# SINOWON®

**Optical Inspection Instruments**

Metrology

Sinowon Innovation Metrology Manufacture Limited

# Vertical Video Projector
# *VP* Series

**High Accuracy**    **Excellent Quality**    **Long Using Life**

10 Year +

**SINOWON**

— VP-2515 —

## ⊕ Characteristic

- The lifting system adopts linear guide rail and precision screw drive, which makes the lift drive more comfortable and stable;

- With precision toothless rod and fast movement locking device, ensure return error is within 2um;

- High accuracy A optical scale and precision working stage, ensure machine accuracy is within 3+L/200mm;

- HD zoom lens and HD color digital camera, ensure clear image without distortion;

- With programmable surface 4-ring 8-division LED cold light and contour LED parallel illumination, it can control the brightness of the 4-ring 8-division independently;

- With powerful iMeasuring2.1 software system , to enhance the control quality;

- Optional imported contact probes and 3D measuring software, it can help upgrade the machine to be coordinate measuring machine;

- Optional FexQMS measurement data analysis and real-time monitor software, enhance process control, reduce material consumption.

## ■ Partial Display

## ⊕ Specifications

| Product Name | Vertical Video Projector | | |
|---|---|---|---|
| Model | VP-2010 | VP-2515 | VP-3020 |
| Code# | 541-200 | 541-210 | 541-220 |
| Working Stage Travel | 200x100mm | 200x150mm | 300x200mm |
| Focusing Travel | 150mm | | |
| Measurement Accuracy* | ≤3+L/200(um) | | |
| Resolution | 0.0005mm | | |
| Loading Weight | 10Kg | | |
| CCD | HD700 TVL Color CCD | | |
| Zoom Objective Lens ** | HD 6.5X Detented Zoom Lens | | |
| | Optical Magnification:0.7X-4.5X; Video Magnification:26X~172X(21.5" LCD) | | |

| Field of View(mm) (Diagonal*Horizontal*Vertical) | Lens Magnification 1/3"CCD | 0.7X | 1X | 2.0X | 3.0X | 4X | 4.5X |
|---|---|---|---|---|---|---|---|
| | | 8.57x6.86x5.14 | 6.00x4.80x3.60 | 3.00x2.40x1.80 | 2.00x1.60x1.20 | 1.50x1.20x0.90 | 1.33x1.07x0.80 |

| Illuminating System (Software Control) | Surface: Adjustable 4-ring 8-division 0~255-grade LED Cold Illumination |
|---|---|
| | Contour: LED Parallel illumination |
| | LED Laser navigation illumination |

| Working Environment | Temperature 20℃±2℃,Humidity Range<2℃/hr,Humidity 30~80%,Vibration<0.002g,<15Hz | | |
|---|---|---|---|
| Software System | iMeasuring 2.1 | | |
| System | Support XP, WIN7, WIN8, WIN10 32/64 Bit | | |
| Power | AC110V/60Hz; 220V/50Hz,600W | | |
| Dimension(L×W×H) | 1460 x 1120 x 580mm | 1725 x 675 x 620mm | 1725 x 675x 760mm |
| Weight | 280kg | 330kg | 380kg |

* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

** Magnification is approximate value, it is related to the dimension of monitor and resolution.

Customers can choose 0.5X or 2X optional objective, and realize image magnification: 13X~86X or 52X~344X.
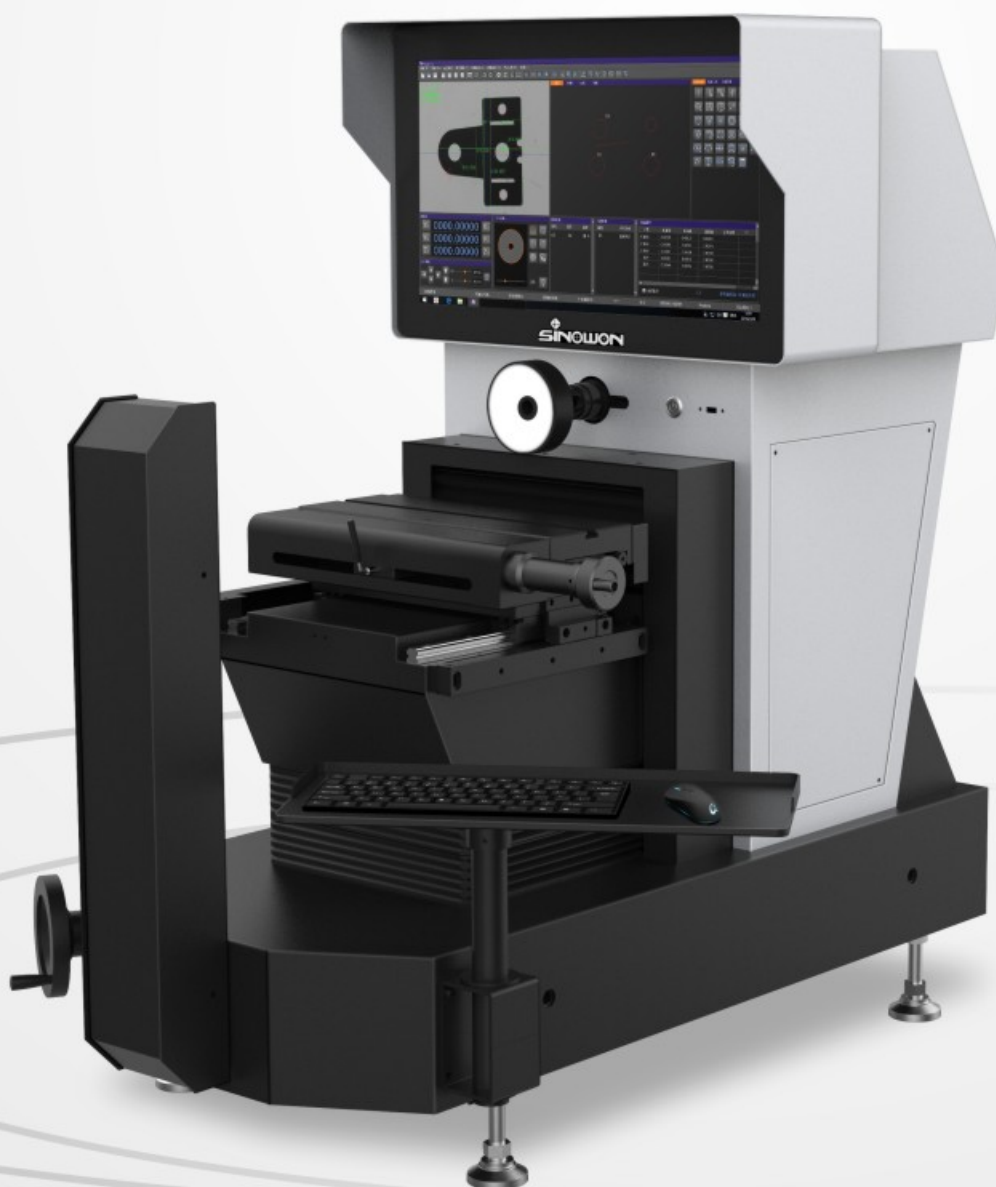
## Horizontal Video Projector
# PH-3015

**High Accuracy**   **Excellent Quality**   **Long Using Life**

10 Year +

## Characteristic

- The lifting system adopts linear guide rail and precision screw drive, which makes the lift drive more comfortable and stable;

- With precision toothless rod and fast movement locking device, ensure return error is within 2um;

- High accuracy A optical scale and precision working stage, ensure machine accuracy is within 3+L/200mm;

- HD zoom lens and HD color digital camera, ensure clear image without distortion;

- With programmable surface 4-ring 8-division LED cold light and contour LED parallel illumination, it can control the brightness of the 4-ring 8-division independently;

- With powerful iMeasuring software system , to enhance the control quality;

- Optional FexQMS measurement data analysis and real-time monitor software, enhance process control, reduce material consumption.

## Partial Display





## Specifications

| Product Name | Horizontal Video Projector | | | | | |
|---|---|---|---|---|---|---|
| Model | PH-3015 | | | | | |
| Code# | 542-310 | | | | | |
| Working Stage Travel | 355X125mm | | | | | |
| X/Y-axis Travel | 200X120mm | | | | | |
| Z axis | 110mm | | | | | |
| Measurement Accuracy* | ≤3+L/200um | | | | | |
| Resolution | 0.0005mm | | | | | |
| CCD | HD700 TVL Color CCD | | | | | |
| Zoom Objective Lens ** | HD 6.5X Detented Zoom Lens | | | | | |
| | Optical Magnification:0.7X-4.5X; Video Magnification:23X~158X | | | | | |
| Field of View(mm) / Lens Magnification | 0.7X | 1X | 2.0X | 3.0X | 4X | 4.5X |
| ( Diagonal * Horizontal*Vertical) / 1/3"CCD | 8.57x6.86x5.14 | 6.00x4.80x3.60 | 3.00x2.40x1.80 | 2.00x1.60x1.20 | 1.50x1.20x0.90 | 1.33x1.07x0.80 |
| Illuminating System (Software Control) | Surface: Adjustable 4-ring 8-division 0~255-grade LED Cold Illumination | | | | | |
| | Contour: LED Parallel illumination | | | | | |
| Working Environment | Temperature 20℃±2℃,Humidity Range<2℃/hr,Humidity 30~80%,Vibration<0.002g,<15Hz | | | | | |
| Software System | iMeasuring | | | | | |
| System | Support XP, WIN7, WIN8, WIN10 32/64 Bit | | | | | |
| Power | AC110V/60Hz; 220V/50Hz,600W | | | | | |
| Dimension(L×W×H) | 1120X720X1100mm | | | | | |
| Weight | 165kg | | | | | |

* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

** Magnification is  approximate value, it is related to the dimension of monitor and resolution.

Customers can choose 0.5X or 2X optional objective, and realize image magnification: 13X~86X or 52X~344X.

# Vision Measuring Software
# iMeasuring

## Introduction

iMeasuring software is a professional multisensor measuring software which combined with the developers tenyears experience in the measuring and software research industry. The design principle is friendly operation, powerful function, high accuracy and stability, simple maintenance.
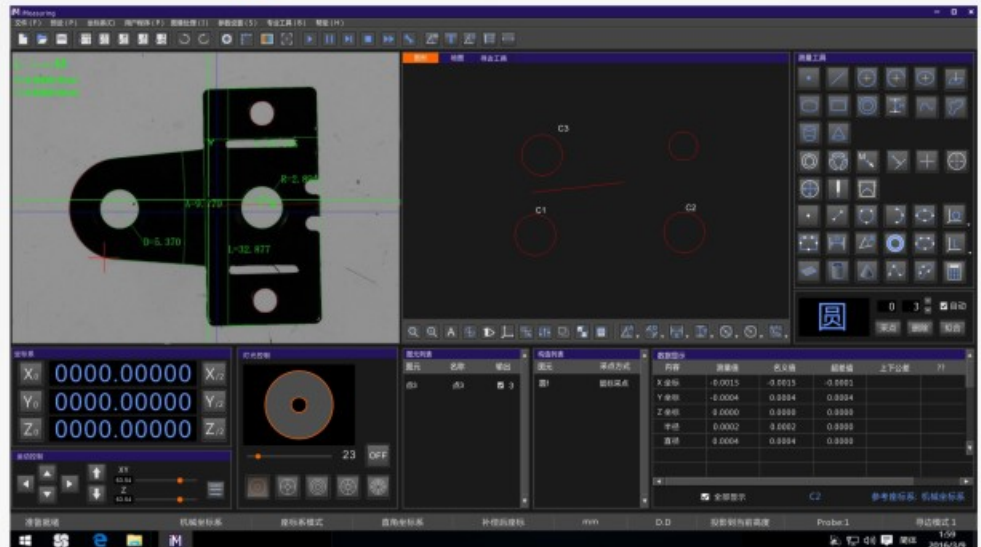
## Product Introduction

- Excellent software architecture design and fully objectoriented, to ensure the software is stable and reliable.

- Professional SPC statistical analysis software connected to measuring software, to realize that the data could automatically export to SPC database without manual operation.

- With powerful edge finder algorithm, which can help to get the edge of the shadow or dark image and ensure highly accuracy.
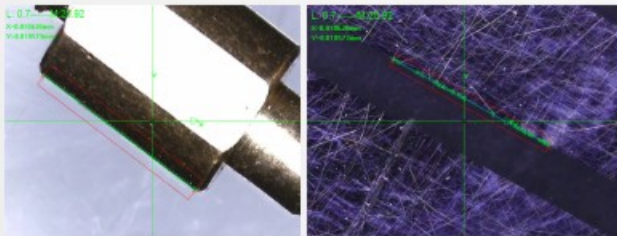
- It is based on different elements and supplies multiple element construction function such as Translation, rotation, extraction, combinations, parallel, vertical, mirroring, symmetry, intersection, tangent, etc.

- The measuring data can auto export to TXT, WORD, EXCEL and SPC software database without the third party software conversion and manual operation.

- The software can import "cancel" and "Recover" to make it easier and faster to operate.

- Support with multiple language, no need to install language pack and change the software which is convenient to local customers.

- The same model of software will be permanent free to update, it can help to reduce other trouble to customer.

- The software could automatically recognize and measure line, circle, arc and other elements.
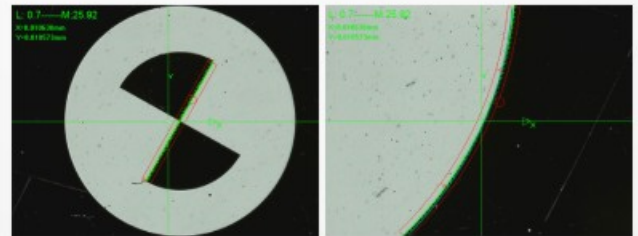
- The software can show you different intelligent processing functions such as: ultra-limit red alert, ultra-limit pause, failure measuring pause, manual measurement, skip running, forced running, etc.

- The software has breakpoint setting function, it can be intelligent switched between manual measurement and auto measurement.
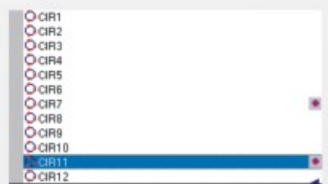
- It can easily measure flatness quickly with powerful laser measuring function, and test the small bumps, pits, V-angle and high-precision surface scanning while video and probe cannot test it.

- The software can supply auxiliary light-dimmer indicated function to avoid measuring error caused by light intensity problem and improve measuring accuracy and efficiency.

- The software can supply many function such as accurate focus, quick focus, image height measurement, and the repeatability can reach to 3um(above 2x magnification ).

- The software supply multiple running control mode, which make it faster and convenient to position.1.Operate handle; 2. Click middle key in the image window, long-press right key; 3. Click middle key in the drawing window; 4. Move element list window to the primitive; 5. Click the mouse in the running control window; 6. Click middle key in the scan window; 7. Click middle key in the map window; 8. Input coordinate value.

- The software supply multiple system error correction function, such as: Linear compensation, sector compensation, vertical error compensation, Z axis linear error compensation, lens center offset error compensation, to ensure accuracy can reach to 0.002 mm any place in the XY area.
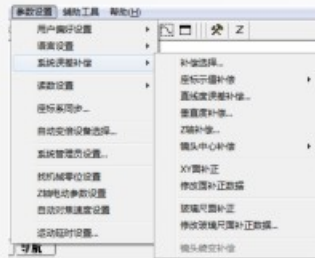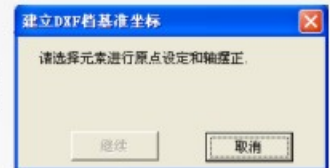
- The software can support to add simple probe based on the video measurement, to realize 3D measurement.
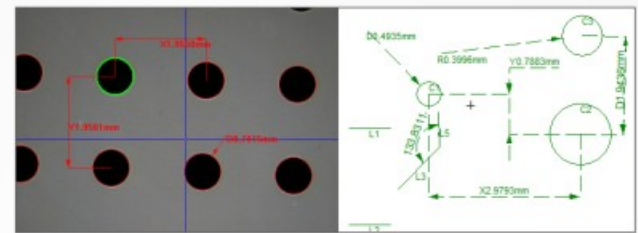
- The software can input viewport navigation, to be convenient to position and get a test place by clicking middle key.

- The software can easily and quickly import and export DXF file and set up coordinate system for auto measurement.

- The image window and drawing window can display the measured elements and marking 2D dimension, which get the result directly.

- The software can photograph mosaic the workpiece to get a large map, then marke and measure it.

- The software can auto calculate and mark the present magnification and video magnification, and display the pixel measurement value.
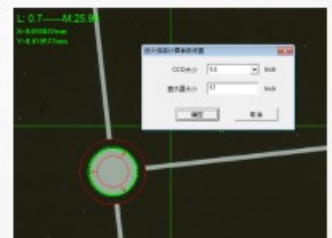
## Sinowon Vision Measuring Machine Software Version Number

| Version | Video Measurement | Linear Scale Signal | Illumination Control | Manual Probe Measurement | Auto Focus | Auto Stage | Auto Zoom | Auto Probe | Probe Auto Conversion | Laser Measurement | Suitable Models |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IM1.0 | √ | x | x | x | x | x | x | x | x | x | VM100 |
| IM1.5 | x | √ | x | x | x | x | x | x | x | x | VP300,VP400, PH400, PH600 |
| IM2.0 | √ | √ | x | x | x | x | x | x | x | x | VMM |
| IM2.1 | √ | √ | √ | x | x | x | x | x | x | x | IVISION/VP/PH |
| IM2.2 | √ | √ | √ | x | √ | x | x | x | x | x | IFOUCS |
| IM3.1 | √ | √ | √ | √ | x | x | x | x | x | x | ITOUCH |
| IM4.1 | √ | √ | √ | x | √ | √ | √ | x | x | x | MVS/AutoVision |
| IM4.2 | √ | √ | √ | x | √ | √ | √ | √ | x | x | MVA/MVH/AutoTouch |
| IM5.0 | √ | x | √ | x | x | x | x | x | x | √ | AutoScan |
| IM6.0 | √ | x | √ | x | x | x | x | x | x | x | IVS-30/60/80/160/240 |

High Accuracy    Excellent Quality    Long Using Life

Ø300mm **Digital Vertical Profile Projector**

# VP300 Series



Ø300
Vertical Optical System

Standard
10X Objective

Standard
DP400 Digital Readout

## ⊕ Characteristic

- The lifting system adopts cross roller rail and precision screw drive, which makes lifting drive more comfortable and stable;
- With coating process reflector, clearer image and great dustproof;
- Adjustable contour and surface illumination, to meet with difference workpiece demand;
- Imported high light and long using life LED illumination, to ensure precision measurement demand;
- High resolution optical system with clear image and magnification error is less than 0.08%;
- Powerful Bi-axial fan cooling system, highly increase using life;
- Powerful and colorful DRO DP400, realized fast and accurate 2D Measurement;
- Built-in Mini-printer, can print and save data;
- With standard 10X objective, optional 20X,50X objective, rotary table, foot switch ,clamp, etc.

## ■ Partial Display



## ⊕ Specifications

| Product Name | Digital Vertical Profile Projector | |
|---|---|---|
| Reverse Image | VP300-1510 (#511-330) | VP300-2010 (#511-340) |
| Obverse Image | VP300-1510Z(#511-330Z) | VP300-2010Z (#511-340Z) |
| Metal Stage Size | 258x308mm | 258x358mm |
| Glass Stage Size | 148x206mm | 148x256mm |
| Stage Travel | 150x100mm | 200x100mm |
| Product Dimension | 988x563x1224mm | 988x563x1224mm |
| Packing Dimension | 1200x800x1580mm | 1200x800x1580mm |
| Gross/Net Weight | 210/165kg | 220/170kg |
| Focusing | 90mm | |
| Accuracy | ≤3+L/200(um) | |
| Resolution | 0.0005mm | |
| Screen | Dia:φ312mm,Measurement Range ≥ Ø300 | |
| | Rotation Angle 0~360° ;Resolution: 1 or 0.01°,Accuracy 6' | |
| Load Capacity | 10Kg | |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout | |
| Working Environment | Temp 20℃±5℃,  Humidity 40%－70%RH | |
| Illumination | Contour Illumination : 3.2V/10W LED | |
| | Surface Illumination : 3.2V/10W LED | |
| Cold-air Blowing System | 3-axis Powerful Fan | |
| Power Supply | AC110V/60Hz; 220V/50Hz,150W | |

## ⊕ Objective Lens

| Specifications | | | |
|---|---|---|---|
| Magnification | 10X ( Std. ) | 20X ( Opt. ) | 50X ( option ) |
| Field of View | φ40mm | φ20mm | φ8mm |
| Working Distance | 80mm | 67.7mm | 51.4mm |

**High Accuracy**   **Excellent Quality**   **Long Using Life**

10 Year+

Ø400mm Digital Vertical Profile Projector

# VP400 Series

Vertical Profile Projector | VP-400

Ø400
Vertical Optical System

Standard
10X Objective

Standard
DP400 Digital Readout

Tel : +86 188-144-91958

## ⊕ Characteristic

- The lifting system adopts cross roller rail and precision screw drive, which makes lifting drive more comfortable and stable;
- Coating process reflector, clearer image and great dustproof;
- Adjustable contour and surface illumination, to meet with difference workpiece demand;
- Imported high light and long using life LED illumination, to ensure precision measurement demand;
- High resolution optical system with clear image and magnification error is less than 0.08%;
- Powerful Bi-axial fan cooling system, highly increase using life;
- Powerful and colorful DRO DP400,realized fast and accurate 2D Measurement; Built-in Mini-printer, can print and save data;
- With standard 10X objective, optional 5X,20X,50X objective,rotary table, foot switch ,clamp, etc.

## ⊕ Specifications

| Product Name | Digital Vertical Profile Projector | | |
|---|---|---|---|
| Reverse Image | VP400-2010 (#511-410) | VP400-2515 (#511-420) | VP400-3020 (#511-430) |
| Obverse Image | VP400-2010Z (#511-410Z) | VP400-2515Z (#511-420Z) | VP400-3020Z (#511-430Z) |
| Metal Stage Size | 308x408mm | 308x408mm | 458x358mm |
| Glass Stage Size | 198x306mm | 198x306mm | 356x248mm |
| Stage Travel | 200x100mm | 250x150mm | 300x200mm |
| Product Dimension | 1003x617x1309mm | 1003x617x1309mm | 1003x617x1309mm |
| Packing Dimension | 1200x800x1580mm | 1200x800x1580mm | 1200x800x1580mm |
| Gross/Net Weight | 280/230kg | 280/230kg | 280/230kg |
| Focusing | 100mm | | |
| Accuracy | ≤3+L/200(um) | | |
| Resolution | 0.0005mm | | |
| Screen | Dia:φ412mm,Measurement Range ≥ Ø400 | | |
| | Rotation Angle 0~360° ;Resolution: 1 or 0.01°,Accuracy 6' | | |
| Load Capacity | 10Kg | | |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout | | |
| Working Environment | Temp 20℃±5℃,  Humidity 40%－70%RH | | |
| Illumination | Contour Illumination : 3.2V/10W LED | | |
| | Surface Illumination : 3.2V/10W LED | | |
| Power Supply | AC110V/60Hz; 220V/50Hz,150W | | |

## ⊕ Objective Lens

| Specifications | | | | |
|---|---|---|---|---|
| Magnification | 5X | 10X | 20X | 50X |
| Field of View | φ80mm | φ40mm | φ20mm | φ8mm |
| Working Distance | 65mm | 80mm | 67.7mm | 51.4mm |

High Accuracy    Excellent Quality    Long Using Life

Ø400mm Digital Vertical Profile Projector

# VP420 Series

Ø400
Vertical Optical System

Standard
10X Objective

Standard
DP400 Digital Readout

## Characteristic

- Ø400mm vertical optical path system ;
- Projector body lifting focus system;
- Stage load capacity can reach 30Kg;
- Telecentric Cold LED lightsoruce;
- High powerful and colorful DRO DP400;
- Optional 5X, 20X, 50X objective is available.

## Specifications

| Product Name | Digital Vertical Profile Projector |
|---|---|
| Reverse Image | VP420-3020 (#511-450) |
| Obverse Image | VP420-3020Z (#511-450Z) |
| Metal Stage Size | 458x358mm |
| Glass Stage Size | 356x248mm |
| Stage Travel | 300x200mm |
| Product Dimension | 1003x617x1309mm |
| Packing Dimension | 1200x800x1580mm |
| Gross/Net Weight | 280/230kg |
| Focusing | 100mm |
| Accuracy | ≤3+L/200(um) |
| Resolution | 0.0005mm |
| Screen | Dia:φ412mm, Measurement Range ≥ Ø400 |
| | Rotation Angle 0~360° ;Resolution: 1 or 0.01°, Accuracy 6' |
| Load Capacity | 10Kg |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout |
| Working Environment | Temp 20℃±5℃,  Humidity 40%－70%RH |
| Illumination | Contour Illumination : 3.2V/10W LED |
| | Surface Illumination : 3.2V/10W LED |
| Power Supply | AC110V/60Hz; 220V/50Hz,150W |

## Objective Lens

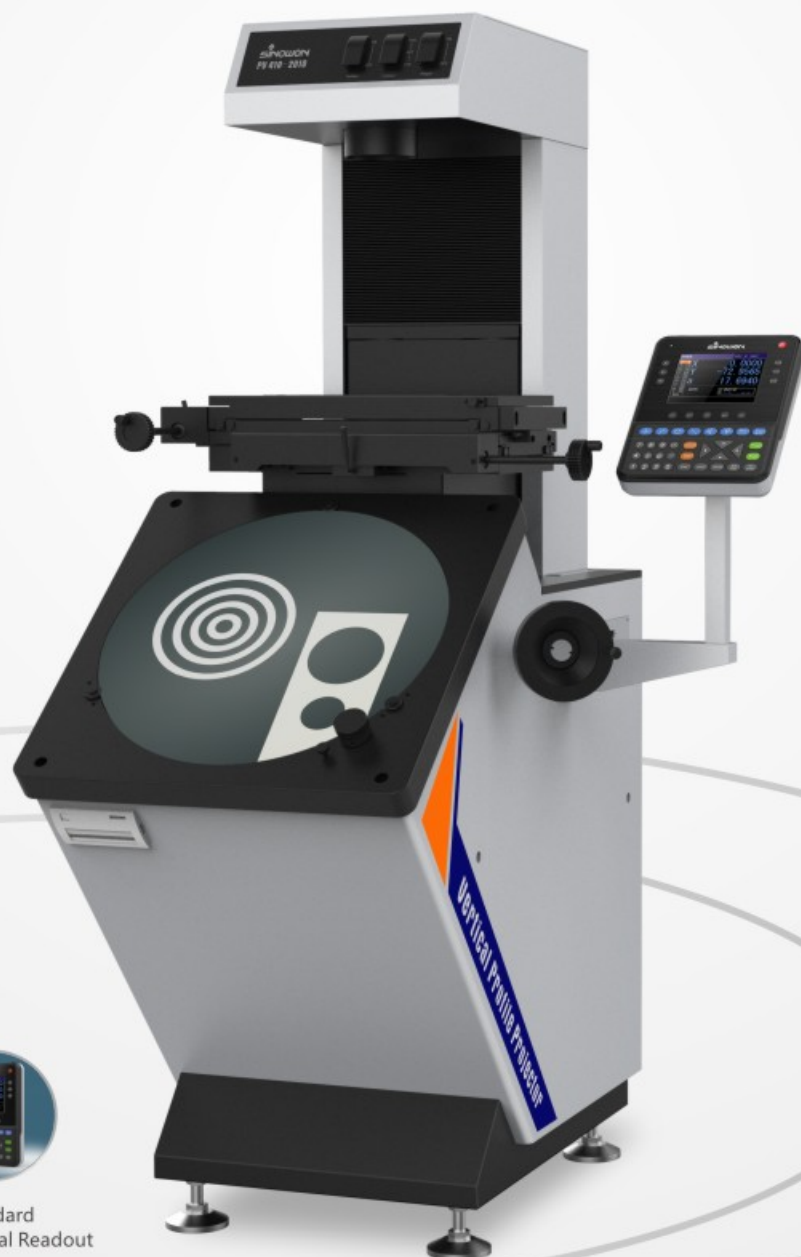| Specifications | | | | |
|---|---|---|---|---|
| Magnification | VP420-5X | VP420-10X | VP420-20X | VP420-50X |
| Field of View | φ80mm | φ40mm | φ20mm | φ8mm |
| Working Distance | 65mm | 80mm | 67.7mm | 51.4mm |

**High Accuracy**  **Excellent Quality**  **Long Using Life**

10 Year +

Ø400mm Digital Vertical Profile Projector

# PV410 Series



Ø400
Vertical Optical System

Standard
10X Objective

Standard
DP400 Digital Readout

Vertical Profile Projector

## ➕ Characteristic

- The lifting system adopts cross roller rail and precision screw drive, which makes lifting drive more comfortable and stable;

- Coating process reflector, clearer image and great dustproof;

- Adjustable contour and surface illumination, to meet with difference workpiece demand;

- Imported high light and long using life LED illumination ,to ensure precision measurement demand;

- High resolution optical system with clear image and magnification error is less than 0.08%;

- Powerful Bi-axial fan cooling system, highly increase using life;

- Powerful and colorful DRO Dp400, realized fast and accurate 2D Measurement;

- Built-in Mini-printer, can print and save data;

- With standard 10X objective, optional 5X,20X, 50X objective, rotary table, foot switch ,clamp, etc.

## ➕ Specifications

| Product Name | Digital Vertical Profile Projector |
|---|---|
| Model | PV410-2010 |
| Code# | 511-440 |
| Table Size | 308x408mm |
| Glass Table Size | 198x306mm |
| XY Travel Range | 200x100mm |
| Z Travel Range | 100mm |
| Accuracy | ≤3+L/200(um) |
| Resolution | 0.001mm |
| Max. Workpiece Load | 10Kg |
| Screen | Effective Diameter:φ412mm ≥ Ø400mm |
| | Screen rotation 0~360° ; Resolution: 1′ or 0.01°, accuracy: 6′ |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout |
| Working Environment | Temp 20℃±5℃, Humidity 40%－70%RH |
| Power Supply | AC110V/60Hz; 220V/50Hz,150W |
| Illumination | Contour Illumination : 3.2V/10W LED |
| | Surface Illumination : 3.2V/10W LED |

## ➕ Objective Lens

| Specifications | | | | |
|---|---|---|---|---|
| Magnification | PV410-5X | PV410-10X | PV410-20X | VP420-50X |
| Field of View | φ80mm | φ40mm | φ20mm | φ8mm |
| Working Distance | 65mm | 80mm | 67.7mm | 51.4mm |

**High Accuracy**  **Excellent Quality**  **Long Using Life**

### Ø350mm Digital Horizontal Profile Projector

# PH350 – 2010



Horizontal Profile Projector

Ø350
Horizontal Optical System

Standard
10X Objective

Standard
DP400 Digital Readout

## ⊕ Characteristic

- The lifting system adopts linear guide rail and precision screw drive, which makes lifting drive more comfortable and stable;

- Coating process reflector, clearer image and great dustproof;

- Adjustable contour and surface illumination, to meet with difference workpiece demand;

- Imported high light and long using life LED illumination ,to ensure precision measurement demand;

- High resolution optical system with clear image and magnification error is less than 0.08%;

- Powerful Bi-axial fan cooling system, highly increase using life;

- Powerful and colorful DRO Dp400, realized fast and accurate 2D Measurement;

- Built-in Mini-printer, can print and save data;

- With standard 10X objective, optional,20X, 50X objective, rotary table, foot switch ,clamp, etc.

## ⊕ Specifications

| Product Name | Digital Horizontal Profile Projector |
|---|---|
| Model | PH350-2010 |
| Code# | 512-350 |
| Working Stage Size | 355x126mm |
| Working Stage Travel | 200x100mm |
| Focusing | 90mm |
| Accuracy | ≤4+L/200(um) |
| Resolution | 0.0005mm |
| Load Capacity | 15Kg |
| Screen | φ380mm, Effective range ≥ Ø350mm |
| | Rotation Angle 0~360° ;Resolution: 1 or 0.01°,Accuracy 6' |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout |
| Illumination | Contour Illumination : 3.2V/10W LED |
| | Surface Illumination : 220V/130W LED |
| Working Environment | Temp 20℃±5℃,Humidity 40%－70%RH |
| Power Supply | AC110V/60Hz; 220V/50Hz,200W |

## ⊕ Objective Lens

| Specifications | | | |
|---|---|---|---|
| Magnification | PH350-10X | PH350-20X | PH350-50X |
| Field of View | φ30mm | φ15mm | φ6mm |
| Working Distance | 75mm | 69mm | 44mm |

**High Accuracy**    **Excellent Quality**    **Long Using Life**

Ø400mm Digital Horizontal Profile Projector

# PH400 – 3015

Horizontal Profile Projector | PH400

**Ø400**
Horizontal Optical System

**Standard**
5X Objective

**Standard**
DP400 Digital Readout

## Characteristic

- The lifting system adopts cross roller rail and precision screw drive, which makes lifting drive more comfortable and stable;
- Coating process reflector, clearer image and great dustproof;
- Adjustable contour and surface illumination, to meet with difference workpiece demand;
- Imported high light and long using life LED illumination, to ensure precision measurement demand;
- High resolution optical system with clear image and magnification error is less than 0.08%;
- Powerful Bi-axial fan cooling system, highly increase using life;
- Powerful and colorful DRO DP400, realized fast and accurate 2D Measurement;
- Built-in Mini-printer, can print and save data;
- With standard 10X objective, optional 5X,20X, 50X objective, rotary table, foot switch ,clamp, etc.

## Specifications

| Product Name | Digital Horizontal Profile Projector |
| --- | --- |
| Model | PH400-3015 |
| Code# | 512-400 |
| Working Stage Size | 455x126mm |
| Working Stage Travel | 300x150mm |
| Focusing | 120mm |
| Accuracy | ≤3+L/200(um) |
| Resolution | 0.0005mm |
| Load Capacity | 15Kg |
| Screen | Dia:φ412mm,Measurement Range ≥ Ø400 |
| | Rotation Angle 0~360° ;Resolution: 1 or 0.01°,Accuracy 6' |
| Digital Readout | DP400 (510-340) Multifunction colorful LCD digital readout |
| Illumination | Contour Illumination : 3.2V/10W LED |
| | Surface Illumination : 3.2V/10W LED |
| Working Environment | Temp 20℃±5℃,Humidity 40%－70%RH |
| Power Supply | AC110V/60Hz; 220V/50Hz,200W |
| Product Dimension | 1099 x 1455 x 633mm |
| Packing Dimension | 1157 x 1355 x 653mm |
| Gross/Net Weight | 350/300kg |

## Objective Lens

| Specifications | | | | | |
| --- | --- | --- | --- | --- | --- |
| Magnification | 5X | 10X | 20X | 50X | 100X |
| Field of View | φ80mm | φ30mm | φ15mm | φ6mm | φ3mm |
| Working Distance | 75mm | 75mm | 69mm | 44mm | 26mm |

## Color Screen Multifunction Digital Readout
# DP400
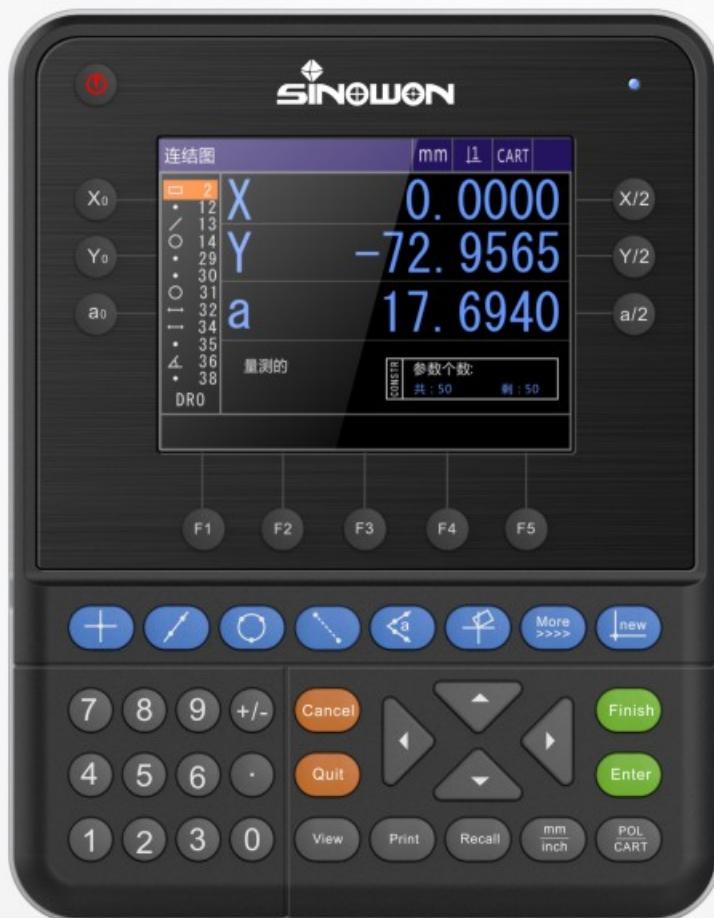
**12V DC — Weak Current**

**+/- — Silicon Button**

**A a — Multi-language**

**640×480 — Color LCD**

### Characteristic

- 5.6 ″ Color Screen and Sealed silicone touch button, with full information, friendly operation, long using life;
- Save 100 permanent image elements, can set and save current date;
- Multi-function Measurement: Point, line, circle, angle, distance, rectangular, screw thread, ellipse, slot, rounding, preset, construction, and so on;
- Obverse or Opposite direction counting function, 1/2 value, midpoint, permission function, Call function, REC(record) function, and Cycle measurement;
- Section and linear compensation are available for 3-axis, highly ensure measurement accuracy;
- Can connect foot switch, printer, optical edge detection and other multiple auxiliary measurement tools;
- With polar and coordinate system, and can display millimeter and inch, and can shift easily;
- With independent password permission function, to prevent the posibility of data deviation by wrong operation, it can also change the original setting by password permission;
- Support multiple language: Chinese, English and other language.

### Specifications

| Model | DP400 |
|---|---|
| Code# | 510-340 |
| Language | Simple Chinese, Complicated Chinese, Portuguese, German and English, etc. |
| LCD Screen Size | 115mm×85mm |
| LCD Screen Resolution | 640*480 |
| Digital Display Range | 8Digits(With Decimal Point) |
| Display Axis | 3-axis (X,Y,Z/Q) |
| Z/Q Display Model | Length or Angle |
| Angle Display Model | Degree, Minutes and Second or Degree |
| Linear Scale Signal | TTL square-wave or AC sine wave of two 90 ° phase angle difference, drive capacity larger than 10MA |
| Linear Scale Resolution | 0.1um,0.2um,0.5um, 1um,2um,5um |
| Baud Rate | 4800,9600,14400,19200,38400,57600 |
| Data Output Port | RS232,DB-9 Parent interface |
| Operation Keyboard | Sealed Silicone touch-type keyboard |
| Expansion port | Foot Switch, Printer, Optical Edge Finder, etc |
| Input Power Supply | DC12V/3A |
| Operation Environment | Working Temperature：0 ℃～40 ℃;Storage Temperature：-10 ℃～60℃; Relative Humidity：<90%RH |

### Operation Interface