**Mantis Key Features**

<http://www.formulatrix.com/demosite/liquid-handling/products/mantis/index.html#tabbed-nav=tab3>

**Extremely Low Dead Volumes**

To minimize dead volume, the reagent plugs directly into the microfluidic chip.  **Dead volumes can be reduced to 6 µL** by using pipette tips as reagent reservoirs. This feature is ideal for dispensing even the most precious samples.

**Optional Chip Changer**

Mantis can automatically **dispense up to six reagents**, allowing you to dispense complex plates and assay development protocols.

**Small Footprint**

The compact Mantis is the smallest liquid handling robot made by Formulatrix and boasts **one of the smallest footprints available.**

With a base that fits on a standard mouse pad, the Mantis can fit in nearly any workspace while remaining robot accessible for automation.

Dimensions: 220 mm (8.66 in.) x 162 mm (6.38 in.) x 111 mm (4.37 in.)

**Optional Continuous Flow Dispensing**

With optional continuous flow, the Mantis can pressurize an external reservior to dispense liquids at a constant rate. This dispensing method allows for filling 7 times faster (at a rate of 150 μL/second) than previous models. This increased dispensing speed is suitable for filling deep well blocks.

**Dual Wash Stations**

The built-in dual wash stations permit easy sterilization during dispenses. One station can deliver bleach or alcohol for sterilization, while the second station can deliver water for a final rinse.

**Extended Z-Axis for Deep Well Blocks**

The dispense head of the Mantis has clearance up to 54 mm for dispensing into deep well blocks.

**Patented Microfluidic Dispensing Technology**

At the core of the Mantis is a **patented microfluidic valve cluster** that measures and dispenses discrete volumes of liquid. Pressure and vacuum open and close each valve on the silicone valve cluster. This chip has **two micro-diaphragms** (100 nL / 500 nL or 1 µL / 5 µL depending on the chip option) that can **fill and dispense as rapidly as 10 times per second.**

**Optional Integrated Ingredient Holders**

The Mantis comes fitted with removable reagent holders that allow reagents in 50mL Falcon tubes to sit safely during the dispense with no need for additional racks or risk of tipping/spilling.