

OctaFlow[™] MultiValve, MultiFunction Superfusion/Perfusion System

OctaFlow[™]: ALA's most versatile Drug Application Device for electrophysiology and imaging research.

The OctaFlow[™] drug-delivery system, the successor to the industry-standard DAD-12, is designed to meet the needs of the basic science researcher or the drug-discovery scientist.

The OctaFlow[™] offers the following user benefits:

- * Modular banks of reservoirs for up to 32 samples per experiment.
- * Choice of valves for rapid exchange or minimal maintenance.
- * Valve-control of solution flow instead of motorized manipulation of barreled pipettes, minimizing sample losses following solution exchange.
- * Keyboard solution selection, for exchange "on the fly."
- * Trigger in/out for synchronization with 3rd party data acquisition systems.
- * Preprogrammed solution selection from GUI or manual.
- * Choice of reservoir sizes (1ml, 5ml, 10ml, or 60ml).
- * Rapid flush mode for easy cleaning of system.
- * Pressurization of fluids for optimal output.
- * Programmable analog output reports valve identification, step number or pressure to data acquisition system.
- * USB 2.0 compatible for fast PC communication.



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OctaFlow[™]

Software



The OctaFlow[™] GUI organizes all software functions into five sections:

- * Valve and reservoir configuration: Label reservoirs, select voltages applied to valves, select reservoir pressures, store and retrieve multiple configurations in individual files.
- * Sequence setup: Enter durations and start times in tabular format, including valve opening, flush time, delay time, output trigger.
- * Run control: Control initiation and termination of sequences, monitor progress of protocols, display all configurations.
- * Manual control: Point and click to open and close valves, store manual sequences for use as future macros.
- * Tools: Test speed and accuracy of pressure changes, initiate automated cleaning pro-

Octaflow Automated Perfusion System 2.0								
File Edit View Tools Help								
Configuration File 🄬 32 Val	lve Config	uration	- 6	Sequer	ce File 🕑 Si	equence Bank 1	- 🐸	89 83
Sync Out + Analog Out + 🥥 Tr	igger OFF	\$ 65	0][5	117	10	544	**	
frmValveManager								
Sequence Maxual					Sequenc	e Editor (Singl	e Valve)	
Sequence Control	Step	TOR	Valve	Label	Spike Voltage	Spike Time (ms)	Hold Voltage	Pressure (PSI)
Sequence control	1		1	Solution A1	18	20	9	2
	2		2	Solution B1	18	20	9	4
	3		3	Solution C1	18	20	9	6
	4		4	Solution D1	18	20	9	8
00000	5		5	Solution E1	18	20	9	10
	6		6	Solution F1	18	20	9	8
Step Status	7		7	Solution G1	18	20	9	6
	8		8	Solution H1	18	20	9	4
	9		9	Solution A2	18	20	9	2
	10		10	Solution B2	18	20	9	4
	11		11	Solution C2	18	20	9	6
Configuration	12		12	Solution D2	18	20	9	8
Valve	13		13	Solution E2	18	20	9	10
Lobel	14		14	Solution F2	18	20	9	8
Spike Volt	15		15	Solution G2	18	20	9	6
Spike Time	16		16	Solution H2	18	20	9	4
Hold Voltage	17		17	Solution A3	18	20	9	2
Pressure	18		18	Solution B3	18	20	9	4
Author	19		19	Solution C3	18	20	9	6
Dr. Smith	20		20	Solution D3	18	20	9	8
Summary	21		21	Solution E3	18	20	9	10
32 channel perfusion	22		22	Solution F3	18	20	9	8

grams from cleaning macro, select global software settings, and log file.

OctaFlow[™] software offers "on the fly control" of pressure and times settings, switches from single- to dual-valve mode, analog output control, input/output triggers, and lots more!

Ordering information key code:							
OctaFlowXXY/Z: XX = # of valves: specify 8, 16, 24,	or 32 valves; Y = type of valve: order S for custom Lee solenoid valve or						
P for 3 way pinch valve; Z = # of QMM MicroManifolds® included - Order 1, 2, 3 or 4 where:							
1 = QMM type is same as the number of valves ordered - 1 QMM included with 1 flush valve							
2 = QMM-16 is included as base and the other is QMM-8 for 24 valves or QMM-16 for 32 valves with 2 flush valves							
3 = QMM-8 is included as base and then 2 more QMM-8's for 24 valves or 1 more QMM-8 and 1 more QMM-16 for 32 valves with							
3 flush valves.							
4 = 4 x QMM-8's are included with 4 flush valves.							
Examples of ordering code:							
OctaFlow32P/4: 32 channel pinch valve system with 4x QMM-8 MicroManifolds® and 4 flush valves.							
OctaFlow24S/2: 24 channel solenoid valve system with 1x QMM-16, 1 x QMM-8 MicroManifolds®, and 2 flush valves.							
OctaFlow [™] specifications*:							
Max. # of perfusion valves: 32	Max. suction developed via internal Venturi pump: 199 mmHg nominal						
Max, # of valves/Bank: 8 valves/bank, up to 4 banks	Typcial speed of pressure rise: 520mmHg/sec						

Max. # of perfusion valves: 32	Max. suction developed via internal Venturi pump: 199 mmHg nominal
Max. # of valves/Bank: 8 valves/bank, up to 4 banks	Typcial speed of pressure rise: 520mmHg/sec
Max. current output per valve: 100mA/ 350mA solenoid/pinch valve	Pressures selectable in mm/Hg in increments of 1 or other units selectable
Max. Voltage Per Valve: 22 volts	Sample flow rate: 1ml in 9 min. @ 520 mmHg w/standard QMM
Max. ontime per valve: 4 hr 40 min Min. ontime per valve: 2ms @ 12V & 1ms @ 22V	Standard QMM: 8 tubes @ 100µm ID, 1 tube @ 200µm ID, 100µm ID tip
Max. input pressure: 3970mmHg - other units selectable	Tip sizes available: 100, 150, 200 µm ID
Max. pressure applied: ~800mmHg	USB 2.0: Support Software is compatible with Windows XP (SP2)/ 2000/ ME
Max. No. of Sequence Steps: 300	Power requirements: 120/220V 360 W
Max. No. of Sequence events with looping: 300 ²⁰	OctaFlow interface: 19"x3.5"x10", 10 lbs/4.5kg
Infinite Step Function in Repeat Mode	Programmable Voltage Range: 1-22volts/valve

*specifications are subject to change without prior notification

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