



Model shown FT25BBPA Combined Ice Cream and Margarine System

features

- Modular system, capable of being fitted with up to three scraped surface heat exchanger barrels
- Full control of barrel speeds to over 1000rpm
- Temperature control system incorporated
- Integral membrane control panel allowing simple control and monitoring of all major variables
- Enclosed self contained, mobile, stainless steel service cabinet for easy cleaning and wash-down
- Hard chromed barrels
- Hygienic design
- Made from AISI 316 stainless steel

Available:

- Variable speed pinworker for margarine and soft spreads
- In cabinet pressurised hot water circulation
- In cabinet refrigeration
- Air incorporation system
- Computer data logging facility

benefits

- Duplicates full scale process
- Fast, accurate new product development
- All process parameters under operator control for maximum flexibility
- Rugged and reliable units

Miniature-scale research & development technology



Armfield miniature-scale technology is well established as offering developers the opportunity to run small trials which provide enough information to allow for scale-up to larger plant with confidence. The formulations go through similar physico-chemical changes as they would in production plant and real time data logging allows results to be recorded and repeated.

The FT25 range of miniature-scale scraped surface heat exchangers has built in control and flexibility with a graphic representation on the membrane technology control panel. The operator can choose the parameters wanted for any particular formulation. The FT25 has a number of configurations according to the use required.

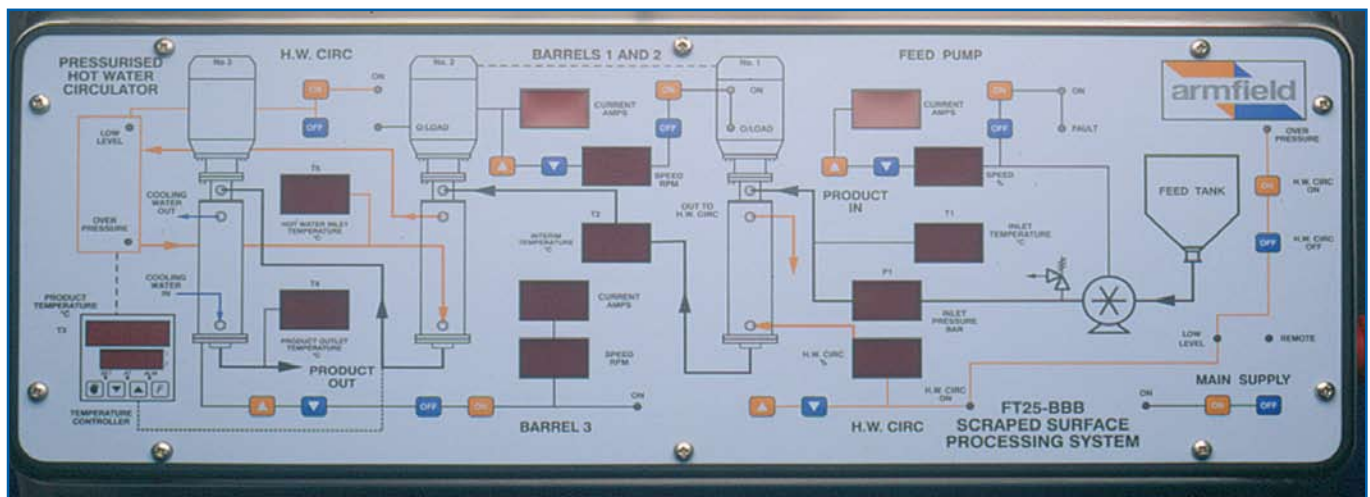
Description

The FT25 scraped surface heat exchanger series is designed round the Armfield monocoque stainless steel cabinet with membrane technology control panel. The working platform can accommodate one, two or three barrels (B) or a variable speed pinworker (P) alongside a product reservoir and feedpump.

An air incorporation system, pressurised hot water circulation and gear or cavity feed pump options are available as is a refrigeration system supplied within the cabinet and utilising a chilled, recirculating brine system which is pumped through the barrel jackets.

Small batch sizes allow rapid product testing and a clean in place (CIP) facility speeds turnaround for increased productivity.

All services required are housed inside the wash-down cabinet which also contains a pull-out drawer mounted with the electrical chassis.



The splashproof, touch sensitive, membrane control panel with diagrammatic representation of the process. It shows variables such as product feed pump rate, barrel and pinworker speed temperature and pressure which are all under operator control. Process data is displayed in real time and can be logged to a PC running the Windows™ operating system.

Typical configurations

Continuous Margarine Crystallizer

FT25BP-IF-C: One barrel and one pinworker

FT25BBP-IF-C: Two barrels and one pinworker
A resting tube for product settling and brine refrigeration unit for process cooling are supplied. A range of oil emulsions can be processed.

Continuous Ice Cream Freezer

FT25BA-IF-C: One barrel
Air incorporation via a small air compressor and refrigeration.
Overrun can be achieved up to 300% (dependant on product).

Combined Ice Cream and Margarine System

FT25BBPA-IF-C Two barrels, one pinworker plus air incorporation.

UHT System for Aseptic Products:

FT25BBB-2H-C Three barrels
Heating by pressurised hot water allows process temperatures up to 150°C to be achieved (one or two barrel systems can also be supplied).



FT25BA Continuous Ice Cream Freezer

Ordering Specifications

Orders for Armfield FT25 units may be placed by using a specification code: for example **FT25BBP-1F-G-A**.

An explanation of the specification may be found by reference to the table below:

FT25XXX - YY - Z - W

Barrel Configuration		Heating/Cooling Options		Feed Pump Option		Supply Voltage*	
BP:	one barrel, one pinworker	-1F:	refrigeration system	-C:	progressive cavity pump	-A	220-240V/1ph/50Hz
BA:	one barrel, air incorporation	-1H:	single hot water circulator			-C	415V/3ph/50Hz
BBA:	two barrels, air incorporation	2H	two hot water circulators*			-D	208V/3ph/60Hz
BBP:	two barrels, one pinworker					-G	220v/1ph/60Hz
BBB:	three barrels						
BBPA:	two barrels, pinworker, air incorporation						

* Note:

For units with 2 hot water circulators it is necessary to use a 3 phase supply. All other configurations use a single phase supply.



An ISO 9001 Company



Miniature-scale R & D technology

Head Office:

Armfield Limited
Bridge House, West Street,
Ringwood, Hampshire.
BH24 1DY England

Telephone: +44 1425 478781

Fax: +44 1425 470916

E-mail: sales@armfield.co.uk

U.S. Office:

Armfield Inc.
436 West Commodore Blvd (#2)
Jackson, NJ 08527
Telephone: (732) 928 3332
Fax: (732) 928 3542
E-mail: info@armfieldinc.com

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Specifications

Heat Exchanger Barrel:

Heat transfer area: 0.045m²
Shaft/barrel volume ratio: 1 : 3.5
Scraper blades: 4 along shaft stainless
steel, 180° separation

Barrel length: 0.35m
Barrel working pressure: 8.0 bar

Pinworker:

No of pins on shaft: 20
No of pins on barrel: 42

Barrel/pinworker drives:

Variable speed ac motors, inverter controlled:
speed range 0-1400rpm

Refrigeration system:

Recirculating brine system: -25°C capability

Feed pumps:

Progressive cavity pump:
Process throughput: 0-20lph, independent
of back pressure

Particulate capability: up to 0.6mm
Fibre handling capability: up to 25mm

Air incorporation system: Air pump with multiple
turn control valve and
dial to vary overrun

NOTE: Air incorporation systems use
a suction inlet and are not fitted
with an inlet tank.

Pressurised hot water system:

Electrically heated: 4kW per system
Operating pressure: 6bar
Water temperature range: up to 160°C
Process temperature: up to 150°C

Optional Accessories

Data Logging Accessory: FT25XP-90IFD-USB

Windows™ Data Capture Software

A unique benefit of the Armfield miniature scale
food processing range is that the measured data
may be captured and stored to disk.

An Armfield FT25XP-90IFD-USB data logging
accessory transfers results to a computer.

Feed pump flow rate, barrel/pinworker speeds,
temperatures and pressures can be monitored in
realtime. The data can be displayed in graphical
and tabular forms and printed.

A computer with a USB port, and running
Windows XP or later is required.

Requirements

Electricity supply: (see ordering codes)

Water supply: For refrigeration cooling

Cooling water supply with flow rate of
3L/min @ 3bar and ≤20°C

Ordering Codes

FT25BA/BP/BBP/BBPA-A	220-240v 1ph 50Hz
FT25BA/BP/BBP/BBPA-G	220-240v 1ph 60Hz
FT25BBB-C	415v 3ph 50Hz
FT25BBB-D	208v 3ph 60Hz
FT25BBB-E	380v 3ph 50Hz
FT25BBB-F	220v 3ph 60Hz

Overall dimensions

Height: 1.4 m
Width: 0.85 m
Depth: 0.90m

Shipping specification

Volume: 2.1 m³
Gross weight: 380 kg

The Armfield range includes HTST/UHT/aseptic systems, carbonator/filler/cappers, spray dryers/chillers, multifunction batch processors, ice cream freezers, margarine crystallisers, extractors, edible oils processors and more. For further information about our products and services, or to book a trial at one of our trials facilities, please contact us.