

ALO 191

Induction tooth hardening and hot straightening of bandsaw blades



THE SYSTEM COMPRISES:

Feed unit
 Hardening generator and inductor
 Straightening generator and inductor
 Closed coolant system
 Closed quench system

CAPACITY:

Band width 6 - 38 mm (other widths on request)
 Band thickness 0.4 - 1.3 mm
 Tooth pitch 3 - 18 tpi
 Hardening generator frequency 27 MHz.
 Straightening generator frequency 1.5 MHz.
 Tempering generator frequency 1.5 Mhz. (option)

- 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.
- High reproducibility due to accurate digital/analogue settings of power, speed and work coils.
- Fast and easy start up and change over.

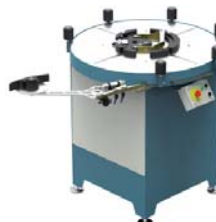
OPTIONS / ACCESSORIES:



ALO 90915/16/17/18
Collapsible coil center



ALO 831
Double coiler



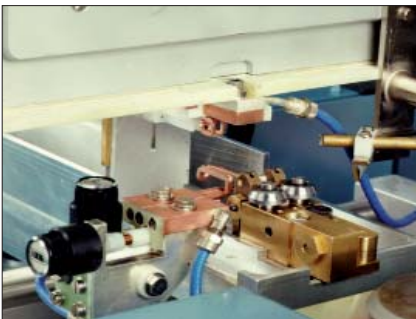
ALO 880
Electric coiler



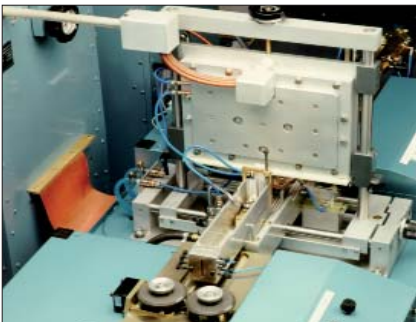
ALO 106 CUBE
Coil handling system



Tooth hardening generator



Inductors



Quench system

MACHINE DESCRIPTION

Band feeder

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 straightening 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 straightening generator is equipped with a chopper for infinitely variable control of the output power.

Inductors

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

Quench system

The system is designed for liquid quenching, such as oil or polymer quenchants. It consists of quenching device for the teeth, quenchant tank built into the feeder, circulation pump, thermostat, heat exchanger, magnetic filter and a heating device for preheating of the quenchant.

TECHNICAL SPECIFICATION:

Band width:	6 - 38 mm	(other widths on request)
Band thickness:	0.4 - 1.3 mm	
Tooth pitch:	3 - 18 tpi	
Capacity:	5 - 15 m/min	
Air pressure:	6.3 bar	91 psi
Standard voltage:	400VAC $\pm 10\%$ 3-phase, 50-60 Hz $\pm 1\%$ directly earthed system, other voltages available upon request.	
Power consumption (at max output power):	20 kVA	

ALO 191 is also available with a inline tempering generator ALO 191 - T

Other customer requirements may be discussed between customer and ALO.

