

Differential Mode
small volume
sampling




The two husky pistons differ in diameter by less than 0.001 inch. Moving together through rugged compression seals, the pistons meter a volume proportional to their tiny difference in cross sectional area, a DRD **differential displacement™** resolution as fine as a 10 uL syringe, so you can accurately aspirate or meter miniscule samples. This process is **robust**, without the bubble hangup and sealing problems of tiny syringes.

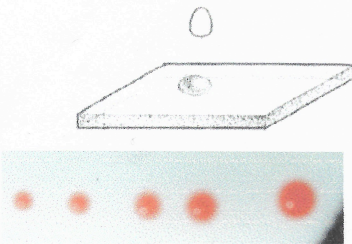
Bulk or Single Mode
large volume dilution
& touchless Blastoff™



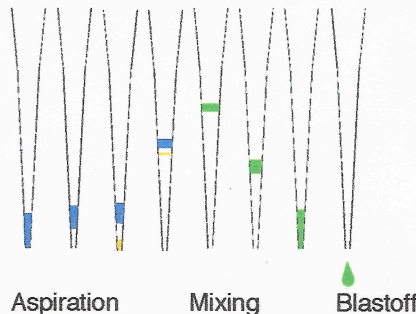
When one piston moves alone, its large diameter gives the high flow rate of a 2 mL syringe. This has the power to blow samples completely off of tips contact-free (**Blastoff™**) and do extreme dilutions, as well as provide ample priming and rinsing to insure robust and hassle-free total system operation.

The unique DRD mechanism endows positive displacement technology with extraordinarily fine resolution and high flow/volume -- via a highly robust 200-fold resolution multiplier! This lets you

Pipette and deliver without contact (touchless) sample droplets down to 100 nanoliters with a disposable tip and 25 nanoliters with a fixed tip (as  in spotting).



Aspirate reagent and then a minute sample into a disposable tip, get mixing in the tip and Blastoff™ the mixture touchless (as in a Maldi application)

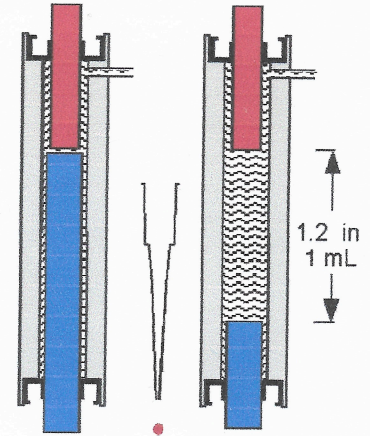
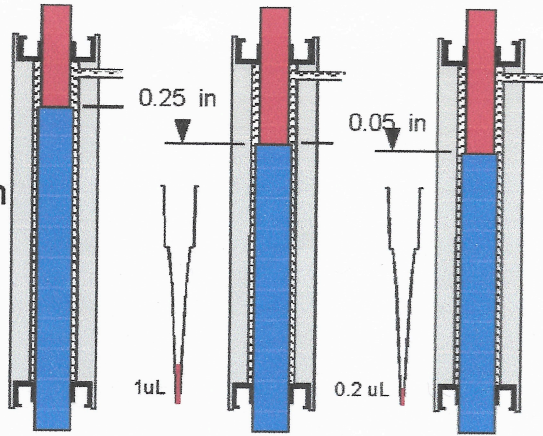
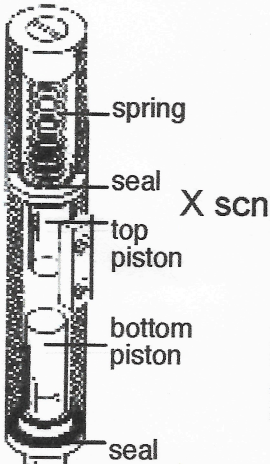


Do a Single stroke dilution of 100,000:1 with a fixed tip by aspirating 10 nanoliters precisely and accurately in the DRD Differential Mode, and then deliver that sample with 1 mL of internal reagent or diluent in the DRD Single Mode.



Differential Aspiration

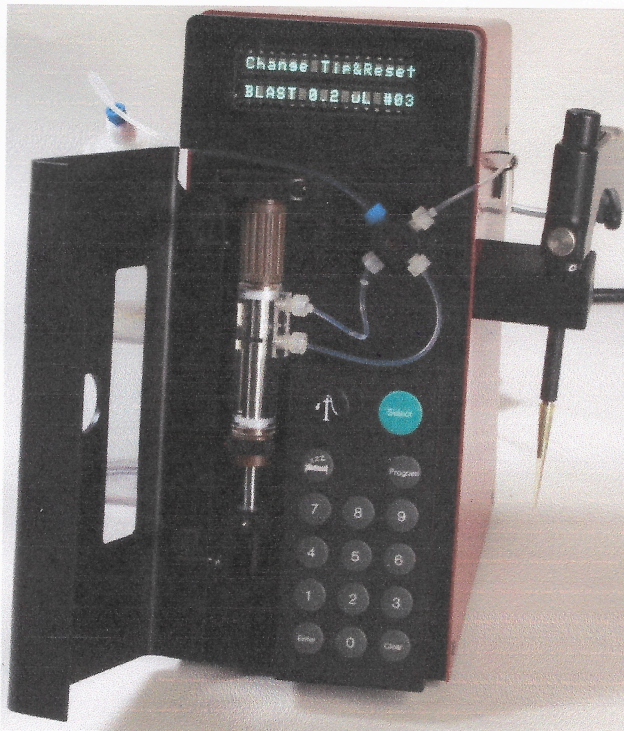
Bulk Dilution or Blastoff



When the bottom piston engages the top piston the two move together.

Simple. With the door closed the unit is run just by using the green "Select" button for the desired program; it comes with standard programs that cover the full range of DRD capabilities.

Programmable. Opening the door exposes the programming panel, and the bright display guides you intuitively to easily write and save any program.



Disposable Tip Handprobe for down to 50 nanoliters. This marvelously smart and friendly handprobe has both an LED light and an audible beep to make use simple.

Fixed Tip precision steel probe for use down to 10 nanoliters.

- Disposable tip to precisely aspirate a sample as small as 100 nanoliters and blow it off intact contact-free (Blastoff™)

- Disposable tip to aspirate a tiny sample and a reagent and mix them in the tip and blast them off together.

- Fixed tip to precisely aspirate a sample as small as 50 nanoliters or dilute up to 20,000:1 with 1 mL of internal reagent.

- a full mL is always available for priming, large dilutions or rinsing.

SPECIFICATIONS

Size: 8 LBS (3.6 kg), 5" wide X 11" deep X 10" high 110-240 VAC, 0.5 amps, 50-60 Hz, battery back up for 80 programs.
Differential Mode: 0.25" (6 mm) excursion per uL (exquisite resolution like a 10 microliter syringe) to 2 uL max vol. SD 1-2 nanoliters.
Bulk or Single Mode: 1.2" (30.5 mm) excursion per mL (like a 2 mL syringe) to 1 mL maximum volume. Standard deviation 0.1 - 0.2 uL.
Flow rate up to 1 mL/sec, able to impart sample tip escape velocity of several meters/second even through tips with conventional IDs.
Resolution Multiplier: Differential mode resolution is 200 times finer than Bulk mode.
Maintenance: Seal replacement typically 500,000 - 1 million cycles.

PARTS LIST

9100 Little Squirt Differential NanoPipettor/Diluter complete with Smart hand probe, rack of 384 0.012" ID Little Squirt Disposable Tips, power cord and Operator's Manual

\$9,995.00

9201 Smart hand probe for disposable tips

9003 rack of 384 disposable Little Squirt tips, tip ID 0.012"

9004 Fixed steel probe, tip ID 0.011

9001 rack of 96 disposable tips, tip ID 0.016"

9005 System Enzyme Cleaning Solution

DRD Liquid Handling, 12 Oakland Street Industrial Park at CI Works, Amesbury, Mass 01913 USA.