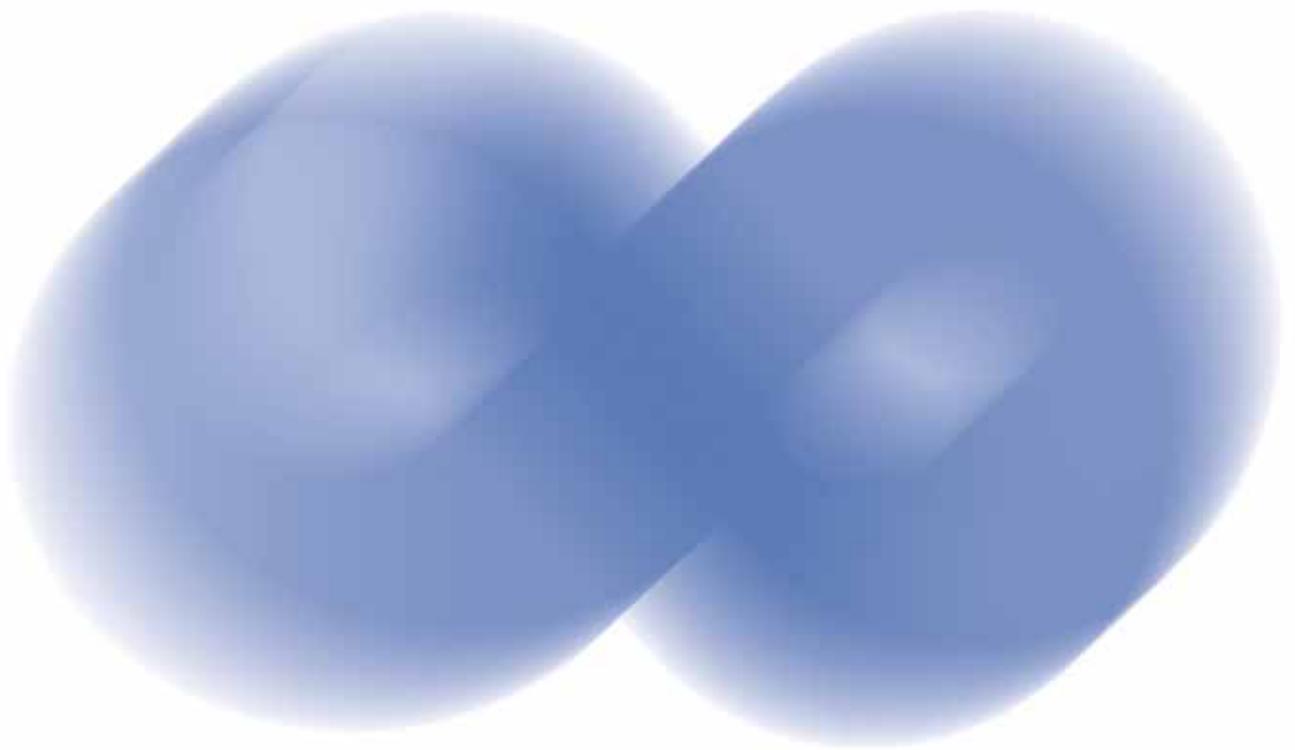


Catalog 2006



 **MATRIX**[®]
fluid thinking.

www.matrixtechcorp.com

Fluid Thinking and the Research Cycle.

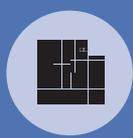


No matter where your work takes you in the research cycle—from fundamental research to high throughput screening—the Matrix product line has been carefully engineered to suit virtually any liquid handling application.

From simple handheld pipettors to sophisticated automated systems, you can be assured that as your needs change or your throughput requirements increase, we'll have the ideal solution to simplify your next project while continually enhancing productivity. Whether your research dictates using only a small segment of our product offering, or your needs require the capabilities of the entire family, you can be sure every

Matrix instrument is engineered in conjunction with our innovative consumables. This integration creates a unique level of compatibility that, in turn, delivers an unsurpassed level of performance.

It's all the result of our commitment to continuous innovation and coming up with new and creative ways to improve your research—or what we at Matrix call "fluid thinking". And it results in the world's most complete, seamless, advanced line of products for all facets of liquid handling: moving liquids (handheld and automated pipettors), storing liquids (tubes and plates), or assaying liquids (microplates and microarray products).

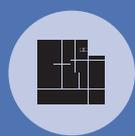


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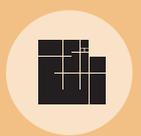
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The most fundamental of laboratory tools, handheld pipettors are ideal for everything from large volume transfers with serological pipets to the repetitive filling of microplates. This broad range of applications requires an equally wide selection of volumes, throughput capabilities, and channels. And that's exactly what you get with the extensive product offering from Matrix. No matter what your chosen application, our innovative, ergonomic line of instruments enhances not only your comfort and productivity, but also the accuracy of your results.

We believe effective, efficient pipetting takes more than just well engineered instruments. Precision-crafted consumables play an equally important role, which is why Matrix pipet tips and reservoirs are designed in conjunction with our pipettors to seamlessly complement their performance and deliver superior results with an array of unique features and benefits.



If your throughput requirements exceed the capabilities of a handheld pipettor, or you'd like the flexibility to walk away from your pipetting to tend to other tasks, an automated system may be better suited to your needs.

As with our handheld instruments, Matrix offers a line of automated systems that can enhance productivity and deliver superior results no matter what your application or budget. For more information, see our "Automated Pipetting Systems" section starting on page 31.



THE WORLD'S MOST ADVANCED SEROLOGICAL PIPETTOR.

CellMate® II is an innovative, intuitive, lightweight, cordless pipettor for use with glass or plastic serological pipets. Easy and comfortable to operate, it features a heavy-duty rechargeable lithium-ion battery that's guaranteed for life and allows the pipettor to operate approximately three to four times longer between charges than typical units using nickel cadmium batteries. Available in a choice of five colors, CellMate II can be wall mounted or stood up in its table stand and comes with a 1ml pipet support to eliminate "wobble" when using 1ml pipets.

FEATURES

- Lifetime guaranteed lithium-ion battery
- Lightweight, ergonomic design
- Separate aspirate and dispense speed controls
- Fully autoclavable nosecone housing
- Large backlit LCD display
- Customizable ID area, five color options
- 1ml pipet stabilizer

BENEFITS

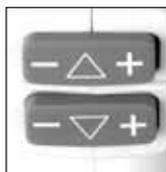
- Offers long runtime per charge and no battery memory problems
- Allows longer, fatigue-free pipetting
- Affords precise control over pipetting speeds and reduces risk of overpipetting with smaller pipets
- Simplifies disinfecting and decontamination
- Provides visual confirmation of remaining battery charge and speed settings
- Permits easy recognition of ownership and/or task designation
- Prevents 1ml pipets from wobbling or coming loose from nosecone



PRODUCT HIGHLIGHTS

Separate Aspirate And Dispense Speed Controls

Buttons on the rear of the CellMate II allow you to individually set aspiration (upper button) and dispense (lower button) speeds. Eight speeds are available for each function—simply push “+” for faster and “-” for slower. Your selection will be displayed on the pipettor’s LCD. A zero speed selection on dispense enables gravity dispensing, and extra slow aspiration speeds prevent overpipetting when using 1ml pipets.



Lithium-Ion Battery Technology—CellMate II uses a lithium-ion rechargeable battery that comes with a lifetime guarantee from Matrix. The battery has a rapid charge rate of 80% in one hour, and delivers up to 20 hours of continuous operation before needing to be recharged. Additionally, lithium-ion technology solves annoying “battery memory” problems.

Backlit LCD Display—Shows remaining battery life, so you won’t be left with a slowing pipettor in the middle of a procedure. Current speed settings are also indicated on the display.



1ml Pipet Stabilizer—The nosecone can accommodate pipets from 1ml to 100ml and, with the included pipet stabilizer, 1ml pipets will hold as securely as larger sizes.



Easy Identification—Not only is CellMate II available in five different colors for user or task identification, but each pipettor also has an ID area that can be customized with any text you wish.



Two Stand Options Included—CellMate II comes complete with a weighted table stand and a wall-mountable holder.



TECHNICAL SPECS

Aspirate Speeds:	8
Dispense Speeds:	8 (+ Gravity Dispense)
Battery:	Lithium-Ion
Approx. Runtime Between Charges:	20 Hours Of Continuous Use
Recharge Time:	Approx. 1 Hour
Weight:	220 Grams
Nosecone Pipet Holder:	Autoclavable Silicone Rubber
Pipet Compatibility:	All Major Brands Of Glass Or Plastic Serological Pipets, 1ml To 100ml
Filter Assembly:	0.45 Micron Standard
Fill Time For 50ml Pipet:	5 Seconds

ACCESSORIES

Additional 0.45 micron filters 25/case

APPLICATIONS

Bulk reagent dispensing with serological pipets



ORDERING GUIDE

CellMate II Cordless Pipettor:
Includes table stand, wall mount, 1ml pipet stabilizer, universal charging transformer and free Matrix multi-blade knife.

Item No.	Description	Unit
9501	CellMate II (White)	
9511	CellMate II (Clear)	
9521	CellMate II (Blue)	
9531	CellMate II (Red)	
9541	CellMate II (Green)	
9057	Hydrophobic Filters 0.45 µm	25/case
9064	Nosepiece (Holder, Silicone Gripper, Filter)	
9065	Silicone Pipet Gripper	4/case
9066	Wall Mount	
9067	Stand	
9068	Power Supply	
9070	1ml Pipet Support	

= Sterile

BRINGING COMFORT, FLEXIBILITY AND PERFORMANCE TO MANUAL PIPETTING.

Matrix single channel manual pipettors are designed to combine precision and accuracy with comfort and flexibility. Four volume ranges are available (see ordering guide) in your choice of standard-length or compact, short-length model.



PRODUCT HIGHLIGHTS

Comfortable, Soft Grip—The contoured handle and finger hook, combined with the soft grip housing, fits the curve of your hand and reduces the pressure required to hold the pipettor for more comfortable operation.



Autoclavable*—For quick and easy decontamination, the pipettor is autoclavable at 121°C.

* Volume control knobs, must be removable prior to autoclaving.

A Fixed And Variable Pipettor In One—Each pipettor includes a variable and fixed volume control knob. Purchasing extra volume adjustment knobs or other fixed volume knobs allows you to quickly and easily switch between commonly used volumes. The knobs are also reversible, so the volume is always visible whether the user is right- or left-handed.



Short Model Available—A shorter-length model is available that allows you to pipet more efficiently when loading gels or working in

a hood. It also allows the use of our extended length TallTips® (see page 25) while keeping the total length the same as a traditional pipettor and tip.



ACCESSORIES

Additional adjustable and fixed volume control knobs or custom volume knobs—contact Matrix Technical Support for ordering information.

APPLICATIONS

- Manual single channel pipetting
- Reagent addition
- Gel loading
- Reverse pipetting

COMPATIBLE PRODUCTS

Matrix Pipet Tips	Page 11
Reagent Reservoirs	Page 29
Memowell Electronic Pipetting Aid	Page 18

ORDERING GUIDE

Single Channel Manual Pipettors

Standard-Length Item No.	Short-Length Item No.	Volume Range	Adjustable Increment*	Volume Control Knobs Included	Accuracy +/- %	Precision +/- %
1039	—	0.5-10µl	0.1µl	Variable, 10µl Fixed	2.5-1.0	1.8-0.5
1030	1040	5-50µl	1.0µl	Variable, 50µl Fixed	1.5-0.7	0.8-0.3
1032	1042	25-200µl	1.0µl	Variable, 200µl Fixed	0.8-0.7	0.3-0.2
1034	1044	100-1000µl	10.0µl	Variable, 1000µl Fixed	0.7-0.6	0.2-0.2

*Volume is continuously adjustable between increments

FEATURES

- Aluminum shaft and tip fittings
- Locking volume adjustment
- Air vented handle
- Quick turning volume adjustment

BENEFITS

- Will not wear with use, are less likely to break than plastic, and offer enhanced chemical resistance
- Prevents inadvertent changing of volume during pipetting
- Ensures hand heat doesn't affect pipettor performance
- Fewer turns required to change volume results in faster adjustments



COMFORT AND PRECISION IN 8, 12, OR 16 CHANNELS.

Much like our single channel models, Matrix multichannel manual pipettors combine precision and accuracy with comfort and flexibility. They also offer a range of innovative features that make them ideal for pipetting into 96 or 384 well microplates.

PRODUCT HIGHLIGHTS

Low Tip Ejection Force—Ejecting 8, 12, or 16 tips at once requires much more force than ejecting the tip from a single channel pipettor. That's why the tip ejector on Matrix multichannel pipettors is designed to be activated by the fingers, not the thumb. The highly leveraged ejector can be pushed or pulled to eject tips almost effortlessly.

Comfortable, Soft Grip—The contoured handle and finger hook, combined with the soft grip housing, fits the curve of your hand and reduces the pressure required to hold the pipettor for more comfortable operation.

Autoclavable*—For quick and easy decontamination, the pipettor is autoclavable at 121°C.

* Volume control knobs, must be removable prior to autoclaving.

A Fixed And Variable Pipettor In One—Each pipettor includes a variable and fixed volume control knob. (Purchasing extra



volume adjustment knobs or other fixed volume knobs allows you to quickly and easily switch between commonly used volumes.) The knobs are also reversible, so the volume is always visible whether the user is right- or left-handed.

ACCESSORIES

Additional adjustable and fixed volume control knobs—contact Matrix Technical Support for ordering information.

APPLICATIONS

- Multichannel pipetting
- Reagent addition
- ELISA assays
- PCR setup
- Reverse pipetting

COMPATIBLE PRODUCTS

- Matrix Pipet Tips Page 21
- Reservoirs Page 29
- Microplates Page 82, 87
- Memowell® Electronic Pipetting Aid Page 18

ORDERING GUIDE

Multichannel Manual Pipettors

8-Channel Item No.	12-Channel Item No.	16-Channel Item No.	Volume Range	Adjustable Increments*	Volume Control Knobs Included	Accuracy +/- %	Precision +/- %
2049	2079	2089	0.5-10µl	0.1µl	Variable, 10µl Fixed	2.5-1.0	1.8-0.5
2041	2071	2080	5-50µl	1.0µl	Variable, 50µl Fixed	1.5-0.7	0.8-0.3
2042	2072	—	25-200µl	1.0µl	Variable, 200µl Fixed	0.8-0.7	0.3-0.2
2044	2074	—	50-300µl	1.0µl	50-200µl Variable, 125-300µl Variable, 50, 100, & 300µl Fixed	0.7-0.7	0.3-0.2

*Volume is continuously adjustable between increments

FEATURES

- Aluminum tip fittings
- Autoclavable
- Locking volume adjustment
- Quick turning volume adjustment

BENEFITS

- Will not wear with use, are less likely to break than plastic, and offer enhanced chemical resistance
- Allows sterilization of pipettor
- Prevents inadvertent changing of volume during pipetting
- Fewer turns required to change volume, results in faster adjustments



THE POWER AND FLEXIBILITY TO ENHANCE MULTIPLE PIPETTING APPLICATIONS.

With all its inherent ergonomic and throughput advantages, electronic pipetting has become mainstream. But with close to a dozen different models available, how do you choose the ideal pipettor for your needs?

The answer is simple once you consider everything you should look for in an instrument. It should:

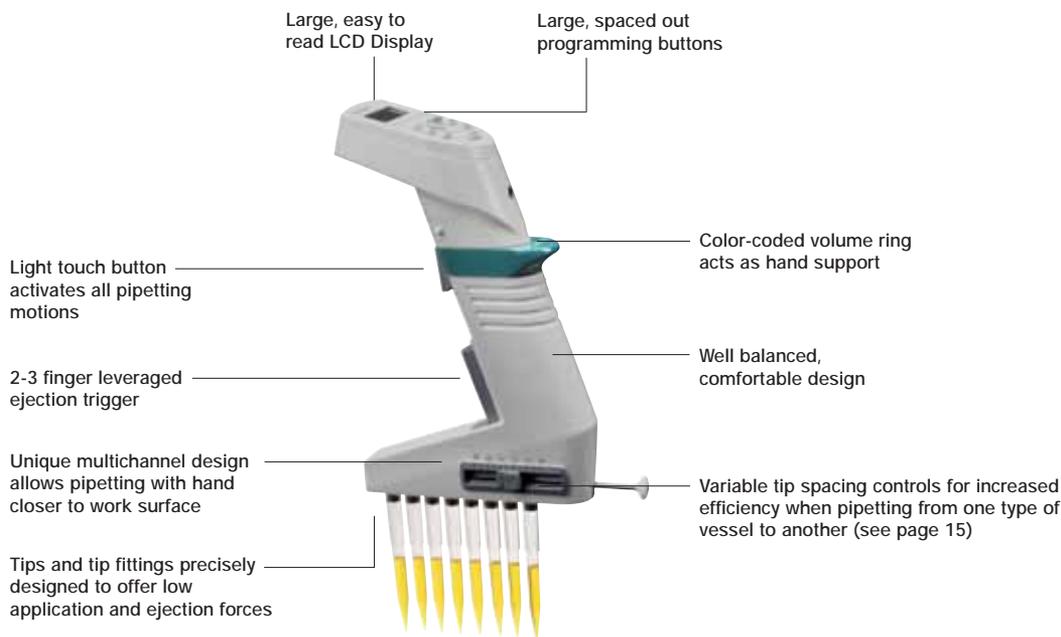
- Be comfortable to hold
- Feature the easiest, most flexible software to program
- Offer unparalleled accuracy and precision
- Guarantee long life, both for the battery and the unit itself
- Function with a wide range of pipetting speeds
- Be perfectly suited to the broadest range of applications
- Deliver good value for your limited lab budget

Matrix Technologies has been on the cutting edge of electronic pipetting for 20 years. Our Impact²® line represents the latest advances in a long history of liquid handling innovation, combining superior ergonomics with simple yet amazingly flexible software.

Ergonomic Design—Matrix pipettors are well balanced, comfortable, and accommodate a natural, at-rest hand position. Their unique design brings you closer to the working area, helping to avoid uncomfortable hand/arm positions while offering greater control of the pipettor.

In addition, because Matrix tips are designed around our tip fittings, they are incredibly easy to apply—no need to bang the unit on the tips. Light pressure on the instrument is enough to securely seat the tips. Easy tip application leads to easy ejection, and our unique use of leveraged tip ejection sharply reduces the force required to accomplish this. To learn more about the inherent features and benefits of Matrix tips, see page 21.

Intuitive, Step-Based Programming—Most electronic pipettors use what is known as “function-based” software for the user-programming interface. This means you will generally see commands such as “pipet,” “mix,” “dilute,” “serial dilute,” etc. This covers the main functions you would expect to see a pipettor perform, but you often must master complex commands in order to execute them. Additionally, it is rare to find pipettors using this type of programming that sequentially links programs together for more demanding protocols.

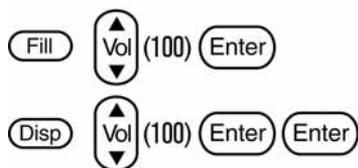


All Matrix Impact² pipettors use “step-based” programming— both for its intuitiveness and extreme flexibility. When pipetting is broken down to its elemental level, it becomes evident that all “functions” are really made up of two (or more) liquid/piston movements: up (Fill) and down (Dispense). This simple realization became the foundation for our programming logic. Any pipetting routine can be broken down into various steps, which is exactly how you program all Impact² pipettors. The examples below show how easy and intuitive Impact² programming is, even for complex applications:



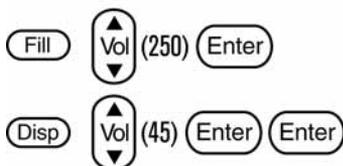
Sample Transfers:

Example: Fill and dispense 100µL.



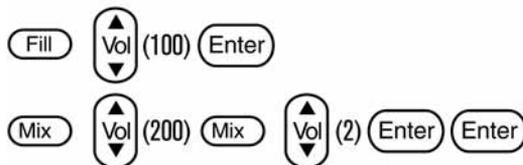
Incremental Pipetting:

Example: Fill 250µL and dispense 45µL in 5 increments.



Serial Dilutions:

Example: Transfer 100µL to the first column of a plate previously filled with reagent. Mix 200µL for 2 cycles. Transfer 100µL to the second column and repeat the mix step. Follow this procedure for the rest of the plate.



After pressing the final Enter key, you are now ready to pipet. Each time you click the trigger, the next step of the program will initiate. You can also save up to five of these programs (up to 40 steps each) in memory, so they are quickly available the next time you need to use them.

Other functions can also be controlled using Impact² programming, fill and dispense speeds can be set for each step of the program, as well as a beep indicator for each step.

Enhanced Accuracy And Precision—Unlike some electronic pipettors, Matrix Impact² pipettors utilize stepper motors for more accurate piston movement and greater control of piston speed. Since the accuracy and precision of liquid dispensed is proportional to the movement of the piston, this helps deliver superior performance.

Impact² pipettors also use error correction software¹ for greater accuracy. For mechanical reasons, a pipettor can only deliver liquids accurately over a portion of its full range and, at the outer limits of its range, it becomes less accurate. The error correction software in Impact² pipettors automatically fine-tunes the piston movement at each volume setting to compensate for this inherent inaccuracy, which in turn greatly enhances accuracy across the full range of the pipettor.



LIGHTWEIGHT, ERGONOMIC DESIGN WITH THE WORLD'S MOST INTUITIVE AND FLEXIBLE PROGRAMMING.

Not only are Impact² pipettors lightweight and comfortable, but the step-based programming allows you to perform pipetting routines that would either be cumbersome or just plain impossible with manual pipettors. What used to take many motions of the thumb and manual adjustment of a volume knob can now be accomplished with the light touch of a button.

FEATURES

- Lightweight, ergonomic design
- Trigger-based operation and tip ejection
- Step-based programming
- On-board memory saves five programs (up to 40 steps each)
- Five volume ranges available
- Advanced battery technology
- Stepper motor technology and error correction software
- Pipettor can be used while plugged-in

BENEFITS

- Increases comfort and reduces risk of repetitive stress injuries
- Eliminates use of thumb; reduces strain when ejecting tips
- Makes it logical, intuitive, and easy to create programs. Enables the Impact² pipettor to perform all the tasks you might do with a manual pipettor—only faster and with less effort, as well as functions that would be impossible with manual models
- Allows you to spend more time pipetting, less time programming
- Flexible enough to perform everything from micropipetting to large volume repeat dispensing
- Allows days of work between charges, no memory effect
- Ensures accurate and precise pipetting, even when performing incremental dispensing or when operating at top or bottom of pipettor's volume range
- No downtime



PRODUCT HIGHLIGHTS

Ergonomic Design—Light, well-balanced, and incorporates a highly leveraged tip ejector that utilizes two or three fingers (not the thumb).



Easy-To-Use, Easy-To-Learn, Step-Based Programming—Allows you to

automate anything you would do with a manual pipettor. For example, you could aspirate 50µl, and then dispense 10µl, 10µl, 10µl, and finally 20µl while setting specific dispense speeds for each. Or, aspirate 20µl of sample and then 200µl of diluent, mix the two together and dispense. All functions can be linked together (up to 40 steps) and saved for future use (up to five programs can be stored in memory). For more information, see page 7.



Individual Speed Control—

Five variable speeds are available for each step of your procedure (aspirate, dispense, or mix). This provides flexibility to either perform a rapid dispense or a slow controlled dispense (perfect for loading gels or dispensing small volumes), depending on your needs.

Light Tip Application And Ejection—Made possible because the pipettor was designed in conjunction with Matrix tips for superior fit with minimal application/ejection forces.

Comprehensive Warranty/Calibration Services—Impact² pipettors are warranted for a full year from the date of purchase. Calibration services are offered that not only calibrate your pipettor, but provide preventive maintenance as well. The entire pipettor is thoroughly checked prior to calibration, and any worn components are replaced as part of the service. If you have several instruments in your lab, special discounts on service or extended warranty agreements may apply. Contact your Matrix representative to discuss what options might work best for you, or visit www.matrixtechcorp.com for more information.

ACCESSORIES

Single pipettor stand, three-pipettor wall rack, six-pipettor stand (see page 17).

APPLICATIONS

- Electronic single channel pipetting
- Sample additions
- Incremental pipetting (of a single volume or variable volumes)
- One-touch aspirate, dispense and mixing
- Automatic serial dilutions
- Multiple reagent additions (with pre-programmed air gaps)
- Simple, one-step dilutions

COMPATIBLE PRODUCTS

- Matrix Pipet Tips Page 21
- Reagent Reservoirs Page 29
- Memowell Electronic Pipetting Aid Page 18

ORDERING GUIDE

Impact² Single Channel Pipettors

Impact² Item No.	Volume	Minimum Prog. Unit	Precision*	Accuracy*
1029	0.5-12.5µl	0.05µl	±0.4% or 0.03µl	±1.0% or 0.03µl
1020	1.0-30µl	0.05µl	±0.3% or 0.05µl	±1.0% or 0.15µl
1021	2-125µl	0.1µl	±0.2% or 0.1µl	±0.6% or 0.3µl
1022	5-250µl	0.5µl	±0.15% or 0.15µl	±0.6% or 0.5µl
1024	15-1250µl	1.0µl	±0.13% or 0.6µl	±0.5% or 3.0µl

*Data determined using incremental dispensing. Neat sample transfers or simple dilutions will yield considerably better results.



OUR SHORTEST, LIGHTEST PIPETTOR.

With all the same features as Impact² single channel pipettors (see page 8), the Shorty[®] line offers the additional ergonomic advantages of a shorter pipettor barrel.



PRODUCT HIGHLIGHTS

Enhanced Ergonomic Design—Even lighter than our standard single channels, the shorter pipettor barrel allows the hands to get closer to the work surface with less elbow bending (especially critical when working in a hood).

Greater Control—The shorter pipettor is easier to handle, simplifying the loading of gels or other small targets.

Easy Use Of Extended-Length Tips—Even when used with Matrix TallTips extended-length pipet tips, the overall length of the Shorty is still less than a standard pipettor with a standard tip. This allows you to enjoy the benefits of extended-length tips (e.g. access to deep tubes without cross-contamination of the pipettor barrel) while keeping the overall length of the pipetting system minimized. For information on TallTips, see page 25.



Step-Based Programming—Simple, easy-to-use programming allows you to perform anything you could with a manual pipettor with the touch of a button. For more information, see page 7.



ACCESSORIES

Single pipettor stand, three-pipettor wall rack, six-pipettor stand (see page 17).

APPLICATIONS

- Pipetting in a hood or other cramped environments
- Gel loading
- Pipetting with extended-length TallTips
- Sample additions
- Incremental pipetting (of a single volume or variable volumes)
- One-touch aspirate, dispense and mixing
- Automatic serial dilutions
- Multiple reagent additions (with pre-programmed air gaps)
- Simple, one-step dilutions

COMPATIBLE PRODUCTS

Matrix TallTips (Extended-Length Pipet Tips)	Page 25
Matrix Pipet Tips	Page 21
Reagent Reservoirs	Page 29
Memowell Electronic Pipetting Aid	Page 18

ORDERING GUIDE

Impact² Shorty

Impact ² Item No.	Volume	Minimum Prog. Unit	Precision*	Accuracy*
1122	5-250µl	0.5µl	±0.15% or 0.15µl	±0.6% or 0.5µl
1124	15-1250µl	1.0µl	±0.13% or 0.6µl	±0.5% or 3.0µl

*Data determined using our unique TallTips

FEATURES

- Lightweight, ergonomic design
- Short pipettor barrel
- Enhanced compatibility with TallTips
- Trigger-based operation and tip ejection
- Step-based programming
- Pipettor can be used while plugged-in

BENEFITS

- Increases comfort and reduces risk of repetitive stress injuries
- Greater control when loading gels or working in a hood
- Allows the use of extended-length tips while keeping overall length of pipettor and tip minimized
- Eliminates use of thumb; reduces strain when ejecting tips
- Makes it logical, intuitive and easy to create programs. Enables the electronic Shorty to perform all the tasks you might do with a manual pipettor – only faster and with less effort, as well as functions that would be impossible with manual models
- No downtime



FLEXIBILITY AND FUNCTIONALITY WHEN PIPETTING INTO MICROPLATES.

Impact² multichannel pipettors allow you to utilize the power of electronic pipetting in microplate formats. In addition to an ergonomic design, Impact² pipettors feature step-based programming that allows you to perform pipetting routines that would either be cumbersome or even impossible with manual pipettors. What used to take many motions of the thumb and manual adjustment of a volume knob can now be accomplished with the light touch of a button.

FEATURES

- Ergonomic design
- Trigger-based operation and tip ejection
- Step-based programming
- On-board memory saves five programs (up to 40 steps each)
- Large volume capacity
- Advanced battery technology
- Stepper motor technology and error correction software
- Pipettor can be used while recharging

BENEFITS

- Increases comfort and reduces risk of repetitive stress injuries
- Eliminates use of thumb; reduces strain when ejecting tips
- Makes it logical, intuitive and easy to create programs. Enables the pipettor to perform all the tasks you might do with a manual pipettor – only faster and with less effort, as well as automating functions such as serial dilutions across a microplate
- Allows you to spend more time pipetting, less time programming
- 1250µl per tip capacity allows you to fill an entire microplate with up to 100µl per well from a single aspiration
- Allows days of work between charges, no memory effect
- Ensures accurate and precise pipetting, even when performing incremental dispensing or when operating at top or bottom of pipettor's volume range
- No downtime

PRODUCT HIGHLIGHTS

Well-Balanced, Ergonomic Design—

Keeps your hand close to the pipetting surface and features a tip ejector that utilizes two or three fingers, not the thumb.



Light Tip Application And Ejection—

Made possible because the pipettor was designed in conjunction with Matrix tips for superior fit with minimal application/ejection forces.

Wide Selection Of Volume Ranges And

Channels—8-, 12-, or 16-channel models are available for performing everything from microvolume pipetting in a PCR plate to filling microplates.

Easy-To-Use, Easy-To-Learn, Step-Based

Programming—Allows you to automate anything you would do with a manual multichannel pipettor. For example, you could aspirate 1200µl, and then dispense 50µl to the first two rows, then 100µl to the next 10 while setting specific dispense speeds for each. Or, aspirate 20µl and then 200µl of diluent, then repeat per each row of a plate for an in-plate serial dilution. All functions can be linked together (up to 40 steps) and saved for future use (up to five programs can be stored in memory). For more information, see page 7.



Individual Speed Control—Five variable speeds are available for each step of your procedure (aspirate, dispense, or mix). This provides flexibility to either perform a rapid dispense, or a slow controlled dispense, depending on your needs.

Comprehensive Warranty/Calibration Services—

Impact² pipettors are warrantied for a full year from the date of purchase. Calibration services are offered that not only calibrate your pipettor, but provide preventive maintenance as well. The entire pipettor is thoroughly checked prior to calibration, and any worn components are replaced as part of the service. If you have several instruments in your lab, special discounts on service or extended warranty agreements may apply. Contact your Matrix representative to discuss what options might work best for you or visit www.matrixtechcorp.com for more information.

ACCESSORIES

Single pipettor stand, three-pipettor wall rack, six-pipettor stand, additional batteries (see page 17).

APPLICATIONS

- Electronic multichannel pipetting
- Sample additions
- Incremental pipetting (of a single volume or variable volumes)
- One-touch aspirate, dispense, and mixing
- Automatic serial dilutions
- Multiple reagent addition (with pre-programmed air gaps)
- Simple, one-step dilutions
- Pipetting into 384 well plates
- Plate-to-plate transfers

COMPATIBLE PRODUCTS

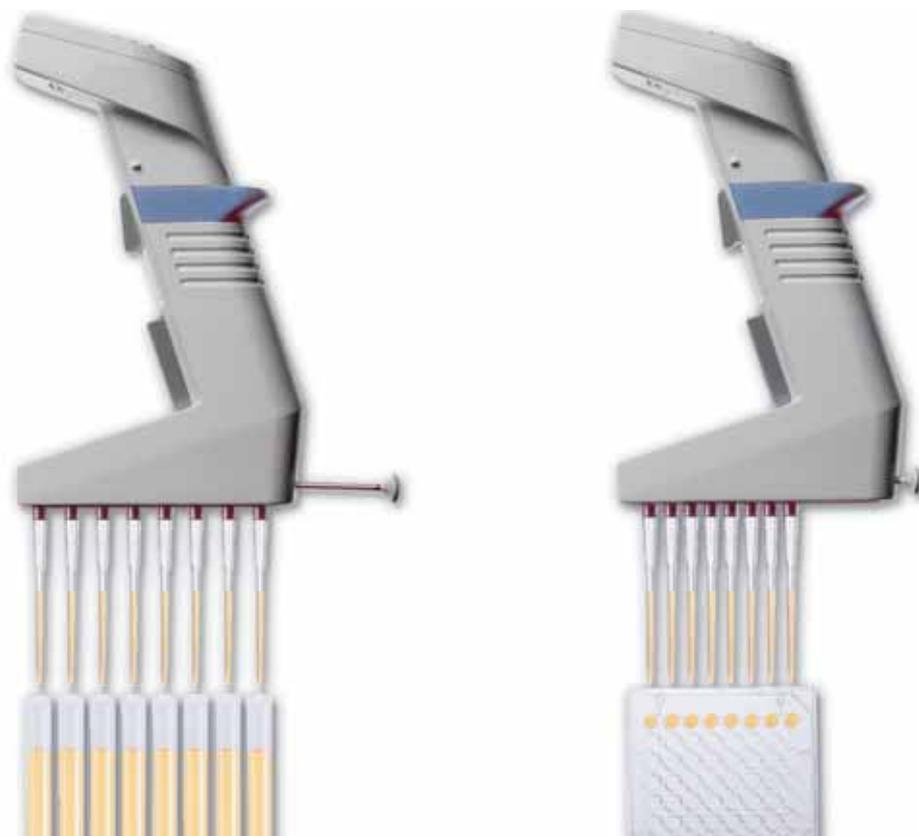
Matrix Pipet Tips	Page 21
Reagent Reservoirs	Page 29
Microplates	Page 82, 87
Memowell Electronic Pipetting Aid	Page 18

ORDERING GUIDE

Impact² Multichannel Pipettors

Impact ² Item No.	Volume	Channels	Minimum Prog. Unit	Precision*	Accuracy*
2009	0.5-12.5µl	8	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2001	2-125µl	8	0.1µl	±1.0% or 0.6µl	±2.0% or 1.0µl
2002	5-250µl	8	0.5µl	±0.7% or 1.0µl	±2.0% or 1.5µl
2004	15-1250µl	8	1.0µl	±0.6% or 3.0µl	±1.5% or 6.0µl
2019	0.5-12.5µl	12	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2011	2-125µl	12	0.1µl	±1.2% or 0.8µl	±2.0% or 1.0µl
2012	5-250µl	12	0.5µl	±0.8% or 1.2µl	±2.0% or 1.5µl
2014	15-850µl	12	1.0µl	±0.6% or 2.5µl	±1.5% or 4.0µl
2069	0.5-12.5µl	16	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2060	1.0-30µl	16	0.05µl	±1.7% or 0.30µl	±2.0% or 0.30µl
2061	2-125µl	16	0.1µl	±1.0% or 0.6µl	±2.0% or 1.0µl

*Data determined using incremental dispensing. Neat sample transfers or simple dilutions will yield considerably better results.



MULTICHANNEL ELECTRONIC PIPETTOR WITH EXPANDABLE TIP SPACING .

To rapidly increase the throughput of sample transfers from tube racks to microplates, Matrix has created the Impact² EXP™. This unique electronic pipettor increases productivity with an innovative adjustable tip system. Simply pull the rod to expand the tips to access test tube or microcentrifuge tube racks, 24 or 48 well plates, and then push the rod to compress the spacing to pipet into 96 well microplates. This feature allows you to transfer up to eight samples at once, and saves many motions of your arm and thumb when compared to performing this routine with single channel pipettors.

FEATURES

- Adjustable tip spacing
- Ergonomic design and trigger-based operation
- On-board memory saves five programs (up to 40 steps each)
- Advanced battery technology
- Choice of five speeds
- Large volume capacity
- Step-based programming
- Pipettor can be used while recharging

BENEFITS

- Allows you to transfer multiple samples between different tube rack and microplate configurations
- Increases comfort and reduces risk of repetitive stress injuries
- Allows you to spend more time pipetting, less time programming
- Allows days of work between charges, no memory effect
- Controls aspiration, dispense and mix steps independently
- 1250µl per tip capacity allows you to fill an entire microplate with up to 100µl per well from a single aspiration
- Makes it logical, intuitive and easy to create programs
- No downtime

PRODUCT HIGHLIGHTS

Expandable Tip Spacing—The EXP's tips can be expanded to access test tube racks, 24 well plates, and 48 well plates, or closed to work with 96 well plates. This facilitates sample transfers and enables them to be done much faster than pipetting one tube at a time with a single channel pipettor. EXP can also be used as a standard pipettor for 24 or 48 well plates.

See the chart below for examples of racks and plates that can be used with each type of EXP.

EXP TIP-TO-TIP SPACING		
Channels	Expanded Spacing	Closed Spacing
6	19.81mm (16mm tubes and 24 well plates)	9.0mm (microplates)
8	14.15mm (12 or 13mm tubes and 48 well plates)	9.0mm (microplates)
8	13.06mm (microcentrifuge tubes)*	9.0mm (microplates)*
12	9.0mm (microplates)	6.0mm (Terasaki, gels, 864s)

*Standard spacing for Item No. 2029. Optional spacing for Item No. 2021, 2022 and 2024. See ordering guide below

If you require equal tip spacing between 9mm and 14.15mm, or would like to go down to 4.5mm spacing, see the Impact² Equalizer on page 15.

Custom Spacing Available—If the current selection of EXP pipettors does not fit your particular needs, Matrix can develop a custom EXP with the exact tip spacing you require for your specific labware. Contact a Matrix representative for more information.

Whichever EXP you choose, you can be sure it includes all the other great features of Impact² multichannel pipettors, including:

Light Tip Application And Ejection—Made possible because the pipettor was designed together with Matrix tips for superior fit with minimal application/ejection forces.

Easy-To-Use, Easy-To-Learn, Step-Based Programming—

Allows you to automate anything you would do with a manual multichannel pipettor. For more information, see page 7.



ACCESSORIES

Single pipettor stand, three-pipettor wall rack, six-pipettor stand, 96-position tube racks, additional batteries (see page 17).

APPLICATIONS

Sample additions
 24 or 48 well plate to/from 96 well plate reformatting
 Pipet into or from tube racks, eight channels at a time
 24 or 48 well plate multichannel pipetting
 Transfer samples between tube racks and microplates, eight at a time
 Serial dilutions
 Gel loading

COMPATIBLE PRODUCTS

Matrix Pipet Tips	Page 21
TallTips	Page 25
Reagent Reservoirs	Page 29
Memowell Electronic Pipetting Aid	Page 18

ORDERING GUIDE

Impact² EXP Pipettors

Impact ² Item No.	Volume	Channels	Minimum Prog. Unit	Precision*	Accuracy*
2621	2-125µl	6	0.1µl	±1.0% or 0.6µl	±2.0% or 1.0µl
2622	5-250µl	6	0.5µl	±0.7% or 1.0µl	±2.0% or 1.5µl
2624	15-1250µl	6	1.0µl	±0.6% or 3.0µl	±1.5% or 6.0µl
2029	0.5-12.5µl	8	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2021	2-125µl	8	0.1µl	±1.0% or 0.6µl	±2.0% or 1.0µl
2022	5-250µl	8	0.5µl	±0.7% or 1.0µl	±2.0% or 1.5µl
2024	15-1250µl	8	1.0µl	±0.6% or 3.0µl	±1.5% or 6.0µl
2229	0.5-12.5µl	12	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl

*Data determined using incremental dispensing. Neat sample transfers or simple dilutions will yield considerably better results.



MULTICHANNEL ELECTRONIC PIPETTOR WITH EXPANDABLE, EQUAL TIP SPACING.

What could once only be accomplished through repetitive motions with a single channel pipettor can now be accomplished with the Impact² Equalizer[®] electronic pipettor. This instant boost in productivity is the result of equal tip spacing that expands or contracts with the simple adjustment of a slide rod making the pipettor able to perform sample transfers between virtually any tube rack, microplate, or horizontal gel box. The Equalizer allows plate-to-plate transfers between 96 and 384 microplates, as well as the ability to load gels eight or 12 channels at a time directly from a microplate or tube rack.

FEATURES

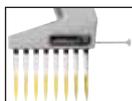
- Adjustable tip spacing
- Ergonomic design
- Step-based programming
- On-board memory saves five programs (up to 40 steps each)
- Large volume capacity
- Five volume ranges and two spacing ranges available
- Pipettors can be used while charging

BENEFITS

- Allows you to transfer multiple samples between any tube rack, microplate, and/or horizontal gel box
- Reduces risk of repetitive stress injuries
- Makes it logical, intuitive and easy to create programs
- Allows you to spend more time pipetting, less time programming
- 1250µl per tip capacity allows you to fill an entire microplate with up to 100µl per well from a single aspiration
- Flexibility to pipet between many types of labware
- No downtime

PRODUCT HIGHLIGHTS

Expandable Tip Spacing—The Equalizer's tips can be spaced anywhere from 9mm (96 well microplates) to 14.15mm (12-13mm tube rack spacing or 48 well plates) in increments of 0.1mm. The distance between tips is always equal—simply set the desired spacing anywhere on the scale and pull or push the rod to expand or contract the tips. This can be done while the tips are empty or full, enabling the quick and easy transfer of multiple samples at once between labware with different configurations.



The Equalizer 384 features the same unique tip spacing mechanism, but allows you to set the tip spacing down to 4.5mm—perfect for multichannel dispensing from 96 well plates into 384 well plates or for multi-lane sample loading of agarose gels. The 8-channel expands to 14.15mm, the 12-channel to 9mm.



Impact ² Equalizer	
Minimum Spacing 9mm	Maximum Spacing 14.15mm
Transfer To/From: ←→	From/To:
96 Microplates	Microcentrifuge Tube Racks
Deepwell Blocks	Test Tube Racks
ScreenMates Tube Racks	48 Well Microplates
Impact ² Equalizer 384	
Minimum Spacing 4.5mm	Maximum Spacing 14.15mm (8 Channel) 9mm (12 Channel)
Transfer To/From: ←→	From/To:
384 Microplates	96 Microplates
384 PCR Plates	Deepwell Blocks
Agarose Gels	ScreenMates Tube Racks
	48 Microplates (8 Channel Only)
	Microcentrifuge Tube Racks (8 Channel Only)
	Test Tube Racks (8 Channel Only)

The Equalizer also includes all the other great features of Impact² multichannel pipettors, including:

Well-Balanced, Ergonomic Design—Keeps your hand close to the pipetting surface. Tip ejector utilizes two or three fingers (not the thumb) for added comfort.



Light Tip Application And Ejection—Made possible because the pipettor was designed in conjunction with Matrix tips for superior fit with minimal application/ejection forces.

Easy-To-Use, Easy-To-Learn, Step-Based Programming—Allows you to automate anything you would do with a manual multichannel pipettor. For more information, see page 7.



ACCESSORIES

Single pipettor stand, three-pipettor wall rack, six-pipettor stand, 96-position tube racks, additional batteries, (see page 17).

APPLICATIONS

Electronic multichannel pipetting between varying spaced labware
 Sample additions
 96 to 384 plate reformatting (and 384 to 96)
 Multichannel gel loading directly from microplates or tube racks
 Multichannel pipetting with tube racks
 Multichannel sample transfers between tube racks and microplates
 Serial dilutions



COMPATIBLE PRODUCTS

Matrix Pipet Tips	Page 21
TallTips	Page 25
Reagent Reservoirs	Page 29
Memowell Electronic Pipetting Aid	Page 18

ORDERING GUIDE

Impact² Equalizer Pipettors

Impact ² Item No.	Model	Volume	Channels	Minimum Prog. Unit	Precision*	Accuracy*
2032	Equalizer	5-250µl	8	0.5µl	±0.7% or 1.0µl	±2.0% or 1.5µl
2034	Equalizer	15-1250µl	8	1.0µl	±0.6% or 3.0µl	±1.5% or 6.0µl
2139	Equalizer 384	0.5-12.5µl	8	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2130	Equalizer 384	1.0-30µl	8	0.05µl	±1.7% or 0.30µl	±2.0% or 0.30µl
2131	Equalizer 384	2-125µl	8	0.1µl	±1.0% or 0.60µl	±2.0% or 1.0µl
2239	Equalizer 384	0.5-12.5µl	12	0.05µl	±2.0% or 0.15µl	±2.5% or 0.15µl
2230	Equalizer 384	1.0-30µl	12	0.05µl	±1.7% or 0.30µl	±2.0% or 0.30µl
2231	Equalizer 384	2-125µl	12	0.1µl	±1.2% or 0.80µl	±2.0% or 1.0µl

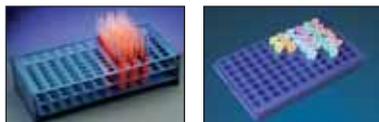
*Data determined using incremental dispensing. Neat sample transfers or simple dilutions will yield considerably better results.



PRODUCTS FOR ADDED EASE AND CONVENIENCE.

Matrix offers a variety of accessories to enhance the productivity and flexibility of your Impact² pipettor.

Tube Racks—To help you take full advantage of the expandable tip system on an EXP or Equalizer pipettor, Matrix offers two different tube racks for simple reformatting from tubes to microplates. The microcentrifuge tube rack works with either 0.5ml or 1.5ml tubes, while the test tube rack works with 12x75mm tubes in an 8x12 format.



Pipettor Stands—Three different stands are available to store your Impact² pipettor when not in use:

Single Stand: A free-standing metal unit for holding one Impact² single or multichannel pipettor.



Three-Position Wall Rack: A wall-mountable rack that works with single or multichannel Impact² pipettors. Includes all necessary mounting hardware.



Six-Position Revolving Stand: Ideal for labs using multiple pipettors, this stand rotates freely to keep your bench top tidy.



Spare Batteries—Can be purchased to ensure your Impact² pipettor is never without power.

Tips and Reservoirs—Matrix offers a complete line of high quality pipet tips and reservoirs designed to give you maximum performance of your Impact² pipettors. For a complete selection of pipettor consumables, please see the following pages.



COMPATIBLE PRODUCTS

Impact ² Single Channel Pipettors	Page 8
Impact ² Shorty Pipettors	Page 10
Impact ² Multichannel Pipettors	Page 11
Impact ² EXP Pipettors	Page 13
Impact ² Equalizer Pipettors	Page 15

ORDERING GUIDE

Impact² Accessories

Item No.	Description
8066	Stand for Impact ² pipettors: one position
1063	Wall-mountable pipettor rack: three positions
1066	Revolving pipettor stand: six positions
8813	Sample transfer test tube rack: 8x12-tube format
8814	Sample transfer microcentrifuge tube rack

For a full selection of batteries, power supplies, and other spare parts for all Matrix electronic pipettors, please visit our Web site (www.matrixtechcorp.com).

ELECTRONIC PIPETTING AID.

The Memowell® Pipetting Aid is a 96 well LED light box that helps you keep track of pipetting into a microplate. It is ideally suited for tracking the pipetting of colorless reagents or minute liquid volumes, and remembering your place when interrupted or when moving between sample tubes and a 96 well plate.



PRODUCT HIGHLIGHTS

Simple Operation Reduces Pipetting Errors—The concept behind Memowell is simple: an LED light is illuminated under specific wells, rows, or columns of a microplate. This can be used to keep track of specific areas of a plate when filling, or indicate wells that need to be aspirated. To advance the light(s) to the next well, row, etc. simply press a button on the unit, or use the optional footswitch for hands-free operation.



On-Board Programming—Six pre-programmed sequences are shipped with Memowell, and six more can be programmed and saved onboard.

Stand-Alone Or Software-Controlled—Memowell works manually or with the available MemoControl software for even greater tracking capabilities. (See below for more information.) Multiple Memowell units can also be linked together to keep track of plate-to-plate transfers.

MemoControl Software—Used in conjunction with a Windows® PC and plate reader, this Microsoft® Excel plug-in software allows you to program Memowell to illuminate rows, columns, or individual wells based on user-defined plate readings.



MemoControl Software also allows you to manipulate reader data in Excel before using Memowell. The LED display can then be programmed to indicate all wells containing hits with a light that is on, off, or blinking.

384 Support—Using MemoControl Software, a set of four wells in a 384 microplate can be illuminated. The image on the PC screen will then indicate which of the four wells is the desired target.

ACCESSORIES

Footswitch: Advances indicator lights while keeping hands free

Rechargeable Batteries: Allow unit to be used when power is not present

APPLICATIONS

Tracking plate filling

Tracking plate-to-plate transfers

Hit-picking

ORDERING GUIDE

Memowell

Item No.	Description
5000	Memowell 96 Well Pipetting Aid
5001	Footswitch (operates Memowell)
5008	Windows-based MemoControl Software

FEATURES

- Microplate tracking
- Footswitch control available
- Optional MemoControl software
- Onboard batteries

BENEFITS

- Reduces errors when filling microplates or performing plate-to-plate transfers; facilitates hit-picking
- Enables hands-free operation
- Plate reader results can be used to control lighting of specific columns, rows, or individual wells
- Allow cordless operation without a power supply



PURITY CERTIFICATION PROGRAM FOR ALL MATRIX PIPET TIPS AND OTHER CONSUMABLES.

Because we understand how critical it is for you to get consistent, accurate results, we certify the purity of every lot of consumables through our PureFect® program. This testing guarantees all of our consumable products are free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.

PRODUCT HIGHLIGHTS

Clean Room

Production—All our products are molded and assembled in a clean room, and all operators are required to wear gowns, gloves, facemasks, and hairnets. Our processes are designed around maintaining absolute cleanliness, and are validated to provide products that can be relied upon to be contaminant-free.



Confidence In Every Matrix

Consumable—While other companies only certify their sterile products to be free of contaminants, we certify the absolute purity of every product we offer, whether it's bulk tips, racked tubes, or microplates. For complete confidence in the purity of your product and the validity of your results, just look for this logo on your Matrix consumables.



Testing Criteria—Testing of Matrix products involves soaking samples in sterile, distilled water, and then testing the extract against the following criteria:

DNA Free: No presence of human-actin DNA, at levels of 0.6ng/well of the test assay.

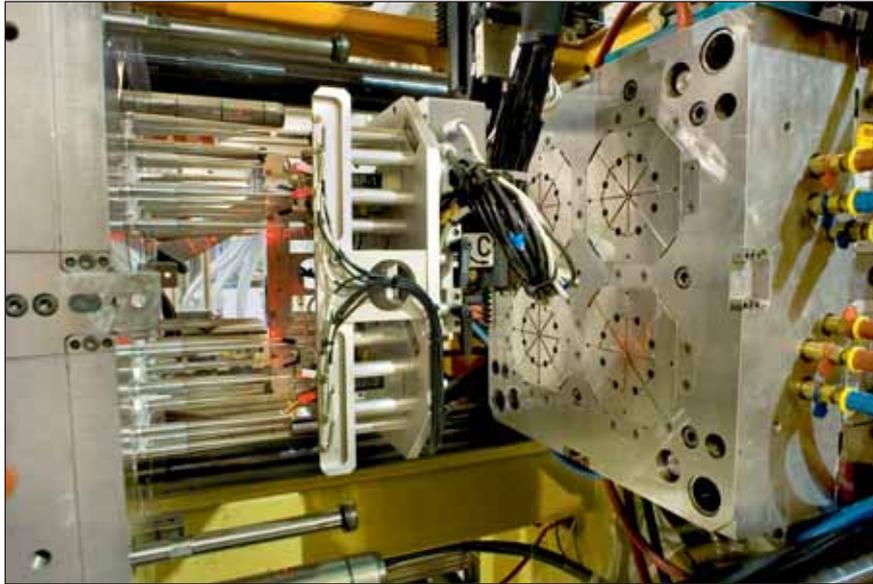
DNase/RNase Free: No presence of DNase or RNase utilizing a highly sensitive (3.3×10^{-7} Units of RNase A and 0.014 Units of DNase I/well of the test assay) fluorescent reporter/quencher tagged RNA or DNA substrate.

Endotoxin Free: Employing the LAL technique, 0.05 EU/ml.

Cytotoxicity: Using the MEM Elution Test to assess cellular toxicity.

Each and every product we offer is accompanied by a Certificate of Quality certifying its purity.

If you'd like more information on our PureFect program, visit our Web site at www.matrixtechcorp.com, or call to speak with one of our scientists.



SUPERIOR MATERIALS, MANUFACTURING, AND QC PRODUCE SUPERIOR CONSUMABLES.

With over 20 years of liquid handling expertise, Matrix has the experience, resources, and capabilities to design a superior range of features into every product we make.

PRODUCT HIGHLIGHTS

Medical-Grade Materials—All of the materials used in our pipet tips, tubes, reservoirs and microplates are classified as Class 6 Medical Grade and are 100% virgin, meaning that only pure, new resins are used to ensure absence of contaminants and imperfections.

First Class Molding Facility—Since high quality laboratory consumables can only be produced with injection molding equipment that undergoes rigorous maintenance schedules, our tool room is on-site to ensure that all of our tooling remains clean, highly polished, and performing at its peak.

Enhanced Quality Control—Our QC procedures encompass all aspects of manufacturing, from the close examination of raw materials before they enter our facility to the rigorous inspection of all finished products before they leave. You can be assured that every product you



receive from Matrix has passed a battery of tests including: dimensional checks, flatness checks on microplates, defect inspections, filter integrity tests, tip straightness, leak testing of tubes, proper packaging, and biological contaminants.

“Automation-Certified” Tips—

We understand that when it comes to automated liquid handling, you have to be able to walk away with confidence while your instrument is running and trust that it will perform as you expect it to. A major component of this performance is properly manufactured pipet tips—misshapen or bent tips can result in wasted reagents, samples, microplates, and time. All Matrix tips designed for our automated platforms undergo 100% testing, each and every one being inspected for proper formation as well as straightness. Our automation tips section begins on page 58.





SUPERIOR SELECTION, QUALITY, AND PERFORMANCE.

Since we realize the consumables you use play a role that's equally as important as your instruments, innovation at Matrix doesn't stop with our pipettors. We carry "fluid thinking" throughout the entire pipetting process, offering an equally well engineered line of consumables for all your pipettors. That line includes the world's most comprehensive offering of pipet tips, featuring tips in bulk, racked, Ecotip® refill packs, extended-length TallTips, and our Integrity®-tested filter tips.

FEATURES

- Sealing rings on tips
- Highly polished molds, rigorous maintenance procedures
- Stabilization rings in racks
- Rigid rack design
- Venting features in rack
- Hinged lid
- Finger notch on racks
- Snap and tear bags
- Well labeled racks
- Environmentally sensitive
- PureFect tested

BENEFITS

- Ensures confident seal without banging tips on pipettor
- Ensures low liquid retention tips without special treatments or additives, and guarantees accurate performance of your pipettor
- Hold tips steady when seating on pipettor
- Ensures solid, even tip seating
- Ensure proper heat flow during autoclaving and reduce condensation on tips
- Prevents sterile lid from coming in contact with lab bench
- Allows easy removal/insert of refill trays
- Make it easy to open each individually wrapped sterile rack
- Simplify record keeping, tip identification, and re-ordering
- Reduced rack size reduces waste. Racks utilize our own recycled material and are marked with appropriate symbols to support your in-house recycling initiatives
- Certifies that every tip in every packaging configuration (bulk, non-sterile or sterile) is free of DNA, DNase, RNase, Endotoxins, and Cytotoxins

PRODUCT HIGHLIGHTS

Molding Perfection—

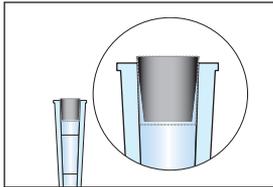
Producing quality labware requires tight molding tolerances, rigorous maintenance schedules, and highly polished molds to create a tip with low retention. Our manufacturing and QC specifications are so tight, Matrix standard tips rival special “low retention” tips currently on the market.



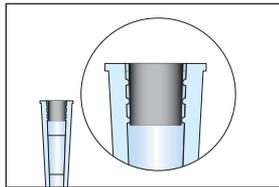
Matrix tips (far left) showed liquid retention characteristics similar to “low retention” tips after pipetting fluids such as dH₂O, 50% Glycerol, Hybridized Buffer, and 0.1% SDS.

Sealing Rings—

Matrix tips and pipettors are designed together to ensure that a perfect balance exists between security of the seal and ease of application/ejection. Sealing rings minimize the total contact area between tip and tip fitting, and compress upon tip application guaranteeing a leak-free seal with minimal application and ejection force. Because these sealing rings compress, Matrix tips also offer a leak-free seal on most other pipettors on the market.

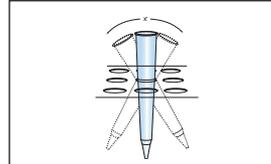


Tips without sealing rings can either seal on a small area of the tip fitting, increasing the chance of leaking or falling off, or seal on too much of the tip fitting, meaning it takes a great amount of force to seat or eject tips.

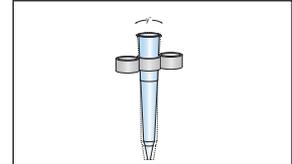


Matrix tips utilize sealing rings which ensure a consistent, secure seal with minimal application/ejection force required.

Flo-Thru® Racks—Matrix tips are supplied in the innovative Flo-Thru rack that individually supports tips to prevent them from wobbling around when trying to seat them on the pipettor. A rigid design also ensures the rack will not flex or bend when trying to apply tips.



Tips that are not supported in the rack move around when trying to seat the pipettor.



Matrix Flo-Thru racks support each tip to limit movement when trying to seat tips.

These racks also feature venting along the edge or around each tip to improve heat flow during autoclaving and reduce condensation that can form on the tips. The dual position lid can be propped open to prevent vacuum deformation during autoclaving.



Packaging Innovation—Matrix sterile tip racks are sold in individual bags with quick-tear openings to ensure each rack remains sterile until you are ready to use it. When you are, simply snap and pull to open the bag; no more fumbling for a razor blade to slice open shrinkwrap.



Each rack also has pertinent product details that remain on the rack at all times including re-ordering information, description, volume range, and lot number.



Environmentally Sensitive—Matrix tip racks are manufactured from clean recycled materials generated during our tip manufacturing, and are made as small as possible to reduce waste. All components of each rack are also marked with the appropriate symbol to simplify recycling. While we recommend that each facility incorporate its own recycling program, Matrix will gladly take back any clean, empty tip racks and trays and forward for general recycling. Contact a Matrix representative or visit www.matrixtechcorp.com for more information.



Hinged, low-profile lid

Removable insert for Ecotip refill packs

Fully autoclavable

Stable, rigid design

Small footprint



EXCEPTIONAL CONTAMINATION PROTECTION FOR YOUR SAMPLES AND PIPETTORS.

Whether you're pipetting genomic material, bacterial samples, or other precious samples, the risk of cross-contamination from aerosols created during pipetting is always of concern. To ensure no contamination of the pipettor barrel occurs, the use of filter tips is recommended. However, just because a tip has a filter doesn't necessarily mean that it is effective in blocking aerosols. Matrix Integrity® filter tips are tested for many types of potential filter failure and every lot must pass a rigorous battery of tests before earning the name "Integrity."

FEATURES

- Integrity tested
- Hydrophobic filter material
- Easy-to-open packaging
- Hinged rack lids
- PureFect tested

BENEFITS

- Guarantees you get a filter tip that effectively blocks aerosols
- Ensures no particulates contaminate samples; inadvertent contact with filter will not contaminate sample or result in sample loss
- Product maintains sterility while being easy to access
- Rack can be opened without laying lid on bench top, helping to maintain sterility
- Guarantees absence of contaminants

PRODUCT HIGHLIGHTS

Integrity Filter Testing—In order for a filter tip to be effective at blocking aerosols, the filter itself must meet certain porosity requirements AND the filter must form a complete barrier across the face of the tip. (Figure 1 shows how a filter can fail to block aerosols.) Matrix performs two specific tests to ensure these defects are not present:

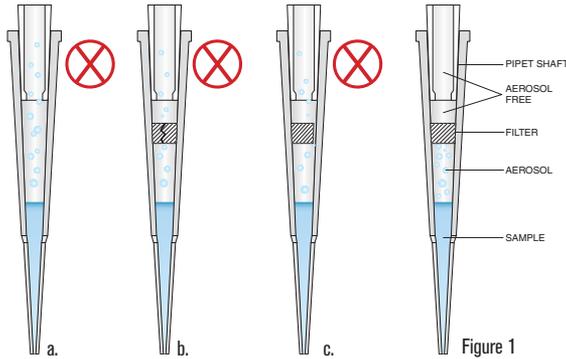


Figure 1

Mercury Intrusion Testing[†]: Ensures that the filter itself meets our aerosol blocking requirements (thus preventing the failure pictured in b).

Particle Count Testing^{††}: Ensures that the filter is effective at blocking aerosols after installation into the tip. A filter that is performing properly will not block aerosols if it does not fit properly in the tip, was damaged during installation, or is not the proper shape (see image c). Every lot of tips produced is tested by drawing a vacuum of aerosols against the filter and ensuring particles do not pass through (see Figure 2).

[†] QC 13.1 - QC 13.8 ^{††} Test Protocol QAS-0100

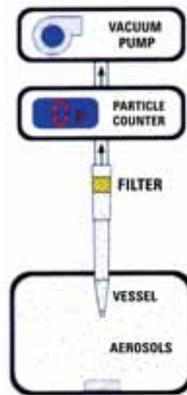


Figure 2

Hydrophobic Filter Material—All Integrity filter tips utilize hydrophobic polyethylene as a filter material. Not only is it non-particulating, but should accidental contact with the filter occur (due to over-pipetting), your sample can be recovered by simply dispensing back out. Because the filter is hydrophobic, your sample will remain uncontaminated and will not be trapped in the filter.

Easy-Open Packaging—Each rack of Integrity filter tips is sealed in a thick polyethylene bag to maintain sterility, yet is easy to open with a simple snap and tear opening.

Hinged Lids—Keep tip box lids off the work surface helps to maintain the sterility of the tips inside.

PureFect Tested—All Matrix tips are produced and packaged in our clean room and Integrity filter tips are PureFect certified to be free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.



APPLICATIONS

Preventing cross-contamination during routine pipetting
Molecular biology
PCR setup
Bacteriology

COMPATIBLE PRODUCTS

Manual Pipettors
Impact² Electronic Pipettors

Page 4
Page 6

ORDERING GUIDE

Integrity Filter Tips (See page 27 for a complete compatibility guide)

Item No.	Style	Unit	Fits
7615	10µl	10 racks of 96 tips	P2/P10 Style Pipettors
7625	10µl	10 racks of 96 tips	20µl Ultramicro Style Pipettors
7635	12.5µl TallTip	10 racks of 96 tips	Matrix 12.5µl* and P2/P10 Style Pipettors
7155	30µl	10 racks of 96 tips	Matrix 30µl* Pipettors**
7275	200µl	10 racks of 96 tips	Matrix 125µl*-250µl and Most 200-250µl Pipettors
7285	200µl TallTip	10 racks of 96 tips	Matrix 125µl*-250µl and Most 200-250µl Pipettors
7325	250µl	10 racks of 96 tips	Matrix 125µl*-250µl and Most 200-250µl Pipettors
7085	250µl TallTip	10 racks of 96 tips	Matrix 125µl*-250µl and Most 200-250µl Pipettors
8045	1250µl	10 racks of 96 tips	Matrix 850-1250µl and Most 1000µl Pipettors
8245	1250µl TallTip	10 racks of 96 tips	Matrix 850-1250µl and Most 1000µl Pipettors
7425	12.5µl 384	10 racks of 384 tips	Matrix 12.5µl 384 and 16-Channel Pipettors
7435	30µl 384	10 racks of 384 tips	Matrix 30µl 384 and 16-Channel Pipettors
7445	125µl 384	10 racks of 384 tips	Matrix 125µl 384 and 16-Channel Pipettors

☞ = Sterile

*Not for use with 384 spacing or 16-channel pipettors
** Special tip ejector required (included with pipettor)
Tip images not to scale



EXTENDED-LENGTH PIPET TIPS.

Matrix extended-length TallTips® allow you to get to the bottom of test tubes, reagent bottles, flasks, and other vessels without touching the barrel of your pipettor against the side of the tube and risking cross-contamination. TallTips also allow you to reach the bottom of particularly long or narrow vessels that standard tips simply cannot reach.



PRODUCT HIGHLIGHTS

Extended Length And Narrow Shaft

—Allow you to access tubes, blocks, and flasks and allow the use of large volume tips in small spaces resulting in less liquid displacement. (See photos below comparing standard tips and TallTips.)



Non-Beveled Tip Ends—When dispensing into deep tubes, chances are you'll be touching off on the sidewall. Non-beveled, narrow tip ends provide cleaner touch-off for greater precision.



Perfect For Use With Impact²

Shorty Pipettors—A shorter pipettor keeps the overall length of tip and pipettor the same as when using a standard tip/pipettor combination. See page 10 for a full line of Shorty pipettors.



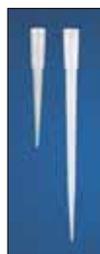
PureFect Tested—All Matrix tips are produced and packaged in our clean room, and TallTips are PureFect certified to be free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.



10µl 40mm



250µl 77mm



300µl 102mm



1250µl 102mm

A comparison of standard and TallTips

COMPATIBLE PRODUCTS

Manual Short-Length Pipettors	Page 4
Impact ² Shorty Electronic Pipettors	Page 10
Manual Pipettors	Page 4
Impact ² Electronic Pipettors	Page 6

ORDERING GUIDE

TallTips (See page 27 for a complete compatibility guide)

Item No.	Style	Unit
7600	30µl / 40mm	Bulk, 1000 tips/bag
7631	30µl / 40mm	10 racks of 96 tips
§ 7632	30µl / 40mm	10 racks of 96 tips
§ 7635*	30µl / 40mm	Filter tip, 10 racks of 96 tips
7280	250µl / 77mm	Bulk, 500 tips/bag
7281	250µl / 77mm	10 racks of 96 tips
§ 7282	250µl / 77mm	10 racks of 96 tips
§ 7285**	250µl / 77mm	Filter tip, 10 racks of 96 tips
7080	300µl / 102mm	Bulk, 500 tips/case
7081	300µl / 102mm	10 racks of 96 tips
§ 7082	300µl / 102mm	10 racks of 96 tips
§ 7085†	300µl / 102mm	Filter tip, 10 racks of 96 tips
8250	1250µl / 102mm	Bulk, 500 tips/case
8241	1250µl / 102mm	10 racks of 96 tips
§ 8242	1250µl / 102mm	10 racks of 96 tips
8246	1250µl / 102mm	Ecotip, 10 refill trays of 96 tips
§ 8245	1250µl / 102mm	Filter tip, 10 racks of 96 tips

§ = Sterile

*Max volume 12.5µl

**Max volume 200µl

†Max volume 250µl

FEATURES

- 102mm maximum length
- Flo-Thru rack
- Universal fit
- PureFect tested

BENEFITS

- Offers safe access to 100mm test tubes
- Reduces tip wobble and improves airflow while autoclaving
- Works with most major brands of pipettors
- Ensures contaminants do not interfere with experimental results

SPACE-SAVING, ENVIRONMENTALLY SENSITIVE TIP PACKAGING.

Ecotip® is a refill system for Matrix tip racks that offers everything from fast rack reloading to a unique, space-saving design. Trays of tips are nested in easily accessible packaging that takes up very little space and eliminates the need to dispose of a tip box each time a rack is emptied.



PRODUCT HIGHLIGHTS

User-Friendly Refills—Ecotip refill trays are quickly and efficiently transferred from the packaging to the empty tip box. Empty inserts from each tip box are easily removed thanks to finger tabs on each tip tray. With Ecotip, there's no need for mechanical towers, clumsy stacks of tips, or other transfer mechanisms.



Environmentally Friendly—While our tips are made from 100% virgin polypropylene, Matrix insert trays and tip boxes utilize our own recycled materials. The Ecotip system is 100% recyclable and each component is marked with the appropriate recycling symbols. If your facility does not support a recycling program, Matrix can accept back clean, empty tip racks and inserts for general recycling.



Lab Space Friendly—Ecotip is a much more compact alternative to standard racked tips, saving valuable lab space. The refills also fit easily in a drawer, on a shelf, or on the bench.



PureFect Tested—All Matrix tips are produced and packaged in our clean room, and Ecotips are PureFect certified to be free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.



ORDERING GUIDE

Ecotip (See page 27 for a complete compatibility guide)

Item No.	Volume	Unit
7156	250µl	10 refill trays of 96 tips
8046	1250µl	10 refill trays of 96 tips
8246	1250µl TallTip	10 refill trays of 96 TallTips

FEATURES

- Environmentally friendly
- Quick, efficient refill
- Space-saving design

BENEFITS

- Reduces plastic waste by eliminating need for a new tip box for each rack of tips
- Reloading empty tip boxes is quick and easy
- Saves bench, shelf, and closet space



ORDERING GUIDE

Pipet Tips



10µl Pipet Tips

Fits: Gilson/Rainin P2/P10 Style Pipettors

Item No.	Unit
7610	Bulk, 1000 tips/case
7611	10 racks of 96 tips
7612	10 racks of 96 tips
7615	Filter tip, 10 racks of 96 tips



20µl Pipet Tips

Fits: Eppendorf UltraMicro Style Pipettors

Item No.	Unit
7620	Bulk, 1000 tips/case
7621	10 racks of 96 tips
7622	10 racks of 96 tips
7625*	Filter tip, 10 racks of 96 tips

*Max volume 10µl



30µl TallTips (40mm Length)

**Fits: 12.5µl & 30µl Impact² Pipettors[†]
10µl Matrix Manual Pipettors
Most P2/P20 Style Pipettors**

Item No.	Unit
7600	Bulk, 1000 tips/case
7631	10 racks of 96 tips
7632	10 racks of 96 tips
7635*	Filter tip, 10 racks of 96 tips

[†] Not for use with Equalizer 384 or 16-channel pipettors
*Max volume 12.5µl, for 30µl filter tip for use with Impact² single channel pipettors, see Item No. 7155



250µl Pipet Tips

**Fits: 125µl & 250µl Impact² Pipettors
50µl, 200µl & 300µl Matrix Manual Pipettors
Most Other 200µl-300µl Pipettors**

Item No.	Unit
7151	10 racks of 96 tips
7152	10 racks of 96 tips
7156	Ecotip, 10 refill trays of 96 tips
7155*	Filter tip, 10 racks of 96 tips
7275**	Filter tip, 10 racks of 96 tips

*Max volume 30µl, fits 30µl Impact² single channel pipettors
**Max volume 200µl



250µl TallTips (77mm Length)

**Fits: 125µl & 250µl Impact² Pipettors
50µl, 200µl & 300µl Matrix Manual Pipettors
Most Other 200µl-300µl Pipettors**

Item No.	Unit
7280	Bulk, 500 tips/case
7281	10 racks of 96 tips
7282	10 racks of 96 tips
7285*	Filter tip, 10 racks of 96 tips

*Max volume 200µl



300µl Pipet Tips

**Fits: 125µl & 250µl Impact² Pipettors
50µl, 200µl & 300µl Matrix Manual Pipettors
Most Other 200µl-300µl Pipettors**

Item No.	Unit
7320	Bulk, 1000 tips/case
7321	10 racks of 96 tips
7322	10 racks of 96 tips
7325*	Filter tip, 10 racks of 96 tips

*Max volume 250µl

☒ = Sterile

Tip images enlarged to show detail, and are not to scale

300µl TallTips (102mm Length)

**Fits: 125µl & 250µl Impact² Pipettors
250µl & 300µl Matrix Manual Pipettors
Most Other 200µl–300µl Pipettors**

Item No.	Unit
7080	Bulk, 500 tips/case
7081	10 racks of 96 tips
▶ 7082	10 racks of 96 tips
▶ 7085*	Filter tip, 10 racks of 96 tips

*Max volume 250µl

1250µl Pipet Tips

**Fits: 850µl & 1250µl Impact² Pipettors
1000µl Matrix Manual Pipettors
Most Other 1000µl Pipettors**

Item No.	Unit
8050	Bulk, 500 tips/case
8041	10 racks of 96 tips
▶ 8042	10 racks of 96 tips
8046	Ecotip, 10 refill trays of 96 tips
▶ 8045	Filter tip, 10 racks of 96 tips

1250µl TallTips (102mm Length)

**Fits: 850µl & 1250µl Impact² Pipettors
1000µl Matrix Manual Pipettors
Most Other 1000µl Pipettors**

Item No.	Unit
8250	Bulk, 500 tips/case
8241	10 racks of 96 tips
▶ 8242	10 racks of 96 tips
8246	Ecotip, 10 refill trays of 96 tips
▶ 8245	Filter tip, 10 racks of 96 tips



12.5µl 384 Pipet Tips

**Fits: 12.5µl Equalizer 384/16-Channel Impact²
10µl Matrix 16-Channel Manual Pipettors**

Item No.	Unit
7421	10 racks of 384 tips
▶ 7422	10 racks of 384 tips
▶ 7425	Filter tip, 10 racks of 384 tips

30µl 384 Pipet Tips

Fits: 30µl Equalizer 384/16-Channel Impact²

Item No.	Unit
7431	10 racks of 384 tips
▶ 7432	10 racks of 384 tips
▶ 7435	Filter tip, 10 racks of 384 tips

125µl 384 Pipet Tips

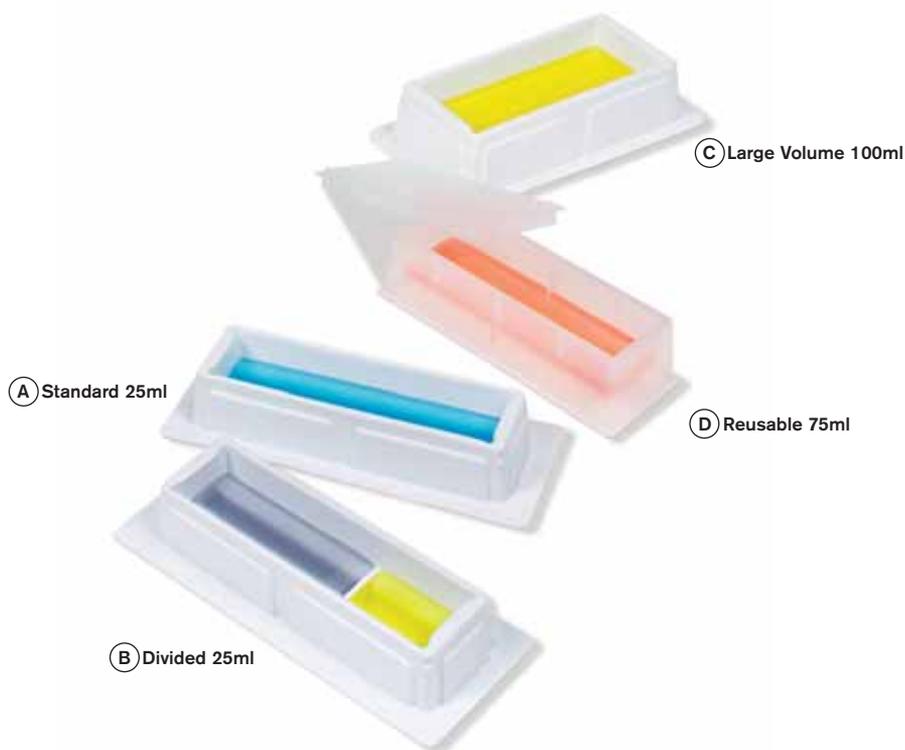
**Fits: 125µl Equalizer 384/16-Channel Impact²
50µl Matrix 16-Channel Manual Pipettors**

Item No.	Unit
7441	10 racks of 384 tips
▶ 7442	10 racks of 384 tips
▶ 7445	Filter tip, 10 racks of 384 tips

▶ = Sterile

Tip images enlarged to show detail, and are not to scale

Tip Compatibility—Matrix tips fit most brands of pipettors on the market. For complete compatibility information with other brands, or for samples to try with your pipettor, please visit our Web site and download an electronic copy of the Matrix Pipettor Tip Compatibility Chart (www.matrixtechcorp.com).



UNIQUE, INNOVATIVE REAGENT RESERVOIRS FOR A VARIETY OF APPLICATIONS.

At Matrix, innovation goes beyond our pipettors and tips. Even our reagent reservoirs have been designed to provide solutions tailored to your procedures, rather than the other way around. Four variations of reservoirs are offered, 25ml, 25ml with divider, 100ml, and a reusable polypropylene 75ml reservoir.

FEATURES

- Trough within a trough
- Pour-off spouts on all four corners
- Graduations on inside wall
- Extra-wide base
- 25ml divided reservoir
- Sterile reservoirs packaged in snap and tear bags
- PureFect tested and certified

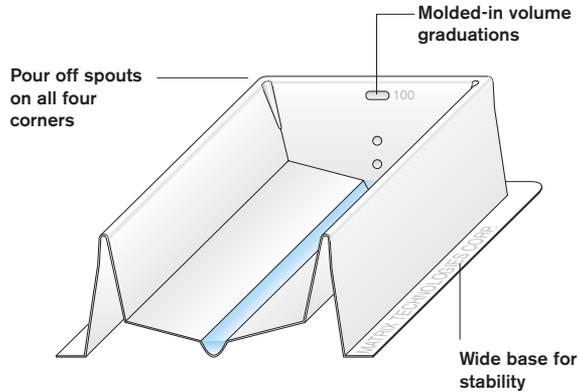
BENEFITS

- Maximizes the amount of liquid accessible to pipet tips when using small amounts of reagent
- Reduce spillage when pouring reagents out of reservoir
- Enable quick measurement of remaining liquid
- Adds rigidity and stability to reservoir, helping to avoid spills
- Allows the pipetting of two different reagents with up to eight channels on one side, and up to four on the other. Maximizes recovery if using only single channel and small amount of reagent
- Packaging maintains sterility while being easy to open
- Guarantees absence of contaminants



PRODUCT HIGHLIGHTS

Trough Within A Trough—Maximizes reagent recovery and allows for small volumes of reagents to be reached by a single channel or all channels of a multichannel pipettor.



25ml Divided Reservoirs—Allow the pipetting of two different reagents with a multichannel pipettor. Up to eight channels can be accommodated on one side and up to four in the smaller section. This is perfect for adding a control row to an assay plate at the same time as filling other wells.

Pour-Off Spouts On All Corners—Simplify emptying and help avoid spills.

Wide Base—Provides stability and prevents accidental tipping.

TECHNICAL SPECS

Material:	25ml, 25ml Divided, 100ml: Vacuum Formed Polystyrene 75ml and Lid: Injection-Molded Polypropylene
Autoclavability:	25ml, 25ml Divided, 100ml: No 75ml and Lid: Yes
Trough Volume:	25ml and 100ml: 4ml
25ml Divided Reservoir Section Volume:	Left: 5ml Right: 10ml
Max Temp:	25ml, 25ml Divided, 100ml: 90°C 75ml and Lid: 140°C

COMPATIBLE PRODUCTS

Manual Pipettors	Page 4
Impact ² Electronic Pipettors	Page 6

For a complete line of reagent reservoirs for automated systems, please see page 63.



ORDERING GUIDE

Reagent Reservoirs For Handheld Pipetting

Item No.	Volume	Description	Unit
§ 8093	25ml	Standard	10 packs of 10 reservoirs
§ 8094	25ml	Standard	50 individually wrapped
§ 8095	25ml	Divided	10 packs of 10 reservoirs
§ 8096	25ml	Divided	50 individually wrapped
8075	75ml	Autoclavable	10/case
8076	Lid	Autoclavable, fits 8075	10/case
§ 8085	100ml	Large-volume	10 packs of 10 reservoirs
§ 8086	100ml	Large-volume	50 individually wrapped

§ = Sterile



At a certain point in the research cycle, pipetting becomes more efficient and economical with an automated system than a handheld instrument. Repetitive tasks—such as delivering the same volume into stacks of microplates—can obviously be simplified with automation, as can avoiding errors during the setup of complex assays that involve many steps and have intricate serial dilutions. In some applications, such as working in 1536 well plates or delivering sub-microliter volumes, an automated system is just plain necessary.



Matrix automated systems are ideal for virtually any medium- or high-throughput application and—like our handheld line—cover all your requirements in terms of number of channels, type of plates, or volume of liquid.

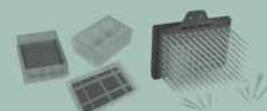


Our consumables products are engineered and produced for superior results. Matrix Disposable Automation Research Tips (D.A.R.T.s[®]) are 100% straightness tested to give you the confidence to walk away from an instrument during pipetting. Our D.A.R.T.s tips reliably access an array of multi well plates and can perform consistent touch offs on the side of microplate wells, while our line of automation reservoirs allows reagents to be moved as easily as microplates on automated systems. From instruments to consumables, Matrix offers proven walk away functionality.



If your throughput requirements do not warrant the use of an automated system, the Matrix line of handheld pipettors may be better suited to your needs.

See our “Handheld Pipetting Systems” section starting on page 1 for a complete selection of precision-engineered pipettors designed for superior comfort, accuracy, and productivity.





FLEXIBLE, HIGH-SPEED, 8-CHANNEL PLATE FILLER.

WellMate® brings unparalleled flexibility and cost-efficiency to plate filling. It is the first instrument of its kind to offer disposable, pre-sterilized tubing cartridges and designed to rapidly dispense a dynamic volume range (1µl to 2,000µl). It also accommodates virtually any microplate—from six to 384 wells—or any height 96-position tube rack. Simply raise or lower the dispensing head to the required height and WellMate can handle everything from deep and shallow well plates, to storage tubes as tall as 89mm. Once the microplate and dispensing head are in place, WellMate can be programmed to dispense volumes from 1µl-2000µl in increments of 1.0µl.

FEATURES

- Adjustable dispensing head
- Disposable, pre-sterilized tubing cartridges with a choice of three different needle options
- Intuitive programming allows discrete well/column filling
- Dynamic dispense volume range (1-2000µl) and plate compatibility
- Y- and X-axis adjustment

BENEFITS

- One instrument accommodates virtually any height 6, 12, 24, 48, 96, or 384 well microplate
- Flexibility of pipetting everything from sensitive cellular materials to high vapor pressure fluids
- Offers greater flexibility in assay design
- Accommodates many plate-filling applications; eliminates need to purchase separate instruments for dispensing into various labware
- Enables dispensing into any side of a well for more precise control



PRODUCT HIGHLIGHTS

Small Footprint—Makes it ideal for space-conscious laboratories, or for use in a hood.

Broad Microplate Compatibility—WellMate is compatible with the widest variety of standard and deep well microplates including 6, 12, 24, 48, 96, and 384-well, all on the same instrument with minimal adjustments.



Chemically-resistant Drip Tray With Spill Barrier—Helps prevent spills from contacting electronics.



Simple Pump Motor Controls—Support fast, easy priming and emptying of tubing lines. Fluid flow can be reversed to recover valuable reagent contained in the lines.

Inexpensive Disposable Tubing Cartridges—Can be quickly and easily replaced, eliminating the need to have them serviced and calibrated. Cartridges are pre-sterilized and individually packaged.



Visual/Audible Safety System—Prevents pump motor rotation when tubing is not clamped correctly.

Standard 9-Pin RS232 Programming Capability—Offers flexible robotic integration options.

DISPOSABLE TUBING CARTRIDGE OPTIONS

On top of its flexibility and functionality, WellMate offers unique cost-efficiencies with pre-sterilized tubing cartridges. Economical enough to be disposable, yet rugged enough to be autoclaved for long-term use, our unique tubing cartridges are ideally suited to a variety of users and applications.

Silicone-based tubing cartridges are available with:

A Standard-Bore Nozzle Orifice—For six to 96 well plate filling and volumes above 20 μ l.



A Small-Bore Nozzle Orifice—For lower volume (1.0 μ l and above) applications and 384 well plate filling.



A Stainless Steel Teflon[®]-coated Nozzle Orifice—Designed for viscous fluids, low volume dispensing (1.0 μ L and above), and 384 well plate filling applications. This cartridge comes with a disposable tubing assembly and is fully autoclaveable.



WellMate standard and small-bore cartridges come in economical packs of five making it possible to keep several cartridges on hand for reagent-specific plate-filling applications. Each cartridge can be used to fill 1,000 plates. The stainless steel tubing cartridge is fully autoclaveable and interchangeable with the disposable small bore tube sets, and disassembles quickly to attach new tubing to the stainless steel tip cartridge head. Use the nozzle selection guide below to help identify the appropriate tubing cartridge for your particular plate-filling application.

PROGRAMMING AND DISPENSING FLEXIBILITY

Among WellMate's capabilities is a unique programming innovation that allows you to select plate columns to be filled or left empty. Rather than always filling the entire plate, an operator can now choose discrete columns to be filled on a particular plate or block.



The instrument also allows you to quickly and easily offset the dispense nozzles over microplate wells so liquid can be dispensed towards the front or back of a well. This feature, coupled with the ability to teach left/right well offsets, enables dispensing into any position in a well, and makes WellMate one of the most accommodating plate fillers available today.



NOZZLE SELECTION GUIDE

Tubing Cartridge	Orifice Size	Plate Type	Channels	Dispensing Accuracy	Dispensing Precision
Small Bore	0.015" (0.38mm)	6-384 wells	8-channel plastic molded nozzles	\pm 2.0% or 0.25 μ l	2.0% or 0.25 μ l
Standard Bore	0.023" (0.58mm)	6-96 wells	8-channel plastic molded nozzles	\pm 2.0% or 1.0 μ l	2.0% or 1.0 μ l
Stainless Steel, Teflon-coated	0.011" (0.28mm)	6-384 wells	8-channel SS, Teflon-coated nozzles	\pm 2.0% or 0.25 μ l	2.0% or 0.25 μ l

WELLMATE



WELLMATE PLATE FILLING SPEEDS

Dispense Volume	96 Plate	384 Plate
5µL	3.2 (sec.)	9 (sec.)
10µL	4.5	11
50µL	8.7	26.5
100µL	13.2	45.5
500µL	52.2	N/A
1,500µL	148	N/A

TECHNICAL SPECS

Size (wxdxh):	14.5 x 11.5 x 8.5in 37.5 x 30 x 21.6cm	24lb 11kg
Input Voltage:	100V AC or 240V AC	
Consumption:	50/60 Hz – 40VA	

ACCESSORIES

OCX Software for Ease of Integration: Allows for PC control of all functions of the WellMate via RS232 communication protocol. This tool is available for free download from www.matrixtechcorp.com.

Additional Pre-Sterilized Tubing Cartridges

Low Profile Plate Lifter

WellMate Stacker

APPLICATIONS

Addition of buffers, diluents, enzymes, substrates, ligands etc.
 Addition of labeled compounds, including fluorophores, radio labeled compounds
 WellMate can be placed in a dark room for dispensing light-sensitive compounds
 Addition of viscous solutions such as scintillation fluid or glycerol/sucrose solutions
 Addition of bacteria, yeast
 Addition of microbeads for assays such as LOCI or loading combichem plates
 Sterile plate filling of cell culture media into 6, 12, 24, 48, 96, or 384 tissue culture plates

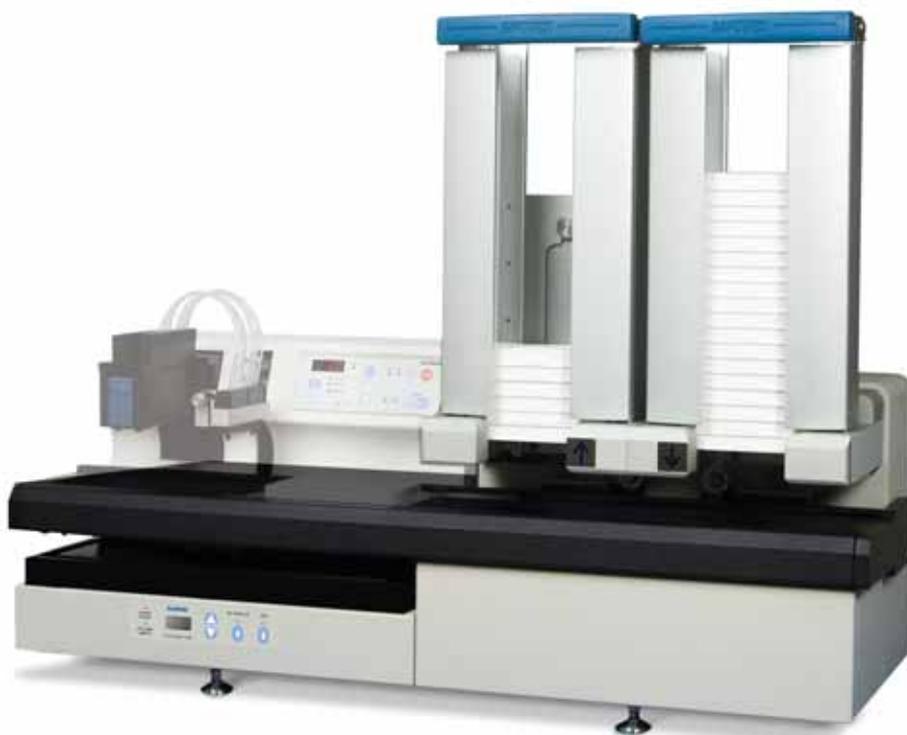
COMPATIBLE PRODUCTS

Matrix ScreenMates® (all SBS standard footprint, 96 and 384 well, deep or shallow plates, tubes, and blocks) Page 82, 87
 WellMate Stacker Page 35
 Tall Chimney Page 36
 Short Chimney Page 36

ORDERING GUIDE

WellMate Microplate Dispenser

Item No.	Description	Unit
201-10001	WellMate base unit inclusive of: One standard-bore tubing cartridge, one small-bore tubing cartridge, universal-microplate removable stage, waste-fluid vessel with tubing, nozzle height reference scale and spacer guide, and other accessories.	
Tubing Cartridges		
Item No.	Description	Unit
201-30001	8-Channel, Standard-Bore Disposable Tubing Cartridge. Pre-sterilized. Features a 0.023" (0.58mm) inner diameter nozzle orifice.	5 per case
201-30002	8-Channel, Small-Bore Disposable Tubing Cartridge. Pre-sterilized. Features a 0.015" (0.38mm) inner diameter nozzle orifice.	5 per case
201-30003	8-Channel, Stainless Steel Teflon-coated Tip Tubing Cartridge, Pre-sterilized. Features a 0.011" (0.28mm) inner diameter nozzle orifice.	1 per case
201-40001	Low Profile Plate Lifter	1 per case



DRAMATICALLY INCREASE THROUGHPUT WITH WALK AWAY PLATE FILLING.

Developed with simplicity and ease of use in mind, the WellMate Stacker is a perfect complement to any WellMate plate filler. A simple linear plate mechanism shuttles tall, standard, and low profile microplates quickly and effortlessly from the storage chimneys to the WellMate dispensing position.

FEATURES

- Removable stacker chimneys
- Front loading
- Universal Plate chimneys
- Simple operation
- Variable capacity chimneys
- Compatible with the Matrix PlateMate Plus system
- Re-stacking
- De-lidding

BENEFITS

- Lightweight and easily removable to load offline or transfer to Matrix's PlateMate Plus system
- Efficient re-loading and easy plate access; chimney doors secure plates
- Accommodates virtually any style standard, low profile, deep well plates, and tube racks without adjustment
- Set the plate height on the keypad and press start!
- Short plate chimneys are perfect for biological safety cabinets and fit up to 25 standard height plates
- Tall plate chimneys accommodate up to 50 standard height plates
- Simple, secure plate transfers from the WellMate to the PlateMate Plus
- Consistently stacks processed plates into original order
- Automatically removes and re-lids plates using Matrix's automation-friendly lids



PRODUCT HIGHLIGHTS

Re-stacking—The WellMate Stacker quickly and efficiently re-stacks processed plates back into the order they were first processed for any timed applications.



De-lidding—For applications requiring the use of lidded plates, the stacker has the ability to de-lid, and re-lid. Choose from our clear or black automation-friendly lids for a variety of protocols. See page 93 for ordering information.



Tall Chimney—Each tall chimney accommodates up to 50 standard height plates and is compatible with deep well and low profile plates.

Short Chimney—Each short chimney accommodates up to 25 standard height plates and is compatible with deep well and low profile plates. When the WellMate and stacker are used with the short chimney option, it fits in most standard sized bio-safety cabinets.

COMPATIBLE PRODUCTS

Matrix WellMate Base Unit	Page 33
Matrix ScreenMates	Page 82, 87
(all SBS standard footprint, 96 & 384 well, deep or shallow plates, tubes and blocks)	
Matrix Automation-friendly Lids	Page 93

TECHNICAL SPECS

WellMate Base Unit

Size (wxdxh):	14.5 x 11.5 x 8.5in	24 lbs.
	37.5 x 30.5 x 21.6 cm	11 kg
Power:	Input Voltage 100V AC or 240V AC	
	Consumption 50/60 Hz – 110VA	

Stacker Base Unit

Size (wxd):	31.06 x 12.65in	60 lbs.
	78.89cm x 32.13cm	27.22 kg
Height with Tall Stackers:	40in/101.6cm*	
Height with Short Stackers	28in/71.12cm*	
Power:	Input Voltage 100V AC or 240V AC	
Consumption:	50/60 Hz -40VA	

* Allow clearance of at least 2 inches if placed in a containment hood.

ORDERING GUIDE

WellMate Stacker

Item No.	Description
201-20001	WellMate Stacker Base Unit
501-30005*	Removable Stacker Chimney, tall
501-30006*	Removable Stacker Chimney, short
4954	Automation-friendly Lid, Clear
4955	Automation-friendly Lid, Black



▶ = Sterile

*Two chimneys are required.



SerialMate



SerialMate CE

SERIALMATE

AUTOMATED MULTICHANNEL PIPETTING SYSTEM.

SerialMate® is a compact, automated pipetting workstation capable of performing various liquid handling tasks normally accomplished using electronic multichannel pipettors. Operating in either an 8/12-channel mode (for 96 well plates) or 16/24 (for 384 plates), SerialMate is the ideal, cost-effective automated alternative to tedious manual pipetting applications such as reagent addition, intra/inter-plate serial dilutions, and plate replication.

FEATURES

- Small footprint
- Liquid-specific calibration
- PC/Software-based or LCD programming
- Interchangeable pipetting heads
- Air-displacement pipetting using disposable tips
- Five-position work surface
- On-board shaking

BENEFITS

- Requires minimal bench space; fits into bio-hazard hoods
- Delivers optimal accuracy and precision regardless of liquid being used
- Offers fast, simple protocol creation; programs can be saved for future use
- Allow 96 or 384 well plate processing on one instrument
- Ensures zero carryover between samples
- Accommodates processing of two microplates and up to four different reagents
- Enables mixing of microplate wells during a protocol

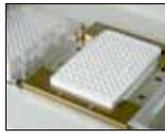
PRODUCT HIGHLIGHTS

Interchangeable 8/12- And 16/24-Channel Pipetting Heads—Four interchangeable air-displacement pipetting heads (ranging from 1.0µl-220µl) are available to meet a variety of volume and plate requirements. Heads are easy to install and work with Matrix SerialMate pipet tips (see ordering guide on next page).



Choice Of Models—SerialMate is available in a standard version featuring an operator-accessible, automation-friendly work deck or with a plexiglass safety enclosure featuring electronic interlocking access doors (SerialMate CE).

On-board Plate Shaking—Every SerialMate comes equipped with an adjustable microplate shaker enabling onboard mixing of well contents using orbital motion with a maximum amplitude of 2.5mm, and a frequency range of 0 to 25 cycles per second.



Five-Position Work Surface—Accommodates virtually any deep or shallow 96 or 384 well plate. The standard five-position work surface is configured as shown in the Technical Specs section and can be customized to meet your needs.



Liquid Level Sensor—Detects when reagent reservoirs are empty and prompts user for refilling.

Choice Of Programming/Control Options—SerialMate can be controlled using its onboard LCD touch panel or ControlMate Software. (See below for details.)

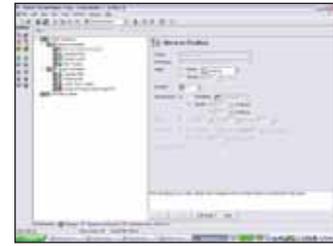
PROGRAMMING FLEXIBILITY

SerialMate offers a choice of easy-to-use programming options:

On-board LCD Screen—This touch panel allows you to create pipetting programs and store up to nine individual and 20 linked pipetting protocols in memory for fast execution.



ControlMate Software—A Windows®-based application that provides a graphical interface for controlling the SerialMate and other Matrix instruments. The software comes standard with every SerialMate, and an OLE ControlMate package is also available for robotic integration. (See page 62 for complete details.)



Whichever programming feature you use, SerialMate allows you to control the following parameters within a pipetting protocol:

- Aspiration/dispense volume, speed, delays
- Tip aspiration/dispense/heights
- Mix volume, speed, cycles
- Air gaps
- Selection of rows/columns to be processed
- Reagent liquid level sensing
- Tip touch off
- Tip changes between rows/columns (tips can be returned to rack or ejected)
- Plate shaking time
- 'Repeat' or 'Neat' dispensing
- Blowout volumes

TECHNICAL SPECS

Size (hxdxw):	22.5 x 15.5 x 28.5in	80lb
	57.15 x 39.37 x 72.39cm	36.3kg

STANDARD SERIALMATE WORK SURFACE

Position No.	Configuration
1	96 or 384 tip rack
2	Reagent reservoir(s) or 96 deep well blocks
3	Microplate (deep/shallow)
4*	Microplate (deep/shallow)
5	Pipet tip disposal station

*Plate Shaker location

SERIALMATE ACCURACY AND PRECISION SPECIFICATIONS

8/12-Channel Head For 96 Well Microplates	Accuracy	Precision
Volume: 1.0-30.0µl	±2.0% or 0.15µl	±1.5% or 0.1µl
5.0-220.0µl	±2.0% or 1.0µl	±1% or 0.5µl
5.0-220.0µl*	±2.0% or 1.0µl	±1% or 0.5µl
16/24-Channel Head For 384 Well Microplates	Accuracy	Precision
Volume: 1.0-30.0µl	±2.0% or 0.15µl	±1.5% or 0.1µl

*Deepwell pipetting head



PROCESSING SPEEDS FOR 96 WELL PLATES

Pipetting Application	Plate Axis Position	
	8-Channel	12-Channel
Reagent addition to one 96 well plate	50 sec.*	32 sec.*
96 well plate replication with pipet tip changes between each row	4 min. 30 sec.	3 min.
Serial dilution (3 mix cycles per row)	1 min. 45 sec.	1 min. 30 sec.

*Time studies for reagent addition performed without tip changes

PROCESSING SPEEDS FOR 384 WELL PLATES

Pipetting Application	Plate Axis Position	
	16-Channel	24-Channel
Reagent addition to one 384 well plate	3 min. 30 sec.*	2 min. 20 sec.*
384 well plate replication (with tip change between rows)	7 min. 45 sec.	5 min. 10 sec.
Serial dilution (3 mix cycles per row)	3 min.	2 min. 40 sec.

*Time studies for reagent addition performed without tip changes

ACCESSORIES

A Unique, Two-Chambered Disposable Reagent Reservoir—Provides large-volume (150ml) reagent storage along with a small trough for dispensing excess reagent.



A Specially Designed Autoclavable Reagent Reservoir—Featuring a capacity of 40ml and a deep v-bottomed trough that makes it easy to access expensive reagent and minimizes waste. By using the supplied reservoir frame, up to four reservoirs can be accommodated in one position on the SerialMate work surface.



APPLICATIONS

Inter/intra-plate serial dilutions
 96 or 384 well plate reformatting
 ELISA assay setup
 PCR plate setup
 Cellular assays
 Reagent/buffer addition
 Sterile pipetting protocols

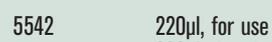
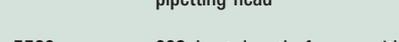
COMPATIBLE PRODUCTS

Matrix ScreenMates
 (all SBS standard footprint,
 96 and 384 well, deep or shallow
 plates, tubes, and blocks)

Page 82, 87

ORDERING GUIDE

Pipet Tips for SerialMate

Item No.	Description	Unit
5571	 30µl, for use with 8-12 Channel 30µl pipetting head	20 racks of 96 tips
§ 5572	 30µl, for use with 8-12 Channel 30µl pipetting head	20 racks of 96 tips
5541	 220µl, for use with 8-12 Channel 220µl pipetting head	20 racks of 96 tips
§ 5542	 220µl, for use with 8-12 Channel 220µl pipetting head	20 racks of 96 tips
§ 5545	 220µl filter tip, for use with 220µl pipetting head	20 racks of 96 tips
5561	 220µl ext. length, for use with 8-12 Channel 220µl deep well pipetting head	20 racks of 96 tips
§ 5562	 220µl ext. length, for use with 8-12 Channel 220µl deep well pipetting head	20 racks of 96 tips
5311	 30µl, for use with 16/24 30µl pipetting head	10 racks of 384 tips
§ 5312	 30µl, for use with 16/24 30µl pipetting head	10 racks of 384 tips

§ = Sterile

ORDERING GUIDE

SerialMate

Base Unit Inclusive Of Software

Item No.	Description
44444-005	Base unit
44444-005CE	Base unit w/plexiglass safety enclosure

Pipetting Heads

Item No.	Channels	Min. Volume Increment	Tip Compatibility	Volume Range
44444-180	8/12	0.1µl	5571, 5572	1.0-30µl
44444-181	16/24	0.1µl	5311, 5312	1.0-30µl
44444-182*	8/12	1.0µl	5561, 5562	5.0-220µl DW
44444-225	8/12	1.0µl	5541, 5542, 5545	5.0-220µl

*Allows full access into 1.0ml deep well blocks or 1.4ml microtubes



96 / 384 - CHANNEL MICRODISPENSER .

Hydra® II is a positive displacement, syringe-based liquid handling system that provides high-speed aspirating and dispensing of microliter and sub-microliter volumes into microplates, 96 or 384 samples at a time. Compact, cost-effective, and easy-to-use, Hydra II dispenses volumes as low as 100nl with excellent precision and accuracy and offers the flexibility of use as either a bench-top liquid handler or as an integrated microplate dispenser.

FEATURES

- Syringe-based automatic pipetting
- Choice of 96 or 384 syringe dispense heads
- Precision movements
- Two-position plate stage available
- Programming via on-board LCD or graphical interface software
- Robotic integration
- Excellent chemical compatibility

BENEFITS

- Enables dispensing down to 100nl and a maximum syringe fill of 1000µl. Resin bead solutions can also be pipetted accurately
- Allows Hydra II to be used with any microplate from 96 to 1536 wells, and any tube rack with a microplate footprint
- Stepper motor technology enables precise movement of syringes as well as X/Y movement of microplates
- Enables pipetting between two microplates, even with different well configurations
- Intuitive, easy programming with or without a PC
- An OLE software package, RS232 port, and open pipetting platform enables easy integration
- Glass syringe technology offers superior chemical resistance



PRODUCT HIGHLIGHTS

Precise Speed Control—Aspirate and dispense speeds can be optimized and independently set based on fluid type or to facilitate optimal precision. Washing speed can also be adjusted to minimize the time to clean needles and syringes.

Programming Flexibility—Hydra II can be programmed utilizing an easy-to-read, four-line LCD display, or with the intuitive drag-and-drop ControlMate software. ControlMate is the same software that is used on all Matrix automation platforms, and an available OLE package provides developers with an ActiveX automation interface. For more information on ControlMate, please see page 62.



Syringe/Needle Assemblies For Precise Low Volume Dispensing—Syringe barrels are made from the highest quality borosilicate glass for excellent chemical compatibility. The inner chambers are precision-machined and highly polished to ensure leak-free operation, and each syringe tip features three points of sealed contact to ensure long-lasting performance. Depending on your application, Hydra II is available with a choice of five different syringe barrel volumes and three different needle types:

Stainless Steel Needles: The standard dispensing needles on Hydra II are Teflon-coated on the exterior to ensure precise droplet formation.

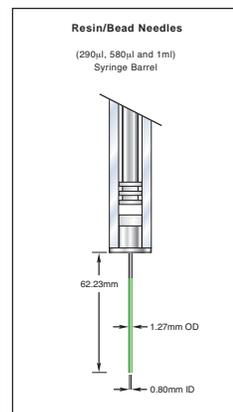
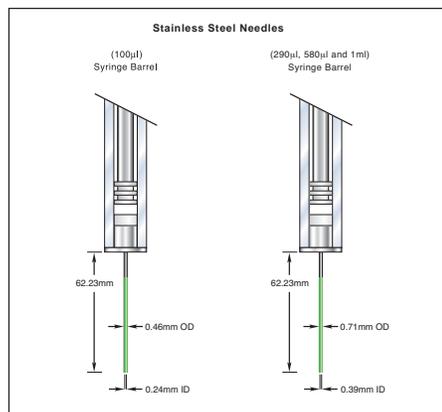
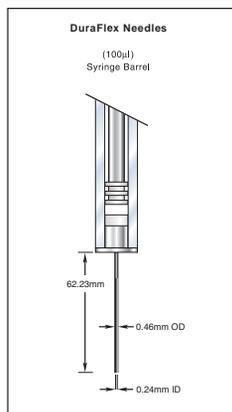
DuraFlex Needles: Made of a flexible titanium alloy, they snap back to their original shape to help prevent damage to the needle or syringe during routine handling or inadvertent contact with a microplate. A proprietary fluoropolymer provides a hydrophobic surface to facilitate drop formation.



Resin/Bead Needles: These wide-bore syringes are ideally suited to resist clogging when dispensing suspensions of resins or beads.

PRECISION OF HYDRA II SYRINGES

Catalog Number	Instrument	Volume Range	Accuracy	Precision	0.5µl expected CV	5.0µl expected CV	50µl expected CV
Hydra 96-Channel Base Instruments							
109610	100µl Stainless Steel Needles	0.1-100µl	+/- 2.5% or 0.01µl	2.5% or 0.01µl	2.5%	2.5%	2.5%
109611	100µl DuraFlex™ Needles	0.1-100µl	+/- 2.5% or 0.01µl	2.5% or 0.01µl	2.5%	2.5%	2.5%
109620	290µl Stainless Steel Needles	0.5-290µl	+/- 2.5% or 0.05µl	2.5% or 0.05µl	10.0%	2.5%	2.5%
109621	290µl DuraFlex Needles	0.5-290µl	+/- 2.5% or 0.05µl	2.5% or 0.05µl	10.0%	2.5%	2.5%
109625	290µl Resin Bead Needles	1.0-290µl	+/- 2.5% or 0.10µl	2.5% or 0.10µl	-	2.5%	2.5%
109630	580µl Stainless Steel Needles	1.0-580µl	+/- 2.5% or 0.10µl	2.5% or 0.10µl	-	2.5%	2.5%
109631	580µl DuraFlex Needles	1.0-580µl	+/- 2.5% or 0.10µl	2.5% or 0.10µl	-	2.5%	2.5%
109635	580µl Resin Bead Needles	2.0-580µl	+/- 2.5% or 0.20µl	2.5% or 0.20µl	-	4.0%	2.5%
109640	1000µl Stainless Steel Needles	5.0-1000µl	+/- 2.5% or 0.50µl	2.5% or 0.50µl	-	10.0%	2.5%
109641	1000µl DuraFlex Needles	5.0-1000µl	+/- 2.5% or 0.50µl	2.5% or 0.50µl	-	-	2.5%
109645	1000µl Resin Bead Needles	8.0-1000µl	+/- 2.5% or 0.80µl	2.5% or 0.80µl	-	-	2.5%
Hydra 384-Channel Base Instruments							
138410	100µl Stainless Steel Needles	0.1-100µl	+/- 2.5% or 0.01µl	2.5% or 0.01µl	2.5%	2.5%	2.5%
138411	100µl DuraFlex Needles	0.1-100µl	+/- 2.5% or 0.01µl	2.5% or 0.01µl	2.5%	2.5%	2.5%





TECHNICAL SPECS

Hydra II Base Unit (Applies To All Models, 96/384, DuraFlex Or Stainless Steel Needles)

Base Unit

Size (hxdxw):	21 x 14 x 10.5in	38lb
	53 x 35.5 x 27cm	17.3kg

Power:	100V/240V
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Automatic Wash Pump Module (Applies To Both Wash Modules)

Pump Module

Size (hxdxw):	12.5 x 13.5 x 6in	21lb
	31 x 34 x 15cm	9.8kg

Power:	100V/120V/2A
	220V/240V/1A

Three-Position X/Y Plate Stage

Plate Stage Table for Hydra II

Size (hxdxw):	4 x 12 x 21in	19lb
	10 x 30 x 53cm	9kg

Power:	Universal 100V/240V
--------	---------------------

Computer Requirements

Operating System	Microsoft Windows® (98, NT 4, 2000, XP)
RAM	256MB Recommended
Processor	1.4GHz Recommended
Communication Ports	2, In any combination of USB or RS232

ACCESSORIES

Automatic Syringe Wash Module—Allows the syringes and needles to be washed between samples with up to two wash solutions. Rinsing is achieved using a reservoir mounted below the plate stage and a separate pump module that moves wash solution in and out of the reservoir, while a liquid level sensor prevents overflowing.

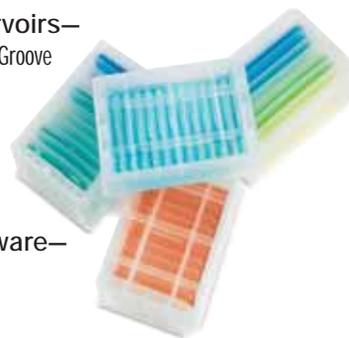
The Three-Position X/Y Plate Stage System—

Moves source plates, destination plates, and reservoirs under the dispensing head. With a positioning accuracy of five microns, the system can accurately and reproducibly position and dispense into 96, 384, and 1536 well microplates. The plate stage includes plate detection sensors and offsets to transfer samples between plates of varying densities (i.e. 96 to 384 plates).



Automation Reservoirs—

Matrix offers a series of V-Groove Low Volume Disposable Reservoirs for use with our automated systems. See page 63 for details.



ControlMate Software—

See page 62 for details.

APPLICATIONS

- PCR set-up
- Distribution of bacteria, yeast, and mammalian cells
- Compound distribution for HTS
- Nucleic acid preps
- Dispensing of solvents
- Plate-to-plate transfers
- Reagent additions
- Reformatting into high-density plates
- Any 96- or 384-channel low-volume positive displacement pipetting procedure

COMPATIBLE PRODUCTS

ScreenMates Microplates	Page 82,87
Tube Racks	Page 66
Automation Reservoirs	Page 63



ORDERING GUIDE

Hydra II Base Units

Item No.	Description
Hydra II 96 Base Unit With Stainless Steel Needles (Includes ControlMate)	
109610	0.1µl–100µl/SS/100-240V
109620	0.5µl–290µl/SS/100-240V
109630	1.0µl–580µl/SS/100-240V
109640	5.0µl–1000µl/SS/100-240V
Hydra II 96 Base Unit With Resin/Bead Syringes/Needles (Includes ControlMate)	
109625	1.0µl–290µl/RB/100-240V
109635	2.0µl–580µl/RB/100-240V
109645	8.0µl–1000µl/RB/100-240V
Hydra II 96 Base Unit With DuraFlex Needles (Includes ControlMate)	
109611	0.1µl–100µl/DF/100-240V
109621	0.5µl–290µl/DF/100-240V
109631	1.0µl–580µl/DF/100-240V
109641	5.0µl–1000µl/DF/100-240V
Hydra II 384 Base Unit With Stainless Steel Needles (Includes ControlMate)	
138410	0.1µl–100µl/SS/100-240V
Hydra II 384 Base Unit With DuraFlex Needles (Includes ControlMate)	
138411	0.1µl–100µl/DF/100-240V

ORDERING GUIDE

Hydra II Optional Accessories

Item No.	Description
3-Position XY Plate Stage	
10961XY3	4x12x21", 19 lbs 10x30x53cm, 9 kg Power: Universal, 100/240V
Wash Pump	
10961WP (110V)	Dimensions: 12.5x13.5x6", 21 lbs Dimensions: 31x34x15cm, 10 kg Power (110V): 100V/120V/2A
10962WP (240V)	Dimensions: 12.5x13.5x6", 21 lbs Dimensions: 31x34x15cm, 10 kg Power (240V): 220V/240V/1A
Computer Requirements	
Operating System	Microsoft Windows® (98, NT 4, 2000, XP)
RAM	256MB Recommended
Processor	1.4GHz Recommended
Communication Ports	2, In any combination of USB or RS232
eDrop™, Single Channel Non-Contact Nano Volume Dispenser**	
10961N1	Single Channel Nano Dispenser Complete with Single Needle Wash
See page 44 for more on the Hydra eDrop	

*Please note the separate catalog numbers for each corresponding voltage source

**To be ordered with any base model Hydra II, either wash pump, and the Three-Position X/Y Plate Stage (10961XY3)



96 / 384 CHANNEL PIPETTING SYSTEM WITH INTEGRATED NON-CONTACT SINGLE CHANNEL DISPENSER.

The Hydra eDrop™ combines the throughput of a 96- or 384-channel positive displacement pipettor with the flexibility of a non-contact dispenser, capable of performing liquid transfers of 100nl up to 120µl. Offering exceptional precision at sub-micro liter volumes while eliminating waste of precious sample material, the Hydra eDrop is the most cost-effective tool for assay miniaturization, forensic and investigative genotyping, protein crystallography, sequencing setup, and PCR setup.

FEATURES

- 96/384 Syringe-based pipettor
- 96 eDrop dispenses in under one minute
- 3-Position stage
- Hydra wash station below stage
- Chilled sample tube holder
- Deep well plate compatible

BENEFITS

- 96 or 384 simultaneous transfers with superior accuracy and precision, even at submicroliter volumes
- Minimizes the effects of evaporation on sub-microliter dispense volumes
- 3 Plate positions allow for increased functionality, including hit picking
- Saves space and allows for the full use of the 3-position stage
- Maintains temperature-sensitive reagents during operation
- Fast access to samples stored in deep well blocks and tube racks



PRODUCT HIGHLIGHTS

Low Volume Non-Contact Dispensing — Transfer between 100nl to 1.20ul per well for a complete plate, or up to 120ul per aspirate and dispense step. Non-contact dispense means no cross-contamination.



Minimal Sample Waste — Aspirate from a single tube, reducing the volume required by minimizing the waste in the reservoir – ideal when working with expensive or precious samples and reagents.



Cherry Picking — Aspirate from 96 or 384 well source plate, block, or tube rack and dispense into any single well or tube position on the stage.



ACCESSORIES

Chilled Sample Tube Holders — Enable source tubes to be kept chilled during aspiration steps. The tube holders work with any refrigerated circulator.

SOFTWARE

ControlMate software is an intuitive, Windows-based graphical interface that integrates into other systems utilizing an OCX component.



APPLICATIONS

- Assay miniaturization
- Forensic and investigative genotyping
- Protein crystallography
- Sequencing setup
- PCR setup

COMPATIBLE PRODUCTS

- Matrix Plates Page 82, 87
- Tube Racks Page 66
- Automation Reservoirs Page 63

Hydra II eDrop supports most commonly used protein crystallography plates

TECHNICAL SPECS

eDrop 96/384 Channel Pipetting System with Integrated Non-contact Dispense

Catalog Number	Base Unit		
10961N1	Size (hxdxw):	13 x 11 x 8in	15lb
		33 x 28 x 20cm	7kg
Power:	Universal, 100/240V		
Air-Supply:	35 +/-5 PSI air source		

Hydra II Base Unit (Applies To All Models, 96/384, DuraFlex Or Stainless Steel Needles)

Catalog Number	Base Unit		
138410	Size (hxdxw):	21 x 14 x 10.5in	38lb
		53 x 35.5 x 27cm	17.3kg
Power:	Universal, 100V/240V		

Automatic Wash Module (Applies To Both Wash Modules)

Catalog Number	Pump Module		
10961WP (110V)	Size (hxdxw):	12.5 x 13.5 x 6in	21lb
		31 x 34 x 15cm	9.8kg
Power:	10961WP 100V/120V/2A		
	10962WP 220V/240V/1A		

Three-Position X/Y Plate Stage

Catalog Number	Plate Stage Table w/Base Module		
10961XY3	Size (hxdxw):	4 x 12 x 21in	19lb
		10 x 30 x 53cm	9kg

Computer Requirements

Operating System	Microsoft Windows® (98, NT 4, 2000, XP)
RAM	256MB Recommended
Processor	1.4GHz Recommended
Communication Ports	2, In any combination of USB or RS232

ORDERING GUIDE

Hydra eDrop

Item No.	Description
10961N1	120ul eDrop non-contact dispenser*
10961NN-1	Replacement eDrop nozzles, set of 2 (100nl-300nl)
10961NN-2	Replacement eDrop nozzles, set of 2 (200nl-max)
10961NT	Replacement eDrop tubing set
10961P-01	Single tube chiller (requires recirculating bath)
10961P-03	Triple tube chiller (requires recirculating bath)
101-10001	Windows® Laptop Computer

*Requires a Hydra II base unit.

EDROP SINGLE CHANNEL DISPENSER: ACCURACY AND PRECISION

Catalog Number	Instrument	Volume Range	Accuracy	Precision	0.5ul expected CV	5.0ul expected CV	50ul expected CV
10961N1	120ul eDrop non-contact dispenser	0.1-120ul	+/- 2.5% or 0.02ul	2.0% or 0.02ul	4.0%	2.0%	2.0%



AUTOMATED PIPETTING SYSTEMS

PLATEMATE 2X2



PlateMate 2x2 with safety enclosure



PlateMate 2x2 with robot-accessible work deck

COMPACT, VERSATILE 96/384-CHANNEL AUTOMATED PIPETTING WORKSTATION.

PlateMate® 2x2 is a small but versatile 96- or 384-channel automated pipetting workstation configurable with any of eight interchangeable air displacement or positive displacement pipetting heads. Designed to minimize laboratory bench space, this compact instrument offers many features previously available only on larger instruments, offering a cost-effective solution for a variety of medium and low throughput liquid handling applications.

FEATURES

- Four interchangeable air displacement pipetting heads available
- Four interchangeable positive displacement pipetting heads available
- Four-position/flexible deck configuration
- High resolution X-Y plate positioning (0.06mm)
- Two peristaltic pumps
- Non-contact liquid level sensors
- Choice of open work area or safety enclosure
- Barcode reading capability
- Windows-based graphical programming interface

BENEFITS

- 500nl to 300µl complete volume range; 8 to 384 channel disposable tip pipetting
- 100nl to 50µl complete volume range; 96 or 384 channel syringe-based pipetting
- Accommodates microplates, reservoirs, wash stations, vacuum manifolds, and other accessories
- Ensures reliable tip access into 96, 384, 864, and 1536 well plates
- Support onboard active reagent replenishment and pipet tip washing
- Trigger automatic replenishment of reagent reservoirs
- Provides robotic access in automated environments, or complete operator safety for stand-alone usage
- Allows automatic tracking of microplates as they are moved on and off the work deck
- Supports fast, easy creation of complex pipetting applications



PRODUCT HIGHLIGHTS

Choice Of Pipetting Heads—PlateMate 2x2 utilizes the same pipetting heads as the high throughput PlateMate Plus. With a total of eight different heads available, the PlateMate 2x2 can be configured for almost any application your protocol requires.

Air Displacement Heads: Utilize pipet tips, and cover volume ranges of 0.5-300 μ l or 5-300 μ l in 96 channels, and 0.5-30 μ l or 1-100 μ l in 384 channels. Ideal for applications requiring disposable tips, serial dilutions, or higher aspiration volumes.



Positive Displacement Heads: Available with either 96 or 384 syringes, with a volume range of 100nl to 50 μ l with stainless steel needles or DuraFlex needles. Ideal for pipetting down to 0.1 μ l, viscous solutions, liquids with high vapor pressure, or caustic reagents.



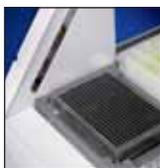
For more information on PlateMate pipetting heads, see page 54.

Four-Position Work Deck—

Accommodates any combination of microplates, tube racks, disposable or automatic replenishing reagent reservoirs, a tip wash station, or other ancillary devices such as vacuum manifolds. 24V DC power for up to two of these devices is available on the deck, and can be controlled via the software.



Choice Of Robot-Accessible Work Deck Or Safety Enclosure—PlateMate 2x2 is available with an open work deck for access by robotic arms and integration into automated environments, or as a CE-certified model with a safety enclosure, complete with a light safety curtain in the open front.



Precise Microplate Positioning—All four plate positions feature active positioning with X-Y resolution of 0.06mm. This ensures that 96, 384, and 1536 well plates can all be reliably aligned under the pipetting head. This high level of precision movement also enables the pipet tips or syringe needles to touch off liquid on the bottom or sidewalls of microplates for dry dispenses, as well as deliver liquid into precise locations within a microplate well.



Small Instrument Footprint—Makes PlateMate 2x2 ideal for use on laboratory benches, or integrated robotic systems.

Onboard Peristaltic Pumps/Liquid Level Detection—Two onboard peristaltic pumps can be used to fill reagent reservoirs or a tip wash station. Integrated non-contact liquid level sensing ensures that reservoirs are automatically replenished when desired, and not over-filled.



Intuitive ControlMate Software—All PlateMate 2x2 functions are controlled with the intuitive drag-and-drop ControlMate software. This is the same software that is used on all Matrix automation platforms, and an available OLE package provides developers with an ActiveX automation interface. For more information on ControlMate, see page 62.

TECHNICAL SPECS

Size (hxdxw)	30 x 26 x 26in 76 x 66 x 66cm	approx. 110lb Approx. 50kg
Power:	50/60Hz 100-240VAC	Max. consumption < 150W
Operation Conditions:	+15°C-40°C	< 85%RH @ +30°C
Interface:	RS232c	

OPTIONS / ACCESSORIES

Onboard tip washing	Serial dilution magazines
Unique disposable tips	Teflon-coated steel probes
Barcode reading	Reagent reservoirs
SepraSeal Piercing Kit	Vacuum Filtration Kit

SOFTWARE

PlateMate 2x2 is controlled by the intuitive ControlMate software. For more information, see page 62.

APPLICATIONS

- Full plate reformatting (96 to 384 or 384 to 1536 well plates)
- Row-based or column-based intra/inter-plate serial dilution
- Full 96/384 plate sample transfers
- Cellular assays
- Sterile pipetting protocols
- IC50 assay dilutions
- Filter-plate vacuum extraction assays
- Pipetting of viscous solutions
- Pipetting of caustic solvents
- Pipetting of high vapor pressure liquids

If your specific applications require the flexibility of the 2x2 but with high throughput, walk-away capability, see the PlateMate Plus on page 50.

COMPATIBLE PRODUCTS

Matrix ScreenMates Microplates and Tube Racks	Page 82, 87, 66
Disposable Automation Reservoirs	Page 63

ORDERING GUIDE

PlateMate 2x2 Base Unit Inclusive of:
Four-position deck, two peristaltic pumps, one vacuum pump, ControlMate Windows-based software, and PC communication cable.

Item No.	Description
301-10001	Base Unit with Safety Light Curtain
301-10005	Base Unit with Robot-Accessible Work Deck

See page 54 for pipetting heads and accessories ordering information.



SEPRASEAL® PIERCING KIT ACCESSES 96 SEALED TUBES SIMULTANEOUSLY.

Increase sample throughput over single or 8-channel methods with the PlateMate 2x2 SepraSeal Piercing Kit. This kit is compatible with the complete line of 96 format TrakMate® tubes fitted with Matrix pre-slit SepraSeals. Compatible with both round bottom and v-bottom Matrix tubes in volumes of 0.5ml, 0.75ml, and 1.4ml, the PlateMate 2x2 can be configured with up to two tube rack positions for septum piercing.



KIT REQUIREMENTS

Catalog Number	Description
301-10001 or 301-10005	PlateMate 2x2 base unit*
501-20004	Pipetting head, 96-channel 0.5-30µl
501-20006	96-channel 0.5-30µl Teflon-coated stainless steel probes
301-30001 or 301-30008	Tip wash station, 96-channel**
101-10001	Windows® based laptop PC

* See page 47. ** See page 56.

ORDERING GUIDE

SepraSeal Piercing Kit
For use with Matrix 1.4ml, 0.75ml, and 0.5ml Tubes

Item No.	Description
301-50010	PlateMate 2x2 Piercing Kit



See page 66 for a complete line of sample storage tubes.

PERFORMANCE SPECIFICATIONS

Septum Seal Type	Probe Type	Volume Range	Expected Precision at 1.0µl	Expected Precision at 3.0µl	Expected Precision at 10µl	Expected Precision at 30µl
Pre-slit SepraSeal	96-channel 30ul (501-20006)	1.0 - 30µl	10%	5.0%	2.0%	2.0%

FEATURES

- Simultaneously access 96 sealed tubes
- Adjustable tube rack height
- 2 tube rack positions
- Compatible with any PlateMate 2x2 instrument
- Compatible with all Matrix storage tubes

BENEFITS

- Greatly increase throughput over one or 8-channel methods
- Compatible with 0.5ml, 0.75ml, and 1.4ml ScreenMates® & TrakMates® tubes with the same kit
- Access up to two tube racks per run
- Enables septum piercing on the extremely flexible PlateMate 2x2 platform without compromising functionality
- Access round bottom or v-bottom tubes sealed with pre-slit SepraSeals®



AUTOMATED VACUUM FILTRATION KIT.

Complete filter plate-based assays automated on the PlateMate 2x2. From source plate transfers to reagent addition, to the last wash cycle, the vacuum filtration assay kit seamlessly processes all aspects of a filter plate assay. Further expanding its versatility, the PlateMate 2x2 is now able to process filter plate assays such as receptor-ligand binding assays by integrating a Millipore MultiScreen_{HTS}[™] vacuum manifold. Integrated ControlMate software powers the vacuum pump on and off for efficient plate removal.



KIT COMPONENTS

Stage assembly	Vacuum flask
Vacuum control relay	Vacuum stopper
Plate lifters (2)	Millipore chemical duty vacuum pump
Tubing set	Millipore MultiScreen _{HTS} vacuum manifold

PRODUCT SPECS

Automated Vacuum Filtration Kit	
Manifold dimensions (hxwxd)	2.25x5.6x2in (57x142x51mm)
Manifold footprint (wxd)	5x3.4in (128x85mm)
Vacuum pump, 110V	115V, 60Hz
Vacuum pump, 220V	220V, 50Hz
Vacuum pump, 100V	100V, 50-60Hz

VACUUM FILTRATION SYSTEM SPECIFICATIONS

Compatible filter plates	96 and 384
Vacuum manifold	MultiScreen _{HTS}
Wash reservoir	Automatic replenishment
Source plate compatibility	Deep well, standard, low profile
Source plate compatibility	96, 384

ORDERING GUIDE

Automated Vacuum Filtration Kit

Item No.	Description
301-50020	Vacuum Filtration Kit, 110V
301-50022	Vacuum Filtration Kit, 220V
301-50024	Vacuum Filtration Kit, 100V
301-10001 or 301-10005	PlateMate 2x2
Choice of 8	Pipetting Head*

* See page 51.

FEATURES

- Compatible with 96- and 384-well filter plates
- Complete filter plate automation
- Automatic reservoir replenishment
- Compatible with all PlateMate 2x2 instruments
- Modular pick and place design
- Integrated ControlMate software

BENEFITS

- Only one instrument is required for all filter plate types
- From source plate to filter plate to the last wash cycle, the PlateMate 2x2 can efficiently manage your assay
- No need to watch the wash buffer reservoir, a liquid level sensor will refill the reservoir if it becomes low
- Filter plate assays can be processed on any PlateMate 2x2 platform
- Allows easy transition from vacuum filtration assays to other applications
- Powers the vacuum on and off for efficient plate removal



HIGH THROUGHPUT 96 - OR 384 - CHANNEL AUTOMATED PIPETTING SYSTEM .

PlateMate® Plus combines the versatility of the PlateMate 2x2 platform with integrated stackers for increased throughput and greater walk-away capabilities. The instrument offers the choice of eight pipetting heads that can pipet 96 or 384 samples at once, with volumes as low as 0.1µl. PlateMate Plus can be configured to access 96, 384, or 1536 microplates, and its four deck positions can accommodate plates, reservoirs, or tip wash stations.

FEATURES

- Four interchangeable air displacement pipetting heads available
- Four interchangeable positive displacement pipetting heads available
- Four microplate stages
- 25 or 50-plate stacker chimneys
- Automation-friendly lid compatible
- Two onboard peristaltic pumps
- Non-contact liquid level sensors
- Barcode reading capability
- Windows-based graphical programming interface

BENEFITS

- 500nl to 300µl complete volume range; 8 to 384 channel disposable tip pipetting
- 100nl to 50µl complete volume range; 96 or 384 channel syringe-based pipetting
- Instrument accommodates microplates, reservoirs, or wash stations. Transfers plates between stacker chimneys and pipetting head
- Allow for automatic movement and processing of microplates, microtube racks, or reagent reservoirs
- Automatically process plates with or without lids, great for biological assays
- Support onboard active reagent replenishment and pipette tip washing
- Trigger automatic replenishment of reagent reservoirs
- Allows automatic tracking of microplates as they are moved on and off the work deck
- Supports fast, easy creation of complex pipetting applications



PRODUCT HIGHLIGHTS

Choice Of Pipetting Heads—PlateMate Plus utilizes the same choice of eight pipetting heads as the PlateMate 2x2 to be configured for almost any application your protocol requires.

Air Displacement Heads: Utilize pipet tips, and cover volume ranges of 0.5 - 30 μ l or 5 - 300 μ l in 96 channels, and 0.5 - 30 μ l or 1 - 100 μ l in 384 channels. Ideal for applications requiring disposable tips, serial dilutions, or higher aspiration volumes.



Positive Displacement Heads: Available with either 96 or 384 syringes, and a volume range of 0.1 - 50 μ l with stainless steel needles or DuraFlex needles. Ideal for pipetting down to 0.1 μ l, viscous solutions, liquids with high vapor pressure, or caustic reagents.



Four Independent Microplate Stages—Accommodate any combination of microplates, tube racks, reagent reservoirs, with or without lids, or a tip wash station. Each stage has an independent vertical drive motor to retrieve or place microplates in the stacker chimneys, which can also be removed to allow robotic arm access to the microplate stages.

Four Removable Plate Stacker Chimneys—Tall or short stacker chimneys accommodate up to 50 or 25 standard microplates, respectively. Stackers are compatible with Matrix ScreenMates and virtually any SBS-standard labware, and are compatible with automation-friendly lids. Removable stackers feature a carrying handle for moving between stations. Swing-out front doors allow easy access for loading and removal.



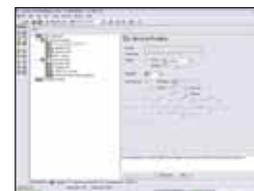
Precise Microplate Positioning—All four plate stages feature active positioning, with X-Y resolution of 0.05mm. This ensures that 96, 384, and 1536 well plates can all be reliably aligned under the pipetting head. This precise movement enables the pipet tips or syringe needles to touch off liquid on the bottom or sidewalls of microplates for dry dispenses, as well as targeting specific locations in a microplate well.



On-board Peristaltic Pumps/Liquid Level Detection—Two onboard peristaltic pumps can be used to fill reagent reservoirs or a tip wash station. Integrated non-contact liquid level sensing ensures that reservoirs are automatically replenished, and not over-filled.



Intuitive ControlMate Software—All PlateMate Plus functions are controlled with the intuitive drag-and-drop ControlMate software. ControlMate and an available OLE package provide developers with an ActiveX automation interface. See page 62 for more information.



TECHNICAL SPECS

Size (hxdxw):	30 x 16 x 54in	(short chimneys)	180lb
	76 x 41 x 137cm	(short chimneys)	80kg
Size (hxdxw):	44 x 16 x 54in	(tall chimneys)	188lb
	112 x 41 x 137cm	(tall chimneys)	85kg

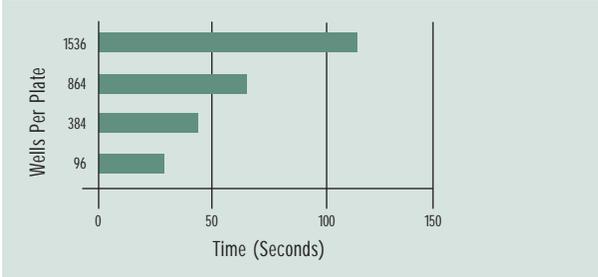
PERFORMANCE SPECIFICATIONS

Item Number	Tip/Syringe Type	Volume Range	Accuracy	Precision
96-Channel Air Displacement Pipetting Heads				
501-20004	30ul D.A.R.T.s	0.5-30ul	+/-2.0% or 0.15ul	1.5% or 0.10ul
501-20001	300ul D.A.R.T.s	5.0-300ul	+/-2.0% or 1.00ul	1.5% or 0.75ul
384-Channel Air Displacement Pipetting Heads				
501-20002	30ul D.A.R.T.s	0.5-30ul	+/-2.0% or 0.15ul	2.0% or 0.10ul
501-20005	100ul D.A.R.T.s	1.0-100ul	+/-2.0% or 0.50ul	2.0% or 0.25ul
96-Channel Positive Displacement Pipetting Heads				
501-102810	50ul Stainless Steel Needles	0.1-50ul	+/-2.5% or 0.01ul	2.5% or 0.02ul
501-102811	50ul DuraFlex Needles	0.1-50ul	+/-2.5% or 0.01ul	2.5% or 0.02ul
384-Channel Positive Displacement Pipetting Heads				
501-102890	50ul Stainless Steel Needles	0.1-50ul	+/-2.5% or 0.01ul	2.5% or 0.02ul
501-102891	50ul DuraFlex Needles	0.1-50ul	+/-2.5% or 0.01ul	2.5% or 0.02ul

PLATEMATE PLUS



PLATEMATE PLUS REAGENT ADDITION WITH 96-CHANNEL HEAD



PLATEMATE PLUS REAGENT ADDITION WITH 384-CHANNEL HEAD

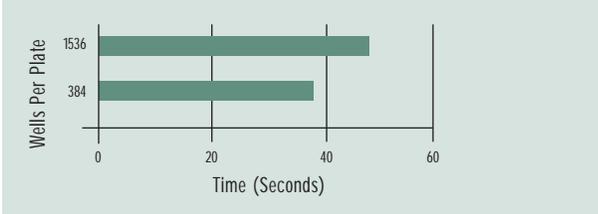
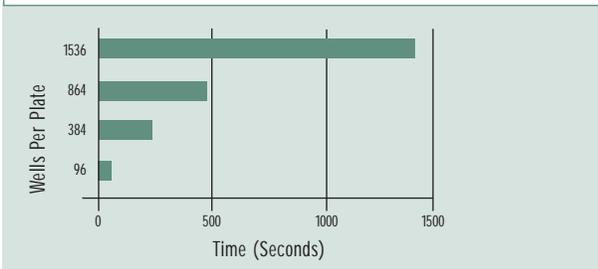


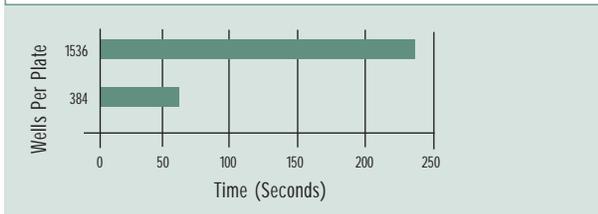
Plate-To-Plate Transfer Protocol:

- Plate-to-plate liquid transfer time, including plate stacking.
- Tip wash included between transfers using three wash cycles.

PLATEMATE PLUS PLATE-TO-PLATE TRANSFER WITH 96-CHANNEL HEAD



PLATEMATE PLUS PLATE-TO-PLATE TRANSFER WITH 384-CHANNEL HEAD



OPTIONS / ACCESSORIES

- Onboard tip washing
- Serial dilution magazines
- Unique disposable tips
- Teflon-coated steel probes
- Barcode reading
- Reagent reservoirs
- Automatic tip changing TipTower

For details on all options/accessories for the PlateMate line, see page 54.

SOFTWARE

See ControlMate details on page 62.

APPLICATIONS

- Full plate reformatting (96 source plates to 96 and 384 assay plates or 384 source plates to 384, and 1536 well assay plates)
- Reagent addition to 96, 384, or 1536 well plates
- Row-based or column-based intra/inter-plate serial dilution
- Full plate sample transfers (0.5–300µl)
- Full plate dilutions
- Cellular assays
- IC50 assays
- Pipetting of resins/beads
- Sub-microliter pipetting
- Pipetting of caustic solvents
- Pipetting of high vapor pressure liquids
- Unattended processing of up to 100 microplates

If your specific applications require the functionality of the PlateMate Plus only with lower throughput demands, the PlateMate 2x2 may be the ideal solution. See page 46 for details.

COMPATIBLE PRODUCTS

Matrix ScreenMates Microplates and Tube Racks	Page 82, 87, 66
Disposable Automation Reservoirs	Page 63
Automation-friendly Lids	Page 93

ORDERING GUIDE

PlateMate Plus

Item No.	Description
501-10001	PlateMate Plus base unit inclusive of: Two peristaltic pumps, one vacuum pump for wash fluid waste removal, ControlMate Windows-based software, four universal microplate adapters
501-30005*	Removable Stacker Chimney, tall
501-30006*	Removable Stacker Chimney, short

* Four chimneys are required.

See page 54 for pipetting head, and accessories ordering information.



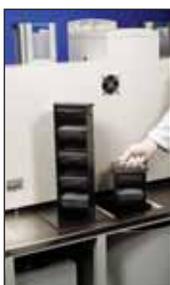
AUTOMATED TIP REPLACEMENT FOR PLATEMATE PLUS.

The TipTower® automates the replacement of pipet tips on the PlateMate Plus (page 50). Combining PlateMate Plus with the TipTower creates a completely automated high throughput workstation that offers fast, efficient, walk-away plate processing.



PRODUCT HIGHLIGHTS

Tip Storage Drum—Provides storage for new magazines of tips, making the TipTower a self-sufficient workstation requiring no lab bench space. The drum accommodates 10 magazine carriers, each holding as many as five D.A.R.T.s tip magazines.



To maximize accessibility, tip carriers on the TipTower can be easily accessed from either the front or from the top opening.



Dual Gripper Mechanism—Keeps new tip magazines above used (wet) tip magazines during tip swaps, preventing cross-contamination.

Unique Tip Disposal Shuttle—Each used magazine of tips is transported away from the instrument and is automatically disposed of in a waste receptacle.



TECHNICAL SPECS

Size (hxdxw):	58 x 45 x 57in 145 x 112.5 x 144.7cm
Power Requirements:	
Input Voltage	115V AC or 240V AC
Consumption	5 AMPS
Cycle Time:	20 seconds per tip magazine replacement

ACCESSORIES

Additional tip magazine carriers that each hold up to five D.A.R.T.s tip magazines for loading into the tip storage drum.

COMPATIBLE PRODUCTS

PlateMate Plus Automated Pipetting Workstation	Page 50
D.A.R.T.s 96 or 384 Automation Tips	Page 58

TIPTOWER

ORDERING GUIDE

TipTower

Item No.	Description
601-10001	Complete base unit inclusive of 10 tip magazine carriers
601-20001	Universal tip magazine carrier for up to five D.A.R.T.s tip magazines



ENHANCING THE PERFORMANCE OF OUR FLAGSHIP AUTOMATED SYSTEMS.

Compatible with both the PlateMate Plus and PlateMate 2x2, these accessories give you the freedom to customize both instruments so you have the ideal platform for your specific liquid handling requirements.

Interchangeable Pipetting Heads—Two 96-channel and two 384-channel heads are available (in both air displacement and positive displacement models) to meet the specific volume range your application requires. Pipetting heads can be swapped out in under a minute with no tools, enabling the quick switch of volume ranges and number of channels, or even to change either PlateMate system from an air displacement pipettor to a positive displacement pipettor, and vice versa.



Air Displacement Heads: For applications requiring the use of disposable pipet tips.

Matrix offers a full range of disposable, automation-certified pipet tips for use with all air displacement pipetting heads. (See page 58.)



Positive Displacement Heads: Ideal for applications requiring the pipetting of volumes down to 0.1µl, caustic reagents, high vapor pressure liquids, and resin/bead solutions.



These pipetting heads are based on the proven Hydra II glass barrel and syringe technology. (See page 41 for more information on our glass syringe technology.)

Teflon-Coated Steel Probes—PlateMate instruments support Teflon-coated stainless steel probes for use with the air displacement heads.



Automation Reagent Reservoirs—To take advantage of the PlateMate instruments' ability to replenish reagent, Matrix offers a complete line of automation reservoirs.





Disposable Reagent Reservoirs: Made of injection molded polypropylene, these economical, disposable automation reservoirs feature removable splash baffles that prevent liquid from sloshing out. For more details about our Disposable Automation Reservoirs, see page 63.



Chemically-Resistant Reusable Reagent Reservoirs: Made of Teflon or Delrin, these reservoirs are ideal for use with harsh chemicals.

Pipet Tip Wash Stations—96- or 384-channel tip wash stations are available for washing tips, probes, or syringes.

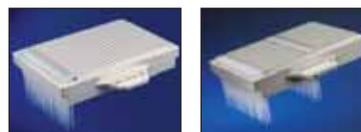


Wash stations quickly mount onto the instrument. One peristaltic pump supplies clean wash fluid while a vacuum pump simultaneously removes waste fluid. An overflow sensor turns the inlet pump off when too much fluid is detected.

Serial Dilution Tip Magazines—To further expand the versatility of PlateMate pipetting systems, these tip magazines have been developed to enable serial dilutions. Utilizing tip magazines, serial dilutions are possible within or between either 96 or 384 microplates. Magazines are compatible with all Matrix D.A.R.T.s (Disposable Automated Research Tips).



Column-By-Column Tip Magazines: Accommodate one or two columns of tips for single or duplicate column-by-column serial dilutions. These magazines allow two halves of a plate to be serially diluted simultaneously—perfect for IC50 dilution applications.



Row-By-Row Tip Magazines (PlateMate 2x2 only): Accommodate rows of 12 or 24 tips for use with 96 or 384 well plates, respectively for front-to-back or row-by-row serial dilutions.



Custom Microplate Adapters For The PlateMate Plus—Ensuring reliable tip access into 1536 well plates requires that the plate be positioned accurately in the plate nest. These adapters are required for use with specific 1536 microplates.



Linear Barcode Reader—The barcode reader can be positioned to read labels on the short or long sides of microplates. Barcode information is stored for reference or exported to other databases using ControlMate Software.



ORDERING GUIDE

Air Displacement Pipetting Heads and Positive Displacement Pipetting Heads

Item Number	Tip/Syringe Type	Volume Range	Plate Compatibility	Accuracy	Precision
96-Channel Air Displacement Pipetting Heads					
501-20004	30ul D.A.R.T.s	0.5-30ul	96, 384, 864	+/-2.0% or 0.15ul	1.5% or 0.10ul
501-20001	300ul D.A.R.T.s	5.0-300ul	96, 384, 864	+/-2.0% or 1.00ul	1.5% or 0.75ul
384-Channel Air Displacement Pipetting Heads					
501-20002	30ul D.A.R.T.s	0.5-30ul	384 & 1536	+/-2.0% or 0.15ul	2.0% or 0.10ul
501-20005	100ul D.A.R.T.s	1.0-100ul	384	+/-2.0% or 0.50ul	2.0% or 0.25ul
96-Channel Positive Displacement Pipetting Heads					
501-102810	50ul Stainless Steel Needles	0.1-50ul	96, 384, 864, 1536	+/-2.5% or 0.01ul	2.5% or 0.02ul
501-102811	50ul DuraFlex Needles	0.1-50ul	96, 384, 864, 1536	+/-2.5% or 0.01ul	2.5% or 0.02ul
384-Channel Positive Displacement Pipetting Heads					
501-102890	50ul Stainless Steel Needles	0.1-50ul	384 & 1536	+/-2.5% or 0.01ul	2.5% or 0.02ul
501-102891	50ul DuraFlex Needles	0.1-50ul	384 & 1536	+/-2.5% or 0.01ul	2.5% or 0.02ul

ACCESSORIES FOR THE PLATEMATE FAMILY



ORDERING GUIDE

Accessories for The PlateMate Family

Item No.	Description	Capacity
Teflon-Coated Steel Probes		
501-20006	For use with 96 channel pipetting head (501-20004), 100ct (0.5-30.0µl)	
501-20007	For use with 96 channel pipetting head (501-20001), 100ct (1.0-300µl)	
501-20003	For use with 384 channel pipetting head (501-20002), 400ct (0.5-30.0µl)	
Item No.	Description	Capacity
Disposable Automation Reservoirs - 20 per case		
1064-05-9	8 Channel, Divided	30ml per lane
▶ 1064-15-9	8 Channel, Divided	30ml per lane
1064-05-10	12 Channel, Divided	20ml per lane
▶ 1064-15-10	12 Channel, Divided	20ml per lane
1064-05-8	96 Channel	125ml
▶ 1064-15-8	96 Channel, individually wrapped	125ml
1064-05-6	96 Channel Deepwell	220ml
▶ 1064-15-6	96 Channel Deepwell, individually wrapped	220ml
1064-05-7	384 Channel	95ml
▶ 1064-15-7	384 Channel, individually wrapped	95ml
PlateMate Plus Wash Stations		
501-30001	Tip wash station, 96 channel, polypropylene with stainless steel chimneys	
501-30008	Tip wash station, 96 channel, Teflon with stainless steel chimneys	
501-30002	Tip wash station, 384 channel, polypropylene with stainless steel chimneys	
501-30009	Tip wash station, 384 channel, Teflon with stainless steel chimneys	
PlateMate 2x2 Wash Stations		
301-30001	Tip wash station, 96 channel, polypropylene with stainless steel chimneys	
301-30008	Tip wash station, 96 channel, Teflon with stainless steel chimneys	
301-30002	Tip wash station, 384 channel, polypropylene with stainless steel chimneys	
301-30009	Tip wash station, 384 channel, Teflon with stainless steel chimneys	
Serial Dilution Magazines		
8-Channel		PlateMate Plus and PlateMate 2 x 2
501-30020	300µl D.A.R.T.s, Column 1, 2 (For use with 5516, 5536 series tips)	
501-30021	30µl D.A.R.T.s, Column 1, 2 (For use with 5506 series tips and 96-channel Probes)	
501-30050	300µl D.A.R.T.s, Column 1, 7 (For use with 5516, 5536 series tips)	
501-30051	30µl D.A.R.T.s, Column 1, 7 (For use with 5506 series tips, and all 96-channel Probes)	
12-Channel		PlateMate 2 x 2
301-30020	300µl D.A.R.T.s, Row A, B (For use with 5516, 5536 series tips)	
301-30021	30µl D.A.R.T.s, Row A, B (For use with 5506 series tips and all 96-channel Probes)	
301-30050	300µl D.A.R.T.s, Row A, E (For use with 5516, 5536 series tips)	
301-30051	30µl D.A.R.T.s, Row A, E (For use with 5506 series tips, and all 96-channel Probes)	

▶ = Sterile



ORDERING GUIDE

Accessories for The PlateMate Family

Item No.	Description
Serial Dilution Magazines	
16-Channel PlateMate Plus and PlateMate 2 x 2	
500-10030	30µl and 100µl D.A.R.T.s, Column 1, 2, 13, 14 (For use with 5416, 5316, 5326 series tips)
501-30052	30µl and 100µl D.A.R.T.s, Column 1, 7, 9, 13, 17, 19 (For use with 5416, 5316, 5326 series tips)
500-10015	12.5µl (For use with 5301, 5302)
500-10020	30µl (For use with 5311, 5312)
500-10025	100µl (For use with 5321, 5322)
24-Channel PlateMate 2 x 2	
301-30052	30µl and 100µl D.A.R.T.s, Row A, E, I, M (For use with 5416, 5316, 5326 series tips)
301-30022	30µl and 100µl D.A.R.T.s, Row A, B (For use with 5416, 5316, 5326 series tips)
Custom Microplate Adapters	
501-30016	Nunc 1536 well plates
501-30017	Matrix/Micronic Snap Rack
501-30024	Genetix 384 well polystyrene plates
501-30025	Genetix 384 well polypropylene plates
501-30026	Matrix and Greiner I and Greiner II 1536 well plates
501-30035	Matrix and Greiner III 1536 well plates
501-30040	384 well plates (compatible with all SBS labware)
Accessories PlateMate Plus and PlateMate 2 x 2	
501-30007	Linear barcode reader
501-30005*	Stacker Chimney, Tall (50 plate capacity) <i>PlateMate Plus only</i>
501-30006*	Stacker Chimney, Short (25 plate capacity) <i>PlateMate Plus only</i>

* Four chimneys are required.



DISPOSABLE AUTOMATED RESEARCH TIPS FOR THE PLATEMATE PLUS AND THE PLATEMATE 2X2.

Matrix has developed a full range of automation-certified disposable tips for your application, from 384 format tips designed to dispense volumes as low as 500nl into a dry 1536 well plate, to a 300ul extended length tip used for accessing deep well blocks and storage tubes. D.A.R.T.s tips use unique face seal technology that eliminates the need for conventional tip fitting and o-ring maintenance, and guarantees a flat planar tip surface required for automated pipetting. Tip loading is simplified on the PlateMate Plus, PlateMate 2x2, and the original PlateMate with pre-racked disposable magazines in both 96 and 384 channel formats.

FEATURES

- Stepped body design
- Small internal tip orifice
- Filter, wide-bore, and extended length tip options available
- 100% inspection
- Face seal design

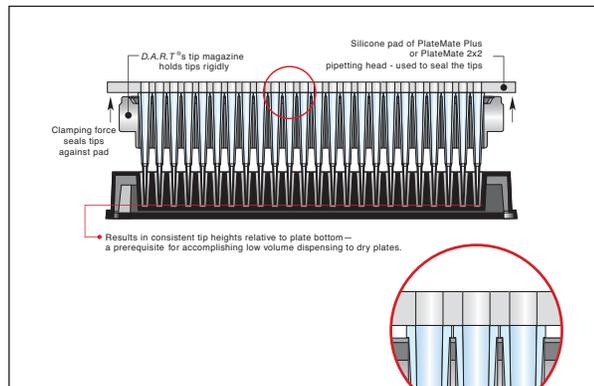
BENEFITS

- Minimizes volume displacement and ensures tip straightness for better well access
- Better small volume droplet formation resulting in optimal accuracy and precision
- Offers the flexibility to choose tips for any application
- Ensures every tip you receive is free of defects
- Ensures consistent tip-to-tip height for precise low volume dispensing



PRODUCT HIGHLIGHTS

Unique Face Seal Design—Unlike conventional automation tips, D.A.R.T.s are provided in disposable rigid magazines and seal onto the pipetting heads by being squeezed against a silicone pad. This forms a definitive seal, which minimizes tip-to-tip height variations enabling consistent dispensing into the bottom of microplate wells.



Accomplishing consistent tip height on the PlateMate Plus and PlateMate 2x2 with a superior sealing system.

Automation-Certified—All of our D.A.R.T.s undergo 100% testing with each and every tip inspected for proper formation as well as straightness.



Disposable Tip Magazines—D.A.R.T.s feature a unique disposable magazine that eliminates the need to flip tips out of a traditional box and into a metal carrier. The entire assembly can be quickly removed and replaced and eliminates extra handling of the tips, which can cause damage or contamination.



PureFect Tested—All our tips are produced and packaged in our clean room and are certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.

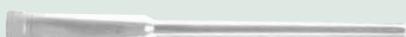


COMPATIBLE PRODUCTS

PlateMate Plus
PlateMate 2x2

Page 50
Page 46

96 Disposable Automated Research tips

	30µl Ext. Length Tips for use with (30µl) PlateMate Plus and PlateMate 2x2 or (1-25µl) PlateMate
	300µl Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate
	300µl Ext. Length Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate
	300µl Ext. Length Wide Bore Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate

384 Disposable Automated Research tips

	30µl Tips for use with PlateMate Plus & PlateMate 2x2 or (10µl, 25µl, 30µl) PlateMate
	30µl Extended Length Tips for use with PlateMate Plus & PlateMate 2x2 or (10µl, 25µl, 30µl) PlateMate
	100µl Tips for use with (100µl) PlateMate Plus & PlateMate 2x2

D.A.R.T.S



ORDERING GUIDE

D.A.R.T.S

Item No.	Description
96 D.A.R.T.s Disposable Magazines	
30µl Ext. Length Tips for use with (30µl) PlateMate Plus and PlateMate 2x2 or (1-25µl) PlateMate	
5506	30µl Extended Length, 20 magazines of 96 tips per case
§ 5507	30µl Extended Length, 20 magazines of 96 tips per case
§ 5508	30µl Extended Length, Filtered, 20 magazines of 96 tips per case
300µl Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate	
5516	300µl, 20 magazines of 96 tips per case
§ 5517	300µl, 20 magazines of 96 tips per case
§ 5518	300µl, Filtered, 20 magazines of 96 tips per case
300µl Ext. Length Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate	
5536	300µl Extended Length, 20 magazines of 96 tips per case
§ 5537	300µl Extended Length, 20 magazines of 96 tips per case
§ 5538	300µl Extended Length, Filtered, 20 magazines of 96 tips per case
300µl Ext. Length Wide Bore Tips for use with (300µl) PlateMate Plus and PlateMate 2x2 or (2-250µl) PlateMate	
5546	300µl Extended Length Wide Bore Tips, 20 magazines of 96 tips per case
§ 5547	300µl Extended Length Wide Bore Tips, 20 magazines of 96 tips per case
§ 5548	300µl Extended Length Wide Bore Tips, Filtered, 20 magazines of 96 tips per case
384 D.A.R.T.s Disposable Magazines	
30µl Tips for use with PlateMate Plus & PlateMate 2x2 or (10µl, 25µl, 30µl) PlateMate	
5316	30µl, 20 disposable magazines of 384 tips per case
§ 5317	30µl, 20 disposable magazines of 384 tips per case
§ 5318	30µl, Filtered, 20 disposable magazines of 384 tips per case
30µl Extended Length Tips for use with PlateMate Plus & PlateMate 2x2 or (10µl, 25µl, 30µl) PlateMate	
5416	30µl Extended Length, 20 disposable magazines of 384 tips per case
§ 5417	30µl Extended Length, 20 disposable magazines of 384 tips per case
§ 5418	30µl Extended Length, Filtered, 20 disposable magazines of 384 tips per case
100µl Tips for use with (100µl) PlateMate Plus & PlateMate 2x2	
5326	100µl, 20 disposable magazines of 384 tips per case
§ 5327	100µl, 20 disposable magazines of 384 tips per case
§ 5328	100µl, Filtered, 20 disposable magazines of 384 tips per case

§ = Sterile



AN AUTOMATION-FRIENDLY LID FOR 96, 384, AND 1536 STANDARD HEIGHT PLATES.

The automation-friendly universal plate lid is designed to allow automated lid handling on the PlateMate Plus, WellMate Stacker, and other automated systems. Specially placed indents enable the systems' solenoids to smoothly separate the lids from the plates. Universal lids are also available pre-packaged with any SreenMate microplate.



TECHNICAL SPECS

Composition:	Polystyrene, Clear or Black
Length:	127.8 mm
Width:	85.5 mm
Total height:	9.5 mm

COMPATIBLE PRODUCTS

ScreenMatesMicroplates	Page 87
WellMate Stacker	Page 35
PlateMate Plus	Page 50

ORDERING GUIDE

Automation-friendly Universal Lids*

Catalog No.	Description	Packaging
4954	Automation-friendly, Universal Lid, Clear, Sterile	10 lids per bag, 80 lids per case
4955	Automation-friendly, Universal Lid, Black, Sterile	10 lids per bag, 80 lids per case

♠ = Sterile

*Also available pre-packaged on any ScreenMates microplate. Please visit www.matrixtechcorp.com or contact your Matrix representative.



Pre-lidded plates descend individually (without the lid) from the original chimney, move to the dispenser for filling, and return to the original chimney to reunite with its lid. The processed lidded plate is then moved to the chimney containing finished plates. (Pictured above with the WellMate and Plate Stacker.)

FEATURES

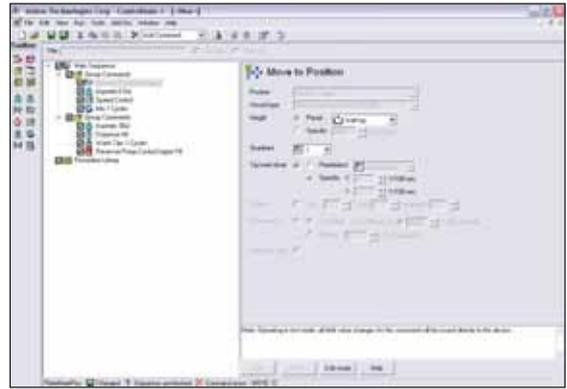
- Fits all 96, 384, and 1536 standard height plates
- Automation-friendly
- Available in clear or black
- Standard height skirt

BENEFITS

- One lid fits all virtually any SBS-standard microplate
- Allows automated lid handling on the PlateMate® Plus, WellMate® Stacker and other automated systems
- Black opaque ideal for light sensitive assays or compounds
- Allows for easy manual and robotic gripping

INTUITIVE GRAPHICAL USER INTERFACE FOR MATRIX AUTOMATED PIPETTING SYSTEMS.

This Windows-compatible software enables complete control over all instrument parameters using simple commands in a tree structure. Because ControlMate commands are universal across all Matrix platforms, when your application requires a new instrument, time is not wasted having to learn an entirely new operating system.



PRODUCT HIGHLIGHTS

Utilizing simple drag-and-drop icons, ControlMate allows control of the following parameters:

- Speed control of X, Y, and Z plate movements
- Control of piston speed
- Tip position and tip touch-off in any microplate well
- Aspiration/dispense volumes
- Dwell time before and after aspiration or dispense
- Repeat (incremental) or neat dispensing
- Specific volume calibration for non-aqueous-based liquids
- Quadrant offsets for 384, 864, and 1536 well plates
- Mixing
- Direction and speed control of peristaltic pumps
- Control of two 24V DC accessory output switches (PlateMate 2x2 only)
- Edit and run lock password protection
- Automatic shut down of all systems at the end of each run or after a system failure
- A standard shared plate library that is easily added to and modified
- Run time clock tracks and documents total protocol elapsed time

ACCESSORIES

ControlMate OLE—Provides application developers with ActiveX automation and will enable an application to create an object that can load, modify, and execute any ControlMate sequence files. ControlMate OLE is approved for use with Visual Basic versions 5 and 6, and contains a sample protocol.

COMPATIBLE PRODUCTS

SerialMate	Page 37
Hydra II	Page 40
PlateMate 2x2	Page 46
PlateMate Plus	Page 50

Speed Control

Aspirate	<input checked="" type="checkbox"/>	Slow	<input type="range"/>	Fast
Dispense	<input checked="" type="checkbox"/>	Slow	<input type="range"/>	Fast
Empty	<input checked="" type="checkbox"/>	Slow	<input type="range"/>	Fast
Wash	<input checked="" type="checkbox"/>	Slow	<input type="range"/>	Fast

Mix

Cycles:

Volume: ul

Aspirate height: Well top

Dispense height: Well top

ORDERING GUIDE

ControlMate Software

Item No.	Description
500-10003	ControlMate Software
501-30023	ControlMate OLE Package



DESIGNED FOR SIMPLE, ECONOMICAL HANDLING OF REAGENTS ON AUTOMATED SYSTEMS.

Matrix disposable automation reservoirs feature the same shape and dimensions as standard microplates, giving you the flexibility to handle reagents on virtually any automated liquid handler. They also feature unique removable baffles that prevent liquid from splashing out during robotic handling. Economical enough to be disposed of, these reservoirs eliminate the risk of cross-contamination and the inconvenience of washing and autoclaving.

DISPOSABLE AUTOMATION RESERVOIRS

FEATURES

- Economical and disposable
- Standard microplate dimensions
- Built-in grooves in reservoir bottom
- Hydrophilic surface properties
- Polypropylene construction
- Available sterile/individually wrapped or non-sterile
- PureFect tested

BENEFITS

- No need to wash reservoirs; allows more reservoirs to be used per run
- Enables reservoirs to be used in plate handlers or stackers
- Reduce reagent waste and allow consistent aspiration of minimal amounts of reagent
- Liquid spreads out evenly, with minimal reagent needed to cover bottom
- Offers excellent chemical resistance
- Reservoirs stay sterile until ready for use. Eliminates need to autoclave
- Certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins



PRODUCT HIGHLIGHTS

Built-In Pour Spout— Matrix non-divided reservoirs feature built-in pour spouts to allow easy, accurate emptying of reagents.



Removable Splash Baffles— Prevent reagents from splashing out when being moved on robotic decks. This enables reservoirs to not only be moved faster, but to be filled closer to the top with reagent. Baffles can be removed to increase reservoir capacity.



Hydrophilic Surface Properties—Each reservoir undergoes a hydrophilic surface treatment that results in a lessened meniscus, meaning liquid spreads out evenly along the reservoir bottom. Not only does this result in less liquid being needed to cover the reservoir bottom, but it also ensures access to the liquid by all pipet tips.

PureFect Tested—All our reservoirs are produced and packaged in our clean room and are certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.



Divided Disposable Reagent Reservoirs – Feature a v-bottom trough design to reduce dead volume, and a standard microplate footprint. Our divided reservoirs are specifically designed to handle and store multiple reagents. Available in 8- or 12-channel, Matrix divided reservoirs can be used with 96-channel automated liquid handling instruments, and most 8- and 12-channel pipettors.



TECHNICAL SPECS

Reservoir Model	Height	Material
8 Channel, Divided	1.544in/39.2mm	Polypropylene
12 Channel, Divided	1.544in/39.2mm	Polypropylene
96 Channel	1.078in/27.4mm	Polypropylene
96 Channel Deepwell	1.618in/41.1mm	Polypropylene
384 Channel	0.696in/17.7mm	Polypropylene

ACCESSORIES

Microplate Lids: Reservoirs can be used with our universal microplate lids to limit evaporation. (See page 88.)

Sealing Tapes: Can be used to seal reservoirs for temporary storage. (See page 86.)

COMPATIBLE PRODUCTS

All Matrix automated liquid handlers

Page 31

ORDERING GUIDE

V-Groove Disposable Automation Reservoirs, 20 per case

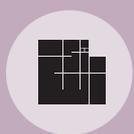
Item No.	Description	Hydrophilic Treatment	Minimum Volume	Maximum Volume with Baffle	Maximum Volume without Baffle	Height of Reservoir
1064-05-8	96 Channel	•	5ml	95ml	125ml	1.078in/27.4mm
§ 1064-15-8	96 Channel	•	5ml	95ml	125ml	1.078in/27.4mm
1064-05-6	96 Channel Deepwell	•	5ml	160ml	220ml	1.618in/41.1mm
§ 1064-15-6	96 Channel Deepwell	•	5ml	160ml	220ml	1.618in/41.1mm
1064-05-7	384 Channel	•	4ml	65ml	95ml	0.696in/17.7mm
§ 1064-15-7	384 Channel	•	4ml	65ml	95ml	0.696in/17.7mm

ORDERING GUIDE

Divided Automation Reservoirs, 20 per case

Item No.	Description	Minimum Volume	Maximum Volume per Channel	Height of Reservoir
1064-05-9	8 Channel	3mL	30ml	1.544"/39.2mm
§ 1064-15-9	8 Channel	3mL	30ml	1.544"/39.2mm
1064-05-10	12 Channel	2mL	20ml	1.544"/39.2mm
§ 1064-15-10	12 Channel	2mL	20ml	1.544"/39.2mm

§ = Sterile



At Matrix, our commitment to “Fluid Thinking” goes beyond the development of instruments that move liquids. It also includes the engineering of a superior line of consumables that works seamlessly with those instruments. Our unique designs not only help you get more from your handheld pipettors and automated systems, they also enhance other liquid handling applications such as the storing, shipping, or assaying of fluids.

Whether it's our unique 2-D barcoded TrakMates tubes or innovative Latch Rack, assay plates or sealing systems, Matrix consumables are designed for efficient, effective sample storage, shipping, sampling, tracking, and assaying. These consumables deliver unsurpassed levels of throughput, precision, and accuracy to virtually any field of research.



Matrix consumables are designed to work with our full line of automated systems (see page 31) and handheld pipettors (see page 1). If you have a specific need not answered in this section, please contact your Matrix representative to discuss our custom product capabilities.



THE MOST COMPLETE LINE OF SOLUTIONS TO KEEP YOUR SAMPLES SECURE.

Matrix offers the widest variety of sample storage microtubes on the market, and the only tubes that are 100% leak tested to ensure your samples stay secure. Depending on your sample-tracking needs, tubes are available blank, with alphanumeric identifiers, or with TrakMates 2-D barcodes. All tubes are available in 8x12 configuration, microplate footprint racks, enabling them to be filled or accessed with standard multichannel pipettors or utilized in robotic systems.

FEATURES

- Individual sample retrieval
- 8x12 format
- Tube racks have standard microplate footprint
- Unique, specially-designed racks
- PureFect tested

BENEFITS

- Avoids having to thaw an entire microplate to access only a few samples and speeds up sample retrieval, preventing degradation
- Allows you to fill up to 96 tubes at once with standard liquid handlers to increase throughput
- Makes them compatible with automated systems or microplate storage racks
- Ensure tubes remain secure during sampling, shipping, or storing
- Tubes are certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins



PRODUCT HIGHLIGHTS

Latch Rack—All Matrix tubes are available in our patented Latch Rack. This unique innovation is loaded with features that you won't find anywhere else, such as:

A lid that locks down, so it will not come off even when dropped. The lid can also be opened on hinges (to maintain sterility by not touching the lab bench), lifted off manually, or by robotics. See Figure 1.

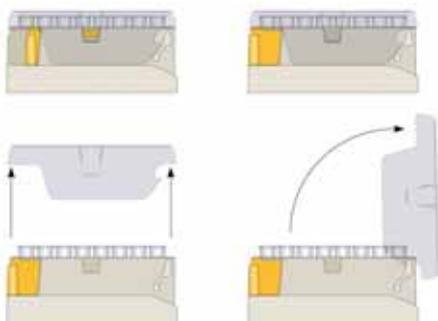
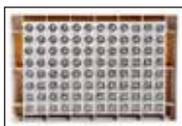


Figure 1

Open bottom and venting around each tube that promotes faster and more consistent freezing and thawing rates, as well as easy tube identification.



Solid, one-piece base that retains its shape even at low temperatures.



Orientation features that quickly identify the front of the rack, and a cutout notch that enables rack orientation in automated systems.

Stackable design that allows racks to be stacked and not slide off of each other.

Snap Rack—For users of traditional polycarbonate racks, Matrix tubes are also available in the Snap Rack. The Snap Rack has an open-bottom design for reading alphanumeric or TrakMates tubes, and is designed to hold samples securely during low-temperature storage and shipping.



EcoTube Refill Packs—Tubes also come packaged in environmentally sensitive EcoTube™ carriers that are pre-filled with 1.4ml tubes to simplify the refilling of Matrix racks.



Tube Tracking Options—Tubes are available blank or with our patented* alphanumeric markings designating their appropriate location within a rack. If tracking of samples on a larger scale is desired, our TrakMates 2-D tubes are etched with a globally unique 2-D barcode (see page 69).



Variety Of Sizes—Polypropylene storage tubes are available in 0.75ml or 1.4ml sizes. Both sizes feature an etched writing surface and volume graduations.



100% Leak Tested—Since your samples are the most valuable asset of your research, every tube is leak tested to ensure that cracks, holes, or other imperfections do not put your samples at risk. Currently, Matrix is the only tube provider on the market to conduct this testing on all of its storage tubes (even those in bulk packaging).

Unique Capping Systems—To create a complete, secure sample storage system, Matrix offers a complete line of capping systems (see pages 80, 84).



TECHNICAL SPECS

Tube Temperature Range:	-80°C* to +120°C	
Autoclavable:	Yes	
Tube Material:	Polypropylene	
Rack Material:	Latch Rack:	Polypropylene
	Snap Rack:	Polycarbonate

*For storage in vapor phase liquid nitrogen, please see our ScrewTop tubes on page 71.

CAPACITY		
	Maximum Fill	Maximum Volume, Frozen with Cap in Place
0.75ml Tubes	0.75ml	500µl
1.4ml Tubes	1.4ml	900µl

ACCESSORIES

Empty racks



APPLICATIONS

- Storage of DNA, compounds, or any other samples
- Shipping samples
- Individual sample retrieval

COMPATIBLE PRODUCTS

Cap Mats	Page 84
Cap Strips	Page 84
SepraSeals	Page 80
SuperSealer	Page 85

*US Patent # 6,171,554



ORDERING GUIDE

ScreenMates Sample Storage Tubes

0.75ml Round Bottom Storage Tubes

Item No.	Tube Label	Unit*
4170	-	Bulk
4271	-	Latch Rack
▶ 4272	-	Latch Rack
4273	Alphanumerics	Latch Rack
▶ 4274	Alphanumerics	Latch Rack

*Bulk tubes packaged 1,000 tubes/bag. Racked tubes packaged 96 tubes/rack, 10 racks/case

1.4ml Round Bottom Storage Tubes

Item No.	Tube Label	Unit*
4140	-	Bulk
4247	-	Latch Rack
▶ 4248	-	Latch Rack
4245	-	Snap Rack
▶ 4246	-	Snap Rack
4249	-	EcoTube Refill Packs
▶ 4250	-	EcoTube Refill Packs
4251	Alphanumerics	Latch Rack
▶ 4252	Alphanumerics	Latch Rack
4147	Alphanumerics	Snap Rack
▶ 4148	Alphanumerics	Snap Rack
4253	Alphanumerics	EcoTube Refill Packs
▶ 4254	Alphanumerics	EcoTube Refill Packs

▶ = Sterile

*Bulk tubes packaged 1,000 tubes/bag. Racked tubes packaged 96 tubes/rack, 10 racks/case



TRAKMATES

2 - D BARCODED STORAGE TUBES .

Whether you need to securely store and keep track of hundreds of samples or even millions, TrakMates® 2-D barcoded storage tubes, in 96 and 384 well formats, can simplify sample identification and tracking in your lab, amongst collaborators, and from compound suppliers. Each tube is permanently marked with a globally unique 2-D barcode, ensuring that tubes are able to be identified when being moved, shipped, or accidentally dropped.



96 WELL 2-D BARCODED STORAGE TUBES.

96 Well Tubes - The non-threaded top enables the tubes to be used with a variety of sealing caps, for quick removal or piercing access with sample processor needles. Open top tubes are available in three volumes: 500µl, 0.75ml, or 1.4ml, and feature a low-volume recovery v-bottom design. ScrewTop® tubes with caps are the ultimate in capping security, and are available with a screw top and silicone o-ring.

FEATURES

- Permanently attached, laser-etched 2-D DataMatrix barcode on bottom of each tube
- 8x12 format
- Tubes come in Latch Rack
- Built-in error correction
- 100% quality control
- Solid, one-piece construction

BENEFITS

- Allows you to scan and decode tubes at once without removing them from the rack, and allows data to be associated with each tube
- Enables the filling of 8, 12, or 96 tubes at once with pipettors you already own
- For added security and protection of samples
- Ensures barcode will never be misread
- Checks that every code is unique and readable
- Means there are no inserts, caps or labels to fall off; enables storage down to cryogenic temperatures



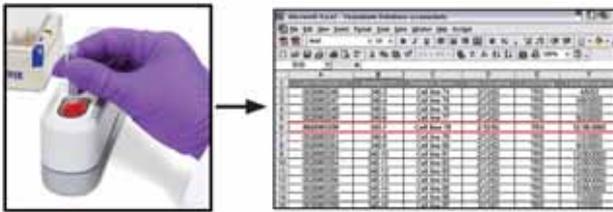
PRODUCT HIGHLIGHTS

Automated Sample Tracking—

Simply scan TrakMates tubes with a VisionMate® reader and you can easily import data for a specific sample, (examples include tare weight, sample data, sample contents, source, expiration date, or concentration) into any database or spreadsheet. Entire racks can also be scanned to search for a particular tube or to quickly identify samples being shipped to or arriving from different locations.



Please see page 76 for the complete line of VisionMate readers.



Permanent, Unique Code—

Each code is laser-etched and permanently adhered to the bottom of each tube by our patented process and is chemically and abrasion resistant. We also guarantee we will never produce the same code number twice, ensuring every code number you receive is globally unique.



1.4ml TrakMates are also available with a human readable code in addition to the 2-D barcode for manual identification.



Unique Racks—Like our round bottom tubes, TrakMates are available in the unique Latch Rack that securely protects your tubes/samples during low-temperature storage, shipping, and accidental drops. For more information on the Latch Rack, please see page 66.



Choice Of Tube Design—

Open-Top Design: The non-threaded top of these TrakMates enables the tubes to be used with a variety of sealing caps, for either quick removal or piercing access with sample processor needles. Open-top tubes are available in three different volumes, 500µl, 0.75ml, or 1.4ml, and feature a low-volume recovery v-bottom design. For a complete selection of caps for use with these tubes, please see page 80.



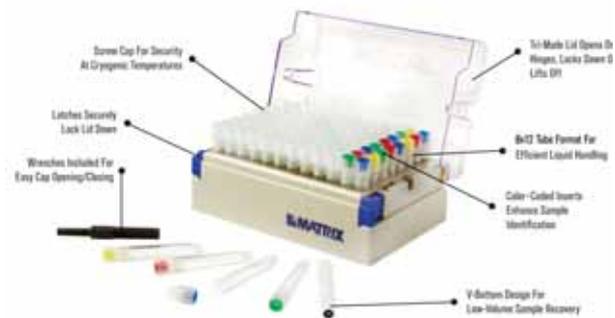
ScrewTop Design: If you need the ultimate in capping security, or need to store samples in the vapor phase of liquid nitrogen, TrakMates are available with a screw top and silicone o-ring. ScrewTop TrakMates feature:



An interlocking wrench system: Tubes can be opened and closed with one hand while in the rack, maintaining sterility and simplifying cap removal. Tubes can also be picked out of the rack with ease.



Color-coded cap inserts: Further simplify the identification of your samples.

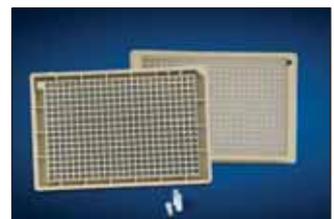


Low-Profile Storage—Matrix Latch Racks are sized to three different tube heights so you don't waste space if you need to store small volumes. Our 500µl TrakMates (right), for example, are exactly half the height of our standard 1.4ml TrakMates meaning you can double your sample capacity in current storage systems.



100% QC Testing—Like our round bottom tubes, every TrakMates tube is leak-tested to ensure sample security. In addition, every tube is read before leaving Matrix to ensure readability and that it is not a duplicate.

Integration Into Automated Systems—Matrix 96 and 384 TrakMates have been successfully integrated into most automatic tube storage systems on the market, and Matrix offers a series of tubes and racks customized for these systems. Please contact your Matrix representative to discuss using TrakMates tubes within your automated tube storage system.



TECHNICAL SPECS

Temperature Range:	-185°C* to +121°C
Autoclavable:	Yes
Tube Material:	Polypropylene
ScrewTop Cap/O-Ring:	Polypropylene/Silicone
Rack Material:	
500µl Latch Rack:	Filled Polypropylene Base Polycarbonate Lid
0.75ml/1.4ml Latch Rack:	Polypropylene
ScrewTop Latch Rack:	Polycarbonate
Snap Rack:	Polycarbonate

*ScrewTop TrakMates are recommended for storage in vapor phase liquid Nitrogen, or temperatures below -80°C

CAPACITY

	Maximum Fill	Maximum Volume, Frozen with Cap in Place
500µl Tubes	500µl	250µl
0.75ml Tubes	0.75ml	500µl
1.4ml Tubes	1.4ml	850µl
1.4ml Tubes w/Human Readable Code	1.4ml	900µl
1ml ScrewTop Tubes	1ml	925µl

ACCESSORIES

Empty Latch Racks
EcoTube Refill Packs: Allow you to quickly and easily refill empty racks with 1.4ml TrakMates tubes



APPLICATIONS

Storage of genomic samples, DMSO-dissolved compounds, or any other samples
 Instant sample identification
 Secure identification of archived samples
 Tracking of samples during manufacturing
 Secure shipping of samples
 Individual sample retrieval

COMPATIBLE PRODUCTS

VisionMate Readers	Page 76-79
Cap Mats	Page 84
Cap Strips	Page 84
SepraSeal	Page 80
DuraSeal	Page 80
SuperSealer	Page 85

ORDERING GUIDE

TrakMates

Item No.	Rack	Packaging
500µl TrakMates		
3734	Latch Rack	10 racks of 96 tubes
▶ 3735	Latch Rack	10 racks of 96 tubes
3736 with DuraSeals® inserted	Latch Rack	10 racks of 96 tubes
▶ 3737 with DuraSeals inserted	Latch Rack	10 racks of 96 tubes
0.75ml TrakMates		
3731	Latch Rack	10 racks of 96 tubes
▶ 3732	Latch Rack	10 racks of 96 tubes
3729 with DuraSeals inserted	Latch Rack	10 racks of 96 tubes
1.4ml TrakMates		
3791	Latch Rack	10 racks of 96 tubes
3792	Latch Rack	10 racks of 96 tubes
▶ 3794	Snap Rack	10 racks of 96 tubes
3801 with DuraSeals inserted	Latch Rack	10 racks of 96 tubes
1.4ml TrakMates with Human Readable Code		
3710	—	Bulk, 1000 tubes
3711	Latch Rack	10 racks of 96 tubes
3712	Latch Rack	10 racks of 96 tubes
▶ 3713	Snap Rack	10 racks of 96 tubes
3714	Snap Rack	10 racks of 96 tubes
▶ 3715	EcoTube Refill Packs	10 carriers of 96 tubes
▶ 3716	EcoTube Refill Packs	10 carriers of 96 tubes

▶ = Sterile



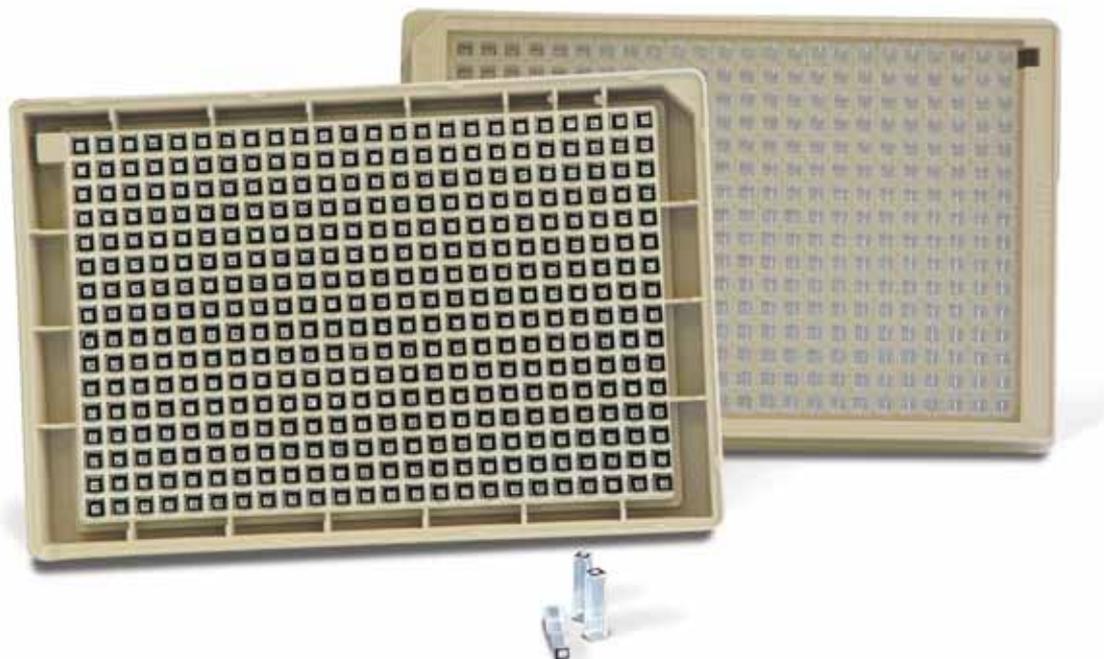
ORDERING GUIDE

TrakMates (Continued)

Item No.	Description	Rack	Packaging
1ml ScrewTop TrakMates			
▶ 3740	Tubes with caps installed	—	10 bags of 48 tubes
▶ 3741	Tubes with caps installed	Latch Rack	5 racks of 96 tubes
▶ 3742	Tubes (no caps)	Latch Rack	5 racks of 96 tubes
▶ 4470	Screw caps	—	500/bag
4471	Color-coded inserts (Red)	—	500/tube
4472	Color-coded inserts (Yellow)	—	500/tube
4473	Color-coded inserts (Blue)	—	500/tube
4474	Color-coded inserts (Green)	—	500/tube
4476	Color-coded inserts (Purple)	—	500/tube
Empty Racks			
4898		500µl Latch Rack	10/case
4899		500µl Latch Rack (for use with DuraSeal caps)	10/case
4896		0.75ml Latch Rack	10/case
4890		1.4ml Latch Rack	10/case
4893		1.4ml Snap Rack	10/case
4897		1ml ScrewTop Latch Rack	5/case

▶ = Sterile

TRAKMATES - 96 WELL



384 WELL 2-D BARCODED STORAGE TUBES.

384 Well Tubes – Designed to address sample degradation concerns caused by multiple freeze/thaw cycles and cross-contamination from multiple accesses. The total volume for this tube is 100µl, with a working volume up to 75µl. You will be able to store many smaller volumes of samples for single use.

FEATURES

- 384 Well format tubes
- Unique 2-D barcode on each tube
- Square top, chimney-shaped tubes
- 100% quality control tested
- Customized racks
- Industry (SBS) standard rack footprint
- Clip-in rack
- Single use
- Assay-ready volume

BENEFITS

- Store smaller amounts with multiple copies of samples per rack; increasing storage efficiency
- Automatic high integrity sample tracking
- Easy access for pipetting
- Every tube is leak-tested to ensure no loss of sample or ingress of air or moisture
- Rack specifications are developed to fit each compound storage system, enabling precise high-speed automation handling
- Compatible with automated equipment; racks can be stacked like microplates
- Securely holds tubes in rack to prevent tubes from falling out during movement/handling
- Addresses concerns of cross-contamination from multiple accesses, and the effects of multiple freeze/thaw cycles
- Each tube contains just the right amount of sample, no further processing needed



PRODUCT HIGHLIGHTS

Sample Tracking Using a Permanently Adhered, Unique Code — Each 384 well tube has a globally unique laser-etched 2-D barcode that is permanently adhered to the bottom of each tube. This code is chemically and abrasion resistant. Since each tube is permanently and uniquely coded, the tubes can be easily scanned and the data imported into any database or spreadsheet, easily detailing each tube's contents.

Single Use/Assay-Ready Volume — The 384 well 2-D barcoded tubes offer you an alternative sample storage size to address the concerns of sample degradation caused by multiple freeze/thaw cycles and cross-contamination from multiple accesses. You can now store many smaller dilutions of just the right amount of sample for a single use. No further processing is needed.

Integration Into Automated Systems — The 384 well tubes are designed to be handled robotically in a controlled storage environment. The tubes can be picked and placed at rates specified by sample storage systems. Only the required tubes ever leave the store, and cherry-picking happens without the need for liquid handling. The standard SBS formatted racks handle just like microplates, and can be filled and accessed on standard pipetting systems.

TECHNICAL SPECS

Tube material:	Chemically-resistant polypropylene
Rack material:	Polypropylene
Total maximum volume per tube:	100µl
Working volume range:	Up to 75µl
Residual dead volume:	1µl
Temperature storage:	Down to -80°C

ORDERING

Contact your local Matrix Sales Representative for ordering information.

TRAKMATES - 384 WELL



VISIONMATE®1 WIRELESS - 2-D BARCODE READER.

The VisionMate 1 Wireless reads and decodes all TrakMates 2-D Barcode storage tubes and virtually any linear barcode. The reader employs Bluetooth® technology to enable secure, wireless connection to any PC, laptop, or PDA – making this reader the ideal choice for use in a lab, freezer environment, or for in-field sample collection.

FEATURES

- Reads most 2-D and linear barcodes
- Compact, lightweight, and portable
- Bluetooth wireless technology
- Bluetooth adaptor kit included
- On-board, extended life battery
- Keyboard wedge operation

BENEFITS

- Flexible for multiple applications: Reads TrakMates 2-D barcodes 88 x 88 TrakMates rack labels, and other linear or 2-D barcoded tubes and microplates
- Easily transported to a freezer, satellite location, or for use in the field, etc. Easily fits in a pocket or backpack
- Secure wireless transmission of data between the scanner and any PC, laptop, or Pocket PC-based PDA; portable barcode reading
- No additional hardware necessary
- Supports field work with 8+ hours of continuous use, and a battery indicator
- Direct data input to any application or database



PRODUCT HIGHLIGHTS

Ease of Operation.

Simply hold the tube over the read window, and each barcode is instantly decoded. To scan a rack or plate linear barcode, just hold the reader up to the barcode.



Bluetooth technology enables quick and easy connectivity to any PC, laptop, or PDA. Data is transmitted to the cursor location of any open application for instant integration with spreadsheets, databases, or LIMS programs.



Each VisionMate 1 Wireless comes with a USB Bluetooth Adapter Kit to give any PC or laptop Bluetooth capabilities. The reader can also connect to a device with an existing Bluetooth radio, or it can be plugged into an active USB port.



TECHNICAL SPECS

Dimensions (l x w x h):	7.4 x 1.68 x 2.28in 4.3 x 18.8 x 5.8cm
Weight:	13.5 oz./383 grams
Battery Type:	1300mA Lithium Ion Battery
Battery Run Time:	> 8 hours of continuous run time
Charging Time:	Approximately 6 hours
Charging Connection:	Via USB port
Battery Indicator Light:	Green 100 - 50% charge level Amber (yellow) 50- 20% Red 20 - 0%
Supported Barcode Types:	Any Matrix 2-D or linear barcode; virtually any 2-D or linear barcode
Computer Requirements:	PC/laptop: Windows® 2000 or XP with available USB 1.1 Port PDA: Pocket PC w/ Active-Sync (Built-in Bluetooth Radio required)
Connection Methods:	Wireless, via USB Bluetooth Radio (included) Wireless, via existing Bluetooth Radio Wired, via USB cable (included)
Data Transmission Range:	Secure transmission of data between reader and specified PC or PDA up to a distance of 100 meters (109 yards)

VISIONMATE LITE

The VisionMate Lite 2-D Barcode Reader reads and decodes all TrakMates 2-D Barcode storage tubes instantly. The reader simply plugs into a desktop computer's keyboard (PS2 or AT) port and automatically transfers the data directly to the cursor location in the active application each time a tube is scanned.



Operation.

Simply hold the tube over the read window, and each barcode is instantly decoded. Data is transmitted to the cursor location of any open application for instant integration with spreadsheets, databases, or LIMS programs.

TECHNICAL SPECS

Dimensions (l x w x h):	7.4 x 1.68 x 3.1in 4.3 x 18.8 x 7.9cm
Weight:	15.7 oz./446 grams
Power Supply:	Via PS2 or AT port
Computer Requirements:	PC: Windows® 2000 or XP with available PS2 or AT port
Connection Method:	Wired, via attached reader cable

*Not recommended for laptop use

COMPATIBLE PRODUCTS

TrakMates	page 69-75
500uL TrakMates	page 72
0.75ml TrakMates	page 72
1.4ml TrakMates	page 72
1ml ScrewTop TrakMates with caps	page 73
1ml ScrewTop TrakMates	page 73

ORDERING GUIDE

VisionMate 1 Wireless and VisionMate Lite

Item No.	Description	Includes
3121	VisionMate1 Wireless	Reader, USB Cable, Belkin® USB Bluetooth® Adapter Kit, Code XML Router Software
3123	VisionMate Lite	Reader, Keyboard Port Adapter



Computer not included.

READERS FOR 2-D BARCODED RACKED TUBES.

Matrix offers a full range of readers to decode 2-D barcoded TrakMates tubes. Whether you need to read one rack or three racks at a time in a high throughput environment, VisionMate® readers are designed to give you the ultimate in decoding reliability.

FEATURES

- Variety of reader types
- Rapid processing speeds
- ActiveX controls provided
- Linear barcode reading support
- Robotic friendly

BENEFITS

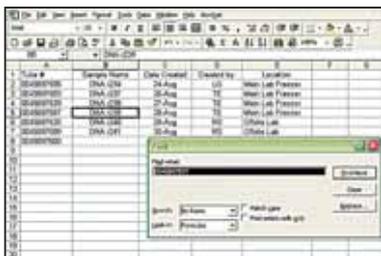
- Allows you to scan a single rack or up to three racks at once
- Enable the reading and decoding of entire racks instantly
- Gives you the flexibility to integrate and control readers from external software applications
- Allows the reading and incorporation of rack barcodes with tube barcodes
- Easily integrate into robotic tube handling systems



PRODUCT HIGHLIGHTS

Integrate With New Or Existing Databases—

VisionMate readers can be easily integrated into any database or spreadsheet. For single and multi-rack readers, tube numbers can be exported to a text file in either columnar or comma-delimited format for import into a database or spreadsheet. For more information on linking VisionMate readers to your database, please visit www.matrixtechcorp.com or contact your Matrix representative.



ActiveX Controls For Complete Integration—

A complete set of ActiveX controls are available for the VisionMate96 and VisionMate96 Plus for seamless integration into your automated system. The readers can be controlled from external applications to initiate a read or acquire decoded tube data.

Support For Linear Barcode Readers—VisionMate96 and 96Plus each support a linear barcode reader for associating rack barcodes with individual tube barcodes.

VISIONMATE READERS

VisionMate96—A three-rack scanner that includes decoding software and an HP scanner. VisionMate96 can decode a rack in approximately 15 seconds, or three racks in 30 seconds, making it ideal when inputting large numbers of tubes at once, or for searching for particular tubes in a set of racks.



VisionMate96 Plus—A high-speed single rack scanner that reads an entire rack of tubes instantly. Robust optics and an automation-friendly design make this reader the ideal choice for high-throughput or automated environments. No moving parts ensure reliable operation down to -40°C. An optical safety switch ensures racks are read in the correct orientation, and the open top allows easy access by robotic arms. Utilizing the same interface as VisionMate96, data is transferred via ASCII text files, or the entire system can be controlled via ActiveX commands. This reader also comes ready to run with a Windows 2000 controller PC with all hardware and software pre-loaded.



Reader	Decoding Capacity	Decoding Speed	Data Transfer Method
VisionMate96	1-3 racks of 96 tubes	10-15 seconds/rack	Data transfer to ASCII text files (linear or columnar); ActiveX controls
VisionMate96 Plus	1 rack of 96 tubes	Instant	Data transfer to ASCII text files (linear or columnar); ActiveX controls

ORDERING GUIDE

VisionMates

Item No.	Description	Includes	System Requirements
3111	VisionMate96	HP Scanner, Rack Template, and Software	Windows 2000/XP, free USB port and a free parallel port
3100	VisionMate96 Plus	Scanner, Windows 2000 PC, all Necessary Hardware and Software	Windows 2000 controller PC (included)

VISIONMATE - RACKED TUBE READERS



PIERCEABLE, INDIVIDUAL TUBE SEALING SOLUTIONS.

To complement our line of innovative storage tubes (page 66), Matrix offers SepraSeal® and DuraSeal™ individual tube capping systems.

SepraSeal offers the flexibility of individual tube capping with the ability to apply 96 caps at once while DuraSeal, an ultra-robust version of SepraSeal, is available pre-installed in any of our storage tubes.

FEATURES

- Low vapor transmission rates
- Pierceable design
- Thermoplastic elastomer construction

BENEFITS

- Minimizes evaporation and water uptake
- Allows samples to be accessed without removing caps
- Ensures sealing performance will not degrade, even after multiple piercings



PRODUCT HIGHLIGHTS

Advanced Materials—SeptraSeal and DuraSeal caps are made of an advanced thermoplastic elastomer that offers an excellent vapor barrier for both water and DMSO. Studies have shown that even SeptraSeal caps pierced hundreds of times will allow less than 2% evaporation per year. SeptraSeal caps will maintain a strong seal at temperatures down to -80°C, and are chemically resistant to DMSO.

Easy Application—SeptraSeal caps are applied in mats of 96 caps with our SuperSealer automated cap mat applicator (see page 85). After the mat is applied, simply remove the backing sheet to leave each tube individually sealed.



Sample Access Options—Individual tube caps are available as:

Solid SeptraSeal caps that can be removed for sample access, or pierced a single time.



Pre-split SeptraSeal caps that can be removed for sample access, or easily pierced by liquid handling piercing needles. Due to its resealing properties, piercing SeptraSeal caps (even up to 200 times) does not cause an increase in sample evaporation or water uptake. Pre-split caps require much less piercing pressure than solid caps.



DuraSeal caps are available pre-installed in any of our tubes and are a thicker, permanently installed version of the pre-split SeptraSeal. Ideal for use when caps will be continually pierced, DuraSeals feature a thick v-shaped lead-in that reliably guides liquid handler needles towards the split in the cap.



ACCESSORIES

Cap Removal Tool: To access a single tube, or an entire row, SeptraSeal caps can be quickly and easily removed with our cap removal tool. Caps can then be ejected, or replaced on tubes without touching them to avoid contamination.

COMPATIBLE PRODUCTS

ScreenMates Storage Tubes	Page 66
TrakMates 2-D Barcoded Tubes	Page 69
SuperSealer Automatic Cap Mat Applicator	Page 85

ORDERING GUIDE

Tube Capping Systems

Item No.	Cap	Packaging
4463	SeptraSeal Solid Caps	10 mats of 96 caps
▶ 4464	SeptraSeal Solid Caps	10 mats of 96 caps
4465	SeptraSeal Pre-Split Caps	10 mats of 96 caps
▶ 4466	SeptraSeal Pre-Split Caps	10 mats of 96 caps
4110	SuperSealer Automatic Cap Mat Applicator	
4469	SeptraSeal Cap Removal Tool	

DuraSeal Caps

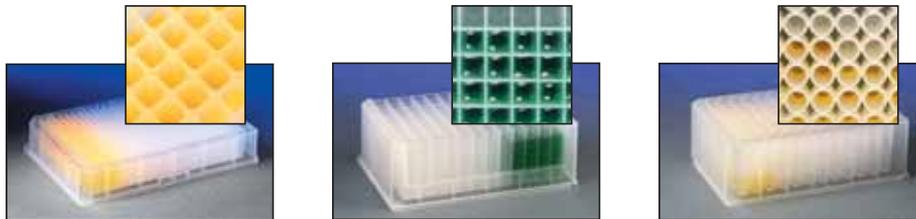
DuraSeal caps are available pre-installed in ScreenMates storage or TrakMates tubes. Please contact your Matrix representative to discuss ordering options.

▶ = Sterile



SUPERIOR SOLUTIONS FOR STORAGE AND SAMPLING.

Matrix offers a variety of microplates and deepwell blocks for your sample storage and sampling needs. Constructed of polypropylene, ScreenMates plates and blocks are chemically resistant and meet all standard microplate specifications.



FEATURES

- Alphanumeric notations
- Industry standard footprint
- Chimney well design on 1ml blocks and 96 well plates

BENEFITS

- Simplify the identification of wells
- Ensures compatibility with sealers, stackers, and liquid handlers
- Reduces risk of carryover when filling wells



PRODUCT HIGHLIGHTS

Unique Packaging—ScreenMates plates and blocks are available in thick snap and tear bags that resist tearing and punctures, but are easy to open by simply snapping and tearing the top of the bag. Plates and blocks are also packed upside down, easing the removal of many plates at once, and simplifying the loading of automated stackers.



Small Volume Sample Recovery—Both our 96 and 384 polypropylene plates are available with v- or u-bottom designs to maximize low volume sample recovery.

Barcoding Available—Every ScreenMates microplate or block is available barcoded according to your exact needs. (See page 94 for more information.)



Complete Line Of Sealing Options—Microplates and deepwell blocks can be sealed securely with a complete line of cap mats, cap strips (see page 84), or sealing tapes (see page 86). For the automatic application of cap mats, see page 85 for the SuperSealer.



ACCESSORIES

- Cap Mats
- Sealing Tapes
- Barcoding Program

COMPATIBLE PRODUCTS

- SuperSealer Page 85
- Matrix Automated Liquid Handling Instruments Page 31

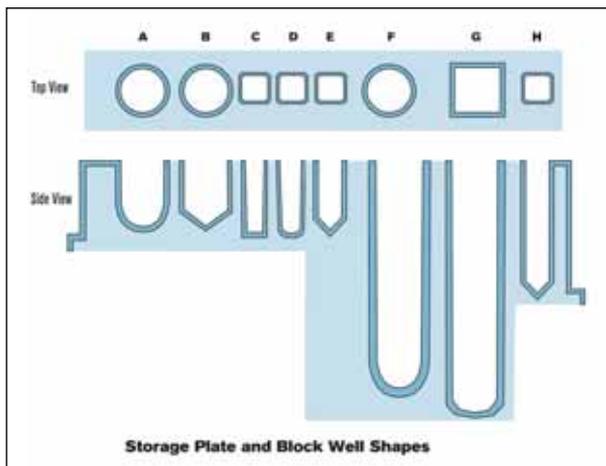


Plate Format	96 Well U-Bottom	96 Well V-Bottom	384 Flat-Bottom	384 U-Bottom	384 V-Bottom	1ml Block	2ml Block	384 Block
Illustration	A	B	C	D	E	F	G	H
Total Volume (µl)	355	340	150	120	145	1000	2000	240
Working Volume (µl)	50-300	50-300	15-130	4-100	4-120	50-1000	50-2000	2-200

ORDERING GUIDE

Polypropylene Microplates

Item No.	Working Volume	Wells	Well Bottom	Unit
4917	50-300µl	96	U	80/case
4918	50-300µl	96	U	80/case
4919	50-300µl	96	V	80/case
4920	50-300µl	96	V	80/case
4314	15-130µl	384	Flat	80/case
4315	15-130µl	384	Flat	80/case
4340*	4-100µl	384	U	80/case
4341*	4-100µl	384	U	80/case
4312	4-120µl	384	V	80/case
4309	4-120µl	384	V	80/case

*Corner notches at H1, H12

For storage of light-sensitive samples, please see our white and black 384 polypropylene plates on page 92

ORDERING GUIDE

Polypropylene Blocks

Item No.	Working Volume	Wells	Well Bottom	Unit
4325	2-200µl	384	V	80/case
4326	2-200µl	384	V	80/case
4211	50-1000µl	96	U	40/case
4212	50-1000µl	96	U	40/case
4221	50-2000µl	96	U	40/case
4222	50-2000µl	96	U	40/case

☒ = Sterile

Order online at www.matrixtechcorp.com or contact your local Matrix representative.

A SECURE SEAL FOR TUBES, MICROPLATES AND DEEPWELL BLOCKS.

Matrix EVA cap mats and strips are engineered to maintain a strong seal at all times on tubes, microplates, and deepwell blocks. Cap mats effectively seal down to -80°C, while cap strips give you the flexibility to seal individual caps or rows.



PRODUCT HIGHLIGHTS

Cap Mat Security—Cap mats are the most effective seal for long-term storage or shipping. Their design ensures plates, blocks, and tube racks remain securely sealed at temperatures down to -80°C.



Cap Strip Flexibility—Cap strips offer the flexibility of sealing and accessing specific rows of a plate or block, cutting down the risk of cross-contamination and sample exposure. Separable strips offer the added benefit of being able to break apart to seal individual wells or tubes. Cap strips effectively maintain a seal down to -20°C.



PureFect Tested—All Matrix cap mats and cap strips are certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins.



APPLICATIONS

Designed for reliable sealing of polypropylene microplates, deepwell blocks, and sample tubes for storage or shipping.

COMPATIBLE PRODUCTS

SuperSealer	Page 85
Storage Tubes	Page 66
TrakMates Tubes	Page 69
Polypropylene Plates and Blocks	Page 82

ORDERING GUIDE

Cap Mats

Item No.	For Use With	Unit
4410	1ml blocks, 96 well plates, tubes in Snap Rack	100 mats/case
4411	1ml blocks, 96 well plates, tubes in Snap Rack	10 mats/case
▶ 4412	1ml blocks, 96 well plates, tubes in Snap Rack	10 mats/case
4420	2ml blocks	100 mats/case
4421	2ml blocks	10 mats/case
▶ 4422	2ml blocks	10 mats/case
4430	Tubes in Latch or Snap Rack	100 mats/case
4431	Tubes in Latch or Snap Rack	10 mats/case
▶ 4432	Tubes in Latch or Snap Rack	10 mats/case

ORDERING GUIDE

Cap Strips

Item No.	For Use With	Separable	Unit
4413	96 well plates, 0.75ml/1.4ml tubes	X	240/bag
▶ 4414	96 well plates, 0.75ml/1.4ml tubes	X	240/bag
4415	96 well plates, 0.75ml/1.4ml tubes		240/bag
▶ 4416	96 well plates, 0.75ml/1.4ml tubes		240/bag

▶ = Sterile

FEATURES

- Low temperature compatible
- Securely seals plates, blocks, and tubes
- EVA material construction
- Alphanumeric designation on mats

BENEFITS

- Seal remains strong – even under extreme conditions
- Ensures sample integrity no matter what the vessel
- Provides a chemically-resistant seal
- Simplifies well identification



AUTOMATIC CAP MAT SEALER.

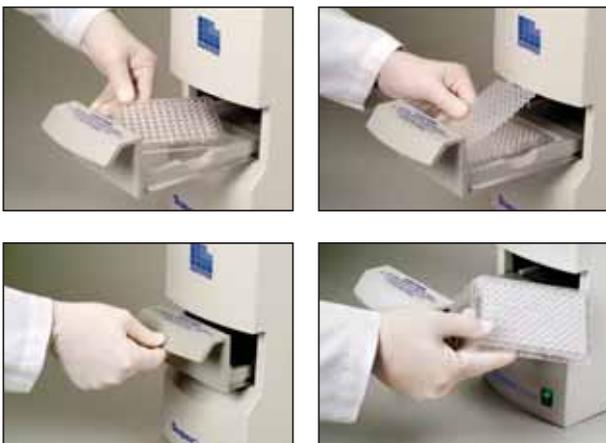
With the innovative SuperSealer®, you'll never have to manually apply cap mats to plates, blocks, or tubes again. Simply lay an EVA cap mat over a polypropylene block, plate or tube rack, or a SepraSeal mat over a tube rack, close the door, and SuperSealer will automatically apply the mat with the right amount of force for the best possible seal.



PRODUCT HIGHLIGHTS

Complete, Secure Sealing—When applying cap mats by hand, or with a manual sealing device, a great deal of operator effort is required to get the perfect seal. Not applying enough force could lead to an improperly sealed mat. Since the SuperSealer is automatic, sealing is secure and consistent every time.

Easy Operation—With nothing to adjust or configure, the SuperSealer is easy to use and simplifies the sealing of plates, blocks, and tube racks. Just close the drawer and the sealing is initiated.



Compatible With A Wide Variety Of Matrix Labware—SuperSealer can be used to apply cap mats or SepraSeal mats to plates, blocks, and tube racks of virtually any height. For compatibility information with other brands of labware, please visit www.matrixtechcorp.com or contact your Matrix representative.

APPLICATIONS

Automatic sealing of Matrix labware with cap mats and SepraSeals.

COMPATIBLE PRODUCTS

Storage Tubes	Page 66
TrakMates Tubes	Page 69
Polypropylene Plates and Blocks	Page 82
Cap Mats	Page 84
SepraSeal Capping System	Page 80

ORDERING GUIDE

SuperSealer

Item No.	Description	Unit
4110	SuperSealer, 110-240V	Each

FEATURES

- Automatic sealing mechanism
- Automatic height adjustment

BENEFITS

- Ensures plates, blocks, and tubes are sealed completely
- Accommodates any height Matrix plate, block, or tube rack



THE QUICKEST, EASIEST WAY TO SECURE SAMPLES IN MICROPLATES.

Matrix offers three different types of tape to seal microplates for a variety of applications.



PRODUCT HIGHLIGHTS

Microplate Assay Sealing Tape—This economical sealing tape is perfect for preventing evaporation during incubation steps of microplate assays.

Chemically-Resistant Sealing Tape—This clear tape is ideal for the long- or short-term sealing of any microplate or deepwell block. The tape and adhesive are resistant to many commonly used lab chemicals such as DMSO.

Foil Seals—For longer-term storage, light blocking, and the ability to pierce with pipet tips for sample access, foil seals are the ideal choice. The foil and adhesive are DMSO-resistant, apply easily, and are compatible down to -80°C.

COMPATIBLE PRODUCTS

Polypropylene Plates and Blocks
Polystyrene Assay Microplates

Page 82
Page 87

Description	Microplate Assay Sealing Tape	Chemically-Resistant Sealing Tape	Foil Seals
Chemically-Resistant	--	Yes	Yes
Temperature Range	-40°C to +120°C	-40°C to +125°C	-80°C to +130°C
Light Blocking	--	--	Yes
Pierceable	--	--	Yes
End Tabs	Double	Double	Single
Perforated End Tabs	Yes	Yes	--
Sealer Material	Polyester	Polypropylene	Aluminum
Adhesive	Acroolefin	Inert	Inert

ORDERING GUIDE

Sealing Tapes

Item No.	Description	Unit
4417	Microplate Assay Sealing Tape	100/box
4418	Chemically-Resistant Sealing Tape	100/box
4419	Foil Seals	100/box

FEATURES

- Packaged in reclosable bags
- Precut to standard microplate size
- End tabs on each seal

BENEFITS

- Facilitates easy opening and resealing
- Allows quick and easy application
- Simplifies removal of backing sheet



CONSISTENT QUALITY FOR CONSISTENT ASSAY PERFORMANCE.

Matrix offers a comprehensive range of 96, 384, and 1536 well microplates to meet a wide variety of assay applications. All our plates are manufactured from virgin medical-grade resins and strictly adhere to industry standards for dimensions. Matrix tests all of our microplates to exact quality control standards to ensure you receive plates that are free of defects, exhibit very tight dimensional tolerances, and are as flat as possible for superior performance in plate readers or automated liquid handling instruments.

FEATURES

- High levels of quality control
- Alphanumeric notations on each plate
- Plates packaged upside down and in easy-tear bags
- PureFect tested
- Industry standard footprint
- Barcoding program available

BENEFITS

- Ensures plates are flat, dimensionally accurate, and free of defects
- Assist in well identification
- Simplifies removal from packaging
- Certified free of DNA, DNase, RNase, Endotoxins, and Cytotoxins
- Ensures compatibility with sealers, stackers, and liquid handlers
- Enables accurate tracking of plates



PRODUCT HIGHLIGHTS

Unique Packaging—ScreenMates microplates are available in thick snap-and-tear bags* that resist tearing and punctures, but are easy to open by simply snapping and tearing the top of the bag. Plates are also packed upside down, easing the removal of many plates at once, and simplifying the loading of automated stackers.

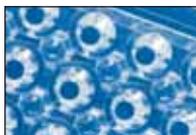


*Tissue culture treated plates are packaged in standard sealed bags.

Tissue Culture Treated Microplates—Designed for cellular assays, these plates are treated to enhance cellular attachment and growth in uniform layers, and are available in standard packaging, or pre-packaged with lids on each plate.



Small Volume 384 Microplates—Offer lower working volumes with the benefit of a 384 well format and can be easily handled in 96- or 384-channel liquid handling systems. These plates are offered in standard microplate height, or in a special low-profile design to save space in stackers or storage racks.



Glass Bottom Microplates—The high optical quality glass, low fluorescent background, and overall flatness of our glass bottom plates provide outstanding performance when used with an inverted microscope or confocal imaging analysis system, including Laser Induced Fluorescence (LIF), Fluorescence Correlation Spectroscopy (FCS), or Fluorescent Polarization (FP). Every plate is tested to ensure secure adhesion of the glass bottom to the plastic upper structure.



Black And White Polypropylene Microplates—384 black and white polypropylene microplates offer a low cross talk, low binding plate for use in homogeneous assays, when luminescent or fluorescent



detection is required. These plates are also ideal for sample storage of light-sensitive reagents.

Barcoding Program—We understand the need to track samples, so every Matrix ScreenMates microplate is available barcoded according to your exact specifications. Please see page 94 for more information.



ACCESSORIES

Microplate Lids: A full selection of lids is available, including a version featuring condensation rings for 96 well plates to keep condensation above a particular well from contaminating other wells.



APPLICATIONS

- ELISA/EIA assays
- Fluorescence assays
- Luminescence assays
- Laser Induced Fluorescence assays (LIF)
- Fluorescence Correlation Spectroscopy (FCS) assays
- Fluorescent Polarization (FP) assays
- Small volume assays
- Assay miniaturization
- Homogeneous assays
- Tissue culture cell growth
- Cell culture assays
- Serial dilutions
- Sample storage

COMPATIBLE PRODUCTS

Matrix Automated Liquid Handling Instruments	Page 31
Sealing Tapes	Page 88
Barcoding Service	Page 94

SURFACE PROPERTIES SELECTION GUIDE

Surface Property	Binding Specifications	Application
Low Binding (LB)	—	Liquid transfers, serial dilutions, assays in which high amounts of protein binding is not desired (i.e. homogeneous assays).
Medium Binding (MB)	200 ng/cm ² IgG	Assays which require binding of large bio-molecules with large hydrophobic regions (i.e. antibodies).
High Binding (HB)	600 ng/cm ² IgG	Assays which require binding of medium to large bio-molecules with hydrophobic regions and ionic groups.
Tissue Culture Treated (TC)	—	Assays which require the attachment and growth of cells in uniform layers.



POLYSTYRENE MICROPLATES

Top View



Side View



Plate Format	96 Well Flat-Bottom	96 Well U-Bottom	96 Well V-Bottom	384 Well Flat-Bottom	384 Well Small Volume	1536 Well
Illustration	A	B	C	D	E	F
Total Volume (μl)	370	300	230	120	25	12
Working Volume (μl)	50-300	50-250	30-180	25-90	2-20	1-10
Surface Area (cm ²)	0.35	--	--	0.09	0.03	0.02

POLYPROPYLENE MICROPLATES

Top View



Side View

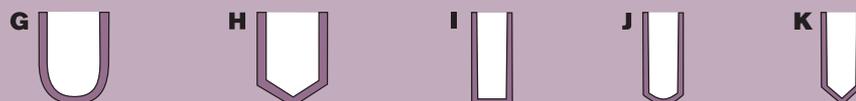


Plate Format	96 Well U-Bottom	96 Well V-Bottom	384 Flat-Bottom	384 U-Bottom	384 V-Bottom
Illustration	G	H	I	J	K
Total Volume (μl)	355	340	150	120	145
Working Volume (μl)	50-300	50-300	15-130	4-100	4-120



ORDERING GUIDE

Polystyrene Assay Microplates

Item No.	Wells	Well Shape	Color	Surface Properties	Packaging	Illustration
4911	96	U	Clear	MB	20/bag, 80/case	B
4912	96	U	Clear	MB	20/bag, 80/case	B
4913	96	V	Clear	MB	20/bag, 80/case	C
4914	96	V	Clear	MB	20/bag, 80/case	C
4915	96	Flat	Clear	MB	20/bag, 80/case	A
4916	96	Flat	Clear	MB	20/bag, 80/case	A
4930	96	Flat	Clear	HB	20/bag, 80/case	A
4922	96	Flat	White	MB	20/bag, 80/case	A
4923	96	Flat	White	HB	20/bag, 80/case	A
4926	96	Flat	Black	MB	20/bag, 80/case	A
4927	96	Flat	Black	HB	20/bag, 80/case	A
4924	96	Flat	White/Clear Bottom	MB	20/bag, 80/case	A
4925	96	Flat	White/Clear Bottom	MB	20/bag, 80/case	A
4928	96	Flat	Black/Clear Bottom	MB	20/bag, 80/case	A
4929	96	Flat	Black/Clear Bottom	MB	20/bag, 80/case	A
4310	384	Flat	Clear	MB	10/bag, 80/case	D
4311	384	Flat	Clear	MB	10/bag, 80/case	D
4316	384	Flat	White	MB	10/bag, 80/case	D
4317	384	Flat	White	HB	10/bag, 80/case	D
4318	384	Flat	Black	MB	10/bag, 80/case	D
4319	384	Flat	Black	HB	10/bag, 80/case	D
4321	384	Flat	White/Clear Bottom	MB	10/bag, 80/case	D
4322	384	Flat	White/Clear Bottom	MB	10/bag, 80/case	D
4323	384	Flat	Black/Clear Bottom	MB	10/bag, 80/case	D
4324	384	Flat	Black/Clear Bottom	MB	10/bag, 80/case	D

ORDERING GUIDE

384 Well Small Volume Microplates

Item No.	Wells	Plate Height	Color	Surface Properties	Packaging	Illustration
4351*	384	Low Profile	Clear	MB	10/bag, 80/case	E
4352*	384	Low Profile	Clear	MB	10/bag, 80/case	E
4356*	384	Low Profile	Black	MB	10/bag, 80/case	E
4357*	384	Low Profile	Black	MB	10/bag, 80/case	E
4361	384	Standard	Clear	MB	10/bag, 80/case	E
4362	384	Standard	Clear	MB	10/bag, 80/case	E
4365	384	Standard	White	MB	10/bag, 80/case	E
4366	384	Standard	White	MB	10/bag, 80/case	E
4363	384	Standard	Black	MB	10/bag, 80/case	E
4364	384	Standard	Black	MB	10/bag, 80/case	E

= Sterile

*Corner notches at H1, H12



ORDERING GUIDE

1536 Well Polystyrene Assay Plates

Item No.	Well Bottom	Working Volume	Surface Properties	Color	Packaging	Illustration
4511B	Flat	10µl	MB	Clear	15/box	F
4512B	Flat	10µl	MB	White	15/box	F
§ 4513B	Flat	10µl	TC	White	15/box	F
4514B	Flat	10µl	MB	White/Clear Bottom	15/box	F
4515B	Flat	10µl	MB	Black	15/box	F
§ 4516B	Flat	10µl	TC	Black	15/box	F
4517B	Flat	10µl	MB	Black/Clear Bottom	15/box	F

ORDERING GUIDE

Tissue Culture Treated Microplates

Item No.	Wells	Well Bottom	Color	Surface Properties	Packaging	Illustration
§ 4941	96	Flat	Clear	TC	10/bag, 80/case	A
§ 4942	96	Flat	Clear	TC	10/bag, w/lid, 80/case	A
§ 4933	96	Flat	White	TC	10/bag, 80/case	A
§ 4934	96	Flat	White	TC	10/bag, w/lid, 80/case	A
§ 4935	96	Flat	Black	TC	10/bag, 80/case	A
§ 4936	96	Flat	Black	TC	10/bag, w/lid, 80/case	A
§ 4937	96	Flat	White/Clear Bottom	TC	10/bag, 80/case	A
§ 4938	96	Flat	White/Clear Bottom	TC	10/bag, w/lid, 80/case	A
§ 4939	96	Flat	Black/Clear Bottom	TC	10/bag, 80/case	A
§ 4940	96	Flat	Black/Clear Bottom	TC	10/bag, w/lid, 80/case	A
§ 4313	384	Flat	Clear	TC	10/bag, 80/case	D
§ 4336	384	Flat	Clear	TC	10/bag, w/lid, 80/case	D
§ 4333	384	Flat	White	TC	10/bag, 80/case	D
§ 4334	384	Flat	White	TC	10/bag, w/lid, 80/case	D
§ 4327	384	Flat	Black	TC	10/bag, 80/case	D
§ 4328	384	Flat	Black	TC	10/bag, w/lid, 80/case	D
§ 4329	384	Flat	White/Clear Bottom	TC	10/bag, 80/case	D
§ 4330	384	Flat	White/Clear Bottom	TC	10/bag, w/lid, 80/case	D
§ 4331	384	Flat	Black/Clear Bottom	TC	10/bag, 80/case	D
§ 4332	384	Flat	Black/Clear Bottom	TC	10/bag, w/lid, 80/case	D

ORDERING GUIDE

96 Well Glass Bottom Microplates

Item No.	Wells	Well Bottom	Color	Surface Properties	Packaging	Illustration
4951*	96	Flat	Black/Glass Bottom	MB	5/bag, 20/case	A
§ 4953*	96	Flat	Black/Glass Bottom	MB	5/bag, with lid, 20/case	A

§ = Sterile

*Corner notches at H1, H12



ORDERING GUIDE

Polypropylene Microplates

Item No.	Wells	Well Shape	Color	Surface Properties	Packaging	Illustration
4917	96	U	Clear	LB	20/bag, 80/case	G
§ 4918	96	U	Clear	LB	20/bag, 80/case	G
4919	96	V	Clear	LB	20/bag, 80/case	H
§ 4920	96	V	Clear	LB	20/bag, 80/case	H
4314	384	Flat	Clear	LB	10/bag, 80/case	I
§ 4315	384	Flat	Clear	LB	10/bag, 80/case	I
4340*	384	U	Clear	LB	10/bag, 80/case	J
§ 4341*	384	U	Clear	LB	10/bag, 80/case	J
4342*	384	U	White	LB	10/bag, 80/case	J
4344*	384	U	Black	LB	10/bag, 80/case	J
4312	384	V	Clear	LB	80/case	K
§ 4309	384	V	Clear	LB	80/case	K
4307	384	V	White	LB	80/case	K
§ 4305	384	V	White	LB	80/case	K
4308	384	V	Black	LB	80/case	K
§ 4306	384	V	Black	LB	80/case	K

§ = Sterile

*Corner notches at H1, H12

ORDERING GUIDE

Microplate Lids

Item No.	Description	Unit
§ 4921	Polystyrene lid for use with 96 well microplates with rings	80/case
§ 4932	Polystyrene lid for use with 96 well microplates	80/case
§ 4320	Low-profile polystyrene lid for use with 96, 384 and 1536 well plates	120/case
§ 4950*	Universal polystyrene lid for use with 96, 384 and 1536 well plates	80/case
§ 4954**	Automation-friendly universal polystyrene lid, clear, for use with 96, 384 and 1536 well plates	80/case
§ 4955**	Automation-friendly universal polystyrene lid, black, for use with 96, 384 and 1536 well plates	80/case

§ = Sterile

*Universal fit, regardless of corner notches

Universal lid is compatible with plates that have corner notches at H1, H12

Low Profile 384 plates are not compatible with the universal lid

** Allows automated handling on the PlateMate® Plus, WellMate® Stacker, and other automated systems.



AN AUTOMATION-FRIENDLY LID FOR 96, 384, AND 1536 STANDARD HEIGHT PLATES.

The automation-friendly universal plate lid is designed to allow automated lid handling on the PlateMate Plus, WellMate Stacker, and other automated systems. Specially placed indents enable the systems' solenoids to smoothly separate the lids from the plates. Universal lids are also available pre-packaged with any SreenMate microplate.



TECHNICAL SPECS

Composition:	Polystyrene, Clear or Black
Length:	127.8 mm
Width:	85.5 mm
Total height:	9.5 mm

COMPATIBLE PRODUCTS

ScreenMatesMicroplates	Page 87
WellMate Stacker	Page 35
PlateMate Plus	Page 50

ORDERING GUIDE

Automation-friendly Universal Lids*

Catalog No.	Description	Packaging
4954	Automation-friendly, Universal Lid, Clear, Sterile	10 lids per bag, 80 lids per case
4955	Automation-friendly, Universal Lid, Black, Sterile	10 lids per bag, 80 lids per case

♻ = Sterile

*Also available pre-packaged on any ScreenMates microplate. Please visit www.matrixtechcorp.com or contact your Matrix representative.



Pre-lidded plates descend individually (without the lid) from the original chimney, move to the dispenser for filling, and return to the original chimney to reunite with its lid. The processed lidded plate is then moved to the chimney containing finished plates. (Pictured above with the WellMate and Plate Stacker.)

FEATURES

- Fits all 96, 384, and 1536 standard height plates
- Automation-friendly
- Available in clear or black
- Standard height skirt

BENEFITS

- One lid fits all virtually any SBS-standard microplate
- Allows automated lid handling on the PlateMate® Plus, WellMate® Stacker and other automated systems
- Black opaque ideal for light sensitive assays or compounds
- Allows for easy manual and robotic gripping



EXACTING STANDARDS FOR UNSURPASSED QUALITY IN BARCODED LABWARE.

Matrix offers an extensive, customizable barcoding service on our complete line of tube racks, blocks, and microplates. We also offer uncompromising QC to ensure every piece of labware you receive is barcoded perfectly, with no duplicate numbers, no missing labels, and no unreadable codes.

PRODUCT HIGHLIGHTS

Guaranteed Quality—

Machine Vision Inspection: After barcode application, each plate is inspected for accurate placement and code quality.

100% Read Inspection: Every label produced is read, recorded in our database, and checked for duplicates.

Database Control: Every aspect of the ordering and production process is captured in our database, so we can ensure there are no duplicates and can provide you with accurate ordering data.

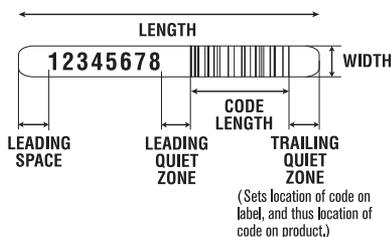
The Flexibility To Meet Your Exact Needs—

Chemical Resistance: Choose from a non-laminated label or an ultra-robust, chemically-resistant laminated label.

Low Minimum Orders: Laminated labels require a 1000-plate minimum, while non-laminated labels have a one-case minimum.

Barcode Label Size: Choose from three standard sizes, with custom sizes available upon request.

Barcode Placement: Specify exact position of code on label and application of label on plate.



Number of Labels: Choose one to four labels per plate.

Number Sequences and Check Digits: Provide your number range, or list of numbers to be encoded.

Easy Reordering: We keep track of every code ever produced, so reordering is quick, easy, and secure.

State-Of-The-Art Service And Support—

Dedicated Barcoding Experts: Handle each of your orders, are highly knowledgeable in the subtle details of barcoding, and are available for consultation on any of your barcoding questions.

ORDERING INFORMATION

Please contact your Matrix representative or visit www.matrixtechcorp.com to learn more about ordering barcoded ScreenMates microplates, tube racks, or deepwell blocks.

COMPATIBLE PRODUCTS

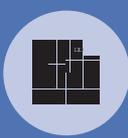
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Polypropylene Plates and Blocks	Page 82
Assay Microplates	Page 87

FEATURES

- 100% Inspection
- Low minimum orders
- Sequential packaging
- Flexible, customizable coding options

BENEFITS

- Ensures barcodes are accurate, readable, and applied correctly to avoid costly work stoppages
- Allows barcoding to be used for small runs
- Simplifies setting up large runs
- Give you a choice of code types, color-coded labels, and barcode positions on labware



HANDHELD PIPETTOR WARRANTY AND SERVICE

Matrix offers a one-year warranty on all of our handheld liquid handling instruments. To keep your Matrix Impact² or manual pipettor performing at its peak, Matrix offers a comprehensive Preventive Maintenance and Calibration Service which includes:

- Inspection, cleaning, and lubrication of wear points
- Replacement of cross tubing (if necessary on Impact² multichannels)
- Complete recalibration to ISO 8655 Accuracy & Precision specifications
- Accuracy and Precision Certificate

Service is performed (with a fast turnaround) at the factory. To arrange for pipettor service, please contact Matrix Technical Support or visit our Web site at www.matrixtechcorp.com.

AUTOMATED LIQUID HANDLING SYSTEMS WARRANTIES AND SERVICE

Standard Warranty—Matrix offers a comprehensive one-year warranty on all automated pipetting instruments. Coverage includes onsite labor* and replacement parts (for non-wear related items) and begins after successful installation and training.

*Onsite service is offered on SerialMate, PlateMate 2x2, PlateMate Plus, Tango, Hydra HTS, eDrop, and TipTower base units. Service and maintenance for all pipetting heads, Hydra II, and WellMate is performed in-factory.

Extended Warranty Options—The original warranty of the SerialMate, Hydra eDrop, PlateMate 2x2, PlateMate Plus, and TipTower base units* can be extended to provide additional in-field support and protection beyond the initial year of coverage:

Extended Warranty Comparison	Original Warranty	TotalAssurance Plus™	TotalAssurance™
Duration (Months)	12	12	12
Parts Included	Yes	Yes	No
Labor Included	Yes	Yes	Yes
Travel Included	Yes	Yes	Yes
Annual Preventive Maintenance	Yes	Yes	Yes
User Replaceable Parts Shipped Via	Standard Overnight**	Standard Overnight**	Standard Overnight**
Discount for Additional Training	N/A	20%	N/A

**Where available

The original warranty of the Hydra II base unit, pipetting heads or VisionMate readers can be extended to provide additional in-factory support and protection beyond the initial year of coverage:

Extended Warranty Comparison	Original Warranty
Duration (Months)	12
Parts Included	Yes
Labor Included	Yes
Annual Preventive Maintenance ^{†1}	Yes
Loaner Pipetting Head Included	Yes

^{†1}Annual Preventive Maintenance is included on PlateMate air displacement and positive displacement pipetting heads. Terms and conditions apply. Please contact Matrix to discuss multi-system and multi-year discounts

Other Service Options—Matrix offers the following options to keep your instruments performing at their peak:

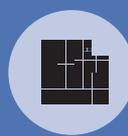
- Factory refurbishment of positive and air displacement pipetting head syringes (including Hydra, Hydra II, Tango, and PlateMate heads)
- One-time inspection and Preventive Maintenance of base units or pipetting heads
- Pipettor calibration service: includes accuracy and precision verification and adjustment
- Automation refresher training

To learn more about all of our extended warranty and service options, please contact your Matrix representative, Technical Support, or visit www.matrixtechcorp.com. Terms and conditions apply.



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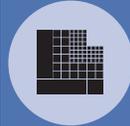


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