Automatic feeding system

(loading material and unloading finished product)

Centering system

Pusher

This system is designed to load the plastic material into the machine and to unload the moulded items.

The drive mechanism for the feeder system parts is based on four servo drives for the feeder tables, a servo drive for the 'pusher', a servo drive for the loading/unloading frame of the feeder system, and two asynchronous motors of the centering system.

The feeder system has the following functions:

- to centre the pallet(s) with the material,

- to centre the material immediately before it is picked up by suckers,

- to pick up the material using suckers and to carry the material to the separation window,

- to pick up the moulded item and to carry it to the unloading zone,

- to remove the moulded item from the unloading zone using a 'pusher'.

The moulded item is unloaded and a plastic sheet is loaded simultaneously. When the forming process is complete, the clamp frame will move the moulded item up using pneumatic locks and places it onto the loading/unloading frame of the feeder system. The feeder system is accompanied by a centering system for positioning pallets with the material to be thermoformed. The feeder comes with air separators for separating the plastic material, with a nozzle that blows ionising air to neutralise electrostatic loads (the risk of the material being stuck onto the pallet). Separating nozzles with ionised air are available as an option. An optional double forming system is also available. it allows for forming two items in the same cycle from two separate plastic sheets. Optical protection of the feeder system, This prevents the feeder from moving when the thermoformed material is on the feeder (before it is removed by the 'pusher'), when the material is in the thermoforming machine area (before the moulded item is caught by the grips of the thermoforming machine after the thermoforming process), when the thermoformed material has not been picked up by the operator and is still placed in the feeder window.