

ALPAQUA[®] MAGNUM FLX[®]

Enhanced Universal Magnet Plate with PAQLOC[®]
featuring Solid-Core[™] Technology

This Technical Data Sheet provides product information for the ALPAQUA[®] MAGNUM FLX[®] Enhanced Universal Magnet Plate, product number A000400.

ALPAQUA[®]

Accelerating Genomic Discovery[®]

Precautions



This magnet plate contains extremely strong neodymium magnets. Individuals with pacemakers, implantable cardioverter-defibrillators (ICD), insulin pumps, or similar devices should avoid contact with this product. Studies have shown the potential for interference between strong neodymium magnets and medical devices (<http://www.ncbi.nlm.nih.gov/pubmed/17198980>, full text: <http://cdn4.vol.at/2007/03/Magnet-Studie.pdf>).



See page 5 for magnetic field information.

Pinch Hazard. Never allow the magnets to come into contact with other magnetic plates, magnets, or metal objects. The resulting strong and rapid attraction may cause personal injury and/or damage to the magnet.

Product Description

The ALPAQUA® MAGNUM FLX® Enhanced Universal Magnet Plate with patented Solid-Core™ Ring Magnets is designed for rapid and efficient magnetic particle separations from a wide range of sample volumes, viscosities, and labware types. It will reliably separate magnetic particles from liquid columns up to 40 mm in height and can be used for elution volumes as low as 10 µl*. The unique universal adapter brackets ensure compatibility with many commonly used 96 well microplates including Flat-Bottom, Round-Bottom, V-Bottom, Deep-Well, and PCR plates (full, semi, or non-skirted). The SBS footprint and elevated base of the Magnum FLX plate also ensures compatibility with virtually all automated liquid handling decks, including those with deep plate nests up to 20 mm in depth.

Product Applications and Use

The ALPAQUA® MAGNUM FLX® Enhanced Universal Magnet Plate is compatible with all molecular biology, cell biology, proteomics and other workflows requiring highly efficient and rapid separation of magnetic particles from solutions in a 96 well SBS compliant footprint.

Do not use microplates that become warped after heating (i.e. thermocycling). The use of warped microplates may result in magnetic particle loss or carryover.

*Some microplate types may require larger elution volumes. To achieve efficient recoveries the magnetic bead ring must be completely covered by elution buffer

Product Maintenance

Cleaning

Cleaning of the ALPAQUA® MAGNUM FLX® Enhanced Universal Magnet Plate before and after each use is recommended to ensure that the plate is clear of any residual solutions or buffers that may contain salts or other corrosive agents. Buildup of these agents may over time result in damage to the plate components and interfere with proper seating of labware onto the magnets. Small amounts of surface debris can be cleaned by lightly wiping with 70% ethanol and drying with a towel or, if available, compressed air can be used to remove liquid from the magnets and springs. If larger salt deposits are found within the ring magnets a Q-tip dampened with ethanol may be used to gently remove bound material. Always thoroughly dry all surfaces including the spring cushion mechanism after cleaning.

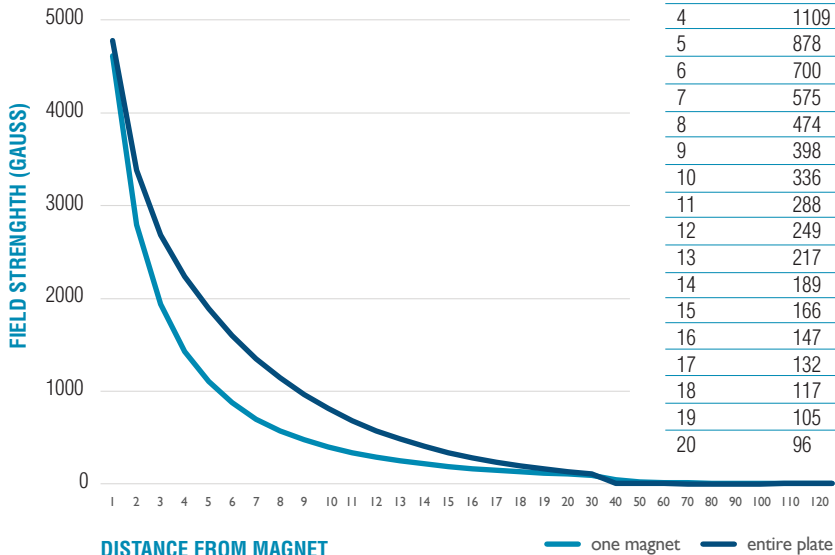
Decontamination

If Alpaqua magnet plates are used in protocols where biohazard contamination has occurred, special care must be taken during decontamination steps to avoid damage to both the magnets and the carrier plate. Cleaning solvents specifically designed for medical devices, such as CIDEX (<http://www.aspij.com/emea/emea/products/manual-solutions/cidex>) or other ortho-Phthalaldehyde based solutions, are the ONLY biohazard decontamination solutions to be used on Alpaqua products. Follow the manufacturer's instructions for product dilution and application time and rinsing. Following biohazard decontamination, a standard 70% ethanol cleaning (above) is required.

Alternatively, the magnet plate can be submerged in 100% isopropanol for up to 30 minutes and subsequently blown dry. Do not exceed 30 minutes as the alcohol will affect the blue base.

Important Note: DO NOT decontaminate or disinfect the magnetic plate with any solution containing bleach or any type of organic oxidizer. Doing so will severely damage the magnets and carrier pieces resulting in irreparable damage and possible device failure. Treatment of Alpaqua magnet plates with non-recommended disinfectants will void all warranties.

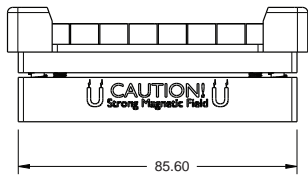
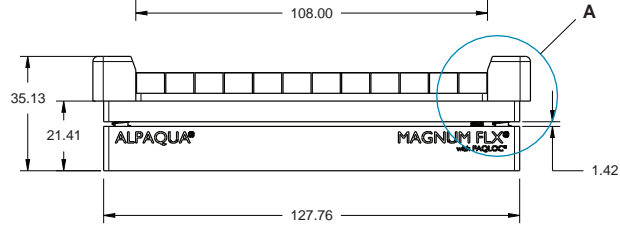
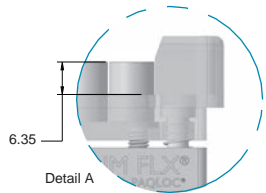
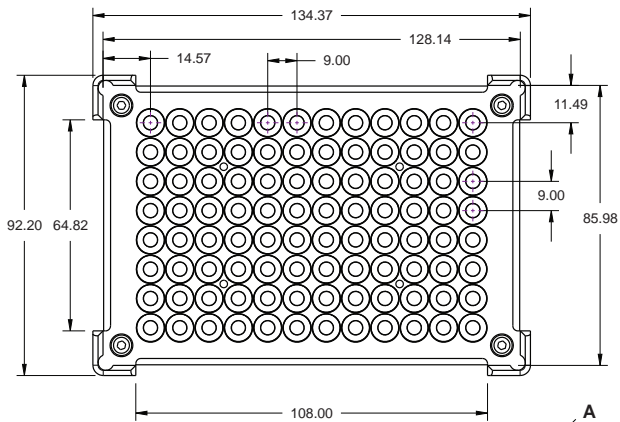
Magnetic Field Information



Warranty / Liability

For research use only. Not for use in diagnostic procedures.

Alpaqua Engineering, LLC is committed to delivering superior product quality and performance. Warranty information for the accompanying product is available at <http://www.alpaqua.com/terms-and-conditions> in "8. LIMITED WARRANTY". Please contact Alpaqua if you have any questions about our warranties or would like information about post-warranty support. The information in this document is subject to change without notice. Alpaqua assumes no responsibility for any errors that may appear in this document and disclaims all warranties with respect to this document, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. In no event shall Alpaqua be liable, whether in contract, tort, warranty, or under any statute or on any other basis for special, incidental, indirect, punitive, multiple or consequential damages in connection with or arising from this document, including but not limited to the use thereof.



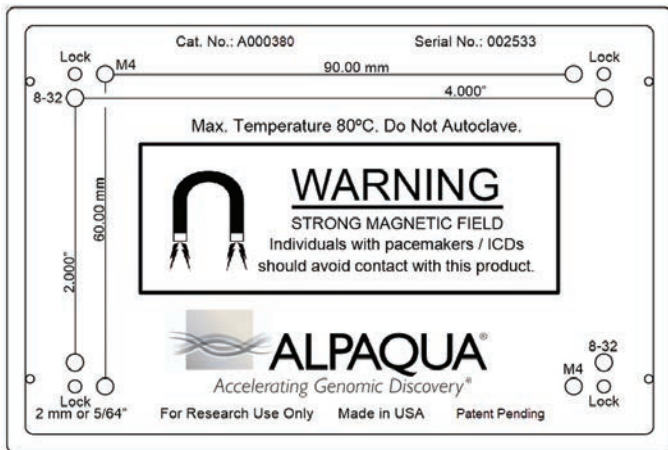
Alpaqua's New PAQLOC® Spring Lock Feature

What Does It Do, How Does It Work?

Alpaqua Magnet Plates have long been known for their unique, innovative features. One of those was Alpaqua's patented Spring Cushion Technology, which is highly appreciated by automated users for compensating the various positioning inaccuracies that can make it difficult for liquid handlers to precisely find the bottom of a well without overshooting or stopping short. At the same time, some users who work with manual pipettes sometimes prefer the rigidity of a springless magnet plate. While springless magnet plates have always been available upon request, once the decision was made to go one way or the other it could not easily be reversed in the field.

The PAQLOC Spring Lock changes this.

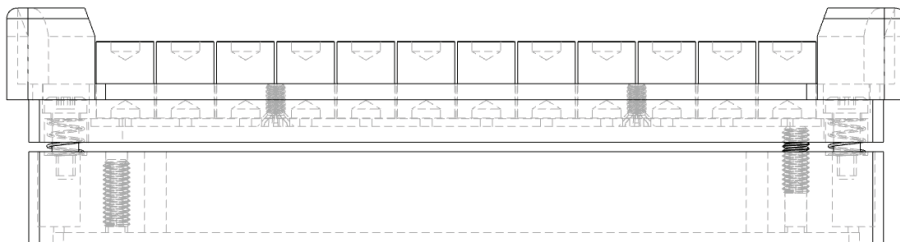
With patent-pending PAQLOC Spring Locks, in just a few seconds the spring cushion feature of a magnet plate can be enabled or disabled, as needed. All it takes is to turn four screws on the bottom of the magnet plate. When PAQLOC is engaged, the magnet plate is fixed in the uncompressed (upper) position, and no changes to any robot settings are needed when switching between the two modes.



The picture on the previous page shows the bottom of a Magnum FLX[®] magnet plate. Each corner has a hole marked “Lock”. Insert a 2 mm (provided) or 5/64” Allen key into each hole and turn clockwise until the screw stops. This will lock the spring action. Likewise, turn each screw counterclockwise as far as it will go to unlock the springs.

Don't use force! Stop when the screw encounters resistance. The screws should just touch the underside of the magnet assembly without pushing it upward.

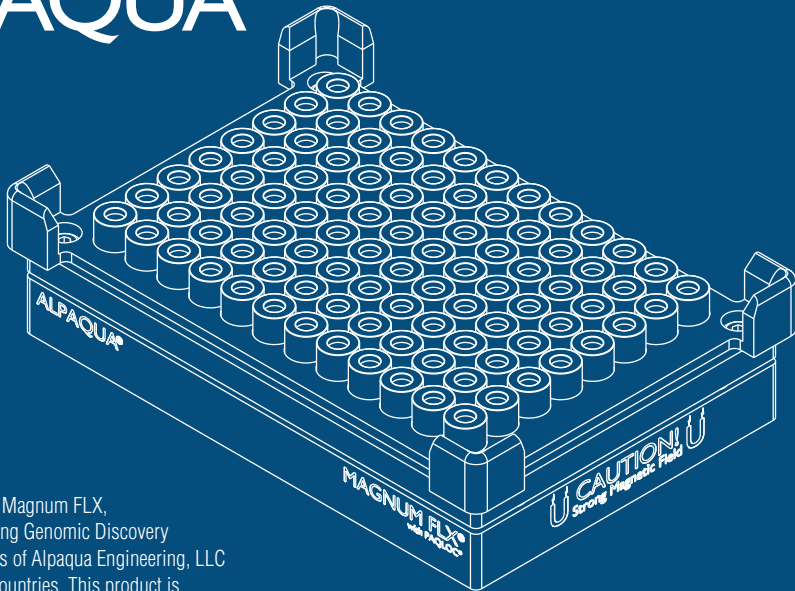
In addition, four threaded holes are provided with 8-32 threads and M4 threads, respectively. Those can be used to secure the magnet plate against a structure, like a robot deck.



PAQLOC is unlocked. Spring cushion is active.

PAQLOC is locked. No spring cushion.

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