

# Video Measuring Machine VX8300



Item No.: VX8300  
Product name: Flash Measuring Machine  
Image Sensor: 20M CMOS  
Field of view : W230mm×L130mm &  
W300mm×L200mm  
Depth of Field: 3mm & 30mm  
Working Distance: 120mm  
Accuracy:  $\pm 1.5\mu\text{m}$  (Without stitching) &  $\pm 3\mu\text{m}$  (Without stitching)  
Resolution: 0.1 $\mu\text{m}$   
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, VX8000 series of Flash Measuring Machines achieve fast dimensional measurement by one-key operation. VX8000 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		VX8300	
Image Sensor		20M 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	300mm×200mm (4 Angle R50)	
	High precision	230mm×130mm	
Resolution		0.1μm	
Repeatability of Image Meas.	Large field	Without Stitching*1	±1μm
		With Stitching*2	±2μm
	High precision	Without Stitching*1	±0.5μm
		With Stitching*2	±1.5μm
Accuracy of Image Meas.	Large field	Without Stitching*1	±3μm
		With Stitching*2	±(5+0.02L) μm
	High precision	Without Stitching*1	±1.5μm
		With Stitching*2	±(3+0.02L) μm
Horizontal Rotary Unit (Optional)	Rotation Angle		Range 360°, Resolution 0.01°
	Rotation Speed		0.2~2rev/s
	Max Diameter		Φ60mm
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		75kg	
Input		AC100~240V/50~60Hz	
Working Environment		Temp.10°C~35°C, Humidity 30%~80%, Vibration<0.002g, Less than15Hz	

Remark:

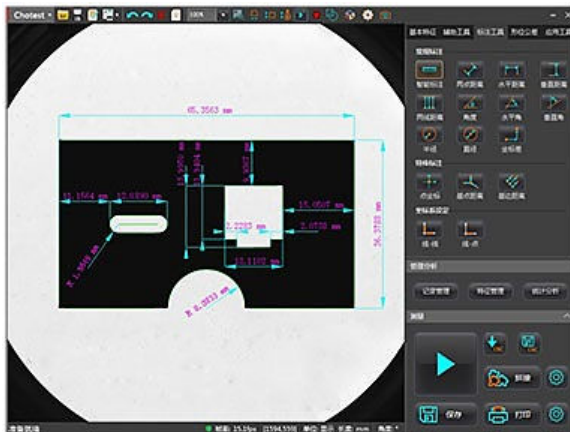
\*1 In the focus position, the environment temperature is +20 °C ± 1.0 °C

\*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,  $\sigma$ ,  $3\sigma$ ,  $6\sigma$ , Ca, Cp, Cpk, etc.) will be automatically recorded and archived. Operators can select different filter conditions for history extraction.



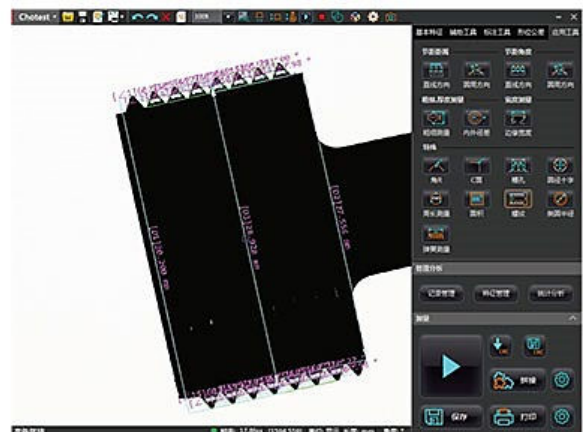
Metal plate



Gear



Metal workpiece

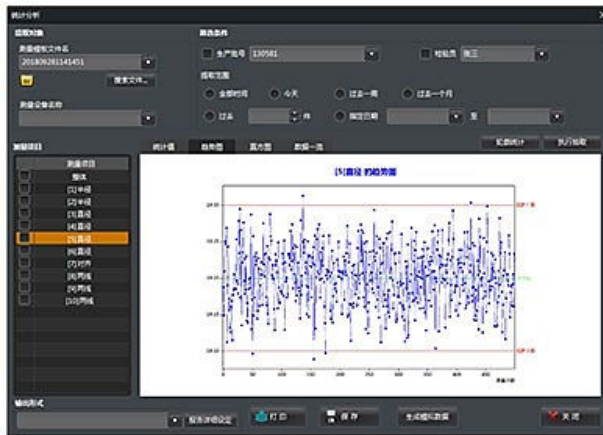


Thread

## § 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