PO-034 Hinged personnel gate for an existing poultry run

Provide a narrow manually operated service gate with a diagonally gusseted leaf and a defined two-sided latch interface.

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-width horizontal rail	2	30 × 2 1/2 × 1 1/2 in 762 × 63.5 × 38.1 mm	Untreated sound straight softwood. Square ends; remove splinters.
B Between-rail stile	2	49 × 2 1/2 × 1 1/2 in 1244.6 × 63.5 × 38.1 mm	Untreated sound straight softwood. Square ends; remove splinters.
C Captured gate mesh	1	28 × 52 × 1/25 in 711.2 × 1320.8 × 1.02 mm	Welded galvanized 1/2 in hardware cloth, 19-gauge product. Capture all cut ends under wooden battens. Schematic thickness is not a supplier measurement.
D Horizontal mesh clamp	2	30 × 1 1/2 × 3/4 in 762 × 38.1 × 19.05 mm	Untreated sound straight softwood. Square ends; remove splinters.
E Between-clamp side	2	51 × 1 1/2 × 3/4 in 1295.4 × 38.1 × 19.05 mm	Untreated sound straight softwood. Square ends; remove splinters.
F Corner gusset	4	8 × 8 × 1/2 in 203.2 × 203.2 × 12.7 mm	Exterior-bond plywood, measured actual thickness. Finished count: FOUR non-mating right-triangle gussets. Cut TWO 8 × 8 in square stock blanks diagonally; retain both halves. The 8 in dimensions describe blank edges before cutting; saw kerf slightly reduces finished legs.

Hardware and consumables

8 × #10 corrosion-resistant exterior wood screw 3 1/2 in (88.9 mm). Frame corner joints [N1]

24 × #8 corrosion-resistant exterior wood screw 1 1/2 in (38.1 mm). Gussets [N1]

28 × #8 corrosion-resistant exterior wood screw 1 1/2 in (38.1 mm). Mesh clamps [N1]

2 × 3 × 3 in corrosion-resistant surface butt hinge, six holes. Three gate and three post screws per hinge; surface fit, clear of gussets

12 × #10 corrosion-resistant exterior wood screw 1 1/4 in (31.75 mm). Hinges, six per hinge [N1]

1 × Nationwide Industries NW6185 Wood Gate Latch with Handle, complete actual hardware kit. Use the exact model interface and current supplied instructions; no substituted cord-operated latch

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

S3 · Small-Scale Poultry Housing · Penn State Extension

S4 · Galvanized Hardware Cloth · Marco Specialty Steel

S9 · NW6185 Wood Gate Latch with Handle, Rev. 01 installation instructions · Nationwide Industries

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 Verify sound existing posts have 30 3/4 in (781.1 mm) clear width. This project supplies the leaf, not post foundations, a wind design or a predator-certified boundary.

02 Cut two A rails 30 in long and two B stiles 49 in long from actual 1 1/2 × 2 1/2 in stock. Lay B between A to make a 30 × 54 in leaf.

03 Clamp square and drive two #10 × 3 1/2 in screws through each rail into each stile end, eight total. Keep holes centered in the stile ends and stagger them across the 1 1/2 in depth.

04 Cut FOUR F non-mating triangular gussets from TWO 8 × 8 in square plywood blanks, cutting each blank diagonally and retaining both halves. Fit one at each rear corner. The 8 in dimensions describe blank edges before cutting; saw kerf slightly reduces finished legs.

05 Attach each gusset using six 1 1/2 in screws, three per frame leg, with the closest hole 1 in from the outer corner and the others 3 and 6 in away. All heads remain flush.

06 Cut C mesh 28 × 52 in and center it on the front, 1 in from every leaf edge. Cover every cut wire with D/E clamps.

Complete the assembly

07 Fasten each D with six 1 1/2 in screws and each E with eight, on the frame/clamp centerline. The wood leaf plus clamp is 2 1/4 in thick, with the thin mesh stack additional.

08 Fit two 3 × 3 in six-hole surface butt hinges on the rear hinge stile at 12 and 42 in above the leaf bottom, clear of gussets. Use six #10 × 1 1/4 in screws per hinge.

09 Support the leaf on solid temporary blocks 2 in above grade. Center it between posts with 3/8 in (9.5 mm) clearance at both sides, then fix hinge post leaves with the remaining supplied/specification-matched screws.

10 Use the specified Nationwide NW6185 manual wood gate latch. Confirm the actual 2.25–2.75 in thickness window, 3/8 in gap and minimum 2 in engagement before drilling; use its actual handle as the template and its supplied hardware.

11 Follow the NW6185 orientation and 3/8 in through-hole instructions. Test release from both sides with a second adult present; do not add a pull cord, padlock or inaccessible closure.

12 Remove setup blocks and cycle twenty times. Confirm ground clearance, smooth two-sided operation and no sharp mesh. This example is not a child-containment or universal predator-proof gate.

Acceptance and intermediate checks

Leaf diagonals agree before gussets; outside size 30 × 54 in.

Actual latch zone thickness, gap and engagement meet the specified hardware instructions.

Two-side operation is checked without a person being confined; no dangling cord or sharp point.

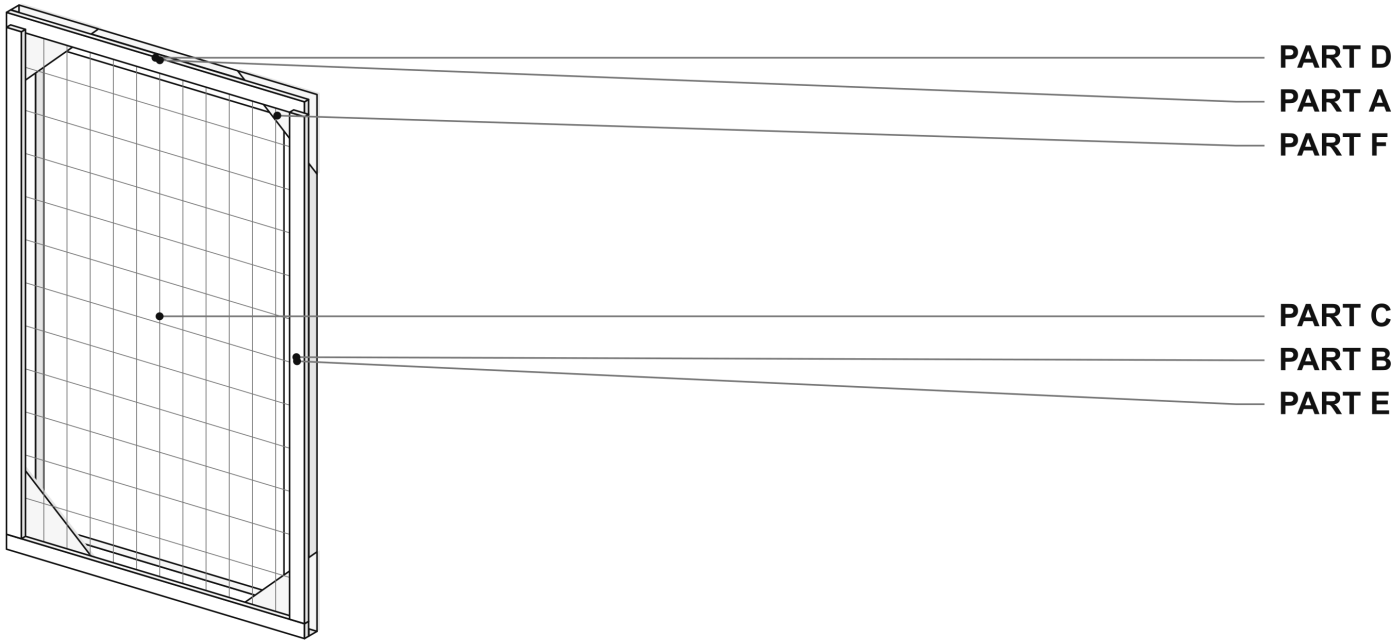
Existing posts remain sound and fixed; inspect after weather and stop if the leaf sags or binds.

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-034 | ASSEMBLY GEOMETRY

Hinged personnel gate for an existing poultry run



Displayed schematic envelope (x × y × z):

30 in × 2.79 in × 54 in / 762.0 × 70.9 × 1371.6 mm

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

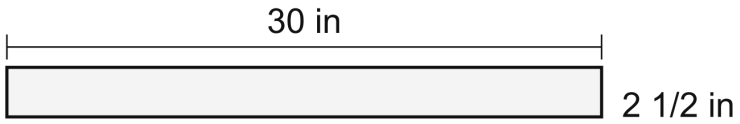
Original black/white vector schematic; dimensions control. Untested editorial draft.

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

PO-034 | DIMENSIONED PARTS 1 OF 2

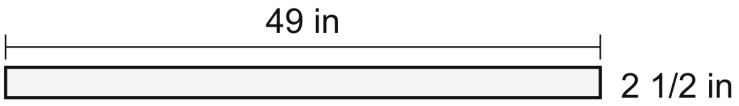
Finished sizes; allow for saw kerfs. Match part letters to the materials list.

A Full-width horizontal rail ×2



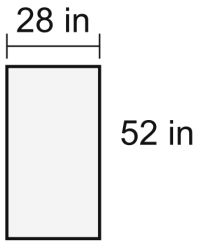
Metric face: 762.0 × 63.5 mm
Thickness: 1 1/2 in / 38.10 mm
Stock and special cuts: materials list.

B Between-rail stile ×2



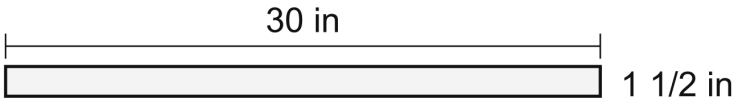
Metric face: 1244.6 × 63.5 mm
Thickness: 1 1/2 in / 38.10 mm
Stock and special cuts: materials list.

C Captured gate mesh ×1



Metric face: 711.2 × 1320.8 mm
19-gauge mesh; thickness is schematic.
Stock and special cuts: materials list.

D Horizontal mesh clamp ×2



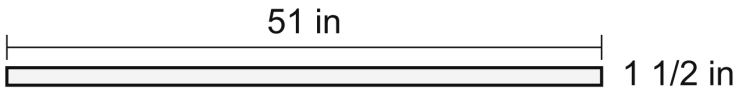
Metric face: 762.0 × 38.1 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

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

PO-034 | DIMENSIONED PARTS 2 OF 2

Dimensions are finished sizes except explicitly labeled STOCK BLANKS.

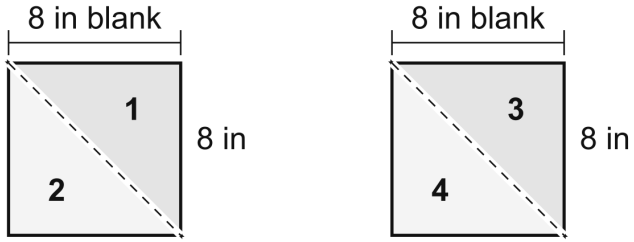
E Between-clamp side ×2



Metric face: 1295.4 × 38.1 mm
Thickness: 3/4 in / 19.05 mm
Stock and special cuts: materials list.

F Corner gussets: FOUR retained triangles

Stock: TWO square blanks, each 8 × 8 in



Cut each blank diagonally; retain all FOUR triangles.

Each STOCK BLANK: 8 × 8 in / 203.2 × 203.2 mm.

Saw kerf slightly reduces retained legs; these gussets do not mate.

Thickness: 1/2 in / 12.70 mm. Assembly shows placement.

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