unisign

UNISIGN

Univers 4000

Travelling Column Vertical CNC Machining Centre

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Univers 4000

UNISIGN

The economical solution for flexible manufacturing!

The UNIVERS 4000, at the entry level of the UNISIGN range of vertical machining centres, is a very flexible and reliable machine which offers powerful and accurate machining at a very competitive price.

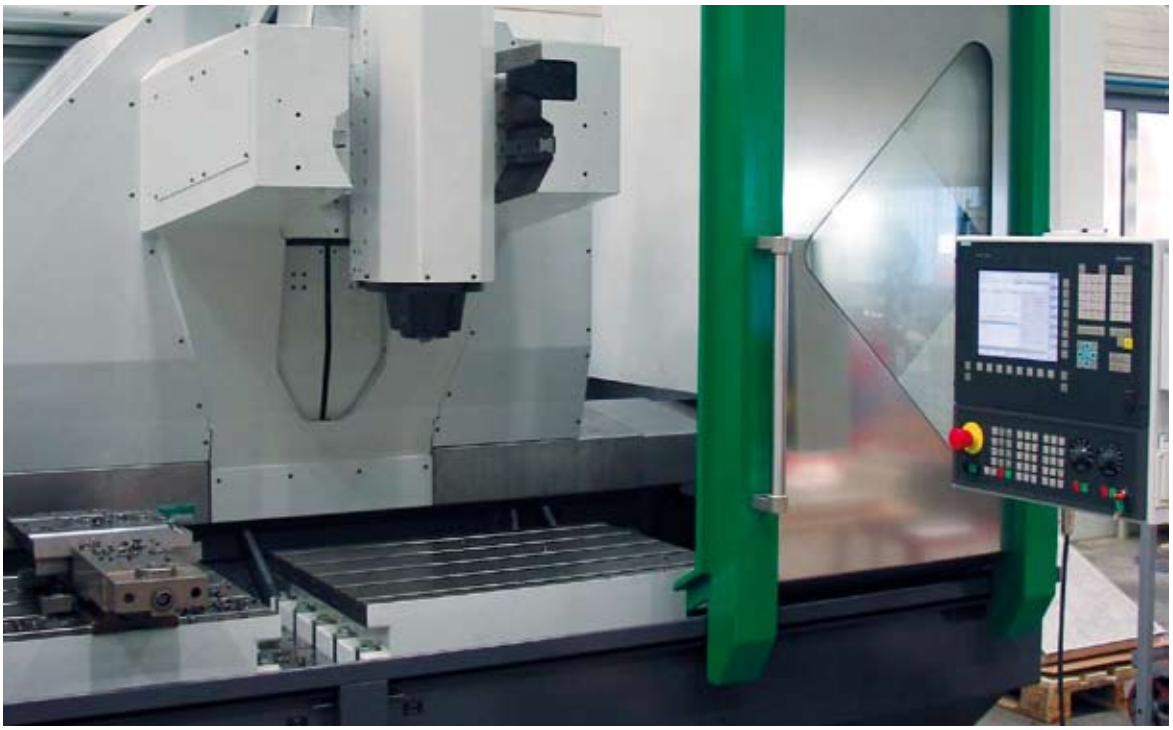
The large X-axis working area of 1.600 mm, in combination with the Y- and Z-axis of 600 and 500 mm, enables long components to be processed, but also offers the flexibility of pendulum machining.

With pendulum machining the overall working area is divided into two separate working zones, enabling components to be loaded in one zone whilst machining them in the other.

Utilisation of pendulum machining results in nearly 100% uptime of the water cooled main spindle, 26 kW (S1-100%) and 12.000 rpm, which substantially reduces production times, improves machine output and subsequently production efficiency! A separator screen, which physically separates the two working areas, can easily be removed to enable processing of long components in one large working area.

The sliding doors at the front of the machine offer easy access to either working zone during pendulum machining or to the complete working area during 'normal' machining operations. The door construction also enables loading via a portal crane from the top side of the machine.

The tool storage is located around the travelling column and offers space to 51 tools (ISO 40) for automatic tool change. Simplicity in operation and maintenance ensures a trouble-free and reliable tool change as a primary feature on the UNIVERS 4000.



UNIVERS 4000 with Siemens or Heidenhain

Travelling Ma

STANDARD CONFIGURATION

UNIVERS 4000 with chip conveyor (optional)

- Vertical CNC machining centre with stationary table and travelling column
- Working area X-axis 1.600 mm; Y-axis 600 mm; Z-axis 500 mm
- Digital main drive AC 26 kW
- Direct driven main spindle 12.000 rpm
- Digital AC Servo drives on all axes
- High accuracy linear guides on all axes
- Automatic tool change from tool storage with 51 pockets
- Taper size ISO 40 (DIN 69871/72 Form A)
- Pneumatic tool taper cleaning
- Tool change time approximately 6 sec.
- Full enclosure guarding (except for top) with electronic safety door locks
- Chip container with integrated flood coolant pump
- Flood coolant 40 l/min at 4 bar
- Automatic central lubrication with function control
- Machine painting RAL 7035/7024
- SIEMENS Sinumerik 810D CNC-Control
- LCD 10.4" colour display
- Siemens tool management system
- Rigid tapping
- User interface under MS-Windows
- Integrated modem for UNISIGN Remote Access
- Ethernet connection

Column Vertical CNC chining Centre

APPLICATIONS

Components typically suited for UNIVERS 4000

NC-table and tailstock centre with clamping cube, designated as A-axis

Component specific clamping fixture for machining of crown wheels

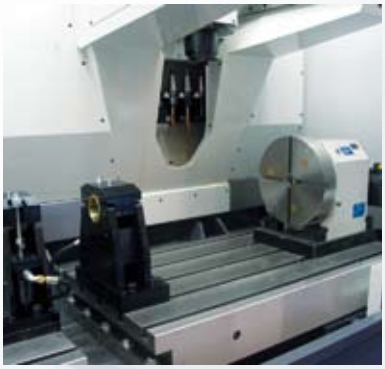
Standard mechanical clamping vice

AVAILABLE OPTIONS

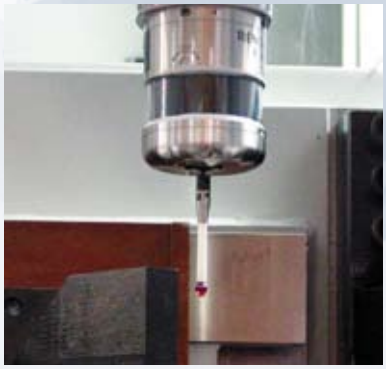
Selection of available options

- One large working area or two individual working cells ('Pendulum Machining') with separator screen
- Pendulum Machining Software
- NC indexer in various sizes and configurations, with or without tailstock centre
- High pressure coolant supply through the spindle and tool
- Automatic tool length and diameter measuring system via tool touch probe
- Wireless measuring probe
- Chip conveyor
- Coolant spray guns for cleaning parts and fixtures
- SIEMENS Sinumerik 840D CNC-control
- HEIDENHAIN iTNC 530 CNC-control
- Manual Pulse Generator with highest operating comfort

Coolant supply through the spindle and tool, including coolant filter unit with self-cleaning rotating filter



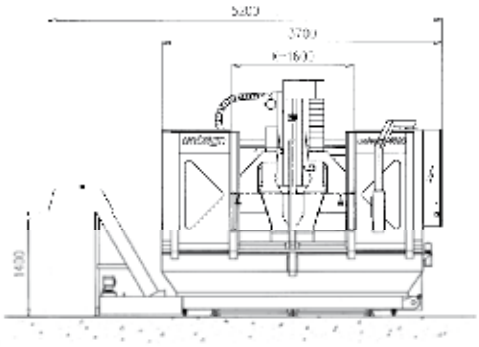
NC-Indexer designated as A-axis (also in pendulum mode)

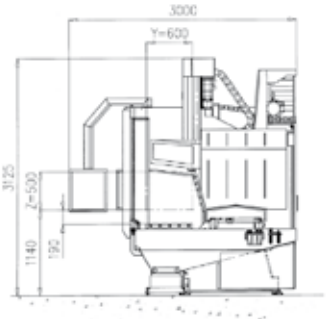


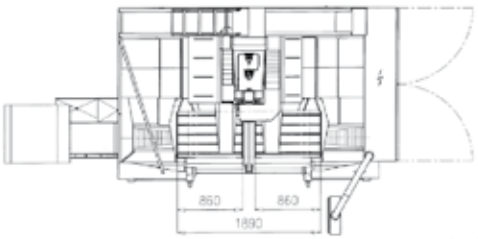
Wireless measuring probe for gauging / calibrating of reference points. The receiver is connected to the CNC control via an interface

Automatic tool length and diameter measuring system

TECHNICAL SPECIFICATIONS

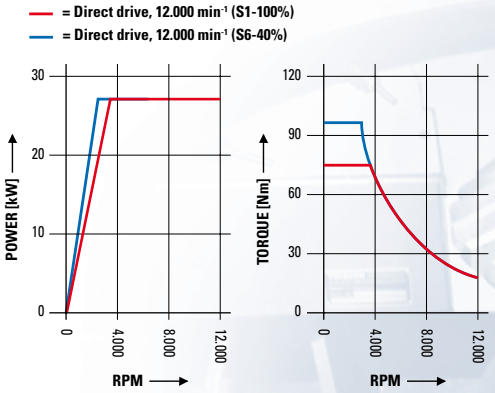






Working area			
X-axis, column travel		mm	1.600
in pendulum		mm	2 x 600
Y-axis, cross travel		mm	600
Z-axis, spindle height travel		mm	500
Distance spindle nose to table		mm	190 - 690
Clamping tables			
Table sizes, per table (2 pieces)		mm	855 x 600
T-slots (5 pieces)		mm	18H12
Distance T-slots		mm	125
Admissible table load, per table		kg	600
Milling & drilling spindle			
Main drive AC	(S1-100%)	kW	26
Spindle speed	direct drive	rpm	12.000
Maximum available torque		Nm	100
Main spindle bearing diameter		mm	70
Toolsystem			
Rotating tool storage around travelling column			
Taper size DIN 69871/72 Form A		#	ISO 40
Number of pockets		-	51
Maximum tool size			
- with loaded adjacent pockets		mm ø	70
- with empty adjacent pockets		mm ø	120
- depending on shape		mm	200 x 120
Maximum tool length		mm	300
Maximum tool weight		kg	7
Tool change time		sec.	6
Axis drive and feed system			
Digital AC-Servo drives			
Rapid traverse	X-, Y- and Z-axis	mm/min	30.000
Feed rate	X-, Y- and Z-axis	mm/min	5 - 30.000
Feed thrust	X- and Y-axis	N	12.000
Drilling thrust	Z-axis	N	12.000
Capacity in C45			
Drilling		mm ø	40
Tapping		-	M 30
Milling		cm^3/min	400
Various			
Power consumption, approximately		kVA	40
Electrical equipment for			400 V / 3 ph / 50 Hz
Floor space (no chip conveyor)		mm	3.700 x 3.000
Height		mm	3.200
Overall weight		kg	9.000

POWER/TORQUE CHARTS



We reserve the right for changes in technical specifications

PANNINGEN
THE NETHERLANDS

UNISIGN

The Unisign range of standard products, UNIVERS, UNI-PRO, UNIPORT and UNICOM, are ideally suited for almost any machining task due to their flexibility. All configurations guarantee high productivity combined with competitive prices. The machining centres are developed and built by Unisign and supported by our well trained service technicians for fast and reliable service, direct from Unisign.

More information? Please contact us:

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