



# High-performance blister lines TLT 2800 S for the pharmaceutical industry



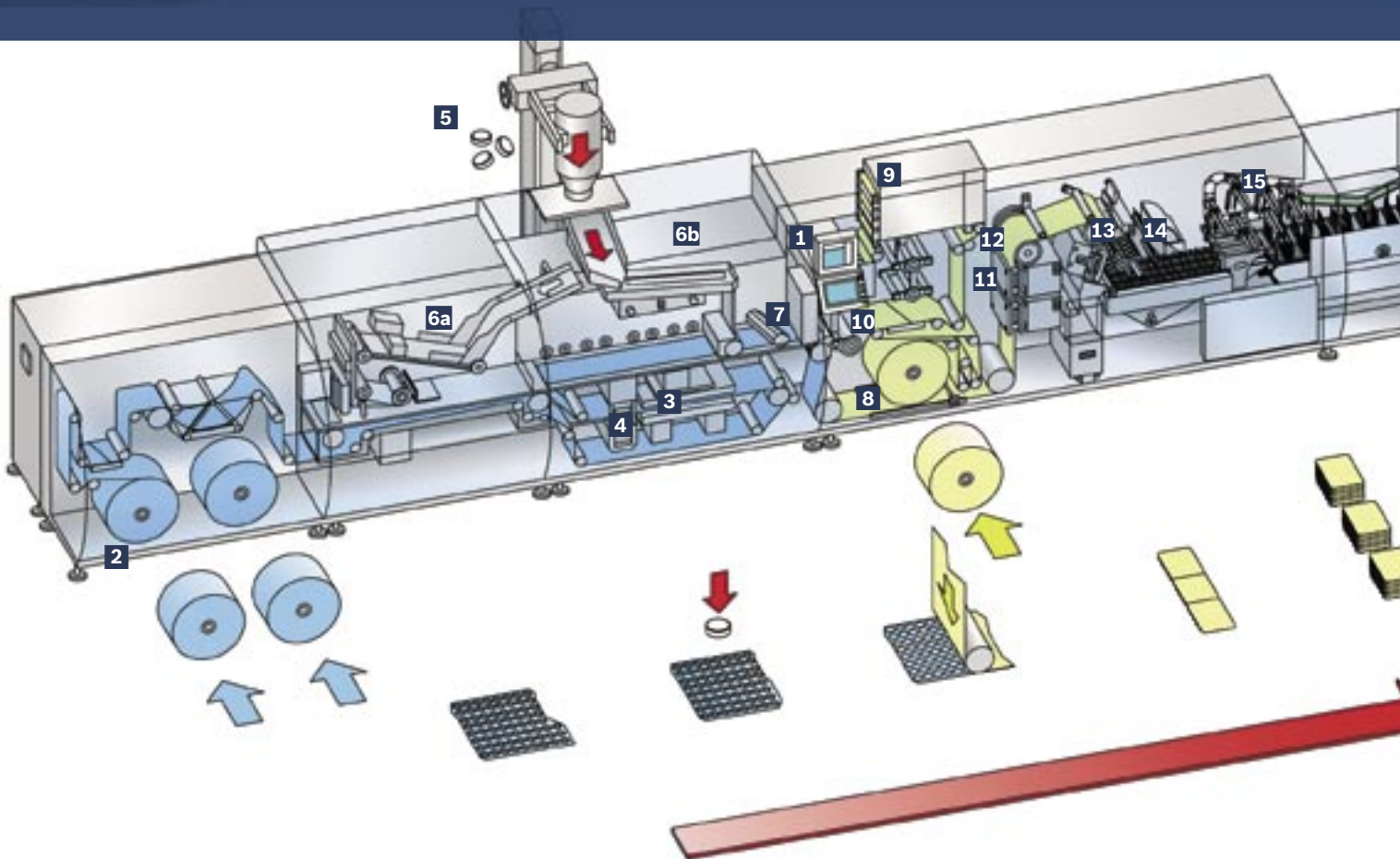
**BOSCH**

Invented for life





**More economical and more flexible –**  
 Bosch high-performance blister lines

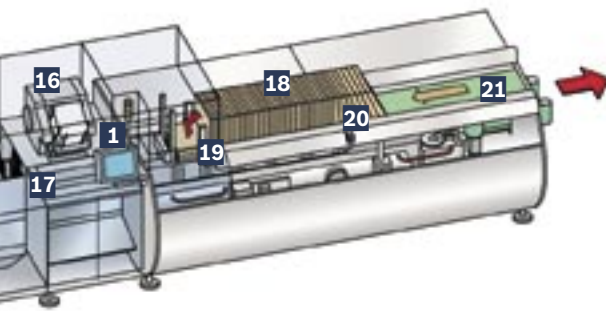




Max. output:  
 2-lane: 800 blisters/min.  
 3-lane: 1200 blisters/min.  
 400 cartons/min.

With the TLT 2800 S Bosch has developed the new generation of secure high output blister lines. It combines in a unique way a high degree of economic efficiency with a high level of flexibility. Controlled security in all functional areas. Flexibility with packaging materials, product and size changes, easy operator control, fast cleaning and the Bosch service package are the decisive basic points that ensure maximum economy and investment without risk. The individual basic concept with optional additional equipment and the easy retrofittability are orientated towards your present and future needs.

Our objective – your satisfaction, today and tomorrow.



**Functional illustration  
 TLT 2800 S/CTC**

1 Operator control panels

**Thermoforming segment**

- 2 Base web feed
- 3 Film heating zone
- 4 Forming station
- 5 Product feed

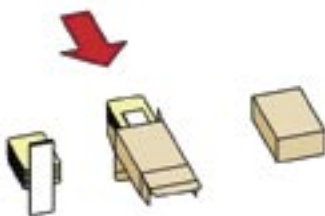
Product feed zone:

- 6a VARIOFILL
- 6b Conventional product feed
- 7 Camera scan
- 8 Lidding material feed
- 9 Printing unit
- 10 Sealing station
- 11 Embossing

- 12 Perforation
- 13 Die-cutting station
- 14 Blister transfer
- 15 Stacking

**Cartoning segment**

- 16 Leaflet unit
- 17 Leaflet conveyance
- 18 Carton magazine
- 19 Product loading
- 20 Folding carton conveyance with embossing and closure
- 21 Folding carton outfeed





**Convincing advantages** make the decision easy



**Very easy operator control: ergonomic and self-explanatory**

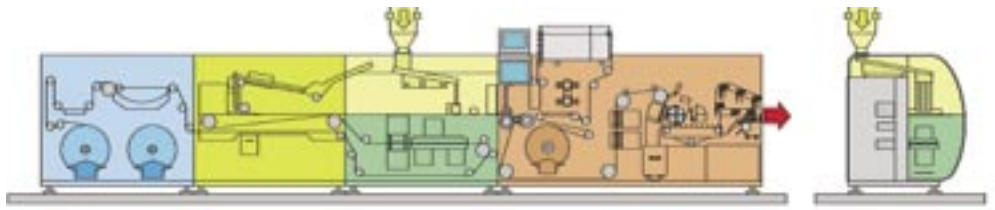
### **1 Economic and flexible**

If you want to package medium and large batch sizes at low cost, dependably and in an extremely short period of time, the TLT 2800 is the solution. With an output of 800 or 1200 blisters per minute the new lines provide a high processing speed.

The operating costs per blister are considerably lower than for lines with a lower output. The decisive plus: not just fast, but the best in its class when it comes to flexibility.

### **2 Best in Class: flexibility in daily operation**

Short changeover times result from the progressive machine concepts. For the blister line the complete size change



## Pharmaceutical-compliant packaging due to the resolute 3-zone concept

### 3 Investment security: will still be flexible tomorrow

In addition to the flexibility in daily operation the structured machine concept provides the highest possible degree of investment security. This will prove to be the case particularly when launching new products and packaging units. A changeover of the product feed, folding carton closures and forming stations to other film types is possible at any time.

### 4 Compact machine dimensions

Unrivaled small machine dimensions make it possible to install the machine in an extremely small production room. You save space, which is expensive and makes the room and machinery easier to clean.

### 5 Extremely easy operator control

The ergonomic and self-explanatory Windows operator interface (icons) facilitates operator control of the machine and reduces errors. The software allows the integration of all languages. Your operating personnel will be inspired.

### 6 100 % accessibility at last

The new guarding concept renders a 100% accessibility for line clearance, cleaning and size changes possible. This contributes to a substantial minimisation of non-productive time.

### 7 Pharmaceutical-compliant 3-zone concept

A pharmaceutical-compliant packaging process is made possible by the resolute separation of the production and drive areas and the complete encapsulation of the product feed chamber:

- No entrainment of product or product dust.
- No contamination by product or product dust due to the encapsulated product feed chamber.
- Optional air conditioning of the product feed chamber

### 8 Dependable and economic feed of your product

The range of feed systems available is now supplemented by the new solution VARIOFILL.

Your requirements, i.e.: "Machine stoppages due to product-related faults in the feed are a massive problem for us" or "We are looking for a solution for reliably feeding complexly shaped products" were paramount in the development of VARIOFILL.

### 9 The extra plus in terms of functional dependability

Reliable solutions from Bosch for the handling of the packaging material such as the positive blister transfer SBT or the leaflet handling on the cartoning machine contribute an extra plus in terms of functional dependability.

takes less than 50 minutes and for a partial size change less than 30 minutes.

This is done without any tools and is reproducible.

Up to now such changeover times were achievable only on lines with considerably lower outputs.

Your operators are provided with effective support: after selection of the format on the control panel the individual drives are adjusted automatically by servo motors. Manual changeovers are facilitated by digital heads and rapid change systems.

Result: higher productivity.



## VARIOFILL the economic product feed

The innovative product feed VARIOFILL provides maximum feed speed with the maximum degree of filling. And this with an ingeniously simple concept.

### The VARIOFILL principle

The core is a thermoformed conveyor belt. This is filled independently of the blister web. The products are then deposited in a specific direction into the blister cavities.

Product backups in the feed zone are a thing of the past.

Continuous production instead of stoppages.

### The VARIOFILL advantages in detail

#### More tolerant

With immediate effect you can give your marketing department a free hand in designing tablets. VARIOFILL is ideally suited for complex geometries. It even operates

dependably and reliably with tablets that have a large height tolerance.

#### More variable

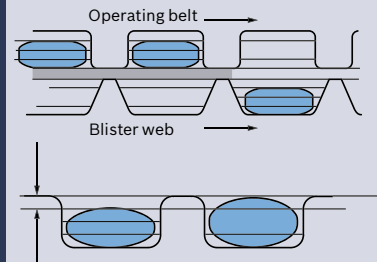
In addition it packages a broad range of products in blisters of the same size and with the same blister cavities.

This applies both to PVC and aluminum blisters. The numbers of blisters and packaging sizes used can be reduced. The size and setup costs can be saved.

A clear gain in flexibility.

### The VARIOFILL principle

Reliable also for products with large height tolerances

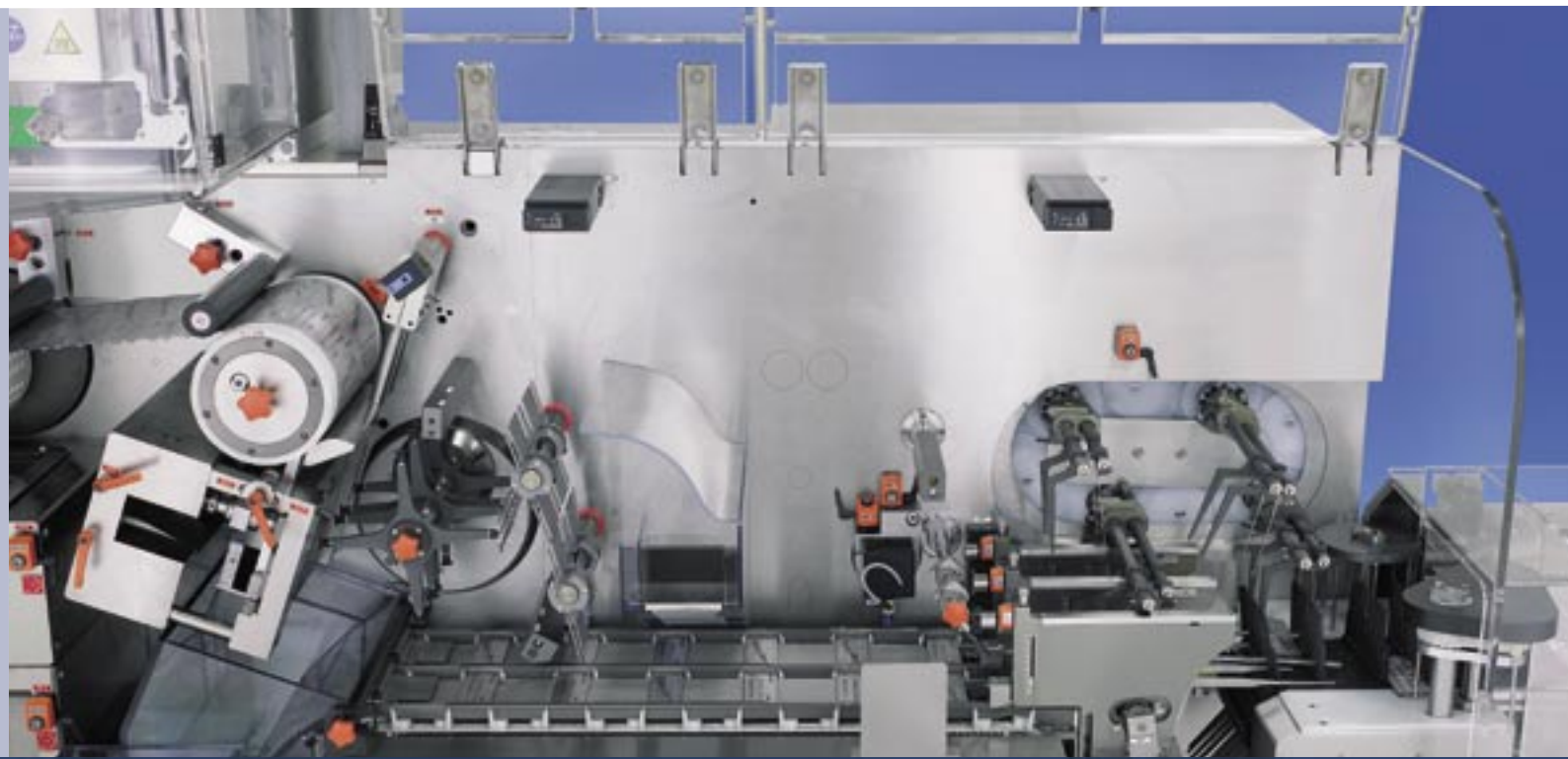


#### Faster

Increase the output of your blister machine by up to 100 % with VARIOFILL.

The few size parts make fast product changes possible.

Due to the low price, instead of being cleaned the operating belt in contact with the product can also be used as a low-cost disposable part.



## Blister transfer SBT the extra plus in terms of functional dependability

### Dependable production

In accordance with the basic principle "Never let go of what has already been singularized and directionally guided" the blister, starting with the shaping by the die through to the folding carton, is conveyed positively and packaged dependably. Non-controlled drop segments, belts or upthrusting stacking units are a thing of the past with the new Safe Blister Transfer SBT. Even sophisticated aluminum blisters with a cross-perforation, which are a challenge to the usual systems, are handled dependably.

### Dependable stacking

If it becomes necessary to reject a blister, e.g. due to an incompletely pressed tablet, the blister stack waits for the next pass blister and is not transferred to the cartoning machine until the required stacking quantity is reached. Blister replenishment via a manually charged top-off stack is obsolete. Due to this the machine can be operated at full speed.

### Quality assurance during production

Optionally obtainable is a unit for the automatic sampling of blisters into a magazine for statistical in-process control. With at-line inspection devices offered by us you can check the seal-tightness with validation capability, documented and non-destructively.

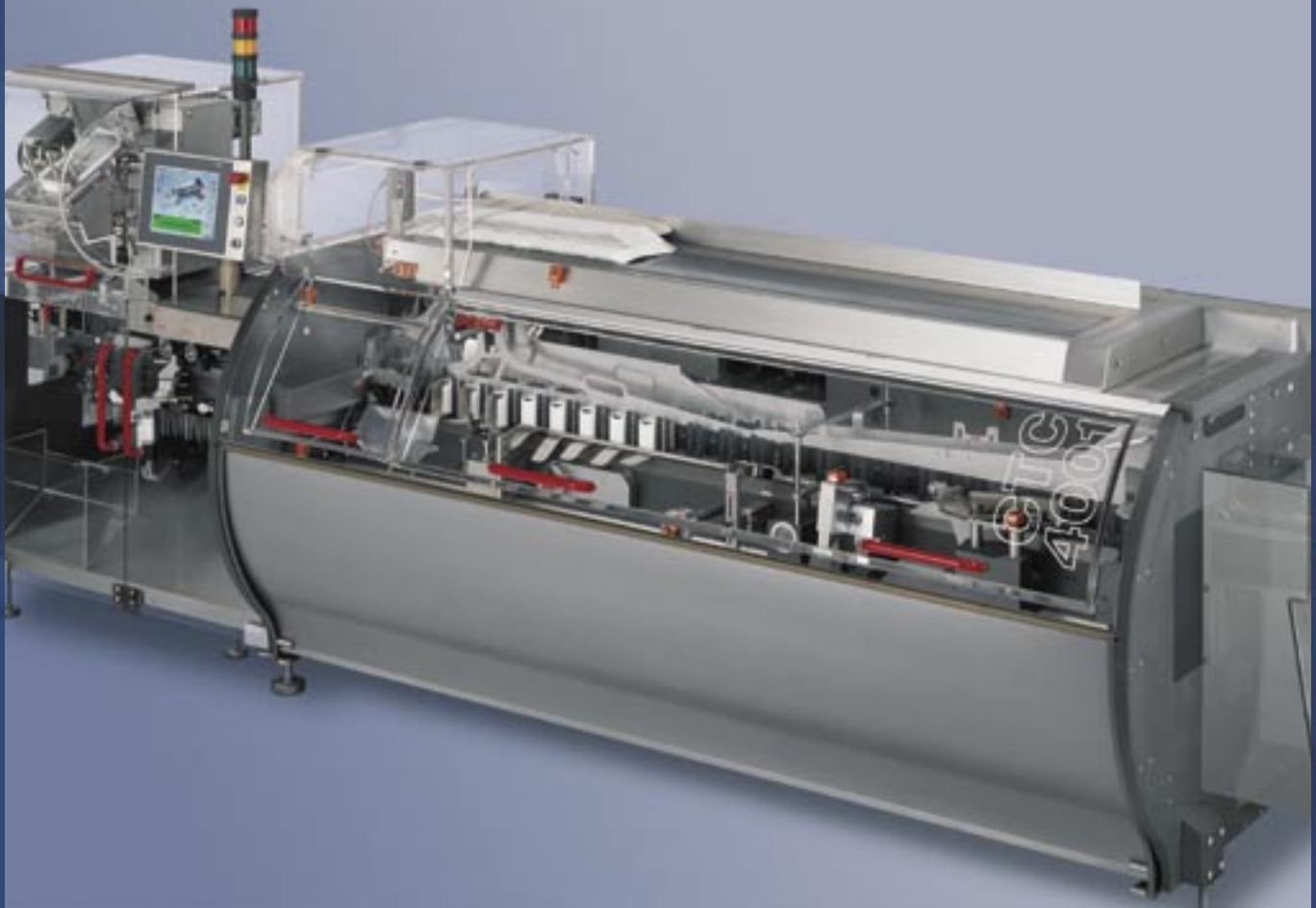


Blister transfer with 2 lanes



Blister transfer with 3 lanes

Package dependably at maximum output - positive blister transfer SBT with 2 and 3 lanes



## Solutions for cartoning and end-of-line packaging

### Cartoning technology

Customized cartoning solutions from Bosch follow on from the blister machine. CTC is a series of continuous cartoning machines with the latest technology. Whether you are dealing with a carton output of up to 400 folding cartons for small packages or with a blister stacking height of up to 100 mm, the processing is always performed dependably and reliably. The leaflet conveyance is guided securely in grippers, is completely inspectable and like the machine itself is easily accessible, if required. The common sheet folders can be swiveled outwards and are accessible from all sides. Inserters for prefolded leaflets, booklets, outserts and other packaging inserts can be mounted on the modular extendable packaging chain. Integrated solutions for code reading provide for the required security with simultaneous good operator controllability. Besides simple embossing a digital solution with inkjet or laser can also be used for coding the folding carton. Optionally also with a monitoring camera.

### Labeller and checkweighers

Labellers can be attached to the outfeed belt of the machine, where the folding carton is securely guided. As a follow-on machine a checkweigher from the KWE 4000 series verifies the pack content with a high degree of selectivity and separate discharges.







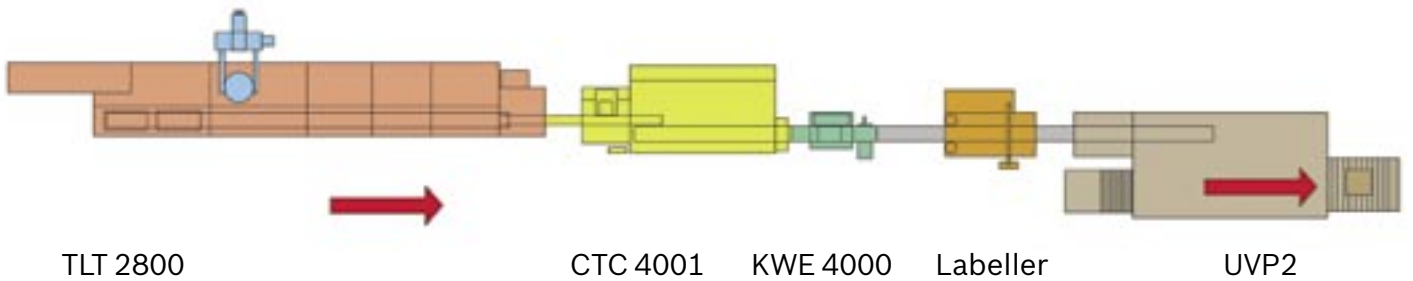
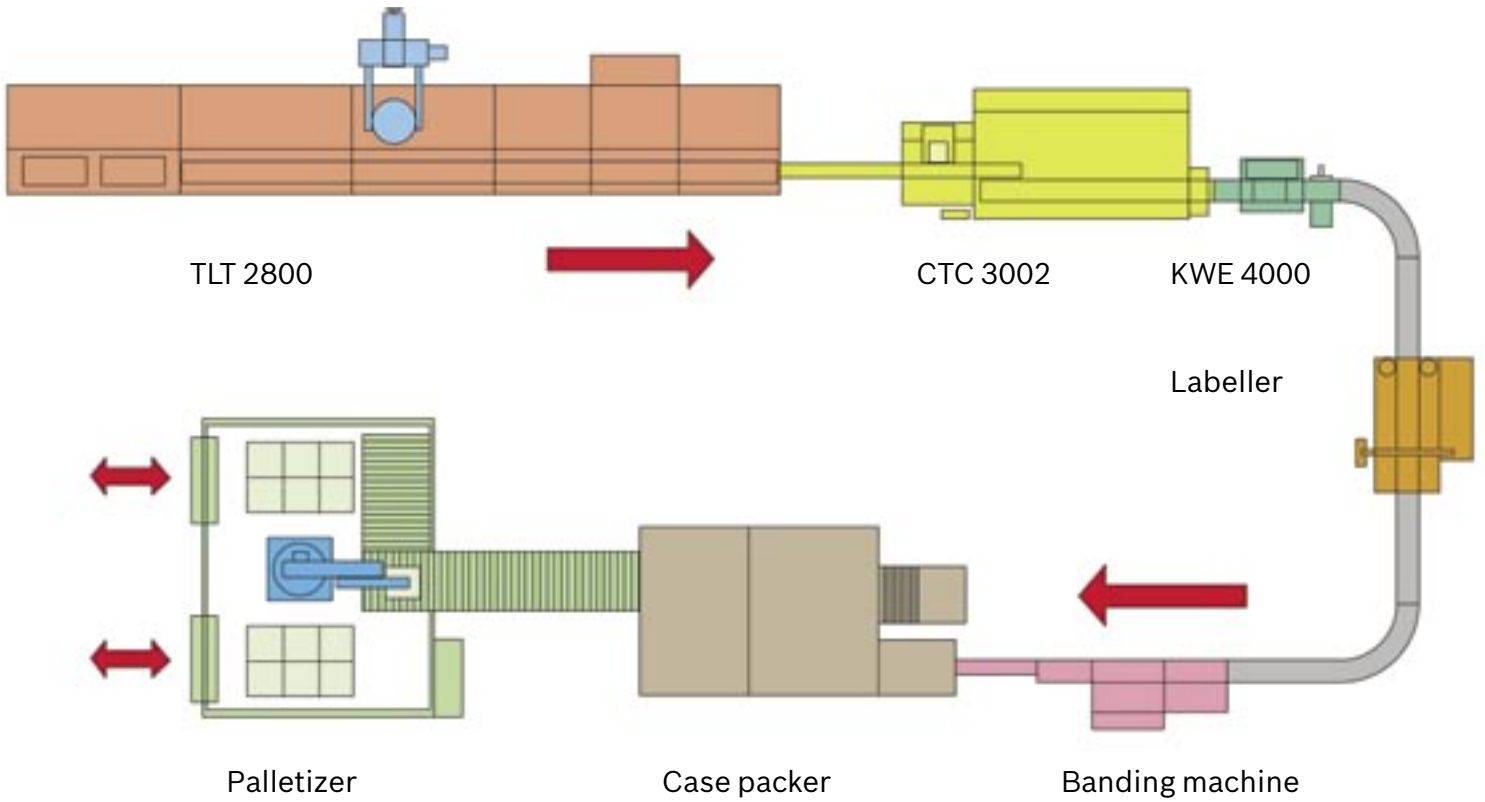
### **End-of-line packaging**

Whether we are dealing with a stretchwrapper, case packer or a complete palletizing solution we plan for you customized end packing solutions that fit seamlessly into the overall line. This includes a uniform operator control and machine control concept. Complete trial runs with your sizes in our assembly department enable you to achieve perfect production from the very start.



# Line capability

Everything from one source, planning and supply of complete lines



# Packaging at high speed requires a well thought-through line concept, from the bulkware to end packing.

## Everything from one source

Our solution covers concept studies, project planning, line integration, qualification, validation, commissioning, training and after-sales service. Always to the Bosch quality standard. In our capacity as a general contractor we are your sole contact partner.

## Uniform operator control concept

We integrate the line components of leading machine manufacturers, including a uniformly matched operator control and machine control concept for the entire line. For evaluation of your production and logistics data the intermatched hardware and software can easily be integrated into a line control station.

## Fast installation on site

As long as we perform the synchronization and trial operation of the complete line at our plant you can dedicate yourself to your daily business. Installation at your company takes place fault-free. You can start production within the shortest possible time.

Bosch blister lines from the TLT2800 series combine speed, flexibility and pharmaceutical security. They set new standards in terms of the high degree of economic efficiency.

## Technical data

### Output

2 lanes	800 blisters/min
3 lanes	1200 blisters/min max. 400 die-cutting cycles/min

### Web dimensions

Max. base web width	320 mm
Max. base web dia.	800 mm
Core dia.	70-76 mm
Core dia. for aluminum-aluminum	150 mm
Max. lidding material width	316 mm
Max. lidding material dia.	450 mm
Core dia.	70-76 mm

Max. drawing depth	12 mm
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### Blister dimensions

2 tracks	max. 90 x 150 mm min. 30 x 60 mm
3 tracks	max. 76 x 100 mm min. 30 x 60 mm

Max. blister stack height	100 mm
Max. stacking quantity	12 blisters

Right reserved to make technical changes/Other values on request

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