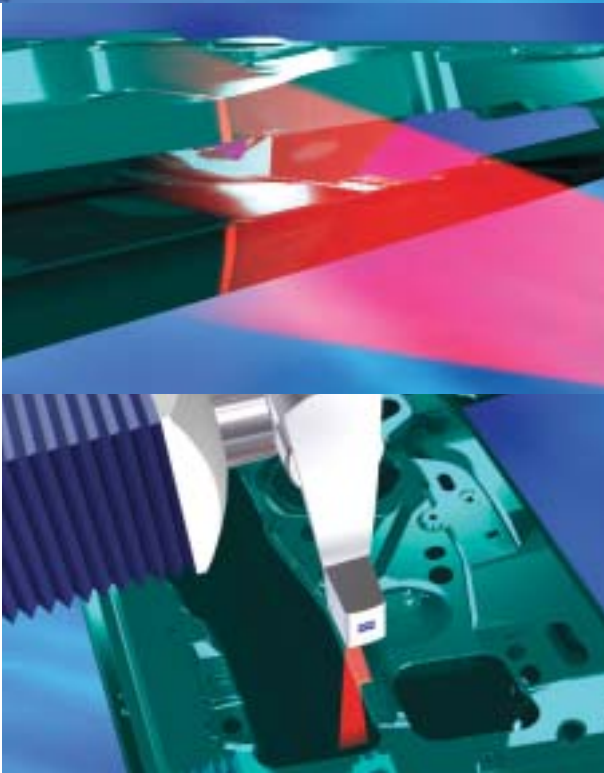


# The Revolution in Optical Metrology. Eagle Eye Navigator



**Eagle Eye Navigator**



# Eagle Eye Navigator: The revolution in car body metrology

**In the automotive industry, quality assurance in car-body production is one of the most complex tasks found in measuring technology. Numerous boreholes need to be measured, as well as edges, sections and transitions and they all need to be measured as quickly and accurately as possible. In car-body production, process quality is an absolute must for quality management.**

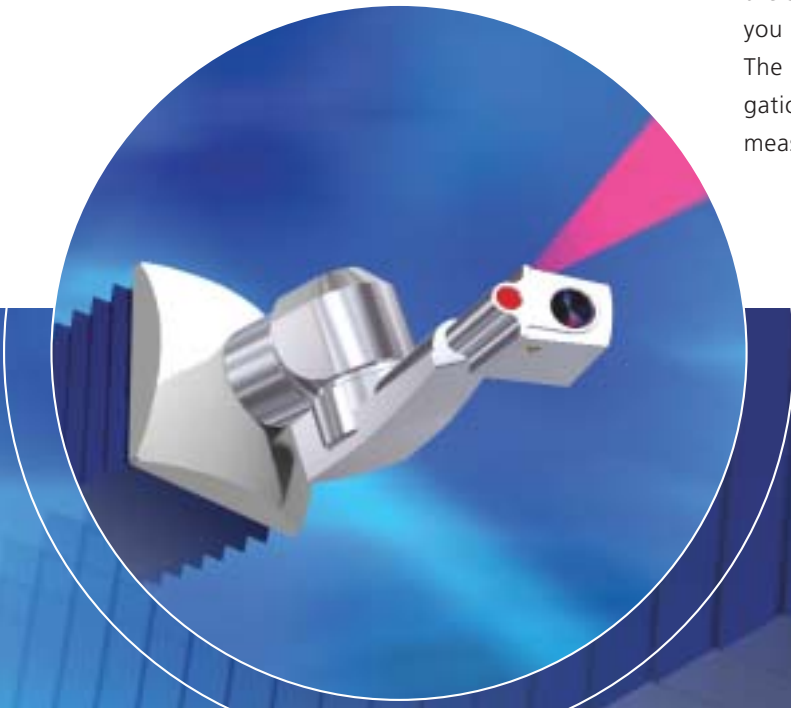
The applications and requirements in car-body production are highly versatile and complex. In other words, nothing but the best will do.

With the Eagle Eye Navigator we have developed an entirely new optical measuring technology tailored specifically to these tasks.

The Eagle Eye Navigator is a product from our Navigator line. It is our guarantee to help you achieve your goals in the fastest and most reliable way possible.

Just imagine sitting in your car with your navigation system showing you the way. It gives you the shortest routes, avoids traffic jams and takes you safely to your destination.

The Eagle Eye Navigator is your metrology navigation system. You reach your target – precise measurement data – quickly and reliably.



1

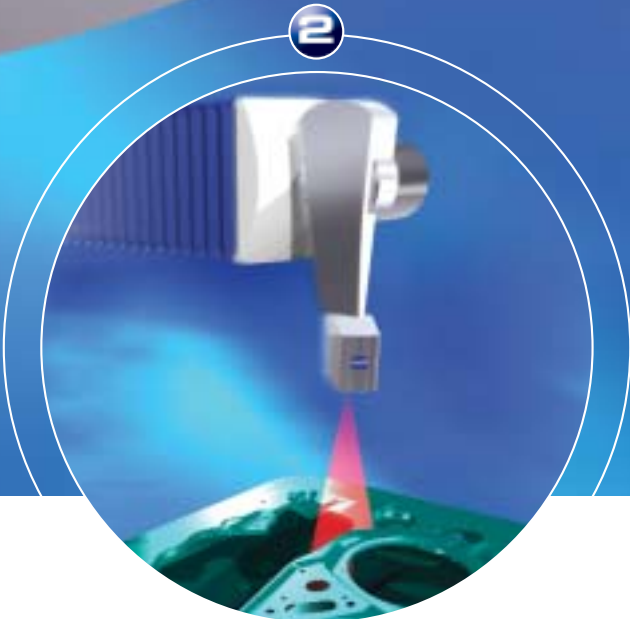
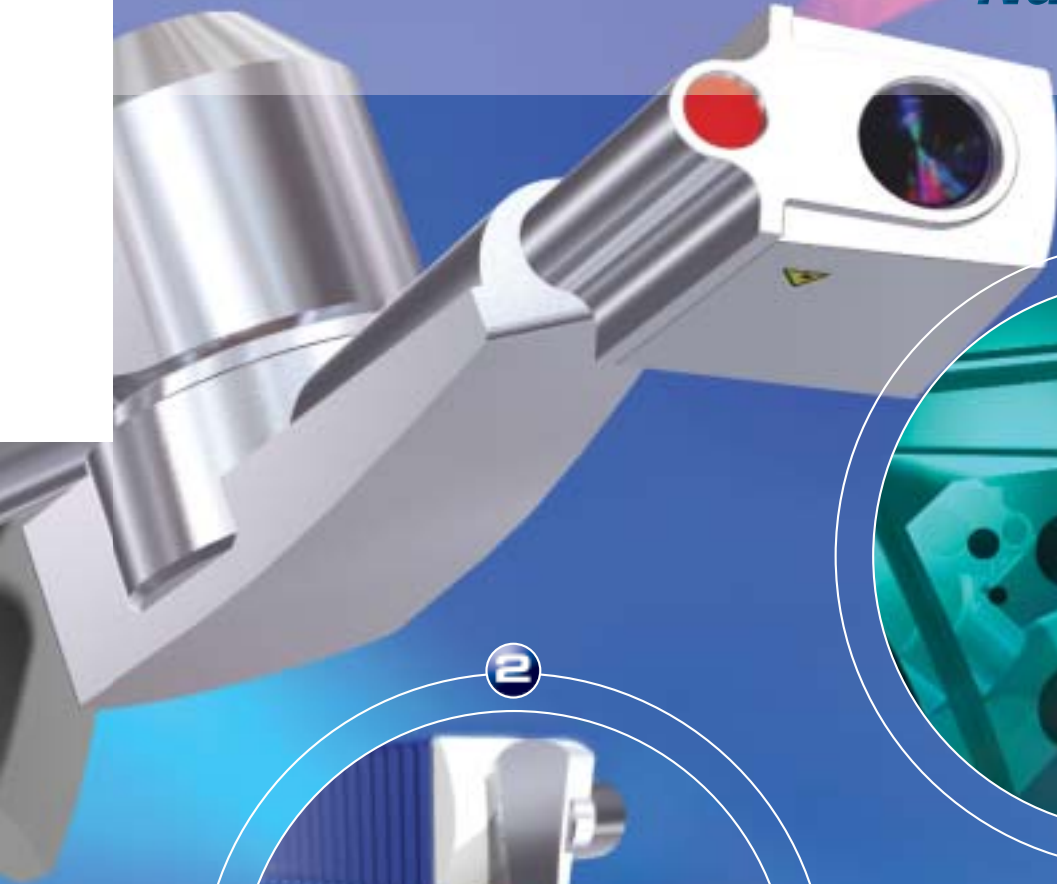
1 Positioning of the sixth axis

2 Optical scanning

3 Automatic feature calculation

# EAGLE EYE

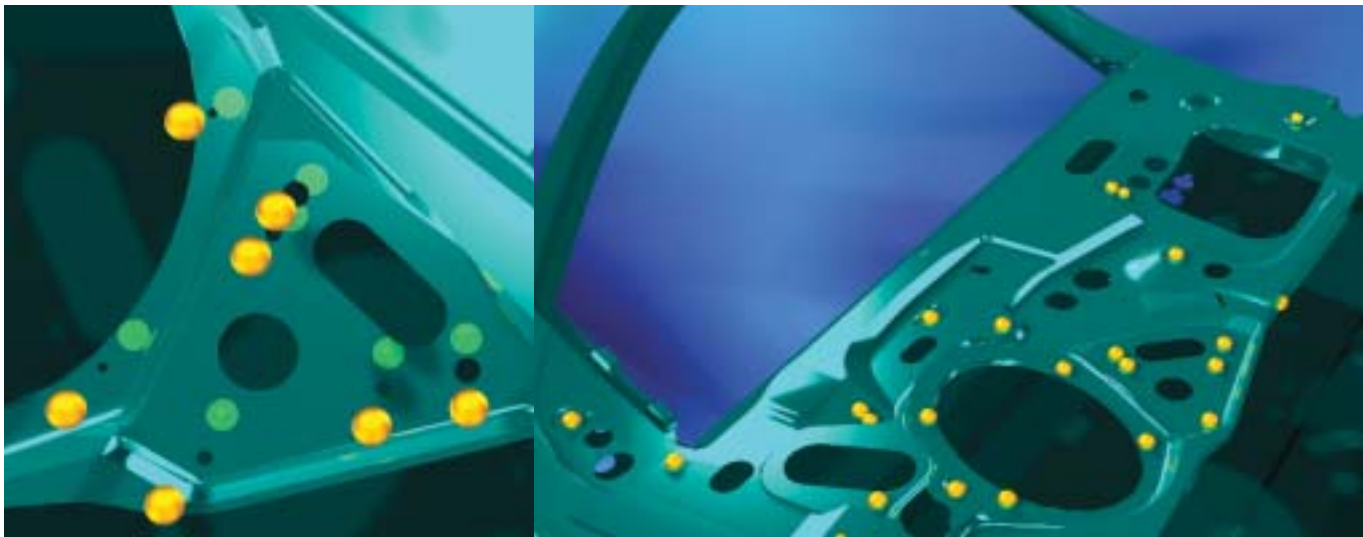
## Navigator



# What does the Eagle Eye Navigator do for you?

**In car-body production, particularly in screening, the verification of boreholes is an extremely time-consuming process.**

**On a complete car-body, the Eagle Eye Navigator saves you almost 50 % of the time.**



For example: every day, stamped and assembly components have to be verified by SPC inspection. Time and accuracy are always essential. In the past, 100 to 150 sphere adapters had to be attached to a mid-class car, a time-consuming and sometimes tricky process, particularly with threaded adapters.

This conventional measuring technique has not only drawbacks regarding time, but also quality: it is only the borehole position in the component that is measured. You still have no information relating to diameter and condition.

## **Up to 30 % time saved.**

With the Eagle Eye Navigator you can do the job much faster and obtain better results that can be exactly evaluated with utmost accuracy and continuous high speed.

Also the Eagle Eye Navigator directly shortens reaction times and improves the quality of stamped parts.

Typical steps required in conventional methods can be totally eliminated – no more sphere adapters to be installed and removed, no material, storage or handling costs.

The Eagle Eye Navigator turns your measuring machine into a production tool. Car-body components and assemblies are checked:

- ▶ **in their entirety**
- ▶ **without interruption and**
- ▶ **directly in production**



### **More information**

The Eagle Eye Navigator measuring technology has an extremely positive effect on the quality of your measured data.

The inevitable inaccuracy of the sphere adapters is a thing of the past.

You are provided with information on the diameter, form and location of the measured feature – down to the last  $\mu\text{m}$ . All data points are available as point clouds. The features are calculated in CMM-OS, while the relevant software takes care of the evaluation.

### **Incredible innovation**

#### **the 6<sup>th</sup> axis**

With the Eagle Eye Navigator, measuring technology has access to an entirely new dimension – the 6<sup>th</sup> axis. Only with the continuous rotation of the axis can you position the optical measuring system optimally to each element and in the normal direction.

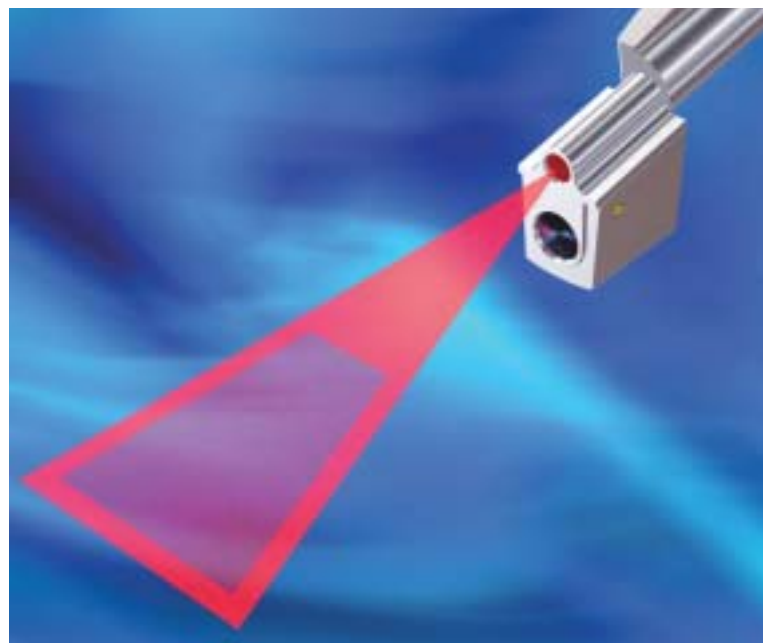
Even edge points can now be measured with unparalleled accuracy using the Eagle Eye Navigator.

### **Fully integrated**

The optical Eagle Eye Navigator system is fully integrated into the general measuring architecture. Both the contacting RST sensor and the Eagle Eye Navigator can be exchanged in the CNC mode and will continue to operate in the same workpiece coordinate system. The sensor change is performed automatically – no need for operator intervention. Our development teams have created the ultimate in system integration.

### **How does it work?**

The Eagle Eye Navigator adopts a very simple principle of physics – triangulation. This means that if you know two angles and one side of a triangle, all other elements of this triangle can be calculated.



# Skills of the Eagle Eye Navigator

No car-body component features as many measurement elements as the car door. Standard geometric elements are located next to free-form surfaces, and large- or small bores must be measured in the same measurement process as complex edges and sections. In short: if a product has passed the "car door test", you can be sure that it is of the utmost quality.

More than 20,000 data points for each laser line guarantee the highest information content. From these points the system's intelligence directly generates all features. Your result is available instantly.

See for yourself: the Eagle Eye Navigator will pass the "car door test" with flying colors!

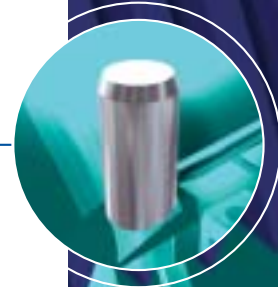


- Ready
- Steady
- Go

Spatial point



Cylinder



Edge



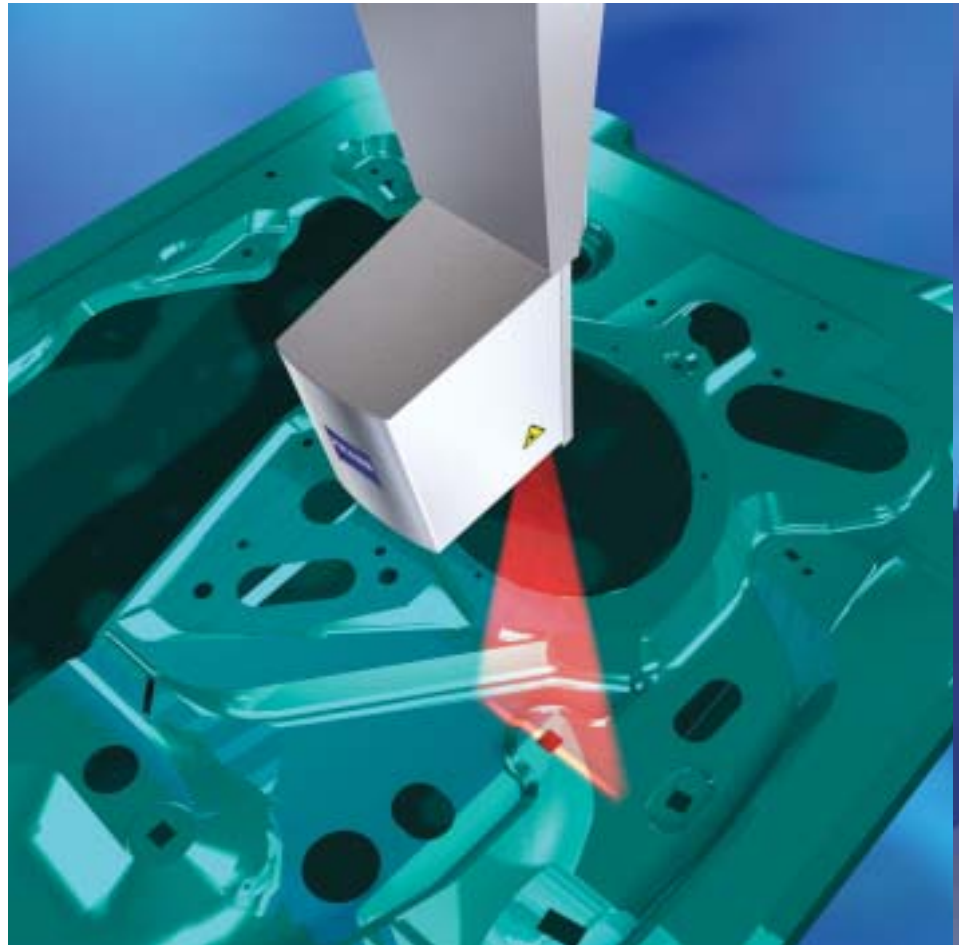


**Borehole**

**Oblong bore**

**Square bore**

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