

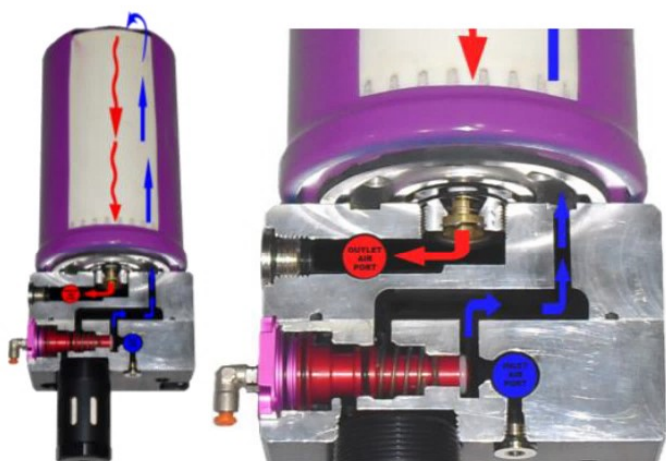


REGENERATIVE DRYERS - HOW THEY WORK

- 1 The technology functions by passing contaminated compressed air through the Tsunami water separator where bulk water and oil is removed down to 10 micron. The air then passes through the oil coalescing filter which further removes oil and particulates down to .01 micron.
- 2 The pretreated air enters the dryer and passes through the desiccant canister(s). Molecular sieve desiccant forms a bed encapsulated within a 10 micron filter bag. The molecular sieve bed is spring loaded, under tight compression, virtually eliminating bead movement which causes breakdown of the media.
- 3 As the wet air passes through the tower(s), the molecular sieve draws the water vapor in while under pressure. At the same time, one or more tower(s) become depressurized. With the use of sweep air, the towers discharge water vapor through the mufflers located below the dryer manifolds.
- 4 The PLC sends out a pilot signal shifting an internal spool. When the spool shifts, air is redirected from the saturated tower(s) to the dried tower(s).
- 5 A small amount of air from the dry outlet flow is then directed backward through the wet towers via a small orifice in the regeneration valve. (This is referred to as "sweep air" or the "regeneration process") The desiccant is dried as the sweep air passes back through the canister(s). The tower is now ready to be cycled again. It's like changing your desiccant every few minutes.

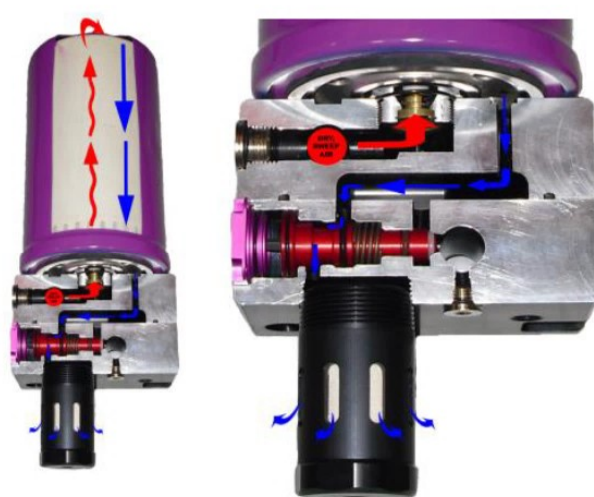
THE DRYING PROCESS

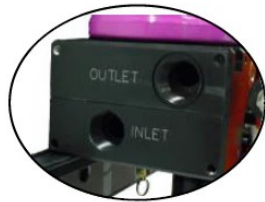
- Wet Incoming Air - supply air from compressor or from the compressor system
- Dry Outgoing Air - air that has had the water vapor removed



THE REGENERATION PROCESS

- Dry Outgoing Air - small amount of dry air used to "sweep" or regenerate the towers
- Wet Discharge Air - water vapor which was removed during the drying cycle





Dual inlet ports and outlet ports provide for easier installation. The unique design of this modular system also allows compressed air to bypass through the inlet chamber for use of filtered air downstream without having to pass through the drying media.



Tower mounting stud with built-in regeneration valve. The size of the regeneration orifice controls how much air is used by the system to dry the towers. Reducing air volume and increasing orifice size can provide even lower dew points; down to -80°F . See pg. 22 for orifice flow chart.



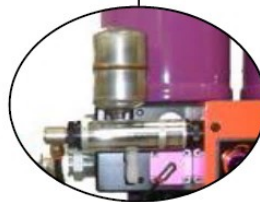
Pre-filtration consists of a Tsunami water separator and oil coalescing filter. These units can handle up to a quart of liquid per minute for extremely wet and dirty air systems.



Dryer housings are machined from solid aluminum billet. Hard coat anodizing provides superior strength and corrosion resistance.



PLC controller allows for more consistent air flow by staggering tower sequencing.



Single piston spool per tower reduces the number of moving components. Allows for easy maintenance.

Moisture Minder[®] pneumatic drains automatically actuate with the dryer to eliminate any water and oil trapped by the Tsunami pre-filters. Eliminates the need for float drains on our pre-filtration.



TSUNAMI REGENERATIVE DRYER

VS.



REFRIGERANT DRYER

Can handle high inlet temperature up to 150°F
 Performs well with high demand surge flows
 No Aftercooler Required
 Complete with Tsunami 2-stage pre-filters and automatic drains
 Dew points ... down to -80°F
 No refrigerant to maintain
 Works great with low flow rates
 Minimal maintenance required

- Change oil coalescing element every 6 months

Max Inlet temperature 100°F
 Moisture will carry over during high demand surge flows
 Requires Aftercooler
 Must purchase pre-filters and automatic drains separately
 Dew points ... $35-50^{\circ}\text{F}$
 Refrigerant to maintain
 Low flow rates may allow water carry over at separator
 Regular Maintenance required:

- Clean Heat Exchanger
- Electric Motor
- Refrigerant Compressor
- Replace Separator Elements and Float Drain