Video Measuring Machine VX3300D

Item No.: VX3300D

Product name: Video Measuring Machine

Image Senor: 5M CMOS

Field of view：W130mm×L230mm & W200mm×L300mm

Depth of Field: 3mm & 30mm

Working Distance: 120mm

Accuracy: ±2μm (Without stitching) & ±5μm (Without stitching)

Resolution: 0.1μm

Loading Capacity: 5kg

Size (LxWxH): 531×503×731mm

Weight: 75kg

Details

§≡≡≡≡ Description ≡≡≡≡

Based on visual measurement principle with precision image analysis algorithms, equipped with double telecentric optical lens with high depth of field, VX series of Flash Measuring Machines achieve fast dimensional measurement by one-key operation. VX series are suitable for precise dimensional measurement in the fields of machinery, electronics, molds, injection molding, hardware, rubber, low-voltage electrical appliances, magnetic materials, precision stamping, connectors, connectors, terminals, mobile phones, home appliances, printed circuit boards, medical equipment, watches, cutting tools, etc.

§≡≡≡≡ Parameters ≡≡≡≡

Model			VX3300	VX3300D
Image Senor			5M CMOS	
Monitor	Built-in		10.4" LCD (XGA:1024×768)	
	Outside		24" LCD (XGA:1920×1080)	
Acceptance Lens			Object Space Telecentric Lens	
Light	Ring		Four-segment illumination (White Light/Green Light)	
	Bottom		Telecentric transmission illumination (Green Light)	
Field of View	Large field		200mm×300mm (4 Angle R50)	200mm×300mm (4 Angle R50)
	High precision		/	230mm×130mm
Resolution			0.1um	
Repeatability of Image Meas.	Large field	Without Stitching*1	±1um	±1um
		With Stitching*2	±2um	±2um
	High precision	Without Stitching*1	/	±0.5um
		With Stitching*2	/	±1.5um
Accuracy of Image Meas.	Large field	Without Stitching*1	±5um	±5um
		With Stitching*2	±(7+0.02L) μm	±(7+0.02L) μm
	High precision	Without Stitching*1	/	±2um
		With Stitching*2	/	±(4+0.02L) μm
Height Meas. (Optical probe) (Optional)	Measuring Range (XY)		120mm×110mm	
	Max Hole-Depth Ratio(h/φ)		1.5	
	Dia. of Beam		Φ38μm	
	Resolution		0.25μm	
	Z Non-movement	Range(Z)	±3.5mm	
		Accuracy	±2μm	
	Z Movement	Range(Z)	70mm	
		Accuracy	±(6+0.01H) μm, H is Z moving height in mm	
Software			Vision X	
XY Object Table	X Travel range		210mm (Motorized)	
	Y Travel range		110mm (Motorized)	
	Loading Capacity		5kg	
Z-Axis Travel range			75mm (Motorized)	
Size (LxWxH)			(531×503×731) mm	
Weight			74kg	75kg
Input			AC100~240V/50~60Hz	
Working Environment			Temp.10°C~35°C, Humidity 30%~80%, Vibration<0.002g, Less than15Hz	

Remark:

*1 In the focus position, the environment temperature is +20 °C ± 1.0 °C

*2 In the focus position, the environment temperature is +20 °C ± 1.0 °C, and the load on the table is 2 kg or less; L is the moving range of the table (mm)
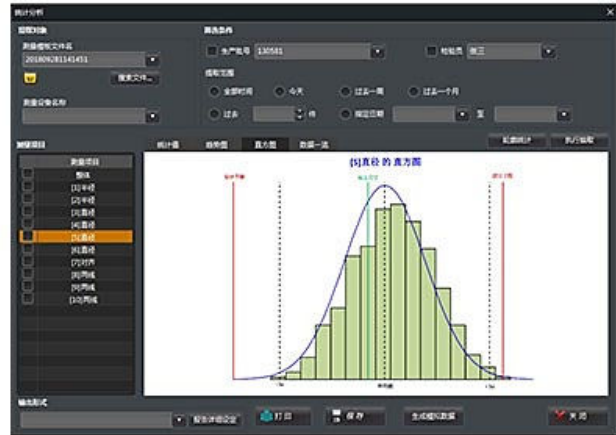
§≡≡≡≡ Applications ≡≡≡≡

Vision X software provides up to 80 extraction analysis tools, including [Feature Extraction] (such as maximum points, centerlines, arcs, peaks, etc.), [Accessory Tools] (such as any dot & line & circle, fitted straight line, Fit circle, tangent, inscribed circle, etc.), [Smart Labeling], [shape tolerance], special [Application Tool] (such as pitch distance, pitch angle, slot, thread, round cross, down Angle, rounded corners, etc.)

The measurement results and their main statistical values (such as average, σ, 3σ, 6σ, Ca, Cp, Cpk, etc.) will be automatically recorded and archived. Operators can select different filter conditions for history extraction.

Metal plate

Gear

Metal workpiece

Thread

§≡≡≡ Statistics ≡≡≡

The trend graph displays the regular trend of the measured values, such as the monotonic and periodic change of the measured values, which can be used for monitoring the abnormality of the production process of producing equipment. Reflecting the status and distribution of fluctuations in product quality, the histogram can intuitively expose information about the quality situation in producing process, which can be used to predict product quality and failure rate.

Through quality diagnosis and analysis with statistical methods, SPC can monitor the product quality and changing trend of the producing process. With SPC we can find the preventive solution in the producing process, so that the subsequent inspection and repair are reduced. Consequently, the producing process control and product quality improvement are achieved.
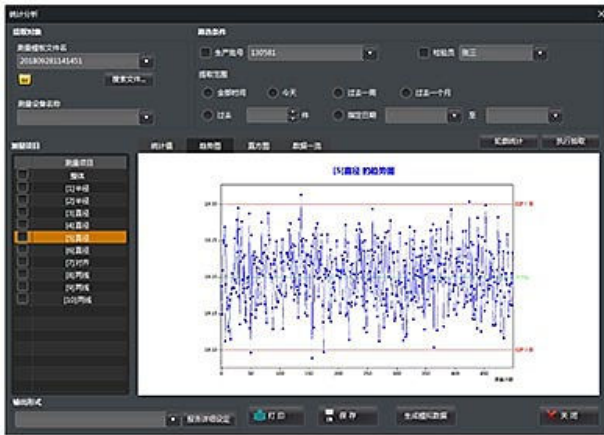
Trend Graph

Histogram

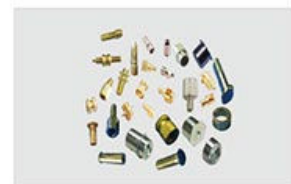# §≡≡≡ More Applications ≡≡≡

Metal

Gasket

PCB

Phone accessories

Magnetic parts

Spring

Bearing

Instrument accessorie