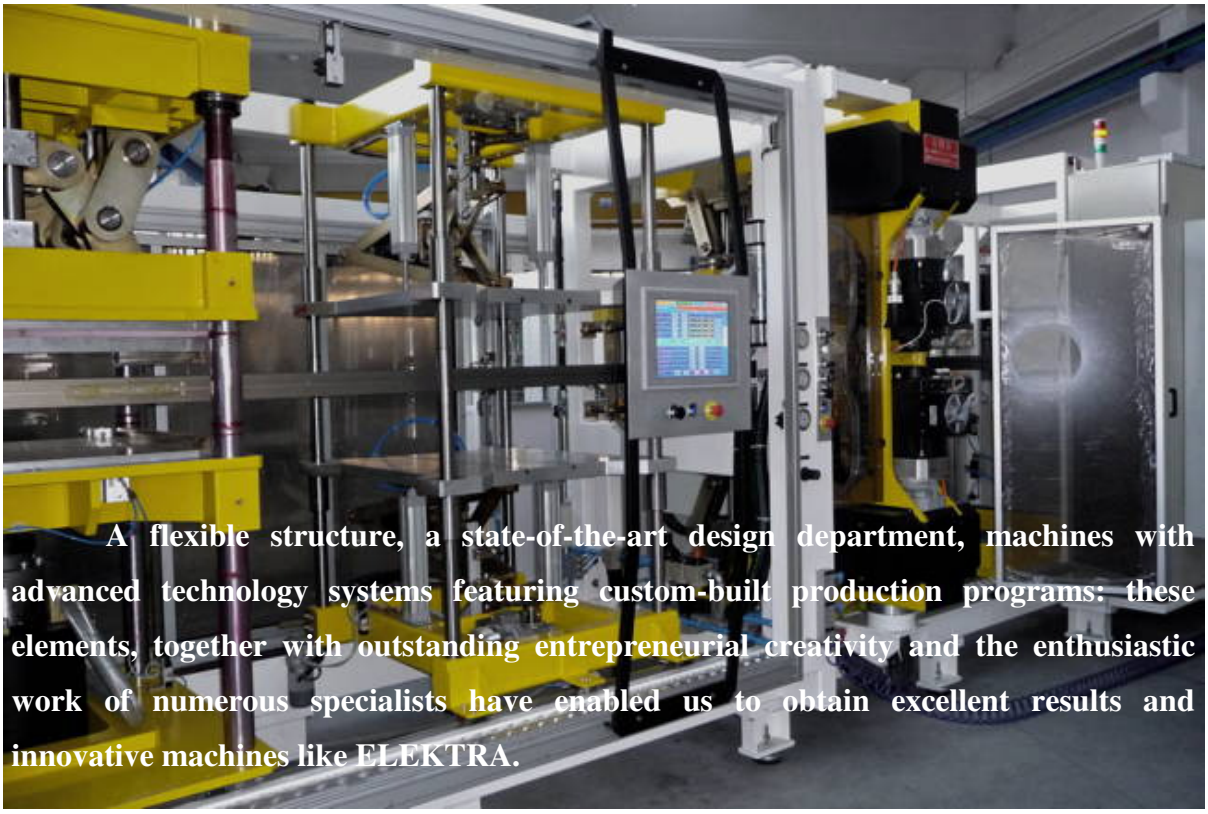
ITALIAN EXPERIENCE AND TECHNOLOGY IN THE WORLD



A flexible structure, a state-of-the-art design department, machines with advanced technology systems featuring custom-built production programs: these elements, together with outstanding entrepreneurial creativity and the enthusiastic work of numerous specialists have enabled us to obtain excellent results and innovative machines like ELEKTRA.

Elektra-Serie: FDC and PVDDC Modell

Bild 1.

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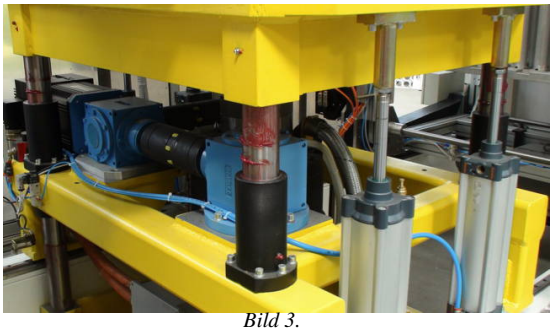
These automatic pressure thermoforming machines are ideal for the production of medium/high volumes. They exploit all the advantages of the thermoforming electric movement, containing unique and innovative features. The peculiarity of these models lies with the cutting, which can be carried out directly in the mould, ensuring the maximum precision and the absence of difference among the moulded components.

Advantages

- **Electric system with servomotors:** higher reliability, reduced energy consumption, high productivity, constant speed, higher thermoforming quality, molds height adjustable according to the needs. (Bild 2.)
- **Energy saving (-60%).**
- **Revolutionary cutting system without use of oil:** more safety, maximum hygiene. (Bild 3.)
- **Upwards and downwards stacking.** (Bild 4.)
- **Fast attachments for moulds.** (Bild 6.)
- **Possibility to lift the slides** in order to replace moulds more easily and rapidly.

Bild 2.



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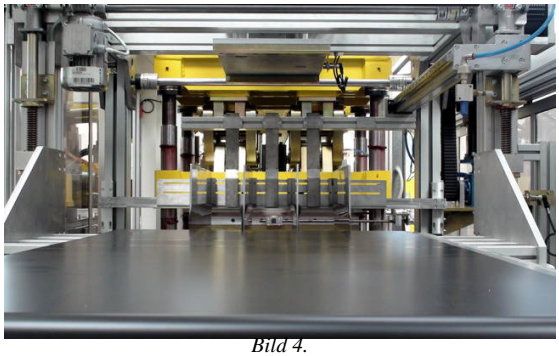

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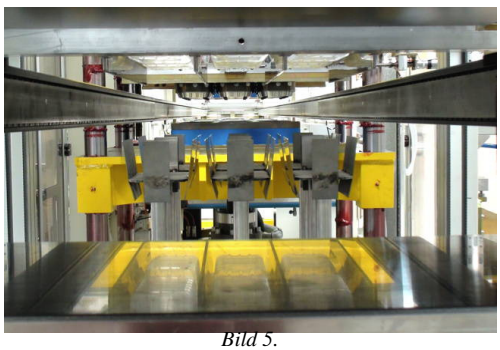

Bild 5.

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Peculiarities

- **Self-filling coil holder** for a simple and rapid loading.
- **Film transfer** by means of chains and small pawls controlled by a servomotor.
- **System of preheating forks (optional)** that ensures the correct translation of the thickest and/or hardest materials, too.
- **Single resistance heating** to optimize heat distribution.
- **Forming press** with two independent movable bolsters that ensures the maximum flexibility thanks to the possibility to precisely adjust heights and speeds (not bound by the mold height). Electrically movable countermolds.
- **Punching (just for the PVDDC model):** a patented four-column press with two movable bolsters is used in case you do not want to carry out the punching in the forming area.
- **Stacking:** molds can be stacked either upwards or downwards and stacking can occur on a base or on a carpet. Also "A & B" or with a stacking system fitted with vacuum pads.
- **Set-up:** all adjustments concerning the machine devices can be set up according to the needs using motorized actuators. All positions are stored, so the set-up procedure can be carried out in a really short space of time.
- **Automatic constant tension waste winder,** declutched for safety reasons, for the pneumatic extraction of the wastage. Alternatively, it is possible to install a wastage grinder.
- **Cycle control** through an industrial touch-screen that allows the operator to easily adjust and record work parameters.
- **Remote diagnostics:** thanks to the possibility to directly communicate with the system in remote mode, OMG technicians are always at the customer's side in the management of the whole system.

Bild 6. Samples

Technical Details FDC	PVDDC42	PVDDC52	PVDDC64
Maximum Form area (mm)*	650x650	800x650	800x800
Maximum depth of draw neg. (mm)*	120	120	120
Maximum depth of draw pos. (mm)*	120	120	120

Technical Details RVE	PVE24	PVE33	PVE42	PVE50	PVE52
Maximum Form area (mm)*	600x400	600x550	650x650	770x650	800x650
Maximum depth of draw neg. (mm)*	120	120	120	120	120
Maximum depth of draw pos. (mm)*	120	120	120	120	320 (RVE) 150 (PVE)

*** IT IS POSSIBLE TO SUPPLY MACHINES WITH STANDARD OR CUSTOM-BUILT WORK AREAS**

The manufactory reserves the right to make changes at any time and without prior notice..

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Un-windig unit

The larger self-loading spool holder makes it possible to lift large and heavy spools without using forklift trucks and centering devices. The width with respect to the spools is adjusted just once, when production is changed. There are sensors to indicate that the spool is empty, and safety sensors on the sheet forward lever (to order).

Optional double self-loading spool holder
One spool is used for the production process; the other is ready to replace the first one when it is empty.

Film Transport

The film is moved using the fully tested system of conveyors with spikes or the optional system of conveyors with peg for special requirements (soft, hard to pierce materials). The forward movement is driven by a brushless servomotor, with full speed control and movement over treated aluminum profile pieces).

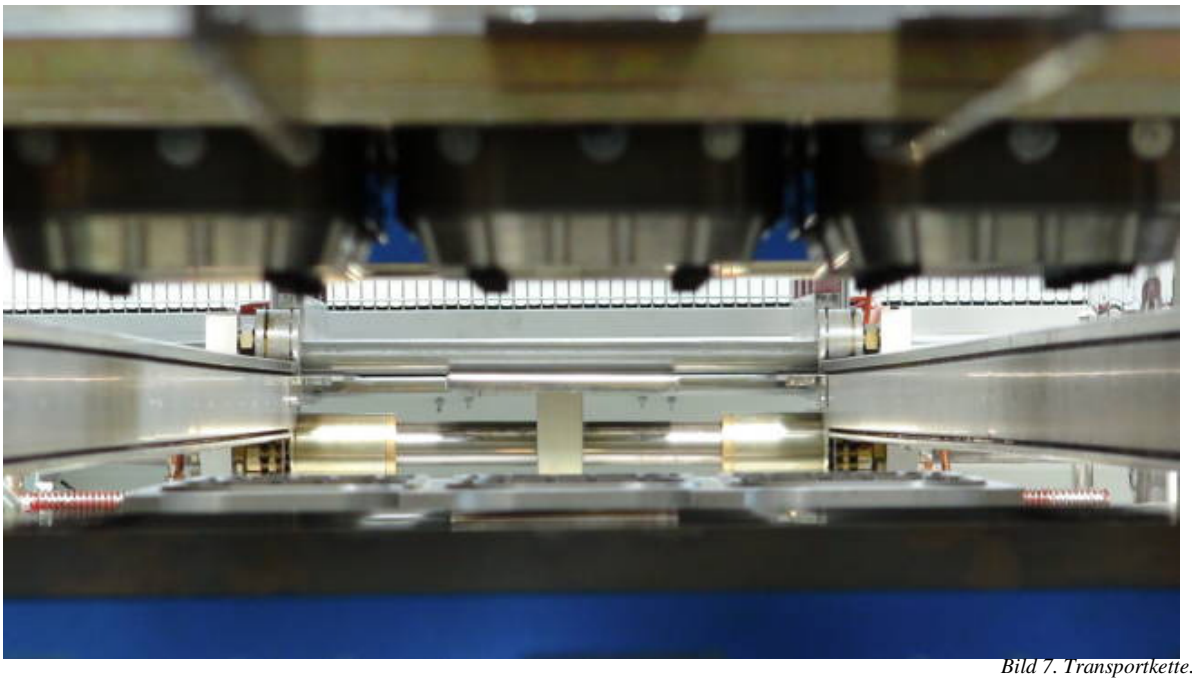

Bild 7. Transportkette.

Offset Sensor System (Optional)
System of offset sensors to control the forward movement and centering of silk-screened materials.

Optional pre-heating system at entrance to line.
The pre-heating system is installed at the entrance to the line. It is a contact device which heats the two lateral edges of the spool to guarantee the movement of harder and/or thicker materials.

Heating plates

Bild 8. Heating plates.

The material is heated with one or two panels which remain in a forward position during the automatic cycle, allowing gradual and controlled distribution of heat to the material being processed. The resistances installed are controlled and managed individually, so that the operator can optimize their use to suit the material and the mold. Another innovation is the possibility to identify the heating area on the basis of the bandwidth and forward speed.

Moulding

Open Form station

Closed Form station

Bild 9. Form and cut separate

The molding system consists of a press with two independent mobile surfaces, moved by toggles and brushless servomotors. The mold height can be set to suit the operator, enabling savings in terms of construction. The molding action is aided by two counter-molds, using the same electronic control philosophy of positions and speeds, so obtaining excellent distribution of the material. The entire device is mounted onto a column. This column rotates by 180 degrees, simplifying maintenance and mold changes. The machine resetting procedure for the next process is speeded up by a further arrangement of quick hitches and brakes mounted onto skates.

Optional new possibility for video operation

There is a new possibility for video intervention directly on the air-powered utilities, with the possibility to tilt the air delivery outlets from the upper level to the lower level and vice versa. There are also video motorized valves to adjust the vacuum and molding.

Bild 11.

Optional hole press

to make European type holes or specially shaped holes using punches and masters. Scraps are collected in a hopper with a suction tube, to suit customer requirements. (Bild Right)

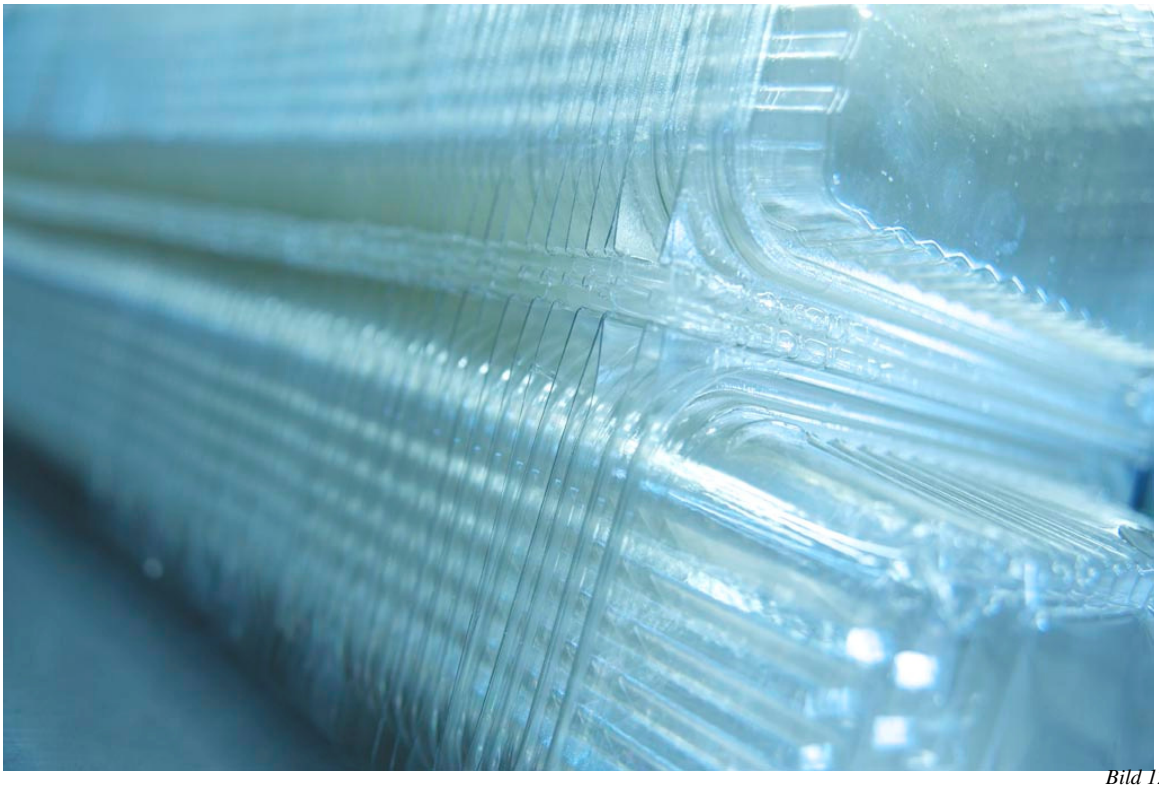

Bild 12.

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Punching

The hot molded elements are punched using a string, 4-colomn press with two mobile surfaces, driven by a completely electrical device built by us. Advantages: further reductions in noise, abatement of consumption and maintenance costs, no oil (meaning no dirt and no fire hazard). The management of heights and speeds is completely flexible, being controlled by servomotors

By request the punch can be drived Hydraulic or Pneumatic.

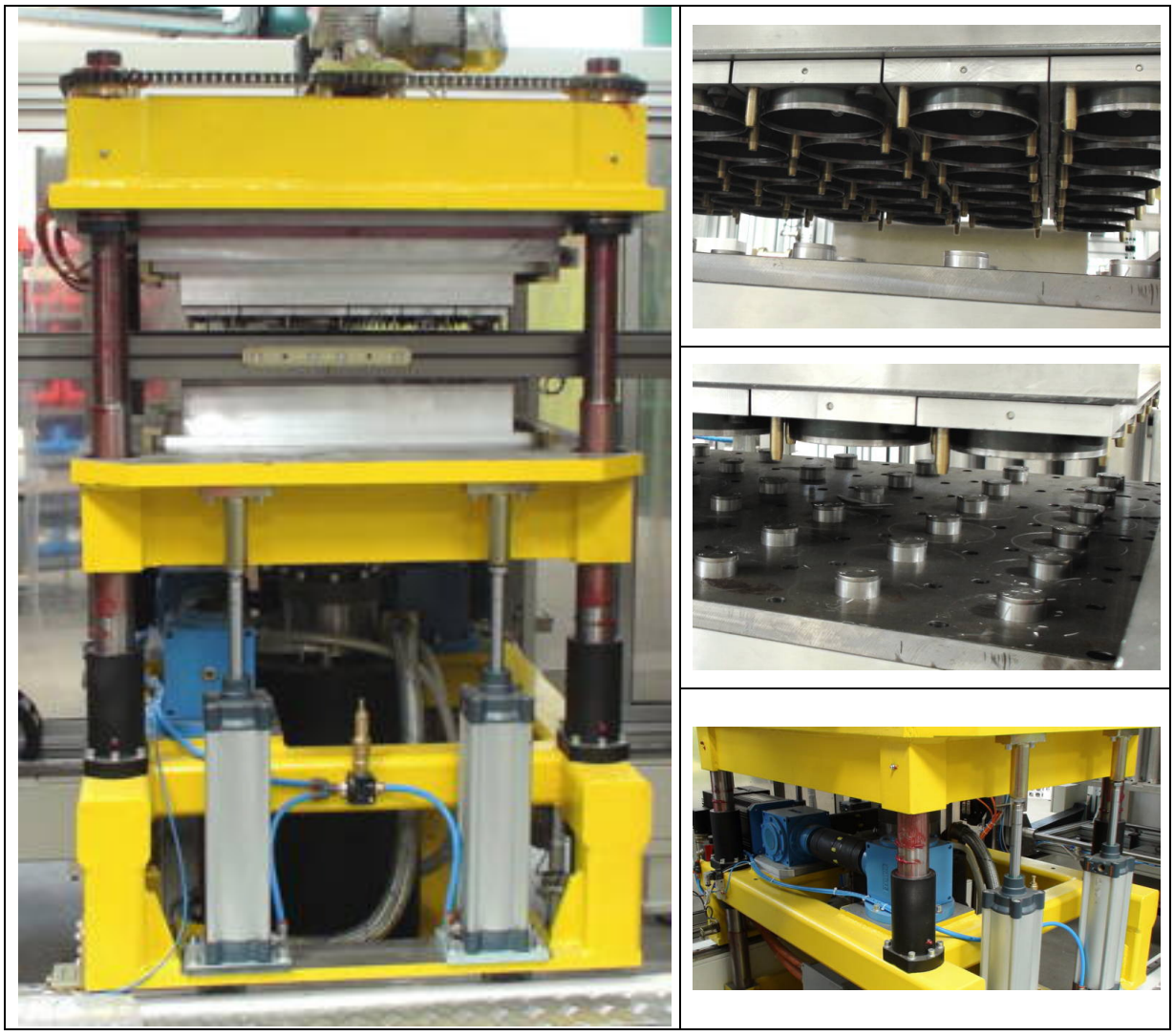

Bild 10. Left: Punching with top and lower table moveable. **Right top:** Mould with Flying knifes. **Right bottom:** Servo drives or Hydraulic

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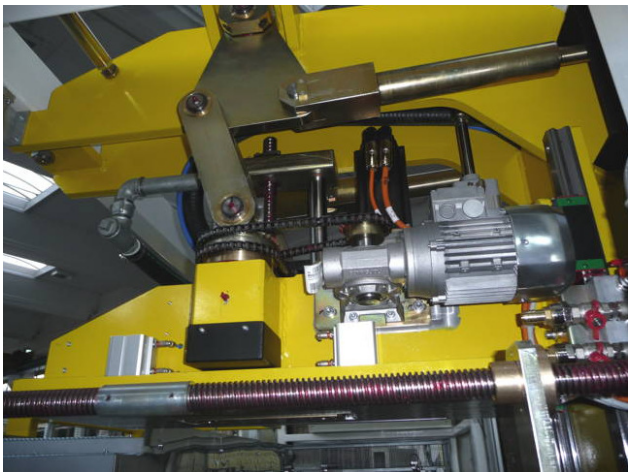
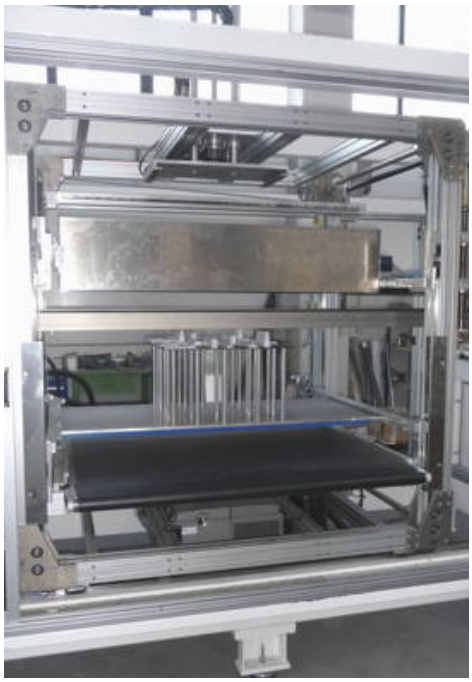


Cutting blade centring device

The cutting blade centering device is installed on the upper level and in the lower part (optional). Adjustment is transversal or rotational (optional). The punch position can be memorized when it is above and below (and also along the length).

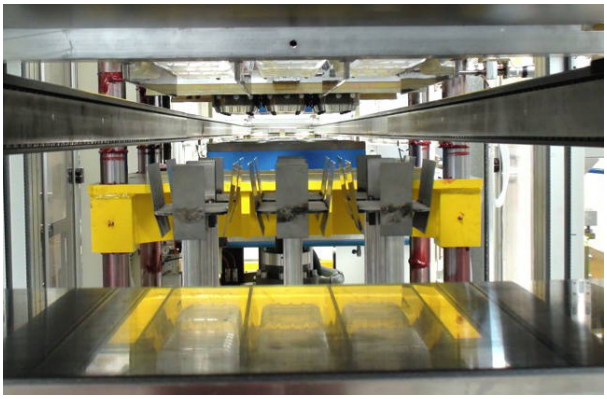
Upward or downward molded element stacking

The molded elements can be stacked upwards or downwards, by servomotors, to suit preference. They are moved by toothed belts. The obvious advantage is quicker speed, as well as the dramatic reduction in part maintenance and lubrication.



Implementation of the lateral collection and expulsion conveyor

The stacker uses the lateral conveyor for the collection and expulsion of the molded elements and the picking vacuum during the lightweight molded element-stacking phase.



Optional suction cup stacking robot

System with a suction cup robot to stack the molded elements using quick movements driven by brushless motors, with the possibility of A&B and A&B&C stacking.

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Work cycle management

The work cycle is managed by touch screen, which simplifies all adjustments and the memorizing of the operating parameters.

Mobile control console

Mobile control console for comfortable, ergonomic operation close the device concerned.

Set-up of working positions

In the previously described devices, the longitudinal working positions and the width of the conveyor guides are set-up by motorized actuators, with the possibility to memorize the positions chosen.

Remote diagnosis system

A remote diagnosis system guarantees prompt remote intervention to help customers with the management of the system, providing assistance via the Internet IP address if necessary.

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Automatic scrap winder

A constant tension automatic scrap winder has a safety clutch with pneumatic extraction of scrap. This can be replaced by a scrap shredder, which carries recyclable material via cyclone to special sacks (supplied by the user).

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Plastic safety guards

Plastic safety guards offer a complete view of the movement of the devices inside the machine and reduce its size.

Ethernet port

Ethernet port connects the machine to a network and consequent control of its operation from the office.

Operating parameter check with Active X (optional)

The purchase of Active X means that the operating parameters can be controlled directly using software developed in Visual Basic or Microsoft Excel.

Mega Plast GmbH – 2010 New Thermoforming machine.

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