VECTRO®

PRECISION **AUTOMATED** FEATURE MEASUREMENT

THIRD DIMENSION
ADVANCING MANUFACTURING

VECTRO.
DESIGNED FOR
AUTOMATION

Vectro automates the advanced non-contact feature measurement capabilities of the GapGun Pro, Third Dimension's bestselling handheld laser measurement system.

It's simple and fast, delivering increased levels of repeatability and excellent returns on investment.

For fast throughput of production quality checks

For high precision break sharp edge applications

For offline metrology testing or research and development

VERSATILE AND COMPATIBLE

Vectro works either robot mounted or in fixtured applications. The system includes a mounting plate that can be attached to your choice of robot.

REDUCE COSTS, IMPROVE QUALITY AND INCREASE PRODUCTIVITY

Vectro improves productivity, enables greater throughput, cuts inspection cost and reduces rework. All of this with the added benefit of improved quality.

01

Fast and efficient

Vectro measures quickly and automatically, allowing more to be manufactured every hour, without sacrificing quality.

02

Accurate, repeatable and reliable

Consistent positioning with fixtured or robotically guided measurements eliminates human error and ensures accurate results every time. VChange sensor heads come with full calibration certificates, traceability and a 2 year warranty.

03

Automatic manufacturing decisions

Vectro automates checking of parts against their dimensional specification with real-time go/no-go decisions, or statistical analysis.

04

Modular and versatile

Vectro is compatible with the full range of VChange sensor heads, allowing the measurement of a diverse range of feature shapes, sizes and surface types.

05

Easy to integrate

Vectro can be built into any application with Third Dimension's easy-to-use Link integration software. Simple commands trigger measurements and retrieve results, leaving more time to focus on the production process.

06

Dynamic user interface

The Vectro display presents live profile information and measured values, making it even easier to focus on improving the quality of products.

Automated feature measurement from a fully integrated system.

THE VECTRO BASE SYSTEM INCLUDES:

- Vectro data collector
- VChange sensor head mount
- Controller to sensor head mount cables
- Power supply
- Mains power cables
- GapGun version 7 software

OPTIONAL SENSOR HEAD PACK INCLUDES:

- VChange sensor head
- Calibration artefact & holder

OPTIONAL CABLE PACK INCLUDES:

- Vectro control and signal cables

12V POWER
SIGNAL
VIDEO
NETWORK

EXTERNAL TRIGGER
USB
RESET
TRIGGER
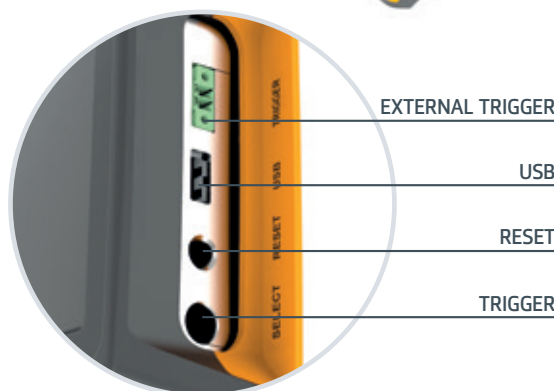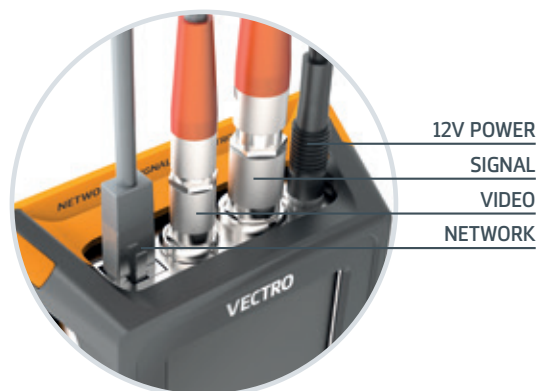
SENSOR HEAD TECHNICAL SPECIFICATION

SENSOR HEAD TYPES

Third Dimension's extensive range of interchangeable VChange sensor heads mean a vast range of measurements can be collected using just one system. Vectro's uniquely modular design enables the customer to interchange sensors for 4 different fields of view.

1. FOV7: SUPER HIGH RESOLUTION

TYPICAL FEATURE SIZE RANGE
0.1mm - 3.0mm

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

2. FOV15: HIGH RESOLUTION

TYPICAL FEATURE SIZE RANGE
1mm - 5mm

Aerospace high accuracy gap and flush, large fasteners.

3. FOV40: STANDARD

TYPICAL FEATURE SIZE RANGE
2mm - 25mm

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

4. FOV80: WIDE ANGLE

TYPICAL FEATURE SIZE RANGE
5mm - 40mm

Large gap and flush, profile measurement, CAD verification.

For more information, contact sales@third.com

VECTRO TECHNICAL SPECIFICATION

VECTRO CONTROLLER

Power rating	6W (12V @ 0.5A)
Screen	97mm (3.8") Daylight readable, full colour, high resolution LCD touchscreen 640 x 480px
User Interface	Click and drag touchscreen, trigger and power/reset button
Feedback	Audio output
Storage capacity	2GB internal storage
Peripheral devices	USB 2.0 port
IP rating	IP50
Ethernet	100Mbps Fast ethernet (100BaseTX)
Operating temperature	0 to 40C (32 to 104F)
Storage Temperature	-20 to 60C (-4 to 140F)
Size	116 x 134 x 46.5mm (5.3 x 1.8 x 4.5") W x D x H
Weight	460g (16oz)
Software	GapGun version 7 software
PLC connectivity	Modbus/TCP

ACCESSORIES

Included	VChange sensor head mount, sensor head mount cables (3 or 10m), power supply (12V) and USB stick

COMPATIBLE PC SOFTWARE

SPC3d	SPC3d Software Pack: for configuring Virtual measurement tools, data logging, reviewing measurements
INSPECT	Inspect Software Pack: for manual and interactive analysis of measurement data
LINK	Link Software Pack: allows custom .NET programs to be written controlling the Vectro or GapGun Devices.
INLINE	Inline Software Pack: allows a large overhead display of measured results

All software packages support international languages and regions.

WARRANTY AND SERVICE

Maintenance and service	2 year warranty as standard. Further options and details available from your local distributor.

SENSOR HEAD

Laser	Class 2M with automatic laser intensity adjustment.
Measurement capability	Defined by specification D05031. Sensor heads include a calibration and certificate.
Accuracy	Meets Cg, Cgk, 6-Sigma and VDAS standards for intended applications
Repeatability	Proven to <15% QS9000 MSA for a wide variety of measurement
Surface capability	U series: Automotive paints, unpolished and galvanised metals including steel and aluminium, plastics and soft furnishings.
	Available as any VChange sensor head.
	M Series: Carbon fibre, glass and mirrored surfaces.
	Available as FOV7 & FOV15 VChange sensor heads only.
Size	65 x 105 x 60mm (2.6 x 4.1 x 2.4") W x D x H
Weight	160g (5oz)

ACCESSORIES

Included	Shock protection sensor head jacket and generic standoff set
Optional	Sensor head extension cable and customisable standoff set

WANT TO KNOW HOW VECTRO CAN HELP REDUCE COSTS AND IMPROVE QUALITY?

CALL : +44 (0)3333 443 000
EMAIL : info@third.com
VISIT : www.third.com

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in third-dimension

OUR CUSTOMERS

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Vectro systems are designed,
developed and manufactured by:

THIRD DIMENSION
ADVANCING MANUFACTURING

Authorised dealer