



# Livit Flex

The next generation in bioprocess control



# Sustainable Life Science

## Passion for all dimensions of Life

Together with our partners and customers, we do everything we can to improve on dimensions of life: Planetary Life, Human Life, Patient Life, Professional Life, Business Life and Societal Life.

To improve on Planetary Life for example, and to give us all a healthier and better future, we aim to do all we can to minimize our impact on the environment. We channel our efforts into a set of initiatives, carried out in collaboration with stakeholders across our value chain.

Getinge is committed to becoming a net-zero company by 2050 across the full value chain and our targets have been approved by the Science Based Targets initiative. Getinge has signed the UN Global Compact and we support its ten principles on human rights, labor, environment and anti-corruption. Our sustainability work is governed by our Code of Conduct and a number of policies such as human rights, anti-corruption and the environment.

Read more on [www.getinge.com](http://www.getinge.com)



SUSTAINABLE DEVELOPMENT GOALS



WE SUPPORT

ecovadis  
Business Sustainability Ratings





# Partner of Choice

## For the life science industry

Our aim is to support scientists, (cell)biologists, lab managers and operators achieve their goals: Improving quality of life.

Our bioreactor system portfolio covers the whole upstream bioprocess, ranging from laboratory scale and

pilot plant scale to production scale. Whatever your application is, we have the right products for you to optimize the growth of cells and bacteria that is key to the production of life-saving products.



Vaccines



Bio-Pharmaceuticals



Regenerative Medicine



Food and Beverages



Bio-Chemicals



Bio-Fuels

# Livit Flex

– The next generation in bioprocess control



Livit Flex brings nearly half a century of Applikon expertise together with the latest technologies to deliver an intuitive and easily configurable bioprocess controller that fits any R&D application.

Livit Flex can be configured as a single or dual control system for single-use or multi-use bioreactors to optimize bench space in the laboratory. The Livit Links enable plug-and-play connection of sensors and auxiliaries with the controller automatically recognizing new devices.

Both experienced and new users will be up and running in no time thanks to the new, intuitive Livit software platform with built-in data acquisition. Livit software is fully configurable and easy to use. Every sensor or actuator has its own widget so users can easily access and modify all settings, and even connect multiple Livit Flex controllers in a network.

By accessing and controlling multiple controllers from one PC in a lab, users can easily set-up parallel experiments and monitor all experiments from one central location.

Combining the flexibility of the Livit Flex controller, the intuitive Livit software, and Getinge bioreactors enables you to accelerate your R&D processes and bring your pharmaceutical and biotech products to market faster.

## Benefits:

- Optimized system configuration and investment that match your dedicated needs
- Faster development thanks to system flexibility and advanced software functionalities
- Reduced risk of operator error and training time through intuitive and user-friendly interface

## Applications:

- Microbial and cell culture
- Cell and gene therapy
- Cellular agriculture
- Screening studies
- Media optimization
- Process optimization
- Batch, Fed-Batch, Perfusion and Continuous cultivation

## Related products:

- Autoclavable bioreactors
- Single-use bioreactors
- AppliSens sensors
- Lucullus® software
- V-Control software

## Features:

- Single or dual bioprocess control system
- Up to 8 variable speed pumps
- Up to 12 mass flow controllers or up to 8 mass flow meters
- Electronic gas selection block
- Plug-and-play sensor and actuators through Livit Links
- Built-in data acquisition, alarm and user management
- OPC-UA compliant
- Compatible with V-Control and Lucullus software
- Compatible with Applikon multi-use and AppliFlex ST single-use bioreactors

## Specifications:

Sensors	
pH Sensor	Traditional electrochemical or Single-use
DO sensor	Traditional Polarographic, LumiSens or Single-use
Redox	Traditional electrochemical
Temperature	Pt-100, measurement Range: 0-150 °C accuracy 0,1°C
Foam/level	Resistive based measurement
Weight	Input for external balances through flexible Livit Links
Optional	Wide variety of 3rd party sensor technology supported through flexible Livit Links such as biomass, pCO <sub>2</sub> , etc.
Additional I/O	Up to max. 48 analog inputs and outputs through flexible Livit Links (max. amount depending of system configuration)
Actuators (optional)	
Gas	Up to 12 MFC's up to 1.5 L/min or up to 8 MFC's or MFM's for flows up to 40 L/min with accuracy up to 0.5% RD + 0.1% FS. Option for electronic gas selection block
Liquids	Up to 8 internal variable speed pumps, option for multiple external pumps through Livit Links
Stirring	0-2000 rpm
Temperature	Heating blanket, cooling with cold water valve and thermocirculator option available
Control	
Control Hardware and Software platform	Getinge proprietary and Getinge Firmware
Certifications	CE certified, GAMP compliant
21 CFR part 11 compatible	Yes, if combined with Lucullus GMP or V-Control
Communication & SCADA	Lucullus® PIMS, V-Control (DeltaV™) Getinge OPC-UA server available





# Getinge Service

## – Total Process Control for You

With Getinge, service goes beyond replacing gaskets. Service is about in depth product knowledge to provide best in class preventive maintenance. Service is an investment in reliable equipment, a reliable process and about providing advice to the to help improve efficiency. In Getinge Service you will find our complete service offer to ease your daily challenges.

### **Getinge Service for bioreactor systems contains**

- Workflow Optimization & Application Support
- Quality & Compliance
- Standard Service
- Extended Warranties
- Installation, Relocation and Retrofitting Services
- On-Demand Service



## Quality & Compliance

All Getinge equipment is tested thoroughly throughout the manufacturing process. During our in house verification processes we perform comprehensive tests on all Getinge equipment. All quality documentation is supplied with our systems. The quality documentation is setup in such a way that it is ready to use for your validation and qualification process. Tailored to your requirements we can assist with Factory Acceptance Tests (FAT), commissioning, Site Acceptance Test (SAT) and IV/OV.

We bring over 40 years of experience with cGMP and EUDRALEX in verification, validation and qualification. Our projects department can assist your in defining your requirements right from the start. It will make your life easier knowing that our experts in the bioreactor field have defined your URS so that no detail is overlooked and all specifications are realistic and achievable.

## Standard Warranty

All Getinge equipment is guaranteed for one year after delivery against defective materials and workmanship. All component parts of our products are covered by this warranty, except for normal consumable items such as glassware, sensors, O-rings and gaskets etc. Warranties are voided by unauthorized service of equipment.





# Getinge Academy

## – Be the Expert

Get trained and be ready! Well-trained scientists, operators, and engineers make sure that our systems are fully utilized in your operations. In our vision, training and instruction on how to operate our scientific equipment to make optimal use of its capabilities is not a one-time occurrence, but needs to be repeated on a regular basis.

That's why we created a curriculum to fit your needs. The courses range from educational hands-on and theoretical "Fermentation & Cultivation" sessions, to advanced SCADA/PIMS software training. Our team of bioprocess experts is ready to give you advice on basic or advanced process optimization questions, including process scale-up, aeration, mixing, temperature, pH, and dissolved oxygen control, plus other process controller settings.





Our in-house laboratory is equipped to run cultures and to mimic your process conditions so that recommendations can be drawn up for you based on hands-on experience. Through our Workflow Optimization Assessment we can even design training programs for your employees, as well as put together a curriculum for you. Training can also be held at your facility for a private training session or in a central location near you for general access. Customized training can be organized on demand, focusing on your specific process challenges. You can ask us to come to you to help improve your current workflow and bio-processes or even set-up completely new ones. Please contact us and we will be glad to act as your partner.

## Available training courses

- Basic Cultivation course
- Advanced Cultivation course
- Basic Cell Culture course
- Basic Lucillus® PIMS training
- Advanced Lucillus® PIMS training
- On-Demand Service

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## Americas

**Brasil**

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www.sotelab.com.br

**Chile**

AP Bioprocess SpA  
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Spinco Biotech Pvt. Ltd.  
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www.spincootech.com

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www.sanyo-trading.co.jp

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## Middle East & Africa

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www.medent.co.il

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Getinge is a global provider of innovative solutions for operating rooms, intensive care units, sterilization departments and for life science companies and institutions. Based on our firsthand experience and close partnerships with clinical experts, healthcare professionals and medtech specialists, we are improving everyday life for people – today and tomorrow.

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