

Technical Specifications

Specification	Description	
1. Illumination	Light source	144 LEDs ring light
	Input	24VDC
2. Focusing mechanism	Stage height adjustment mechanism Fine adjustment scale: 0.002 per graduation; Fine adjustment stroke: 0.2mm per turn Total stroke: 28mm Co-axial coarse and fine focusing on ball drive Coarse adjustment travel per rotation	
3. Observation tube	Field number: 22 Tube tilting angle: 30° Interpupillary distance adjustment range: 52-75	
4. Stage	Size	240 x 160 mm (with mechanical X-Y stage)
	Movement range	114 x 41.3mm
	Specimen holder	Slide and Petri dish
5. Dimensions & Weight	20.0 in/508mm (L) x [11.5 in/292 mm (min W)~ 15 in/381mm (max W)] x 16 in/406.5mm (H)	
6. Pump	Vacuum range	up to 22”Hg
	Input	24VDC
7. Linear actuator	Linear travel/step	0.0015 mm
	Maximum travel	8.9 mm
	Input	5 VDC
8. Operating environment	Indoor use Altitude: max. 2000 meters Ambient temperature: 5°C to 40°C (41°F to 104°F) Maximum relative humidity: 80% for temperature up to 31°C (88°F) Supply voltage: 100VAC to 240 V AC, 50-60 Hz	

System Performance

Description	Specifications
Resolution	Single Cell
Vacuum duration (Ts), seconds	0.1 s to 1.0 s
Vacuum strength, Hg"	4.4" to 22" Hg
Available DCU IDs, μm	From 10 to 100 μm
Acquisition speed (Hg"/Ts), seconds	
Minimum settings (4.4"/0.1 sec)	1.3 s
Maximum settings (22.0"/1.0 sec)	2.2 s
Acquisition sample volume (Hg"/Ts/DCU ID) *	
4.4"/0.1 sec/20 μm	10 to 30 nl
22.0"/1.0 sec/20 μm	1.4 to 2.2 μl
4.4"/0.1 sec/30 μm	35 to 55 nl
22.0"/1.0 sec/30 μm	1.5 to 2.8 μl
4.4"/0.1 sec/40 μm	70 to 100 nl
22.0"/1.0 sec/40 μm	4.7 to 4.9 μl
Cell collection speed (cells/minute) from tissue sections	
Rat Purkinje cells (cerebellum)	12.0 \pm 1.5 cells/min
Mouse anterior horn motor neurons	12.0 \pm 1.5 cells/min
Cell collection speed (cells/minute) from adherent cell cultures	
SH-SY5Y human neuroblastoma cell line	Up to 25 cells/min
Chinese hamster ovary cells (CHO)	Up to 25 cells/min

* - acquisition volume depends on the DCU ID and sample viscosity

Sample Applications

Kuiqpick™ is designed for efficient tissue microdissection and collection of single (individual) cells from any adherent and suspended cell cultures. In addition, individual cell and cell colonies may be collected from 3D cell cultures. **Kuiqpick™** can also collect individual cells from tissue sections. Kuiqpick has low impact on cell viability, demonstrating viability rates up to 95% for some of the cell lines.

Collected cells and tissue samples may be used for a wide range of downstream applications including re-culturing (clonal expansion, enrichment for transfected cells, etc.), molecular analysis such as gene and protein expression studies and Next Generation Sequencing. RNA and proteins isolated from collected cells and microdissected tissue samples demonstrate high quality with low degradation rates. Microdissected native tissues may be used for establishing primary cell cultures such as progenitor cultures.