



SAFEGUARDING YOUR RESEARCH INVESTMENT

Tailored Solutions For The Biotechnology Industry

Power Availability

Power Protection

Power Conversion/Distribution

Heat Removal/Precision Air Conditioning

Monitoring/Service



ACCURATE RESULTS DEPEND ON CONSISTENT CONDITIONS

From agriculture to pharmaceuticals to zoology, biotechnology is providing products and processes that are revolutionizing the way we live. The cornerstone behind this industry is the time and resources that you are dedicating to the research and testing that will yield even more extraordinary results. But so much of your work depends on accuracy in the discovery, testing and review processes. Many of these procedures depend on the continuous, accurate delivery of electrical power – and maintaining precise, consistent environmental conditions for computers and test equipment within the research facilities.

You Shouldn't Have To Worry About External Variables Affecting Your Work

For over 35 years, Liebert Corporation has been helping a wide variety of businesses and other organizations to protect the operation and integrity of critical equipment and processes. From mission-critical computer rooms to worldwide networked systems to laboratories and other research facilities, Liebert has more experience and knowledge than anyone else on how to address environmental and power protection.

Liebert systems will help you to maintain consistent, repeatable results whether you are in the development stage, FDA approvals or final production.



Why Risk Your Hard Work On Power And Environmental Fluctuations?



Different Market Segments — All With The Same Needs For Process Reliability

There are five key areas of critical system protection that must be addressed to maintain the highest levels of system uptime in biotech facilities:

1 Power Availability Uninterruptible Power Supplies

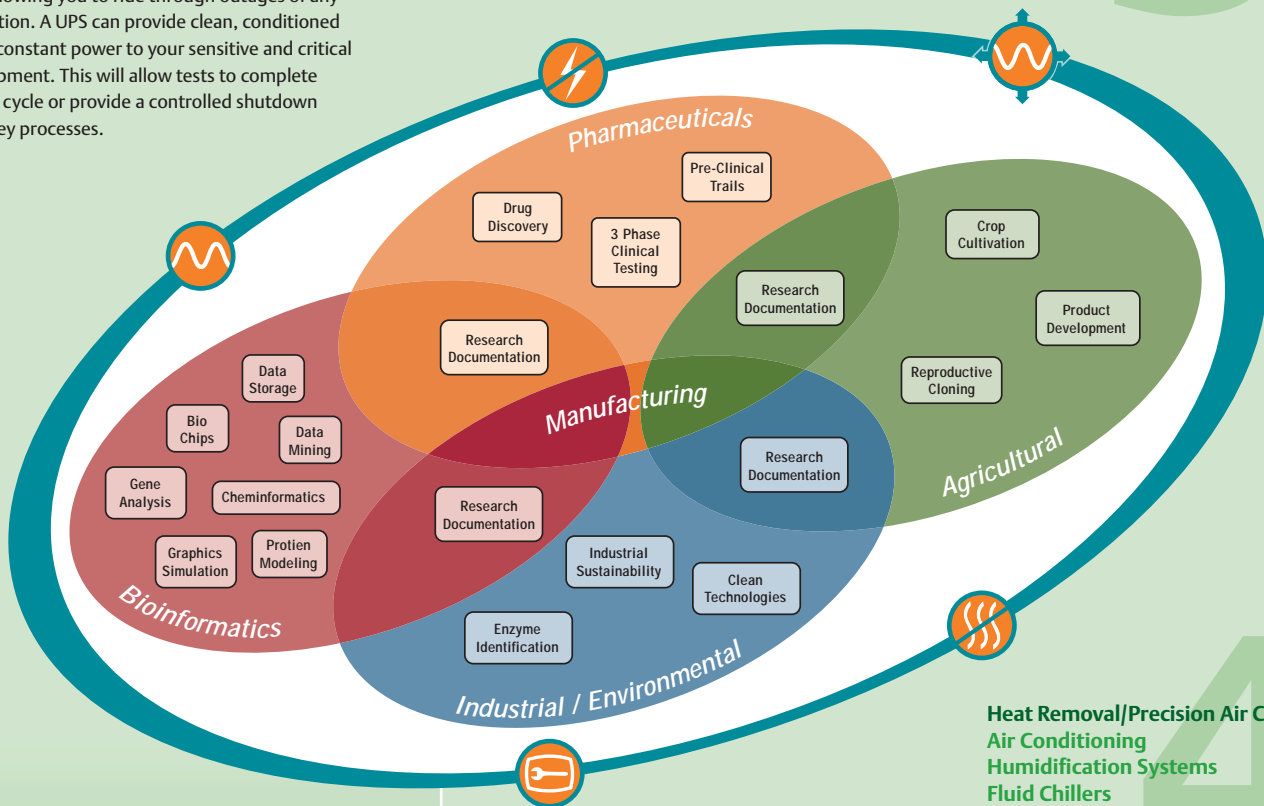
Whether your needs are heavy computing power for genomics and bioinformatics...or research and testing equipment, your process requires a continuous, controlled flow of electricity to achieve success. Use of an uninterruptible power supply (UPS) will help assure the integrity of your data and preserve it by allowing you to ride through outages of any duration. A UPS can provide clean, conditioned and constant power to your sensitive and critical equipment. This will allow tests to complete their cycle or provide a controlled shutdown for key processes.

2 Power Protection Surge Suppression Power Conditioning

In a shared business/industrial park, raw utility power may be unsuitable for sensitive electronic equipment. Power can be contaminated with spikes, surges, sags and noise from other operations within your complex. In these situations, power conditioning systems and transient voltage surge suppression solutions are designed to shield critical lab and process instrumentation from the full range of power anomalies.

3 Power Conversion/Distribution Static Transfer Switches AC and DC Power Distribution

As biotech laboratories and production facilities grow with more and more critical equipment, the need to deliver power to each of these components becomes even more important. Power brought into your facilities needs to be converted to the voltages that the equipment requires. Power distribution products will ensure the delivery of clean, high quality power from the UPS to your vital systems. They provide a clean design and, as you grow, can be taken with you.



Liebert is the only company that can provide a variety of solutions in all five key areas of system protection

4 Heat Removal/Precision Air Conditioning Air Conditioning Humidification Systems Fluid Chillers

Temperature, humidity and airborne particulate can have a detrimental effect on critical processes, equipment, computers and analysis. Liebert precision environmental control, specialized enclosures and rugged remote protection can protect labs and equipment from heat and air impurities by providing consistent temperature, humidity and filtering. Liebert also has a line of fluid chillers to provide constant cooling for equipment.

5 Monitoring/Service Multi-Platform Monitoring Systems 24/7 Service Capabilities

Validation and stringent record keeping are essential to research, testing and approval processes. This includes the ability to chart, trend and record temperature, humidity and power parameters for your lab environment. It is just as important to know that service can be there wherever and whenever maintenance is required on these critical support systems.

EACH APPLICATION WITHIN THE BIOTECHNOLOGY DEVELOPMENT PROCESS HAS ITS OWN UNIQUE NEEDS FOR PROTECTION

No matter what segment of biotechnology you are involved with — pharmaceutical, agricultural, environmental — your research and testing programs go through different stages, each of which has distinct needs for system and infrastructure protection. From protecting a single piece of equipment to an entire facility, there is a Liebert tailored solution to fit the needs of your processes:

Computer Analysis

Many biotech projects, such as the highly complex human genome mapping efforts, begin with hardcore number crunching by high-speed computers. Bioinformatics combines information technology, data storage, analysis and management of genetic data derived from these biotechnology studies.

Protecting the operation of these systems to ensure the integrity and accuracy of this vast information base is absolutely necessary. Liebert is recognized around the world for its unequalled expertise in the protection of computer rooms and other critical spaces. From precision environmental control to uninterruptible power to total system monitoring, we have the proven capability to deliver maximum availability.

Laboratories

There can be literally millions of dollars riding on the work performed in your laboratories. Any deviation from established procedures due to power, temperature, humidity or dust problems can ruin valuable work — especially if these disturbances are not detected or accounted for. Even a small glitch can create inaccurate or misleading results or inaccurate data collection. The environmental conditions, inside a controlled space, must be constantly maintained within prescribed limits. Laboratories depend on a controlled environment to assure accurate readings.

The critical nature of the work performed in laboratory facilities requires environmental and power support systems that eliminate power, temperature and humidity as process variables. Liebert manufactures a full range of precision air conditioning, power protection equipment, fluid chillers, specialized enclosures and facility monitoring systems for these vital facilities.

Skewed
Results

Bad Data

Repeated or
Failed Trials

Pilot Processes

Like research laboratories, pilot facilities involved with clinical trials and other testing require consistent temperature, humidity and electrical power — only on a larger basis. Because process consistency and reliability is so important at this stage of the development sequence, there is an even greater demand for support systems that will maintain these critical standards. Liebert can fill these needs no matter how extensive or how demanding.

We can offer you a full range of precision air conditioning, as well as power protection equipment, including transient voltage surge suppression protection, power conditioning and UPS to protect these vital systems. And we back it all with the industry's most extensive factory-trained service organization.

Production Facilities

The power quality and cooling requirements for biotechnology production processes are remarkably demanding. One “blip” in the room environment or power feeding a process — and an entire batch must be disposed. This may cost you hundreds of thousands...even millions of dollars.

Control over all variables that can affect the final product in these applications is essential. A secure source of high quality power must be maintained and delivered properly to each piece of equipment. Temperature and humidity levels within the space must be maintained within specified limits. Conditions must be monitored to assure strict adherence to process guidelines.

Liebert is the one source that can meet your requirements for critical protection systems able to handle the toughest requirements of manufacturing and process control applications. These systems must be able to protect sensitive electronic equipment within this environment.

Process

Out of Control

Equipment

Failure/Damage



YOU MUST HAVE THE PROPER INFRASTRUCTURE IN PLACE

Liebert Expertise Can Help You Develop A Critical Process Protection Plan

Your work is just too valuable to entrust to patched together protection or partial solutions.

This is why your local Liebert Representative, an expert in the application of facility protections systems, can help you develop a Critical Process Protection Plan for your biotechnology operations.

Specifying and maintaining a high availability facility support system requires someone who is knowledgeable in all phases of power protection and environmental control. This resource, coupled with our broad product line, gives Liebert the ability to create a “tailored solution” that will meet your protection needs precisely and efficiently. We don’t emphasize one product as a universal solution. We have the expertise and product set to give you the best answer every time.

We Understand Your Needs

Knowing the needs of our customers and having the expertise to apply our products precisely to your applications has always been a key to our success. The biotechnology field has unique processes that vary from those of other industries. Yet, all share an overriding need for protecting the availability of the critical electronic systems used in these operations.

Liebert is the one company that truly knows and understands biotech applications and the need for power and environmental protection. Over 35 years of experience gives us a unique perspective of your industry’s needs — and a greater capability to help you design and assemble the right solution for the protection of your sophisticated technologies anywhere in the world.



Local Liebert Representatives

The People Behind Your Reliability



The Need To Know

A key to providing proper service for critical support systems is the ability to know what's going on inside your facility at any given time. That's why Liebert is so firmly committed to providing equipment monitoring capability in the majority of our products.

No matter what communications protocols, network management system or operating platform you are using to communicate, you can receive and use information from your Liebert equipment and systems. In-band, out-of-band and web-based monitoring are all available.

This ability helps to put you in direct control of vital equipment, no matter where it's located within a facility. This information can be used to track and trend power and environmental data. This capability will assist in proving that your process is in statistical control; a critical FDA validation criteria.

Liebert can even provide you with full-scale remote monitoring and control of critical support systems through our Customer Response Center. This 24-hour-a-day service instantly locates alarms, measures criticality and identifies the appropriate response — including the dispatching of Liebert service technicians to the site.

Unequaled Service And Support

From the beginning, Liebert has recognized that selling you the equipment is only half of the protection equation. Having the ability to service it — wherever and whenever it's needed — is vital to maintaining the systems availability of our customers.

More than 35,000 customers in 70 countries around the world trust Liebert to minimize critical system emergencies and interruptions. We're backed by the largest technical support and customer response system in the industry with more than 1,000 factory-trained and company-employed service professionals in more than 100 service centers ready to assist in maintaining your uptime, 24 hours a day, every day of the year.

Liebert can provide service capability for your entire facility infrastructure — from battery maintenance to power equipment to precision air conditioning. With the largest service organization in the industry, we can offer you four-hour response time in most major cities. Or, if you prefer, train your staff to perform most maintenance operations.



WE HELP YOU GET IT RIGHT — RIGHT FROM THE START.

For over 35 years, Liebert has been providing tailored solutions for protecting the operation of critical electronic systems in a variety of industries. From customer premise equipment to global networks, we've used our expertise to tailor the right products, monitoring systems and global service capabilities into a variety of specific solutions.

Liebert's years of experience and knowledge of leading edge technologies enables us to truly understand your needs — both in terms of overall reliability and specific areas of equipment protection. Whether it's a new or existing facility, centrally located or remote, we listen to you and your preferences to help us develop solutions that are right for your facilities.

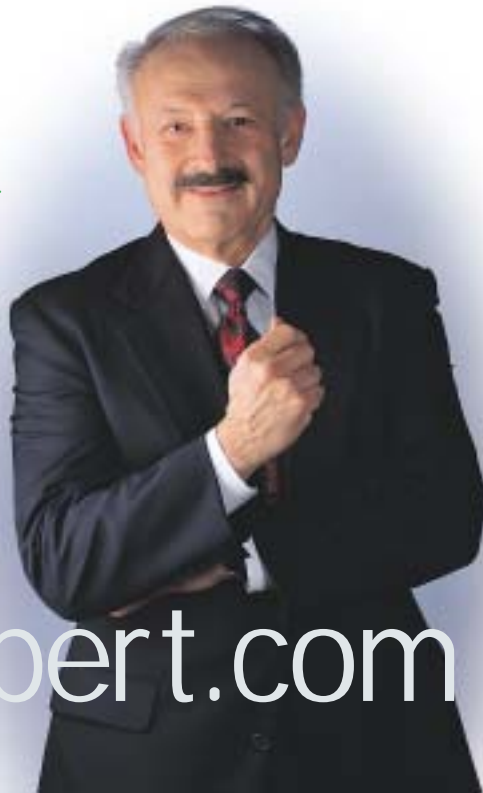
We recognize that each situation has its own unique requirements and are better prepared than any other manufacturer to deliver the right level of reliability at the right price. And we do it through the right combination of knowledge, experience, product selection and service capability.

Someone Nearby To Help Before And After The Sale

Specifying and maintaining a high availability facility support system requires someone who is knowledgeable in all phases of environmental and power protection. And knowing where to turn for ongoing maintenance or service is just as important.

One of the many things that differentiate Liebert from others in our business is local expertise. We have the most extensive sales and service network in the world. Liebert's extensive network of technical sales associates, backed by the industry's largest service organization, enables us to respond quickly to customer needs.

Your needs for protecting critical facilities will change many times in the years ahead — Liebert is the one source you can count on for the tailored solutions to meet this challenge.



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