

RESEARCH AND INNOVATION

RESEARCH AND DEVELOPMENT CENTERS

Clextal operates directly two research centers dedicated to helping clients develop new products and improve their processes in France and in the United States. Also two pilot plants are operated under Clextal license in Australia and France.



At Clextal's headquarters in Firminy, France, we operate a test facility that serves all food and non-food industries. The US center in Tampa, Florida focuses primarily on food R&D to support North and South American customers. In Cérences, France, at LIS and in Werribee, Australia, at CSIRO's, two R&D centers are dedicated to Extrusion Porosification Technology (EPT™), a breakthrough powder manufacturing process.

YOUR PARTNER IN NEW PRODUCT DEVELOPMENT

Clextal helps clients develop new products and improve their processes by providing expert assistance at our fully equipped test facilities. Our R & D services help manufacturers anticipate and respond to new trends by managing and implementing their innovations.



CO-DEVELOPMENT

Clextal partners with customers and public and private research centers on many co-development projects. These R&D ventures are deployed in a wide range of food and non-food industries and cover many scientific and industrial disciplines: new chemical and food formulas, improved processing, innovative equipment design, new applications, etc. This collaboration can include joint development of exclusive products or shared patents.



WORLDWIDE PRESENCE



Leveraging its core expertise in twin-screw technology, Clextal provides its customers with turnkey processing lines that integrate extruders, dryers and ancillary equipment. Its reliable and innovative systems are quality and excellence benchmarks in its three key markets: Food & Feed, Green Industries and Powder Industries. Clextal is also designing and manufacturing high-precision industrial pumps for the energy and chemical markets. Its global offering includes upstream design and testing of industrial solutions, equipment manufacturing, on-site installation and full maintenance and continuous process improvement services. Based in Firminy (France), Clextal is present on all five continents, providing local support to its customers all over the World.



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EXTRUSION PILOT PLANT RESEARCH & DEVELOPMENT



CLEXTAL Extrusion
Expertise
Excellence

FOOD-COMPLIANT FACILITY FOR R&D

Our food compliant facility in Tampa is dedicated to your food development and testing needs, equipped with R&D and production twin screw extruders, dryers, and a wide selection of ancillary equipment.

Our on-site process engineers and research scientists can assist with your product development and recommend product formulation and production platforms.

A variety of food product categories may be created and tested including snacks, cereals, ingredients and fibrated proteins...



SERVICE & EXPERTISE

- Confidential trials and industrial simulations ensure optimum product quality and throughput
- Customer partnerships provide proactive R&D to improve existing product lines or implement advanced product and technology development
- Process expertise streamlines the development of innovative products with different shapes, textures and coloration
- Testing at Clextal's facility is an efficient alternative to in-house testing on production extruders with related downtime and production loss
- Demonstrations on current and new processes
- Training modules and short course lectures designed for process personnel are conducted at the test center by Clextal's expert technical staff

Clextal's extrusion pilot plant is available by reservation.

Please contact us for complete information and to schedule a test.

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EQUIPMENT FOR LAB SCALE INDUSTRIAL TRIALS

Clextal's Pilot Plant in Tampa, USA is dedicated to developing new products and improving processes. Design, laboratory testing, prototyping, small batch processing, and industrial simulation are performed independently and confidentially.

The pilot plant is equipped with the new EVOLUM+ twin screw extruder, a drying system and modular clip-on ancillaries for shaping, co-extrusion, coating (preconditioning, degassing, cutting, bi-coloration, laminating).

EVOLUM 56 +

The EVOLUM+ twin screw extruder combines the proven features of the industry-leading EVOLUM® line with advanced technology to give processors new levels of throughput and temperature control while ensuring maximum product quality and process stability.



MODULAR CLIP-ON EQUIPMENT

FILLING PLATFORM

The Co-extrusion module enables the production of filled products. The extruder creates the direct-expanded outer shell while the module simultaneously injects a soft filling at the die level.



COATING SYSTEM

The coating system completes this key stage in food processing that impacts the product's appearance, texture, structure and taste features.



PINCHING FORMER

The Pinching former creates co-extruded products in a wide variety of traditional and innovative shapes. Products are formed as they exit the co-extrusion die.



EVOLUM DRYER

This very compact belt dryer features precise functions for gentle, efficient and cost-effective drying.

The EVOLUM dryer ensures the quality of the finished product by preserving textures and structural properties of all extruded products, including directly expanded snacks (balls, curls, cups, etc.), breakfast cereals, filled cereals and textured vegetable proteins (chunks) ...



HYGIENIC AND SAFE ENVIRONMENT

HYGIENIC FACILITY

Clextal's Tampa pilot plant is designed to follow FDA guidelines to ensure a safe and hygienic processing environment for our clients' product testing requirements.



CLEAN EQUIPMENT DESIGN

- Specifically designed for hygienic operation to optimize food safety
- The EVOLUM+ extruder has stainless steel construction
- New ergonomic designs and open profiles allow full machine access
- Continuous hygienically welded mine fabrication eliminates bolted joints



FDA GUIDELINE IMPLEMENTATION: METHODS, PERSONNEL, AND PRACTICES

- GMP/Hygiene requirement for all pilot plant personnel and visitors
- Quality management of raw materials: shipping/receiving inspection and documentation, dry storage area separate from processing floor
- Sanitary pass-through room prior entering the processing area
- Defined cleaning protocol in practice for processing equipment, floors, walls, washrooms
- Standardized pest control management and waste disposal programs
- Preventive maintenance program in operation for entire facility

