



Video Measuring Projector Pro - QualiVMP™ Adv 2000 Series



STANDARDS

ASME B89.4.1

ISO 10360-7

ISO 14253-1

ISO 14978

Video Measuring Projector Pro - QualiVMP™ Adv 2000 Series

QualiVMP™ Adv 2000 Series Video Measuring Projector is a granite-based, video-assisted optical measuring system designed for fast, repeatable 2D inspection. It combines a precision X-Y stage, HDMI camera + monitor viewing, LED surface/contour lighting, and a DP400 multifunction digital readout for straightforward dimensional checks in QC and production environments.

Built on a high-stability granite base and column, the system is designed to help maintain measurement consistency, while a fast locking mechanism supports smooth staging and low return error performance.

APPLICATIONS

Video Measuring Projector Pro - QualiVMP™ Adv 2000 Series Applications

- Incoming inspection of machined parts
 - Quickly verify lengths, diameters, radii, hole locations, and edge geometry on small-to-medium components using video viewing and readout-based measurement functions.
- In-process checks on production lines

- Support faster go/no-go and dimensional verification without moving parts to a metrology lab, helping reduce rework and downtime.
- Tooling, fixtures, and stamped parts measurement
 - Useful for checking profiles, slots, and formed features where consistent lighting (surface + contour illumination) improves edge definition.
- Electronics and small-component dimensional inspection
 - Measure outlines, pitches, and small feature spacing where optical magnification and a stable stage help improve repeatability.
- General QA documentation and reporting support
 - DP400 readout supports multi-function measurement routines (points, lines, circles, angles, distances, threads, slots, etc.) that help standardize shop-floor measurement workflows.



Standards

- ISO 10360-7 – Acceptance and reverification tests for coordinate measuring systems with imaging probing systems (useful as a reference for verifying imaging-based measurement performance).
- ISO 14253-1 – Decision rules for proving conformance/nonconformance with specifications (helps when reporting pass/fail against tolerances).
- ISO 14978 – General concepts and requirements for GPS measuring equipment (useful for metrology equipment selection and measurement system context).
- ASME B89.4.1 – Performance evaluation guidance within the B89 dimensional metrology framework.

FEATURES

Video Measuring Projector Pro - QualiVMP™ Adv 2000 Series Key Features

- Granite base and column for stability that helps maintain measurement consistency over time.
- Precision X-Y stage with fast locking designed to support smooth movement and low return error performance.
- 0.5 μm linear scale resolution for fine stage readout.
- LED surface illumination + bottom parallel light, with optional coaxial light for difficult reflective parts and edges.
- HDMI camera + 21-inch HDMI monitor viewing for clear, real-time measurement visualization.
- DP400 multifunction digital readout with geometry measurement functions and compensation features to support consistent results.
- Multi-language readout and flexible connectivity, including RS232 output and expansion options (printer, foot switch, edge finder).

TECHNICAL SPECIFICATIONS

Video Measuring Projector Pro - QualiVMP™ Adv 2000 Series Technical Specifications

System Types and Models

Measurement Category	Type	Description	Model
2.5D Vision Measuring Machine	A	Optical zoom-lens sensor	QualiVMP™ Adv 2000A Series
3D Contact & Vision Measuring Machine	B	Zoom-lens sensor + contact probe sensor	QualiVMP™ Adv 2000B Series
2.5D Semi-automatic Vision Measuring Machine	C	Zoom-lens sensor + Z-axis autofocus	QualiVMP™ Adv 2000C Series
3D Semi-automatic Contact & Vision Measuring Machine	D	Zoom-lens sensor + contact probe + autofocus	QualiVMP™ Adv 2000D Series

Core Specifications

Specification	Value
Measuring software	iMeasuring
Marble worktable (mm)	270 × 350
Glass stage (mm)	142 × 242
X/Y travel (mm)	200 × 100
Z travel	High-precision linear guide, effective travel 200 mm
X/Y/Z resolution	0.5 μm
Accuracy (XY)*	$\leq 2.5 + L/200$ (μm)
Accuracy (Z)*	$\leq 4.0 + L/200$ (μm)

Specification	Value
Repeatability	2 μm
Base and column	High-precision granite
Illumination (software-controlled)	4-ring / 8-zone LED cold surface light; contour LED parallel light; optional coaxial light
Camera	1/2.9" high-resolution digital camera, 1.6 MP
Zoom lens	6.5 \times electronic feedback zoom lens
Magnification	Optical: 0.7 \times -4.5 \times ; Video: approx. 26 \times -172 \times (21.5" monitor)
Supported OS	Windows 10/11 (32/64-bit)
Languages	English, Simplified Chinese, Traditional Chinese (other languages optional)
Machine size (W \times D \times H, mm)	677 \times 552 \times 998
Weight (gross / net)	220 / 150 kg

Notes :

- L is the measured length (mm). Z-axis mechanical accuracy and focus accuracy depend strongly on the workpiece surface condition.
- Magnification values are approximate and vary with monitor size and resolution.
- Optional auxiliary objectives can be selected: 0.5 \times or 2 \times , which can extend video magnification to 13 \times -86 \times or 52 \times -344 \times .
- Working environment: 20°C \pm 2°C, temperature change <1°C/hr, humidity 30-80% RH, vibration <0.02 g, \leq 15 Hz.

Configuration

- Type A: Optical zoom-lens sensor (2.5D vision)
- Type B: Optical + contact probe (3D contact & vision)
- Type C: Optical + Z-axis autofocus

- Type D: Optical + contact probe + Z-axis autofocus

Model range (same QualiVMP™ Adv Series)

Model	Effective travel (X/Y/Z)	Machine dimensions (L×W×H)	Package dimensions (L×W×H)	Installation dimensions (L×W×H)
QualiVMP™ Adv 2000 Series	200 / 100 / 200 mm	677 × 552 × 998 mm	1030 × 780 × 1260 mm	850 × 1400 × 1720 mm
QualiVMP™ Adv 2500 Series	250 / 150 / 200 mm	790 × 617 × 1000 mm	1030 × 780 × 1260 mm	850 × 1400 × 1720 mm
QualiVMP™ Adv 3000 Series	300 / 200 / 200 mm	838 × 667 × 1000 mm	1030 × 780 × 1260 mm	850 × 1400 × 1720 mm
QualiVMP™ Adv 4000 Series	400 / 300 / 200 mm	1002 × 817 × 1043 mm	1130 × 1000 × 1270 mm	1010 × 1460 × 1810 mm
QualiVMP™ Adv 5000 Series	500 / 400 / 200 mm	1002 × 852 × 1085 mm	1280 × 1070 × 1470 mm	1110 × 1500 × 1850 mm

Configuration List

Standard Delivery (Included)

- Measurement software
- Electronic feedback zoom lens
- Manual controller
- 4-ring / 8-zone LED illumination
- 0.5 μm enclosed grating ruler
- Dust cover
- 1/2.9" digital camera
- Dongle
- Optical calibration plate
- Data cable

- Contour LED parallel cold illumination
- Documentation set: certificate, warranty card, instruction manual, and packing list

Optional Accessories (Add-Ons)

- Instrument table
- Electronic feedback coaxial optical lens
- 3D touch probe
- Calibration ball
- Computer and monitor
- 1/1.8" color camera
- Block gauge
- 0.5× additional objective
- Foot switch
- 2× additional objective



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