

# THE GAPGUN PRO

## A REVOLUTIONARY STEP IN LASER MEASUREMENT.





# THE GAPGUN PRO PROVIDES UNRIVALLED LEVELS OF PERFORMANCE AND PROFILE MEASUREMENT CAPABILITIES.

## ULTRA FAST MEASUREMENT CAPABILITY

GapGun Pro's superfast processor means that measurements can be collected faster than ever before, with speed improvements of up to 20x over manual techniques, reducing cycle time and increasing efficiency.

## UNRIVALLED CONNECTIVITY OPTIONS

GapGun Pro stores data internally as it measures and automatically connects to Wi-Fi for seamless productivity. Results can be downloaded at any time using integrated wireless link, USB port, docking station or Ethernet.

## BEST USER INTERFACE ON THE MARKET

Full colour graphical checkplans show operators how and where to measure. On-screen compass and colour coding guides positioning relative to the part, whilst sounds and vibrations alert operators of in/out tolerance conditions.

## COMPLETELY PORTABLE FOR OPERATOR FLEXIBILITY

GapGun Pro can operate completely standalone for around 4 hours with its high capacity internal battery, taking measurements with the same accuracy, reliability and performance as when tethered to a PC. For a further 6.5 hours autonomous use, simply attach it to its lightweight clip on battery pack.

## HIGH RESOLUTION & PRECISION MEASUREMENT CAPABILITY

GapGun Pro can be specified with multiple field of view and resolution VChange sensor, to take a wide range of measurements. GapGun Pro RET (Resolution Enhancement Technology) uses over 4000 data points per measurement to give real world repeatability of 10µ or maximum feature size of 50mm.

## ROBUST CONSTRUCTION

GapGun Pro's evolved, rugged design with shock protection sensor jacket makes it durable for a wide range of challenging and unique manufacturing environments.



# THE GAPGUN PRO COMES EQUIPPED WITH A MARKET LEADING RANGE OF FEATURES.



## HIGH RESOLUTION TOUCH SCREEN

The GapGun Pro's large colour touch screen is highly responsive, easy to navigate and best on the market, with 4x the resolution than that of previous GapGun models. Readable in a huge array of conditions, the high definition screen displays measurement instructions, results and analysis.



## VCHANGE SENSORS WITH HI-RANGE CAPABILITY

VChange sensors have a Hi-Range measurements capability which dynamically adjusts laser output to allow measurement on multiple surface conditions. GapGun Pro can measure anything from carbon fibre to high gloss black paint and chromes.



## AUTOMATIC SYNCRHONISATION

Set up the GapGun Pro either using its built-in teach mode, or via the GapGun Pro checkplan software on the PC. Thereafter, the GapGun Pro automatically synchronises both checkplans and measurement data in real-time with your corporate network, PC or laptop.



## FULLY CUSTOMISABLE TO YOUR REQUIREMENTS

The GapGun Pro comes ready configured to measure a wide variety of common applications. You can create your own infinite variations on these initial building blocks.



## STRAIGHTFORWARD SYSTEM GUIDES

The GapGun Pro menu system guides operators through even the most complex tasks. You can also easily customise the complete menu system to match your exact requirements and workflow.



## ON SCREEN RESULTS ANALYSIS

View cross sections of the measurement area and results analysis on-screen using standard red/green colouring conventions and warning sounds to indicate "go/no go" conditions.



## EXPORT RESULTS EASILY

GapGun Pro can fully customise its output and export results easily to Excel, CSV, PDF, SQL, XML and other file formats, as well as interface with most leading SPC packages such as QDAS.



## SHARE MEASUREMENT PLANNING

GapGun Pro connects to SPC3d and shares with multiple GapGuns, to create bespoke Virtual Tools and graphical measurement checkplans for complex applications.



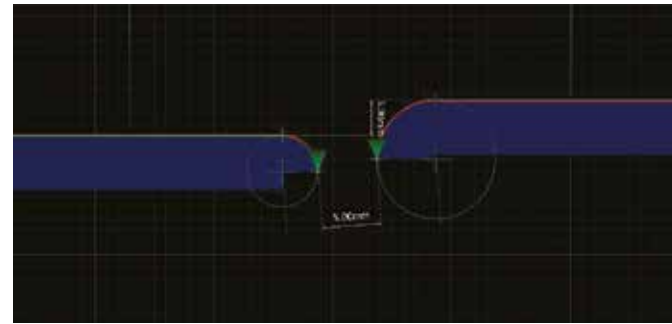
## WI-FI CAPABILITY

GapGun Pro interfaces with your PC by Wi-Fi feeding results into automatic measurement reports.

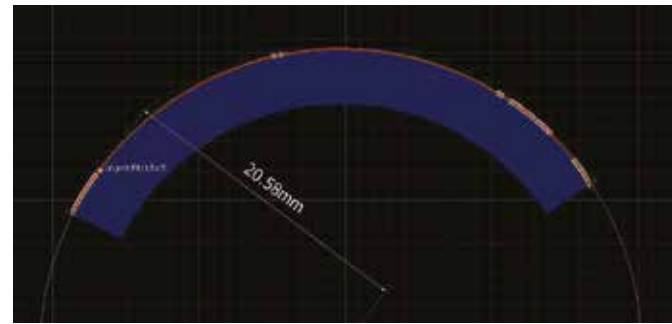




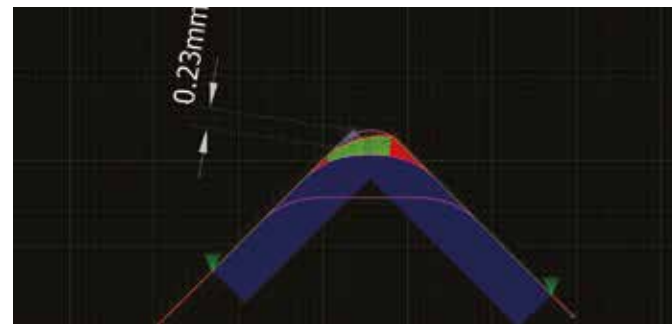
GAP & FLUSH



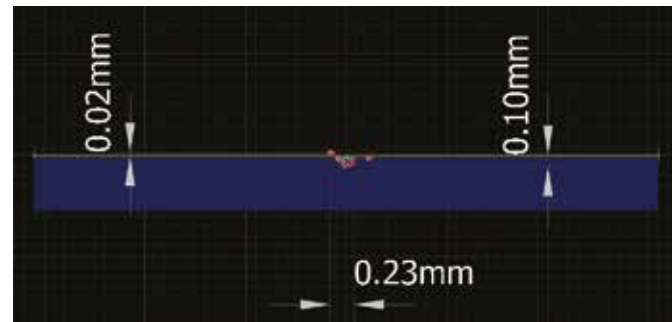
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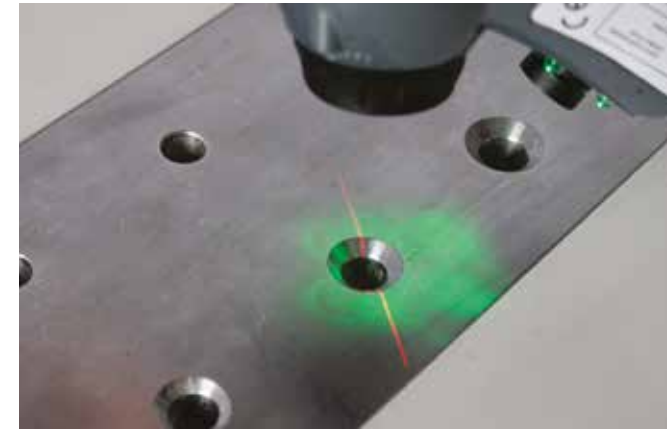
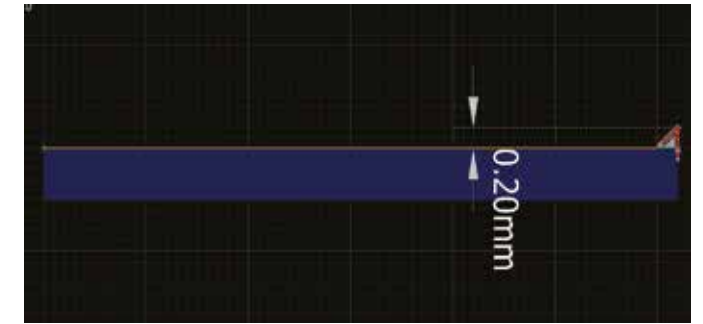
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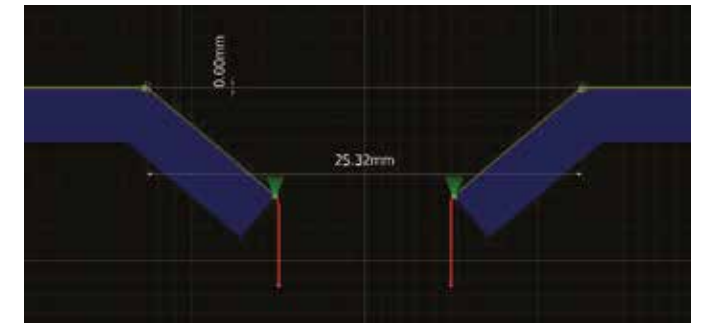
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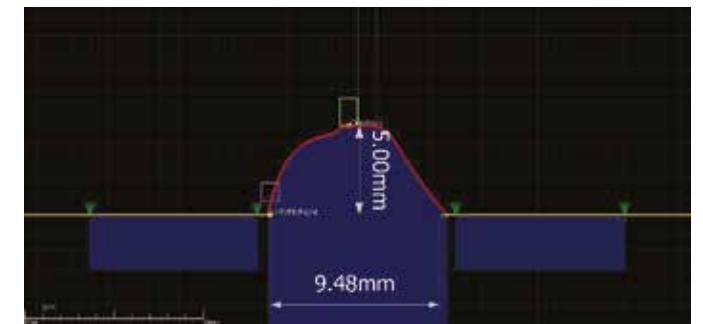
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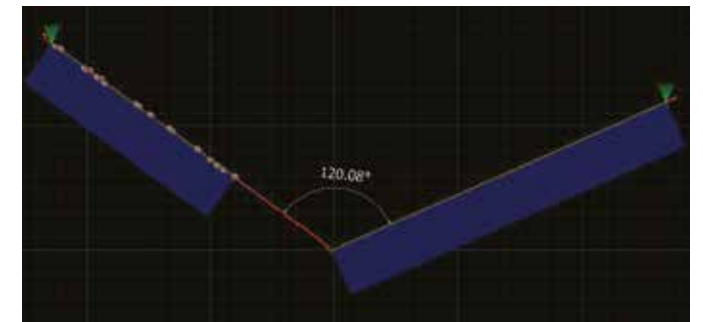
COUNTERSINK



WELD & SEAL



ANGLE







# MAXIMISE YOUR ACCURACY AND REPEATABILITY.

The GapGun Pro system comes equipped to operate either non-contact (no stand-offs) or contact (with stand-offs). Because adding or removing the standoffs takes only seconds, you can maximise performance by selecting the best method for each measurement point.

## USE THE GAPGUN PRO WITHOUT STAND-OFFS (NON-CONTACT)

- Where accuracy and repeatability are critical
- On any surfaces that are soft, plastic, or may move
- Where surface damage is a concern
- For hard to reach, concave, or restricted areas.



Non-contact measuring

## OTHERWISE, USE THE GAPGUN PRO WITH STAND-OFFS (CONTACT)

- Where speed is more important than accuracy (contact is approximately 15% faster)
- For measuring at arms length or on small complex features
- Where an application specific stand-off is used
- To train new operators.



Contact measuring

## FULLY INTEGRATED WI-FI CAPABILITY

GapGun Pro has a fully integrated Wi-Fi connection for totally autonomous measurement capability. This means it's possible to achieve instant results access direct to the PC with no additional hardware or cables required, giving operators enhanced portability and convenience on the shop floor.



Wi-Fi

## MULTIPURPOSE DESK DOCK

Used to download measurement plans and upload results data between the PC and the GapGun Pro, the desk dock is also an ideal place to dock and charge the GapGun Pro whilst not in use.



Desk dock

# SENSOR SPECIFICATION

## SENSOR TYPES

A vast range of measurements can be collected using just one system and Third Dimension's extensive range of interchangeable VChange sensors.

GapGun Pro's uniquely modular design enables the customer to interchange sensors for 4 different fields of view.

### 1. SUPER HIGH RESOLUTION: 7MM

Field of view: 6.5mm (0.26")  
RET resolution: 3µ (0.0001")

Scratches, defects, fasteners, chamfers and profiles, turbine blades, small gap and flush, radii.

### 2. HIGH RESOLUTION: 15MM

Field of view: 25mm (1.0")  
Max gap & flush: 10mm (0.4")  
RET resolution: 11µ (0.0004")

Aerospace high accuracy gap and flush, large fasteners.

## THE VCHANGE SENSORS

GapGun Pro includes Third Dimension's ergonomic VChange sensor interface, which allows the sensor to remove, swap and reattach sensors, in just seconds, making multiple sensor use on the shop floor easier than ever before.



The VChange sensor system



### 3. STANDARD: 40MM

Field of view: 55mm (2.2")  
Max gap & flush: 25mm (1")  
RET resolution: 24µ (0.0010")

Generic, automotive or aerospace gap and flush, interiors, sealants, ring gauges.

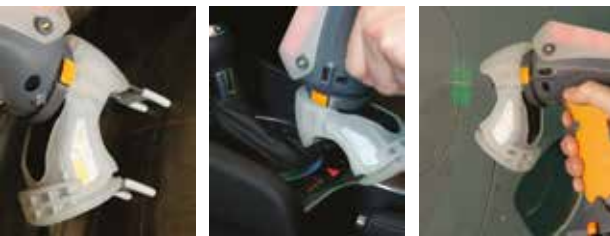
### 4. WIDE ANGLE: 80MM

Field of view: 90mm (3.5")  
Max gap & flush: 50mm (2")  
RET resolution: 40µ (0.0016")

Large gap and flush, profile measurement, CAD verification.

## ADJUSTABLE LASER CAP

Third Dimension's Hi-Range sensor technology enables a multitude of challenging surface finishes to be measured. Its patented adjustable laser cap can uniquely shorten or split the laser line to measure a range of complex features.



Split laser line adjustment, small laser line adjustment, long laser line.

# TECHNICAL SPECIFICATION

## MEASUREMENT CAPABILITY

Accuracy	GapGun Pro systems meet Cg, Cgk, 6-Sigma and VDA5 standards for their intended applications. Please contact us for detailed performance figures for your application.
Repeatability	Proven to <15% QS9000-MSA for a wide variety of measurement sections.
Output format	Customisable, including millimetres, inches and thousandths of an inch.
Surfaces	Measures all known automotive paints, carbon fibre, unpolished and galvanised metals including steel and aluminium, plastics and soft furnishings. Glass and mirrored surfaces can also be measured.
Operating principle	Laser triangulation with Resolution Enhancement Technology (RET).

## SOFTWARE

Virtual Toolkit™	Extensive toolkit that allows measurement of virtually any gap, flush, radius, scratch, chamfer, fastener, seal or profile. Add-on packs for specialised aerospace and automotive applications are available.
SPC	Use the GapGun Pro's built in SPC or link directly to your existing SPC software.
Data input	CAD data from file. Checkplans from MS Excel.
Results output	Freely customisable, including DMIS, QDAS, MS Excel, plain text, CSV, point cloud, MeasurLink, CM4d, SPC3d.
User interface	Simple creation of menus and graphics for GapGun Pro LCD.
Language	English, French, German, Spanish, Italian, Japanese, Korean, Chinese, etc.
Integration	Optional developers' SDK allows integration with third party software.

## MEASUREMENT SENSORS

Weight	150g (5oz)
Dimensions	65 x 105 x 60mm (2.6 x 4.1 x 2.4") W x D x H
Laser	Class 2M with automatic laser intensity adjustment.
Standoff	20mm (0.9") from front of head for Super High Resolution head. 50mm (2") from front of measurement head for all other head types.

## HANDLE

Weight	480g (17oz)
Dimensions	90 x 135 x 190 mm (3.5 x 5.3 x 7.5") W x D x H
Storage	2GB + 2GB internal MicroSD card.
Screen	97mm (3.8") Daylight readable, full colour, high resolution LCD touchscreen 640 × 480 pixel.
Input devices	Click and drag touchscreen, trigger and power/reset button.
User feedback	Dual audio output and vibrator for high noise environments.
Sensor rotation	Measurement sensor can be angled through +/-90 degrees, maximising accessibility and comfort.
Sensor Interface	Rotating quick release VChange interface.

## SYSTEM

Environment	IP50
Operation	0-40°C (32 -104°F) onboard temperature sensing.
Storage	-20 - 60°C (14 -104°F)
Connectivity	Connect directly to MS Windows™ networks via 100MBPS Fast Ethernet or 802.11 wireless LAN provided as standard, with optional radio link. Data download and interchange also available using USB.
Shock protection	Shock protecting cover on sensor and body, high impact plastic housing and internal shock sensor.
Included accessories	Wrist loop, belt clip, calibration check artefact, training artefact, standoff sets, clip on battery pack and battery charger.

## WARRANTY AND SERVICE

Maintenance and service	Agreements available from your local distributor.
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# WANT TO KNOW MORE ABOUT OUR MARKET LEADING GAPGUN PRO RANGE?

CALL : 03333 443 000

EMAIL : [info@third.com](mailto:info@third.com)

VISIT : [www.third.com](http://www.third.com)

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## OUR CUSTOMERS

Our distribution network serves customers in 25 countries worldwide. These include:



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GapGun systems are designed,  
developed and manufactured by

**thirddimension**  
advancing manufacturing

For more information please visit: [www.third.com](http://www.third.com)

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