

**INSTRUCTIONS FOR USING  
VP 710D3 *MultiStirrus* MAGNETIC TUMBLE STIRRER  
FOR STIRRING A SYRINGE ON A SYRINGE PUMP**

**\*US Patent # 6,176,609**



**Figure 1. VP 710D3 *MultiStirrus* Magnetic Tumble Stirrer shown with accessory kit VP 710D3-4 for stirring a syringe on a syringe pump (VP 710D3 and syringe pump not included in kit).**

### WARNING!!!!

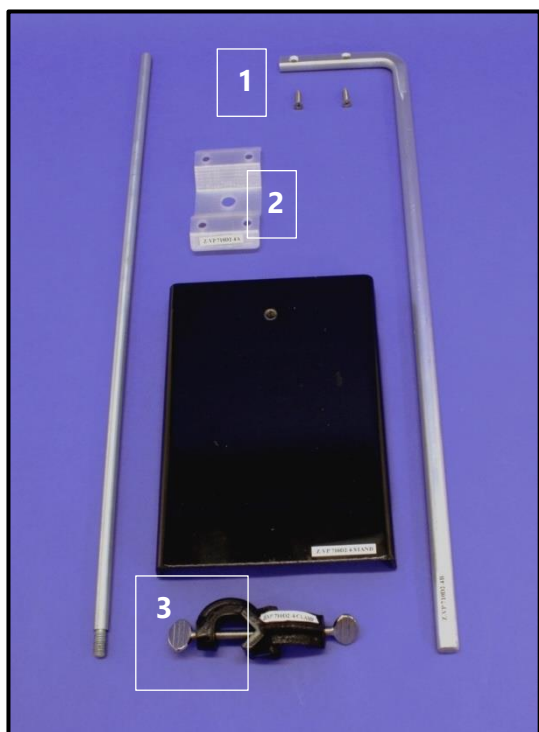
- Be advised that the Magnetic *MultiStirrus* has very strong magnetic fields coming from a very strong Neodymium Iron Boron drive magnet.
- **People with pacemakers should not get closer than 24 inches.**
- Remove all magnetic influenced tools and objects from the immediate area to prevent them from being pulled onto the magnet or from striking anyone as the objects are pulled towards the magnet.
- Keep credit cards, watches and other magnetic sensitive items at least 24 inches from the magnetic fields coming from the *MultiStirrus*.
- Do not operate the Magnetic *MultiStirrus* in the close proximity to thick pieces of aluminum or ferromagnetic material. For more information see INSTALLATION section of Technote #286.

### SET-UP

For instructions on basic set-up of the *MultiStirrus* please refer to Technote #286B for part number VP 710D3 and Technote #343 for part number VP 710D3.

The VP 710D3-4 accessory kit is used to position the VP 710D3 *MultiStirrus* for stirring in a container at a distance, such as in a syringe on a syringe pump. Some syringe pumps have a steel or stainless-steel enclosure to which the magnetic VP 710D3 is attracted. This interferes with the magnetic stirring in the syringe. Therefore, positioning the VP 710D3 above the syringes allows for more effective stirring by keeping the Magnetic Stirrer away from the pump.

**The VP 710D3-4 accessory kit is composed of the following parts:**



(1) VP 710D3-4B arm that attaches to VP 710D3 with 2 screws.

(2) VP 710D3-4A plastic syringe holder for KD Scientific Pump (Legato210) to replace the magnetic metal one that is supplied with the pump.

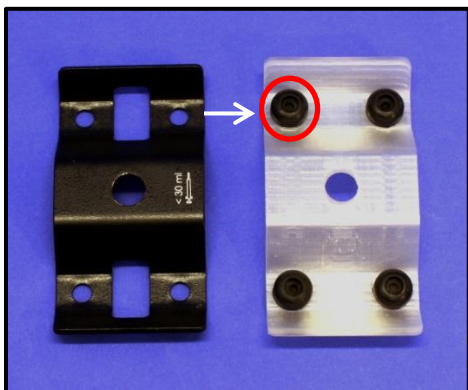
Please let us know if your pump has a metal syringe holder or clamp that is different from the one in the kit and we can make a plastic one for you.

(3) VP 710D3-4C Lab Support Stand and Clamp.

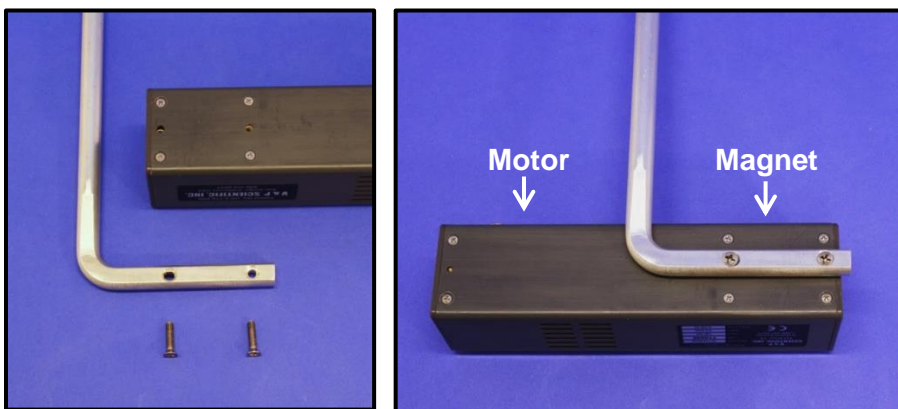
\*Parts of the VP 710D3-4 kit can be ordered separately\*

### Assembly Instructions for the VP 710D3-4 accessory kit:

Remove syringe holder from pump, transfer rubber grommets from metal holder to VP 710D3-4A plastic holder.



Attach VP 710D3-4B arm to VP 710D3 with the provided screws and a Phillips screwdriver.

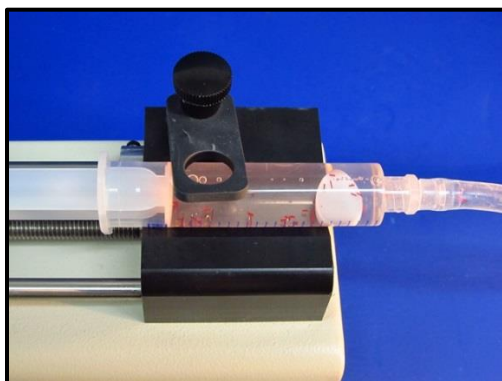


Secure 710D3-4B arm (with VP 710D3 attached) to VP 710D3-4C Lab Stand with Clamp as show in photo. Position VP 710D3 *MultiStirrus* over the syringe so that the magnet end is over the fluid in the syringe. Adjust position up or down until desired stirring is achieved.



## USE

For instructions on operation of the VP 710D3 *MultiStirrus* please refer to Technote #343A



We recommend using one of V&P Scientific's disc-shaped Magnetic Stir Elements for stirring in a syringe:

**PTFE Encapsulated Neodymium Discs** VP 772DP-N42-5-2, VP 772DP-N42-8-2, VP 772DP-N42-24-3

**PEEK Encapsulated Neodymium Discs** VP 772DK-N42-5-2, VP 772DK-N42-8-2

**PTFE Encapsulated Samarium Cobalt Discs** VP 779-5, VP 779-13

**Parylene Encapsulated Samarium Cobalt & Neodymium Discs** VP 782S series and VP 782N series

**PTFE Sandwich Style Discs with Neodymium** VP 772FN-5-5, VP 772FN-5-5A, VP 772FN-8-8, VP 772FN-13-13 and VP 772FN-24-24

For more information, please see these Magnetic Stir Elements on V&P Scientific's website: [vp-sci.com](http://vp-sci.com)

**Note:** If using the VP 710D3CE for the **Drop-Seq Protocol** (McCarroll Lab at Harvard) see <http://mccarrolllab.com/dropseq/> for protocol details.

## WARRANTY

V&P Scientific, Inc. warrants this product to be free from defects in material and workmanship when used under normal laboratory conditions for one year. This warranty begins from the date of delivery by V&P Scientific.

In the event this product fails under normal laboratory conditions within the specified period of time because of a defect in material or workmanship, V&P Scientific will, at its option, repair or replace the product. Damage to the product caused by user negligence is not covered.

Please keep the special shipping carton in case the unit needs to be shipped back to V&P Scientific. Please contact V&P Scientific at the address below for return authorization and shipping instructions. This warranty is made in lieu of other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose. V&P Scientific shall not be liable for loss or damages arising from the use of these products nor for consequential damages of any kind.

If assistance is required, please contact V&P Scientific, Inc. at 858-455-0643 or [sales@vp-sci.com](mailto:sales@vp-sci.com).