New Wide Product Range

Smart_Projector
Smart_Projector
Fast Industrial Video Measuring Machine

“Smart_Projector allows automatic, objective, repeatable, easy and fast dimensional quality check of any part”

Easy and Fast

Smart_Projector by SmartVision is the first and unique instrument designed to perform a complete and automatic check of any part easily and fast.

Automatic and Productive

Revolutionary digital evolution of traditional profile projector and micrometer caliper, it allows to check an unlimited number of quotas per item in just few seconds, with no need for part alignment, no manual collimation nor focus and without any moving part inside the equipment.

Accurate

Smart_Projector provides objective and repeatable measures and signals a simple « Pass / Fail » semaphore output, with no contribution nor interpretation by the operator, ensuring a full automatic gauging and reporting of all checking activities in compatible excel files (csv, tsv, txt), prints (or pdf) and image files.

Industrial and Compact

Smart_Projector is a fast, compact, rugged, static, easy to use and easy to program equipment, designed for harsh environment and heavy duty cycle use.

New Generation Software: TOUCH & MEASURE!

- Multi touch-screen software
- Automatic feature recognition
- Automatic data report
- CSV / TSV / TXT / DXF / PDF
- Software programmable light
- Front / Back / Diffused light
Smart Features

Two Smart_Projector in One - Vertical & Horizontal Use

- Rugged stainless steel industrial case
- Compact static equipment
- Industrial high-resolution camera
- Collimated Diascopic Light
- Protected measuring chamber
- Easy object placement
- Customizable loading plate
- Rotating Stage for 360° Measurements
- Two Smart_Projector in One - Vertical & Horizontal Use
- Industrial high-resolution camera
- Episcopic Light (4 independent sectors)
- Suitable for the production line
- Ready for automation
- Smart_Horizontal_Adapter_Kit
  - Smart_Rotating_Stage
  - Four custom-made pins to switch the use of Smart_Projector from the standard Vertical position to Horizontal use.

All-In-One touchscreen PC
- Powerful All-In-One touch screen HD PC
- Intuitive touch screen measurements software
- Easy programs recording with finger gesture
- Automatic feature recognition
- Up to 16,000 features per item

The Smart_Horizontal_Adapter_Kit includes:
- Smart_Rotating_Stage
- Four custom-made pins to switch the use of Smart_Projector from the standard Vertical position to Horizontal use.
Large Range of Available Models
Smart_Projector - Configurations & Features

PRODUCT HIGHLIGHTS
Smart_Projector - Main Benefits

- 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, it is ready to use
- Suitable for unskilled operators use
- Flexible investment with a fast Return on Investment
- Reduces time and costs of controls
Applications
Quality Control for Industrial Sectors

GLASS

PLASTIC

CUTTED

RUBBER

ELECTRONICS

TURNING

MICROMECHANICS
Specifications
Smart_Projector - Fast Industrial Video Measuring Machine

PC Device
Powerful All-In-One touch screen FULL HD PC with Windows 10 PRO 64-bit, monitor resolution 1920x1080

Light receiving lens
Double telecentric lens

Field of View\(^3\) (FoV\(^1\) (mm)

<table>
<thead>
<tr>
<th>FoV(^1) Type</th>
<th>Rectangular</th>
<th>Rectangular with vignetting</th>
<th>Rectangular with vignetting</th>
<th>Rectangular with vignetting</th>
<th>Rectangular with vignetting</th>
</tr>
</thead>
<tbody>
<tr>
<td>FoV(^3) Diagonal (mm)</td>
<td>7x4.5</td>
<td>29x19</td>
<td>55x37</td>
<td>108x73</td>
<td>168x113</td>
</tr>
<tr>
<td>FoV(^3) Area (mm)(^2)</td>
<td>8</td>
<td>30</td>
<td>60</td>
<td>125</td>
<td>195</td>
</tr>
<tr>
<td>Measuring Chamber (mm)(^5)</td>
<td>218x125x55</td>
<td>218x125x55</td>
<td>200x200x175</td>
<td>200x230x240</td>
<td>250x330x405</td>
</tr>
<tr>
<td>Repeatability accuracy(^4)</td>
<td>±0.07 μm</td>
<td>±0.2 μm</td>
<td>±0.5 μm</td>
<td>±1 μm</td>
<td>±1.5 μm</td>
</tr>
<tr>
<td>Measurement accuracy(^4)</td>
<td>±0.5 μm</td>
<td>±1.5 μm</td>
<td>±3 μm</td>
<td>±6 μm</td>
<td>±8 μm</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>324x330x490</td>
<td>324x330x490</td>
<td>284x330x873</td>
<td>284x330x1255</td>
<td>335x380x1255</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>18</td>
<td>18</td>
<td>29</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>Diascopic Light(^1)</td>
<td>Collimated</td>
<td>Collimated</td>
<td>Collimated</td>
<td>Collimated</td>
<td>Directional(^6)</td>
</tr>
<tr>
<td>Episcopic Light(^2)</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Layout</td>
<td>Vertical</td>
<td>Vertical</td>
<td>Ver. / Hor.</td>
<td>Ver. / Hor.</td>
<td>Vertical(^6)</td>
</tr>
<tr>
<td>Operation ambient °C</td>
<td>+10 to +40°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply / consumption</td>
<td>110-240 Vac</td>
<td>50-60 Hz</td>
<td>2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement points</td>
<td>16000 features max</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern search</td>
<td>X Y Θ (accepts random positioning)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tolerance</td>
<td>Angle, angularity, area, circumference, concentricity, diameter, flatness, form, length, parallelism, perpendicularity, radius, roundness, runout, straightness, symmetry, true position, width, XY position.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistical Analysis</td>
<td>Ready to connect with SPC software</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD export</td>
<td>dxf file with nominal values and tolerance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD import</td>
<td>dxf file for profile match, nominal values and tolerance</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Data Report</td>
<td>csv, tsv, txt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print Report</td>
<td>Windows installed Printer (optional pdf), xps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User account control</td>
<td>Supervisor, Users 1 to 20 (with password login and editable rights)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi language interface</td>
<td>English, German, Spanish, French, Italian, Portuguese, Russian, Chinese, Japanese, Polish, Czech, Romanian. All languages are editable.</td>
<td></td>
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</tr>
</tbody>
</table>

\(^{1}\)Diascopic Light: Collimated Projector with green led light or Standard Directional led backlight.
\(^{2}\)Collimated projector intensity is software programmable when also Episcopic Light Control (2) is available.
\(^{3}\)Episcopic Light Control: 4 independent 90° sectors, software programmable, front / episcopic while diffused led light, made to order.
\(^{4}\)Standard models, other custom FoV available on request.
\(^{5}\)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°C.
\(^{6}\)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.
\(^{6}\)The model 168x113 is available with Collimated Diascopic Light (1) under request, in this case it is possible to use it horizontally with the S_H_A_K Option.