



**Clextal SAS**

## EXCELLENCE IN EXTRUSION

*As a production method, twin-screw extrusion offers numerous benefits over single-screw extrusion, including very homogenous product quality, enhanced productivity, greater flexibility with regard to the use of different raw materials, energy savings and easy maintenance. The technology was first employed in plastics processing 60 years ago. Clextal SAS, a pioneer in the sector, developed it further and introduced it to the food industry. Today, committed to excellence in extrusion, the innovative French company generates more than two thirds of its revenue in the food and feed sector.*

Clextal is a global leader in twin-screw extrusion and drying solutions for food processing, paper and pulp, speciality chemicals and biomaterials applications. In the food sector, the company's focus is on processing lines for breakfast cereals, crispbreads and snacks, as well as fish feed and pet food.

Headquartered in Firminy in central France, Clextal has operations in eleven countries worldwide, from Europe and the Americas to Africa and Australia. The company is part of Legris Industries Group based in Brussels, Belgium.

Besides Clextal, the diversified industrial group includes two further divisions: the international logistics engineering specialist Savoye, which is located in Dijon, France, and Keller, the German provider of turnkey production solutions for brick and tile operations.

The history of Clextal has been characterized by three major driving forces: constant technological innovation, product and market diversification, and internationalization. The company was established in 1956 and has pioneered several technology breakthroughs since then.

"We started as a manufacturer of twin-screw extruders for the plastics industry," says Vice President and COO Georges Hallary, describing the origins of the company. "In the 1970s, we were the first company to take the useful technology to the food industry. At that time, we designed a completely new processing line for Danone for the



*The great majority of extruders are produced in France to guarantee perfect*

production of Craquette, a new type of crispy flat bread positioned somewhere between crackers and rusk. It was a groundbreaking development that marked our entry into the food industry. Today, extrusion lines for food processing applications are our most important business segment.”



In the 1980s, Clextal developed another fast-evolving market by creating twin-screw extruders for cellulose-based products used in the pulp and paper industry. “This niche market innovation enabled the production of security papers and banknotes,” states Mr. Hallary.

Today, Clextal is a global player with manufacturing facilities in France and Chile, three research and development centers in France, the USA and Australia, and customers in over 92 countries on all continents. Clextal offers complete, turnkey processing lines with extruders, dryers and other useful equipment such preconditioners, dies and cutters.

As a technology leader in twin-screw extrusion, the company provides state-of-the-art solutions for the continuous processing of both natural and synthetic products of a very homogenous quality. “All our processing lines are custom-engineered to meet the client’s individual application and requirements,” says Mr. Hallary.



*Based in central France, Clextal is a global leader in twin crew extrusion*



*At Düsseldorf's Interpack, Clextal presented its next-generation twinscrew*

Clextal is active in three major markets: food and feed, green industries and powder industries. “The majority of our twin-screw extrusion systems are used in food and feed applications,” explains Mr. Hallary. “The food and feed sector accounts for approximately 70% of our total sales.”

Clextal equipment is used for the production of cereals, flakes, savoury snacks, breadcrumbs, flours, proteins, flavours, pasta, couscous, pet food and fish feed. In many cases, Clextal serves local suppliers with highly specific processing demands.

“Thanks to our global presence, we can meet these often very diverse requirements,” says Mr. Hallary. “There are, for example, many different types of grain which our systems are individually adapted to.”

The green industries division of Clextal serves customers using biomaterials and recycled materials in their production, such as manufacturers of security paper, biodegradable packing or horticultural fibers.

The third market segment, powder industries, is based on the company's Extrusion Porosification Technology (EPT™), introduced in 2011. The unique technology enables the production of innovative powders for both food and non-food applications.

Cleextral ships over 80% of its twin-screw extruders abroad. "Our extrusion systems are used to produce foodstuffs for the middle class, which is growing in many developing countries across the globe," explains Mr. Hallary. "In countries from South America to North Africa and Asia, people are changing their consumer behaviour, with demand for savoury snacks and breakfast cereals expanding at a constant rate. So, globally speaking, we are operating in a clear growth market."



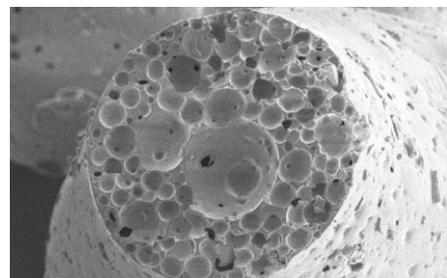
*Cleextral equipment is used for the production of cereals, flakes, savoury snacks and many other foodstuffs*

Cleextral is developing this growth market with a combination of great technological expertise in twin-screw extrusion, many years of experience in the food and feed sector, reliable and robust solutions and a close-knit international presence with local service and support.

"We speak the language of our customers, wherever they are," states Mr. Hallary. "Being close to our customers, understanding their specific requirements and developing a made-to-measure solution are very important for us."

In 2016, Cleextral plans to open a new office in Indonesia, one of the fastest evolving markets for the company. "The next step will be India to further grow our global presence," says Mr. Hallary. At the same time, Cleextral will continue innovating.

The latest product innovation presented is EVOLUM+, a next-generation twin-screw extruder with improved productivity and processing capacity. "We are also working on further reducing energy consumption," states Mr. Hallary. Another example of the innovative power of Cleextral is a new production line for couscous, which has been designed for smaller production runs. The French twin-screw specialist is also determined to realize further technology breakthroughs. The French twin-screw specialist is also determined to realize further technological breakthroughs.



For this purpose, Cleextral is cooperating with three partners in a new project aimed at extruding viscous materials. Using its revolutionary EPT™ system, Cleextral's customers can treat highly viscous, difficult-to-dry liquids and produce porous powders with enhanced functional characteristics, allowing for better rehydration, flavour retention

and dispersability, for instance. "Our technology does that using up to 40% less energy than conventional systems," Mr. Hallary adds.

The company has already installed a line at Lesaffre Ingredients Services' facilities to test and improve the system. SPF-DIANA and Triballat-Noyal are also involved in the EPT™ pilot project.

On the occasion of its 60th anniversary this year, Clextrel will organize an international congress called Innovation Summit, scheduled to take place 19 and 20 October.