



BioLogic Maximizer™ Valve System

Maximize Your BioLogic DuoFlow System Capabilities with Buffer Blending, High Flow Rates, and Twice the Valving Capacity



Maximize Your Applications

Buffer Blending, Increased Flow Rates, and
Twice the Valving Capacity



Because protocols change as research projects unfold, you need a system that adjusts to these needs. You may start off on a small scale by purifying a few milligrams of a recombinant protein on your BioLogic DuoFlow System. Adding the buffer blending capabilities of a BioLogic Maximizer Valve System will simplify initial pH scouting experiments. As you move to larger columns and sample volumes for pilot scale-up applications, the BioLogic Maximizer System expands pumping capabilities. The BioLogic Maximizer System boosts the throughput of your BioLogic DuoFlow System to meet your ever-expanding research needs.



Automated Buffer Blending Speeds pH Scouting

The BioLogic Maximizer System automatically blends up to four stock solutions to the right pH and salt concentrations, and compensates for changes in ionic strength and temperature during the run. BioLogic DuoFlow Software version 5.1 calculates the acid:base ratio for any pH you select. Now you can automatically run multiple separations, each at a different buffer pH and salt concentration, on your BioLogic DuoFlow System.

Higher Flow Rates Increase Your Column Capabilities

Double the flow rate capabilities of your BioLogic DuoFlow System with the BioLogic Maximizer System. Maximum flow rate for the F10 pump is increased from 10 ml/min at 3,500 psi to 20 ml/min, and for the F40 pump from 40 ml/min at 1,000 psi to 80 ml/min. With the BioLogic Maximizer System you'll have no problem running those large columns required for pilot scale-up studies.

Increased Valving Capacity Enhances Automation

The BioLogic Maximizer System gives your BioLogic DuoFlow System twice the valving capacity. By duplicating the connectors on the BioLogic DuoFlow Workstation, the BioLogic Maximizer creates a total of 12 valves (6 high pressure and 6 low pressure) that can operate simultaneously. With this increase, the variety of applications and protocols that can be developed on your system is vastly expanded.



Components and Upgrades

BioLogic DuoFlow Version 5.1 (or higher) Software

- Integrates the BioLogic Maximizer System and new components into programming
- Retains the same intuitive, easy-to-follow format
- Trace Compare feature overlays multiple chromatograms



Calomel pH Monitor

- High-precision calomel electrode ensures compatibility with buffers (such as Tris) that complex with silver, eliminating electrode clogging
- Reference and pH electrodes sealed in a single body, which minimizes reference dry-out and eliminates the need to add electrolyte solutions
- Stable at 80 ml/min, making it compatible with larger columns
- Compatible with BioLogic DuoFlow Systems with signal import module (SIM)



Maximizer Mixer

- Increases mixing capacity to accommodate 80 ml/min
- Dynamic large-volume mixer ensures accurate and reproducible gradients at higher flow rates
- Constructed of biocompatible PEEK

BioLogic Maximizer Mixer Functional Range

Mixer Barrel Size	Functional Flow Rate
0.75 ml	0.5–20 ml/min
with 5 ml expansion barrel	10–40 ml/min
with 12 ml expansion barrel	10–80 ml/min



BioLogic DuoFlow Pump Kits

- Different pumphead kits expand flow rate capabilities
- Pumphead kits include fully assembled pumpheads with check valves and seals installed, making pump switching fast and easy

Pump Configuration Flow Rates

Configuration	Flow Rate	
	BioLogic DuoFlow System	BioLogic DuoFlow System With BioLogic Maximizer System
F10	0.01–10 ml/min	0.02–20 ml/min
F40	0.5–40 ml/min	1–80 ml/min



Specifications

BioLogic Maximizer System Electrical Connections

The BioLogic Maximizer System duplicates all rear panel connectors on the BioLogic DuoFlow Workstation except the UV detector, which connects only to the workstation.

Connector	Function
INSTR. BUS	2 instrument bus ports connect the workstation USB Bitbus communicator
SV PORTS 7, 8, 9	Valve ports for low-pressure SV solenoid valves: SV5-4, SVT3-2
AV PORTS 10, 11, 12	Valve ports for high-pressure AV valves: AVR7-3, AVR9-8
SIM	Combicon Connector for third-party detector (e.g., refractive index, fluorescence)
pH	BNC connector for the pH electrode
ATC	Reserved for future use
MIXER	Connects BioLogic MX-1 and Maximizer Mixers
COND	Connects BioLogic Conductivity Monitor
AUX	Auxiliary connector; same configuration as workstation
	Controls EP-1 Peristaltic Pump, Model 2110 Fraction Collector, and generic collectors
COM 1	Connects the BioLogic DuoFlow QuadTec™ UV/Vis Detector (replaces the ICM)
COM 2	Reserved for future use

Maximizer

Size	47 x 36 x 11 cm (L x W x H)
Weight	4.8 kg
Environment	Coldroom compatible
Solvent compatibility	1 M NaOH, HCl, and organic acids; 0.1 M sulfuric acid; 7 M urea; 8 M guanidine HCl; 100% MeOH, isopropyl alcohol, and acetonitrile; 0.1% TFA; 1% detergents (including SDS, Triton X-100)

pH Monitor

Electrode	Calomel sealed electrode Tris buffer compatible 75 psi limit
Flow cell	PEEK construction

Ordering Information

BioLogic Maximizer System upgrades require BioLogic DuoFlow Software version 4.0 (or higher). The BioLogic DuoFlow Workstation may require a firmware upgrade; please contact your local Bio-Rad sales representative for more information.

Catalog #	Description	Catalog #	Description
760-2200	BioLogic Maximizer Kit , 100/120 V, for U.S., Japan, Korea; includes BioLogic Maximizer Base Unit (760-2000), pH monitor, BioLogic Maximizer Mixer, starter kit, tubing kit, system cable 30, U.S. power cord	760-2042 760-2044 760-2010	pH Electrode pH Flow Cell BioLogic Maximizer Mixer , includes 750 µl mixer body, 5 ml and 12 ml mixer barrel extenders, 5 O-rings, stirbar, installation screws
Accessories and Spare Parts			
760-0110	F10 Pump Kit , converts F40 workstation to F10 pumps to enable flow rates as low as 0.01 ml/min; includes 2 fully assembled pumpheads, 4 piston assemblies, F10 tubing kit, tools, instructions	760-2005 760-2012 760-2002	BioLogic Maximizer Mixer Barrel Extender , 5 ml BioLogic Maximizer Mixer Barrel Extender , 12 ml BioLogic Maximizer Tubing Kit , includes 4 FEP PTFE prefitted tubing lengths for connection of solvent vials to the BioLogic Maximizer Mixer; color coding indicates buffer solution
760-0180	F40 Pump Kit , expands F10 workstation pumping capabilities to 40 ml/min; includes 2 fully assembled pumpheads, 4 piston assemblies, mixer barrel extender, 2 mm UV flow cell, F40 tubing kit, tools, instructions	760-2003	BioLogic Maximizer Interconnect Tubing , includes 2 prefitted PEEK Tubing lengths for connection of BioLogic DuoFlow Pumps to the BioLogic Maximizer Valve System

Combicon is a trademark of Phoenix Contact GmbH and Co. PEEK is a trademark of Victrex PLC. Triton is a trademark of Dow Chemical Company.



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Laboratories, Inc.**

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