

HUMIDITY MANAGEMENT DEVICE AND METHOD

ABSTRACT

A humidity management device, a humidity management method, an air-conditioning system, and a method of operating an air-conditioning system are disclosed. The humidity management device includes a chamber having a first end and a second end, an air inlet disposed adjacent the first end, an air outlet disposed adjacent the second end, a rotatable brush disposed between the first and second ends, the brush having a sorbent-carrying surface, and sorbent distribution means configured to distribute a sorbent over the sorbent-carrying surface. The air inlet is configured to receive input air having a first humidity level. The air outlet is configured to draw the input air to contact the sorbent-carrying surface to thereby change a moisture content of the input air such that output air exiting the air outlet has a second humidity level different from the first humidity level.

FIG. 3A