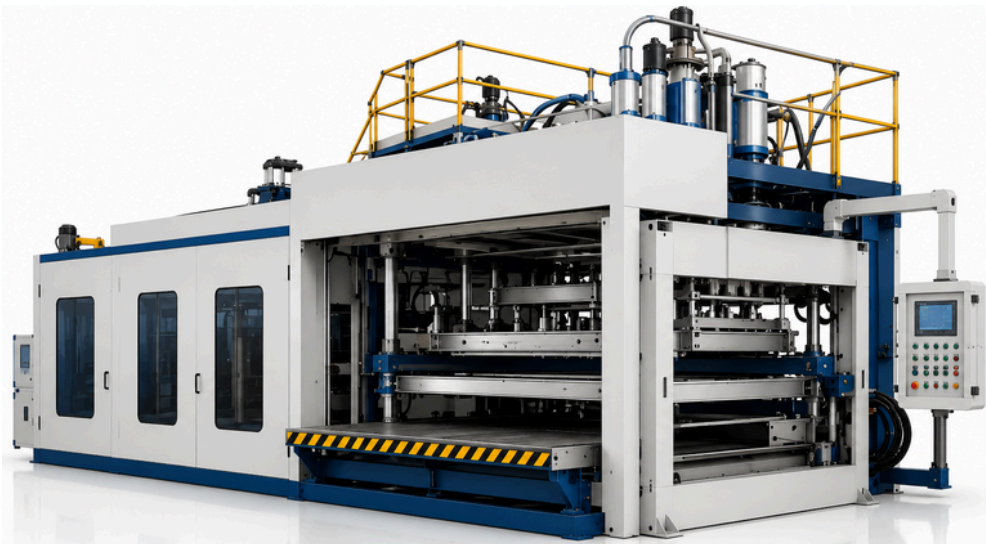


# THE WORKING PROCESS OF TWIN SHEET THERMOFORMING MACHINES



01

## MATERIAL LOADING

The process begins with material loading, where two plastic sheets are placed into the upper and lower frames of the machine.

02

## SIMULTANEOUS HEATING

Next comes simultaneous heating. Both plastic sheets are heated together until they soften and become ready for forming.

03

## POSITIONING OVER MOLDS

After heating, the machine performs positioning over molds. Each softened sheet is transferred and aligned over its corresponding mold—one for the top section and one for the bottom section.

04

## COOLING

Then the thermoforming cycle includes cooling inside the closed mold. Cooling helps the part retain its shape while supporting a strong bond between the final layers.

05

## MOLD CLOSING & SHEET BONDING

Once the sheets are formed, the machine executes mold closing and sheet bonding.

06

## VACUUM FORMING

During the forming stage, vacuum forming shapes each sheet to match its mold surface. Vacuum pressure pulls the plastic tightly against the mold, helping achieve clean details on both sides.

07

## PART EJECTION & TRIMMING

Finally, the system completes part ejection and trimming. After cooling, the molds open, and the finished product is ejected.

Read More:

[www.vacuamac.com/double-sheet-product-thermoforming-machine](http://www.vacuamac.com/double-sheet-product-thermoforming-machine)

A **Twin Sheet Thermoforming Machine** is designed to produce high-quality hollow, double-walled plastic parts by forming and bonding two heated sheets into a single, strong structure. This method supports efficient production, smooth surface quality, and durable results—especially for medium to large and complex components used in industries such as automotive, logistics, medical device housings, and industrial equipment casings.

## 1. Material Loading

The process begins with material loading, where two plastic sheets are placed into the upper and lower frames of the machine. Using both sheets at the same time helps enable the final part to have a hollow core and improved rigidity compared with single-layer forming.

## 2. Simultaneous Heating

Next comes simultaneous heating. Both plastic sheets are heated together until they soften and become ready for forming. This step is essential because the sheets must reach the correct thermoforming temperature to ensure accurate shaping and reliable bonding later in the cycle.

## 3. Positioning Over Molds

After heating, the machine performs positioning over molds. Each softened sheet is transferred and aligned over its corresponding mold—one for the top section and one for the bottom section. Correct alignment supports dimensional accuracy and helps form complex shapes with sharp corners and varied depths.

## 4. Cooling

Then the thermoforming cycle includes cooling inside the closed mold. Cooling helps the part retain its shape while supporting a strong bond between the final layers. Controlled cooling is important for achieving consistent quality across repeat runs.

**Also Read: [How to Choose the Right Twin Sheet Thermoforming Machine](#)**



## 5. Mold Closing and Sheet Bonding

Once the sheets are formed, the machine executes mold closing and sheet bonding. The molds close together, pressing the two shaped sheets into contact. While still hot, heat and pressure fuse the sheets, mainly along the edges or designated bonding surfaces, creating a strong welded connection.

## 6. Vacuum Forming

During the forming stage, vacuum forming shapes each sheet to match its mold surface. Vacuum pressure pulls the plastic tightly against the mold, helping achieve clean details on both sides and maintaining structural consistency for the double-walled design.

## 7. Part Ejection and Trimming

Finally, the system completes part ejection and trimming. After cooling, the molds open, and the finished product is ejected. Trimming removes excess material, resulting in a clean final component with minimal additional finishing.



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## Why This Process Matters

This step-by-step workflow is what makes twin sheet technology effective: it creates lightweight parts with hollow interiors (for wiring, insulation, or fluid channels) while also delivering the strength, rigidity, and surface quality manufacturers need for reliable industrial performance.

## Advantages of Twin Sheet Thermoforming Technology

A **Twin Sheet Thermoforming Machine** offers numerous advantages, including reduced manufacturing costs, fast production speed, high design flexibility, and strong product durability. It is an efficient solution for producing large hollow plastic components for multiple industries worldwide.

Click this link <https://tinyurl.com/3ukcwpv2> or call now at **+86 13916846091** for more information about the **Twin Sheet Thermoforming Machine**.