

# UNISCAN II

## Vertical Hardening Machine



- 100–200 kW, 10, 30 kHz
- 50–150 kW, 50–200 kHz
- hardening length up to 1000 mm
- clamping length up to 1000 mm
- workpiece weights up to 23 kg
- programmable vertical axis

### The concept

- The UNISCAN II is a universal vertical feed machine for hardening and tempering wide-ranging different workpieces.
- Alongside state-of-the-art transistor-based inverter technology, it comprises up to two heating stations, a control system and separate recooling systems for the energy section and quench. All the components are pre-assembled to form a unit, so reducing on-site installation work required to simply connecting the water and electrical power.

### The operating range

- The system is equipped as standard with a maximum of two vertical pairs of centres. The use of workpiece fixtures on the lower centres allows not only shafts but also other workpiece types such as gears to be hardened.
- The stable feed unit guarantees precise positioning even for heavier workpieces.

### The control system

- The user-friendly control panel positioned conveniently within working reach permits fast machine adjustment and programming of the feed axis.
- All important process parameters are cyclically monitored at the UNISCAN and can be displayed in plain text.
- A memory allows a large selection of individual programs to be quickly stored and retrieved.

## Technical data

## UNISCAN II

<b>Power rating</b>	100 / 150/200kW HF 50–150 kW	10 oder 30 kHz 50–200 kHz	
<b>Hardening length</b>	1 000 mm		
<b>Workpiece rotation</b>	30–300 rpm		
<b>Cooling system</b>	customers cooling water supply; closed recooling system with water/water plate heat exchanger (use of quench water possible) and recirculating pump for cooling the inverter cooling water and quenching medium, digital temperature control and heating for quenching medium.		
<b>Control system</b>	CNC control system for programming the complete hardening process with the following functions:		<ul style="list-style-type: none"> <li>• positions</li> <li>• feed rates up to max. 250 mm/s</li> <li>• heating ein/aus</li> <li>• heating output in %</li> <li>• quench on/off</li> <li>• times</li> <li>• additional functions as required</li> </ul>
	drive by means of servomotor with fully digitized Standard Lenord & Bauer control system, optionally Siemens 840D		
<b>Program memory</b>	manual, link to handling or robot possible		
<b>Workpiece data</b>	length 1 070 mm	weight 23 kg/spindle	
<b>Load/unload</b>	manual, link to handling or robot possible		
<b>Dimensions/ weight</b>	length 2 355 mm width 1 880 mm height 3 445 mm	1 800 kg	
<b>Connected loads</b>	400/480V	50/60 Hz	
	100 kW	10 oder 30 kHz	130 kVA
	150 kW	10 oder 30 kHz	192 kVA
	200 kW	10–30 kHz	255 kVA
	50 kW	200 kHz	68 kVA
	100 kW	200 kHz	135 kVA
	150 kW	200 kHz	202 kVA
<b>Water requirement</b>	50 kW	70 l/min.	With 25°C infeed; actual requirement dependent upon cooling water temperature and capacity utilization.
	50 kW	120 l/min.	
	100 kW	225 l/min.	
	150 kW	340 l/min.	
	200 kW	450 l/min.	
<b>Safety devices</b>	door interlock; pressure switches on all water-cooled capacitors, temperature switches on all critical water paths; flow switches for inductor cooling circuit		
<b>Options</b>	CNC control system Sinamics/Siemens 840D; process parameter monitoring; quick-change inductor connection; inductor ground detection; 1-spindle version		