



## Roboocyte2

## Technical Specifications

### Roboocyte2

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	
Newly designed integrated digital TEVC amplifier	
Headstage included	
Operates fully automatically and computer controlled	
Active bath clamp with two independent reference electrodes	
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

### Technical Specifications

#### Performance and Accuracy

Operates with disposable standard 96 well plates

Positioning accuracy

20  $\mu\text{m}$  in x / y and z-dimension

Movement time from well to well

2 s

Test Model Cell

Electrode resistance

470 k $\Omega$

Leak resistance

100 k $\Omega$

Membrane capacitance

100 nF

#### Interfaces

USB

USB 2.0 High Speed, connection to the computer

Roboflow

Serial data and power, connection to 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<sup>®</sup>

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 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

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)

## Roboflow

## Technical Specifications

### Roboflow

#### 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]

#### Waste 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]

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.