EMA
induction
technology

Vertical Hardening Systems

for inductive heat treatment

Reliability at work

Aichelin

Vertikale Universalhärteanlagen

Standardized feeders must meet a whole host of requirements. They need to be flexible and universal, yet also be tailored to the requirements of the customer, as well as affordable and efficient. All hardening plants are keen to process as wide a range of workpieces as possible using the machines at their disposal. Obviously, the speed at which they can retool their machines to different workpieces therefore also plays a critical role. However, series production of large batches with all safety aspects is also very important.
The wide range of workpieces handled by the progressive hardening machines from EMA Indutec stretches from just a few centimeters in length up to 5 meters - with diameters ranging from 5 mm to 3,000 mm. The robust machines excel through their high flexibility and easy extendibility.
The modular system from EMA Indutec for vertical hardening machines offers you these advantages at an attractive price.
The specific adaptations can be implemented easily and cost-effectively. In combination with a converter from EMA Indutec, the vertical hardening machine fulfills the requirements in terms of flexibility, universality and efficiency.
In combination with the service, the network connection guarantees high availability and enables our experts to clear most of the faults online without the need of a service call on-site.

Basic configuration of the universal machines

- Siemens 840 Dsl CNC controller
- Visualization of all process-relevant parameters using a color control panel and documentation using a process data monitoring module
- Vertical inductor travel length and supporting bearing designed as CNC axis
- Transversal adjustment of the inductor manual
- Rustproof workspace design
- Quality assurance packages
- Control unit connection via Ethernet/ Internet networks as well as automation and PDA interfaces

Areas of application

- Surface hardening
- Tempering
- Annealing
- Soldering
- Calibration
- Protective gas processes

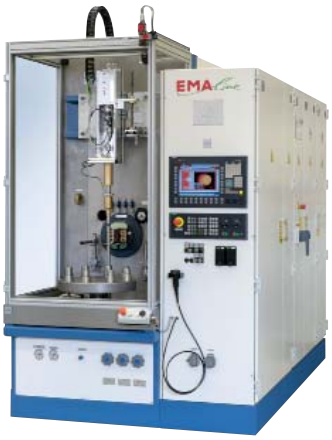
Benefits of the systems

- Development and production at EMA Indutec
- Space-saving and compact construction and therefore shorter commissioning time
- Remote Service via network or modem
- Quick set-up
- User-friendly and easy-to-understand operation
- robust and durable machines
- Individualized customer solutions
- All from one source

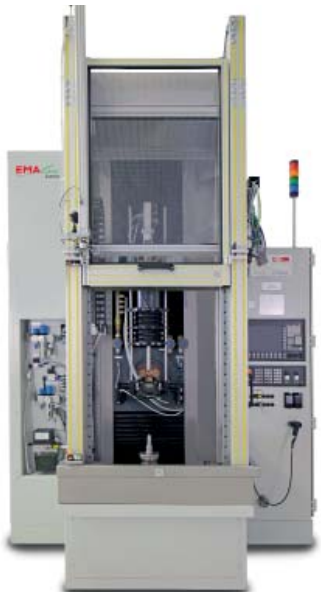
Versions

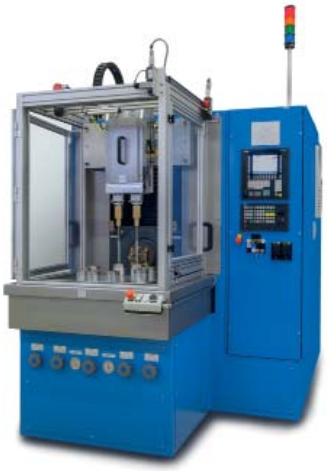
- SC: Single Column
- DC TT: Double Column, Turn Table
- SC TS: Single Column, Twin Station
- DC DS: Double Column, Double Station
- SC TT: Single Column,Turn Table
- MTT: Movable Turn Table
- SCL: Single Column Large

The number behind the vertical hardening machines Tucana, Lepus, Lupus, Taurus and Cetus indicates the maximum clamping length for workpieces in millimeters, e.g. Taurus 1500.
The Lepus 300 has with 300 mm the smallest, the Cetus 5000 with 5,000 mm the largest clamping length.



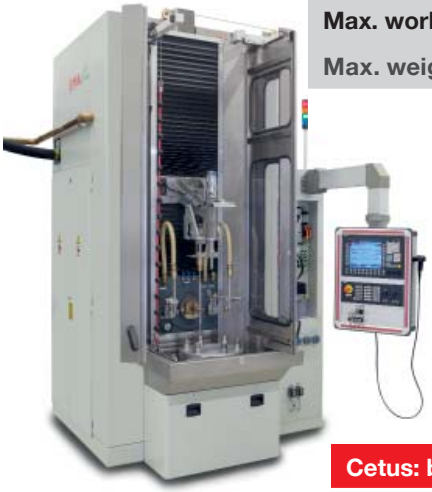
Tucana: basic technical data	
Max. work piece clamping length	500 mm
Max. work piece diameter	600 mm
Max. weight of work piece supporting	250 kg





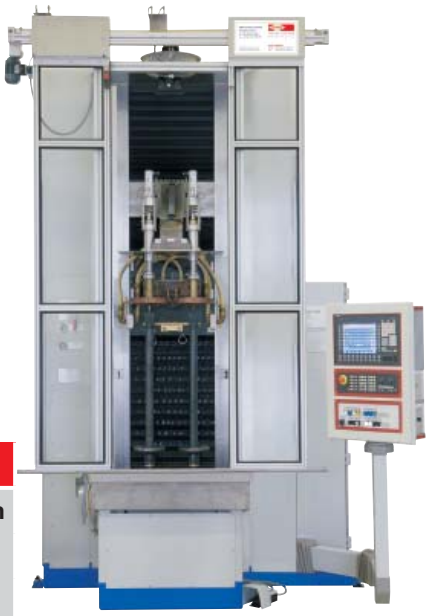
Lepus: basic technical data	
Max. work piece clamping length	300 mm
Max. work piece diameter	600 mm
Max. weight of work piece supporting	100 kg

Lupus: basic technical data	
Max. work piece clamping length	1.100 mm
Max. work piece diameter	600 mm
Max. weight of work piece supporting	500 kg



Taurus: basic technical data	
Max. work piece clamping length	1.500 mm
Max. work piece diameter	600 mm**
Max. weight of work piece supporting	1.000 kg**

**: Taurus MTT: 3.000 mm and 3.000 kg



Cetus: basic technical data	
Max. work piece clamping length	5.000 mm
Max. work piece diameter	800 mm
Max. weight of work piece supporting	5.000 kg

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Ideal Solutions for Heat Treatment

Induction heating and hardening systems

- Economical and highly reliable systems
- Low energy consumption per workpiece
- Accurately reproducible hardening results
- High throughputs
- Heating zones and times can be determined precisely
- Heat treatment processes with low distortion
- Scale-free hardness zones due to heat treatment with protective gas
- Simple to integrate into production lines
- Lower expenses for production parts
- Tailor-made induction systems from a single source
- User-friendly adjustment, retrofitting and maintenance
- Modern engineering supported by FEM simulation
- Areas of application: surface hardening, annealing and tempering, heat shrinking, fixture hardening

IGBT converters

- Digital converter control
- Power range from 10 kW up to several Megawatt
- Frequencies from 5 Hz to 400 kHz
- Heating and melting
- Hardening, annealing and tempering
- Forging and forming
- High energy efficiency
- Easy integration into production lines
- Customized solutions and special systems
- Replacement of old and external devices

After Sales Service

- Qualified and knowledgeable Service Centre
- Service hotline for troubleshooting
- Preventive maintenance
- Smart remote control solutions
- Efficient spare part concepts
- Customized plant-retrofit
- Inductor development, construction and repair service
- Training for operators, maintenance personnel and induction experts (also on site)

Top quality from one source

- More than 70 years of experience in heat treatment
- Over 10,000 induction systems in long-term operation worldwide
- Development and manufacture from a single source
- DIN EN ISO 9001:2015 certified
- Efficient project and quality management from the first question to subsequent service

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