transfer the six actual holes per hinge. Use stopped pilots matched to the screw root; hand-check head seating in a hinge first.
3. Support the leaf and swing slowly to 90°. Check the 3° latch bevel, relieved stops, heads and glazing receivers. Keep 4 inches clear above each pin and at least 15 inches working room in front. Withdraw bottom, middle, then top pin with the helper carrying the leaf; refit top first.

Local marking and receiver pattern

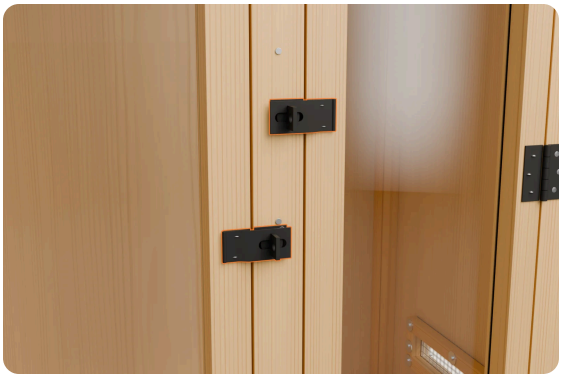
RECEIVER / ROW	PLACEMENT
Three hinges per leaf	Centres 4″ from top/bottom; third halfway between. All pins share one straight axis. Transfer six delivered holes per hinge; no mortises.
Screw/pin fit	#8 × 1¼″; reference leaf about 5/64″ thick. Check head seating and at least ⅛″ back cover. Leave 4″ above pins; support leaf throughout removal/refitting.

CHECK BEFORE YOU MOVE ON

No forcing, screw pull or scraping. Nominal screw entry is about 1⅛ inches with over ¼ inch back cover; verify actual tips and repeat free swing/removal after finishing.

STEP 15 OF 22 · PHASE B

15 Fit independent keyless door latches



Two independent swivel hasps. Turn the swivel and lift the flap to open without a key.

1. Use one National Hardware N305-979 swivel-staple hasp per leaf. Fit the narrow hinged base to the moving latch stile and its square swivel plate to the fixed FE post. Both front faces remain flush; the two fixed plates are staggered vertically.
2. Align the left swivel centre 17 19/32″ from the shell LEFT and 23″ above the floor underside. Align the right centre 18 13/32″ from LEFT and 29″ above the same datum. Transfer these marks with the width/height story sticks. Check full plate backing and flap alignment before marking actual holes.
3. Use the received plate holes as the drilling template. Fit seven Everbilt #10 × ⅝″ screws per assembly: three at the hinged base and four at the square plate. Keep all pilots within solid front-layer wood and clear of the pane pocket; use the proven depth-stop setting from the scrap trial.
4. Turn the swivel so it aligns with the flap slot, lift the flap outward, then open that door. Close the door, fold the flap over the swivel and turn the swivel across the slot to retain it. Open each leaf while the other stays latched. Repeat after finish cure; do not force or bend the purchased hardware.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Left swivel centre	17 19/32″ (446.881 mm) from LEFT; 23″ (584.2 mm) above floor underside.
Right swivel centre	18 13/32″ (467.519 mm) from LEFT; 29″ (736.6 mm) above floor underside.
Seven screws per assembly	Use actual purchased holes and the received-hardware trial. The illustrated formed profile is not a drilling template.

CHECK BEFORE YOU MOVE ON

Both doors latch and release independently by hand. No key is needed for daily access. A padlock may be added for optional secondary security; none is required or included in the base build.

STEP 16 OF 22 · PHASE B

16 Fit the external restraint receiver

External solid receiver RT; fit both complete restraint kits at the actual wall.

1. Fit RT, the exposed rear receiver bar, over solid RB with both centre heights aligned. RT is ¾ inch thick and 2½ inches high; fit its length to the width gauge less 3 inches. It projects ¾ inch behind the shell.
2. Clamp the bar and drill clearance holes through RT and P05, with stopped pilots into RB. Fit four #8 × 2½-inch screws using the adjacent pattern. The nominal stack leaves about 1 inch of screw in solid RB; no screw relies on plywood alone.
3. Fit two Hillman9976524 restraints to the exposed bar with the kit's ⅝-inch furniture screws. Transfer each actual bracket, keeping its full footprint on wood and clear of bar screws. Route cables entirely outside. At the final location, follow kit instructions for sound wood studs, wall screws, cable slack and pin retention.

Local marking and receiver pattern

RECEIVER / ROW	PLACEMENT
Receiver bar · 4 screws	Centre bar across the back over RB. Centre its height on RB, then transfer the ledger centreline through the back. Width-stick marks: 6″, 14″, 22″, 30″. Use #8 × 2½″ through bar/back clearance bores into RB pilots.
Two kit brackets	Transfer actual brackets to the exposed solid bar, clear of its four screws. Use only the kit's ⅝″ furniture screws. Bracket footprint must fit the 2½″ face; retain at least ⅛″ wood behind screw tips.

CHECK BEFORE YOU MOVE ON

Full-footprint support, actual bracket/wood fit and site fastening must be checked. Another wall type needs a supported method. No containment hole, universal wall claim or tested load rating.

STEP 17 OF 22 · PHASE B

17 Check the complete dry assembly

Supported door service positions; no physical load test is claimed.

1. Inspect all joints and fasteners; check squareness and support contact. Operate each supported door independently, then remove/refit its pins and test its keyless latch.
2. Check pane expansion spaces, mesh edge capture and all inside surfaces by sight and touch. Resolve binding, protruding hardware, loose mesh or cracked timber before finishing.
3. Mark mating components and photograph the dry assembly. Record actual hinge measurements and any source changes; this guide does not claim a physical trial has occurred.

CHECK BEFORE YOU MOVE ON

Do not use finish or extra screw torque to conceal a gap or misaligned joint.

PHASE C

Finish and cure

STEP 18 OF 22 · PHASE C

18 Disassemble for finishing

Separate removable parts for finishing; keep glued assemblies intact.

1. Remove and label panes, hinges, hasps, mesh and steel strips and other removable hardware. Bag hardware by location; retain laminated frame/door/column assemblies intact.
2. Use helpers and temporary supports for the roof, doors and panels. Keep every component ID visible on a protected non-exposed reference area.
3. Complete drilling and edge smoothing before coating. Keep dust off mating/contact surfaces and protect threads and hinge seats from uncontrolled film buildup.

CHECK BEFORE YOU MOVE ON

The reassembly map and all parts remain identifiable.

STEP 19 OF 22 · PHASE C

19 Apply the verified coating system

Coat disassembled wood; keep bare glue interfaces and threads protected.

1. Use Varathane Triple Thick clear satin 284473, Lowe's 9181732 / seller 284473-7482. Keep Titebond III glue faces bare; let joints cure under its own directions. Sand clean, dry wood 120–220 grit, vacuum and wipe lint-free. Stir, do not shake; use a synthetic-bristle brush with the grain and ventilation.
2. Brush one coat of Varathane Triple Thick clear satin 284473 with a synthetic brush; stir, do not shake. Apply at 60–90°F and below 85% RH with ventilation. Two two-can packs provide four quarts; calculated need is three cans including the separate repair/detail allowance.
3. Keep the shell unoccupied through FULL CURE: 7 days at 70°F / 50% RH with ventilation, starting from the final applied or repaired coat; adverse conditions require longer under manufacturer directions. Record time and conditions. Two-hour recoat, 48-hour light use and loss of odor are not full cure. Clean tools with soap and water.

CHECK BEFORE YOU MOVE ON

Indoor, moderate humidity, non-immersed, no permanent wet contact; keep fixtures away from wood and radiant hotspots. Manufacturer excludes outdoor surfaces and floors. No animal-safety certification or numeric heat rating is claimed.

PHASE D

Final assembly and checks

20

STEP 20 OF 22 · PHASE D

Reassemble into existing holes

Reassemble the shell using its checked holes and bearing faces.

1. After full cure, inspect faces, edges, cutouts and holes. Verify actual coated clearances at the relieved stops, door reveals, pane pockets and roof bearings; nominal film is only an allowance, not a fit guarantee.
2. Reassemble the supported shell in the dry-fit sequence using the existing holes. Recheck square and bearing contact; do not bury heads or force a coated joint closed.
3. Refit captured mesh and roof. Refit the external receiver/restraints at the final support and wall. Keep vents clear; confirm every cut bolt tail is protected.

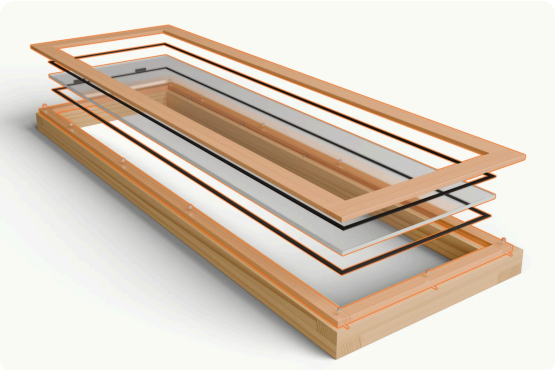
CHECK BEFORE YOU MOVE ON

Coating thickness has not eliminated a reveal, pane movement gap or removable-hardware clearance.

21

STEP 21 OF 22 · PHASE D

Capture glazing and refit doors



Refit glazing layers after full cure, then reinstall the supported doors.

1. Refit the selected unbonded neoprene face cushions and lower setting pads, then each pane. Fit the removable beads with the 24 designated screws; retain the perimeter movement allowance and light contact without bowing.
2. With a helper supporting each leaf, refit its surface hinges/pins, independent keyless hasp. Keep at least 1/16 inch finished perimeter clearance and check full 90° outward movement; do not force a bind.
3. Inspect screw seating, sound timber and the retained glazing. Repeat supported pin removal/refitting with the actual glazed leaf; hinge reference dimensions do not establish a tested door load rating.

CHECK BEFORE YOU MOVE ON

Verify finished pad contact, pane movement and received hinge/hasp installation before use.

STEP 22 OF 22 · PHASE D

22 Final checks and equipment planning

Finished shell with clear left-side lamp provision and a separate cool side.

1. Limit dry substrate to 4 inches above the inside floor. This leaves 1½ inches below the sill top. Inlet clearance is 3½ inches less the measured floor thickness—about 2¾ inches with the specified sheet. Keep piles and furnishings away from both inlet faces.
2. Inspect and clean both lower screens and the roof outlets regularly; recheck edge capture and fastener security. Low-to-high airflow is a design strategy, not a measured ventilation rate.
3. For the optional screen-top example, use the Fluker 27004 Mini Sun Dome only in its manufacturer-permitted external screen-top position. Centre its rigid flat rim 9.87″ from LEFT and 11″ from FRONT, over both steel strips through the mesh. The proposed fit envelope is at most 6″ overall diameter, a 5½–6″ rim and at most 2 lb including bulb. Weigh and measure the received assembly; 2 lb is a design assumption, not a tested capacity.
4. Confirm four seated rim contacts over the two strips, stable support and full bearing at the batten ends. No fixture goes on unsupported cloth or the central rib. The nominal 2.87″ wood margin is geometric space, not a universal thermal clearance. Keep the right half free of heat fixtures and provide species-appropriate shade.
5. Select the bulb, thermostat, guard where required, cables and placement using the actual fixture/bulb instructions and the animal's reviewed needs. The fixture's 100 W electrical maximum is not an operating recommendation. Keep heat off wood, finish and cables; measure the completed warm and cool conditions before animals. If a fixture cannot meet its instructions here, use a suitably guarded internal installation only when its manufacturer permits that installation and its attachments and clearances are resolved.
6. At the final location, check full-footprint support, both external restraints, door service room, dry substrate and all sharp-edge covers. Repeat keyless opening, closing and supported pin removal. Record measurements and recheck hardware, coating and temperature controls during use.

CHECK BEFORE YOU MOVE ON

Completed shell construction still requires actual received-hardware fit and site/equipment commissioning. No standing-water, strength, tipping, thermal or animal-suitability certification is claimed.

Placement and maintenance

Support the entire floor on a level 36″ × 24″ surface. RT projects ¾″ behind the shell; leave working space for the external cable kits and wall attachment. Use a helper for doors and tall panels, and leave at least 4″ above hinge pins and 15″ in front for the stated service operation.

Daily access is keyless: align the swivel with the slot, lift the flap and open. Close the leaf, fold the flap over and turn the swivel across the slot. Recheck screws, latches, mesh edge capture and restraints periodically. Keep lower screens unobstructed and dry substrate at or below 4″ above the floor.

The selected coating is for indoor moderate-humidity, non-immersed use without permanent wet contact. Repair damaged film and repeat full cure before use. Recheck the actual equipment’s instructions, thermostat operation, warm/cool measurements and wood/cable exposure after any equipment change.

The model communicates part positions and the operating sequence. Purchased hardware profiles are schematic; the hasp’s internal flap/tab shape is approximate. Received hardware, the scrap trial and final supported operation govern fitting. Digital geometry checks do not replace a physical load or thermal test.

Reference files and model

Interactive model · Practical cuts and fitting · Exact nominal source cuts · Materials schedule

Hardware and equipment references

- Rubber-Cal solid neoprene 40A sheet — reference 1
- Varathane Triple Thick clear satin polyurethane — reference 1
- Hillman Simple Mount Anti-Tip Kit — reference 1
- Hillman Simple Mount Anti-Tip Kit — reference 2
- OPTIX clear acrylic — reference 1
- OPTIX clear acrylic — reference 2
- Acorn galvanized hardware cloth — reference 1
- McMaster surface-mount removable-pin hinges — reference 1
- Titebond III Ultimate — reference 1
- Titebond III Ultimate — reference 2
- National Hardware black swivel-staple safety hasp, 3-1/4 inch — reference 1
- National Hardware black swivel-staple safety hasp, 3-1/4 inch — reference 2
- Fluker Mini Sun Dome — fixture instructions