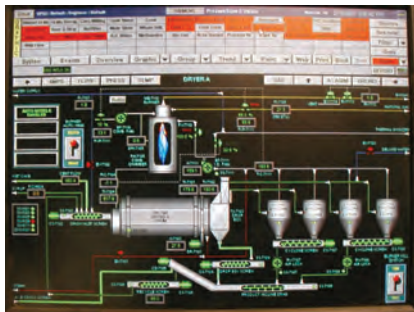


# Rotary Drying & Conditioning Equipment

*Smart solutions for custom industrial applications*

ICM offers practical solutions for drying, cooling, and conditioning needs. We have leveraged our extensive background in grain, fiber, and particulate processing to develop a product line that is custom-designed and manufactured to meet your specific conditioning needs. We are confident our precision engineering and durable construction will produce a system that will exceed your expectations. From needs analysis to installation to on-site technical support and parts replacement, ICM stands ready to assist you throughout the life of your dryer or cooler. **We look forward to serving you.**



*Optional control integration is designed for ease of use.*



*the energy of innovation™*



## Full-service solutions with a proven history of results

ICM is a full-service provider that can offer you design, manufacture, installation, maintenance, and repair services for your entire drying system. Our services cover not only dryers and coolers, but also conveyors, cyclones, emissions control, buildings for housing dryer systems, as well as buildings for storage and loadout systems.

With more than 340 dryer systems designed, built, and installed in more than 150 plants across North America since 1995, ICM couples superior drying technology with an unmatched experience base to design complete state-of-the-art turnkey solutions.

**We don't simply take orders** – we work closely with every client to make sure the solutions we propose are smart investments, both for now and for the future. Our blend of knowledgeable employees, quality equipment, and comprehensive services makes management of your ongoing conditioning needs as simple as picking up the phone. And we've leveraged our size and position in the industry to aggressively negotiate supplier agreements to offer competitive pricing.

To further enhance our capabilities, ICM has developed relationships with respected service providers across a wide spectrum of industries to provide comprehensive field support services.

## Dryers, conditioners, and cookers

### Rotary Steam Tube Design

No matter what your process requires, ICM rotary steam tube dryers provide indirect heat transfer for enhanced control of the dehydration process. Additional features of the ICM steam tube dryer include:

- Low sweep gas volume
- Optional purge seals
- Low temperature capabilities
- Hot flue gas recovery
- Precise movement (radial and axial)



*Uniform internal tube placement provides a gentle conditioning environment – your product never touches direct heat source.*

### Indirect- and direct-fired dryers

ICM gas-fired dryer design provides for superior strength and durability, fail-safe safety controls, and enhanced performance. They can be engineered to use alternate fuel sources. Direct-fired design is ideal for dehydrating fine particles and indirect-fired design is best for products sensitive to combustion.

## Coolers and conditioners

ICM offers varied solutions for cooling product after drying.

- Rotary Air Coolers
- Water Tube Coolers
- Pneumatic Conveyor Cooling



## Applications

Our equipment is a valuable asset in conditioning applications across a broad base of industries, including:

- Torrefaction
- Ethanol
- Oil seed
- Chemicals
- Coal
- Woody biomass
- Grain
- Plastic
- Rubber
- Rendering plants
- Manure
- Sewer sludge

### Additional Services:

- Emissions control equipment
- Centrifuges, conveyor, cyclone integration
- Electrical/automation control design
- Piping design
- Installation services
- Outage services
- Maintenance services, inc. CMMS
- 24/7, 365 days/year customer service

## On the phone or in your plant, ICM will be there for you

For a comprehensive list of industries served and additional product applications, visit us online at [www.icminc.com/rotary](http://www.icminc.com/rotary).

Or call our Customer Service department at **877.456.8588**



## Custom equipment

ICM's employees pride themselves on our reputation for developing creative and efficient drying solutions for challenging objectives. We will work hand-in-hand with you to develop a customized system to meet your equipment conditioning needs. Our systems provide:

- Resolution of complex material conditioning needs
- Flexibility of materials: Carbon or stainless steel, or corrosion-resistant alloy metal
- Sizing for optimum performance

## Superior design coupled with quality workmanship

### PRECISION ENGINEERING

- Detailed sizing calculations ensure proper sizing for required throughput, moisture levels, and retention
- Available progressive finite element analysis provides assurance to design reliability
- Innovative equipment configuration is designed for ease of use, making quick work of maintenance and parts replacement
- Proprietary internal flighting optimizes material flow to reduce fouling while providing maximum heat transfer. This makes our dryers an excellent option for hard-to-dry materials

### QUALITY MANUFACTURING

- Heavy-duty construction with quality materials ensures long equipment life and low-maintenance, trouble-free operation, along with lower long-term capital costs
  - » Exacting standards for manufacturing ensure precision movement, extending conditioner life
  - » Proprietary purge seal provides for efficiency in high-pressure applications
  - » Specialized tire and gear mounting allows differential at expansion between shell and tire/gear
  - » Optional fully machined heavy shim bands provide precise and minimal axial run outs
  - » High-grade forged steel tires, trunnions, thrust roll components
- Designed to satisfy YOUR customers
  - » Proven final product consistency and quality
- Designed to satisfy YOUR employees
  - » ICM equipment is safe equipment. Manufactured with an array of built-in safety features, our systems incorporate easy-to-use control interfaces to reduce the chance of operator errors



*Proprietary flighting design in our indirect- and direct-fired dryers offers even heat distribution for uniform processing of hard-to-dry materials.*

### UNPARALLELED SUPPORT

- Dedicated customer support department offers 24/7, 365 day/year emergency support. We're ready to serve you with immediate technical advice
- Responsive field service staff is supported by an extensive \$10 million spare parts inventory and a fleet of trucks and company aircraft for rapid mobilization capabilities
- Equipment is backed by solid warranty with extended warranty option available

## ICM solutions please your accountant & Mother Nature

As we develop a scope of work for our clients, we often uncover unique opportunities to further reduce energy consumption by taking advantage of existing in-house or nearby over-the-fence energy resources to help power your system. We have extensive experience in energy balance and steam loads, and we look forward to working with you to discover opportunities to recycle energy within your facility.

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