



**Specification for CELdek
EB-CS-0204**

DIRECT EVAPORATIVE COOLING / HUMIDIFIER MEDIA:

The media shall be CELdek® cellulose evaporative cooling / humidification media as manufactured by the Munters Corporation. The engineered media shall be self-supporting, impregnated, and treated to give high absorbancy and protection against decomposition through the effects of water and air. It shall consist of unique design characteristics to assure even air flow and higher evaporative cooling efficiency while preventing clogging and biological degradation. It shall be a cross-fluted, self-cleaning design. Saturation efficiency for a 12" depth in the direction of the air flow, will not be less than 90% when operated at up to 400 feet per minute (fpm) face velocity. The media air passage flutes shall form an angle of 15 degrees with the horizontal air flow and the water passage flutes shall form an angle of 45 degrees with the horizontal air flow. The depth of the media shall be [6", 8", 12", 18"] in the direction of the air flow.

A water distribution pad with a thickness of [2", 3"] shall be provided and installed across the top cross section of the media to provide for the even distribution of water. The water distribution pad shall be constructed of the same cellulose material as that of the cooling / humidification media. The distribution pad shall have a synthetic edge coating applied on the water inlet and outlet sides to reduce erosion and provide for cleaning.

The CELdek media shall have an average design life span of between 3 and 5 years when maintained according to the manufacturers recommendations and used during a typical cooling season of 5 to 6 months per year.

Media cooling effectiveness and resistance to air flow shall be certified by the manufacturer that it is tested according to ASHRAE 41.2 - 1987 *Standard Methods for Laboratory Air Flow Measurement*, Figure 15.

The manufacturer of the media shall be certified to the quality standard system ISO 9001, 1994 at all locations or their operations.

The manufacturer shall warrant that the media shall be free from defects in materials and workmanship for a period of 1 (one) year commencing from the date of shipment. This warranty is provided that the media is installed and maintained according to the manufacturers written instructions and details contained in their Engineering Bulletins.

Media manufactured from aspen wood, horse hair, glass wool or any other random or synthetic materials shall not be allowed.

Alternate manufacturers shall not be allowed to provide proposals until they have provided to the owners satisfaction (or their delegated project architect and / or engineer) that the performance of their proposed product is equal to the base bid. Alternate manufacturers shall provide certified documentation and warrant that their product will not cause any objectionable odors, lose rigidity, thermal efficiency, deteriorate or in any way fail prematurely.