



REVOLUTIONIZE FEEDING

Space saving gravimetric feeding solution
for bioprocessing integrated in Lucillus®



“Amphora is unique in terms of space requirements, precision and integration into the bioprocess world.”

Lukas Neutsch

Ph.D., Head of Bioprocess Technology Division, ZHAW Life Sciences and Facility Management

Product Overview

The Amphora Scale and Pump combination is a Lucullus® integrated solution for additional precise gravimetric single- and multi-feed control in bioprocessing. It's ideal for equipping existing installations with additional feeding capacity.

Main benefits

Unique design

Up to four feeding bottles on a stackable pump and scale tower

Space Saving

Low footprint (space requirement not higher than footprint of bottles)

Precision

Full gravimetric control over all liquids fed in bioreactor (even antifoam and base consumption) with one single scale

Highly useful

Ready-to-use solutions for feed development and media optimization in small parallel bioprocesses

Main features

Precise feed control

from 0.14ml/min to 7.3ml/min

Precise weighting

0 g to 3000g, resolution 0.1g, precision 1‰

Various bottle holders

4x0.25L, 3x0.5L, 2x1L, 1x2L bottles or up to four bags

Ethernet connection

Seamless network integration over Ethernet connection

Automated control

Automated multi-feeding control loop and feedback with Lucullus® PIMS



Scale
0-3000g | d=0.1g

Dual Pump
0.14-7.3ml/min

Product Configuration

Amphora Station 1

Consisting of one scale and a dual pump with 2x1L, 1x2L feeding bottle holder

1x Scale		+ 1x Plate		for 1x2L bottle	
1x Pump		+ 1x Plate		for 2x1L bottles	

Amphora Station 2

Consisting of one scale and two dual pumps with 4x0.25L, 3x0.5L, 2x1L, 1x2L feeding bottle holder

1x Scale		+ 1x Plate		for 1x2L bottle	
		+ 1x Plate		for 2x1L bottles	
2x Pumps		+ 1x Plate		for 3x0.5L bottles	
		+ 1x Plate		for 4x0.25L bottles	



amphora

8888

calibrate



tare / OK



hold / cancel

8852

start / stop

down



up

amphora

8888

start / stop

down



up

Scale | Technical Data



Bottle plate
exchangeable

Display
4 digit segment

Buttons
tare, hold, calibration



Bracket
for tube holder

Ethernet / PoE
for Lucillus

Power Supply
input

Dimensions	H: 12 cm, Ø 14 cm
Weighing range	0 ... 3000 g
Resolution	0.1 g
Absolute accuracy	+/- 0.3g
Repeatability	< 0.10%
Supply voltage	100-240 VAC (50/60 Hz)

Dual Pump | Technical Data

Display
4 digit segment

Pumpheads
for 0.85mm wall tubes

Buttons
speed, run/stop



Bracket
for connecting rod

RS232 interface
for third party scale

Power Supply
input/output

Ethernet / PoE
for Lucullus



Dimensions	H: 15 cm, Ø 14 cm
Pump speed (precision)	+/- 70 rpm (+/- 1 rpm)
Material (pump head)	Acetal, PET, stainless steel
Supply voltage	100-240 VAC (50/60 Hz)

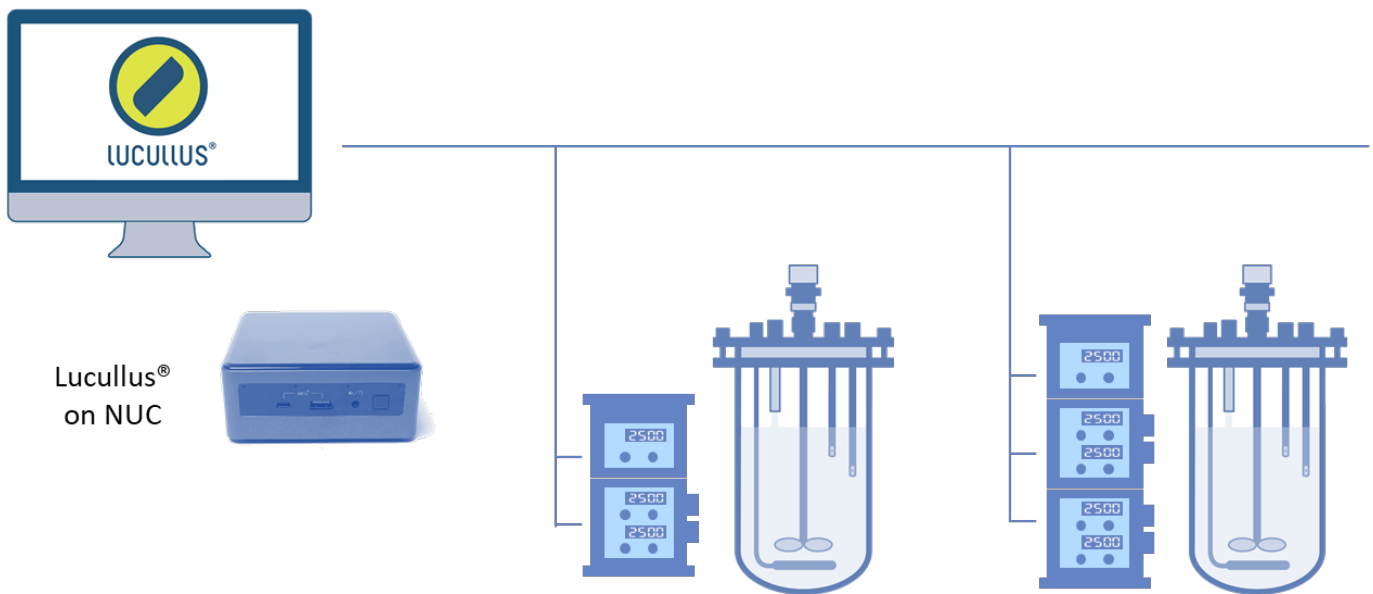
Tubing

Santoprene® or PVC (Autoclavable: PVC only, admission: FDA 21, wall 0.85mm)

Tube bore (mm)	Flowrate (ml/min)		
	1 Feed	2 Feeds	4 Feeds
0.76	1.4	0.49	0.25
1.52	4.76	1.66	0.83
2.06	7.28	2.54	1.27

Flowrates for H₂O at 20°C, at 70 rpm, zero pressure and no suction height. All figures are nominal and may vary +/-10% depending on tube tolerances.

Integration in Lucullus®



Amphora is available for existing Lucullus® installations with an easy integration procedure. The connection of Amphora devices works over Ethernet. Therefore, no additional interfaces are needed. The scale and pumps can be directly coupled into the existing network.

To facilitate new users' entry into the Lucullus® world, Securecell offers the Amphora Station with a NUC (Next Unit of Computing) that comes pre-installed with a ready-to-run Lucullus® environment, and the required network switch and cables.

The installation provides full functionality for setting up feed profiles out-of-the-box, such as linear, exponential and interpolation curves – triggered by process phases or events.

MORE INFORMATION



GET IN TOUCH



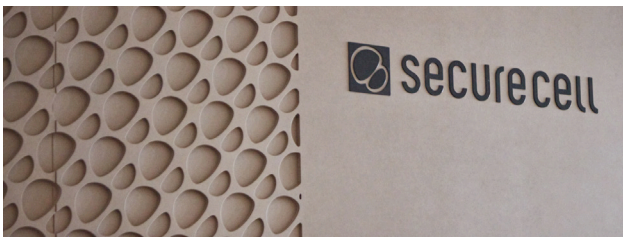
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