

EXTRUSION TECHNOLOGY DEVELOPMENT - THE JOURNEY BEGINS

TAPPING INTO OPPORTUNITIES

Extrusion is one of the most energy and environmentally friendly processes to produce pre-cooked ready-to-eat products. Extrusion has wide applications in the food as well as feed industries. There are numerous opportunities in the market for the development and marketing of extruded products.

When doing business with CFAM Technologies, you will have access to a one-stop service. You will be guided through the business conceptualisation stage, product development, plant establishment, technology development, training, right through to on-going maintenance and support.

ONE-STOP EXTRUSION SERVICE

CFAM Technologies provides a personalised complete business development solution in the extrusion field. This service includes:

- Product development.
- Business plan development and feasibility studies.
- Technology design
 - o Design of extrusion equipment and processing plants.
 - o Manufacturing of components and equipment.
 - o Installation and commissioning.
 - o Specialised high-precision manufacturing.
 - o Detailed mechanical and machine design service.
- Training & capacity building.
- On-going maintenance and support.
- Project management.



PRODUCT DEVELOPMENT

CFAM Technologies provides solutions for adding value to basic agricultural produce such as maize, sorghum, soy, rice and wheat.

A library of basic recipes is available to clients for the development of new food or feed products. Sample products are produced on a medium size 50 mm twin-screw extruder. This extruder is ideally suited for use in product development, as it can produce small batches of sample products. However, these results are easily scalable to large production machines. Once the client is satisfied with the products, consumer tests are undertaken.

Examples of extruded products include breakfast cereals, snack bars, texturised soy meat analogues, aquaculture feed pellets and pet food.

BUSINESS PLAN DEVELOPMENT AND FEASIBILITY STUDIES

Developing a business plan and undertaking a feasibility study are important steps in ensuring that a marketable product is developed. CFAM Technologies has access to business development specialists who will assist clients in undertaking feasibility studies, compiling business plans and developing product brands and trademarks.



For more information, please contact:
CFAM TECHNOLOGIES (Pty) Ltd
Potchefstroom, South Africa
Tel +27 (0) 18 294 7173
Mobile +27 (0) 82 324 3183
danie.vorster@nwu.ac.za
www.cfam.co.za



EXTRUSION TECHNOLOGY DEVELOPMENT - CREATING A SOLUTION

INDIVIDUALISED SERVICE

CFAM Technologies' custom-fit services include:

- the design and manufacturing of complete extruders and processing plants;
- manufacturing of wear components for existing extrusion equipment;
- specialised high-precision manufacturing;
- detailed mechanical design
- complete rebuilding and retrofitting of old extruders with new technology.

DESIGN AND MANUFACTURING OF EXTRUDERS AND PROCESSING PLANTS

CFAM Technologies design and manufacture complete extruders, as well as processing plants.

CFAM engineers have the experience to customise an extrusion solution to address the specific and unique needs of every customer. Our equipment are designed tough and user friendly to ensure dependable service and ease of maintenance.



MANUFACTURING OF EXTRUDER REPLACEMENT WEAR PARTS

CFAM Technologies manufacture replacement wear parts for a whole range of extruder makes. This includes kneading elements and kneading blocks, various screw elements, barrels and barrel liners and extrusion dies.

SPECIALISED HIGH-PRECISION MANUFACTURING

The manufacturing facility at CFAM is equipped with state of the art manufacturing technology. This enables CFAM to manufacture intricate high precision machine components for a number of industries.

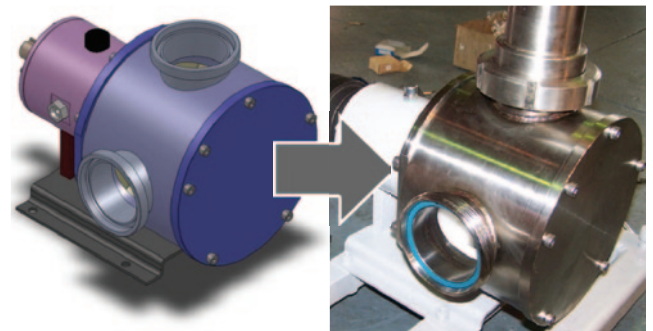
CFAM provides a reverse engineering service using high precision electronic and mechanical measuring equipment in combination with CAD software to digitize products.

CFAM services the following industries:

- Polymer extrusion
- Defence
- Explosives manufacturing
- Food processing
- Mining
- Filtration
- Gravimetric feeding
- Volumetric feeding
- Specialised pumping

DETAILED MECHANICAL DESIGN

Highly qualified design engineers form part of the team at CFAM. The team has years of experience in the design of not only twin-screw extruders and replacement parts, but also other products such as sinusoidal pumps, marine ship pump jets and azimuth thrusters, twin-screw feeding systems, gravimetric PLC controlled feeding systems etc.



For more information, please contact:
CFAM TECHNOLOGIES (Pty) Ltd
Potchefstroom, South Africa
Tel +27 (0) 18 294 7173
Mobile +27 (0) 82 324 3183
danie.vorster@nwu.ac.za
www.cfam.co.za

EXTRUSION TECHNOLOGY DEVELOPMENT – FINDING THE RIGHT SOLUTION

CFAM-EXTRUDERS

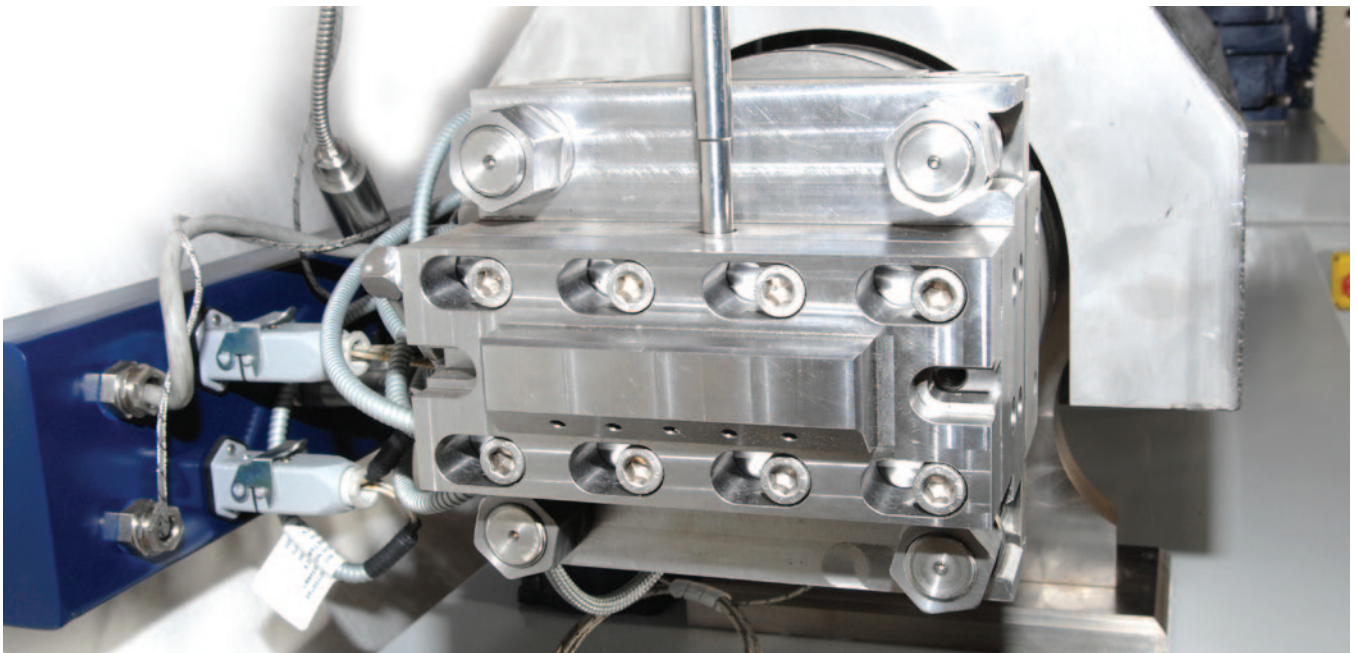
CFAM Technologies will assist clients in finding the perfect solution to meet their individual extrusion needs.

Unique features of CFAM extruders:

- Designed and manufactured in Africa for Africa.
- Modular design for quick switchover between products.
- Plug and play type components.
- Ease of maintenance – use locally available electrical and mechanical parts.
- Easy to operate with a low operator skills requirement.
- A number of safety features designed into the equipment to prevent accidental damage to the equipment as far as possible.



For more information, please contact:
CFAM TECHNOLOGIES (Pty) Ltd
Potchefstroom, South Africa
Tel +27 (0) 18 294 7173
Mobile +27 (0) 82 324 3183
danie.vorster@nwu.ac.za
www.cfam.co.za



CFAM TX80F twin-screw food extruder



- Extruder type: Co-rotating, fully intermeshing
- Barrel bore nominal diameter: 75mm
- L/D ratio: 15:1 to 25:1
- Throughput: Product specific, typically 750 - 2000 kg/hr
- Drive motor: 160 – 200 kW, AC
- Max screw speed: 600 RPM
- Gearbox: Zambello, Italy
- Control system: PLC, full colour touch screen interface. Primarily Allen Bradley / Rockwell automation components
- Raw material feeder: Gravimetric, PLC controlled
- Water dosing: Via PLC controlled dosing pump
- Die: CFAM designed die with speed controlled product cutter
- Die inserts: Replaceable inserts
- Coupling: Autogard torque limiting coupling, factory set to the correct disengagement torque

For more information, please contact: CFAM Technologies (Pty) Ltd, Potchefstroom, South Africa:
Tel +27(18) 294 7173 | danie.vorster@nwu.ac.za | www.cfam.co.za