AtriCure Synergy Ablation System	
Device	**Product Code**
Isolator Synergy Clamp (long and short)	OLL2/OSL2
Ablation and Sensing Unit (ASU)	ASU2
AtriCure Switch Matrix	ASB3

Other Devices Use to Complete Maze IV Lesions	
Device	**Product Code**
cryoICE® Cryoablation Probes	CRYO2/CRYO3
Isolator Multifunctional Pen, 19 cm	MAX3

The AtriCure Isolator Synergy Ablation System is indicated for ablation of cardiac tissue for the treatment of cardiac arrhythmias, including atrial fibrillation.

The Isolator™ pen is a sterile, single use electrosurgery device intended to ablate cardiac tissue during cardiac surgery using radiofrequency (RF) energy when connected directly to the ASU or ASB3 in Ablation mode. The Isolator™ pen may be used for temporary cardiac pacing, sensing, recording, and stimulation during the evaluation of cardiac arrhythmias during surgery when connected to a temporary external cardiac pacemaker or recording device.

The Cryo Ice cryo–ablation probe is indicated for use in the cryosurgical treatment of cardiac arrhythmias. The PROBE freezes target tissues, creating an inflammatory response (cryonecrosis) that blocks the electrical conduction pathway.

Please review the Instructions for Use for a complete listing of contraindications, warnings, precautions and potential adverse events prior to using these devices.

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AtriCure

Isolator® Synergy™ Ablation System

The Only FDA-Approved Surgical Device to Treat Atrial Fibrillation During Heart Surgery

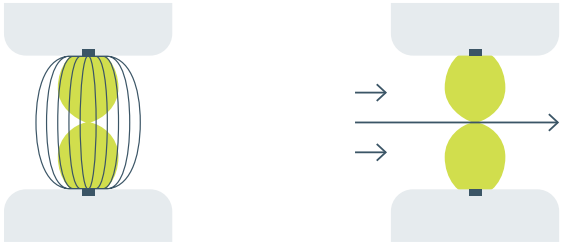
AtriCure

Why the Isolator Synergy Ablation System by AtriCure?

1 / UNIQUE LESION FORMATION

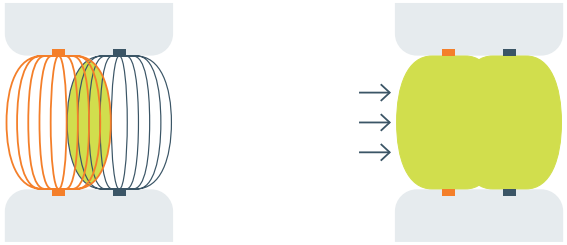
A lesion is only as strong as its weakest link, or gap. Traditional radio frequency creates a lesion from the surface toward the middle, resulting in an hourglass-shaped lesion. AtriCure's Isolator Synergy Bipolar clamp uses dual electrodes with alternating and overlapping fields to form a lesion from the middle to the surface. The result is a more robust and wider column-shaped lesion with transmurality.

FIGURE 1. CONVENTIONAL BIPOLAR



With conventional bipolar (one pair of electrodes), electrical signals can escape through the weakness in the lesion.

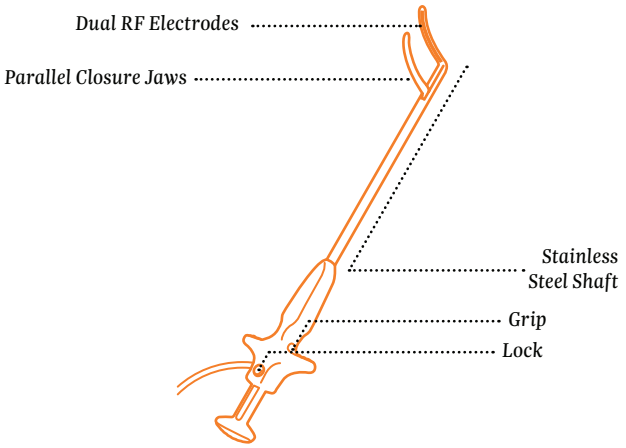
FIGURE 2. ISOLATOR SYNERGY CLAMP



The Synergy clamp uses two pairs of electrodes, creating a more robust lesion.

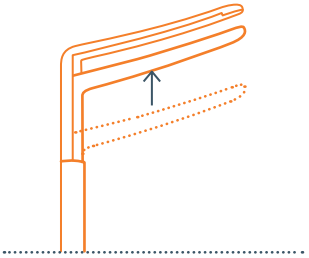
2 / CONSISTENT TISSUE COMPRESSION

FIGURE 3. ISOLATOR SYNERGY ABLATION SYSTEM



Complete and consistent tissue contact leads to even and consistent energy delivery. Too little pressure and contact leads to weak energy delivery and incomplete lesions. Too much pressure and contact leads to overdosing of energy and perforations. Synergy's stainless steel shaft and jaws maintain consistent tissue pressure and precise electrode alignment across the entire length of the jaws. Consistent pressure and precise alignment ensures a column-shaped lesion regardless of where the tissue is positioned within the jaws.

FIGURE 4. PARALLEL CLOSURE JAWS

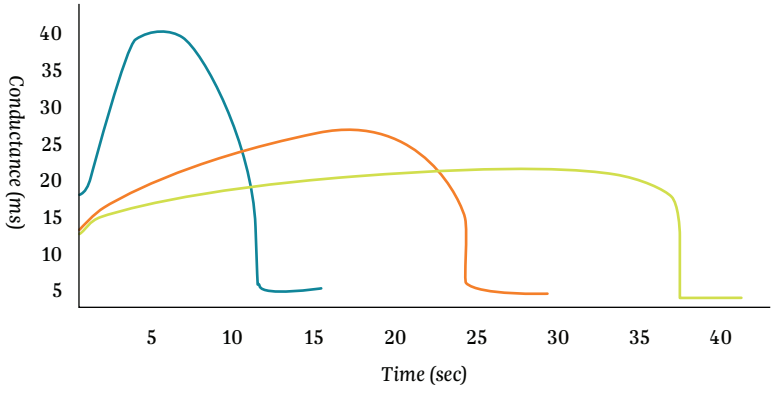


Synergy's stainless steel shaft and jaws maintain consistent tissue pressure and precise electrode alignment across the entire length of the jaws.

3 / EFFICIENT ENERGY DELIVERY

A lesion must be custom made to the tissue. The Synergy Bipolar device uses a dynamic monitoring algorithm that measures the tissues' response to radio frequency delivery 50 times per second. The system responds to specific tissue properties and adjusts the energy output and time accordingly. The result is a custom-made column-shaped lesion specific to a tissue's length, width and composition.

FIGURE 5.
CONTINUOUS MONITORING = CUSTOMIZED REAL-TIME ABLATIONS

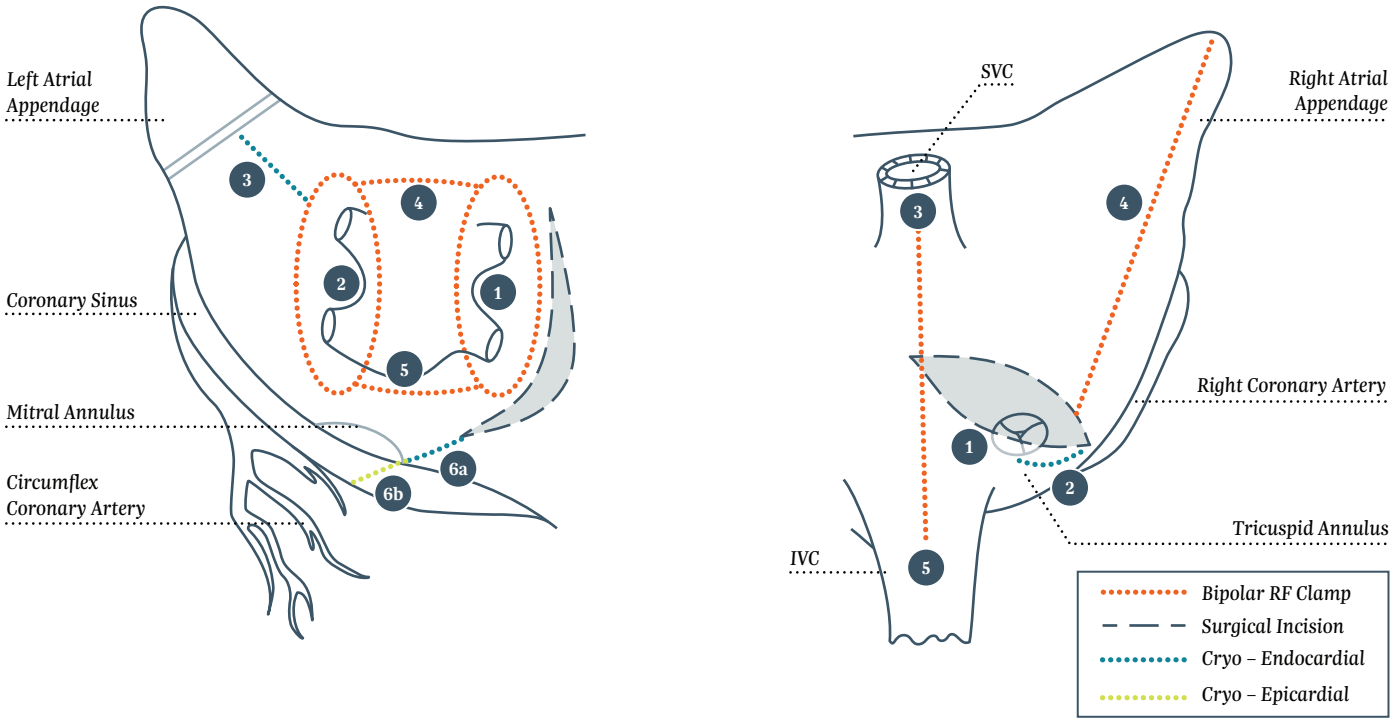


No two ablations are alike. This graph displays different ablation graphs of power and time based on the specific requirements of individual tissue composition and thickness.

Maze IV Lesion Set Checklist

- Proven lesion pattern that provides dependable and predictable outcomes
- Proven ablation technology that provides reproducible robust lesions

FIGURE 6. LESIONS FOR MAZE IV PER ABLATE PROTOCOL[1]



	LESION ORDER	LESION
	LEFT ATRIAL LESION SET	
PVI	1	Right antral PV isolation (right PVI)
PVI	2	Left antral PV isolation (left PVI)
PVI	3	Connecting lesion from left atrial appendage to the left superior PVI
PVI		Left atrial appendage exclusion
BOX	4	Superior connecting line (Right PVI to Left PVI, “Roof” line)
BOX	5	Inferior connecting line (Right PVI to Left PVI, “Floor” line)
LAL	6a	Mitral isthmus
LAL	6b	Coronary sinus
	RIGHT ATRIAL LESION SET	
MAZE	1	Vertical right atriotomy (“T” incision)
MAZE	2	Tricuspid annulus (2 o’clock)
MAZE	3	SVC
MAZE	4	Right atrial appendage
MAZE	5	IVC

1. Approved under PMA P100046.