

CALIPRI CB20

Key features

CALIPRI sensors use advanced laser light sectioning technology with three laser lines projected on the target parts. The CALIPRI sensor captures more data points on a measured profile, resulting in reliable flush and gap analysis based on the entire edge geometry and not upon mathematical extrapolation. The patented technology automatically corrects positioning errors in the pitch and roll axes, eliminating user error from the measurement process. The device's orientation towards the measured edge is tracked and maintained, making it easy to operate for all flush and gap locations.

Unmatched software capabilities

The simplest and most powerful software on the market ensures extremely precise and repeatable results, thanks to the patented CALIPRI Principle.

Edge evaluation plans

Two adjacent objects can connect in many forms of gap. CALIPRI software acquires the complete edge data enabling you to evaluate flush and gap areas based on your evaluation strategies or fixed analysis methods per gap type.

Twin head sensors

Two sensor heads mounted at a 60-degree angle allow for high-speed measurements.

Minimal footprint

Compact design requires minimal space in the line.

Visual assistance on screens

Real-time feedback for operators. Progress of inspection routines is displayed on the screen, showing results in customer-chosen colour codes.

Increase vehicle and production quality

Exceptionally precise and repeatable results from highly sophisticated hardware and software capabilities directly improve quality.

Cross-platform solution

When used throughout the production line CALIPRI assures the use of the same measurement strategy for all manufacturing steps.

Inspect all surfaces

Patented CaliBreeze technology allows measurement on all surfaces (e.g. glass, transparent plastics, compounds).



VEPOSE

Determining the vehicle position/orientation in 6 dimensions allows for measurements in the moving line.

Simple operation and maintenance

Easy implementation of new vehicles. The system is maintenance-free.

Combine inline and rework stations

One complete system to measure flush and gap. Inspection data generated at an inline measurement station can be automatically transmitted to following stations. These stations can be in the line or close to the line.

Connectivity

The latest technologies combined with Hexagon's smart manufacturing solutions establish connectivity between all manufacturing steps.

Verification artefact

The artefact supplied with each sensor is used to verify system performance according to certification standards.

PLC connection

The CALIPRI CB20 receives required vehicle information through the PLC and can automatically select and open the corresponding test plan.

Global service centres

An extensive network of Hexagon service centres guarantees that quality service and support is always nearby.

Class 2M blue laser

Safe to use without protective equipment whilst enabling the scan of different materials, finishes and optics.

Criteria for choosing a flush and gap device		CALIPRI CB20 + VEPOSE	Conventional gauge
Software	Does the solution prevent incorrect data collection by compensating and alerting pitch and roll axis errors?	✓	
	Can you capture the full edge even when the parts are fully assembled?	✓	
	Does the software allow flexible work modes including pre-capturing of the edges to improve efficiency?	✓	
	Can the measurement plan be shared between different devices, departments and plants?	✓	
	Can you evaluate flush and gap types (T-Gaps, trim edges, hem edges, inner seal gaps, etc.) with multiple settings and calculation methods?	✓	
	Is it possible to forward the data from the measurement station to the rework/refit station and have the operator in the rework station inspect the parts/vehicle with a manual device with the same technology?	✓	
	Can the highest accuracy and repeatability in the market be achieved while providing high-speed execution?	✓	
	Can the vehicle position/orientation be exactly determined in order to allow measurement on a moving production line?	✓	
	Is it possible to guarantee the capture of the outermost layer of headlamps and taillamps and therefore work without offsets?	✓	
	Is it possible to capture the largest portion of the vehicle in order to guarantee a highly reliable way to determine vehicle position?	✓	
	Can the supplier provide a system that identifies vehicle orientation without needing to change hardware parts?	✓	
	Can the position of the vehicle be determined to enable measurement on a moving production line and can the system also be used for static vehicle measurement in, near and off the line?	✓	
	Is a point cloud created to define a vehicle position in six dimensions?	✓	
Hardware	Can new vehicle types be implemented easily?	✓	
	Does the supplier offer to rotate the sensor in order to reliably capture the entire edge shape?	✓	
	Does the sensor come with a breeze technology and a class 2M blue laser (no UV lasers) so you can measure flush and gap on all reflective and translucent material?	✓	
	Is the gauge thermally stable and temperature compensated in order to reduce the systematic error and increase accuracy?	✓	
	Does the solution offer a twin head sensor angled at 60° to each other to ensure accurate inspection of the most challenging sections?	✓	
	Does the self-test artefact allow on-site sensor recalibration without sending it to a lab or the manufacturer, allowing 24/7, 365-day use of the system?	✓	
	Does the supplier offer automated as well as hand-held solutions for all parts of the production line using the same technology?	✓	
Integration	Can a vehicle positioning system (like VEPOSE) be implemented with a minimal footprint, and is it maintenance-free?	✓	
	Does the measurement software have an automatic mode, and can it be controlled via standardised interfaces to allow easy integration on all platforms?	✓	
	Is the supplier able to offer different technologies besides flush and gap in order to satisfy your needs across the board?	✓	
	Does the supplier have global strategic integration partners to ensure top-class installations?	✓	
	Does the supplier offer an integration-ready product for the highest standardisation in the commissioning phase?	✓	

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

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