



### **ADL LARGE DEHUMIDIFYING DRYER**

AEC's ADL Series dryers are designed to dry (remove 1% water per hour) hygroscopic pelletized plastic material, when used in conjunction with an appropriately sized drying hopper. The unique energy-efficient design features Hi-Core™ Technology, which places the electric heating element inside the hollow core of the desiccant canister, allowing faster regeneration and cooling of the desiccant in less than one hour.

All models are available in three temperature ranges, standard, low and high heat. Expandable control platforms are available to complement your process.

### **STANDARD FEATURES**

- Standard off-the-shelf programmable controller and 1/16 DIN digital temperature control
  - Standard units 180°F to 250°F
  - Low temperature units 120°F to 180°F
  - High temperature units 250°F to 400°F
- Unique Hi-Core™ desiccant canister design lowers energy costs 10-15% and reduces regeneration time to less than one hour
- Sizes up to 3000 cfm (5100 m<sup>3</sup>/hr) are available for central or beside-the-press operation
- 13X molecular sieve desiccant offers high adsorption and quick regeneration
- Single electrically-actuated air valve is more reliable than traditional pneumatic two-valve design
- High-pressure centrifugal blower delivers stated airflow under load. (High-performance dryers are equipped with multiple regenerative blowers)
- Convenient access panels allow easy access to process, regeneration and air filters
- Double-wall constructed stainless steel heater boxes provide maximum thermal efficiency

### **OPTIONAL FEATURES**

- Gas-fired heat exchangers for both process and regeneration can reduce your energy costs 50% to 85% compared to electric heater models
- Advanced controller (includes all the features of the basic control, plus a touch-screen interface)
- Low-heat model 120°F-180°F (includes a pre-cooler to cool dry air before entering the process heater)
- High-heat model 250°F-400°F (includes insulated process delivery air hose, additional heaters or larger burner/gas heat exchanger, electronics to support this operation, and a return air after-cooler to maximize the efficiency of the dryer)





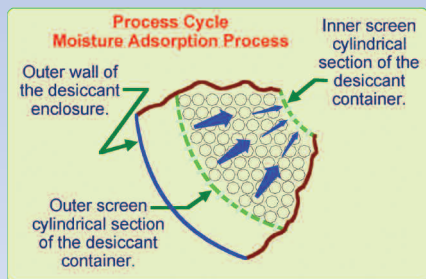
The AP1 PLC controlled system includes a touch-screen interface.

## AP1 CONTROLLER FEATURES

- Touch-screen interface provides clear information about desiccant bed regeneration, process temperature, and dewpoint
- Off-the-shelf programmable controller monitors and controls the drying and conveying system
- Allows simple start-up, shut-down, and adjustment of drying and conveying parameters
- Integral PID temperature control with display of setpoint and actual process temperature
- Display of "actual" dewpoint
- Alarm indication also includes high temperature conditions, dirty filters, and heater failure
- Dryer "auto shutdown" sequence
- Loop break alarm
- 7 day timer
- Material over-drying protection

## AP1 CONTROLLER OPTIONS

- Ethernet module



## STANDARD CONTROL FEATURES

- Off-the-shelf 1/16 DIN temperature controller with auto tune and PID
- Programmable logic based control system
- Enclosure meets NFPA 79, UL and CUL electrical standards
- Non-fused disconnect
- High process temperature alarm light
- Temperature controlled regeneration with safety

## STANDARD CONTROL OPTIONS

- Audible alarm with silence button
- Digital dewpoint monitor to -40°F



The standard control system features digital temperature control.

## HI-CORE TECHNOLOGY

Hi-Core™ design (patent pending) locates electric or gas-fired heaters directly within a hollow core desiccant canister for maximum thermal efficiency.

During drying, air from the blower enters the canister from the large surface area on the outside of the cylinder. As the air moves towards the core, its pressure and velocity increase, aiding the moisture adsorption process.

During regeneration, heated air pressurizes the core of the desiccant canister. As the air moves outward through the canister, it loses pressure and velocity. The air slows down and expands, increasing its contact time with the desiccant and resulting in very efficient regeneration.

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