WALDRICHSIEGEN

PROFITURN V

# Vertical Lathe

## In Table and Gantry Design

ProfiTurn V – a modular machine concept for a broad range of workpieces

# Customized for Your Workpieces

WaldrichSiegen has developed and manufactured vertical lathes for the highest technological demands since the 1930s. The ProfiTurn V series sets a new benchmark in the market in terms of power and precision. Thanks to its robust design and hydrostatic guideways, the concept allows for pre-machining and finish-machining on a single machine. A clear, modular machine program covers the complete range of standard models for a variety of applications. We offer the perfect solution for any task.

**Fully Hydrostatic Vertical Lathe:**

- In table or gantry design
- With a fixed or movable rotary table
- With one or two carriages
- Machining diameter of up to 14,000 mm
- Machining height of up to 14,000 mm
- Workpiece weight of up to 500 t
- Power at the faceplate of up to 350 kW

## ProfiTurn V – Your Advantages at a Glance

- High-performance turning and milling unit with a Masterhead interface
- Fully hydrostatic guidance of all main axes for the highest cutting performance
- Main structural components made of high-performance cast iron for the best damping characteristics and high stiffness
- Optimal static and dynamic machine behavior in the entire work area
- Modular design system for optimal adaptation to customer requirements
- Highest availability with reduced maintenance and repair costs
- Integration of a broad range of manufacturing methods for the machining of demanding workpieces
- Comprehensive equipment

Masterhead interface for different machining units

Powerful and robust rotary and traversing table made of cast iron

Machine Highlights:

# Sophisticated Technology for Precision and Efficiency

### Hydrostatic Guidance in all Axes

- Highest static and dynamic stiffness
- Optimal damping behavior
- Close to unlimited service life of the guidance rails

### Rotary Table

Made of high-quality cast iron with hydrostatic face-plate bearing, driven via a backlash-free Master/Slave drive.

- Workpiece weights up to 500 t
- Outstanding static and dynamic characteristics
- High drive torque for optimal cutting performance
- High positioning accuracy during milling operations

Option: available as traversing rotary table

### Masterhead Interface at the RAM

Only the drive shaft is located in the ram. All bearings and spindles are located in the machining units.

- High stiffness of the interface
- Long service life and high availability
- A single interface for all machining units (turning, milling, boring and grinding)

Different machining units to expand the application range of the ProfiTurn V

## Equipment and Options

Thanks to a broad range of equipment and options, the capability and productivity can be expanded even further:

- Large number of machining units (turning, milling, boring and grinding)
- Automatic change of the machining units
- Automatic tool changer in different designs: pick-up changer, wheel changer, chain changer, rack changer or tool arena with a robot
- Workpiece measuring with a switching probe
- Tool measuring / tool breakage monitoring
- Automatic tool management with the WaldrichSiegen Tool Management System
- Camera system for cutting process control
- Housing / coolant fume extraction
- Traversing operating platform
- Prepared for “Industry 4.0”

Special solutions available on request.

Tool changer with a chain magazine


Protected operating platform for an unimpeded view of the work area

# Technical Data

## Designs

Fixed rotary table

Traversing rotary table (Y-axis)

Portal in gantry design

## Dimensions

| | |
|---|---|
| Machining diameter* | 3.0 – 14 m |
| Machining height* | 2 – 14 m |
| Workpiece weight | Up to 500 t |

## Rotary Table

| | |
|---|---|
| Faceplate diameter* | 2 – 12 m |
| Drive power | 100 – 350 kW |
| Torque | 60 – 560 kNm |
| Speed | 0.5 – 280 $min^{-1}$ |

(* in 500 mm steps)

## Turning and Milling Units

| ram (mm) | 300 | 350 | 400 | 450 | 550 | 600 |
|---|---|---|---|---|---|---|
| Power (kW) up to | 38 | 68 | 68 | 80 | 103 | 140 |
| Torque (Nm) up to | 1,575 | 2,500 | 2,500 | 2,750 | 7,500 | 11,000 |
| Speed ($min^{-1}$) up to | 3,000 | 6,000 | 6,000 | 6,000 | 4,000 | 2,500 |
| C-axis | +/- 190 indexed, continuous (ram ≥ 400 mm) | | | | | |
| ram traverse | < 1.25 – 4 m | | | | | |

PROFITURN V

Ident-Nr. 2023/01-EN · Subject to change

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