

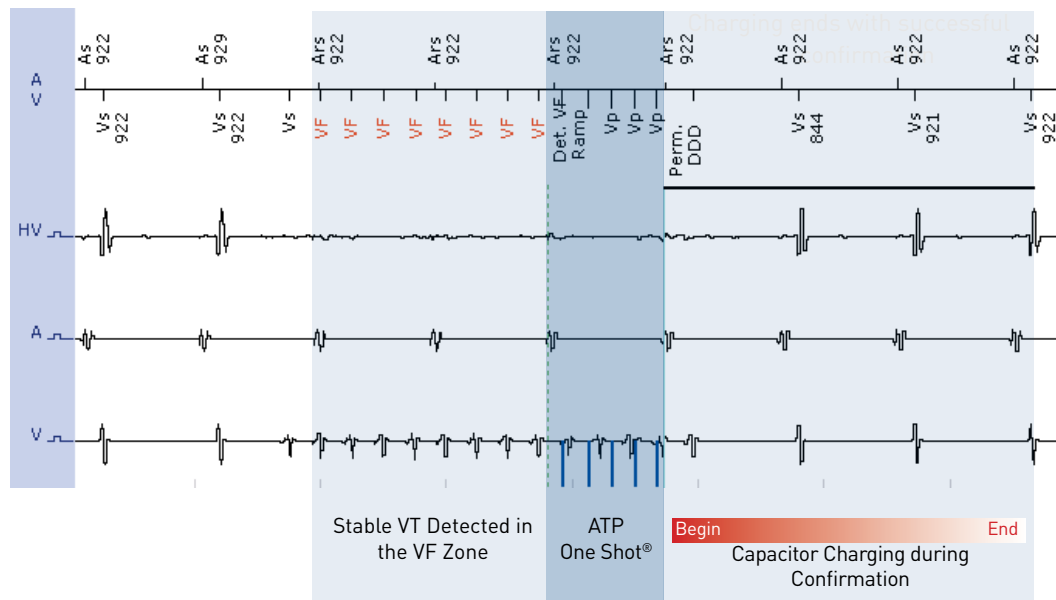
## Minimize the Occurrence of Painful Shocks for Fast, Stable Ventricular Arrhythmias with ATP One Shot® in the VF Zone

ATP One Shot® immediately delivers a burst of ATP upon detection of a stable VT in the VF zone. This provides your patient the possibility of a painless conclusion to an arrhythmia. ATP One Shot® can also save battery longevity by quickly terminating the shock charging process once ATP has been declared effective.

### ATP One Shot® Details

- Provides one ATP therapy in the VF zone. Burst, Ramp, or Burst + PES schemes are available.
- ATP is delivered if the ventricular arrhythmia meets the fixed stability criterion of 12%.
- After ATP is delivered, the capacitors start charging immediately without a redetection period.
- If ATP therapy is successful (e.g., 3 out of 4 sinus intervals are detected), the ICD immediately stops charging and dumps the energy.
- If ATP is unsuccessful, the first shock will be delivered after charging the capacitors to the programmed energy.

A successful ATP One Shot® IEGM



## Tachyarrhythmia Therapy Options

### Key Benefits

- Minimize the occurrence of painful shocks with ATP One Shot® (ATP therapy in the VF zone).
- Protect your patients with a complete high-energy ICD and CRT-D portfolio.
- Reduce inappropriate shocks with SMART® Detection.
- Manage high DFT patients with Biphasic 2.

1. *Summary of Safety and Effectiveness Data, PMA # P000009. Phylax AV. September 29, 2000.*
2. *Shorofsky, Stephen R. and Michael R. Gold. "Effect of Second Phase Duration on the Strength Duration Relation for Human Transvenous Defibrillation." Circulation. 2001;102:2239-2242.*
3. *Merkely, Bela et. al. "Shortening the Second Phase Duration of Biphasic Shocks: Effects of Class III Antiarrhythmic Drugs on Defibrillation Efficacy in Humans." J Cardiovas Electrophysio, Vol. 12, pp. 824-827, July 2001.*

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.  
For further information, please contact your local BIOTRONIK representative and/or refer to the technical manual.  
Specifications subject to modification, revision, and improvement.  
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## Lumax ICDs and CRT-Ds

Shift into Advanced Patient Management™



## Tachyarrhythmia Therapy Options

- ATP One Shot®
- Full line of high-energy ICDs and CRT-Ds
- Biphasic 2 and alternating shock polarity
- SMART® Detection

## Provide Your Patients with the Protection They Expect from Their ICDs

Full high-energy portfolio: Lumax 340 ICDs and CRT-Ds offer 35 Joules of delivered energy.



Lumax 340 VR-T  
66 x 55 x 13 (mm)  
37cc



Lumax 340 DR-T  
66 x 55 x 13 (mm)  
37cc



Lumax 340 HF-T  
66 x 59 x 13 (mm)  
40cc

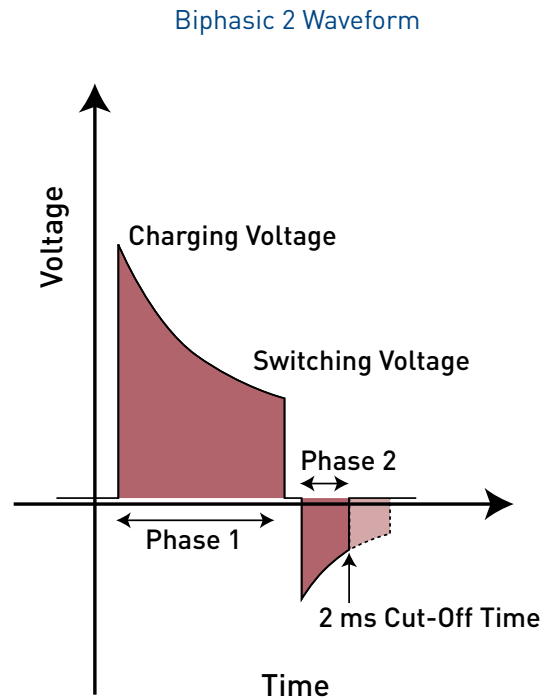
## DFT Management Options

### Biphasic 2

Lumax ICDs and CRT-Ds provide the ability to focus defibrillation energy by decreasing the pulse width of the second phase of the biphasic defibrillation waveform to 2 ms. In two clinical studies, reducing the pulse width of the second phase to 2 ms improved the effectiveness of energy delivery<sup>2</sup> and decreased DFTs for patients being treated with amiodarone<sup>3</sup>.

### Alternating Polarity of Full-Energy Shocks

The Alternating Polarity feature of Lumax ICDs and CRT-Ds switches automatically between normal and reversed polarity waveforms following the first ineffective full-energy shock. Alternating Polarity diversifies the shock therapy available rather than relying on one waveform for all maximum-energy shocks.



## Improve Your Patients' Quality of Life by Saving Them from the Pain of Inappropriate Shocks

### SMART® Detection

Protect your patients from inappropriate therapy by choosing a Lumax ICD or CRT-D with superior AV discrimination during both initial detection and redetection. The SMART® Detection algorithm uses Onset, Stability, AV Regularity, AV Trend, AV Rate between chambers and Multiplicity to achieve a VT sensitivity of 100% and an SVT specificity of 94%.<sup>1</sup>

### Programmable Confirmation

When Confirmation is programmed to ON, the device will confirm the continuing presence of a tachyarrhythmia during capacitor charging. If the tachyarrhythmia spontaneously terminates during charging, the capacitor charging will stop and shock therapy will be aborted. This saves unnecessary therapy from being delivered to your patient. Confirmation can be programmed ON or OFF for all shocks in a specific ventricular therapy zone.

### Superior AV Discrimination with SMART®

