

### SHARED DISPENSER

Slanted or straight dispenser heads are available for 6, 12, 24, 48, 96, 384 and 1536 well plates. The **Blue®Flow** graphical user interface allows selection of cell-friendly dispense modes to minimize loss of weakly adherent/ suspension cells.

### LIQUID INPUTS

In the standard configuration, liquids from up to seven inputs can be dispensed through a shared dispenser head and internal liquid path. Each liquid input is addressed individually and tuned with the **Blue®Flow** software.

### DEDICATED DISPENSER

In the dedicated dispenser configuration, up to 3 dedicated liquid inputs are added on the right side of the **Blue®Washer**. Each input uses its own “dedicated” dispenser head and internal liquid path. Eliminating the need to purge a shared liquid path when switching liquids makes it economical to dispense precious reagents. In addition, different dispenser heads can be mixed and matched eliminating the need to swap dispensers when switching plate types.

### DRUM CLEAN

The internal rotor chamber and all dispenser components – shared and dedicated – are automatically cleaned and disinfected using **Blue®Washer's** patent pending self-cleaning methods. **Blue®Washer's** submersive DrumClean method reliably removes any built-up deposits from inside the rotor and rotor chamber for periodic, intense decontamination.

### LINEAR DRIVE

**Blue®Washer's** patented linear drive positions plates with micrometer precision during dispensing, ensuring dispense jets enter wells in the exact location required by the application, every time. For instance, the dispense jet can be trained to hit the front wall of the wells to ensure that sensitive cells do not detach.

### PLATE FORMATS

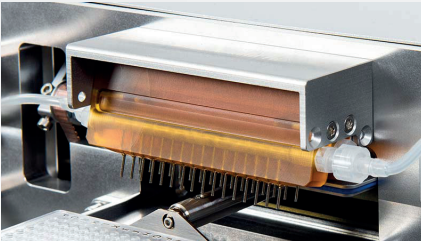
Blue@Washer can handle any SBS format plate up to 17.4mm height including 1536 well strips or slides. **Blue®Washer XL** is designed for taller plates up to 27mm height in applications such as 3D cell-based assays or higher volume magnetic bead assays.

## Accessories



### DISPENSER COMBS

Available for 6, 12, 24, 48, 96, 384 and 1536 well plates



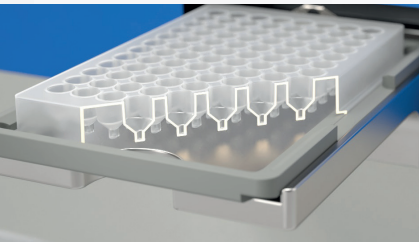
### DEDICATED DISPENSER HEAD

**Blue®Washer** can be configured with up to 3- and **Blue®Washer XL** with up to 2 dedicated dispensers



### CARRIER + BALANCE

Set of 2 carriers with 52mm cut-out compatible with HRB grippers for 14.5mm, 10.4mm and 8mm standard plates



### BLUE@PLATE

For magnetic bead applications in standard 96 well format



### BOTTLE CAPS & TUBES

Set of color coded reagent tubes (1m) with Luer locks and GL-45 bottle caps



### BLUEDAILY & BLUEINTENSE CLEANING SOLUTION

Anti-bacterial & fungicidal cleaning agent for daily cleaning and intensive alkaline micro biocidal cleaning agent to be used at least once per week

## Test your customized Blue®Washer configuration

Each assay is different! Let us know about your specific workflows & individual targets to get a customized **Blue®Washer** configuration for your assay campaigns.



GET FREE DEMO

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## BLUE®WASHER / BLUE®WASHER XL

CLEAN DATA, SHORTER TURNAROUND TIME, REDUCED COST FOR YOUR ASSAY CAMPAIGNS

The **Blue®Washer** uses contact-free centrifugation technology to remove liquids from 96, 384 and 1536 micro-well plates without disposable tips. This environmentally friendly technology allows you to handle cellular, bead

based, genomic, and ELISA assays contamination free with no residual volume, eliminating background and variability in assay data. The integrated dispenser leads to unparalleled efficiency in your assay campaigns.

### BETTER DATA

- ▶ Z' lift 0.1-0.3
- ▶ Better %CV
- ▶ Lower background due to residual volume: 0.1-0.3µl/well
- ▶ No contact, no “donuts”

### HIGH THROUGHPUT

- ▶ Evacuates any plate < 20sec
- ▶ Frees up automated liquid handler (ALH)
- ▶ Easy to automate and integrate

### SAVES COST

- ▶ Doubles ALH throughput
- ▶ Tip-less evacuation – less waste

### SIMPLER ASSAY DESIGN

- ▶ Fewer wash steps
- ▶ Simpler assay automation
- ▶ Simpler transition to 1536

### FAST, COMPACT, QUIET

- ▶ < 20 sec to evacuate plate
- ▶ 40 cm x 70cm footprint
- ▶ No compressed air or vacuum

### MORE RELIABLE SCREENS

- ▶ No clogged needles
- ▶ No re-calibration
- ▶ Constant residual volume

### BETTER DATA

- ▶ Lower background and variability due to consistent and complete buffer removal

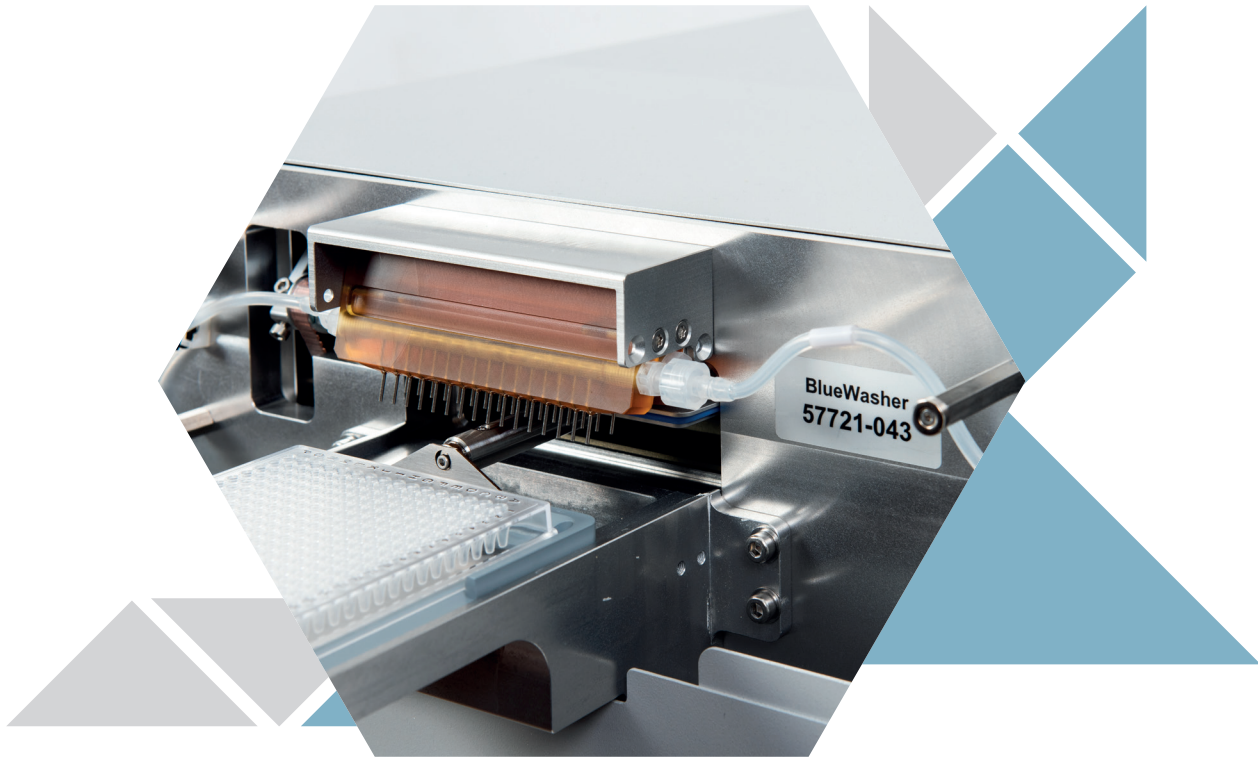


Drive your applications with the centrifugal

# Blue®Washer / Blue®Washer XL

### CENTRIFUGATION

**Blue®Washer** uses centrifugation instead of aspiration to remove liquids from microtiter plates. With **Blue®Washer's** centrifugal technology, microtiter plates are spun around a horizontal axis, and liquids are removed from wells by the centrifugal forces, immediately leaving the rotor chamber through **Blue®Washer's** patented passive drain. Centrifugal evacuation significantly reduces residual volumes and variability in media changes or when removing supernatant.



### 2D CELLULAR ASSAYS

Centrifugal media evacuation reduces background and variability in cellular assay data, reducing %CV and improving z' by 0.1 to 0.3. Higher z' means more reliable compound profiles!

### 3D CELLUAR ASSAYS

Media change of highly sensitive spheroid / organoid assays can be realized with the gentle **Blue®Washer** evacuation programs

### SUSPENSION CELLS

Cells in suspension are washed / supernatant is removed efficiently after pelleting. Sophisticated workflows including staining procedures are possible

### CELL SEEDING

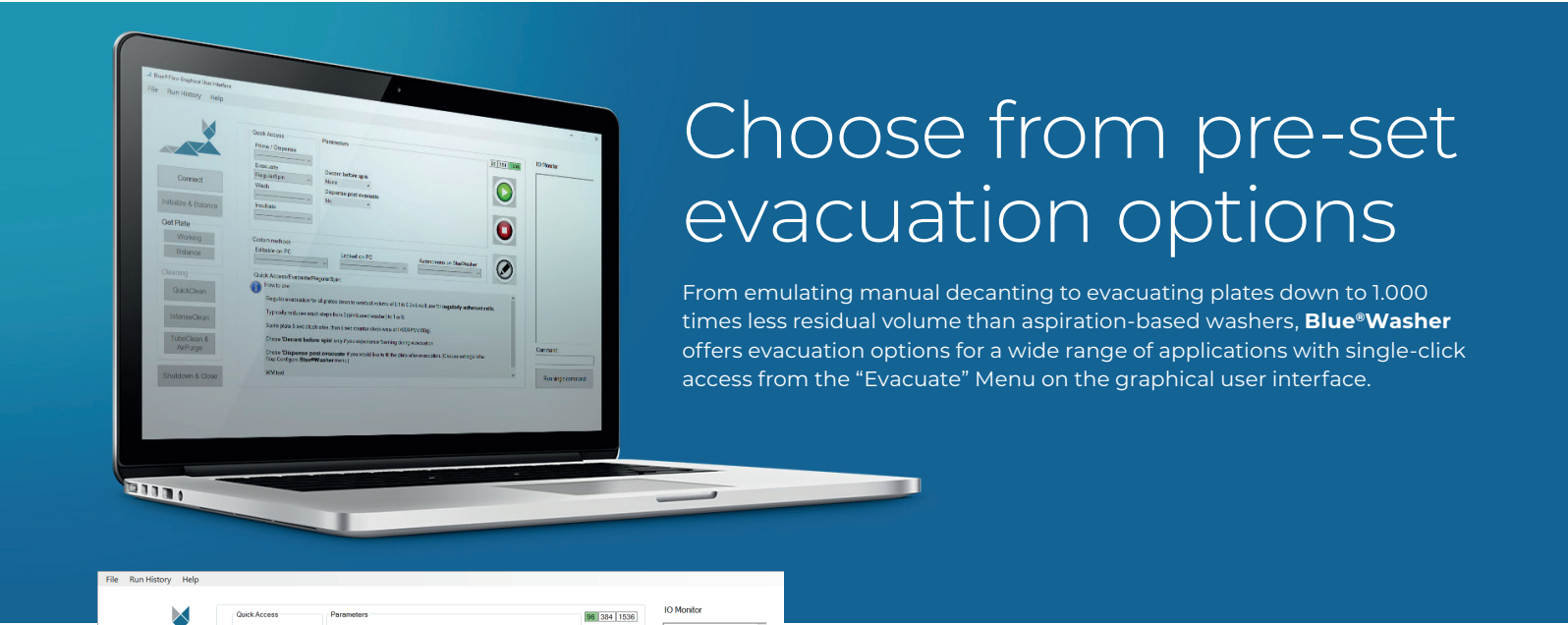
**Blue®Washer** dedicated dispenser technology enables reproducible seeding of cells to form spheroids in low attachment plates.

# Blue®Flow - User Interface

Customize your **Blue®Washer** Workflows

Intuitive Graphical User Interface featuring, pre-set application-specific evacuation methods along with a click-and-drag method manager to customize protocols easily.

- ✓ Quick access to all **Blue®Washer** functions
- ✓ Single-click cleaning for effective contamination control
- ✓ Workflow editor for simple programming of complex workflows
- ✓ open, well documented API for easy integration with 3rd party systems
- ✓ Integrations with Agilent, Beckman Coulter, BioNex, BioSero, Hamilton, HighResBio, ThermoFisher



From emulating manual decanting to evacuating plates down to 1,000 times less residual volume than aspiration-based washers, **Blue®Washer** offers evacuation options for a wide range of applications with single-click access from the "Evacuate" Menu on the graphical user interface.

#### HARD DECANT

For low affinity ELISA  
Emulates manual decanting – reproducibly & automated

#### MagBeadSpin

For magnetic bead applications  
Emulates manual tapping – reproducibly & automated

#### StrongSpin

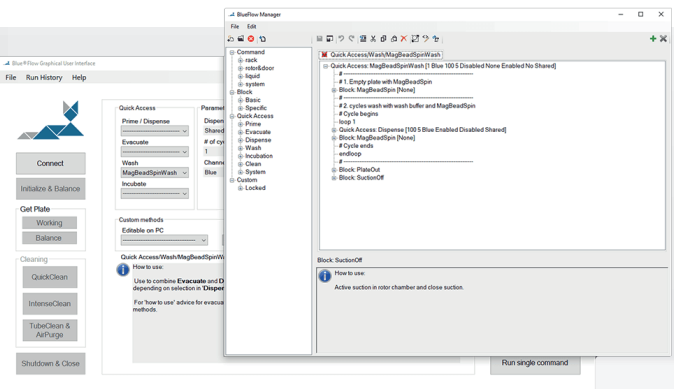
For complete ELISA background removal  
adherent cellular assays  
10 - 1,000 times dryer than manual tapping. For automated & complete slide drying for array imaging, "no wait"

#### ExtraSpin

#### ExtraSpin

## Optimize your specific Workflows with the highly flexible Blue®Flow Editor

Test your workflows and set all required parameters individually to guarantee optimal results in your assays.



### MAGNETIC BEAD ASSAYS

**Blue®Washer** significantly reduces run time and tip waste for magnetic bead assays such as NGS library preparation, DNA extraction, and multiplex protein assays. They can easily be migrated to the Blue®Washer platform.

### GENOMICS - NGS ASSAYS

Centrifugal Bead Separation (CBS) dramatically reduces tip cost and speeds up workflows such as AMPure® magnetic bead clean-up for NGS library construction.

### DISPENSING

The **Blue®Washer** dispensing technology allows for fast, highly reproducible, and cell friendly- dispensing of all SBS plate formats including 1536.

### PLATE COATING

**Blue®Bench** is the perfect set up for poly-L-lysine, fibronectin, collagen or other coating protocols, particularly in 1536 well format as a walk away workflow - plates ready to use.

# Specifications

	Blue®Washer	Blue®Washer XL
Applications	Contactless media change & liquid evacuation with near zero, reproducible residual volume for 96, 384, 1536 well MTPs	Contactless media change & liquid evacuation with near zero, reproducible residual volume for 6, 12, 24, 48, 96 and 384 well MTPs
Compatibility	Any SBS format plate up to 17.4mm height (including 1536 well) strip or slides, custom formats programmable; dispensing into 96 and 384 well plates; 1536 well MTP option	Any SBS format plate up to 27mm height strip or slides, custom formats programmable; dispensing into 6, 12, 24, 48, 96 and 384 well plates
Centrifuge system	Liquid evacuation by centrifugation; plates positioned in symmetric rotor with well openings facing outwards to expel liquids. Rotor driven by computer controlled, high power servo motor	
Residual volume	0.01µl to 5µl per well, depending on application-specific evacuation method selected	
Shaking & incubation	Programmable speeds, rocking angles and time, ideal to break up liquid layers	
Centrifuge specs	RPM: 5 to 3,500 RPM (= 630 g), Acceleration: <1,500 RPM/s, Deceleration:< 1,000 RPM/s Maximum weight difference between active plate and balance plate in dry condition: 15 g @ 3,500 rpm, 20 g @ 2,000 rpm, 35 g @ 1,500 rpm, 70 g @ 1,000 rpm	
Dispense system	Precision membrane pump and electromechanical valves controlled by on-board Linux CPU	
Liquid inputs	Choice of 4 or 7 liquid inputs with Luer lock fittings	
Specifications (all volumes per well)	<b>Manifold:</b> 8, 16, or 32 needles (for 96/384/1536 well MTP) <b>Dispense jet position:</b> Slanted dispenser mount to aim at well walls, plate off-set adjustable <b>Dispense pressure:</b> adjustable in 5 steps, from approx. 35% to full pressure <b>Dispense speeds:</b> 96w MTP: 7 sec @ 100µl; 384w MTP: 13 sec @ 50µl; 1536w MTP: 13 sec @ 8µl <b>Range &amp; accuracy:</b> 96 and 384 MTP: >5µl, < 3%CV @ 100µl; 1536 MTP: >3µl, < 5%CV @ 10µl	<b>Manifold:</b> 2, 3, 4, 6, 8, 16 needles (for 6/12/24/48/ 96/384well MTP) <b>Dispense jet position:</b> Slanted dispenser mount to aim at well walls, plate off-set adjustable <b>Dispense pressure:</b> adjustable in 5 steps, from approx. 35% to full pressure <b>Dispense speeds:</b> 96w MTP: 7 sec @ 100µl; 384w MTP: 13 sec @ 50µl <b>Range &amp; accuracy:</b> 6, 12, 24, 48 MTP: >xµl; 96 and 384 MTP: >5µl, < 3%CV @ 100µl;
Internal dead volume	8 ml (input connector to dispenser pin tips)	
Tubes	<b>Reagent tubes:</b> length: 1m, Ø outside: 5mm, Ø inside: 3mm; Luer locks on both ends connect Blue®Washer input to Luer lock on GL-45 cap for reagent bottle, color-coded	
Software and operation	PC-based GUI with quick access to pre-set, application specific evacuation methods and editor to customize methods and program workflows. Autonomous mode to run methods from Blue®Washer's internal memory	
Automation	Easy plate load/ pick-up by simple robotic gripper; standard API, USB and Ethernet Available automated plate loading via Blue®Bench; choice of plate storage in up to 5 stacks or random access hotels with auto de-lidding/ re-lidding	
Safety	Centrifugation shut off in case of excessive vibration; sensor controlled interlocking door	
Cleaning & decontamination	Single touch QuickClean and IntenseClean protocols with custom Blue®Daily and Blue®Intense cleaning solutions highly effective to clean and decontaminate Blue®Washer interior	
Dimensions (HxWxD)	20.5 cm x 36.5 cm x 69.0 cm   8.1" x 14.4" x 27.2"	20.5 cm x 36.5 cm x 69.8 cm   8.1" x 14.4" x 27.5" electrical and shared liquid connections on left side wall, dedicated liquid connections on right side wall
Weight	27 kg   60 lbs	28 kg   62 lbs
Power requirements	100 – 240 V, 50/60 Hz, 350 W, auto sensing, I max = 10A	
Ambient temperature	15°C – 55°C   60 F – 130F	