

### **Vial holder – functional description**

This item consists of 8 separate parts that are assembled to form a complete unit. There is no contact between any part of the unit and the vial contents. Nor should it contact the syringe needles if correctly used. (See the attached diagram).

Part#001 – Outer body. Consists of a platform with a recess to locate a vial and the outer body that holds all the remaining parts in place. The maximum size of vial that can be used is 32mm. Smaller vials can be used with the addition of the vial pad (Part #007) which fits into the main body and is designed to ensure that the vial is centered down the axis of the holder.

Part #002 – Slider. This locates in the main body and is retained in place by protrusions on the body that fit into recesses in the slider. The slider has a longitudinal recess that locates the syringe. The maximum size of syringe that can be used is 3 ml. This is controlled by the size of the recess. With the addition of a reducer sleeve (Part #008) the size of syringe may be reduced.

Parts #003 to #006 – Spacers. These are used in combination to adjust the distance from the outer end of the slider to the cap of the vial being used. In this way the length of needle protruding from the final spacer can be controlled. The ideal is that the needle protrudes far enough only to pierce through the vial cap making removal of the entire contents of the vial simpler.

Part #007 – Vial pad. This item fits inside the main body. Its purpose is to make the center line of the vial line up exactly with the axis of the holder. The thickness of this item controls the exact position of the vial and can be changed by design without affecting the function of the holder.

Part #008 – Reducer sleeve. This reduces the size of the syringe recess to accommodate 1 ml syringe. The internal dimension of this can be changed by design.

### **How to use this item**

This is intended to be held in the hand with the vial at the upper end during normal use.

#### **Section 1 Basic description**

1. Ensure that all the parts of the unit are present (see the attached diagram) These are:-
  - a. Outer body - #001
  - b. Syringe holder section - #002
  - c. Spacer parts 3mm #003, 6mm #004, 12mm #005, 18 mm #006
  - d. Vial pad – #007
  - e. Reducer sleeve - #008
2. Check that the vial fits into the vial pad. The pad provided is for a standard vial of the type used for a 22mm vial. The device can be used without the pad if necessary.
3. Insert the vial pad into the outer body and slide to the blank end. This is intentionally a tight fit.
4. Take a syringe/needle combination of the type intended to be used for the reconstitution/ dispensing /injections of the vaccine.
5. Slide the assembled syringe into the holder until the finger wings rest on the end of the holder.
6. Remove the needle cover from the syringe and from the side place it into the slot in the syringe holder section.
- The following steps (7 through 11) to determine the size of the spacer block need to be done only once assuming the same syringe needle combination is used for all injections.*
7. Carefully select which of the spacers will give about 1/4” of needle exposure when placed in contact with the holder. This can be done by inserting the spacer into the outer body of the main assembly from the end. It is retained by the edges of the body.
8. Slide the syringe holder into the body until the spacer contacts the vial pad. At this point the length of the needle protruding from the spacer can be judged. The intention is to have 3/16” to 1/4” of the needle tip exposed. The length of the spacer or a combination of the spacers can be used to get the correct needle tip exposure.
9. Check that the needle is located along the center line of the holder unit. This is to ensure that the needle goes through the center of the vial stopper which is the thinnest part.
10. Slide the syringe holder combination away from the end of the body section until the outer end of the slider is flush with the end of the body.
11. Slide the syringe back in the holder until the needle tip is about 1/2” inside the syringe holder recess.
12. Drop the needle cover into the syringe recess.
13. Slide the syringe forward carefully until the needle is inside the cover.
14. Remove the syringe from the recess and ensure that the needle cover is correctly fitted. Assuming that aseptic precautions have been observed this syringe may be used to reconstitute the vaccine.
15. Remove the crimp from a vial of vaccine and place the vial onto the vial pad.
16. Slide the syringe holder slider section in until the vial is held in place by the spacer block.
17. The holder is now ready for use.



