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# AveCure®

## Next Generation Microwave Thermal Ablation Technology

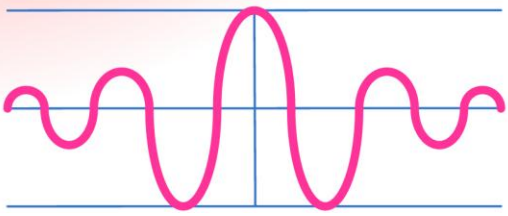
***Intelligent Power Control Based on Real-time Temperature and Permittivity Feedback Maximizes Ablation Safety and Efficiency, and Minimizes Reverse Power Loss***

***True Microwave Ablation Field Directly Heats Tissues Near and Far from the Antenna to Cover Predictable Shapes and Sizes with Minimal Heat-sink Effects and Gaps.***

***Safe, Predictable, and Customizable Ablation Zone Coverage with Intelligent Programmable Generator and Array of Microwave-field Antennas with Built-in Temperature Sensor.***

***FDA and CE Approved***

***Not cleared for cardiac applications***



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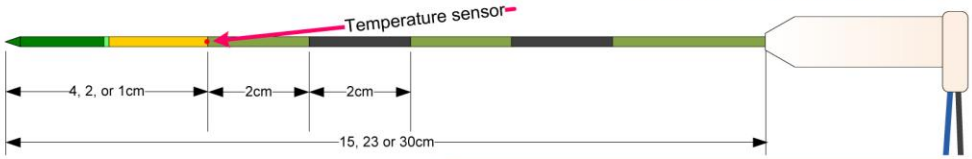
# Key Components and Features

## Probes:

- ***Robust and Sharp Antenna Tip:*** *in combination with an assortment of lengths make positioning safe and easy (no ceramic components to chip or crack off).*
- ***Built-in Temperature Sensor:*** *and patented efficient power transmission system enables real-time feedback control of power for safe and effective ablations (no cooling mechanism to mask unsafe conditions).*
- ***Array of Antennas:*** *distinct field sizes for tailoring ablation zone coverage of various lesion sizes while avoiding critical structures near their locations.*
- ***Separate Extension Cables:*** *for safe, efficient power transmission and ease of positioning without cable drag.*

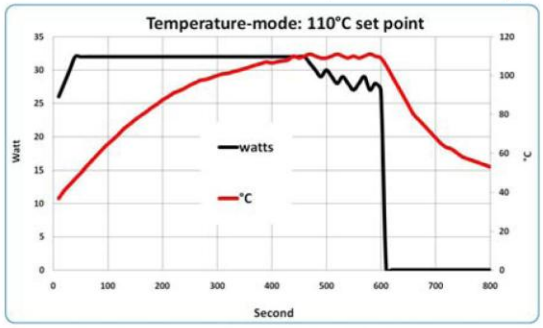
| Field size & Gauge | Antenna Field Length | Ablation Width Max | Ablation Length Max |
|---|---|---|---|
| Large 14 G | 4 cm | 5 cm | 6 cm |
| Small 16 G | 2 cm | 2.5 cm | 3 cm |
| Mini 16 G | 1 cm | 1.3 cm | 1.4 cm |

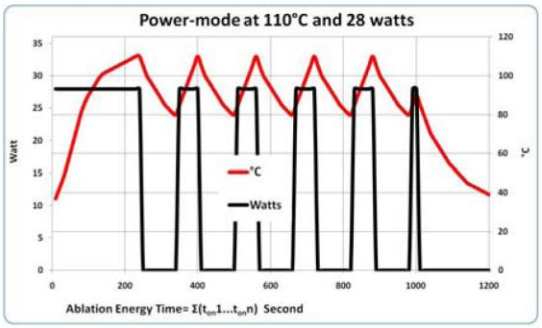
**Medium field antenna available soon.*




## Generator:

- ***Intelligent Control:*** *power level (10—32watts) and frequency setting (902MHz—928MHz) are automatically selected based on real-time temperature and permittivity feedback to maximize ablation safety, efficiency, and minimize reverse power loss (true microwave field ablation).*
- ***Dual Mode of Control:*** *temperature or power modes can be customized with user selectable temperature setpoint (60°C—130°C), power-level (10—32watts), and ablation duration (0—15 minute).*
- ***User Display:*** *continuous display of temperature (before, during and after ablation), forward power and reverse power during ablation, and remaining time in alternate display mode.*
- ***Safety Features:*** *reverse power limit, over power and over temperature alarms, audible change in the beep interval reflecting reverse power level, and self-test during initialization and ablation combine to create safe operating conditions.*

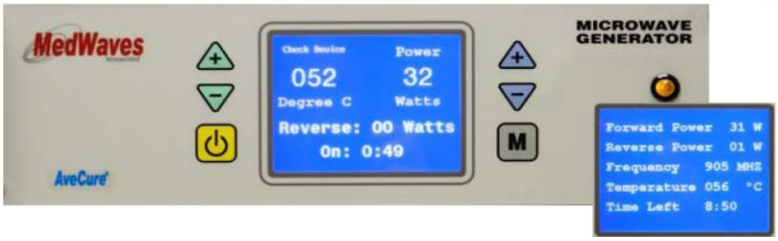




*Far-left: generator is in temperature-mode, programmed and ready with 100°C set-point, and 10 minute ablation cycle.*

*Left: press the M switch and generator changes to power-mode, programmed and ready with 100°C set-point, 28 watts, and 10 minute ablation cycle.*




*Far left: generator is in an ablation cycle with default display showing current temperature, forward-power, reverse-power, and time since the start.*

*Left: press the M switch and display changes to alternate display showing current forward-power, reverse-power, frequency, temperature, time left to finish the cycle.*

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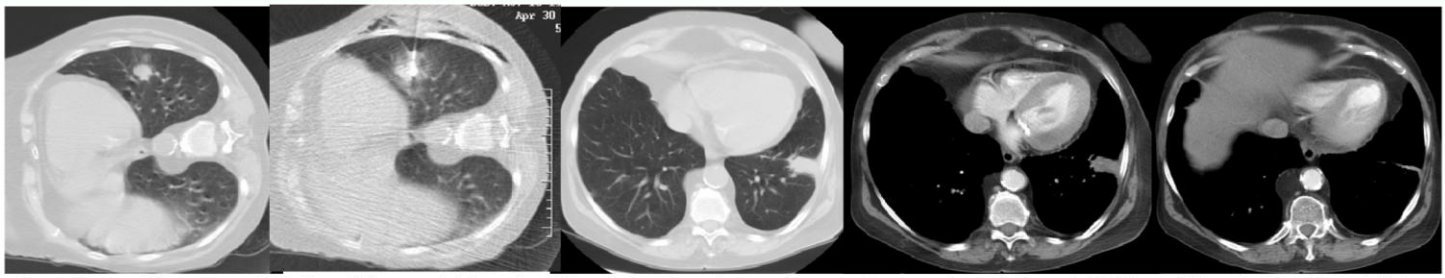
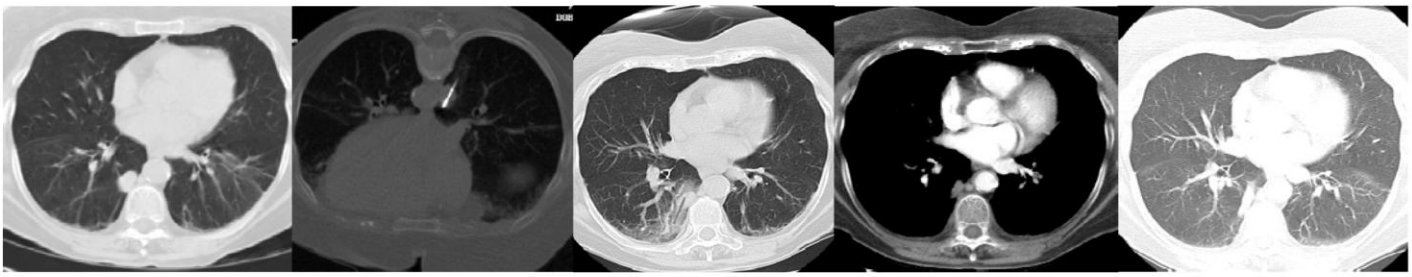
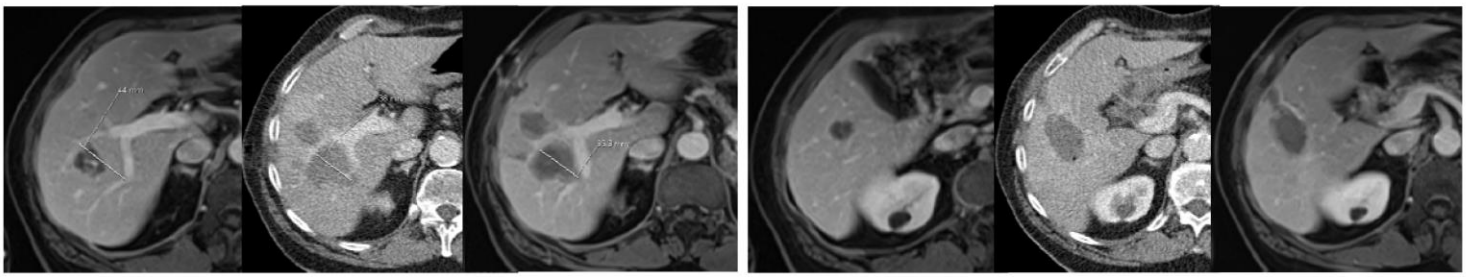


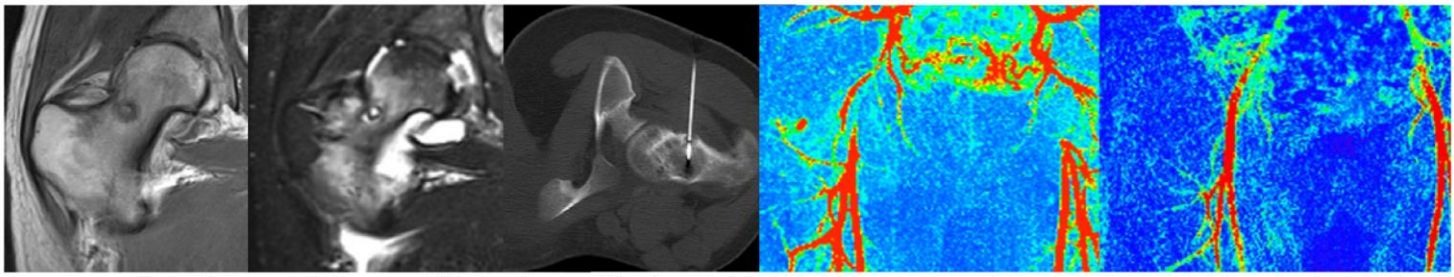
**Lung Tumor Microwave Ablation:** 83-year old female with primary lung tumor, temperature-mode ablation at 110°C and 11 minutes. From left to right: Pre ablation image showing tumor and satellites nearby. During ablation image shows ground-glass effect of microwave coagulation in and around the tumor. Post ablation images at one month follow-up showing scar tissue with no tumor enhancements. The ablation was performed April 2009 and the patient has no signs of recurrence.



**Lung Tumor Microwave Ablation:** 79-year old female with lung carcinoid, power-mode ablation at 28 watts, 100°C—105°C and 12 minutes. From left to right: Pre ablation image showing tumor next to aorta growing front to back and top to bottom. Pre ablation image shows one of placements of antenna. Post ablation image showing ground-glass effect of microwave coagulation in and around the tumor. Post ablation images at six months follow-up showing scar tissue with no tumor enhancements and shrinkage of tissue.



**Liver Tumor Microwave Ablation:** 70-year old male with two colorectal metastasis in the liver, temperature-mode ablation at 110°C. From left to right: Pre ablation image showing tumor next to the hepatic veins. Post ablation image showing ablation zone between the veins. Post one month ablation image showing with shrinkage and no enhancements. Pre ablation image shows smaller tumor more peripherally. Post ablation images showing ellipsoidal zone from 5 minute energy applications. Post ablation one month follow-up showing scar tissue with no enhancement and tissue shrinkage.



**Bone Tumor, Osteoid Osteoma Microwave Ablation:** 13 year old male, right hip Osteoid Osteoma, in pain for several months with a sclerotic rim ablated using mini field antenna, power-mode, 16 watts, 80°C and one minute. From left to right: Pre ablation MRI T1W and T2W images showing the tumor in right femoral head. Pre ablation image shows mini field antenna in position for treatment. Pre and post ablation dynamic MRI images show complete devascularization of tumor and ablated zone. Complete pain relief the day after ablation.

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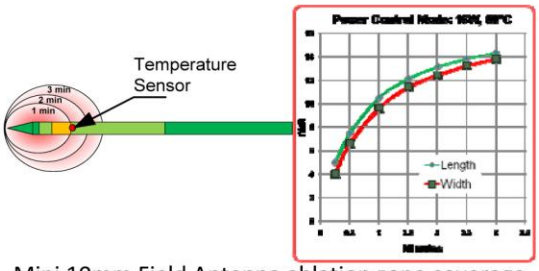
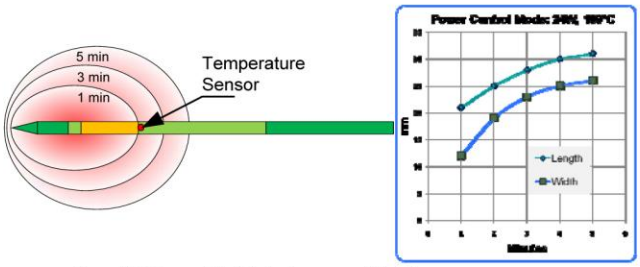
# Products offered:

| Catalog Number | Product Descriptions | Active MW Field Length | Shaft Gauge | Length w/o Handle (cm) |
|---|---|---|---|---|
| 16-15-LH-10 | Mini 10mm Field Antenna, 16G, 15cm | 10mm | 16 | 15 |
| 16-15-LH-15 | Small 20mm Field Antenna, 16G, 15cm | 20mm | 16 | 15 |
| 14-15-LH-25 | Medium 30mm Field Antenna, 14G, 15cm* | 30mm | 14 | 15 |
| 14-15-LH-35 | Large 40mm Field Antenna, 14G, 15cm | 40mm | 14 | 15 |
| 14-23-SH-35 | Large 40mm Field Antenna, 14G, 23cm | 40mm | 14 | 23 |
| 12-30-LH-35 | Large 40mm Field Antenna, 12G, 30cm | 40mm | 12 | 30 |
| | | | **Length (feet)** | **Length (m)** |
| MECO-SECO | MW-SIG Extension Cable Set | na | 8 | 2 |
| | | | **Power in VAC** | **Frequency in Hz** |
| MWG881 | MWA Generator | na | 110/220 | 50/60 |

*Medium 30mm Field Antenna is pending release.

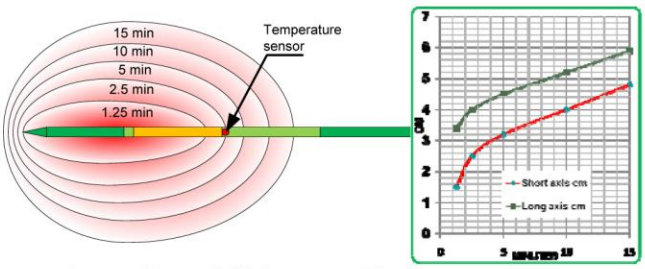



Mini 10mm Field Antenna ablation zone coverage

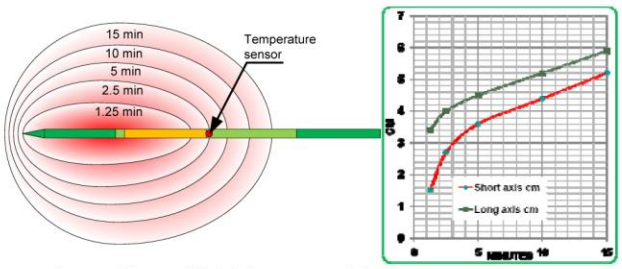



Small 20mm Field Antenna ablation zone coverage

Images of ablation zones are not to scale.




Large 40mm Field Antenna ablation zone coverage
Temperature-mode




Large 40mm Field Antenna ablation zone coverage
Power-mode


**Manufacturer:**

***MedWaves, Incorporated***

**16760 W Bernardo Drive**
**San Diego, CA 92127 USA**
**Tel: 858-946-0015**
**Fax: 859-946-0016**


***FDA and CE Approved***

***Not cleared for cardiac applications***

**Local Representative :**

healthcare
A Division of Quik & Sav Systems
65 Onnut Road, Kwang Prawet,
Khet Prawet, Bangkok 10250
T : 02-721-6935 , 02-721-6931
M : 087-199-5591
F : 02-721-6930
E : medwavesbkk@gmail.com