

OPERATIONAL EFFICIENCY, LIFE SAFETY AND SUSTAINABILITY IN PHARMA MANUFACTURING





Your mission is to deliver products that help improve people's health. This means your organization's buildings must be as smart, effective and efficient as the employees working in them. For decades, Honeywell has helped pharmaceutical companies address the unique challenges of their building portfolios while creating environments that foster industry compliance to help maintain product safety and quality.

The right building automation solutions can help you improve operational efficiency, support sustainability goals and enhance the life safety and security of your entire campus.

IMPROVE OPERATIONAL EFFICIENCY

From your offices and R&D labs to manufacturing and quality control facilities, your buildings do more than house people and processes. Their smooth operations are critical to business continuity and delivering essential treatments. The performance of your building systems can help enable your business plans and support operational efficiency goals.

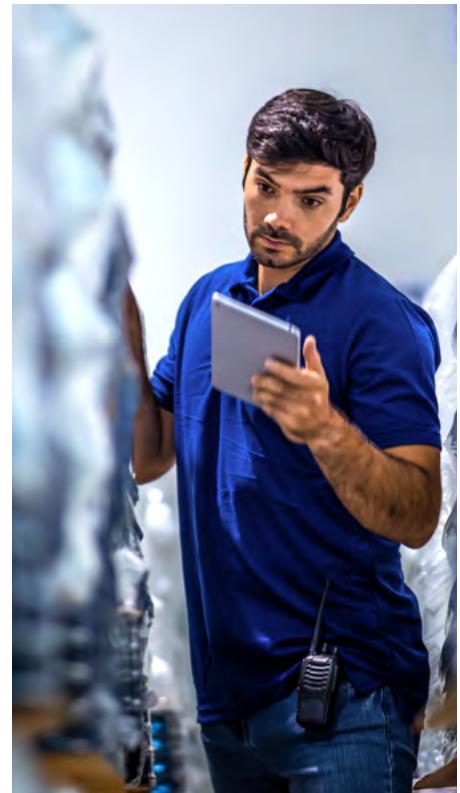
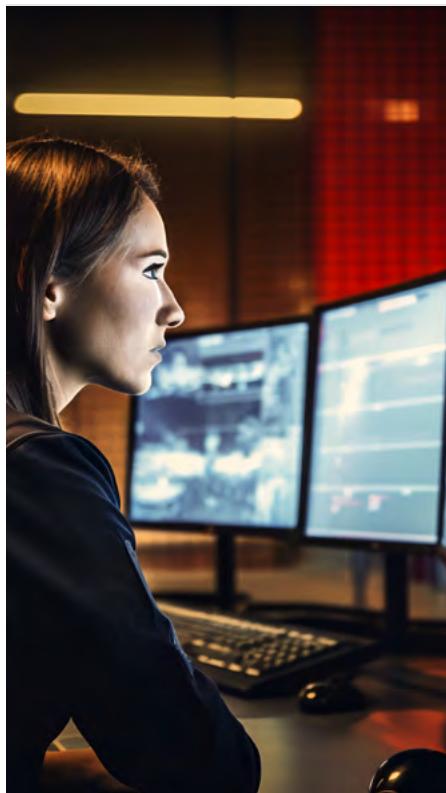
REAL-TIME MONITORING, CLOUD SOLUTIONS AND PROCESS INTEGRATION

Good Practice (GxP) requirements ensure pharmaceutical products are suitable for public use and produced using processes and systems that are accurate, consistent and reliable. New traceability requirements make operational efficiency, quality control management and supply chain visibility more important than ever. Your building operations need to follow suit – and can even help integrate building and non-building systems for better visibility and management to help you better comply with requirements.



HONEYWELL INTEGRATED OPERATIONS

The [Honeywell Integrated Operations](#) platform provides a suite of capabilities to help automate complex workflows, manage energy use, optimize safety and occupant experiences, and deliver analytical insights for savings throughout your building portfolio. Three core solutions – Enterprise Buildings Integrator (EBI), Digital Video Manager (DVM) and Command and Control Suite (CCS) – are designed to promote better decision making by integrating critical building domains and third-party systems in a single platform.



Visualize Security with Digital Video Manager (DVM)

Improve the security of your site with a complete video system designed to integrate new technologies, including the latest IP cameras, video analytics and encryption. [DVM](#) helps you more effectively maintain vigilance and mitigate risks while enhancing the efficiency, integrity, and, above all, safety of your operations.

Integrate Systems with Enterprise Buildings Integrator (EBI)

[Integrate building management](#) systems, fire and life safety, security and third-party systems and equipment in an open, IoT platform. Leverage a powerful, unified interface that uses zoomable site maps designed to promote faster, more intuitive comprehension and interaction.

Coordinate Intelligence with [Command and Control Suite \(CCS\)](#)

Manage complex critical infrastructure using intuitive map-based navigation designed to make critical information more accessible and incident workflows that support standard operating procedures (SOPs) for more efficient responses.



CREATING AN OPTIMAL INDOOR ENVIRONMENT

In pharmaceutical facilities, it's critical to maintain precise temperature, humidity, airflow and microbiological and particulate parameters in clean rooms, manufacturing facilities and long-term storage spaces. Reliable HVAC and other building systems are essential to maintaining proper indoor air quality. Honeywell brings decades of experience in delivering robust and reliable HVAC control.



Honeywell Forge Performance+ for Buildings | Predictive Maintenance

When downtime isn't an option, predictive analytics can help operators anticipate failures before they happen. [Honeywell Forge Performance+ for Buildings | Predictive Maintenance](#) generates alerts that can enable users to pre-emptively take corrective action to potential issues in their buildings. By coupling the software with rapidly deployable wireless sensors to continuously monitor the health of critical rotating assets like motors, pumps, compressors, and gearboxes, you can proactively identify inefficiencies or impending issues and perform root cause analysis. By predicting asset failures before they occur, the technology helps to minimize downtime, prevent costly repairs and optimize the overall operational efficiency of your systems.

Honeywell Building Performance Services

Move away from traditional, on-site service approach to a connected, remote-first approach with [Honeywell Building Performance Services](#). Enabled by our Honeywell Building Operations Center, more than 100 global, remote domain subject experts can identify and resolve issues. By digitalizing the service process, Honeywell can help reduce response times and service truck rolls, provide real-time status updates, improve first-time fix rates, and make the service experience more efficient and resilient.

Phoenix Controls Valves and Controllers

Pharmaceutical companies can count on [Phoenix Controls](#), a Honeywell brand, for precision airflow control systems for critical environments like clean rooms. With Tracel BACnet valve controllers, Venturi valves provide a compliant working environment for clean rooms, standalone labs or entire research complexes. Airflow turndown and flexible configuration options make Venturi Valves ideal for mission-critical environments.

Celeris Valves are high-performance, variable air volume and airflow control valves for fume hood intensive, high-level containment and pharmaceutical manufacturing facilities. Uncompromised fume hood containment and directional airflow support user safety.

SUPPORT SUSTAINABILITY GOALS

According to the SBTi Monitoring Report, between 2022 and 2023, biotech, healthcare and pharma businesses saw the greatest proportional year-on-year growth (222%) of any sector in the number setting science-based targets for greenhouse gas (GHG) emissions reductions.¹

Yet, pharmaceutical facilities face unique challenges in the search for sustainability. Their top priority is to provide consistent and high-quality research and therapies, and maintaining mission-critical environments with climate-sensitive specifications requires substantial energy use. Internal quality metrics and government regulations mean these environments are held to a high standard.

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1. Science Based Targets, [SBTi Monitoring Report 2023](#), July 2024 [Accessed 12 September 2024]

HONEYWELL FORGE SUSTAINABILITY+ FOR BUILDINGS

Whether your goal is compliance, savings, carbon reduction or an increased return on investment, sustainability can be a competitive advantage when you can turn siloed energy data into strategic decisions. Honeywell Forge Sustainability+ for Buildings goes beyond identifying abnormalities and opportunities. It unlocks actionable intelligence to enable users to take corrective actions or stay on course. Advanced control capabilities enable customers to adjust building systems – either manually or autonomously – to take charge of their energy use and carbon emissions.



Honeywell Forge Sustainability+ for Buildings | Carbon and Energy

[Carbon and Energy](#) empowers you to monitor, control and optimize siloed energy and carbon data. The platform goes beyond standard abnormality identification to enable users to take timely corrective actions. It delivers real-time visual analysis of trends, forecasts, key performance indicators, and compliance and reporting, and validates the effectiveness of energy conservation measures.

This advanced platform uses machine learning to optimize HVAC system operations, unlocking siloed energy data for GHG reduction insights and the ability to improve energy efficiency and reduce costs without compromising your building occupants' health, safety or comfort.

Honeywell Forge for Sustainability+ for Buildings | Power Manager

The pharmaceutical industry depends on continuous, energy-intensive manufacturing processes. Even minor power interruptions can halt operations, costing hundreds of thousands of dollars per minute in lost production. [Power Manager](#) can help to reduce costs, support decarbonization goals, improve resilience and increase uptime by monitoring weather conditions, grid status and utility rates to help you manage energy consumption and stay prepared. It integrates on-site generation assets like generators, solar installations and battery storage systems to provide greater flexibility and help you achieve carbon reduction goals.

Energy as a Service (EaaS)

Elevate your energy management strategy with an Energy as a Service delivery model. You can focus on your core business while we take care of the intricacies of energy infrastructure design, construction, and operations management. We handle everything from energy supply to demand management, helping deliver optimal efficiency and project outcomes.

From audit to implementation, Energy as a Service projects and programs are fully funded by Honeywell and a private financier. The financier maintains ownership of the assets for the contract term, while Honeywell guarantees the performance and energy savings. This approach can be used for both energy savings projects and energy or commodity production, such as solar, chilled water, and heating applications. By leveraging private financing, building upgrades can be made without typical CAPEX approvals, reduced assets or liabilities on your balance sheet, and they can be delivered at scale to accelerate progress towards your sustainability goals.

ENHANCE LIFE SAFETY

Honeywell helps you operate buildings that prioritize life safety, security and cybersecurity. Honeywell Building Solutions can help accelerate threat detection, improve emergency responses, manage access and protect operational technologies. We work hard to provide solutions that allow you to rest easy knowing your people, building, assets and data are safe.

WHEN SECONDS COUNT

Every second counts in pharmaceutical facilities when there's a safety or security emergency. Fast response times and reliable hardware can dramatically reduce the chance of injuries, minimize property damage and help operators restore normal operations.

Advanced Detection Technology

Fires can endanger building occupants, destroy valuable assets and cause unplanned downtime.

[Honeywell Advanced Detection](#) solution can provide early alerts in the event of a fire emergency to enable timely investigations of situations and effective responses.

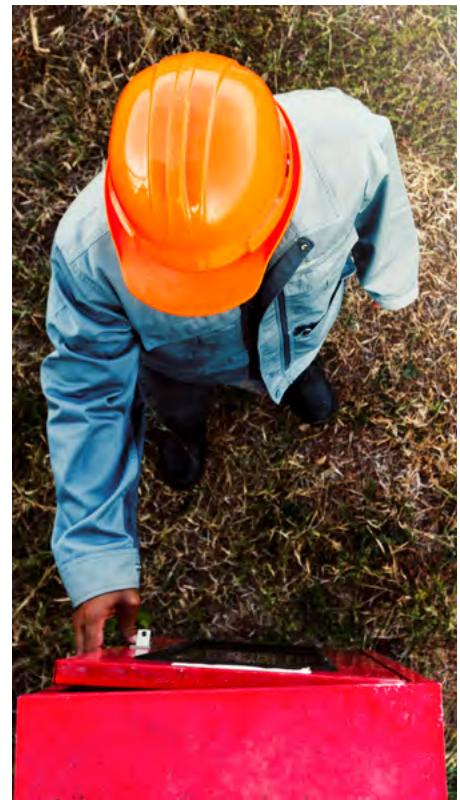
Honeywell pioneered the Very Early Smoke Detection Apparatus (VESDA), which continuously samples air into tiny tubes and tests for minute traces of smoke. The device alerts building managers to potential problems so they can find the source and respond almost immediately. Sites that use lithium-ion batteries also need consider solutions, like the Honeywell Li-on Tamer, that can help prevent thermal runaway before it starts.



Connected Life Safety Services (CLSS)

The [Honeywell Connected Life Safety Services](#) platform provides end-to-end connectivity to fire systems with web and mobile apps that provide a remote view of all facilities to operate effectively, meet regulatory requirements, protect system uptime and create better outcomes.

CLSS enables fire systems facilities managers to deliver enhanced fire safety services while maximizing the performance of Honeywell's proven detection and notification systems. It provides visibility of the issue to allow services teams to be better prepared to resolve the problem before they arrive on-site, reducing disruption and increasing response times.



Honeywell Self-Test Detectors

Traditional smoke sensor testing can be slow, costly and disruptive. High ceilings, common over pharma manufacturing production lines, are hard to access without halting production so that detectors may go untested, putting buildings at risk. With our patented and UL listed technology, [Honeywell Self-Test detectors](#) overcome these obstacles. The devices can introduce small amounts of heat and smoke into the detection chamber, testing both photo and thermal sensors, as well as making sure that smoke entry points are clear. It enables even the largest networked systems to be tested more quickly and with less disruption than traditional systems.

ProWatch Integrated Security Suite

[Pro-Watch](#) is an integrated network of video recording technology, access control and cloud-connected ecosystems. It connects to your building management system for better, more customized control of your facilities from top to bottom. Our integrated suite centralizes real-time data, meets compliance requirements, and helps reduce operating costs while using standard operating procedures to improve incident response time.

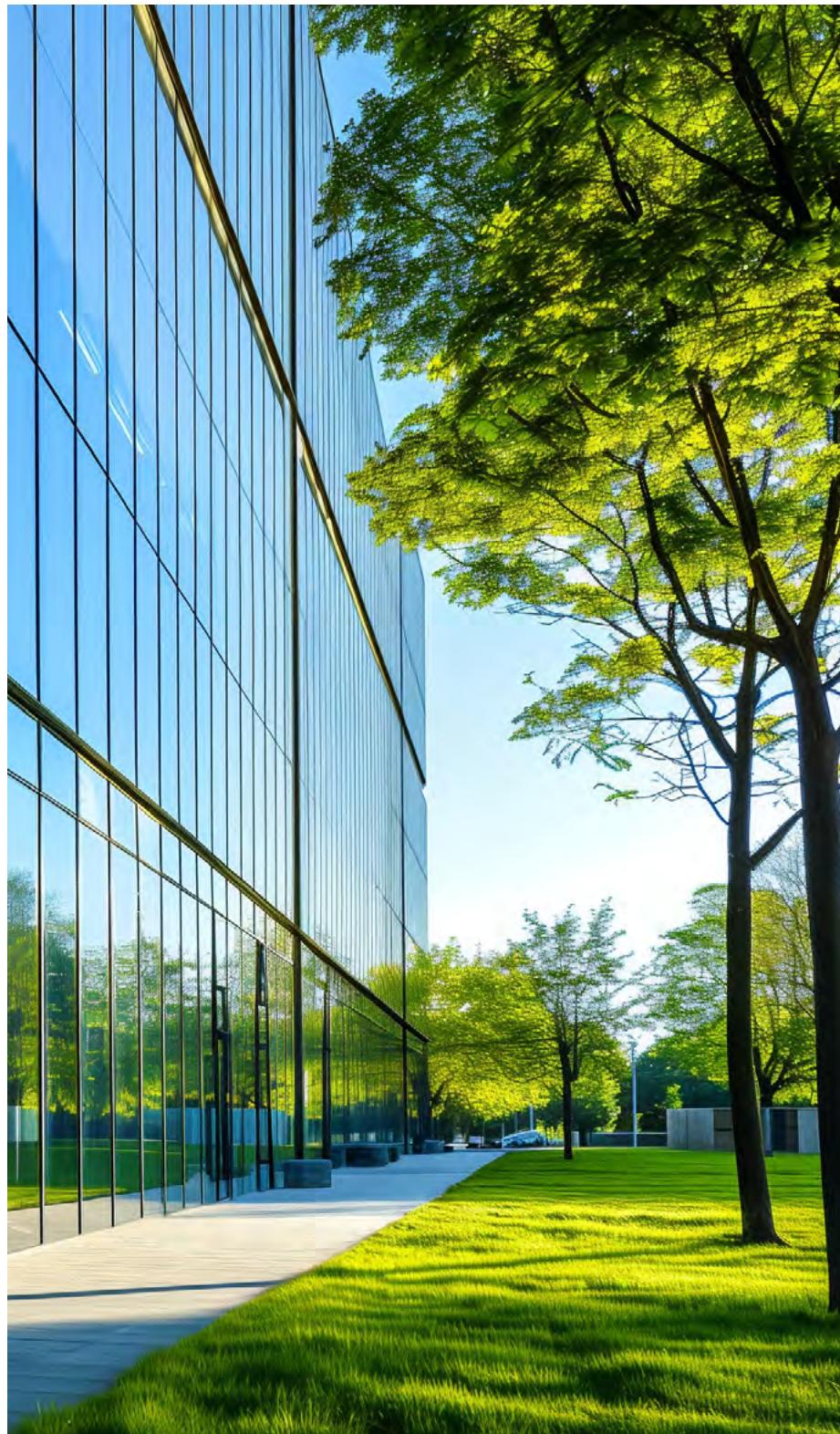
[Honeywell XLS4000 Series Fire Alarm Control Panel](#)

This scalable fire alarm control panel is fully networkable life safety system designed to scale up with any installation to minimize the need for equipment changes and provides secure connectivity with industry compliance.

REDUCE DOWNTIME RISK

It's not just its people the pharmaceutical industry must protect. Safeguarding research and data can also be critical. Cyber attacks are a growing downtime concern. According to IBM2, the average cost of a data breach in the pharma industry was \$4.82 million in 2023 – putting it in the top three sectors by cost exposure.

Attacks aren't just costly; they can threaten to halt the advancement of your R&D trajectory if valuable data and research are compromised or lost.



Honeywell Forge Cybersecurity+ for Buildings

The convergence of information technology (IT) and operational technology (OT) enables real-time data exchange, better decision-making, remote access to site operations and numerous other benefits. It has also made OT networks more vulnerable to cyberattacks. OT attacks target industrial control systems (ICSs) that monitor and control pharmaceutical buildings' assets, processes, events and devices.

[Honeywell Forge Cybersecurity+ for Buildings](#) can help you prevent cyberattacks, avoid costly operational disruptions, protect employees and critical assets, and comply with current and emerging cybersecurity standards.

Our OT-specific Cyber Insights and Cyber Watch software help pharmaceutical companies identify and quantify security risks to set priorities; detect cyberthreats, vulnerabilities and attempted attacks in near real time; and recover quickly if an attack occurs.



GAIN A COMPETITIVE ADVANTAGE

Honeywell understands the pressures on the pharmaceutical industry, from changing government regulation and sustainability goals to managing diverse building portfolios and supply chain issues. To meet these challenges, pharma businesses need an outcomes-based approach to building management that aligns with their goals.

With decades of experience catering to the unique needs of the pharmaceutical industry, Honeywell can help achieve those goals. We can help you improve operational efficiency by integrating hardware, software and services across your pharmaceutical campus or mixed-use facilities.

Contact us today to learn more about how we can reimagine your buildings for a better future.

Honeywell

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