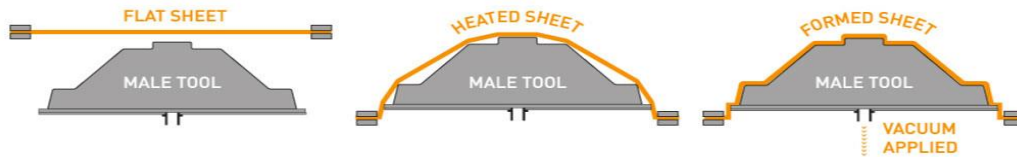


Basic vacuum forming packaging.

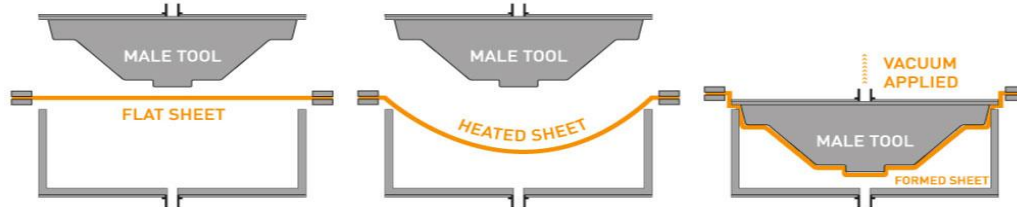
Vacuum formed packaging, also known as thermoformed packaging, is a manufacturing process used to create a variety of plastic products, including packaging materials. Here's an overview of the process and its benefits:

## Process

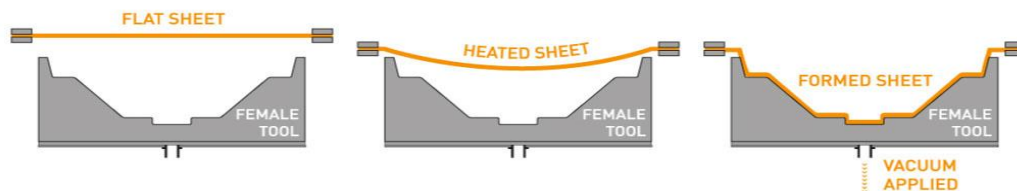
### Vacuum Forming - Male Tool - Bottom Platen



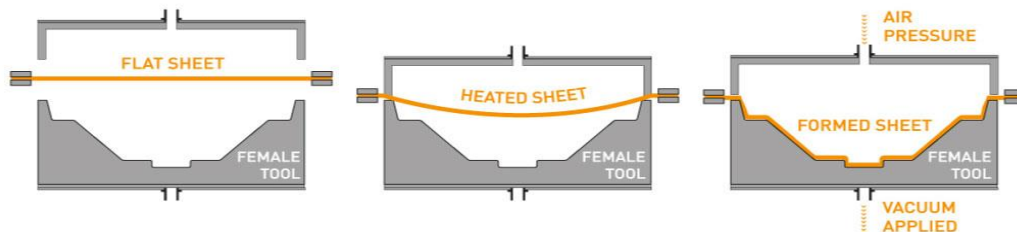
### Vacuum Forming - Male Tool - Top Platen



### Vacuum Forming - Female Tool - Bottom Platen



### Vacuum Forming - Female Tool - Top & Bottom Platen



1. **Heating:** A plastic sheet is heated until it becomes pliable.
2. **Forming:** The heated plastic sheet is placed over a tool. A vacuum is then applied, pulling the plastic tightly against the tool, creating the desired shape.
3. **Cooling:** The formed plastic is cooled to retain the shape.
4. **Trimming:** The excess plastic is trimmed off, leaving the final product.

## Materials Used

Common materials used in vacuum forming include:

- Polyethylene (PE)
- Polypropylene (PP)
- Polystyrene (PS)
- Polyvinyl Chloride (PVC)
- Polyethylene Terephthalate (PET)

## Applications

Vacuum formed packaging is used across various industries due to its versatility and cost-effectiveness. Some common applications include:

- **Blister packs:** Often used for pharmaceuticals, electronics, and small consumer goods.
- **Clamshell packaging:** Used for food products, electronics, and other retail items.
- **Trays:** Used in food services, medical equipment, and industrial components transit trays.
- **Custom packaging solutions:** Tailored to specific products for protection and display purposes.



## Benefits

1. **Cost-Effective:** The process is generally less expensive than other moulding methods, especially for small to medium production runs.
2. **Quick Turnaround:** The moulds for vacuum forming can be produced relatively quickly, enabling faster production times.
3. **Design Flexibility:** Allows for a wide range of shapes and sizes, making it suitable for custom packaging solutions.
4. **Durability and Protection:** Provides excellent protection for products during shipping and handling.
5. **Visibility:** Transparent materials can be used, which is beneficial for retail displays where product visibility is important.

## Environmental Considerations

- **Recyclability:** Many of the materials used in vacuum forming are recyclable.
- **Sustainability:** Efforts are being made to use more eco-friendly materials and processes to reduce the environmental impact.

Overall, vacuum formed packaging is a versatile and efficient solution for many packaging needs, offering both functional and aesthetic benefits.

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