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avitech develops and sells micro pumps with a unique technology on an international market. Mr. Johan Stenberg founded Xavitech fifteen years ago with the ambition of changing the pump market. The founder got the idea for the company while working with capnography and gas sampling. He realized that micro pumps were too expensive and created multiple problems when they broke, time and time again. That was something Xavitech would change. Today, we sell our pumps all over the world – and are even represented in space. Xavitech delivered pumps to NASA and the pumps are installed in a project on ISS. Xavitech continuously develops and strengthen our own technology, while simultaneously working to help our customers design optimal systems. Our expertise in electronics and software, as well as mechanical engineering, makes our team strong and well suited to guide you to the best solution. We strive to ensure that our customers will be totally satisfied with our technology and service, from the selection of a pump model to system integration. Not until we exceed our goals, are we at Xavitech satisfied.

DID YOU KNOW

The operating cost for our V200 pump is as low as 0,4* cent per operating hour or lower, depending on the purchased quantity? – That is one of the most cost-effective micro pump in the world!

*When buying 100 pumps guaranteed to run for 35 000 hours (3-year warranty).

WHAT WE OFFER

Xavitech is here for the customer who wants great flexibility, high quality and a market leading lifetime. Our BLACK edition pumps are unique on the market in offering such great flexibility and quality.

Do you want a high-quality pump with a lower price and a lifetime of up to 1 000 hours? We have that too. The original ORANGE edition pumps offer a high-quality pump that is more reliable than other short-term pumps on the market.

XAVITECH TEAM

Not only the pumps themselves are one-of-a-kind but the highly professional Xavitech team will make sure that we do everything we can to meet your needs.



FOLLOW XAVITECH ONLINE

Find us online, @xavitechab on Instagram, Facebook and LinkedIn. And don't forget our website www.xavitech.com.



MEDICAL APPLICATIONS

INCUBATOR

Incubator for embryos in Lithuania.

LAB

The V200 is used in a LAB in Germany for cellculture growth.

LAB/HEALTCARE

V200 is used in a LAB in the USA for gas analysis of CO2 and O2.

METABOLIC CART

CO2 and O2 analysis in the USA.

CAPNOGRAPHY

Used in capnography devices for monotoring CO2 in respiratory gases. For example during anesthesia and intesive care.



INDUSTRIAL APPLICATIONS

FOOD PACKAGES

Oxygen CO2 analysis in the USA.

LASER SYSTEM

The V200 is used in a system in Slovenia.

SURFACE ANALYZER

The P200 is used in Germany for surface analyzer in automobile coating.

OXYGEN ANALYZER

In the UK the V1500 is used in a device for oxygen analysis.

GAS MONITOR

The V200 is used to detect and analyze CO2 and O2 in the USA.



ENVIRONMENTAL APPLICATIONS

OZONE MONOTORING

The V200 is used in ozone monotoring in New Zealand.

FISH FARMING

Gas analysis of CO2, oxygen, total carbonate in Denmark.

COMBUSTION ANALYSIS

The V1500 analyses CO, CO2, HC, NO, O2 from truck combustion in the USA.

WATER ANALYSIS

In France the V1500 is used in water analysis.

BIO GAS ANALYZER

In the UK the V200 and V1500 is used to analyze bio gas.

SMOG ANALYZER

Analyzing PM2.5 and VOC in SMOG in China.

APPLICATIONS

Xavitech's pumps are used in systems every day all over the world. The pumps are mainly used in three different areas: Industrial, Medical and Environmental applications.

DID YOU KNOW

We have patents in Europe, China, and the USA. This to protect our unique technology.

"We do not get serial control with other micro pumps and the fact that we could eliminate the flow sensor to regulate the flow was important, says Steven Pruzia at Criticare."

"Our existing pumps would barely last one year before the diaphragm was damaged. With Xavitech we got a long service life and a two-year warranty, says Mark Swetnam, Managing director at Cambridge Sensotec."

DID YOU KNOW...



...that our pumps have been used in a green house project at the NASA ISS station?

GUARANTEED LIFETIME FROM 2 000 TO +35 000 HOURS | CALIBRATED FLOW | ADAPTED FUNCTIONS

MICROPUMPS BLACK EDITION **FROM XAVITECH**

Xavitech's BLACK edition is our pump model with the most functionality and flexibility. Our goal is for you to be able to use this micro pump in your new system or as a drop-in replacement in your existing system in an easy and convenient way.

- Guaranteed lifetime
- Small footprint
- Easy to install with vibration absorbing pump mountings
- Customized calibrations
- Many other functions available

CHOOSE THE GUARANTEED LIFETIME OF YOUR MICRO **PUMP**

The service lifetime of the pump is one of the most important things when it comes to choosing a new pump. With the BLACK edition from Xavitech, you don't need to adapt your decision to the one lifetime that the pump supplier offers. Here you choose the service lifetime that suits your system.

We believe that you, the customer should be able to choose the service lifetime that exactly fits your system and business model, and not pay for more hours than you actually need. This is why we have the BLACK edition pumps.

Choose between:

• 2 000 hours (1 year warranty) • 5 000 hours (1 year warranty) • 10 000 hours

• 20 000 hours (2 year warranty)

(1 year warranty)

• +35 000 hours (3 year warranty)

ADAPT THE BLACK EDITION TO YOUR REQUIREMENTS

The BLACK edition offers a wide variety of functions. We offer a standard BLACK edition pump with high quality and a great lifetime but the BLACK edition pump can also be calibrated for your specific needs.

- Calibrated flow rate
- Choose operating voltage 3.3VDC - 24VDC
- Custom firmware
- Flex cable or flying leads

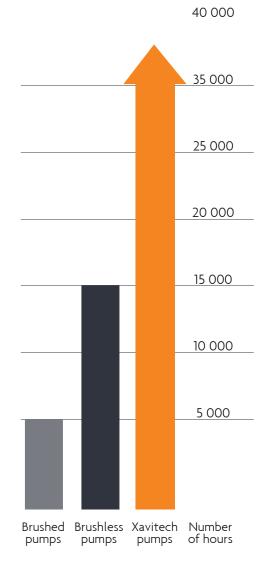
You also have the opportunity to influence how the pump will work in its application. Each micro pump has a built-in microcontroller and we create customized firmware for various purposes. We are very interested to learn how you would like your ideal pump to work. Very likely, we can come extremely close to it with a BLACK edition pump from Xavitech.

DID YOU KNOW

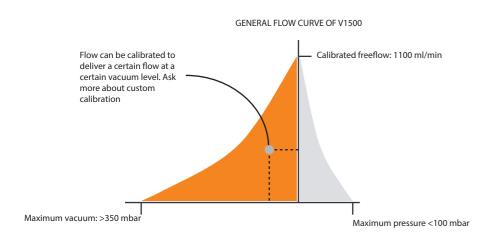
Out of all pumps delivered during 2018 we only received *0,7% in return. A number that we think vouch for our superior quality. This year we are fully committed to decreasing this number even more.

*Includes all pumps received in return including failures caused by the customer.

LIFETIME CHART COMPARISON:



GENERAL FLOW PERFORMANCE V1500 PUMPS



PUMP MODEL	V1500 BLACK EDITION
PERMISSABLE AMBIENT TEMP	0 - 55 C (Extended temp. range can be approved)
PERMISSABLE MEDIUM TEMP	0 - 55 C (Extended temp. range can be approved)
FLOW MEDIA	Air and gas. (Ask for compability)
WETTED PARTS	EPDM and PPS (Other materials on request)
	Other materials can change flow specifications, ask for information
CAPACITORS	Missing VCC capactior can damage the pump. See electrical interface datasheet
CONNECTIONS	Incorrect lead connection can damage the pump
FILTERS	To insure lifetime, air filters should be used in order to prevent contaminations like dust to enter the pump
FLOW TOLERANCES	Flow can vary -/+ 5% of calibrated specification between individual pumps
VACUUM AND PRESSURE TOLERANCES	Vacuum and pressure can vary -/+ 5% of calibrated specification between individual pumps
PUMP FLOW	Flow can only be in one direction and can not be reversed

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STANDARD MODELS (Part number)

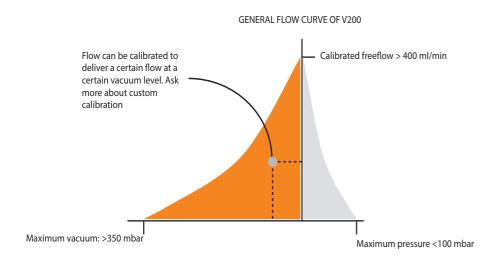
Xavitech can provide a number of pre-calibrated standard models. With the models the voltage and the max flow is calibrated to a standard value. The only thing that needs to be defined before the pump can be ordered is the lifetime of the pump. The chart below is the standard pumps models that Xavitech can offer. But custom calibration is also an option, please contact Xavitech for more information.

	VOLTAGE (DC)	CALIBRATED FLOW (ml∕min)	MAX VACCUM (mbar)	CONNECTION INTERFACE	ANALOG FLOW CONTROL	SERIAL INTERFACE (RS-232)	LIFE TIME (Hours)
V1500-BF12V	12V	1100	>350	Flex cable	YES	YES	2000 to 35 000
V1500-BF24V	24V	1100	>350	Flex cable	YES	YES	2000 to 35 000
V1500-B3C12V	12V	1100	>350	3 Wires	YES	NO	2000 to 35 000
V1500-B3C24V	24V	1100	>350	3 Wires	YES	NO	2000 to 35 000
V1500-B5C12V	12V	1100	>350	5 Wires	YES	YES	2000 to 35 000
V1500-B5C24V	24V	1100	>350	5 Wires	YES	YES	2000 to 35 000

CONTROL

Read more about how to control the pump flow with either analog signal or with serial interface and how to chose your custom calibration point in dedicated instructions at www.xavitech.com.

GENERAL FLOW PERFORMANCE V200 PUMPS



PUMP MODEL	V200 BLACK EDITION
PERMISSABLE AMBIENT TEMP	0 - 55 C (Extended temp. range can be approved)
PERMISSABLE MEDIUM TEMP	0 - 55 C (Extended temp. range can be approved)
FLOW MEDIA	Alr and gas. (Ask for compability)
WETTED PARTS	EPDM and PPS (Other materials on request)
	Other materials can change flow specifications, ask for information.
CAPACITORS	Missing VCC capactior can damage the pump. See electrical interface datasheet
CONNECTIONS	Incorrect lead connection can damage the pump
FILTERS	To insure lifetime, air filters should be used in order to prevent contaminations like dust to enter the pump
FLOW TOLERANCES	Flow can vary -/+ 5% of calibrated specification between individual pumps
VACUUM AND PRESSURE TOLERANCES	Vacuum and pressure can vary -/+ 5% of calibrated specification between individual pumps
PUMP FLOW	Flow can only be in one direction and can not be reversed

STANDARD MODELS (Part number)

Xavitech can provide a number of pre-calibrated standard models. With the models the voltage and the max flow is calibrated to a standard value. The only thing that needs to be defined before the pump can be ordered is the lifetime of the pump. The chart below is the standard pumps models that Xavitech can offer. But custom calibration is also an option, please contact Xavitech for more information.

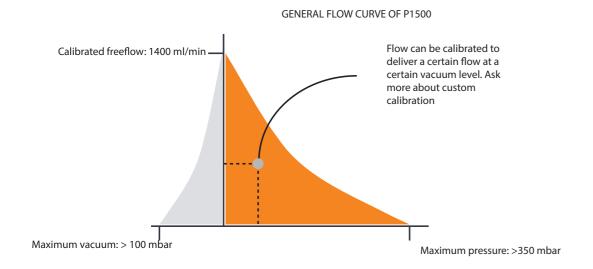
	VOLTAGE (DC)	CALIBRATED FLOW (ml/min)	MAX VACUUM (mbar)	CONNECTION INTERFACE	ANALOG FLOW CONTROL	SERIAL INTERFACE (RS-232)	LIFE TIME (Hours)
V200-BF5V	5V	350	>300	Flex cable	YES	YES	2000 to 35 000
V200-BF12V	12V	400	>350	Flex cable	YES	YES	2000 to 35 000
V200-BF24V	24V	400	>350	Flex cable	YES	YES	2000 to 35 000
V200-B3C5V	5V	350	>300	3 Wires	YES	NO	2000 to 35 000
V200-B3C12V	12V	400	>350	3 Wires	YES	NO	2000 to 35 000
V200-B3C24V	24V	400	>350	3 Wires	YES	NO	2000 to 35 000
V200-B5C5V	5V	350	>300	5 Wires	YES	YES	2000 to 35 000
V200-B5C12V	12V	400	>350	5 Wires	YES	YES	2000 to 35 000
V200-B5C24V	24V	400	>350	5 Wires	YES	YES	2000 to 35 000

CONTROL

Read more about how to control the pump flow with either analog signal or with serial interface and how to chose your custom calibration point in dedicated instructions at www.xavitech.com.

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GENERAL FLOW PERFORMANCE P1500 PUMPS



PUMP MODEL	P1500 BLACK EDITION
PERMISSABLE AMBIENT TEMP	0 - 55 C (Extended temp. range can be approved)
PERMISSABLE MEDIUM TEMP	0 - 55 C (Extended temp. range can be approved)
FLOW MEDIA	AIr and gas. (Ask for compability)
WETTED PARTS	EPDM and PPS (Other materials on request)
	Other materials can change flow specifications, ask for information
CAPACITORS	Missing VCC capactior can damage the pump. See electrical interface datasheet
CONNECTIONS	Incorrect lead connection can damage the pump
FILTERS	To insure lifetime, air filters should be used in order to prevent contaminations like dust to enter the pump
FLOW TOLERANCES	Flow can vary -/+ 5% of calibrated specification between individual pumps
VACUUM AND PRESSURE TOLERANCES	Vacuum and pressure can vary -/+ 5% of calibrated specification between individual pumps
PUMP FLOW	Flow can only be in one direction and can not be reversed

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STANDARD MODELS (Part number)

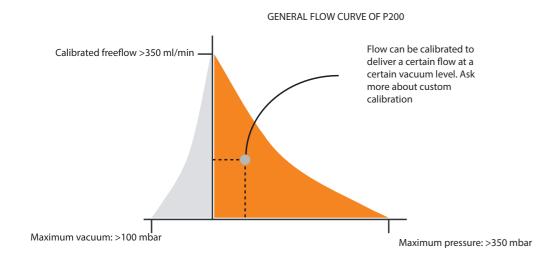
Xavitech can provide a number of pre-calibrated standard models. With the models the voltage and the max flow is calibrated to a standard value. The only thing that needs to be defined before the pump can be ordered is the lifetime of the pump. The chart below is the standard pumps models that Xavitech can offer. But custom calibration is also an option, please contact Xavitech for more information.

	VOLTAGE (DC)	CALIBRATED FLOW (ml/min)	MAX PRESSURE (mbar)	CONNECTION INTERFACE	ANALOG FLOW CONTROL	SERIAL INTERFACE (RS-232)	LIFE TIME (Hours)
P1500-BF12V	12V	1300	>300	Flex cable	YES	YES	2000 to 35 000
P1500-BF24V	24V	1400	>350	Flex cable	YES	YES	2000 to 35 000
P1500-B3C12V	12V	1300	>300	3 Wires	YES	NO	2000 to 35 000
P1500-B3C24V	24V	1400	>350	3 Wires	YES	NO	2000 to 35 000
P1500-B5C12V	12V	1300	>300	5 Wires	YES	YES	2000 to 35 000
P1500-B5C24V	24V	1400	>350	5 Wires	YES	YES	2000 to 35 000

CONTROL

Read more about how to control the pump flow with either analog signal or with serial interface and how to chose your custom calibration point in dedicated instructions at www.xavitech.com.

GENERAL FLOW PERFORMANCE P200 PUMPS



PUMP MODEL	P200 BLACK EDITION
PERMISSABLE AMBIENT TEMP	0 - 55 C (Extended temp. range can be approved)
PERMISSABLE MEDIUM TEMP	0 - 55 C (Extended temp. range can be approved)
FLOW MEDIA	AIr and gas. (Ask for compability)
WETTED PARTS	EPDM and PPS (Other materials on request)
	Other materials can change flow specifications, ask for information
CAPACITORS	Missing VCC capactior can damage the pump. See electrical interface datasheet
CONNECTIONS	Incorrect lead connection can damage the pump
FILTERS	To insure lifetime, air filters should be used in order to prevent contaminations like dust to enter the pump
FLOW TOLERANCES	Flow can vary -/+ 5% of calibrated specification between individual pumps
VACUUM AND PRESSURE TOLERANCES	Vacuum and pressure can vary -/+ 5% of calibrated specification between individual pumps
PUMP FLOW	Flow can only be in one direction and can not be reversed

14

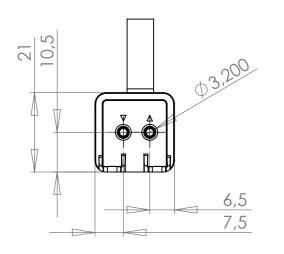
STANDARD MODELS (Part number)

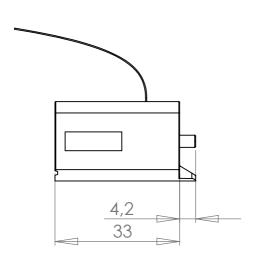
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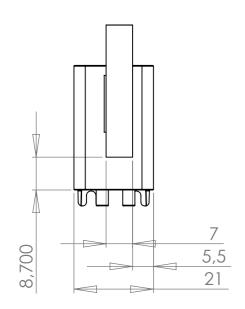
	VOLTAGE (DC)	CALIBRATED FLOW (ml/min)	MAX PRESSURE (mbar)	CONNECTION INTERFACE	ANALOG FLOW CONTROL	SERIAL INTERFACE (RS-232)	LIFE TIME (Hours)
P200-BF5V	5V	350	>300	Flex cable	YES	YES	2000 to 35 000
P200-BF12V	12V	350	>400	Flex cable	YES	YES	2000 to 35 000
P200-BF24V	24V	350	>400	Flex cable	YES	YES	2000 to 35 000
P200-B3C5V	5V	350	>300	3 Wires	YES	NO	2000 to 35 000
P200-B3C12V	12V	350	>400	3 Wires	YES	NO	2000 to 35 000
P200-B3C24V	24V	350	>400	3 Wires	YES	NO	2000 to 35 000
P200-B5C5V	5V	350	>300	5 Wires	YES	YES	2000 to 35 000
P200-B5C12V	12V	350	>400	5 Wires	YES	YES	2000 to 35 000
P200-B5C24V	24V	350	>400	5 Wires	YES	YES	2000 to 35 000

CONTROL

Read more about how to control the pump flow with either analog signal or with serial interface and how to chose your custom calibration point in dedicated instructions at www.xavitech.com.



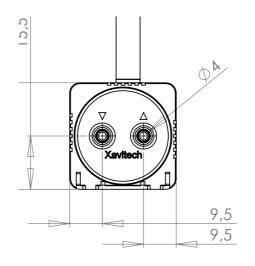


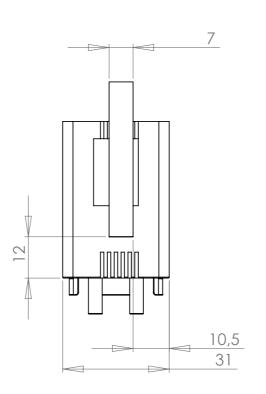


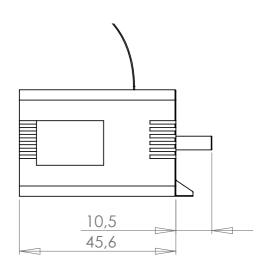


ALL DIMENSIONS ARE IN MM











ALL DIMENSIONS ARE IN MM

PUMP MODEL	V1500 AND P1500 BLACK EDITION
CONNECTION	Flex
DIMENSION TOLERANCE	+/- 0,5mm
PUMP WEIGHT	108g +/- 2g
RECOMMENDED CONNECTORS	MOLEX 52610 or 52271
RECOMMENDED TUBE ID	2,8 to 3,8mm (Material dependent)

DID YOU KNOW...



...that micro pumps are used in medical technology all over the world? They are used to create a vacuum or pump gas and liquids. For example, you can find micro pumps in sleep apnea masks and NPWT devices.

ORANGE edition pumps ••••}

AFFORDABLE | PERFECT FOR GAS ANALYSIS AND SAMPLING | SUITABLE FOR HANDHELD DEVICES

MICRO PUMP ORANGE EDITION MICRO PUMP WITH FROM XAVITECH GUARANTEED LIFET

ORANGE edition is suitable for those who need a high quality micro pump and a lifetime of 1 000 hours.

- High quality
- Affordable solution
- Guaranteed service lifetime

DID YOU KNOW

All pumps are assebled at our office in Härnösand, Sweden.

MICRO PUMP WITH GUARANTEED LIFETIME OF 1,000 HOURS

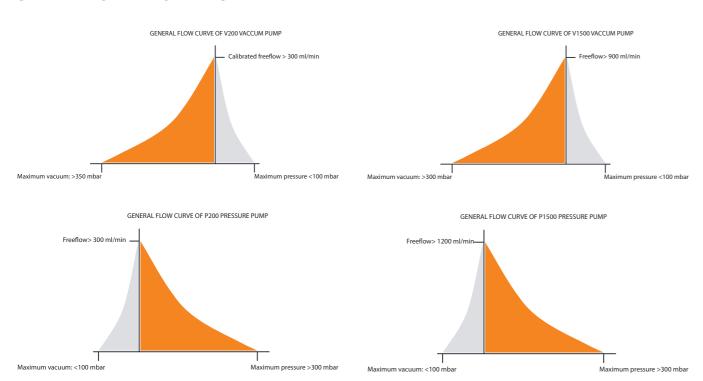
With the ORANGE edition, you get a micro pump that is guaranteed to work for the full 1,000 hours it was designed to do, at a very good price. In this way, you do not need to pay for pumps with a longer lifetime in order to be assured that the pump will actually work for the stated number of hours.

ORANGE EDITION PROVIDES HIGH QUALITY AT AN AFFORDABLE PRICE

Xavitech's trademark of high quality also pervades our ORANGE edition pumps. Flexibility is limited in the ORANGE edition, which allows for such an affordable price. It is sold in a limited number of standard designs for each pump model. If more flexibility is required, check out our BLACK edition instead.



GENERAL FLOW PERFORMANCE

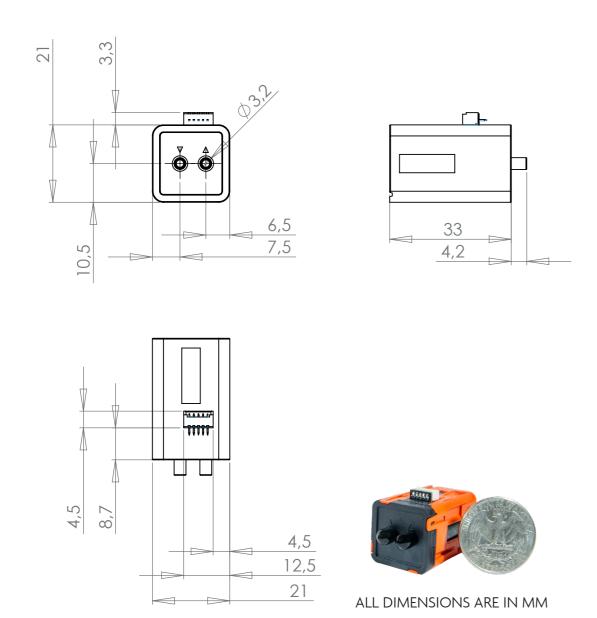


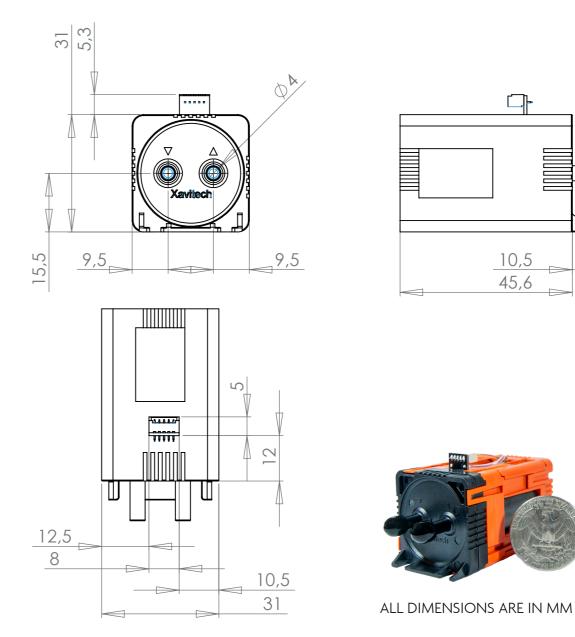
PUMP MODEL	ORANGE EDITION PUMPS
PERMISSABLE AMBIENT TEMP	0 - 55 C (Extended temp. range can be approved)
PERMISSABLE MEDIUM TEMP	0 - 55 C (Extended temp. range can be approved)
FLOW MEDIA	Air and gas. (Ask for compability)
WETTED PARTS	EPDM and PPS (Other materials on request)
CAPACITORS	Missing VCC capactior can damage the pump. See electrical interface datasheet
CONNECTIONS	Incorrect lead connection can damage the pump
FILTERS	To insure lifetime, air filters should be used in order to prevent contaminations like dust to enter the pump
FLOW TOLERANCES	Flow can vary > 10% of calibrated specification between individual pumps
VACUUM AND PRESSURE TOLERANCES	Vacuum and pressure can vary -/+ 5% of calibrated specification between individual pumps
PUMP FLOW	Flow can only be in one direction and can not be reversed

STANDARD MODELS (Part number)

The ORANGE version is only availbe in fixed voltages and can not be customized on flow calibration. The lifetime is also fixed. Choose the BLACK edition if a more flexible solution is required.

	VOLTAGE (DC)	FLOW (ml/min)	MAX PRESSURE (mbar)	MAX VACUUM (mbar)	CONNECTION INTERFACE	ANALOG FLOW CONTROL	SERIAL INTERFACE (RS-232)	LIFE TIME (Hours)
V200-O2C5V	5V	>300	<100	>300	2 Wires	NO	NO	1000
V200-O2C12V	12V	>300	<100	>300	2 Wires	NO	NO	1000
V1500-O2C12V	12V	>900	<100	>300	2 Wires	NO	NO	1000
V1500-O2C24V	24V	>900	<100	>300	2 Wires	NO	NO	1000
P200-O2C5V	5V	>300	<300	<100	2 Wires	NO	NO	1000
P200-O2C12V	12V	>300	<300	<100	2 Wires	NO	NO	1000
P1500-O2C12V	12V	>1200	<300	<100	2 Wires	NO	NO	1000
P1500-O2C24V	24V	>1200	<300	<100	2 Wires	NO	NO	1000





PUMP MODEL	V200 AND P200 ORANGE EDITION
CONNECTION	2 wires
DRAWING SCALE	1:1
DIMENSION TOLERANCE	+/- 0,2mm
PUMP WEIGHT	40g +/- 2g
RECOMMENDED CONNECTORS	MOLEX 53047 (picoblade)
RECOMMENDED TUBE ID	1,6 to 2,8mm (Material dependent)

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PUMP MODEL	V1500 AND P1500 ORANGE EDITION
CONNECTION	2 wires
DRAWING SCALE	1:1
DIMENSION TOLERANCE	+/- 0,4mm
PUMP WEIGHT	108g +/- 2g
RECOMMENDED CONNECTORS	MOLEX 53047 (picoblade)
RECOMMENDED TUBE ID	2,8 - 3,8mm (Material dependent)

Accessories Accessories

PUMP HOLDER



PUMPHOLDER FOR V200 AND P200 (BLACK AND ORANGE EDITION)

Xavitech can offer a solution that is based on moulded parts in silicon material for pull through quick mount. By press fitting two soft holders, one from each side of the pump, you get 4 soft arrow like pins underneath the pump. Theese pins you can pull through holes and they will expand on the other side of a PCB and thus create a lock. There are two arrows on each pin so you can mount the pump at two diffrent levels. At level 1 the pump will be elevated 2.75mm and enables you to have electrical components underneath the pump. When pump is mounted on PCB, excessive parts of the pin underneath the PCB can be cut away.

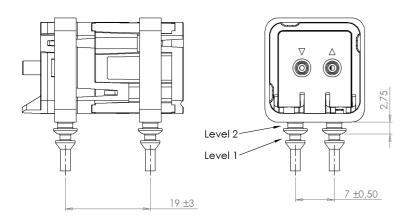
FLOW CONTROL UNIT (FCU)

With our FCU the user can calibrate the pump flow rate (operating frequency). Adjust the flow rate with the push buttons and the new setting will be stored in the pump's built-in memory. This feature will help to find the optimal flow rate for your specific application. In this way the user can try different flow rate settings for each pump which will speed up evaluation during R & D phase.



Mount drawing

V200 and P200



Benefits with using Xavitech's pump holder

- Absorbs vibrations
- Easy mounting on PCB or other materials
- Electronic or other components can be placed underneath
- Cost effective

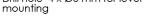
ADAPTER PCB

This small adapter is intended for use during testing and evaluation of Xavitech BLACK edition micro pumps. With all necessary components integrated on this small PCB the verification process could not get any easier.



Drill hole 4 x Ø3 mm for level 2 mounting

Drill hole 4 x Ø2mm for level 1





SILICONE TUBING

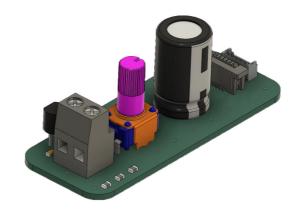
Get started directly with your Xavitech pump test. We offer silicone tubes with correct dimensions.



TUBE CONNECTORS

For harder tubings or steel pipe connections with outer dimension of 4 mm we recommend to use tube connectors.





ANALOG FLOW CONTROLLER (AFC)

This small flow controller is intended for use during testing and evaluation of Xavitech BLACK edition micro pumps. By turning the potentiometer the user will be able to adjust pump flow rate (operating frequency) within the whole range from pump OFF up too max flow rate.

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NEW PRODUCTS

EXCHANGEABLE PUMP HEAD

- Change pump head within a few seconds
- Ideal for applications requiering service
- Costefficient and sustainable
- Available for our V200 & P200 pumps



NOW AVAILABLE!



V100 MICRO PUMP

- Small size 15*15*25 mm
- Built-in ARM core enables less external components so your system can become both smarter and smaller
- Flow rate: 200ml/min
- Vacuum: 200mbar
- Supply voltage: 5V DC & 12V DC

IOT MODULE

- Remote control your pumpGet feedback about working conditions
- Wireless adjustment of flow rate

This product is still under developement



DID YOU KNOW...



...that everyday Xavitech pumps are used in applications made to create a better environment. As an example, one of our clients in New Zealand uses the V200 pump to monitor ozone.

XAVITECH EUROPE

Phone: +46(0)611-556100 Fax: +46(0)611-782510 Hours: 8am to 5pm GMT+1 sales eu@xavitech.com

XAVITECH AB

Industrigatan 17 871 53 Härnösand SWEDEN

XAVITECH USA

Phone: 424-625-5161 Hours: 6am to 4pm EST sales_usa@xavitech.com

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