

HAMILTON®

MAGPIP

Revolutionizing your Lab



The Future Starts **NOW**

We're proud to be revolutionizing the world of pipetting with the new MagPip. There are 1000 reasons why this completely new technology represents the future. In short, it's incredibly fast, covers a wide volume range and is extremely precise. This leads to more efficiency across the entire workflow. Smaller volumes mean you'll use less of your precious samples and reagents. The massive speed will increase throughput and save valuable time in the lab. The MagPip combines opposites – fast, while precise.



MagPip Channels on the
Microlab® VANTAGE Liquid Handling System

The Three Dimensions of **SPEED**

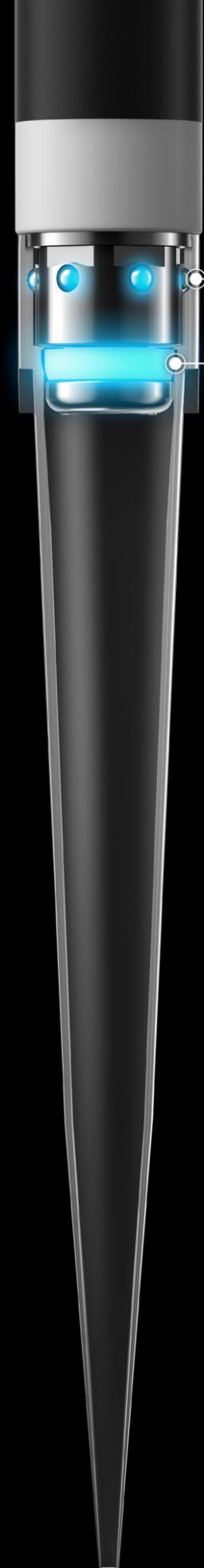
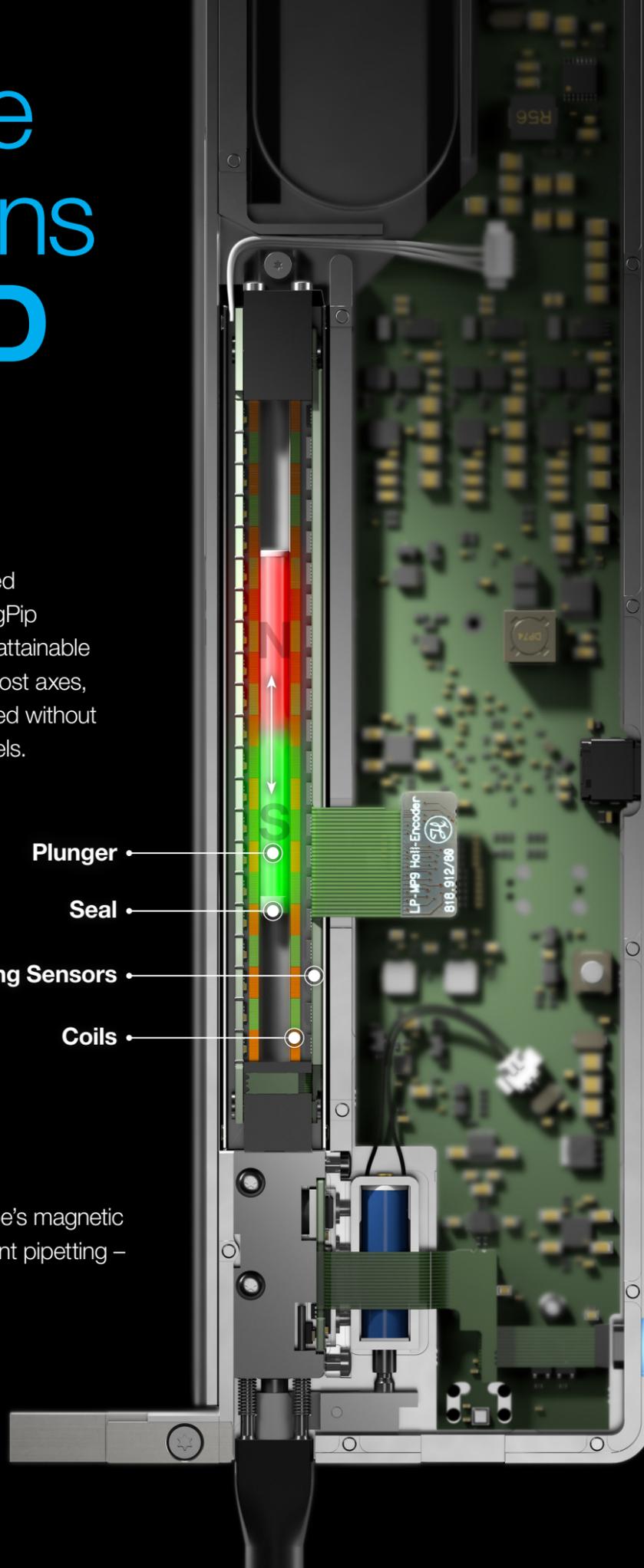
Speed of the MagPip Channels

Through the consistent use of miniaturized components and its slim design, the MagPip channels can be moved at previously unattainable speeds. By means of linear motors on most axes, the required movements can be generated without the use of gears, spindles and gear wheels.

- Plunger
- Seal
- Positioning Sensors
- Coils

Speed of the Tubular Linear Motor

A magnetized piston is moved by the tube's magnetic field. The piston performs air displacement pipetting – with unprecedented acceleration.



Ball-Lock Mechanism

Sealing

Speed of the MagLock Coupling

The separation of locking and sealing by function allows for faster coupling. The coupling is now performed by a mechanism driven by an electromagnet.

Tip coupling in less than
0.05 seconds

Pipetting a 384-well plate in
12 seconds

Up to **600**
aliquots per minute

The Three Dimensions of **WIDTH**

750µl

350nl

Wide Range of Volumes and Liquid Classes

By foregoing mechanical components and fusing the moving part of the motor with the pipetting piston in the tubular linear motor, acceleration speeds can be achieved that were never before possible with conventional drives. As a result, the lower-limit of the pipettable volume of the MagPip is an incredible 350nl, while 750 µl marks the upper-limit.

Wide Range on the Deck

Thanks to the compact design of the MagPip and the MagTrail pipetting arm, the workspace of the Microlab® VANTAGE can be put to even better use. The compact arm provides additional space for a second arm, which can carry, for example, 5ml channels or a transport tool. This opens up additional possibilities for accelerating applications, using parallel actions.

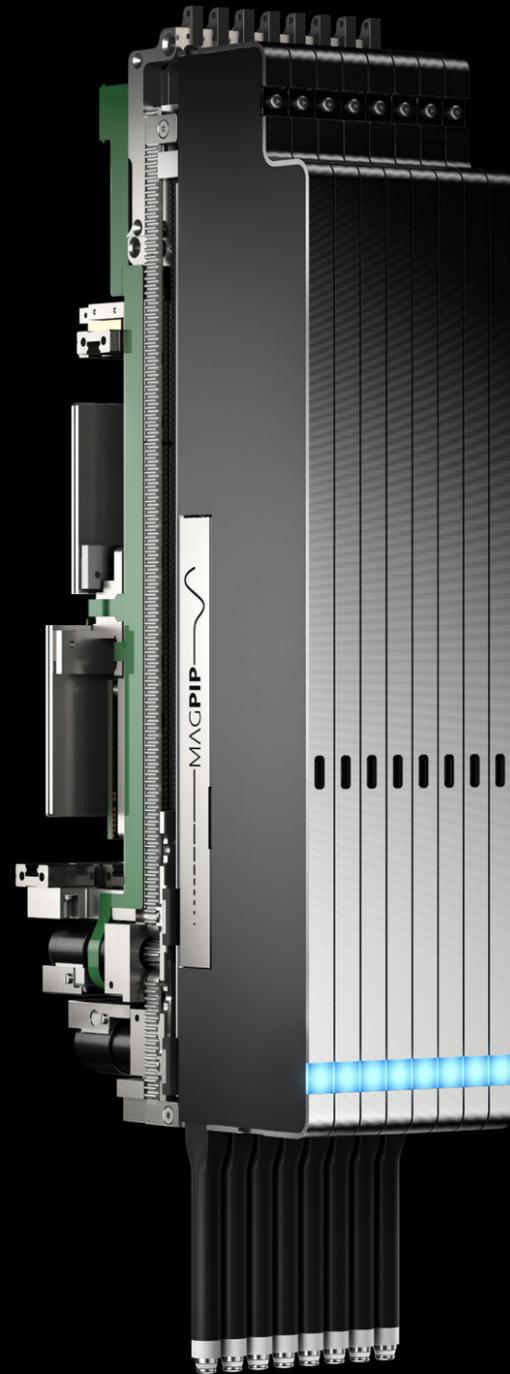
Wide Range of Applications

The new volume range opens up new possibilities for applications. Dilution series can be prepared at an unprecedented speed, and reactions can be made with even the smallest volumes. This drastically expands the application portfolio of the Microlab® VANTAGE.

The Three Dimensions of **PRECISION**

Precision of Technology

Due to our newly developed electronics for liquid level detection, even the smallest volumes can now be detected. Only a few microliters in a PCR plate are required for detection, and thanks to the new pipetting mechanism, even very small volumes can be processed. In the course of this revolutionary design, we have also optimized all our other technologies such as TADM™ (Total Aspiration & Dispense Monitoring) and LLD (Liquid Level Detection), and brought them up to the latest state of the art.



Precision in Processing

The new tip coupling mechanism allows for the precise positioning of disposable pipetting tips for even more accurate positioning and pipetting. Steel balls are pressed into the groove of the CO-RE® tip within milliseconds in order to secure the tip to the channel. A seal, specially developed for the MagPip, seals the tip and guarantees perfect conditions for precise pipetting.

Precision in Pipetting

The MagPip pipettes extremely accurately. An unprecedented way of moving liquids makes it possible to dispense even the smallest volumes with high accuracy. Enhanced pressure control makes it possible to accurately dispense both single-dispensing and aliquots, regardless of the disposable tip size.



Safe INVESTMENT

Extraordinary Service & Support

Our worldwide service organization is committed to providing the best quality service and support in the industry. We offer highly qualified support from local service engineers. Trained by certified Hamilton trainers, these engineers are supported by both our local service headquarters and distribution partners.

Our commitment to high quality standards goes beyond ISO 9001 certification, and includes continuous training of all authorized service technicians. With us as your automation partner, you can always rely on excellent service and support.

Support which goes the extra mile

Always there when you need us

Our global field service and support network – from the technical support hotline to local service engineers and application specialists – guarantees fast response times to your inquiries, in order to minimize downtime. Whether routine maintenance, service, or application support, we ensure that you can work as efficiently as possible.

Practice makes perfect

Hamilton training courses can follow an established generic structure suitable for a variety of users, or courses can be tailor-made to meet specific needs. Combining theoretical knowledge with practical applications, our courses provide comprehensive understanding of the content for the student. Training courses take place at our headquarters, in your local subsidiary, or on-site at your facility when needed.

The highest quality level and the best service

Quality from a single source

We guarantee the highest standards of quality, reliability and precision for all our products; from our own production and state of the art quality control systems to final inspection.

System installation made to measure

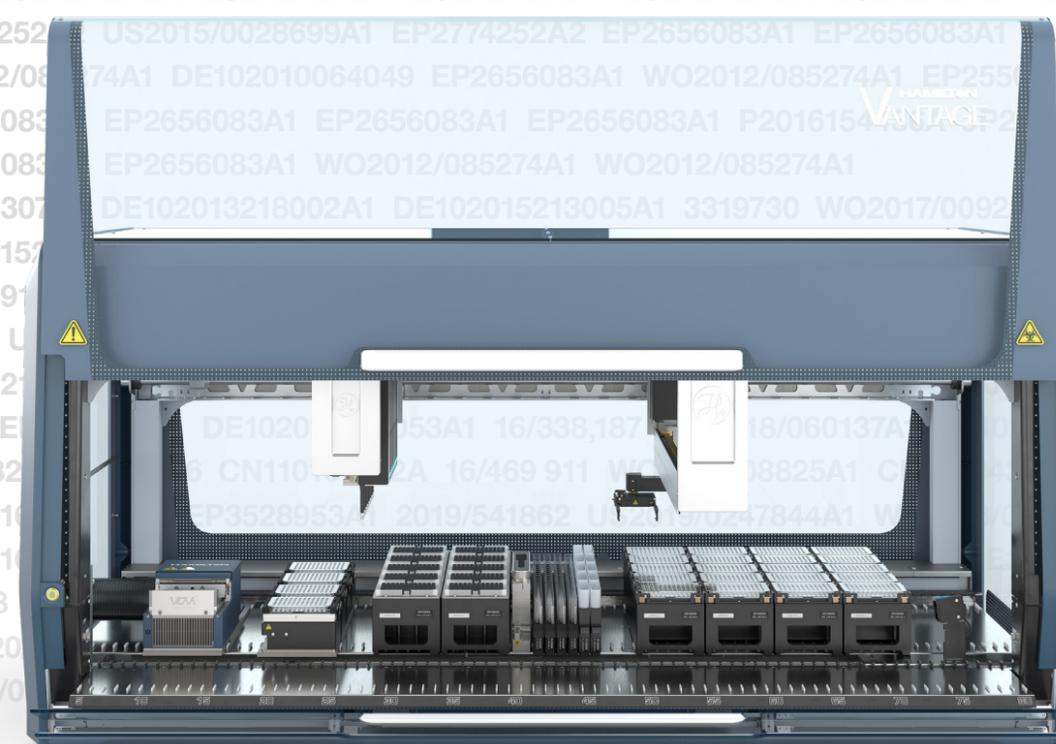
All Hamilton systems are installed following strict procedures and in accordance with ISO 9001. Each installation includes a comprehensive Installation Qualification (IQ) and detailed documentation.

Service as individual as you are

Ensure the longevity and peak performance of your automated system with a Hamilton service contract, including regular monitoring and preventative maintenance. There are three individual service and support contract levels to choose from.

Specifications

A total of 62 patents impressively demonstrate the uniqueness and innovation of the MagPip. Publication Number WO2018103813A1 DE102013104782A1 EP2994722A1 US20160102998A1 WO2014180614A1 DE102017115796A1 WO2019011698A1 DE102011085636A1 DE102013105495A1 WO2013064614A2 CN104094507A EP2774252A2 EP2774252A2 EP2774252A2 EP2774252A2 EP2774252A2 EP2774252A2 EP2774252A2 EP2774252A2 EP2656083A1 EP2656083A1 WO2012/085274A1 DE102010064049 EP2656083A1 WO2012/085274A1 EP2551150 EP2656083A1 EP2656083A1 EP2656083A1 EP2656083A1 P2016154300 EP2656083A1 EP2656083A1 WO2012/085274A1 WO2012/085274A1 EP2848307 DE102013218002A1 DE102015213005A1 3319730 WO2017/009211 DE102015213005A1 EP3349911 WO2017/009211 501895 U WO2017/009211 EP348221 WO2017/009211 K 2019-517411 E WO2017/009211 225209A1 2019-532 WO2017/009211 A DE102016133533A1 2019/541862 I WO2017/009211 3A1 DE102016133533A1 7201114A1 3573758 WO2017/009211 497A1 WO/2020/009211 PCT/EP2019/009211 750658.3



Microlab® VANTAGE
Liquid Handling System

MagPip Channel

Tip Type	Liquid	Volume	Accuracy – R (%)	Precision – CV (%)
1000 µL	HVS	750 µL	1	0.75
1000 µL	HVS	100 µL	1.25	1.75
300 µL	HVS	300 µL	1	1.75
300 µL	HVS	100 µL	1.25	1.75
300 µL	HVS	1 µL	3	3.75
50 µL	HVS	50 µL	2	0.75
50 µL	HVS	10 µL	1	1
50 µL	HVS	5 µL	2	1.75
50 µL	HVS	0.5 µL	5	5
10 µL	HVS	10 µL	1	1
10 µL	HVS	5 µL	2	1.75
10 µL	HVS	1 µL	3	3.75

Measured gravimetrically under optimized conditions using Hamilton Verification Solution.



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