This 2D measuring system is the result of 30 years of experience in metrology by vision

You drop it, you measure it!

Recognition of the item and automatic selection of the corresponding measuring program.

Control of workpieces regardless of their position and orientation in the control area.

Increased accuracy, reproducibility and objectivity of measurements, while reducing the control time.

Recording and statistical analysis of measurements optimize traceability and quality control.

Within one second
Specifications & features

Structure:
- Rugged aluminum structure allowing «close to production line» use
- Bi-telecentric lens for very accurate full-field measurements
- Optional X motorized axis (200, 400 or 600 mm)
- X axis encoder resolution: 0.5 µm

Measuring capacities:

<table>
<thead>
<tr>
<th>Zoom position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field of view</td>
<td>67.6 x 56.5mm</td>
<td>33.8 x 28.3mm</td>
<td>16.9 x 14.1mm</td>
<td>8.4 x 7.1mm</td>
</tr>
<tr>
<td>Uncertainty (2σ) in the FOV</td>
<td>±5µm</td>
<td>±2.5µm</td>
<td>±1.3µm</td>
<td>±0.7µm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. measuring ranges with X axes</th>
<th>ICM D2P 200</th>
<th>ICM D2P 400</th>
<th>ICM D2P 600</th>
<th>ICM D2P 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>200 x 67.6</td>
<td>400 x 67.6</td>
<td>600 x 67.6</td>
<td>200 x 200</td>
</tr>
<tr>
<td>mm</td>
<td></td>
<td></td>
<td></td>
<td>300 x 200</td>
</tr>
</tbody>
</table>

XY uncertainty (2σ) $P + (2.5 + 5L/1000) \mu m$ (L in mm)

Vision:
- 5 MPX color high definition digital camera
- Motorized bi-telecentric zoom lens (4 indexed positions)
- Programmable lighting devices:
  - Episcopic lighting (white LED)
  - Diascopic collimated lighting (LED)
  - Optional 3 in 1 motorized lighting (surface, low angle, dark field)
- Magnifications x7 to x56 (for guidance with full screen display 24")

Computer:
- CPU INTEL Core I5, Memory 8 Go, HDD 250 Go mini
- 24” LCD Screen
- Windows 10 / 64 bits

ICM suite software:
The ICM D2P machine is provided with the «ICM Suite» software, including control of parts, reporting, and follow up of the control device.

Optional configuration & accessories:
- 5 MPX Camera with single field of view up to 67 x 56 mm
- 20 MPX Camera with single field of view up to 120x80 mm
- Motorized rotary axis
- Mounting with integrated lighting for measuring long profiles parts or pipes

Conditions of use:
- Power supply: 120 or 220 V, 50 or 60 Hz, 500 VA
- Temperature range to ensure measuring accuracy: 20 ±1°C
- Usage temperature: 15 to 35°C
ICM D2P 71

2D digital profile projector

This 2D measuring system is the result of 30 years of experience in metrology by vision

No compromise!

70 million pixels for accurate measurements in a large field of view

Control of workpieces regardless of their position and orientation in the control area.

Increased accuracy, reproducibility and objectivity of measurements, while reducing the control time.

Recording and statistical analysis of measurements optimize traceability and quality control.

Within 3 seconds
Specifications & features

Structure:

- Rugged aluminum structure allowing «edge production line» use.
- Bi-telecentric lens for very accurate full-field measurements
- 71 mega pixels camera for accurate measurements in a wide field of view

Measuring capacities:

<table>
<thead>
<tr>
<th>Magnification</th>
<th>Configuration A</th>
<th>Configuration B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field of view</td>
<td>67x47 mn</td>
<td>33x23 mn</td>
</tr>
<tr>
<td>Measurement uncertainty (2σ) in the FOV</td>
<td>±1.5 μm</td>
<td>±0.8 μm</td>
</tr>
</tbody>
</table>

Vision:

- 71 MPX high definition digital color camera (10000 x 7096 pixels)
- Bi-telecentric zoom lens
- Programmable lighting devices:
  - Episcopic lighting (white LED)
  - Diascopic collimated lighting (LED)
  - Optional 3 in 1 motorized light (surface, low angle, dark field)

Computer:

- CPU INTEL Core i5, 8 Go, HDD 250 Go mini (embedded computer)
- 24” LCD screen, for optimal and ergonomic use
- Windows 10 / 64 bits

ICM suite Software:

The ICM D2P machine is provided with the «ICM Suite» software, including control of parts, reporting, and follow up of the control device.

Conditions of use:

- Power supply: 120 or 220 V, 50 or 60 Hz, 500 VA
- Temperature range to ensure measuring accuracy: 20 ±1°C
- Usage temperature: 15 to 35°C
This 2D measuring system is the result of 30 years of experience in metrology by vision

You drop it, you measure it!

Scan of workpiece(s) up to 200 x 300 mm

Control of workpieces regardless of their position and orientation in the control area.

Increased accuracy, reproducibility and objectivity of measurements, while reducing the control time.

Recording and statistical analysis of measurements optimize traceability and quality control.

Multi parts control.
Specifications & features

Machine structure:

- Aluminum structure
- Measurement capabilities (X, Y): 200 x 200 mm or 200 x 300 mm
- Loading up to: 10 kg
- Cross roller guides
- Encoder resolution: 0.5 µm
- X, Y, Z speeds: 75 mm/s maximum
- Bi-telecentric lens for very accurate full field measurements

Measuring capacities:

<table>
<thead>
<tr>
<th>Zoom position</th>
<th>1</th>
<th>2</th>
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<tr>
<td>Field of view</td>
<td>33.8 x 28.3mm</td>
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<td>8.4 x 7.1mm</td>
<td>4.2 x 3.5mm</td>
</tr>
<tr>
<td>Uncertainty (2σ) in the FOV</td>
<td>±2.5µm</td>
<td>±1.3µm</td>
<td>±0.7µm</td>
<td>±0.4µm</td>
</tr>
</tbody>
</table>

Measurement uncertainty with XY axes (2σ): P + (2.5 + 5L/1000) µm (L in mm)

Bidirectional image stitching function:

The advanced stitching function creates a global picture of the part from several pictures.

Vision:

- 5 MPX high definition digital color camera
- Motorized bi-telecentric zoom lens (4 indexed positions)
- Programmable lighting devices:
  - Episcopic lighting (white LED)
  - Diascopic collimated lighting (LED)
  - Optional 3 in 1 motorized lighting (surface, low angle, dark field)
- Magnification x14 at x112 (for information with full screen display 24”)
- Available with one fixed single magnification (Zoom position #1)

Computer:

- CPU INTEL Core i5, Memory 8 Go, HDD 250 Go mini
- 24” LCD Screen
- OS Windows 10 / 64 bits

ICM suite software:

The ICM D2P machine is provided with the «ICM Suite» software, including control of parts, reporting, and follow up of the control device.
ICM Suite
Vision software for measurement & control

You drop it, you measure it!

Friendly and intuitive graphic user interface.

Multiple programming modes, either by learning or using CAD (DXF) files.

Complete library of mathematical, geometric, and statistical tools.

Traceability of results (exploitation of results, management of controlled lots...).

Naturally open and adaptable software (MS Windows® environment, MS Excel® interface, production management).

SQL Server database.

Integrable into a production line (robot or PLC connection).
Specifications & features

A large range of powerful tools:

- Detection tools (points, lines, circles, fixtures, shapes…)
- Geometric constructions (intersections, perpendicular, parallel, projection)
- Measurement tools (distance, angle, perimeter, area, ISO, radius, diameter)
- Vision tools (image processing and operation, tolerances, gap-shaped, edge)
- Advanced vision tools (identification, scanning, autofocus)
- DXF file exploitation (edges detection, fixture, layers, location, tolerances)
- Miscellaneous tools (external sensor, macro, programming, mathematics)
- Two levels limits (warning and stop) and specification limits

Software functionalities:

- Pattern matching to measure a part whatever its position and orientation
- Automatic part recognition to select the correct measuring program
- Automatic palletization to control several parts at the same time
- X or X&Y scanning and stitching to increase the size of the controlled part
- Lights, axes and multi-magnification lens controls
- Automatic generation of a program with only a few defined parameters

Traceability:

- Data recording and exploiting in a SQL database
- Automatic statistics computation (average, range, standard deviation, CP)
- Visualization of a data trend
- Automatic export of the data in our SPC software (SPC suite)
- Manual or automatic export of the data to third party software
- Configurable and manual or automatic control reports by part or batch
- Manual or automatic saving of the pictures
- Configurable production management
DELTEC LEOS
3D automatic measuring system
Multi sensors

DPM: a unique system to detect various parts by shape learning

This machine is fitted with all the tools you need for your tridimensional metrology (software and 3D structure).

Suitable for all controls: First part, process, laboratory, at entrance, at exit, during production...

Programming by self-learning or CAD files.

Automatic control of parts (single or multiple, by step and repeat).

Ergonomic workstation with one or two screen(s).
Specifications & features

Structure (LEOS 200 / 300):

- Structure made of aluminum alloys
- Measurement capabilities (L, P, H): 200 x 200 x 150 mm / 200 x 300 x 150 mm
- Loading up to 10 kg
- Crossed rollers guides
- Encoder’s resolution: 0.5 µm
- X, Y, Z speeds: 75 mm/s maximum

Measurement uncertainty (2σ):

- XY E2: (2.5+5L/1000) µm (vision, touch probe)
- Z E1: (4+5L/1000) µm (vision)
- Z E1: (2.4+5L/1000) µm (touch probe)

Vision:

- HD B&W digital camera 1.3 MPX
- Programmable lighting devices:
  - Episcopic lighting (white LED)
  - Coaxial lighting
  - Diascopic lighting (green LED)
- Motorized zoom lens (6 indexed positions)
- Magnifications X30 to X200 (for guidance with full screen display 24”)
- Second wide field camera, for an automatic multi parts control
- Positioning eased thanks to laser pointing

Tactile (option):

- Renishaw® TP200
- 3 or 5 docks stylus changer rack

Confocal (option):

- “Confocal Chromatic” technology (while light sensor)
- Measuring pencils: 1.4, 4 and 12 mm

Computer:

- CPU INTEL Core I5, 4 Go, HDD 300 Go
- 2 x 22” LCD screens
- Windows 10 / 64 bits
- Software: Deltec Suite™

Conditions of use:

- Power supply: 120 or 220 V, 50 or 60 Hz, 600 VA
- Temperature range to ensure measuring accuracy: 20 ±1°C
- Usage temperature: 15 to 35°C
The 3D metrology machine that fits your requirements

This machine is fitted with all the tools you need for your dimensional metrology (software and 3D structure).

The machine is compatible with every type of workpiece (automobile, mechanics, electronic, pharmaceutical...) and materials (metal, plastic, rubber, glass...)

Suitable for all controls: first items, process, laboratory, at entrance, at exit, during production...

Using different sensors in the same program is possible

Programming by self-learning or CAD files

Automatic control of parts (single or multiple, by step and repeat)
Specifications & features

Structure:

- «C frame structure» made in solid granite
- Table with crossed XY movements (open frame)
- Cross roller guides
- Measurement capabilities (L, P, H): 400 x 400 x 200 mm
- Loading up to: 20 kg
- Resolution of the rulers: 0.5 μm
- X, Y, Z speed: 50 mm/s maximum

Measurement uncertainty (2σ):

- XY E2: \((2.5 + 5L/1000)\) μm (vision, touch probe)
- Z E1: \((4 + 5L/1000)\) μm (vision)
- Z E1: \((2.4 + 5L/1000)\) μm (touch probe)

Vision:

- HD B&W digital camera 1.3 MP (option 5 MP)
- Programmable lighting devices:
  - Episcopic LED white (8 sectors)
  - Coaxial lighting LED
  - Diascopic lighting LED (green LED)
- Motorized zoom (6 indexed positions)
- Magnification x30 at x200 (for guidance with full screen display 24°)
- Second wide field camera for automatic multi parts control
- Positioning eased thanks to a laser beam

Renishaw touch probe (option):

- Renishaw® TP200
- 3 or 5 docks stylus changer rack

Confocal (option):

- "Confocal chromatic" technology (white lighting)
- Measuring pencils 1.4, 4 and 12 mm

Computer:

- CPU INTEL Core i5, Memory 8 Go, HDD 250 Go mini
- 2 x 22" LCD screens
- Windows 10 / 64 bits
- Software: Deltec Suite™

Conditions of use:

- Power supply: 120 or 220 V, 50 or 60 Hz, 500 VA
- Temperature range to ensure measuring accuracy: 20 ±1°C
- Usage temperature: 15 to 35°C
DELTEC Suite
Software for 3D metrology measurement

Simply 3D

Dual screen interface

Multi-sensors: vision, touch probe and «Confocal Chromatic»

Automatic detection of workpieces par by shape learning

Programming by self-learning or CAD files

Complete library of various tools (mathematics, geometrics, 2D and 3D)

ISO functions

Integrated reporting module

Integrated S.P.C. module

Direct export to MS Excel®

External data acquisition (caliper, micrometer, others...)

Run with Windows 7 and Windows 10

Also compatible with profile projectors, microscopes, etc...
Specifications & features

Interface:
- Dual screen with one screen dedicated to camera view
- Lighting devices and zoom managed by the software
- X Y Z positioning by joystick
- Programming by self-learning
- Programming from CAD files (DXF, IGES)
- Step and repeat mode

Analyzing tools:
- Autofocus
- Image backup
- Automatic detection of edges and outlines
- Automatic setting of the part by vision
- Probing of 2D and 3D geometric elements
- Various functions of construction (projection, intersection, symmetry)
- Measuring of distances and angles
- ISO functions
- Mathematical formulas

Reports:
- Integrated software for reporting
- Customizable reports
- Management of tolerances
- Back up, printing and export of reports
- Data export in Excel®, HTML, CSV format

Statistics:
- SPC module integrated in the software
- Histograms, value charts
- Means and standard deviations
- Display of manufacturing limits, control, and alarm limits
- Sorting of the results, by keywords, dates and times
- Edition of the reports
- Exportation of analyzed data
High performance 3D scanner

Enter a new dimension!

Offers complete 2D and 3D metrology for small parts.

Different measuring means gathered into an automated one.

Designed to work in manufacturing environment.

Offline & assisted programming (from CAD files).

Increased accuracy, reproducibility and objectivity of measurements, while reducing control time.

Recording and statistical analysis of measurements to optimize traceability and quality control.
Specifications & features

Machine structure:

- Solid granite structure.
- High precision XY table with crossed movements and linear motors.
- XYZ (upper / lower) measuring range: 300 x 300 x 100 / 50 mm.
- Metrological structure isolated by antivibration pads.
- Structure compatible with a production environment.
- Load capacity: 20 kg.
- Encoder resolution: 3 nm.
- X, Y speed: up to 200 mm/s (depending on configuration).

Main measuring sensor:

- Line sensor based on “Confocal Chromatic” technology (white light sensor).
- Single or double side.
- Up to 384,000 measuring points per second and per side.
- 2 types of sensors to fit your needs (high accuracy / high capacity)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Line length</th>
<th>Pitch</th>
<th>Axial resolution</th>
<th>Z range</th>
</tr>
</thead>
<tbody>
<tr>
<td>High accuracy</td>
<td>1.98 mm</td>
<td>10 μm</td>
<td>80 nm</td>
<td>1 mm</td>
</tr>
<tr>
<td>High capacity</td>
<td>4.80 mm</td>
<td>25 μm</td>
<td>320 nm</td>
<td>4 mm</td>
</tr>
</tbody>
</table>

Secondary measuring sensor:

- High resolution 5 MPX CCD camera
- Programmable lightings devices:
  - Surface ring light (red LED)
  - Sub-stage telecentric back light (green LED)
- Motorized zoom with 6 indexed positions

Measurement uncertainty (2σ):

- XY: from 2.5 μm
- Z height/depth (1 side): from 0.5 μm
- Z thickness (2 sides): from 1.0 μm

Computer:

- Core i7 INTEL CPU, Memory 32 Go, HDD 250 Go mini
- 24” touchscreen
- Windows 10 / 64 bits

GALAXY Suite software:

The “GALAXY Suite™” software offers off line programming from CAD files, parts control, data record, production monitoring, and result reporting.

Conditions of use:

- Power supply: 220 V, 50 or 60 Hz, 3500 VA
- Temperature range to ensure accuracy: 20 ±1°C
Ease your visual inspection!

This analysis and observation system allows visual control of your parts.

Autofocus provides great simplicity and user convenience.

Even smallest defects can be detected thanks to the high resolution camera combined with a manual zoom.

Images and videos can be saved on a USB Drive, for further analysis and discussions.
Specifications & features

Machine:

- Size: 320 x 308.5 x 417.5 mm
- Weight: 5kg
- Maximum height of parts to be inspected: 50 mm

Optical lens:

- Magnification (6 positions) from x 45 to x 230
- Resolution: from 3.9µm (4.5x) to 11.2 µm (0.7x)
- Working distance: 88 mm +/- 2mm
- Video distortion: <0.02%

Camera:

- Image sensor: CMOS color
- Resolution: 2 MPX
- Control: USB mouse
- HDMI output
- Episcopic lighting
- White balance: manual / auto
- Exposure: auto / manual
- Image refresh rate: 1080P @ 60 images / s
- Working temperature: 0°C ~ 50°C
- Backup: USB drive
- Supplied with 24” screen
Your partner to meet your metrological requirements!

Ayonis is a European company specialized in the conception, the manufacturing and the marketing of automatic 2D and 3D measuring devices without contact.

We also design software for metrology, data processing, and results management.

Your quality requirements are increasing. Our experience of over 30 years in dimensional metrology, our status as a manufacturer, together with our staff, are here to satisfy them.

More than simple instruments, we want to offer you solutions.

Many users, from the most prestigious to the most modest ones, already grant confidence to us and we thank them for it.

We would be more than happy to count you among them. So join us!

Christophe Boucherie, CEO

Ayonis machines are present in many different countries.

Our head office is located in Normandy, 100 km from Paris.

ISO9001-2015 certification

Our instruments are specially designed to check the dimensional compliance of your industrial products in many different sectors of activity, such as:

- Medtech
- Watchmaking
- Electronic
- Automotive
- Aeronautic

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A team at your side since 1986...