



### PHROCESSOR PK

A modular assembly of processing units all fully pre-piped, pre-wired and workshop tested prior to despatch. The advantages are:

- (a) Reduced pipelines between process stages. This can be critical in achieving a good quality crystallised emulsion.
- (b) Minimum installation time and hence avoidance of delays often caused by minor technical problems only realised during commissioning.
- (c) Minimal wastage or reprocessing of margarine and spread produced during commissioning.
- (d) Very considerable floor space reduction.

A typical PHROCESSOR PK for the manufacture of margarine, spread and shortening would comprise:

- |     |  |
|-----|--|
| 1   | Emulsion Feed and Hot Water Vessel   |
| 1   | High pressure triplex piston pump with hygienic pulsation damper               |
| 1   | PHROGAS Model PG - nitrogen gas injection unit.                                |
| 2-4 | PHROTATOR Model PK units - scraped surface heat exchangers.                    |
| 1-3 | PHROTEX Model ISC units - crystal dispersion units.                            |
| 1-2 | PHROTEX Model PT unit - heat release and texturing unit.                       |
| 1   | Auto-Blow System - for incorporation where frequent power loss is anticipated. |
| 1   | Process control and instrument panel.  |
| 1   | Set of pipes and valves - water, emulsion and refrigerant.                     |



### GROUP ACTIVITIES

#### Chris James Consultants - CJC

Food process designers, project managers and contractors operating principally in the edible oils and fats business. CJC have developed processes and equipment to suit both developing and developed markets. CJC are able to offer product formulation technology and also independent survey and cost effective analysis of existing operations.



#### Phropines Manufacturing Ltd - PML

Manufacturers of the PHROPINES range of production, packaging and service equipment for the margarine, dairy, spread and shortening industries. CJC & PML have a combined resource backed by over 30 years of first hand operational experience and hence offer a complete plant supply service to the industry.



#### Containerised Process Plant Ltd - CPP

A specialist contractor to the food industry operating in collaboration with one of the UK's leading international process equipment suppliers and a team of technical experts. CPP have recently developed a fully containerised edible oil refining plant of both "alkali" and "physical" capability, capacity range 10 - 200 tonnes/day. This patent registered scheme utilises standard profile sea/land transport containers fully pre-assembled and requiring only site assembly, weather cladding and the supply of locally manufactured storage tanks to complete a comprehensive installation.



#### JLJ Engineering Services Ltd - ESL

The UK's leading design, supply and installation contractor to the paper corrugating industry. In this niche market ESL provide steam raising plants with fully enclosed condensate recovery systems, starch units encompassing receipt, storage, make-up and handling and a wide range of ancillaries. ESL are also able to offer developing markets fully reconditioned modern plant of relatively low to medium output.



#### JLJ Effluent Engineering Ltd - EEL

A manufacturer under exclusive European licence of the world renowned Alar waste water treatment system. This system has been adapted by EEL to the requirements of the corrugated board industry. As this brochure goes to print, CJC & EEL are collaborating in a similar development specific to the food and edible oil/fat industry.



### Reference Plant Listings

#### JLJ Operations

Abbey Corrugated Ltd  
Amcor Packaging Group  
A.S.S.I. Dorman Ltd  
David S. Smith Group  
Granada Television  
Hiang Seng Bangkok - Thailand  
I.P.C. Ltd  
Laporte Industries Ltd  
Longulf Trading Ltd - UK & Yemen  
L.W.T. Ltd  
Model Board Ltd  
Rexam Corrugated Ltd  
S.C.A. Packaging Ltd  
S.H.S. Container Ltd  
Smurfit Corrugated Group - UK & NI  
Socar - France  
T.B.A. Belting Ltd

#### CJC + PML Operations

Ahmed Vegetable Oil & Ghee Mills - Pakistan  
Armaghdown Creameries Ltd - NI  
N.Z. Bakels - Malaysia  
Bodfari Producers Ltd  
Bakels Group - UK, SA & Malaysia  
British Arkady Ltd  
De Mulder Group  
Eilers & Wheelers Group  
Fresco Oils and Fats Ltd  
Giloil Ltd - Kenya  
Guan Soon Heng Edible Oil Sdn Bhd - Malaysia  
Milk Marketing Board - R & D  
Norbury Ltd  
Pedigree Petfoods Ltd  
Pura Foods Ltd  
United Biscuits Ltd  
W & R Barnett (Precision Liquids) - NI

#### CJC + JLJ Operations

Anchor Foods Ltd - UK & NZ  
Anglia Oils Ltd  
Bidco Oil Refineries Ltd - Kenya  
Britannia Refining Co Ltd  
Express Dairy Creamery  
Milk Marketing Board

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### PHROPINES Manufacturing Ltd



# The Complete Margarine & Spread Processing Plant