



# TD-SERIES DESICCANT DRYERS

# THERMOPLASTIC DRYERS FOR PLASTIC MATERIAL PROCESSORS

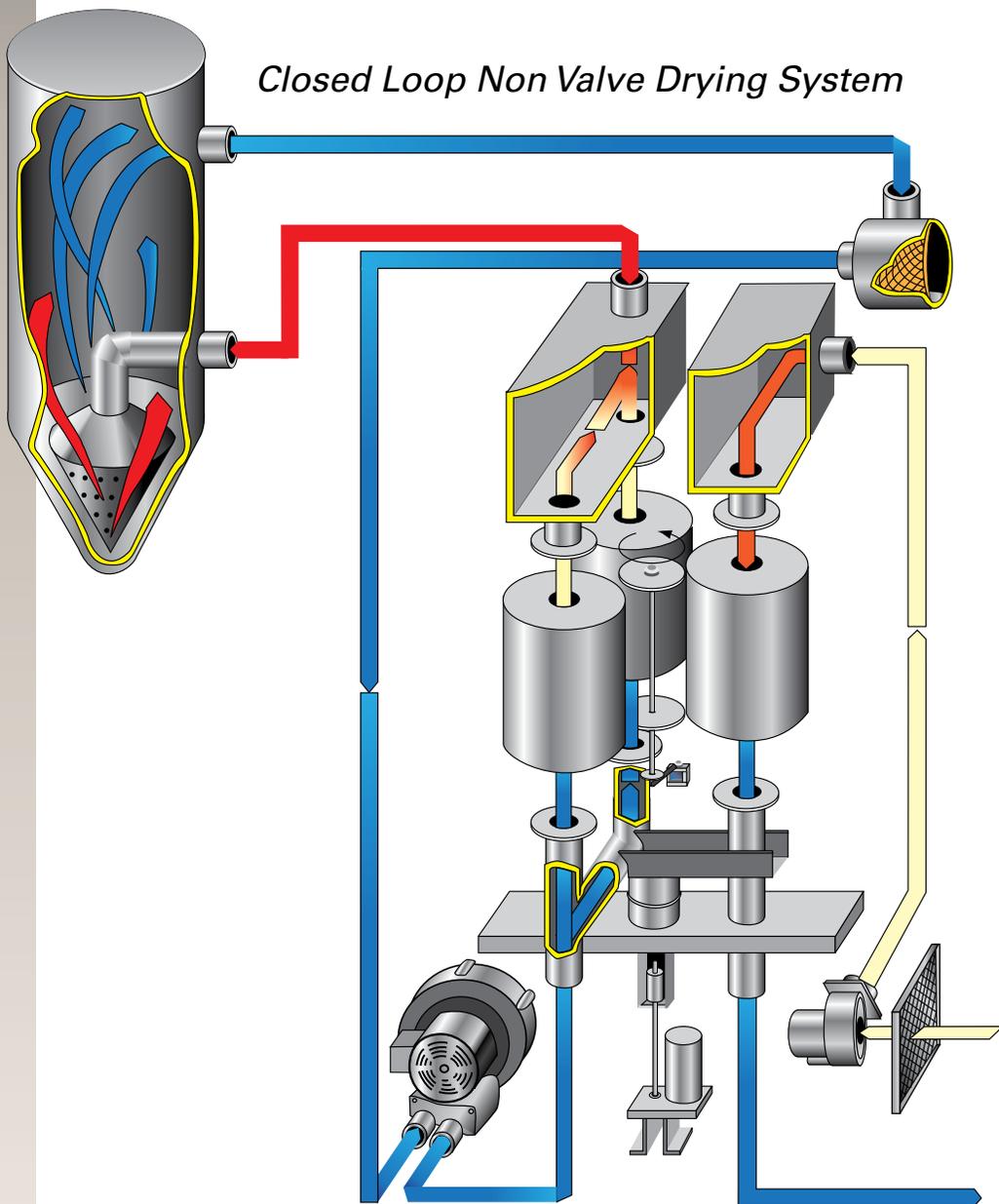
Thoreson McCosh has been a leader in providing low-maintenance material handling systems since 1947. Our experienced team of engineers and technicians are dedicated to providing our customers with the finest drying, blending and conveying equipment possible. Since we manufacture nearly 40 different types and sizes of efficient, cost-effective dryers, you're certain to find the system that best suits your specific drying needs and requirements.

The Thermal-D's totally closed loop non valve drying system is engineered to prevent moisture, dirt, and other substances from contaminating processed materials. The ProTek microprocessor controlled dryingsystems is completely automatic and self diagnostic.

The indexing triple desiccant bed design provides greater absorbing capacity and efficient drying, while using less power and desiccant. This design also allows the dryer to use the residual regeneration heat that is recovered from cool-down to preheat the process-air flow — making the unit extremely energy efficient. The desiccant beds feature horizontal flow, which prevents bead fluidization and desiccant abrasion. Cool-down takes place in the process steam, which creates an economical, extremely dry desiccant with increased moisture absorbing capacity. With this revolutionary system, heat that would normally be wasted is now reclaimed and used in the drying process.

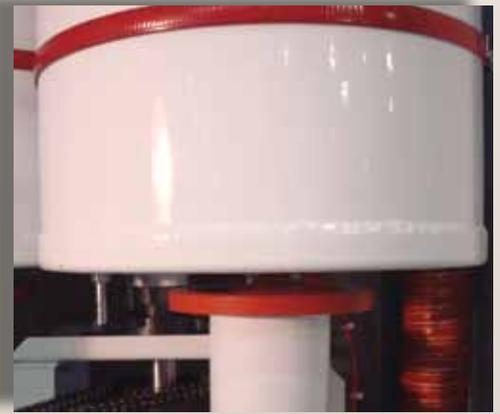
## FEATURES

- Heat energy recovered from the regeneration cycle is reclaimed and re-introduced into the process air-stream for increased energy efficiency.
- Counter-flow regen-air regenerates the desiccant bed more efficiently, assuring a constant effective process air dew point of  $-40$  degrees or lower — even under the most severe drying and humid atmospheric conditions. Regen-air is filtered to prevent desiccant bed contamination during regeneration.
- The material drying hopper fits all molding machines / extrusion lines and is designed to eliminate material and air channeling. The diffuser cone provides drying to the extreme bottom of the hopper. This eliminates wasteful and cumbersome material purge and re-loads any undried resin back into the top of the hopper during start-up.



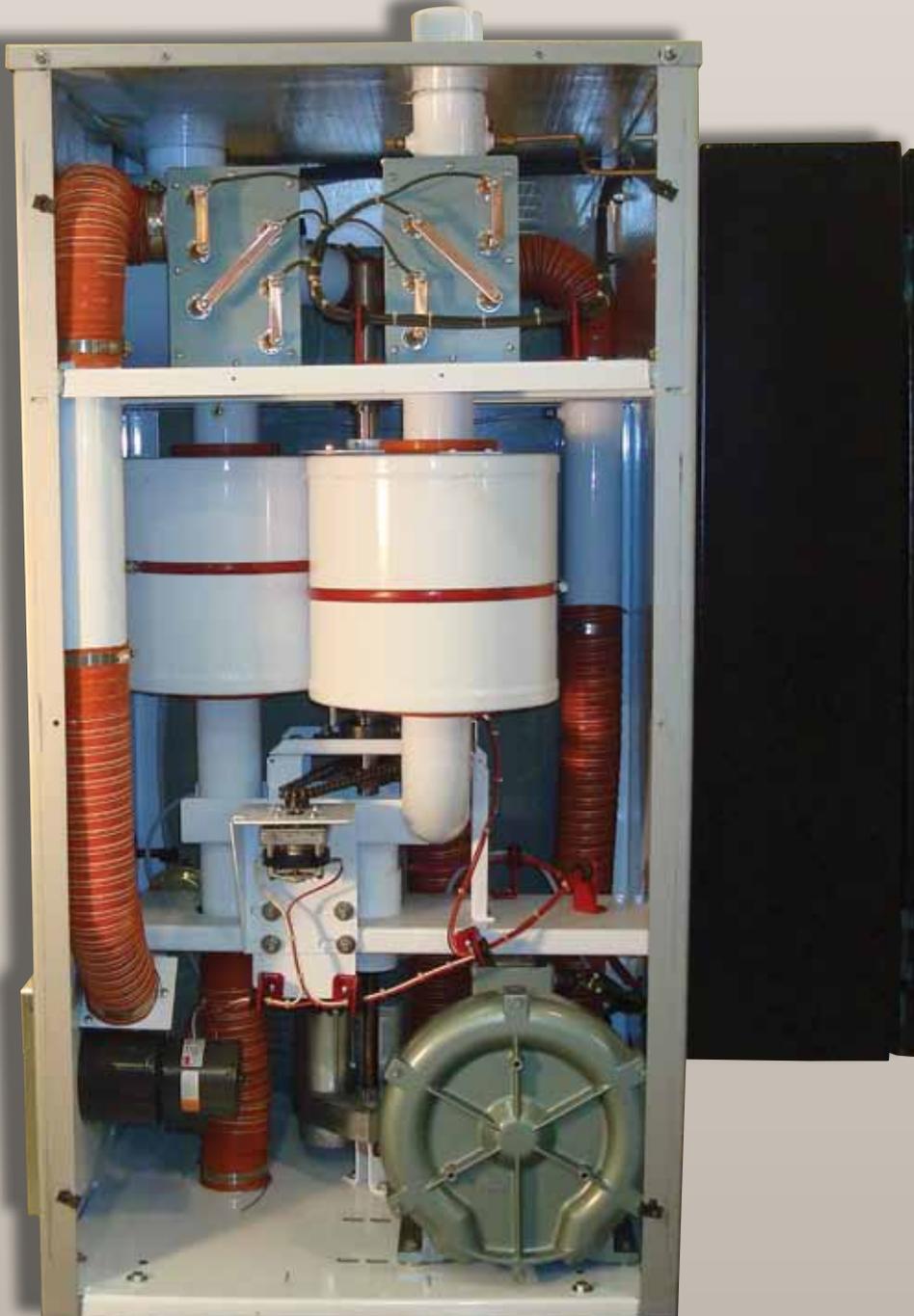
## THORESON MCCOSH'S PROTEK DRYERS INCLUDE:

- The triple bed indexing system that has no rotating or moving seals and its airflow valves have been completely eliminated.
- High-pressure blowers which provide more effective process air flow to material and desiccant bed regeneration.
- Extra large filters that provide filtration of drying air while preventing desiccant air contamination.
- A bed index rotation indicator.
- The cylindrical desiccant bed provides increased moisture-absorbing capacity.
- Efficient static seals that prevent leakage and cross air contamination between desiccant beds while eliminating rotational seal wear and lubrication problems.
- The vertical manifold unclamping system eliminates load on the rotate drive motor during desiccant bed indexing.



## DRYER UNIT FEATURES:

- Energy-saving automatic switching of desiccant beds when dew-point level would affect drying efficiency. This option pays for itself by eliminating unnecessary regeneration cycles when material moisture level or atmospheric conditions reduce drying requirements.
- Process and regeneration heater-bank function indicators.
- Alarm to ensure correct blower rotation.
- Alarm that sense filter condition.



## PROTEK CONTROLS

The ProTek easy-to-program HMI Interface Control Panel keeps the operator completely informed of the current condition of the resin material being processed.

Controls are mounted in an oil and dust tight NEMA-12 electrical enclosure. Organized for simplicity and efficiency, the control panel has plug-in modules, numbered terminal-strips and clear, concise, ladder-type wiring diagrams. All operator interface controls for the ProTek are on the front panel, so the door remains closed during operation.



### STANDARD FEATURES

- Dewpoint Meter with Energy Saving Shift Control
- Graphing of Dewpoint Readings Over an 8 Hour Period
- Graphing of Four Temperature Readings, Process, Return Air, Regeneration, and Regeneration Exhaust
- Easy to Follow Flow Schematic Monitor Screen
- 7 Day Timer with Multiple Temperature Setpoints
- Dirty Filter Alarm
- Regeneration Heater Fault Indicator
- Blower Direction Indicator
- High Dew Point Alarm

### DRYER OPTIONS DELTA T:

By continuously monitoring hopper air inlet and air outlet temperatures through a Delta T function, you are assured dried resin for process or allowed to reduce the process temperature to a maintenance set point — avoiding material over dry and material degradation.

### DRYER UNIT OPTIONS:

#### • REGENERATION POWER SAVER

A power saving regeneration heater shut down service that senses when the regeneration cycle is complete.

#### • HIGH HEAT

High process air heat with return air after cooler for high temperature material dry applications.

#### • LOW TEMPERATURE

Process air precooler for low temperature material dry application

Manufactured by Thoreson McCosh offers efficient, cost-effective, energy-saving drying performance, and is ideal for:

- Centralized, simultaneous material drying of multiple resins.
- Large throughput requirements of 2000 pound or more.



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