

# 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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Versatile yet specialised.



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Precision starts in the head.



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SHW's long term experience:  
Versatile yet specialised.



Tool making



Engine manufacture



Gear manufacture



Mechanical  
engineering



Mould and die  
production



Environmental  
engineering

SHW Milling Heads:  
Precision starts in the head.

**Milling heads for machines without head change system:**



Automatic universal milling heads of orthogonal design. (left side: milling head for the **UniSpeed** and **PowerSpeed** Series, right side: milling head for the **UniForce** and **PowerForce** Series)

**Milling heads for machines with head change system:**



Automatic universal milling head of orthogonal design



Automatic universal milling head of orthogonal design with continuously positioning A-axis



Automatic fork head with integrated high frequency spindle



Centric horizontal  
milling head



Eccentric horizontal  
milling head



Angular milling head



Turning head horizontal /  
vertical

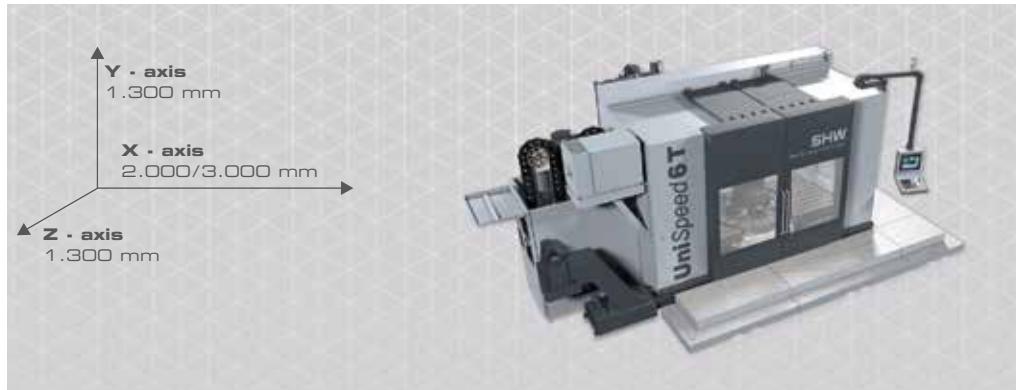


Plano milling head



Multiple spindle milling head

## 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 come equipped with our universal milling head of orthogonal design (see milling heads for machines without head change system). This head offers up to 64.800 programmable head positions.

As an option we offer a version with continuously positioning axes.

### Machining area/travels

X-axis (horizontal lengthwise) in mm	2.000/3.000
Y-axis (vertical) in mm	1.300
Z-axis (horizontal crosswise) in mm	1.300

### Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis
segmentation optional	

### Main drive

Drive power in kW	up to 36
Speed range in min <sup>-1</sup>	up to 8.000

### Motion speeds

Feed rates and rapid traverses (X,Y,Z) in mm/min	up to 30.000
Acceleration of linear axis in m/s <sup>2</sup>	2

### CNC System

Siemens and Heidenhain

### Tool holder

optional  
SK 50 BIG-PLUS  
HSK 100 A DIN 69893

### ATC

Number of pockets up to 360

### Machine weight in kg

approx. 40.000 (5/5T)  
approx. 45.000 (6/6T)

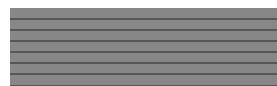
## UniSpeed 7/7T



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.

### Flexible configuration of the machining area

(without/with one or two rotary/turning tables)



### Machining area/travels

X-axis (horizontal lengthwise) in mm	6.000
Y-axis (vertical) in mm	1.600
Z-axis (horizontal crosswise) in mm	1.300

### Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis*
segmentation optional	

### Main drive

Drive power in kW	up to 44
Speed range in min <sup>-1</sup>	up to 8.000

### Motion speeds

Feed rates and rapid traverses (X,Y,Z) in mm/min	up to 30.000
Acceleration of linear axis in m/s <sup>2</sup>	3,5

### CNC System

Siemens and Heidenhain

### Tool holder

optional  
SK 50 BIG-PLUS  
HSK 100 A DIN 69893

### ATC

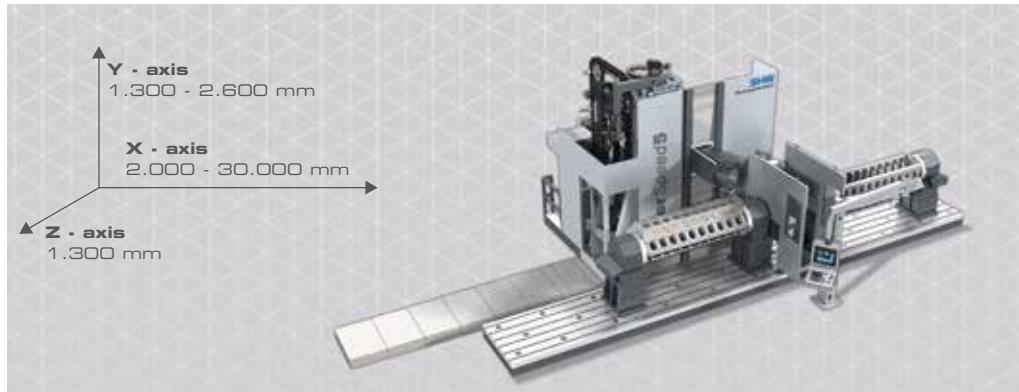
Number of pockets up to 180

### Machine weight in kg

approx. 45.000

\* reduced Z-travels

## 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** comes equipped with our universal milling head of orthogonal design (see milling heads for machines without head change system). This head offers up to 64.800 programmable head positions.

As an option we offer a version with continuously positioning axes.

The **PowerSpeed 5** can be equipped with a variety of interchangeable milling heads (see milling heads for machines with head change system).

### Machining area/travels

X-axis (horizontal lengthwise) in mm	2.000 - 30.000
Y-axis (vertical) in mm	1.300 - 2.600
Z-axis (horizontal crosswise) in mm	bis 1.300

### Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis
segmentation optional	

### Main drive

Drive power in kW	up to 44
Speed range in min <sup>-1</sup>	up to 8.000

### Motion speeds

Feed rates and rapid traverses (X,Y,Z) in mm/min	up to 30.000
Acceleration of linear axis in m/s <sup>2</sup>	up to 5

### CNC System

Siemens and Heidenhain

### Tool holder

SK 50 BIG-PLUS  
HSK 100 A DIN 69893

### ATC

Number of pockets

up to 150

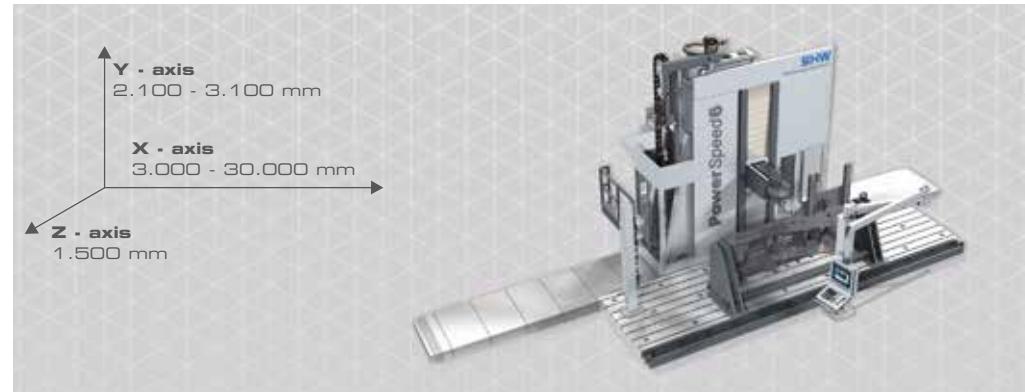
### Machine weight in kg

approx. 35.000

### 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** comes equipped with our universal milling head of orthogonal design (see milling heads for machines without head change system). This head offers up to 64.800 programmable head positions.

As an option we offer a version with continuously positioning axes.

The **PowerSpeed 6** can be equipped with a variety of interchangeable milling heads (see milling heads for machines with head change system).

\* optional

### Machining area/travels

X-axis (horizontal lengthwise) in mm	3.000 - 30.000
Y-axis (vertical) in mm	2.100 - 3.100
Z-axis (horizontal crosswise) in mm	up to 1.500

### Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis
segmentation optional	

### Main drive

Drive power in kW	up to 55
Speed range in min <sup>-1</sup>	up to 8.000

### Motion speeds

Feed rates and rapid traverses (X,Y,Z) in mm/min	up to 30.000
Acceleration of linear axis in m/s <sup>2</sup>	up to 5

### CNC System

Siemens and Heidenhain

### Tool holder

SK 50 BIG-PLUS  
HSK 100 A DIN 69893

### ATC

Number of pockets

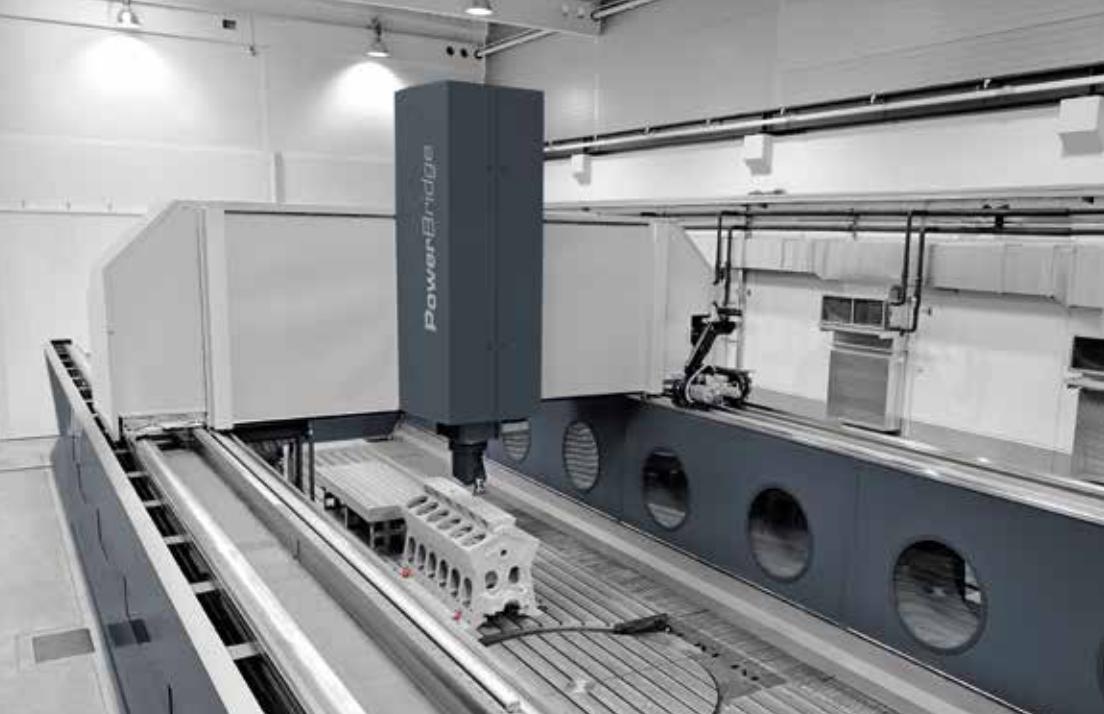
up to 150

### Machine weight in kg

approx. 40.000

### Pick-up-system

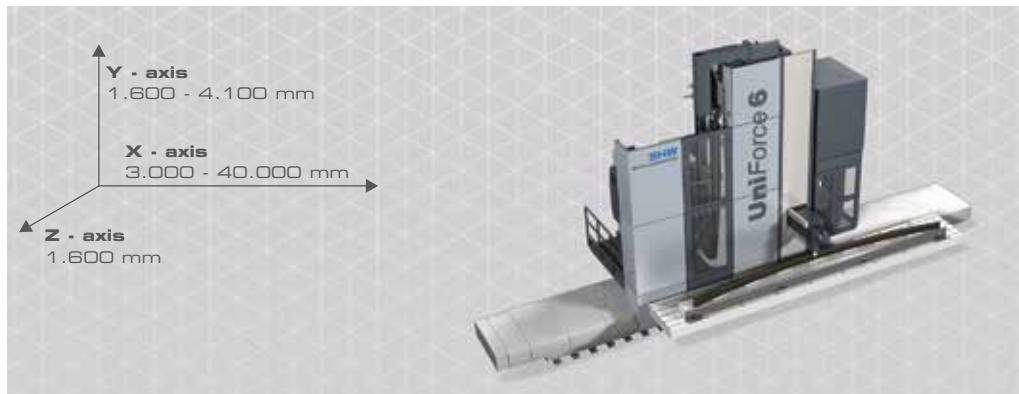
for oversized and special tools depending on customer requirements



Together we work out tailored  
solutions - individual, future oriented,  
successful.



# 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** comes equipped with our universal milling head of orthogonal design (see milling heads for machines without head change system). This head offers up to 64.800 programmable head positions.

As an option we offer a version with continuously positioning axes.

The **UniForce 6** can be equipped with a variety of interchangeable milling heads (see milling heads for machines with head change system).

## Machining area/travels

X-axis (horizontal lengthwise) in mm	3.000 - 40.000
Y-axis (vertical) in mm	1.600 - 4.100
Z-axis (horizontal crosswise) in mm	up to 1.600

## Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis
segmentation optional	

## Main drive

Drive power in kW	up to 63
Speed range in min <sup>-1</sup>	up to 5.000

## Motion speeds

Feed rates and rapid traverses in mm/min	X-axis up to 36.000 Y- and Z-axis up to 24.000 up to 2
Acceleration of linear axis in m/s <sup>2</sup>	

## CNC System

Siemens and Heidenhain

## Tool holder

SK 50 BIG-PLUS HSK 100 A DIN 69893

## ATC

Number of pockets	up to 150

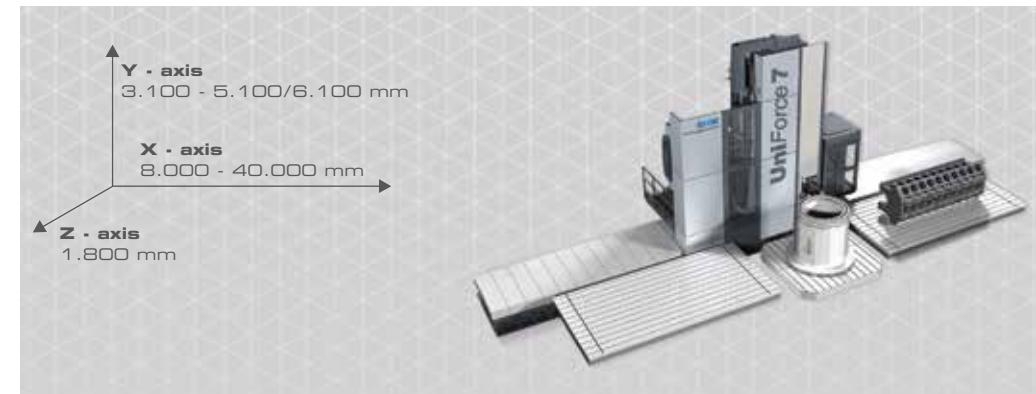
## Machine weight in kg

approx. 50.000

## Pick-up-system

for oversized and special tools depending on customer requirements

# UniForce 7/8



## Machining area/travels

X-axis (horizontal lengthwise) in mm	8.000 - 40.000
Y-axis (vertical) in mm	3.100 - 5.100/6.100
Z-axis (horizontal crosswise) in mm	up to 1.800

## Milling head

Automatic universal milling head of orthogonal design swivel range (standard)	A-axis 180° C-axis 360° in 1° steps cont. pos. A- and C-axis
segmentation optional	

## Main drive

Drive power in kW	up to 63 (drive motor up to 100)
Speed range in min <sup>-1</sup>	up to 5.000

## Motion speeds

Feed rates and rapid traverses in mm/min	X-axis up to 36.000 Y- and Z-axis up to 24.000 up to 2
Acceleration of linear axis in m/s <sup>2</sup>	

## CNC System

Siemens and Heidenhain

## Tool holder

SK 50 BIG-PLUS HSK 100 A DIN 69893

## ATC

Number of pockets	up to 150

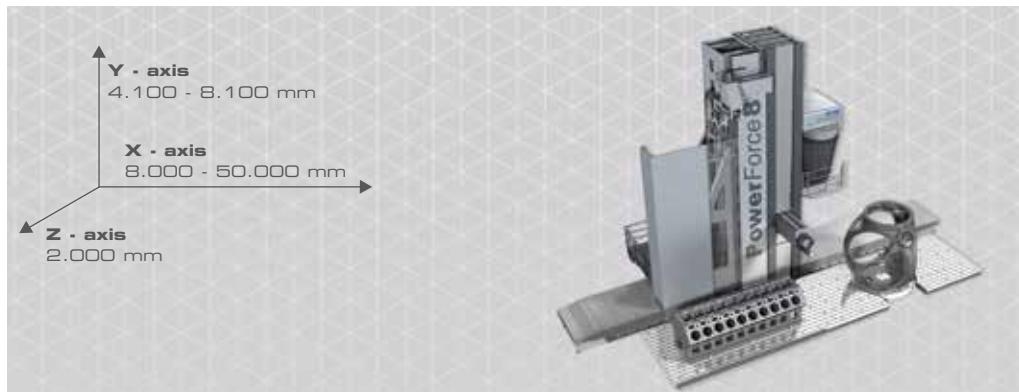
## Machine weight in kg

approx. 65.000

## 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 our universal milling head of orthogonal design. Combined with the integrated continuously positioning C-axis in the headstock you get almost infinite machining options even in the basic configuration.

As an option we offer a version with continuously positioning A-axis.

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 equipped with a variety of interchangeable milling heads (see milling heads for machines with head change system).

<b>Machining area/travels</b>	
X-axis (horizontal lengthwise) in mm	8.000 - 50.000
Y-axis (vertical) in mm	4.100 - 8.100
Z-axis (horizontal crosswise) in mm	2.000
<b>Milling head</b>	
Automatic universal milling head of orthogonal design	
swivel range	A-axis 180° C-axis 360°
segmentation	A-axis in 1° steps, cont. pos. C-axis
optional	cont. pos. A-axis
<b>Main drive</b>	
Drive power in kW	up to 90
Speed range in min <sup>-1</sup>	up to 5.000
<b>Motion speeds</b>	
Feed rates and rapid traverses (X,Y,Z) in mm/min	up to 20.000
Acceleration of linear axis in m/s <sup>2</sup>	up to 2
<b>CNC System</b>	Siemens and Heidenhain
<b>Tool holder</b>	SK 50 BIG-PLUS optional HSK 100 A DIN 69893
<b>ATC</b>	
Number of pockets	up to 150
<b>Machine weight in kg</b>	approx. 80.000
<b>Pick-up-system</b>	for oversized and special tools depending on customer requirements

# PowerBridge



Technically proven components, new solutions, individual configuration - With the **PowerBridge**, SHW Werkzeugmaschinen is satisfying the demand for a portal milling machine with the same performance characteristics as the UniForce 6/7/8 series.

By its nature, the portal design guarantees high rigidity and allows, for example, 5-side machining of engine blocks in the upright position.

The **PowerBridge** comes equipped with our universal milling head of orthogonal design. Combined with the integrated continuously positioning C-axis in the headstock you get almost infinite machining options even in the basic configuration. As an option we offer a version with continuously positioning A-axis.

The **PowerBridge** can be equipped with a variety of interchangeable milling heads (see milling heads for machines with head change system).

<b>Machining area/travels</b>	
X-axis (longitudinal) in mm	10.000 up to 50.000
Y-axis (horizontal) in mm	3.100/4.100/5.100
Z-axis (vertical) in mm	1.800
<b>Milling head</b>	
Automatic universal milling head of orthogonal design	
swivel range	A-axis 180° C-axis 360°
segmentation	A-axis in 1° steps, cont. pos. C-axis
optional	cont. pos. A-axis
<b>Main drive</b>	
Drive power in kW	in future up to 80
Speed range in min <sup>-1</sup>	up to 5.000
<b>Motion speeds</b>	
Feed rates (X,Y,Z) in mm/min	up to 36.000
Rapid traverses (X,Y,Z) in mm/min	36.000/30.000/30.000
Acceleration of linear axis in m/s <sup>2</sup>	up to 2
<b>CNC System</b>	Siemens and Heidenhain
<b>Tool holder</b>	SK 50 BIG-PLUS optional HSK 100 A DIN 69893
<b>ATC-Robot</b>	Number of pockets Standard 60 (modular expansion of the tool magazine)
<b>Machine weight in kg</b>	approx. 200.000
<b>Pick-up-system</b>	for oversized and special tools depending on customer requirements

SHW Werkzeugmaschinen GmbH

Alte Schmiede 1  
73433 Aalen, Germany  
Tel. +49 7361 5578-800  
Fax +49 7361 5578-900  
[info@shw-wm.com](mailto:info@shw-wm.com)  
[www.shw-wm.com](http://www.shw-wm.com)