

READ ME: How to Use the Greenhouse Case Study files in the .zip folder

Thank you for downloading this case study utilizing Ansys Discovery and Parametric Studio to explore thermal and structural analysis of a greenhouse. There are many files in this .zip folder, so please use this document as a guide to identify all the files and their uses.

01 Case Study

The first folder to open is the **01 Case Study** folder. Here, you can find the case study document in PDF. It is recommended to open this file first, as it will take you through each part of the project from start to finish including when to open the other files.

02 Ansys Discovery Simulation Files

In the **02 Ansys Discovery Simulation Files** folder, you will find the files used for geometry construction and simulation. Each file contains the finished form of the Greenhouse and the simulation.

- Greenhouse_Initial_Geometry.dsco
- Greenhouse_Structural_Simulation.dsco
- Greenhouse_Structural_Simulation_Optimisation.dsco
- Greenhouse_Structural_Simulation_Parametrisation.dsco
- Greenhouse_Thermal_Day_Simulation_Solved.dsco
- Greenhouse_Thermal_Night_Simulation_Solved.dsco
- Greenhouse_Thermal_Night_Simulation_With_Heater_Solved.dsco

.dsco = Ansys Discovery file

03 Tutorials

In the **03 Tutorials** folder, you will find step-by-step PowerPoint presentations on how to create the Greenhouse geometry and perform the thermal & structural simulations in Ansys Discovery.

- Greenhouse Geometry Creation Tutorial.pptx
- Greenhouse Thermal & Structural Simulation Tutorial.pptx

04 Videos

In the **04 Videos** folder, you will find step-by-step video guides on how to perform the thermal & structural simulations in Ansys Discovery.

- Day_Simulation.mp4
- Heater_Simulation.mp4
- Night_Simulation.mp4
- Structural_Simulation.mp4

05 Parametric Studio

In the **05 Parametric Studio** folder, you will find step-by-step video guides for students and teachers on how to sign up for an account and how to use the MARCONI tool.

- Using MARCONI [Teacher] - Written Instructions - Greenhouse.pdf
- Written Instructions for Using MARCONI.pdf

The Greenhouse project can be accessed on the Parametric Studio website at the following address
<https://www.parametricstudioinc.com/ansys>