Flatness Special Measuring Machine

Flatness measuring machine is a full-size flatness measuring machine designed by Sobekk (sunpoc group) for the contour size and flatness measurement requirements of precision machining parts. The design concept seeks to simplify complexity, moving work table, Granite material with precision bearing design, both innovative and rigorous. Small footprint, allows you to quickly complete the installation mode, for the measurement of more time.

Flatness detector is used in mobile phone frame LCD warehouse flatness detection, battery mold outer contour size, end plate flatness, dial plane, module assembly flatness, segment difference, hole position measurement and contour, surface size precision measurement. It has the characteristics of fast and accurate measurement.

Features:

●Accuracy: accuracy <3um, the measured real result is without any compensation
●Capacity: can be measured >20000 pieces in a day.
●Quick: the flatness of 23 points was measured<2 seconds
●Special inspection: length, width, hole distance position, ink size, profile.

Leading the measurement industry, breakthrough in full size, flatness, fault rapid detection application problems. Compatible point laser, line laser and CCD sensor in one, designed for demand. Fast measurement efficiency. Can be measured >20000 pieces in a day.

Application case:

● **Mobile communications field**

Check the flatness and segment difference of 5G communication module shell, difference in flatness and height of the 90X camera mounting frame, CG screen flatness value, flatness of mobile phone shielding cover, TP box (frame) and LCD bin flatness, the camera segment difference and flatness of the rear cover of the mobile phone, the flatness and straightness of the highest position in the frame of the mobile phone, the flatness size and arc height of the mobile phone case, the height difference of the four angles of the mobile phone backlight board, the flatness of the mobile phone frame, the height of the mobile phone nut and the height of the plastic parts, 2.5D detection glue and the height difference of the step, etc.

● **Clocks and watches field**

Watch dial flatness detection, realize 10 pieces of products, 10 seconds to complete.
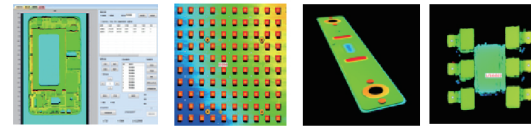
● **LED field**

LED filament height difference（checking whether the lamp beads are good）, PCBA appearance checking, component circuit board measurement height difference,flatness of LED lamp etc.

● **New energy battery field**

Power battery welding quality inspection, battery plane sag extraction, battery corner point sag extraction, pole defect extraction, shrapnel height difference detection, whether solder covered wire and rubber path, Screw height difference, auto spare parts filter element, mobile phone screw floating height, screw floating height, shrapnel floating height, ceramic chip hole depth detection, etc.

● **Socket field**

Stitching coplanar detection and height difference detection, stitching flatness detection, stitching height difference, connecting head stitching height difference.

Specification:

Model	FQT300-L	FQT400-L	FQT300-M	FQT400-M
Measuring range(mm)	300*300*100	400*300*100	300*300*100	400*300*100
Laser type	spectral confocal laser		3D line scanning laser	
Flatness measurement speed	15 points of time <13 seconds		23 points of time <2 seconds	
Flatness repeatability（μm）	0.002	0.002	0.005	0.005
Flatness measure accuracy (μm)	3.0+L/200	3.0+L/200	5.0+L/200	5.0+L/200
Object space view	65*43mm	65*43mm	65*43mm	65*43mm
XY max speed	300mm/s	300mm/s	300mm/s	300mm/s
In-field measurement accuracy	2.5um	3.0um	2.5um	3.0um
Coordinates moving accuracy	3.5+L/200um	4.5+L/200um	3.5+L/200um	4.5+L/200um
In-field measurement repeatability	2.0um	3.0um	2.0um	3.0um
Coordinates moving repeatability	3um	3.5um	3um	3.5um
Move	fully automatic			
Image sensor	20.0Mpexl ultra high definition CMOS sensor (black and white)			
Optical lens barrel	double telecentric tube			
Min resolution	0.0005mm metal linear scale			
Light	annular LED reflected light / coaxial surface light source / coaxial transmission light source			