

ALO 192

Induction hardening and tempering of edges for steel rules and band knives



THE SYSTEM COMPRISES:

- High efficiency and low energy consumption generators with air-cooled oscillator tubes.
- Automatic anode current control keep the anode current constant during the whole coil.
- Automatic flash guard protect the system against damage from flash-overs.
- Band feeder with a pulling 4-wheel drive system designed for accurate speed and guiding.
- Electromagnetic brake for optimal control of band tension.
- Parameters for speed, effect and power settings can be saved in HMI giving high reproducibility
- Fast and easy start up and change over.

THE SYSTEM COMPRISES:

- Feed unit
- Hardening generator and inductors
- Tempering generator and inductor
- Closed coolant system

CAPACITY:

Band width 9 - 50 mm
 Band thickness 0.5 - 1.5 mm
 Maximum depth of hardness 0.3 mm
 Hardening generator frequency is 27 MHz.
 Tempering generator frequency is 1.5 MHz

OPTIONS / ACCESSORIES:



ALO 822
Double coiler



ALO 831
Double coiler



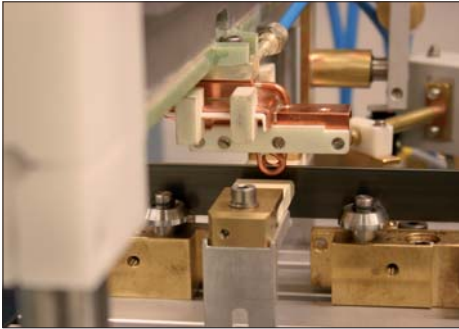
ALO 880
Electrical coiler



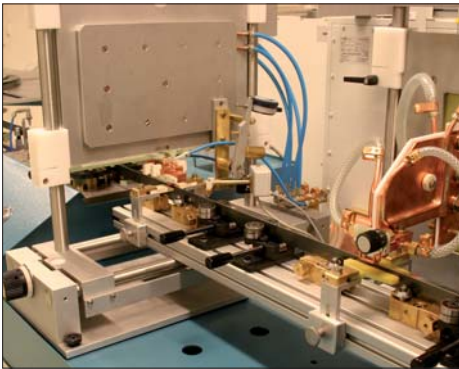
ALO 106 CUBE
Coil handling system

MACHINE DESCRIPTION

Band feeder



Hardening unit with flash guard



Hardening generator with automatic anode current control and tempering unit

The band feeder consists of two units, one 4-wheel feed unit, the other as an adjustable brake to control the band tension by using an electro magnetic friction brake. Both units are equipped with two pairs of inclined rolls. The four rolls on the feed unit are driven by a servomotor, and the speed is controlled by a servo controller. The oscillating circuits with the inductors are located between the brake and the feed units such that the band is pulled through the inductors at a controlled tension.

Generators

The hardening and tempering generators are enclosed in separate aluminium cabinets, equipped with separate oscillating circuits connected to the cabinets via coaxial cables. The generators are air cooled, thus limiting the cooling water requirements to inductors and oscillating circuit only. The hardening generator is equipped with an automatic anode current regulator, thus ensuring a stable power during the hardening operation. The tempering generator is equipped with a chopper for infinitely variable control of the output power.

Inductors

The interchangeable inductors are made of copper tubing and can be custom made for different pitches and band gauges. Adjustable in height for different blade widths and sideways for different blade gauges.

TECHNICAL SPECIFICATION:

Band width:	9 - 50 mm
Band thickness:	0.5 - 1.5 mm
Capacity:	0 - 25 m/min
Air pressure:	6.3 bar
Standard voltage:	400VAC $\pm 10\%$ 3-phase, 50-60 Hz $\pm 1\%$ directly earthed system, other voltages available upon request.
Space requirement (l x w x h):	4 x 2 x 2m
Weight:	1600 kg
Power consumption (at max output power):	20 kVA
Other customer requirements may be discussed between customer and ALO.	