ELVEFLOW
PLUG & PLAY MICROFLUIDICS

A WHOLE UNIVERSE OF MICROFLUIDIC INSTRUMENTS

Elveflow® Product Line 2016

Plug & Play systems for high level microfluidics

Developed by researchers for researchers

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

FLOW CONTROL

OB1 Mk3

Pressure & Vacuum Flow Controller

Pressure & Vacuum on up to 4 channels, 20 times more stable & up to 10 times faster than other microfluidic flow controllers.

AF1 Series

Mobile Pressure & Vacuum Pump

An autonomous pump with the advantages of the most recent piezoelectric technology for microfluidics.

MUX Series

Flow Switch Matrices

Switch between different samples at lightning speed.
Instantaneous stop flow & Quake valve control.

FPS Sensor Reader

Flow Sensors & Pressure Sensors

Measure and control the flow-rate and pressure in your microfluidic system in real time and with the best precision.

OPTICAL CONTROL

OPR Series

Microfluidic Optical Reader

Measure optical properties in your microfluidic channel.
Detect and quantify flowing objects.

ACCESSORIES & SPARE PARTS

KITS Series

Accessories & Spare Parts

Reservoirs, tubing, fittings, manifolds & setup boosters.
Everything you need to get started straight away.

MICRO FABRICATION

BOX Soft Litho

Soft Lithography Station

3 turnkey stations that include everything to make your chips
No need for a clean room.

+ Temperature Controller, Perfusion System, Fluorescence Reader, OEM Customized Products, etc...

www.elveflow.com contact@elveflow.com

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

OB1 *Mk3*

Pressure & Vacuum Controller

20 X more stable & up to 10 X faster than other microfluidic flow controllers

Stability: 0.005 % - Response Time: 9 ms

Pressure & vacuum within the same channel.

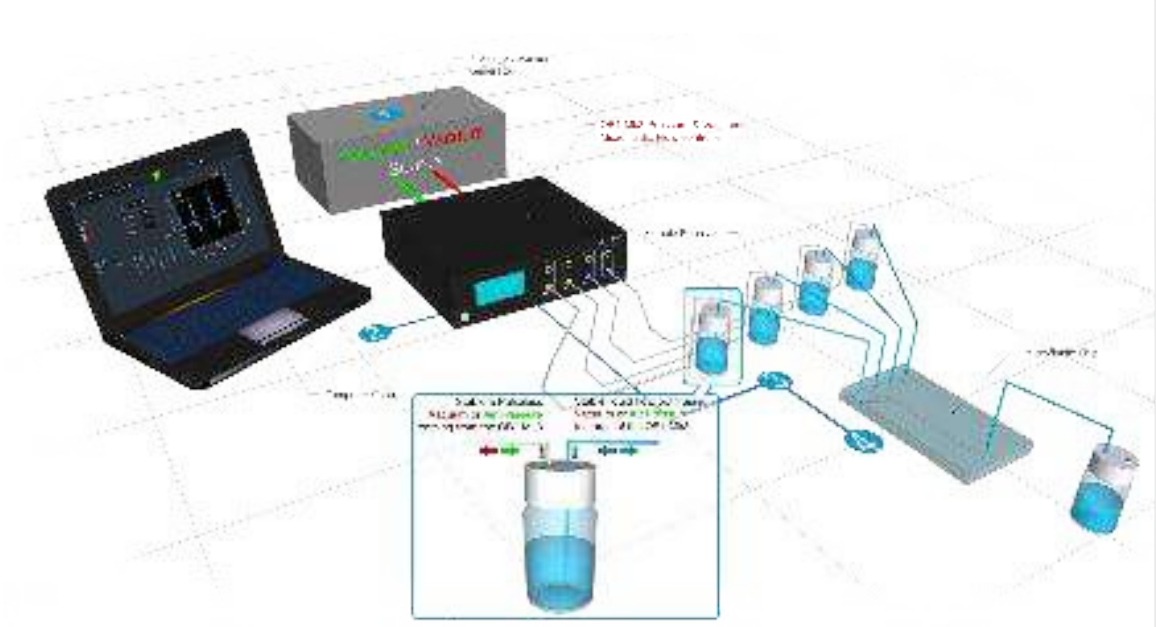
Outstanding performances

- Pressure stability: 0.005 %
- Pressure Sensor Resolution 0.006 %
- Response time: 9 ms
- Settling time: 40 ms

Wide range of applications

- Digital microfluidics: micro-droplets, anisotropic particles, double emulsion generation & handling
- Bead and particle manipulation
- Fast liquid sample switching
- Cell culture experiments

OB1 PRINCIPLE



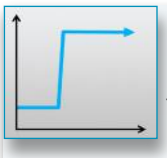
1 Pressure & Vacuum Source
Connect a pressure and a vacuum source to your OB1.

2 Monitoring
Control the pressure and flow rate* using the Elveflow Smart Interface on your computer. This software enables you to create and automate sequences with a specific pressure or flow rate profile.

3 Sample
Depending on your choice, the liquids can be sucked into the reservoir or be ejected therefrom since the OB1 can use Pressure or Vacuum within the same fluidic channel.

4 Chip
OB1 Pressure & Vacuum features offers precise sample handling, and provides full control over the sample injection.

OB1 FEATURES & BENEFITS



› Short Response & Settling Time
Responsive performance.
The piezo technology technology used on the OB1 Mk3 enable a blazing fast flow change in your microdevice and make the OB1 the flow controller of choice for the most demanding microfluidic applications.

› Highest Flow Stability
Taking control to a new level.
The 0.005 % flow stability ensures a superior flow performance even at low flow rates, to provide you with low noise data and quality results upon first time.

› Accurate Flow Rate Control
Master the Flow.
Our flow regulation algorithm provides a real time regulation of the flow rate inside your microchannels while keeping the stability and responsiveness of pressure driven flows.

› Plug & Play Software Interface
Shorten the Path to Your Goal.
ESI - Elveflow Smart Interface - controls all Elveflow instruments, letting you automate basic functions to operate all your devices with the same intuitive interface. Seldom used expert functions are out of sight, but just a mouse click away. Save time and get faster answers to your questions!

› Complex Fluidic Profiles
Make the Complex Simple.
Our profile editor will enable you to easily create and program sine, triangle, square, sawtooth and pulses flow profiles to automate the most sophisticated protocols.

› High Customization Flexibility
Your Flexible Choice of Elements.
The OB1 offers a range of technical features and product versions that enable you to design your OB1 instrument the way you prefer. Get from 1up to 4 channels, in any maximum pressure range (200 mbar, 2 bar, 8 bar or vacuum) with any type of flow sensor, on the same instrument.

› Setup Synchronization
Communication Skills.
The OB1 offers a TTL trigger set for easily synchronizing your instrument with any Elveflow device, microscope or mechanical shutter. Get a complete control of all the devices involved in your experiments.

› High Compliance
Ever ready.
Former electro-mechanical pressure controllers have limited gas throughput which limits their ability to quickly pressurize large tanks. The OB1 MkII technology enables fast pressurization of tanks up to 1 liter and enables you to setup long term or high flow rate microfluidic experiments.

The Elveflow® Smart Interface Makes Your Work Easier

Thanks to an ergonomic design of the fluidic functions & modules, your routine tasks and workflows will be more comfortable.

- Intuitive control interface
- Real time control using pressure or flow rate regulation
- Pressure & flow rate visualization and recording
- Programming & automation of complex sequences
- Easy alternative instrument control through the provided Labview® and Matlab® libraries, and DLLs

National instruments is our technological partner for embedded electronics

NATIONAL INSTRUMENTS

OB1
TECHNICAL SPECIFICATIONS

Unit Pressure Range	0-200 mbar (0-2.9 psi)	0-2000 mbar (0-29 psi)	0-8000 mbar (0-116 psi)	-1000 to 1000 mbar (-14.5 psi to 14.5 psi)
Pressure Stability (1)	0.005 % FS 10 µbar - 0.00014 psi	0.005 % FS 100 µbar - 0.0014 psi	0.006 % FS 500 µbar - 0.007 psi	0.05% FS (-1000 to 500 mBar : 1 mBar - 0.014 psi) 0.25% FS (500 to 1000 mBar: 5 mBar - 0.072 psi)
Response Time	down to 9 ms (2)			
Settling Time	down to 40 ms (3)			
Pressure Sensor Resolution	0.006 % FS 12.2 µbar - 0.00017 psi	0.006 % FS 122 µbar - 0.0017 psi	0.006 % FS 0.48 mbar -0.007 psi	0.006 % FS 122 µbar - 0.0017 psi
Input Pressure (min - max)	1.5 bar - 10 bar			Any value from 0 to -1 bar (4).
Liquid Compatibility	No liquid should enter the OB1. Any aqueous or organic solvent, oil or biological sample solution can be propelled.			
Pressure Source	Non corrosive, non explosive, dry and oil-free gases, *e.g.* air, argon, N_2, CO_2,...			

Related Products & Services

Eppendorf® Microfluidic Tank

100% gas tight connection caps.
1.5 - 2 mL Eppendorf® tubes
15 mL BD Falcon® tubes
100 mL - 2 L Upchurch® bottle

Connection Kits

Bored of microplumbing issues? Our kits enable to easily connect your microfluidic device to any pressure or flow control equipment.

Broad Product Line

Elveflow instruments are designed to work together on your microfluidic setup. Switch valve system, flow rate monitoring,

Service

Benefit from our microfluidics PhD team's expertise. Take advantage of our support for specific developments on your setup.

OEM Solutions

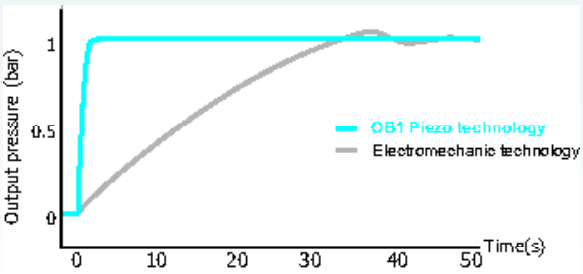
All our instruments are highly customizable and available in end user or OEM version and designed to be easily integrated.

OB1
PRODUCTS & SERVICES

Elements provided by Elveflow	Included	Optional
Software & libraries Control all Elveflow® instruments with the same smart interface.	●	
OB1 Connection kit A complete set of accessories fitted for the OB1 pressure controller.		●
Kits Connect any pressure source/syringe pump to your device.		●
Reservoirs Gas tight reservoirs with ergonomic fluidic connection.		●
Flow Sensors A line of sensors to monitor very low liquid flow rates.		●
Compressor A safe & secure pressure source for the OB1 pressure controller.		●

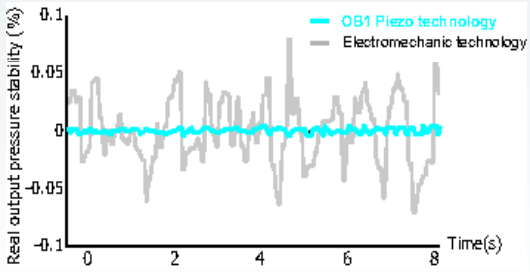
Performance cannot ☒st be told, it must be e☒perienced.

Responsiveness



Experimental condition: pressure response to a 1 bar step with an output volume of 300 mL.

Stability



Experimental condition: pressure stability at 150 mbar with an output volume of 2 mL.

(1) Output stability measured at 150 mBar with an external high accuracy pressure sensor (Druck DPI150) (2) Depending on user computer operating system (3) Volume dependent – Measurement done on 12 mL reservoir for a set point from 0 to 200 mbar
(4) The VACCUM channels can be used without vacuum source if only positive pressures are desired. If no VACCUM channels are present the Vacuum Input can be left open.

☒ is no coincidence that the most prestigious names trust in us

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

AF1

Pressure Generator

An autonomous pump designed to match all mobile workers needs

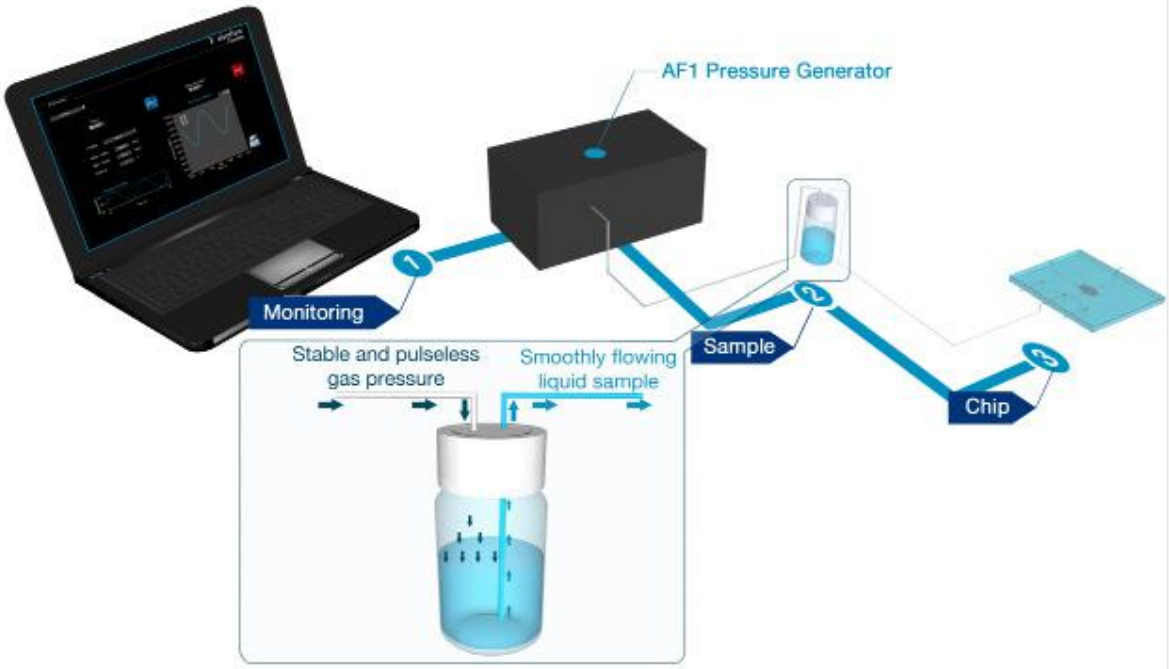
Exceptional performances

› Pressure resolution: 100 µbar › Pressure stability: 100 µbar › Response time: 50 ms › Settling time:100 ms

Wide application range

› Digital microfluidics: micro-droplets, anisotropic particles, double emulsions generation & handling
› Beads and particles manipulation
› Fast liquid sample switching
› Cell culture experiments under medium perfusion

AF1
PRINCIPLE



1 Monitoring

Control the pressure and the flow rate* through the Elveflow Smart Interface on your PC.

This software enables you to create and automate sequences with a specific pressure or flow rate profile.

2 Sample

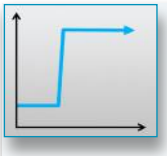
Pressurize the liquids samples stored into the reservoirs with your AF1.

3 Chip

Pressurized liquids are smoothly and precisely injected into the chip in accordance with the set pressure or flow rate profile.

* flow sensor required.

AF1
FEATURES & BENEFITS



› Short Response & Settling Time
Get the Highest Responsiveness.

The piezo technology used for the AF1 enable a blazing fast flow change in your microdevice (100 ms response time, 100 ms settling time) to perform amazingly dynamic experiments.

› Highest Flow Stability
Enjoy a Smooth & Pulseless Flow.

The 100 µbar flow stability (i.e. 0.05 % F. S.) ensures a superior flow performance even at low flow rates, to provide you with low-noise data and quality experimental results upon first time.

› Accurate Flow Rate Control
Master the Flow.

Our flow regulation algorithm provides a real time regulation of the flow rate inside your microchannels while keeping the stability and responsiveness of pressure driven flows.

› Plug & Play Software Interface
Shorten the Path to Your Goal.

ESI - Elveflow Smart Interface - controls all Elveflow instruments, letting you automate basic functions to operate all your devices with the same intuitive interface. Seldom used expert functions are out of sight, but just a mouse click away. Save time and get faster answers to your questions!

› Complex Fluidic Profiles
Make the Complex Simple.

Our profile editor will allow you to easily create and program sine, triangle, square, sawtooth and pulses flow profiles to automate the most sophisticated protocols.

› Portability
Performance Anywhere.

The AF1 provides superior portability while keeping performances at high level, to deliver a stable and pulseless fluid flow for the most demanding experiments, anytime, anywhere.

› Setup Synchronization
Communication Skills.

The AF1 offers a TTL triggers set for easily synchronizing your instrument with any Elveflow® device, microscopes or mechanical shutter. That way you can have a full control of all the devices involved in your microfluidic experiment.

› Compactness
Small, yet Mighty.

Subtleexperimentssometimes require rather significant space. Fortunately, the AF1is shaped to deliver impressive performances while saving valuable lab bench space (220 x 130 x 130 mm LxIxh).

The Elveflow® Smart Interface Makes Your Work Easier

Thanks to an ergonomic design of the fluidic functions & modules, your routine tasks and workflows will be more comfortable.

- Intuitive control interface
- Real time control using pressure or flow rate regulation
- Pressure & flow rate visualization and recording
- Programming & automation of complex sequences
- Alternativeinstrumentcontrolthrough the provided Labview® and Matlab® libraries, and DLLs

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AF1 Dual

Pressure & Vacuum

The only microfluidic instrument in the world able to generate pressure & vacuum on the same channel

Partner modules that can deliver pressure & vacuum on the same channel

Vacuum & Pressure Generator

Generate vacuum & pressure wherever an electric plug is available.

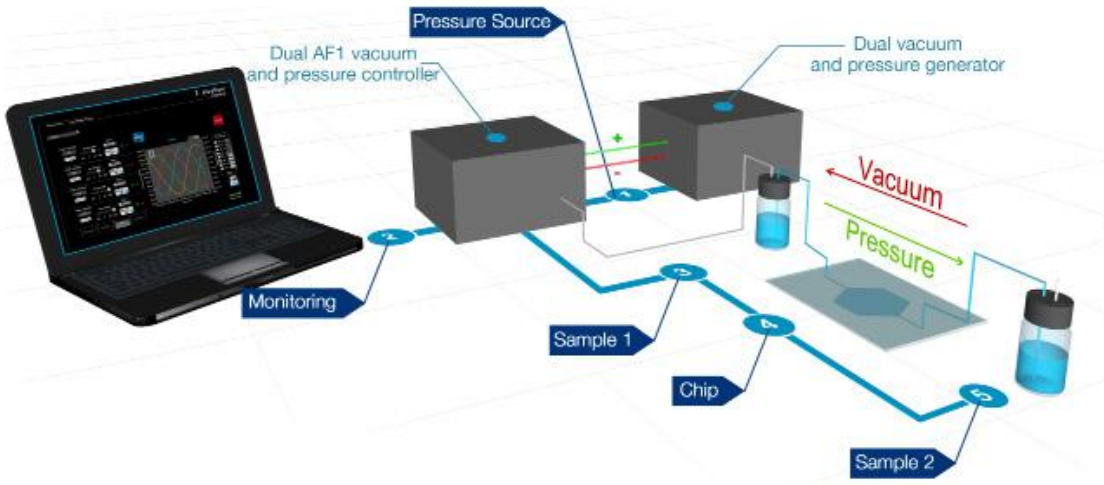
This instrument has been designed to ensure a perfect teamwork with the AF1 Dual Vacuum & Pressure Controller, that would bring the control and accuracy you need. This instrument can also be used independently.

Vacuum & Pressure Controller

Regulate negative & positive pressure on the same channel.

This instrument covers a pressure control range from -700 mbar to 1000 mbar. It has to be linked to an external pressure/vacuum source such as the AF1 Dual Vacuum & Pressure Generator to supply regulated vacuum and pressure.

AF1 Dual
PRINCIPLE



1 Pressure Source

The AF1 Dual Controller has to be connected to an external pressure source that can be, for instance, the AF1 Dual Generator.

2 Monitoring

Control the outlet pressure (or the flow rate*) of the AF1 Dual Vacuum & Pressure Controller through the Elveflow Smart Interface on your PC.

3 Sample 1

The liquid stored into this reservoir can be injected into your chip using pressure.

4 Chip

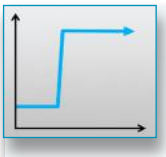
The liquid is smoothly and precisely injected into the microfluidic chip.

5 Sample 2

The liquid stored into this reservoir can be sent into your chip using vacuum.

* flow sensor required.

AF1 Dual
FEATURES & BENEFITS



› Highest Flow Stability
Enjoy a Smooth & Pulseless Flow.

The 1mbar flow stability provided by the AF1 Dual ensures a superior flow performance even at low flow rates, to provide you with low-noise data and quality experimental results upon first time.

› Short Response & Settling Time
Get the Highest Responsiveness.

The piezo technology used for the AF1 enable a blazing fast flow change in your microdevice (100 ms response time,100 ms settling time) to perform amazingly dynamic experiments.

› Bi-directional Flow Control
Master the Flow.

The -700 mbar to 1000 mbar pressure control range allows you to precisely manage positive and negative flow rates on the same channel with the same instrument.

› Plug & Play Software Interface
Shorten the Path to Your Goal.

ESI - Elveflow Smart Interface - controls all Elveflow instruments, letting you automate basic functions to operate all your devices with the same intuitive interface. Seldom used expert functions are out of sight, but just a mouse click away.

› Complex Fluidic Profiles
Make the Complex Simple.

Our profile editor will allow you to easily create and program sine, triangle, square, sawtooth and pulses flow profiles to automate the most sophisticated protocols.

› Portability
Performance Anywhere.

The AF1 provides superior portability while keeping performances at high level, to deliver a stable and pulseless fluid flow for the most demanding experiments, anytime, anywhere.

› Setup Synchronization
Communication Skills.

The AF1 offers a TTL triggers set for easily synchronizing your instrument with any Elveflow® device, microscopes or mechanical shutter. That way you can have a full control of all the devices involved in your microfluidic experiment.

› Compactness
Small, yet Mighty.

Subtle experiments sometimes require rather significant space. Fortunately, the AF1 is shaped to deliver impressive performances while saving valuable lab bench space (220 x 130 x 130 mm Lxlxh).

The Elveflow® Smart Interface Makes Your Work Easier

Thanks to an ergonomic design of the fluidic functions & modules, your routine tasks and workflows will be more comfortable.

- Intuitive control interface
- Real time control using pressure or flow rate regulation
- Pressure & flow rate visualization and recording
- Programming & automation of complex sequences
- Alternative instrument control through the provided Labview® and Matlab® libraries, and DLLs

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AF1
TECHNICAL SPECIFICATIONS

AF1 Unit Pressure range Premium	0 to 200 mbar (0 to 2.9 psi)	0 to 1600mbar (0 to 23 psi)	Dual Pressure & Vacuum Controller -700 to 1000 mbar (-10 to 14 psi)
Type of pressure	Positive	Positive	Negative & Positive
Pressure Sensor Resolution	0.006 % FS 12.2 µbar - 0.00017 psi	0.006 % FS 122 µbar - 0.0017 psi	0.006 % FS 122 µbar - 0.0017 psi
Pressure stability	100 µbar (0.0014 psi) i.e. 0.05 % Full Scale	1 mbar (0.014 psi) i.e. 0.05 % Full Scale	-700 to 500 mBar : 1 mBar 500 to 1000 mBar: 5 mBar
Response time	50 ms		
Settling time	down to 40 ms (1)		
Supply pressure (min - max)	Integrated pump No pressure source needed		Pressuresupplyneeded (1.5barmin,2.5barmax)
Liquid compatibility	Any aqueous or organic solvent, oil, or biological sample solution can be propelled		
Power consumption	15 W (100 V to 240 V - 50 Hz to 60 Hz)		
Weight	1.7 kg		
Case dimensions L x l x h (mm)	220 x 130 x 130		
Output connectors	Stainless steel female luer lock		

(1) Volume dependent – Measurement done on 12 mL reservoir for a set point from 0 to 200 mbar

AF1
PRODUCTS & SERVICES

Elements provided by Elveflow	Included	Optional
Software & libraries Control all Elveflow® instruments with the same smart interface.	●	
AF1 Connection kit A complete set of accessories fitted for the AF1 pressure generator.		●
Kits Connect any pressure source/syringe pump to your device.		●
Reservoirs Gas tight reservoirs with ergonomic fluidic connection.		●
Flow Sensors A line of sensors to monitor very low liquid flow rates.		●
Compressor A safe & secure pressure source for the OB1 pressure controller.		●

Related Products & Services

› Eppendorf® Microfluidic Tank

100% gas tight connection caps.
1.5 - 2 mL Eppendorf® tubes
15 mL BD Falcon® tubes
100 mL - 2 L Upchurch® bottle caps.

› Connection Kits

Bored of microplumbing issues? Our kits enable to easily connect your microfluidic device to any pressure or flow control equipment.

› Broad Product Line

Elveflow instruments are designed to work together on your microfluidic setup. Switch valve system, flow rate monitoring, temperature control...

› Service

Benefit from our microfluidics PhD team's expertise. Take advantage of our support for specific developments on your setup.

› Grants & Partnerships

Elveflow invests in co-development and cooperative projects with academic, SME and industrial partners to take an active part in the development of microfluidics.

It is no coincidence that the most prestigious names trust in us

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

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MFS

Microfluidic Flow Sensor

F1 & OB1 become the most performant syringe pumps

High-accuracy for very low flow rate monitoring

Exceptional performances

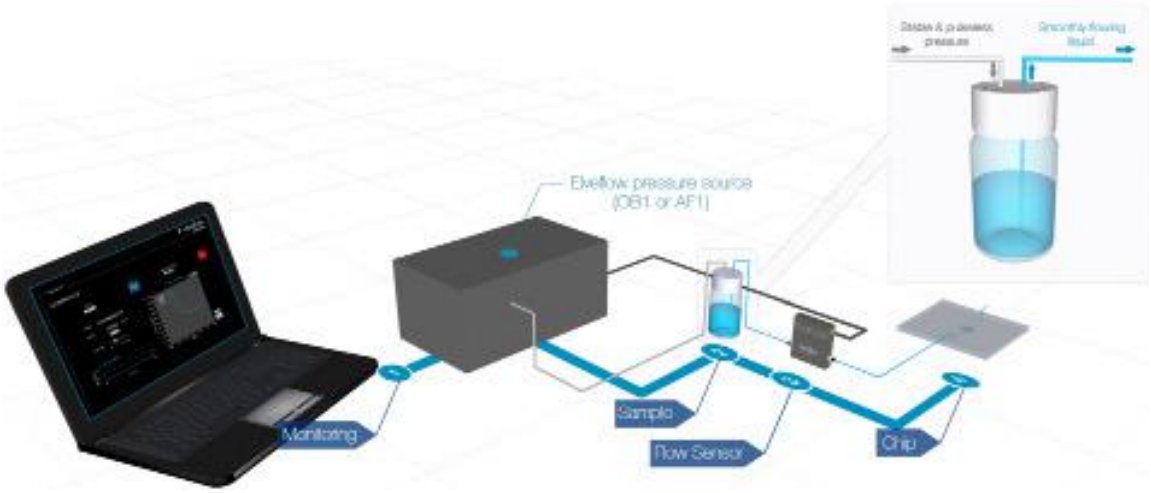
- Calibrated flows from 0.07 µL/min to 5000 µL/min
- Sensor response time: 40 ms
- Resolution down to 1,5 pL/s

Features that matter

- Chemical and biological compatibility
- Low internal volume (1µL)
- Bi-directional flow rate measurement (positive & negative)

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

MFS
PRINCIPLE



1 Monitoring

Set a desired flow rate profile and control it using the Elveflow Smart Interface on your computer.

2 Sample

Pressurize the liquids samples into the reservoirs with your Elveflow instrument (OB1 or AF1).

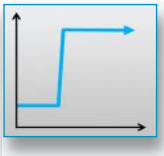
3 Flow Sensor

The sensor output signal is sent to the Elveflow Smart Interface that automatically adjusts the pressure to reach the set flow rate value in your channels.

4 Microfluidic Chip

The pressurized liquid is smoothly and precisely injected into the microfluidic chip at the desired flow rate.

MFS
FEATURES & BENEFITS



› Short Flow Detection Response Time
Get the Highest Responsiveness.

The exceptional qualities of these MFS flow sensors (40 ms response time, resolution down to 1,5 pL/s) enables you to conduct extremely subtle experiments requiring a very high level of technical expertise.

› Highest Flow Stability
Enjoy a Smooth & Pulseless Flow.

The combination of the MFS flow sensor's performances and the extreme pressure stability of Elveflow instruments ensures a superior flow control performance upon first time.

› Plug and Play flow control
Let it Flow.

«Plug & Play Microfluidics» is not just a motto to us. Users will benefit from a control algorithm that ensures an extremely sensitive and responsive flow rate regulation, while being very simple to operate.

› Complex Flow Rate Pattern Control
Make the Complex Simple.

Our profile editor will allow you to easily create and program sine, triangle, square, sawtooth and pulses flow rate profiles to automate the most sophisticated protocols.

› Chemical & biological compatibility
Complete Confidence.

Wetted materials include borosilicate glass, quartz glass, or inert PEEK plastic to ensure a full chemical and biological compatibility, so you can work in complete confidence.

› Broad Line of Products
A Sensor for Every Need.

Elveflow® provides a large line of flow sensors ranging from 70 nL/min to 5 mL/min, so there is always a device fitted to your experimental needs.

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MICROFLUIDIC FLOW SENSOR	MFS 1	MFS 2	MFS 3	MFS 4	MFS 5
Flow Rate Range	0 to ±1.5 µL/min	0 to ±7 µL/min	0 to ±80 µL/min	0 to± 1 mL/min	0 to ±5mL/min
Accuracy (m.v. = measured value)	10% m.v. between [-1500to-70]&[70to1500]nL/min	5% m.v. between [-7 to 0.4] & [0.4 to 7] µL/min	5% m.v. between [-80to-2]&[2to80]µL/min	5% m.v. between [-1to-0.04]&[0.04to1]mL/min	5% m.v. between [-5to-0.2]&[0.2to5]mL/min
	7nL/min between [-70 to 70] nL/min	20 nL/min between [-0.4 to 0.4] µL/min	120 nL/min between [-2 to 2] µL/min	2 µL/min between [-40 to 40] µL/min	10 µL/min between [-200 to 200] µL/min
Sensor Inner Diameter	25 µm	150 µm	430 µm	1.0 mm	1.8 mm
Microfluidic Fitting Type	UNF 1/4-28				
Microfluidic Fitting Material	PEEK				
Internal Sensor Capillary Material	Quartz			Borosilicate Glass	
Electrical Input	8 V ⎓ 100 mA				
Analog Output	0 - 5 V				
Flow Sensor Size (lenght x width x height)	58 x 52 x 23 mm				
Weight	102 g				

The recommended storage temperature ranges from -10 °C to +60 °C.
The operating temperature range is -20 C to +50 C.
Liquid Flow Sensor enables fast, and non invasive measurements of very low liquid flow rates below 5 mL/min.
Excellent chemical resistance and bio-compatibility are ensured.
The flow sensor shows bi-directional and linear transfer characteristics.
The product comes fully calibrated for water. For volume applications, flow calibration for methanol or other media is available on request (all data for medium H2O, 20°C, 1 bar unless otherwise noted).

Non-contractual information may be changed without notice.

Related Products & Services

› Eppendorf® Microfluidic Tank

100% gas tight connection caps.
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100 mL - 2 L Upchurch® bottle caps.

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› Connection Kits

Bored of microplumbing issues? Our kits enable to easily connect your microfluidic device to any pressure or flow control equipment.

› Broad Product Line

Elveflow instruments are designed to work together on your microfluidic setup. Switch valve system, flow rate monitoring, temperature control...

› Flow Reader

A device specifically designed to be used with a flow sensor for flow rate measurements inside your microchannels

› Service

Benefit from our microfluidics PhD team's expertise. Take advantage of our support for specific developments on your setup.

It is no coincidence that the most prestigious names trust in us

BFS
BRONKHORST FLOW SENSOR

Microfluidic Flow Sensor

OUTSTANDING PERFORMANCES

Precision, stability, response time, repeatability, fiability…

ONE SENSOR SUITED TO A LARGE RANGE OF FLOW RATES

Adaptive ranges from 1.6µL/min to 3mL/min

LARGE LIQUID COMPATIBILITY

Water, oil, alcool, mixture, … work with several liquids without requesting calibration.

Measure your flow rates with unmatched precision

- Direct mass flow measurement, independent of fluid properties
- Additional density and temperature outputs
- Compatible with all liquids
- No periodical recalibration required
- Excellent repeatability and long-term stability
- Excellent accuracy (0,2% of measured value)

Specifications

PROPERTIES	SPECIFICATION
Ranges	
Minimum Flow Rate	1.6 µL/min
Maximum Flow Rate	3.3 mL/min
Performance	
Mass flow accuracy liquids	± 0,2% of rate
Mass flow accuracy gases	± 0,5% of rate
Repeatability	± 0,05% of rate
Zero stability (ZS)*	< ±0,02 g/h
Density accuracy	< ±5 kg/m³
Temperature accuracy	±0,5 °C
Temperature effect**	Zero drift: ±0,01 g/h/°C
Mounting***	Any position, attitude sensitivity negligible
Device temperature	0…70°C
Response time, meter (t98%)	0,2 s to fill the tubing then 35 ms
Mechanical parts	
Material (wetted parts)	Stainless steel 316L or comparable
Pressure rating	200 bar
Sensor Inner Diameter	250µm
Microfluidic fitting type	UNF 1/4-28"
Analog output	0-10V
Sensor size	65*32*144 mm³
Weight	3 kg

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

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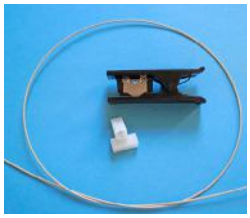
Using Flow Resistances

Using flow resistances in a microfluidic setup can be very useful in a number of experiments.
It enables to reach and work at low flow rates, even with chips of low fluidic resistance.
It also greatly stabilizes the flow rate when flow rate responsiveness really matters or when working with differents fluids - e.g. when making droplets.

Elveflow offers a broad range of flow resistances kits that are easy and quick to connect and offer excellent chemical compatibility :



- KFR 1: Kit Flow Resistance 1 - 25 µm ID PEEK Capillary
- KFR 2: Kit Flow Resistance 2 - 50 µm ID PEEK Capillary
- KFR 3: Kit Flow Resistance 3 - 65 µm ID PEEK Capillary
- KFR 4: Kit Flow Resistance 4 - 100 µm ID PEEK Capillary
- KFR 5: Kit Flow Resistance 5 - 150 µm ID PEEK Capillary
- KFR 6: Kit Flow Resistance 6 - 250 µm ID PEEK Capillary
- KFR 7: Kit Flow Resistance 7 - 500 µm ID PTFE Capillary

Installation could not be easier, since these kits contains enough tubing to make about three to fifteen flow resistances, along with all necessary fittings, and a microfluidic tubing cutter.

The following table indicates the tubing length and flow resitance kit reference to be used based on the typical working pressure and the Elveflow flow sensor used.

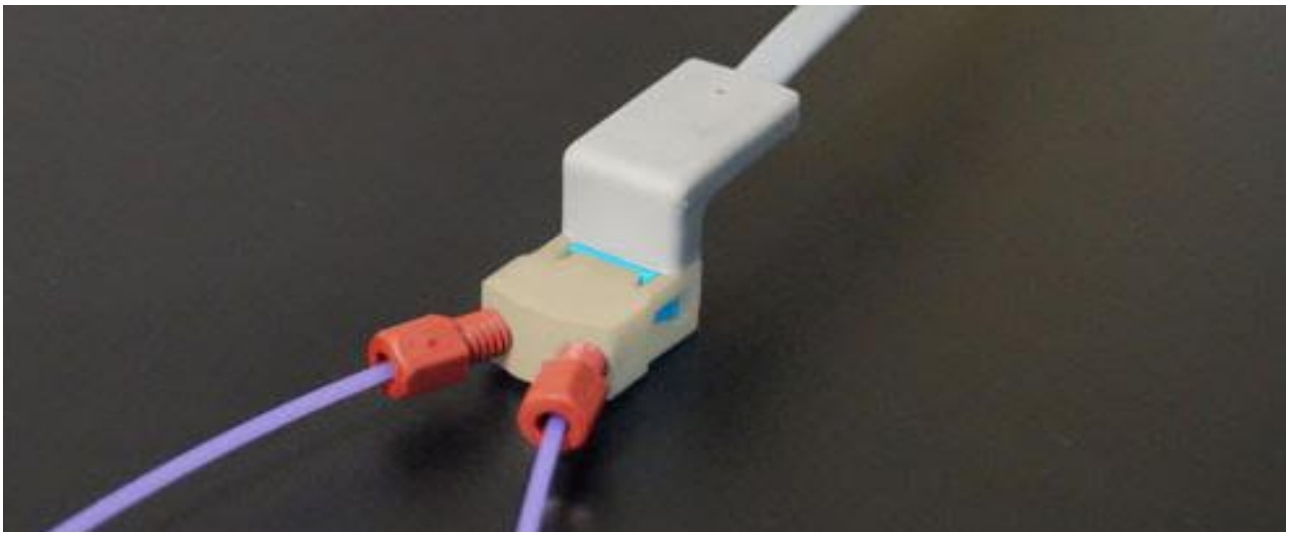
	Working Pressure			
Microfluidic Flow Sensor	200 mbar	1000 mbar	2000 mbar	8000 mbar
MFS 1	KFR 3: 30 cm	KFR 2: 25 cm	KFR 1: 7 cm	KFR 1: 30 cm
MFS 2	KFR 3: 8 cm	KFR 3: 30 cm	KFR 2: 25 cm	KFR 1: 6 cm
MFS 3	KFR 5: 15 cm	KFR 4: 15 cm	KFR 4: 30 cm	KFR 3: 25 cm
MFS 4	KFR 6: 10 cm	KFR 5: 6 cm	KFR 5: 30 cm	KFR 4: 10 cm
MFS 5	KFR 7: 30 cm	KFR 6: 10 cm	KFR 6: 20 cm	KFR 5: 10 cm

Important Note : This table is not intended to provide absolute values for a particular setup and should only be seen as a beginners guide. The microfluidic resistance should be refined based on each setup characteristics. The particular conditions of your use and application of our products are beyond our control. Only a test in the specific conditions of your application will determine the appropriateness of a flow resistance size, which remains a hypothesis among other parameters (e.g. biophysical model chosen, length of fluidic channel, pressure source, chip height, etc ...).

To go even further in understanding the hydraulic resistance in microchannels, we highly recommend the following article :
Reexamination of Hagen-Poiseuille flow: Shape dependence of the hydraulic resistance in microchannels - NA Mortensen, F Okkels, H Bruus - Physical Review E 71 (5), 057301.

MPS

MICROFLUIDIC PRESSURE SENSOR



Microfluidic Pressure Sensor

Liquid flow-through pressure sensor - 7.5 µL internal volume

- Accuracy down to 0.2 % Full Scale
- 4 ranges from 5 psi (340 mBar) to 100 psi (7 bar)
- Ultra small internal volume of 7.5 µL on small package version
- 20 ms Settling time
- Compatible with gas and liquids*
- Interactivity with other Elveflow instruments

* Limited only to media compatible with polyetherimide, silicon, and fluorosilicone seals

Measure and control pressure anywhere in your setup

- Our pressure sensors work as Gauge pressure sensors, measuring positive and negative pressure relativly to atmospheric pressure.
- Several pressure ranges are available from 5 psi (340 mBar) to 100 psi (7 bar).
- You can plug our liquid pressure anywhere within your microfluidic setup, record the pressure on your computer and adjust the flow accordingly using our pressure pumps. The pressure sensors are fitted for Elveflow pressure pumps.

Specifications

MICROFLUIDIC PRESSURE SENSOR		MPS 1	MPS 2	MPS 3	MPS 4
Sensor Range:		5 psi (340 mBar)	15 psi (1 bar)	30 psi (2 bar)	100 psi (7 bar)
Minimum pressure (psi)		-5	-15	-15	-15
Maximum pressure (psi)		5	15	30	100
Max overpressure (psi)		20	45	60	200
Linearity (%span)	Typ.	0.4	0.25	0.1	0.1
	Max	0.5	0.5	0.2	0.2
Repeatability & Hysteresis (%span)		+/- 0.2			
Stability over 1 year (%span)		+/- 0.5			
Operating temperature		-40° to +85°C			
Specified temperature range		+0 to +50°C			

Package model	Large	Small
Connection type	Arrow for 3/32 ID tubing	10-32 thread with ferrule
Internal volume (µL)	70	7.5
Recommended tubing diameter (inch)	3/32 ID	1/16 OD
Material in contact	polyetherimide, silicon and fluorosilicone seal	PEEK, silicon and fluorosilicone seal
Electrical connection	4 point measurement M8 connector compatible with Elveflow Flow Reader and a Flow Reader 4 point sensor adaptor	

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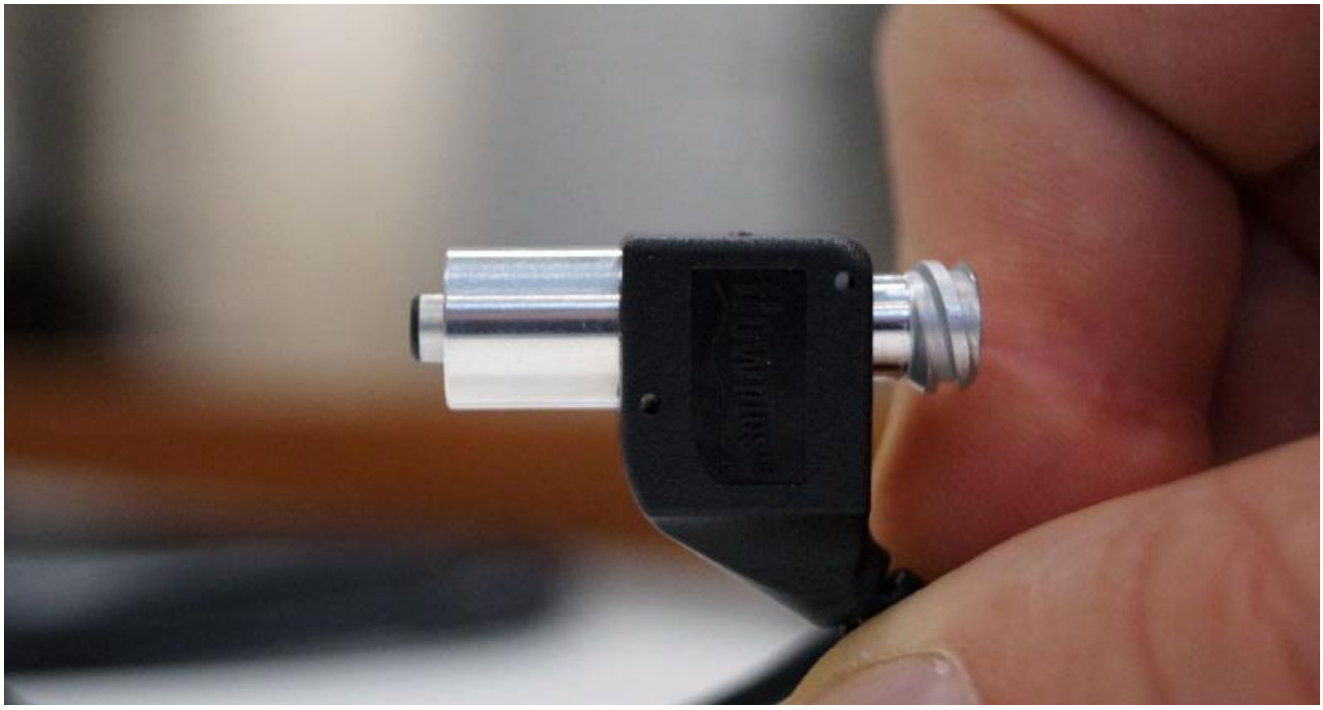


Microfluidic Inline Pressure Sensors

Pressure measurement with no dead volume and FDA certified

- Accuracy down to 0.2 % Full Scale
- 1 range: 0 – 16 bar* / overload 25 bar
- No dead volume
- Flow rate up to 100 ml / min **
- Compatible with gas and liquids
- Interactivity with other Elveflow instruments

* limited to 10 bar when used with the Flow Reader
** depending on the viscosity and primary pressure of the medium

Measure and control pressure anywhere in your setup

The Flowplus is a sensor for measuring the pressure of fluids and primarily impresses through its special design featuring extremely small dimensions and a fluid area with no dead space. These pressure sensors are no problem to re-integrated because they are easy to clean and maintenance-free.
The compact dimensions of the sensor also makes them easy to install or integrate in existing plants.

Specifications

MICROFLUIDIC FLOWPLUS PRESSURE SENSOR	MFP Inline Pressure Sensor FlowPlus
Flowrate :	up to 100 ml / min.**
Measurement Parameters :	0 to 16 bar*
Feed :	12 to 30 VDC
Material :	Housing – coated aluminum Interior flow channel – FFKM Modded – PU
Signal :	0,1 bis 10 V
Electrical Connection :	„push-pull“ connector / M8 sensor plug
Mechanical Connection :	LUER-LOCK DIN EN 1707
Operating temperature :	15 to 45°C

* limited to 10 bar when used with the Flow Reader
** depending on the viscosity and primary pressure of the medium

MSR

Microfluidic Sensor Reader

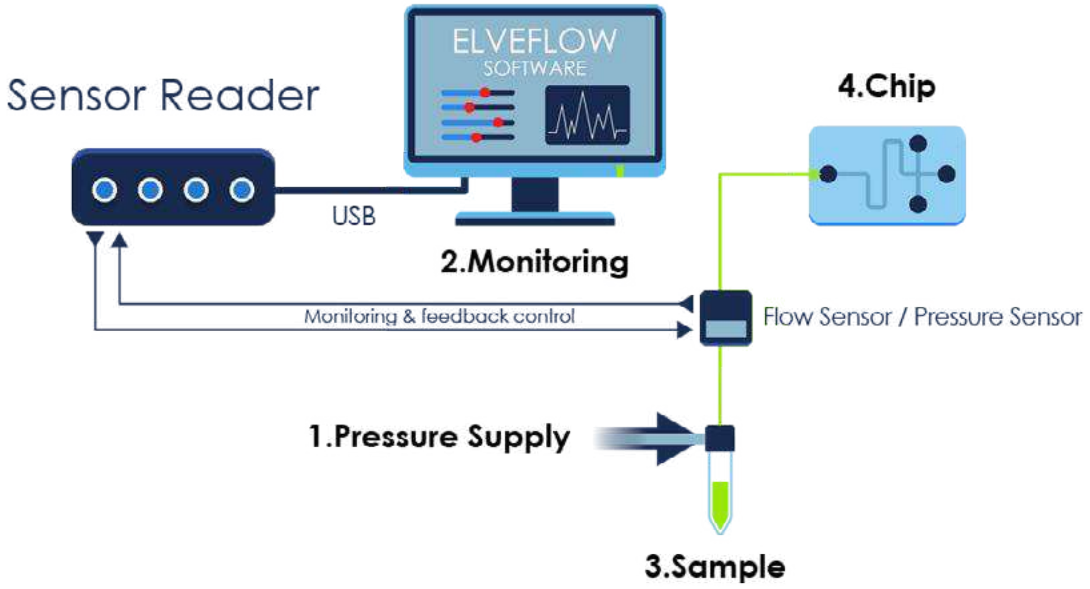
An acquisition interface for all your sensors inside your setup

Monitoring and feedback control

- Read simultaneously up to 4 sensors
- Compatible with Elveflow Pressure & Flow Sensor
- Fast and precise, 10 kHz and a 11 bit resolution,
- Real-time control & Feedback loops

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

MSR PRINCIPLE



1 Pressure Supply

Pressurize your reservoir using an OB1 Pressure & Flow Controller.

2 Monitoring

Set a desired flow rate profile and control it using the Elveflow Smart Interface on your computer.

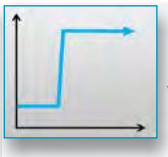
3 Sample

Pressurize the liquids samples into the reservoirs with your Elveflow instrument (OB1 or AF1).

4 Microfluidic Chip

The pressurized liquid is smoothly and precisely injected into the microfluidic chip at the desired flow rate.

MSR FEATURES & BENEFITS



Fast and Precise

Feeted for microfluidic

With an acquisition sampling rate of up to 10 kHz and a 11 bit resolution, the Sensor Reader enables you to easily conduct experiments involving monitoring or controlling a physical parameter with analog sensors in real time .

Noise Reduction

Cleaner data

An embeded analog 60 Hz low pass filter function can be activated on each channel independently to reduce sensor noise.

Plug and Play flow control

Let it Flow.

«Plug & Play Microfluidics» is not just a motto to us. Users will benefit from a control algorithm that ensures an extremely sensitive and responsive flow rate regulation, while being very simple to operate.

Complex Flow Rate Pattern Control

Make the Complex Simple.

Sensor measurements can be monitored in real time simultaneously with measurements of other Elveflow® apparatuses. Data can be logged and measurements can be used in interaction with other apparatuses to make feedback loops.

Wide sensor compatibility

Complete Confidence.

Sensor Reader embed two independent power supplies ranging from 5 to 25 V (one for the channels 1-2, one for the channels 3-4). This allows the use of a wide variety of sensors functionning with different voltages for their power supply. Thus, up to four sensors working with 2 different voltages for their power supply can be monitored simultaneously.

The Elveflow® Smart Interface Makes Your Work Easier

Thanks to an ergonomic design of the fluidic functions & modules, your routine tasks and workflows will be more comfortable.

- Intuitive control interface
- Real time control using pressure or flow rate regulation
- Pressure & flow rate visualization and recording
- Programming & automation of complex sequences
- Alternative instrument control through the provided Labview® and Matlab® libraries, and DLLs

National instruments is our technological partner for embedded electronics

NATIONAL INSTRUMENTS

MSR
TECHNICAL SPECIFICATIONS

General			
Number of sensors	4		
Physical characteristics			
Sensor connectors	M8 female (4 pins)		
Dimensions	91x69x29 mm (without connectors)		
Weigth	320 g		
Power			
USB			
feeding current	100 mA min, 500 mA max		
Sensor power supplies			
Voltage (2 power supplies tunable independently each of which feeding 2 sensors)	5 - 25 V		
Total power (On the 4 channels)	0.9 W		
Sensor inputs			
Impedance	1 MΩ		
Max acquisition frequency	0-10 kHz		
Acquisition resolution	11 bits (2048 cts)		
Input range	0-10 V	0-5 V	0-1 V
Resolution (1 bit)	5 mV	2.5 mV	0.5 mV
Noise (Full band)	5 mVrms	2.5 mVrms	0.5 mVrms
Analog Low-pass filter function characteristics			
cutoff frequency	60 Hz		
filter order	3		

Related Products & Services

Microfluidic Sensor Reader

The Sensor Reader is an interface allowing the acquisition of many kinds of analog sensors, including Elveflow pressure and flow sensors.

Broad Product Line

Elveflow instruments are designed to work together on your microfluidic setup. Switch valve system, flow rate monitoring, temperature control...

Grants & Partnerships

Elveflow invests in co-development and cooperative projects with academic, SME and industrial partners to take an active part in the development of microfluidics.

Service

Benefit from our microfluidics PhD team's expertise. Take advantage of our support for specific developments on your setup.

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

MUX
Flow Switches

4 unique microfluidic flow switch matrices

Skilful instruments...

- Fast flow switch: 25 ms
- 2-way or 3-way valves
- Clean fluids injection: no backflow
- Complete flow stop
- No residual flow
- Low volume injection

...with extended capabilities

- Fast medium switching - Drug Testing
- On-chip peristaltic pumping
- Sequential sample injection
- Cell/particle sample screening
- Medium perfusion switch for cell biology
- Diffusion studies

__ MUX __
FAMILY

4 unique microfluidic flow switch matrices

ROCKER valve technology » No waves created when opening & closing valves (flow displacement < 10nL).

MUX Cross Chip The Zero Flow Virtuoso

A flow switch matrix designed to stop the flow in microfluidic devices in 100 ms

Applications : Instantaneous Flow Stop, Small Sample Injection & Sample Premixing

- Rocker Peek Valves
- Plug & Play Programmable Flow Stop
- Complete Equilibrium & Stop Flow In 100 ms
- Ultra Low Volume Injection
- Internal/External Trigger

MUX Flow switch Matrix The Medium Switch Specialist

A flow switch matrix designed for fast drug switch into microdevices in less than 300ms

Applications : Drug, Reagent & Cell Medium Switch For Cell Biology and Flow Chemistry

- Rocker Peek Valves & PEEK Manifold
- Plug &Play Usb Software
- No Samples Cross-Contamination & No Backflow
- Flexible : From 4 To 256 Valves
- Internal/External Trigger

MUX Quake Valve The PDMS Valves Expert

A flow switch matrix designed to open & close bilayer PDMS valves in less than 50ms

Applications : PDMS Microvalves & Micropumps and Cell Confinement Device Control

- Plug & Play Programmable Valve Sequence
- Fast Valve Switch
- Fine Valve Position Tuning
- Flexible : From 16 To 256 Peek Valves
- Internal/External Trigger

MUX Distributor The Sample Injection Artist

A rotative valve designed to easily execute fast medium switches in less than 1s.

Applications : Drug, Reagent & Cell Medium Switch For Cell Biology

- Fast medium switch in less than 1s
- Inject up to 6 different solutions into the same inlet
- Clean sample injection - No back flow
- Automate your experiment and increase reproducibility
- Automate your sample collection

MUX
FEATURES & BENEFITS

› Short Flow Switch Time
Lightning-fast.

The technology used in the Elveflow® MUX makes it possible to achieve a 25 ms flow switch into your microfluidic system. This level of performance pushes the conventional experimental limits and offers you new possibilities.

› Zero Flow
Absolute Flow Control

The MUX Flow Switch is the first system which enables to completely stop the flow in a microfluidic system in 100 ms, with zero displaced volume (flow displacement < 10 nL), thanks to the ROCKER® valve technology.

› Plug and Play Flow Control
Let it Flow.

ESI - Elveflow Smart Interface - enables you to control simultaneously up to 16 Elveflow® instruments involved in your microfluidic experiment, while being very simple to operate.

› Complex Flow Patterns
Loop it. Mix it. Send it.

Our profile editor will allow you to easily program subtle valves patterns and repeat a set of steps in a loop to automate the most sophisticated protocols.

› Chemical & Biological Compatibility
Complete Confidence.

Wetted materials include borosilicate glass, quartz glass, or inert PEEK plastic to ensure a full chemical and biological compatibility, so you can work in complete confidence.

› Setup Synchronization
Perfect Timing.

The MUX offers a TTL triggers set for easily synchronizing your instrument with any Elveflow® device, microscopes or mechanical shutter. That way you can have a full control of all the devices involved in your microfluidic experiment.

› Compactness
Small, yet Mighty.

Choose the number of valves you need from 4 to 16 (up to 256 on special request) and the type of valves, unidirectional valves (2/2) for fast sample injection or bi-directional valves (3/2) for quake valves control.

The Elveflow® Smart Interface Makes Your Work Easier

Thanks to an ergonomic design of the fluidic functions & modules, your routine tasks and workflows will be more confortable.

- ► Intuitive control interface
- ► Real time control using pressure or flow rate regulation
- ► Pressure & flow rate visualization and recording
- ► Programing & automation of complex sequences
- ► Alternative instrument control through the provided Labview® and Matlab® libraries, and DLLs

National instruments is our technological partner for embedded electronics

NATIONAL INSTRUMENTS

MUX
TECHNICAL SPECIFICATIONS

MUX Elveflow® flow switches		Cross Chip	Flow Switch Matrix	Quake valve	Distributor
Power Supply	Input voltage range, AC	100 V to 240 V			
	AC supply frequency	50 Hz to 60 Hz			
	Input current, AC	1 A			
	Power consumption	35 W			
	Safety	IEC/EN 61010-1: 2001			
	Shutting down power supply	button switch or disconnect the AC/DC adapter			disconnectAC/DCadapter
Performances	Valves response time	20 ms			300 ms
	Max. supported pressure	2 bar (29 PSI)			9 bar (125 PSI)
Mechanical Specifications	Valve type	2/2-way Solenoid Valve		3/2-way Solenoid Valve	6 positions/7ports *or* 10 positions/11 ports rotative valve
	Input/Output connectors	10-32 UNF (PEEK tube to port fittings adapters provided)			1/16 or 1/8 fitting-less tubingconnectionsystem
	Dimensions L x l x h (mm)	220 x 130 x 130			160 x 76 x 117
	Operating temperature	10°C to 40°C			
	Operating humidity	20 to 80%			
Software	Computer specifications	USB2.0port,IntelPentiumII500MHz,1GoHardDiskspace,2GoRAMWindowsXP/Vista/7/8,32/64bit.Labview® 2011 is required when using Labview® libraries.			
	Connection type	USB			
	Provided elements	Labview® library, Matlab® library, C DLLs			

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

MMW

MICROFLUIDIC MUX WIRE

Microfluidic Valves Controler

Plug your valves anywhere in you microfluidic setup

PLUG FROM 1 TO 16 VALVES
Control 1 to 16 valves independently

MIX ALL KIND OF VALVES
Use our microfluidic valves (3:2 , 2:2, …)
or plug your own valves

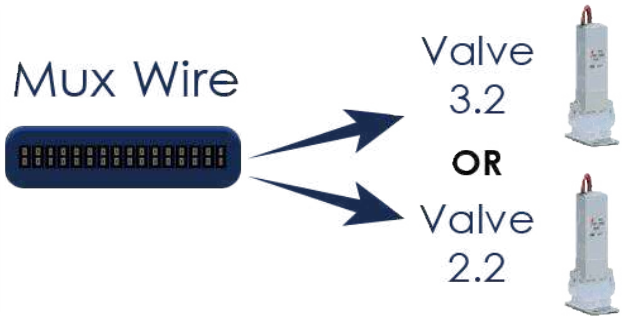
SOFTWARE & SDK
A simple USB connection and easily control your valves with your computer

* Limited only to media compatible with polyetherimide, silicon, and fluorosilicone seals

Plug your valves wherever you want in your microfluidic setup

Our selection of valves : Choose the one for you

- Low internal volume: 20 µL
- Compatible with gas or liquid
- Low power consumption: 1.5 W
- Convenient ¼-28UNF connection
- ROCKER® valve technology (flow displacement < 10nL)
- Afford a wide range of pressure: -0.75 bar to 2.5 bar (-11 psi to 37 psi)



Specifications

Properties	SPECIFICATION
General	
Number of controled valves	16
Bus interface	USB 2.0
Power supply	24 VDC, 1.5 A
Max valve power	10 W
Max total power (sum of the power of all connected valves)	35 w
Physical characteristics	
Valve connectors	WR-MPC 3 2.2
Dimmensions	128x81.5x31 mm
Weight	251 g

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

Related Products & Services

› Eppendorf® Microfluidic Tank

100% gas tight connection caps.
1.5 - 2 mL Eppendorf® tubes
15 mL BD Falcon® tubes
100 mL - 2 L Upchurch® bottle caps.

› Grants & Partnerships

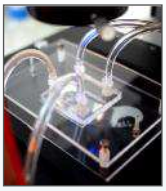
Elveflow invests in co-development and cooperative projects with academic, SME and industrial partners to take an active part in the development of microfluidics.

› Connection Kits

Bored of microplumbing issues? Our kits enable to easily connect your microfluidic device to any pressure or flow control equipment.

› Broad Product Line

Elveflow instruments are designed to work together on your microfluidic setup. Switch valve system, flow rate monitoring, temperature control...



› Chip Holder

A device specifically designed for sample screening, small sample injection, and Zero Flow applications

› Service

Benefit from our microfluidics PhD team's expertise. Take advantage of our support for specific developments on your setup.

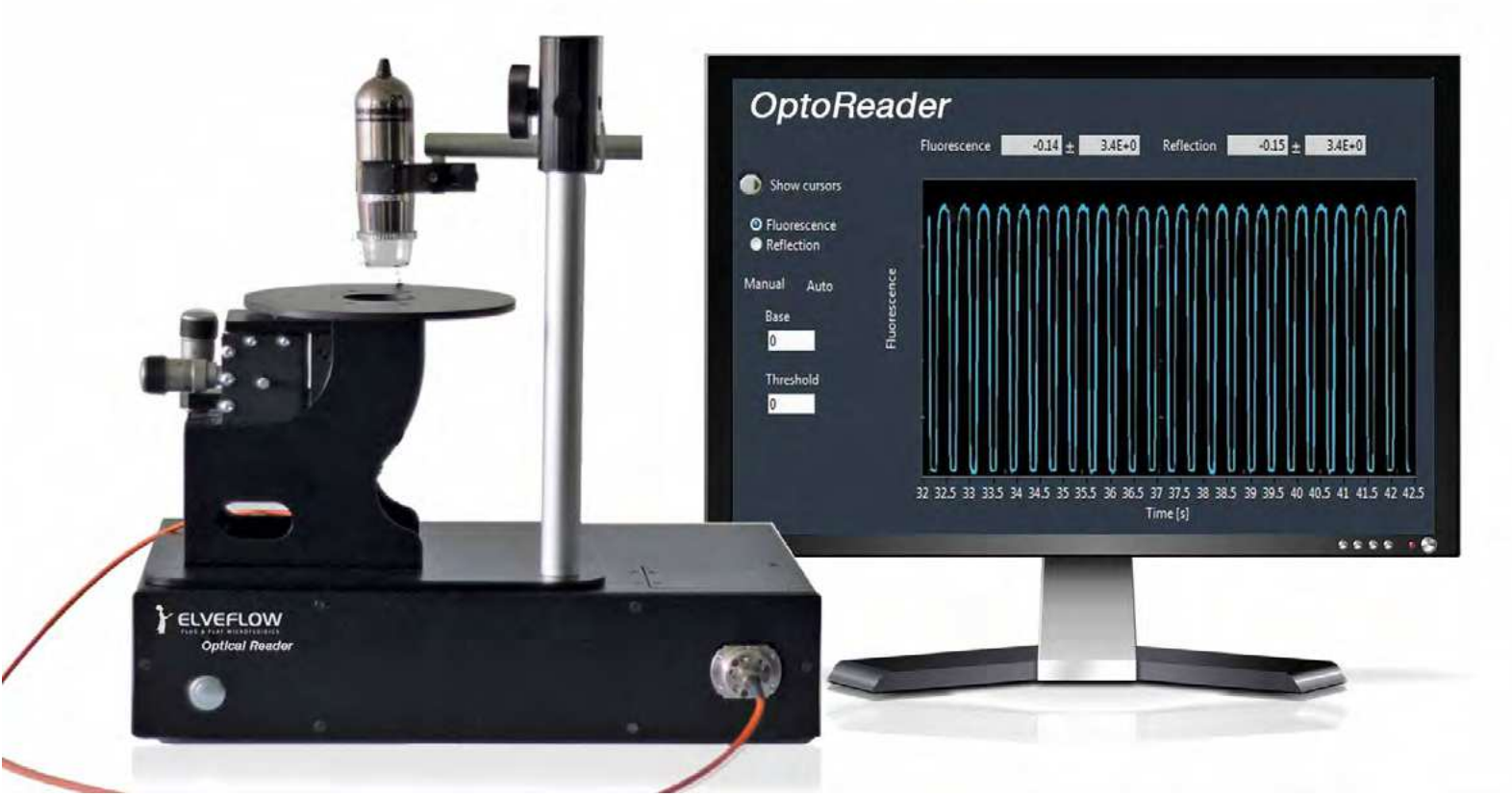
It is no coincidence that the most prestigious names trust in us

CNRS · University of Michigan · University of Cambridge · SANOFI · UCSB University of California Santa Barbara · UCL · Harvard · Total · Vanderbilt University · Kyoto University · University of Maryland · Singapore Agency for Science, Technology and Research · University of Virginia

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

OPR

Microfluidic Optical Reader



OPTOREADER - OPTICAL DETECTION FOR MICROFLUIDICS

OptoReader uses one optical fiber to both illuminate and capture light emitted by the sample. In function of your needs, there are different available versions:

- OptoReader Basic: Measurement of fluorescence.
- OptoReader Fluo: Simultaneous measurement of reflection & fluorescence.

MAIN FEATURES

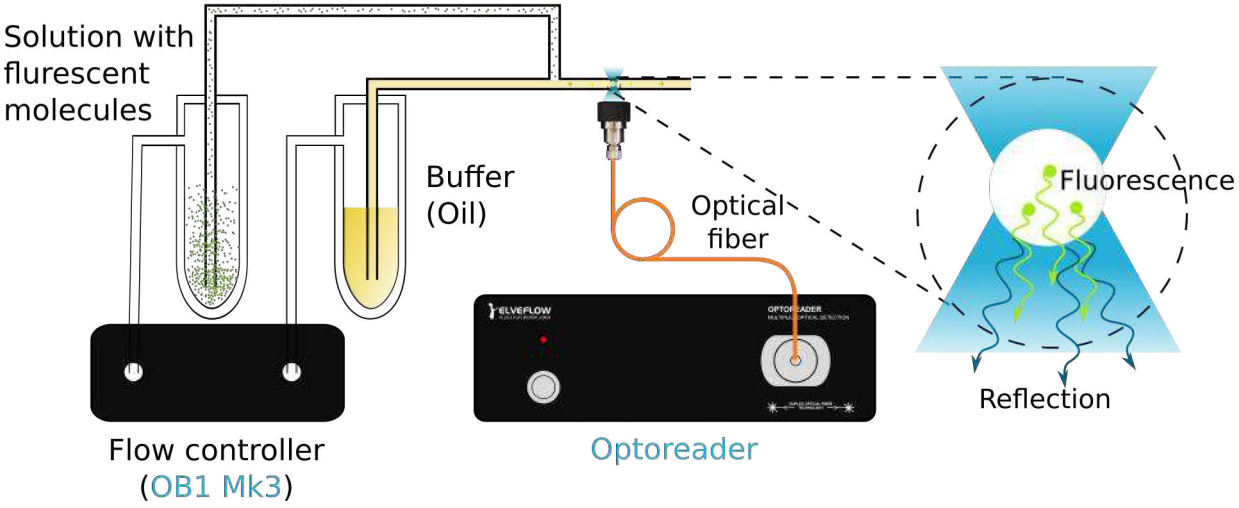
- Inspection camera: x10 to x90
- Alignement Module: sensitivity 50 µm/rotation
- Custom filter set: 9 types of fluorophore
- Custom lens: magnification 0.5x to 5x
- Custom excitation wavelenght: from 365 nm to 625 nm

BENEFITS

- Fast acquisition
- High sensitivity: detection limit down to 1 nM FITC
- Tiny detection spot with high aperture
- Simultaneous measurement of fluorescence and reflection
- Versatile integration

ELVEFLOW
PLUG & PLAY MICROFLUIDICS

OPR
PRINCIPLE



OPR
FEATURES & BENEFITS

Compact optical fiber-based design
for an easy and versatile integration with your microfluidic device.

Bidirectional Optical fiber output
the optical fiber can perform simultaneous reflection and fluorescence measurement.

High throughput detection
100 kHz acquisition, capable of detecting thousands of events per seconds.

High sensitivity
Fluorescence detection limit: < 20 pW full bandwidth.

Monitoring
The OptoReader allows detection and quantification of flowing particles in a given point during microfluidic experiments.

Plug-and-Play
Control your experiments through C, Python, Matlab®, Labview® or the Elveflow® Smart Interface.

Technical support
A team of experts in microfluidics will provide you individual customer care, specialist advice and technical support: the guarantee for a solution tailored to your specific research

Many available options
- Higher sensitivity (25x)
- Alignment platform
- Focalization optics
- Multi band fluorescence detection (up to 3 colors)
- Lock in detection

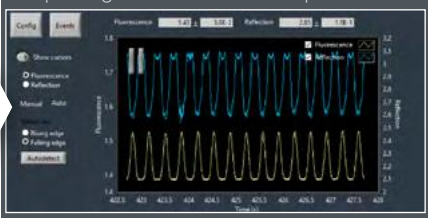
Compact
Offers great advantage over conventional microscopes thanks to its compact design, real-time processing capacity, high detection sensitivity and cost effectiveness.

Our software Makes Your Work Easier

A user-friendly software that allows easily integrating Optoreader into your existing flow control system.

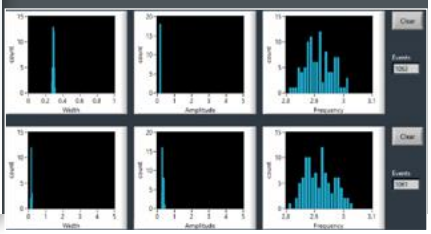
▶ Optical Detection Interface

Records the variation of the reflection and fluorescence signals due to the passing of the fluorescent objects.



▶ Statistic Interface

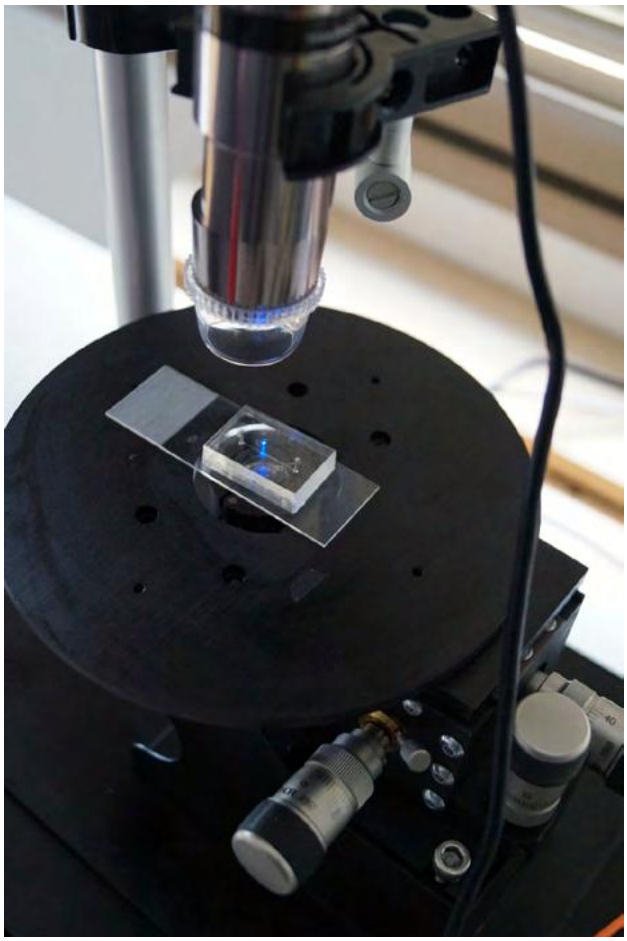
Get real-time statistical information on the studied objects: frequency, amplitude, witdth.



ELVEFLOW
PLUG & PLAY MICROFLUIDICS

OPR
TECHNICAL SPECIFICATIONS

PROPERTIES	SPECIFICATION		
EXCITATION			
Excitation wavelength	365nm, 470 nm, 530 nm, 590 nm, 625 nm		
Fluorescence filter set	DAPI, FITC, TRITC, Texas Red, Cy5		
Power	0-1.5 mW (470 nm LED)		
Pulse duration (pulse mode)	10 µs-10 s		
Frequency (Lock-in mode)	50 Hz-10 kHz		
ACQUISITION			
Acquisition frequency	0-100 kHz		
Acquisition resolution	16 bits		
Typ. acquisition dynamic	84 dB		
Reflection offset resolution	100 pW		
Bandwidt	RANGE		
	REFLECTION	FLUORESCENCE	
	0-12 µW	0-120 nW	100 kHz
	0-3.6 µW	0-36 nW	10 kHz
	0-1.2 µW	0-12 nW	1 kHz
	0-360 nW	0-3.6 nW	100 Hz
	0-120 nW	0-1.2 nW	10 Hz
	0-36 nW	0-360 pW	1 Hz
Noise equivalent power (NEP)	REFLECTION		4 pW/Hz$^{1/2}$
	FLUORESCENCE		40 fW/Hz$^{1/2}$
Reflection min. noise	6 pW (0-360 pW range)		
Fluorescence sensitivity (Specified on normal mode, can be improved with lock-in mode)	< 60 fW (0-360 pW range), or 5 x 10^4 photons/s* (available option with 2 x 10^3 photons/s sensitivity) **		
Minimal equivalent fluorescence background (Specified on normal mode, virtually zero in lock-in mode)	0.1 µM FITC in 400 µm spot (0-360 pW range, 200 µW power)		
OPTICS			
Optical fiber diameter	50 µm, 200 µm, 400 µm		
Optical fiber numerical aperture	0.50		
Focalized spot diameter	36 µm, 143 µm, 286 µm		
Focalized spot numerical aperture	0.6		
MECHANICS			
Size Lxlxh (mm)	346x253x124		



Related Products & Services

Eppendorf® Microfluidic Tank

100% gas tight connection caps.
1.5 - 2 mL Eppendorf® tubes
15 mL BD Falcon® tubes
100 mL - 2 L Upchurch® bottle caps.

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Service

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BOX

Soft Lithography Solutions

SoftLitho□o□® Create your Molds. □eplicate your Chips.

Ready To Use Soft Lithography Station for Fast & Easy PDMS Devices Production

A Turnkey System that Includes Everything

› We provide equipment, chemicals, protocols, training & assistance

Major strengths of SoftLithoBox

› Save Time : Do not waste time trying to set up a microfabrication facility on your own, we are here !
› Easy to Use : Our reliable protocols will help you to quickly become self-sufficient.
› Save Space : The equivalent of a conventional clean room in 3 m^2.
› Highly Efficient : Get a direct access to high quality microfabrication tools - resolution down to 1 µm.

MICRO CHEM
DOW CORNING
RS
SIGMA-ALDRICH
Fisher Scientific
HAMAMATSU
ThermoFisher SCIENTIFIC
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Experts in Thermostatics
VWR
Laurell TECHNOLOGIES CORPORATION

SoftLithoBox
SU-8 PHOTOLITOGRAPHY PACK

Quickly create your own master molds out of the clean room.

Our benchtop SU-8 photolithography facility includes everything you need to fabricate molds for microfluidics in your lab and test new experiments fast :

- Programmable hot plates
- Programmable spin coater
- Programmable UV lamp
- Pressurized air gun…

All chemicals for photolithography (MicroChem Corp. SU-8, SU-8 developer, TCMS, Isopropanol, etc.) and all associated accessories (Silicon wafers, wafer tweezers, timers …) are also included.

SoftLithoBox
PDMS MOLDING PACK

Replicate easily your PDMS devices out of the clean room.

With our benchtop PDMS molding facility, just take your master molds and duplicate PDMS devices directly in your lab. Our PDMS molding facility includes all equipments so that you can start your fabrication immediately :

- Complete air plasma system
- Oven for fast PDMS curing
- Desiccator for PDMS degassing
- Spin-coater for multilayer PDMS devices

All chemicals for photolithography (MicroChem Corp. SU-8, SU-8 developer, TCMS, Isopropanol, etc.) and all associated accessories (Silicon wafers, wafer tweezers, timers …) are also included.

SoftLithoBox
FULL SOFT LITHOGRAPHY PACK

Quickly create your own molds & replicate your devices out of the clean room.

The full softlithography pack, includes everything you need to fabricate molds and replicate PDMS devices directly in your lab. Our pack includes all equipment and support to produce chips autonomously :Complete air plasma system

- Oven for fast PDMS curing
- Desiccator for PDMS degassing
- Spin-coater for multilayer PDMS devices

All chemicals for photolithography (MicroChem Corp. SU-8, SU-8 developer, TCMS, Isopropanol, etc.) and all associated accessories (Silicon wafers, wafer tweezers, timers …) are also included.

It is no coincidence that the most prestigious names trust in us