

Metric tap-test block generator

CAD-013 / REV A / 2026.09.01

Generate a labeled metric hole set from structured thread data rather than hardcoded positions.

STATUS	Recovered/Partial
CLASSIFICATION	CAD
MATERIAL	CAD / AUTOMATION
DISPOSITION	PUBLIC / RECOVERED/PARTIAL
CATEGORY	CAD / Scanning / Automation
RECORD TYPE	how-to

GOAL

Run the first test described in this guide and record the result for metric tap-test block generator.

SOURCE STATE

New reference guidance; not a recovered test result

EQUIPMENT

- CAD / automation tool
- Representative test model
- Measurement or inspection method

METHOD / STEPS

1. Create rows with nominal diameter, pitch, pilot diameter, depth and label, all with explicit millimeter units.
2. Use a current tap manufacturer's drill recommendation for the material and tap type. The nominal-minus-pitch rule is only a rough cutting-tap estimate, not a forming-tap rule.
3. Validate spacing and edge margins before generating the block and holes.
4. Export a test block and check labels against the input table before tapping or trial assembly.

THINGS TO WATCH FOR

M6 alone is incomplete when pitch matters. Do not use the same drill assumptions for cutting taps and roll/form taps. A printed pilot-hole trial does not establish a metal tapping specification.

FIRST TEST / WHAT TO RECORD

The generated drawing/table and physical labels agree, including pitch and any intentional diameter offset.

RESULT / WHERE THIS STANDS

The generated drawing/table and physical labels agree, including pitch and any intentional diameter offset.

TROUBLESHOOTING

- M6 alone is incomplete when pitch matters. Do not use the same drill assumptions for cutting taps and roll/form taps. A printed pilot-hole trial does not establish a metal tapping specification.

SPECIFICATION

TOOL PATH	CAD / automation tool
DELIVERABLE	HOW-TO
VALIDATION	Representative model / known dimension
STATUS	Recovered/Partial

DEVELOPMENT HISTORY

2026.09.01 / Rev A

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

REFERENCE NOTES

FreeCAD reference (https://wiki.freecad.org/PartDesign_Hole).

HOW-TO SOURCES

FreeCAD reference

https://wiki.freecad.org/PartDesign_Hole

RELEASED MATERIAL / SOURCE LINKS

cad-013-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/cad-013-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/CAD-013>