

Printed specialty press-brake end forms

3DP-040 / REV A / 2026.09.01

Specialty end forms are useful to explore when a short flange or unusual contour cannot be represented by a standard straight tool. Start with geometry and accessibility.

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 printed specialty press-brake end forms.

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. Capture the required finished end profile and identify surfaces that must remain unmarked.
2. Model tool, holder, punch, sheet and adjacent bends together. Sweep or step through motion to identify collisions and extraction problems.
3. Print a fit-only mock-up. Confirm seating, access and assembly without applying forming load.
4. If moving to loaded trials, define the force direction, retention and support with a tooling reviewer, then log the exact specimen and conditions.

THINGS TO WATCH FOR

Small contact regions and asymmetric shapes can concentrate force or push a tool sideways. A successful visual fit does not establish strength or prevent ejection.

FIRST TEST / WHAT TO RECORD

Save the approved cross-section and revision alongside the mock-up photos; mark fit-only parts clearly.

RESULT / WHERE THIS STANDS

Save the approved cross-section and revision alongside the mock-up photos; mark fit-only parts clearly.

TROUBLESHOOTING

- Small contact regions and asymmetric shapes can concentrate force or push a tool sideways. A successful visual fit does not establish strength or prevent ejection.

SAFETY / LIMITATIONS

- Use qualified judgment and current manufacturer or code guidance for safety-critical work.

SPECIFICATION

PRINTER	FDM printer / slicer
MATERIAL	Material requires confirmation
FOCUS	Tooling contact, wear, load direction, and sheet gauge
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

Formlabs rapid-tooling research (not a rating for these FDM dies)
(<https://formlabs.com/global/white-papers/how-to-do-rapid-tooling-for-sheet-metal-forming-with-3d-printed/>).

HOW-TO SOURCES

Formlabs rapid-tooling research (not a rating for these FDM dies)

<https://formlabs.com/global/white-papers/how-to-do-rapid-tooling-for-sheet-metal-forming-with-3d-printed/>

RELEASED MATERIAL / SOURCE LINKS

3dp-040-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/3dp-040-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-040>