

# Tetra Pak® Ice Cream Sandwich unit A1

First-rate hygiene meets top-tier capacity



## APPLICATION

Tetra Pak® Ice Cream Sandwich unit A1 produces rectangular ice cream sandwiches wrapped in a fold-wrap style packaging.

## HIGHLIGHTS

- Open hygienic design
- All servo-driven
- Wash-down design
- High output, minimal maintenance

## WORKING PRINCIPLE

The Tetra Pak® Ice Cream Sandwich unit A1 contains several functional units to fill and wrap ice cream sandwiches.

The sandwich wafers are loaded into a left-and-right sided magazine and combined with a central extruded ice cream strand to an ice cream sandwich. The indexing star wheel cuts the ice cream and a conveyor transfers the sandwich to the wrapping box. The roll of packaging material is placed on an arbour on the opposite site of the machine.

The wrap feeder cuts the packaging into sheets and transfers it into the wrapping box. During a vertical elevation, the sheet is wrapped around the sandwich and pushed over a heated plate for the final sealing onto an outfeed conveyor.

## STANDARD DESIGN

The basic machine consists of a frame in an open design with a top mounted cabinet for all electric components, such as the PLC and servo controllers. All drives are in stainless steel execution and mounted on the backside. Most of the units are fast removable and mounted from the operator site.

The wafer magazines and guides have an integrated drip shield and are easy adjustable to secure a perfect interaction with the ice cream extrusion nozzle, the wafer stripper and the star wheel.

The product transition from the star wheel to the conveyor can be by-passed to the bottom of the machine (e.g. for start-up or wrap feeder issues) to convey just good products to the wrapper box and the product discharge conveyor. The wrap can either cut to a pre-selected length or, by using an integrated sensor, in relation to a registration mark. After wrapping, the product is sealed in a dual-zone heating area. The zone temperatures can be individually adjusted for best results, even when temperature-critical material like poly film wrap is used.

The belt conveyor transports the products to downstream equipment – e.g. an automated case packer or a manual packing area.

The machine is guarded according to the highest safety standards, but allows good access for cleaning, maintenance and troubleshooting when opening the safety switch-controlled and interlocked guards.

The units in direct food contact are specially designed for fast removal and rigorous cleaning out of the machine. These units can be reassembled without readjustment.

## MAIN COMPONENTS

The machine is built in a modular structure for fast adjustment to different sandwich sizes. Depending on format change one or multiple functional units must be replaced. Adjustment of the timing can be stored and selected in the program.

### SIZE KIT

- Extrusion nozzle
- Star wheel
- Product conveyor
- Wrapping box

### OPTIONAL EQUIPMENT

- Ripple equipment
- Cleaning device

## CONTROL PANEL

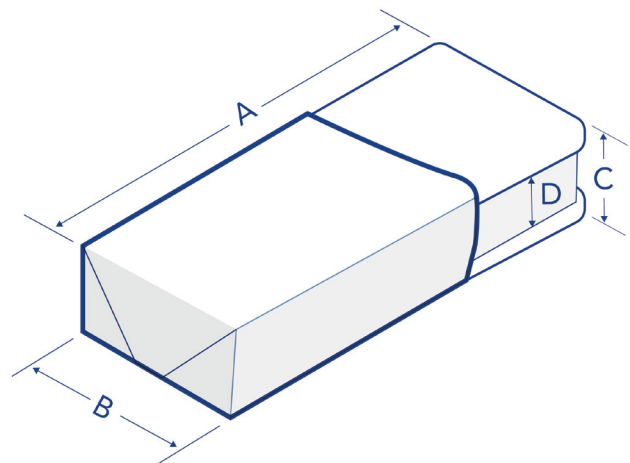
Tetra Pak® Ice Cream Sandwich unit A1 is controlled by an Allen Bradley CompactLogix PLC. It is controlled via a central PLC control system, enabling more accurate control and easier product change-overs.

The PLC allows automatic start-up and end-of-production shutdown.

The unit also allows pre-programming of up to 50 products. Relevant production data is shown on the touchscreen display on the control panel. The large, user-friendly touch panel is positioned next to the operator working area. It is equipped with recipe set-ups required for the various product SKUs (stock-keeping units). The PLC and touchscreen operator panel make it easy to optimize all settings individually for each SKU. It enables maximum repeatability by storing the data, and retrieving and activating it again the next time you produce the same product.

## CAPACITY

Depending on wafer quality, up to 200 products/minute (12 000 products/hour).



### PRODUCT DIMENSION

Typical US wafer dimensions (A, B, C, D, E)

**Length A:** 88 mm – 130 mm (3.5" – 5.1")

**Width B:** 38 mm – 51 mm (1.5" – 2")

**Total Height C:** D + 9 mm (3/8")

**Nozzle width/height D:** 12 mm – 26 mm (0.5" – 1")

## TECHNICAL DATA

### ELECTRICAL POWER

Connections	3 ~ 400 V, 50-60 Hz
Total consumption	approx.- 3 kW
Main breaker	32 A

### COMPRESSED AIR

Supply pressure	4 bar
Total consumption $V_N$	N/A

# LAYOUT

MACHINE FOOTPRINT:

