

PORTA-WAND™ ELITE

Product No. 52910, 52911, 52913, 52914

DESCRIPTION:

The Porta-Wand™ Elite vacuum pick-up tool features a replaceable 9.6 NiMH rechargeable battery, in-stand charger and hose-free operation. This self-contained continuous vacuum system can lift over 500 grams including wafers up to 12", disk media and other items with flat, hard surfaces. Its exhaust meets Class 1 Cleanroom standards.



Figure 1: Porta-Wand™ Elite

APPLICATION:

- To operate the Porta-Wand™ Elite, press the button to turn the unit ON and release to turn it OFF (refer to *Figure 2a*).
- Slight pressure on the button toward the rear may be necessary to prevent the button from locking.
- The vacuum/battery level indicator light does not illuminate until a SAFE vacuum is established between the wafer tip and the wafer being handled. The same indicator blinks on and off when battery recharge or replacement is necessary (refer to *Figure 2a*).
- To lock the Porta-Wand™ Elite to the “ON” position, press the button down and push forward, then release pressure on the button (refer to *Figure 2b*).
- To unlock and turn OFF Porta-Wand™ Elite, simply apply pressure to the button and push towards the rear of the tool (refer to *Figure 2c*).



Figure 2a: ON and OFF Controls



Figure 2b: Lock ON Controls



Figure 2c: Unlocking Controls

FILTER REPLACEMENT:

- To replace the air filter, disassemble the unit as shown (*Figure 3*) and reassemble with a new filter. Under normal clean room conditions, the inlet filter should be replaced annually, more often in dustier areas.
- The 0.1 micron internal exhaust filter is located in the battery pack. When you install a new battery, you are automatically replacing the rear exhaust filter.

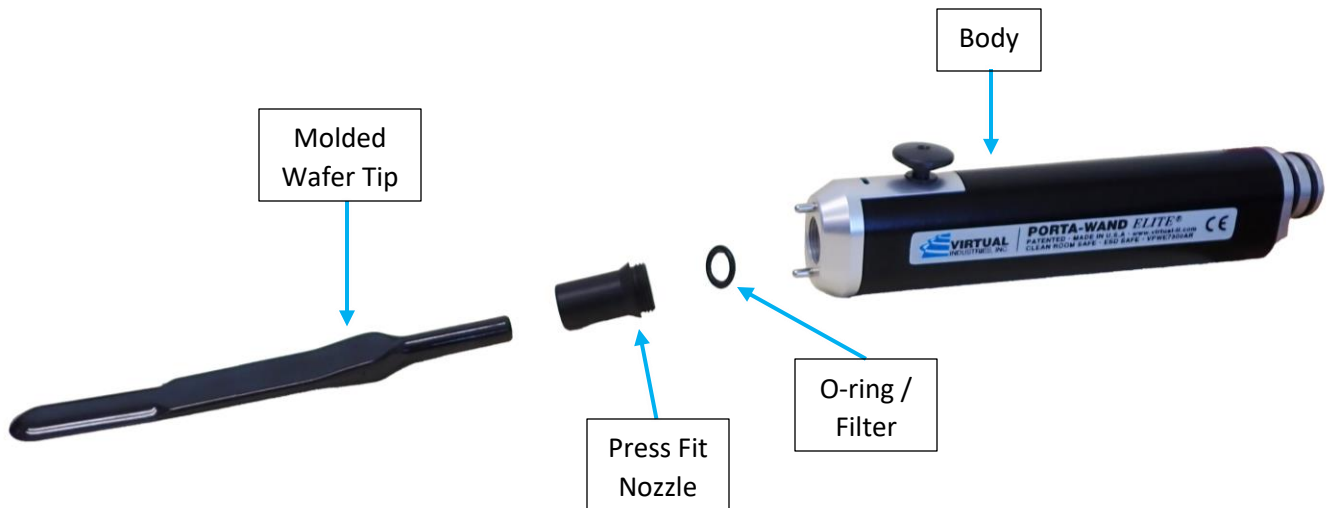


Figure 3: Disassembling Unit to Replace Filter

CHARGING THE PORTA-WAND™ ELITE:

- Plug the transformer into an outlet and the power connector into the jack on the side of the charger stand.
- The red INPUT POWER indicator will light and stay on as long as input power is connected.
- Insert the Porta-Wand™ Elite into the charger stand. The charging stand detects the presence of a battery which lights up both the green BATTERY CHARGING LED and the green BATTERY CHARGED LED.
- After a moment, the BATTERY CHARGED LED will turn off and the BATTERY CHARGING LED will stay on. This means the charging has commenced. If the battery pack was completely drained before charging, then the BATTERY CHARGING LED will stay on for up to 120 minutes.
- For partially charged battery: the BATTERY CHARGING LED will stay on for a shorter period of time depending on the charge level at the time the tool was inserted into the charging stand—overcharging will not occur.
- The charger will deliver periodic maintenance charge pulses to compensate for the self-discharge characteristics of the battery.



Figure 4: Charging the Porta-Wand™ Elite

ERROR CONDITIONS:

- If the indicator lights do not turn on when the tool is inserted in the stand, then the battery is either open or short-circuited.
- Check to make sure that the contacts on the bottom of the tool are clean. If the problem continues, replace the battery.
- If both the green BATTERY CHARGING LED and the BATTERY CHARGED LED light up and stay on, then the battery charge level is too low to begin charging. The charger will attempt to raise the charge slowly before beginning a fast charge. If the problem continues, replace the battery.
- If the red power LED is not on, check the power supply connections at both ends.

REPLACEMENT FILTERS:

Set of five replacement 40 micron inlet filters:

- Part number **52920**

ON / OFF SWITCH SENSITIVITY ADJUSTMENT:

- If the on/off switch needs to be adjusted (the unit does not shut off or the unit does not hold a part), use a 0.050” hex wrench to adjust the screw inside of the control button.
- Hold the button firmly when making adjustment. Turning clockwise increases the sensitivity when the button is pushed, while counterclockwise has the opposite effect.

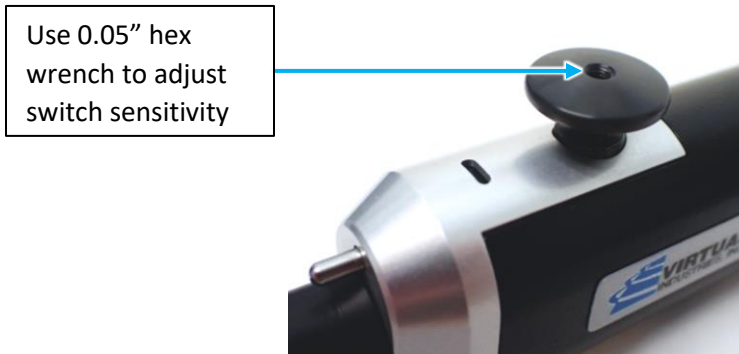


Figure 5: Switch Sensitivity Adjustment

SPECIFICATIONS:

BATTERY FACTS	DETAILS
Battery Type	9.6 Volt NiMH
Battery Charge Time	120 Minutes for a Full Charge
Continuous Run Time	2 to 3 Hours
Number of Complete Charges	Up to 1000
Battery Replacement	Factory Replaceable (Product Number: 52915)

DIMENSIONS:	Wand	Stand
Length	9" (228mm)	4.5" (114mm)
Height	1.2" (30mm)	2" (51mm)
Width	0.85" (21mm)	3.5" (98mm)

WEIGHT		
Porta-Wand™	Charger Stand	Transformer
6.4 Ounces (181 grams)	9 Ounces (257 grams)	12 Ounces (362 grams)

- **VACUUM:**

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

- **OPERATING TEMPERATURE RANGE:**

50°F to 113°F (10°C to 45°C)

- **RECHARGER POWER REQUIREMENTS:**

Wall plug-in power supply 24 VDC @ 500ma.

BARREL JACK SIZE 5.5mm OD X 2.1mm ID. Center Pin Positive

- **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.

- Part numbers **52920-4, 52920-6, 52920-8, and 52920-12**

- **SELECTION OF ALUMINUM PTFE COATED WAFER TIPS**

Tips are machined from aluminum and coated with PTFE.

- Part numbers **52920-14, 52920-16, and 52920-18**