

AERODRY CONNECT

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Welcome to the Third Edition of Aerodry CONNECT

Dear Partners, Clients & Team,

Welcome to the third edition of **Aerodry CONNECT** - your inside look at how smart auxiliary equipment is shaping the future of plastics processing in India and beyond.

In previous editions, we explored **Crystallisers** and **Gravimetric Batch Blenders** - the essential steps of material preparation. Today, we take you deeper into the third pillar of quality assurance: **Dehumidification**.

As polymer applications demand higher precision and sustainability, the role of effective drying becomes more vital than ever. With our Dehumidifying Dryers, Aerodry offers cutting-edge solutions that save energy, cut scrap, and deliver flawless output across industries.

Let's explore why "Drying Right" is non-negotiable - and how Aerodry leads the way. Happy Reading!



Moisture is Invisible. Its Impact Isn't. Aerodry Dehumidifiers – Engineered for Precision.

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Let's Talk Drying

The Hidden Cost of Moisture - Why Proper Drying Is Non-Negotiable in Polymer Processing?

Moisture may be invisible to the eye, but its effects are glaringly visible in the end product - from surface defects to structural failure.

Many common polymers like PET, PA, ABS, and PC are hygroscopic - meaning they absorb moisture from the air. When these are processed without proper drying, the results can be disastrous.

Risks of Inadequate Drying:

- ⚠ Silver streaks, bubbles, and surface haze
- ⚠ Drastic loss of tensile and impact strength
- ⚠ Color variation and yellowing
- ⚠ Poor bonding in multilayer or overmolded products
- ⚠ Increased rejection and downtime



Quick Fact:

Moisture content as little as 0.05% can degrade the performance of high-end polymers by over 30%.

ROI You Can Count On

- Reduce Scrap: No more rejections due to moisture.
- Eliminate issues like bubbles, streaks, and inconsistent strength
- Faster Material Changeovers: Every 30 minutes saved between batches can yield an extra run per day
- Boost Throughput: Consistent drying = uninterrupted processing.
- Improve Sustainability: Less waste, optimized power usage
- Minimize Maintenance Downtime: One less breakdown per week equals thousands saved in lost production time
- Lower Manpower Dependency: One trained operator can now oversee multiple machines



DID YOU KNOW?

1% excess moisture can degrade polymer strength by up to 30%.

Meet the Lineup

EAD 50-120: Small-Capacity Dryers

- Ideal for drying and pre-heating small quantities of hygroscopic engineering plastics
- Operates in a closed-loop system for consistent drying
- Achieves a continuous dew point below -55 °C, ensuring high drying performance.

EAD 200-1000: Mid-Sized Multi-Hopper Dryers

- Supports single or multiple drying hopper configurations, suitable for moderate throughput needs.
- Offers customizable setups to match specific drying requirements while optimizing energy consumption.

EAD 1000-2000: Large-Scale Dryers

- Designed for high-capacity drying with multiple hopper options, suited for large operations.
- Customizable for the customer's specific requirements, with a focus on minimizing power usage.

ADH Series Drying Hoppers

- Tailored for efficient preheating and drying of hygroscopic polymers.
- Features a uniform air distribution system that accelerates drying and improves consistency.
- Customizable in stainless steel or aluminum, with capacities ranging from 25 L to 4,000 L.

Engineered Dehumidifying Dryer (EAD – Multiple Hopper)

- Built for handling recycled or sticky polymers—like PET, PTFE, TPE, TPU, PBT, Acetal, Cellulose, Acetate - often challenging due to hygroscopic nature.
- Custom systems to meet specific project requirements.

Capable of delivering -60 °C dew point, with features like agitator-based drying hoppers, flow meters, energy-saving modules, and online dew point monitoring.

You don't just save costs - you protect future revenues.

Excellence Defined

Uncompromising Quality, Every Time



Technical Highlights

- Dew Point Control up to -60°C → Ultra-dry air for moisture-sensitive polymers (PET, Nylon, PC).
- Energy-Efficient Technology → Saves up to 30% power compared to conventional systems.
- Modular Design → Scales from lab-scale applications to high-volume extrusion lines.
- Smart Controls → Real-time monitoring, alarms, and data logging for maximum process reliability.
- Eco-Mode → Adaptive drying that cuts energy when throughput is low.

Moisture is Invisible. Its Impact Isn't

Drying polymers right before processing makes all the difference between average and excellence.

Common Drying Mistakes That Cost You Time & Money

✗ Mistake	💡 Impact	✓ Aerodry Advantage
Over-drying materials	Brittleness, degradation	Precision PLC + dew point monitoring
Relying on ambient drying	Inconsistent moisture, poor surface finish	Closed-loop system unaffected by humidity
Incorrect hopper sizing	Material blockage or underperformance	Customized hopper options (25–4000L)
Lack of dew point control	Moisture not truly removed	-55°C to -60°C dew point standard
Ignoring material-specific temps	Warping, discoloration	Pre-programmed drying recipes



DID YOU KNOW?

Some polymers, like polycarbonate (PC), can absorb moisture from air in under 15 minutes - meaning even short delays after drying can ruin a batch.



Why Drying Matters in Polymer Processing?

Ever noticed how even the smallest amount of moisture can ruin a perfectly good plastic part? That's because resins and moisture don't mix well. The right dryer ensures your process stays efficient, your resin stays dry, and your finished products stay flawless.

Here's a quick comparison between Hot Air Dryers and Dehumidifying (Desiccant) Dryers:

Hot Air Dryers

- Dry only the surface of resins, making them suitable for non-hygroscopic materials.
- Simple to operate, low-cost, and energy-efficient for basic drying needs.
- However, they lack precise humidity control, meaning results can vary with seasonal and weather conditions.

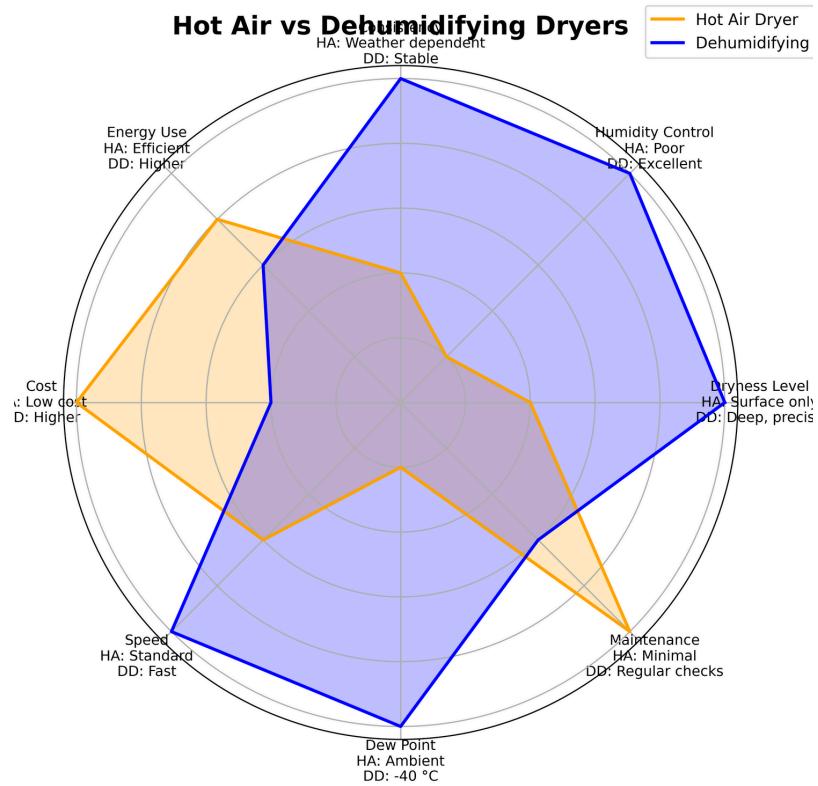
Dehumidifying (Desiccant) Dryers

- Deliver deep, precise drying - a must for hygroscopic resins like PET, Nylon, and ABS.
- Offer excellent humidity control, achieving dew points as low as -60 °C, ensuring consistent drying regardless of the environment.

Require higher capital, yet reduces the need for costly re-drying and boosts processing efficiency.

So, what's the takeaway?

- Use Hot Air Dryers when simplicity and low costs are key.
- Choose Dehumidifying Dryers when consistency, speed, and high-quality results matter most.



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Global Reach, Local Excellence

At Aerodry, we take pride in being a trusted partner to industries across the globe. Our mission goes beyond supplying equipment - we empower our clients with advanced technologies that enhance productivity, ensure precision, and foster innovation.

By combining engineering expertise with a deep understanding of industry challenges, we deliver solutions that not only optimize performance but also create long-term value. With every project, we aim to strengthen our customers' competitive edge and contribute to shaping a smarter, more efficient future for manufacturing worldwide.

Aerodry at K Show 2025

Join us at the heart of the global plastics industry to experience cutting-edge technology, smart automation, and sustainable solutions that are driving the future of plastics processing.

Whether you're looking to optimize your production line or seeking smart automation partners – we're ready to connect, collaborate, and create solutions together.

Let's shape the future of plastics together !

See you at **Hall 10 | Stand H52**

 8th to 15th October 2025

 Düsseldorf, Germany



Let's Talk Drying

Looking to Upgrade or Optimize Your Dehumidifying Dryer System?

- Speak to our application team
- Custom solutions for injection, extrusion, blow molding, and more
- Unlock the full potential of your equipment with our cutting-edge drying technology

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