

# xCUBIO retrofit

## Economic Refurbishment and Upgrade for Every Bioreactor and Fermenter with a Plug & Play Compatible Automation Solution

New automation for old biosystems

Plug-in compatible customization

Upgrades with state-of-the-art technologies

Exact rebuilt of existing automation functions

Securing investments and valuable equipment

All bioreactor and fermenter types, all system scales, all applications, all manufacturers

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



## General Parameters

Measures (W x H x D)	520 x 420 x 500 mm, example measures for Biostat® cases
	Customized measures for every biosystem type and size
	Compact and space saving case design
Design	Valuable stainless steel surface
	19"-touchscreen with adjustable tilt
	Elaborate and clear design for optimal implementation into existing structures
Automation	Exact functional rebuilt of existing biosystem plus add-ons
	Integration of external controllers and analytical devices in just one control system
	State-of-the-art user interface with intuitive menu design
	Superior trend display with data analysis and visualization capabilities
	Self-explanatory sequence editor and easy-to-handle control loops
Interfaces	Customized sensor ports for existing measuring technologies
	Customized communication ports to existing hardware and controllers
	Ethernet (remote access via license-free VNC-client, remote service, OPC-connection)
	USB (batch and configuration data export, encrypted binary file and csv-file)



## Example Configuration: Biostat® ED DCU Replacement, In-situ Sterilizable 10 Litre Fermenter

Measures (W x H x D)	520 x 420 x 560 mm, installation on old supply case			
	Fully mirrored functionalities of seed production fermenter			
	Controllers for pO <sub>2</sub> , temperature, stirrer speed, gravimetric feed, level			
Automation	Customized, fully automatic sterilization sequence			
	Connected Actuators	2 x mass flow controllers	Safety system	
		5 x magnetic valves	2 x control valves	
		6 x peristaltic pumps	2 x external pumps	
		1 x fermenter balance	2 x media feed balances	
		Integrated former external analytics	1 x exhaust analysis O <sub>2</sub> and CO <sub>2</sub>	
			1 x inline turbidity sensor	
	Bidirectional integration into MFCS/Win (Biostat® is reg. trademark by Sartorius AG)			



## Benefits

Situation	Existing bioreactors and fermenters are in a good state, technical equipment is worth a lot
	Aged automation systems that are out of order or do not offer state-of-the-art technology
Challenge	Replacing existing automation without hardware changes of vessels or utilities
	Saving investment by extended operation of proven equipment
Keep it Simple	Preinstalled and pretested xCUBIO retrofit replaces the old control system without any preparatory work
	Plug-in compatibility
	All vessels, sensors and actuators can be reused
Keep it Flexible	Biosystem expansion, upgrade, centralization, integration, simplification and more
Keep it Economic	No need for further investment into new vessels, pipes, valves, sensors, as well as operational staff training and more

