

High Performance Products For The Plastics Industry
Backed By A 2 Year Warranty

Controllable Dew Point Drying Maintains Material Flexibility

- **Set Dew Points from 0° to - 40° F.**
(Optional Dew Point Measurement to -112°F)
- **Protects Part Flexibility**
- **Operates Like Standard Dryers**
- **Automatic Desiccant Regeneration**
- **PLC Control**

Moisture Manager* Dryers allow processors of certain homopolymer and copolymer polyamides, such as nylon 6 and 6.6 and some polyesters, to remove excessive moisture without over-drying. Such materials require some moisture content to maintain desired impact resistance and flexibility.

The dryers include special dew point controls and monitoring, diverter valves and air circuit configurations, plus a PLC processor to control all dryer programming, monitoring, and performance. Models are available for drying from 25 lbs/hr. through 4,000 lbs/hr. in either electric heat or indirect, gas-fired configurations.

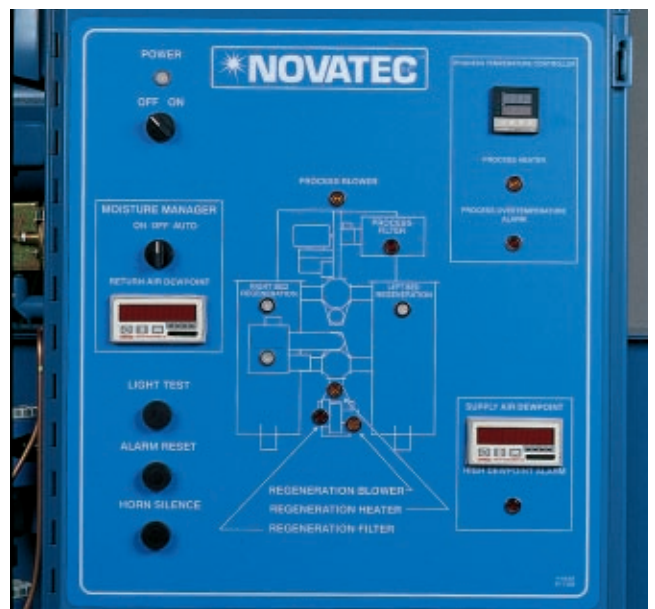
Simple to Program. Reliable Performance.

The desired dew point level, from 0° F. to - 40° F. is programmed with drying temperatures. Dew point sensors are provided on both the process and return air circuits to monitor both dryer and material dew points, signalling a change in process air flow if the dew point moves from set-point.

The closed loop drying system includes dual, solid desiccant towers, ensuring maximum air contact time to quickly achieve dew point levels. The “on-process” desiccant tower is automatically regenerated when desiccant nears saturation, while the second, “freshened” tower is brought on-process. Externally mounted desiccant regeneration heaters simplify maintenance.



Controllable dew point dryers prevent over-drying certain polyamides and polyesters.



The PLC processor has a graphic, schematic display of all major component functions, including temperature settings, dew points and other process variables. These are also available on the PLC's communication port.

* PATENT APPLIED FOR



Central Drying System utilizing Moisture Manager Dryer.

A Variety of Processing Applications.

Moisture Manager dryers can be provided as conventional, beside-press, dryers. The process air blower can be optionally mounted on a floor stand, near the drying hopper, allowing the dryer to be positioned some distance from the hopper.

As a Central Dehumidifying System, the dryer delivers unheated, controlled dewpoint air to several, remote drying hoppers fitted with heater/blowers. Multiple dewpoint monitors can provide dewpoint control at individual hoppers.

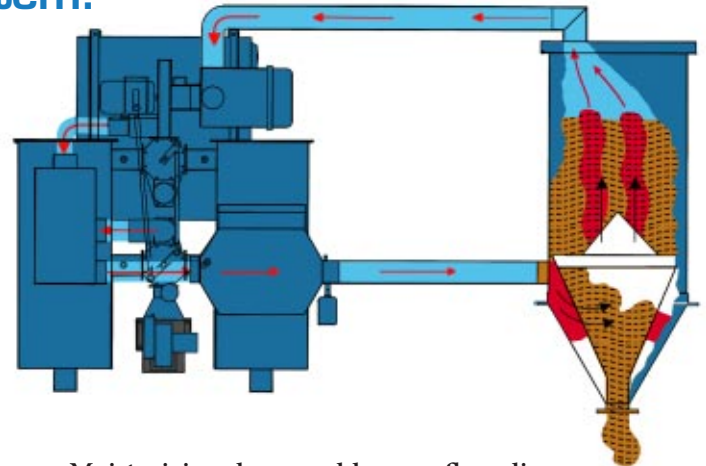
Novatec Moisture Manager dryers can also provide dry air for central conveying systems.

Novatec's Closed Loop Drying System: Proven Best Year After Year

In the NOVATEC MOISTURE MANAGER "closed loop" drying system moisture laden air exits from the hopper where the dew point is monitored by the return air dewpoint sensor. The air passes through a flexible hose and enters the two-stage filter where virtually all fines carried from the hopper are trapped. A set of valves then allows the process air to be directed into the desiccant bed or to the by-pass mode depending on the dewpoint setting that has been programmed into the controller. This air is then directed to the process heater, which heats the air from the dryer to the temperature selected for the material being processed. Another flexible hose delivers the clean dry air to the hopper where the air diffuser, insures uniform drying without channeling. A second sensor monitors system dewpoint and feeds the information to the PLC for system dewpoint indication.

Simultaneously, the desiccant in the second tower is being regenerated. Ambient air is drawn through the regeneration filter and heated by the regeneration heater. The heated air then passes through the lower valve which directs it into the off-line tower and through the desiccant. The heated air purges the trapped moisture from the desiccant, exits through the upper valve and is released into the atmosphere.

When the regeneration cycle is complete, the regeneration heater and blower are de-energized and the desiccant is



Moisturizing dryer and hopper flow diagram

allowed to cool statically before the next adsorption cycle begins. This is unlike competitive units where the regeneration blower runs continuously using moist ambient air to cool the desiccant. Novatec's static cooling concept prevents any moisture build-up and completely eliminates dewpoint "bumps" during changeover.

Static cooling also results in long cycle times, a minimum of 4 hours per tower, which greatly reduces power consumption during regeneration, reduces maintenance and component wear to minimum levels, and significantly extends desiccant life.



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