

Title (en)  
AIR CONDITIONING SYSTEM AND OPERATING METHOD THEREOF

Title (de)  
KLIMAAANLAGE UND BETRIEBSVERFAHREN DAFÜR

Title (fr)  
SYSTÈME DE CLIMATISATION ET SON PROCÉDÉ DE FONCTIONNEMENT

Publication  
**EP 4421401 A1 20240828 (EN)**

Application  
**EP 24158588 A 20240220**

Priority  
IT 202300002934 A 20230221

Abstract (en)  
An air conditioning system (1) is described that is structured to be installed in a building (2) which comprises at least one internal compartment (3) and a hydraulic system (4) comprising at least two ducts which extend into the building between said internal compartment and an external location to said building (2). The air conditioning system comprises a heat pump unit which is arranged in the external location, is hydraulically connected to the two ducts, and is configured to carry out a heat exchange between the water circulating in the ducts and the ambient air in the external location. The system further comprises a heat-pump fan coil unit which is arranged in the compartment, is hydraulically connected to the two ducts, and is configured to carry out a heat exchange between the water circulating in the ducts and the ambient air in the internal compartment. The system further comprises a control system which controls the heat pump unit in order to maintain the temperature of the water circulating in the ducts in a predetermined temperature range.

IPC 8 full level  
**F24F 11/65** (2018.01); **F24D 5/02** (2006.01); **F24D 5/12** (2006.01); **F24D 19/10** (2006.01); **F24F 1/0083** (2019.01); **F24F 5/00** (2006.01); **F24H 15/429** (2022.01); **F25B 25/00** (2006.01)

CPC (source: EP)  
**F24D 5/02** (2013.01); **F24D 5/12** (2013.01); **F24D 19/1087** (2013.01); **F24F 1/0083** (2019.02); **F24F 5/001** (2013.01); **F24F 11/65** (2018.01); **F24H 15/429** (2022.01); **F25B 25/005** (2013.01)

Citation (search report)  
• [XAY] EP 3995763 A1 20220511 - MITSUBISHI ELECTRIC CORP [JP]  
• [X] EP 3117161 B1 20190424 - HUSSMANN CORP [US]  
• [X] US 10605498 B2 20200331 - OKAZAKI TAKASHI [JP]  
• [Y] WO 2022008785 A1 20220113 - SENERA OY [FI]  
• [A] US 11421907 B2 20220823 - KATO NAOKI [JP], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA

Designated validation state (EPC)  
GE KH MA MD TN

DOCDB simple family (publication)  
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