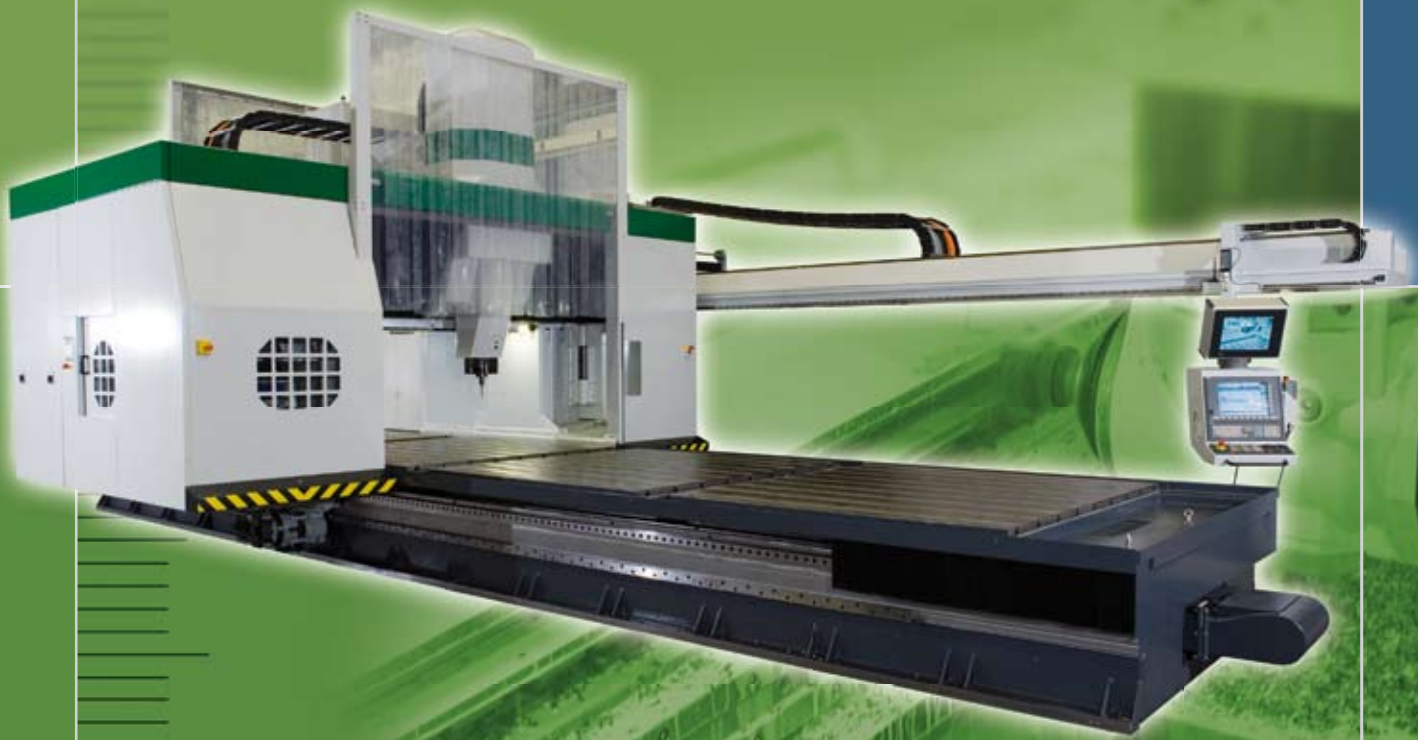




UNISIGN

## **Uniport 6000**

**Travelling Bridge Machining Centre**



# Uniport 6000

## 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 large working envelope in conjunction with the powerful UNISIGN right angle head allows for five-sided machining of large and voluminous components.**

The gantry configuration with travelling bridge and stationary table makes the UNIPORT 6000 a highly flexible machining platform with applications in many areas of the manufacturing industry. From general machining of welded fabrications and cast iron components to high speed machining of aluminium components; a wide selection of accessories allows UNIPORT 6000 to be fully adapted to almost any manufacturing task!

Large and heavy components are clamped directly onto the stationary clamping table. The clamping table is only 400 mm above floor level, offering comfortable access for easiest loading and unloading. This concept of a stationary clamping table with travelling bridge reduces the required floor space to an absolute minimum. The large X-axis enables pendulum machining allowing loading in one zone while machining in the other.

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 gantry concept make the machine predestined to be successfully utilized in manufacturing environments where highest accuracies are required.

The cartridge type milling and drilling spindle, installed in the lower end of the ram, is easily exchangeable. The upper end of the ram holds the main drive unit which consists of a two-stage gearbox with water cooled drive motor. A central drive shaft is installed between the drive unit and the main spindle.

For flexible multi-sided machining, the UNISIGN right angle milling and drilling head is available. This right angle head can be indexed in the horizontal plane in 5° increments (2,5° increments as option) via C-axis. For even more flexibility, the UNISIGN universal angular head is available which allows the tool to be positioned at almost any angle in 5° increments (option: 2,5°) via B- and C-axis.

For very specific machining tasks, a large variety of accessories is available, including a C-axis rotary table or carousel turning station for vertical turning applications. The rotary table or carousel turning station is fully integrated into the base frame of the travelling bridge machine.

The tool magazine is located around one of the columns and travels with the bridge. It offers 30 tool pockets for automatic tool change into the vertical main spindle, the right angle head and the universal angular head. For increased tooling capacity, one or two additional tool magazines with up to 154 pockets are available for installation on the rear side of the travelling bridge.



*UNIPORT 6000 Travelling Bridge Machine with rotary table, designated as C-axis and fully integrated into the machine's base frame.*

## STANDARD CONFIGURATION



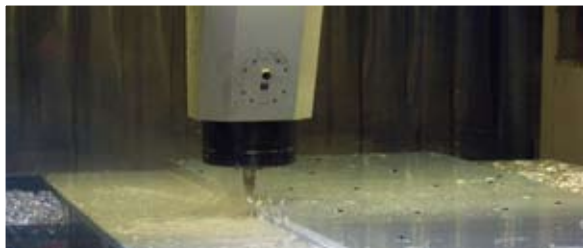
*Uniport 6000 travelling bridge gantry machine*

- Gantry style CNC-machining centre with travelling bridge and stationary clamping table
- Work area:
  - X-Axis 3.000 to 18.000 mm
  - Y-axis 1.500 to 3.000 mm
  - Z-axis 800 or 1.000 mm
- Water cooled main spindle motor AC 36 kW
- Two-stage gearbox, automatically shifting
- Main Spindle 6.000 rpm
- Digital AC servo drives in all axes
- High accuracy linear guides on all axes
- Chain type tool magazine with 30 pockets for automatic tool change
- Taper size ISO 50 (per DIN 69871/72, type A)
- Taper cleaning by compressed air
- Tool change time of 10 seconds
- 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
- Folding bellow covers for X- and Y-axis
- Integrated chip conveyor, located centrally underneath the table
- Coolant collecting tank with coolant feed pump 40 l/min at 4 bar
- Automatic central lubrication with function control
- Two-tone machine painting RAL 7035/7024
- SIEMENS Sinumerik 840-D Control
- TFT 15" colour monitor
- SIEMENS tool management system
- Rigid tapping
- User interface under MS-Windows
- Remote access for teleservice via modem
- Ethernet connection

# Bridge Machining Centre

## APPLICATIONS

Components typically suited for UNIPOINT 6000



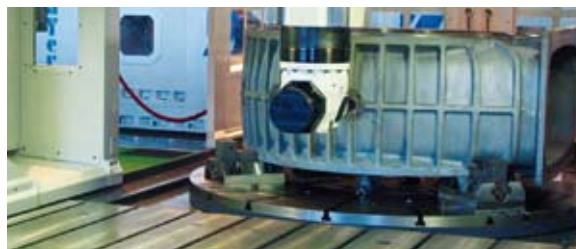
High speed routing of large aluminium plates



Long and small components, such as traverses



Large fabrications, such as rolling stock bogey frames and related components

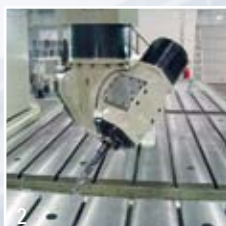


Round and flange type components, such as pumps and turbo chargers, can be easily machined on the optional C-axis rotary table

## AVAILABLE OPTIONS

### Selection of available options

- Z-axis travel extended to 1.000 mm
- Elevation of the cross rail for increased distance spindle nose to table top face of 1.300 mm
- Tooling system HSK 100-A per DIN 69893
- Main spindle 9.000 rpm / 720 Nm / 36 kW
- Tool magazine extension: one additional magazine with +53 / +61 / +69 / +77 extra pockets or two additional magazines with +106 / +122 / +138 / +154 extra
- Right angle milling and drilling head 4.000 rpm or 6.000 rpm for C-axis positioning in 5° or 2,5°
- Universal milling and drilling head 4.000 rpm or 6.000 rpm for combined A- and C-axis positioning in 5° or 2,5° increments
- 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
- High pressure through the spindle coolant supply
- Tool probe for tool length and diameter verification
- Tool identification system with data chips
- Tool monitoring system
- Spindle loaded radio wave measuring probe
- Handheld pulse generator with electronic hand wheel
- Ethernet connection via integrated network card
- Splash curtains with motorized height setting
- NC indexers in various sizes and configurations
- Fully integrated carousel turning station



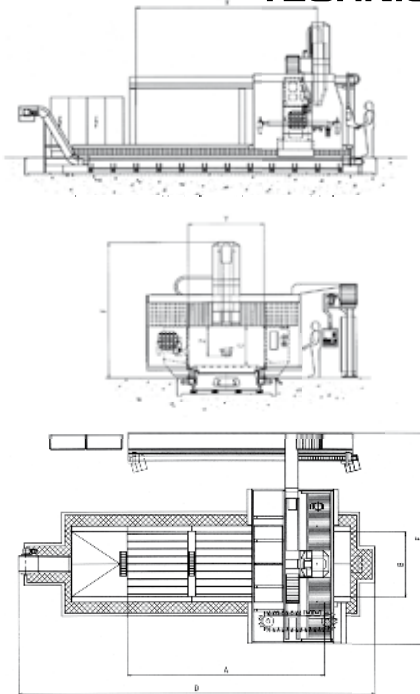
1. Right angle head for horizontal milling and drilling operations

2. Right angle head for horizontal milling and drilling operations

3. Narrow design right angle head for machining of less accessible areas



## TECHNICAL SPECIFICATIONS



### Work Area

X-axis, bridge travel	mm	3.000 - 18.000
Y-axis, cross travel	mm	1.500 - 3.000
Z-axis, height travel	mm	800 or 1.000
Clearance between the columns	mm	1.500 - 3.000
Clearance under the cross rail	mm	1.100 - 1.300
Distance spindle nose to table top	mm	300 - 1.100
- Optional	mm	500 - 1.300
- Optional	mm	300 - 1.300
Clamping table		
- Length	mm	4.250 - 20.000
- Width	mm	1.170 - 2.670

### Milling and Drilling Spindle

Main drive motor (S6-40%)	kW	36
(S1-100%)	kW	26
Spindle speed	rpm	6.000
- Optional	rpm	9.000
Gearbox	-	2-speed
Maximum available spindle torque	Nm	720
Main spindle bearing diameter	mm	100

### Tool System

<i>Chain type rotary tool magazine located at the column</i>		
Taper size DIN 69871/72, form A	#	ISO 50
Number of pockets	-	30
- Optional (1)	-	+53/+61/+69/+77
- Optional (2)	-	+106/+122/+138/+154
Maximum tool size		
- with loaded adjacent pockets	mm ø	150
- with empty adjacent pockets	mm ø	200
- depending on shape	mm	250 x 180
Maximum tool length	mm	450
Maximum tool weight	kg	25
Tool change time	sec.	10

### Axis Drive- and Feed System

<i>Digital AC-Servo drives</i>			
Rapid traverse	X-axis	mm/min	36.000
	Y-and Z-axis	mm/min	30.000
Feed rate	X-axis	mm/min	5 - 36.000
	Y-and Z-axis	mm/min	5 - 30.000
Feed pressure	X- and Y-axis	N	30.000
Drilling pressure	Z-axis	N	20.000

### Capacity in C45

Drilling	mm ø	120
Tapping	-	M 55
Milling	cm <sup>3</sup> /min	1.000

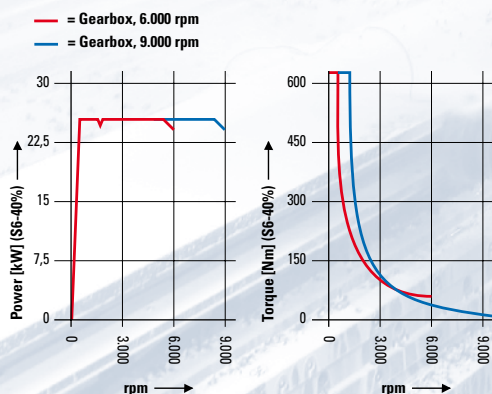
### Various

Power supply	KVA	55
Electrical equipment for		400 V / 3 ph / 50 Hz

## SIZES & TRAVELS

<b>[X] X-Axis</b>	<b>3.000</b>	<b>4.000</b>	<b>5.000</b>	<b>6.000</b>	<b>8.000</b>
[A] Table Length	4.250	4.250	6.500	6.500	8.750
[D] Overall Length	8.200	9.200	10.700	11.400	13.600
<b>[X] X-Axis</b>	<b>10.000</b>	<b>12.000</b>	<b>14.000</b>	<b>16.000</b>	<b>18.000</b>
[A] Table Length	11.000	13.250	15.500	17.750	20.000
[D] Overall Length	15.800	18.000	20.400	22.500	25.000
<b>[Y] Y-Axis</b>	<b>1.500</b>	<b>2.600</b>	<b>2.500</b>	<b>3.000</b>	
[B] Table Width	1.170	1.670	2.170	2.670	
[E] Overall Width	6.000	6.500	7.000	7.500	
<b>[Z] Z-Axis</b>	<b>800</b>	<b>800</b>	<b>1.000</b>		
[C] Vertical Clearance	1.100	1.300	1.300		
[F] Overall Height	3.900	4.100	4.500		

## POWER/TORQUE CHARTS



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



PANNINGEN  
THE NETHERLANDS

## UNISIGN

The Unisign range of standard products, UNIVERS, UNI-PRO, UNI-PORT 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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