sprimag
automated coating
systems

EAM-4

ELECTRIC ANNEALING MACHINE

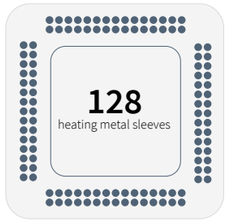
EAM-4 The new standard for soft annealing of aluminum tubes according to DIN EN 16285

With the EAM-4, Sprimag sets new standards in efficiency, sustainability, and process reliability. The innovative electric annealing machine for aluminum tubes enables production speeds of up to 200 tubes per minute while drastically reducing energy consumption compared to conventional tube annealing ovens.

The patent-pending technology includes high-precision temperature control for targeted soft annealing and burning off lubricant residues. The EAM-4 is impressive both technically and economically.

Your benefit:
Homogeneously annealed tubes, lower operating costs, and a significantly more sustainable production process.

Variants of the EAM-4:



Two-row heated blocks for tubes Ø 12.5–25 mm (2x16 baskets)

Three-row heated blocks for tubes Ø 25–50 mm (3x14 baskets)

BENEFITS

- Highest energy efficiency with maximum production output
- Sustainable solution for modern aluminum tube production
- Precise, reproducible annealing results
- High ease of use thanks to modern HMI design
- No contamination from chain lubrication
- Reduced system complexity for shorter evacuation times

FEATURES

- Production speeds of up to 200 tubes/min
- Electrically heated with annealing temperatures up to 510 °C
- Precise temperature control (+/- 3 °C) throughout the entire process
- Low number of tubes in the annealing area
- Innovative heating system with contact heating
- Safe tube transport without transport chain
- Individual monitoring at the take-off for safe transfers

SUSTAINABILITY

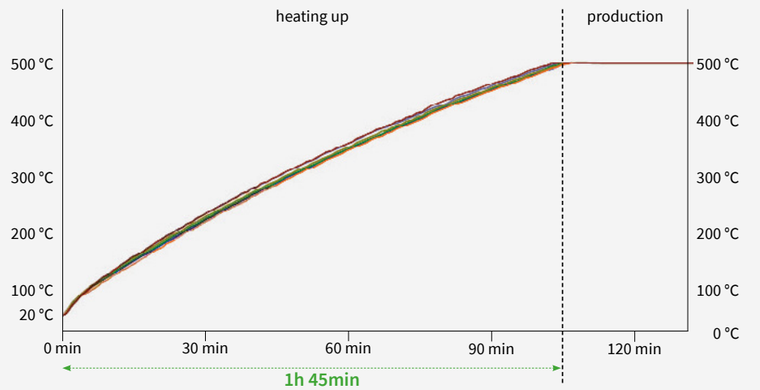
The heart of the EAM-4 is its electric heating process with direct contact heating and efficient insulation. This allows a transition away from fossil fuels while maintaining extremely low energy consumption.

Comparison of energy consumption (production):

	TGO – gas-heated	EAM – electric
two-row variant	1.347 kWh / 24 h	194 kWh / 24 h
three-row variant	2.352 kWh / 24 h	360 kWh / 24 h

Energy savings > 75 %
compared to conventional tube annealing ovens.

Heat-up curve:

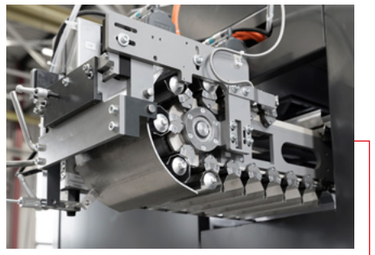


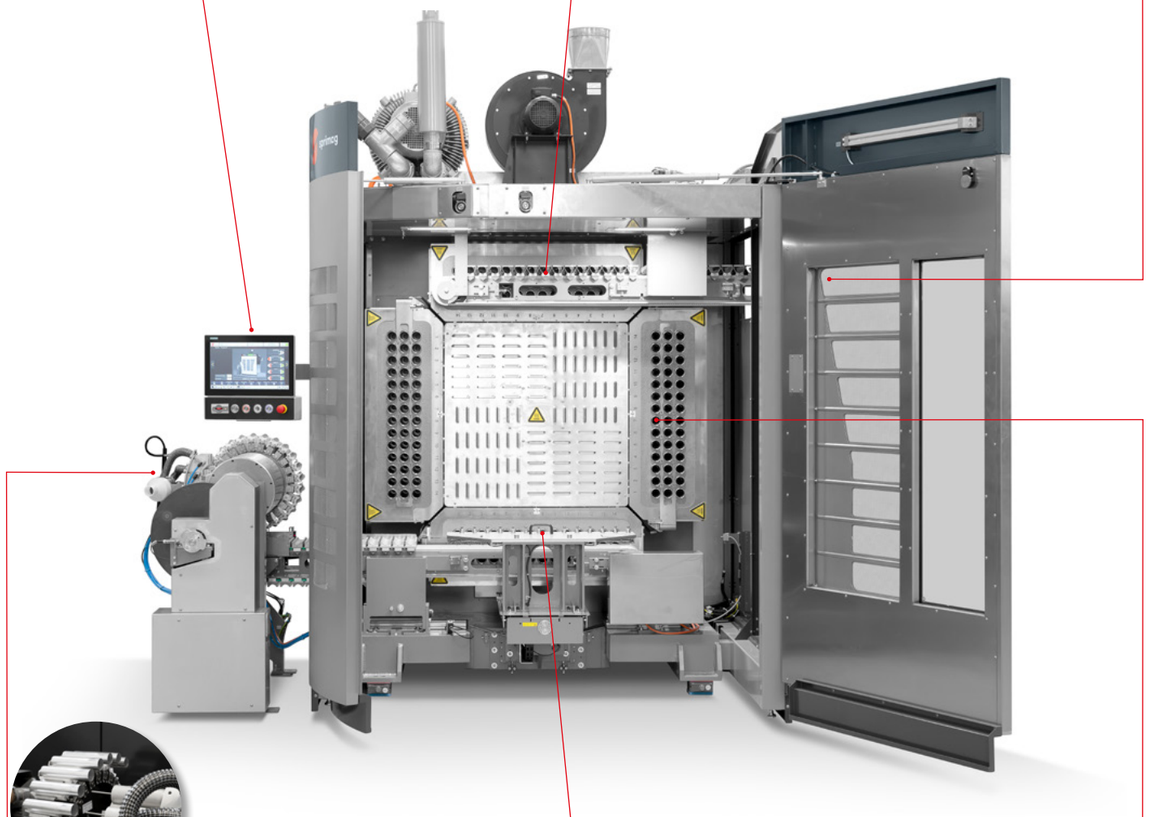
Precise control to set temperature (+/- 3 °C)

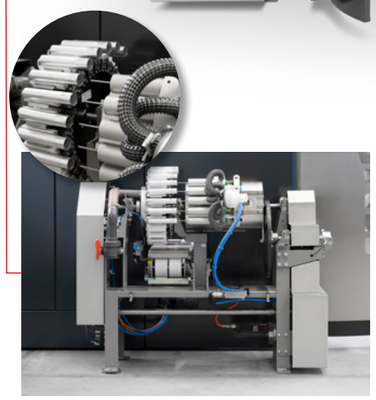
Heating energy:
63 kWh

The intuitive HMI design with multi-touch technology provides new possibilities for visualization.

Two basket segments, each with 16 baskets (two-row variant) or 14 baskets (three-row variant), for continuous and safe take-off of the tubes after the annealing process.







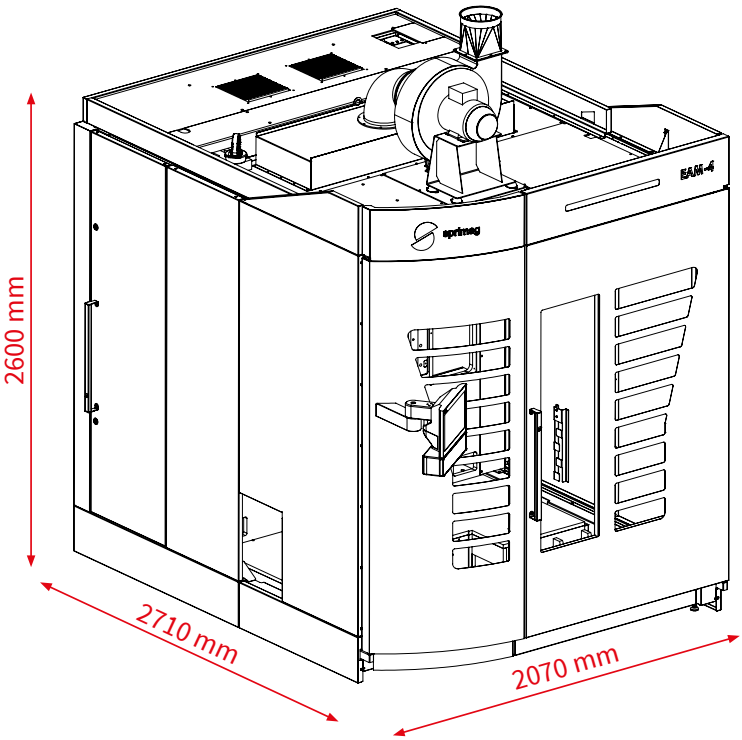
Optionally, a chip blow-off drum (CBD) with targeted extraction and an extended blow-off process can be added.

Safe tube transport and individual monitoring at the take-off for reliable transfer of the tubes into and out of the metal sleeves.

Four heated blocks with a total of 128 (two-row) or 168 (three-row) integrated heated metal sleeves with high-efficiency insulation material.

TECHNICAL DATA

Parameter	Specification
Product range	Aluminum tubes
Product diameter range	D_{min} = 10 mm, D_{max} = 50 mm
Product length range	L_{min} = 70 mm, L_{max} = 220 mm
Production speed	up to 200 tubes per minute
Annealing temperature	up to max. 510 °C
Electrical connection power	70 kVA



Watch the EAM-4 video now!

10 STRONG ARGUMENTS FOR A FUTURE-ORIENTED TECHNOLOGY:

- energy savings of more than 75% compared to conventional annealing ovens
- precise temperature control up to 510°C (±3 °C)
- accurate and reproducible annealing results
- better annealing results with recycled aluminum raw material
- reduced system complexity for easier evacuation (no more downstream accumulator needed)
- no more chain lubrication / no more weekly downtime
- no more transport chain / no more expensive maintenance
- significant reduction in unintended heating of the work space environment
- the compact design with a reduced footprint allows an easy integration into older, existing production lines
- new opportunities for a complete transition away from fossil fuels

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