

A_L_S_ BOS Box Opener

BOS for incoming goods and returns

The BOS Automatic Box Opening System can open up to 600 randomly sorted items an hour, depending on the cutting technique. That can amount to a 75% cost-savings when compared to manual opening by an employee.



Opening process

Boxes are transported one-at-a-time by conveyor system into the BOS Box Opener. Once inside, they are locked in. Sensors then measure the box height to gauge where to begin the cut. The sensors then follow the cutting process until the process is complete. As soon as a box has been opened, it is sent from the cutting area and the next one enters.

Four different cutting techniques

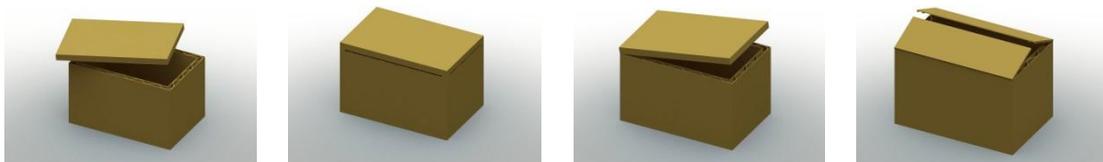
The **Complete Cut** separates the lid from the box completely.

For operations where boxes must initially remain closed for further transport, the **Partial Cut** is ideal. With this method, the blades cut along the four sides but leave the corners uncut.

This ensures the goods inside remain protected until the lid is (easily) removed later.

With the **Hinge Cut** three sides of the box are cut open completely, leaving the fourth side closed to act as a hinge. This cut ensures that the box is easily and readily opened while keeping shipping documents intact, which are often attached to the box lid.

The **Tape Cut** cuts along the tape on the top edges of collapsible boxes.



Handling - Risks - Resulting Problems

In a standard **receiving** line, boxes are manually opened with a blade

- Risk: Damage to the goods within; employee injury
- Result: Loss of value to the goods; loss of manpower

In the **picking process** the goods damaged through the opening procedure are not identified

- Risk: defective goods are unknowingly put through to the shipping department
- Result: the picking process must be repeated or double-checked later

In **shipping** the damaged goods are still not identified before being repacked

- Risk: defective goods get shipped
- Result: added shipping costs, processing of returns, re-processing of closed jobs

A_L_S_ BOS Box Opener

Performance

In comparison to manual laborers, machines do not require breaks and do not exhaust after long hours of work. They are also not susceptible to injury or illness and require no vacations or sick leave.

The BOS system can open up to 600 boxes / hour (depending on box size) and can be put into 3-shift operation.

Box sizes

Within an chaotic sorting system, BOS can process the following sizes (L x W x H):

- min. 160 x 140 x 120 mm
- max. 600 x 600 x 400 mm

Technology

The BOS blades can be adjusted to any **cutting depth** from **4 – 11mm**. This ensures that the goods inside are never damaged. As the machine can (optionally) be outfitted with a magazine of **four** such **blade heads** (each with four individual blades), it is possible to pre-configure a number of different cutting depths for various types of cardboard. The operator can they choose the appropriate tool on the control panel.

Depening on the desired application, there are three different blade types available:

- Triangular blades for long cuts (Complete, Hinge, and Partial)
- Triangular blades for Tape Cuts
- Perforation blades for perforating cuts (Complete, Hinge, and Partial)

Logistics Integration

We also supply additional machines for your supply chain, including barcode scanners, defect recognition systems, picking systems, etc.

Due to its standardized conveyor system, the BOS can easily be implemented into existing processing lines as well.

Amortization

The BOS is capable of outperforming a person 5:1. See the cost comparison below (per box):

Person **12.2** Cents : Machine **2.9** Cents

A BOS system can therefore reduce costs by 75%.

Depending on usage, a BOS system can be amortized in a matter of mere weeks or months.