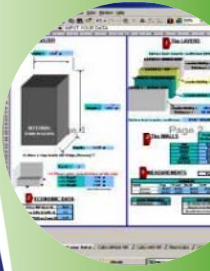




Refrigeration Developments
and Testing Ltd

Mathematical modelling



Modelling of:

- Air flow
- Heat transfer
- Refrigeration system performance
- Refrigeration system design
- Energy usage
- Structures/insulation/packaging performance

Our range of mathematical modelling services cover a range of applications including:

- Retail display.
- Commercial service cabinets.
- Domestic refrigerators.
- Bottle coolers.
- Cold stores.
- Air curtains.
- Cold boxes.
- Food production facilities.
- Food chilling.
- Food freezing.
- Food tempering.
- Packaging.

Our range of mathematical modelling services:

CFD:

Models can be developed for applications including:

- Design of air flow in refrigerated retail display cabinets.
- Ventilation around supermarket refrigerated aisles.
- Entrainment through cold store entrances.
- Simulating airflows within cold stores for incorporation into cold store models.

Heat transfer models:

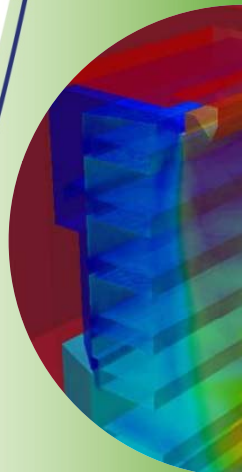
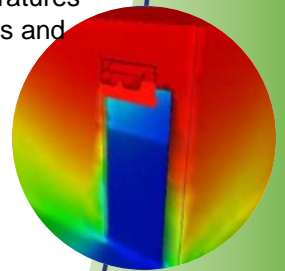
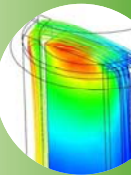
- Models of heat flows in foods that allow the user to simulate temperature changes in foods and their surroundings
- Heat transfer in foods to model cooling or freezing times/processes.
- Prediction of heat loads for cooling processes.
- Prediction of food thermo physical properties. Models that estimate the thermo physical properties of foods over a range of temperatures (these can be used in heat transfer models and calculations).

Refrigeration design and specification:

- Models that enable the design and specification of refrigeration systems.
- Prediction of energy consumption in varied modes of operation (including operation).

Bespoke models:

- Development of models to predict effect of application of new or novel technologies.
- Energy use in a range of applications.
- Design of test facilities.



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