

SHW

Werkzeugmaschinen

UniSpeed Series

Compact. Universal. Fast.



UniSpeed 5/6 milling centre: Much better than fast.

UniSpeed is the “entry-level class” of SHW tooling machines with limited travel path variations. As the smallest series in our range, the UniSpeed has all the advantages of SHW machines concentrated in a compact format. The UniSpeed 7 is a compact machine of the latest generation.

The UniSpeed 5 and 6 versions are universal milling centres with rotating options (if needed), which cover a wide range of machining options with their speed. They are ideal for use in model and mould making, contract manufacturing, tool manufacturing and the aerospace industry.

The most important technical data:

Output

- 26 kW at 100 % ED
- 36 kW at 40 % ED

Torque

- 630 Nm at 100 % ED
- 880 Nm at 40 % ED

Travel paths

- UniSpeed 5
X = 2,000, Y = 1,300 mm, Z = 1,300 mm
- UniSpeed 6
X = 3,000, Y = 1,300 mm, Z = 1,300 mm



Milling and turning machining centre UniSpeed 5T/6T:

Milling and turning in a single set-up.



The UniSpeed 5T and 6T expand the already general purpose range of the UniSpeed 5/6 with the functionality of a lathe. As highly modern milling/turning centres, they allow the turn-key machining of a workpiece in a single set-up. The advantages are convincing: greater flexibility, shorter lead times, lower costs – and thus maximum efficiency!

Over and above the standard features of the UniSpeed milling centres the UniSpeed milling/turning centres also have an NC rotary table with torque drive (maximum speed: 250 min⁻¹) and an intelligent balancing system, integrated with Siemens 840D controls.

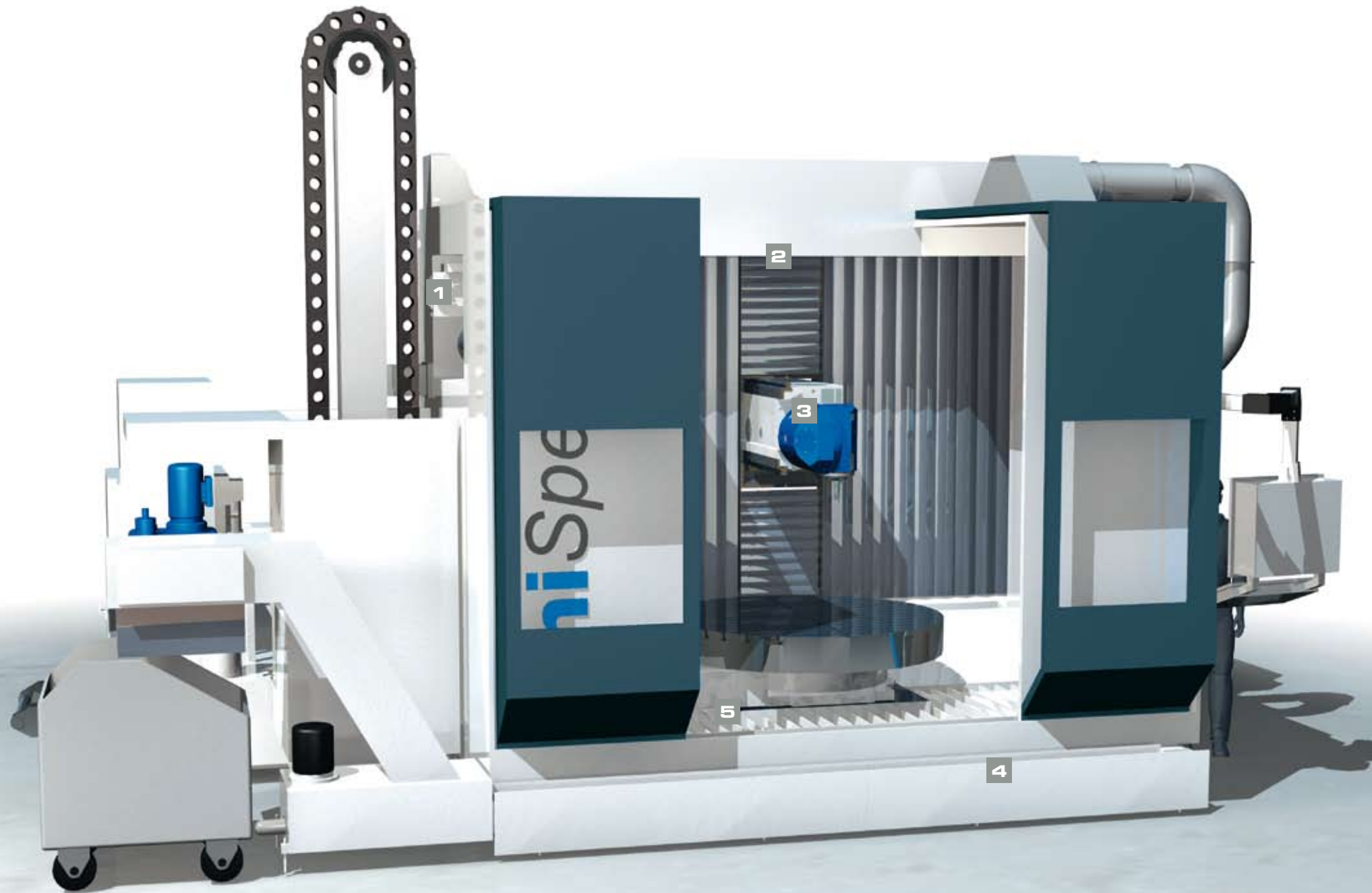
Equipped with the patented SHW turning tool holders (available with the tool systems Capto C6/C8, Kenmetall etc.), the high-precision milling machine achieves excellent turning results

There are two versions available:

- For regular turning: with 4-point support for automatic change
- For serious machining or long workpieces: with Hirth gearing for manual changes



UniSpeed 5/5T/6/6T: Dynamic compact solutions.



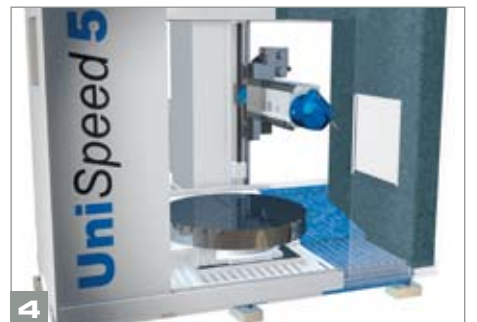
Tool changer with double gripper tongs



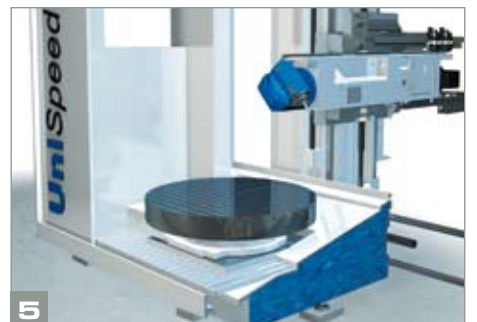
3 guide tracks in the X-axis for maximum stability and accuracy as well as smooth milling performance



SHW orthogonal milling head for precise universal machining without restriction of the work space – by swivelling of the head

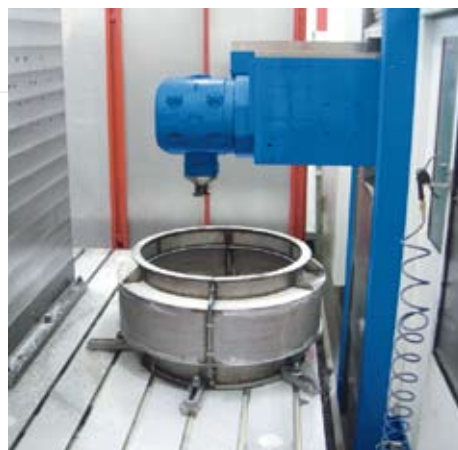
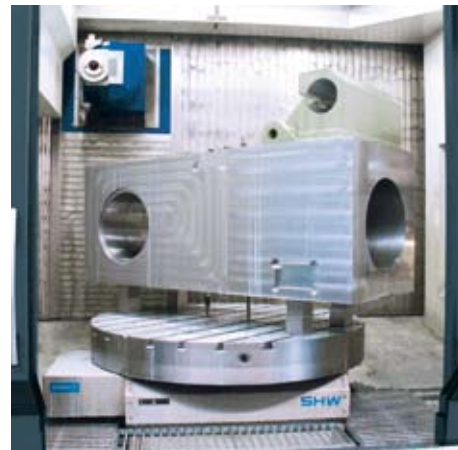


No foundation required because of the inherently rigid one-piece machine frame and gantry structure from high-quality composite material – with excellent damping properties for high stock removal rates and consistent quality



Slopes in the machine frame ensure optimum chip removal

As versatile as the series:
UniSpeed machining examples.



Compact and powerful:
The universal SHW milling head
(orthogonal head).

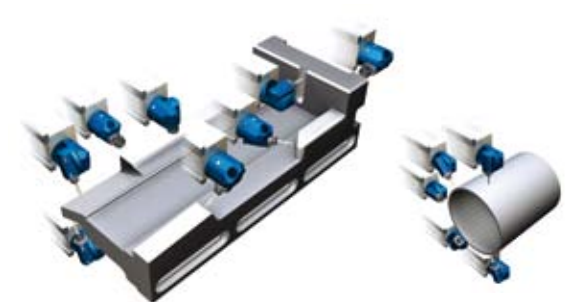
Cost-effectiveness and maximum precision

- The universal milling head in orthogonal design has a range of 64,800 different machining positions. The milling head (A-axis) swivels through 180°, milling head holder (C-axis) swivels through 360° (in degree increments).
- Each position is automatically swivelled into and calculated in the NC program.
- Friction and form-fit connections ensure that the drive power (26 kW at 100 % duty cycle; in spikes up to 36 kW) is fully transferred and utilised in every position.

A head with brains: intelligent design

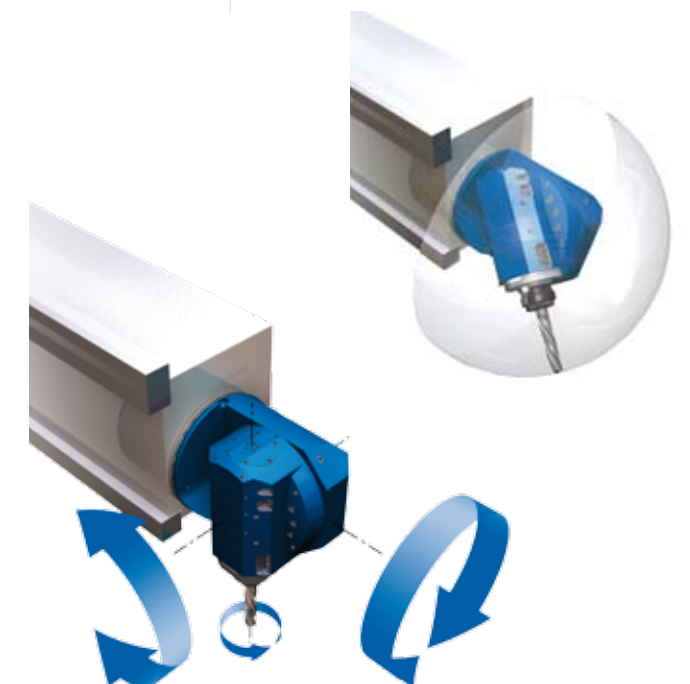
- Pull-down force of 13 tons
- All energy supplies flow through the head
- The greatest possible diameter of the face gear rings
- Extremely high efficiency, since only 3 gear pairs are installed
- All media feed centrally through the head; rotary distributor for internal coolant supply, minimum-quantity lubrication, air, shower ring for all coolants
- No interfering contours caused by lines, etc. outside of the milling head
- Compact design of the head; effortless use also in tight situations

Machining options



Milling head holder

360° x milling head 180° = 64,800
various positions in an imaginary hemisphere can be achieved



We are consistent in many ways.
By always remaining flexible.



SHW tooling machines represent the famous "Made in Germany" quality claim and – to raise the standard even further – the best performance from Swabia. And we are bound by the fact that our origins are here, our success is grounded here, and we see our future here. In recent years we have grown steadily at our location and we have continued to invest in our company and our employees. In the future, too, we want to continue to move forward, remain flexible and think ahead. With self-confidence and sound judgment we thus create the conditions to meet our customers' needs in the future, assert our position as a technological market leader and take a firm step forward.

Those who come to us get much more than a mere machine.

Our machines have a considerable impact on the processes of our customers. That is why we bear a great deal of responsibility and thus approach each project holistically. We see the task you set us as a challenge. Our aim is to develop and implement the best solution for each situation – and that involves far more than “just” an excellent machine.

Personal liaison and support from the outset

- With us, each customer gets “his own” project team, which stands by his side from the outset and also provides him with advice on the structural design.

“Turn-key” machines

- The machine that we hand over to you is immediately fully operational.

Training

- We provide your operating staff with comprehensive training so that you can take full advantage of all the capabilities of your SHW machine. Our support begins with basic programming courses and extends to production support.

Service – for the life of the machine

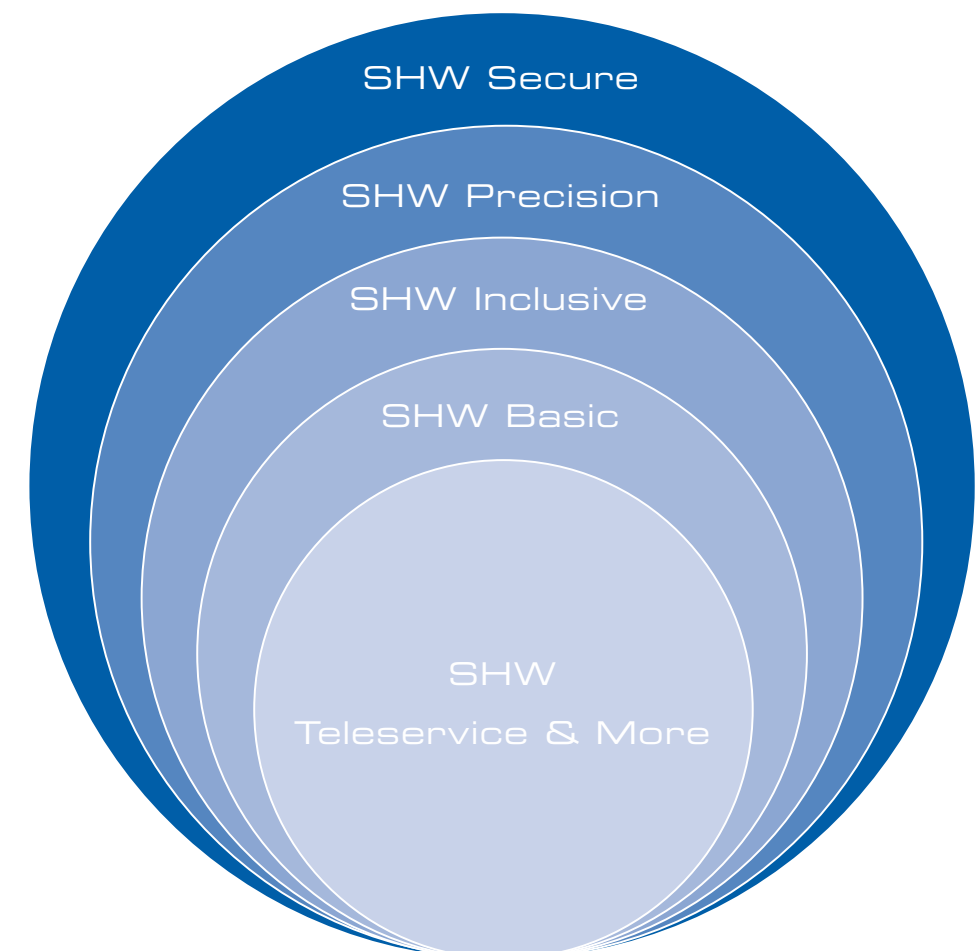
- After commissioning, we continue to provide support for customers’ machines. Your SHW service technician will look after and maintain your machine over its lifetime, and will make regular on-site visits.
- We provide the fastest possible service – worldwide.
- All SHW machines are capable of remote diagnosis – a service tool that you can use without additional expense.



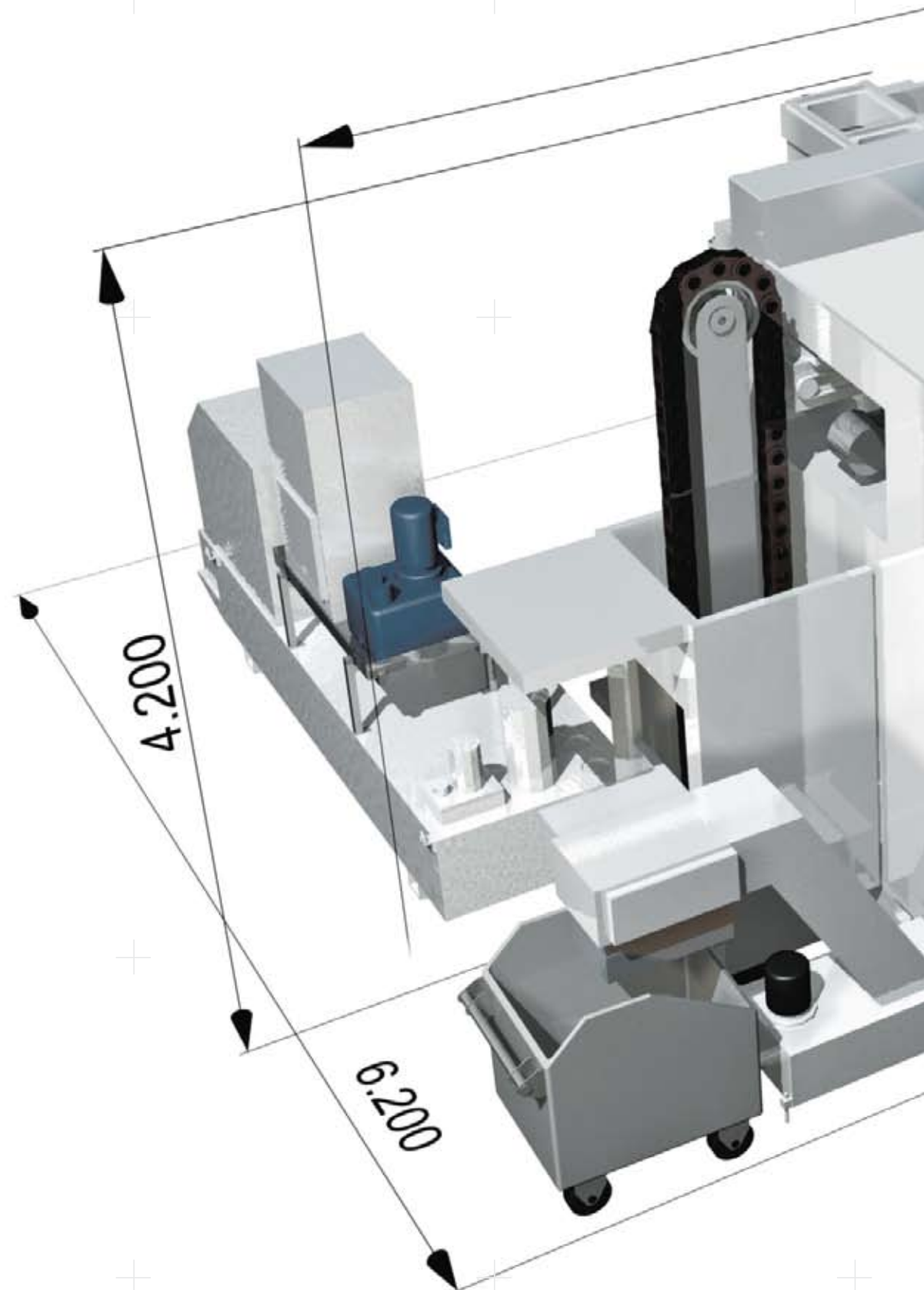
We offer individuality – also when it comes to services.

Based on our decades of experience, we have put together standard packages for you, ranging from remote diagnosis with the Teleservice & More package to the comprehensive Secure package that includes repairs, wear parts, geometry settings and crash insurance.

We will also gladly put together a customised service package that focuses on your specific requirements. Simply talk to us and tell us what your needs are. We will take care of the rest.



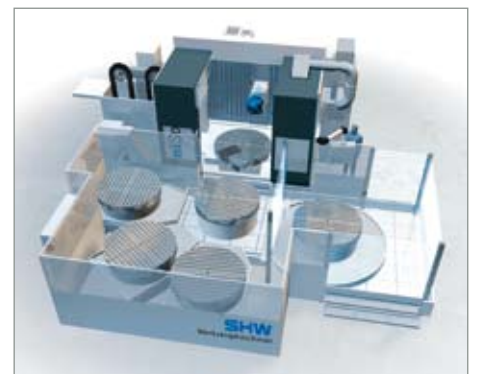
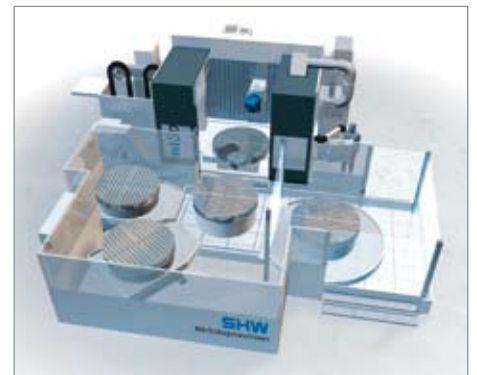
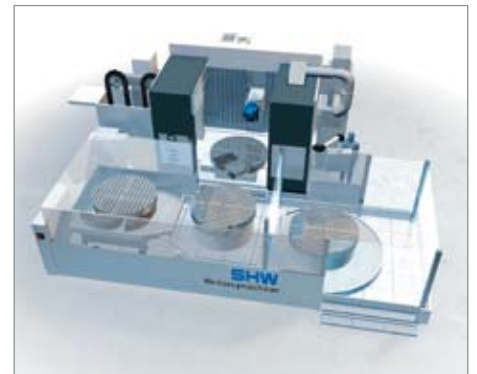
Technical data



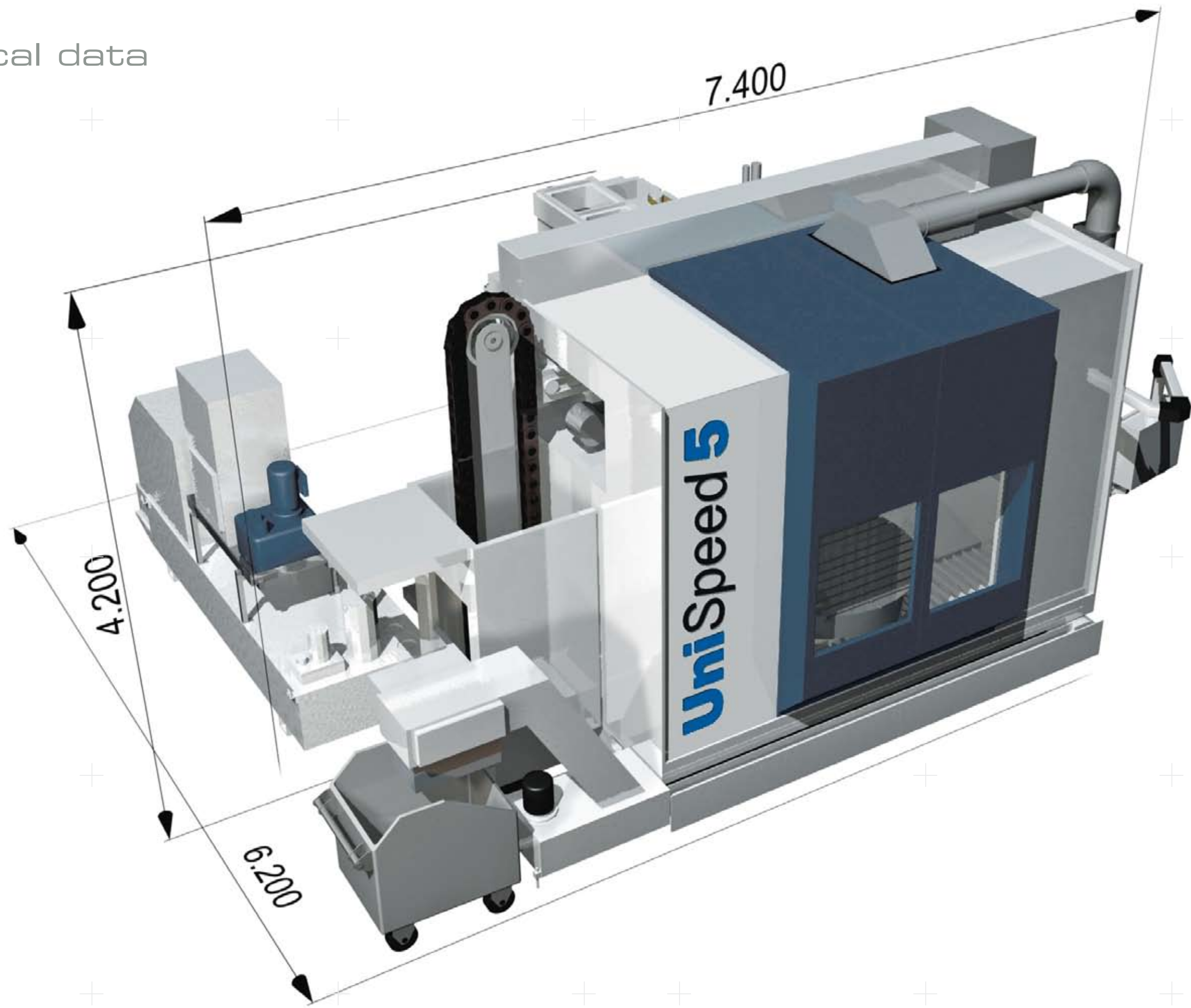
More productive in many ways: SHW pallet changer and pallet pool.

Reduce downtime. Increase productivity.

- Even in our smallest series the ultimate objective is to reduce downtime. That is why all the machines in the UniSpeed series can be equipped with a pallet changer.
- With a pallet changer, the UniSpeed series sets new standards in terms of universality and productivity in the machining of large parts. For parts with a longer run time, a two-pallet changer for set-up parallel to production time is available.
- Intelligent pallet management is important for mass production and for customers with a frequently changing range of parts – for this purpose optional pallet pools for up to four pallets are available.
- The pallet has a diameter of 1,600 mm. SHW pallet changers are designed for workpieces with a maximum total weight of 4 tons (1 ton in the rotation mode).
- The tooling station and the accessibility of the machine are ergonomically adapted to the needs of the operator. The comfort and safety of operating staff are our main priority and are already taken into account at the planning stage.



Technical data



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

SHW Werkzeugmaschinen GmbH

Alte Schmiede 1

73433 Aalen-Wasseralfingen

Tel.: +49 (0)7361 5578 800

Fax: +49 (0)7361 5578 900

info@shw-wm.de

www.shw-wm.de