



**DE-GROOT** LABORATORY EQUIPMENT LTD.  
דה-גרוט ציוד מעבדות בע"מ



## Microplate Filling Systems

**\*\*\*NEW\*\*\***

### The 96 Channel Manifold Microplate Filler VP 177AD

- Rapid, fills both standard and 96 deep well plates in less than 3 seconds.
- Simple filling of multiple plates.
- Adjustable in both Z and X directions
- Can reposition dispense tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 10 ul to 500 ul/well.
- Compact, easy to use.
- Uses 20 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers **(NO ORGANIC SOLVENTS\*)**
- Quick clean system.

V&P's new 96 CHANNEL MANIFOLD (**VP 177AD**) will fill your 96 well microplates with sterile growth media, buffers and other solutions. Our single manifold delivery system makes plate filling very easy. If you have been filling your plates with a 12 channel pipettor you will really appreciate the speed and simplicity of the 96 Channel Manifold. Even labs with robotic work stations use the 96 Channel Manifold because it is easier to set up and 50 times faster than the robot and it is a ready replacement when the robot breaks down. Robot labs also feel it is more efficient for their robot to do assays than fill plates. At only a fraction of the cost of a robot, even the smallest labs can afford a 96 Channel Manifold plate filler.

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

The VP 177AD is very adaptable with a simple Z adjustment to accommodate both deep well and standard 96 well microplates. Designed for high throughput filling of multiple microplates. Just place over a plate and dispense the syringe.

The key elements of the VP 177AD dispenser are noted in the photo to the right. A Luer inlet nipple is used to connect the Inlet Valve to the manifold. When the syringe plunger is raised liquid is drawn from the source bottle through the Inlet Valve. Depressing the plunger dispenses the liquid through the manifold.

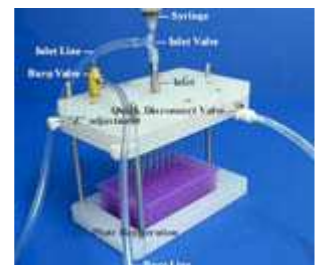
Priming the system is facilitated by a Burp Valve located strategically over the high point inside the manifold.

Cleaning the manifold is facilitated using a Quick Disconnect valve attached to a vacuum line. When connected, the manifold contents are rapidly removed. This ability greatly facilitates the cleaning process.

The three "Z" adjustment knobs allow the dispense tubes to be set at any height above a standard or deep well microplate.

The plate registration feature provides a simple but sure method of placing the dispense tubes in the wells.

The photo on the right illustrates the Inlet Valve and the Burp Valve.





The photo to the right illustrates a Quick Disconnect Valve which connects the manifold to a vacuum trap. It is used to rapidly remove liquid from the manifold and facilitates the cleaning of the manifold between source liquids. When the valve is disconnected it seals the system closed and permits dispensing.



The photo to the right is a bottom view of the VP 177AD's microplate registration system. The adjustment bar illustrated in the photo can be set by the user into one of two positions. The position illustrated positions the dispense tubes in the middle of the wells. The second position allows the dispense tubes to be slid in the X axis so the dispense tube will touch the sides of the well and facilitate a "touch off" of dispensed liquid droplets.



**\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.**

#### CV Transfer Results from [Product Report](#)

Contact Dispense

- 50uL CVs < 7%
- 100uL CVs < 5%
- 100uL CVs < 4%

**\*\*\*NEW\*\*\***

**VP 177AD - Plus** (plus a Bottle Top Dispenser) Precision 96 well plate filler)

- Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
- Versatile, fill from 10 ul to 600 ul/well. (Larger and small dispense volumes are possible)
- Accurate and Precise filling of multiple plates.
- Accommodates sterile media, reagent buffers **and organic solvents**
- Rapid, fills 96 well plate in less than 3 seconds.
- Adjustable in both Z and X directions
- Can reposition tubes to side of the wells
- Compact, easy to use.
- Uses 20 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Quick clean system.

V&P's new 96 CHANNEL MANIFOLD (**VP 177AD-PLUS**) (plus a Bottle Top Dispenser) will fill your 96 well microplates (standard and deep well) with sterile growth media, buffers and organic solvents like DMSO. Our single manifold delivery system makes plate filling very easy. If you have been filling your plates with a 12 channel pipettor you will really appreciate the speed and simplicity of the 96 Channel Manifold. Even labs with robotic work stations use the 96 Channel Manifold because it is easier to set up and 50 times faster than the robot and it is a ready replacement when the robot breaks down. Robot labs also feel it is more efficient for their robot to do assays than fill plates. At only a fraction of the cost of a robot or an automated pipettor, even the smallest labs can afford a 96 Channel Manifold plate filler. The difference between the VP 177AD and the VP 177AD-PLUS is the 2 to 10 ml (**VP 195D-1**) or the 10 ml to 59 ml (**VP 195K**) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. The syringe valve on the VP 177AD is sensitive to organic solvents. Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 177AD to make it a VP 177AD-PLUS.



**Ordering information:** In order to get a complete system you must order the 2 parts separately - a **VP 177AD** dispenser and either a **VP 195D-1** 2-10 ml Bottle top dispenser, or a **VP 195K** 10-59 ml Bottle Top Dispenser.

**VP 195D-1** 2 to 10 ml Bottle Top Dispenser, contains PTFE coated ceramic plunger in a glass cylinder protected by dual plastic sleeves. Standard accessories include Extension dispense tube (50 cm), inlet tube, tube dispense nozzle stopper (PTFE) dispense nozzle, dispense nozzle cap, dispense nozzle stopper, dispense nozzle holder, wrench, bottle top adapters (25, 33 and 45 mm), 500 ml glass bottle.



**VP 195K** 10 to 59 ml Bottle Top Dispenser, contains plunger cap, selector assembly, sleeve, glass barrel, body, intake valve, guide bar, intake valve ball, feed tube, outlet valve assembly, delivery jet connector, stop screw, delivery jet, tip cap, vernier ring, nut, T-union, ring, klik stop assembly, guide ring fixing screw, guide bar fixing plate, guide bar fixing screw, vernier finger, guide ring, calibration fixing screw, calibration screw, distance ring, bottle top adapters (37, 39 and 45 mm).



*\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.*

#### CV Transfer Results from [Product Report](#)

##### Contact Dispense

- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- 200uL CVs < 4%

## \*\*\*NEW\*\*\* The 96 Channel Manifold Microplate Filler VP 177AD-1

- Rapid, fills both standard and 96 deep well plates in less than 3 seconds.
- Simple filling of multiple plates by sliding plates under the manifold.
- Adjustable in both Z and Y directions.
- Z axis is spring loaded easy operation.
- Can reposition dispense tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 10 ul to 500 ul/well.
- Compact, easy to use.
- Uses 19 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers **(NO ORGANIC SOLVENTS\*)**
- Quick clean system.

V&P's new 96 CHANNEL MANIFOLD (**VP 177AD-1**) will fill your 96 well microplates with sterile growth media, buffers and other solutions. The VP 177AD-1 differs from the VP 177AD in that the plates are slid in under the manifold instead of placing the manifold on top on the plate. Our spring loaded manifold delivery system makes plate filling very easy.

The VP 177AD-1 is very adaptable with a simple Z adjustment to accommodate both deep well and standard 96 well microplates. Designed for high throughput filling of multiple microplates.



The key liquid handling elements of the VP 177AD-1 dispenser are the same as described for the VP 177AD above. A Luer inlet nipple is used to connect the Inlet Valve to the manifold. When the syringe plunger is raised liquid is drawn from the source bottle through the Inlet Valve. Depressing the plunger dispenses the liquid through the manifold.

The major difference between the two is that the plates are slid under the manifold as opposed to placing the manifold over the plate.

Three "Z" adjustment stops allow the dispense tubes to be set at any height above a standard or deep well microplate. The manifold is held up by 3 springs and is pushed down to the Z stop prior to dispensing.

The plate slider/registration feature provides a simple but sure method of placing the dispense tubes in the center of the wells and then reposition the pins to edges of wells.

**\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.**



### CV Transfer Results from [Product Report](#)

#### Contact Dispense

- 50uL
- 100uL CVs < 7%
- 100uL CVs < 5%
- 200uL CVs < 4%

**\*\*\*NEW\*\*\***

## VP 177AD-1-PLUS (plus a Bottle Top Dispenser Precision 96 well plate filler)

- Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
- Versatile, fill from 10 ul to 600 ul/well. (Larger and small dispense volumes are possible)
- Accurate and Precise filling of multiple plates.
- Accommodates sterile media, reagent buffers and organic solvents
- Rapid, fills 96 well plate in less than 3 seconds, after sliding them under the manifold.
- Z axis is spring loaded easy operation.
- Adjustable in both Z and Y directions
- Can reposition tubes to side of the wells
- Compact, easy to use.
- Uses 19 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Quick clean system.

V&P's new 96 CHANNEL MANIFOLD (**VP 177AD-1-PLUS**) (plus a Bottle Top Dispenser) will fill your 96 well microplates (standard and deep well) with sterile growth media, buffers and organic solvents like DMSO. The difference between the VP 177AD-1 and the VP 177AD-1-PLUS is the 2 to 10 ml ([VP 195D-1](#)) or the 10 ml to 59 ml ([VP 195K](#)) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. The syringe valve on the VP 177AD-1 is sensitive to organic solvents. Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 177AD-1 to make it a VP 177AD-1-PLUS.



**\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.**

### CV Transfer Results from [Product Report](#)

#### Contact Dispense

- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- CVs < 4%

## VP 177AD-1-24T

The VP 177AD-1-24T was designed by modifying a VP 177AD-1-24 to fit on a Thompson filter plate manifold. It is a 24 Deep Well Plate Dispenser on 18 mm centers with 42mm long 19 gauge tubes, with spring loaded Z height adjustment and sliding microplate registration feature, with 4 Stainless Steel Dowels Locating In Thompson Instrument Co. Vacuum Manifold.



By incorporating the dispensing manifold on top of the filter manifold it greatly facilitates the washing of 96 well filter manifolds.



## VP 177AD-1CR

The VP 177AD-1CR was designed to accommodate the dispensing of organic solvents such as chloroform. All the gaskets or materials coming in contact with the liquid are either Viton B, stainless steel or polypropylene.



## VP 177AD-1-24

The 24 Channel Manifold Microplate Filler VP 177AD-1-24

- Rapid, fills both standard and 24 deep well plates in less than 3 seconds.
- Simple filling of multiple plates by sliding plates under the manifold.
- Adjustable in both Z and Y directions.
- Z axis is spring loaded easy operation.
- Can reposition dispense tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 50 ul to 10,000 ul/well.
- Compact, easy to use.
- Uses 19 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers (**NO ORGANIC SOLVENTS\***)
- Quick clean system

V&P's new 24 CHANNEL MANIFOLD (**VP 177AD-1-24**) will fill your 24 well microplates with sterile growth media, buffers and other solutions. Our spring loaded manifold delivery system makes plate filling very easy.

The VP 177AD-1-24 is very adaptable with a simple Z adjustment to accommodate both deep well and standard 24 well microplates. Designed for high throughput filling of multiple microplates.

Three "Z" adjustment stops allow the dispense tubes to be set at any height above a standard or deep well microplate. The manifold is held up by 3 springs and is pushed down to the Z stop prior to dispensing.

The plate slider/registration feature provides a simple but sure method of placing the dispense tubes in the center of the wells and then reposition the pins to edges of wells.

*\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.*

## VP 177AD-1-24-PLUS (plus a Bottle Top Dispenser Precision 24 well plate filler)

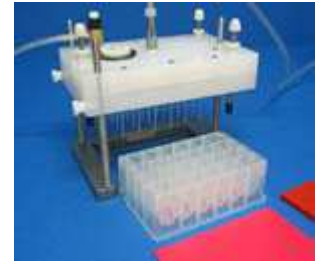
- Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
- Versatile, fill from 50 ul to 10,000 ul/well. (Larger and small dispense volumes are possible)
- Accurate and Precise filling of multiple plates.
- Accommodates sterile media, reagent buffers and organic solvents
- Rapid, fills 24 well plate in less than 3 seconds, after sliding them under the manifold.
- Z axis is spring loaded easy operation.
- Adjustable in both Z and Y directions
- Can reposition tubes to side of the wells
- Compact, easy to use.
- Uses 19 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Quick clean system

V&P's new 24 CHANNEL MANIFOLD (**VP 177AD-1-24-PLUS**) (plus a Bottle Top Dispenser) will fill



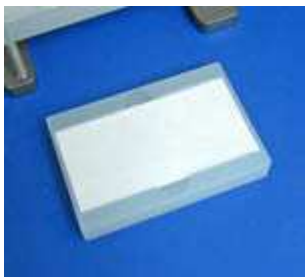
your 24 well microplates (standard and deep well) with sterile growth media, buffers and organic solvents like DMSO. The difference between the VP 177AD-1-24 and the VP 177AD-1-24-PLUS is the 2 to 10 ml (VP 195D-1) or the 10 ml to 59 ml (VP 195K) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. The syringe valve on the VP 177AD-1-24 is sensitive to organic solvents. Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 177AD-1-24 to make it a VP 177AD-1-24-PLUS.

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## VP 177AD-1-72A

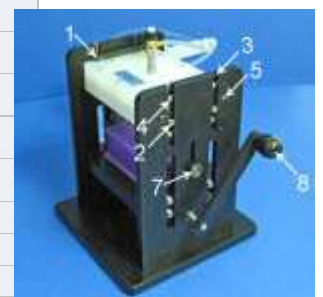
The VP 177AD-1-72A was designed to deliver small volumes onto membranes. The spacing between the cannulas is 9 mm. A special carrier was constructed to hold the membrane and register it to the dispenser.



## VP 179A Jig with Dispensing Manifolds

The VP 179A Microplate Positioning Jig provides a very flexible platform for registering microplates to dispensing and aspiration manifolds. The designation of "J" in the part number of a VP 178 (96) or VP 179 (384) dispense manifold indicate that it is Jig compatible. The VP 179A provides the mechanism to adjust the X, Y or Z position of manifold tubes to many different microplates. Polypropylene microplates are very difficult to make to exact tolerances because the plates shrink as they cool out of the mold. As each microplate manufacture may produce microplates with slight differences in dimension, it is often desirable to have the ability to precisely align the manifold to the microplate. This is especially true if you are trying to dispense culture media and not disturb a monolayer on the well bottom or magnetic beads attracted to the sides of the well.

1 – Manifold Hold Down Bars	11 – Support Arm
2 – Shoulder Bold Heads	12 – Two-Way Valve
3 – Jig Slot	13 – Liquid Collection Bottle
4 – Manifold Hold Down Screws	14 – Bleed Tube
5 – X Positioning Screw	15 – Cap Hole
6 – Y Position Screw	16 – Manifold Feed Tube
7 – Z Thumb Screw	17 – Bottle Cap
8 – Z Arm	18 – Source Bottle
9 – Nylon Pressure Screw	19 – Bleed Valve Button
10 – Stop cock Valve	20 – Dispenser System





## VP 178BJD

The **VP 178BJD** is a 96 *standard* microplate dispenser, with 13 mm long 20 gauge 316 s/s tubes mounts to a VP 179A plate registration jig.

There are several advantages to this design.

- Rapid, fills 96 well plate in less than 3 seconds.
- Simple filling of multiple plates.
- Precision adjustable in X, Y and Z directions
- Can reposition tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 10 ul to 500 ul/well.
- Compact, easy to use.
- Uses 20 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers **(NO ORGANIC SOLVENTS\*)**
- Quick clean system.



*\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.*

### CV Transfer Results from [Product Report](#)

Contact Dispense

- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- 200uL CVs < 4%

[Download Video of VP 178BJD Dispensing](#)  
(mpeg movie- 5.5MB)

Press the play button to view the video in a flash format, flash must be installed, or click the download link to download a mpeg version.

## VP 178BJD - Plus

The **VP 178BJD - PLUS** (plus a Bottle Top Dispenser) is illustrated in the photo to the right as it is mounted in a **VP 179A** Jig. There are several advantages to this design.

- Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
- Accurate and Precise filling of multiple plates.
- Accommodates sterile media, reagent buffers **and organic solvents**
- Rapid, fills 96 well plate in less than 3 seconds.
- Adjustable in X,Y and Z directions
- Can reposition tubes to side of the wells
- Versatile, fill from 10 ul to 600 ul/well. (Larger and small dispense volumes are possible)
- Compact, easy to use.
- Uses 20 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.



- Quick clean system.

The difference between the **VP 178BJD** and the **VP 178BJD-PLUS** is the 2 to 10 ml (**VP 195D-1**) or the 10 ml to 59 ml (**VP 195K**) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. (The syringe valve on the VP 178BJD is sensitive to organic solvents.) Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 178BJD to make it a VP 178BJD-PLUS.

**Ordering information:** In order to get a complete system you must order the 3 parts separately - a VP 179A Jig, a VP 178BJD dispenser and either a VP 195D-1 2-10 ml Bottle top dispenser, or a VP 195K 10-59 ml Bottle Top Dispenser.

In addition to filling standard microplates the VP 179A and VP 178BJD can also be used to wash microplates on magnetic separation blocks as illustrated in the photo to the right.

*\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.*

#### CV Transfer Results from [Product Report](#)

Contact Dispense

- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- 200uL CVs < 4%



## VP 178JD

The **VP 178JD** is a 96 *deep well* microplate dispenser, with 42 mm long 20 gauge 316 s/s tubes mounts to a VP 179A plate registration jig.

There are several advantages to this design.

- Rapid, fills 96 well plate in less than 3 seconds.
- Simple filling of multiple plates.
- Precision adjustable in X, Y and Z directions
- Can reposition tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 10 ul to 500 ul/well.
- Compact, easy to use.
- Uses 20 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers (**NO ORGANIC SOLVENTS\***)
- Quick clean system.

*\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.*

#### CV Transfer Results from [Product Report](#)

Contact Dispense

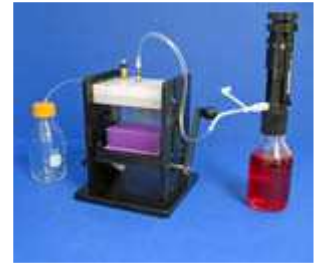
- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- 200uL CVs < 4%



## VP 178JD - Plus

The **VP 178JD - PLUS** (plus a Bottle Top Dispenser) is illustrated in the photo to the right as it is mounted in a **VP 179A** Jig. There are several advantages to this design.

1. Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
2. Accurate and Precise filling of multiple plates.
3. Accommodates sterile media, reagent buffers **and organic solvents**
4. Rapid, fills 96 well plate in less than 3 seconds.
5. Adjustable in X,Y and Z directions
6. Can reposition tubes to side of the wells
7. Versatile, fill from 10 ul to 600 ul/well. (Larger and small dispense volumes are possible)
8. Compact, easy to use.
9. Uses 20 gauge tubing for anti-drip control.
10. No air bubbles in dispensed liquid.
11. Quick clean system.



The difference between the **VP 178JD** and the **VP 178JD-PLUS** is the 2 to 10 ml([VP 195D-1](#)) or the 10 ml to 59 ml ([VP 195K](#)) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. (The syringe valve on the VP 178JD is sensitive to organic solvents.) Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 178JD to make it a VP 178JD-PLUS.

**Ordering information:** In order to get a complete system you must order the 3 parts separately - a VP 179A Jig, a VP 178JD dispenser and either a VP 195D-1 2-10 ml Bottle top dispenser, or a VP 195K 10-59 ml Bottle Top Dispenser.

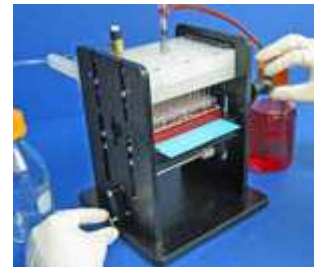
In addition to filling standard microplates the VP 179A and VP 178JD can also be used to wash microplates on magnetic separation blocks as illustrated in the photo to the right.

**\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.**

### CV Transfer Results from [Product Report](#)

Contact Dispense

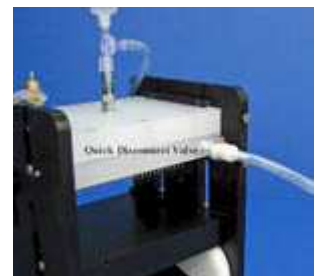
- 50uL
- 100uL CVs < 7%
- 200uL CVs < 5%
- CVs < 4%



## VP 179BJD

The **VP 179BJD** 384 well microplate dispenser is illustrated in the photo to the right as it is mounted in a **VP 179A** Jig. There are several advantages to this design.

- Rapid, fills 384 well plate in less than 3 seconds.
- Simple filling of multiple plates.
- Precision adjustable in X, Y and Z directions
- Can reposition tubes to side of the wells
- Inexpensive, uses disposable syringes.
- Versatile, fill from 5 ul to 120 ul/well.
- Compact, easy to use.
- Uses 23 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Accommodates sterile media and reagent buffers **(NO ORGANIC SOLVENTS\*)**
- Quick clean system.



When the line portion of the Quick Disconnect valve is removed the valve closes for dispensing operations.

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

#### CV Transfer Results from [Product Report](#)

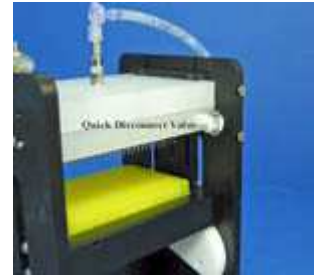
##### Contact Dispense

- 25uL
- 50uL CVs < 5%
- 75uL CVs < 4%

##### Non-Contact Dispense

- 25uL
- 50uL CVs < 10%
- 75uL CVs < 8%
- 75uL CVs < 7%

[Download Video of VP 179BJD Dispensing](#)  
(mpeg movie- 8.7MB)



## VP 179BJD - Plus

The **VP 179BJD - PLUS** (plus a Bottle Top Dispenser) is illustrated in the photo to the right as it is mounted in a **VP 179A** Jig. There are several advantages to this design.

- Uses either a 2 to 10 ml Bottle Top Dispenser ([VP 195D-1](#)) or a 10ml to 59 ml Bottle Top Dispenser ([VP 195K](#))
- Accurate and Precise filling of multiple plates.
- Accommodates sterile media, reagent buffers **and organic solvents**
- Rapid, fills 384 well plate in less than 3 seconds.
- Adjustable in X,Y and Z directions
- Can reposition tubes to side of the wells
- Versatile, fill from 5 ul to 150 ul/well. (Larger and small dispense volumes are possible)
- Compact, easy to use.
- Uses 23 gauge tubing for anti-drip control.
- No air bubbles in dispensed liquid.
- Quick clean system.



The difference between the **VP 179BJD** and the **VP 179BJD-PLUS** is the 2 to 10 ml([VP 195D-1](#)) or the 10 ml to 59 ml ([VP 195K](#)) bottle top dispenser which are both resistant to organic solvents and capable of precision delivery. (The syringe valve on the VP 179BJD is sensitive to organic solvents.) Also the reproducibility of the bottle top dispenser is better than "eye balling" a syringe. If you already have a bottle top dispenser you may use it with our VP 179BJD to make it a VP 179BJD-PLUS.

**Ordering information:** In order to get a complete system you must order the 3 parts separately - a VP 179A Jig, a VP 179BJD dispenser and either a VP 195D-1 2-10 ml Bottle top dispenser, or a VP 195K 10-59 ml Bottle Top Dispenser.

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

#### CV Transfer Results from [Product Report](#)

##### Contact Dispense

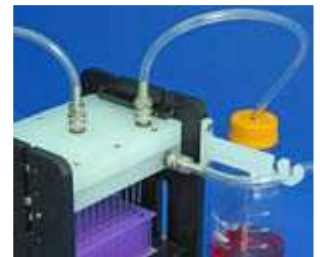
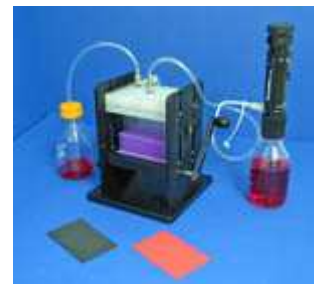
- 50uL CVs < 5%
- 75uL CVs < 4%

#### Non-Contact Dispense

- 25uL
- 50uL CVs < 10%
- 75uL CVs < 8%
- 75uL CVs < 7%

## VP 178JD-CR & VP 179A

The VP 178JD-CR & VP 179A is chemically resistant version of the VP 178JD. The VP 178JD-CR was designed to accommodate the dispensing of organic solvents such as chloroform. All the gaskets or materials coming in contact with the liquid are either Viton B, stainless steel or polypropylene.



## Bottle Top Dispensers

### VP 195D-1

2 to 10 ml Bottle Top Dispenser, contains PTFE coated ceramic plunger in a glass cylinder protected by dual plastic sleeves. Standard accessories include Extension dispense tube (50 cm), inlet tube, tube dispense nozzle stopper (PTFE) dispense nozzle, dispense nozzle cap, dispense nozzle stopper, dispense nozzle holder, wrench, bottle top adapters (25, 33 and 45 mm), 500 ml glass bottle.



## VP 195K

10 to 59 ml Bottle Top Dispenser, contains plunger cap, selector assembly, sleeve, glass barrel, body, intake valve, guide bar, intake valve ball, feed tube, outlet valve assembly, delivery jet connector, stop screw, delivery jet, tip cap, vernier ring, nut, T-union, ring, klik stop assembly, guide ring fixing screw, guide bar fixing plate, guide bar fixing screw, vernier finger, guide ring, calibration fixing screw, calibration screw, distance ring, bottle top adapters (37, 39 and 45 mm).



## Wand Style 96, 96 Deep Well and 384 Well Dispensers

### The Multi-Spense™ Wand Style Microplate Fillers

- Luer-Lok® connectors for quick set up.
- Simple manual advance/indent system.
- Rapid, fills plate in less than 20 seconds.
- Versatile, fill either 384 or 96 well plates.
- Also fills 96 deep well plates.
- Accommodates sterile media or chemicals (**NO ORGANIC SOLVENTS\***).
- Acrylic hood protects plates from airborne contamination.
- Autoclaveable polycarbonate dispensing wands.
- Autoclaveable variable volume bottle top dispenser.
- Bottle top adapters allow dispenser to be used with most large bottles.

V&P's MULTI-SPENSE will fill your 384 or 96 well microplates and deep well plates with sterile media or other solutions. Our double wand delivery system coupled with our indent fill stations makes plate filling very easy. If you have been filling your plates with a 12 channel pipetter you will really appreciate the speed and simplicity of the MULTI-SPENSE. Even labs with robotic work stations use the MULTI-SPENSE because it is easier to set up and 10 times faster than the robot and it is a ready replacement when the robot breaks down. Robot labs also feel it is more efficient for their robot to do assays than fill plates. At only a fraction of the cost of a robot, even the smallest labs can afford a MULTI-SPENSE. An acrylic hood, to prevent airborne contaminants, is provided with each MULTI-SPENSE system.



\*None of the VP 175A to VP 191L series wands or manifolds should be used with organic solvents such as DMSO.

## The Multi-Spense Is Available in Four Different kits:

### VP 195B (Multi-Spense for 96 Well Plates)

#### VP 195B kit comes with two 12 channel wands (VP 185L):

- Each dispensing fills 48 wells
- Dispenses from 20 to 100 ul/well adjustable in 2 ul increments
- 8 fill stations located on plate slider
- Fill accuracy 5%

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

Non-Contact Dispense: CVs < 5%

### VP 195A (Multi-Spense for 384 Well Plates)

#### VP 195A kit comes with two 24 channel wands (VP 186L):

- Each dispensing fills 48 wells
- Dispenses from 20 to 100 ul/well adjustable in 2 ul increments
- 8 fill stations located on plate slider
- Fill accuracy 5%

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

#### CV Transfer Results from [Product Report](#)

Non-Contact Dispense: CVs < 5%



### VP 195L (Multi-Spense for 1536 Well Microplates)

#### VP 195L kit comes with two 48 channel wands (VP 191L):

- Each dispensing fills 96 wells
- Dispenses from 2 to 10 ul/well, adjustable in .5 ul increments
- 16 fill stations
- Fill accuracy 7%
- Accommodates sterile media or chemicals (**NO ORGANIC SOLVENTS\***)
- Acrylic hood protects plates from airborne contamination.
- Autoclaveable polycarbonate dispensing wands.
- Autoclaveable variable volume bottle top dispenser.
- Bottle top adapter allows dispenser to be used with most large bottles.

An entire plate can be filled in 3 minutes by a novice. It is easy to set up and the dispenser, wands, and tubing are all autoclaveable.



\*None of the VP 175A to VP 191L series wands or manifolds should be used with organic solvents such as DMSO.

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

#### **CV Transfer Results from [Product Report](#)**

Non-Contact Dispense: CVs < 5%



## **VP 195J (Multi-Spense For 96 Deep Well Plates)**

### **VP 195J kit comes with two 12 channel wands ([VP 185L](#)):**

- Each dispensing fills 24 wells
- Dispenses from 420 to 2460 ul/well, adjustable in 40 ul increments
- 4 fill stations
- Fill accuracy 5%
- Luer-Lok® connectors for quick set up.
- Simple manual advance/indent system.
- Rapid, fills plate in less than 20 seconds.
- Accommodates sterile media or chemicals.
- Acrylic hood protects plates from airborne contamination.
- Autoclaveable polycarbonate dispensing wands.
- Autoclaveable variable volume bottle top dispenser (.4 to 2.5 ml/well).
- Bottle top adapter allows dispenser to be used with most large bottles.

V&P's new MULTI-SPENSE will fill your 96 Deep Well microplates (**VP 195J**) with sterile media or other solutions. Our double wand delivery system coupled with our indent fill stations makes plate filling very easy. If you have been filling your plates with a 12 channel pipetter you will really appreciate the speed and simplicity of the MULTI-SPENSE. Even labs with robotic work stations use the MULTI-SPENSE because it is easier to set up and 10 times faster than the robot and it is a ready replacement when the robot breaks down. Robot labs also feel it is more efficient for their robot to do assays than fill plates. At only a fraction of the cost of a robot, even the smallest labs can afford a MULTI-SPENSE.

\*This product has not been tested with all types of solutions, for example, those containing or comprised of various detergents and/or organic solvents. If your application includes these types of solutions, preliminary testing may be needed.

Non-Contact Dispense: CVs < 5%

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