



UNISIGN

Uniport 4000

Travelling Bridge Machining Centre



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UNISIGN

The economical solution to flexible manufacturing!

Since the introduction of the first UNIPORT travelling bridge machining centre, UNISIGN has established its name as a world leading manufacturer of portal and gantry style machining centres. Flexibility, speed, power, precision, reliability and serviceability are the key features of this new design portal machine. The UNIPORT 4000 is suitable for numerous applications throughout the metalworking industry.

The large X- and Y-axis travels make it an ideal machine for producing large, relatively flat components. Side plates of earth moving equipment and products from the paper industry are suitable parts to be machined on the UNIPORT 4000. The machine concept offers excellent access for loading and unloading. The flexible design enables the integration of features such as customer specific fixtures and rotary tables.

The possibility to divide the X-axis in two individual work zones for pendulum machining adds further to the flexibility of UNIPORT 4000. Pendulum machining enables loading of one zone while machining continuous in the other zone, thus resulting in nearly 100% spindle up-time.

The direct driven water cooled main spindle, 12.000 rpm and 36 kW, make the UNIPORT 4000 a highly flexible machining platform with applications in many areas of the manufacturing industry. Also available is a 16.000 rpm spindle for high speed cutting in aluminium.

This relatively small travelling bridge machining centre can also be equipped with electronic synchronised X-axes drives on both sides to increase the rigidity and the positioning accuracy.

The chain type tool storage with 39 pockets is located on the travelling column. Automatic tool change, cleaning of the taper with compressed air and hydraulically activated tool release are standard on this machine.



STANDARD CONFIGURATION



Uniport 4000 travelling bridge gantry machine

- Vertical CNC machining centre in gantry style with travelling bridge and stationary clamping table
- Work area
 - X-axis 2.000 to 18.000 mm
 - Y-axis 1.000 to 3.000 mm
 - Z-axis 500 mm
- Vertical clearance 610 mm
- Direct driven water cooled main spindle AC 36 kW, 12.000 rpm
- Digital AC servo drives on all axes
- High accuracy linear guides on all axes
- Integrated chip conveyor
- Folding bellows for X-axis guide way protection
- Automatic tool change from tool storage with 39 pockets
- Taper size HSK 63 (DIN 69893 form A)
- Tool taper cleaning with compressed air
- Tool change time approx. 8 sec.
- Coolant collecting tank of 340 litres capacity
- External coolant supply 40 l/min at 4 bar
- Automatic central lubrication with function control
- Two-tone machine painting RAL 7035/7024
- SIEMENS Sinumerik 840D CNC-control
- TFT 15" colour monitor
- SIEMENS tool management system
- Rigid tapping
- User interface under MS-Windows
- Remote access via integrated modem
- Ethernet connection

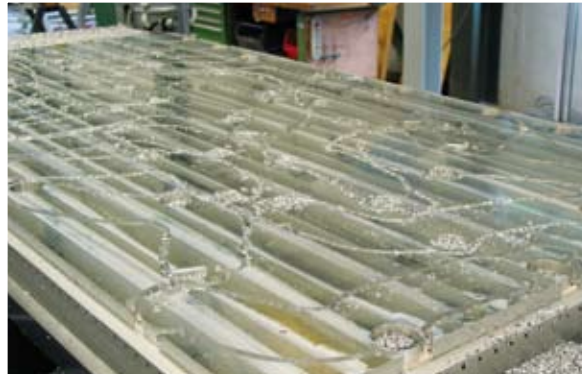
ridge Machining Centre

APPLICATIONS

Components typically suited for UNIPORT 4000



Production of side plates for earth moving equipment, with magnetic clamping plates



Production of aluminium arm rests for aircraft seats, with vacuum clamping plates

AVAILABLE OPTIONS

Selection of available options

- Direct driven water cooled main spindle AC 36 kW, 16.000 rpm
- Tooling system ISO 40 (per DIN 69871/72, type A)
- X-axis drive on both sides including electronic synchronisation
- Direct position feedback with linear scales in X-, Y- and Z-axis
- One large working area or two individual working zones ('Pendulum Machining') with separator screen
- Pendulum machining software
- Tool magazine extension: one additional magazine with +39 extra pockets
- High pressure coolant through the spindle, including filter unit
- Coolant spray gun for cleaning parts and fixtures
- Pick-up tool storage for larger tools
- Tool probe for tool length and diameter verification
- Tool monitoring system
- Tool identification system with data chips
- Radiographic part probe
- Safety panels adjustable in height
- Manual Pulse Generator
- Heidenhain iTNC 530 CNC-control



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



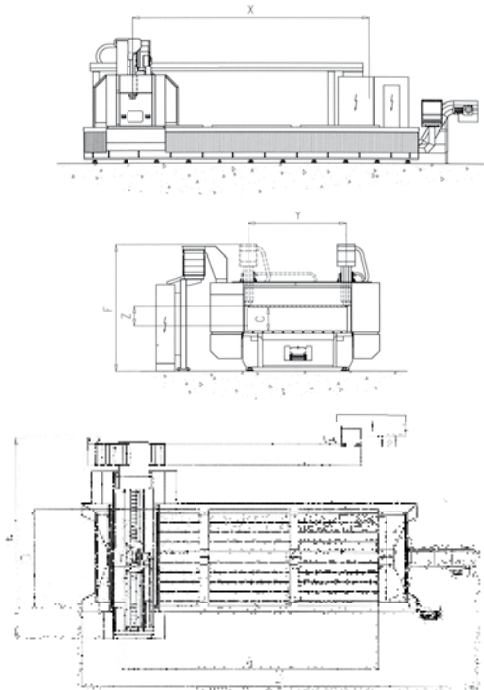
Coolant supply through the spindle and tool, including coolant filter unit with self-cleaning rotating filter



Safety panels adjustable in height via push-buttons on the control panel



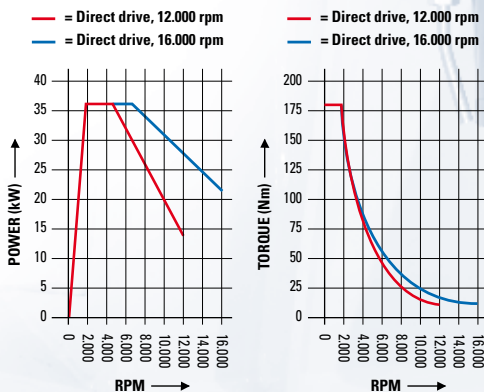
TECHNICAL SPECIFICATIONS



SIZES & TRAVELS

[X] X-axis	2.000	3.000	4.000	5.000	6.000	8.000
[A] Table Length	2.520	3.520	4.520	5.520	6.520	8.520
[D] Overall Length	6.000	7.000	8.000	9.000	10.000	12.000
[X] X-axis	10.000	12.000	14.000	16.000	18.000	
[A] Table Length	10.520	12.520	14.520	16.520	18.520	
[D] Overall Length	14.000	16.000	18.000	20.000	22.000	
[Y] Y-axis	1.000	1.500	2.000	2.500	3.000	
[B] Table Width	1.000	1.500	2.000	2.500	3.000	
[E] Overall Width	3.500	4.000	4.500	5.000	5.500	
[Z] Z-axis	500					
[C] Vertical Clearance	610					
[F] Overall Height	3.200					

POWER/TORQUE CHARTS



Work Area

X-axis, bridge travel	mm	2.000 - 18.000
Y-axis, cross travel	mm	1.000 - 3.000
Z-axis, height travel	mm	500
Clearance between the columns	mm	1.050 - 3.050
Clearance under the cross rail	mm	610
Distance spindle nose to table top	mm	144 - 644
Clamping table		
- Length	mm	2.520 - 18.520
- Width	mm	1.000 - 3.000
Admissible table load per m ²	kg	1.000

Milling and Drilling Spindle

Main drive motor (S6-60%)	kW	36
(S1-100%)	kW	26
Spindle speed		
- standard direct drive	rpm	12.000
- optional direct drive	rpm	16.000
Maximum available spindle torque	Nm	180
Main spindle bearing diameter	mm ø	70

Tool System

Chain type rotary tool magazine located at the column

Taper size DIN 69893, form A	#	HSK 63
Number of pockets	-	39
- optional	-	+39
Maximum tool size		
- with loaded adjacent pockets	mm ø	95
- with empty adjacent pockets	mm ø	120
- depending on shape	mm	200 x 120
Maximum tool length	mm	350
Maximum tool weight	kg	10
Tool change time	sec.	8

Axis Drive and Feed System

Digital AC servo drives

Rapid traverse	X-axis	mm/min	36.000
	Y- and Z-axis	mm/min	40.000
Feed rate	X-axis	mm/min	5 - 36.000
	Y- and Z-axis	mm/min	5 - 40.000
Feed thrust	X- and Y-axis	N	10.000
Drilling thrust	Z-axis	N	16.000

Capacity in C45

Drilling	mm ø	50
Tapping	-	M 30
Milling	cm ³ /min	400

Various

Power supply	kVA	70
Electrical equipment for		400 V / 3 ph / 50 Hz

We reserve the right to change technical specifications without notice



PANNINGEN
THE NETHERLANDS

UNISIGN

The Unisign range of standard products, UNIVERS, UNIPENT, UNIPRO, UNIPOINT 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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