

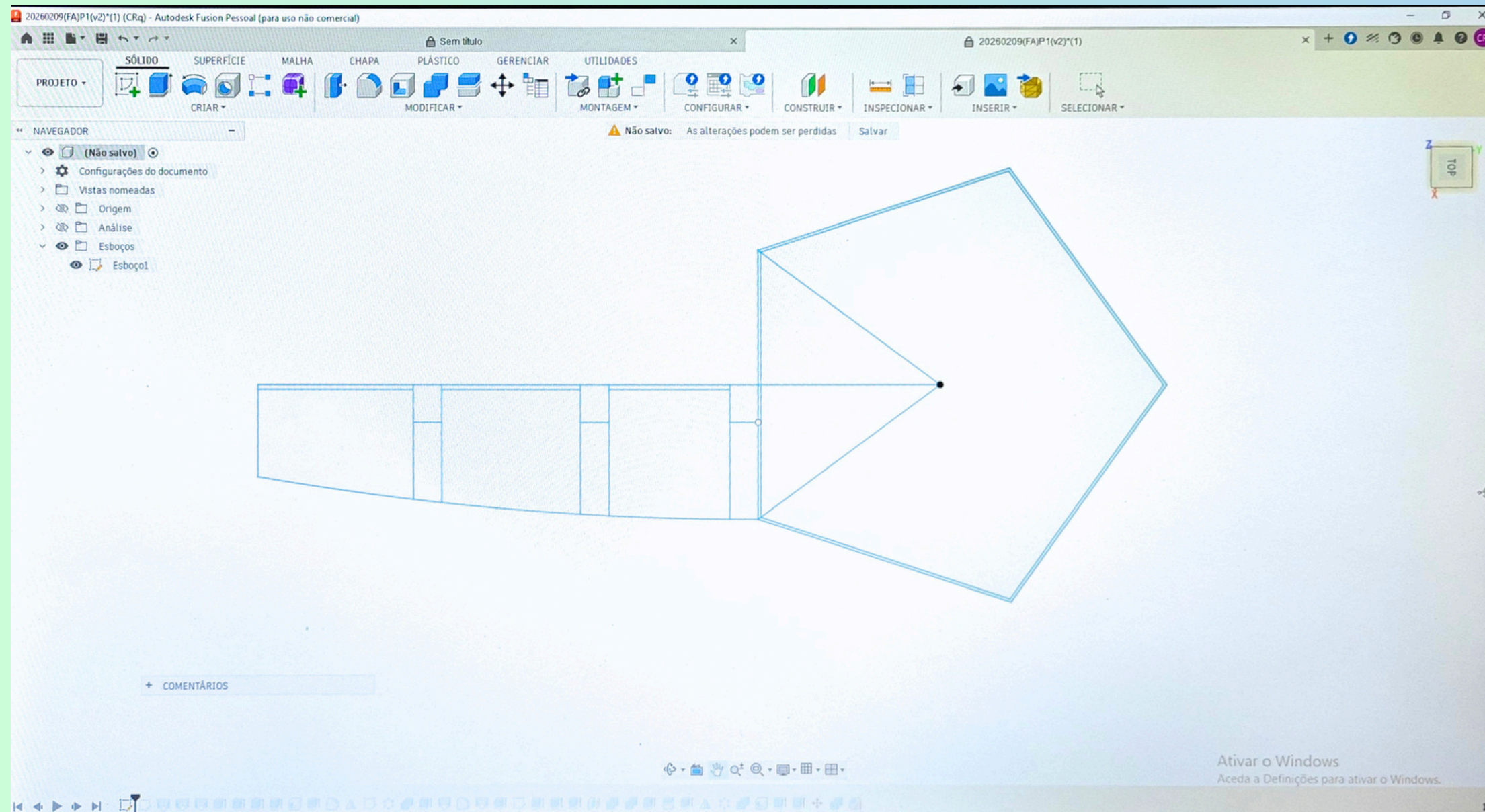
A 3D CAD model of a mould for a flower actuator. The model is a complex, multi-layered structure with a central circular feature. The layers are stacked and have various shapes and sizes. The central feature consists of a small cylinder with concentric circles around it. The model is rendered in a light blue color with a semi-transparent effect, allowing the internal structure to be visible. The background is a solid light blue color.

MOULD DESIGN WORKFLOW

MOULD FOR FLOWER ACTUATOR — RADICAL ECOSYSTEM — HYBRIDA STUDIO

Workflow Steps

- 01 — Base Sketch and Chamber Layout
- 02 — Chamber Profile Definition
- 03 — 3D Extrusion and Volume
- 04 — Radial Flower Structure
- 05 — External Mould Design
- 06 — Pneumatic Network Verification
- 07 — Pneumatic Chamber Generation
- 08 — Final Mould Assembly



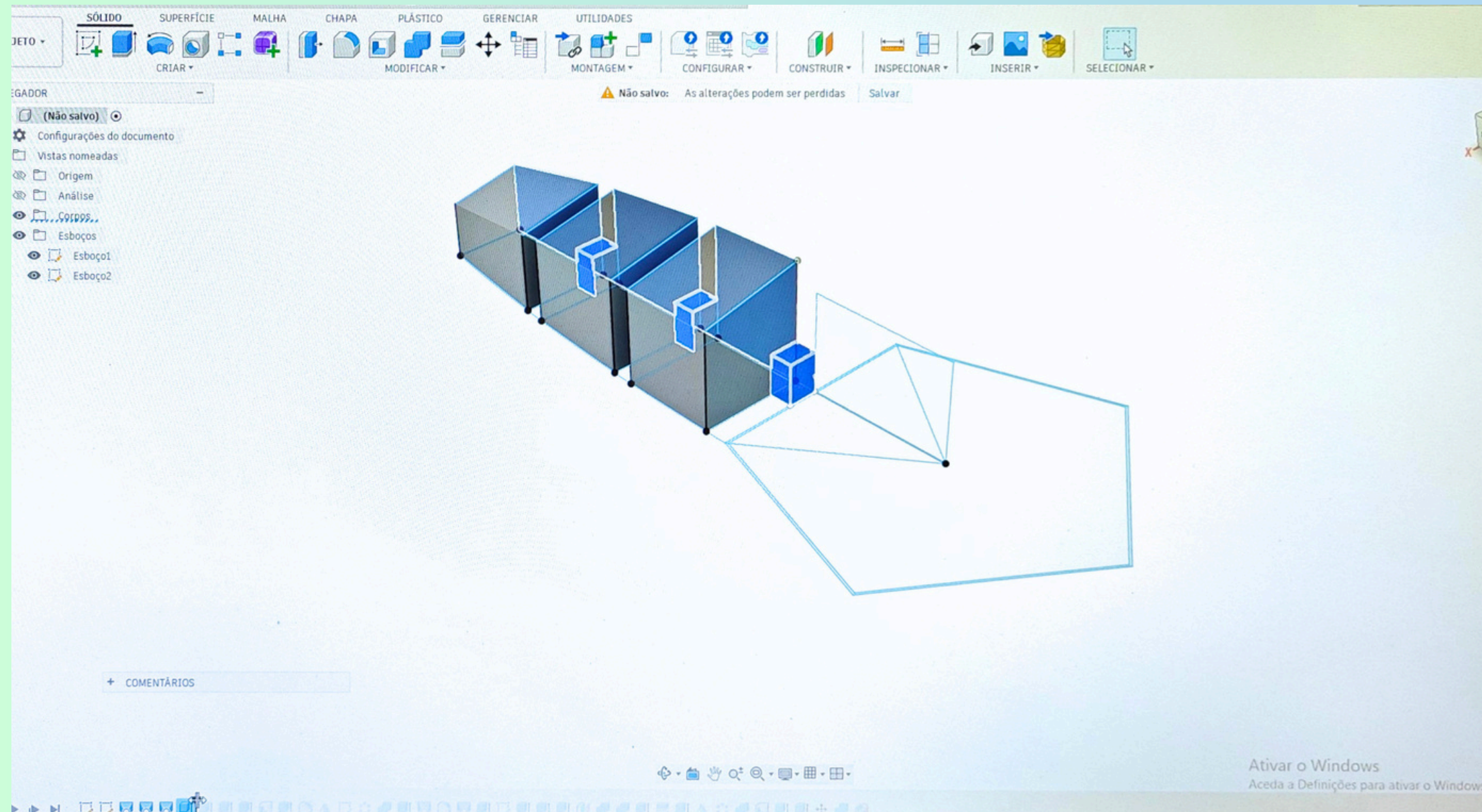
01

Base Sketch and Chamber Layout

Creation of the initial flower sketch defining the overall geometry, chamber layout, and central connection point.

Commands

Sketch, Line, Arc, Offset, Trim, Dimension



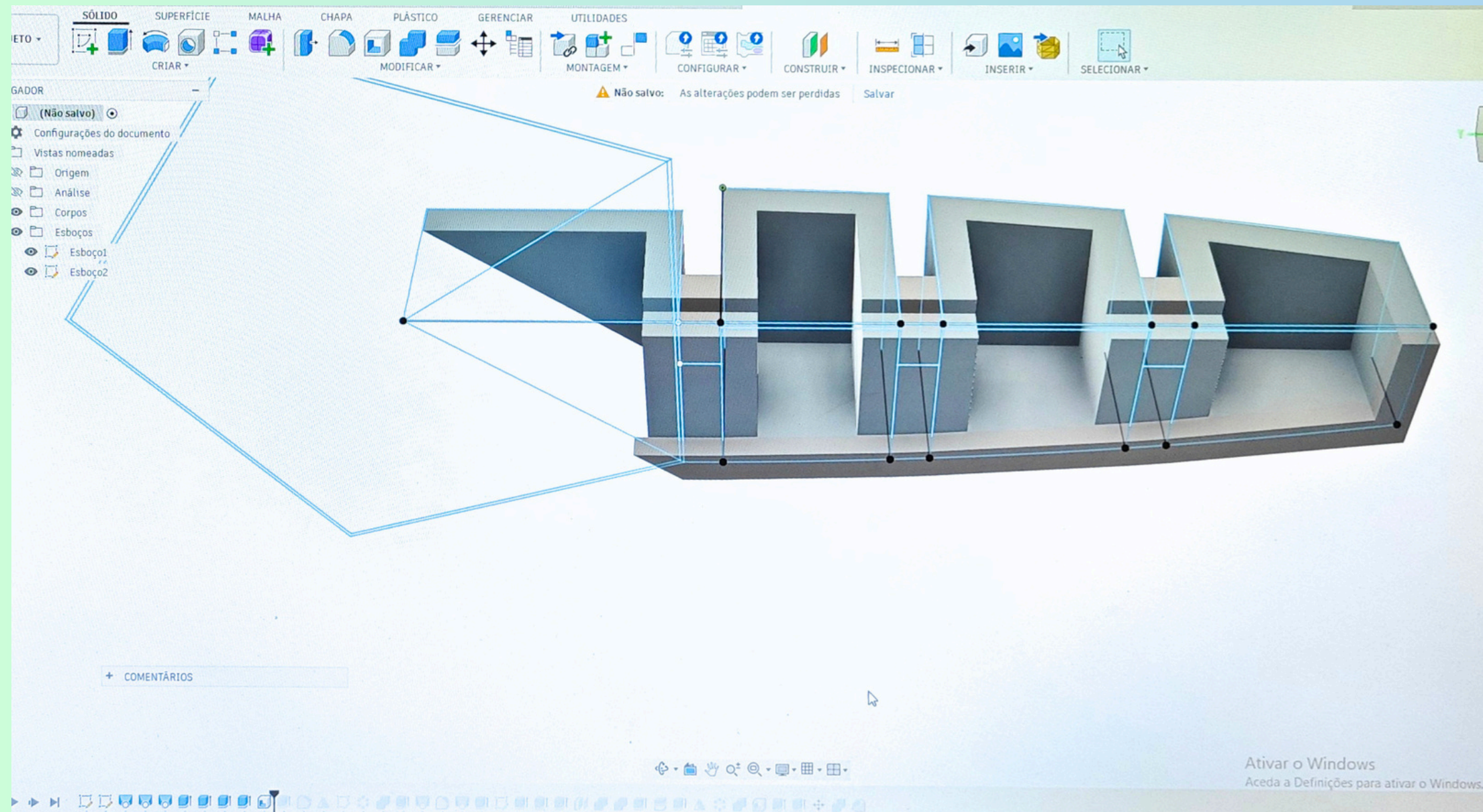
02

First 3D Extrusion

The 2D profiles were extruded to generate the first three-dimensional mould volumes.

Commands

Extrude, New Body, Join



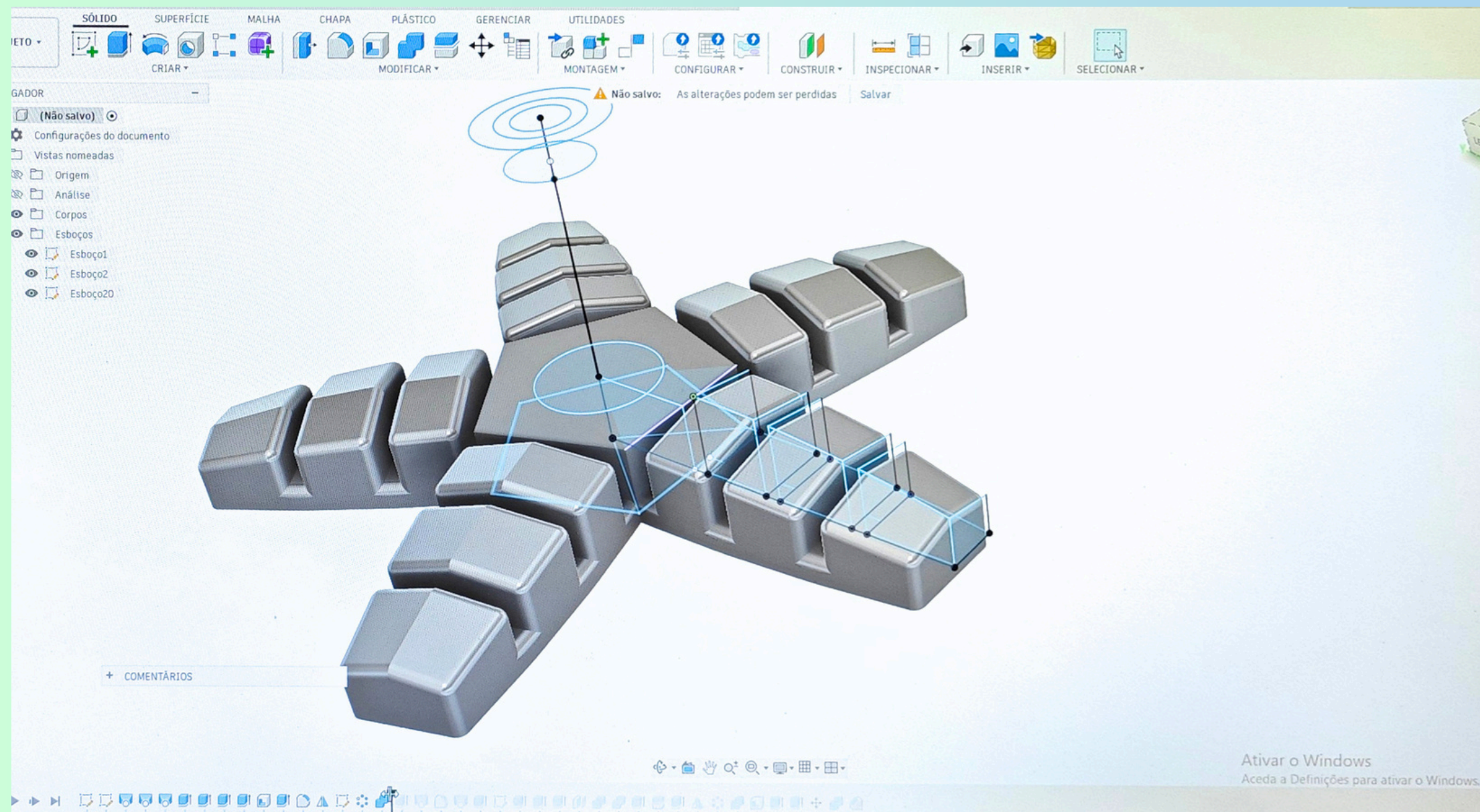
03

Internal Cavities

Internal pneumatic channels and chamber volumes were created to define the future silicone actuator structure.

Commands

Sketch, Offset, Extrude, Cut

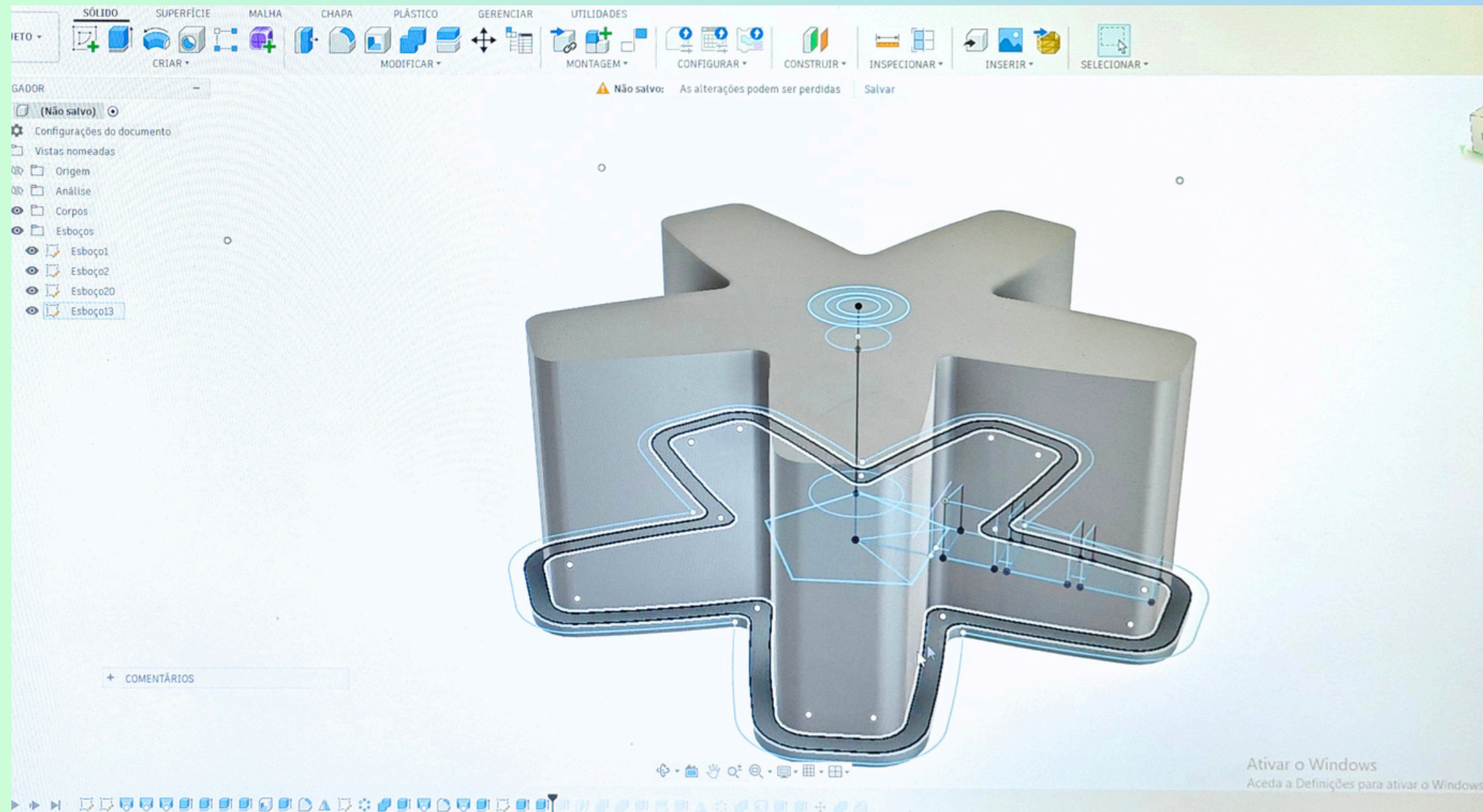


04 Radial Flower Structure

The chamber geometry was replicated around the centre to build the radial flower architecture.

Commands

Circular Pattern, Move, Mirror, Align



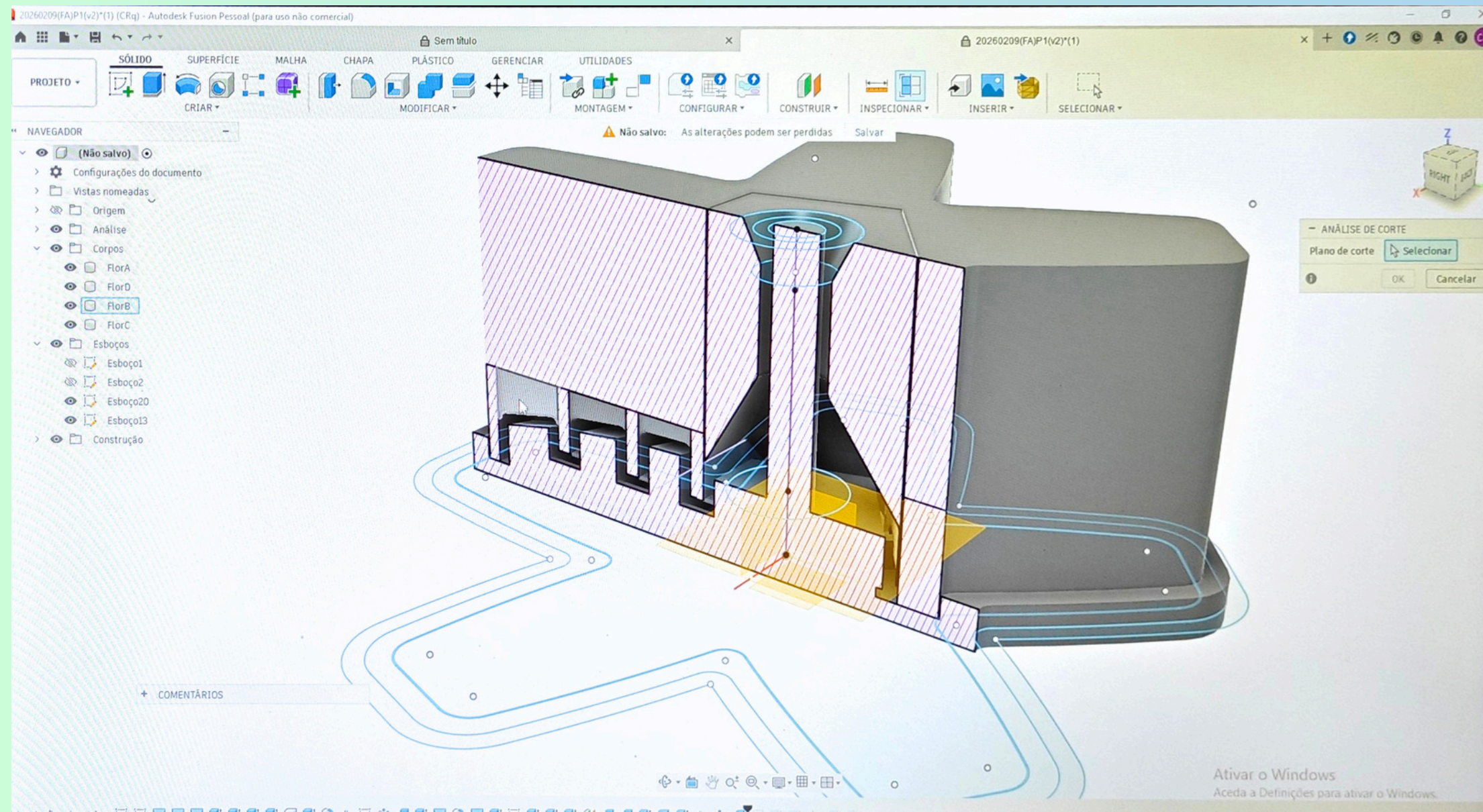
05

External Mould Design

An external shell was generated around the actuator geometry to create the mould walls and define casting boundaries.

Commands

Offset, Extrude, Shell, Fillet



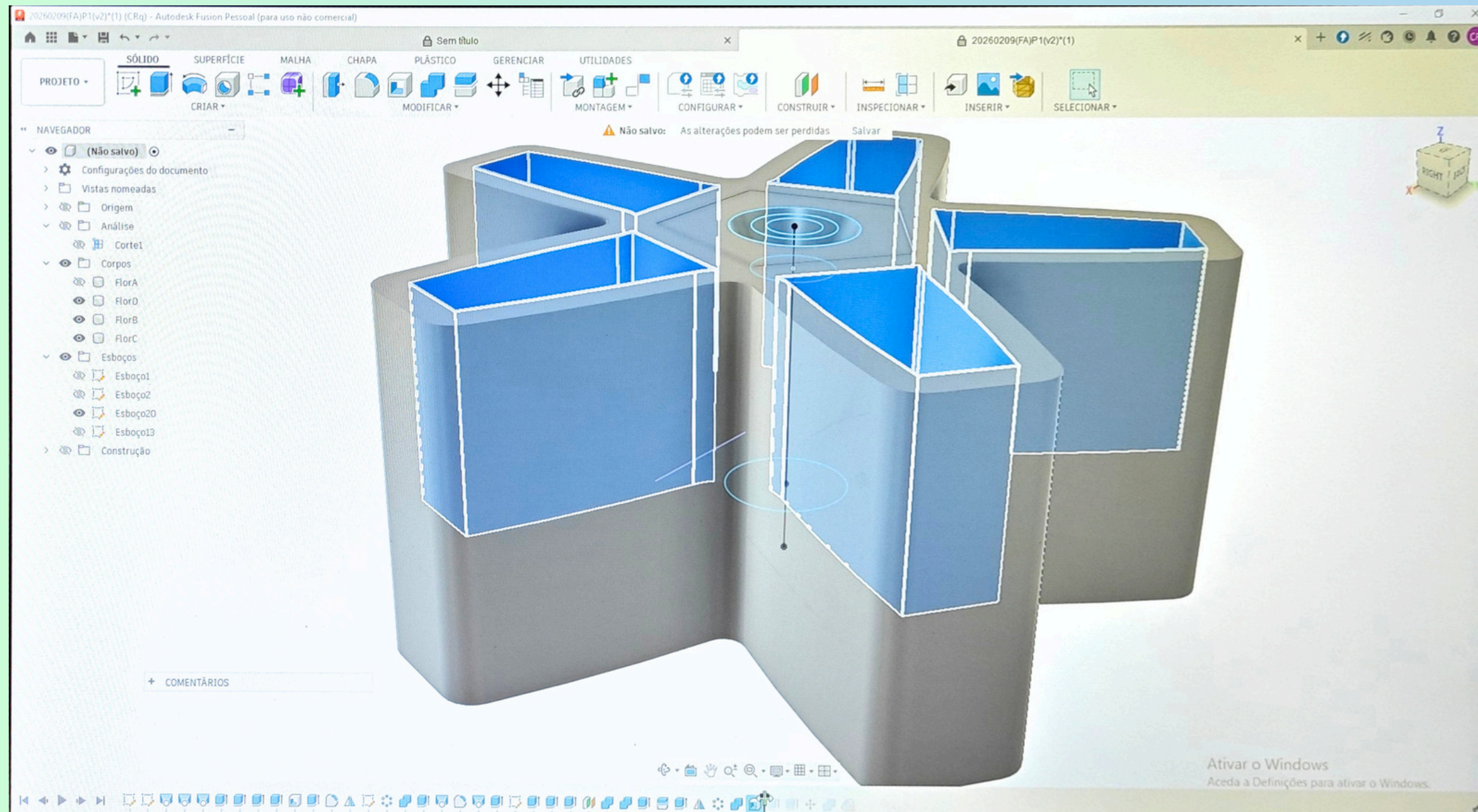
06

Pneumatic Network Verification

Section analysis was used to inspect airflow paths, chamber continuity, and the connection between the inlet and internal chambers.

Commands

Section Analysis, Inspect, Measure



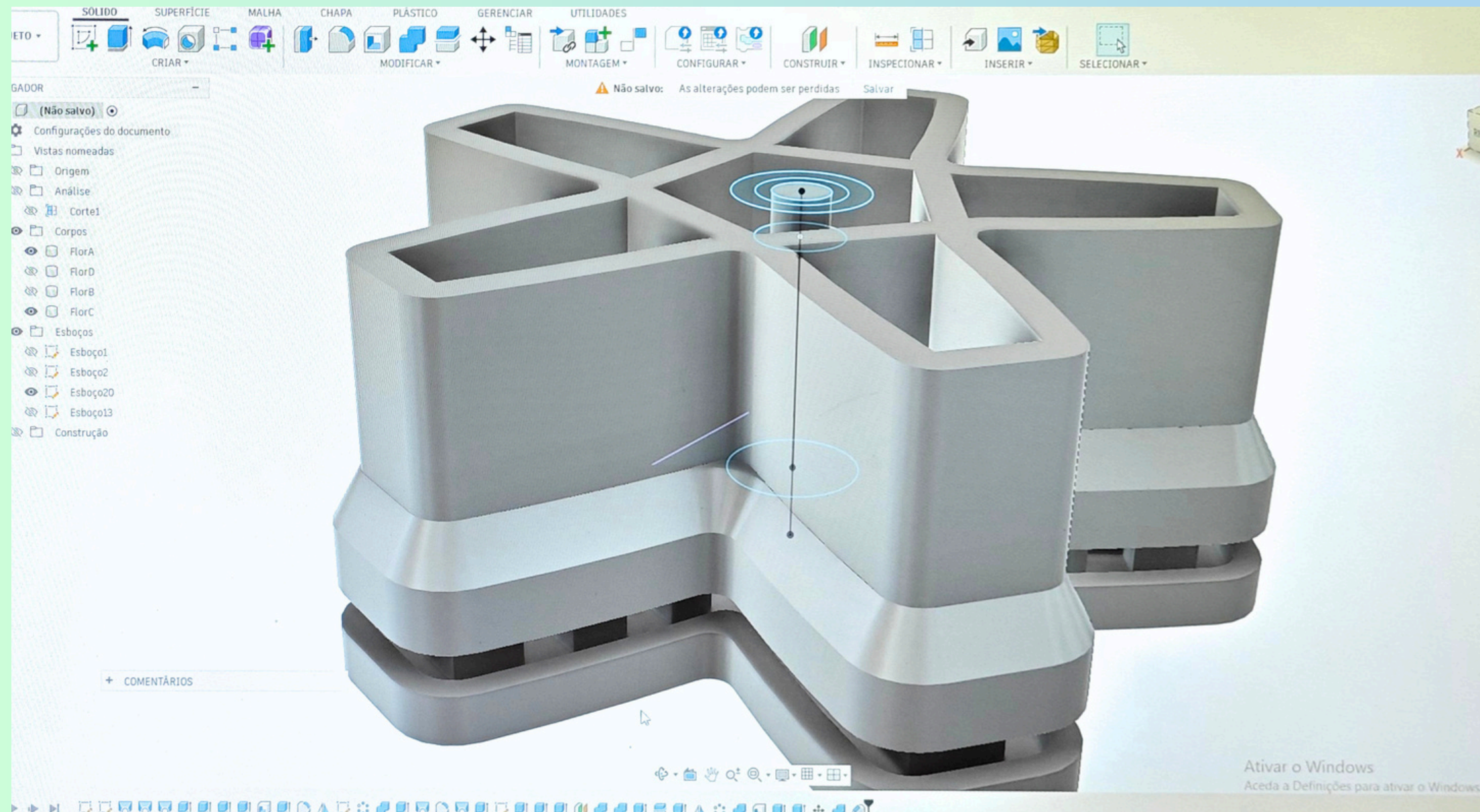
07

Pneumatic Chamber Generation

The individual chamber bodies were refined and integrated into the mould structure to create the final pneumatic geometry.

Commands

Extrude, Combine, Join, Cut



08

Final Mould Assembly

All mould components were assembled and verified before export for 3D printing and silicone casting.

Commands

Combine, Align, Section Analysis, Inspect, Export STL

MOULD DESIGN WORKFLOW

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FABRICADEMY 2026 FINAL PROJECT TOOLKIT
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