



Dehumidification Wheel Specification (Rotor Series)

Wheel Media: The dehumidification or desiccant wheel shall be uniform in nature, comprised of corrugated fiberglass with an “in situ” formed silica gel desiccant. Corrugations shall be 0.059” tall by 0.118” wide, with a wall thickness of 0.007” + 0.001”. Media shall be nominally 12 lb per cubic foot with “dry” (reactivated) desiccant concentration of not less than 80% of the total media mass. Not more than 4% of the media, including face coat, shall be of an organic material. Rotor media is rated for continuous service between –100 FDB and + 320 FDB. Media must withstand temperatures to 2000 FDB without mechanical failure. Rotor media shall be independently tested in accordance with ASHRAE guidelines for performance and independently tested in accordance with ASTM E-84 for flame resistance and smoke production. ASTM E-84 result must be 0/0 for both flame and smoke rounded indexes. Independent test results must be furnished by the manufacturer upon request. Lithium chloride, or lithium chloride containing desiccant shall not be used because of the deliquescent property of LiCl₂ during the adsorption process.

Wheel Media support system: The wheel frames shall consist of evenly spaced stainless steel spokes, stainless steel outer band and rigid center hub. The wheel construction should allow for post fabrication wheel alignment.

Wheel Seals: The wheel seals shall be high temperature extruded contact seals which are easily adjustable, and which prevent leakage at up to 8” w.c. differential pressure. Inner seal contact with rotor shall be Teflon coated to maximize wear resistance.

Wheel cassette: Cassettes shall be fabricated of heavy duty reinforced minimum 14 gauge galvanized steel. Bearings shall be inboard, zero maintenance, permanently sealed roller bearings or alternatively, sealed pillar block bearings for larger wheels. Drive systems shall consist of fractional horsepower A.C. drive motors powered via control VFD. The drive mechanism shall be heavy duty #40 chain and sprocket drive assemblies or equivalent. Belt drives are not acceptable