

SHW product information

Made in Germany.

We deliver solutions

Dynamic. Precise. Individual.

SHW Werkzeugmaschinen GmbH is one of the leading manufacturers of travelling column milling machines and ranks among the internationally acknowledged specialists in cutting machining.

Our product range includes machines in various dimensions and characteristics for multiple applications. Each machine is individually configured to meet the specific requirements of our customers.

Our product information gives you an initial overview of our entire range of machines.

To obtain more detailed information or to describe your specific machining task, please contact us directly.

Challenge us!

We look forward to your enquiry.



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SHW's long term experience: Versatile yet specialised.

- 1

Tool making
- 2

Engine manufacture
- 3

Gear manufacture
- 4

Mechanical engineering
- 5

Mould and die production
- 6

Environmental engineering



SHW Milling Heads: Intelligence starts in the head.

SHW Milling Heads

1

Short orthogonal milling head

2

Long orthogonal milling head

3

Fork head

4

Short orthogonal milling head

5

Fork head

6

Eccentric horizontal milling head

7

Angle head

8

Milling and boring head

9

Orthogonal milling head with infinitely variable A axis

10

Long horizontal milling head

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Short horizontal milling head

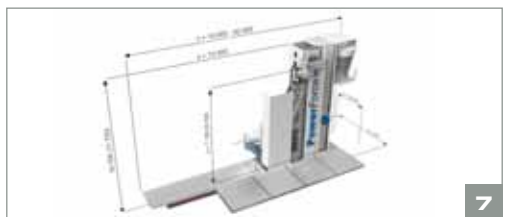
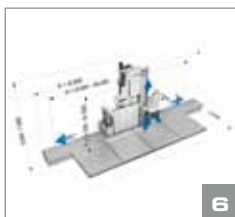
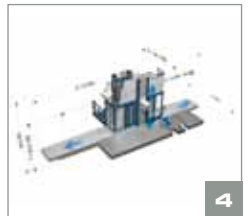
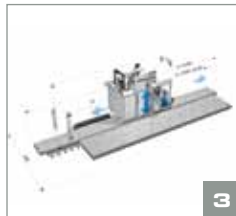
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Eccentric horizontal milling head

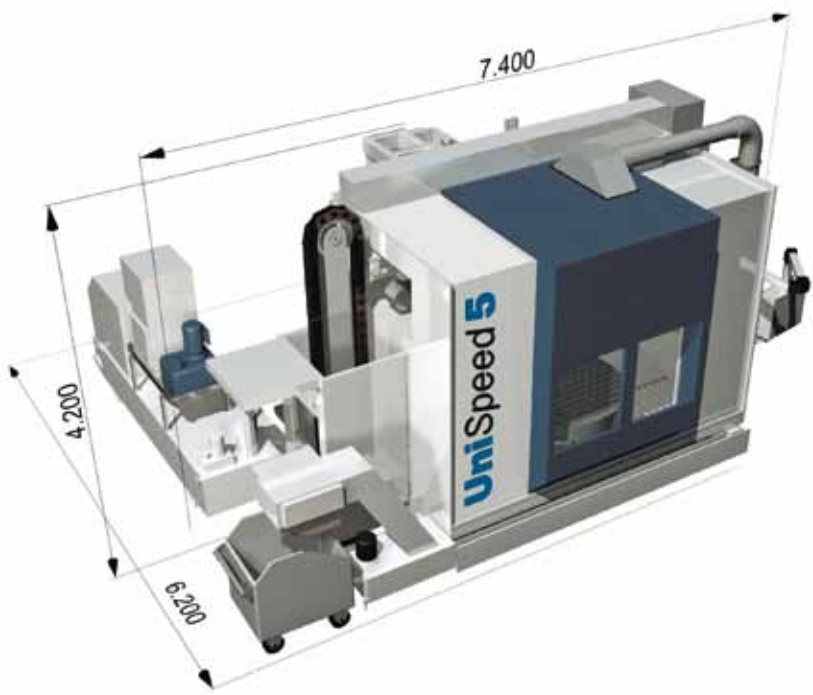
More information can be obtained from
www.shw-wm.de or
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Our office staff will be happy to pass on
your enquiry to the Sales and Marketing
Department.

All our machines:

An overview.



UniSpeed 5/5T/6/6T

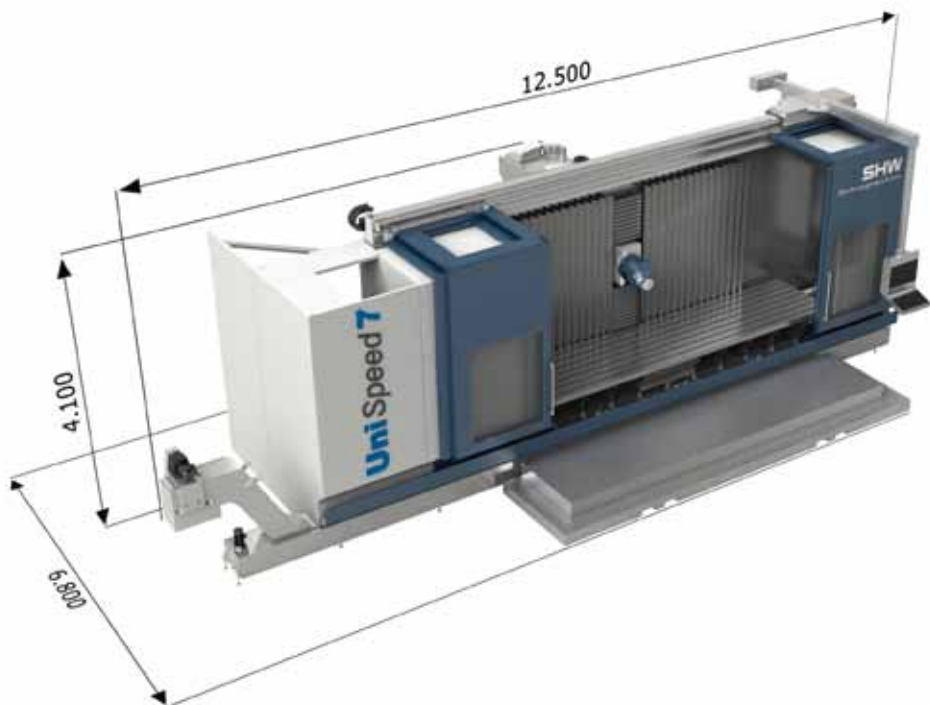


The all-purpose compact machining centres of the **UniSpeed** range deliver dynamic performance coupled with the highest levels of efficiency for milling and turning (T) operations. They are particularly well suited for the use in tool and die shops, in contract manufacturing and the aviation industry.

The machines of the **UniSpeed** range are equipped with an orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 1).

Machining area/travels		
X axis [horizontal lengthwise]	mm	2,000 [3,000]
Y axis [vertical]	mm	1,300
Z axis [horizontal crosswise]	mm	1,300
Orthogonal head	for 64,800 programmable head positions	
Clamping table	mm	Ø 1,600 [3,000 x 1,600]
Max. table load		
For milling	kg	6,000 [8,000]
For turning [UniSpeed 5T]	kg	3,000
Speed		
For milling	min ⁻¹	5
For turning [UniSpeed 5T/6T]	min ⁻¹	up to 250
Feed rates and rapid traverses		
[X, Y, Z axis]	mm/min	0 – 30,000
Acceleration of linear axis	m/s ²	2
Drive power	kW	up to 36
Speed range	min ⁻¹	22 – 6,000
Tool holder	SK 50 DIN 69871	
Optional	HSK 100 A DIN 69893	
CNC System	Siemens and Heidenhain	
ATC	SK 50 DIN 69871	
Number of pockets	48, 66, 90, 120	
Machine weight	kg approx. 40,000 [5/5T]	
	kg approx. 45,000 [6/6T]	

UniSpeed 7

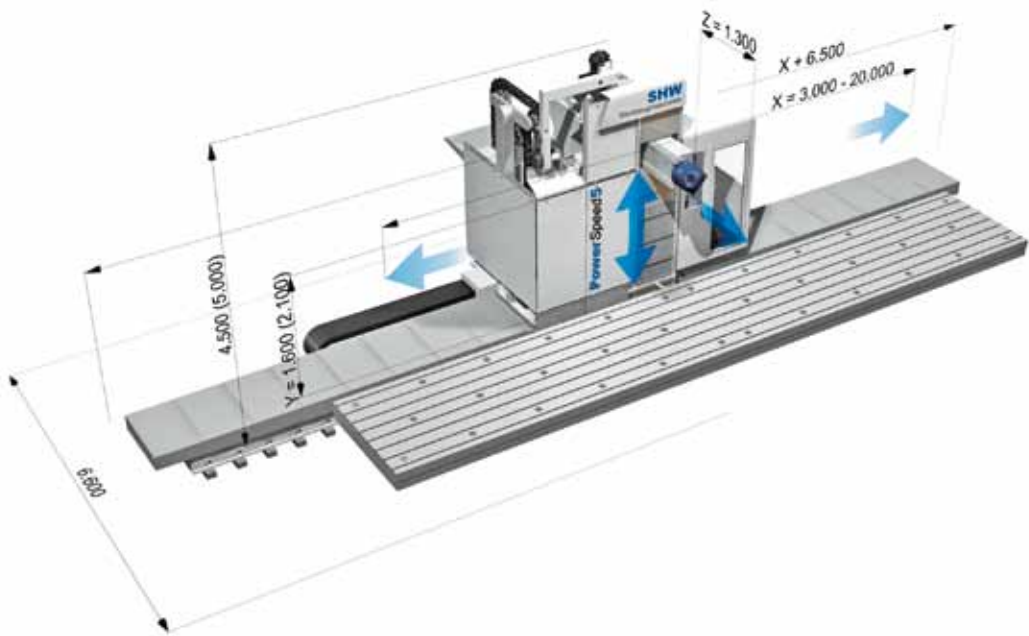


The **UniSpeed 7** is a compact machine incorporating the latest technology. Despite the significantly increased working range it is completely enclosed and can be set up without the need for a special foundation. With its symmetrically opening front doors and two 10-tool pick-up-stations, placed at the ends of the clamping table, shuttle machining is also possible – a partition wall is included in this option.

The **UniSpeed 7** is equipped with an orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 1).

Machining area/travels		
X axis [horizontal lengthwise]	mm	6,000
Y axis [vertical]	mm	1,600
Z axis [horizontal crosswise]	mm	1,300
Orthogonal head	for 64,800 programmable head positions	
Clamping table	mm	6,000 x 1,200
Max. table load		
For milling	kg	6,000
Feed rates and rapid traverses		
[X, Y, Z axis]	mm/min	0 – 30,000
Acceleration of linear axis	m/s ²	3,5
Drive power	kW	up to 44
Speed range	min ⁻¹	22 – 6.000
Tool holder	SK 50 DIN 69871	
Optional	HSK 100 A DIN 69893	
CNC System	Siemens and Heidenhain	
ATC	SK 50 DIN 69871	
Number of pockets	48, 66	
Machine weight	kg approx. 40.000	

PowerSpeed 5

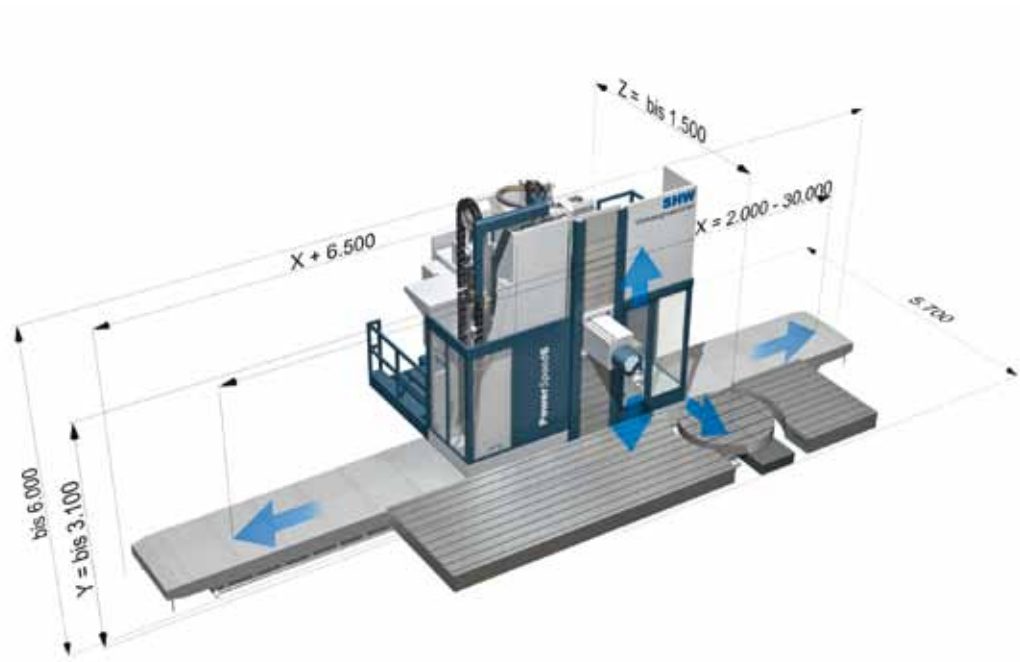


The **PowerSpeed 5** is universal like a milling machine but offers the dimensions of a large milling and boring unit. The travelling column machine is particularly designed for large work pieces. It covers long travels with extreme speed and precision.

The **PowerSpeed 5** is equipped with an orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 1). As an option, it can be fitted with interchangeable milling heads (4, 5, 6, 11, 12).

Machining area/travels		
X axis – table/stands lengthwise	mm	2,000 – 30,000
Y axis – carriage vertical	mm	1,300 – 2,100
Z axis - headstock crosswise	mm	up to 1,300
Travelling speeds		
Feed rates X, Y, Z	mm/min	2 – 30,000
Rapid traverses X, Y, Z	mm/min	up to 30,000
Acceleration	m/s ²	up to 5
Feed rate – rotary table	min ⁻¹	0 – 8
Rapid traverse – rotary table	min ⁻¹	up to 8
Drive power		
Speed ranges	kW	up to 44
	min ⁻¹	up to 6,000
Tool holder		
Optional	SK 50 DIN 69871 HSK 100 A DIN 69893	
Table assemblies		
Clamping surface	Machine table mm	from 2,000 x 1,000 to 30,000 x 3,000
Rotary tables		
Clamping surface	fitted or separate mm	Diameter 1,000 up to customer requirement
CNC System		
Siemens or Heidenhain		
ATC		
Number of pockets	48, 66, 90, 120, 150	
Pick-up system		
for oversized and special tools depending on customer requirements		

PowerSpeed 6

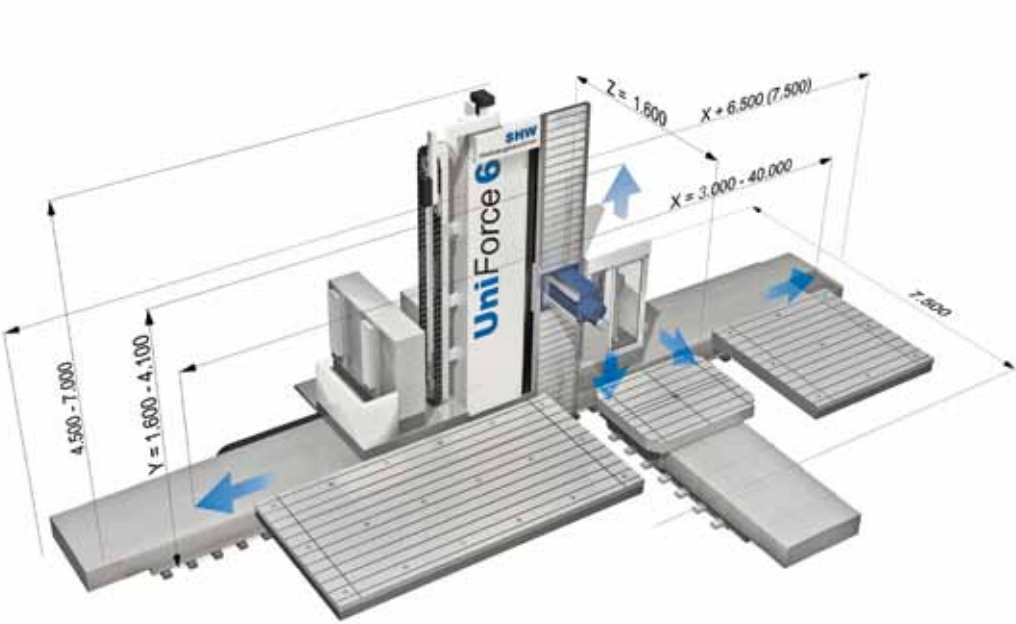


When it comes to power, dynamic performance and precision, the **PowerSpeed 6** sets the standards in top-of-the range machines. Equipped with the patented **SHW Dynamic Drive®** it masters even longer travels with even greater performance; with highest rigidity and precision.

The **PowerSpeed 6** is equipped with an orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 1). As an option, it can be fitted with interchangeable milling heads (4, 5, 6, 11, 12).

Machining area/travels		
X axis – table/stands lengthwise	mm	2,000 – 30,000
Y axis – carriage vertical	mm	2,100 – 3,100
Z axis - headstock crosswise	mm	up to 1,500
Travelling speeds		
Feed rates X, Y, Z	mm/min	2 – 30,000
Rapid traverses X, Y, Z	mm/min	up to 30,000
Acceleration	m/s²	up to 5
Feed rate – rotary table	min ⁻¹	0 – 8
Rapid traverse – rotary table	min ⁻¹	up to 8
Drive power		
Speed ranges	kW	up to 55
	min ⁻¹	up to 8,000
Tool holder		
Optional	SK 50 DIN 69871 HSK 100 A DIN 69893	
Table assemblies		
Clamping surface	Machine table	
	mm	from 2,000 x 1,000 to 30,000 x 3,000
Rotary tables		
Clamping surface	fitted or separate	
	mm	Diameter 1,000 up to customer requirement
CNC System		
	Siemens and Heidenhain	
ATC		
Number of pockets	48, 66, 90, 120, 150	
Pick-up system		
	for oversized and special tools depending on customer requirements	

UniForce 6

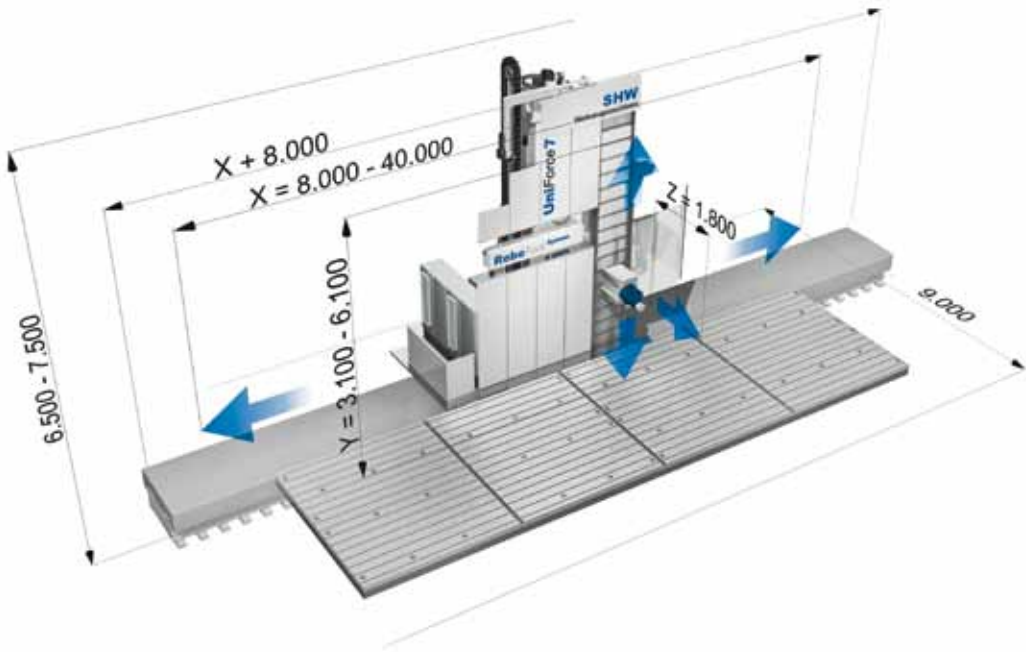


The **UniForce 6** is a travelling column machine which – thanks to its robustness and strength – is particularly suited for large work pieces. Extremely flexible and precise over long travels, it is also suitable for tool making as well as single item and small batch production in mechanical engineering. The machine concept enables bulky and complex components to be machined in one set-up.

The **UniForce 6** is equipped with an orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 2). As an option, it can be fitted with interchangeable milling heads (4, 5, 6, 7, 8, 9, 10, 11, 12).

Machining area/travels		
X axis – table/stands lengthwise	mm	3,000 – 40,000
Y axis – carriage vertical	mm	1,600 – 4,100
Z axis – headstock crosswise	mm	up to 1,600
Travelling speeds		
Feed rates X, Y, Z	mm/min	2 – 36,000
Rapid traverses X, Y, Z	mm/min	up to 36,000
Acceleration	m/s ²	up to 2
Drive power		
Speed ranges	kW	37 – 40 – 60
	min ⁻¹	22 – 4,000
Tool holder		
Optional	SK 50 DIN 69871	
	HSK 100 A DIN 69893	
Table assemblies		
Clamping surface	Machine table mm	500 mm segments longitudinal and cross
Rotary tables		
	fitted or separate	
Clamping surface	mm	Diameter 1,000 up to customer requirement
Cross movement (W-axis)	mm	1,000 – 3,000
CNC System		
	Siemens and Heidenhain	
ATC		
Number of pockets	48, 66, 90, 120, 150	
Pick-up system		
	for oversized and special tools depending on customer requirements	

UniForce 7/8



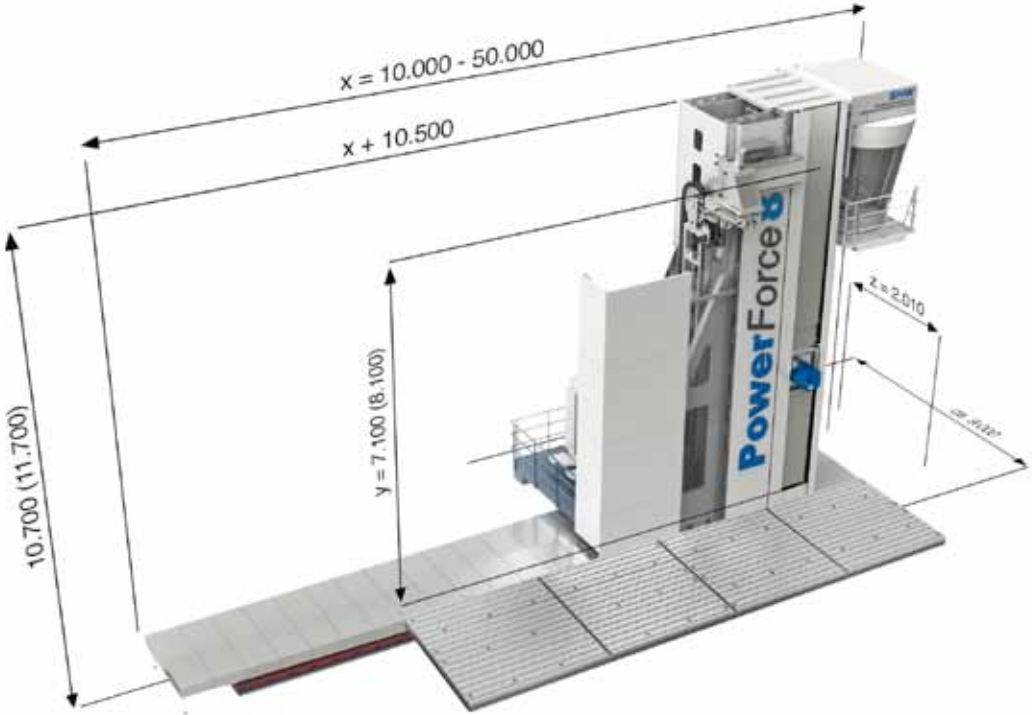
The **UniForce 7** is a large machining centre with the travels of a portal machine. The machine can handle the hardest cutting tasks and even highly complex state-of-the-art machining jobs. The new tool changing system shortens changing times irrespective of the traverse path and thus reduces machine-dependent downtimes to a minimum.

The **UniForce 8** offers a higher vertical travel of 6,100 mm. The tried and tested **UniForce 7** has not only been extended to $y = 6,100$ mm, also all its measurements have been adjusted accordingly.

UniForce 7 and 8 are equipped with a orthogonal milling head (see full range of SHW milling heads in the centre section, Fig. 2). As an option, they can be fitted with interchangeable milling heads (4, 5, 6, 7, 8, 9, 10, 11, 12).

Machining area/travels		
X axis – table/stands lengthwise	mm	8,000 – 40,000
Y axis – carriage vertical	mm	3,100 – 5,100 (6,100)
Z axis – headstock crosswise	mm	up to 1,800
Travelling speeds		
Feed rates X, Y, Z	mm/min	2 – 36,000
Rapid traverses X, Y, Z	mm/min	up to 36,000
Acceleration	m/s ²	up to 2
Drive power		
Speed ranges	kW	up to 63
	min ⁻¹	22 – 4,000
Tool holder		
Optional	SK 50 DIN 69871 HSK 100 A DIN 69893	
Table assemblies		
Clamping surface	Machine table mm	500 mm segments longitudinal and cross
Rotary tables		
Clamping surface	fitted or separate mm	Diameter 1,000 up to customer requirement
Cross movement (W-axis)	mm	1,000 – 3,000
CNC System		
Siemens and Heidenhain		
ATC		
Number of pockets	70, 90, 120, 150	
Pick-up system		
for oversized and special tools depending on customer requirements		

PowerForce 8



This impressive machine represents an ingenious combination of power, dynamics and precision. The **PowerForce 8** comes equipped with the new, infinitely adjustable orthogonal head, which achieves a drive power of up to 90 kW and a torque of up to 1,725 Nm. The mobile elevating work platform also sets completely new standards in terms of design and construction with its towering vertical travel.

The **PowerForce 8** can be fitted with a wide variety of interchangeable milling heads (see full range of SHW milling heads in the centre section, Figs. 4, 5, 6, 7, 8, 9, 10, 11, 12).

Machining area/travels		
X axis – table/stands lengthwise	mm	up to 50,000
Y axis – carriage vertical	mm	up to 7,100
Z axis - headstock crosswise	mm	2,000
Travelling speeds		
Feed rates X, Y, Z	mm/min	2 – 36,000
Rapid traverses X, Y, Z	mm/min	up to 36,000
Acceleration	m/s ²	up to 2
Drive power		
Speed ranges	kW min ⁻¹	up to 90 22 – 5,000
Tool holder		
Optional	SK 50 DIN 69871 HSK 100 A DIN 69893	
Table assemblies		
Clamping surface	Machine table mm	500 mm segments longitudinal and cross
Rotary tables		
Clamping surface	fitted or separate mm	Diameter 1,000 up to customer requirement
Cross movement (W-axis)	mm	1,000 – 3,000
CNC System		
Siemens and Heidenhain		
ATC		
Number of pockets	90, 120, 150	
Pick-up system		
for oversized and special tools depending on customer requirements		

Contact

