

# xCUBIO twin

## Two Identical Vessels in Parallel or Independent Operation or Scale-in-One Systems

Most compact scaling in  
just one system

Unlimited sensor  
opportunities

0.5, 1, 2, 5 and 10 litres  
jacketed glass vessels

Vessel options: scaled,  
airlift, steel, in-situ

Up to 5 internal, independent pumps per  
vessel, digital or analogue

Up to 6 MFCs per vessel, complex gassing regimes –  
from bacteria and fungi to cell cultivation

xCUBIO provides the most equipment options among all  
bioreactors and fermentors worldwide.



### General Parameters

Measures (W x H x D)	1,040 x 790 x 450 mm; xCUBIO twin with identical 0.5, 1 or 2 litre vessels	
	1,240 x 790 x 450 mm; xCUBIO single with identical 5 or 10 litre vessels	
	640 x 660 x 450 mm; xCUBIO twin without thermostat	
Materials	Borosilicate glass vessels with double jacket and round bottom	
	Stainless steel head plate with optimized port distribution	
	All parts with media contact are 1.4435/1.4571 stainless steel	
Automation	10"-touchscreen with intuitive menu design, 19"-screen available	
	Superior trend display with data analysis and visualization capabilities	
	Multiple control, sequencing and export functions (CSV, OPC, VNC, USB)	
	Free choice of sensors, actuators and automation level	
Media Handling	Up to 5 peristaltic pumps per vessel	Free sizing of all pumps
	Free pump purpose allocation	Independent drive for each pump
	Digital or analogue drive selection	External pumps from lab to scale
Gas Handling	Up to 6 mass flow controllers per vessel	Rotameters for manual flow control
	Up to 4 gasses	Input pressure reducers
	Complex gassing regimes	High cell density cultivation



### Example Configuration: Minimal Setup for Microbial Applications with two Parallel 5 Litre Vessels

Measures (W x H x D)	1,240 x 790 x 450 mm including thermostat	
Media Handling	2 x 4 peristaltic pumps	2 x 3 digital, 2 x 1 analogue
	For corrective media & harvest/feed	2 x 1 AO for external pump
Gas Handling	2 x 1 MFC for oxygen	2 x 1 magnetic valve for air/nitrogen
	2 x 1 microsparger	Add-ons prepared
Sensors	2 x 1 temperature in medium	2 x 1 pH in medium
	2 x 1 pO <sub>2</sub> in medium	2 x 1 level or foam
Stirrer	2 x 1 top drive	Powerful servo drive
	2 x 3 Rushton impellers	Continuous speed control 0...1,200 rpm



### Options

Packages	Cell	Extended and sensitive gassing system, ultra-sensitive mixing	
	In-situ	Two steam-sterilizable steel vessels incl. piping, valves, equipment	
Vessels	Identical vessel design OR different vessels. Choose your scale-in-one system!		
	Autoclavable glass vessels 0.5, 1, 2, 5 or 10 litres		
	Single-wall glass vessels, airlift systems, steel vessels, in-situ sterilizable vessels		
Media Handling	Free peristaltic pump selection	Multiple external device integration	
Gas Handling	Free gas mix selection	Flowchart for order specification	
Sensors	pH (2...12)	Temperature (0...130 °C)	Level/foam (on/off)
	pO <sub>2</sub> (0...100 %)	pCO <sub>2</sub> (0...100 %)	Turbidity inline (0...4 CU)
	Exhaust O <sub>2</sub> (0...25 Vol.-%)	Exhaust CO <sub>2</sub> (0...10 Vol.-%)	Turbidity bypass (0...4 CU)
	Conductivity (0 μS...2 GS)	Redox/ORP (± 1,000 mV)	Pressure (-1...+3 barg)
	Balances (± 0.001...± 10 g)	Many more! Customize ranges, media, types and scales!	

