

NOVELAIRE TECHNOLOGIES

Cleaning the Desiccant Wheel

In the event that routine annual inspection indicates that there is dirt or dust buildup within the wheel, then wheel cleaning should be performed as follows:

1. Using a standard shop vacuum, vacuum any debris from both faces of the wheel. Slowly work around the entire face of the wheel to complete the procedure. Do not damage wheel face by excessive pressure of the vacuum nozzle on the wheel face.
2. Using 20 psig clean dry air, and a small air nozzle, blow air through one face of the wheel. At a similar location on the opposite side of the wheel, gently apply a shop vacuum to “receive” any remaining debris exiting the wheel.

In the event that this method does not remove visual buildup or return pressure drop to within normal parameters, a wheel washing procedure is recommended. The NovelAire Technologies’ desiccant wheels can be washed thoroughly with water without affecting the performance of the wheel. The wheel will simply dry out following a washing procedure and resume dehumidification without any deviation in performance.

If the desiccant wheel can be easily removed from the cassette or unit, it is recommended to do so to facilitate the washing process. However, in most cases, it is impractical to remove larger wheels and therefore, the washing procedure must take place within the air handling unit and provisions need to be made to collect the runoff water from the bottom of the unit.

1. Shield all electrical components and bearings with plastic sheeting. Ensure that an adequate drainage system exists to collect runoff water from the bottom of the unit.
2. Disable the regeneration section. Do not wash the wheel with the regeneration circuit in operation. Keep the wheel rotating at its set speed.
3. Using standard pressure water (do not use a high pressure washer) and working from the process side of the wheel, wash the wheel with a standard “garden” nozzle to flush any debris trapped within the flutes of the wheel. Minimize water contact with the bulb seals.
4. After washing, continue to rotate the wheel and run the process air and regeneration air fans to air dry the wheel (approximately 24 hours) prior to starting the regeneration circuit.

5. After air drying, the desiccant wheel can be placed back into regenerative service. The wheel should return to full capacity after a couple of regeneration cycles.