

**VT-SERIES  
VT 2 · VT 4**



VERTICAL SHAFT TURNING MACHINES

think

VERTICAL



- + Vertical machining with four axes
- + Powerful working spindle
- + Integrated automation



TURNING MACHINE  
VT 2 · VT 4

EFFICIENT

## Maximum Performance for Shaft Production

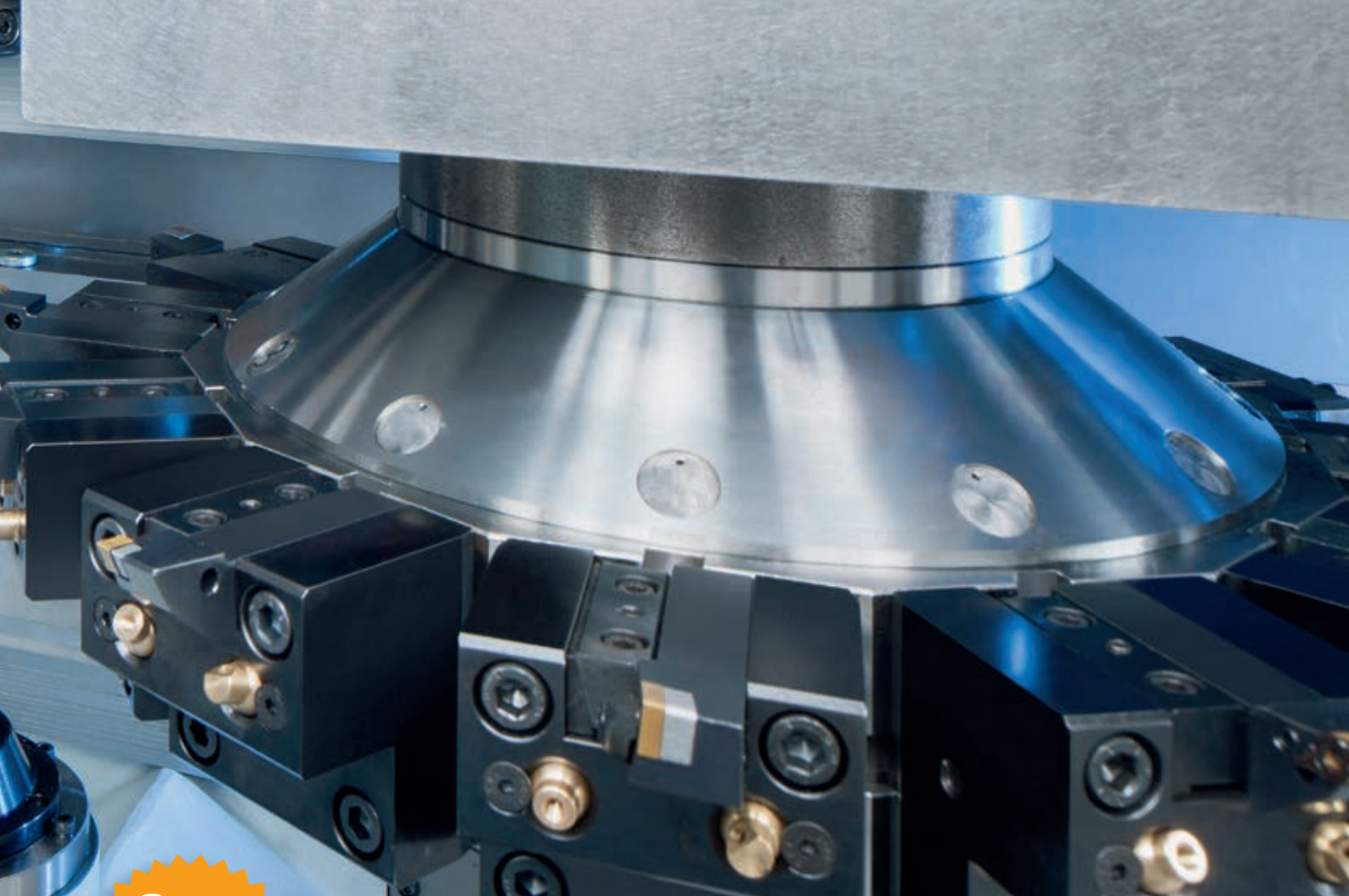
**Fast processes are required for machining large quantities of shafts. Both the machining process and the loading and unloading processes must be completed extremely quickly. The VT 2 and VT 4 machines guarantee the maximum performance you require.**

Four axes, short distances and a powerful main spindle – these are the strengths of the VT-series. The full effect of these can be felt in particular when machining large quantities. A key factor here is the machining of parts

from two sides. This greatly reduces the machining time. Two tool turrets, each with eleven tool positions which can be equipped with turning tools or driven tools, ensure machine flexibility.

**Automation: fully integrated in the machine.**

The VT-machines are loaded and unloaded via the turrets. While one work-piece gripper (in the turret) transports a new component into the machine, the other removes the finished one. The entire process only takes a few seconds.



**6 SEC.**  
**WORKPIECE**  
**CHANGEOVER**  
**TIME**



**THREE KEY SUCCESS FACTORS**

- 1. REDUCED MACHINING TIMES**  
 due to four-axis machining
- 2. SHORTER IDLE TIMES**  
 thanks to simultaneous loading and unloading of components
- 3. LOWER INVESTMENT COSTS**  
 thanks to integrated automation

**TECHNICAL DATA**

	<b>VT 2</b>	<b>VT 4</b>
Chuck diameter	160 mm 6 inch	250 mm 10 inch
Swing diameter	210 mm 8.5 inch	270 mm 10.5 inch
Workpiece diameter, max.	100 mm 4 inch	200 mm 8 inch
Workpiece gripper diameter, max.	63 mm 2.5 inch	90 mm 3.5 inch
Workpiece length, max.	400 mm 15.5 inch	630 mm 25 inch
Spindle nose – quill distance	848 mm 33.5 inch	870 mm 34 inch
» Option: main and counter spindle / W1 + 100 mm	600 / 700 mm 23.5 / 27.5 inch	–
» Option: spindle at the bottom	567.5 mm 22.5 inch	–
» Option: tailstock 100 mm lower	–	970 mm 38 inch
» Option: spindle 160 mm higher / 109 mm lower	–	1,030 / 761 mm 40.5 / 30 inch
X-axis travel	336 mm 13 inch	395 mm 15.5 inch
Z-axis travel	625 mm 24.5 inch	810 mm 32 inch
Y-axis travel (optional)	± 25 mm ± 1 inch	± 25 mm ± 1 inch
Main spindle		
» Power rating, 40% / 100%	17.9 / 14.1 kW 24 / 19 hp	38 / 29 kW 51 / 39 hp
» Torque, 40% / 100%	142 / 90 Nm 105 / 66 ft-lb	250 / 200 Nm 184 / 148 ft-lb
» Speed, max.	6,000 rpm	4,500 rpm
Turret tool stations	2 x 11 (2 x 1 Gripper)	2 x 11 (2 x 1 Gripper)
Rapid-traverse rate X / Y / Z	30 / 15 / 30 m/min 1,181 / 591 / 1,181 ipm	30 / 15 / 30 m/min 1,181 / 591 / 1,181 ipm
Speed driven tools, max.	12,000 rpm	9,600 rpm
Torque of driven tools 30% / 100%	30 / 16 Nm 22 / 12 ft-lb	56 / 33 Nm 41 / 24 ft-lb

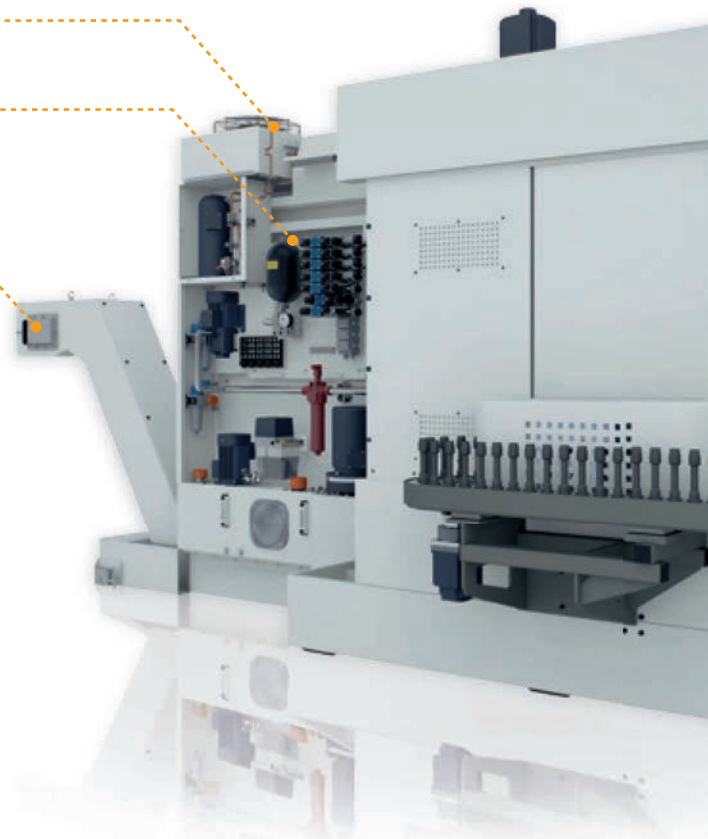
# AUTOMATED PRODUCTION



Cooling Unit

Hydraulic  
System

Chip Conveyor





# Automation of the VT-Machines

**Automatic loading and unloading is an integral part of the VT-machine concept.**

The raw parts are transported from the workpiece belt in a vertical position into the machine by the workpiece grippers in the two turrets. The belt takes the form of a chain cycle belt with workpiece carriers.

Different workpiece lengths and diameters are defined in the NC parts program.



Control System

Revolving Belt (Automation)

Revolving Belt (Automation)



## "O"-AUTOMATION

The "O"-automation system provides a workpiece store for up to 24 (VT 2) / 28 (VT 4) workpieces. Several VT-machines can be interlinked easily in a cost-efficient way using pick-and-place units, changers or robots.

The basis of the VT-machines is the machine body made of MINERALIT® polymer concrete. The main body supports all the necessary technology units: the working spindle, two turrets and a tailstock.

The compact machine design means that the modules can be closely positioned while the maintenance and servicing areas are easily accessible from the rear. This makes the VT-machines easy to link and therefore ideal for line production.

## KEY FEATURES

- 1. GOOD ACCESSIBILITY**  
All the service units are ergonomically arranged.
- 2. LOW SERVICE COSTS**  
All the units are always accessible (electrics, hydraulics, cooling system, cooling lubricant and central lubrication system).
- 3. EASY TO OPERATE**  
The control interface remains the same regardless of the control unit.



## DESIGN OF THE VT-MACHINES





# ACCESSIBILITY

At home all over the world.

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