

**NEXTSENSE**



**PROFILE & SURFACE  
INSPECTION IN  
STEEL INDUSTRY**

# SYSTEMS FOR PROFILE MEASUREMENT AND SURFACE INSPECTION

NEXTSENSE OFFERS MOBILE AND STATIONARY MEASURING SYSTEMS FOR TESTING DIMENSIONAL ACCURACY AND SURFACE QUALITY.



Forget about conventional approaches: In the future, you can evaluate the profile of your long goods directly, during hot rolling without the cooling phase, and continuously monitor dimensional accuracy and surface quality with just one test system. Our mobile profile measuring devices CALIPRI RCX and the stationary combined testing systems OSIRIS are equipped with the latest laser light section technology, in order to guarantee the highest accuracy.

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OSIRIS

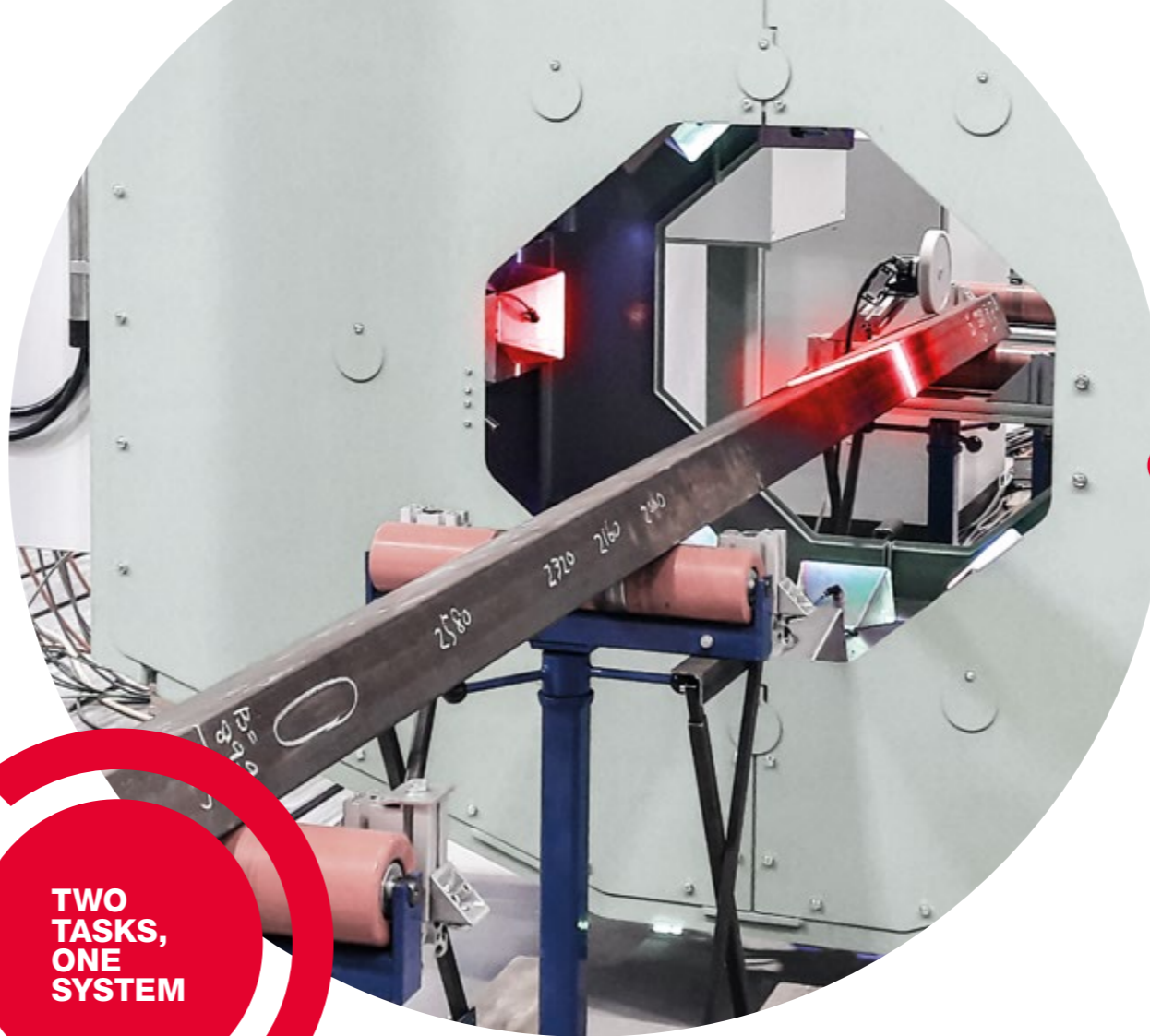
# COMBINED PROFILE & SURFACE INSPECTION

DO YOUR CUSTOMERS EXPECT THE HIGHEST SURFACE QUALITY AND DIMENSIONAL ACCURACY? THAT'S NO PROBLEM FOR OSIRIS! UNLIKE OTHER MEASURING SYSTEMS, OUR SYSTEM COMBINES BOTH TEST STEPS IN ONE SYSTEM.

Combining two systems (profile measurement and surface inspection) halves the time and money spent on mechanics, sensors, repair and maintenance, and requires only half the space.

This is also possible for measurements at high temperatures: With the OSIRIS HOT product variant, you can take measurements at temperatures up to 1,200 °C . This is a significant advantage in the production of long goods, as measurements carried out during production allow errors to be detected early. This enables you to make improvements immediately instead of waiting for the product to cool down and producing rejects in the meantime.

**TWO TASKS, ONE SYSTEM**



Sophisticated laser light section sensors detect the tiniest deviations.

Sensors arranged radially around the measuring object guarantee a complete detection of the long good. Depending on the size of your products, you can choose between different product variants.

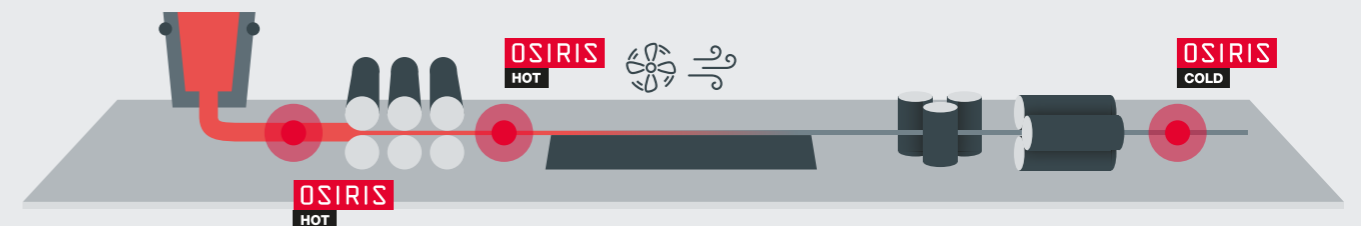
Measurement field sizes from 50 mm are supported. We would be pleased to advise you in the selection of the solution suitable for your requirements.



### In real time

The operator can view and analyze all the results in real time during the measuring process via the control terminal.

### PRODUCTION APPLICATION AREAS



**CALIPRI RCX**

# MOBILE PROFILE MEASUREMENT SYSTEM

CALIPRI RCX ARE NON-CONTACT, PORTABLE PROFILE MEASUREMENT DEVICES THAT CAN BE CONVENIENTLY MOVED FROM ONE ROLLING MILL TO ANOTHER.

You can place the device at any point in the rolling mill, either manually or using an automated mechanism. The C-frame of the housing allows the dimensional accuracy of long goods to be checked at random while rolling is underway.

Start the measurement operation at the touch of a button – a sensor will move around the rolled material in a circular path. This allows profile sections to be captured from all directions, which are then combined to form an overall profile. Following the measurement, which takes less than 10 seconds, the result is visible on the tablet PC.



**STRIKE WHILE THE IRON IS HOT**

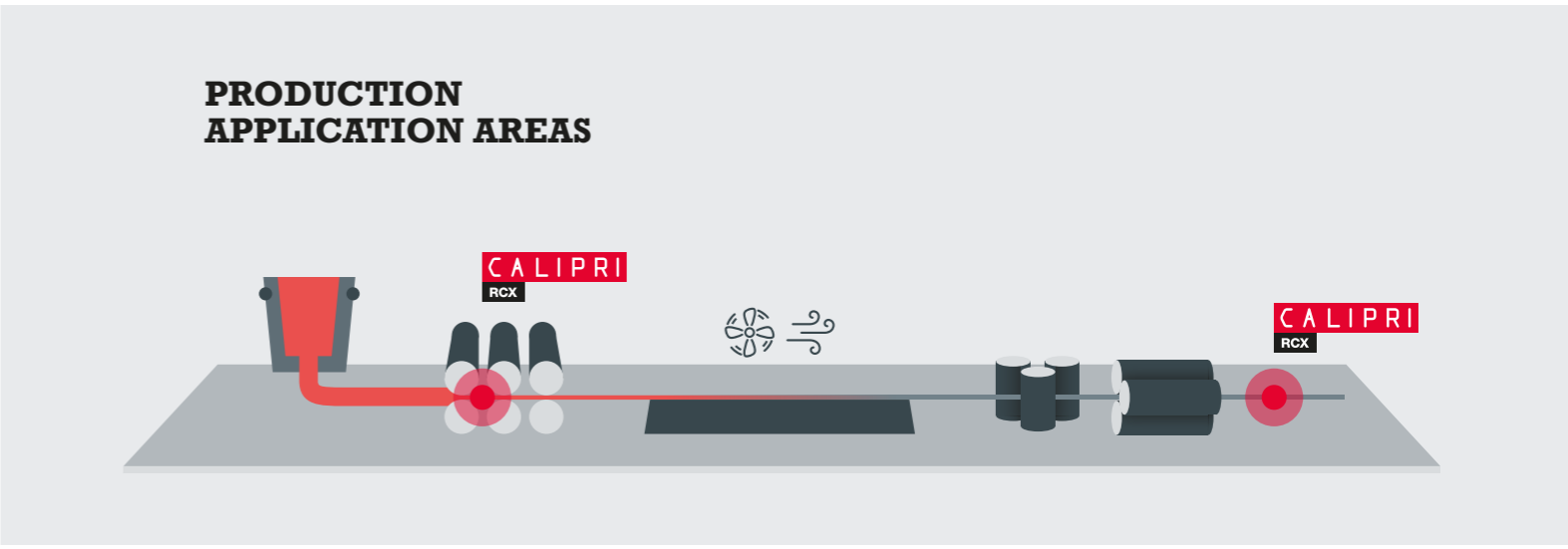
» One device, three uses.

- 01 **Using CALIPRI RCX to configure the rolling stand:**  
At the start of production, the rolling stand must be set up correctly for every new rolling profile. A complex, time-consuming process – until now. CALIPRI RCX shortens this step considerably while delivering even more accurate measurement results than usual processes. In future, you can take measurements quickly and easily on the still hot material between the rolling stands. High time and cost savings guaranteed!
- 02 **Using CALIPRI RCX for random sample measurement:**  
The measurement device can be transported from one rolling mill to another with ease. This represents a key cost advantage, as you only need to use one portable measurement device instead of several permanently installed and expensive systems. It couldn't be simpler: Position the device, perform the measurement and compare the actual profile with the target contour on the tablet PC.
- 03 **Using CALIPRI RCX as a development tool:**  
The calibration needs to be developed before new rolled products can be made. With CALIPRI RCX, the key dimensions required for this can now be recorded immediately while the profile is still hot. You no longer need to wait for the sample to cool down. If required, the software automatically converts cold to hot dimensions. This means that you have access to more information and, above all, more accurate results.



## DIRECT TARGET/ACTUAL COMPARISON

The contour of the rolled material can be analyzed conveniently on the tablet PC. Deviations from the target values are highlighted in color if desired and all results can be exported or printed as reports at the touch of a button.



FMG

## EXTENDED FLATNESS MEASUREMENT

WITH FMG THE FLATNESS OF LONG PRODUCTS CAN BE TESTED AND DOCUMENTED RIGHT UP TO THE ENDS OF THE PRODUCT.

The FMG flatness measuring systems use the latest laser light section technology and sophisticated algorithms to enable measurement right up to the ends of the product - in conformity with standards and with high accuracy. This eliminates the need for a separate system for flatness analysis of the ends.

The use of laser light section technology in combination with a sophisticated evaluation algorithm enables measurement results independent of the movement of the long goods. Thus, when changing the profile, elaborate mechanical setting processes for the positioning of the sensors is no longer required. Combined with simple and rugged mechanics, this results in low acquisition costs, low operating costs and low maintenance costs.

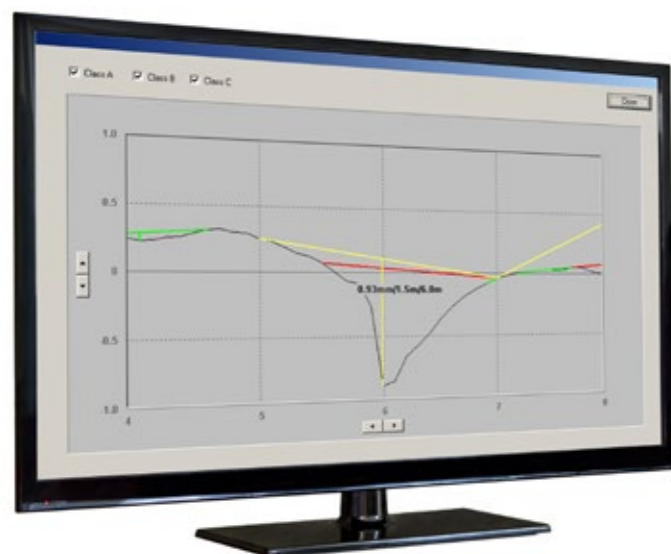


### DETECTION UP TO THE ENDS OF THE PRODUCT

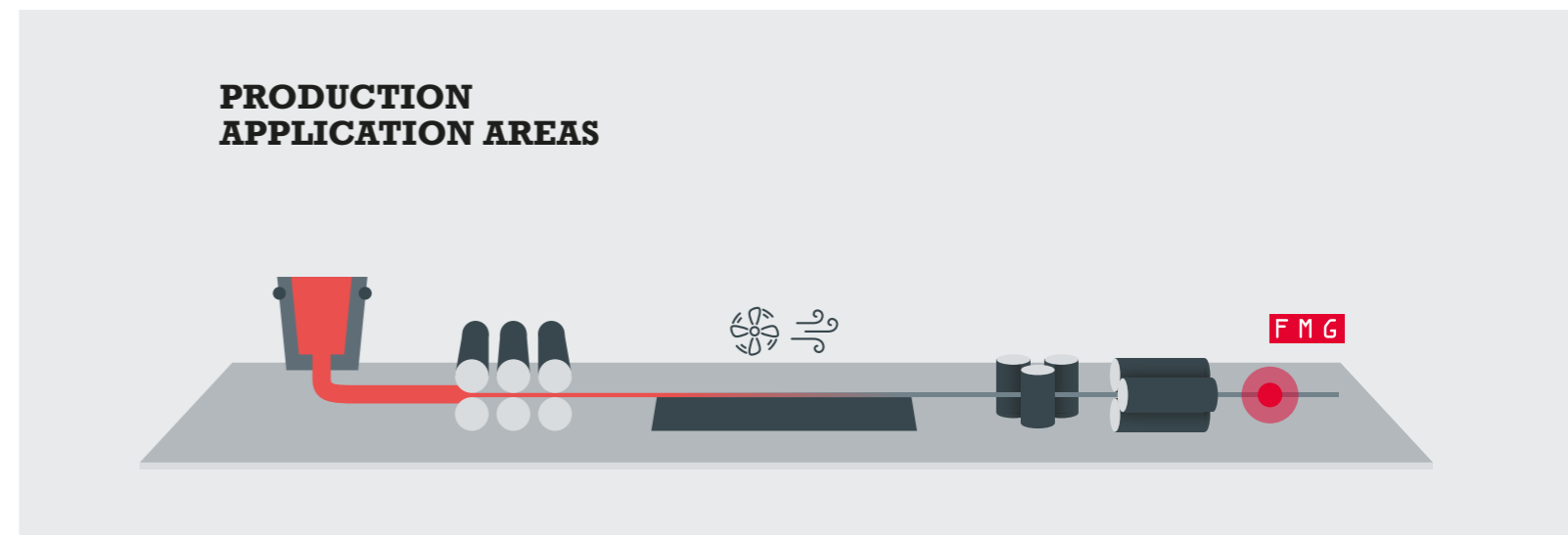
High accuracy and detection up to the ends by additional sensors.

The camera and laser units are mounted on a fixed measurement bar. All units are easily accessible from outside for maintenance purposes. Cover panels and ventilation elements protect the optical parts from soiling and overheating.

FMG systems are equipped with a database interface to a higher-level computer system (e.g.: CAQ, material monitoring system, process control system), so that they enable the input of product data (e.g.: material IDs, material metadata) as well as the defined output of result data.



» FMG flatness measuring systems determine the horizontal and vertical flatness of the long good and classify the results according to defined test standards.



# NEXTSENSE

## RESEARCH TAKING CENTER STAGE

Increasing demands for quality require even more exact and complete inspections and documentation. Conventional inspection methods are often not capable to meet the required criteria. With our patented Calipri measuring method and innovative sensor technology, we guarantee maximum accuracy and reliable quality assurance.

## SERVICE TAKING CENTER STAGE

What do our customer appreciate about us? Our innovative products and, of course, our comprehensive customer service, which goes above and beyond the call of duty. In order to ensure that our measuring systems and integrated optimally into your company processes, we handle all project management tasks for you, from purchasing to commissioning. This means that you have a point of contact for every job, leaving you free to concentrate on your core business without any concerns. To ensure that your system works perfectly once it is running, we train your employees and perform system maintenance, and will of course also be there to provide you with support if you need it: Our technical support experts can assist you with any issues concerning the functionality, operation and application of our products. Whether we support you via telephone, e-mail or use a virtual network to allow us to work over a remote connection, we only have one goal: The ideal solution for your company.



## RESULTS TAKING CENTER STAGE

### NEXTSENSE FACTS

2007  
FOUNDING YEAR

80  
FROM 4 TO 80  
EMPLOYEES  
IN 10 YEARS

45  
SALES PARTNERS IN  
32 COUNTRIES

91%  
EXPORT RATIO

## INNOVATION TAKING CENTER STAGE

In 2007, four technicians from the Austrian Joanneum Research Institute revolutionized the optical sensor market with a ground-breaking development. They founded NEXTSENSE, writing the first chapter of our success story. Our passion for innovation and high-tech solutions continues to accompany us. What has changed, however, is our company: We now have more than 80 employees in Graz and Atlanta and we work with distribution partners in every continent in the world – meaning that Nextsense is available to support you anywhere, at any time. Since 2018, NEXTSENSE is a part of Hexagon AB, a world leader in information technology.

## REFERENCES



ARE YOU INTERESTED IN OSIRIS,  
CALIPRI RCX OR FMG AND NEED  
ADDITIONAL INFORMATION?

CONTACT US!

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