



SMART CORE PRO software

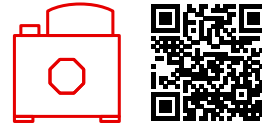
Profile deviations and surface defects at a glance



SMART CORE PRO provides all relevant data in real time at a glance.

SMART CORE PRO

SMART CORE PRO software provides users of CONTOUR CHECK SHAPE systems with intelligently configured visualization of geometrical data that can be applied directly in the process line and in the data structures of an Industry 4.0 production environment.



Find out more about
CONTOUR CHECK SHAPE –
our solution to fit your
expectations

See

SMART CORE PRO presents all of the geometrical data needed for the rolling process clearly and in real time.

It is designed for use in rolling:

- Round stock like rods and tubes
- Rebar
- Flat and rectangular profiles
- Hexagonal and octagonal profiles

Measurement results can be presented as desired:

- Contour as circle chart
- Line diagrams
- Process with defect map
- Three-dimensional visualization

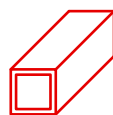
With a few mouse clicks, authorized users can configure all screen masks to display exactly the data they need to see. For example, the software shows rolling-mill workers the profiles as circle or line graphics, while quality assurance gets comprehensive information and evaluates statistical data.



Wire



Rebar



Square



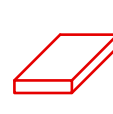
Hexagonal



Bar



Tube



Flat



Octagonal



Even complex shapes like reinforcing steel can be visualised.

Analyze

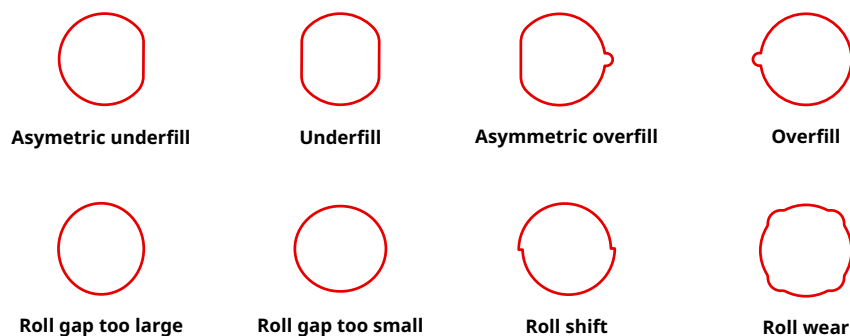
LAP's light-section sensors capture such form deviations as:

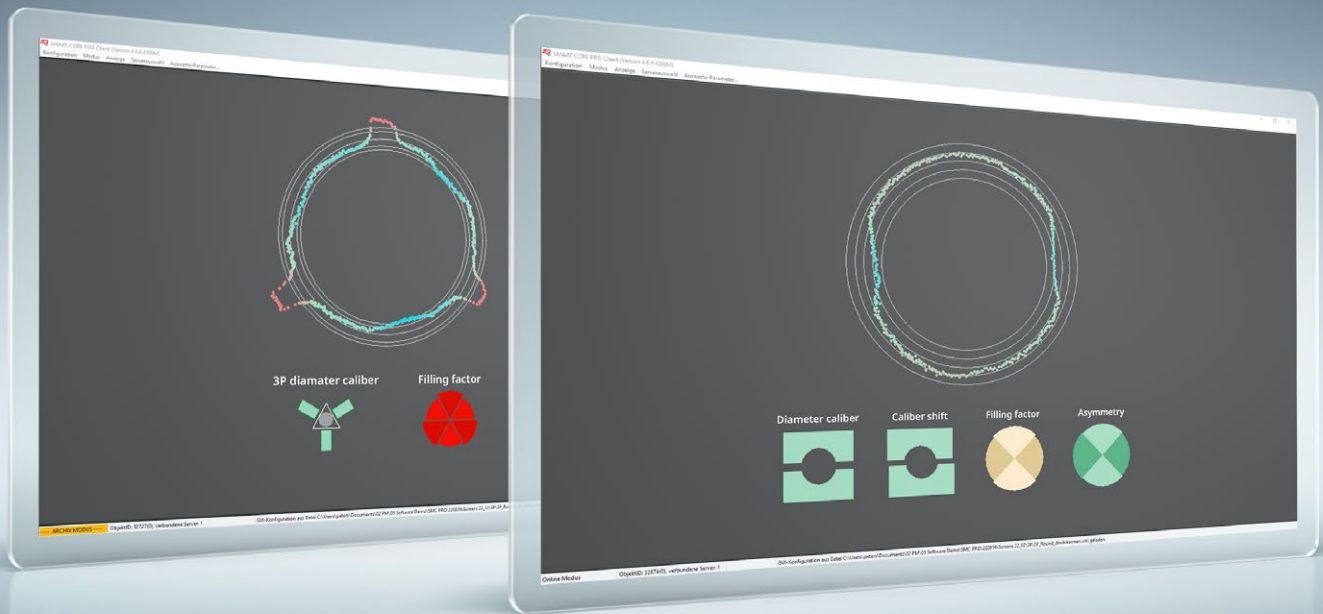
- Divergent dimensions of rolled material
- Over- or underfilling on one or both sides
- Surface defects
- Roll offset and wear

For two- and three-roller stands, reliably detecting the orientation of the profile is critical. An algorithm devel-

oped especially for SMART CORE PRO compensates for any twisting of the rolled material between rolling stand and measurement point. This ensures that the contour is always captured and presented in the correct position.

This makes it possible to unambiguously assign core dimensions, like groove base and gap, shoulder, and seam, to the rolling stand setting and the respective rollers, which is a fundamental requirement for automatic control of the rolling process.





Icons with colour indication give direct feedback for roller adjustments.

Act

Unambiguous detection and classification of profile deviations and surface defects allows targeted elimination of the causes.

SMART CORE PRO distinguishes between various convex and concave contour deviations, which are assigned to one of five classes based on their length.

This removes subjective estimation from the rolling stand adjustment process: SMART CORE PRO gives

specific information on how to adjust the stand.

For example, the measured values for a roll offset can flow directly into the adjustment's target value.

That means that the rolling stand can be trimmed faster and more accurately after product changes, raising the certainty of producing within specified tolerances again within a short time, and so increasing rolling-mill output.



Steps with hard edges



**With convex and concave dents
sharp contours**



Steps with smooth edges



**With convex and concave dents
soft contours**

SMART CORE PRO detects and classifies different surface defect forms.



3D visualization, circle chart, defect map, and defect diagram facilitate rolling process analysis.

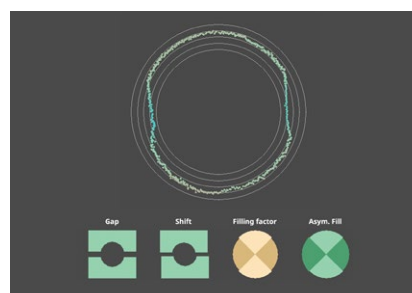
Improve

The integral database stores all measured values for several months. Users can access all geometrical information from any computer in the company intranet or cloud, regardless of platform. Extensive statistical tools enable offline evaluation of stored data based on various criteria, like per band, roller lot, or batch.

SMART CORE PRO has its own communications gateway, by which it provides measurement data to

super-ordinated systems using industry-standard process interfaces. This means it is prepared for deep integration in networked systems like MES or ERP. If necessary, LAP will adapt the interfaces to the individual customer environment.

The systems thus supply extensive input for improving processes, for example for big-data analysis or supply-chain optimization applications.



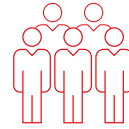
Exaggerated contour presentation clearly shows even small deviations.

About us

LAP is one of the world's leading suppliers of systems that increase quality and efficiency through laser projection, laser measurement, and other processes. Every year, LAP supplies 15,000 units to customers in industries as diverse as radiation therapy, steel production, and composite processing. LAP employs 300 people at locations in Europe, America, and Asia.



90+
Partners



300
Employees



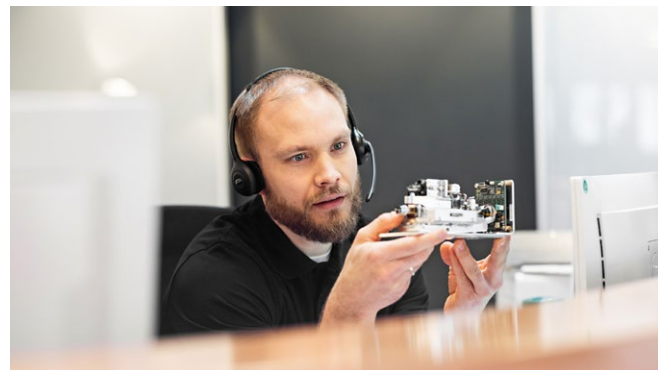
8
Locations



Quality

We work to uniform standards and with certified processes. For us, "Made in Germany" means the highest precision in manufacturing and quality inspection of each device. For our customers, this means planning and process certainty.

All our worldwide locations use a quality management system according to EN ISO 13485 or EN ISO 9001. Our products have all the necessary approvals and registrations almost everywhere in the world.



Service

We ensure the maximum availability of your equipment so you can concentrate on your core process. Wherever you need us, our certified service technicians are quickly on site in any time zone. We support you from installation and commissioning, through user training, up to maintenance, repair, or unit replacement.

Our efficient logistics ensure the fast availability of spare parts worldwide. For technical questions and support, our helpdesk is at your disposal by telephone, via e-mail, or remote diagnosis.



**made
in
Germany**

Contact us!
info@lap-laser.com

Contact us!

P +49 4131 95 11-95

E info@lap-laser.com

in LAP Laser

▶ [laplaser](#)

LAP GmbH Laser Applikationen

Zeppelinstr. 23

21337 Lüneburg

Germany

LAP GmbH Laser Applikationen, Germany / LAP Measurement Technology GmbH, Germany / LAP Sued GmbH, Germany
LAP FRANCE SAS, France / LAP Laser Applications Asia Pacific Pte. Ltd., Singapore / LAP Laser Applications China Co. Ltd., China
LAP of America Laser Applications, L.L.C., USA / LifeLine Software, Inc., USA / Our worldwide partners: Argentina / Australia / Brazil / Bulgaria
Canada / Chile / Colombia / Croatia / Czech Republic / Dominican Republic / Egypt / Finland / Greece / Hungary / India / Indonesia / Italy / Japan
Jordan / Kuwait / Latvia / Lebanon / Lithuania / Malaysia / Mali / Malta / Mexico / Netherlands / Norway / Oman / Philippines / Poland / Portugal / Qatar
Romania / Saudi Arabia / Slovakia / Slovenia / South Africa / South Korea / Spain / Sweden / Switzerland / Taiwan, China / Thailand / Turkey
United Arab Emirates / United Kingdom / Venezuela / Vietnam / Zambia

LAP is a registered trademark of the LAP Group in several countries worldwide including the USA and EU.
Designations of other companies and products are used for identification purposes only (e.g. to inform about the compatibility). These names can be trademarks or registered trademarks which belong to their respective owners. The use of any of these trademarks by third parties may infringe the rights of the respective owner.

www.lap-laser.com/smart-core-pro