

Title (en)
A heat pump system for a tumble dryer

Title (de)
Wärmepumpensystem für Wäschetrockner

Title (fr)
Système de pompe à chaleur pour sèche-linge

Publication
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Application
EP 09180848 A 20091229

Priority
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Abstract (en)
The present invention relates to a heat pump system for a tumble dryer. The heat pump system comprises an air stream circuit (10) including at least one drum for receiving laundry to be dried, at least one fan (34) for generating an air stream, a first heat exchanger (18) and a second heat exchanger (20). The heat pump system comprises a refrigerant circuit (12) including at least one compressor (14), the first heat exchanger (18), at least one expansion valve (16) and the second heat exchanger (20). The heat pump system comprises a collecting sump (24) for collecting condensed water from one of the heat exchangers (20). The air stream circuit (10) and the refrigerant circuit (12) are thermally coupled by a first heat exchanger (18) and a second heat exchanger (20). The heat pump system comprises a closed condensed water circuit (22) for the condensed water with a further heat exchanger (26), wherein the refrigerant circuit (12) and the condensed water circuit (22) are thermally coupled by said further heat exchanger (26). Further, the present invention relates to a method for controlling the heat energy exchange between the refrigerant circuit (12) and the condensed water circuit (22) in the heat pump system.

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DE 4409607 C2 20020314 - MIELE & CIE [DE]

Citation (search report)
• [XDAI] DE 4409607 A1 19941027 - MIELE & CIE [DE]
• [A] DE 102007049060 A1 20090416 - BSH BOSCH SIEMENS HAUSGERAETE [DE]
• [A] DE 3321245 A1 19841213 - CORDES WILH MASCHF [DE]
• [A] DE 202006018205 U1 20070215 - V ZUG AG [CH]

Cited by
EP2644768A1; EP4050147A3; EP2650425A1; EP4050151A3; CN104204335A; CN105986446A; WO2013144780A1; WO2019192782A1; WO2013153080A1

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