



HIGH CAPACITY DEHUMIDIFYING DRYERS

600-3000 CFM HIGH CAPACITY DEHUMIDIFYING DRYERS

Sterling designed the SDA High-Capacity dryers with a unique desiccant canister that improves thermal efficiency, lowering energy costs by 10-15% and reducing regeneration time to less than one hour. Available in sizes up to 3000 cfm (5100 m³/hr), the SDA dryers will operate effectively centrally or beside the machine.

Keeping flexibility in mind, we designed the SDA Series dryers to suit your needs. All of the SDA dryers are available in three temperature ranges—standard, low, and high temperature. Control platforms are available to complement your process. The dryers are effective in the harshest environments, achieving -40°F dew points even in high-humidity.

For even greater efficiency, the SDAG models feature gas-fired heat exchangers for both process and regeneration. Our gas-fired dryers can reduce your energy costs 50% to 85% compared to electric heater models.

Features

- 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) Peripheral blowers are available
- Convenient access panels allow easy access to process, regeneration and air filters
- Double-wall constructed stainless steel heater boxes provide maximum thermal efficiency





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



The standard control system features digital temperature control.

AP1 Controller Features

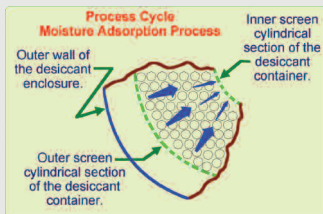
- Touch-screen interface provides clear information about desiccant bed regeneration, process temperature, and dewpoint
- Off-the-shelf programmable controller monitors and controls the drying and conveying system
- Allows simple start-up, shut-down, and adjustment of drying and conveying parameters
- 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

Standard Control System Features

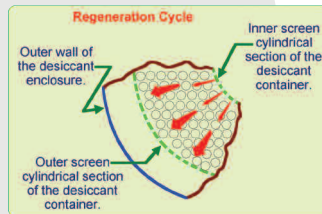
- Touch-screen interface provides clear information about desiccant bed regeneration, process temperature, and dewpoint
- Off-the-shelf 1/16 DIN temperature controller with auto tune and PID
- Programmable logic based control system
- Enclosure meets NFPA 79, UL and CUL electrical standards
- Non-fused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

Standard Control System Options

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



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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