

TMI-SONICUT-2™ ULTRASONIC TRIM KNIFE (UTK)

The SONICUT-2™ ULTRASONIC TRIM KNIFE (UTK) is a hand held, portable instrument designed for cutting, and trimming of prepregs and other hard to cut composite materials.

The SONICUT-2™ systems cut prepregs faster, more efficiently and with less fiber damage than conventional cutting methods, and are more cost effective through greater productivity and reduced material waste. Ultrasonic energy is triggered providing operators with control over cutting pressure and the duration of ultrasonic activation. Accessories for remote operation of a Sonicut-2™ system in a automated machine mounting are available.

Custom Icon-Driven User Interface

Ten Presets



System Protection Monitor with Autotune

Hand-Held Systems

Line/Load Regulation

Multiple Welding Modes with Ground Detect Available

CE and NRTL Certified

Using the Branson LPX, 150 watt variable amplitude power supply, offers control of the amplitude (blade stroke) for different materials and thicknesses. The system is capable of both constant and timed ultrasonic activation. A choice of steel, carbide, or titanium tips and blades provide the accessories necessary to complete a variety of composite cutting operations.

Functionality with Hand-Held Pistol or Barrel Grip

The hand-held ultrasonic units are compact, lightweight tools used to cut, spot weld or stake large, complex geometries and those with hard-to-cut materials. Two types of hand-held units are available, pistol grip and barrel grip.

The pistol grip HK215 model has the trigger switch is located on the grip and barrel grip model have the trigger switch located on the side of the barrel. All units may be operated utilizing a remote trigger, a start signal, or by the start/stop switch located on the front panel.

The barrel grip HT215 model has a spring-loaded sleeve automatically triggers the ultrasonic cutting or welding cycle when the operator applies pressure against the part. An adjustment screw is used to vary the force required before ultrasonic triggering occurs.



HT215 (20 kHz)



HK215 (20 kHz)

Advanced-Performance Features for Process Control and Reliable Power

User Interface/Process Controls

- **Digital parameter entry** for precise, easy setup.
- **1 ms sampling rate** of all data provides superior performance.
- **Digital amplitude control** allows fine-tuning for critical applications (ranges from 10% to 100% in 1% increments).
- **LCD interface** with straightforward icons provides improved navigation, easier configuration, and shorter setup time.
- **Self-diagnostics and monitoring** provide visual, audible, and logic output alarms.
- **Selectable auto reset conditions available for all alarms.**
- **Save and recall presets** provide up to ten presets for aid in setup.
- **Optional ground detect** can be used to detect horn-to-anvil contact or can be utilized as an “ultrasonic cut-off” signal/safety override in all available welding modes. (This is optional and must be factory installed).

Current weld mode when running, or available weld modes during setup

Available weld parameters for each weld mode

Parameter values



Power Supply Key Features

- **Line/load regulation** – Branson’s patented closed-loop amplitude control corrects for variations due to power line fluctuations ($\pm 10\%$) and varying load conditions.
- **LCD interface** displays weld mode and weld parameter settings with straightforward icons to ease configuration and shorten setup time.
- **Visual and audible alarms and external outputs** identify overload, machine faults, and setup errors.
- **Last weld results** including peak power, time, energy, and amplitude are available for viewing on the LCD interface.
- **System Protection Monitor (SPM)** – Five levels of power supply protection are provided to reduce equipment failures and improve weld accuracy and repeatability.
- **Autotune Plus Memory (AT/M)** – Provides fully-automatic horn frequency tuning by storing the horn frequency at the end of each weld for consistent and reliable horn starting.
- **Timed seek** tracks the operating frequency of the stack when the system is idle.
- **Sequence of operation** is viewable through the LCD interface during the welding cycle.
- **Non-volatile storage of setup parameters** provides storage of setup parameters if system is shut off or a power loss occurs.
- **Power measurement** is displayed when depressing the “test” key, which is helpful for diagnostics of acoustic tooling.
- **High cycle rate** – The power supply is capable of more than 200 welds per minute. Actual cycle rate is dependent upon the application and controls.
- **User I/O interface** provided for direct hookup with +24V DC programmable controllers.
- **Preset weld setup** – The power supply can save and recall up to ten preset configurations, allowing consistent and repeatable setup.



Mechanical Specifications

Height: 9.54" (242.3 mm)

Width: 8" (203.2 mm)

Depth: 13.7" (348.2 mm)

(Add 3" (76.2 mm) for cable clearance)

Depth Including Handle: 15.32" (389.2 mm)

Weight: lbs. 14.5 lbs (6.5 kg)

Connections to the LPX Platform Power Supply

Item	Name	Function
1	Power Switch	Turns the unit on/off.
2	IEC/C14 Power Connector	To connect the power supply to a grounded electrical power source using the provided detachable line cord.
3	Fuse Holder	Provides access to a replaceable protective fuse.
4	User I/O J2 Connector	Connects the power supply to a PLC controller for remote control.
5	Ground Detect Terminal (Optional)	Factory installed option used to detect contact between the horn and an anvil that has been isolated from ground.
6	3 Pin RF Connector	Connects the power supply to the ultrasonic converter.

All units are NRTL certified by Curtis-Straus and comply with FCC rules and regulations governing radio frequency interference. CE compliant models are indicated.

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ISO 9001:2015 & AS9120B Certified

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