PO-003 Lift-out manure catch tray

Collect droppings below an existing roost in a removable washable-lined tray, independently of the roost structure.

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

Read every step and identify the installed orientation. Make the component off-site with birds excluded.

Measure the actual receiving space, chosen commercial accessories and access route. Stop if the example does not fit; changing only one member can invalidate the assembly.

Reject split, warped, moldy or chemically contaminated stock. Keep exposed mesh cut ends and all sharp fasteners inaccessible to birds.

The drawing dimensions control; illustrations are not full-size templates. Allow a saw kerf between parts when laying out stock.

Use limits

No person may stand or sit on this component. No tested load rating is claimed.

A site-specific safe location and supervision are required; remove it if birds become trapped, peck damaged material, or cannot use their normal feed, water, shelter and escape routes.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
A Bottom	1	36 × 24 × 1/2 in 914.4 × 609.6 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
B Full-depth side	2	24 × 3 1/2 × 1/2 in 609.6 × 88.9 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
C Front	1	35 × 3 1/2 × 1/2 in 889 × 88.9 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
D Back	1	35 × 3 1/2 × 1/2 in 889 × 88.9 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.

Hardware and consumables

26 × #8 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). Wood joints. Use compatible coatings/metals and the maker's pilot-hole guidance; do not substitute drywall screws.

2 × Flush exterior pull with short compatible screws. Outside handles; selected fasteners must not penetrate the inner surface

Removable 1/16–1/8 in (1.6–3.2 mm) polypropylene liner; not counted as structural bracing

Tools

Tape measure, square and pencil; Saw appropriate to material and work supports; Drill/driver, countersink and pilot bits selected for the screws; Clamps, sanding block and eye/hearing protection; dust control appropriate to the material

Primary context and design record

Context references; not design endorsements or certifications.

S1 · Caring for chickens in cold weather · University of Minnesota Extension

S2 · Build a Clean Routine · USDA APHIS Defend the Flock

Assembly and first checks

The large drawing plates follow the instructions in this same PDF. Read the cut list and match part IDs before cutting. Print with automatic page orientation; use written dimensions rather than measuring the printed drawing.

01 Cut bottom A to 36 × 24 in (914.4 × 609.6 mm) from actual 1/2 in plywood; mark its upper face.

02 Cut two B sides to 24 × 3 1/2 in (609.6 × 88.9 mm) and C/D to 35 × 3 1/2 in (889 × 88.9 mm).

03 Dry-fit B on top of A with the outer faces flush with A's long sides. C and D fit between B, not outside them.

04 Mark bottom-to-wall screw lines 1/4 in (6.4 mm) inward from each bottom edge. Keep the first and last fastener 1 in (25.4 mm) from the corners.

05 Clamp B square and drive four 1 1/4 in screws through the underside of A into each B edge at equally spaced positions.

06 Clamp C and D between B; drive five 1 1/4 in screws through A into each front/back lower edge.

07 Drive two 1 1/4 in screws through each B end into C or D, at 1 and 2 1/2 in (25.4 and 63.5 mm) above A.

08 Make a removable one-piece polypropylene liner 34 7/8 × 22 7/8 in (885.8 × 581 mm), rounding its corners so it clears the 35 × 23 in internal floor.

09 Attach one bought flush pull to the outside center of each B with maker-matched short fasteners. Do not cut hand holes that can snag birds.

10 Seal plywood edges with a suitable fully cured coating, then install the liner loose; do not glue down a surface that must be removed to dry.

11 Locate the tray on a level supported floor below the soiling zone. Ensure its 4 in (101.6 mm) total height does not create a trapping gap or obstruct a landing path.

12 With birds absent, lift it empty through the actual exit route. Clean frequently enough that material never makes the tray unmanageable; carry by both pulls.

Acceptance and intermediate checks

The outside plan remains 36 × 24 in; the internal liner space is 35 × 23 in.

The liner lifts freely, and no bottom screw emerges above a wall edge.

Empty tray exits the coop without tipping through a bird opening.

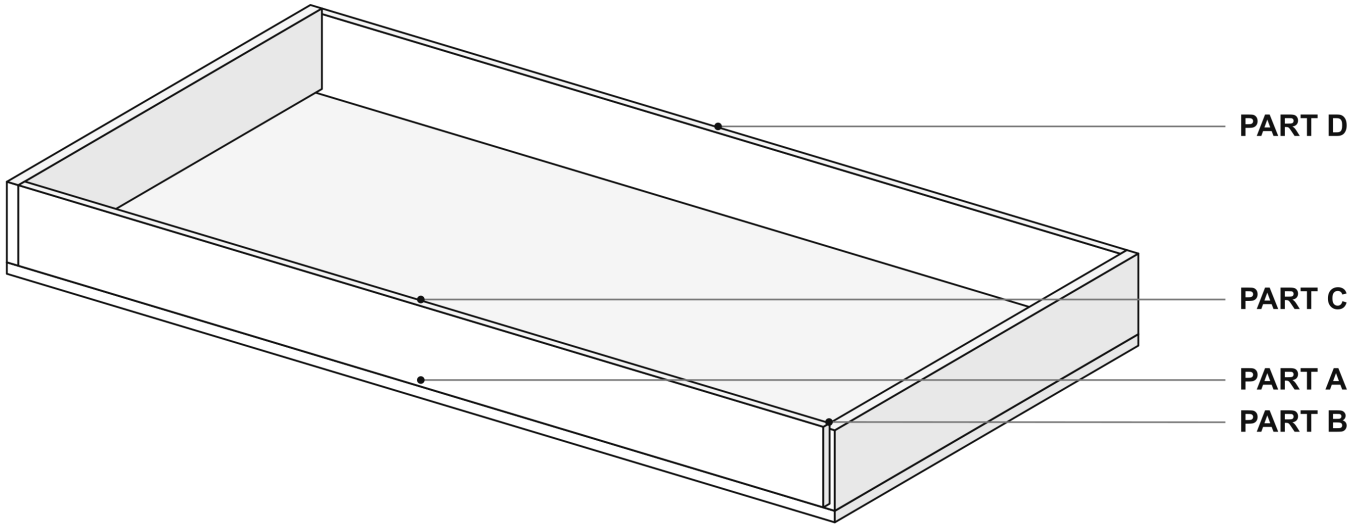
Pulls are secure; no wire, sharp edge or trapping gap remains at the chosen location.

Cleaning and maintenance

Inspect before each use for splits, loose joints, protruding points and trapped debris. Remove accumulated litter or manure promptly. When cleaning is needed, move birds away, remove debris first, wash and use only a suitable label-directed product if disinfection is indicated; let the item dry before return. Recheck the fit after seasonal wood movement. Replace cracked panels, rusted fasteners or frayed liners instead of concealing damage. Sand accessible edges to a small smooth radius. Use a removable washable contact liner where specified. Any optional coating must be suitable for the intended animal-equipment use and fully cured according to its label before installation. Porous wood is not represented as a disinfectable food-contact surface.

PO-003 | ASSEMBLY GEOMETRY

Lift-out manure catch tray



Displayed schematic envelope (x × y × z):

36 in × 24 in × 4 in / 914.4 × 609.6 × 101.6 mm

Part letters match the cut list. Hardware/anchors are described in the steps.

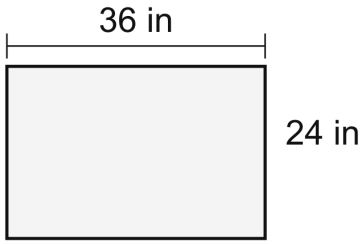
Original schematic • dimensions control • untested editorial draft

x = left/right; y = front/rear; z = height.

PO-003 | DIMENSIONED PARTS 1 OF 1

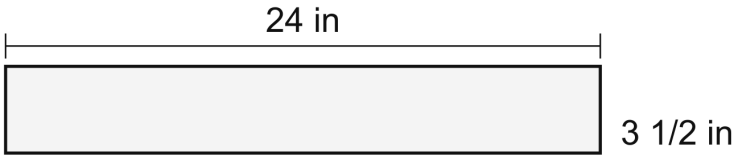
Finished sizes; allow for saw kerfs. Match part letters to the materials list.

A Bottom ×1



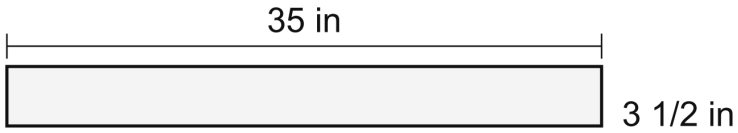
Metric face: 914.4 × 609.6 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

B Full-depth side ×2



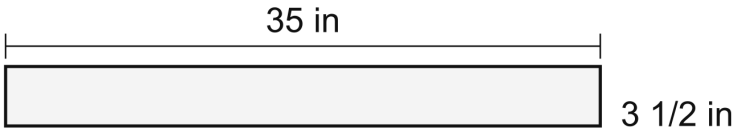
Metric face: 609.6 × 88.9 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

C Front ×1



Metric face: 889.0 × 88.9 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

D Back ×1



Metric face: 889.0 × 88.9 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

Original B/W vector drawing • US inches control • unbuilt / untested