

THERMOFORMING TECHNOLOGY

When we speak about “thermoforming” we are using a definition coined in 1938 to describe the overall process of vacuum and high-pressure forming. Massive machinery production and market attention came in the 50s, together with the introduction of polypropylene thanks to Giulio Natta and Karl Ziegler, who researched and developed catalyst for polymerization of PP material. PET was invented before 1941, but the application in thermoformed food packaging became appealing at the end of the 19th century. There are different applications and concept in thermoforming, but WM Thermoforming Machines is particularly focused on the high-speed vacuum and high-pressure technology and its development.



Through the years, the company has faced many challenges and has successfully responded to customers' and market needs:

- **Higher clarity of packaging:** WM in-line extrusion and thermoforming ensures a better transparency of the PP, thanks to solid forming for providing linear orientations.
- **More tamper evident solutions:** WM has actively contributed to several successful projects in collaboration with renowned mold makers
- **In-line labeling and marking system:** WM can provide solutions with integrated labeling and marking system;
- **Portion packaging instead of large containers and beverage downsizing:** WM new stacking system allows to stack, count and bag also products with complex shapes, fully automatically;
- **Flexible machinery to run small and medium productions,** responding to the growing customized and downsized product packaging: WM Robot Stacker (RS) and quick mould change ensure 45 minutes production change time;
- Reducing resin cost by using fillers or expanded materials, especially with materials replacing PP such as EPS, PS, OPS.
PET, on the other hand, replaces some of the PP products due to its lower density.
- WM inline extruders and thermoforming lines with in-mould trimming technology are a perfect solution for processing PP and two colors with fillers to achieve close tolerance for food packaging at a lower cost.
- Lower energy consumption: WM offers a regenerative feeding system, heating elements of latest technology, improvements to align to the European Directive EuP2005/32/EC (Eco-Design of Energy-using products)
- Labor cost reduction: the system is fully automated and can be operated by only one machine supervisor. Continuous processing for increased efficiency, with consequent decrease in the CapEx cost USD versus labour cost (fully automated vertical production).

WM is keeping an attentive eye on the market demands and on customers feedbacks and requests, to keep the pace and provide tailored solutions to their every need.

Our special talent is to be passionately curious!

www.wm-thermoforming.com

WM THERMOFORMING MACHINES

WM THERMOFORMING MACHINES, located in Stabio (Switzerland), has been manufacturing thermoforming machines since 1981 and is currently recognized as one of the leading companies within the industry thanks to the close cooperation with their customers, mold makers and suppliers of raw material. A highly experienced and qualified technical team is continuously engaged in developing new process improvements and tailor-made solutions to meet the special requirements of each customer. The specific knowledge acquired in the thermoforming processing technology and the continuous research and testing result in a strong presence on the market with innovative thermoforming machines, equipment and devices responding the needs of the packaging industry.



Hall Nr.1 - Steel rule cutting machines assembling hall



Hall Nr.2 Form punch machines and IN-LINE assembling hall

PRODUCT RANGE

FC SERIES

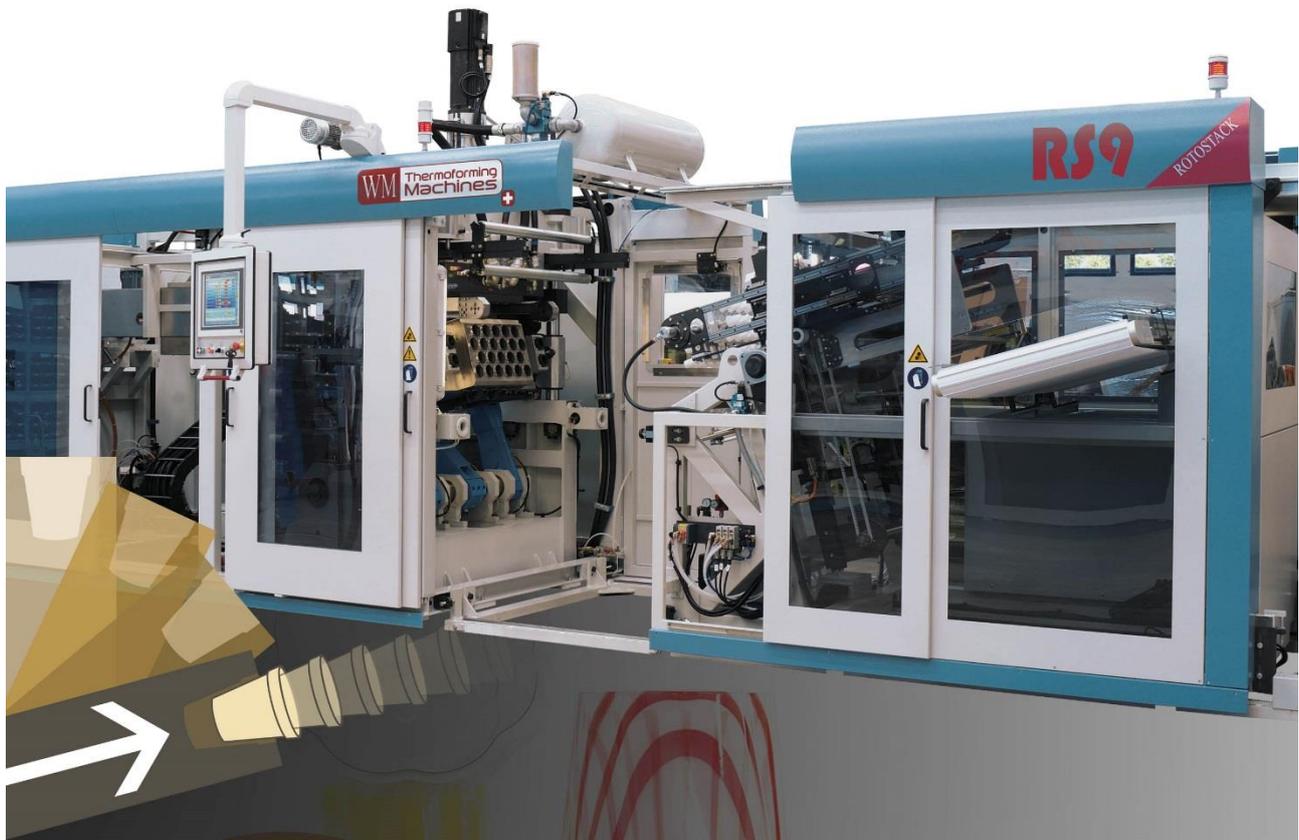
Vacuum and pressure thermoforming machines with steel rule cutting technology, suited for contract thermoformers who need to cover and satisfy flexible medium-high productivities.



FC Series		FC600 E	FC780 E	FC1000 E
Max. mould size	mm	640x450	780x570	1060x750
Max. pos/negative depth	mm	130	130	130
Forming clamping force	daN	15,000	30,000	60,000
Total heating power	kW	50	96	176
Cutting press clamping force	daN	50,000	60,000	105,000

FT SERIES

In-mould trimming with punch-and-die thermoforming machines with lower tilting platen, are suitable for high quality products and medium-long productivities including a wide range of automatic stacking devices which are defined according to final product requirements.



FT Series		FT 500	FT 700	FT 900
Max sheet width	mm	620	750	930
Max mould size	mm	570x375	705x400	880x520
Max cutting dimension	mm	550x320	685x340	860x460
Max negative depth	mm	150	150	150 (180)
Clamping force	daN	30,000	40,000	75,000

TWIST SERIES

In-mould trimming with punch-and-die thermoforming machine with lower tilting platen without mechanical cams. One-step-ahead technology that makes the TWIST series the most interesting solution for medium-high productions of tubs, dairy containers, pots, disposable cups and lids that require closed cutting tolerance, high product quality within a fully automated process.



TWIST Series		TWIST 300	TWIST 700
Max sheet width	mm	155-395	400-750
Max mould size	mm	340x230	705x400
Max cutting dimension	mm	315x200	685x340
Max negative depth	mm	120	180*
Clamping force	daN	10,000	40,000

**Related to the product design, to be verified*

INTEC SERIES

Showpiece of WM product portfolio are the IN-LINE plants, real production islands including sheet extrusion, thermoforming, direct scrap recycling, up to the final product packaging. The most efficient system to produce disposable cups, plates, margarine tubs and yogurt containers.



The key **APPLICATIONS** of WM machinery and In-Line plants are various, as well as the type of raw materials to be processed.

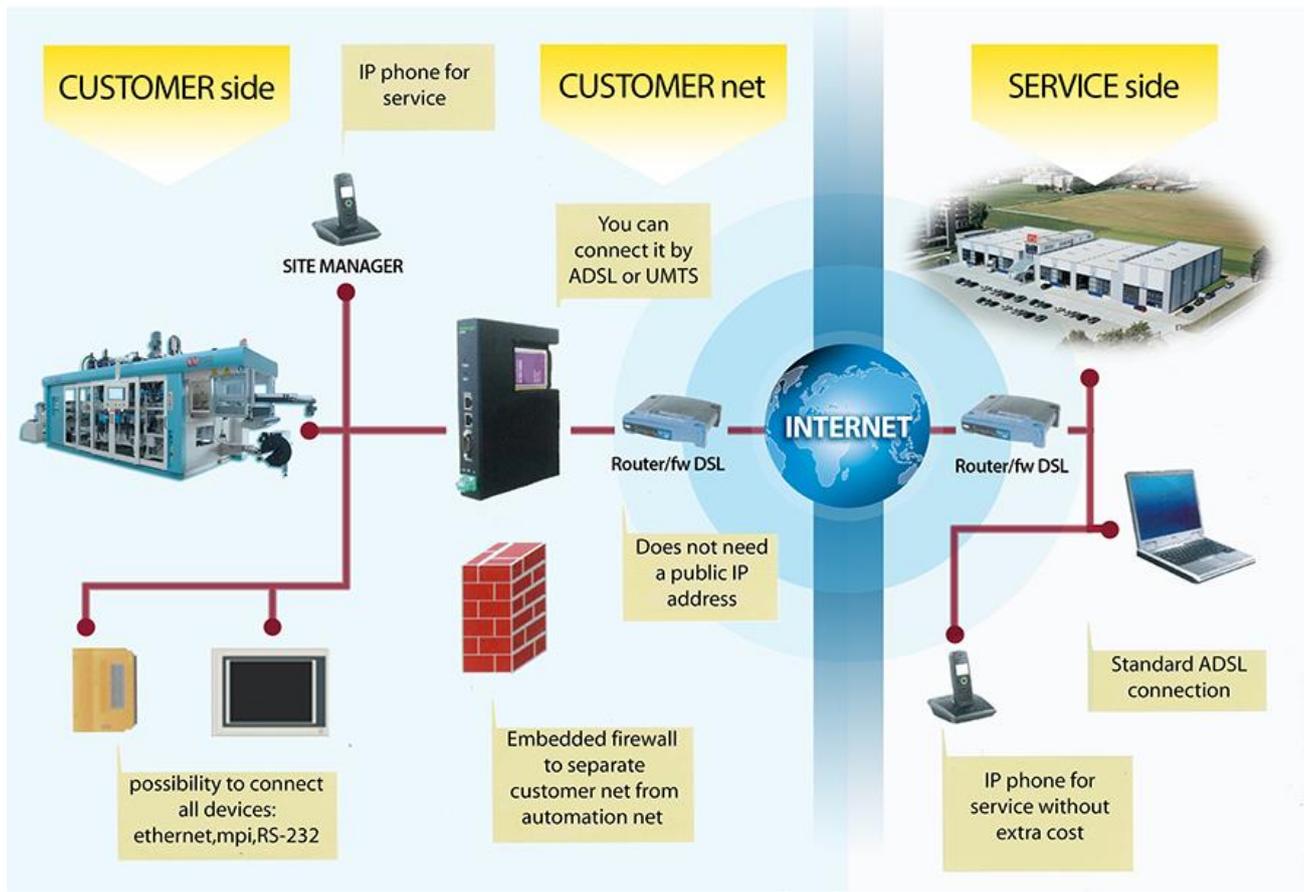
Our machines can produce:

- Parts for industrial packaging and food trays for the retail channel
- Disposable cups, plates and dairy containers

CUSTOMER CARE AND AFTER SALES SERVICE

The immediate and professional response of highly skilled professionals is valued by all of WM's customers.

The company also offers customized training courses at its headquarters in Stabio to instruct their customers on the latest available technology and optimal usage of the WM's thermoforming machineries.



DIFFUSION AND SALES ORGANIZATION

Today **WM THERMOFORMING MACHINES** is recognized as one of the major and best-in-class thermoforming manufacturers worldwide, renowned for its high-quality products and advanced technological standards of its equipment and has installed more than 1000 thermoforming machines and 100 complete In-Line plants in more than 60 countries.

The company has a global presence through a diffused sales organization supervised by 7 Area Managers who maintain a continuous relationship with their agents and customers to cover their daily needs.



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