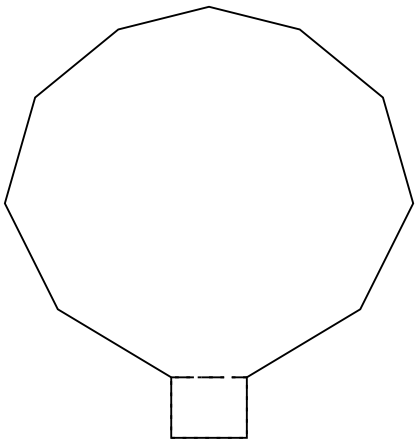
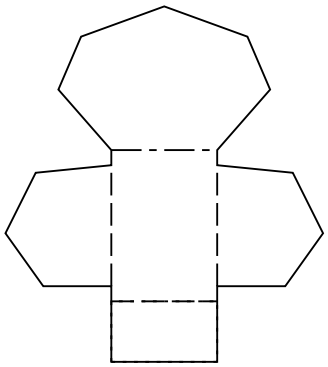
Faceted Moth Orchid

orchid / 1.0.0 / A4 / Template page 1

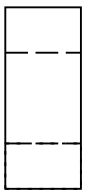
P2 | cut 1
54.00 x 57.00 mm



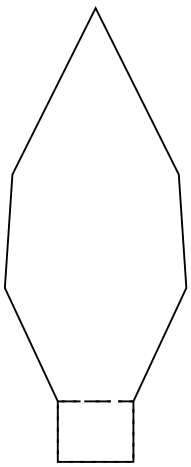
L1 | cut 1
42.00 x 47.00 mm



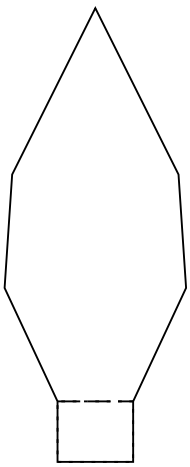
C1 | cut 1
10.00 x 24.00 mm



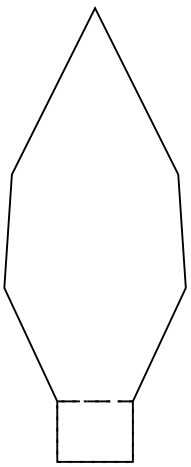
S1 | cut 1
24.00 x 60.00 mm



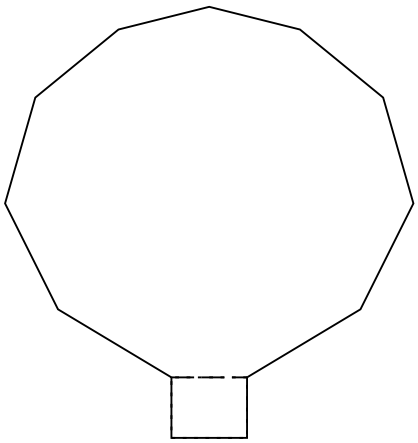
S2 | cut 1
24.00 x 60.00 mm



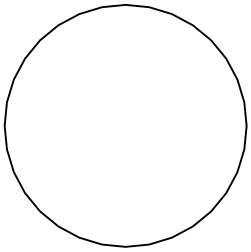
S3 | cut 1
24.00 x 60.00 mm



P1 | cut 1
54.00 x 57.00 mm



B1 | cut 1
32.00 x 32.00 mm



Solid: cut | Dashed: valley | Dash-dot: mountain | Dotted: glue

50 mm calibration

Print at 100% / Actual size. Do not fit to page. Original paper craft template.

Faceted Moth Orchid

orchid / 1.0.0 / A4 / Assembly instructions

Finished size: 107.1 x 105.1 x 17.4 mm (width x height x relief)

Materials: One A4 or US Letter sheet of 160-180 gsm white cardstock for the eight cut pieces; color with pencils if desired; PVA craft glue, approximately 1 ml; apply only a thin film to the marked feet; Scissors, blunt scoring tool, millimetre ruler, tweezers and a protractor

Original geometric interpretation of a moth orchid, not a botanical replica. Eight paper pieces; no stem, wire, hidden support or extra cuts.

All shaped faces have exact flat correspondence and rigid edge lengths. Petals are angular flat blades with a root hinge, not smooth double-curved natural petals.

The lip has a raised throat, two independently folded lateral lobes and a downward-turning apron; the column is an open folded strip, not a closed tube.

Root feet overlap on the 32 mm backing. Preview uses nominal 0.2 mm layer offsets; actual stacked paper and glue thickness, fold radius and springback are not simulated.

Display face-up on the backing as a low-relief flower. It is not a freestanding stemmed orchid.

Physical printing, cutting, folding, bonding and long-term stability are pending verification. Digital checks do not prove physical assembly.

Part inventory (cut each instance once):

B1: Backing disc

S1: Upper sepal

S2: Lower left sepal

S3: Lower right sepal

P1: Left petal

P2: Right petal

L1: Winged lip

C1: Golden column

1. Calibrate and cut [B1]: Print the template page at 100% actual size. Measure the 50 mm ruler before cutting. Cut B1, S1-S3, P1-P2, L1 and C1 once each on solid outer edges. Score the internal fold lines lightly; never cut them. Keep IDs on the reverse. B1 is a 32 mm backing disc.

2. Place the three sepals [S1, S2, S3, B1]: With the colored face up, raise each sepal blade 8 degrees at its 10 mm root crease, leaving the 10 x 8 mm glue foot flat. On B1 mark its center and a 12 oclock direction in pencil. Center the midpoint of each foot short bottom edge on that center. Point S1 toward 12 oclock, S2 toward lower left (140 degrees counterclockwise from S1), and S3 toward lower right (140 degrees clockwise). Glue only the feet to B1, overlapping where necessary. Hold until tacky, then dry flat for 10 minutes.

3. Add the broad lateral petals [P1, P2]: Raise each broad blade 16 degrees at its 10 mm root crease. Place P1 left and slightly upward, 75 degrees counterclockwise from S1; P2 right and slightly upward, 75 degrees clockwise. Align the midpoint of each foot bottom edge to the backing center as before. Glue the flat 10 x 8 mm feet over the sepal feet. Keep the broad blades free and dry for 10 minutes.

4. Fold the distinctive orchid lip [L1]: Work on L1 with its 14 x 8 mm rectangular glue foot nearest you and colored face up. Valley-fold the throat up 35 degrees from the foot at y=8 mm. Valley-fold each side lobe up 60 degrees relative to the throat along its 16 mm side crease. Mountain-fold the flared end down 65 degrees relative to the throat at y=28 mm; it then slopes down 30 degrees relative to the foot. The side lobes remain free at both ends. Do not join their edges or round the facets.

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orchid / 1.0.0 / A4 / Assembly instructions continued

5. Attach the lip below the center [L1, B1]: Point L1 toward 6 oclock between the lower sepals. Place the midpoint of its foot bottom edge 2 mm below the backing center; its 8 mm foot extends downward from there. Glue only that 14 x 8 mm foot to the exposed backing and overlapping root feet. The raised throat and folded lobes face outward toward the viewer. Keep glue off all moving folds, support the foot with tweezers until tacky, and dry 10 minutes.

6. Fold and mount the golden column [C1]: On C1 leave the 10 x 6 mm foot flat. Valley-fold the 12 mm wall up 90 degrees at y=6 mm. Valley-fold the final 6 mm hood another 90 degrees at y=18 mm, so it returns over the foot parallel to it. Orient the foot toward 12 oclock with its bottom-edge midpoint 3 mm below the backing center. Glue its underside over the central root stack; the upright wall is 3 mm above center and the hood projects toward the lip. Leave both sides of the column open.

7. Dry and inspect the bloom [B1, S1, S2, S3, P1, P2, L1, C1]: Let all eight pieces dry face-up for at least 30 minutes, or follow the glue label. Check that all seven glue feet contact the backing or previously bonded feet, the lateral lip lobes stay open and the five outer blades retain their specified root angles. Compare the three narrow sepals with the two broad petals. Display horizontally on B1; physical fit and springback still need a real print-and-build trial.