

edge break +

Bring precision chamfer and radius inspection to the shop floor



- ▶ Gap
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Edge Break inspection is a critical area of turbine manufacture. Sharp edges must be smoothed down to radii or chamfers of precise dimensions to ensure the correct and safe operation of components within a turbine. It is critical to ensure that there is no undue stress during operation that might reduce the working life of a component.

It is also a complex and difficult area to inspect. Historically, bespoke contact measurement systems have been slow and cumbersome, with the only shop floor alternative being imprecise manual gauges which rely on an operator's judgment rather than measured values, preventing any kind of traceability.

The revolutionary and cutting edge GapGun® Edge Break+ system finally brings precision chamfer and radius inspection to the shop floor.

edge break



Ergonomics: The hidden innovation

World leading ergonomics are incorporated into GapGun Edge Break+, making shop floor integration fast and simple as well as dramatically reducing training time for new operators.

GapGun Edge Break+ can be supplied with multiple, interchangeable standoffs that mirror measurable surfaces ensuring correct positioning and increasing operator comfort whilst maintaining measurement confidence. These standoffs replicate actual components for a comfortable fit and are made of a rugged yet non marring material, ensuring surface finish remains immaculate.

Total traceability means total confidence

Every measurement head is uniquely identifiable and supplied with a traceable calibration certificate along with a UKAS certified calibration artefact, ensuring you can be confident that every measurement you take is accurate.

Additionally, GapGun Edge Break+ includes a wide array of data logging options, allowing for limitless records of measurements. From logging images of profiles to integration with third party SPC software, full capability is offered meaning that any components inspected are dimensionally recorded forever.

Industry proven hardware, global coverage

Based on the industry proven GapGun₃, Edge Break+ is fast, yet accurate, robust, yet ergonomic. Furthermore, with over 10 years of continual development and hundreds of installations worldwide, GapGun systems are an industry recognised shop floor standard.

With a network of distributors spread across more than 20 countries globally, local sales and support are easily available. To find out more information or to arrange a demonstration from a local distributor please visit www.third.com.



Customisation options create the perfect shop floor solution

Ergonomics can be further improved with a range of customisation options to ensure the installed solution closely matches your requirements. Not only can standoffs be customised to suit your measured product, but the modular design that is central to all GapGun products means that measurement heads are interchangeable and remotely operable.

Additionally, communication standards are also configurable to allow integration with corporate networks, allowing measurement data to be stored anywhere within your facility.

Speed and accuracy come as standard

Using optical measurement techniques and laser triangulation, GapGun Edge Break+ can measure an edge feature on bright machined surfaces to accuracies as great as $10\mu/0.0004''$ in as little as 2 seconds!

Inspection processes that have previously taken hours or even days can now be completed in a matter of minutes to repeatably high accuracy, finally empowering operators on the shop floor to make decisions based on reliable dimensional data.

How it works

GapGun Edge Break+ is an optical measurement system that uses a uniquely configured laser stripe as a datum measurement surface. Cutting edge software analyses the image data of the surface and checks the measured profile against dynamically created CAD data, showing the operator exactly how the part compares to nominal dimensions and warning when parts enter a "no go" condition. The profile of the surface, along with the upper and lower allowable profiles are shown on the GapGun Edge Break+'s large, colour touch screen providing instant feedback and allowing decisions to be made with confidence faster than ever before.

Specifications

Field of view	7mm/0.3"
Resolution	Accuracy to 10 μ /0.0004" (measurement capability)
Measurement speed	Typically 2 seconds per section
Weight	Approximately 0.5kg (1.1lb)
Dimensions	76x117x165mm (3.0x4.6x6.5")
PC interface	Wireless (802.11a, b or g) or Ethernet. Supports WEP, WPA-PSK, WPA2-PSK, IEEE 802.11x
Laser	1M or 2M, with automatic intensity adjustment
Storage	2Gb: Near limitless measurement capacity
Screen	Daylight readable 3.5" TFT full colour touch screen, 240x320 pixel
Sensor head features	Head can be removed or rotated for ease of access
Standoff	Multiple, interchangeable, customisable standoffs available. Measurement distance 20mm from surface to measurement head
Input devices	Touch screen and trigger, integrated USB port for input peripheral attachment
User feedback	Audio and visual indicators given, including colour coded go/no-go conditions
Environmental	IP50
Operation	0-40°C (32-104°F) with onboard temperature sensor
Storage	-10-40°C (14-104°F)
Warranty and service	12 months manufacturer's warranty, further maintenance and service agreements available from your local distributor

For more information please visit www.gapgun.com

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