Monkey Industrial Supply Inc.™
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FEEDBACK Control Technology®

mcq instruments

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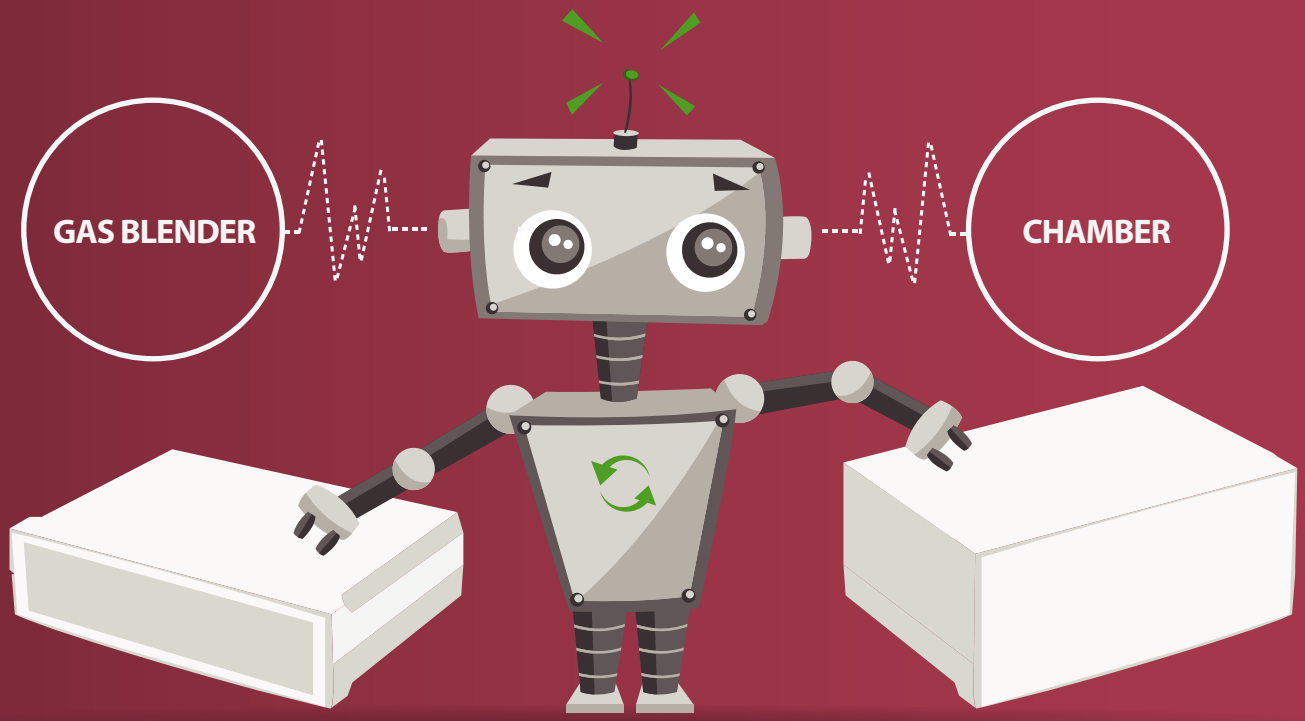
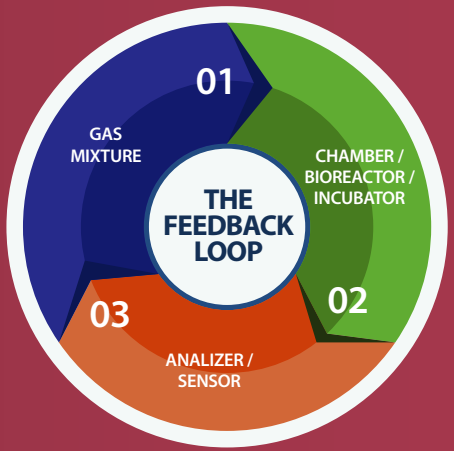
Fully Automated Monitoring

Thanks to our Feedback Control Technology, you will be able now to modify the percentages of single components of a gas mixture which flows inside a chamber/bioreactor/incubator, with a feedback in a closed loop control, in an automated way.
The Feedback Control could be provided by an Analyzer at the end of the process that measures the atmosphere inside the chamber or it could be provided by a Sensor inside the chamber/bioreactor/incubator.



Benefits

Our full AUTOMATION of the processes will allow you a continuous monitoring, with everything it implies: costs saving, effciency, lesser chance of errors, continuous process monitoring, big time saving of the experiment, automation, and much more.
The Chamber/Bioreactor/Incubator may contain cell cultures or must or anything else that can be employed in life science, biotechnologies, pharmaceutical or studying food and beverages or much more.
It is a completely NEW solution on the market ready for your laboratory.



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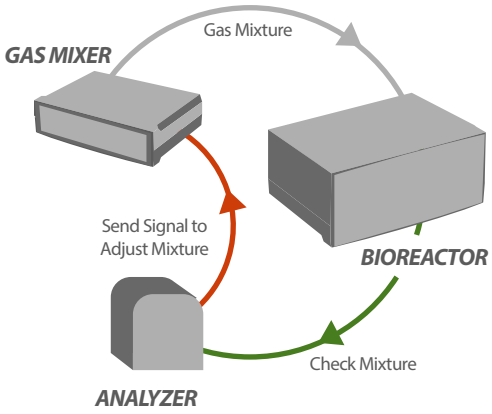
Gas mixer + Bioreactor + Analyzer

This is the case in where our Gas Mixer injects the gas mixture inside a Bioreactor. Then the Analyzer can read the result and our instrument is now able to check if the result is optimal, so it means anything changes. But if any parameter varies in a negative condition for your needs, a signal is sent with a Digital Feedback Control to the Gas Mixer which adapts itself changing the percentages of the components of the gas mixture in an absolutely automated way.



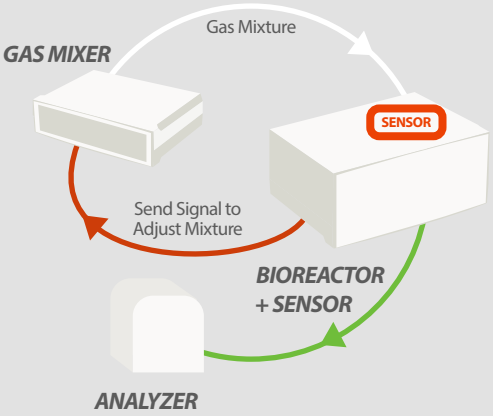
A SAMPLE OF FEEDBACK IN A LOOP CIRCUIT:

The analyzer will measure if the result of your gas mixture is somehow different from what is expected, so our instruments will adjust it, modifying the input gas mixture to the bioreactor to restore the correct atmosphere inside it.
Everything is automatically controlled and regulated by the digital communication between the analyzer and the gas mixer called:

"MCQ FCT"
(Feedback Control Technology).

Gas mixer + Bioreactor (Sensor inside) + Analyzer

This is the case in where we create a system which allows to constantly monitor a whole process that otherwise would be brought forward using an obsolete BATCH SYSTEM.
OLD SOLUTION:
The Gas Mixer injects a gas mixture inside a Bioreactor, that will be then detached and closed for the proper time that the reaction needs. Usually there are NOT possibilities to monitor the process, and usually, these procedures require time. The main problem is that the result of the reaction can reserve too many unexpected surprises after several days, with the consequences of a great amount of wasted time.



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THE MCQ INSTRUMENTS SOLUTION:

We are now able to constantly monitor the whole process and, if it's degenerating towards unacceptable parameters, we can adjust the gas mixture in a timely manner by intervening on the input mix and restoring the correct atmosphere inside the bioreactor, in a full AUTOMATION.
HOW?
By inserting a Sensor inside the Bioreactor which measures your analyte. It will provide the feedback towards our Gas Mixer and it will keep under control the process. We have basically found a solution to switch from an obsolete batch system to an innovative continuous monitoring system.

"MCQ SFCT"
(Sensor Feedback Control Technology).