

Scan mesh to editable SOLIDWORKS model

CAD-028 / REV A / 2026.09.01

Reconstruct useful design intent instead of treating every triangle as a separate CAD face.

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 scan mesh to editable solidworks model.

SOURCE STATE

New reference guidance; not a recovered test result

EQUIPMENT

- Scanner / mesh workflow
- Representative test model
- Measurement or inspection method

METHOD / STEPS

1. Import the mesh with correct units, trim irrelevant data and align it to functional datums.
2. Measure and fit primary planes, cylinders and section curves while retaining the unmodified mesh for comparison.
3. Build sketches, extrusions, revolves, holes and surfaces in a logical feature tree. Use licensed reverse-engineering tools where available.
4. Compare the reconstruction to the mesh and independent dimensions, then export both native and neutral formats as agreed.

THINGS TO WATCH FOR

A faceted solid conversion is not the same as a clean parametric model. Smoothing can erase wear or functional edges. Mark inferred hidden geometry explicitly.

FIRST TEST / WHAT TO RECORD

The model rebuilds after a controlled parameter change and still meets the checked interfaces.

RESULT / WHERE THIS STANDS

The model rebuilds after a controlled parameter change and still meets the checked interfaces.

TROUBLESHOOTING

- A faceted solid conversion is not the same as a clean parametric model. Smoothing can erase wear or functional edges. Mark inferred hidden geometry explicitly.

SPECIFICATION

TOOL PATH	Scanner / mesh workflow
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.

2026.10.10 / PROJECT UPDATE

Connected the newer project records: MDL-ICE-SHOVEL-001, MDL-GNOME-001. Existing test limitations remain in place.

REFERENCE NOTES

DezignWorks reference (<https://dezignworks.com/>), DezignWorks reference (<https://www.solidworks.com/partner-product/dezignworks>).

HOW-TO SOURCES

DezignWorks reference
<https://dezignworks.com/>

DesignWorks reference

<https://www.solidworks.com/partner-product/dezignworks>

RELEASED MATERIAL / SOURCE LINKS

[cad-028-public-summary.txt](#)

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/cad-028-public-summary.txt>

CONNECTED RECORDS

MDL-ICE-SHOVEL-001

<https://u225x.com/record/MDL-ICE-SHOVEL-001>

MDL-GNOME-001

<https://u225x.com/record/MDL-GNOME-001>

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-028>