The Elvesys group develops a range of state-of-the-art microfluidic instruments, for all kinds of microfluidic applications.
Our vision in one equation:

Great researchers + great instruments = great discoveries

Microfluidics is one of the most important pillars of the ongoing biotech revolution, probably the biggest scientific revolution ever faced by humanity. If we look at Nobel Prize winners and science history, it shows us that most of the greatest discoveries were made by great researchers using state of the art scientific instruments.

Our mission:

To develop state of the art microfluidic instruments for demanding researchers and engineers

As a scientist, you are shaping the future. You can make scientific breakthroughs. Accelerate companies. Be certain of one thing: you can rely on us.

We want you to take microfluidics further than it has ever been, and while you do, we commit to be there for you every step of the way.
A company founded by microfluidic researchers, for microfluidic researchers

ELVESYS is an innovative, self-funded company created by 3 microfluidic researchers who started to develop microfluidic instruments in 2011. ELVESYS aims to become a key research partner for every researcher who needs microfluidics, all over the world.

Thanks to researchers who believed in us, it only took 4 years for our brand ELVEFLOW to become the world leader of high performance microfluidic flow control.

2011
ELVESYS
A new microfluidic company

2014
The rise of ELVEFLOW
Already collaborating with more than 20 laboratories in the world; Development of the quickest system in the world for the detection of pathogens; Worldwide Innovation winner

2015
A microfluidic company focused on collaborative research
ELVESYS has its own research facilities: more than 300m² and an annual budget of more than 4 million euros to carry out scientific research.

2016-2017
ELVESYS Innovation Unit
A well-recognized research partner
ELVESYS has delivered on its promise to become a major research partner in microfluidics: from half a dozen of ongoing research projects just a year before, we were involved in 12 international research projects.

2018-2020
ELVESYS/ELVEFLOW
Becoming the biggest microfluidic company in the world
With extended facilities, 1,200m² dedicated to microfluidics and 45 employees, we are now involved in more than 30 collaborative research projects in various fields such as organ on chip, advanced cell culture, droplets, encapsulation, lab automation and flow chemistry. We also launched several side initiatives such as the microfluidic art project and a set of interviews of microfluidics researchers across the world to promote our field.
A microfluidic product line that goes beyond the state of the art
Our Flow control systems are based on patented piezoelectric technology inspired from aeronautics, for a flow control that is 20 times more precise and 10 times faster than the leading flow controllers on the market.

We offer 4 different compact Valves Matrix solutions enhancing performances thanks to PEEK rockers valves. Use from 4 to 256 valves, perfectly synchronized.
OB1 : Cutting-edge Microfluidic Flow Controller

Best performance & affordable: Piezoelectric Technology
The OB1 MK3+ by Elveflow is the only microfluidic flow control system in the world to use piezoelectric regulators, enabling a flow control that is 20 times more precise and 10 times faster than the other flow controllers on the market.

Customizable & upgradable: 1 Module, up to four channels, 5 ranges available
The OB1 MK3+ can be configured, and upgraded at a later date, in any way you want, with up to 4 pressure and/or vacuum channels (and more as custom) on one piece of equipment.

Fastest flow rate control when paired with a flow sensor
You can connect a flow rate sensor to your OB1 MK3+ to control directly the flow rate in your chip. The system continuously calculates the pressure to apply in order to maintain the desired flow rate.

Full control software & SDK
A single and intuitive software to get started in a few clicks and further automate the most complex and long lasting experiments. The SDK libraries to control the OB1 MK3+ with your own code and involve third parties instrument are also available.

OEM version available
The OB1 MK3+ can be used on a bench setup and also embedded in your own product. Elveflow has a solution for every step of your research & development.

Don't be limited by instrumentation for your microfluidic experiments!
Designed by scientists for scientists, the versatile and powerful OB1 MK3+ pressure controller allows perfect flow control for all kinds of applications.

Whether you need pressure or vacuum, low flow rate or high flow rate, short experiments or week-long processes, the OB1 MK3+ is the perfect companion for your microfluidic research.
Our modules can either be used with our pressure controllers or as a standalone instrument when plugged into our Flow reader. Design the monitoring solution that best fits your needs and control it on a computer through our Software.

Perform both pressure & flow control with the same instrument thanks to our 5 different Flow Sensors. Monitor pressure at a given point of your setup thanks to our 5 different Pressure Sensors.
Powerful, modular and versatile set-up control solution

The Elveflow Smart Interface allows an intuitive control of our microfluidic instruments in few clicks. It is thought both for basic control and complex tasks thanks to the use of the scheduler.

The ESI Microfluidic Software makes many applications easy, such as: generation of continuous fluid streams, dosing of volumes, generation of dynamic flow profiles, Optomicrofluidic control, and many more.
APPLICATIONS PACKS

Our Applications Packs are all-in-one solutions which include everything you need to perform your microfluidic experiments successfully.

Our many configurations available ensure that you get a microfluidic setup perfectly fitted to your needs.
Why Elveflow is the ideal partner?

OEM & custom solutions
ELVEFLOW & INDUSTRIAL PROJECTS

1,000+ equipments sold to companies

10+ OEM & integration projects handled since 2018

Company: TOTAL SA (FR)
Key function: Pressure control at high viscosity and extreme physical conditions

Company: Johnson & Johnson
Key function: Automated membrane filtration system

Company: Nuclera Nucleics Ltd
Key function: Liquid perfusion and switching modules for production system

Field: Biotech
Type: off-the-shelf OEM
Need: Scale-up of molecule testing assays for drug discovery
Solution: multiple (9) liquid sequential injection

Field: Healthcare instruments
Type: integration
Need: liquid handling integration in a fully automated system
Solution: multiple (45+) liquid sequential injection & software control

Field: Animal breeding industry
Type: on-the-shelf OEM
Need: Robust cell sorting with low biological sample consumption
Solution: Precise liquid flow control and cell sorting module
When it comes to design complex microfluidic systems that fit your needs, Elveflow is your ideal partner. Strong of a decade of experience, we can take you through OEM solutions and/or easy integration for your microfluidic dilemmas, be it fluid handling, liquid mixing, flow measurement...

Our solutions are based on the Elveflow range of microfluidic instruments, favoured by scientists for over a decade. Together, let's take your solution further to reach efficient, precise and cost-effective setups by using the full potential of liquid and gas flow miniaturisation.
Microfluidics to ease, scale-up and reduce production costs

Main features of microfluidics
- High surface-to-volume ratios
- Micrometric scales (nL - mL)
- Easy parallelization & fluidic system automation

Benefit from:
- Decrease reagent consumption, shorten experiments, higher system precision...
- Ability to work with low (nl) & large (ml to L) volumes of reagents
- Fluidic system scale up
20+ Researchers involved in 30+ International Projects

Just imagine: faster and reliable malaria or tuberculosis detection. Better drug delivery in leukemia treatments. Selecting the right fungicides to protect crops. Generating artificial cells. Using organs on chips to understand cancer and test an exponential number of potential treatments. And why not even unveil the origins of life itself?

We are working on every single one of these projects – they are among the 30+ ongoing microfluidic research projects at Elveflow.
RESEARCH AND DEVELOPMENT

Multidisciplinary Team / Project management

A team of 10 people (all PhDs and/or Engineers) supports legacy products and conducts the development of new ones.

Skillset

- Electronics
- Mechanics
- Pneumatics
- Software and Firmware
- Simulations
MAY THE FLOW BE WITH YOU!

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