



PITTLER T&S

PV Series

The Allrounder for Medium to Large Components



PITTLER T&S

PITTLER develops and produces high-precision multifunctional lathes and skiving machines. They are optimized for soft and hard turning as well as drilling and milling rotationally symmetrical components with a diameter of up to four meters.

In the spirit of the company's founder Wilhelm von Pittler, the skiving technology was further developed into an efficient gear cutting technology, which has established itself in PITTLER's machine portfolio both in the context of complete machining as well as an individual technology.

PITTLER T&S offers the skiving process as a single process or in combination with complete machining. An integrated tool magazine makes it possible to use this efficient gear cutting technology alongside turning, milling, drilling, grinding, thread production, and measuring in a single machine without compromise. The flexible use of technology enables machining in maximum two clampings, thus guaranteeing high levels of accuracy. Coolant, oil, compressed air, or a combination thereof can be used for cooling and better chip flow.

A DVS TECHNOLOGY GROUP COMPANY

The DVS TECHNOLOGY GROUP is a group of experienced companies engaged in the machining technologies of turning, gear cutting, grinding and honing.

The DVS TECHNOLOGY GROUP employs more than 1050 staff worldwide and is considered a leading system provider of machines, tools, and manufacturing solutions for the soft and hard-fine machining of components.

The DVS TECHNOLOGY GROUP includes the following divisions:

DVS Machine:

Manufacture and sale of high-precision machine tools and automation systems

DVS International Sales & Service:

Local DVS partners for sales and service in international markets.

DVS Services & Tools:

Customer-specific development, manufacturing, and sale of machine components, tools, and abrasives and related services.

FOCUS ON CORE TECHNOLOGIES



TURNING



MILLING



DRILLING



PITTLER SKIVING



GRINDING



MEASURING

Hard-fine machining on the PV series

Where precision meets performance

The PV series emphasizes stability. It is equally suitable for demanding machining processes in soft machining with high feeds and infeeds as well as hard-fine machining with turning and grinding. Stability is the foundation for outstanding precision and surface quality and thus the basis for even the most challenging machining tasks.

To improve user-friendliness, the PV series has been expanded to include software functions for grinding. The newly integrated functions enable precise control for various grinding tasks, such as surface grinding, diameter grinding using the plunge grinding method, or oscillatory grinding. This precision makes it possible to achieve the finest surfaces and exact shape and position tolerances and to meet the highest requirements.

The large work area opens up the possibility of using dressing tools, such as single-grain diamonds or dressing rollers. This versatility not only improves machine performance, but also increases efficiency by allowing additional processes to be integrated into the same clamping.

A core feature is flexibility, which improves cost-effectiveness. This approach ensures not only high-quality surfaces, but also flawless adherence to geometric tolerances. By producing components in a single clamping, cumulative errors during re-clamping are eliminated, resulting in superior component quality and geometry.



Seamlessly switching from hard turning to grinding in a single machine dramatically reduces setup time and optimizes production processes. Increasing process flexibility is a core principle of the PITTLER philosophy, which is epitomized by the PV series. With an integrated tool magazine and the multifunctional head that can accommodate rigid and driven tools, the machining possibilities are almost infinite. This configuration enables smooth switching between different operations, optimizes production processes, and minimizes downtime.

In short, the PV series represents the pinnacle of modern methods by combining hard turning and grinding technology in one. Based on stability, software options, and customizable

work area design, these machines offer not only advanced capabilities, but also an integrated approach to efficiency, precision, and innovation.

Experience the future of precision machining.



Machining on up to six axes

Turning, grinding, milling, drilling, measuring,
PITTLER SKIVING with Y-axis possible,
further integration of NC axes
(tool carrier) possible

**Automatic tool
changeover with up to 150 tools**

High degree of flexibility
through numerous equipment variants

Powerful headstock
up to 23,400 Nm torque,
Optional: Hydraulic clamping, single spindle ma-
chines with Y-axis available

**Generously dimensioned work area
and good accessibility**
for optimal loadability



PV series (630 – 1600)

The All-rounder for Medium to Large Components

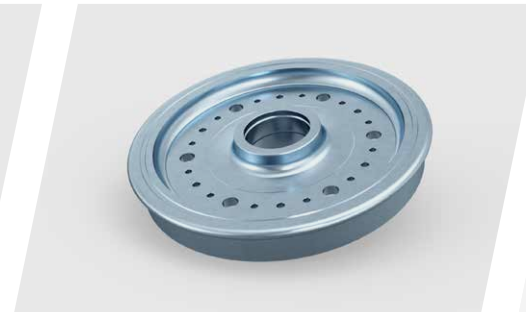
The PV series offers a compact modular system that allows configurations for multi-technology machines and the complete machining of rotary components with diameters from 350 – 1600 mm.

The series includes single-spindle machines as well as machines with two separate work spaces, each of which has its own or up to two tool carriers. There are also shuttle slide

machines that ensure an excellent balance between off-peak and main time.

Thanks to this versatile modular system, all applications, such as turning, grinding, drilling, and milling can be carried out on the machines.

COMPLETE MACHINING OF COMPONENTS WITH DIAMETERS FROM 350 – 1600 MM



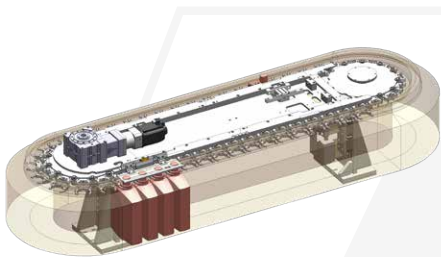
Committed to tradition

PITTLER T&S GmbH gradually developed the PV series into a turning machining center that covers a wide range of highly economical turnkey manufacturing technologies in all common workpiece sizes. Today, PITTLER is able to offer its customers the most modern machine technology as well as the latest drive and control technology in the application area of 5-axis machining up to a workpiece diameter of 1600 mm.

At the heart of the innovation are tool carrier systems for complete machining, which, in the green (soft) workpiece state use the turning, skiving, milling, drilling, thread cutting, and reaming technologies to achieve maximum economic efficiency with improved workpiece quality. The conventional vertical lathe was transformed into a fully-fledged turning machining center.

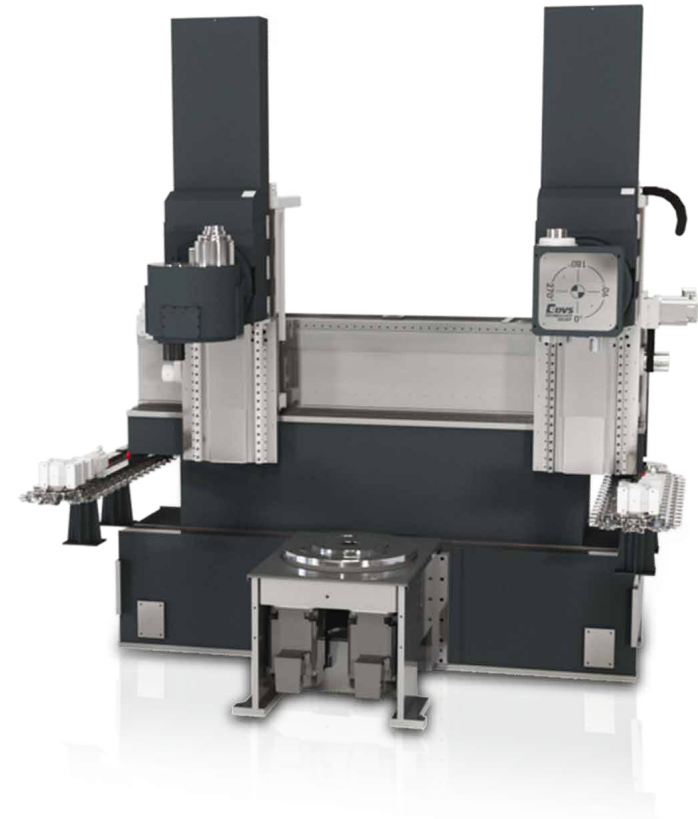
With the new PV generation, PITTLER has also entered the field of hard machining and replaced the grinding process. Thanks to the user-friendly software and the dressing cycles matched to the component and the grinding process, the PV series can handle all common grinding applications and produce the component not only in the soft state but also in the hard state with the usual precision and economy.

The PV series is a perfect “all-rounder” for medium to large workpieces that can meet any challenge.



OTHER HIGHLIGHTS AND CONFIGURATIONS

Further highlights, their technical specifications and machine bed configurations can be found from page 30.



YOUR ADVANTAGE

- Powerful headstocks
- Different tool carriers are possible
- Magazine with up to 150 tools
- Integration of grinding spindle and dressing tools
- Headstock with Y-axis available for single-spindle machines



Headstock with Y-axis

MACHINE BED

At the heart of this machine series is a stable monoblock in a stepped bed design. Precisely welded and cast with low-shrinkage concrete, this structure offers maximum static and dynamic rigidity. At the same time, it minimizes vibrations, offers optimal damping, and ensures thermal stability.

The intelligent design allows for the ideal application of force to the guide system and machine bed. What stands out in particular is the direct introduction of cutting force into the roller guide for stable machining processes. This tried-and-tested design enables a wide range of options for precise machining and superior performance in various fields of application.



Technical Data

	PV630	PV1250	PV1600
WORKPIECE			
Max. length (mm)	500	500 (1000)	500 (1000)
Max. weight (kg)	1000	3000	5000
TECHNOLOGIES	Turning, grinding, milling, drilling, measuring		
MACHINE COMPONENTS			
Spindle flange Ø (mm)	380	520	800
Thrust bearing Ø (mm)	240	460	670
Power at 100% duty cycle (kW)	39	104	208
Torque at 100% duty cycle (Nm)	1375	12000	23400
Speed (rpm)	1000	500	400
Y-axis (mm)	+250 / -150	+ -300	+ -300
Turning Ø	630	1250	1600

PV1250



PV1600





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DVS MACHINE



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Vertical turning center and Pick systems – Gear cutting for complete machining



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Camera-guided robot automation systems

DVS INTERNATIONAL SALES & SERVICE



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Motorspindles & Components



DVS Service GmbH | dvs-technology.com/dvs-service
Maintenance – Complete overhauls – Repairs



DISKUS WERKE Schleiftechnik GmbH | diskus-werke.dvs-gruppe.com
Face grinding – Double face grinding – Special machining

DVS PRODUCTION



DVS Precision Components (Taicang) Co. Ltd.
Precision powertrain components in series production for passenger cars and trucks on DVS machines