

Title (en)
DEVICE AND METHOD FOR CONTROLLING THE TEMPERATURE OF A MEDIUM

Title (de)
VORRICHTUNG UND VERFAHREN ZUM TEMPERIEREN EINES MEDIUMS

Title (fr)
PROCÉDÉ ET DISPOSITIF DE RÉGULATION DE LA TEMPÉRATURE D'UN MILIEU

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Application
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Abstract (en)
[origin: WO2017005643A1] The invention relates to a device for controlling the temperature of a medium, comprising the following components: a first closed heating medium circuit (3) in which a first heating medium circulates without phase transitions; a second closed heating medium circuit (20) in which a second gaseous heating medium circulates that flows through the second heating medium circuit (20) without phase transitions; a first heat converter (1; 1') which is arranged in the first heating medium circuit (3) and in which the first heating medium can exchange heat with a surrounding medium; a second heat converter (5; 5') which is arranged in the first heating medium circuit (3) and in which the first heating medium can exchange heat with the medium to be temperature-controlled; a first delivery means (12) which is arranged in the first heating medium circuit (3) for moving the first heating medium; a compressor (22) which is arranged in the second closed heating medium circuit (20) for compressing the second gaseous heating medium; a third heat converter (9) which is arranged behind the compressor (22) when seen in the flow direction so as to contact the second heating medium circuit (20) and which exchanges heat with the first heating medium; and means (18, 19) for cooling and/or expanding the first heating medium. Such a device can be used in heating operations, as a heating pump, as well as for cooling purposes and exhibits a high energy efficiency.

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