

PRESS RELEASE

FOIL IS GETTING THINNER WITH AMUT THERMOFORMING MACHINES

Saving money and keeping a good level of quality: this is what customers want and what AMUT is able to guarantee with its cutting-edge technology and wide knowledge of the extrusion of plastics. Custom-made solutions are always developed.

AMUT has lately supplied to Poly Er, one of the biggest Russian thermoformers, the first in line thermoforming machine producing disposable plates (in HIPS + GPPS material) with a weight of only 3 gr.

Following the specific needs of the customer, AMUT has studied personalized solutions to realize all of the parts of the machine: highly sophisticated control systems and complete coordination and management of the production process from the raw material up to the finished product.

The machine produces:

52.500 plates /h with 3 gr weight, 165 mm diameter and 135 μ thickness

34.500 plates /h with 5 gr weight, 203 mm diameter and 146 μ thickness.

Both productions have very low tolerances for the medium weight of the material and for the plate: from +/- 0.1 g to +/- 0.2 g.

Despite being very thin, the foil can keep absolutely stable conditions in production thus assuring lack of flaws on the finished product.

The line includes a raw materials loading and dosing system for the main extruder (4 components) and for the co-extruder (2 components).

The thermoforming skeleton grinding is closed-loop made and some sophisticated systems have been realized to treat thin material (apparent specific weight lower than 0.2 kg/dmq).

Furthermore, the grinder is equipped with a very fine tension gauge system.

The extrusion unit is composed of a single screw main extruder EA100 with plasticizing capacity of 600 Kg/h and an under vacuum venting system complete with closed-loop water control and of a single screw co-extruder EA60 for external layers and suitable for different productions.

A high level of precision of die regulation parameters allows to maintain the thin thickness and the low weight and to avoid foil edge fragility. The die flow box has required as well an accurate design. It is possible to obtain the following foil structure without stopping the machine: A/B, B/A, A/B/A.

The calender, complete with thickness gauge system, assures a very gradual and uniform cooling and consequently an optimization of foil internal tensions.

Additionally, there is a haul-off with tension control and a pressurized water diathermic unit with 3 circuits. The stack control at the entry of the thermoforming machine is carried out by means of both measurement optical system and a highly precise dandy roll.

Based on PA 1000 model, the thermoforming unit has been especially optimized to treat HIPS material and to avoid the breakage of this very fragile structure through special transport system, heating oven, machine movement, thermoregulation and thermodynamic loop performances.

A special packing unit consents to pack from 12 to 100 pcs, more plates with equal quantity of material. An integrate stacker system, where the intervention of the operator is minimum, is also supplied.