



# WHITLOCK-MATERIAL HANDLING

## WD SERIES HIGH CAPACITY DEHUMIDIFYING DRYERS



**These high capacity models feature twin plenum chambers in each tower for even air flow across desiccant beds. Skid mounted construction lowers rigging, installation and maintenance costs.**

*AEC WD Series High Capacity Dehumidifying Dryers feature 350-500 CFM (595-850 m<sup>3</sup>/hr) ratings and offer user friendly off-the-shelf controls. The unit provides a compact frame with minimum moving parts, easy accessibility for maintenance, and a small footprint. Every dryer is factory-tested before shipment to assure reliable performance for years to come. Optimal desiccant utilization guarantees lowest dew point.*

### OFF-THE-SHELF CONTROL PACKAGE

*The Control Panel features illuminated flush-mounted buttons for protection. The buttons are color-coded to indicate graphic functions. Off-the-shelf controller displays process, actual, and regeneration temperatures. Standard high-visibility, temperature compensated dew point monitor features adjustable "Dew Point Extend" limit for maximum efficiency.*

*Primary alarms offer visual indication of:*

- High or low process temperature
- High or low regen temperature
- High dew point
- Process or regen blower failure

*Optional Alarms*

- Dirty process and regen filter
- Control valve positioning error



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## WD SERIES HIGH CAPACITY DEHUMIDIFYING DRYERS

WD Series dryers produce a continuous supply of hot, dry air to the drying hopper where moisture is absorbed from hygroscopic materials.

### DRYING CYCLE

The closed loop system maintains a constant rate of drying by alternatively operating desiccant beds. The beds contain moisture absorbent, molecular sieve. Cool, wet air returns from the drying hopper and passes through cartridge filters. Before entering the blower, the air returns through the upper control valve and into the onstream desiccant bed. Molecular sieve desiccant in the bed absorbs moisture from the air which proceeds through the lower control valve, and into the process air heater before returning to the drying hopper.



### EASY MAINTENANCE

Rear view of these WD Series dryers allows easy access to component parts for maintenance.

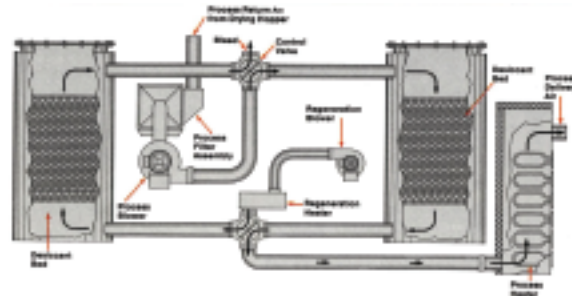
**HEATERS:** process (A) and regeneration (B) heater are easily accessible.

**BLOWERS:** process (C) and regeneration (D) blowers are positioned for easy reach.

**FILTERS:** process filter cartridges (E) provide convenient accessibility for normal maintenance and replacement. Permanent washable regeneration air screen filters (F) offer easy access for maintenance; no tools required.

**DESICCANT:** To directly access the desiccant, unbolt the tower cover.

**AFTER COOLER:** Optional integrally-mounted after cooler offers removable coil assembly (H) for easy cleaning.



### REGENERATION CYCLE

The on-stream desiccant bed absorbs moisture from the process air while the regenerating desiccant bed releases moisture picked up during its on-stream cycle. The regeneration blower draws air and blows across the regeneration air heater. 550°F heated air passes through the lower control valve to the regeneration desiccant bed. Heated air absorbs moisture from the desiccant through the upper control valve to the bleed which vents it to the atmosphere.

In reverse direction of the process air, regeneration air blows through the desiccant bed from bottom to top. When the regenerating desiccant bed dries, the regeneration air heater shuts off. The regeneration blower continues to circulate air to cool down the desiccant bed. Dew point demand switches the regenerating bed to become the on-stream bed. Simultaneously, the on-stream bed switches to become the regenerating bed.



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