Available machine sizes of TK Series

Model no.	Material dimension max.	Work piece max.	Height piece max.	Heater power
TK 1010	1000X1000 mm	900X900 mm	500 mm	12 KW
TK 1510	1500X1000 mm	1400X900 mm	500 mm	18 KW
TK 2010	2000X1000 mm	1900X900 mm	600 mm	20 KW
TK 2015	2000X1500 mm	1900X1400 mm	600 mm	36 KW
TK 3020	3050X2050 mm	2950X1950 mm	600 mm	72 KW

Prepared for almost any application

Thermoforming is a manufacturing process used to create plastic parts by heating a flat sheet of thermoplastic material and shaping it over a mold.

The process involves heating the sheet until it is pliable, and then using a vacuum or pressure to form it into the desired shape.

The thermoforming process typically involves the following steps:

Material Selection: The first step in the thermoforming process is to select the appropriate material. Thermoforming materials are typically thermoplastics, which soften when heated and then become rigid again when cooled. Common materials used in thermoforming include acrylic, polycarbonate, polyethylene, polystyrene, and polypropylene.

Sheet Heating: Once the material has been selected, the flat sheet is heated until it becomes pliable. The heating process can be accomplished using a variety of methods, including convection ovens, radiant heaters, or infrared heaters.

Forming: After the sheet has been heated to the correct temperature, it is placed over a mold. A vacuum is applied to the mold, which pulls the heated sheet down over the mold. The vacuum ensures that the sheet conforms to the shape of the mold and creates a tight seal.

Trimming: Once the sheet has been formed over the mold, any excess material is trimmed away using a cutting tool or a router. The trimmed parts are then ready for further processing or assembly.

The thermoforming process is commonly used to produce a wide variety of products, including packaging materials, automotive components, medical devices, and consumer products. It is a cost-effective and efficient manufacturing process that can produce high-quality parts with consistent quality and precision.

Production in series

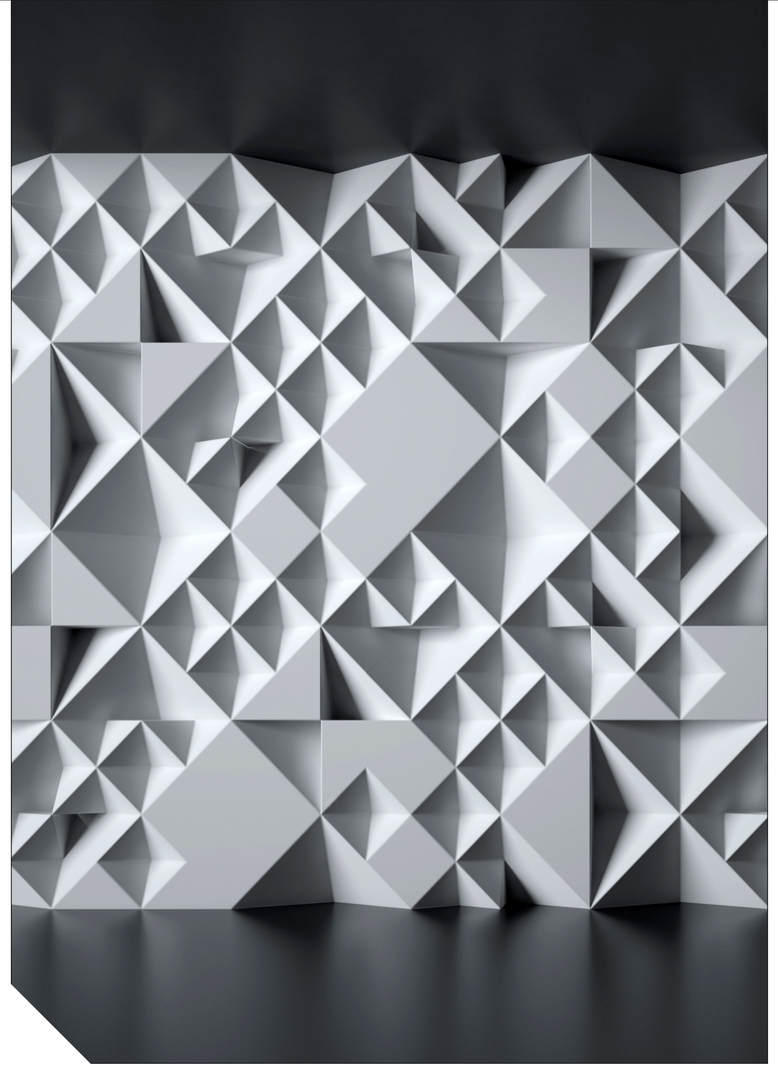
Swiss Dynamics offers complete solutions for thermoforming in continues mode without stopping the process for high volume of plastics.

The high production system typically involves the following option:

Roller delivery system: This system is designed to load a plastic roll with diameter up to 1000 mm and deliver the material to the thermoforming machine.

Linear robot for loading the material: The thermoforming loading system is used to achieve a complete automated process with a transfer robot and an electrical trimmer that cuts dimensional precise sheets.

Linear robot for unloading the parts: The thermoforming unloading system takes the part from the machine and places it in a stack.



Swiss Dynamics GmbH | Echterdinger Strasse 57 | DE-70794 Filderstadt | Deutschland

Tel: +49-152-56980234 | office@swiss-dynamics.com | **www.swiss-dynamics.com**

SD SWISS DYNAMICS

Thermoforming Machines
TK Series

www.swiss-dynamics.com

TK Series
Thermoforming Machines

Fully automated thermoforming equipment

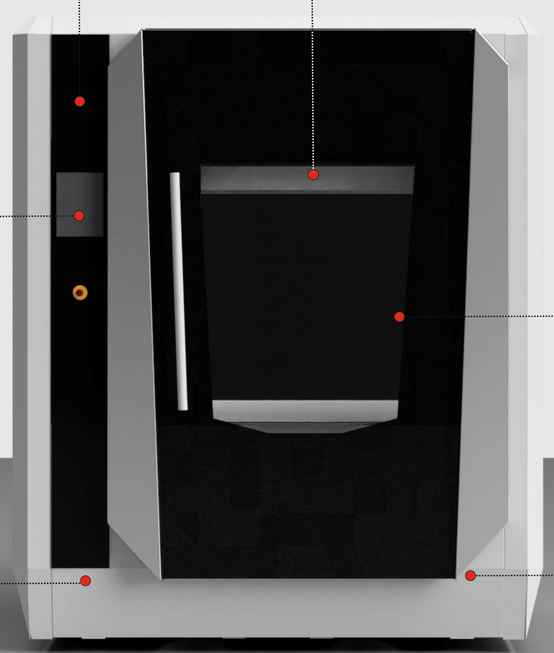
- The vacuum thermoforming machines from Swiss Dynamics offer a new perspective for companies working in the plastics processing industry.
- Fully automated, Galaxy Thermoforming equipment offer an easy solution for transforming flat creations into exceptional 3D objects.
- Thermoform Galaxy offers precision for every deformation, computerised numeric control, an user-friendly application accessible on the touchscreen panel and a fully automated thermoforming system (material heating with active temperature control, vacuuming and releasing of material on the mold)

User friendly interface 7" touchscreen panel

- Easy to use system that does not require experience in operation
- Complete automated thermoforming functions with 30 memory programs
- Programable position for loading, heating and vacuum with measurment of force and vacuum pressure

Compact design - small foot-print

- Small space requirements
- Complete housing close
- Work piece maximum dimensions 900 x 900 x 500 mm for TK1010
- FEM-optimized design & construction
- Precision in every component and detail



Heater Energy efficiency

- Low energy consumption - Best in the class of thermoforming machines
- Quartz resistors with vacuumed carbon fiber
- Stainless steel heater with thermal compensation system

Material fixing & clamping

- Automated fixing of the material with electrical axes
- Automated clamping
- Automatic air blowing system from the mold for an easy release of the material

Vacuum System on all standard TK machines

- High performance vacuum system based on Oerlikon SogeVac vacuum pump with total power up to 300 cm/h and a pressure up to 0.8 mBar Abs.
- Vacuum table with full electronic control.
- Suitable for any thermoformable plastic
- Long oil life time and easy maintenance.
- Variants suitable for every application.

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