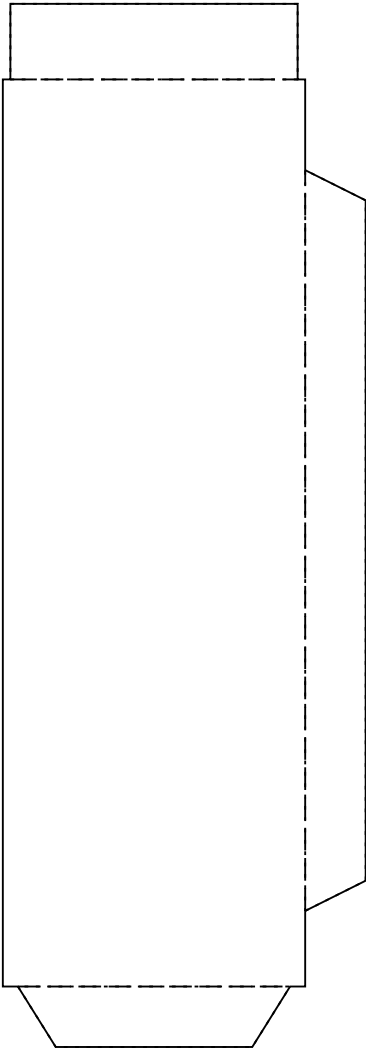


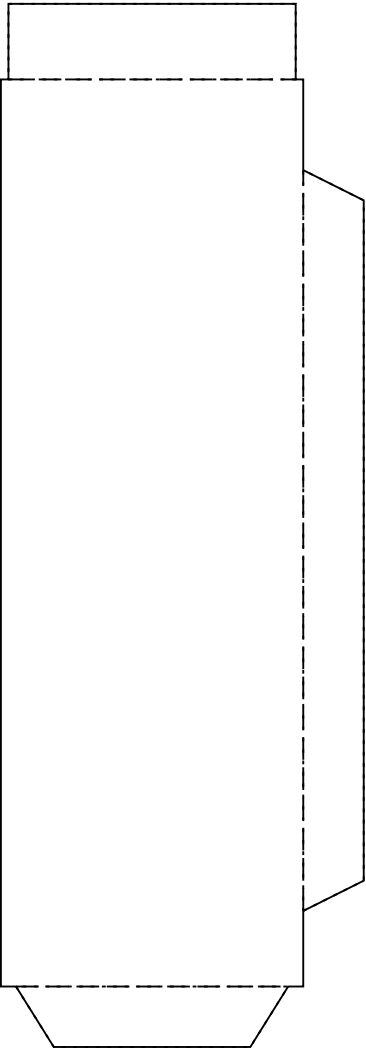
Folded-rim Hexagonal Pencil Cup

pencil-cup / 1.0.0 / Letter / Template page 1

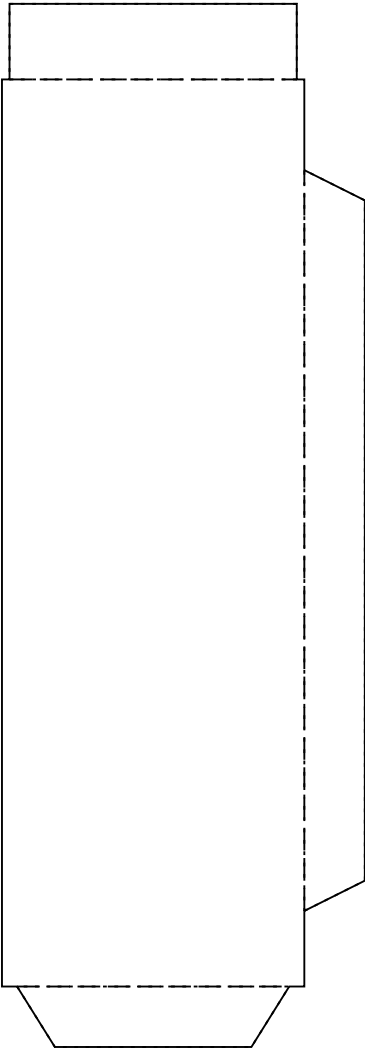
W1 | cut 1
48.00 x 138.00 mm



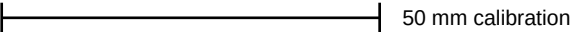
W2 | cut 1
48.00 x 138.00 mm



W3 | cut 1
48.00 x 138.00 mm



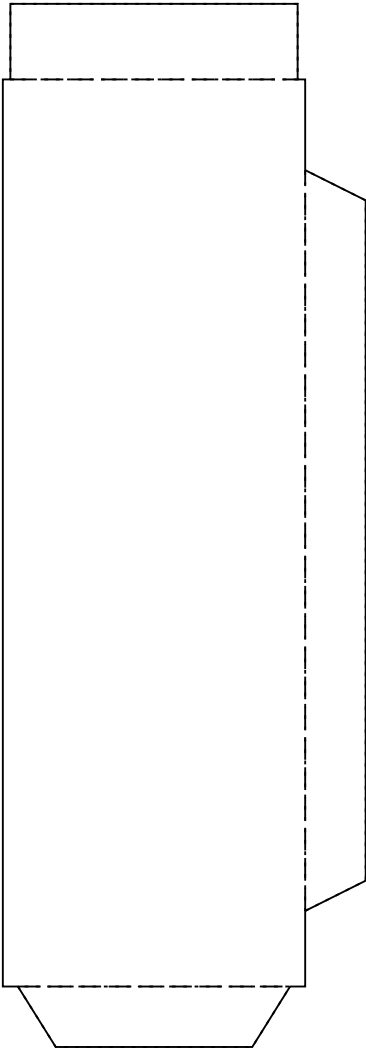
Solid: cut | Dashed: valley | Dash-dot: mountain | Dotted: glue



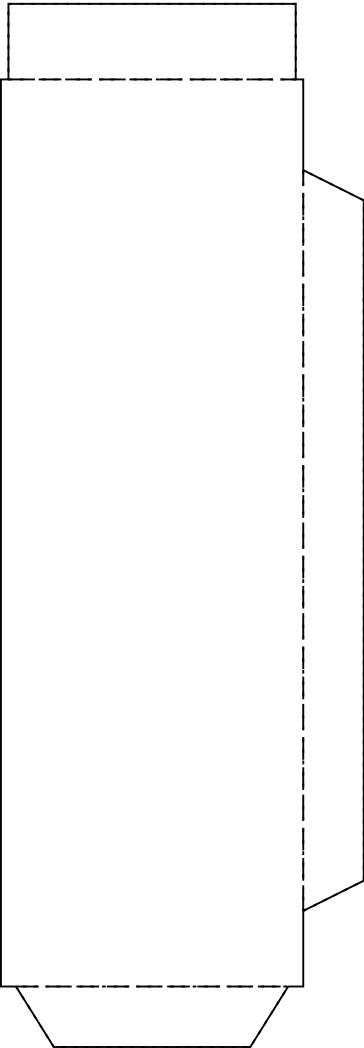
Folded-rim Hexagonal Pencil Cup

pencil-cup / 1.0.0 / Letter / Template page 2

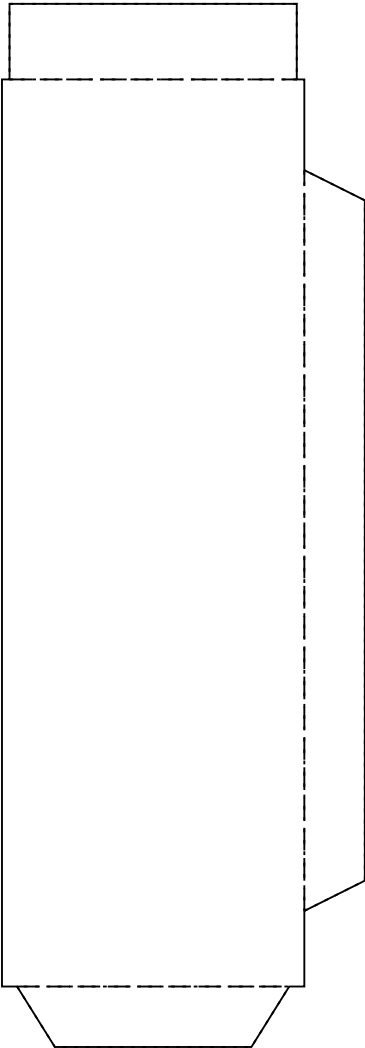
W4 | cut 1
48.00 x 138.00 mm



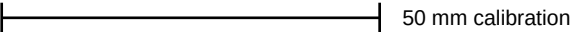
W5 | cut 1
48.00 x 138.00 mm



W6 | cut 1
48.00 x 138.00 mm



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

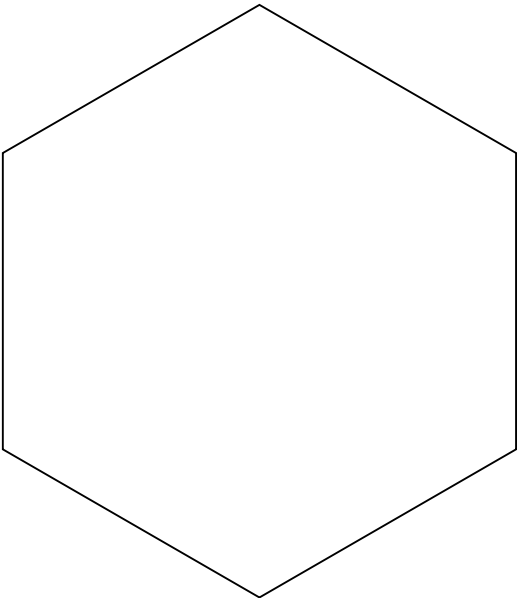


Print at 100% / Actual size. Do not fit to page. Original paper craft template.

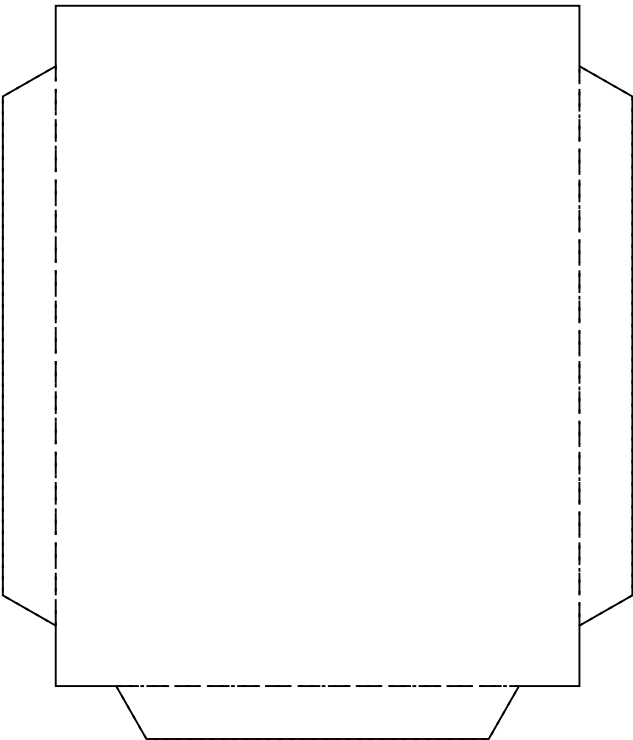
Folded-rim Hexagonal Pencil Cup

pencil-cup / 1.0.0 / Letter / Template page 3

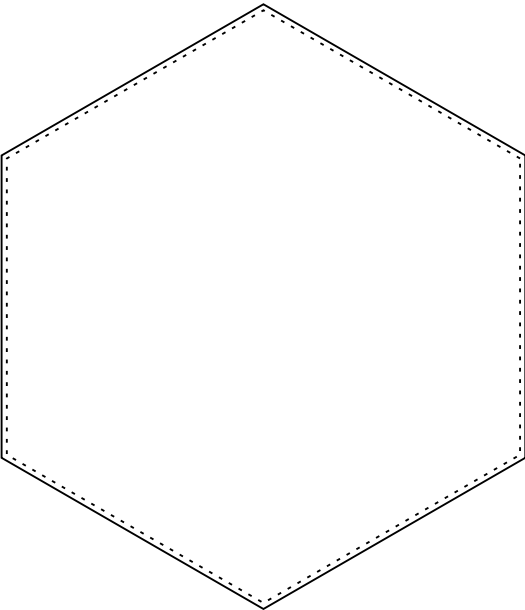
B2 | cut 1
67.90 x 78.40 mm



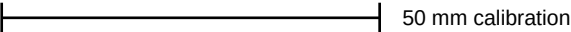
D1 | cut 1
83.28 x 97.00 mm



B1 | cut 1
69.28 x 80.00 mm



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



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

Folded-rim Hexagonal Pencil Cup

pencil-cup / 1.0.0 / Letter / Assembly instructions

Finished size: 69.3 x 80 x 120 mm; optional divider 69.3 x 90 mm

Materials: 220-260 gsm cardstock; PVA craft glue; Scissors; Ruler and blunt scoring tool; Clips and scrap paper for pressing

Original construction. Physical printing, assembly and load qualification pending.

Open top: no lid, light apertures or lantern fittings. Six 10 mm folded hems reinforce the mouth.

All wall, hem, seam, support and divider faces have exact flat-to-folded rigid correspondence. The model uses zero-thickness paper; laminated hems and seams coincide. The inner floor is shown 0.4 mm above the outer floor to suggest the paper-and-glue stack, not simulate thickness.

D1 is supplied and shown installed; omit it for one compartment (8 pieces), or use all 9 pieces for two compartments.

Light-load desktop prototype only: start with 3-5 wooden pencils, total at most 30 g as an unverified trial target, not a rated capacity. Keep on a dry level desk; do not lift it loaded or use for scissors, heavy tools, water or dropped objects. Stop if the base sags or seams open.

Allow a full 24 hours for final PVA cure, or longer if the adhesive label requires. Paper thickness and crease springback need physical fitting; do not force the divider into a distorted shell.

Part inventory (cut each instance once):

W1: Wall 1 with rim and foot

W2: Wall 2 with rim and foot

W3: Wall 3 with rim and foot

W4: Wall 4 with rim and foot

W5: Wall 5 with rim and foot

W6: Wall 6 with rim and foot

B1: Outer hexagonal floor

B2: Inner reinforcing floor

D1: Optional divider with three tabs

1. Print, cut and score [W1, W2, W3, W4, W5, W6, B1, B2, D1]: Print at 100 percent actual size; measure the 50 mm ruler. Cut W1-W6, B1 and B2; also cut the supplied D1 if two compartments are wanted. Score dashed folds before forming. Each main wall measures 40 x 120 mm; identify the 10 mm top hem, 8 mm side lap and 8 mm bottom foot.

2. Double the open rim [W1, W2, W3, W4, W5, W6]: On each wall fold the 38 x 10 mm top hem 180 degrees DOWN onto the OUTSIDE face. Glue the entire hem flat over the top 10 mm of wall and press between scraps for 20 minutes. The 1 mm relief at each end leaves corners clear. The mouth stays open at 120 mm height.

3. Join a six-wall sleeve [W1, W2, W3, W4, W5, W6]: Bend every right-hand side lap inward by 60 degrees from its wall plane (120 degree interior corner). Glue W1 lap behind the first 8 mm of W2, then W2 to W3, W3 to W4, W4 to W5 and W5 to W6. Align bottom edges at one level. Close with W6 lap behind W1; press each seam for 10 minutes. W3 and W6 are opposite faces. Dry-fit B1 beneath the sleeve as a hexagonal squaring guide: 40 mm sides, 69.3 mm across flats.

4. Attach the supporting outer floor [B1, W1, W2, W3, W4, W5, W6]: Fold all six bottom feet 90 degrees INWARD, making a horizontal ledge at the bottom. Apply a thin glue film to their undersides. Set B1 underneath, matching its six edges to the wall bottoms; each foot overlaps B1 by 8 mm. Press from inside with a blunt ruler while B1 rests on the desk. Let this joint set at least 30 minutes before adding

Folded-rim Hexagonal Pencil Cup

pencil-cup / 1.0.0 / Letter / Assembly instructions continued

the second floor.

5. Laminate the inner floor [B1, B2]: Spread a thin film on the upper face of B1 and the upper faces of all six feet. Lower B2 through the open mouth and align its corners with B1. B2 has 39.2 mm sides and about 0.69 mm clearance per flat from the walls. Press it down to sandwich the feet between both floors; slight bridging at the foot edges is a real paper-thickness effect. Keep the cup square and allow 30 minutes to set.

6. Fit the optional supplied divider [D1, W3, W6, B2]: For two compartments use D1; for one compartment leave it unused. Fold both 7 mm end tabs and the 7 mm bottom tab 90 degrees to the SAME side of the panel. Dry-fit across the centers of opposite walls W3 and W6, with its bottom on B2 and its top about 30 mm below the rim. Glue the end tabs to the inner wall faces and the bottom tab to B2. The panel span is 69.28 mm; finite paper thickness may require gently easing the creases. Do not bow the walls to force a fit. Press end tabs with a ruler until set.

7. Cure and qualify for light use [B1, B2, W1, W2, W3, W4, W5, W6, D1]: Leave unloaded on a level surface for at least 24 hours. Physical qualification is still pending: trial only 3-5 wooden pencils totaling no more than 30 g, placed gently rather than dropped. Inspect the floor, six feet and wall laps for sagging or peeling. Remove contents if any join opens; never carry the cup loaded. This is not a certified load rating.