

## FT83 STERILE FILLING SYSTEM



**HEPA Filter**  
High efficiency HEPA filter  
99.995% @ 0.3micron.

*The Armfield FT83 is the most cost effective solution for R&D departments to produce sterile packaged samples with an excellent shelf life. As well as a working chamber with a controlled, clean environment, the unit includes the facilities to allow all the product paths to be sterilised and for the filling to be controlled in a simple manner.*

### features

- Capable of filling containers and producing sterile samples (when linked to a suitable UHT processing system)
- Filling environment to ISO Class 5 (i.e. meets microbiological safety and pharmaceutical production/filling requirements)
- Simple operation
- Open front for ease of use
- Large working area
- Wide range of containers and sealing devices can be catered for
- Low Oxygen Filling facility as standard
- Can form part of a complete aseptic UHT processing line
- Cleaning, Sterilisation and Filling modes
- Stainless Steel Construction

### benefits

- Extended shelf life products achievable
- Can interface with existing Armfield UHT equipment

Miniature-scale research & development technology



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An ISO 9001 Company



Miniature-scale R & D technology

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#### Armfield R&D products include:

Hygienic connections  
as standard



316 Stainless steel



CE certification



Extended warranty  
as standard



For more product  
information please visit:  
[www.explorearmfield.com](http://www.explorearmfield.com)



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All products CE certified



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## Description

The FT83 utilises a vertical flow laminar flow cabinet to maintain the air within the working section to better than ISO class 5 (Federal Standard 209e - Class 100). This high specification is achieved by passing the air through a high efficiency HEPA filter, and recirculating most of this air to get an improved filtering effect. A digital air flow readout is incorporated and also serves as a warning when the HEPA filter needs replacing. A pre-filter extends the life of the HEPA filter.

The product from the UHT system is either passed to the filling head or diverted to drain by means of a hygienic, pneumatically operated, three way valve controlled by a foot pedal. When filling, the operator places a pre-sterilised container under the filling head and uses the foot pedal to fill to the required level.

When cleaning-in-place (CIP) or sterilising-in-place (SIP) a stainless steel pipe is positioned over the filling head to a return outlet in the working chamber. The cleaning fluid or sterilising hot water can be passed through the filling head, and also through the divert section. In these modes the integral mini-plc now controls the 3-way valve and hence the flow path. During SIP the plc also monitors the temperature of the water to ensure that the specified sterilisation time and temperature have been met.

The flow path to drain incorporates a heat exchanger to reduce the sterilising water to a safe temperature and a back pressure valve to maintain pressure within the system to prevent boiling.

The containers used for filling need to be sterilised before use. Any convenient sterilisation method can be used, such as autoclaving, gamma radiation, or buying in sterilised containers from a laboratory equipment supplier. In use, the working chamber is cleaned manually.

The cabinet surfaces are sterilised using a suitable spray (e.g. ethanol). This method can also be used to sterilise the neck and seal of the containers where necessary.

Filled containers can be removed easily from the working chamber and new containers can be introduced without introducing product contamination. Trials have shown that using this system, new operators with a minimum of instruction can produce packaged aseptic samples similar to production aseptic filling systems.

A nitrogen nozzle is included, which can be directed over the container whilst filling, to give low oxygen content in the packaged product.

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.

## Specifications

### Air quality inside chamber:

Federal Standard 209e -  
Class 100 ISO 14644 Class 5

HEPA filter efficiency: 99.995% at 0.3 Micron  
EN1822 – H14

Working Chamber Size: 220mm x 580mm

### Requirements

#### Electricity supply (single phase):

FT83-A, FT83-94-A, FT83-174-A 220-240V, 50Hz

FT83-B, FT83-94-B, FT83-174-B 110-120V, 60z

FT83-G, FT83-94-G, FT83-174-G 220-240V, 60Hz

Compressed Air: 5-7 bar

Cooling Water Supply: 5L/min at 1 bar, max.  
temperature 25°C

#### Nitrogen Gas:

Only needed for low oxygen filling

#### UHT System (for sterilisation):

Either FT74X plus FT74-45, or FT94X

### Overall dimensions

Height: 2.2m

Width: 1.3m

Depth: 1.1m

### Shipping specification

Volume: 4.5m<sup>3</sup>

Gross weight: 400kg

**Note:** The FT83-94 and FT83-174 are specifically designed for use with the Armfield FT94X and FT174X UHT systems. They are controlled from the UHT system touch panel.