

Koozie jig warping and production fixture

3DP-044 / REV A / 2026.09.01

A koozie fixture needs to hold the work repeatably without distorting it. First determine whether warping happens during printing, under clamping, or during a heat process.

STATUS	Recovered/Partial
CLASSIFICATION	3DP
MATERIAL	3D PRINT / MAKER
DISPOSITION	PUBLIC / RECOVERED/PARTIAL
CATEGORY	3D Printing
RECORD TYPE	project

GOAL

Run the first test described in this guide and record the result for koozie jig warping and production fixture.

SOURCE STATE

New reference guidance; not a recovered test result

EQUIPMENT

- FDM printer / slicer
- Slicer project
- Calipers or inspection method

MATERIALS

- Material requires confirmation

METHOD / STEPS

1. Measure the workpiece and define the locating faces, clearance, clamp force and actual process temperature.
2. For a fit-only prototype, try 0.20 mm layers, 4 walls and 25-35% infill. Add broad support and ribs where they resist the actual load rather than filling every cavity solid.
3. Measure the cooled fixture on a flat surface. If it warps during printing, address bed adhesion, material shrinkage and drafts before changing the fixture offsets.

4. If it moves during production, measure its temperature and loaded deflection. Select material using continuous-service data for that condition or use a metal fixture for heat exposure beyond the plastic's capability.

THINGS TO WATCH FOR

A higher nozzle temperature does not make the finished part heat resistant. Do not put an unverified plastic jig into a heat press. Over-tight clamping can create the very ovality the jig was supposed to prevent.

FIRST TEST / WHAT TO RECORD

Run repeated unloaded and process-temperature fit checks and log drift from the original locating surfaces.

RESULT / WHERE THIS STANDS

Run repeated unloaded and process-temperature fit checks and log drift from the original locating surfaces.

TROUBLESHOOTING

- A higher nozzle temperature does not make the finished part heat resistant. Do not put an unverified plastic jig into a heat press. Over-tight clamping can create the very ovality the jig was supposed to prevent.

SPECIFICATION

PRINTER	FDM printer / slicer
MATERIAL	Material requires confirmation
FOCUS	First layer, dimensions, surface, and function
VALIDATION	Small test print before release

DEVELOPMENT HISTORY

2026.09.01 / Rev A

Imported as an independent manifest record; public copy keeps uncertainty visible.

REFERENCE NOTES

Official help.prusa3d.com reference (https://help.prusa3d.com/article/asa_1809), Official help.prusa3d.com reference (https://help.prusa3d.com/article/polycarbonate-pc_165812).

HOW-TO SOURCES

Official help.prusa3d.com reference

https://help.prusa3d.com/article/asa_1809

Official help.prusa3d.com reference

https://help.prusa3d.com/article/polycarbonate-pc_165812

RELEASED MATERIAL / SOURCE LINKS

3dp-044-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/3dp-044-public-summary.txt>

RETURN TO THE LIVING RECORD

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This PDF preserves the public notes at this revision. Visit the record for updates and attached images.

<https://u225x.com/record/3DP-044>