

Printed tooling for 16-10 gauge sheet

3DP-041 / REV A / 2026.09.01

This is a comparison and test-planning reference for sheet thicknesses discussed as 16 through 10 gauge. Gauge alone is not a sufficient tooling specification.

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 tooling for 16-10 gauge sheet.

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. Record the actual material and thickness in inches or millimeters; steel, stainless and aluminum gauge systems are not interchangeable.
2. Create a matrix with bend length, V-opening, punch radius, bend angle and process type for each intended job.
3. Obtain force estimates from the machine/tooling supplier or a validated shop method, then separately assess the printed tool's supported structure and failure modes.

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- Document only the load cases actually tested under approved conditions. Store force, springback, visible damage, dimensional drift and life observations per revision.
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THINGS TO WATCH FOR

Do not publish a claim such as “prints bend 10 gauge” without the material, geometry and validated evidence. Short coupons do not establish full-width capacity; hemming and bottoming must be evaluated separately.

FIRST TEST / WHAT TO RECORD

A complete matrix shows untested cases explicitly and never extrapolates a safe rating from infill percentage.

RESULT / WHERE THIS STANDS

A complete matrix shows untested cases explicitly and never extrapolates a safe rating from infill percentage.

TROUBLESHOOTING

- Do not publish a claim such as “prints bend 10 gauge” without the material, geometry and validated evidence. Short coupons do not establish full-width capacity; hemming and bottoming must be evaluated separately.
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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

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-041-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/3dp-041-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-041>