



UNISIGN

Uniport 8000

**CNC Portal Machining Centre
with Moving Table**



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The economical solution to flexible manufacturing!

The UNIPORT 8000 range of portal type machining centres comprehend the experience and expertise gained from numerous portal machines that were built and installed over a period of more than 20 years. Machines from the UNIPORT 8000 range include some very unique features to further improve on flexibility, precision, power and speed! Last but not least, reliability, serviceability and ease of operation are brought to an even higher level!

UNIPORT 8000 is offered not only as a travelling bridge-Gantry machine, but also as a moving table machine with pallet changer or as a "Twin-Table" machine with two moving tables in pendulum setup. The pendulum setup allows one table to be loaded while machining continuous on the other table. Alternatively, both tables may be mechanically linked for the machining of long components.

For highest flexibility in machining tasks, UNIPORT 8000 offers a head changer that physically exchanges various spindles. The spindle carrier (or 'ram') is equipped at the lower end with an interface that is capable of connecting with various types of spindles. From straight forward vertical and horizontal spindles to spindle extensions, motor spindles or even a 2-axes servo head for continuous 5 axes machining.

The interface in the lower end of the spindle carrier incorporates couplings for central lubrication, flood- and through the spindle coolant, cooling oil, compressed air and electrical couplings for rotary encoders and 3-phase power supply for motor spindles. All couplings are automatically (dis-)engaged when exchanging spindles.

For increased Z-axis rigidity and stability, the Z-axis movement incorporates a hybrid slide way system. The combination of hardened and ground rails with roller packs for the actual Z-axis movement and a hydrostatic dampening system for vibration dampening results in a fast, precise and extremely rigid Z-axis.

Many of the heat generating sub-assemblies are either installed thermally isolated from the machine or are included in a closed loop cooling circuit with heat exchanger, resulting in an extremely high thermal stability. This thermal stability in conjunction with the moving table concept make the machine predestined to be successfully utilized in manufacturing environments where highest accuracies are required.

The concept of a moving table with pallet changer or with two moving tables in pendulum setup makes the machine predestined for almost any manufacturing application. From the powerful machining of large fabrications and castings up to the high accuracy finish machining of large and complex high precision components; a large variety of options and accessories allow UNIPORT 8000 to be adopted to almost any machining task!

The standard fully enclosed guarding section complies with the highest safety requirements and guarantees a comfortable and safe operation. The location of the control panel near the spindle and the large window in the operator access door ensure an excellent view on the machining process inside the machine.

The control panel and the operator access door are located near the spindle for a comfortable operation.



STANDARD CONFIGURATION



UNIPORT 8000 with pallet changer

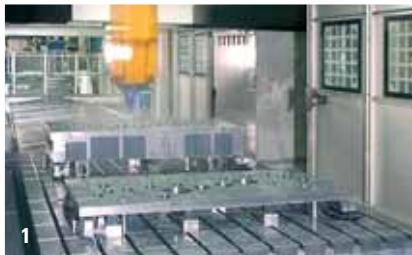
- Portal machine with moving table and pallet changer or two moving tables in pendulum setup
- Pallet / table length 3.000, 4.000 or 6.000 mm
- Pallet / table width 2.000, 2.500, 3.000 or 3.500 mm
- Water cooled main spindle motor AC 42 kW
- Two-stage gearbox, automatically shifting
- Exchangeable vertical main spindle and horizontal spindle both with 6.000 rpm
- Digital AC servo drives in all axes
- High accuracy linear ways with roller packs for the X- and Y-axis; hybrid slide way system for the Z-axis
- Tool magazine with 34 pockets for automatic tool change
- Taper size HSK 100-A (per DIN 69893)
- Automatic taper cleaning with compressed air
- Tool change time of 10 sec.
- Closed loop cooling system with heat exchanger for main drive, spindle bearings, spindle carrier, gearbox and electrical cabinet
- Hydraulic counter weight for the spindle carrier
- Steel telescope covers for the X-axis; folding bellow covers for the Y-axis
- Integrated chip conveyor on both sides of the table
- Guarding section with vertical sliding door for table access
- Coolant collecting tank with coolant feed pump of 40 l/min at 4 bar
- Automatic central lubrication with function control
- Two-tone machine painting in light grey
- SIEMENS Sinumerik 840-D CNC-control
- Colour display 15"
- Remote access for teleservice via modem



Vertical Machining Centre with Moving Table

APPLICATIONS

Components, typically suited for UNIPORT 8000



1. Large, high precision components for printing machines.



2. Diesel engine manufacturing: machining of diesel engine casings.



3. Large, high precision components for machine tools.



4. Defence industry: machining of tank hulls or other armoured vehicles.

AVAILABLE OPTIONS

Selection of available options

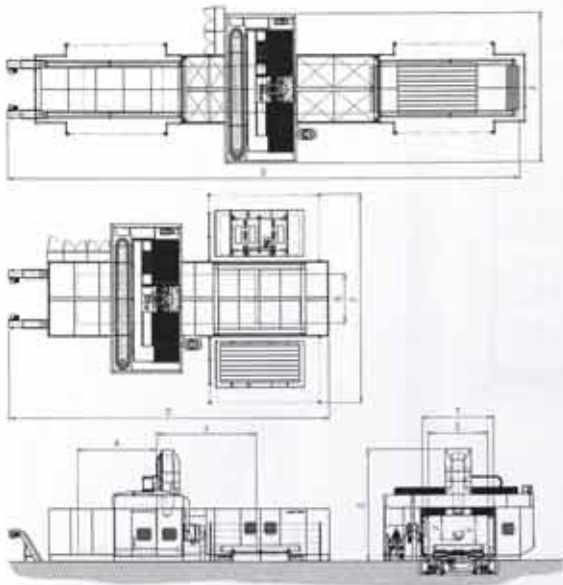
- Extended Z-axis travel 1.600 mm
- Elevation of the cross rail for increased distance spindle nose to table (or pallet) top face of 1.750 mm or 2.000 mm
- Additional tool magazine with +97 / +105 / +113 / +121 extra tool pockets (depending on the horizontal clearance)
- C-axis drive unit, integrated in the spindle carrier
- Two-axes servo head for continuous 5-axes machining
- Extension spindle $\varnothing 175 \times 300$ mm
- High pressure through the spindle coolant supply
- Tool probe
- Tool identification system with data chips
- Tool life control with sister tool selection
- In-process tool break detection
- Spindle loaded measuring probe
- Hand held pulse generator with electronic hand wheel
- Ethernet connection via integrated network card
- Mist extraction system with electrostatic filter units
- Additional pallets



1. Vertical main spindle (right) and vertical extension spindle (left).
2. Horizontal spindle for horizontal machining.
3. Two-axes servo head for continuous 5-axes machining.



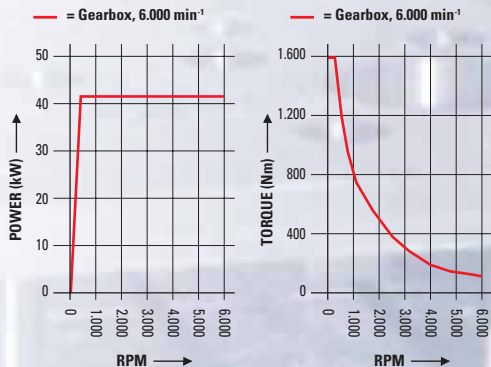
TECHNICAL SPECIFICATIONS



DIMENSIONS

[A] Pallet / table length	3.000	4.000	6.000	
[X] X-axis	4.000	5.000	7.000	
[D] Overall length (Pallet Changer)	14.200	16.200	20.200	
[D] Overall length ("Twin-Table")	21.800	25.800	33.800	
[B] Pallet / table width	2.000	2.500	3.000	3.500
[E] Clearance between columns	2.500	3.000	3.500	4.000
[Y] Y-axis	3.100	3.600	4.100	4.600
[D] Overall width (Pallet Changer)	10.000	11.500	13.000	14.500
[E] Overall width ("Twin-Table")	7.100	7.600	8.100	8.600
[Z] Spindle height travel	1.250	1.250	1.600	1.600
[C] Clearance under cross rail	1.500	1.750	1.750	2.000
[G] Overall height	5.250	5.500	6.150	6.400

POWER/TORQUE CHARTS



Work Area

Number of pallets	-	2
Table / pallet size	length	mm 3.000 - 6.000
	width	mm 2.000 - 3.500
X-axis, table travel	mm	4.000 - 7.000
Y-axis, cross travel	mm	3.100 - 4.600
Z-axis, spindle height travel	standard	mm 1.250
	option	mm 1.600
Clearance between the columns	mm	2.500 - 4.000
Clearance under the cross rail	mm	1.500 - 2.000
Distance spindle nose / pallet top	standard	mm 250 - 1.500
	option	mm 500 - 1.750
	option	mm 150 - 1.750
	option	mm 400 - 2.000

Spindle Drive Unit

<i>Drive unit with gearbox integrated in upper half of the spindle carrier</i>			
Main drive motor AC	(S6-60%)	kW	42
	(S1-100%)	kW	37
Speed range	rpm		6.000
Gearbox	-		2-speed
Maximum available drive torque	Nm		1.600

Exchangeable Vertical Main Spindle and Horizontal Spindle

Power	(S6-60%)	kW	42
	(S1-100%)	kW	37
Speed range	rpm		0 - 6.000
Maximum available torque	Nm		1.600
Main bearing diameter	- vertical main spindle	mm	110
	- horizontal spindle	mm	105

Tool System

<i>Tool magazine located at the column</i>			
Taper size DIN 69893	-		HSK 100-A
Number of pockets	standard	-	34
	option		+97/+105/+113/+121
Maximum tool size	- w. loaded adjacent pockets	mm	Ø 15
	- w. empty adjacent pockets	mm	Ø 250
Maximum tool length	mm		700
Maximum tool weight	kgs		25
Tool change time	sec.		10

Axis Drive and Feed System

<i>Digital AC servo drives</i>			
Rapid traverse	X-, Y-, Z-axis	mm/min	40.000
Feed rate	X-, Y-, Z-axis	mm/min	5 - 40.000
Acceleration / deceleration	X-, Y-, Z-axis	m/sec ²	2 / 3,75 / 5
Thrust	X-axis	N	100.000
	Y-axis	N	50.000
	Z-axis	N	24.000

Capacity in C45

Drilling	mm	Ø 130
Tapping	-	M 55
Milling	cm ³ /min	1.400

Various

Power supply, approx.	KVA	140
Electrical cabinet		400 V / 3 ph / 50 Hz

We reserve the right to change technical specifications without prior notice.



PANNINGEN
THE NETHERLANDS

UNISIGN

The Unisign range of standard products, UNIVERS, UNIPRO, 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.

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