**Mantis Key Features**

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

The Mantis is currently available in two designs. The newer version, the v3, is built for continuous flow dispenses to deep well blocks. The previous version, the v2, is perfect for use in an environment that only requires smaller volume dispenses.

**Extremely Low Dead Volumes**

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

**Chip Changer (Optional)**

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 on the market.**

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

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

**Continuous Flow Dispensing (Optional)\***

When combined with pressurized bottles, Continuous Flow chips can dispense volumes from 5 µL – 2000 µL in an uninterrupted stream, perfect for setting up deep well blocks. Pressurized bottles are available as 50 mL Falcon tubes and 250 mL Nalgene bottles.

**Dual Wash Stations\***

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

**Deep Well Block Dispensing\***

Combine the Mantis v3’s expanded plate clearance with a continuous flow chip and you’ve got a machine made for deep well block dispenses.

**Built-in Tube Holders (Optional)\***

Six built-in tube holders are located at the right (2) and left (4) sides of the Mantis v3, ideal for large volume dispenses or frequently used reagents.

**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.**

**DMSO-friendly (Optional)**

**The Mantis can be configured to dispense DMSO reagents via use of DMSO-friendly chips.**

**DNAse and RNAse friendly (Optional)**

**The Mantis can be configured to dispense sterile reagents by using molecular grade chips.**

**Formulator Integration**

Leverage the Formulator’s ability to dispense viscous reagents and the Mantis’s low dead volume by combining the two.

*\*Available with Mantis v3 only.*