

## Roboocyte2

### Technical Specification of the Roboocyte2-System



### Technical Specifications

Roboocyte 2	
Operating temperature	10 °C to 50 °C
Storage temperature	0 °C to 50 °C
Relative humidity	10 % to 85 % , non-condensing
Dimensions (W x D x H)	320 mm x 320 mm x 310 mm
Weight	23.2 kg
ClampAmpC	
<ul style="list-style-type: none"> <li>- Newly designed integrated digital TEVC amplifier Headstage included</li> <li>- Operates fully automatically and computer controlled</li> <li>- Active bath clamp with two independent reference electrodes</li> </ul>	
Sampling rate	1 Hz to 20 kHz
Data resolution	16 Bit
Recommended electrode resistance range	100 kΩ to 1 MΩ
Current electrode output	
Output range	-107 μA to +107 μA
Compliance voltage range	-100 V to +100 V
Effective current resolution	1 nA
Voltage electrode input	
Input range	-500 mV to +500 mV
Voltage resolution	0.125 mV
Clamp voltage setpoint range	-500 mV to +500 mV
Clamp voltage setpoint resolution	1 mV
Amplifier gain settings	
Proportional gain	0 to 6700 nA/mV
Integrated gain	0 to 8000 1/s
Typical rise time in voltage clamp mode	< 1 ms

## Roboocyte2-System

### Technical Specification of the RoboFlow-System

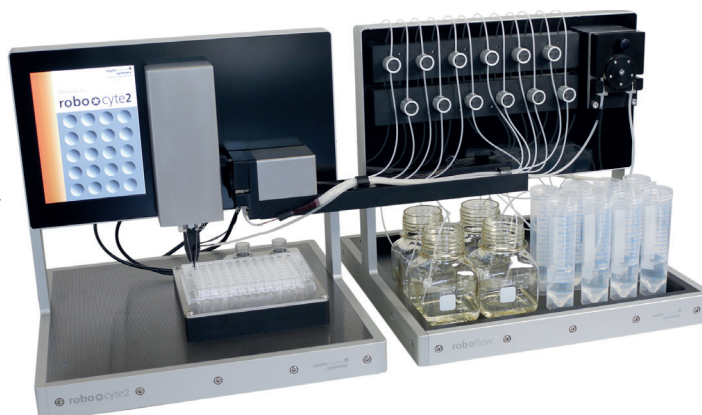


### Technical Specifications

Performance and Accuracy	
Operates with disposable standard 96 well plates	
Positioning accuracy	20 µm in x / y and z-dimension
Movement time from well to well	2 s
Test Model Cell	
Electrode resistance	470 kΩ
Leak resistance	100 kΩ
Membrane capacitance	100 nF
Interfaces	
USB	USB 2.0 High Speed, connection to the computer
RoboFlow	
Diluter	RS 232-C, connection to Gilson GX-271
Compressed Air Supply	
Style	Separate compressed air service unit with regulator, filter and manometer
Air pressure @ input regulator	4 to 8 bar
Air pressure @ input Roboocyte2	3.0 bar
Power Supply	
Style	Separate desktop power unit
Electrical power	150 W
Input voltage range	100 - 240 VAC
Input frequency	47 to 63 Hz
Output voltage	24 VDC
Software	
Operating system Microsoft Windows ®	Windows 10, 8.1, 7 (32 or 64 bit), English version supported
Full automation and control of all devices and features including perfusion via scripting	
Controlling of perfusion system	either RoboFlow or Gilson GX-271
Linkage to Microsoft Access 2010 database	Microsoft Access (not included)
Data export	ASCII file format

## Roboflow

### Technical Specification of the Roboflow-System



## Technical Specifications

Roboflow	
Operating temperature	10 °C to 50 °C
Storage temperature	0 °C to 50 °C
Relative humidity	10 % to 85 % , non-condensing
Dimensions (W x D x H)	320 mm x 320 mm x 310 mm
Weight	6.9 kg
Power supply and control	
Power supply and control	by Roboocyte2 via cable
Equipment	with tray to carry the reservoirs with the solutions
Valves	
Number	12
Operating principle	pinch
Version	2/2-way, normally closed (NC)
Actuation	solenoid
Response time	(typical) 20 ... 50 ms [1]
Valve tube material	silicone
Valve tube hardness	50 ... 60 shore A
Valve tube dimension	1.0 mm x 2.0 mm x 1 m
Manifold	
Type	12 to 1
Ports	nipple with 1.8 mm outer diameter
Fixation	magnetic (toolless replaceable)

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#### Technical Specifications

Valve Pump (Inlet)	
Operating principle	peristaltic
Pump tube material	Pharmed® BPT
Pump tube dimension	1.14 mm x 2.84 mm
Speed	1 ... 10.000 (controlled by software)
Rotation speed	(max) 165 rpm (@ max. speed 10.000)
Flow rate	(max) 10 ml/min (@ max. speed 10.000) [2]
Valve Pump (Outlet)	
Operating principle	peristaltic
Pump tube material	Pharmed® BPT
Pump tube dimension	2.29 mm x 3.99 mm
Speed	1 ... 20.000 (controlled by software)
Rotation speed	(max) 145 rpm (@ max. speed 20.000)
Flow rate	(max) 36 ml/min (@ max. speed 20.000) [2]
Notes	
Note [1]	The response time of the pinch valves varies with the viscosity of the solution and the resilience of the tubing.
Note [2]	The flow rate is linearly dependent on the speed. The values are valid in conjunction with the supplied fluidic components and tubing.