

## Specifications

### HOURS OF CONTINUOUS RUNNING TIME:

BATTERY TYPE:	HOURS:
9.6 VOLT NiMH	3 to 4
9 VOLT ALKALINE	12 to 15
9 VOLT CARBON	4 to 5
9 VOLT LITHIUM	36 to 40

### VACUUM:

Minimum of 15 to 20 inches of mercury depending on elevation and atmospheric pressure.

### DIMENSIONS:

LENGTH	HEIGHT	WIDTH
7.3" (185mm)	1.1" (28mm)	.8" (20mm)

Add .62 (15.23mm) to the length when using the rechargeable battery pack.

### WEIGHT:

WITH BATTERY: 6.03 ounces (171 grams)

技术咨询与报价  
电话: 18823303057 QQ:2104028976

### PORTA-VAC™ OPTIONS:

#### INSTAND CHARGER AND BATTERY PACK

The Instand NiMH battery charger is designed to charge the battery while the PORTA-VAC™ tool is in the stand.

#### POLYPROPYLENE STAND

Smart looking stand holds the PORTA-VAC™ tool at a convenient 45° angle to protect vacuum attachments and for overall ease of use.

#### RECHARGEABLE BATTERY AND EXTERNAL CHARGER

Allows recharging of 9.6 volt NiMH batteries outside of the PORTA-VAC™ tool.

#### SELECTION OF VACUUM CUPS AND PROBES

The vacuum cups are a soft rubber material that allow handling a wide variety of small parts.

#### SELECTION OF MINIATURE VACUUM TIPS

These tips are designed to handle tiny parts as small as 0.02" (0.5mm).

#### SELECTION OF MOLDED PEEK WAFER TIPS

Tips are molded from the industry accepted carbon filled PEEK to provide chemical resistance as well as ESD safe properties.

#### VARIETY OF FLAT VACUUM HANDLING ATTACHMENTS

These attachments are perfect for handling silicon wafers, flat glass items or any other sensitive flat substrates.

### Virtual Industries, Inc.

2130 Victor Place  
Colorado Springs, CO 80915  
U.S.A.

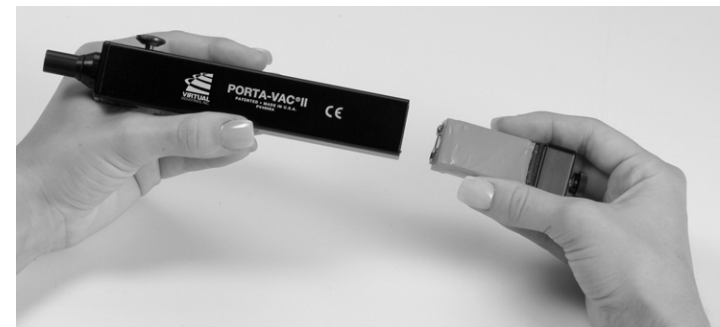
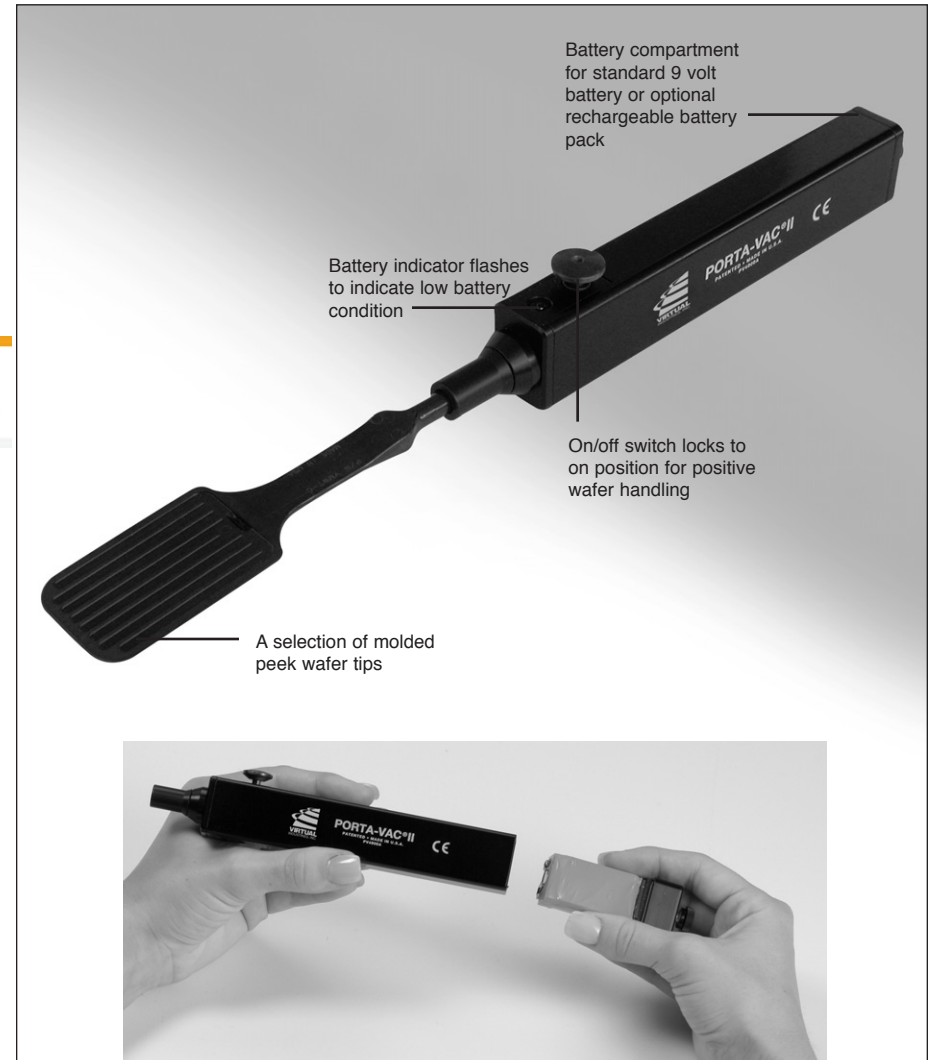
For technical assistance call toll free 1-800-590-2829  
Tele: 719-572-5566  
Fax: 719-572-5504  
8:00 A.M. to 4:30 P.M. Mountain Standard Time



## OPERATING INSTRUCTIONS, SPECIFICATIONS AND PRODUCT WARRANTY

### PORTA-VAC II™ Patented Vacuum Handling Tool

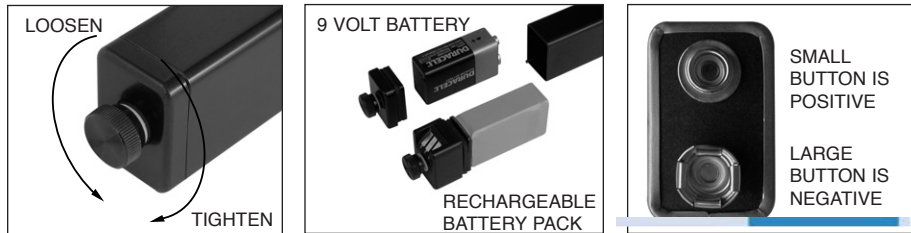
Model No. PV4000A



## Battery Replacement

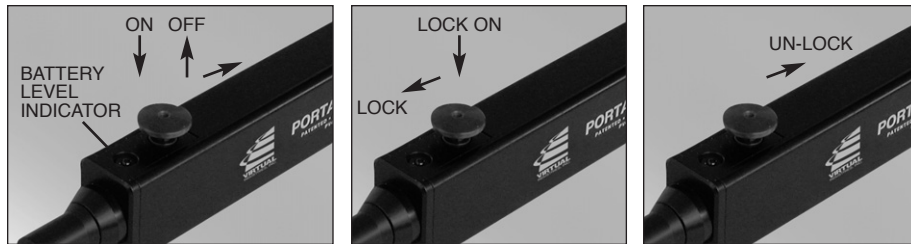
To remove the rear cap or the rechargeable battery pack turn the screw on the rear of the unit ONE turn counterclockwise. The rear cap or battery pack can now be removed with ease. When installing a battery or the rechargeable battery pack always check the polarity. The positive terminal shall be installed towards the top of the tool. To secure the rear compartment turn the screw on the rear of the battery compartment clockwise until it is tight.

NOTE: Rechargeable battery packs and batteries must be charged up before use.



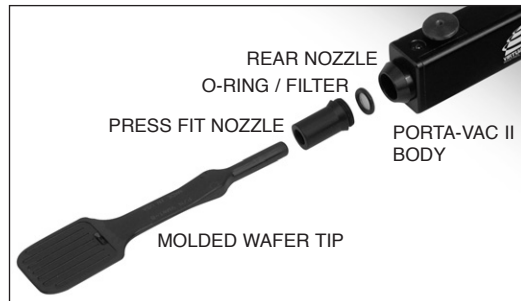
## Operation of the PORTA-VAC™

To operate the PORTA-VAC™ simply depress the button down to turn the unit on and release the button to turn it off. Slight pressure on the button toward the rear may be necessary to prevent the button from locking. The battery level indicator light blinks on and off when battery recharge or replacement is necessary. See battery selection procedure that follows to set the PORTA-VAC™ for the battery that you are using. To lock the PORTA-VAC™ to the on position press the button down and forward. Relax pressure on the button. The PORTA-VAC™ should remain on and running. To turn the PORTA-VAC™ off when it is in the locked position simply apply pressure to the button towards the rear of the tool and the button will release. The PORTA-VAC™ will now be off and the part released.



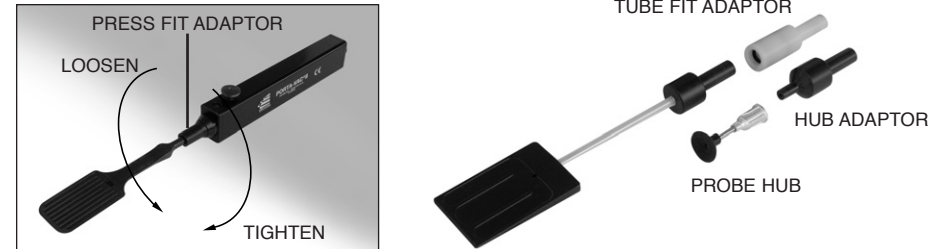
## Filter Replacement

To replace the air filter, disassemble the unit as shown and reassemble with a new filter. Under normal clean room conditions the inlet filter should be replaced annually, more often in dustier areas.



## Changing Handling Attachments

To replace a wafer tip pull it out of the press fit adaptor and insert the replacement tip into the adaptor. To use the PORTA-VAC™ with vacuum cups, remove the press fit adaptor and replace it with the hub adaptor. To use the PORTA-VAC™ with machined wafer tips having a .094" connector tube remove the press fit and replace it with the tube adaptor (and the inside collet).



## On/Off Switch Sensitivity Adjustment

If adjustment of the on/off switch is needed (the unit will not shut off or the unit will not hold a part) use the 0.050" hex wrench to adjust the screw inside of the control button. Hold the button from turning when making this adjustment. Clockwise adjustment turns the unit on earlier when the button is pushed while counterclockwise adjustment has the opposite effect.



## Setting The Battery Low Warning for Your Battery

The battery selection switch is located on the bottom of the PORTA-VAC™. To set the PORTA-VAC™ battery low indicator for use with alkaline, carbon or lithium batteries; rotate the battery selector switch fully clockwise. To set the PORTA-VAC™ battery low indicator for use with a nickel metal hydride battery rotate the battery selector switch fully counter-clockwise.

CAUTION:  
DO NOT USE EXCESSIVE FORCE WHEN ROTATING THE SWITCH

FACTORY SETTING IS FOR STANDARD 9 VOLT BATTERY

