

Title (en)

AIR TREATMENT UNIT, OF DEHUMIDIFICATION AND HEATING ENERGETICALLY EFFICIENT

Title (de)

LUFTBEHANDLUNGSEINHEIT MIT ENERGIEEFFIZIENTER ENTFEUCHTUNG UND HEIZUNG

Title (fr)

UNITÉ DE TRAITEMENT DE L'AIR, DE DÉSHUMIDIFICATION ET DE RÉCHAUFFEMENT EFFICACE DU POINT DE VUE ÉNERGÉTIQUE

Publication

EP 2066984 A2 20090610 (EN)

Application

EP 07826572 A 20070927

Priority

- IB 2007053938 W 20070927
- PT 10357206 A 20060927

Abstract (en)

[origin: WO2008038250A2] The Air Treatment Unit (ATU), of Energetically Efficient Dehumidification and Heating, is equipped with two heat exchangers (12, 19) fed by a Chiller and a boiler respectively and a thermic recuperator (13) between them. While crossing the three components, the forced air flow, actuated by ventilators (14, 21), reaches the humidity and filling temperature in the building for the internal conditions. Concerning this disposition, the ATU allows the use of the heat recuperator in heating periods of 100% of fresh air with/without air humidification (20-humidificator), dehumidification and heating of 100% fresh air or of the mixture of fresh air with addicted air, allowing the reduction of energetic consumption in air treatment. In periods of 100% of fresh air and forced ventilation cooling of the space, a 'bypass' is made for the heat recuperator. This unit assures the air quality inside buildings, avoiding, for example, problems of Legionella, chlorine concentrations on Covered Pools and of CO₂ in buildings with humidity control.

IPC 8 full level

F24F 3/14 (2006.01)

CPC (source: EP)

F24F 3/14 (2013.01); **F24F 5/0071** (2013.01); **F24F 12/003** (2013.01); **F24F 12/006** (2013.01); **F24F 2012/007** (2013.01); **Y02B 30/52** (2013.01); **Y02B 30/56** (2013.01)

Citation (search report)

See references of WO 2008038250A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008038250 A2 20080403; **WO 2008038250 A3 20080626**; EP 2066984 A2 20090610; PT 103572 A 20080331

DOCDB simple family (application)

IB 2007053938 W 20070927; EP 07826572 A 20070927; PT 10357206 A 20060927