

Transforming Arterial Care with Advanced Energy's Lithotripsy Power Solutions

INDUSTRY**Electrosurgery****SOLUTION****UltraVolt A Series
Artesyn AEE20W-M Series****APPLICATION****Lithotripsy****BACKGROUND**

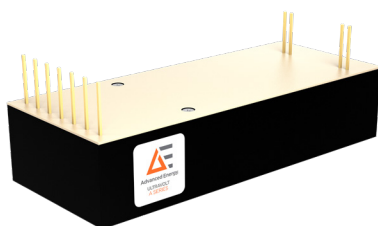
Intravascular Lithotripsy (IVL) is a novel technique used to treat calcified arterial plaque. It involves delivering low-energy shock waves via a catheter to soften and fracture calcified lesions, improving vessel compliance before stent placement. This method is gaining traction in cardiology and peripheral vascular interventions due to its precision and safety.

CHALLENGE

A medical device company was designing an IVL device to treat calcium deposits in arteries using sonic pressure waves to fracture and break up these calcified blockages. In order for the treatment to provide improved blood flow and easier stent placement the application required a DC-DC isolation module, 24 Vdc to 24Vdc. It also required a 24 Vdc to 4 kVdc, 30 W DC-DC power converter for capacitor charging. The medical device manufacturer was seeking a company with a broad portfolio of medically certified power supplies and strong technical support.

SOLUTION

Meeting design requirements with a wide selection of electrical, shielding, and mechanical integration options, the UltraVolt A series is a perfect fit for lithotripsy applications. The UltraVolt A series of DC-DC converters feature configurable high voltage output, power and polarity. They are also capable of output from 62 VDC to 20 kVDC in single-output positive or negative polarities.



UltraVolt® A Series



Artesyn AEE20W Medical DC-DC Converter

Delivering up to 30 W with a low 100 ppm ripple from 12 or 24 VDC input, the regulated power supplies feature analog interface options of 0 to 5 VDC or 0 to 10 VDC (full-scale) for control and monitoring of high-voltage output and current.

The Artesyn AEE20W-M Series of 20-Watt isolated DC-DC converters are designed for demanding applications like lithotripsy that require

supplementary or reinforced insulation to comply with stringent medical safety standards.

AE was also able to provide the following advantages:

- World-class service and consulting from technical experts
- Fast samples lead to fast time to market with lowest total cost of ownership

RESULT

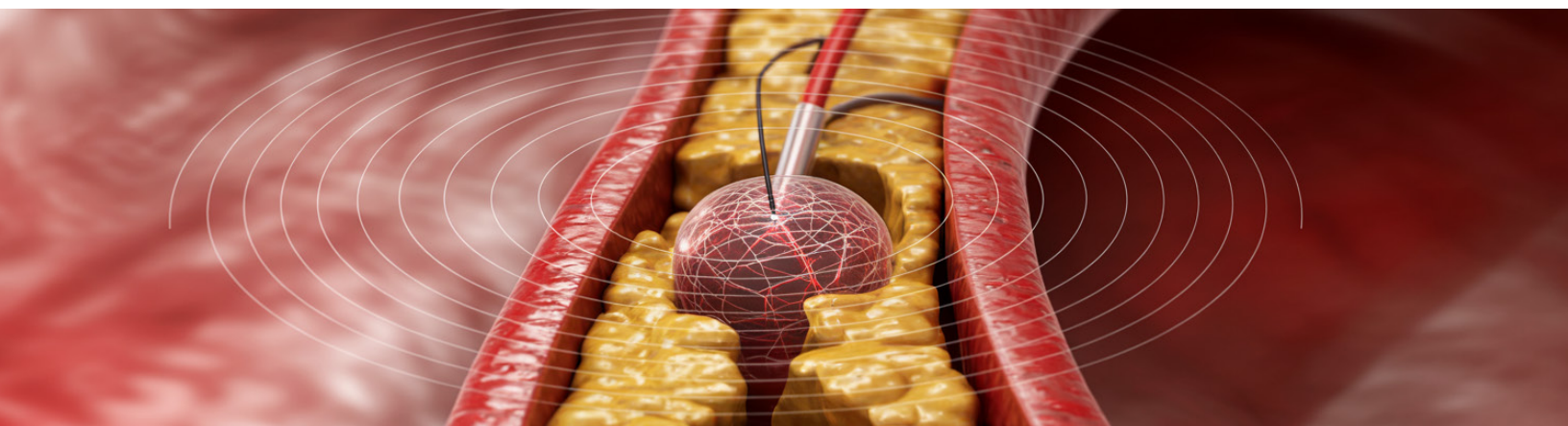
By choosing Advanced Energy's UltraVolt A Series and Artesyn AEE20W-M medical DC-DC converter, the customer satisfied their requirements for high reliability and isolation along with other benefits such as high power density and best-in-class quality. As a result of the exceptional technical support and fast delivery of samples, the customer was able to accelerate their development cycle.

CONCLUSION

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. AE's power solutions enable customer innovation in complex electrosurgery applications.

Advanced Energy's UltraVolt A Series and Artesyn AEE20W-M are designed to meet the demanding specifications of novel lithotripsy applications utilizing state-of-the-art power conversion topology.

With Advanced Energy's broad portfolio of highly reliable medical solutions, we are well equipped to meet all your high and low voltage application requirements for electrosurgery devices. With deep medical applications knowledge and responsive service and support across the globe, AE builds collaborative partnerships to power the future of electrosurgery.



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