

WM Thermoforming Machines SA with UPAX UNITY R-PET market in Russia

The Swiss **WM Thermoforming Machines SA** with production plant at Stabio, is worldwide present since 1981 with his thermoforming production lines. Today WM is present in more of 60 countries and territories with more than 1100 machines and more than 110 complete IN-LINE Extrusion and Thermoforming systems,

At the K fair in Dusseldorf, 16 - 23 October 2019, the Swiss machines manufacture has celebrated the premiere of the new thermoforming machine **Flex 92** which integrates several innovative features. The machine was presented in operation with 24 cavities in-mould cutting tool to produce PP-Lids with a 450-micron film.

This technology allows an extreme precise and form-stable cut of the products.

The new Flex 92 has a maximum tool dimension of 920 x 700 mm, with a positive/negative forming depth of 160 mm. The clamping force is totally 105 ton in the IM-Forming station and 82 ton in the cutting station.

Flex 92 offer the possibility to load also tools, build for different machines without modifications of the tools. One additional innovation presented is the laser application (TLA) integrated in the Flex 92 which had its world premiere during K trade fair. This solution offer for example the possibility of inline-engraving logos, data, traceability info and big and micro holes cut; WM underline that this application does not require any additional tools.

For a better control of the process, WM has introduced on the FLEX 92 for the first time the "Map-View" (WM-Viewer), which can be used soon also on the other WM models. This application allows to all important machine parameters to be displayed on PC and mobile end-units like laptop, phones or I-Pads, in real time.

WM is proud about his new Flex 92, which has generated great interest of all visitors at the K 2019 show.

WM Thermoforming Machines has supplied the first thermoforming machine to a Russian customer in 1989. In the following years, the Russian market has been developed and became one of the important markets for the swiss company.

One of the key projects realized in Russia is an innovative solution produce of thermoformed products with R-PET, the fully recycled material.

Upax-Unity Company is opening the most modern PET processing plant in Russia and probably in all over the world, thus making an important contribution to conserving resources and expanding the cycle economy" says Mr. Mikhail Tsirkulev (CEO of MS-Technique LLC), who also is the chief project supervisor.

Quality-conscious processing of PET bottle flakes begins with cleaning and colour sorting and continues with melt preparation in an extruder. Here, melt filtration and degassing ensure ideal conditions for the PET melt before it reaches the heart of the PET processing plant - the LSP reactor (LSP = Liquid State Polycondensation). In the LSP reactor, harmful chemicals are removed far below EFSA and FDA limits and at the same time the PET molecular chains are extended to the desired, very uniform length (increase in the intrinsic viscosity of the polyester). This allows Upax-Unity to produce PET cups and trays with very uniform and high strengths, excellent optical properties and no health hazards.

The Upax-Unity system allows the rPET sheets to be produced directly from the rPET melt coming from the LSP reactor. This arrangement saves one heating process for the plastic and thus further contributes to the economical use of resources.

"Looking for ways to recycle PET bottle waste to produce high quality food packaging, Upax-Unity have selected a combination of state-of-the-art and forward-looking technologies that is unique in Russia," says Mr. Mikhail Tsirkulev.

UPAX UNITY is one of the leading companies in the Russian market with its own and capillary sales organization and sales offices distributed in the entire territory of Russia.

“After several years of close collaboration with **UPAX UNITY**’s specialists, we can confirm for the future years our partnership with this important company new R-PET projects.

The first step of the project includes the supply of 3 thermoforming machines”, Mr. Jörg Huth, Sales Area Manager of **WM Thermoforming Machine SA for Russian market** said: -

UPAX together HighTech with supplier partners as Marbach, Leistritz, NGR and WM Thermoforming Machines SA, make the Russian plastics industry able to face the new rules in the global markets and to access to the Close Cycle Economy”

In detail, **WM Thermoforming Machines SA** has delivered one **Twist 700** machine with its MSv7 robotized stacking System, one **FC 780 E Speedmaster Plus** Machine and one **FC 780 HP** machine.

Twist 700 tilting machine is a pressure forming – punch and die machine with lower tilting platen without mechanical cams. It is developed for high quantity production of tubs, dairy containers, pots, disposable cups and lids that require closed cutting tolerance, high productivity within a fully automated process.

The machine offers additionally the possibility to use existing tools which were designed to be used on WM competitor’s machines without the necessity to modify those tools.

Some of the main benefits of the **Twist 700**:

- New motion System without cams to reach up to 50 cycles/min in production
- Servomotor driven extractor for perfect cycle synchronization
- MLS System (Machine Learning System) for initial self-setting of the cycle parameters
- Higher clamping force insuring more cavities for PET and PP materials
- MSV7 universal and robotized stacking System enables easy automatic handling of light and shallow products to the further operations, es. Packaging machine.

FC 780 E Speedmaster Plus and the **FC 780 HP Speedmaster Plus** machines are steel rule cutting machines equipped with fully automated 3-Axis Stacking Robot. The **Plus** version represents the last evolution of fully electric steel rule cutting thermoforming machines and it has maximum tool dimensions of 780x570 mm and a maximum forming height positive/negative of 130 mm.

The machine movements are made with servomotors which allow high productivity with up to 54 cycles per minute in production.

The HP version of FC 780 series has one additional holes punching press to produce for example fruits and vegetables trays & lids.

Some of the main benefits of **FC 780 E Speedmaster Plus** and **FC 780 E HP**

- MLS System (Machine Learning System) for initial self-setting of the cycle parameters
- Fast tool change to reduce machine downtime
- Cutting platen with minimal deflection to increase knife life and process stability
- Ceramic heating elements with individual temperature controllers for precise setting
- Display for energy consumption defining real Energy Savings
- Easy operating and maintenance

With the supply of this 3 Thermoforming Machines supplied by **WM Thermoforming Machines SA** to the Russian rigid packaging producer **UPAX UNITY**, the R-PET project is moving on the highest technology level available today.

“This is the first step we realize with our Customer **Upax Unity** into a long-term relationship, orientated in high performance technology, for the packaging production, under full respect of recyclability of the thermoformed products and Close Cycle Economy”

The Upax project shows that the rigid packaging market in Russia is evolving into the new era of close cycle economy. WM is well prepared to support his Customers to step into this technology with Machines, Technology & Innovations and worldwide Service.

WM Thermoforming Machines SA with his Agent, **Plastmash** (ex. FPM Formet Plastic Machinery), have the pleasure to invite you at Interplastica Exhibition, January 2020 in Moscow. The welcomed Customers will be informed about the full range of thermoforming machines as well as of their actual and future, innovations and developments.



Head Quarter UPAX UNITY, Perm, Russia



Twist 700



FC 780 E HP after successful acceptance operations in WM



Headquarter WM Thermoforming Machines SA, Stabio, Switzerland



K-Show Lid