AKGEC-SIEMENS
Advance Manufacturing Centre

Surface Roughness Tester

Machine Specification

Make & Model	:	Zeiss Surfcom Flex-50A
Controller	:	Zeiss

Technical Specification

Z direction	: ±500 m
X Direction	: 50 mm
Evaluation Length	: 0.1 to 50 mm
Straightness accuracy	: 0.3 m/50 mm
Detector vertical movement volume	: 50 mm
Measurement speed	: 0.15, 0.3, 0.6, 1.5, 3 / 0.05, 0.1, 0.2, 0.5, 1 mm/s

A roughness tester is used to quickly and accurately determine the surface texture or surface roughness of a material. A roughness tester shows the measured roughness depth (Rz) as well as the mean roughness value (Ra) in micrometers or microns (µm). Ra is calculated as Roughness average of a surfaces measured microscopic peaks and valleys. One can infer from examination of the formulas, that a single large peak or flaw within the microscopic surface texture will affect (raise) the RMS value more than the Ra value. Ra is the arithmetical average value of all absolute distances of the roughness profile from the center line within the measuring length. Rz is the average maximum peak to valley of five consecutive sampling lengths within the measuring length.