

UNITWIN

Truck front axle machining centre



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 **unisign**
machine tools

the economical solution to flexible manufacturing!

The UNITWIN is an impressive addition to the highly successful range of UNISIGN Truck Front Axle machining solutions. Nearly all the major truck brands use front axles manufactured on UNISIGN machines. The total number of front axles produced by OEM's and subcontractors on our machines, far exceeds 1,5 million per annum.



The two main spindles operate independently and can either do the same or varying operations.

The UNITWIN is equipped with two very powerful main spindles. Both of them can tilt up to plus and minus 15 degrees, so they can handle all operations on the various king pin angles available in the market. The two spindles work simultaneously to finish front axles in the quickest possible time for a major reduction in cycle times. These can be as little as 4,5 minutes per axle.

Each spindle can also finish one complete axle beam independently, simply by positioning the other spindle in a parking area. This great feature allows continuous production, eliminating down time due to maintenance or tool changes.

The UNITWIN is highly dynamic with a very robust design, ensuring optimum cutting capabilities. The two tilting spindles, in combination with the A-Axis, allow easy accessibility to perform all operations on the front axles. Operations can be milling, drilling, boring and reaming of the king pins, as well as milling the outer circumference of the king pin. Other operations are drilling of the cross holes, drilling and milling of the spring pads and much more. In short, the machine can accurately manufacture complete front axles easily achieving process capabilities commonly found in the truck manufacturing industry.

To ensure maximum productivity from the UNITWIN, the machine is equipped with an automatic loading crane for quick changeover of parts. This layout allows the installation to run in an unmanned condition for an extended period of time. Once the loading crane has picked up the front axle from the input conveyor, it is measured to ensure it will be correctly positioned in the fixture. A sliding roof in the top guarding opens automatically to allow entry of the loading crane. The crane itself is equipped with a double gripper, which ensures the fastest possible changeover of parts to achieve near continuous production.

UNISIGN has optimised the programming method for front axle beams. A full product program can now be generated by simply entering the required parameters of the beam. Also, the machine is equipped as standard with three-dimensional zero-point correction, including the rotary axes, for optimum positioning of machining processes in relation to the forging.

The UNITWIN is fully enclosed which guarantees a safe working environment. The operator has a good view on all the processes, both inside and outside the machine.

Work in progress
Live preview unitwin
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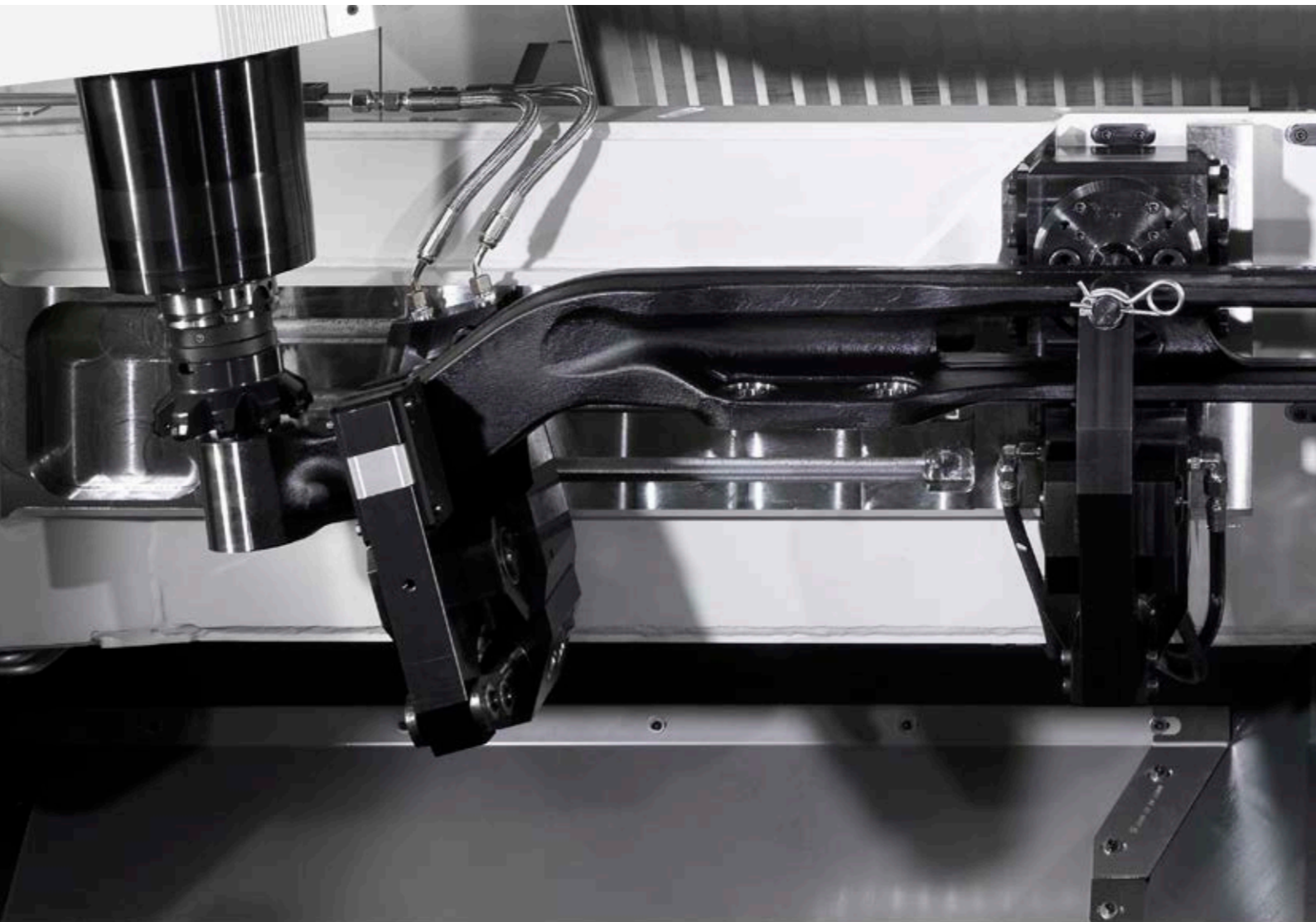




One further strong point of the UNISIGN front axle machining solutions is their flexibility. With minimum effort, the fixture can be altered to allow a large variety of front axles to be clamped. There is even an option to change the full fixture, which allows customers to produce less common types of beams, such as bus front axles.

The UNITWIN is in fact a state-of-the-art machining centre; a complete solution that promises an excellent return on investment. A unique machine, backed by the world's market leader.

UNISIGN... your partner in productivity!

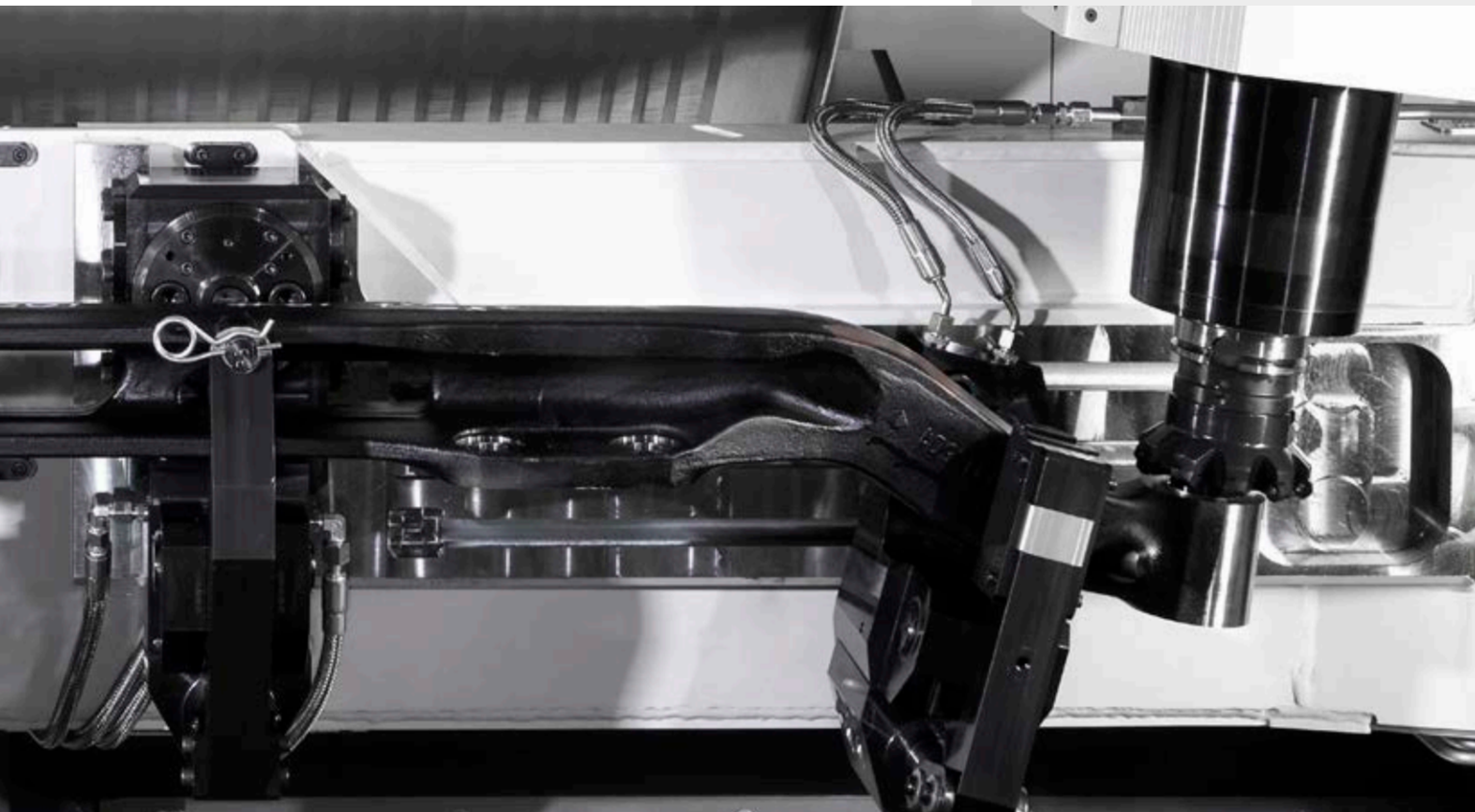




Highlights

- World leader in front axle machines since 1996
- More than 75 front axle machines installed
- Unmanned production
- Very easy programming method
- Cycle times as low as 4,5 minutes per front axle

The two main spindles ensure quickest possible cycle times.



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technical specifications

Work area

X-axis, longitudinal travel per spindle	mm	2x2.800
X-axis, total	mm	4.200
Y-axis, cross travel	mm	600
Z-axis, height travel	mm	500
Minimum distance between spindles	mm	700
Tilting range spindles	°	+/- 15
Rotating range A-axis	°	360

Two main spindles

Main drive motor	kW	51
Spindle speed	min ⁻¹	6.000
Maximum available spindle torque	Nm	1.000

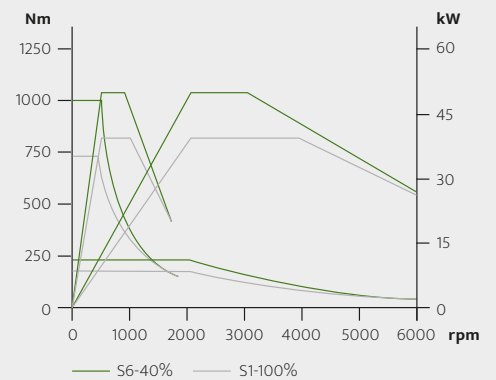
Axis drive- and feed system

Rapid / Feed rate	X-axis	mm/min	40.000
	Y-, Z-axis	mm/min	30.000
Speed of rotation	A-axis	min ⁻¹	15
	B-axis	min ⁻¹	11

Various

- Automatic loading crane with double gripper
- Input and discharge conveyor
- Milling of spring pad faces
- Fully enclosed working environment
- Automatic sliding roof for loading and unloading of components
- Two-stage gearbox, automatically shifting
- Tool magazine with 39 pockets; one for each spindle
- Taper size HSK100A or ISO50
- Tool change time of 8 seconds
- Two measuring probes
- High accuracy
- High pressure coolant
- Integrated chip conveyor
- Machine painting in RAL 7035/7024 light grey / medium grey
- SIEMENS One Control
- Tool management system
- Remote access

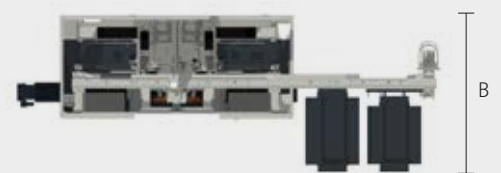
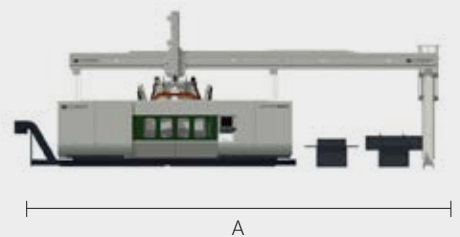
Spindle 51 kW



Sizes

Length (A):	13.600 mm
Width (B):	7.000 mm
Height (C):	5.800 mm

Views



Industries



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UNISIGN is an engineering company producing innovative and proven machine tool technology for customers in all market segments.




Through years of experience, UNISIGN has evolved into an international operating company with an impressive installed base. The basis of our success is the clear company philosophy to design all the machines in such a way that they can be tailor-made to create the ideal machine for our customers. The large number of machine tools supplied by UNISIGN reflects our strength and versatility.

01-2024



UNISIGN adds value to our customer production processes.

This makes UNISIGN your partner in productivity.

-  logistics
-  energy
-  general machining

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