

Providing Custom Solutions Through Modular Design

INTRODUCTION

In today's test and measurement environment, users rarely have "standard" requirements. Whether they are working in EMC compliance, sonar testing, imaging applications, or advanced research, power demands are constantly evolving. Voltage levels change, current requirements increase, frequency ranges expand, and new test profiles emerge.

The challenge is clear:

How do you deliver a solution that feels custom-built without creating a one-off system that is expensive, difficult to support, and impossible to scale?

At AE Techron, the answer is found in one guiding principle:

Providing custom solutions through modular design.

Rather than approaching every application as a blank sheet of paper, our cabinet-based power systems are built around proven, standardized building blocks. This allows us to meet unique user requirements quickly and efficiently while maintaining the reliability, repeatability, and long-term serviceability that users depend on.

THE POWER OF MODULARITY

A modular system is more than just a cabinet with amplifiers inside. It is an engineered platform designed to grow and adapt alongside the user's needs. Instead of forcing users to purchase oversized equipment up front – or redesigning an entire system when requirements change – modularity enables a scalable approach:

- Add power when needed
- Expand voltage capability over time
- Reconfigure outputs for different test demands
- Maintain consistent performance across modules

CABINET SYSTEMS DESIGNED FOR REAL-WORLD APPLICATIONS

AE Techron's **8000 and 9100 Series cabinet systems** are prime examples of modular design in action. These platforms are built to provide a wide range of power profiles in an efficient, compact footprint, while still allowing users to tailor the configuration to their specific application.

Instead of purchasing individual amplifiers and managing complex integration on their own, users benefit from a complete, cabinet-level solution that is assembled, tested, and validated as a unified system.

This approach eliminates many common challenges, including:

- Interface and connection mismatches
- Complicated wiring between standalone units
- Uncertainty in system-level performance
- Increased setup time and troubleshooting

With AE Techron cabinet systems, you receive a solution that is designed to work cohesively from the start.

SCALING POWER WITHOUT REDESIGN

One of the greatest strengths of modular cabinet architecture is scalability. Users can start with the performance level they need today and expand as requirements grow tomorrow.

For example:

- ***Need more current or total power?*** Additional amplifier modules can be added in parallel.
- ***Need higher voltage output?*** Amplifiers can be bridged to increase voltage capability.
- ***Need a larger system overall?*** Multiple cabinets can be integrated together for expanded performance.

This modular strategy ensures that users are never locked into a fixed configuration. Instead, they gain a long-term platform that can support new programs, expanded testing, or more demanding specifications without starting over.

A MODULAR EXAMPLE: THE 9100 SERIES CABINET PLATFORM

The **9100 Series** is one of AE Techron's clearest demonstrations of how modular cabinet design delivers scalable, application-ready solutions. Instead of forcing users into a fixed power supply configuration, the 9100 Series provides a cabinet platform that can grow module-by-module as requirements change.

These cabinet systems are built using the proven **9115 amplifier** as the core building block. By integrating multiple 9115 modules into a single enclosure, AE Techron offers standardized cabinet models that support a wide range of power profiles – without requiring unique, one-off engineering.

The modular concept is simple:

- Start with the cabinet size that fits today's requirement
- Add more amplifier modules as power demand increases
- Maintain consistent architecture, controls, and serviceability across the platform

Model	Max. Cont. Output	Surge Rating (@ 200Vp)	Max. Cont. Power
9130	180A RMS	290A peak	10 kW
9145	270A RMS	435A peak	15 kW
9160	360A RMS	580A peak	20 kW
9175	450A RMS	725A peak	25 kW
9190	540A RMS	870A peak	30 kW

What makes this lineup so powerful is that each cabinet model is not a completely different design, it is an extension of the same modular system concept. Users benefit from a solution that feels custom-tailored, but is built from standardized amplifier modules and proven cabinet infrastructure.

CUSTOM SOLUTIONS THAT AREN'T TRULY CUSTOM

What makes AE Techron's approach unique is that our "custom" solutions are often not truly custom in the traditional sense. Instead of designing and building unique, one-off units, we leverage a modular platform that can be configured in repeatable ways.

That means users receive a solution that feels tailored to their application, while also benefiting from:

- Proven designs
- Faster delivery timelines
- Easier maintenance and support
- Reduced engineering risk
- Long-term scalability

It's a smarter way to deliver specialized performance without sacrificing reliability or efficiency.

A BETTER PATH FORWARD

As testing environments become more complex, users need more than raw power and they need power systems that can evolve with them. AE Techron's modular cabinet designs in the **8000 and 9100 Series** provide exactly that: scalable, configurable solutions built on a foundation of proven engineering.

The message is simple: modularity is how we deliver custom results without reinventing the system every time. It's how AE Techron helps users meet today's requirements while staying ready for tomorrow's challenges.

With AE Techron cabinet systems, power becomes not just a product, but a flexible solution platform.