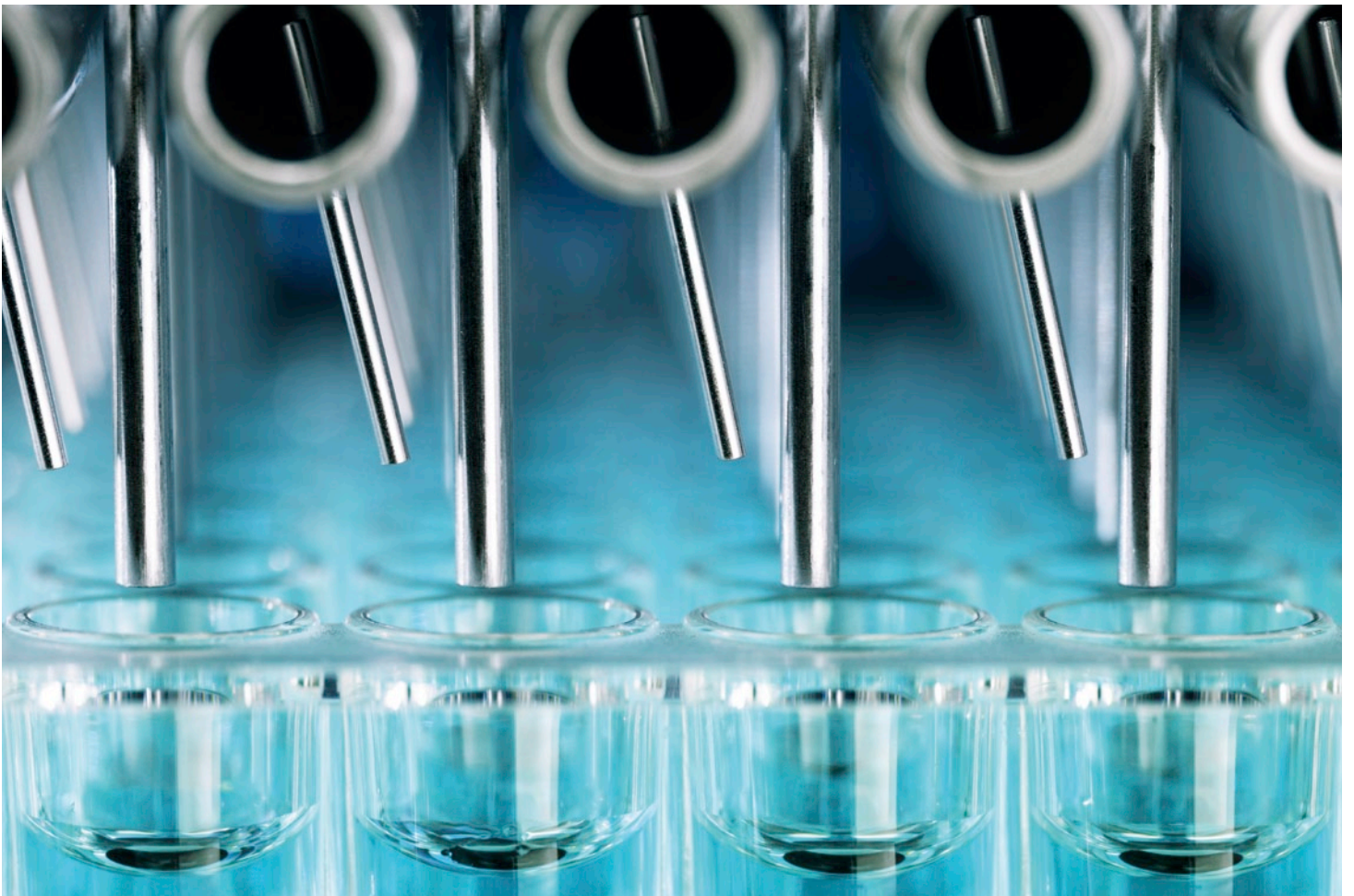


Zoom HT Microplate Washer

The Fastest Microplate Washer For The Life Sciences



Zoom HT Microplate Washer

Zoom HT is ...

fast

It takes only 17 seconds for a triple wash of a 96 well microplate. This is made possible by the unique one-rail plate transfer design which shuttles the microplate the short distance from stacking to washing positions.

flexible

The Zoom HT Washer will process both 96 and 384 well plates using the same wash head. Priming, washing, as well as shaking and dispensing steps can be combined in any order and saved in memory. An optional Dispense Module is available for precise dispensing of additional reagents with minimal dead volume (important for adding antibody conjugate).

efficient

The Zoom HT Washer frees up your valuable time. The built-in software is intuitive and fast. No external computer is required. Protocols are easily edited as needed, but can also be protected from unauthorized changes in the Admin mode.

accurate and precise

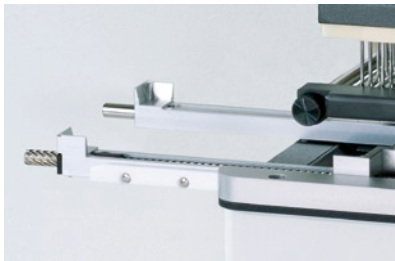
The robust and meticulous design of the Zoom HT Washer ensures excellent accuracy and precision of washing and dispensing for the lifetime of the instrument. The 3D aspiration function allows the removal of liquids with virtually no residual volume.

reliable

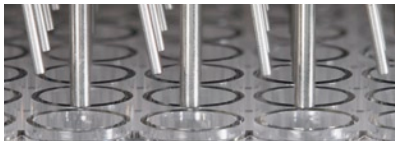
The powerful vacuum system ensures a constant liquid flow in the aspiration path. Liquid waste is removed automatically by the unique self-emptying discharge system. The complete liquid path is made of chemically resistant materials. Regular thorough cleaning is supported by assisted self-maintenance protocols.

Applications

- Microplate coating
- ELISA assays
- ELISPOT assays
- Multiplex assays
- Cell based biochemical or toxicity assays
- Loosely adherent cell layer washing



One-rail plate transfer design



Wash head for 96 and 384 wells



Buffer selection



Buffer selection

Reliable Solutions for Your Daily Work



Zoom HT Microplate Washer with Dispense Module (optional)

Zoom HT Microplate Washer

Zoom HT 96 channel wash head for 96 well and 384 well microplates



Plate Washing with Maximum Reliability

The Zoom HT wash head

Each wash channel has its own aspirate tip and dispense tip, which allows simultaneous washing of all 96 wells. The same 96 channel wash head is used for 384 well washing in four quadrants. Rapid positioning of the wash head provides 384 well wash speeds comparable to 384 channel washers. Large diameter aspirate tips, 3-dimensional (3D) tip positioning and a constant flow rate vacuum pump ensure a smooth, efficient washing performance.

Individual optimization of microplate washing

Two wash modes are available: Regular wash mode and Superwash mode (also known as "Overflow mode"). In the regular wash mode, the wash fluid dispensing and evacuation follow each other. In the Superwash mode, the wash fluid dispensing and evacuation are conducted simultaneously creating a continuous wash fluid flow through the well. The Superwash flow rate is adjustable. For additional wash procedure optimization, the Zoom HT supports creating and storing of the 3D tip positioning profile for each microplate type and assay. This profile defines the aspirate tip horizontal and vertical positions thereby mapping how the well is aspirated.

In addition, the speed with which the tip is immersed into the well is adjustable. Residual wash fluid volumes less than 1 µl/well are attainable with the Zoom HT.* * in presence of surfactant in the wash fluid.

Automatic switch of wash liquids

Zoom HT is available with one wash buffer inlet, and as versions which can automatically switch between two or four inlets. This feature is beneficial for applications which require sequential washing with different buffers, or for an automatic cleanup routine after use.

A unique self-emptying liquid discharge system

The discarded wash fluids are captured by a self-emptying waste trap, which allows uninterrupted processing of large microplate batches. Biohazard waste management is supported by automatic addition of a decontamination solution. The decontaminated waste is continuously drained from the trap.

Zoom HT for ELISA processing

The most demanding and labor-intensive steps of an ELISA can be performed by the Zoom HT. In addition to the washing steps, Zoom HT can add reagents and provide shaking function.

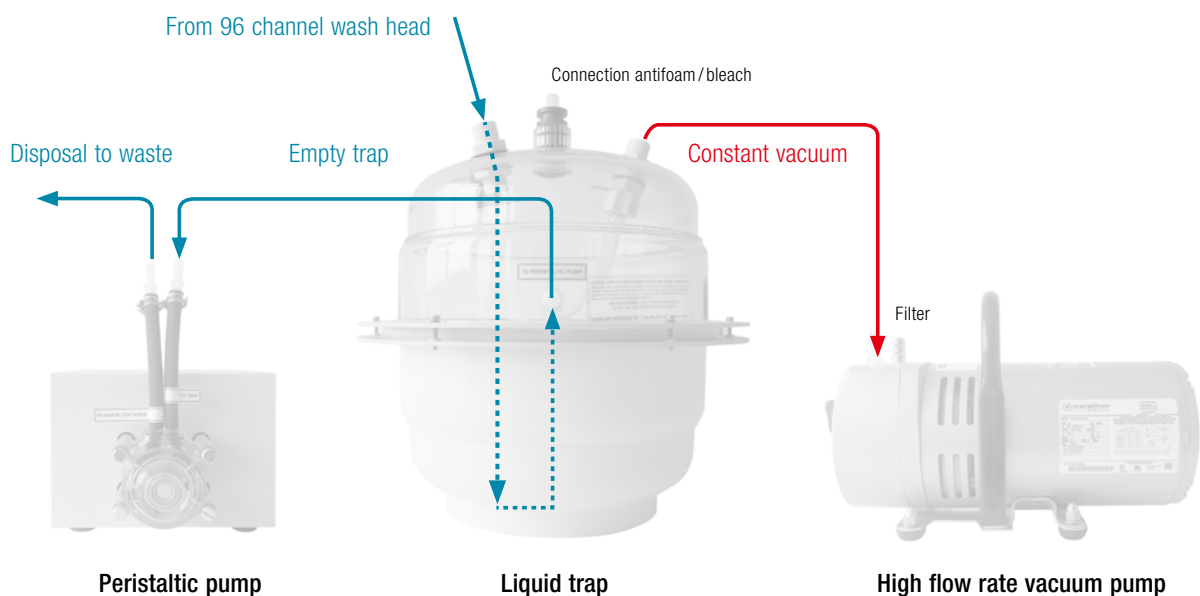
Zoom HT Microplate Coating System

Zoom HT is the ideal tool for plate coating. The system is robust, easy-to-use and designed for speed and throughput. It offers incredible productivity on only 60 cm of bench space.

Throughput coating*

Coat + Stack	250 plates/h, 1.750 plates/day
Aspirate + 3x Wash + Stack	50 plates/h, 1.050 plates/day
Aspirate + Block + Stack	250 plates/h, 1.750 plates/day
Block	360 plates/h, 2.520 plates/day
Final Aspirate + Stack	300 plates/h, 2.100 plates/day

* 96 well plate, based on 7 h shift



A unique self-emptying liquid discharge system

Zoom HT Microplate Washer

The Dispense Module is operated with one or two 10 ml syringes



Wash head and two 8-way dispense manifolds



Detail of 4-inlet version



Dispense Options and Accessories

Optional Dispense Module

The Dispense Module is an easy to install plug-and-play device that does not require calibration, making it extremely easy to use. With the addition of a Dispense Module, the Zoom Washer becomes an efficient washer-dispenser combination instrument. The Dispense Module ensures timely and accurate one or two-channel reagent dispensing. Titertek-Berthold uses a proprietary syringe based liquid delivery system for reagent dispensing. Direct drive and positive displacement syringes guarantee the highest precision and accuracy of dispensing. The Dispense module feeds one or two 8- or 16-way manifolds (for 96 or 384 well microplates).

Throughput

Wash	
96 well, 1 x 300 µl wash	257 plates/h
96 well, 3 x 300 µl wash	150 plates/h
384 well, 3 x 75 µl wash	82 plates/h
Wash and reagent dispense*	
96 well, 1 x 300 µl wash + 50 µl dispense	135 plates/h
96 well, 3 x 300 µl wash + 50 µl dispense	100 plates/h
384 well, 3 x 75 µl wash + 20 µl dispense	58 plates/h
Dispense*	
96 well, 1-channel reagent dispense, 100 µl	180 plates/h
96 well, 2-channel reagent dispense, 100 µl	240 plates/h
384 well, 1-channel reagent dispense, 20 µl	155 plates/h

* with optional Dispense Module installed

Easy maintenance

The unique design of the dispense manifold eliminates the need for special cleaning options such as ultrasonic cleaning. The aspirate head is maintenance free. The large aspirate tip diameter, combined with a continuous vacuum, reliably prevents an accumulation of reagent residue and clogging.

Ordering Infos

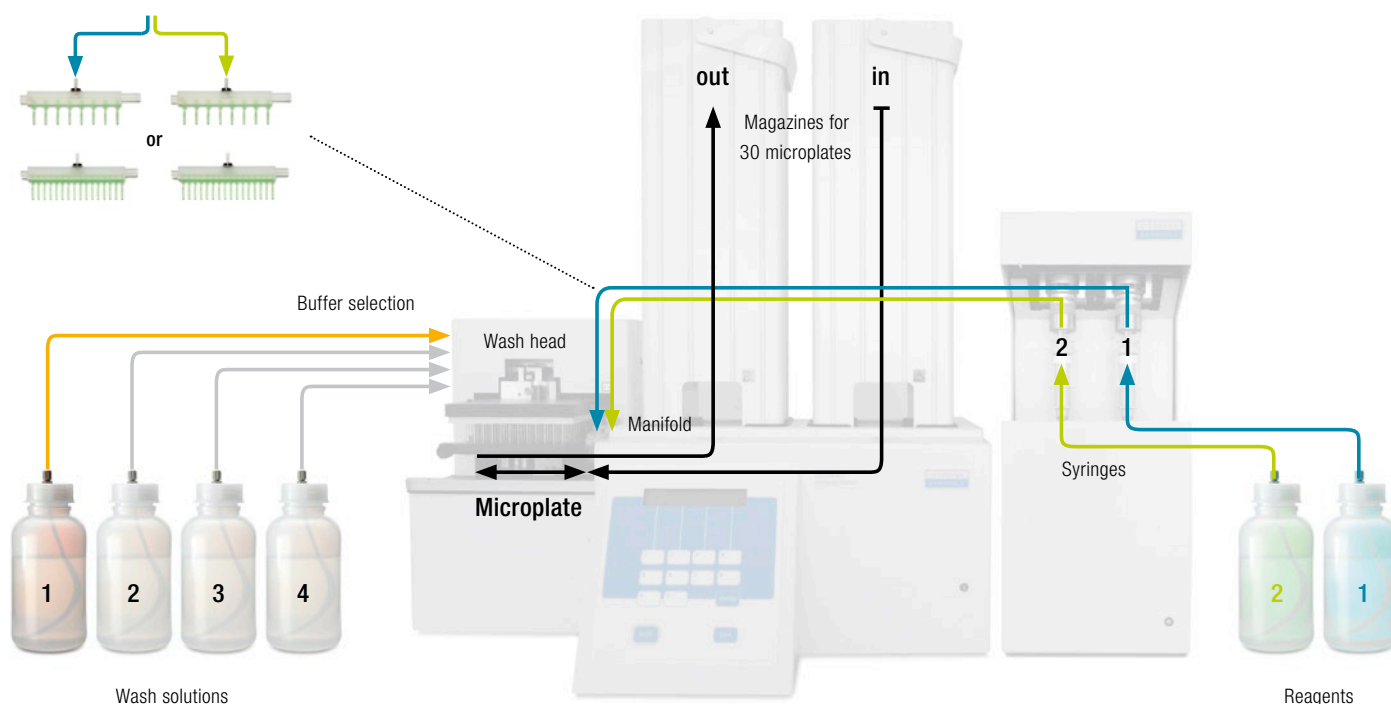
Zoom HT

14000315	Zoom HT Microplate Washer, 230V, one buffer inlet
14000320	Zoom HT Microplate Washer, 115V, one buffer inlet
14000316	Zoom HT Microplate Washer BS2, 230V, 2-channel buffer selection
14000321	Zoom HT Microplate Washer BS2, 115V, 2-channel buffer selection
14000318	Zoom HT Microplate Washer BS4, 230V, 4-channel buffer selection
14000323	Zoom HT Microplate Washer BS4, 115V, 4-channel buffer selection
14000902	30 Plate Magazine

Accessories

14000710	Dispense Module, 96 well, 2-channels, 230V
14000711	Dispense Module, 96 well, 2-channels, 115V
14000712	Dispense Module, 384 well, 2-channels, 230V
14000713	Dispense Module, 384 well, 2-channels, 115V
14000354	Pump/Trap Discharge System, 230V
14000355	Pump/Trap Discharge System, 115V
18500178	IQ/OQ/PQ Manual
18500187	Strip Push-Down Device, applicable for strip plates
18800420	Zoom HT Training at Titertek-Berthold

8- or 16-way dispense manifolds



System configuration – Up to 2 reagents, up to 4 wash fluids, up to 99 programs

Zoom HT Microplate Washer

Configuration	Wash Head	96 channel wash head for fastest processing of 96 and 384 well microplates
	Microplates	96 well plates and strips, 384 well; Dimensions according to ANSI SLAS
	Stacker	One-rail design connecting wash, dispense, and storage positions in short distance on one level
Settings (96 channel)	Dispense Volume	5–300 µl
	Shaking	Up to 80 s, amplitude 1 mm, frequency 12 Hz
	Aspirate Tip Descent Speeds	Slow / Medium / Fast
	Soak Time	0–99 s
	Wash Modes	Regular and Superwash
	Number of Programs	1–99
	Wash Cycles Per Program	1–99
	Wash Fluid Selection	1 inlet (standard), 2 or 4 inlet versions
	Protocol Protection	Admin mode to prevent unauthorized changes
Performance	Dispense Accuracy	± 2 % typical @ 50–300 µl range
	Dispense Precision	≤ 2,5 % CV @ 200 µl ≤ 3 % CV @ 100 µl ≤ 4,5 % CV @ 50 µl
	Residual Volume	< 2 µl/well
	Plate Processing Speed	96 well plate, 1 cycle 300 µl incl. stack: 14 s 96 well plate, 3 cycles 300 µl incl. stack: 24 s 384 well plate, 3 cycles 75 µl incl. stack: 44 s
General Specifications	Dimensions (HxWxD)	61 x 69 x 56 cm / 24 x 27 x 22 inch
	Weight	29.5 kg / 65 lb
	Power Consumption	300 VA
	Power Requirements	100–120 V 50/60 Hz; 220–240 V 50 Hz
	Operating Temperature	10–40° C
	Liquid Path Materials	Stainless steel, Teflon®, PVC, Norprene, Silicone, Polysulfone

Dispense Module

Configuration	Dispense Manifolds	8-way and 16-way manifolds available
	Dispense Manifold Ports	2 in direct proximity to wash head for immediate dispensing after aspiration
	Syringe Size	2 x 10 ml, separate channels
Settings	Dispensing Technology	Positive Displacement
	Dispense Speeds	1–8
	Number of Reagents	Up to 2
	Dispense Volume	5–300 µl
Performance	Dispense Accuracy	≤ 1 % @ 100 µl
	Dispense Precision	≤ 1 % CV @ 200 µl ≤ 3 % CV @ 50 µl ≤ 5 % CV @ 10 µl
	Dimensions (WxDxH)	17 x 22 x 40 cm / 6.7 x 8.7 x 15.8 inch
	Weight	12 kg / 26 lb
General Specifications	Power Consumption	175 VA
	Power Requirements	100–120 V 50/60 Hz; 220–240 V 50 Hz
	Operating Temperature	10–40° C
	Liquid Path Materials	Glass, Teflon® and Kel-F