

Frequently Asked Questions on American Beauty® Thermal Wire Stripper

Q. What is Thermal Wirestripping?

A. The process of using heat to melt through the insulation on a wire to facilitate its removal.

Q. How do your American Beauty® thermal wirestripping systems work?

A. The elements in the thermal wirestripping handpiece are heated by the same principles as the electrodes used for resistance soldering. By passing a safe, low voltage, high amperage current through a resistive material we are able to generate heat that can be controlled. The heat that is being generated can then be efficiently used to melt through the insulation of the wire being stripped.

Q. Can thermal wirestripping be used on high temperature insulations?

A. Yes. As long as the insulation is not flame retardant or self-extinguishing you should have no trouble stripping it using our thermal wirestripping systems.

Q. Why is thermal wirestripping often recommended or required by certain organizations, including the military?

A. In some circumstances a conductor may become nicked, or crimped when mechanical stripping devices are used. This can result in unwanted resistance in the conductor, causing it to over heat during use. When stripping wires thermally the possibility of nicking the conductors with a sharp blade is eliminated.

Q. Can the same power unit be used for resistance soldering and thermal wirestripping?

A. Absolutely! The same power unit can be used to operate an assortment of different American Beauty® handpieces for both thermal wirestripping and resistance soldering.

Q. Are there any precautions that I should take before thermal wirestripping?

A. Some insulation materials emit harmful vapors when they are exposed to high temperatures. It is always a good idea to work in a **properly ventilated area** and to check the wire manufacturers MSDS to know what types of gases or vapors may be emitted when the insulation material on the wire is heated.

Q. What is a 50% duty cycle?

A. When ever you are operating an American Beauty power unit at 50% of its available output, or higher, you will need to cycle the unit so that the idle time is equal to, or greater than the active time. For example, if your power unit is set to 50% and it

takes ten seconds to solder a joint, you will need ten seconds or more of idle time before soldering the next joint. This is to ensure the power unit is not over taxed and to help keep the handpiece from over heating. You should periodically check the handpiece and cabling for any excess accumulation of heat.

You should never run the unit continuously on any setting for more than 20 seconds.

Q. Are there size limitations to thermal wirestripping?

A. No. If you need to strip a wire that is larger than our Model 105131 or Model 10517 will accommodate, you can use our V-Notch Style Handpieces. If the wire you need to strip does not fit into the V-Notch the element can be opened slightly, or it can be used as a hot blade to melt through the insulation around the circumference of even the largest diameter wires.

Q. How do I test the voltage output from my resistance soldering power unit?

A. You can do this quite easily, using your always handy, multi-meter, with the function dial set to read AC voltage.

Disconnect the handpiece from the power unit, to allow access to the output receptacles or bolts.

Make sure the power unit is plugged into the footswitch and the footswitch is plugged into an active AC power outlet. ***Do not actuate the footswitch just yet!***

Turn the power unit on and turn the voltage control knob to the maximum setting.

Place the multi-meter test probes into the output receptacles or onto the output bolts on the front of the power unit. With AC voltage there is no positive, or negative current to be concerned about.

Actuate the footswitch and check the reading on the multi-meter to verify the power unit's output.

Adjust the voltage control knob to confirm power unit's ability to control voltage.

Q. How do I test the voltage output from my resistance soldering handpiece? 

A. You can do this quite easily, using your always handy, multi-meter, with the function dial set to read AC voltage.

Ensure that the handpiece is properly connected to the American Beauty® power unit. If your handpiece connects to the power unit via taper pins, make sure that each pin is fully seated into the receptacle by turning them in a clockwise direction while applying pressure.

Make sure the power unit is plugged into the footswitch and the footswitch is plugged into an active AC power outlet. ***Do not actuate the footswitch just yet!***

Turn the power unit on and turn the voltage control knob to the maximum setting.

Place the multi-meter test probes onto the adapter portions of the handpiece. (Portion of the handpiece that holds the electrodes or elements. With AC voltage there is no positive or negative current to be concerned about. Actuate the footswitch and check the reading on the multi-meter to verify the handpiece's output.