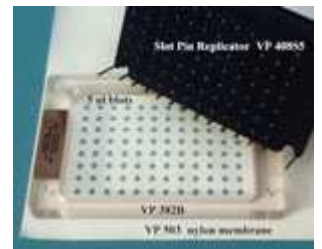




Slot Pin Replicators

96 Slot Pin Multi-Blot™ Replicator

Slot Pin Replicators provide an easy quantitative way to transfer liquids from microplates to membranes, MADGE gel wells, agar or to another microplate. The slots fill automatically by capillary action and then release the liquid to a surface or another liquid. They can be used to make arrays when used with our registration accessories: COLONY COPIERS [VP 380](#), [VP 380D](#), LIBRARY COPIER™ [VP 381](#), MULTI-PRINTS [VP 382](#), [VP 382B](#) and [VP 385](#). The typical arrayed material is of cDNA, DNA, RNA, oligos, PCR products, PCR digests, BAC libraries, YAC libraries, plasmid libraries, cosmid libraries, phage display libraries, antibodies, antigens and antibiotics.



By simply choosing the slot we can change the volume of liquid transported by Replicators and therefore the size of the spot. Our standard Slot Pin Replicators have stainless steel 1.58 mm diameter pins, each with a slot precisely cut in the tip. Each pin transfers a precise amount of liquid because the size of the slot directly determines the volume of liquid transported. We have standard slots of 0.5, 1, 2, 5, 10 and 25 ul and we provide them in 2 basic lengths of 22 mm and 45 mm. The 22 mm are for standard microplates and the 45 mm long slot pins are for deep well microplates.



[Click here](#) for a document showing Macro-arrays prepared using V&P Scientific's MultiBlot Replicators and MultiPrint registration devices.

[Click here](#) for a list of published articles that cite using the products on this page.

10 and 25 ul Slot Pin Multi-Blot™ Replicators - 96 pins

These replicators were made in response to scientists that want to deliver larger inoculums (usually yeast) to an agar [Omni Tray](#) or a membrane. To make slots that will yield the larger volumes we have to use pins of a larger diameter. The end view of the slot is illustrated in photo to the right. The 25 ul P11AS25 pins are 4.75 mm in diameter and the 10 ul P13S10 pins are 3.17 mm in diameter.



We can also make [custom slot pins](#) that will deliver as little as 6 nl to meet your specific needs.

Also see our 8, 12, 16 and 24 [Replicator Strips with slot pins](#) and 8, 12, 16 and 24 [Floating Replicator Strips with slot pins](#). These are good for loading gels and making microarrays on glass slides.

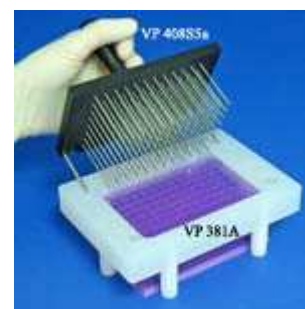
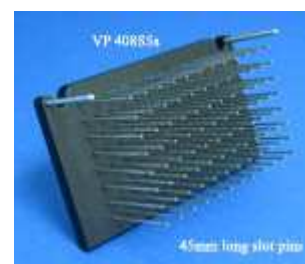


The 22 mm long pins are better for loading [MADGE Gels](#) or inoculating onto an agar surface. Both of the pins are used to make quantitative liquid to liquid transfers or liquid to membrane blots.

96 Slot Pin Multi-Blot Replicators

45 mm Long Fixed Slot Pins

96, ~0.5 ul Slot Pin MULTI-BLOT™ Replicator, pin length = 45mm, pin diameter=1.58mm	VP 408S.5a
96, ~1 ul Slot Pin MULTI-BLOT™ Replicator, pin length = 45mm, pin diameter = 1.58mm	VP 408Sa
96, ~2 ul Slot Pin MULTI-BLOT™ Replicator, pin length = 45mm, pin diameter = 1.58mm	VP 408S2a
96, ~5 ul Slot Pin MULTI-BLOT™ Replicator, pin length = 45mm, pin diameter = 1.58mm	VP 408S5a

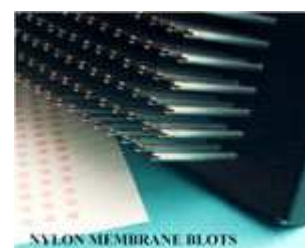
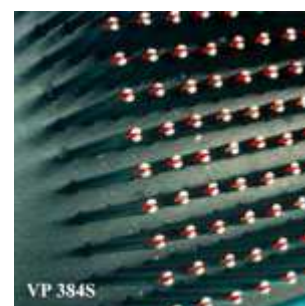


384 Slot Pin Multi-Blot™ Replicator

22 mm Long Slot Pins

The 1 ul Slot Pins make a 2.75 mm diameter blot with 1.75 mm space between blots for distinct resolution.

384, ~.5 ul Slot Pin MULTI-BLOT™ Replicator, pin length=22mm, pin diameter=1.58mm	VP 384S.5
384, ~1 ul Slot Pin MULTI-BLOT™ Replicator, pin length=22mm, pin diameter=1.58mm	VP 384S
384, ~2 ul Slot Pin MULTI-BLOT™ Replicator, pin length=22mm, pin diameter=1.58mm	VP 384S2

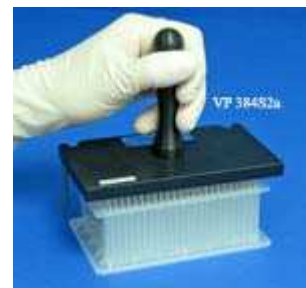


384 Slot Pin Multi-Blot™ Replicator

45 mm Long Slot Pins

These Replicators with their 45 mm long pins will reach the bottom of all the 384 deep well blocks on the market including the Whatman Uniplate 400.

We highly recommend that you use the VP 381A Library Copier to assist in placing the replicator pins into the proper wells. [Follow this link](#) for more information.



384, ~0.5 ul Slot Pin MULTI-BLOT™ Replicator, pin length=45mm, pin diameter=1.58mm	VP 384S.5a
384, ~1 ul Slot Pin MULTI-BLOT™ Replicator, pin length=45mm, pin diameter =1.58mm	VP 384Sa
384, ~2 ul Slot Pin MULTI-BLOT™ Replicator, pin length=45mm, pin diameter =1.58mm	VP 384S2a

Membrane Macroarray Starter Kit Accessories

For your convenience and a 5% discount, V&P Scientific has combined the essential components of our 96 and 384 pin MULTI-BLOT™ replication system into a starter kit to make up to 4 identical 864 or 1536 feature Macroarrays at once. You select whichever slot pin MULTI-BLOT™ Replicator fits your application and delivery volume, then just add it to the Basic Macroarray Starter Kit VP OK14 and you have everything you need to start making arrays. Included in the Starter Kit are the following:

VP OK14	
Four, MULTI-PRINTS	VP 382
One, LIBRARY COPIER™	VP 381 or VP 381N *
One, V&P Pin Cleaning Solution Bottle	VP 110
One, Package Of Lint Free Blotting Paper	VP 522
One, Pyrex Alcohol Reservoir With Lid	VP 420
One, Clear Overlay Reading Mat For 864 And 1536 Arrays	VP 430
Five, Plastic Bleach Or Water Reservoirs	VP 421
One, Pin Cleaning Brush	VP 425
One, 30 cm By 3 Meter Roll Of Hybond N Nylon Membrane	VP 503
* Use the VP 381N for Floating Slot Pin Replicators	

Nanoliter Slot Pins

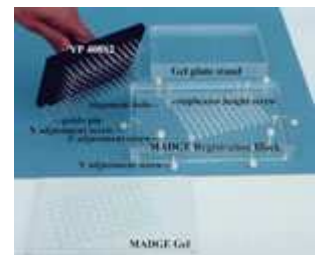
Our smallest standard slot size is 6 nl. These are used primarily in arraying on glass slides. For liquid to liquid delivery with slot pins we recommend using floating pin tools. With the floating pin tools we have slot volumes that range from 10 nl to 50 nl.



Slot Pin Replicators To Load Madge Gel Wells

V&P Scientific, Inc. has developed a [MADGE Gel Registration Block](#) that provides a simple register of our 96 MULTI-BLOT™ Slot Pin Replicators to the wells in the MADGE Gel. This greatly simplifies loading the MADGE Gel wells with PCR product.

The Registration Block visually aligns with the 96 wells in the MADGE Gel. The two guide pins on the MULTI-BLOT™ Replicator fit into two alignment holes on the Registration Block and insure that the Replicator slot pins are aligned above the wells for accurate delivery.

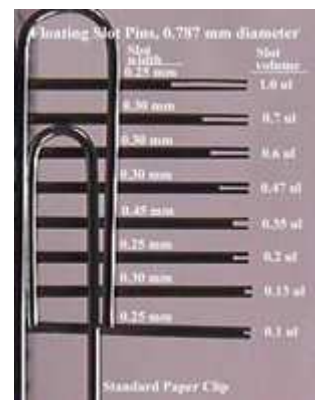


All of the V&P Scientific Slot Pin MULTI-BLOT™ Replicators have guide pins that are compatible with the alignment holes on the Registration Block, so any volume from 0.1 ul to 10 ul can be delivered to the wells. However, most investigators use either the 2 ul or 5 ul Slot Pin MULTI-BLOT™ Replicators ([VP 408S2](#) or [VP 408S5](#)).

Custom Slot Pin Multi-Blot™ Replicators

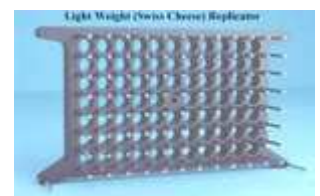
Make a custom Slot Pin Replicator to fit your application. Just select slot volume, pin length, pin diameter and pin format (48, 96, 384, 1536).

The enlarged 0.787 mm diameter floating slot pins in the photo on the right illustrates our flexibility in making slots of different widths (0.25 mm to 0.45 mm) and depths. The 0.787 mm diameter pins have the advantage of a very small foot print and yet can be slotted to carry a large volume of specimen. For comparison purposes we have included a standard paper clip in the photo.



Custom Light Weight (Swiss Cheese Style) Slot Pin Replicators

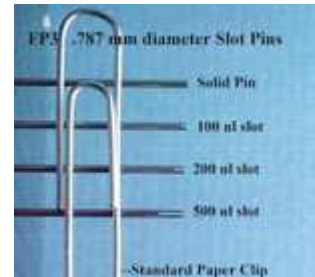
One of our customers requested an ultra light weight Multi-Blot Replicator for a particular application so we designed a Replicator base with all of the excess aluminum removed. We call it the "Swiss Cheese Style". If you need a light Replicator just request a custom "Swiss Cheese." If you use your replicators constantly throughout the day as many labs do. You will come to appreciate a light weight replicator. We can also make them with [384 pins](#) and with [slot pins](#).



[Floating Tube Type Slot Pin Multi-Blot™ Replicators](#)

The advantage of floating slot pins is that the stainless steel pins have a precision slot cut into the tip of the pin to precisely pick up liquid via capillary action. Each

pin slides into a hole in a floating assembly until it "floats" on the gridding surface and delivers via capillary action, liquid from the slot at the tip. This floating action assures that each of the pins will deliver its liquid even if the blotting/gridding surface is not level or smooth. Manual Multi-Blot Floating Slot Pin Replicators and Robot Floating Slot Pin Replicators are available in 96, 384, and 1536 formats. The standard slot volumes for tube style pins available range from 6 nl to 500 nl. A complete description of the floating slot pin replicators and how to order them is found on the [floating pin page](#).



[Floating E-Clip Type Slot Pin Multi-Blot™ Replicators](#)

The advantage of the E-Clip floating slot pins is that they carry a larger volume than the Tube style slot pins. Each precisely picks up liquid via capillary action and delivers it on contact with a liquid or solid surface. Each pin slides in a floating assembly until it "floats" on the gridding surface and delivers via capillary action, liquid from the slot at the tip. This floating action assures that each of the pins will deliver its liquid even if the surface is not level or smooth. Manual Multi-Blot Floating E-Clip Slot Pin Replicators and Robot Floating E-Clip Slot Pin Replicators are available in 96 and 384 formats. The standard slot volumes for E-Clip style pins available range from 0.5 ul to 5 ul. A complete description of the floating E-Clip slot pin replicators and how to order them is found on the [floating pin page](#).

