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MultiScreen®HTS Vacuum Manifold

- *DirectStack™ technology enables crosstalk-free filtrate collection*
- *Configurations for deep well or standard receiver plates*
- *ANSI/SBS compliant footprint allows for easy robotic deck integration*
- *Solvent-resistant*

DATA SHEET

Versatile manifold design allows rapid washing and/or collection of samples for a range of applications

Developed for Maximum Versatility

The MultiScreen$_{HTS}$ vacuum manifold is ideal for multiwell filter plate applications in both manual and automated laboratory environments. The manifold supports a wide variety of MultiScreen platforms, including 96-well and 384-well filter plates for bioassays, and deep well Solvinert™ filter plates for sample preparation.

The MultiScreen$_{HTS}$ manifold can be easily configured to support applications that require flow to waste as well as analyte collection. A vacuum pressure indicator is provided as standard equipment to allow users to set and reliably measure vacuum pressure. Controls include an external on/off valve and vacuum level adjustment valve for optimizing filtration performance. Vacuum source options include the use of a Millipore vacuum pump, available separately, or house vacuum.

DirectStack Technology Prevents Cross-contamination

For applications that require filtrate collection for further analysis, the MultiScreen$_{HTS}$ vacuum manifold and filter plates offer a significant improvement over current systems. When used with MultiScreen$_{HTS}$ filter plates and ANSI/SBS standard receiver plates, the DirectStack feature of the HTS system eliminates gaps between flow directors and receiver wells. This technology provides increased reliability for assays where filtrate collection is required. Direct stacking also makes vacuum initiations effortless and complete filtration assay cycles can be done with no manual intervention.

The optional deep well collar can be used to accommodate 96-well deep well receiver plates, while maintaining direct stacking capability when used with the MultiScreen Deep Well Solvinert filter plate.

Broad Solvent Compatibility

The MultiScreen$_{HTS}$ vacuum manifold is constructed from solvent-resistant materials. The vacuum manifold collar is sealed top and bottom with solvent-resistant silicone gaskets for repeated use and low maintenance.

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Plate-on-plate Stacking Improves Assay Reliability

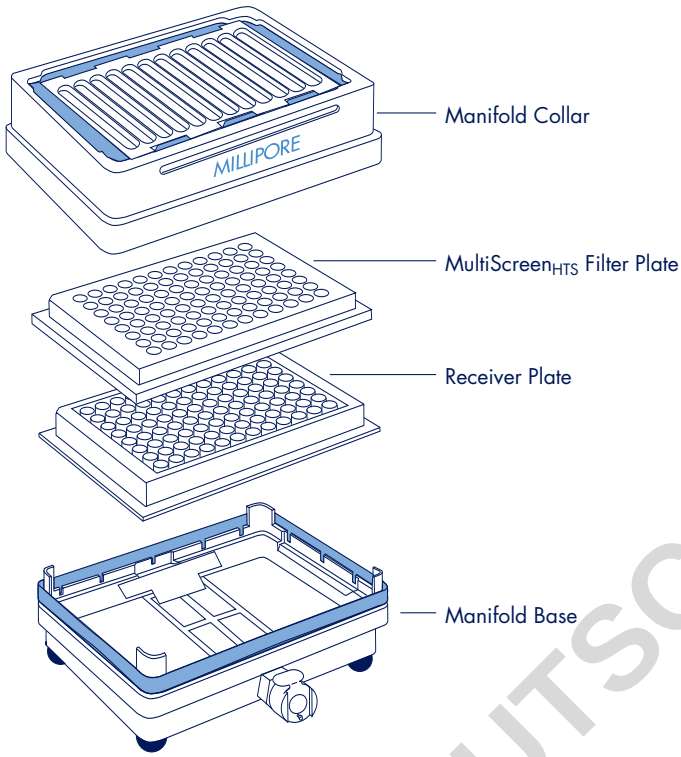
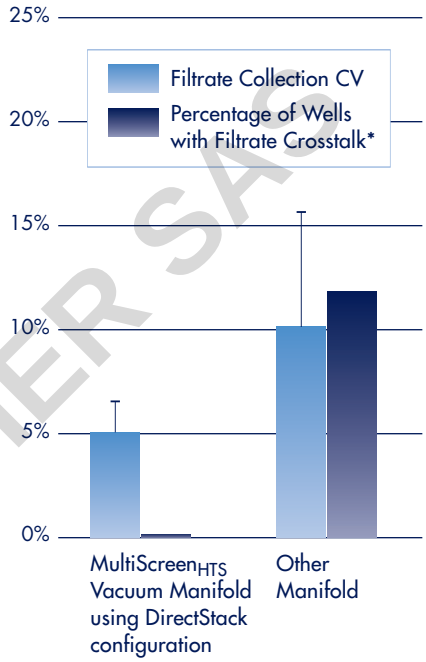


Figure 1. *Plate-on-plate stacking eliminates gaps between flow directors and receiver wells in applications that require filtrate collection. The manifold also accommodates a deep well system (if both receiver and filter plate are deep well, a deep well collar is required to accommodate plate-on-plate stacking).*

Low Crosstalk

MultiScreen$_{HTS}$ vacuum manifold with DirectStack feature enhances 384-well filter plate performance



*A filtrate crosstalk event is defined as any buffer-only well location with >2% fluorescent signal.

Figure 2. *Data shown is for MultiScreen$_{HTS}$ 384 well filter plates (n=4). CV was determined by microplate spectrophotometer absorbance measurement of dye in aqueous buffer. Filtrate crosstalk was determined by filtering a checkerboard pattern of fluorescent dye containing and buffer only containing wells into a 384-well collection plate and reading in a Tecan Spectrafluor™ Plus plate reader.*

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Droplet-free Sample Processing

MultiScreen$_{HTS}$ vacuum manifold eliminates droplets in 384-well sample processing

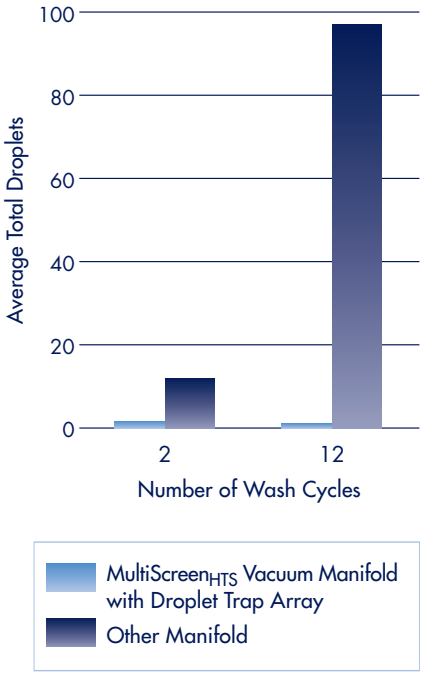
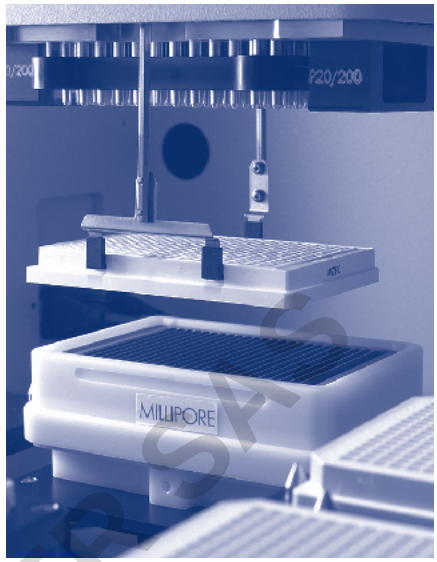


Figure 3. *When filtering to waste in retentate analysis applications such as receptor ligand binding, hanging droplets can pose a cross-contamination risk in plate stacks waiting for analysis or from the work surface. Total droplets is a count of small droplets present on the automation deck, and of droplets counted on a paper towel blot of the filter plate bottom. Droplets are virtually eliminated by the MultiScreen$_{HTS}$ manifold's unique droplet trap accessory. Data shown is for MultiScreen$_{HTS}$ 384 well filter plates on the HTS manifold (n=2) versus a 384-well plate on an "other" manifold. Average total droplets are per 384-well plate.*

Easy Integration for Automated Sample Processing



The compact size of the new MultiScreen$_{HTS}$ Vacuum Manifold makes it an ideal choice for robotic systems. The dimensions of the manifold base are modeled on ANSI/SBS 2004 standards for microplates to fit most robot deck locations. The manifold collar is lightweight and features a groove for easy handling by robotic gripper systems. If additional precision is needed for placement of the collar during assembly/disassembly routines, a collar holder accessory is available.

The MultiScreen$_{HTS}$ vacuum manifold is designed for use on a wide range of automated instruments including:

- Biomek® FX
- Biomek 2000
- BioTek Precision™
- Gilson Workstations 925/940
- Microlab® Star
- Evolution™
- MultiProbe®
- BioCube™
- Xantus, Sias AG
- Tecan Genesis™
- TekBench™
- BioCel® Automation Systems

For additional information and automation support, visit www.millipore.com/automation.

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Ordering Information

Description		Qty/Pk	Catalogue No.
MultiScreen$_{HTS}$ Vacuum Manifold Standard Kit Includes manifold base, standard collar, gaskets, gasket inserts, all tubing, valves, and pressure gauge		1	MSVM HTS 00
Vacuum pumps			
Chemical Duty Pump	115 volts, 60 Hz	1	WP61 115 60
Chemical Duty Pump	100 volts, 50/60 Hz	1	WP61 100 60
Chemical Duty Pump	220 volts, 50 Hz	1	WP61 220 50
Accessories/Replacement parts			
Deep Well Collar, also includes gaskets and collar gasket frame		1	MSVM HTS 0D
Collar Holder, for automation		1	MSVM HTS 0H
Droplet Trap Array		1	MSVM HTS 0A
Collar Gasket Frame		1	MSVM HTS 0F
Vacuum Flask, 1 L		1	XX10 047 05
#8 Stoppers		5	XX20 047 18
Millex-FA$_{50}$ Filter Unit 1.0 µm Hydrophobic PTFE; recommended for vacuum source protection		10	SLFA 050 10
Millex-FG$_{50}$ Filter Unit 0.2 µm Hydrophobic PTFE; recommended for vacuum source protection in biological sample applications		10	SLFG 050 10

Related Information

Literature, including protocols and application notes, at www.millipore.com/HTS

PF1544EN00: MultiScreen$_{HTS}$ 96-well Filter Plates Data Sheet

PF2813EN00: MultiScreen Solvinert and MultiScreen Deep Well Solvinert Filter Plates Data Sheet

PF2041EN00: MultiScreen$_{HTS}$-PH Phosphocellulose Filter Plates for Radiometric Kinase Assays

PF1150EN00: MultiScreen$_{HTS}$ Glass Fiber Filter Plates for Assays including Receptor-Ligand Binding

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