

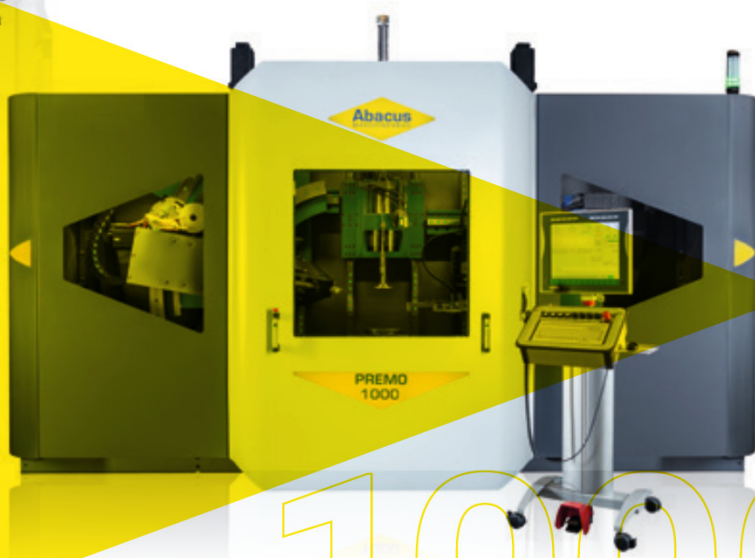
Abacus
MASCHINENBAU

6000

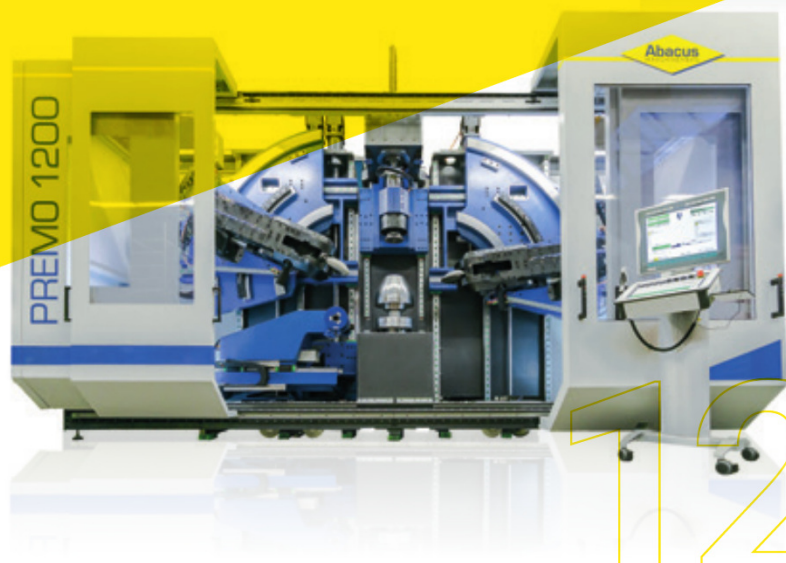


SPINNING MACHINES **PREMO-SERIES**

600/HD | 1000/HD | 1200/HD



10000



12000

PREMO
global spinning

4.future

www.abacus-maschinenbau.de

Staying one decisive step ahead. This is what Abacus Maschinenbau has stood for - for over 30 years. And that's why metal processing companies worldwide also rely on our expertise and experience for the digital transformation of their business. As a reliable partner and technological pioneer, we create added value: through spinning systems that also produce autonomously at the highest quality, and pave the way to smart metal spinning by means of data-based metal spinning. Digitally networked, intelligent, and highly automated - these are the metal spinning operations of tomorrow. For better decisions, higher productivity, and more efficiency.

We have laid the foundation for this by connecting the spinning machines to the Internet and analyzing the data to increase performance and availability. We now offer you an entire ecosystem for digitizing value creation in spinning plants. You benefit from intelligent services such as predictive maintenance through PREMO global spinning 4.future from Abacus Maschinenbau.



Dipl.-Ing. FH Derk Weber
Managing Director

A portrait of a middle-aged man with grey hair, smiling, wearing a black button-down shirt. He is standing in front of industrial machinery. A yellow circle with a dot is positioned to his right, with a line connecting it to his name.



B.Sc. Bartosch Wolnik
Plant Manager

A portrait of a man with a beard and glasses, smiling, wearing a black button-down shirt. He is standing in front of industrial machinery. A yellow circle with a dot is positioned to his right, with a line connecting it to his name.

PREMO
global spinning

4.future

WE'LL ACCOMPANY YOU. ON YOUR WAY INTO THE DIGITAL FUTURE.

Dipl.-Ing. FH Thorsten Beling
Managing Director

State-certified Technician

Konstantin Ster
Service/Application Technology

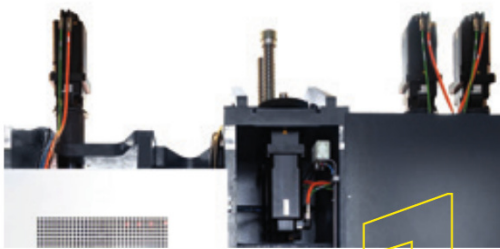
Dipl.-Ing. FH Bernhard Schräer
Software Development

Certified technician
Peter Middeldorf
Construction

**PREMO
600HD**

YOUR TASKS

OUR SOLUTIONS



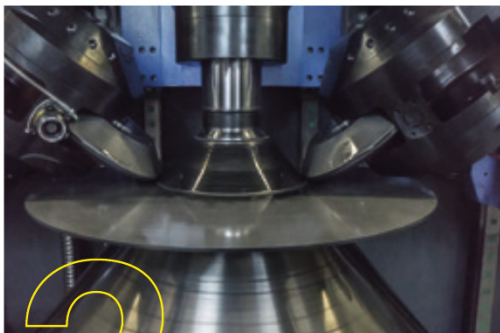
100% servo machines

State-of-the-art drive technology in all axes. For highly precise positioning and repeatability. Prevents temperature-related fluctuations as in machines with hydraulic drives. State-of-the-art control cabinet construction with active air conditioning technology. Maintenance-free and energy-saving (up to 64% compared to hydraulic-operated machines).



Additional swivel axis

For optimum force flow on the workpiece. Freely programmable angle position, can also be swiveled during processing. Optimized sickle process. Higher speeds and feeds are possible. Better surface quality on the entire contour. Reduced wear on the spinning roller. Several radii can be used on one spinning roller with a swivel range of 90° to 30°.



100% vertical spinning

We have turned the spinning process on its head and thus use gravity. The blank is placed on the die form and the finished spun part does not fall out of the machine. The operator has optimum access to the tool and the spun products.



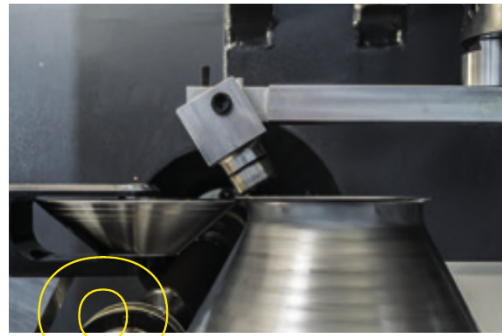
Automatic shape measurement

This option is available to enable our customers to continue to make optimum use of existing and reworked forms. Accurate form measurement enables manufacturing processes to be optimized and thus increases the quality of the products.



Defined forces and laser measurement

Force measurement directly on the spinning rollers and laser measurement of the spinning rollers (roller contours and wear corrections) are prerequisites for high-precision and consistent quality during production.



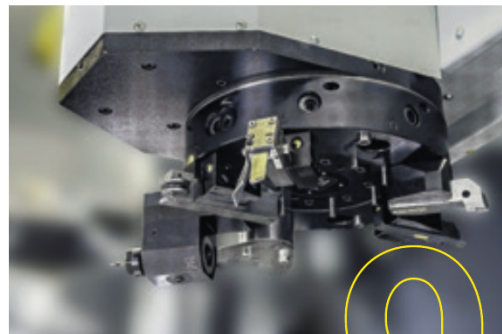
2 channel control

By using a 2-channel control system, the main and secondary support can perform completely separate tasks simultaneously.



Freely programmable lift, support roller

The roller operates synchronously with the turret at any angle in any position and can be programmed for distance and/or force. Thanks to this patented highlight, the word „sharp-edged“ reaches a new dimension when it is elevated – even at 90 degrees.



Secondary turret with 8 tool locations

The turret offers versatile and almost unlimited possibilities for holding insertion aids, cutting knives, flanging, beading and embossing rollers, and other auxiliary tools. Optionally, the Sauter turrets can be equipped with power tools so that engraving, drilling and even complex milling work can be carried out on the PREMO spinning machine.



Gemini spinning

Thanks to the newly developed feature „Gemini light“ in the Abacus control system, it is possible to drive an opposite roller in parallel on the secondary turret. This allows the smallest spinning chucks to be used and to form demanding materials as well as complicated geometries effortlessly. Free-form spinning can also be easily implemented with this technique.



4 press rollers on the main turret

The optional 4-way turret on the main axis with 4 spinning roller bearings incl. pre-set spring pack and a change time of < 2 sec. leaves nothing to be desired.

PREMO-SERIES

MACHINE OVERVIEW



PREMO 600/HD



PREMO 1000/HD



PREMO 1200/HD

Machine Data

Machine Weight	approx 7,5 or 16,0 to. Depending on features	approx 16,0 or 21,0 to. Depending on features	approx 21,0 to. or 33,0 to. Depending on features
Dimensions W / H / T	3500 / 3400 / 1900 mm	4800 / 3600 / 2400 mm	6300 / 3800 / 3300 mm
connection data	400V +/-5%, 50-60 Hz. Fuse 80 or 100 A	400V +/-5%, 50-60 Hz. Fuse 100 or 125 A	400V +/-5%, 50-60 Hz. Fuse 125 A or 160 A
Max. pressing force	15 KN or 30 KN	30 KN or 60 KN	60 KN or 90 KN

Control

CNC control Programming system	Beckhoff TwinCAT-CNC	Beckhoff TwinCAT-CNC	Beckhoff TwinCAT-CNC
Software packages opt.	PREMO-Kompakt	PREMO-Kompakt	PREMO-Kompakt

Main Spindle

Spindle head DIN 55027	DN. 6 or DN. 8	DN. 8 or DN. 11	DN. 11 or DN. 15
Motor power	21 KW or 36 KW	36 KW or 47 KW	47 KW or 57 KW

Tailstock

Outer tailstock			
extension path	500 mm	650 mm	850 mm
Max. pressing force	15 KN or 30 KN	30 KN or 60 KN	60 KN or 90 KN

Opt. Inner tailstock

outward path	500 mm + 160 mm	650 + 160 mm	850 + 160 mm
Max. pressing force	15 KN or 30 KN	30 KN or 60 KN	60 KN or 90 KN

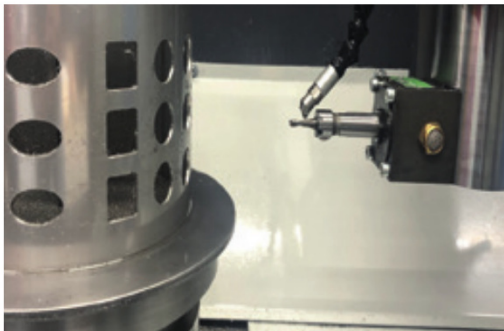
Spinning form

Jaw width:	800 mm	1000 mm	1100 mm
Form weight:	300 kg	600 kg	1200 kg
Max. rim diameter	600 mm	1000 mm	1200 mm



Spinning

On the PREMO spinning machines, it can be spun classically via the so-called teach-in, but it can be supported by features such as „generating automatic sickle.“



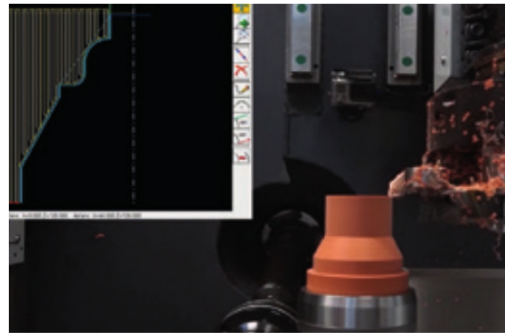
Milling

With an optional milling unit, for example, different-shaped hole patterns or engravings can be milled in. This avoids the need to change to a separate processing machine.



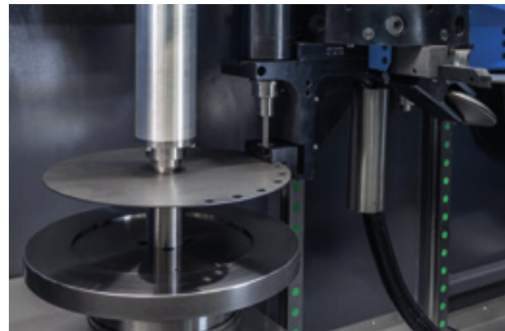
Insertion Aids

In order to always place the round blank 100% in the center, a programmable insertion aid is used.



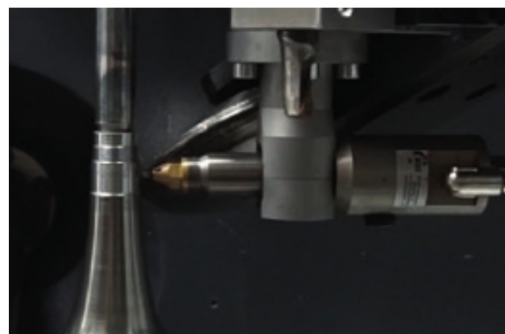
Turning

This feature allows you to create the form directly on the PREMO spinning machine. Setup time is reduced, the need for a machine producing the mold is eliminated, and the prototype manufacturing process becomes much faster.



Punching

Holes can be inserted into the edge of the rim diameter in the process using an optional punch.



Engraving

Serial numbers, labels, or any graphics can be engraved on the top surface of the workpiece. Position and height are variable and independently adjustable.

FULLY AUTOMATED SPINNING

THE HIGHEST POSSIBLE VALUE CREATION



The automation of THE PREMIO series is the logical step toward increasing productivity and plant efficiency and thus significantly increasing value creation. The automation that has already been used several times and im-

plemented in our control system (software package: PREMIO automation) is the guarantee for optimized production. A core element is the perfect harmonization of the individual production steps up to the „choreography“ of the processes, waiting positions, and placement of the workpieces. Immediate reports of system errors or excessive tolerance deviations of the workpieces can be sent by SMS or email for the fastest possible resumption of the manufacturing process.

THE SOFTWARE MAKES THE DIFFERENCE

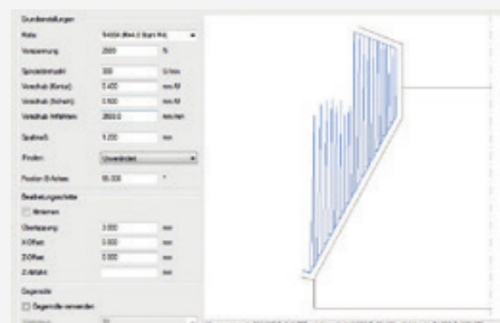
INNOVATIVE HIGHLIGHTS FROM THE PREMIO CONTROL SYSTEM

The close cooperation with our customers in software development ensures an intuitive and practical user experience. Individual features can be added to different production steps, individually configured, and optionally executed. The innovative software features leave room for endless possibilities for individuals and make the entry into professional spinning much easier, especially for new customers without much programming experience. The rapid prototyping „spinning to go“ ensures the rapid development of prototypes and sample parts. Small lot sizes, sample parts, and demonstration pieces can be implemented without long setup times.



Spinning path reworking/optimizing

All travel paths can be reworked for optimizing movement sequences after teach-in. The entry into an already taught-in workpiece or product is possible at any position. The data is saved graphically and as a CNC-Code.



Free-Form Spinning

Spinning without a form. To do this, a rotating cylinder can be mounted as a counter form on the side revolver. This moves synchronously with the movement of the spinning roller and creates the desired contour.



Edge Folding

Turning Technology

Corner Shaping

[illegible]

Engraving

[illegible]

Automatic Spinning

Controlled parameter spinning paths are generated automatically. The teach-in of the motion sequences is reduced to a minimum.

PREMO SMART SERVICE 4.0

Less complexity.

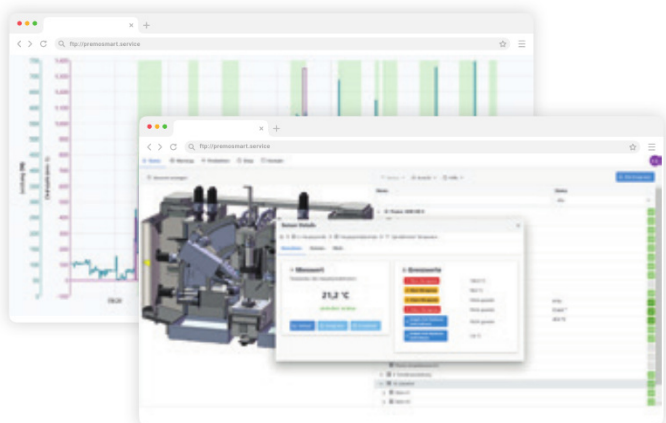
More profit.

Pressures rethought.

Get comprehensive production, product quality and maintenance analytics.

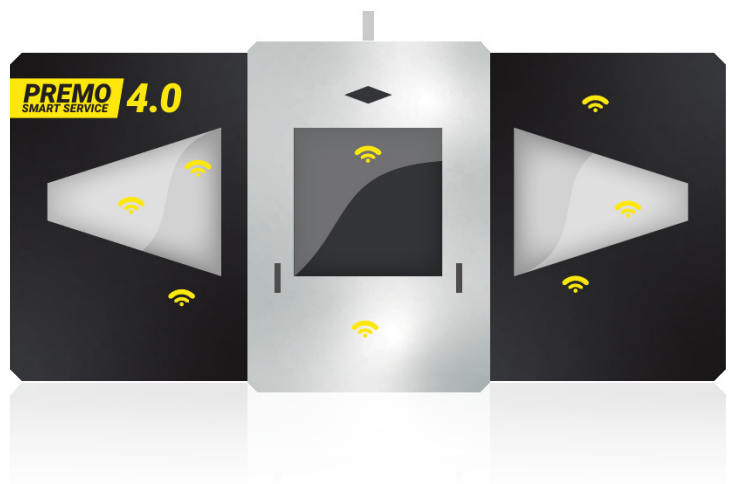
MACHINE CONDITION MONITORING

Condition monitoring is the continuous monitoring of machines by means of sensors installed on critical components or assemblies. Temperatures, vibrations, power, etc. are measured in order to detect possible problems in the machine at an early stage and to take measures in time. Premo SmartService 4.0 offers you the possibility at any time to either in real time or via the history of past measurement data either in real time or via the history.



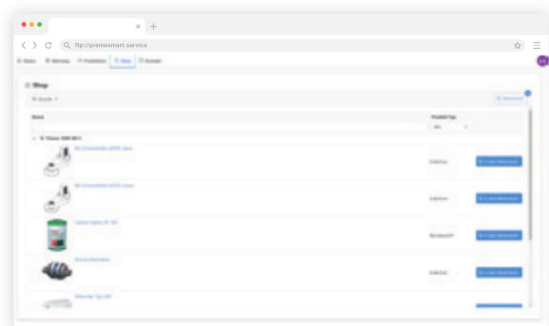
ANALYSIS

Premo SmartService 4.0 provides a solution for intelligent reports to provide core information on production of parts, machine operation, energy consumption (electricity, compressed air, etc.) and upcoming maintenance, compressed air, etc.) The reports can be sent weekly, monthly or quarterly.



SHOP

The shop offers you the possibility to order spare parts, operating materials and accessories directly from Abacus with just a few clicks. In this way, sources of error in procurement can be and optimise the maintenance of the Premo spinning machines.



REMOTE MAINTENANCE

Remote Maintenance enables with the help of e.g. AR glasses, a tablet or smartphone a deep insight into the machine. Problems can be localised in the simplest way with the help of this technology. It enables the support of the customer by the Abacus maintenance staff. Customers are Abacus service technicians direct customers to specific components and are supported in their maintenance measures.



Increase production.

Minimise downtimes.

Detect failures at an early stage.

Secure know-how digitally.

Optimise maintenance.

Save costs.

Demonstrate sustainability.

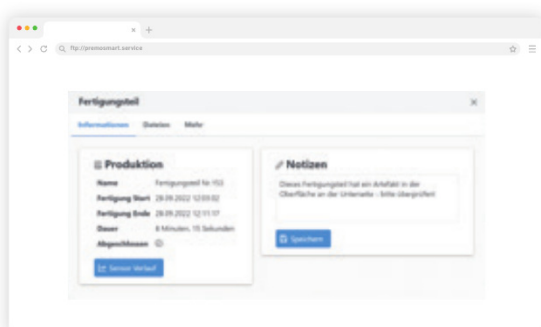


PREDICTIVE MAINTENANCE

Predictive maintenance enables the failure of machine components with the help of measurement data even before a machine stops. predict the failure of machine components with the help of measurement data, so that appropriate maintenance measures can be carried out in good time to minimise downtimes.

PRODUCT MONITORING

Product Lifecycle Management allows you to the basic and process data of every part produced on your Premo spinning machines. This enables optimal quality management and forms the data basis for production, such as OEE and other key figures. For production parts with special quality requirements, it is possible to generate individual QR codes after production and to make the production part 100% traceable with this.



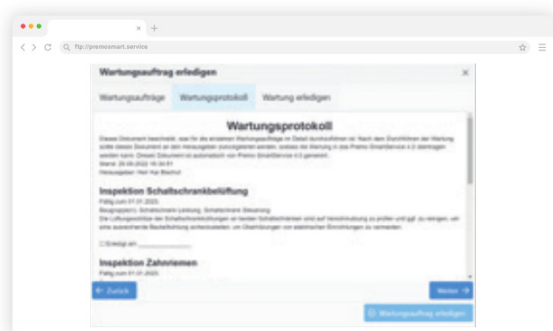
PUSH-NOTIFICATION

Intelligent communication of digital applications. As soon as a measured value of the monitoring exceeds its specific limit value, a fully automated message is sent via system by e-mail or push message directly to the responsible employees.



MACHINE MANAGEMENT

Every maintenance and all service interventions are historically logged and traceable over the entire life cycle of the machine. Thanks to the complete logging, it is possible to save the know-how and problem solving of the maintenance personnel directly in Premo SmartService 4.0. Maintenance forms and checklists are generated and stored to ensure optimal cooperation and communication between the client and the maintenance staff.



**OUR TOOLS FOR YOUR
DIGITAL FUTURE.**



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1,600 square meters of production area, many years of experience and a highly qualified team offer the best prerequisites to come up with new solutions for you with creativity and innovation.

www.abacus-maschinenbau.de