

UNIPENT4000 AERO

High speed 5-axis machining centre



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 **unisign**
machine tools

Economical and versatile manufacturing

The UNIPENT 4000 AERO offers extreme aluminium metal removal rate

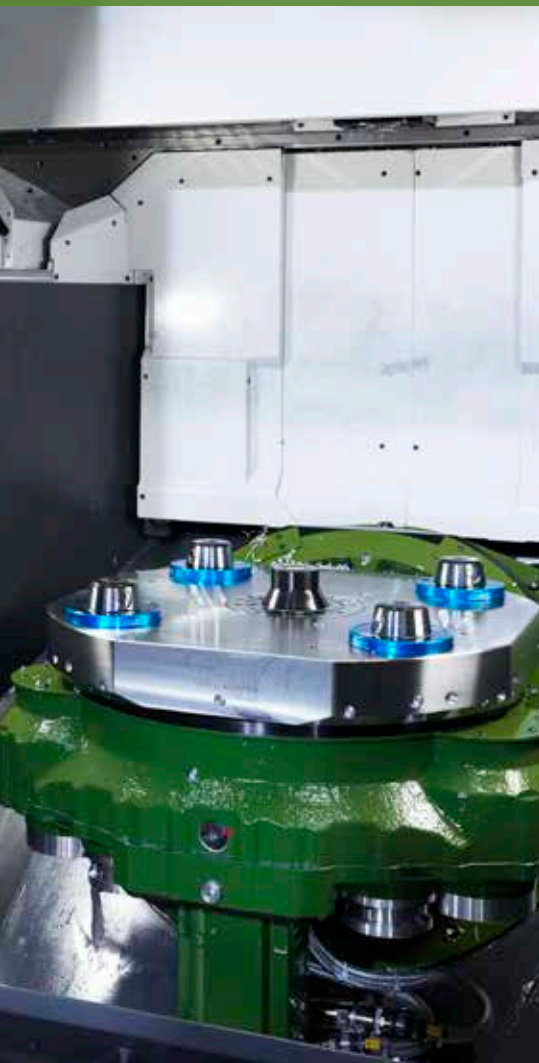
The UNIPENT 4000 AERO is purpose designed to produce high-volume aluminium aerospace structural components quickly, accurately and cost-effectively. The powerful 100 kW spindle drive runs at 25.000 rpm and removes aluminium at a rate over 10.000 cm³ per minute while remaining ultra stable because of the extremely rigid machine design.

This workhorse machine is compact, and has a lightweight but highly rigid portal bridge construction. It has a two-sided synchronised drive system in the Y-axis for the movable bridge, and a moving spindle carrier with ram in the X-axis.

Accurate, high volume output at low cost

Aerospace structural parts demand high-volume production with extreme accuracies at lower cost. The revolutionary and unique UNISIGN 100 kW spindle is, after many years of service, still the distinctive feature in the UNIPENT 4000 AERO. With its large capacity, it is renowned in the market as the tireless hard worker.

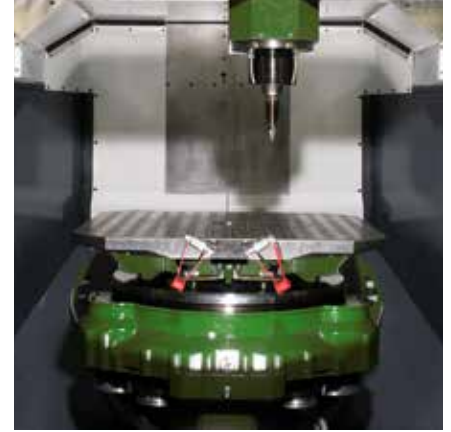
The machine has a small footprint, but with a large product swing circle of 1 m. The integrated rotating and tilting table enables 5-axis machining and complex component positioning for highest productivity. The table allows complete access. It is extremely rigid, with a rotary coupling enabling vacuum clamping.



Zero-point clamping integrated
in the machine table

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Easy to access, safe to operate

The machine is fully enclosed, with built-in fume extraction and electronic safety locks on the operator doors for a safe working environment. The operator has a good view of all processes, and the machine is easily accessible. A pneumatically activated

slideway system opens a roof for easy loading and unloading by overhead crane through the top of the machine.

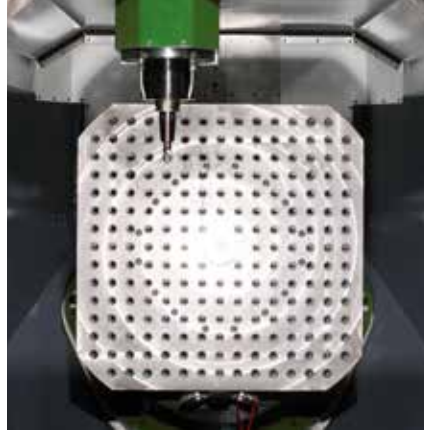
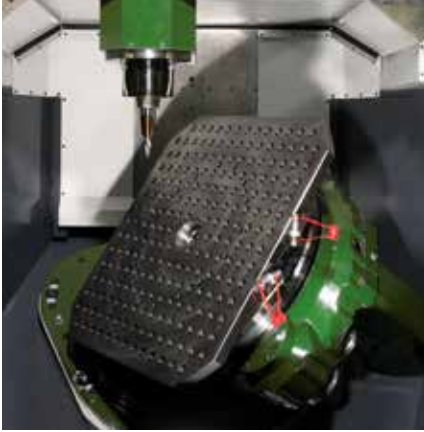
The UNIPENT 4000 AERO works either stand-alone or with multiple machines, there is an optional pallet changer for versatile production.

The UNIPENT 4000 AERO: extreme power in a state-of-the-art machining centre, ideal for any aerospace company.

UNISIGN... your partner in productivity!

The UNIPENT 4000 AERO offers shortest production times in the market





Automatic loading via pallet system



Highlights

- Full 5-axis machining capacity
- Over 10.000 cm³ per minute aluminium removal rate
- Stand-alone or multiple machines with optional pallet changer
- Portal machine configuration with extreme rigidity
- Excellent operator access

technical specifications

Work area

X-axis	mm	1.000
Y-axis	mm	1.000
Z-axis	mm	600
Table dimensions	mm	800x800
Swing circle	mm	1.000

Main spindle

Power	(S6-25%)	kW	100
	(S1-100%)	kW	75
Spindle speed		min ⁻¹	25.000
Spindle torque		Nm	90

Tool storage

Tool taper	-	HSK63A
Number of tool pockets	#	61 - 187
Tool change time	s	5

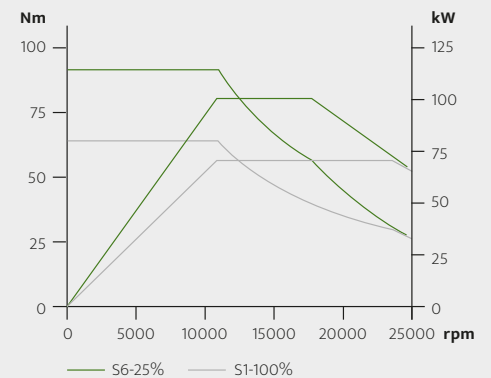
Axis drive and feed system

Rapid / Feed rate	X-, Y-, Z-axis	mm/min	60.000
Table rotation speed	B-/C-axis	min ⁻¹	32 / 52

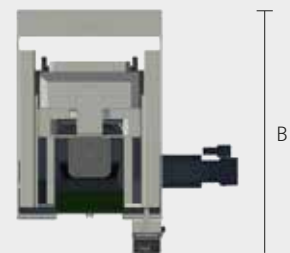
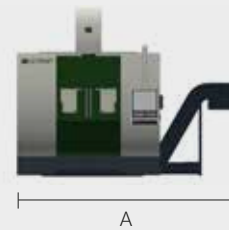
Various and optional

- 100 kW, 25.000 min⁻¹ motor spindle
- UNISIGN Turn-Tilt table 800 x 800 mm
- Rotary coupling for vacuum clamping
- 1 or 2 additional tool storages
- High accuracy package standard
- Fully closed machining area
- Sliding roof for (un)loading the machine
- Excellent ergonomics, operator can get very close to the table
- Coolant through the spindle
- Tool measuring via laser
- Measuring probe
- Optional pallet loading
- Siemens 840D or Heidenhain control
- Remote access

Spindle 100 kW



Views



Sizes

Length (A): 4.100 mm
 Width (B): 4.000 mm
 Height (C): 3.400 mm


Industries



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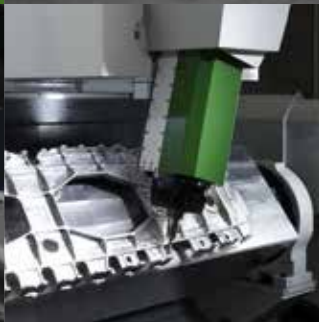
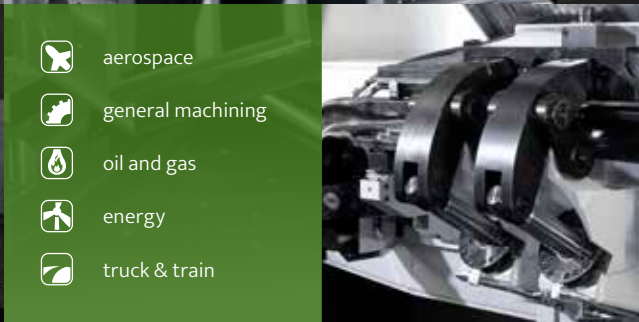





UNISIGN is an engineering company producing innovative and proven machine tool technology for customers in all market segments.

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.



UNISIGN adds value to our customer production processes.

This makes UNISIGN your partner in productivity.

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