

## Bahnson Environmental Specialties

# Infinitely Precise. Ultimately Reliable.

Bahnson Environmental Specialties, LLC (BES) is a leader in the design, manufacturing, installation, and servicing of a diverse line of controlled environmental chambers for a wide range of research, development, and manufacturing activities.

We provide a complete array of service, maintenance, and validation offerings designed to help maintain and enhance the operation of our chambers as well as those of our competitors plus laboratory equipment manufactured by other companies. From retrofits to emergency response, we are committed to supporting our clients throughout the lifespan of their environmental chambers and critical equipment.

#### **OUR SERVICES**

Pre-sales support Architectural design Mechanical design Electrical and controls design Project management Field installation Validation and qualification Remapping of chamber processes Preventive maintenance and calibration Emergency service and repair Technical support Parts distribution

#### **OUR MARKETS**

Pharmaceuticals Biorepositories Biotech and healthcare Distribution centers, warehousing research, and development Agricultural sciences Industrial Government

#### COMPREHENSIVE, END-TO-END CLIENT SUPPORT

At BES, we are committed to supporting our clients throughout the entire lifespan of their environmental chamber. Our presales support team can walk your through the purchase process to make sure you select equipment ideally suited for your needs, and we can also help with design and project management during the installation phase.

#### MAINTENANCE AND CALIBRATION

BES offers client-tailored preventive maintenance and calibration programs designed to meet rigorous industry standards and best practices, while remaining flexible enough to meet your unique equipment, scheduling, and budgetary requirements.

We utilize advanced tools — including National Institute of Standards and Technology (NIST)-traceable instrumentation — to help ensure that your critical equipment meet current Good Manufacturing Practices (GMP) certification standards, in accordance with Food and Drug Administration (FDA) — and International Council for Harmonization (ICH) — established guidelines.

**Spare Parts Inventory:** To help minimize delays and downtime, our factory keeps a wide inventory of spare parts in stock for repairs and maintenance. If a part isn't available, we'll help you find a replacement or recommended retrofit suitable to your equipment's needs. Our staff can also tailor and stock a list of spare parts critical to your equipment on-site, further reducing downtime.

#### Medical Laboratory Equipment Maintenance

**and Repair:** Not only do we have the expertise needed to work on our own equipment, but we are also familiar with equipment from a variety of other manufacturers. Our service teams can even perform maintenance on select laboratory and medical equipment.

#### **ON-CALL TECHNICAL SUPPORT**

We understand the demands of your mission-critical operations and highly sensitive products. When you encounter urgent and unexpected service needs, we're available with immediate, on-call support to solve your technical questions or problems.

Our support desk is operated by an in-house technical staff with access to your BES equipment files, backed up by our engineers, validation experts, and quality assurance personnel. They're ready to assist staff members at all levels of your organization.

We also offer a bi-annual, three-day intensive hands-on seminar at our training facility. At this training seminar, we equip your team with the skills and knowledge necessary to optimize your chambers' performance and productivity.

**Emergency Service:** We also provide emergency service personnel to meet your equipment's critical nature. With our nationwide service centers, we can respond rapidly to your pressing needs, and can typically have a qualified technician at your site within hours.



#### UPGRADES AND RETROFITS

We're ready to help keep your chambers up to every challenge — whether it's adapting to new technology, meeting changing design needs, conforming to changing regulations, or addressing shifting performance requirements.

Our engineers and service professionals are available to help you evaluate your existing equipment and consider your upgrade and retrofit options. They provide expert consultation on the latest technological advances and design trends and can help you balance potential performance boosts with your budget requirements.

### VALIDATION AND QUALIFICATION SUPPORT

BES provides environmental chamber validation and qualification support. We provide you with a thorough understanding of your equipment's critical qualification protocols, and will prepare, execute, and complete the qualification tests with a comprehensive final report.

## Our stability chamber validation and qualification procedures include:

Installation qualification (IQ): We establish that equipment is properly and safely installed, verify and record all model and serial numbers, as well as document all utility requirements.

**Operational qualification (OQ):** We verify that equipment consistently demonstrates performance inline with design specifications in unloaded conditions, and verify both temperature and relative humidity uniformities.

#### Performance qualification (PQ):

We test equipment's ability to perform to-specification in both operating set point and loaded conditions, including a simulated typical product load.

**Final report:** We collect and review all test data to review with the client, and provide a final report with all graphical multi-point data and all textual information.

Bahnson Environmental Specia



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