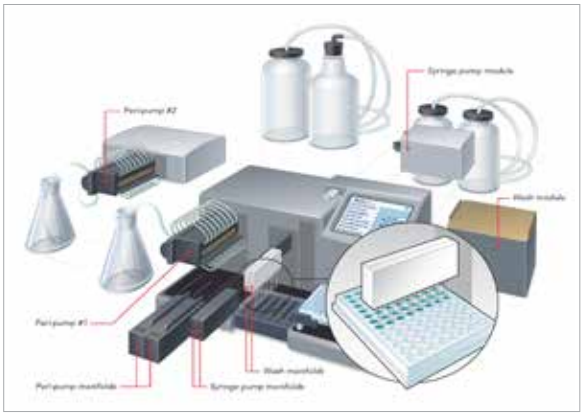
L I Q U I D H A N D L I N G

MultiFlo™ FX Microplate Dispenser

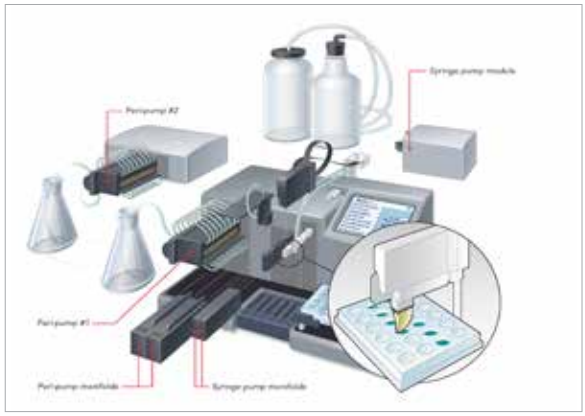
MultiFlo™ FX is an automated multi-mode reagent dispenser for 6- to 1536-well microplates offering BioTek's unique Parallel Dispense™ technology. Up to four independent reagents can be dispensed in parallel without potential carryover.

MultiFlo FX becomes a versatile multi-mode dispenser with the addition of either the RAD™ technology for random access dispensing to 6- to 384-well plates or a wash module for 6- to 384-well plate washing.

Fast, intuitive programming and operation are via the color touch screen user interface. A MultiFlo FX configured with either RAD technology or the wash module replaces up to five liquid handlers.



MultiFlo FX configured with optional wash module.



MultiFlo FX configured with optional RAD module.

Features:

RAD TECHNOLOGY

- Multi-mode dispensing replaces up to four dispensers and a washer
- RAD™ technology for dispensing individual volumes to individual wells
- Parallel Dispense™: peristaltic or syringe dispensing with no carryover
- Cost savings through dispense mode options and low prime volumes
- Cell friendly angled dispense and wash tubes, adjustable flow rates and adjustable carrier speed
- Onboard computer with two USB flash drive ports for file transfer, storage and operation
- Optional plate washing module for additional functionality
- Modular and upgradable
- BioStack™ 4 compatible to automate cell-based workflows using lidded plates

BioTek®

www.biotek.com

Typical Applications:

- Primary/secondary screening assays
- Compound storage
- Genomics and proteomics research
- ELISA
- Cell-based washing, fixing and staining

Optional Accessories:

- Peristaltic pump module
- Syringe pump module
- Product Qualification Package
- BioStack 4 Microplate Stacker
- Liquid Handling Control™ Software
- 1260023 Wash Module Upgrade Kit (for RAD configurations)

Configurations:

MFX:	MultiFlo FX base unit
MFXP:	MultiFlo FX with one peri pump
MFXW:	MultiFlo FX with washer
MFXPW:	MultiFlo FX with one peri pump and washer
MFXR:	MultiFlo FX with one peri pump and RAD
MFXPR:	MultiFlo FX with two peri pumps and RAD

See website or price list for complete listing.

RAD module with unique 8-to-1 cassette.

Specifications:

General

User interface: 5.7" LCD touch screen display

	Labware supported	Volume range/well*
Multi-channel cassettes	6-, 12-, 24-, 48-, 96-, 384- and 1536-well microplates (standard, low profile, deep well); PCR plates, microtubes	500 nL - 30,000 µL
RAD single tube/tip cassette		
Syringe pump		3 µL - 30,000 µL
		20 µL - 30,000 µL
RAD single tube/tip cassette	Same as above, except 1536-well	500 nL - 30,000 µL
RAD 8-to-1 tube/ tip cassette	6-, 12-, and 24-well	8 µL - 30,000 µL

**Manifold and plate type dependent.*

Sterilization	Peri and syringe pump cassettes	Autoclavable *(model/ cassette dependent)* Chemical
	Wash module	Chemical

USB ports (2): For protocol storage and transfer
For optional external mouse or keypad
Shaking: Slow, medium, fast or variable up to 60 minutes
Soak time: Programmable in minutes and seconds, up to 60 minutes
Convenience/ maintenance: Adjustment utility for plate positioning
Pre-programmed maintenance routines
Automation: Compatible with BioStack™ and 3rd party automation
Onboard software: Create, edit or run multiple protocols, extensive Help system
Software: Liquid Handling Control™, for PC *(optional)*

Dispensing – Peristaltic Pump (Multi-Channel)

Dispense speed: 1 µL/well, 1536 wells: 21 seconds *(1 µL cassette)*
5 µL/well, 384 wells: 6.5 seconds *(5 µL cassette)*
10 µL/well, 384 wells: 8 seconds *(10 µL cassette)*
10 µL/well, 96 wells: 3 seconds *(5 µL cassette)*

Cassette size	Dispense accuracy	Dispense precision	Minimum prime volume
1 µL	±5% typical at 1 µL	≤5% CV typical at 1 µL	0.78 – 1.20 mL
		≤10% CV typical at 500 nL	
5 µL	±2% typical at 5 µL	≤2.5% CV typical at 5 µL	2.75 – 4.23 mL
10 µL	±2% typical at 10 µL	≤2% CV typical at 10 µL	4.79 – 7.36 mL

Dispensing – Peristaltic Pump (RAD Technology)

			96 wells	384 wells
Dispense speed (flow rate high)	1 µL cassette	1 µL/well	19 s	55 s
		10 µL/well	33 s	112 s
	5 µL cassette	5 µL/well	19 s	58 s
	10 µL cassette	10 µL/well	21 s	66 s

		Precision		Accuracy	
Dispense performance (flow rate high)	1 µL cassette (med flow rate)	0.5 µL/well	10 % CV	-	
		≥2 µL/well	5% CV	≥2 µL/well	±5%
	5 µL cassette	5 µL/well	5% CV	5 µL/well	±4%
		≥10 µL/well	2.5% CV	≥10 µL/well	±2%
	10 µL cassette	10 µL/well	4% CV	10 µL/well	±4%
		≥20 µL/well	2% CV	≥20 µL/well	±2%
	8-to-1 cassette	≥10 µL/well	2.5% CV	40 µL/well	±4%
		-		≥80 µL/well	±2%

Dispensing – Syringe Pump

Dispense speed: 20 µL/well, 96 wells, 1 x 16: 5 seconds
20 µL/well, 384 wells, 1 x 16: 14 seconds
3 µL/well, 1536 wells, 2 x 32: 7 seconds
Prime volume: 12 mL minimum

Dispense accuracy	Dispense precision
±1 µL at 5 µL	≤5% CV at 5 µL
±1 µL at 20 µL	≤2.5% CV at 20 µL
±1% at 100 µL	≤1% CV at 100 µL

Washing

Labware: 6- to 384-well microplates
Fluid delivery: One positive displacement syringe pump
Dispense precision: ≤3% CV (96-/384-well plates; 300 µL/well)
≤3% CV (12-/48-well plates; volume dependent)
≤5% CV (6-well plates; 5560 µL/well)
Dispense accuracy: ±3%
Residual volume: ≤2 µL/well, 300 µL dispense, 0.1 Tween
Supply bottle volume: 2 L

Physical Characteristics

Power: 100 – 240 Volts AC 50/60 Hz
Dimensions: Base instrument:
17.19" W x 11.75" D x 8" H (43.51 x 29.21 x 20.32 cm)
Weight: 19.5 lbs (8.8 kg)

Regulatory

CE and TUV marked, RoHS compliant. Models for In Vitro Diagnostic use are available.

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Performance values represent average factory observed test values.
**Specifications subject to change.*