



# armfield

## DISC BOWL CENTRIFUGE

**FT15**  
issue 5



*The Armfield Disc Bowl Centrifuge is designed to provide practical training in the technique of separating a heavy phase liquid from a lighter phase liquid with particular emphasis on the separation of cream from milk. Throughputs of up to 125 litres/hour are possible.*

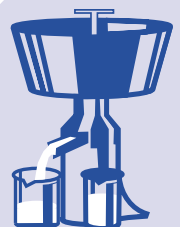
### INSTRUCTIONAL CAPABILITIES

*The centrifuge provides practical instruction exercises in all aspects of cream/milk separation including:*

- *production of a variety of creams having milk fat contents from 12% to 55%*
- *demonstration of the effect of temperature and bowl speed on separator performance*
- *demonstration of the effect of product type on throughput*
- *learning the importance of cleanliness and hygiene in food processing*
- *understanding the mode of operation of this type of centrifuge, using instructive diagrams and ease of strip down to component parts*

Food Process Engineering and Technology

FT



## DESCRIPTION

*A supporting framework intended for bench mounting houses the separator, complete with its variable speed drive control unit, food reservoir and the necessary ancilliary equipment.*

*The feed reservoir, positioned over the centrifuge, is made from grey anodised aluminium and contains a polypropylene on/off valve. The separator bowl assembly is made up of stainless steel disks and an anodised aluminium casing with nitrile rubber sealing ring, housed in a polypropylene shroud which incorporates the cream and skimmed milk outlets.*

*A motor, directly coupled to the separator bowl, is mounted vertically in a cast aluminium casing with cushioned clamping feet. The casing acts as the support for the separator.*

*Ancilliary equipment to facilitate a thorough investigation into this type of separation consists of:*

- *optical tachometer*
- *product collecting vessels*
- *stop clock*
- *tools*

*The backboard includes a sectioned diagram detailing the component parts of the separator bowl and describing its mode of operation.*



*The Disc Bowl Centrifuge can easily be dismantled into its component parts*

## TECHNICAL DETAILS

Throughputs up to 125 litres per hour can be obtained depending on degree of separation

The feed reservoir has a capacity of 10 litres, which can be replenished as necessary

Separator bowl incorporates 19 discs

Twelve motor speeds between 8 500 and 10 000rpm are selectable by switch on the motor control housing

The tachometer has a 5 digit display and a measuring range of 60 to 19 999rpm

Resolution 1rpm

Two graduated sample collecting vessels, glass, 1.0 litre and 0.4 litre

One stop clock, 100mm dial, 30 hour spring driven movement with start/stop and reset push buttons

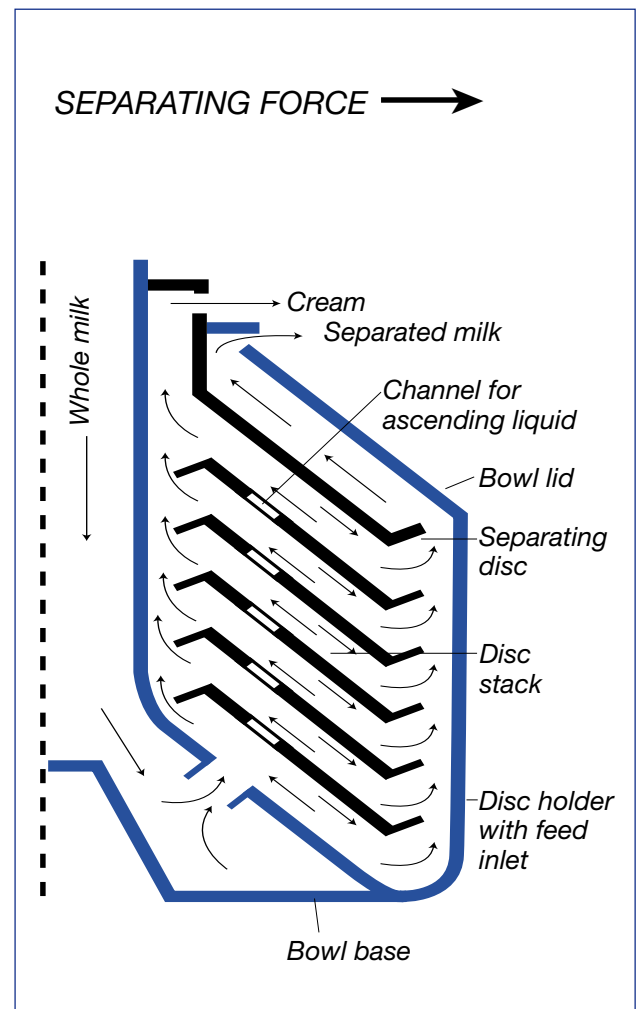
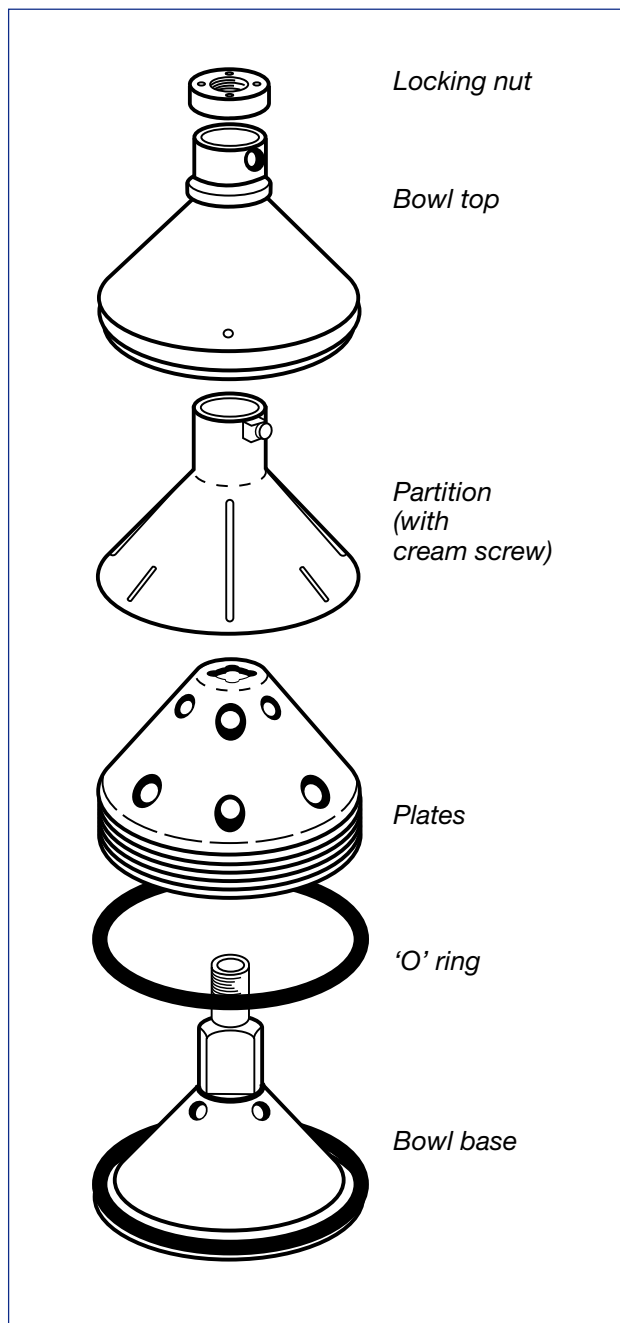


Diagram showing the separation of cream from milk with a disc bowl centrifuge

Separator bowl components

## ORDERING SPECIFICATION

***A self-contained centrifugal separator training unit which allows thorough investigation of the separation of a heavy phase liquid from a lighter phase liquid.***

***Using milk as the process fluid, cream having a fat content from 12 - 55% can be obtained. Accessories are included to allow variation and measurement of bowl speed and throughput rate measurement. Ease of strip down to component parts is facilitated by tools included in the supply.***

***Throughput up to 125 litres per hour can be obtained from a 10 litre capacity feed tank which can be continuously replenished. Materials in contact with the process fluid are anodised aluminium, stainless steel, nitrile rubber and polypropylene. Twelve motor speeds between 8 500 and 10 000rpm are selectable.***

***Accessories mounted on the framework include:***

- ***optical tachometer***
- ***stop clock***
- ***product collecting vessels***
- ***tools***

***A comprehensive instruction manual is included in the supply detailing installation, commissioning and operation.***

## SERVICES REQUIRED

***Electricity supply:***

***FT15-A: 220/240v/1ph/50Hz***

***FT15-B: 120v/1ph/60Hz***

## OVERALL DIMENSIONS

***Height: 0.6m***

***Width: 0.6m***

***Depth: 0.4m***

## SHIPPING SPECIFICATION

***Volume: 0.4m<sup>3</sup>***

***Gross weight: 60kg***

Armfield Limited  
Bridge House West Street Ringwood  
Hampshire England BH24 1DY  
Tel: +44 (0)1425 478781  
Fax: +44 (0)1425 470916  
E mail: sales@armfield.co.uk  
URL: <http://www.armfield.co.uk>

USA Office:  
Armfield Inc.  
436 West Commodore Blvd (#2)  
Jackson NJ 08527  
Tel: (732) 928-3332  
Fax: (732) 928-3542  
E mail: armfield@optonline.net