

ABSTRACT

MOISTURE CONTROL UNIT

A moisture control unit comprising a body (1) which is partitioned by a partition wall (1_a) into a plurality of chambers (1₁, 1₂), wherein a dehumidifying opening (4) is provided in the chamber (1₁) and a humidifying opening (5) is provided in the chamber (1₂), a moisture absorption rotor (2) which is rotatably provided in the chambers (1₁, 1₂) so as to be located in each of the chambers (1₁, 1₂) at a part thereof, and a heater 6 provided in one (1₂) of the chambers (1₁, 1₂) adjacent to the moisture absorption rotor (2) for evaporating water which is absorbed by the moisture absorption rotor (2). A part of the moisture absorption rotor (2) which absorbs moisture from air is made heavy to thereby rotate downward owing to weight of water while a part of the moisture absorption rotor which is heated by a heater (6) and from which water is evaporated is made light to thereby rotate upward. As a result, the moisture control rotor (2) can rotate by itself without needing a rotary driving source. The moisture control unit can be simplified in the structure and can be easily small-sized, and can be installed with low cost without needing a piping work. Another moisture control unit comprises a body (21), a fan (23) provided on a surface of the body (21), a moisture absorption rotor (24) rotatably provided in the body (21), a sensible heat exchanger (25) provided in the body (21), first and second passages (25a and 25b) provided in the sensible heat exchanger (25), and a heater (28) provided in the body (21), wherein a part of air which is sucked through the fan (23) and is to be dehumidified is supplied to the moisture absorption rotor (24) where it is dehumidified, and then it is discharged outside the body (21), remaining sucked air in the body (21) is supplied to the moisture absorption rotor (24) after it passes through the first

This Sheet Has Been Replaced



passages (25a) of the sensible heat exchanger (25) and the heater (28) so as to regenerate the moisture absorption rotor (24), and wherein air which is made high in humidity owing to regeneration of the moisture absorption rotor (24) is supplied to the second passages (25b) of the sensible heat exchanger (25) so as to form dew on the sensible heat exchanger (25), and dew drop is collected to perform dehumidification.

This Sheet Has Been Replaced

