SMARTVISION
IN LINE QUALITY

Great Performance, Easy Price

Easy_Projector

The best Price/Performance Digital Profile Projector

About Easy_Projector

The best Price/Performance Digital Profile Projector

"Easy_Projector the best Price/Performance Video Measuring Machine for the future of metrology"

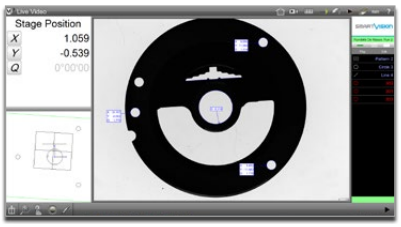
High Performances at a Low Price

This special line available in **two models**, offers products of the same quality as traditional Smart_Projector series and similar performances related to the specific size of Field of View (FoV).

With no additional functionalities, **Easy_Projector** is perfect for a fast and simple basic **dimensional control** at a low cost and it is integrated with a **Mini PC NUC** (Next Unit Computing) without monitor or a Powerful All-In-One PC with HD touchscreen.

The intuitive SmartVision metrology software ensures a **fast, accurate, objective and fully automatic measurement** of items and creates reports of all control activities in compatible and ready-to-print Excel files (CSV, TSV, TXT), PDF and Image files.

New Generation Software!



- Automatic feature recognition
- Automatic data report
- Software programmable light
- Front / Back / Diffused light

Product Highlights

- Specifically suited for massive (production) quality inspection, in-line control, incoming inspection
- Eliminates subjectivity and errors of operator-based gauging
- Increases number of quotas and quality check rate, up to 16000 checking features in a few seconds
- Performs full automatic reporting and SPC (Min, Max, Range, Average, Std Dev, 6 Sigma)
- Designed for in-production massive use
- Plug-and-play, ready-to-use
- Suitable for unskilled operators use
- Clever investment with a fast Return on Investment
- Reduces time and costs of controls
- Ready to automation

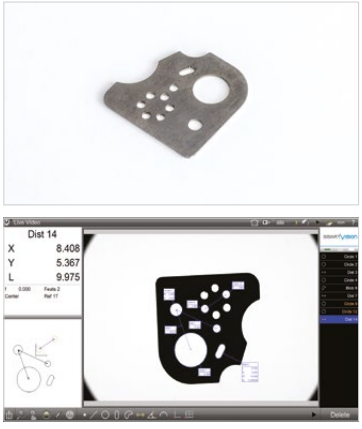
Hardware Features

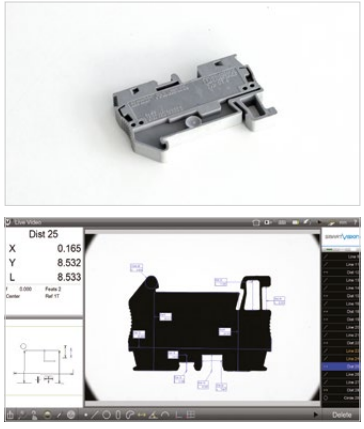
Easy_Projector: Great Performance, Easy Price

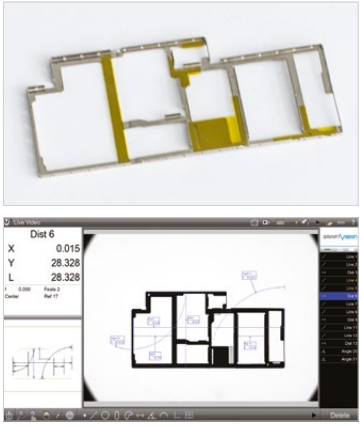
- Industrial high resolution camera
- High performance Bi-Telecentric Optics
- Resistant stainless steel industrial case Compact static equipment
- Ready for Automation
- Protected Two Side Open measuring chamber
  Easy object placement
  Height-adjustable interchangable glass
  Customizable loading plate
- Suitable for the production line
- Directional Diascopic Light

Examples of Application Cases

FLAT ELEMENTS

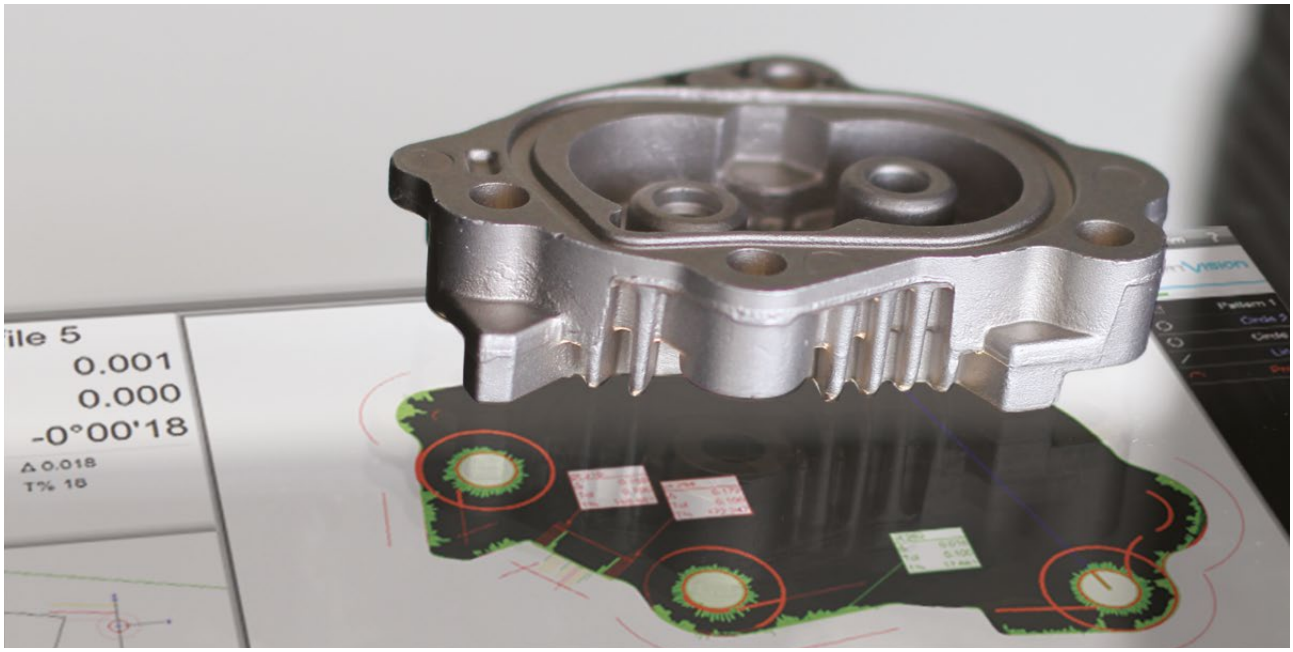






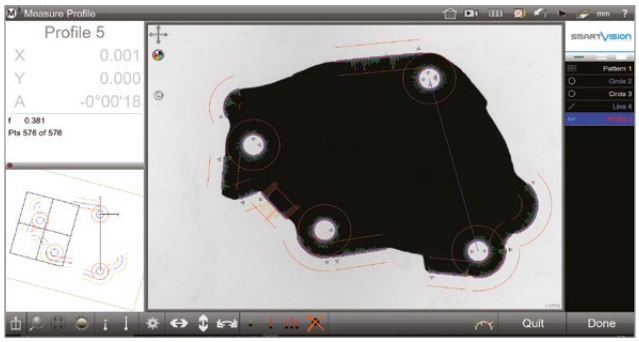
Smart_Profile_Matching *Option*

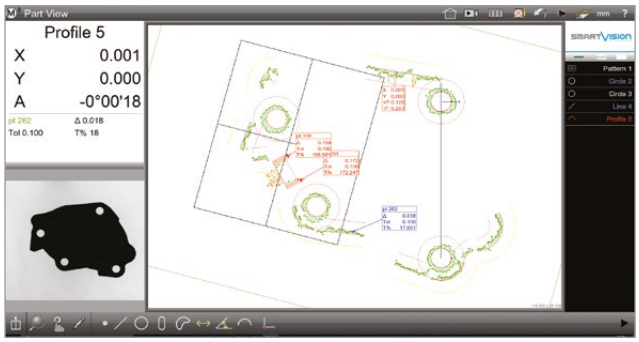
Advanced Digital Profile Check Tool



Smart_Profile_Matching is an **automatic Profile Check advanced feature**, which can control any item compared to a DXF master. This feature replaces the use of a traditional profile projector that requires the overlay of a glossy sheet on the component's projection.

Smart_Profile_Maching is able to perform a very fast check of a profile verifying the tolerances within a given range. Standard applications include components such as punched and formed parts, injection-molded (plastic and metal) and laser cut workpieces, die-cast, extrusions, millings, CNC machining.



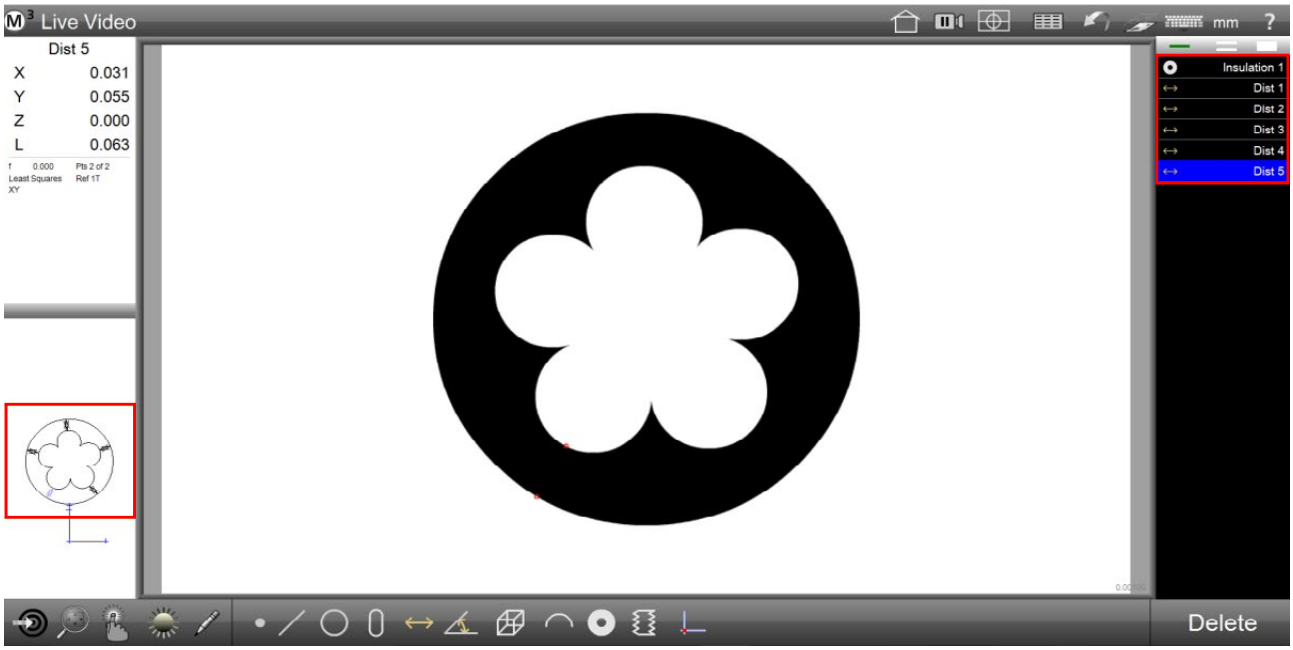


Features & Benefits

- **Pattern Recognition**: the system automatically performs the Smart_Profile_Matching no matter what's its orientation nor position in the field of view.
- **Profile Fit**: the software compares a DXF file containing position, angle and tolerance data to a corresponding component shown in the live video window. It shows resulting errors with coloured whiskers and returns the overall profile position, angle and form.
- **Master Creation**: the master shape can be either extracted by a real sample or obtained by a technical drawing in dxf format, allowing the Technical Office and the production line to be completely aligned.
- **Reverse Engineering**: the shape of the sample can be exported in the industry-standard DXF file format for reverse engineering or use with other software applications.

Smart_Wire_Measurement *Option*

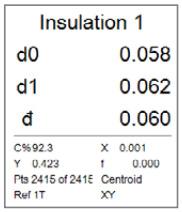
Measure Wire insulation samples according to Standards

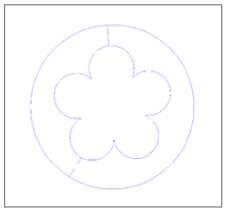


Thanks to the **Smart_Wire_Measurement** insulation tool it is possible to determine the number of strands in a wire automatically, as well as manually select the appropriate figure.

The Wire Insulation Measurement function calculates the absolute minimum distance between the outer "blob" of the insulation profile and the inner "blob" of the insulation profile. Once this minimum distance is determined, the system breaks the diameter of the insulation into six 60 degrees segments, based on the minimum distance at 0 degrees. The minimum distance between the inner and outer "blobs" is determined from within each of these 60 degrees segments. This mechanism is used when there is a single strand on the inside lobe (like in a simple gasket), or there are 6 or more lobes or wire strands.

- "đ0" represents the minimum distance
- "đ1" represents the maximum distance
- the character "đ" in the detail information screen represents the average distance
- "c" is the percent concentricity





Features & Benefits

- **Automatic**: by selecting the "Auto Strand" button and clicking on an edge of the insulation sample, the System determines the number of strands automatically.
- **Fixed-Strands Measurement**: when the wire sections is blurry the number of strands can be manually specified by choosing one of six different strand count selections.
- **Distance Results Mode**: if the Distances Mode button is enabled, the Software automatically displays and creates every distance between strands and edges during the regular insulation measurement. It also determines the minimum, maximum and average distance between strands and edges within the insulation profile.

Technical Specifications

Easy_Projector: Great Performance, Easy Price

Model	Easy_Projector 92	Easy_Projector 168
FoV[A] (Field of View) mm	92x61	168x113
FoV[A] Diagonal (mm)	100	195
FoV[A] Area (mm^2)	5485	18500
FoV[A] type	Rectangular with vignetting	Rectangular with vignetting
Measuring Chamber[B] (mm)	203x250 H.280	250x330 H.405
Repeatability accuracy[C]	±1 µm	±1.5 µm
Measurement accuracy[C]	±6 µm	±8 µm
Diascopic Light[D]	Directional	Directional
Light receiving lens	Double telecentric lens	Double telecentric lens
Dimensions (mm)	290x330 H.880	335x380 H.1255
Weight (kg)	25	40
Operation ambient °C	+10 to +40°C	
Power supply / consumption	110-240 Vac | 50-60 Hz | 2 A	
Measurement points	16000 features max	
Pattern search	XYΘ (accepts random positioning)	
Tolerance	Angle, angularity, area, circumference, concentricity, diameter, flatness, form, length, parallelism, perpendicularity, radius, roundness, runout, straightness, symmetry, true position, width, XY position.	
Optional PC Devices	Genuine Windows 10 PRO 64-bit preinstalled either on: - Mini PC NUC without monitor; - Powerful All-in-One PC with FULL HD touchscreen, monitor resolution 1920x1080.	
Statistical Analysis	Ready to connect with SPC software	
CAD export	dxf file with nominal values and tolerance	
CAD import	dxf file for profile match, nominal values and tolerance	
Data Report	csv, tsv, txt	
Print Report	Windows installed Printer (optional pdf), xps	
User account control	Supervisor, Users 1 to 20 (with password login and editable rights)	
Multi language interface	English, German, Spanish, French, Italian, Portuguese, Russian, Chinese, Japanese, Polish, Czech, Romanian. All languages are editable.	

[A] Standard models - other custom FoV available on request.
[B] The dimensions of the measuring chamber are not the dimensions of the Field of View, therefore they have not to be considered as test area.
[C] Precision of measurement (±µm) of a line, obtained measuring a specific calibration target located approximately in FoV center, best focus position, at 25° C ±1°.
[D] Diascopic Light: Standard Directional led backlight.

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