PO-038 Front-loading dry-bedding magazine

Store a modest amount of new dry bedding behind a removable front so a scoop can be loaded without reaching into an open sack; no automatic dispensing claim.

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 Full-height side	2	30 × 12 × 3/4 in 762 × 304.8 × 19.05 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
B Between-side top/bottom	2	18 1/2 × 12 × 3/4 in 469.9 × 304.8 × 19.05 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
C Back	1	20 × 30 × 1/2 in 508 × 762 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
D Low fixed front	1	18 1/2 × 8 × 3/4 in 469.9 × 203.2 × 19.05 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
E Lift-off upper front	1	18 1/4 × 20 1/4 × 1/2 in 463.55 × 514.35 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Square ends; remove splinters.
F Front spacer	2	21 × 3/4 × 3/4 in 533.4 × 19.05 × 19.05 mm	Untreated sound straight softwood. Square ends; remove splinters.
G Front keeper	2	21 × 1 1/2 × 3/4 in 533.4 × 38.1 × 19.05 mm	Untreated sound straight softwood. Square ends; remove splinters.
H Panel stop block	2	1 1/2 × 3/4 × 3/4 in 38.1 × 19.05 × 19.05 mm	Untreated sound straight softwood. Square ends; remove splinters.

Hardware and consumables

22 × #8 corrosion-resistant exterior wood screw 2 in (50.8 mm). Carcass and front D ends [N1]

16 × #8 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). Back [N1]

3 × #8 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). D from below [N1]

8 × #8 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). F spacers [N1]

8 × #8 corrosion-resistant exterior wood screw 2 in (50.8 mm). G keepers [N1]

4 × #8 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). Stops [N1]

2 × Substrate-appropriate anti-tip retainer. Floor-supported cabinet, actual backing inspected

N1 applies to every entry marked [N1]: Use compatible coatings/metals and the maker's pilot-hole guidance; do not substitute drywall screws.

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.

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

S6 · Backyard Flock Production · Oklahoma State University Extension

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 Use only in a dry service room, never for wet litter or chemicals. Provide at least 50 in clear height for the lift-out front; the example is floor-supported and has no assigned bulk-storage load.

02 Cut A sides 30 × 12 in, B top/bottom 18 1/2 × 12 in from 3/4 in ply, and C back 20 × 30 × 1/2 in. Clamp B between A for a 20 in outside width.

03 Fasten top/bottom with four 2 in screws per joint, sixteen total. Compare diagonals before fixing C with sixteen 1 1/4 in screws into actual shell edges.

04 Cut D to 18 1/2 × 8 × 3/4 in and fit it between A, standing on B at z = 3/4 in. Use three 1 1/4 in screws up through B and three 2 in screws through each side into D.

05 Cut E 18 1/4 × 20 1/4 × 1/2 in; mark it as a lift-out panel. Sand its edges and round only the two upper corners.

06 Cut F spacers 21 in long with actual 3/4 in square section. Fix them vertically on the outer front side faces from z = 8 1/2 to 29 1/2 in, four 1 1/4 in screws per F.

07 Cut G keepers 21 × 1 1/2 × 3/4 in. Attach over F with four 2 in screws each, leaving a 3/4 in running depth for the 1/2 in E panel.

08 Dry-fit E: its lower edge is at z = 8 7/8 in and inside spacer width is 18 1/2 in, so there is 1/8 in clearance at each side. Fit two short wooden stop blocks below E without blocking panel removal.

09 Make each stop from 1 1/2 × 3/4 × 3/4 in stock and screw it to the front of D using two 1 1/4 in screws; its top supports E at the stated height.

10 Set the magazine on a dry level floor and fit two upper anti-tip retainers to inspected support. The front panel must lift out without tipping the carcass.

11 Load only clean dry bedding in small amounts through the removed front. Leave the panel off while scooping; do not imply that fibrous bedding will flow through a narrow gap.

12 Empty periodically, remove E and clean/dry corners. Replace swollen panels and keep the magazine separated from dirty litter and feed-contact tools.

Acceptance and intermediate checks

Carcass is 20 W × 12 1/2 D × 30 H in before front tracks.

E has 1/8 in side clearance and lifts out; stops support its lower edge at 8 7/8 in.

Two anti-tip restraints installed, no pinched fingers or inaccessible damp corner.

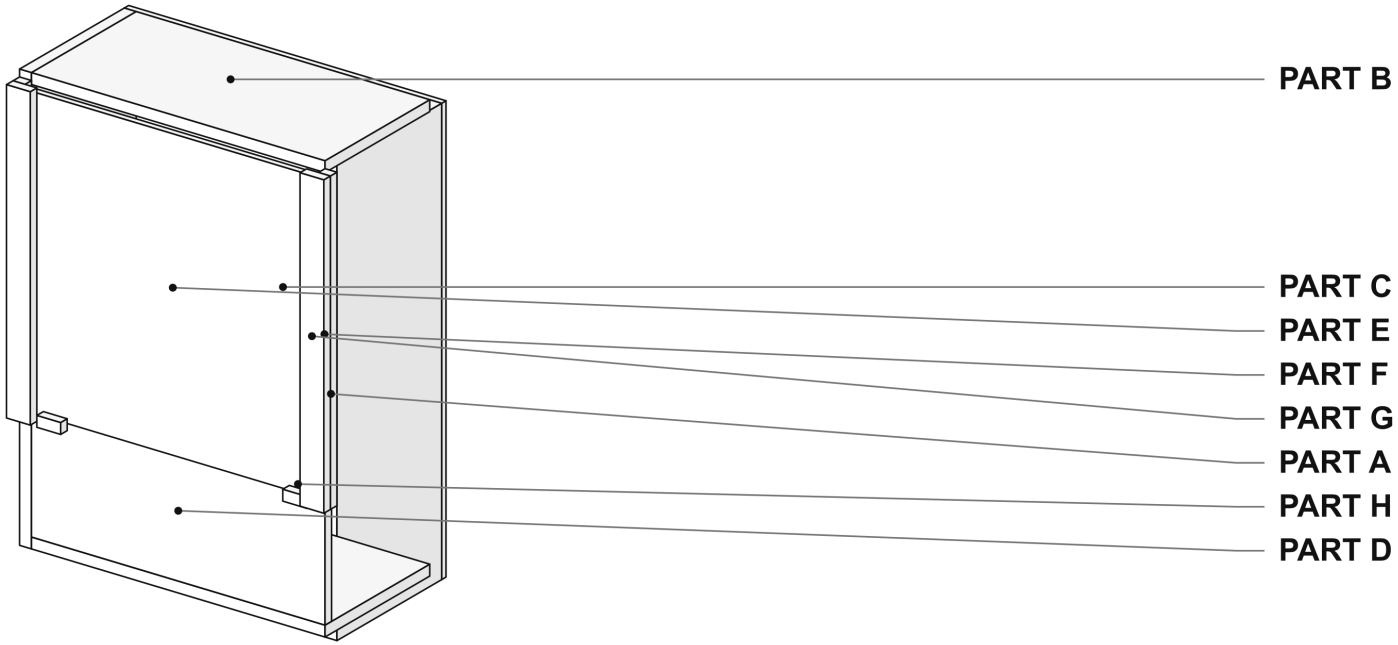
Clean dry bedding only; no automatic flow, pest-proof storage or payload claim.

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-038 | ASSEMBLY GEOMETRY

Front-loading dry-bedding magazine



Displayed schematic envelope (x × y × z):

20 in × 14 in × 30 in / 508.0 × 355.6 × 762.0 mm

Part letters refer to the cut list; standard hardware is specified in the assembly steps.

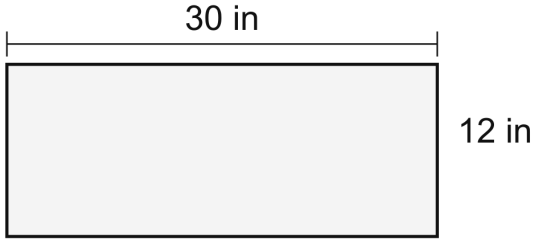
Original black/white vector schematic; dimensions control. Untested editorial draft.

x = left/right; y = front/rear; z = height. Purchased hardware is not falsely modeled as engineered parts.

PO-038 | DIMENSIONED PARTS 1 OF 2

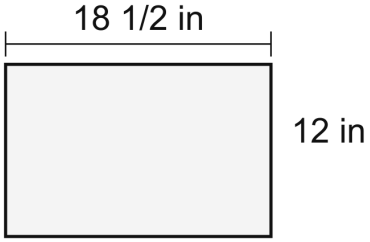
Finished sizes; allow for saw kerfs. Match part letters to the materials list.

A Full-height side ×2



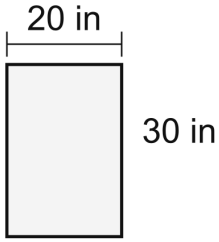
Metric face: 762.0 × 304.8 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

B Between-side top/bottom ×2



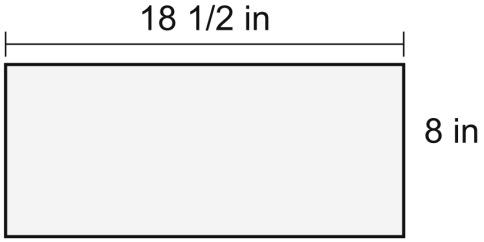
Metric face: 469.9 × 304.8 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

C Back ×1



Metric face: 508.0 × 762.0 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

D Low fixed front ×1



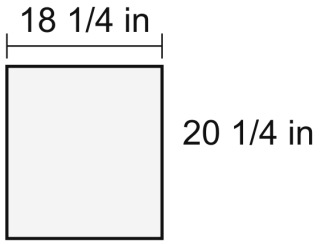
Metric face: 469.9 × 203.2 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

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

PO-038 | DIMENSIONED PARTS 2 OF 2

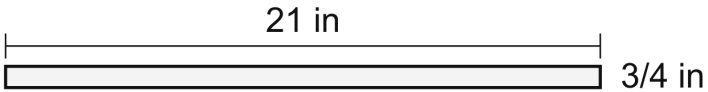
Finished sizes; allow for saw kerfs. Match part letters to the materials list.

E Lift-off upper front ×1



Metric face: 463.5 × 514.4 mm
Thickness: 1/2 in / 12.70 mm
Stock and special cuts: materials list.

F Front spacer ×2



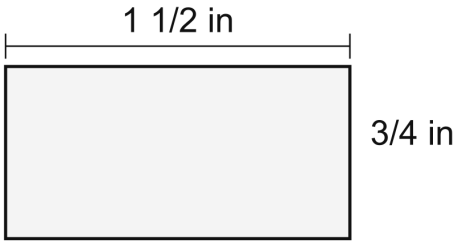
Metric face: 533.4 × 19.0 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

G Front keeper ×2



Metric face: 533.4 × 38.1 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

H Panel stop block ×2



Metric face: 38.1 × 19.0 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

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