



mit uns technisch überlegen

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# Highest standards in roll grinding

**GEORG** ultragrind



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It is our ambition to develop leading technologies that help to optimize production processes significantly.

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What matters for our customers are precise results. And on them they can rely with us.

Special challenges motivate our ambition for technical progress. In close cooperation with our customers we develop exceptional machine tools that perfectly match with all kind of machining tasks. With creativity and unrivaled know-how we engineer technologically leading complete solutions that will ensure you optimal and long-term machining results.





# Faster

with GEORG

30%  
time savings

## Cubic boron nitride

Cubic boron nitride (CBN) is next to diamond the second hardest material. The great advantage compared to commonly used corundum grinding discs is that - if used properly - there is almost no heat accumulation. Tools made from CBN wear down very slowly, thus extending the service time compared to conventional abrasives. All **GEORG ultragrind** machines are designed for use of CBN abrasives.

## Roll shop management

The roll shop management system offers a complete overview about all process parameters ensuring an efficient and economic production. All important key-performance-indicators are continuously monitored, recorded and evaluated. This results in an optimum material flow within the roll shop and in a reduction of the grinding costs.

## Two-point-measuring

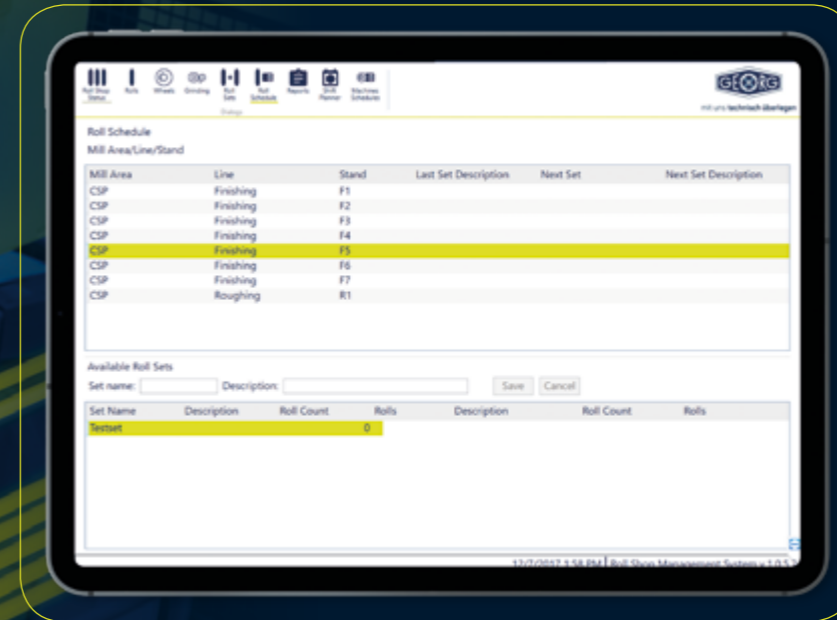
Two-point-measuring offers a significant increase in workpiece precision and drastic time savings as measuring takes place during the machining process and downtimes can be considerably cut.

# Digital Native

Smart manufacturing

less failure  
less idle  
less maintenance

higher productivity



## Condition Monitoring

With a permanent monitoring the machine availability can be increased.

## Predictive Maintenance

The change from a basic tool to an intelligent machine component: Based on measuring results and the actual load of the machine an individual maintenance plan is issued.

## Connectivity

With our **GEORG connected-services** you will get full quality and performance control: Complete process recording and data exchange to your ERP system/RSMS real-time service connection.

## Control system

The use of Siemens controls ensures a high availability and simplifies maintenance of all components. Outstanding in flexibility, dynamic response and precise control the SINUMERIK 840D sl is used in our machines.

# This is ultragrind

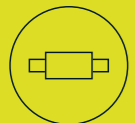
## Quick Facts



**Workpiece weight**  
0.1 – 300 tons



**Grinding diameter**  
50 – 2,000 mm



**Roll length**  
400 – 15,000 mm



**Grinding wheel power**  
20 – 180 kW

## Application

**GEORG ultragrind** roll grinding machines cover nearly all applications of roll grinding. Everything ranging from Sendzimir work rolls up to plate mill back up rolls can be ground on **GEORG ultragrind** machines.

Also many other rolls [like pinch rolls, table rolls, edger rolls, slitter shafts and others] in rolling mills which require frequent re-machining can be ground on **GEORG ultragrind** machines.

**GEORG ultragrind** machines have proven their precision and efficiency in all applications of carbon steel, stainless steel, specialty steel, titanium, aluminum and copper production.

## Features & Benefits



**Suitable for CBN abrasives**



**Fully integrated measuring system**



**Quick change of grinding wheels**



**Siemens components for control system**



**Roll shop management systems**



**Online service and maintenance friendly design**

- > High productivity with reduced auxiliary time
- > Low maintenance costs

- > Smart manufacturing ready
- > Real-time quality and performance control



## GEORG ultragrind SG 1

The **GEORG ultragrind SG 1** is especially suitable for machining of Sendzimir work- and back-up rolls in steel and stainless steel production. In combination with a loading and unloading system (robot or handling system) the **GEORG ultragrind SG 1** can grind rolls fully automatically.

- > Highest productivity (fully automatic loading – grinding - testing – unloading)
- > Reduced auxiliary times – more grinding time
- > Safe and environmentally friendly
  - emissions are kept within the machine
  - operator is not exposed to grinding dusts

### Main technical data

- > **Workpiece weight**  
0.1 – 1.5 tons
- > **Grinding diameter**  
25 – 450 mm
- > **Roll length**  
400 – 3,000 mm
- > **Grinding wheel power**  
18 kW

### Features

- > One bed, travelling workpiece
- > Machine enclosure
- > Siemens direct linear infeed motor
- > Automatic chuck
- > Fully automatic loading and unloading (robot/manipulator)
- > Dressing unit behind the wheel
- > CBN ready



## GEORG ultragrind SG 2

With a **GEORG ultragrind SG 2** most kind of work rolls of cold rolling mills, galvanizing lines, tandem cold rolling mills and skin pass rolling mills in steel, stainless steel, aluminum and copper production can be machined.

- > No foundation required
- > Damage-free loading and unloading by softloaders
- > Optimized usage of rolls with minimized stock removal
- > Safe and environmental friendly
  - emissions kept within the machine
  - operator not exposed to grinding dusts

### Main technical data

- > **Workpiece weight**  
1 – 5 tons
- > **Grinding diameter**  
350 – 500 mm
- > **Roll length**  
2,000 – 5,000 mm
- > **Grinding wheel power**  
53 kW

### Features

- > One bed, made from UHPC
- > Travelling wheelhead
- > Machine enclosure
- > Siemens direct linear infeed motor
- > Softloaders
- > On-the-fly measuring up to barrel end
- > CBN ready





## GEORG ultragrind 10/25/50

The **GEORG ultragrind** machines of the series 10/25/50 have proven their strength at the machining of work- and back up rolls of cold- and (heavy duty) hot rolling mills for the production of steel, stainless steel, aluminum, titanium or special steels. Applications in CSP<sup>®</sup>, CEM<sup>®</sup>, Steckel- or plate rolling mills are also covered by this series of machine.

- > Hydrostatic grinding spindle
- > Wear-free fully hydrostatic guide ways
- > Optimized usage of rolls with minimized stock removal
- > Damage free loading and unloading by softloaders
- > Removal or external turning of chocks not required
- > Grinding with or in chocks possible
- > Automatic roll coupling

### Main technical data

- > **Workpiece weight**  
5 – 300 tons
- > **Grinding diameter**  
500 – 2,000 mm
- > **Roll length**  
2,000 – 15,000 mm
- > **Grinding wheel power**  
135 – 180 kW

### Features

- > Hydrostatic guideways in all axes
- > Steady rests in modular design
- > Softloaders
- > Automatic roll neck detection and roll coupling
- > Chock turning device
- > Starting drive for high roll weights
- > On-the-fly measuring up to barrel end
- > CBN-ready

## GEORG protectionworld

Service with real added value.

The **GEORG protectionworld** Life Cycle Quality Management offers our customers an all-round carefree package for the entire life cycle of their machine. Our customers can concentrate on their core business.

Our services range from planning and consulting to production, monitoring, strategic maintenance, troubleshooting and comprehensive training concepts.

The **GEORG protectionworld** Life Cycle Quality Management helps to lower the operational costs of the machines significantly and to rise the profit of our customers.

GEORG Service is active for our customers worldwide. In order to meet the specific requirements best, we will be pleased to work out a customized quotation.



georg.com



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