

**SHW**  
Werkzeugmaschinen

*Licence to Mill*

# 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.

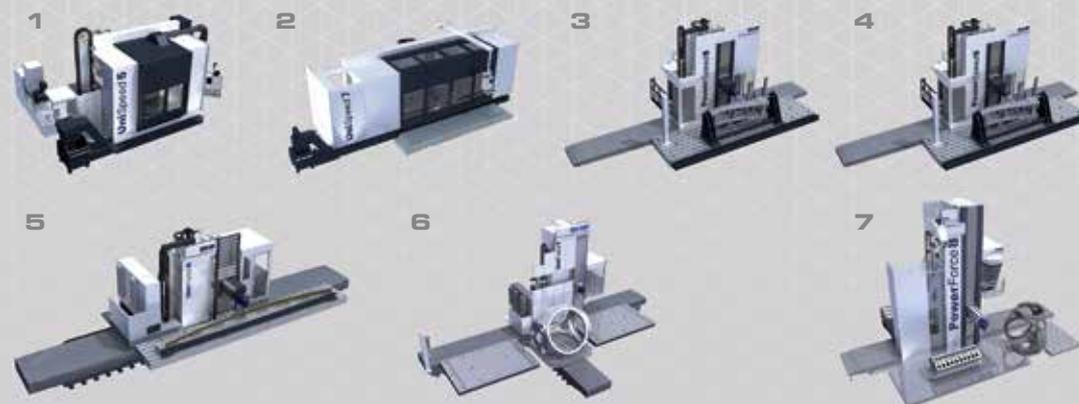
Our product information gives you an initial overview of our entire range of machines.

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

Challenge us!  
We look forward to your enquiry.

## Our machine family:

An overview.



1) UniSpeed 5/5T/6/6T

2) UniSpeed 7

3) PowerSpeed 5

4) PowerSpeed 6

5) UniForce 6

6) UniForce 7/8

7) PowerForce 8C

8) Contact

SHW's long term experience:  
Versatile yet specialised.

SHW Milling Heads:  
Precision starts in the head.



Tool making

Engine manufacture

Gear manufacture



Mechanical engineering

Mould and die production

Environmental engineering

**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 orthogonal milling head

Excentric horizontal milling head

Angular milling head



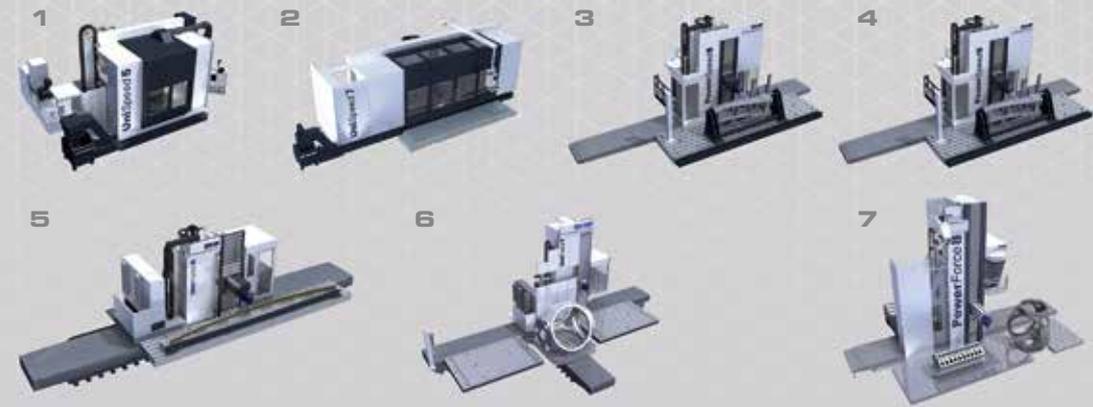
Turning head horizontal / vertical

Plano milling head

Multiple spindle milling head

Our machine family:

An overview.



1) UniSpeed 5/5T/6/6T

2) UniSpeed 7

3) PowerSpeed 5

4) PowerSpeed 6

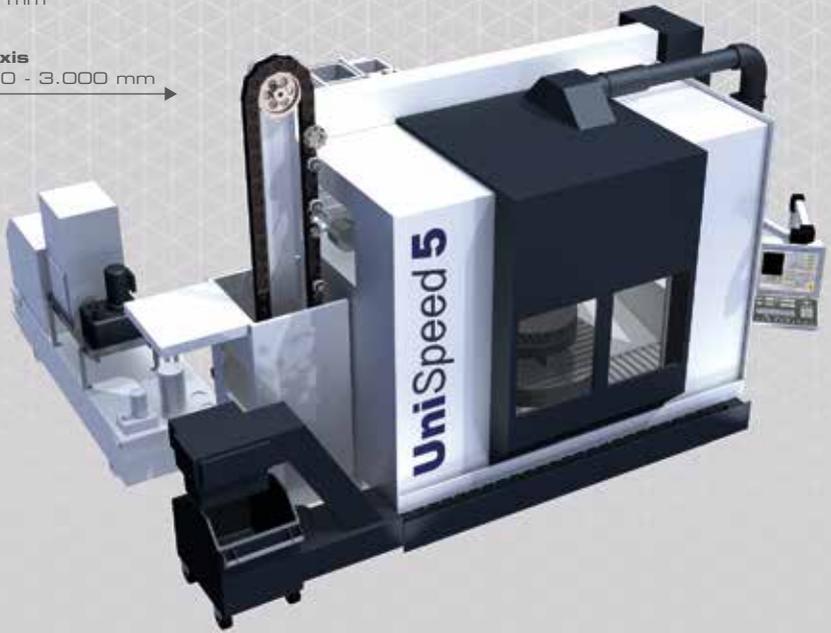
5) UniForce 6

6) UniForce 7/8

7) PowerForce 8C

8) Contact

# 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°
segmentation	in 1° steps
optional	cont. pos. A- and C-axis

## 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

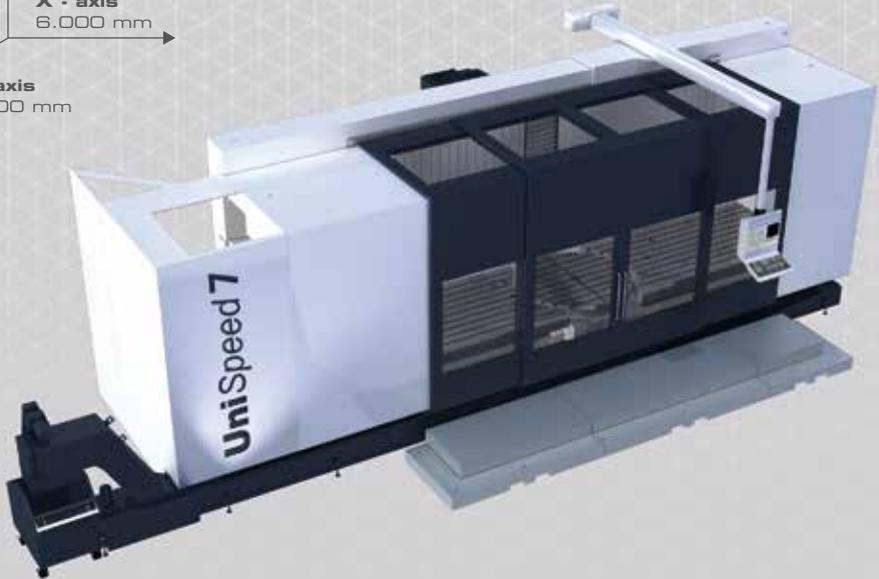
48, 66, 90, 120, 150

## Machine weight in kg

approx. 40.000 (5/5T)

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** 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.

## 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°
segmentation	in 1° steps
optional	cont. pos. A- and C-axis

## 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 48, 66, 90, 120, 150

## Machine weight in 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** 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	up to 1.300

## Milling head

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

## 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

optional SK 50 BIG-PLUS  
HSK 100 A DIN 69893

## ATC

Number of pockets 48, 66, 90, 120, 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).

## 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°
segmentation	in 1° steps
optional	cont. pos. A- and C-axis

## 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

optional SK 50 BIG-PLUS  
HSK 100 A DIN 69893

## ATC

Number of pockets 48, 66, 90, 120, 150

## Machine weight in kg

approx. 40.000

## 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** 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°
segmentation optional	in 1° steps cont. pos. A- and C-axis

## 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 (X,Y,Z) in mm/min	X-axis up to 36.000 Y- and Z-axis up to 24.000
Acceleration of linear axis in m/s <sup>2</sup>	up to 2

## CNC System

Siemens and Heidenhain

## Tool holder

optional SK 50 BIG-PLUS  
HSK 100 A DIN 69893

## ATC

Number of pockets 48, 66, 90, 120, 150

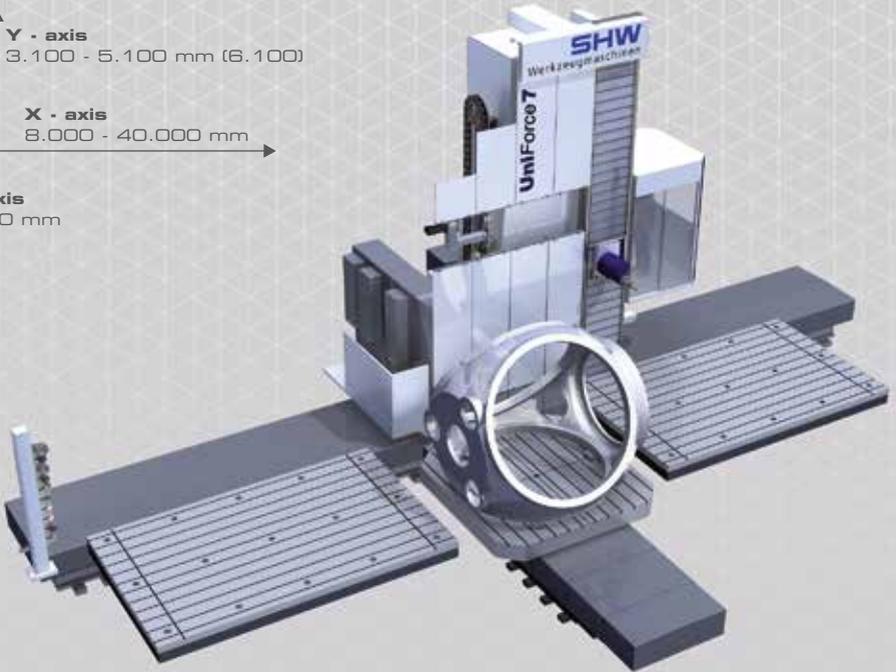
## Machine weight in kg

approx. 50.000

## 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** 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.

The **UniForce 7 and 8** 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	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°
segmentation	in 1° steps
optional	cont. pos. A- and C-axis

## Main drive

Drive power in kW	up to 63 (drive motor up to 75)
Speed range in $\text{min}^{-1}$	up to 5.000

## Motion speeds

Feed rates and rapid traverses (X,Y,Z) in mm/min	X-axis up to 36.000 Y- and Z-axis up to 24.000
Acceleration of linear axis in $\text{m/s}^2$	up to 2

## CNC System

Siemens and Heidenhain

## Tool holder

optional SK 50 BIG-PLUS  
HSK 100 A DIN 69893

## ATC

Number of pockets 70, 90, 120, (150)

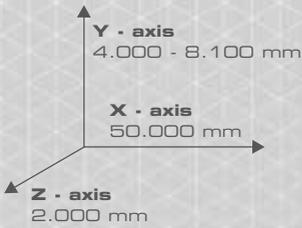
## Machine weight in kg

approx. 65.000

## Pick-up system

for oversized and special tools depending on customer requirements

# PowerForce 8C



This impressive machine represents an ingenious combination of power, dynamics and precision. The **PowerForce 8C** 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 8C** 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	up to 50.000
Y-axis (vertical) in mm	4.000 - 8.100
Z-axis (horizontal crosswise) in mm	2.000

## Milling head

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

## Main drive

Drive power in kW	up to 90
Speed range in min <sup>-1</sup>	up to 5.000

## Motion speeds

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

## CNC System

Siemens and Heidenhain

## Tool holder

optional SK 50 BIG-PLUS  
HSK 100 A DIN 69893

## ATC

Number of pockets 90, 120, 150

## Maschinengewicht in kg

approx. 80.000

## Pick-up system

for oversized and special tools depending on customer requirements

# Contact



More information can be obtained  
from [www.shw-wm.com](http://www.shw-wm.com) or  
+49 [0]7361 5578 800  
Our office staff will be happy to  
pass on your enquiry to the Sales  
and Marketing Department.