



DEMONSTRATION CAPABILITIES

- > Food preservation
- > Effect of freezing on food
- > Fast freezing v slow freezing
- > Taste and texture assessments
- > Freezing rates
- > Links with biology (food structure)
- > Effect of temperature on bacteria
- > Links with physics (refrigeration)
- > Temperature sensing
- > Quality assurance / quality control (QA/QC)

The FT34MkII demonstrates an industrial fast-freezing process in a simple, practical and student-friendly configuration. It directly illustrates the large improvements in taste and texture that can be achieved by fast-freezing processes compared with the slower freezing times of a domestic refrigerator.

An informative wall chart is supplied free with each FT34MkII Contact Plate Freezer. It describes the industrial freezing process and highlights the importance of freezing food quickly.



BENEFITS

The FT34MkII Contact Plate Freezer enables foods to be quick frozen using an industrial freezing process. Five thermocouples are provided, which can be positioned in different points of the product being frozen. This enables the effect on the freezing process of parameters such as the shape of the product, the packaging, portion size, etc to be investigated. The flexibility and simple operation of the plate freezer make it ideal for project work at a variety of levels. At a basic level, the difference between fast and domestic freezing can be evaluated. At higher levels, a frozen food product can be assessed for a large number of attributes and the interaction of different attributes considered. The FT34MkII is supported by comprehensive teacher and student instruction sheets, giving detailed explanations, operational instructions, investigations and suggestions for project work.

DESCRIPTION

The FT34MkII Contact Plate Freezer uses the familiar Armfield vacuum-formed ABS base onto which is mounted a refrigeration unit employing an environmentally friendly refrigerant R404A. One 180mm x 250mm, fixed plate and one height-adjustable freezing plate are positioned adjacent to the refrigeration unit. A hand-operated lever raises and lowers the adjustable freezing plate into close contact with the product to be frozen, which is placed on the fixed plate. Bagged, wrapped and boxed products may be quick frozen. Five temperature probes are provided to monitor the product throughout the freezing process. All controls and instrumentation are housed in the base unit. Outputs to connect the plate freezer to a PC via the Armfield Data Logging Accessory (FT34-DTA-ALITE) are also provided.

DATA LOGGING

Freezing is an ideal application for demonstrating the importance of data logging. The five temperature sensor outputs are available for this. An optional data logger is available, which can be used to display the freezing curves on a computer. This illustrates the freezing characteristics and shows the thermal arrest time, during which ice crystals are formed. The operational data may be logged to a PC. Windows software is included to display tables and graphs of the logged data and to enable the data to be exported to a spreadsheet.



FOR FURTHER INFORMATION ON THE ADVANCED FEATURES OF THE SOPHISTICATED ARMFIELD SOFTWARE VISIT:
www.discoverarmfield.co.uk/data/armsoft/

TECHNICAL SPECIFICATION

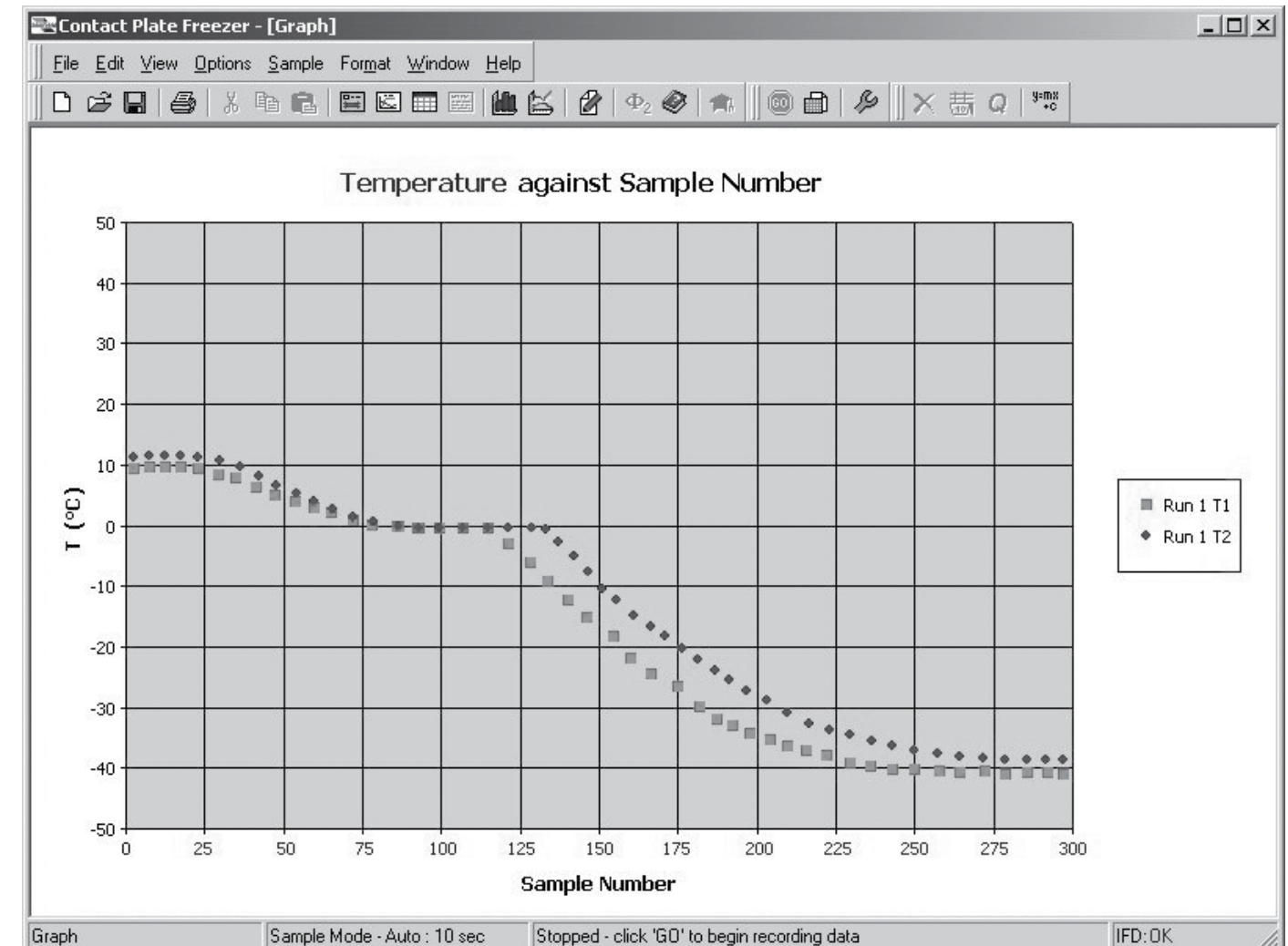
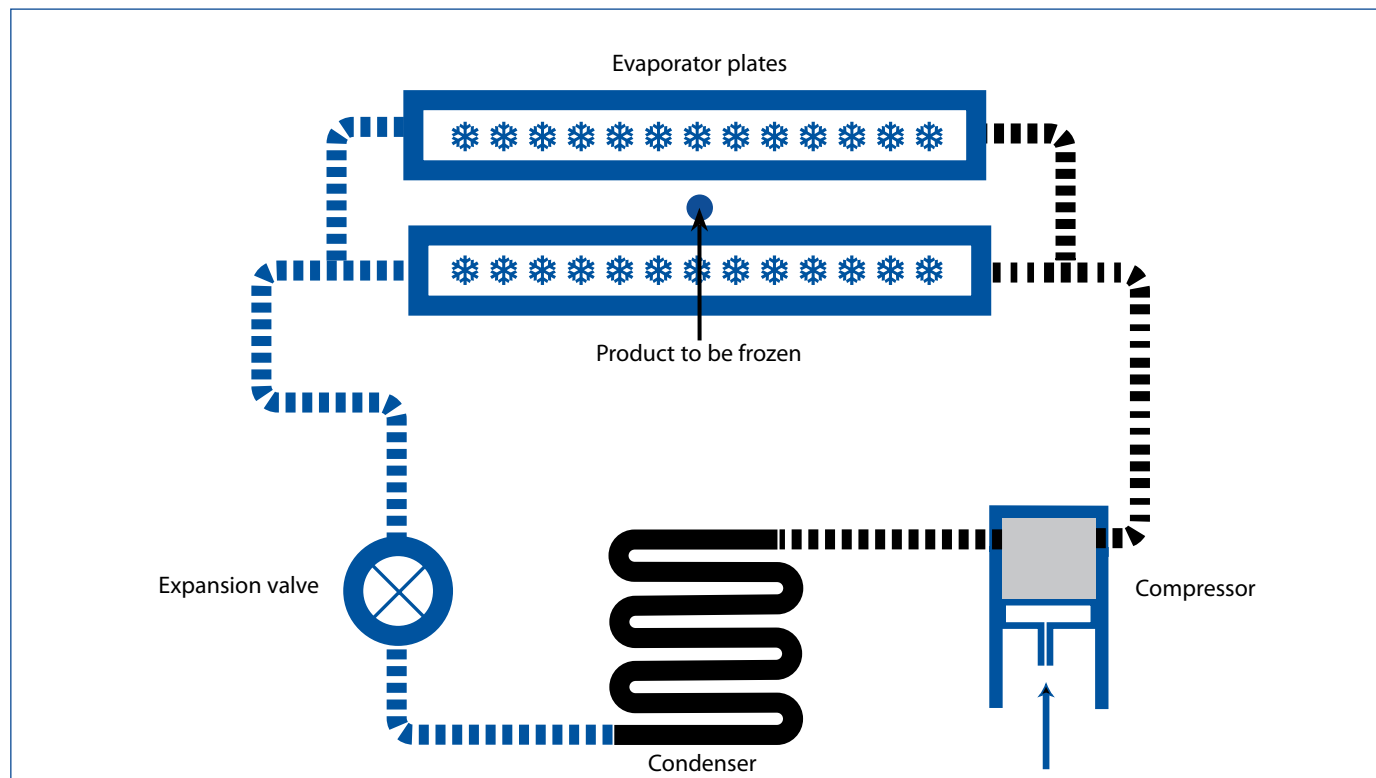
Plate temperature (both plates):	< -35°C
Temperature sensors:	Five thermocouples
Refrigerant (environmentally friendly):	R404A
Display:	Digital display for temperature sensors
Outputs:	±5V (represents ±50°C)
Freezing area:	180mm x 250mm
Max thickness of sample:	38mm

OPTIONAL ACCESSORIES

FT34-DTA-ALITE

Data Logging Accessory:

Comprises interface device, software and leads. Requires a user-supplied PC with a USB port, running Windows 98 or above.



FT34MkII - typical software screenshot

REQUIREMENTS

Electrical supply:

FT34-MkII-A: 220-240V / 1ph / 50Hz / 10 amp

FT34-MkII-B: 120V / 1ph / 60Hz / 20 amp

FT34-MkII-G: 220-240V / 1ph / 60Hz / 10 amp

Cooling water: Tap and drain

OVERALL DIMENSIONS

Height: 0.55m

Width: 1.00m

Depth: 0.50m

SHIPPING SPECIFICATION

Volume: 0.5m³

Gross weight: 40kg

ORDERING CODES

FT34-MkII-A: 220-240V / 1ph / 50Hz / 10 amp

FT34-MkII-B: 120V / 1ph / 60Hz / 20 amp

FT34-MkII-G: 220-240V / 1ph / 60Hz / 10 amp

ORDERING SPECIFICATION

- A contact plate freezer with two freezing plates of 180mm x 250mm. One is fixed, the other is height adjustable, and both are serviced by a refrigeration unit
- Bagged, wrapped and boxed food products up to a maximum size of 160mm x 230mm x 38mm may be quick frozen
- Five temperature probes are provided to monitor the product throughout the freezing process
- A comprehensive operation manual and wall chart are included in the supply
- An optional data logging accessory and Windows-based software is also available



* Excluding DLM range



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