

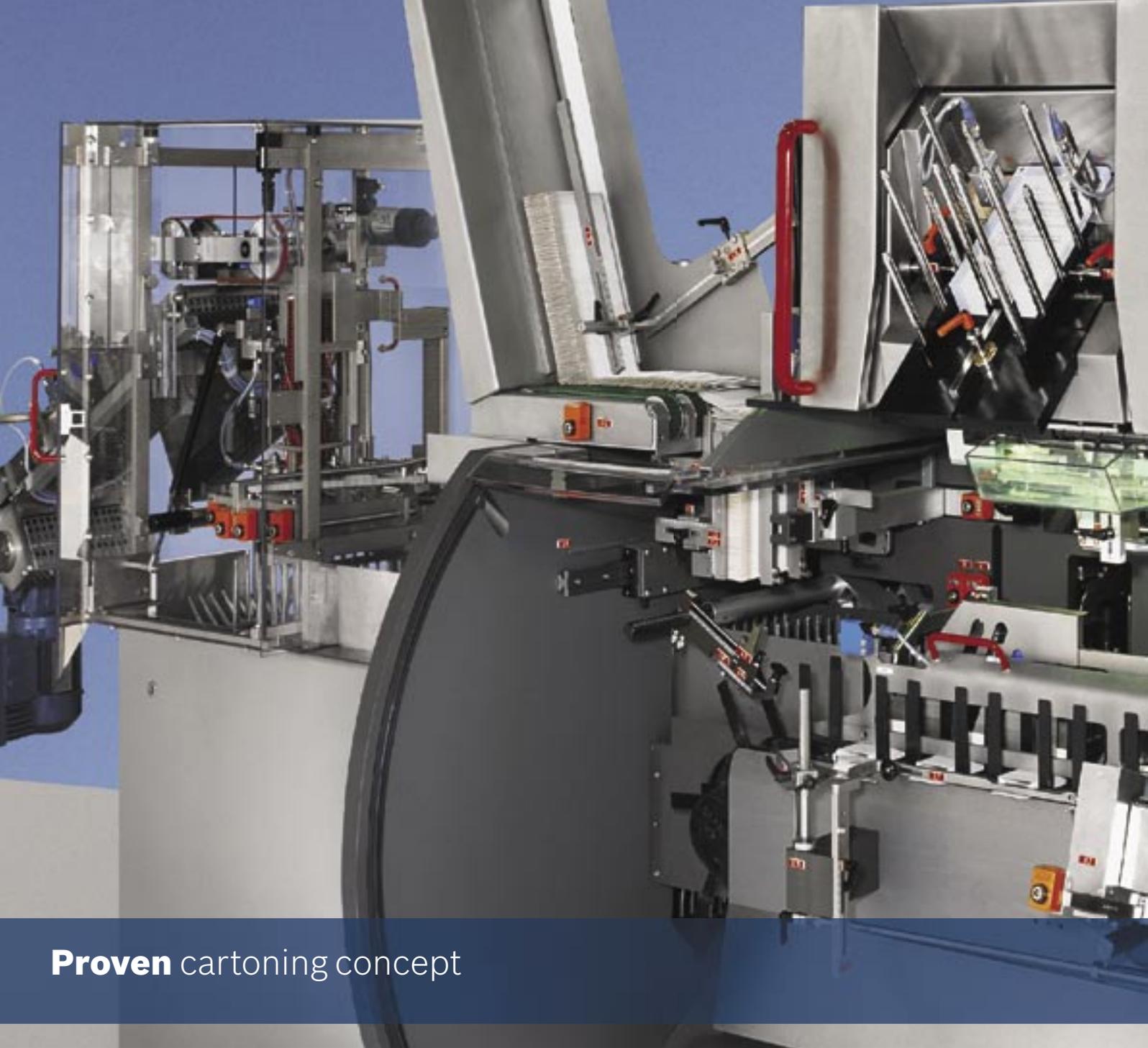


# Cartoning machine CUT 120 for the pharmaceutical industry



**BOSCH**  
Invented for life





## Proven cartoning concept

Setting standards in cartoning technology: The CUT 120 from Bosch. With our focus on customer benefits, our know-how gained during many years of practical experience was translated into innovative solutions. Maximum availability and efficiency ratio, easiest access, shortest size changeover times and paramount pharmaceutical security are the result.

The function principle of the carton conveying system and the ergonomical machine structure allow the consequent orientation towards the production environment.

Bosch's profound knowledge and time-tested experience in the time-tested experience in the appropriate implementation of servo technology and industrial PC control systems as well as the known ergonomical operating panel of the touchscreen provide for secure, reliable and troublefree production runs.

### **GMP-compatible design**

How to reconcile production reliability, size flexibility, and easy accessibility is demonstrated by Bosch with the CUT 120. Slanted guards, spatial separation and covered cabling translate into a GMP-compatible design.

The clearly arranged design and the round guarding that can be completely lowered into the machine allow fast access to all process steps.



### **Flexibility**

The large size range serves the most diverse fields of application. The machine has a modular structure and can be retrofitted, adapting to different requirements.

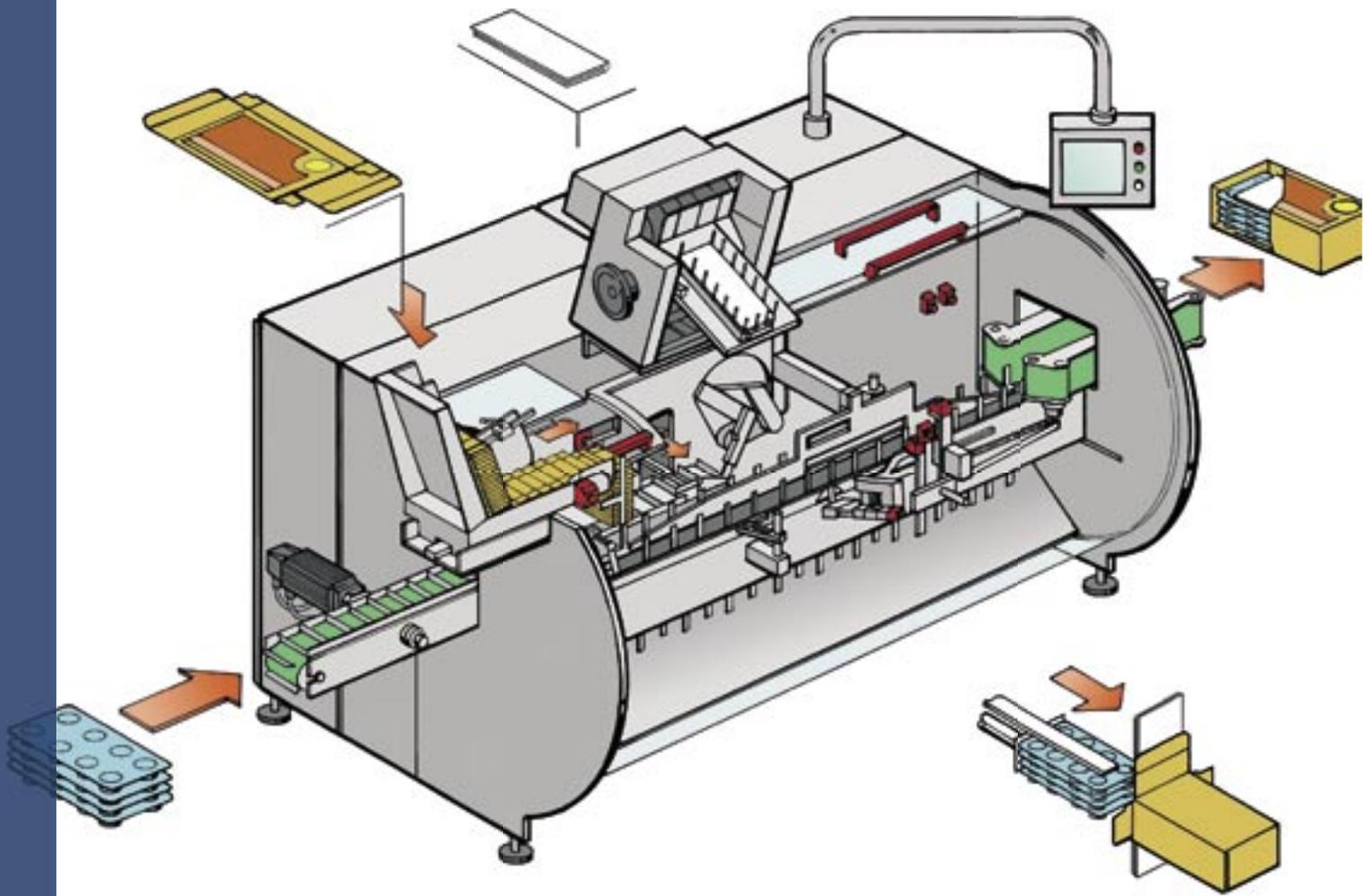
Size changes are carried out fast and reproducibly due to the low number of setting points, the operator is guided through the changeover process using the stored format data.

### **Security in production**

Production faults are excluded by the active-pass philosophy with verification of all individual components prior to assembling the carton package.

### **Cost-efficient**

State-of-the-art computer-controlled servo technology and the reduced number of wear parts lead to low maintenance and upkeep requirements. High efficiency ratios permit the efficient utilization of products and packaging materials. Thus the investment for a CUT 120 machine pays off very quickly.



## Unbeatable flexibility

### Control and drive technology

The CUT120 is equipped with an industrial PC control with Soft-PLC. Operator guidance, detailed logging and display as well as a powerful memory capacity for all required format data are self-evident features. A modem for teleservice is standard configuration.

The operating panel can incorporate a software for compliance with the requirements of 21 CFR Part 11. Production data are saved automatically.

### Reduced maintenance requirement - increased machine availability

Like the maintenance-free carton conveying system. Plastic carrier lugs guarantee careful handling and dimensional stability of the carton during transportation, avoiding friction at the carton base.

Avoiding the use of chains or belts in the carton transport renders lubrication a thing of the past, there is no system elongation and hence no further adjustments will be required.

There are no deviating stations on bearings via sprockets or timing belt wheels as with standard systems. This is only one of many examples on how to lower your expenses while increasing the uptime availability of your equipment.

### Reliable and easy size changeover

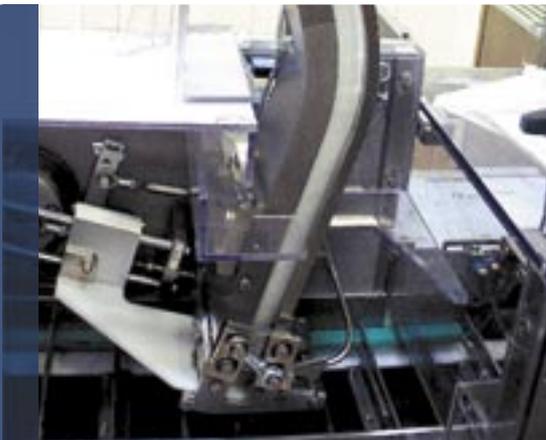
Neither changeparts nor adjustments are required for size change within a defined size range - and only a few beyond this range. Due to quick-change closure modules one machine can process different types of carton.



Infeed for round bottles and vials



Infeed for round bottles and vials



Spoon feeder



Counting stack for the infeed of blister packs

Size changeover is operator-guided, collision-free and uncomplicated. The few changeover points allow a complete size changeover (three-dimensional) in less than 15 minutes.

**The right infeed system for every product:**

As for all cartoning machines, Bosch offers standardized infeed systems for the CUT 120: for **vials, bottles, blisters, sachets and pillow packs**. Inserter devices for additionally added items, such as **spoons** or **outserts**, are integrated into the modular product

feed system according to application requirements.

Infeed systems for other products, including combination packs, are designed and matched to each application by our experience project team.

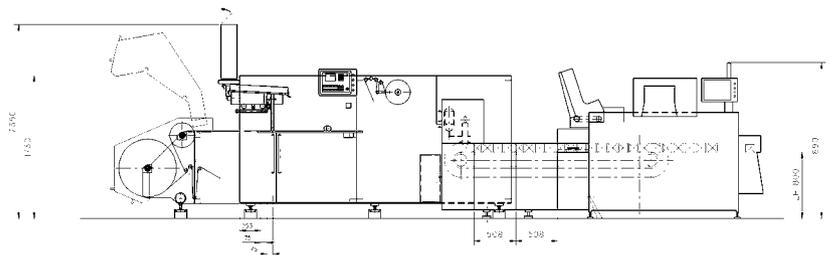
**Time-tested**

**Operating at about 150 locations around the globe, the CUT 120 machine sets standards with regard to security, reliability, and dependability in the most diverse application ranges in pharmaceutical production.**



## Line integration – where Bosch is strong

If you are looking for a knowledgeable partner for individual project planning and the engineering of complete production lines, with many years of experience and in-depth expertise and know-how: Bosch is your experienced and capable source in all matters of packaging technology. Based on a multitude of different components, the Bosch Line concept offers trendsetting and future-orientated solutions, customized and purpose-built for the product - and all this from a single course.



Example layout of a TLT 1400 blister machine with CUT 120 cartoning machine

## Technical information

<b>max. output</b>	120 cartons/min (per DIN 8743)
<b>Size range (A x B x H)</b>	min. 20 x 15 x 50 mm max. 110 x 100 x 200 mm
Size range expansion	max. 110 x 110 x 210 mm
<b>Operating mode</b>	intermittent
<b>Design</b>	balcony construction (GMP-compliant design)
<b>Drives</b>	8 servo motors with electronic camshaft
<b>Control / operation</b>	Industrial PC with Soft-PLC and touchscreen, Operator guidance for size change, Memory for 999 sizes
<b>Conveying system</b>	Carton: lubrication-free plastic carrier system, without chain centrally adjustable, 4 lugs per carton Product: modular product chain, flexible expansion, central adjustment
<b>Size change</b>	Scaled spindles and operator guidance via operating terminal for fast and reproducible adjustments. Few quick-change sizeparts, depending on application.
<b>Options</b>	<ul style="list-style-type: none"><li>- Preinsertion for reliable insertion of leaflets in C-shape</li><li>- Mouth piece for dust flap spreading</li><li>- Carton marking by coding, inkjet or laser</li><li>- Expanded carton magazine</li><li>- and many more.</li></ul>
<b>Closure variants</b>	<ul style="list-style-type: none"><li>- Straight or reversed tuck-in closure</li><li>- Tuck-in closure with safety flap</li><li>- Glue closure</li><li>- Safety closure (tuck-in closure with glued 4th flap)</li><li>- Closure combinations</li><li>- Quick-change closure modules for different packages all on one machine</li></ul>
<b>Power consumption</b>	4 kW (CUT without gluing) 9 kW (CUT with gluing)
<b>Connected load</b>	6 kVA (CUT without gluing) 11 kVA (CUT with gluing)
<b>In-series fuse</b>	25 A
<b>Compressed air requirement</b>	approx. 8 m <sup>3</sup> /h at 6 bar overpressure

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