



G3Lab Universal Bioreactor Controller



Universal Vessel Control

G3Lab™ Universals have been designed to control most brands of bioreactor or fermenter vessels without sacrificing quality or performance.

The modular design allows G3Lab Universals to evolve with the process and integrate third-party peripherals as needed.

G3Lab Universals leverage Finesse technology including SmartParts, software and sensors to enable easy process development and cell culture optimization.



Compatible Bioreactor Vessels

Type	Manufacturer	Working Volume (L)
Glass	Finesse	1, 2, 5, 10
	Applikon	0.9, 1.7, 2.7, 3.4, 5.4, 12, 16
	Sartorius	1, 2, 5, 10
	New Brunswick Scientific	1, 2.2, 5.6, 10.5
Single-Use	Finesse	2
	Cercell	2
	Millipore	2.4
	New Brunswick Scientific	3.4, 10.5, 45
	Sartorius	2
	Xcellerex™	10
Rocker	Finesse	10, 20, 50
	GE Wave™ Bioreactor Rocker	10, 20, 50
	Sartorius	10, 20, 50

G3Lab Universal Architecture

SmartSensors

For excellence in bioprocessing measurement, the G3Lab Universal controller accommodates either TruFluor® and TruTorr® single-use or TrupH® and TruDO® sterilizable sensors.



SmartParts

Intelligent hardware that creates systems to precisely meet the requirements of a process. Enhance bioprocess reproducibility by exploiting the local control capability of each SmartPart, and scale productivity by modifying the loading on the primary controller and data network.



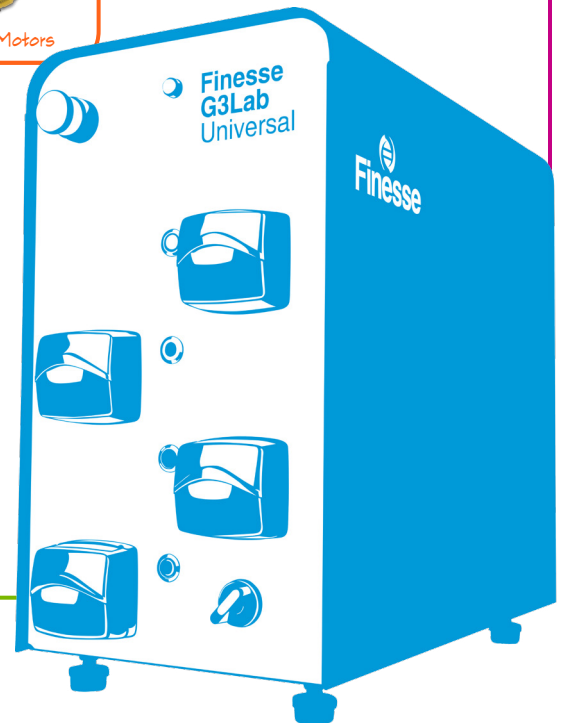
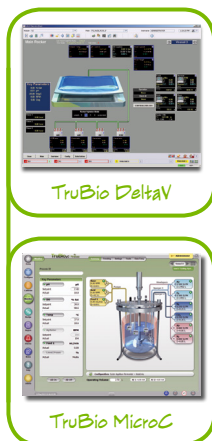
SmartSoftware

Finesse TruBio® Software for G3Lab Universal controllers can be selected by the user to best fit the intended use.

TruBio DV scales from benchtop R&D to cGMP-compliant processes.

TruBio µC is for Lab-scale / R&D.

Programming skills are not required to use either software package.



G3Lab Universal

SPECIFICATIONS

Utility Tower Dimensions (H x W x D)	438.4 x 240 x 482.6 mm (17.3 x 9.5 x 19 in)
Enclosure Rating	NEMA2
Operating Temperature	5°C to 40°C (41°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Relative Humidity	5% to 95% Non-Condensing
Certifications	The Finesse G3Lab Universal controller has been tested and verified as meeting CE standards EN-60101 and EN 61325
Weight / Shipping Weight	14 kg / 21.4 kg (31 lbs / 47 lbs)
Agitation	Finesse SmartMotor Controller – Glass Vessel Agitator or Rocker Connection to Vessel Adapter Box – Thermo Scientific HyPerforma™ SUB Only Serial Port Connection to GE Wave™ Rocker – EHT Model Only
pH (Up to 2 Inputs)	TruSens Transmitter (Electrochemical Sensors) or TruFluor pH Transmitter (Rocker, Single-Use Vessel)
DO (Up to 2 Inputs)	TruSens Transmitter (Electrochemical Sensors) or TruFluor DO Transmitter (Rocker, Single-Use Vessel)
Temperature	TruSens Transmitter (RTD) or TruFluor (Rocker)
Foam Level	Conductivity Input
Liquid Control	Four (4) Variable-Speed Peristaltic SmartPumps, Watson-Marlow® Series 114
Cold Finger Solenoid	Digital Solenoid Valve
Gas Control (TruFlow)	Standard: Four (4) MFCs with Two (2) Output Connectors Optional: Six (6) MFCs with Three (3) Output Connectors
Scales / Load Cells	Analog Input via Scale Port
Auxiliary Connectors	Seven (7) Analog Inputs and Four (4) Analog Control Loops
Digital Input	Two (2) 24V DC
Digital Output	Two (2) Dry-Relay Contacts
Thermal Control	Heater Blanket, Chilled Water Source
External Pumps	Two (2) Watson-Marlow® Pumps on a Finesse Pump Tower
pH Cables	K8, VP, TruFluor
DO Cables	D4, VP6, VP8, TruFluor
Heater	IEC5-15 Receptacle
Vessels	Glass, 1 L to 20 L Single-Use (SUB), 2.4 L to 45 L Rocker, 10 L to 50 L
Standard Colors* (pictured below)	*Also available in clearcoated stainless as standard. Additional and custom colors are available at extra charge and longer lead times. The color examples shown are for reference only. Printed and on-screen colors may vary from actual product color.





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