

Elveflow Pressure & Vacuum Sources

DOCUMENT REF: UG PVS 210906

USER GUIDE



Symbols used in this document



Important information. Disregarding this information could increase the risk of damage to the equipment, or the risk of personal injuries.



Helpful information. This information will facilitate the use of the instrument and/or contribute to its optimal performance.



Additional information available on the internet or from your Elveflow representative.

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Introduction

Elveflow introduces a new generation of oil-less pressure and vacuum sources designed to be used with Elveflow OB1 pressure and flow controllers. The small footprint and reduced noise of both of these units makes it possible to install them directly at the place of use.

Elveflow Pressure Source (EPS)

The pressure source is a pressurized air source designed to supply compressed air to an OB1 with two 0-2bar channels. The pressure source provides a steady pressure of 2 bar as long as the conditions of use are respected.

Elveflow Vacuum Source (EVS)

The vacuum source is a vacuum pump designed to supply vacuum to an OB1 with two vacuum channels.

Main Features & Benefits

The small footprint, plug & play capability and quiet operation (<60 decibels) of both the Elveflow Pressure Source and the Elveflow Vacuum Source makes it easy-to-use and ideal for point-of-use laboratory, medical and test equipment applications or where a clean, quiet and reliable source of compressed air or vacuum is required.

Pressure source

- Oil less design
- Small footprint
- Plug & Play capability
- Low noise level (53 dB)
- Automatic water drain valve

Vacuum Source

- Oil less design
- Small footprint
- Plug & Play capability
- Low noise level (51 dB)

Technical Specifications & Design

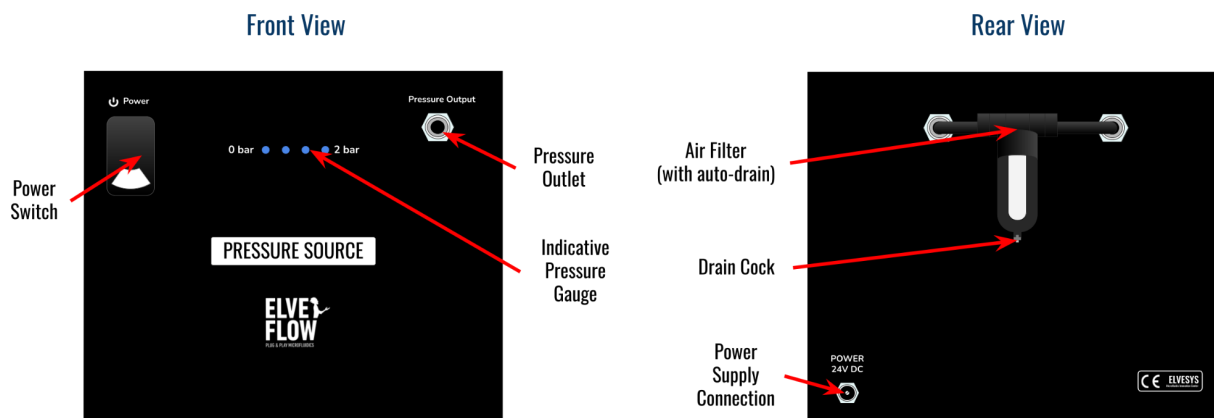
The Elveflow Pressure & Vacuum Sources

		ELVEFLOW PRESSURE SOURCE (EPS)	ELVEFLOW VACUUM SOURCE (EVS)
Performances	Pressure range	0 to 3000 mbar	-850 to 0 mbar
	Pressure guaranteed*	2 bar (approx 29 psi)	-850 mbar (approx-12 psi)
	Number of ports	1	
	Number of positions	2	
Electrical specifications	Input voltage range	24V	
	AC supply frequency	50-60Hz	
	Power supply voltage	10-240vac	
	Max current consumption	peak = 1,5 A typical = 0,8 A	
	Power consumption (max)	36W	
	Connection type	Male Plug and Female Socket Connector (2.1mm x 5.5 mm x 11mm)	
Mechanical specifications	Pneumatic connection	6mm push-in	
	Operating temperature	5-40°C	
	Operating Humidity	20-80%	
	Dimensions (without connectors, cm)	16.1 x 19.4 x 19.5	14 x 18 x 14
	Weight	2kg	1.4kg

*as long as the recommended conditions of use are followed (100 mL Tank).

Design

Elveflow Pressure Source (EPS)



Elveflow Vacuum Source (EVS)

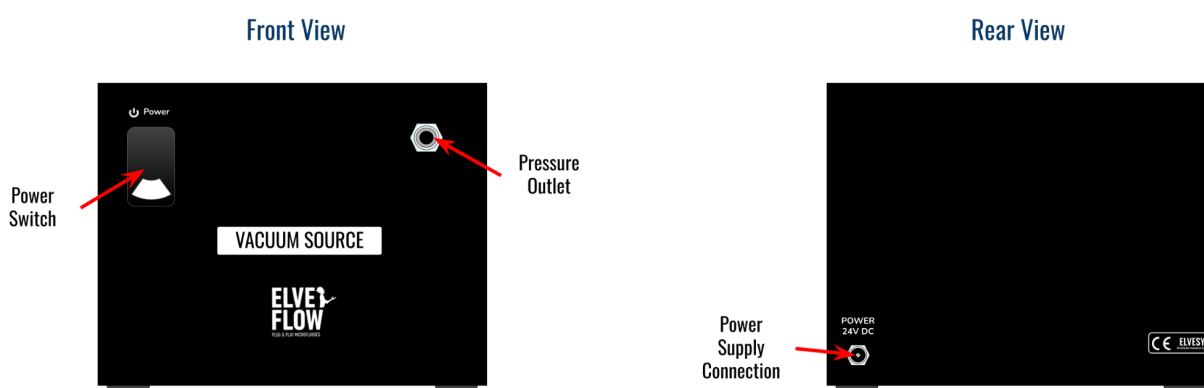


Fig 1. Description of the Elveflow Pressure Source and the Elveflow Vacuum Source.

Product package contents

Elveflow Pressure Source

1. the instrument
2. a power supply unit (24V DC)
3. Pneumatic 6mm OD tubing (2m)
4. a USB flash drive containing the Elveflow® Smart Interface software and the user guides

Elveflow Vacuum Source

1. the instrument
2. a power supply unit (24V DC)
3. Pneumatic 6mm OD tubing (2m)
4. a USB flash drive containing the Elveflow® Smart Interface software and the user guides

Installation & use

Connection to Elveflow OB1

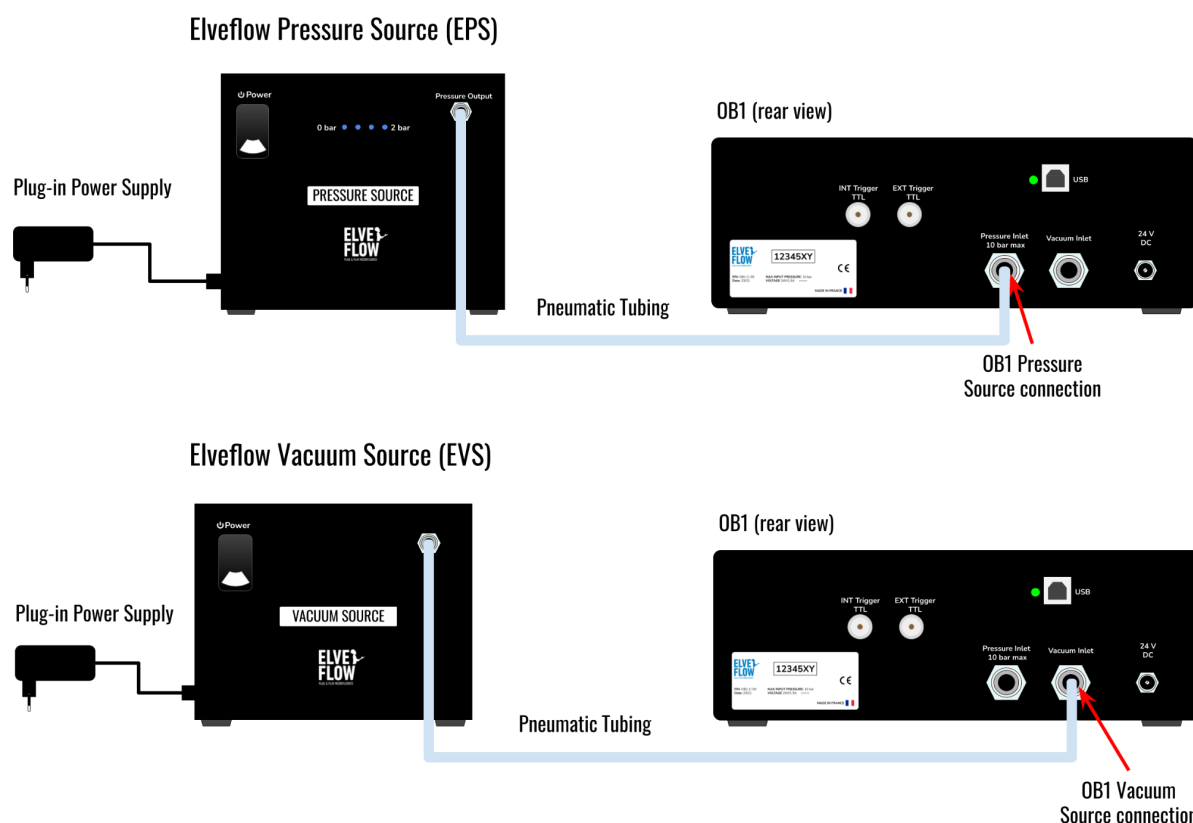


Fig 2. Connection of the Elveflow Pressure Source and the Elveflow Vacuum Source to an Elveflow OB1 Pressure and Flow Controller.

Using pneumatic push-in connectors

The Elveflow Pressure & Vacuum Sources use 6mm OD pneumatic push-in connectors (Fig 3 below), often named “Quick Connect fittings”. Connect any 6 mm OD tubing to a push-in connector by inserting the tube in the vacuum or pressure connector. To disconnect the pressure and/or the vacuum inlet, ensure that the pressure and vacuum sources are turned off, then push the grey ring and pull tubing (Fig 4 below).

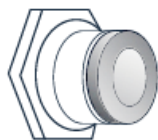


Fig 3. 6mm OD pneumatic push-in connectors

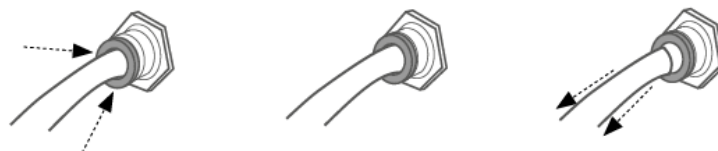


Fig 4. How to disconnect OB1 quick connect fittings

How to operate the Elveflow Pressure & Vacuum Sources

The Elveflow Pressure & Vacuum Sources are two very simple units, very easy to operate. Observe the following simple instructions and you will get many years' service from your device.

1. Visually inspect your pressure or vacuum source for shipping damage, contact your us immediately if you think the unit may have been damaged.
2. Always keep the pressure or vacuum source protected during transportation.
3. Place the pressure or vacuum source in a dust free, dry and cool, yet frost free, room. Do not install in a closed cupboard, unless adequate openings for ventilation are available. Ensure that the unit stands firmly on the floor.
4. Connect a pneumatic tubing to your Elveflow OB1 equipment (see Connection to Elveflow OB1).
5. Plug your pressure or vacuum power supply into an outlet switch of nominal voltage and ensure that fusing is adequate (see Technical Specifications).
6. Start your pressure or vacuum source using the Power Switch on the unit. The unit will automatically start generating pressure or vacuum, depending on the unit used.
7. Pressure output value
 - a. for Elveflow Pressure Source: the switch is normally factory set for operation at 2 bar (approx 29 psi).
 - b. for Elveflow Vacuum Source: the switch is normally factory set for operation at -900 mbar (approx -13 psi).

Important notices and recommendations

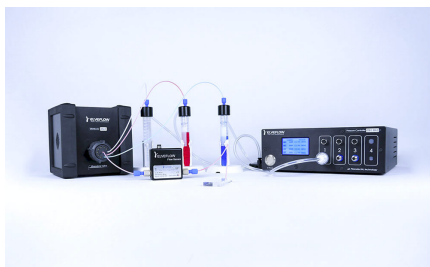


1. Always use these Elveflow Pressure & Vacuum Sources with the power supply provided.
2. Make sure that the filter of the Elveflow Pressure sources is in good condition.
3. To disconnect the pressure and/or the vacuum inlet, ensure that the pressure and vacuum sources are turned off, then push the grey ring and pull tubing (Fig 4 above). Pulling on the tubing without pressing the ring is very likely to damage the connection.
4. Any compressed air system produces condensation, which is the moisture that drops out of a compressed air flow as it cools. It is important to remove condensate from an air system as water can cause damage and corrosion. The auto-drain of the EPS source can eliminate this condensate in the form of a small puddle of approx 5cm in diameter in the event of intensive use. Make sure that these few drops collected are not a problem for your setup, or take the necessary precautions (eg use a container), if necessary.

Maintenance

Replace the filter of the Elveflow Pressure sources (which also acts as an auto-drain) at least once a year, contact Elveflow Support (customer@elveflow.com) to get a quote for this replacement.

Linked products



[Live Cell Perfusion Pack](#)

A liquid handling platform for cell-based experimentations



[OB1 MK3+ Flow Controller](#)

The most responsive and stable flow controller on the market



[Microfluidic Reservoirs](#)

microfluidic adapters for Eppendorf ©, Falcon © tubes or GL45 threaded glassware

Customer Support

You are welcome to browse through the Elveflow Support Portal accessible online anytime (<https://support.elveflow.com/support/solutions>). You can find lots of guidance on how to use our product line. It is most likely that the answers you're looking for are already here. In case there are still some questions and you'd like further clarification, please don't hesitate to let us know by email at customer@elveflow.com.



With critical context information readily at hand, Elveflow Support employees will be better prepared to help you.

The elements usually required are:

- the serial number of the Elveflow device(s) used (Sensors, Instrument)
- the ESI software initialization file located in C:\Users\Public\Documents\Elvesys\ESI\data. It is called either "ConfigESI.ini" or "ESI.ini", depending on your ESI version.
- the screenshots of the error messages received, if applicable.
- Some pictures, or movies of your setup and your issue. [WeTransfer](#) is perfect for easily sending us large files.

We are always happy to help ❤️