



**SETREM**

*Extrusion cooking*

# Extrusion solutions



# Complete extrusion solutions for food and feed products

Setrem has been designing and marketing complete extrusion lines throughout the world since 1986. Its single-screw extruders meet all requirements for food and animal feed products.

Thanks to the flexibility of its extruders, Setrem has been able to follow and anticipate developments in the market by offering tailor-made systems to its customers. Setrem's single-screw extruders are equally suited to dry and semi-wet processes for the manufacture of the most complex products. Setrem can offer complete lines with capacities ranging for 40kg/hour up to around 10 tonnes/hour.



- ▶ **Flexible and robust in use**
- ▶ **Low operating cost**
- ▶ **High-quality extruded products**
- ▶ **Fast return on investment**



# Complete solutions

## MECHANICAL COMPONENTS

### Hopper

This not only holds a sufficient stock of the formula but also helps control perfect product take-off.

### Feeder

The purpose of the feeder is to ensure that the product is put through at a steady rate. It may be of single-screw or twin-screw type according to the application.



### Preconditioner

A preconditioner upstream from the extruder offers a number of advantages:

- higher rates of throughput,
- steady operation,
- less mechanical wear of extruder parts,
- uniform product wetting,
- three-minute residence time,
- a more palatable product,
- increased starch gelatinisation,
- improved product aspect and quality.

Preconditioner models may be of single-rotor or dual-rotor type to meet the requirements of the whole range of industrial configurations and guarantee a fast return on investment.

### Cutting head

The cutting head comprises a set of interchangeable blades for optimum quality of product cut. It is articulated and integrated in the machine. Its ease of opening ensures that the extruder die is highly accessible, facilitating maintenance work. Setrem extruder dies allow a large number of product shapes to be manufactured.

### Modular components

The extruder sleeve comprises various models of screws, steamlocks and barrels fabricated in high-resistance steel. Barrels are double-jacketed to enable heating or cooling and can be grooved in a range of ways.

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## SUCCESSFUL INDUSTRIAL PROCESS

### Dryers

Setrem offers a wide range of dryers that meet the extrusion requirements: the type of product to be extruded and the quantity of water for evaporation. Two technologies are proposed to match manufactured products and obtain the best possible energy efficiency:

- counterflow drying,
- fluid-bed drying.

# Innovation and know-how at the service of manufacturers



## FULL CONTROL SOFTWARE

This software allows the start-up and stop of the extruder but also the full control of the parameters production.



## CUSTOMER SERVICE

The technical team can provide assistance in commissioning your extruder along with their product formulation skills. Setrem has a stock of spare parts for rapid delivery.

## LABORATORY EXTRUDERS

Setrem has developed a range of limited-capacity, single-screw extruders specifically for use in laboratories and research facilities.

Capacity: approximately 40-50 kg/hour  
Reproducible results on an industrial scale

## A PILOT LINE OF RESEARCH AND DEVELOPMENT TOOL

The pilot line is a Setrem research and development tool is available for use by manufacturing companies in the agrifood sector for the following:

- conducting trials for research and development projects,
- conducting tests to validate new processes or extrusion projects based on your formulas.

## The Setrem extruder range

The above production figures are indicative only. Actual figures will depend on formula, base material and particle size.

Models	Number of barrels	Power kW	Production (kg per hour)			
			Wet extrusion soya	Cereal mix	Petfood or Aquafeed 0 > 5 mm	Petfood or Aquafeed 0 < 5 mm
S50	3 - 5	22 - 37	400 - 500	200 - 300	300 - 450	150 - 300
X100	4 - 5	75	1 000 - 1 200	700 - 1 000	900 - 1 100	650 - 1 000
X125	5 - 6	90	1 200 - 1 500	1 000 - 1 200	1 000 - 1 800	750 - 1 400
Y160	5 - 6	110 - 132	2 000 - 2 500	1 500 - 1 800	2 500 - 3 800	1 500 - 3 200
Y200	6 - 7	160 - 200	3 000 - 4 000	2 000 - 4 000	3 800 - 5 000	2 500 - 3 800
Z300	7 - 9	200 - 250	5 500 - 10 000	3 000 - 6 000	5 000 - 8 500	4 000 - 6 500



# Adaptability to market development

## VARIETY OF FEEDSTOCKS

Single-screw extruders can also be used for:

- **treatment of base materials:** soybean, rapeseed, wheat and other cereals,
- **preparation for the mechanical extraction** of oil from oilseeds.

## LARGE MARKET FOR FEED PRODUCTS

Extruders capable of producing all types of feed products:

- **for dogs and cats:** processed, premium, semi-wet and co-extruded products, treats,
- **for aquatic species:** floating, sinking and semi-sinking feed products,
- **for livestock:** high-production dairy cows, other cattle, sheep, pigs, poultry (laying hens, broilers), horses...
- **for humans:** TVP, infant formula...



Setrem, leading global partner of extrusion solutions, assists and adapts to the performance level of agrifood companies. Concerned about your innovation and excellence challenges, Setrem offers tailor-made equipment.

- ▶ **Adaptability and proximity for sustainable excellence**
- ▶ **Innovation and engineering for performance**



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