

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

Title (de)
Wärmepumpensystem für Wäschetrockner

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

Publication
EP 2551402 A1 20130130 (EN)

Applicaton
EP 11175739 A 20110728

Priority
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Abstract (en)
The present invention relates to a heat pump system for a laundry dryer, said heat pump system comprises a refrigerant circuit (10) for a refrigerant and an air stream circuit (12) for an air stream. The refrigerant circuit (10) includes a compressor (14), a first heat exchanger (16), lamination means (20) and a second heat exchanger (24) connected in series and forming a loop. The air stream circuit (12) includes the first heat exchanger (16), a laundry drum (26), at least one air stream fan (26) and the second heat exchanger (24) connected in series and forming a closed loop. The refrigerant circuit (10) and the air stream circuit (12) are thermally coupled by the first heat exchanger (16) and the second heat exchanger (24). The compressor (14) is formed as a multi-stage compressor or as a plurality of serial compressors. The refrigerant circuit (10) includes at least one series of a third heat exchanger (18) and further lamination means (22). The compressor (14) includes an intermediate connection arranged between the stages of the multi-stage stage compressor or between the serial compressors, respectively. The intermediate connection of the compressor (14) is connected to the inlet of the third heat exchanger (18). The outlet of the further lamination means (22) is connected to the inlet of the second heat exchanger (24).

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D06F 58/20 (2006.01)

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D06F 58/206 (2013.01 - EP US)

Citation (search report)
• [IA] EP 1811076 A1 20070725 - SANYO ELECTRIC CO [JP]
• [A] US 2005072022 A1 20050407 - NAGAE ETSUSHI [JP], et al
• [A] EP 2251622 A1 20101117 - DAIKIN IND LTD [JP]
• [A] DE 19738735 A1 19990311 - BOSCH SIEMENS HAUSGERAETE [DE]
• [A] EP 2060671 A1 20090520 - ELECTROLUX HOME PROD CORP [BE]

Cited by
CN105297370A; EP3333305A1; US10633784B2; WO2015180228A1

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