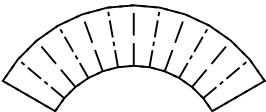


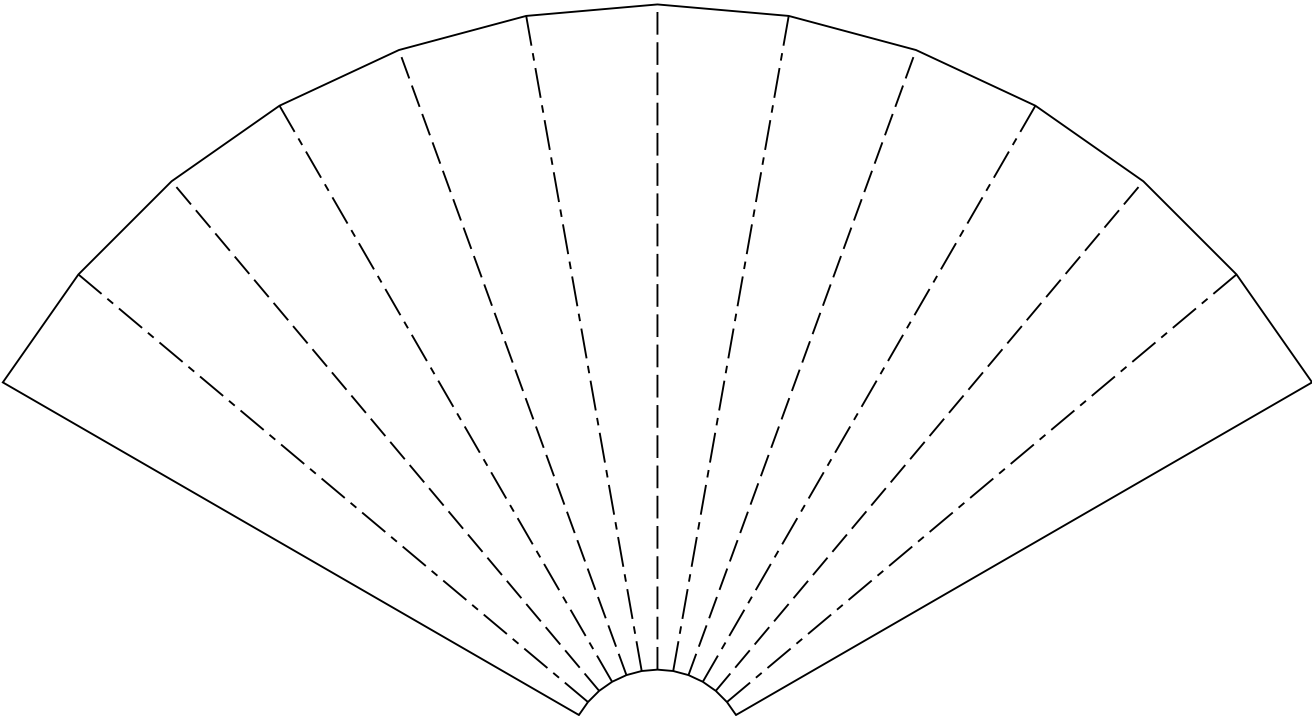
Radial Accordion Fan

accordion-fan / 1.0.0 / Letter / Template page 1

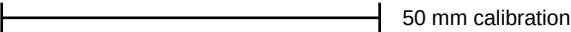
B1 | cut 1
34.64 x 14.00 mm



F1 | cut 1
173.21 x 94.00 mm



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



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

Radial Accordion Fan

accordion-fan / 1.0.0 / Letter / Assembly instructions

Finished size: 117.4 x 90.1 x 14.0 mm at the illustrated opening

Materials: One A4 or Letter sheet of 90-110 gsm paper for F1; One sheet of 70-90 gsm paper for B1; Scissors, ruler and blunt scoring tool; Small amount of PVA glue and a fine brush

Original radial-sector construction: 120-degree flat sector, twelve 10-degree panels, outer radius 100 mm, inner radius 12 mm. Both curved boundaries are deliberately straight chord segments; cut the polygon as printed.

B1 spans radii 12-20 mm and is an 8 mm radial binding, not an extra handle. It laminates the inner grip while retaining all eleven moving hinges.

The illustrated opening is about 72.1 degrees in plan. Alternating rays lie at -4 and +4 degrees elevation; adjacent rays stay exactly 10 degrees apart in 3D. Every panel has exact flat-to-shaped triangle correspondence.

Zero-thickness paper and ideal sharp hinges; B1 has a 0.15 mm vertical display offset. Real thickness limits full closure. No central pivot, pinched apex or stretched paper is assumed. The preview is one static partly opened state, not a continuous folding simulation.

Automated checks do not establish foldability in real paper. Screen review and physical printing, folding, binding and repeated opening remain pending.

Part inventory (cut each instance once):

F1: Radial accordion leaf

B1: Pleated inner binding

1. Print and cut two pieces [F1, B1]: Print at 100% actual size. Check the 50 mm ruler. Cut F1 and B1 on solid boundaries, including the concave inner edge. F1 measures 173.21 mm across its two outer corners. Do not cut the radial fold lines.
2. Score matching radial hinges [F1, B1]: Keep both printed faces upward, inner notches toward you. Number the eleven radial lines left to right. Lines 1,3,5,7,9,11 are mountains (printed sides outward at ridge); 2,4,6,8,10 are valleys (printed sides inward). Lightly score both pieces with a blunt tool.
3. Pre-fold the accordion [F1, B1]: Fold each scored line through the full radial length, alternating mountain and valley, working left to right. Bring adjacent panels nearly together, then reopen. Do not gather the inner edge to a point: its 12 mm radius notch must remain. Pre-fold B1 identically.
4. Laminate the pleated binding [F1, B1]: Reopen both pieces almost flat without reversing creases. Brush a thin film of PVA onto the printed side of B1, leaving about 1 mm dry on each side of every fold. Place B1 beneath F1, printed sides facing the same way, so B1 glue contacts the back of F1. Match the entire 12 mm inner boundary, both end edges and all eleven creases. The binding covers only radii 12-20 mm. Press each panel separately.
5. Set hinges and let dry [F1, B1]: Gently refold the matching hinges before the glue sets; do not glue neighbouring panels together. Hold each laminated panel for 30 seconds, reopen slightly and leave for at least 30 minutes or the adhesive maker's full drying time.
6. Open and hold the fan [F1, B1]: Hold the reinforced inner arc lightly and spread the outer corners to about 117.4 mm apart (about 72.1 degrees in plan). Distribute the folds evenly, alternating ridges and troughs; never force the base into a point. To store, bring panels together gently into a tapered stack; stop at the paper thickness rather than crushing the binding. Test repeated opening only after the glue is dry.