

PowerSpeed 5

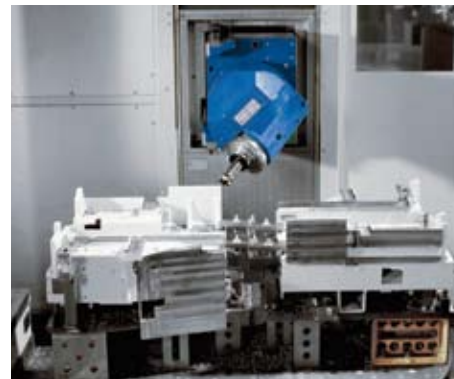
Dynamic. Powerful. Versatile.



PowerSpeed 5: The universal high-speed centre.

PowerSpeed is the medium-sized series in the SHW range of tooling machines. It provides travel path variations as well as tables and splash guard panels according to customer specifications.

The PowerSpeed 5 is a travelling column machine for large workpieces – suitable for universal use like a milling machine, but with the dimensions of a large milling and drilling machine. Its particular strengths lie in tool manufacturing and in single and small batch production in the field of mechanical engineering.



The most important technical data:

Output

- 32 kW at 100 % ED
- 44 kW at 40 % ED

Torque

- 637 Nm at 100 % ED
- 875 Nm at 40 % ED

Travel paths

X up to 30,000 mm, Y up to 2,100 mm, Z = 1,300 mm



PowerSpeed 5: Dynamics – newly defined.

The PowerSpeed 5 is designed for particularly large workpieces and handles long travel paths effortlessly, with impressive speed and maximum precision at the same time. The heaviest machining with extreme accuracy is made possible by direct power transfer.

The dynamics that the PowerSpeed 5 develops is still unmatched in machines of this size. During the design phase, structural models were created to reproduce and simulate the real acceleration behaviour of the drives. This is necessary to predict the actual dynamic behaviour of the machine, to really control the dynamics – and thus guarantee accuracy!



The PowerSpeed is as flexible as you want it to be. Especially the head.



*Robot tool changer
Tool for fast chip-to-chip time and
the highest availability*



*Two liquid-cooled drives in the vertical axis
dynamically manoeuvre the vertical axis*



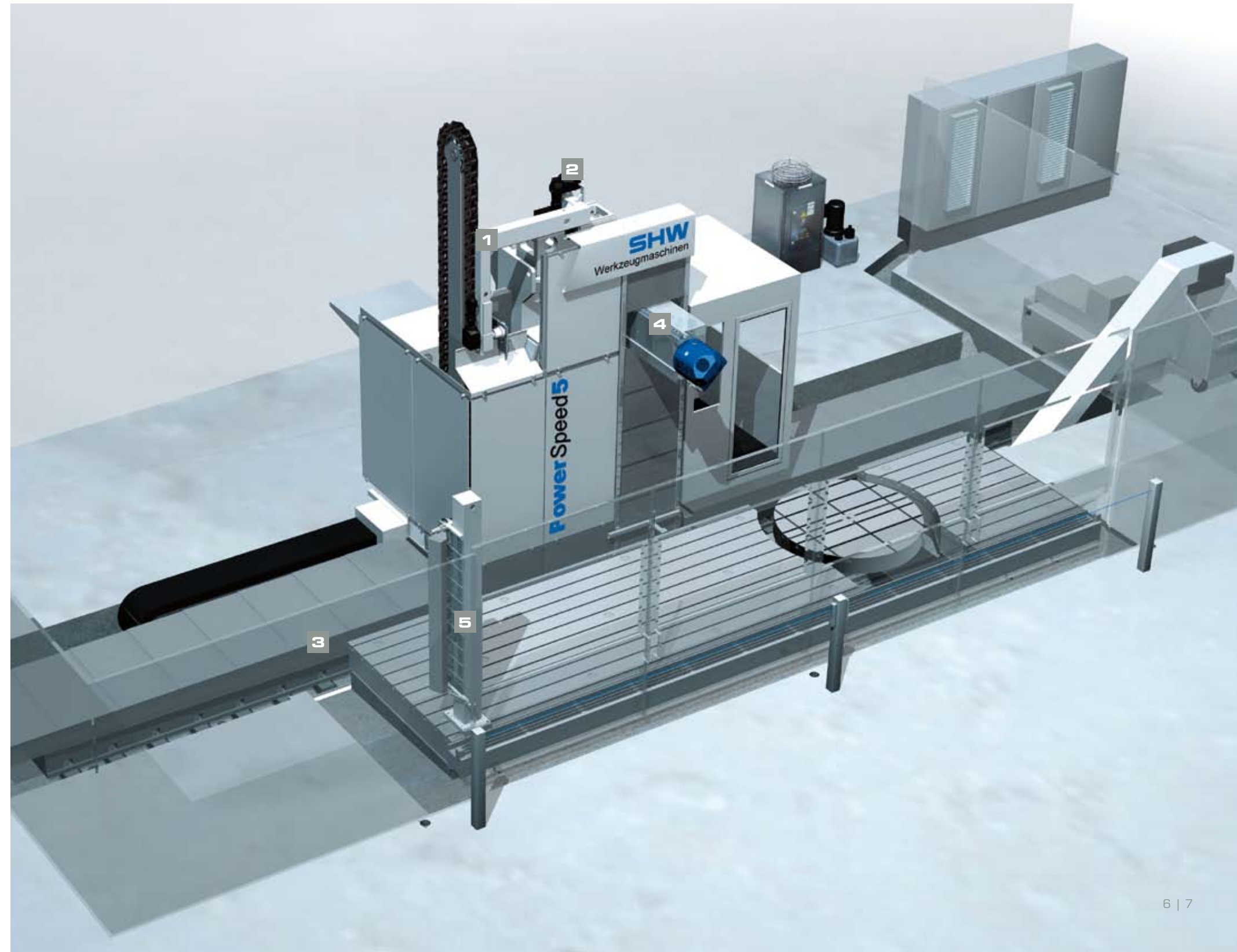
*Optimised guide tracks and rack and pinion drive
for power in the x-axis and highly dynamic
acceleration*



*Close spacing of the guide tracks to the column
and headstock ensures short power transfer
distances and thus higher rigidity for powerful
milling and machining*



Pick-up station for heavy or oversized tools



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

- The PowerSpeed 5 is equipped with the milling heads that precisely meet your needs.
- Every SHW machine tool contains the know-how we have built up over 50 years making universal milling heads. The orthogonal head on the PowerSpeed 5 comes as standard! As a result, you also get the numerous advantages of this head as standard:
 - 64,800 different machining positions
 - 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 is fully transferred and utilised in every position
 - Tool holder SK 50/HSK 100
 - Drive power up to 44 kW
 - Torque up to 875 Nm
 - Speed range up to 8,000 min⁻¹

Machining options



Milling head holder

$360^\circ \times \text{milling head } 180^\circ = 64,800$
various positions in an imaginary hemisphere can be achieved



One clever head is not enough for us: the automatic head chan- ging system.

As dynamic as your demands.

As flexible as your tasks.

The SHW head changing system is designed for those who want to combine the advantages of different machines in a single machine. With this system, we not only offer a universal head exchange interface, but also a stepless C-axis, which can be used as a full NC-axis in the program.

Other heads, such as the fork head for 5-axis simultaneous machining, are part of our standard range. Individual heads for special customer requirements can be custom-made. State-of-the-art torque drives in the head change interface and the latest control technology allow simultaneous machining of the C-axis together with the other NC-axes. The C-axis can be hydraulically clamped in any position – so even the most difficult cutting tasks are no problem.

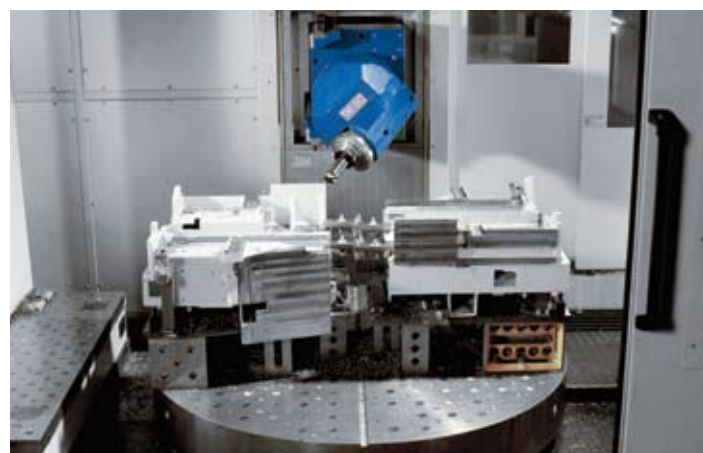
Our standard heads include:

- 1** SHW universal head, in orthogonal design, liquid-cooled with a max. speed of 8,000 min⁻¹
- 2** SHW horizontal head up to 1,000 mm
- 3** SHW angle head in ultra-compact design
- 4** SHW fork head for 5-axis simultaneous machining



Expertise in action:
PowerSpeed machining examples.

SHW industry expertise:
Specialist versatility.



Energy



Construction machinery



Rails



Gear wheels



Motors

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 judgement 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

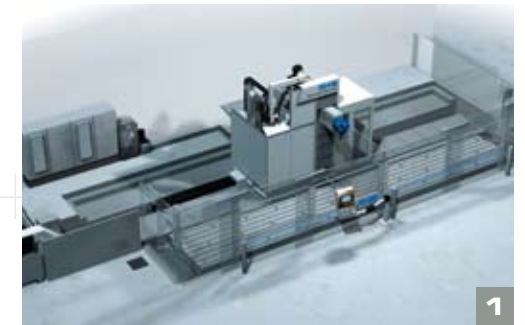
- After commissioning, we continue to provide support for customers' machines. Your SHW service technician will look after and maintain your machine over its lifetime, and will make regular on-site visits.
- We provide the fastest possible service – worldwide.
- All SHW machines are capable of remote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



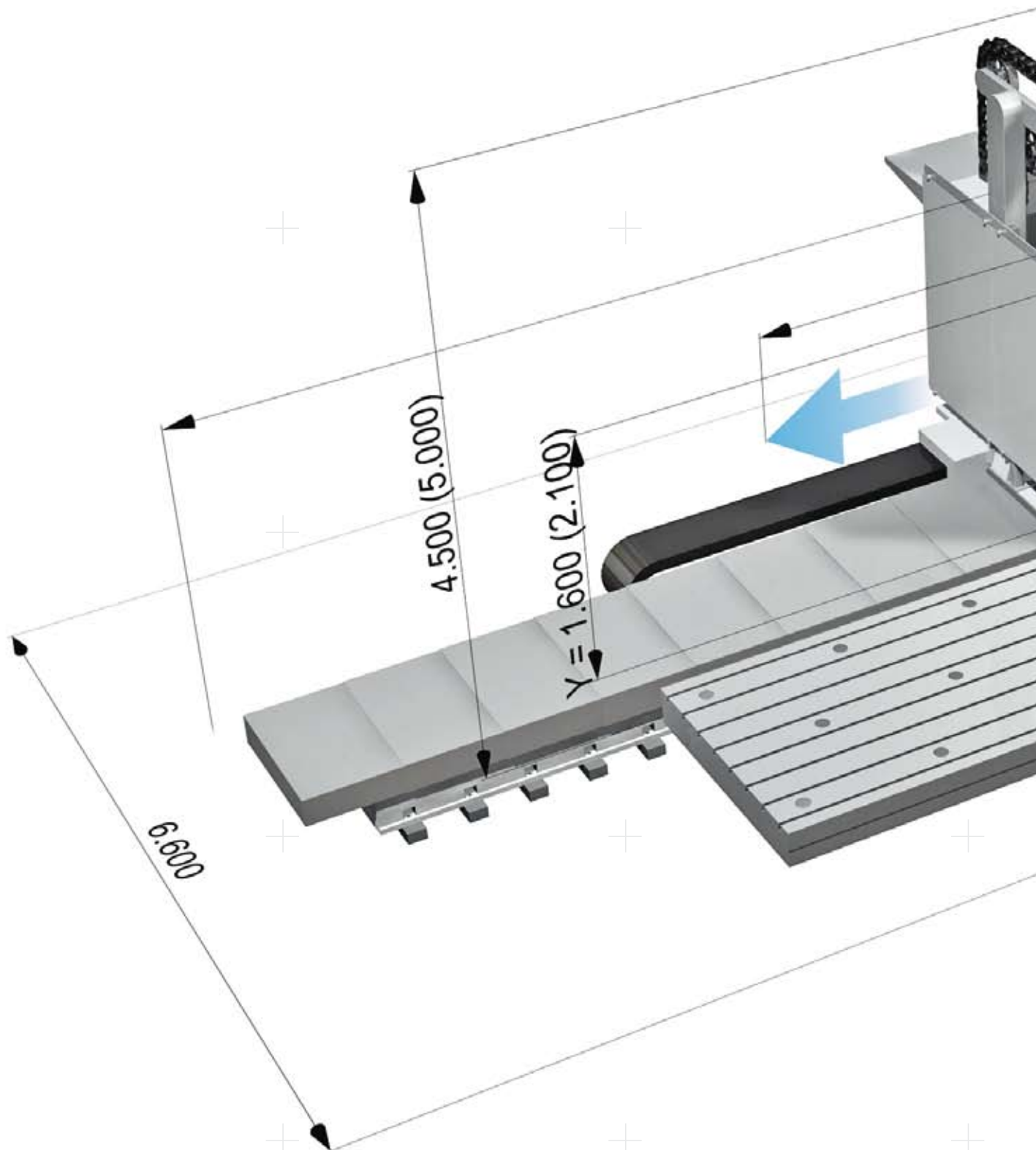
Technical data

The SHW modular system for all-inclusive, customisable solutions.

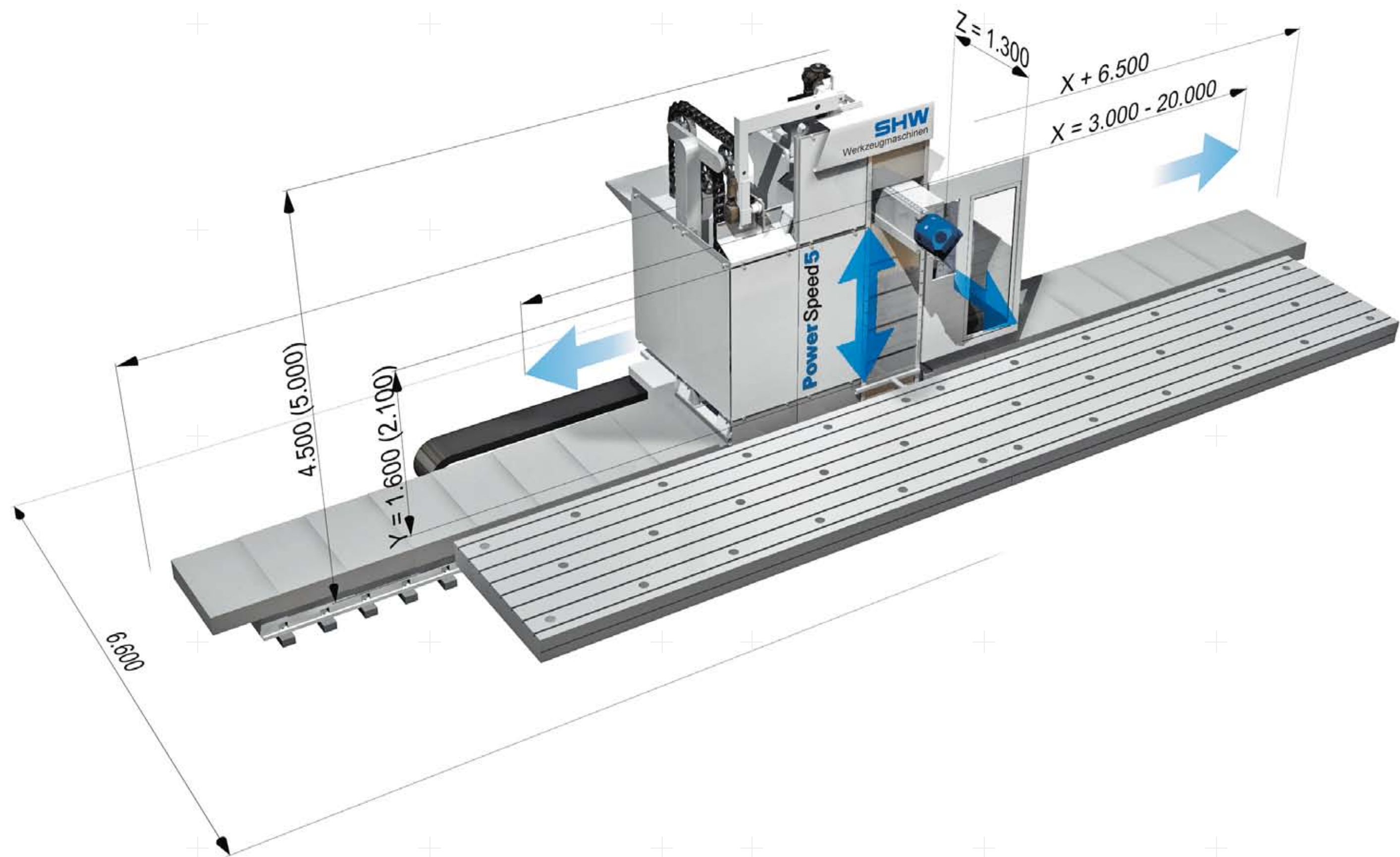
Our sophisticated modular system enables us to respond to your demands with extreme flexibility. The machining modules can be combined with variable bench assemblies. This means that we can design all work areas to meet your specific needs. You also benefit from our years of experience. You receive a workpiece-specific solution that ensures cost-effective production.



- 1** Classic with face plate
- 2** Face plate with integrated rotary table
- 3** Double column system
- 4** Fully enclosed



Technical data



Machining area/travels		
X-axis [horizontal lengthwise]	mm	2,000 – 30,000
Y-axis [vertical]	mm	1,300 – 2,100
Z-axis [horizontal 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		
	SK 50A DIN 69893	
Optional	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 requirements
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	

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