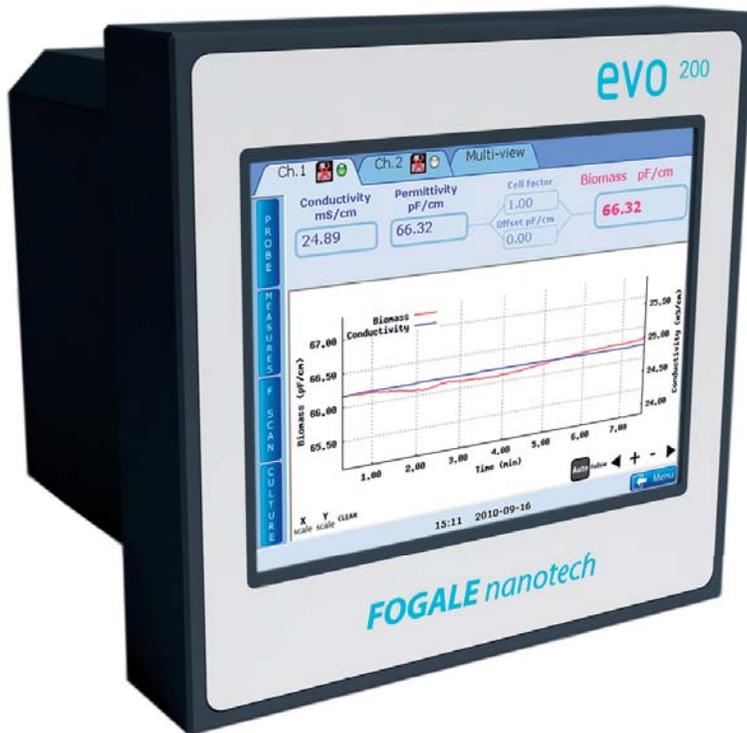


The solution for Biomass monitoring

evo



Merging the best of
Capacitance & OD technologies



Don't choose between OD and capacitance, take **evo**

evo is a unique instrument for on-line Biomass monitoring. It includes our range of viable cell concentration probes, our new OD probes, and the powerful transmitter which is capable of monitoring and merging all probes signals for advanced biomass controls.

Innovation

1 product with
2 technologies
for
3 solutions

evo is offered with a choice of three technologies configurations to meet your needs.

Capacitance

This technique takes advantage of the dielectric property of cells and their ability to polarize (capacitor effect) under an electric field. Only viable cells are polarized, the signal measures BIOVOLUME.

Multifrequency scanning provides additional information on cell size and physiology.

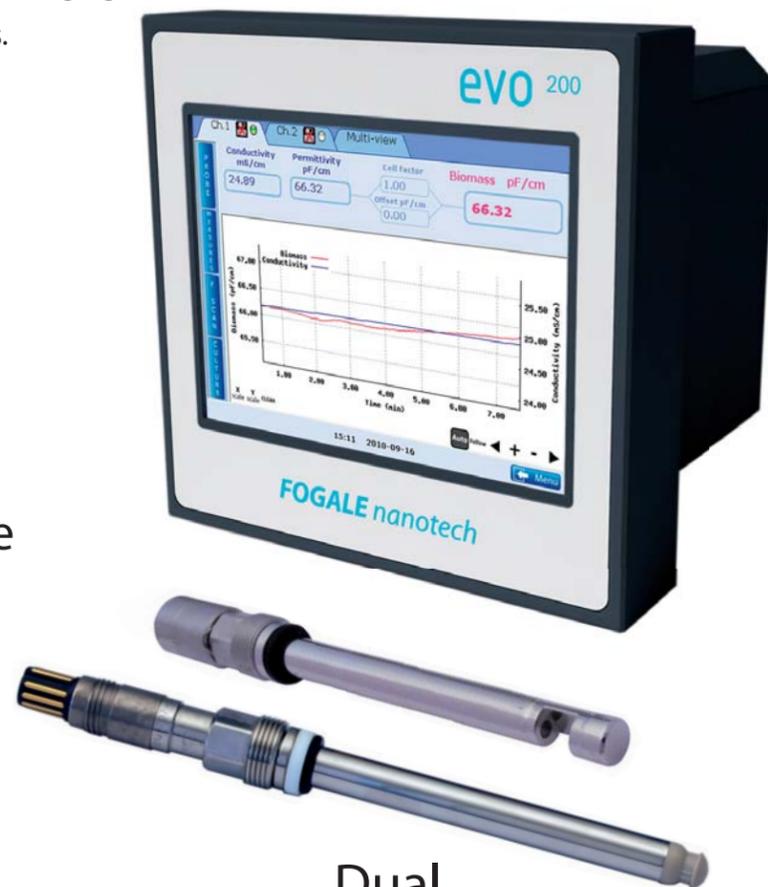
OD

The cells in suspension induce light dispersion and light absorbance, the resulting loss of light measures by optical density. The signal is sensitive to viable and dead cells concentration.

Dual

Capacitance and OD signals are generated from very different physical properties of cells, **evo** takes advantage of that difference and provides more information on cell size and viability.

The Evolution is to incorporate advanced learning capability for more customized response to your culture.



Intelligent range of probes

Wide range of in situ probes to fit all bioreactors, from autoclavable benchtop to in situ sterilizable cGMP manufacturing vessels. All probes materials conform to FDA requirement & USP Class VI.

With 12mm and 25 mm diameter and triclamp sanitary sensors, all probes measure reproducible signals: ideal for scaling-up or moving to single-use application with the disposable sensor.

Traceability

The probes meet the need for improved traceability required in the pharmaceutical industry. They come with embedded memory with IDs, serial numbers, calibration, and other intelligent tracking features such as sterilization counts and remaining life time.

cGMP validation

evo meets the standards for cGMP environments. Full validation documentation have been set to meet the demand of the regulated pharmaceutical companies. Material certificates, and IQ/OQ procedures are available, in addition the machine includes unique features for calibration, time of operation and sterilization traceability.

Connectivity

4-20 mA, Ethernet (OPC compliant), USB, multiple BUS modules (Profibus, fieldbus, devicenet).

Intuitive HMI

Large color touchscreen, wide graphic display, common architecture for rapid knowledge transfert from Lab to manufacturing.

Powerful functions

Run analysis, compare current against previous runs, specific alarm settings, graph analysis of multi frequency data for physiological informations on cells.

Growth rate, feeding modules.

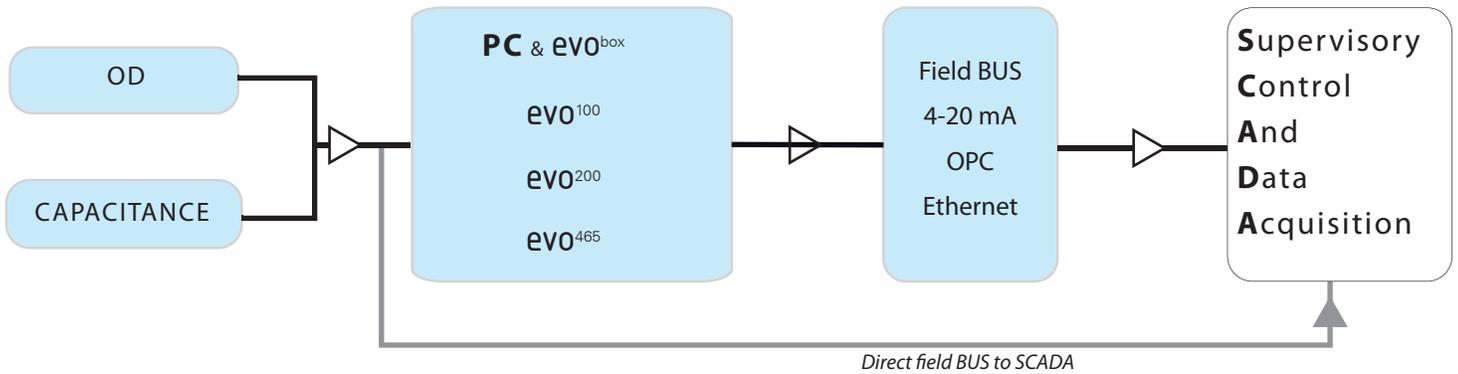
Complete range

evo range: 100 (Low cost, ideal for cGMP), 200 (All in one compact), box (Lowest cost for research), 465 (Powerful and flexible).



Flexible range *make your choice*

Probes — User interfaces — Communications —



Applications

- Animal cell culture
- Suspension or micro-carrier
- Fed-batch / perfusion
- Feeding rate control
- High density fermentation
- Yeast / bacteria
- Filamentous fungi
- Complex media
- Plant cells

Distributor



www.fogalebiotech.com

With more than 25 years experience in metrology, we contribute to enhance the productivity and quality of our customers processes. We innovate in high-tech sensors and bioreactor technologies to make our users "life science" easier.

We offer high added value on-line measurement and control solutions. We deliver performance, high quality and user friendly devices.

With our team of regional offices, local distributors and sales representatives, we exceed our customers expectation for service and support.