



PITTLER T&S

## **PVSL series**

Verticale Pick-up Lathes





## 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**

**Process flexibility**

Parallel or reversible processing possible

**Modular work area,**

for example, integration of a NC lifting holder for the machining of brake discs



**Simplified workpiece infeed**

Lateral infeed of workpieces with PVSL N1, with PVSL 450 the infeed of workpieces takes place from all sides

**Simple chaining**

of systems and versatile component feeding solutions for raw and finished parts

# PVSL Series

## Vertical Pick-up Lathes

The PITTLER PVSL series offers an incredible amount of technology in a very small space. With up to four tool turrets, it offers a wide range of possible uses for both soft and hard machining.

The PVSL series combines two workspaces in one machine and uses a turning station to turn the component by 180°. The tried-and-tested pick-up technology eliminates the need for external automation, as the components are automatically picked up by the spindles from the raw part conveyor/blank part conveyor.

External automation and robot cells can optionally be added to further optimize your production processes. The combination of short strokes and the efficient pick-up loading system enables short cycle times even when producing complex components in series. With the PVSL series you get an innovative manufacturing solution that not only saves space, but is also powerful and extremely flexible.

### SHORT LOADING TIME THANKS TO THE PICK-UP SYSTEM



## Discover the PVSL series

Your solution for versatile vertical pick-up turning!

Our PVSL series offers a vertical pick-up lathe with a flexible infeed of the workpieces directly into the machine's automation room. This intelligent design optimizes the use of space and enables extremely efficient workpiece feeding.

As a standalone machine, the PVSL 450 is particularly easy to automate, as two systems can be operated back to back with one automation cell. In the PVSL N1, the automation is positioned at the front and the workpieces are fed into the automation chamber from the side.

The seamless integration of an NC lift-off holder, multi-spindle drilling head, and a second turret for four-axis turning is just a small example of a wide range of additional applications that can be integrated into the work area.

The PVSL series features innovative parallel and turn-over machining, which allows you to machine two workpieces at the same time. This function significantly reduces the throughput times and increases the productivity of your manufacturing processes.

Whether you want to machine complex workpieces with different requirements or a large number of parts, the PVSL series is the ideal choice. Our vertical pick-up lathe not only offers maximum precision and quality, but also flexibility and efficiency in your production. Invest in the PVSL series and benefit from the numerous advantages that this machine can offer for your production. Increase your competitiveness and set new standards in vertical turning.



PVSL 450 - 2

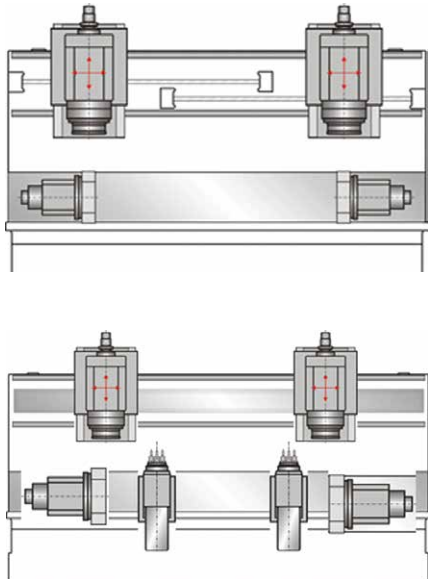
### YOUR ADVANTAGE PVSL N1

- Loading via storage for autonomous machining
- Automatic parts separation: no defined setting down of raw and finished parts necessary
- Easy to set up: changeover to a new workpiece in less than 15 minutes

### YOUR ADVANTAGE PVSL 450

- Generously sized work area, with space for additional equipment such as NC lift-off holders, multi-spindle drilling head, and a second turret
- Suitable for heavy machining
- Shuttle loading possible from all sides for maximum flexibility when integrating the machine into a production line

## MACHINE BEDS PVSL N1 AND PVSL 450



### Two-spindle design with two independent compound slides

- For subsequent or parallel processing
- Feed drive by either ball screw or linear motor
- Additional units such as multi-spindle drill head in middle and large series
- Alternative: two-spindle drilling with tool turret for programmable pitch circle
- PVSL N1 available in two different bed lengths: 2400 mm and 3000 mm

### INDIVIDUAL ROBOT CHAINING FOR THE PV SL SERIES

PITTLER T&S offers tailor-made automation solutions for chaining several PVSL series machines. The selection ranges from belt automation with storage to robot-assisted loading to meet the specific requirements of customers.

Particularly with the PVSL 450, rear loading enables a straightforward connection to other machines. The production facility, e.g., for differential housings, is linked by a robot, which offers additional advantages. The measuring and marking stations are also automatically loaded by robots to make the process even more efficient.



## Technical Data

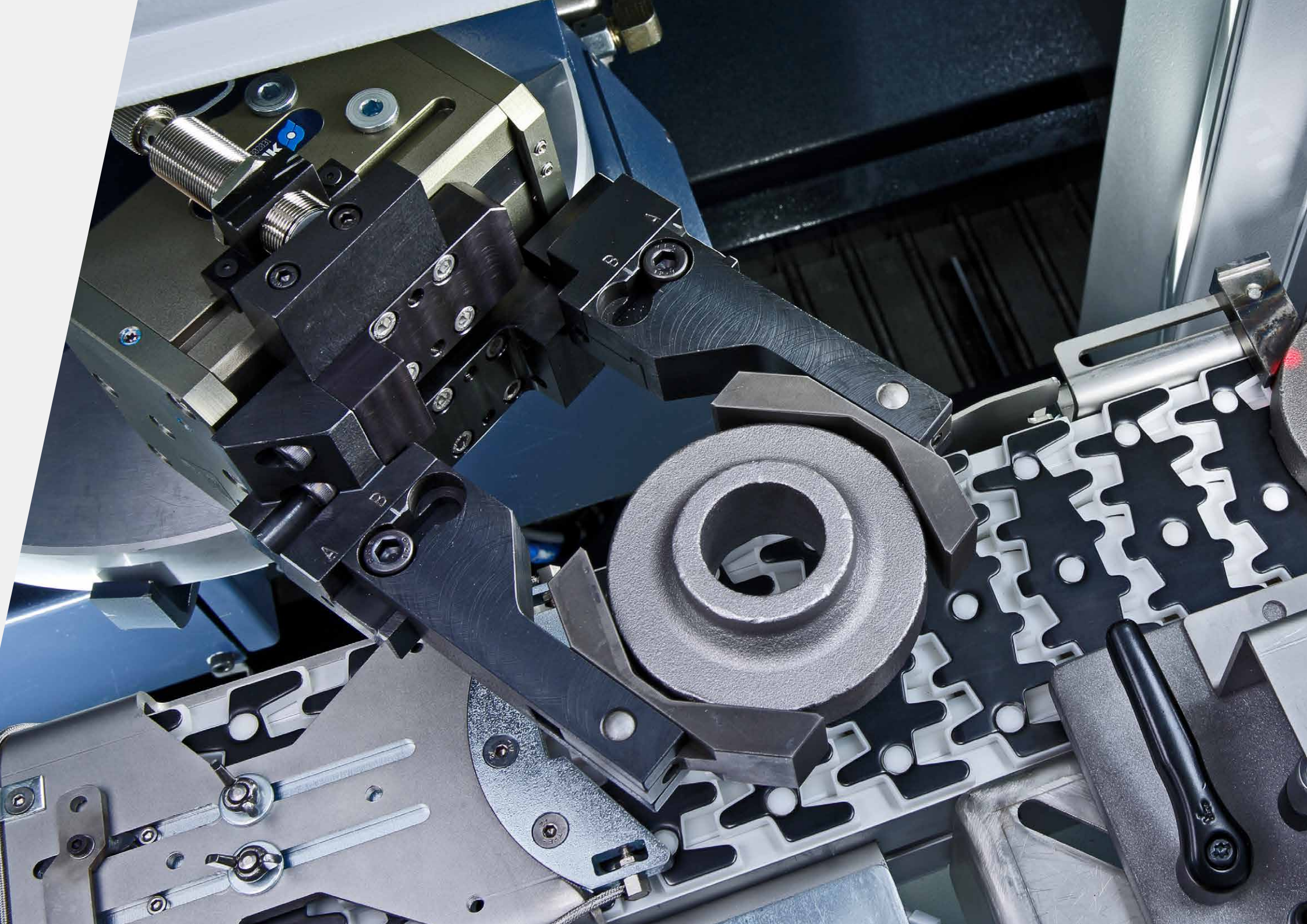
	PVSL N1 / 2-2 2400	PVSL N1 / 2-2 3000	PVSL 3 / 2-2	PVSL 450 / XL
<b>WORKPIECE</b>				
Max. diameter (mm)	140	280	450	550
Length (mm)	80		280	450 / 550
<b>MAIN SPINDLE</b>				
Swing Ø up to (mm)	350		530	550
Spindle nose Ø (mm)	182	220	300	KK A8
Power 100% duty cycle under full load 40% duty cycle (kW)	29 / 34	67 / 80		64 / 80
Max. torque (Nm)	484	885		1220
Speed (rpm)	4500	4000		3500
<b>TECHNOLOGIES</b>				
	Turning, drilling, milling			
S1 - Max. torque of the main drive [Nm]	194		820	



PVSL N1



PVSL 450



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## Members of the DVS TECHNOLOGY GROUP

### DVS MACHINE



**BUDERUS Schleiftechnik GmbH** | [dvs-technology.com/buderus-schleiftechnik](https://dvs-technology.com/buderus-schleiftechnik)  
I.D. grinding – O.D. grinding – Bore honing – Hard turning



**PITTLER T&S GmbH** | [dvs-technology.com/pittler](https://dvs-technology.com/pittler)  
Vertical turning center and Pick systems – Gear cutting for complete machining



**PRÄWEMA Antriebstechnik GmbH** | [dvs-technology.com/praewema-antriebstechnik](https://dvs-technology.com/praewema-antriebstechnik)  
Gear honing – Gear grinding – Hobbing/Fly-cutting – Chamfering



**rbc robotics GmbH** | [dvs-technology.com/rbc-robotics](https://dvs-technology.com/rbc-robotics)  
Camera-guided robot automation systems

### DVS INTERNATIONAL SALES & SERVICE



**DVS Technology America, Inc.** | [dvs-technology.com](https://dvs-technology.com)  
DVS Sales & Service in USA, Canada & Mexico



**DVS Technology (Taicang) Co., Ltd.** | [dvs-technology.com](https://dvs-technology.com)  
DVS Sales & Service in China

### DVS SERVICES & TOOLS



**DVS TOOLING GmbH** | [dvs-technology.com/dvs-tooling](https://dvs-technology.com/dvs-tooling)  
Tool solutions and technology support for PRÄWEMA gear honing



**NAXOS-DISKUS Schleifmittelwerke GmbH** | [dvs-technology.com/naxos-diskus](https://dvs-technology.com/naxos-diskus)  
Conventional grinding tools – CBN and diamond tools



**Werkzeugmaschinenbau Ziegenhain GmbH** | [dvs-technology.com/wmz](https://dvs-technology.com/wmz)  
Motorspindles & Components



**DVS Service GmbH** | [dvs-technology.com/dvs-service](https://dvs-technology.com/dvs-service)  
Maintenance – Complete overhauls – Repairs



**DISKUS WERKE Schleiftechnik GmbH** | [diskus-werke.dvs-gruppe.com](https://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