

RDMS

LASER PROFILE GAUGES FOR WIRE, ROD, BAR AND TUBES



INLINE MEASUREMENT FOR PRODUCTION MONITORING
AND QUALITY CONTROL



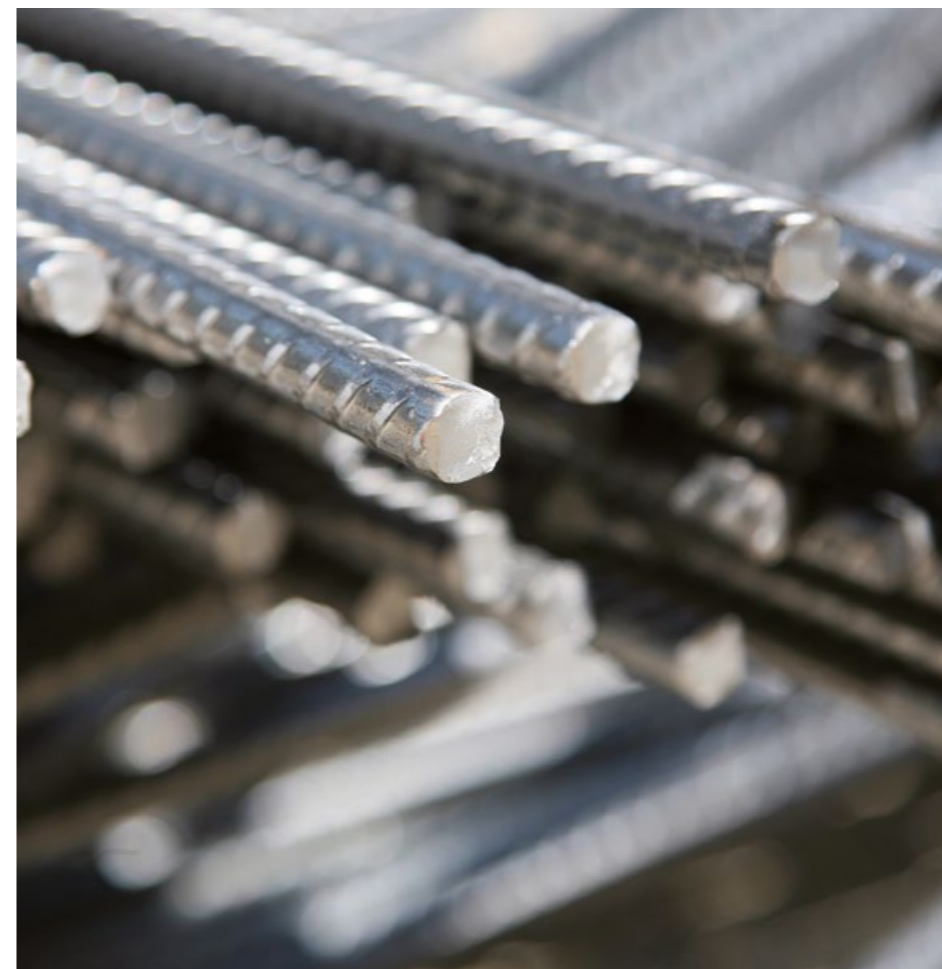
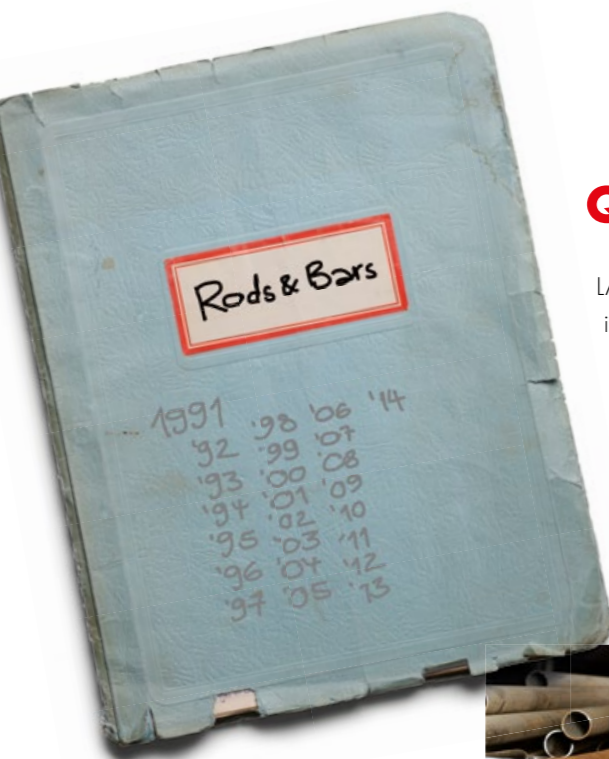
LAP RDMS – LASER PROFILE MEASUREMENT FOR LONG PRODUCTS

Wire, rod, bar, tubes - RDMS are THE solution for inline measurement of long products before, during or after rolling. Profiles may be round, square or hexagonal, glowing, hot or cold - RDMS measure relevant dimensions, detect changes in shape and rolling defects. The system provides warnings if tolerances are exceeded so you can intervene before scrap is produced. Start-up times after product changes are reduced substantially by measuring from the first moment material comes through.

RDMS are equipped with 2, 3, 4 or 6 measuring axes. Depending on application, they may be fixed, tilting permanently (SWING) or tilting periodically (MIXED MODE). For rebar and 3-lobed shapes as rolled frequently by 3-roll mills, LAP offers special solutions.

QUALITY SINCE 1984

LAP laser measurement systems are successfully used worldwide in metals industries, mostly in steel industry. They prove themselves daily in the harsh environment of rolling mills and in similar working conditions. RDMS have been a part of it from the beginning - first with analog sensors, intricate frames and customized software for every customer. Today with digital laser technology, decoupled carrier frame in solid steel housing with fixed or turning measuring axes, modular software and intuitive user interface with selectable views of profile, process and statistics. But always with air purge for cleaning the sensor windows and staying in the temperature range for safe operation. Always with minimum maintenance effort. And always with an open ear for you, our customers, and your special requirements.



RDMS BENEFITS

SUPERVISION

RDMS show you what happens in your production. You can see deviations and errors occurring and you can check the impact of corrective actions – without losing time or producing scrap.

ANALYSIS

Use filed data for precise analysis of production parameters. Save money by using the optimum parameter set.

QUALITY

Built like a tank – high-tech inside. More than 25 years of experience tell us what you need in the environment of rolling mills.

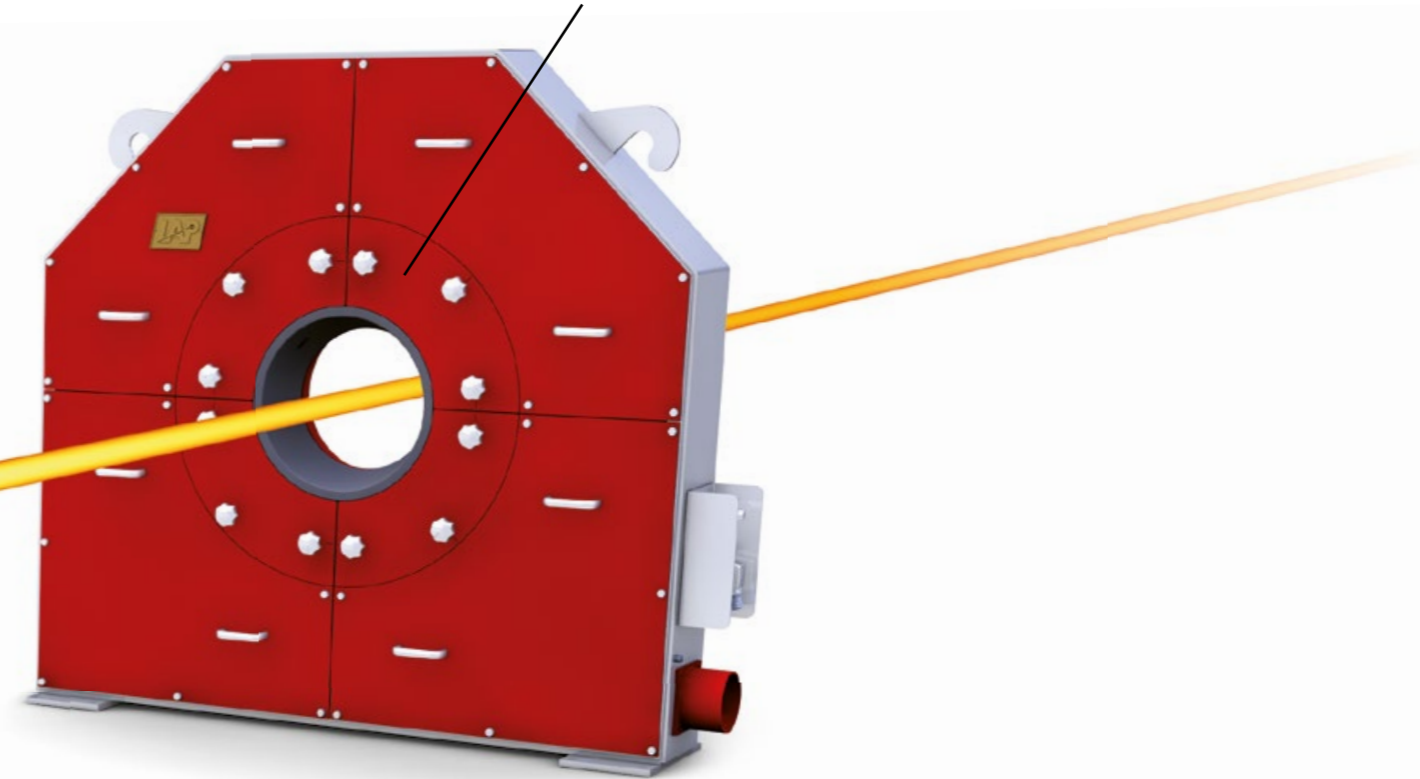
USABILITY

The user interface has been completely redesigned and meets the needs of today's working environments. Choose from different views to configure your optimum process monitoring.

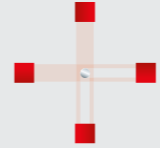



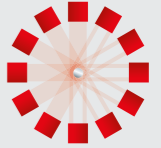
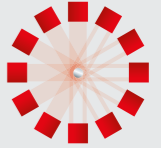
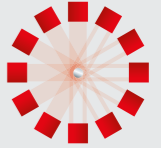














LAP RDMS – EXTREMELY ROBUST, EXTREMELY RELIABLE, EXTREMELY PRECISE.

NEW Higher accuracy by mounting all sensors on a mechanically stress-free base plate, separated from the housing.

NEW Divided covers. Inner covers can be unscrewed manually for easy maintenance access.



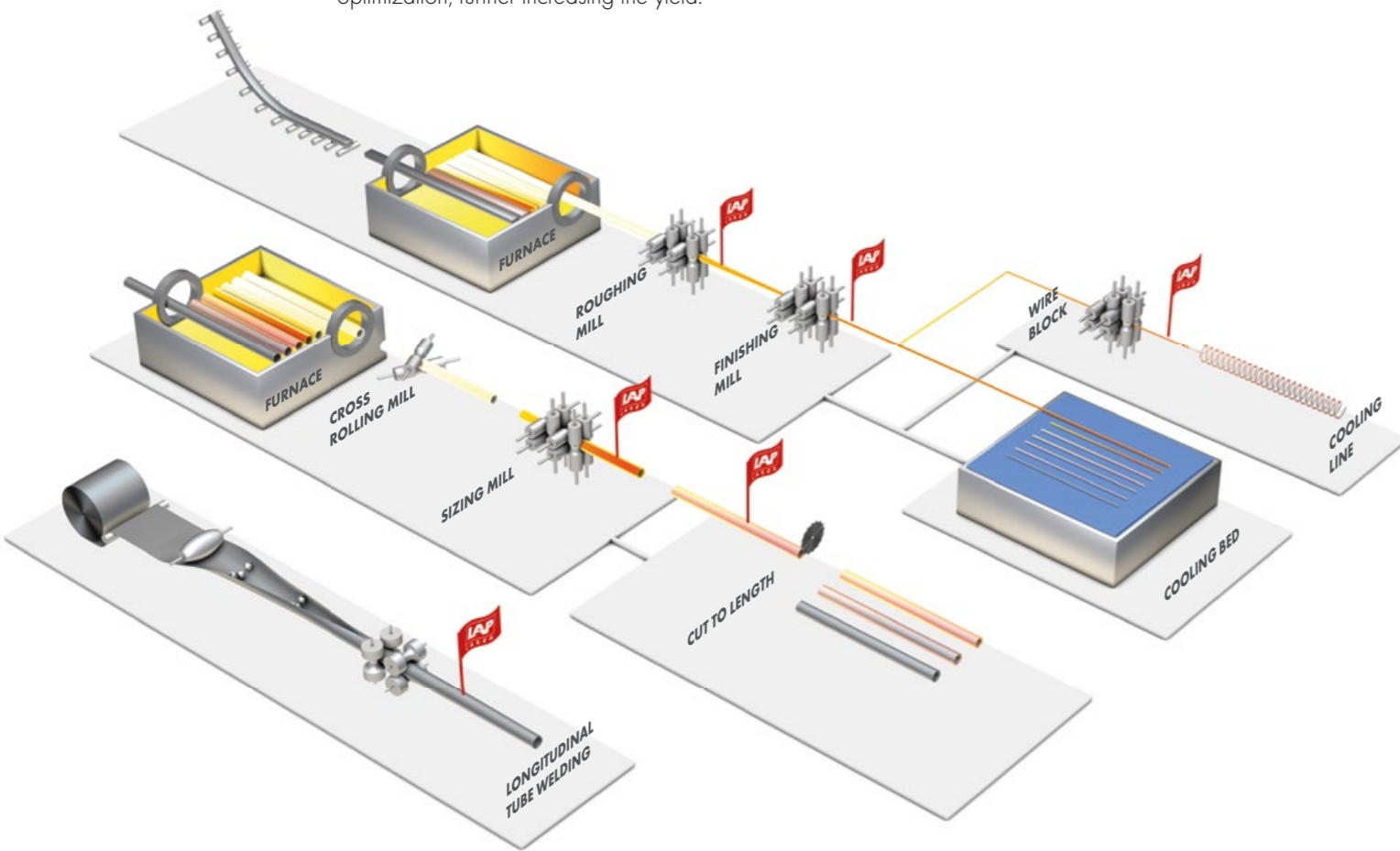
AXIS CONFIGURATIONS

							
	2 Axes	3 Axes	3 Axes Swing	4 Axes	4 Axes Swing	6 Axes	6 Axes Swing
Profiles							
Detectable Rolling Defects							

System selection depends on rolled profiles and profile rotation at location of measurement

THE RIGHT SOLUTION FOR YOUR ROLLING MILL

LAP RDMS provide all the information needed for fast and precise adjustment of rolling lines. They can measure not only rounds, but also rebar, flats, squares and hexagons. The patented TrueShape technology allows precise measurement of three-lobed or polygonal rounds, and of single-sided over- or underfill. Off-size conditions are immediately displayed and allow corrections during runtime of a billet. Elimination of sample cutting reduces the ramp-up time after size or product change. Precise determination of off-size lengths at head and tail allows crop-optimization, further increasing the yield.



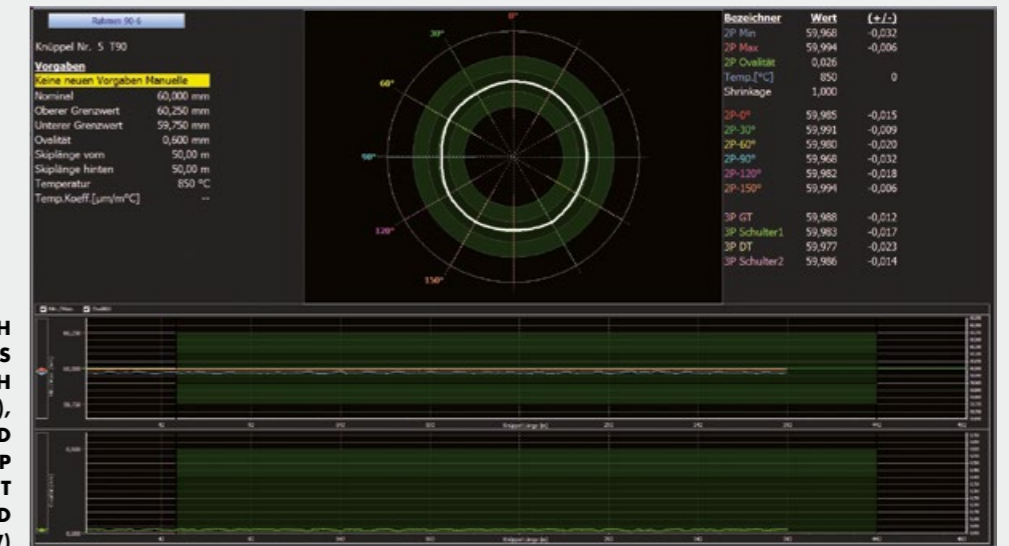
RDMS measure the OD of tubes in the rolling line. Measurement of diameter in two or three axes also yields precise ovality readings, avoiding costly post-processing. The result of this is that a greater percentage of the tubes being produced meet the specification that are required by the customers. Producing to tighter specifications also increases the yield ratio. RDMS for final inspection of tubes before shipment provide essential data for quality assurance.



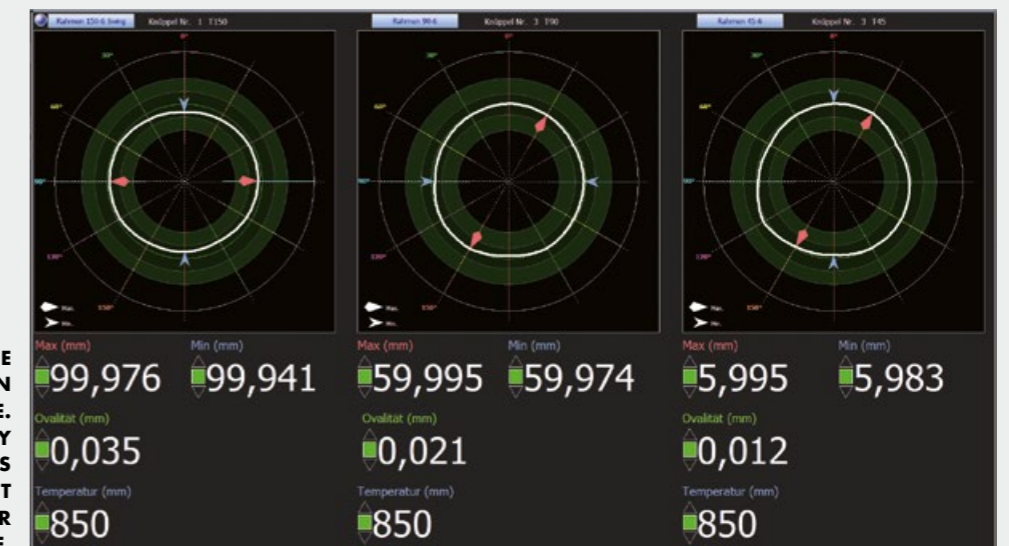
SOFTWARE

The functions and display of the new RDMS software are optimized for monitoring rolling processes. The user interface displays different combinations of graphical and numerical data, changing views is always possible. During measurement the menu disappears to offer maximum screen area for visualisation of data. Besides the views shown below, there are screens for configuration, histograms and statistical evaluation.

STANDARD VIEW WITH NOMINAL AND LIMIT VALUES (TOP LEFT), PROFILE VIEW WITH TOLERANCE FIELDS (MIDDLE), MEASUREMENT VALUES AND DEVIATIONS BY AXIS (TOP RIGHT) AND MEASUREMENT VALUES FOR DIAMETER AND OVALITY ALONG BILLET (BELOW)



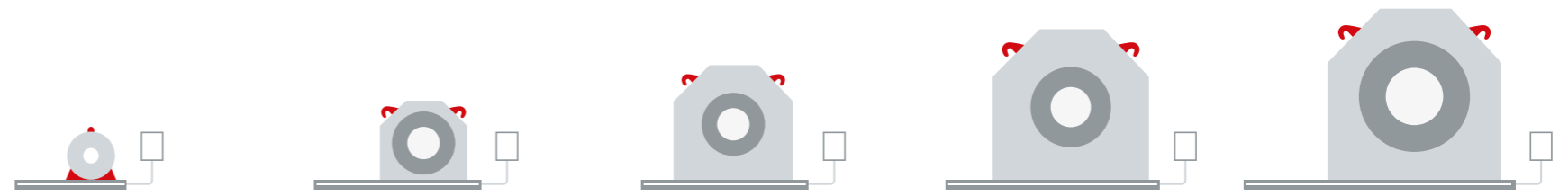
LARGE DISPLAY OF THREE MEASUREMENT FRAMES IN ONE PRODUCTION LINE. SHOWS PROFILE GEOMETRY WITH TOLERANCE FIELDS AS WELL AS MOST IMPORTANT MEASUREMENT VALUES FOR EACH FRAME.







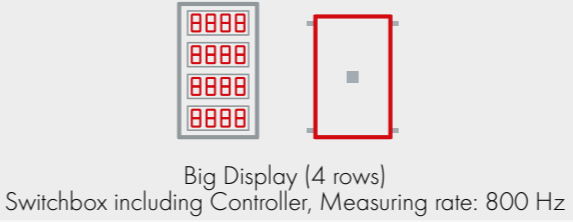
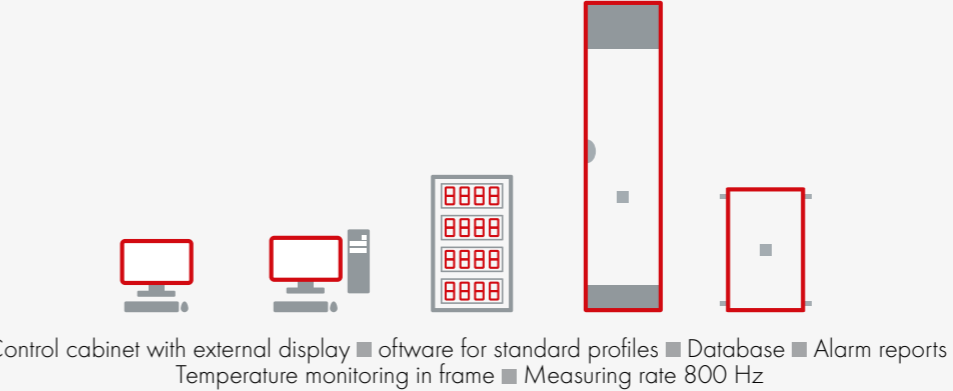


NUMERICAL „BIG DISPLAY“ ON SCREEN. ALLOWS FOR FAST DETECTION OF EXCEEDED TOLERANCES AS AFFECTED FIELDS CHANGE COLOR.



RDMS MODELS



	RDMS 45	RDMS 90	RDMS 120/150	RDMS 180/230	RDMS 500
Scan field width [mm]	45	90	120/150	180/230	500
Swing Model as option	-	■	■	■	■
Number of axes	2, 3, 4, 6	2, 3, 4, 6	2, 3, 4, 6	2, 3, 4, 6	2, 3, 4
Frame width [mm]	860	1240	1720	2250	2550
Overall height [mm]	940	1170	1685	2215	2515
Overall depth [mm]	81/130	302	302	302	302
Inner diameter blower ring [mm]	140	350	350	450	910
Passline height [mm]	450	570	835	1100	1250
Moving Rail (optional)	■	■	■	■	■
Blower					
Air cooling unit (optional, dimensioning depends on ambient conditions)					
STANDARD	 <p>Big Display (4 rows) Switchbox including Controller, Measuring rate: 800 Hz</p>				
PREMIUM	 <p>Control cabinet with external display ■ software for standard profiles ■ Database ■ Alarm reports Temperature monitoring in frame ■ Measuring rate 800 Hz</p> <p>OPTIONS</p> <p>Swing configuration ■ Software for 3-roll reducing/sizing technology ■ Software for rebar/ribbed steel Temperature monitoring of rolling stock ■ Uninterruptible power supply ■ Big Display (4 rows) Air conditioning unit for cabinet ■ Switchbox for Connection of 1 x RDMS static up to 6 client-PCs (depending on Ethernet structure) Remote terminals via KVM extender ■ Measuring rate 1600 Hz</p>				



**BRING COLOUR TO YOUR LIFE.
LAP ALSO PROJECTS OUTLINES AND
TEMPLATES. MULTICOLOURED.**

www.LAP-LASER.com



**NEVER GO WRONG AGAIN:
LAP LINE LASERS FOR ALIGNMENT
AND POSITIONING**

www.LAP-LASER.com

LAP SERVICE



SERVICE PACKAGE

LAP stays right by your side before, during and after the installation of a LAP system. International experience acquired over decades in the installation and maintenance of laser systems across virtually all industries makes us a reliable and competent partner. Before you make your decision, we will give you plenty of advice and explain both the possibilities and also the limitations of the technology. We will support you in the planning and installation of the system onsite. After commissioning, we will stay with you during your first steps using the laser measuring system until its use has been optimised. Each customer has different requirements regarding maintenance cycles, reaction times and protection from down times. LAP therefore offers each customer an individually tailored package. Just tell us what you want - we will find a suitable solution for you.

Customer-specific adaptations of the system

- Support during the planning of the measurement system
- Supply of individual accessories closely related to the system (mounting options, traversing systems ...)
- Software adaptations and extensions (connection to the company network, databases, visualisation ...)

Installation and commissioning

Training

Maintenance

- Replacement of expendable parts
- Cleaning
- Adjustment

Updates for software and firmware

Repair

LAP LASER SYSTEMS HIGHEST QUALITY AND PRECISION

For more than 30 years, LAP has been developing, manufacturing and distributing laser measurement systems, line lasers and laser template projectors for industrial and medical applications. LAP products are high-precision devices **Made in Germany**. Using LAP laser systems, our customers improve performance and increase the quality of their products as well as the effectiveness of their processes.

As a result of continuous product innovation, LAP has become a world leader in lasers for projection and measurement. LAP products are setting the standards in a wide range of markets from manufacturing to heavy industrial environments and medical applications. Environmental protection is important to us. We use solar panels, green electricity, roofs planted with grass and rain water. Our production is planned by standards

of sustainability. Quality has always been part of our commitment. We are content if you are. We know your high demands. To meet your requirements, the quality management of LAP is certified by DIN EN ISO 9001:2008 for industrial products and by EN ISO 13485:2007 for medical engineering products.

www.lap-laser.com/RDMS



Further designations of products or services may be registered trademarks of LAP GmbH or other organizations; their use by third parties may infringe the rights of the respective owners.

LAP GmbH Laser Applikationen

Zeppelinstrasse 23
21337 Lueneburg
Germany
Phone +49 4131 9511-95
Fax +49 4131 9511-96
Email info@lap-laser.com

LAP Laser, LLC

1830 Airport Exchange Blvd.
Suite 110
Erlanger, KY 41018
USA
Phone +1 859 283-5222
Fax +1 859 283-5223
Email info-us@lap-laser.com

LAP GmbH

Лазерные приложения
Представительство в Москве
1, Казачий переулок 7
119017 Москва
Российская Федерация
Тел. +7 495 7304043
Факс +7 495 7304044
Email info-russia.si@lap-laser.com

LAP Laser Applications Asia Pacific Pte. Ltd.

Blk 750A #07-08
Chai Chee Road
Technopark@Chai Chee
Singapore 469001
Phone +65 6536 9990
Fax +65 6533 6697
Email info-asia.si@lap-laser.com

LAP Laser Applications China Co. Ltd.

East Unit , 4F Building # 10
LujiaZui Software Park
No. 61 Lane 91 EShan Road
Shanghai 200127
China
Phone +86 (21)5047-8881
Fax +86 (21)5047-8887
Email info-asia.si@lap-laser.com

