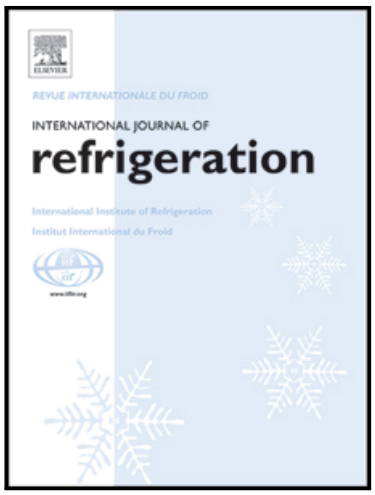


# Research on axis orbit of the journal bearing lubricated with oil and refrigerant mixtures in a twin-screw refrigeration compressor

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**Highlights**

- Experimental measurement of axis orbit in twin-screw compressor is achieved， which is hardly seen elsewhere.
- A two-phase flow model is presented to calculate axis orbit of journal bearing.
- Axis orbit is located at the second quadrant and is close to an ellipse with six fluctuations.
- A few refrigerant dissolved in oil is beneficial to the stability of rotor-bearing system.
- It tends to adopt journal bearing with small radius clearance and aspect ratio.