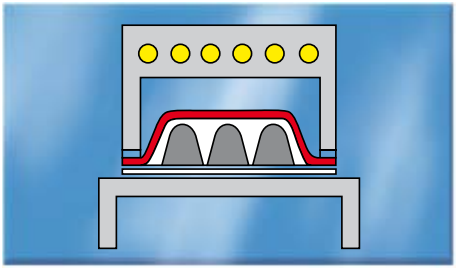
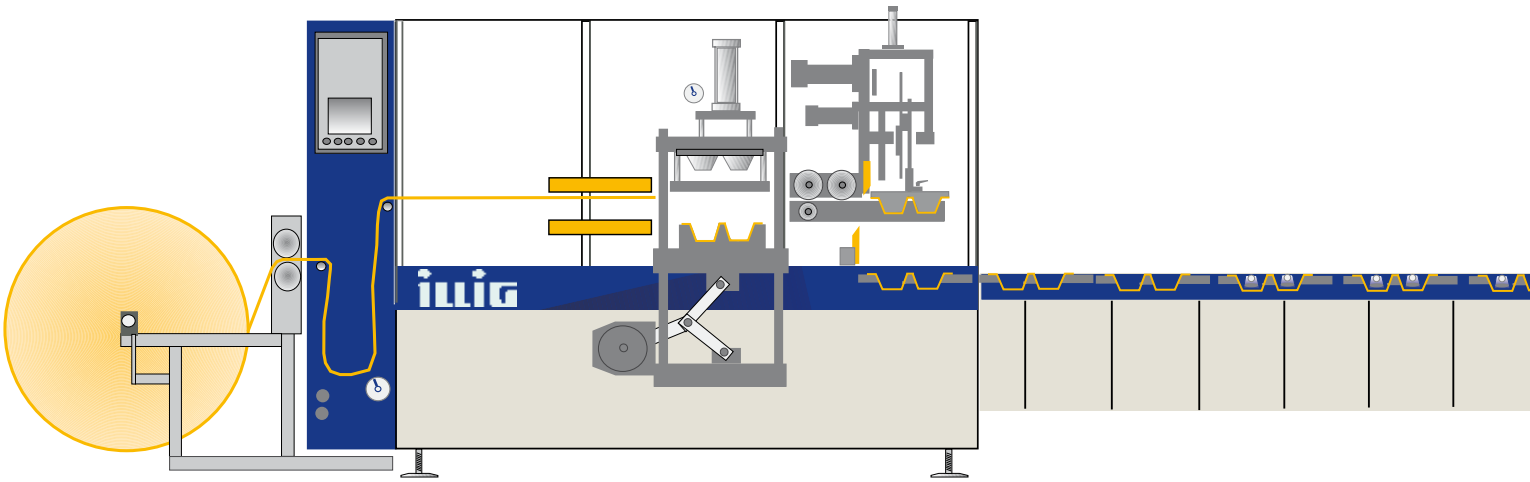


Automatic blister packaging machine HSA 50d

The ILLIG HSA system sets the standard for an innovative customer-oriented packaging concept.



blister packaging line HSA 50d, extended to 26 pallets

Market advantages with suitable technology.

The automatic blister packaging machine, HSA 50d, consists of a thermoforming and a sealing unit to form a complete production system. Blister packs with thermoformed transparent caps can be produced by upgrading the system with card loading and pack lift-out devices.

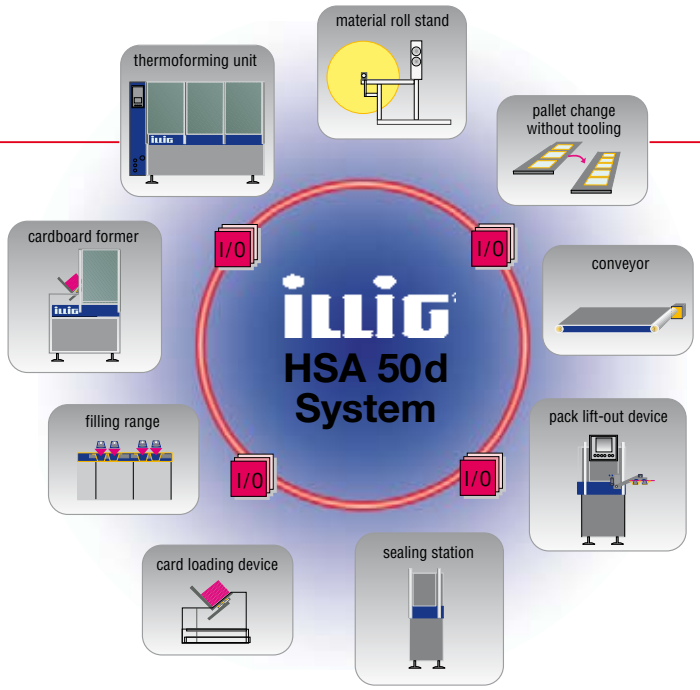
The machine sets the standard with regard to mechanical construction and ease of operation. The consistent use of servo motors in combination with state-of-the-art control and regulation technology ensures precise setting of distances and speeds.

Storage of all production parameters is one of the benefits of the HSA 50 d. Up to 40 programs can be stored in the control unit. Operating panels on forming and sealing units facilitate the setting and start-up of the machine, this is an advantage especially for long machine lines.

A higher feed accuracy is achieved by the servo-motor transport drive, resulting in higher cutting accuracy of the blister caps. Blisters are placed into the sealing pallets by even and vibration-free movements of the optimized blister transfer system.

The machine is of modular construction and connected by Profibus systems. Relocation or retrofitting of additional elements, such as card loading or feeding devices is possible at each relevant machine location. With this general-purpose modular system the customer can produce various packs in a very flexible way. Extensions to attach labelling devices or coding units can be installed after the sealing station without problem.

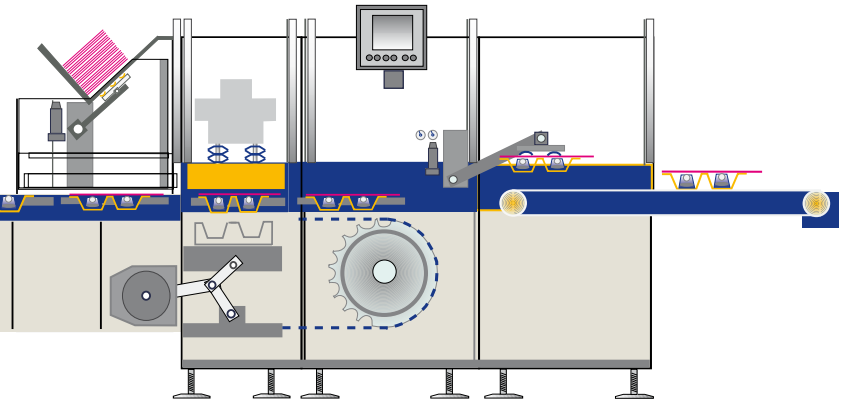
The servo-motor driven sealing pallet transport can be variably set and ensures indexing with positional accuracy.

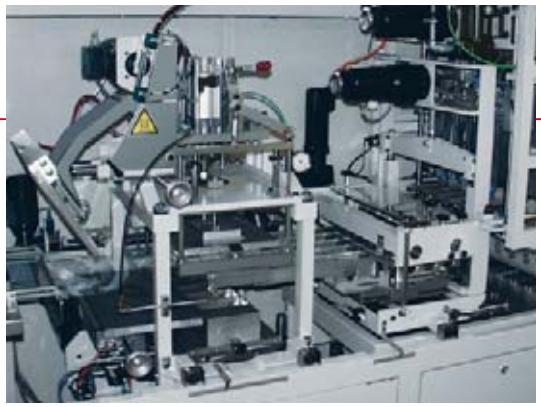


Soft carton material can also be processed since the upper and lower table of the sealing station are movable. Attachment of the sealing tool to the sealing heater improves heat transition from the heater to the sealing electrode thus also reducing energy consumption.

The modular elements are connected by BUS systems. Additional units can be used depending on packing specifications.

blister transfer into sealing pallets





forming unit to produce transparent caps

Improved product quality by using advanced machine equipment.

Thermoforming unit

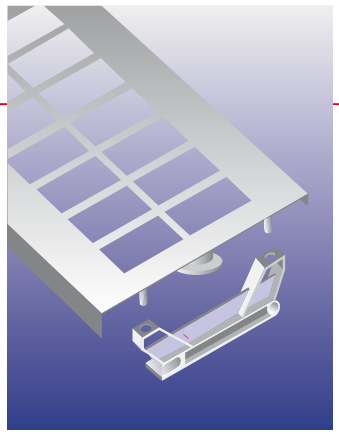
- optimum material heating by contact heating, independent of format
- servo motor for blister transport
- blister forming with mechanic pre-stretching plugs
- positive forming by vacuum
- longitudinal and cross cutting device for formed blisters
- automatic blister transfer into the sealing machine's pallets
- digital setting and storage of machine parameters, consequently reproducible thermoforming process
- waste-free operation

Sealing unit

- servo motor for pallet transport
- pallet quick-change system without tooling
- blister filling range – filling is carried out manually or by automatic feeding devices
- automatic card loading device in front of sealing station with card low-level monitoring system
- discharge of finished packs by conveyor
- freely selectable position for optional extras
- Profibus system for interfaces
- Siemens S7 control with OP 17 operating panel on forming and sealing machine, storage of 40 production programs possible

Different packing variants and shortest set-up times with future-oriented system technology.

HSA 50d with thermoforming unit, card loading device, sealing station and pack lift-out device



pallet quick-change without tooling

ILLIG quick-change technology

With the tool system all format parts can be changed for the first time very fast without using any additional tooling.

Forming unit

quick-clamping device for forming tool and clamping frame

exchange of complete knife shaft for longitudinal cut of blister caps

quick-clamping system for guide plate and set of suction units

positioning of forming tool and cross cutter by motor, data can be saved in the control system

Sealing unit

for HSA 50d, standard version, featuring the new pallet quick-change system the change-over time for the sealing pallets is reduced to approx. 3 min

new suction technique on card loading and pack lift-out devices with quick-change suction plate

quick-clamping device for sealing electrode as well as for bottom part of sealing unit

smooth change of complete card magazine or quickly-adjustable magazine chutes (please note metal screen)

conversion times of 15 min are possible for a complete format change on the basic machine

standard blisters

Flexibility is demonstrated by a multitude of packaging solutions.

Double production output with cutting / spreading device

If the packaging formats can be arranged in two rows on a sealing pallet, the output of the machine is doubled. The blisters formed in the double cavities are separated into single cavities and during the transposing movement they are spread to the sealing dimension of the pallet.

Double-card blister packs

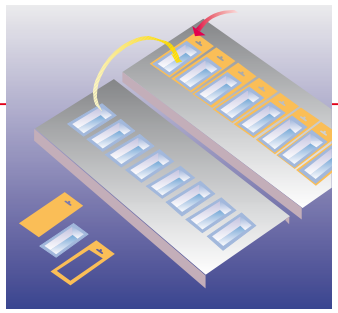
A blister transposer with card loading device is required to produce cleanly separable packs. This transposer positions the blister cap into the window card. After filling, a further card loading device puts on the backing cards which are sealed with the window cards. The blister cap remains unsealed and consequently can be easily separated from the card.

Stand-up blister packs

For alternative presentation, blisters are equipped with a foot. During the movement of the pre-stretching plug the foot is formed to the blister cap with an additional cross movement in the upper tool part.

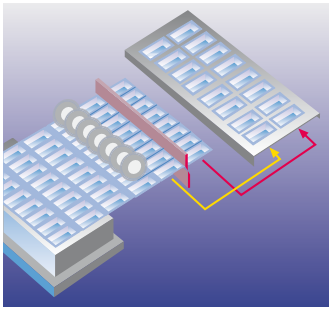
Production of all-card blisters with cardboard forming unit

Pre-punched card blanks are positioned into the forming tool from a card magazine. After forming, they are transferred into the sealing pallets. The cardboard forming unit can be placed anywhere on the pallet conveyor.



blister transposing system

double card blisters



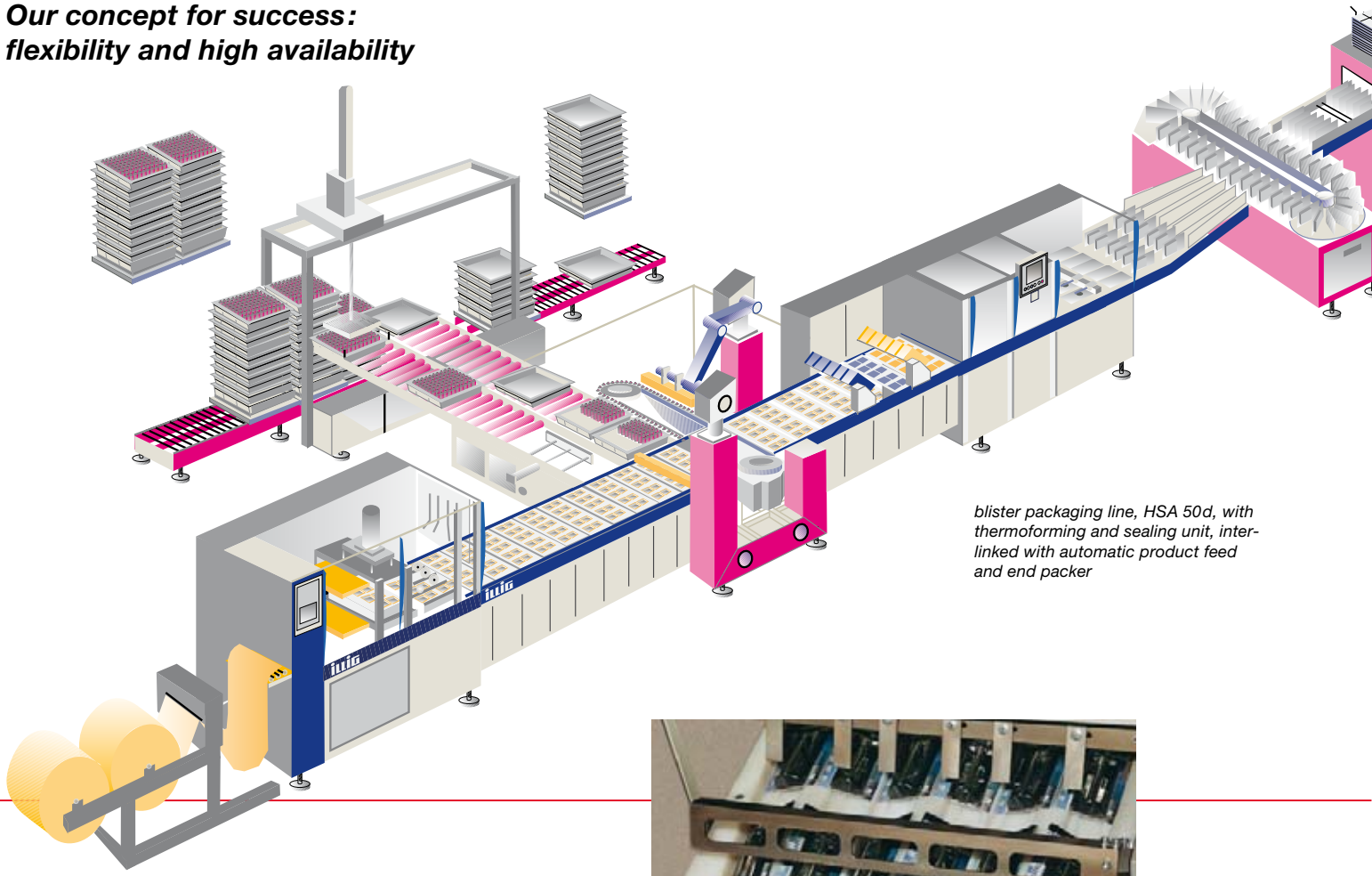
cutting / spreading device

blister transposer

Hole punch unit

Hanging holes are punched into packs with all-plastic front by a hole punch unit.

Our concept for success: flexibility and high availability



blister packaging line, HSA 50d, with thermoforming and sealing unit, interlinked with automatic product feed and end packer

feeding into end packer

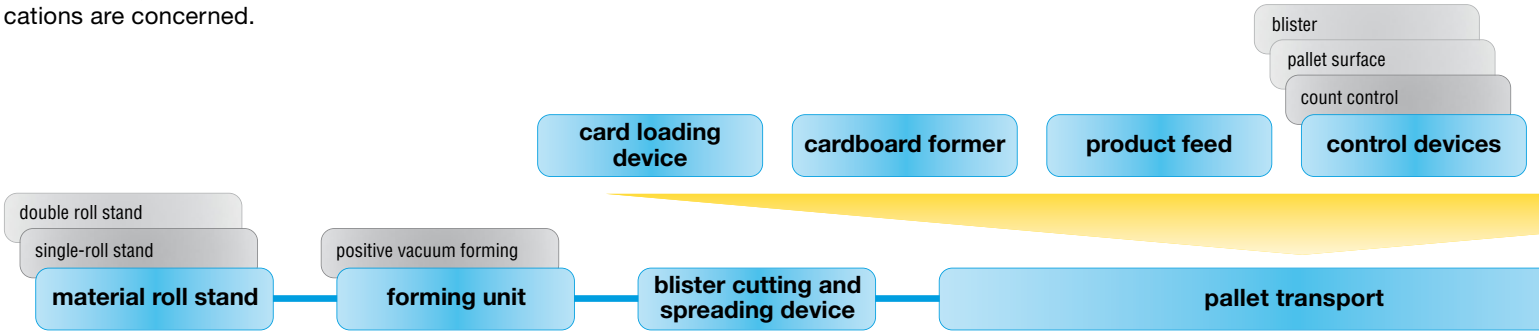
Machine, packaging material, feeding system and end packer as a closed unit.

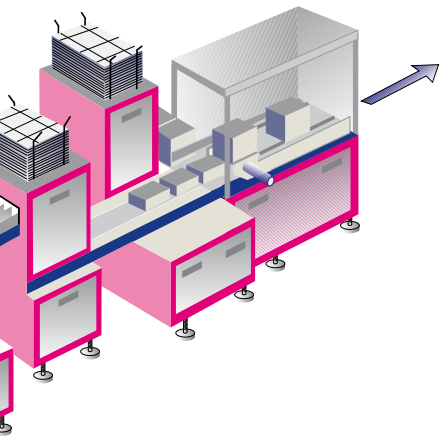
Packs for high-quality products call for specific solutions. Our machine lines and process technologies set the standard for flexible and economic production.

Product-oriented packaging systems are composed of elements from a comprehensive standard program. Such custom-made systems result in market advantages especially when short delivery times and high quality specifications are concerned.

Smooth operation is ensured by testing and delivery of all individual components from one source. This also applies to sophisticated machine lines. Performance and speed of the individual modular elements have to be optimally synchronized.

The various functions are connected by sensors or BUS-systems.





screen operating panel OP 17 for thermoforming and sealing unit

Practical, easy operation.

Findings from process engineering and application technology combined with comprehensive material knowledge result in an optimum machine program incorporating the parameters for forming, sealing and end packing.

The HSA 50d sets the standard when it comes to the demand for easy operation. The reproducibility of production data is a major element for maximum availability especially for high automation levels and frequent product changes. All relevant process data are entered on the operating panel and displayed as set point/actual comparison.

The set data can be stored and they are available right away for repeat orders. All major operation data are continuously available to check the ongoing production.

Due to a modular guarding system, many devices can be placed in freely selectable order, one after the other or separately on the pallet transport.

card loading device

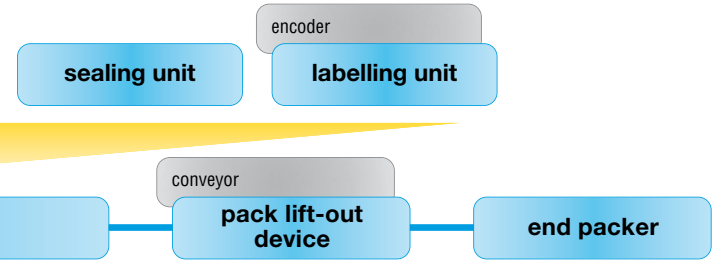
Card loading device for single and multi-cavity formats in quick-change version

It can be positioned anywhere on the sealing unit, thanks to its modular structure.

pack lift-out device

The pack lift-out device operates with direct drive

Consequently, pack transfer to subsequent machines is vibration-free.



stand-up blister

all-card blister

Technical data HSA 50d

thermoforming unit

forming area	max.	500 x 300 mm
forming area	min.	100 x 35 mm
depth of draw positive	max.	80 mm
material width	max.	500 mm
material roll diameter	max.	900 mm
width of cut, single blister, multi-format layout	min. (smaller widths upon request)	47 mm
feed length	max.	300 mm
feed length	min.	35 mm
mould closing force	max.	45 kN

total connected load (basic equipment) **10,5 kW**

working air (free air per cycle)	8,0 l

machine dimensions

length of forming unit	3500 mm
width	1196 mm
height	2050 mm
total weight thermoforming unit	approx. 1800 kg

sealing unit

sealing area	max.	500 x 300 mm
blister depth when sealed from above	max.	80 mm
card size (card with EURO hole, 1-up format layout)		500 x 340 mm
card size (8-up format layout)		58 x 340 mm
card width	min.	40 mm
sealing force	max.	45 kN
number of sealing pallets, basic machine		20
extension possible, by 3 stations each		

total connected load (basic equipment) **10,1 kW**

machine dimensions

length of sealing unit, 20 pallets	5560 mm
width	1230 mm
height	1690 mm
total weight, sealing with 20 pallets	approx. 2000 kg
cycle speed	20/min

power supply
TN-supply 3/PEN 50Hz 400 V with loadable neutral

standard color: white/blue, RAL 9002 and RAL 5013

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