



HEXAGON

NEXT**SENSE**

**CALIPRI CB20**

Data Sheet



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**CALIPRI**  
**CB20**

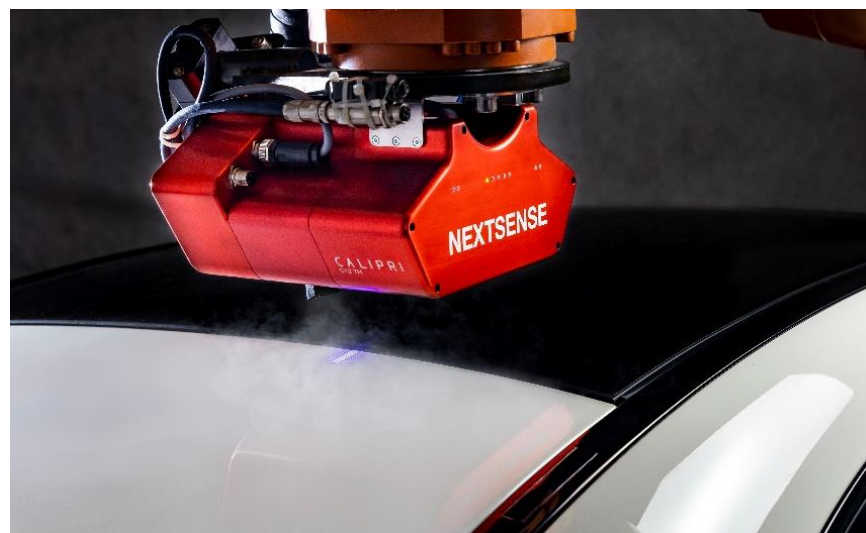
# 1 **PRECISE GAP AND FLUSH MEASUREMENT ON EVERY SURFACE**

The CALIPRI CB20 brings automated gap and flush measurement to the next level. Especially developed for the challenging demands in final assembly, the revolutionary CaliBreeze™ technology enables optical measurements on every surface.

Where other systems fail - e. g. with fully transparent materials like glass or plastic parts, highly reflective chromium or extremely light absorbing deep black finishes, the CALIPRI CB20 delivers highly precise and fast results.

In order to optimize the naturally poor reflectivity of transparent and semi-transparent surfaces, the patented CaliBreeze™ technology produces optical contrast by applying a layer of microscopic water droplets on the measurement object. Thus, enhancing the optical properties of any surface, making measurements at highest precision and speed possible. After serving its purpose, the water droplets evaporate within seconds without leaving any residue on the measurement object.

The CALIPRI CB20 combines the newly invented CaliBreeze™ technology with the proven CALIPRI principle. The latter being an industry trademark for precision and reliability for more than a decade now. Hence, the CALIPRI CB20 builds on known CALIPRI advantages while at the same time adding extreme versatility and independence of material surfaces.



**Measuring a glass roof with CALIPRI CB20 and  
its integrated CaliBreeze™ technology**



## 2 CALIPRI CB20 ADVANTAGES

### **Measurements on every surface**

Full gap and flush measuring performance on all types of surfaces by use of the patented CaliBreeze™ technology. This leads to reliable and precise results for gap and flush dimensions around windows, mirrors, panoramic roofs, head and tail lights and other important design elements.

### **Safe operation guaranteed**

Full operator safety due to 100 % visible light according to laser class 2M. The normal eyelid closure reflex is sufficient to safely avoid any damage to the eyes (an advantage over e. g. invisible UV lasers).

Furthermore, the CaliBreeze™ technology only needs water for operation, which evaporates without any residues and without endangering people or the environment.

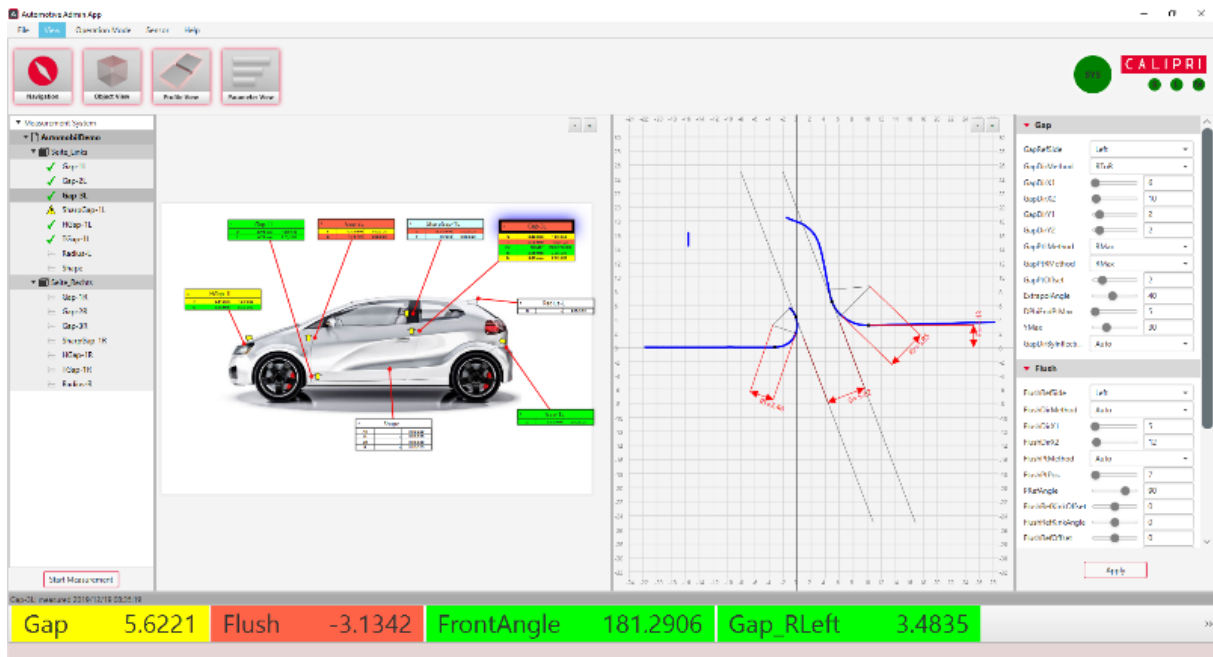
### **Fully automated**

CALIPRI CB20 is a fully automatic 100 % gap and flush measurement system for the final assembly line and works with any standard industrial or collaborative robot.

Factory-ready dual sensor heads measure gap and flush from two different angles in order to get a full gap profile view extremely fast. Ex works these are calibrated and temperature compensated, Thus, in case of downtimes, the sensor head is exchanged in minutes without any adjustment work needed.

### **Where it says CALIPRI, there is CALIPRI**

CALIPRI CB20 facilitates all proven advantages of the CALIPRI product family: Full compatibility of the robotic measurements with the results of CALIPRI handheld measurement systems (CALIPRI C10/C14/C15). Thus, enhancing traceability of gap and flush deviations through the whole process chain and optimizing corrective actions.

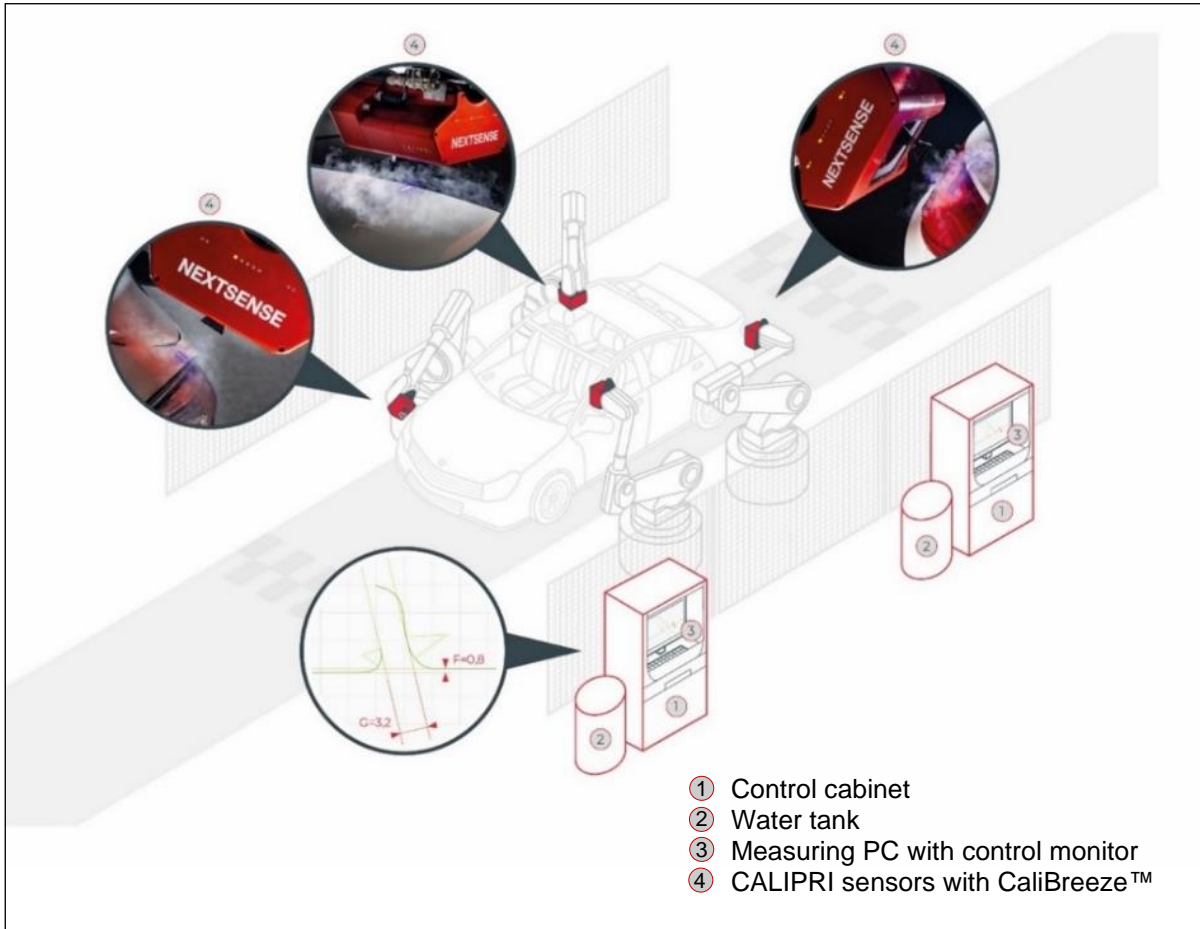


CALIPRI CB20 – Measurement results



### 3 SCOPE OF SUPPLY & SERVICES

	2-sensor-system	4-sensor-system
<b>Product ID</b>	CB2BD01	CB2BD02
<b>Hardware</b>	2 x sensor CALIPRI C12CB with CaliBreeze™ technology	4 x sensor CALIPRI C12CB with CaliBreeze™ technology
	2 x self-test and adjustment standard	4 x self-test and adjustment standard
	2 x measurement computer	4 x measurement computer
	1 x control cabinet with control monitor and CaliBreeze™ water tank	2 x control cabinet with control monitor and CaliBreeze™ water tank
<b>Software</b>	2 x CALIPRI measurement application	4 x CALIPRI measurement application
	2 x measuring module „Gap & Flush“	4 x measuring module „Gap & Flush“
	2 x measuring module „Special Gaps“	4 x measuring module „Special Gaps“
	2 x measuring feature CaliBreeze™	4 x measuring feature CaliBreeze™
	1 x CALIPRI Manager (software for measuring plan creation)	
<b>Services</b>	Support of installation and commissioning of measurement system	
	Basic training for operators, maintenance and IT staff	
	Support via phone, email and remote access after commissioning	



**CALIPRI CB20 (4-sensor-system)**

## 4 TECHNICAL DATA

<b>Accuracy</b>	Absolute:	< ± 20 µm
	Repeatability:	< ± 10 µm
<b>Speed</b>	Measuring time:	Ø 1.0 s
	Breeze time:	+ 0.5 s
<b>Sensor</b>	Design:	Twin Head (measurement from two angles) with CaliBreeze™ technology
	Laser class: Protection rating:	2M IP54
Factory-calibrated with temperature compensation		
<b>Environmental conditions</b>	Operation: ▪ Temperature/humidity	Air flow must be prevented! 10 – 40 °C / 20 – 80 % (non-condensing) 40 – 45 °C / 70 – 80 % (non-condensing)
	Storage: ▪ Temperature/humidity	0 – 70 °C / 8 – 90 % (non-condensing)
<b>Data collection</b>	Sensor technology:	Laser light section
	Tilt & roll correction:	Automatic (patented CALIPRI principle)
	Transparency: CaliBreeze™	CaliBreeze™ technology (patented)
	layer thickness:	2,5 µm (typical)
<b>Data transfer</b>	Protocols:	Profinet, Ethernet IP/IO
<b>Export formats</b>	Reports:	PDF, direct connection to printer
	Data records:	XML, CSV, DXF
<b>Application</b>	For the fully automated in-line measurement of gap and flush on all materials on the exterior of cars	



**CALIPRI CB20 – Measurements on any surface**



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