

Digital universal tool microscope



Introduction

The YK19JC digital universal tool microscope is a classic measuring instrument that our company has been producing for decades, and it is the basic model in the 19J series of products. It covers almost all means of geometric measurement. The instrument has full functions, high precision, easy operation and durability. It is a conventional equipment in the precision machinery industry, and it is also an effective testing basis for technical supervision and measurement and testing departments at all levels. It is a scientific research, teaching The right assistant in the field.

YK19JC adopts grating subdivision and digitization technology, which has the characteristics of intuitive reading and good consistency, which improves work efficiency and further expands the scope of use.

The digital display of the instrument has a data output interface, which can be extended to connect to a two-dimensional data collector and a computer measurement operating system, and is upgraded to a 19JPC microcomputer-type universal tool microscope.



0086 16601757347
 inquiry@yukelab.com
 www.yukelab.com
 0086 021 59570209

Main technical specifications of the instrument

X, Y coordinates	Measuring range:	200×100 mm	Resolution: 0.0002 mm
aiming microscope	Lifting stroke:	120 mm	
	Arm tilt range:	15 degrees left and right	Graduation value: 10'
	Illumination diaphragm adjustment range:	φ3~φ32 mm	Grid value: 1 mm
goniometer eyepiece	Angle measurement range:	360°	Graduation value: 1'
Contour eyepiece	Angle measurement range:	±7°	Graduation value: 10'
	Arc reticle:	Radius of curvature:	R0.1~100 mm
	Threaded reticle:	common thread pitch	t = 0.25 - 6 mm
		Trapezoidal thread pitch	T = 2 - 20 mm
Optical indexing head	Measuring range:	360°	Graduation value: 1'
Optical Positioner	Probe diameter:	Φ3±0.1 mm (the limit verification error of the actual diameter value is not more than 0.5μm)	
	Measuring force:	0.1±0.03N	
	Maximum measuring depth	15 mm	
glass workbench	Glass table size:	215×130 mm (Dimensions: 268×225 mm)	
Thimble holder	Maximum clamping diameter:	Φ100 mm	
	Maximum clamping length:	When the diameter of the tested piece is ≤ 55 mm: 750 mm	
		When the diameter of the test piece is greater than 55mm: 600mm	
High thimble holder	Maximum clamping diameter:	Φ180 mm	
	Maximum clamping length:	600 mm	
V-shaped frame	Left V-shaped frame front and rear adjustment range:	5mm each	
	Right V-shaped frame height adjustment range:	Up 15mm; Down 3mm	
Maximum load 40kg			



0086 16601757347
inquiry@yukelab.com
www.yukelab.com
0086 021 59570209

Objective lens magnification mark value Tag		1×	3×	5×
Total magnification	with goniometric or profile eyepieces	10×	30×	50×
	with dual vision eyepieces	15×	42×	65×
object field of view (mm)	with goniometric or profile eyepieces	φ20	φ6.6	φ4
	with dual vision eyepieces	φ13	φ4.7	φ3
working distance (mm)	with goniometric or profile eyepieces	81	90	65
	with dual vision eyepieces	47	85	63

Instrument Accuracy

temperature requirements

- (1) The temperature of the studio should be 20 ± 2 °C;
- (2) The temperature change of the studio is less than or equal to 0.5 °C per hour;
- (3) The temperature difference between the DUT and the instrument is less than or equal to 0.5 °C

Under the condition that the specified temperature requirements are met, the instrument has the following guarantees:

- ① When the X and Y coordinates are verified with a glass millimeter reticle, the maximum inaccuracy of the instrument is: $(1 + L / 100) \mu\text{m}$ where L = measurement length unit: mm, the reticle of the instrument is adjusted according to the correction table When correcting: X direction is not more than 0.0035mm, Y direction is not more than 0.0025
- ② Goniometer eyepiece Maximum inaccuracy of measuring angle: no more than 1'
- ③ Dual-image eyepiece Instability of combined image: no more than 0.0005mm, inaccuracy of combined image: no more than 0.001mm
- ④ Optical indexing head Maximum inaccuracy: no more than 30"
- ⑤ Optical positioner Measurement instability: no more than 0.001 mm, measurement inaccuracy: no more than 0.0015 mm

Instrument weight, dimensions

Mainframe net weight: about 250 kg

Mainframe dimensions: (X×Y×Z): 980×1020×640