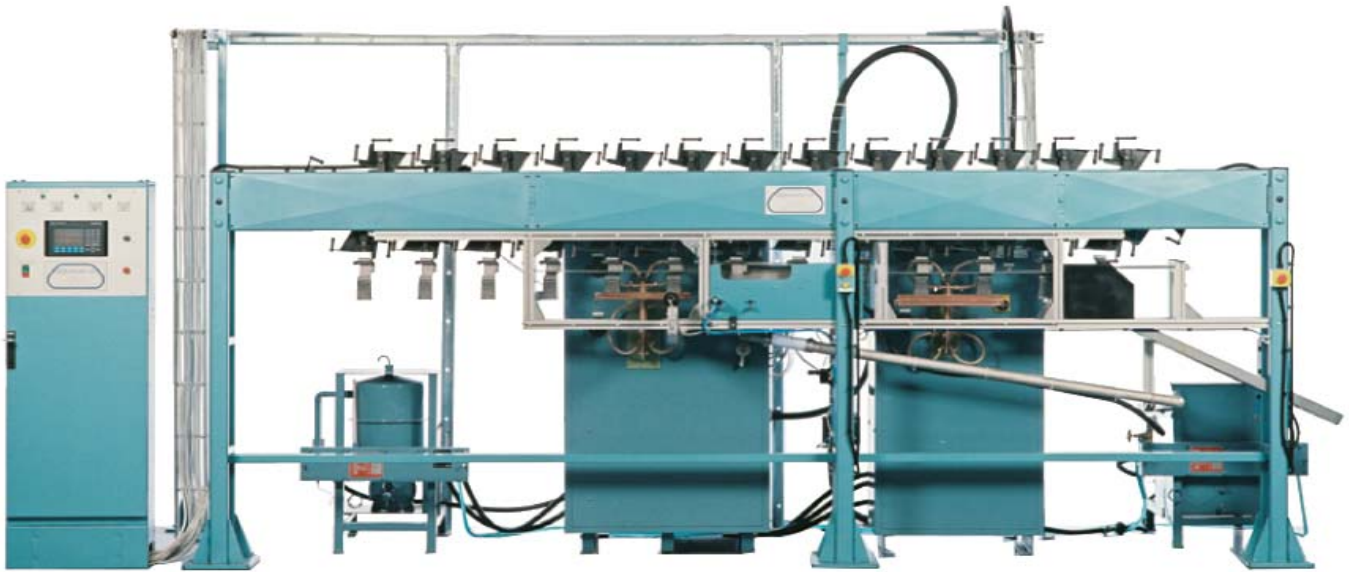


ALO 701

Induction hardening and tempering of axes

ALO 702

Induction hardening and tempering of chisels



THE SYSTEM COMPRISES:

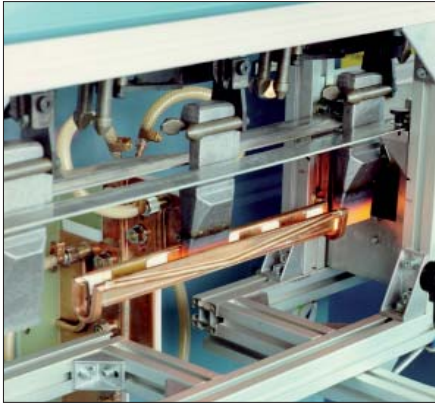
- Transport unit for tools
- Hardening generator and inductor
- Tempering generator and inductor
- Closed cooling system for generators
- Cooling and circulation system for quenchant

CAPACITY:

- | | |
|--------------------------|---|
| Depth of hardening: | approx. 25 mm (1") from the edge |
| Production rate example: | approx. 250 hardened and tempered axes/h |
| | approx. 360 hardened and tempered chisels/h |



By using different fixtures and inductors the machine can process different kind of tools



Hardening unit



Tempering unit

MACHINE DESCRIPTION

Generators

The generator is enclosed in an aluminium cabinet. Controls and instruments are placed on the front of the generator, water and main connections on the opposite side. The output power is controlled by means of a chopper. The generators and inductors are cooled by a closed cooling system.

Inductors

The copper inductors are water cooled and built for simultaneous heating of two tools at a time up to a max. heating height of approx. 25 mm from the edge of the tool.

Cooling shower

The cooling shower consists of a number of nozzles directed towards the edge for maximum selective quench output. It is designed to quench one tool at a time and is enclosed in a container with in- and outfeed openings to avoid splash. The stainless steel quenchant tank has a volume of 200 l. The shower-time can be adjusted so that any remaining quench fluid could evaporate and guarantees totally dry tools when the tempering starts.

Transport device for the tools

The indexing are done with a servo-motor with a gearbox. Each fixture has four different tool holders and by turning the fixture 90° it's easy to shift between the different holders so that the edge of the different tools always comes into the same height in relation to inductors. Loading of the tools is manually done, while the tools are automatically put off after the heat treatment.

TECHNICAL SPECIFICATION:

Air pressure:	6.3 bar	91 psi
Power consumption (at max output power):	58 kVA	
Hardening generator max output power:	25 kW	
Tempering generator max output power:	15 kW	
Standard voltage:	400VAC $\pm 10\%$ 3-phase, 50-60 Hz $\pm 1\%$ directly earthed system, other voltages available upon request.	

Other customer requirements may be discussed between customer and ALO.