

dry facts

Dawn of a New Era in Dehumidification

Bry-Air® P80^x Dehumidifier

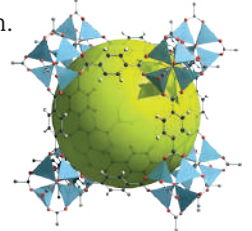


- Performance Enhanced > 25%
- Energy Saved > 50%
- Regeneration at 60°C - 80°C
- Silica Gel replaced by MOF Adsorbent Core
- Shorter Pay - Back Period

**GAME
CHANGER**

For over three decades, silica gel has defined the foundation of industrial dehumidification, delivering reliable humidity control across industries. However, evolving operational demands, longer production cycles, sustainability mandates, and rising energy costs - have redefined expectations. Today, the challenge is not just moisture control but achieving it with precision while ensuring energy efficiency and optimized lifecycle performance.

Advancements in material science have introduced a breakthrough in adsorption technology through metal - organic frameworks (MOFs), a Nobel Prize - recognized innovation. Unlike conventional systems operating at 120°C - 140°C, these next-generation materials enable regeneration at significantly lower temperatures of 60°C - 80°C, fundamentally transforming the energy equation. This shift delivers over 50% reduction in energy consumption and 25% higher performance.



This evolution is redefining system design, efficiency benchmarks, and operational economics. The P80^x, powered by the next-generation MIRACLE™ rotor, with ultra - porous molecular structure translates this material breakthrough into real - world industrial performance - combining precise humidity control with lower energy demand and improved lifecycle efficiency. The focus remains unchanged, but the benchmark has shifted: dehumidification is now defined not just by control, but by how intelligently and efficiently that control is achieved.



Scan the QR code to download

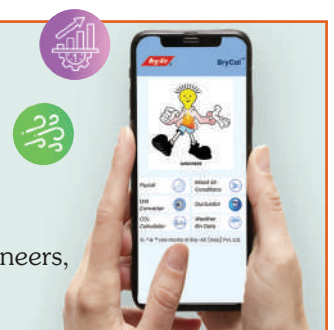
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and the App Store to download.

Your One Stop Shop Mobile Solution for HVAC Calculations

- Developed by Bry-Air, a global leader in air treatment and dehumidification for over 60 years
- Designed for HVAC professionals, engineers, facility managers and consultants





When Gravity Lets You Fly

Imagine stepping into a chamber where gravity loosens its grip. A deep breath. A rush of air. And suddenly, your feet leave the ground.

Inside Gravity Indoor Skydiving, flight isn't imagined - it is engineered. A powerful stream of air lifts the body into freefall, turning precise control into pure exhilaration. Every movement is amplified. Every second feels weightless.

Behind the thrill, precision is already at work.

High-speed air, powerful motors, and enclosed glass operate in perfect balance. Humidity remains invisible. Condensation never appears. The air stays calm, stable, and predictable - no matter how intense the motion inside.

Bry-Air works in silence.

Integrated seamlessly with the facility's air systems, Bry-Air's desiccant dehumidification technology continuously maintains a finely tuned indoor climate - keeping moisture in check, protecting sensitive equipment, preserving clear visibility, and ensuring every flight feels as flawless as the last.

The result is effortless continuity.

Just flight - pure, controlled, unforgettable.

Because when humans defy gravity, engineering is already ensuring the magic never falters.

The result :

- No fog on glass
- No corrosion behind the scenes
- No interruption to the experience.



Rain Room, Sharjah, Where Art Turns Physics Into Poetry.



When It Rains, It Doesn't Pour

Imagine walking into darkness - only to hear the whisper of falling rain. Invisible sensors follow each gesture, pausing the rainfall in perfect sync - turning rain into a responsive dance of light, motion, and silence.

Created by Random International, the installation lets visitors walk through a continuous downpour without getting wet. But behind this serenity lies intricate climate precision. As the water ceases, the air must hold its calm - humidity balanced, temperature poised, no condensation clouding the magic.

Bry-Air dehumidifier works quietly with the air-handling system

The dehumidifier maintains delicate $50\pm 5\%$ RH equilibrium. The result is pure harmony - art and engineering converging to craft an experience that blurs the line between nature and control, emotion and innovation.



www.bryair.com

When **MOISTURE** is Torture

In this column, we share our experience of major application areas where usage of dehumidification is both extensive and essential.

The Hidden Variable in Semiconductor Reliability

Semiconductor manufacturing is advancing at remarkable speed. As chip architectures shrink and complexity rises, precision is no longer measured only in nanometers - it is measured in stability.

Inside modern cleanrooms, air is not simply circulated; it is engineered. Because as devices become smaller, their tolerance for environmental variation narrows.



At the photolithography stage, humidity behaves like condensation on a camera lens - almost invisible, yet capable of distorting extremely fine patterns. Even slight imbalances can influence consistency long before defects appear in final testing.

During wafer cooling, storage, and handling, condensation and oxidation can embed risks that surface later as yield or reliability concerns. These effects accumulate gradually, often becoming visible only after their impact has compounded.

In high-humidity regions or environments with airborne contaminants, this vulnerability intensifies - placing additional stress on equipment and process stability. Humidity in semiconductor facilities is therefore not a background condition. It is a process variable. Maintaining stable dew point conditions across cleanroom zones demands consistency, monitoring, and disciplined environmental control.

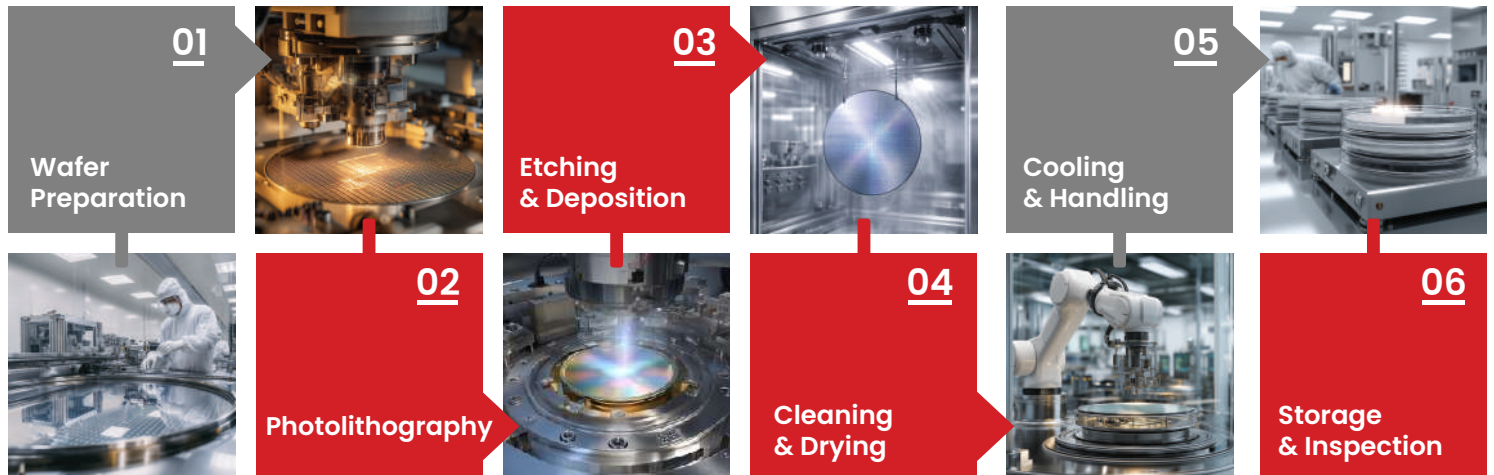
The Bry-Air solution

At Bry-Air, we design air Systems to perform with the same reliability expected from the chips themselves - quietly protecting processes from moisture-driven instability and electronic corrosion. Because in semiconductor fabrication, stability is not support infrastructure. It is production integrity.



Semiconductor Fabrication: Process Stability Across Stages

Highlighted stages represent humidity-critical processes where precise RH and dew point control protect yield and prevent defects.



Enter Bry-Air... exit moisture



Glimpses from our recent events

CII Data Center Summit,
Oct 2025, Bengaluru



Dahej Industrial Expo,
Nov 2025, Dahej



Bry-Air 60 years celebration,
Dec 2025, Mumbai



4th Annual Chemical Labs Quality Control
India Summit, Dec 2025, Mumbai



Khadhya Khurak, Dec 2025, Gandhinagar



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