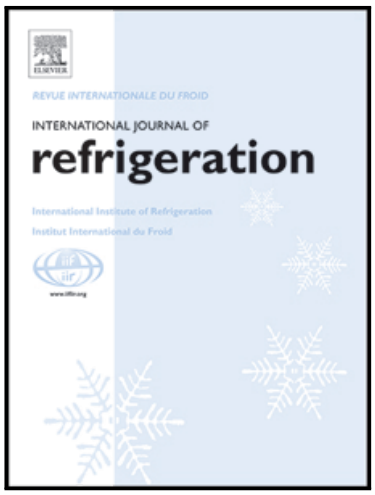

Development of a steady-state physical-based mathematical model for a direct expansion based enhanced dehumidification air conditioning system

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Highlights

- A novel enhanced dehumidification air conditioning (EDAC) system was proposed.
- A steady-state physical-based mathematical model for EDAC system was developed
- The model was experimentally validated, with an adequate modeling accuracy.
- It was verified that the EDAC system can provide variable dehumidification ability.
- The model helps optimize the sizing of the two evaporators used in the EDAC system.