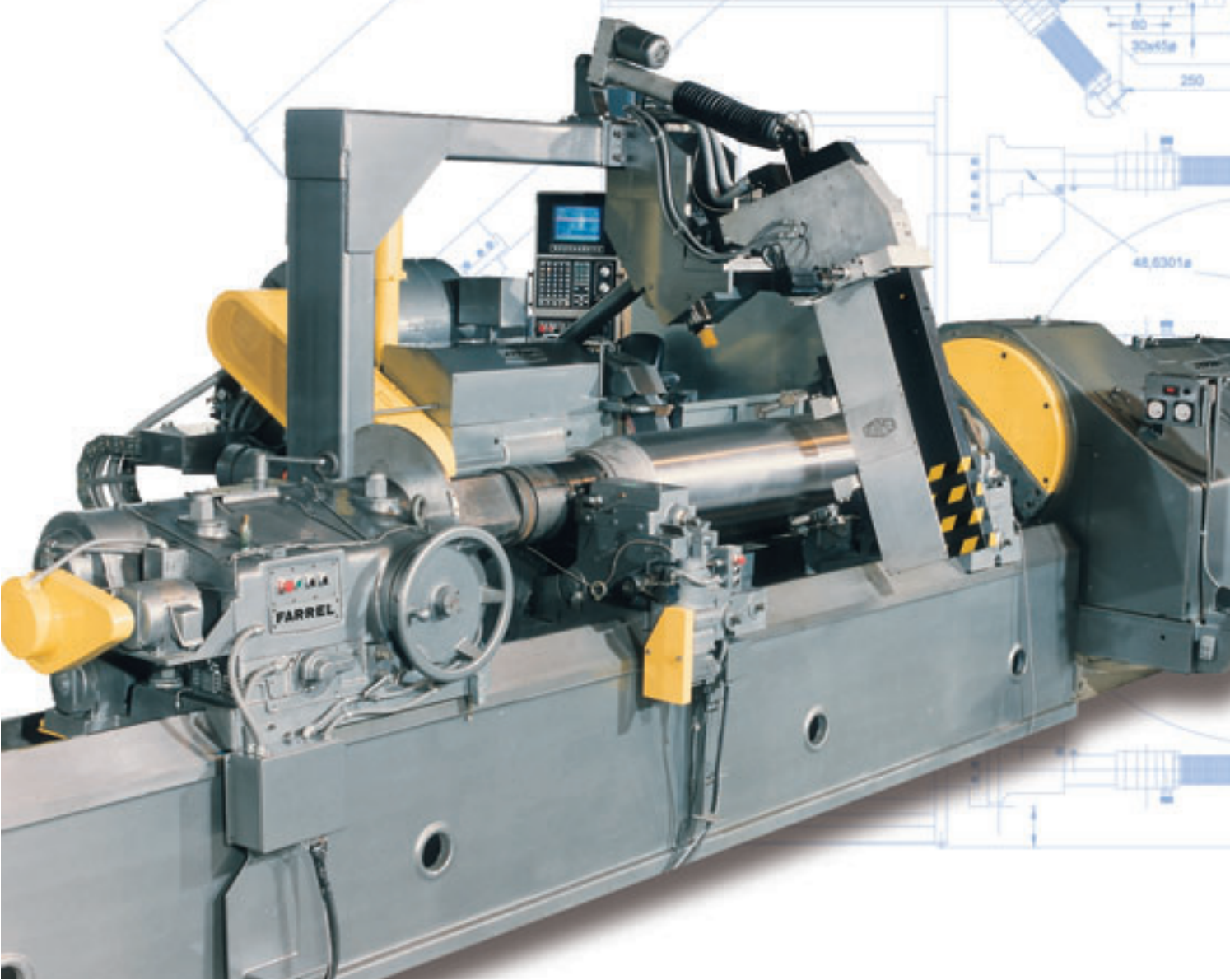
Roll Measurement

VSL - ROLL GRINDER GAUGES

fully automatic roll measurement during the grinding, on-line;
the gauge's measurement arms are in the same Z-axis position as the grinding wheel

MAIN FEATURES:

- **optimal roll form due to continuous measurement of the grinding process**
- **easy, accurate roll alignment before grinding**
- **numerous forms of graphical measurement data displays allow for fast and easy evaluation, e.g. by means of comparison curves, tolerance curves or error curves**



THESE ROLL DATA IS MEASURED:

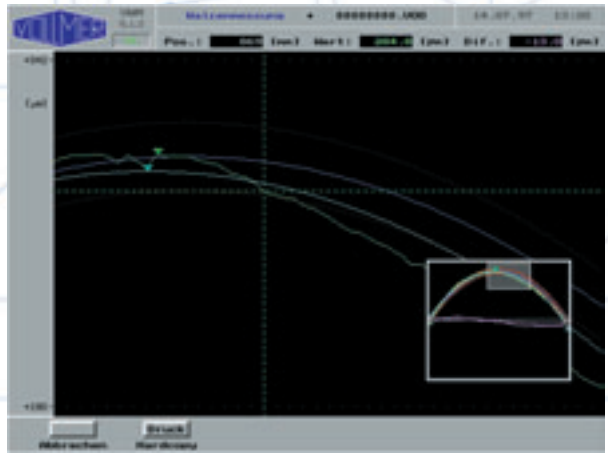
lateral and height alignment
form and diameter
concentricity and roundness

SUCH IS THE MEASUREMENT DOCUMENTATION:

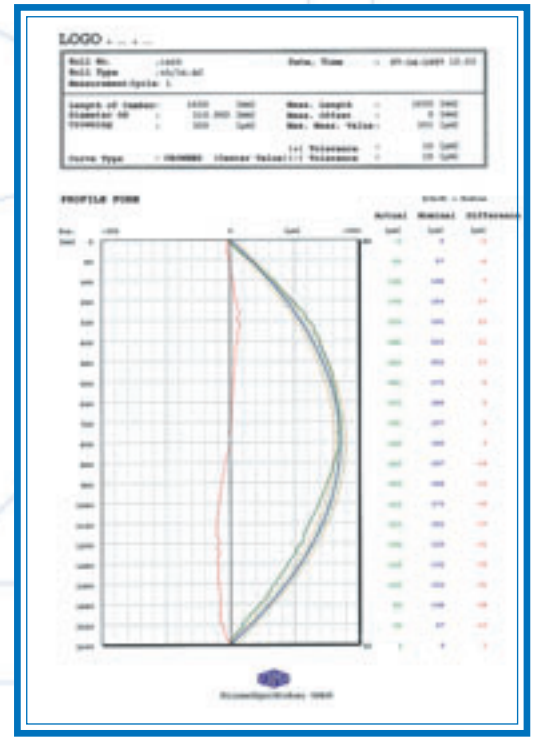
on-line report of the measurement data on the monitor,
color printout as value lists and as graphics
immediately after the measurement end

the Vollmer Roll-Measurement-Software is easy to operate
and in addition to the usually indicated parameters it offers
many options for data evaluation, including statistics

Large on-line measurement data display



Monitor display after an on-line measurement



Printout of a roll form measurement report

DETAILS OF THE VSL

The inside of the gauge is well protected against grime, all movable parts are permanently lubricated by automatic grease cartridges.

VSL grinder gauges are very rugged and can be operated nearly free of maintenance.

The data of each measurement axis is indicated individually on a large digital display.

Measurement transducer for measuring the roll form; a safety stop switch limits the measurement arm travel towards the roll

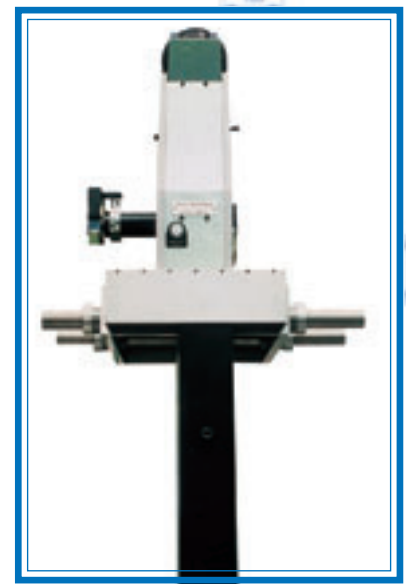
The gauge is pivoted from its measurement position to its resting position by a linear drive with a self locking spindle.

Diamond measurement tip with grime protection shield: The cylindrically shaped measurement tip does not leave any marks on the roll surface.

Fully encapsulated measurement arm: Long lasting measurement performance independent of emulsion and grinder swarf.

Safety rod: Actuates a limit stop switch for Z-axis motions of the grinder to protect the gauge.

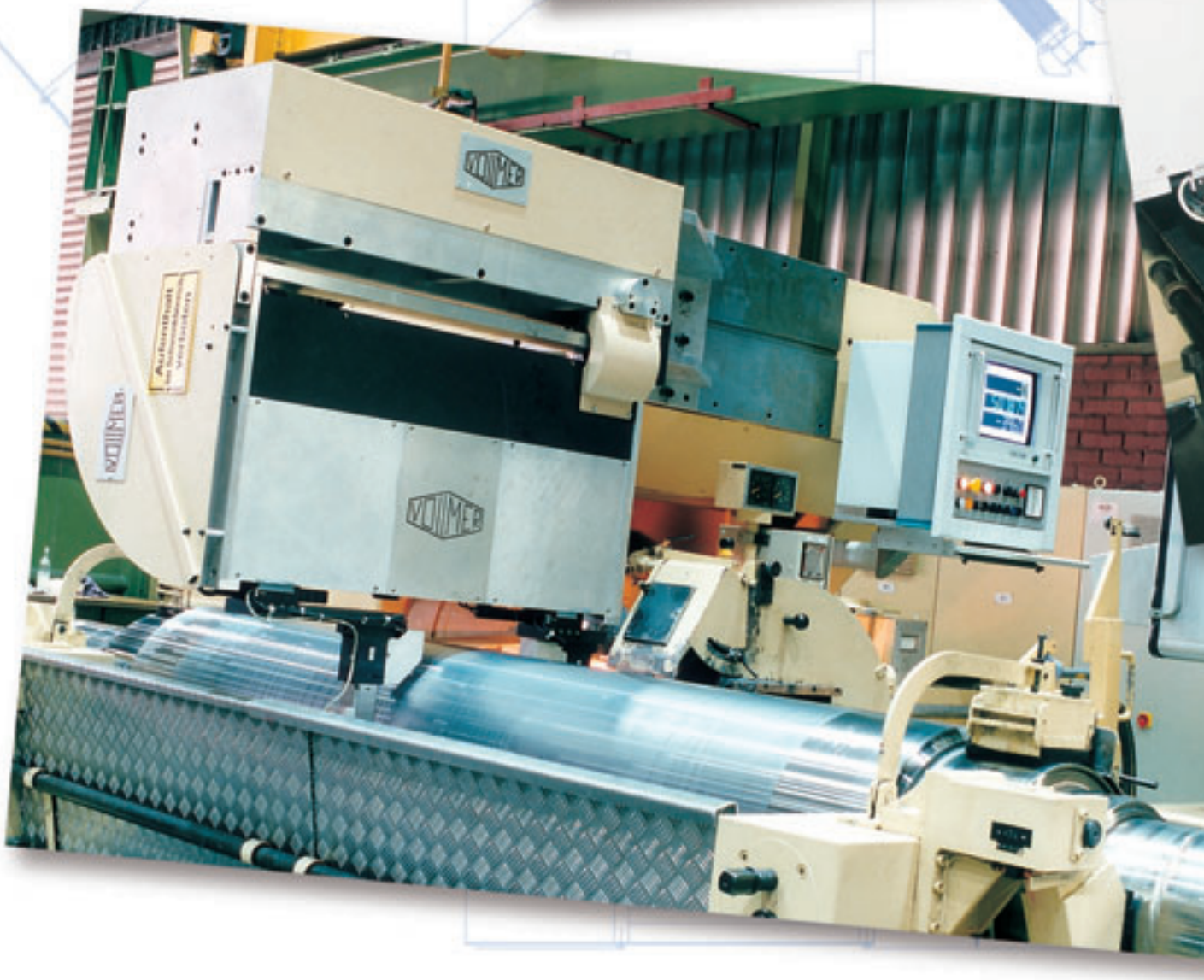
In some VSL gauges, an optional third transducer is installed between the two measurement arms. From this well protected position it is only driven forward for roll alignment measurement.



Each gauge can be redesigned to suit individual requirements. This VSL gauge has a device for side shifting. Every time when the grinding wheel approaches to the end of the roll camber, the gauge is automatically traversed opposite to the Z-axis travel. This allows the grinding wheel to continue travelling while it prevents the VSL from colliding with an obstacle.

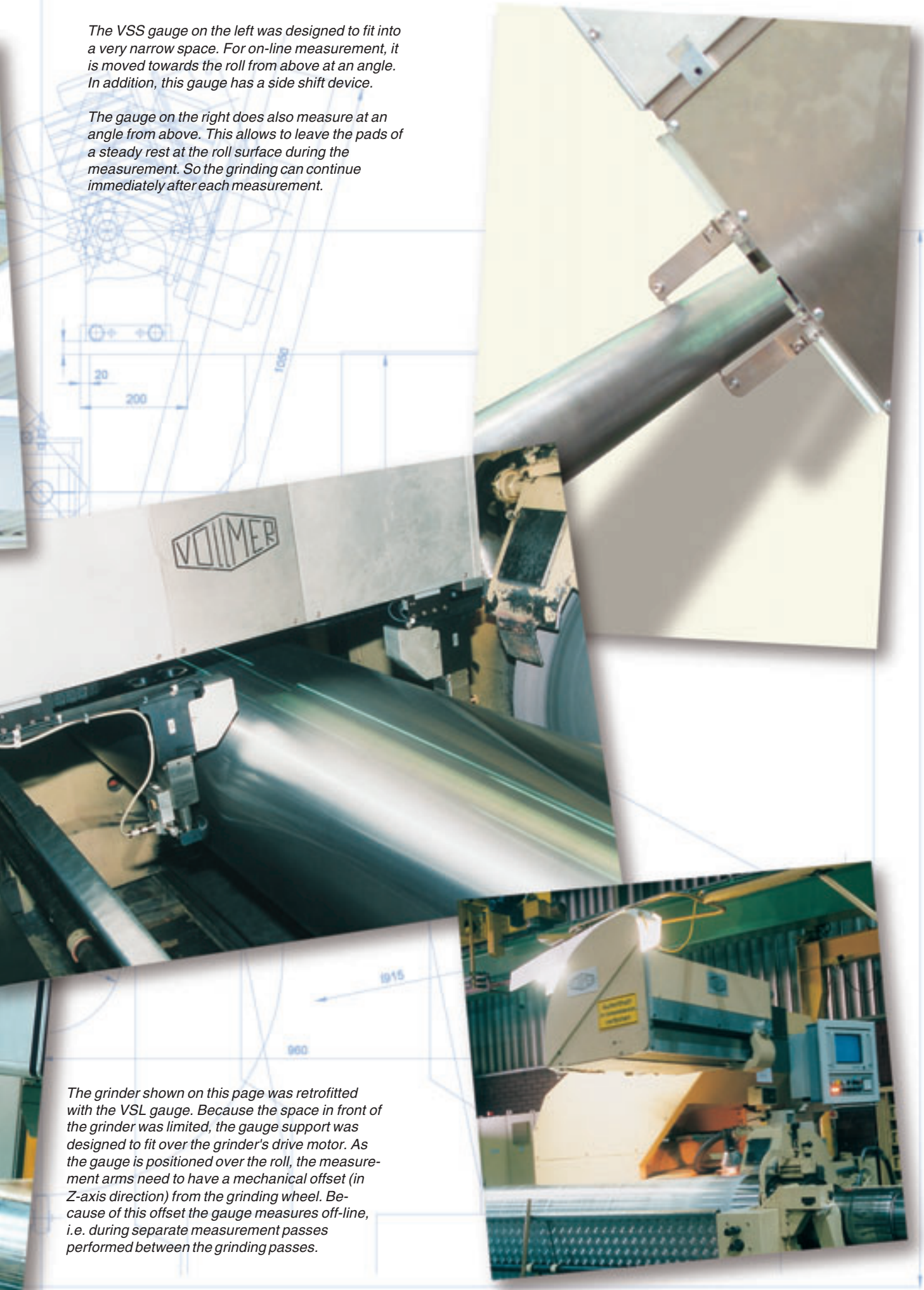
AUTOMATIC GRINDER GAUGES

many different designs available for table grinders as well as for support grinders, suitable for all kinds of roll forms



The VSS gauge on the left was designed to fit into a very narrow space. For on-line measurement, it is moved towards the roll from above at an angle. In addition, this gauge has a side shift device.

The gauge on the right does also measure at an angle from above. This allows to leave the pads of a steady rest at the roll surface during the measurement. So the grinding can continue immediately after each measurement.



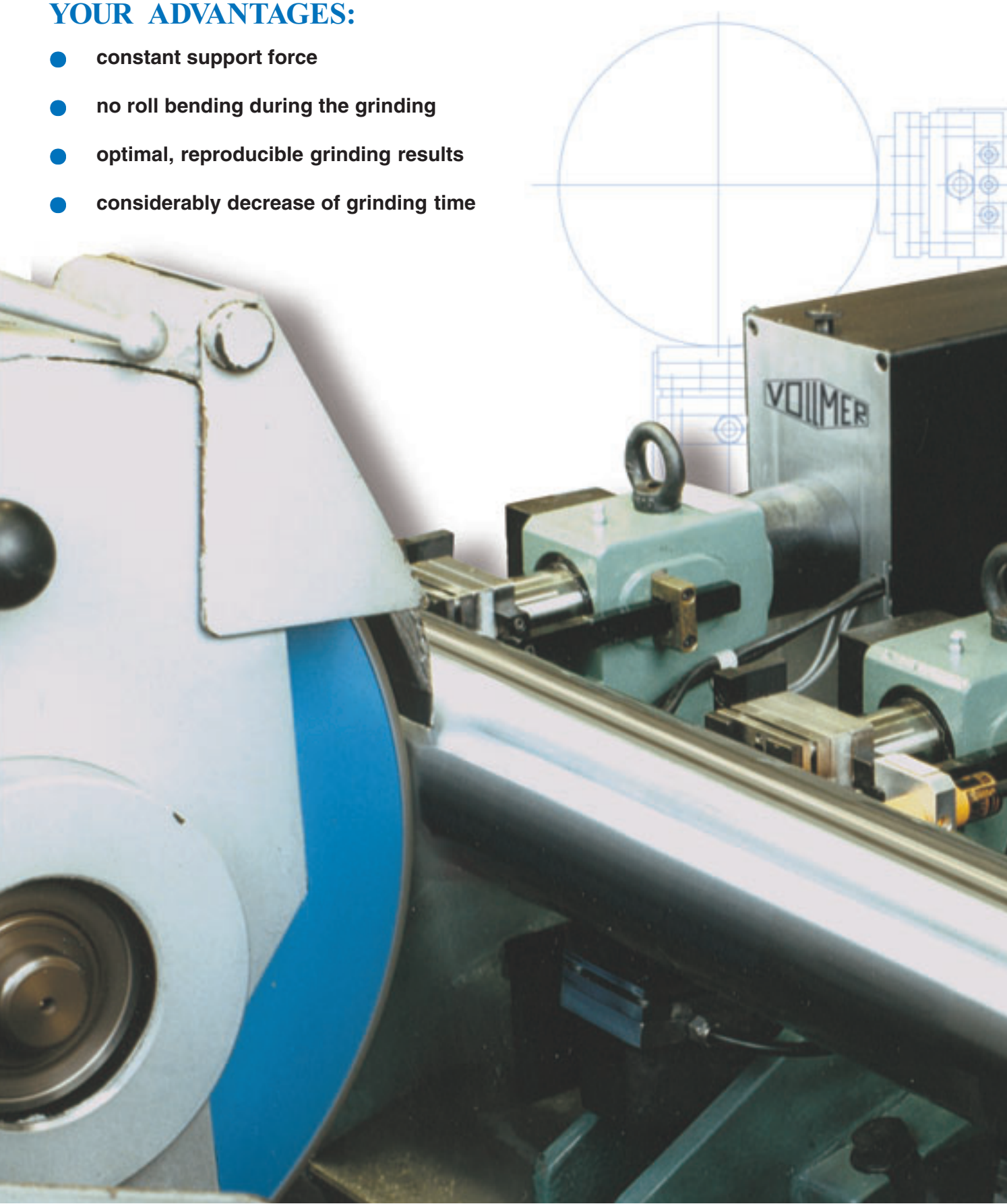
The grinder shown on this page was retrofitted with the VSL gauge. Because the space in front of the grinder was limited, the gauge support was designed to fit over the grinder's drive motor. As the gauge is positioned over the roll, the measurement arms need to have a mechanical offset (in Z-axis direction) from the grinding wheel. Because of this offset the gauge measures off-line, i.e. during separate measurement passes performed between the grinding passes.

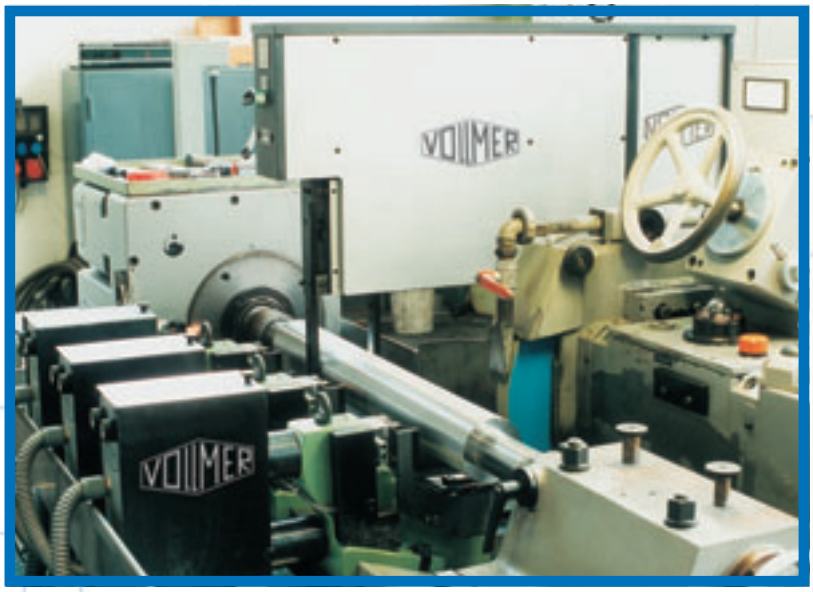
AUTOMATIC VOLLMER STEADY RESTS

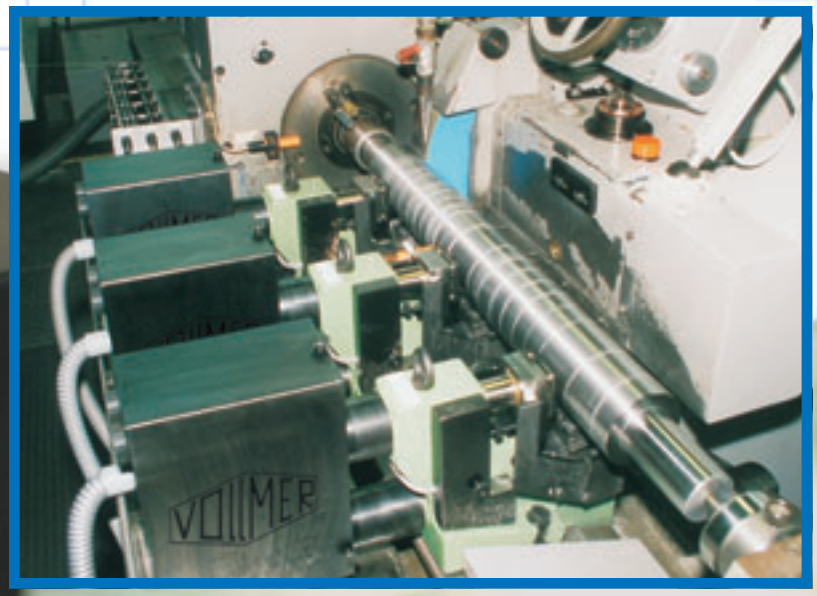
**eliminate roll bending on the grinder,
the steady rest pads are continuously readjusted by the automatic steady rest control**

YOUR ADVANTAGES:

- **constant support force**
- **no roll bending during the grinding**
- **optimal, reproducible grinding results**
- **considerably decrease of grinding time**




VOLLMER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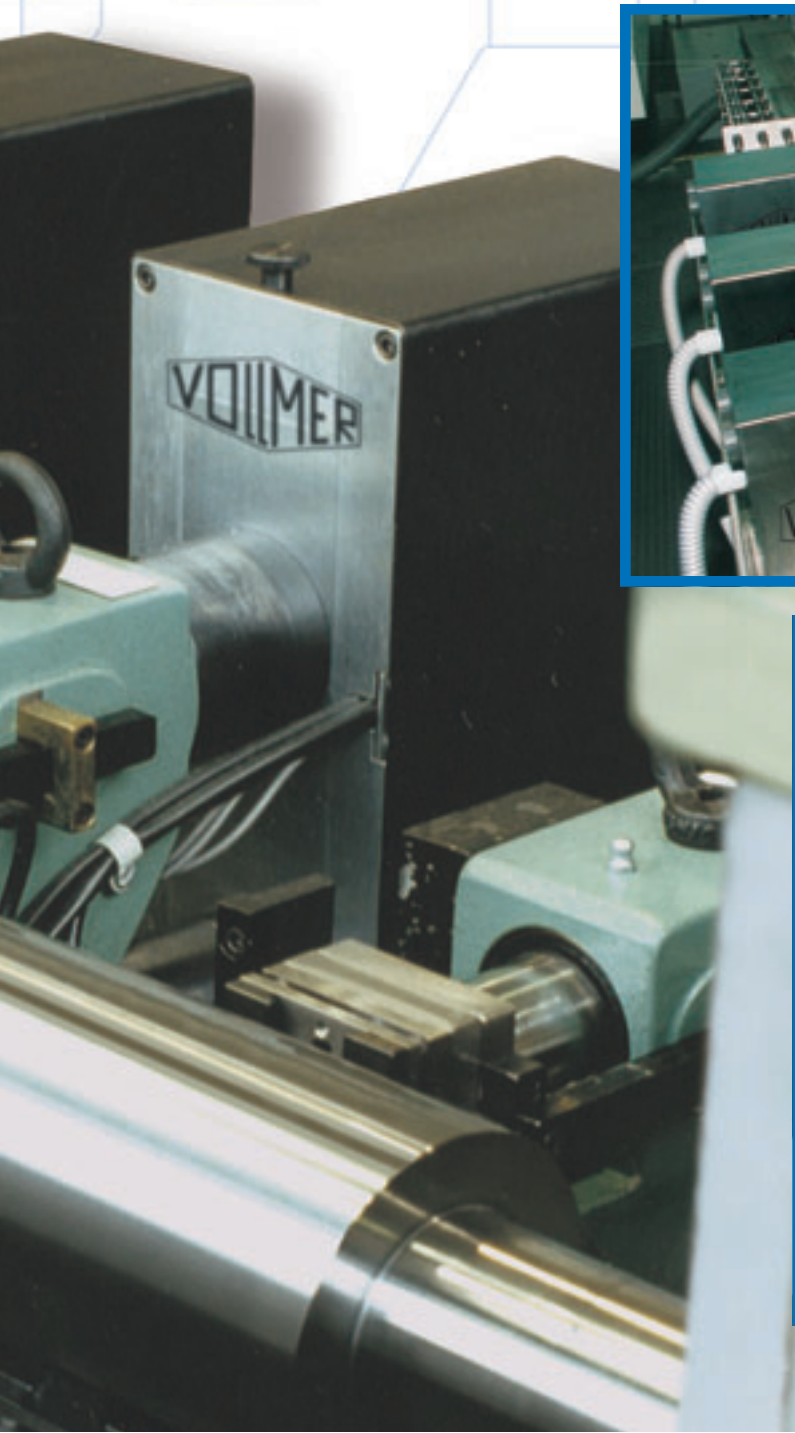
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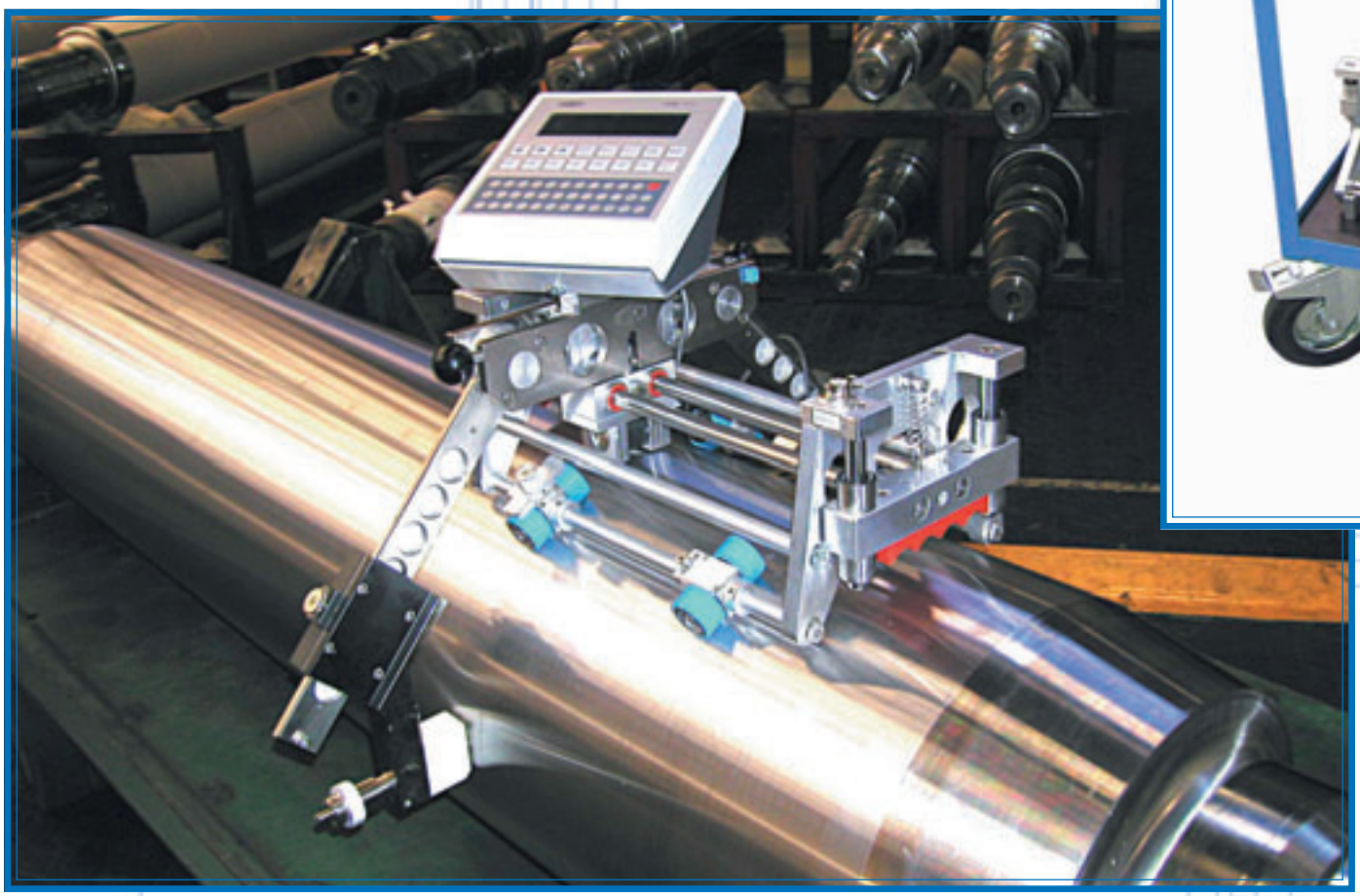
PORTABLE CARRIAGE STRADDLE GAUGE

for battery powered measurement anywhere, with graphical display of the roll form

The Vollmer carriage straddle gauge comprises at least one carriage, one measurement frame and the data shuttle.



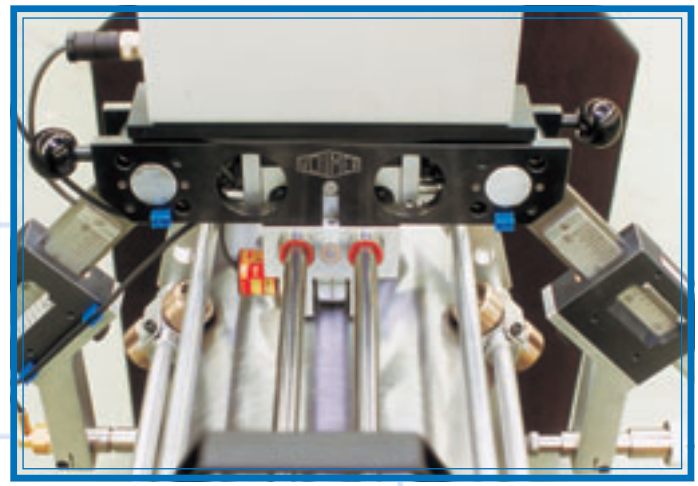
MAIN FEATURES:

- **can be used anywhere (like a large micrometer caliper)**
- **the data storage box makes the gauge very versatile, so that it can be carried anywhere, independent of the cart**
- **on-site measurement data evaluation on data monitor and as colored paper printout**

The transport cart allows for easy and safe delivery of the gauge even to relatively distant places, such as rolling mill, roll shop, stores entrance.

For rolls of small diameter, the carriage straddle gauge is made with a cushioned clamping device.

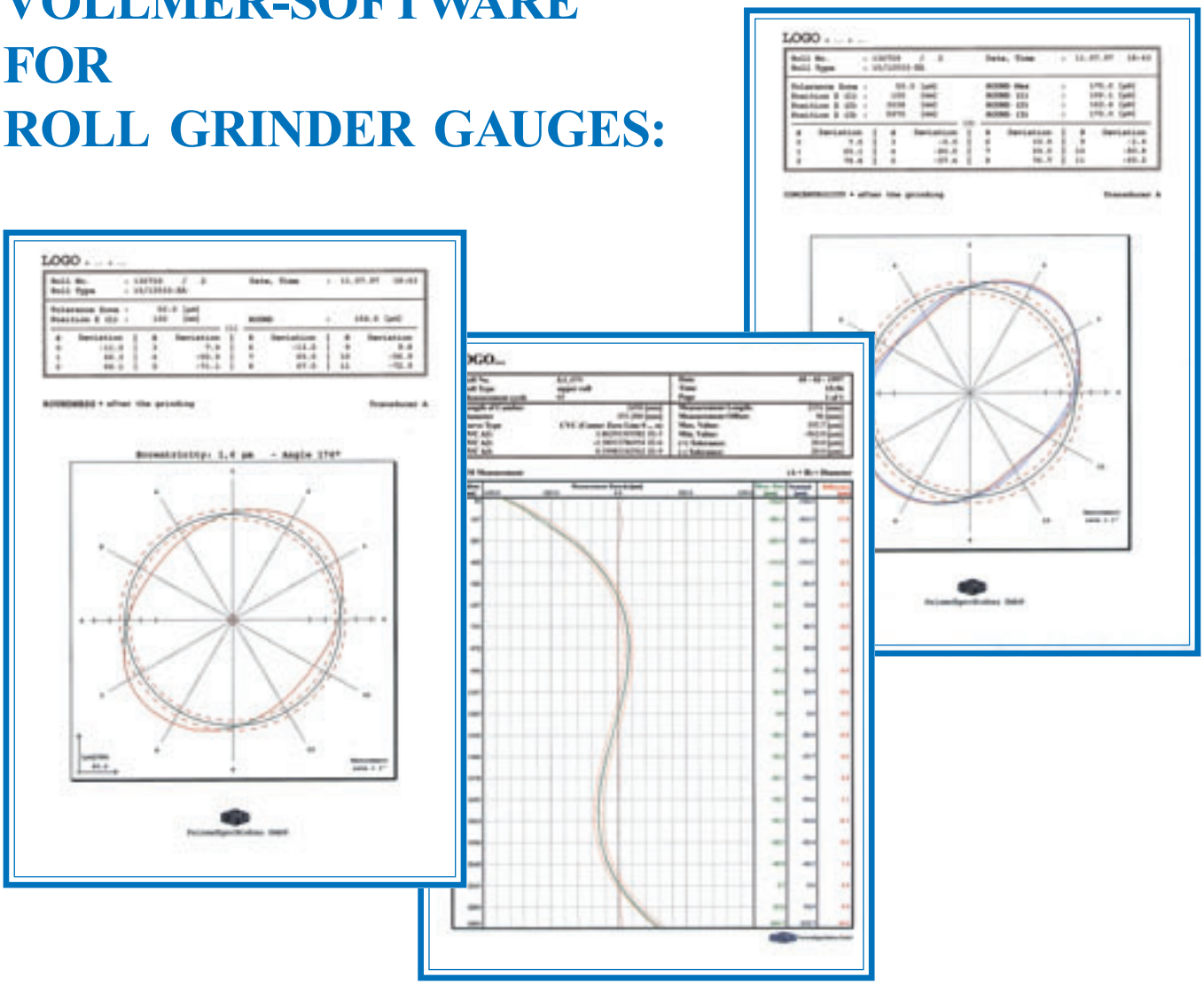
While the two feelers are sliding along the roll, the measurement wheel in the center detects the distance travelled. The carriage straddle gauge measures the real roll form continuously from one to the other end of the camber. The data storage frequency is one measurement spot per millimetre travelled.



The carriage is manually put onto the roll. Then add the preset measurement frame and the data storage box. Now the gauge is ready for measurement and the carriage can be rolled along the roll camber.

The data storage box can save 40 measurements. For data evaluation, an easy to operate Vollmer PC-software comes with the gauge. Beside graphic roll form data display, it offers many additional practical ways of data evaluation.

VOLLMER-SOFTWARE FOR ROLL GRINDER GAUGES:



- **on-line measurement data display on the monitor**
- **measurement protocol with measurement curves as well as numerical data lists**
- **many curve types can be selected and viewed together with the actual curve:**
  - **nominal data curve and measured data curve**
  - **smoothness curve**
  - **tolerance limit curves**
  - **comparison curves (from previous measurements)**
  - **error curve**
- **variable measurement spot distance**
- **polar chart evaluation of concentricity and roundness measurement data**
- **measurement data storage**

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