



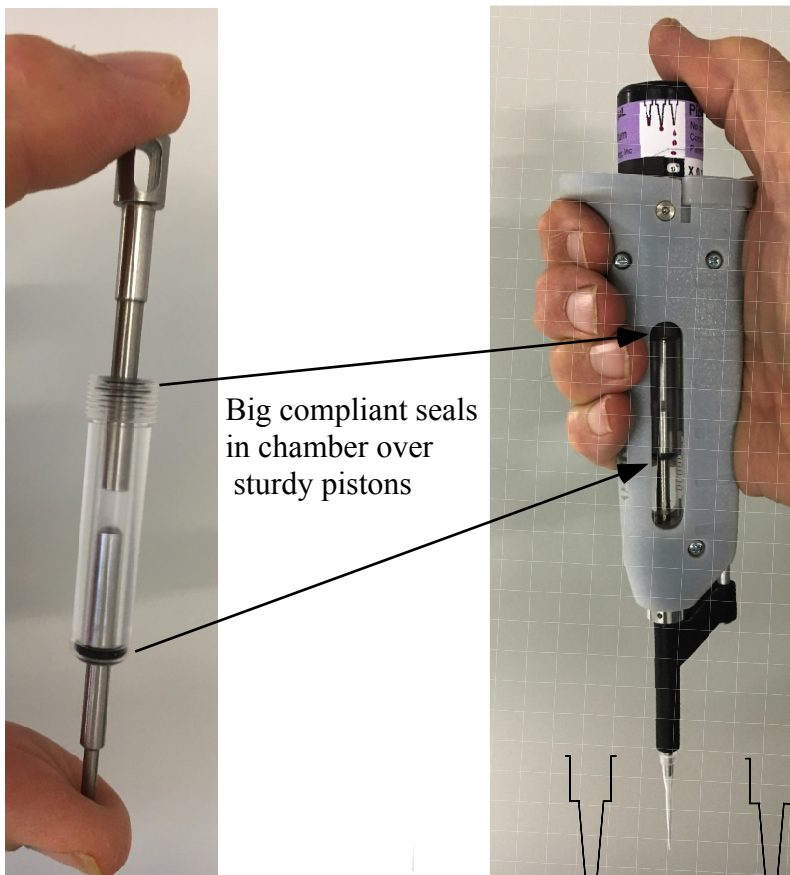
# PipettorPlus™ -- World's best pipettor.

**PipettorPlus** handles exactly like your standard pipettor and can do everything you expect in pipetting.

**Plus** because it gives you additional capabilities your standard pipettor simply does not have:  
contact-free delivery option, no outliers, and better accuracy and precision over a wider range.

You will not need any training because it handles the same. But you will need to get used to no outliers or missed short samples! You may find yourself cutting way down on visual tip inspection and triplicates.

This is a true disruptive technology breakthrough. Not just nicer peripherals. The unique offset displacement mechanism eliminates the small seals and skinny pistons which are the source of leaks. Also allows generous stroke excursion down to nanoliters. The internal mechanism works seamlessly to enhance your pipetting. You will quickly deem this the best pipettor you ever used.



PipettorPlus unique core mechanism.

Big compliant seals in chamber over sturdy pistons

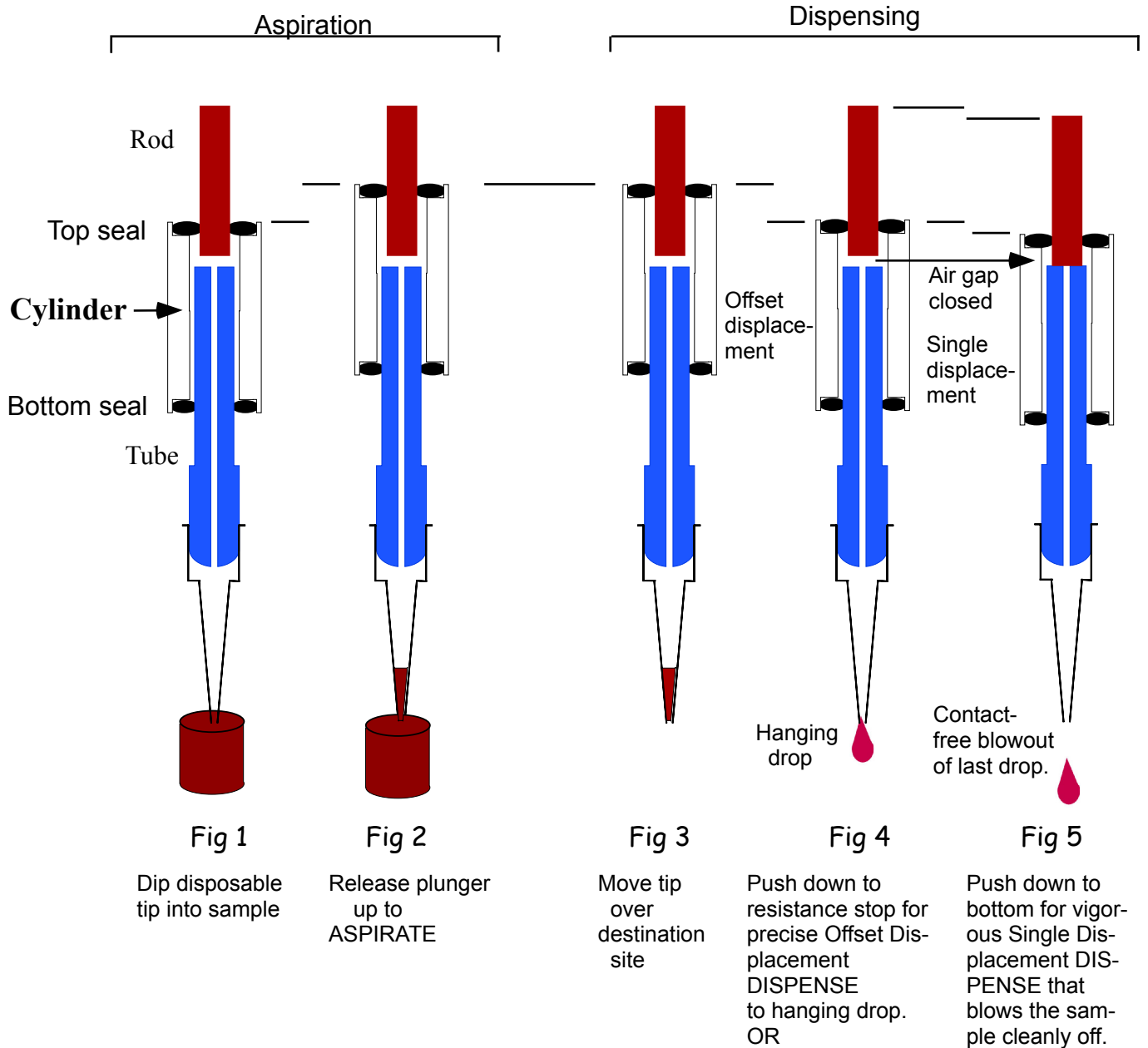
Core mechanism is always working for you. You don't have to think about it, but the whole sealing system is so robust and reliable that you can see it and could even touch the chamber during operation!

For **ASPIRATION**, no small sample misses, **no outliers**.

For **DISPENSING**, your choice of ultra precise hanging drops or clean **contact-free** blowout.

# How our unique breakthrough mechanism Works

[The PipettorPlus and related products are covered by patents and patents pending]

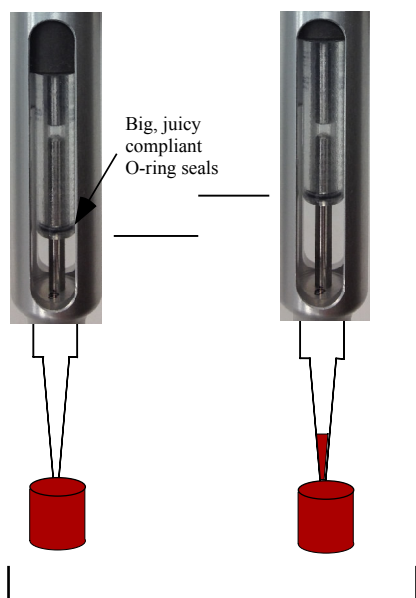


The cylinder and its two seals move up. More of the wider tube mass leaves the common sealed chamber than thinner rod mass enters, a negative offset displacement that creates a vacuum that aspirates the sample extremely precisely. The robust sealing does not leak so there are no “outliers” or missed aspirations for small volumes.

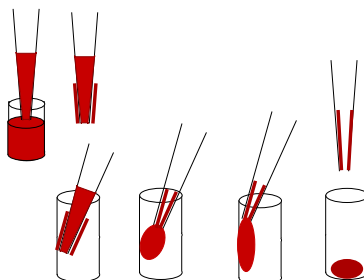
In Fig 3-4 the cylinder and its two seals sweep down to the resistance stop. More of the wider tube enters the chamber than thinner rod leaves, a positive offset displacement that dispenses the sample very precisely (and slowly) and typically leaves a hanging drop.

In Fig 4-5 the cylinder and seals are pushed down beyond the resistance stop to the bottom. An unseen part of the mechanism causes the rod to move down with them. Without any offset from the rod, the full mass of the tube displaces and closes the air gap to give a fast, crisp high flow of air that blows the last drop completely off of the tip.

# How our unique breakthrough mechanism gives you Better Accuracy.



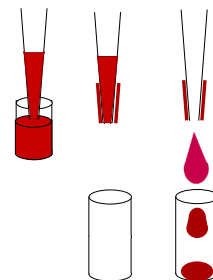
**Conventional Contact Dispensing** requires *contacting* the destination for touchoff-&-drag or immersion final delivery.



Aspirate what you want    Move INTO where you want to put it    Dispense hanging drop by touchoff    While dragging tip up    Withdraw tip

- "Wickoff" volume added from outside of tip.
- Retention volume inside tip.
- User technique variability.

**Single Displacement Dispensing** delivers contact-free and contamination-free



Aspirate what you want    Move OVER where you want to put it    Dispense what you aspirated contact-free

- All the sample is delivered from inside the tip.
- Outside "wickoff" left behind
- Not technique sensitive.

### ASPIRATION.

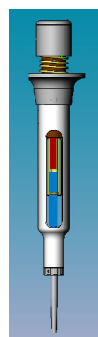
Look at our robust sealing and feel your trust! No intermittent leaks, missed or short sample "outliers" like all the others. Our Precision and accuracy are tighter. Eye strain and mental stress from constant visual tip inspections are reduced, as are many duplicates and triplicates.

### DISPENSING.

You can dispense by hanging drop touchoff-and-drag just like you do now. But you also have the option of dispensing the sample crisply and cleanly contact-free, and the graphic shows why that is more accurate and precise. During aspiration, some sample gets on the outside of the tip, but our clean blowout of the inside of the tip also leaves most of the outside material behind. The contact-free delivery is also not user technique dependent so different users will get substantially the same results. This obviously contributes to more consistent user-to-user results and better overall accuracy and precision.

## SPECIFICATIONS

### Fixed Volume



Volume	CV	Accuracy
20 µL	0.4%	1%
10 µL	0.6%	1.5%
5µL	0.8%	2%
2µL	1%	2.5%
1µL	1.5%	3%
0.75µL	2%	4%
0.5µL	3%	6%

### Adjustable Volume DRP 0.5 -10µL example

Volume	CV	Accuracy
10 µL	0.6%	2%
5 µL	0.8%	3%
1 µL	2%	4%
0.5 µL	4%	8%



Volume selected shows through a viewing window.

All precision and accuracy specifications are for contact-free delivery and for using all 10 points without any statistical discards. Accuracy is for 69 deg F (20.5 C) by weighing and Artel PCS dual dye ratiometric photometry, which is tied to NIST calibration standards. Measurements are with the disposable LS3 and LS4 tips. TIP ESCAPE VELOCITY of up to 10 meters per second is generated by comfortable thumb speed as needed for clean, contact-free delivery of some more viscous (typically biological) materials.

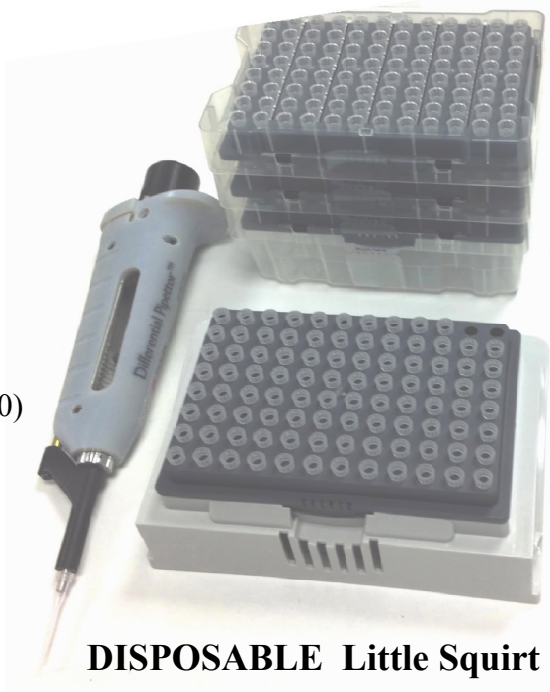
## Ordering Information

**ORDER by mail, email or phone (see bottom). We typically ship within 1 week ARO.**

### Fixed Volume

- DRP 20µL
- DRP 10µL
- DRP 5µL
- DRP 2µL
- DRP 1µL
- DRP 0.75µL
- DRP 0.50µL
- DRP custom vol (\$800)

**\$500 each**



### Adjustable Volume



- DRP 1-20µL \$900.
- DRP 0.5-10µL \$900.
- DRP 0.2-2µL \$1,500

### DISPOSABLE Little Squirt TIPS

LS4 Low Retention tips. Tip ID 0.014"

Catalog #

LS4-1	1 Reusable Box and 5 96-tip Reload Trays (480 tips).....	\$75
	Required starter set.	
LS4-2	Clean tips. Case of 10 96-tip Reload Trays (960 tips).....	\$93
LS4-3	PCR Clean. Case of 10 96-tip Reload Trays (960 tips).....	\$107
LS4-4	Dual filter and PCR Clean, Sterile and pyrogen free. ....	\$173
	Case of 10 sterile-wrapped 96-tip boxes (960 tips).	

LS3 Normal Retention tips. Tip ID 0.012"

Catalog #

LS3-1	Clean. Case of 5 boxes of 384 tips each (1920 tips).....	\$200
LS3-2	Sterile. Case of 5 boxes of 384 tips each (1920 tips).....	\$220

**TERMS** 2% 10, net 30. Price FOB factory .

**WARRANTY is 24 months** against defects in materials and workmanship when used as prescribed.

**CALIBRATION** verification and certification by us is free every 6 months in New England and \$100/yr elsewhere in US. Inquire about our Promotional Quality Credit if you purchase an Artel PCS® or MVS® (registered trademarks of Artel, Inc. of Westbrook, Maine) to use for extra quality monitoring.

Our robust sealing system should not need servicing, but should calibration slip we will restore it during the warranty period.