



# UNICOM6000

Large mill-turn machining centre



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 **unisign**  
machine tools

# Economical and versatile manufacturing

UNICOM 6000;  
Complete  
machining without  
compromises

**The UNICOM 6000 is a large mill-turn machining centre with pallet changer for a wide range of applications. It is ideal for manufacturing large components like pumps and valves, turbo chargers, jet engine and turbine parts.**

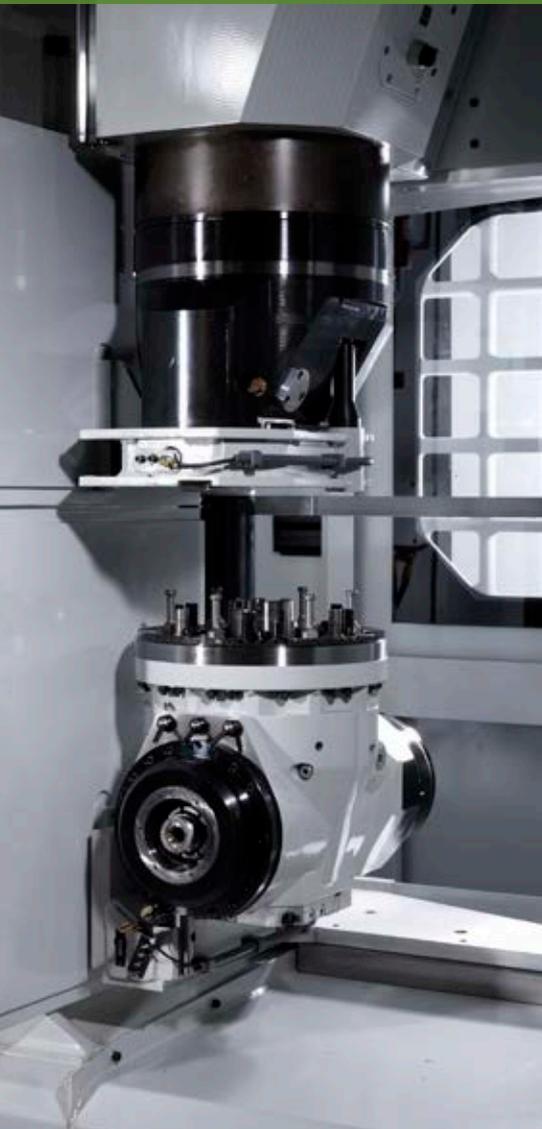
The mill-turn process increases productivity by combining various operations in one machine. It does this without compromising quality and without reducing the speed of individual processes.

## **Stable and accurate machining**

The design is based on the proven vertical ram configuration of the 6000 series. The various heads guarantee stable and highly accurate machining. For turning operations, the machine picks up a dedicated head which ensures that none of the cutting forces are loaded on the bearing, resulting in a longer spindle life time. The UNICOM 6000 has a moving ram that can plunge inside components. All the internal turning, milling and drilling operations can be done with short tools, increasing the speed, accuracy and stability of the machine.

The excellent stability means the carousel turning station can perform heavy cutting with power up to 95 kW and torque up to 38.000 Nm. It can also be used as a high precision C-axis.

The proven UNISIGN right-angle head performs horizontal machining. This head has the same power, torque and speed as the main spindle. Components with inclined surfaces can simply be handled by adding the UNISIGN universal head, which can be indexed in the B- & C-axis.



Automatic head changer

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## Highlights

- Powerful turning AND milling
- No compromise in performance, flexibility or accuracy
- Great reduction of lead times
- Various pallet sizes and configurations in one machine
- Great ergonomics and full enclosure guarding

Powerful turning

### Versatile machine configuration

The UNICOM 6000 has many features adding to flexibility and productivity. The standard pallet changer allows new work pieces to be loaded during machining. The loading station is located near to the control panel, which makes for comfortable and easy parts loading and machine operation. The machine takes different pallet sizes for parts with a range of diameters. The maximum speed of the turning station is automatically adapted to the pallet size. Tools, machining heads and pallets all are changed automatically.

If any process is interrupted, the UNICOM 6000 by default runs “recovery cycles” that bring the machine back into a controlled situation.

There is a single tooling system for the turning and milling operations. And for safety, the cabin is fully enclosed with an unrestricted view of the machining processes.

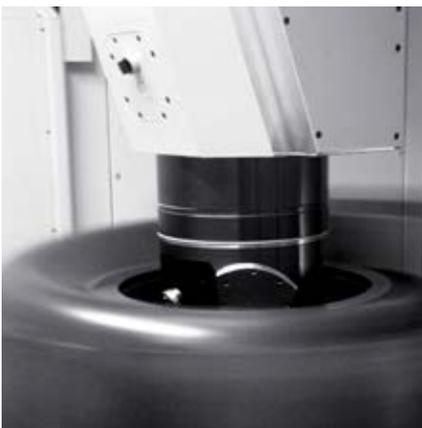
The UNICOM 6000 offers advanced, extremely powerful and complete machining that combines cost-effective performance, accuracy and reliability.





The UNICOM 6000 offers a highly modern mill-turn concept, combining productivity, reliability, flexibility and accuracy

Pallet loading station with centring device



# technical specifications

## Work area

X-axis, cross travel	mm	1.950
Y-axis, table travel	mm	1.425
Z-axis, height travel	mm	1.000 / 1.250
Distance spindle nose to table	mm	1.300 / 1.550
Pallet sizes	∅ mm	1.250 / 1.600 / 1.800
Swing circle	∅ mm	2.000

## Main spindle, gearbox driven

Power	(S6-40%)	kW	36 / 54
	(S1-100%)	kW	26 / 39
Spindle speed		min <sup>-1</sup>	6.000
Spindle torque		Nm	720 / 1.000

## Carousel turning station

Power	kW	70 / 95
Maximum torque	Nm	25.000 / 38.000
Maximum speed (depending on pallet size)	min <sup>-1</sup>	300 - 450

## Tool storage

Tool taper	-	Capto C8 / HSK100A
Number of tool pockets	#	80 - 202
Tool change time	s	10

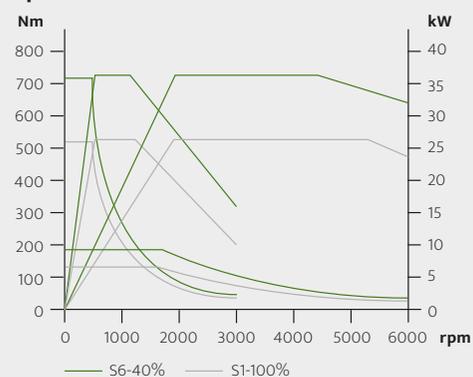
## Axis drive and feed system

Rapid / Feed rate	X-, Y-, Z-axis	mm/min	30.000
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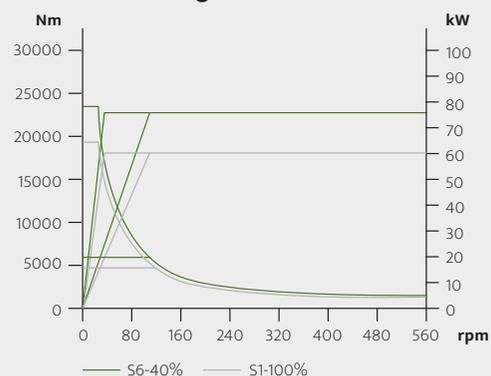
## Various and optional

- Turning tool adapters; vertical and horizontal
- UNISIGN right angle head
- UNISIGN universal head
- Customer specific machining heads
- Pickup station for 6 machining heads
- Increased capacity of carousel turning station
- Pallet changer with increased number of pallets
- Measuring unit for pallet loading
- Vacuum cleaning unit at loading station
- Linear scales in all axis
- In-process measuring probe on separate slide
- Fully enclosed working area
- SIEMENS 840D-sl control
- Cycles for balancing, grooving and conical turning
- Work area vision system
- Remote access

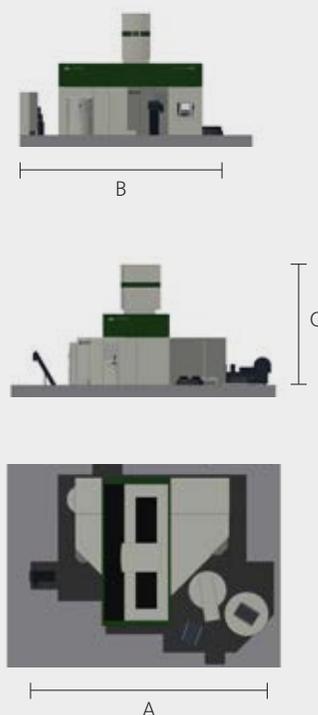
## Spindle 36 kW



## Carousel turning station



## Views



## Sizes

Length (A):	10.500 mm
Width (B):	8.500 mm
Height (C):	5.200 mm

## Industries



# your partner in productivity

**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.

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UNISIGN adds value to our customer production processes.

This makes UNISIGN your partner in productivity.

-  aerospace
-  general machining
-  oil and gas
-  energy
-  truck & train

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