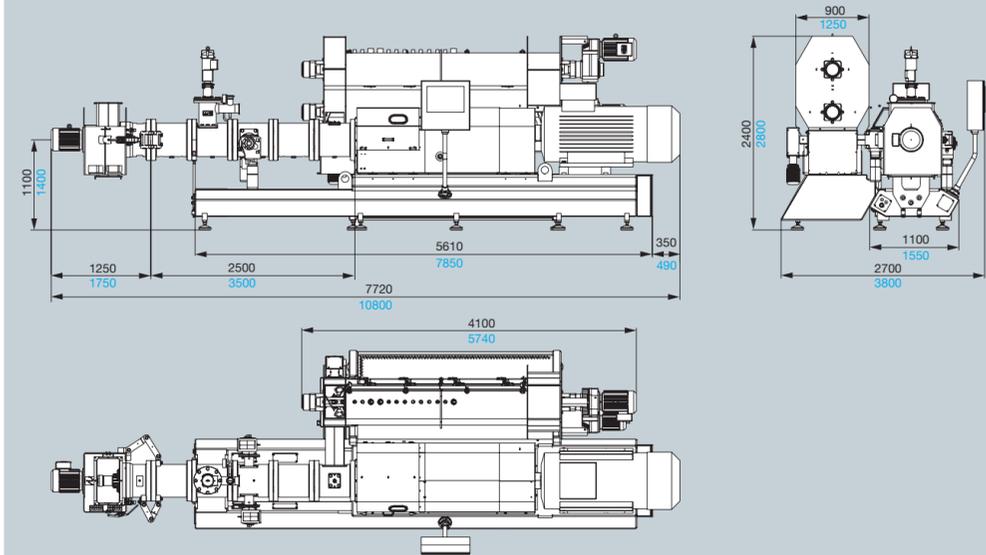


## Technical data.

*ECOtwin 125*  
*ECOtwin 175*

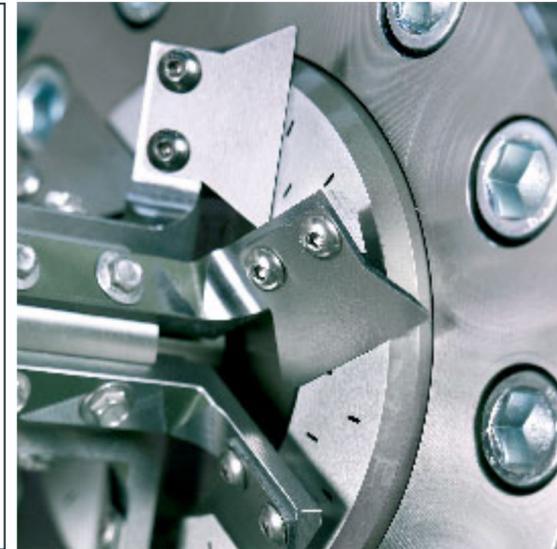


Twin-screw extruder <i>ECOtwin™</i>	Type 125	Type 175
Screw diameter (nominal diameter)	125 mm	175 mm
Screw length L : D ratio	16–20 (2.0–2.5 m)	16–20 (2.8–3.5 m)
Screw speed variable	rpm 150–800	rpm 125–600
Standard main drive for 50 Hz / 1500 rpm	max. 450 kW	max. 900 kW
Max. allowable axial pressure	75 bar	75 bar
Max. allowable barrel temperature	150°C	150°C
Throughput up to	10 t/h	20 t/h

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ES 55004 en 0705 1500 DF

Twin-screw  
extrusion system.



*ECOtwin™*

# Twin-screw extruder *ECOtwin™*.

The *ECOtwin™* extrusion system consists of the extruder, the preconditioner, and the peripheral devices. Its performance is tailored to the specific requirements of the petfood and industrial fish feed industries. Its modular design ensures the best possible customization to users' needs.

## The new twin-screw extruder *ECOtwin™*

The system is characterized by its excellent reliability and ease of operation.

Easy cleaning and accessibility of all critical zones ensure a high level of sanitation. The SME and Density Control modules guarantee excellent and reproducible product quality. The product characteristics can be adjusted during the production process and within a very short time. This does not require any costly screw reconfigurations and/or modification of other process parameters such as the water content or the screw speed.

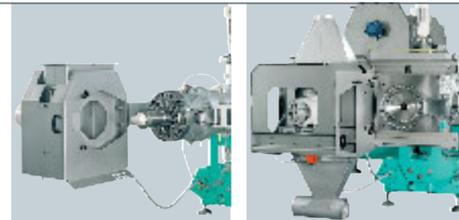
### Some features:

- The preconditioner with its separate mixing and retention zones guarantees homogeneous mixing and a narrow retention time range.
- The retention time in the preconditioner can be selected independently.
- The active control of material flow throughout the system prevents material build-up.
- To prevent condensation and build-up, surfaces are either scraped or heated.
- All transitions are short and have large cross-sections.
- The automatic screw ejection unit allows very user-friendly and fast ejection of the screw shafts for cleaning or reconfiguration.
- The screw shafts are additionally supported by bearings at the die end. This reduces screw wear and prevents dry running.
- The low overall height enables the complete system to be installed on a single building level.
- Logging of process data and production statistics provides an excellent overview of the process.
- SME and Density Control ensure consistently high product quality.



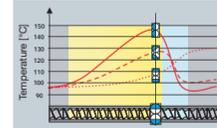
### Cutter

The cutter cuts the product to the required length. Two types are available. The photograph on the left shows the standard cutter for the *ECOtwin™* extruder. It can be swung up by hand, for example for changing the die. The photograph on the right shows a cutter designed for fully automatic service. It can be moved pneumatically. In the start and stop phases, this cutter can be automatically opened and closed.



### Best products achieved through splitting up the process

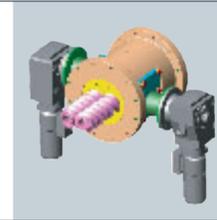
The SME and Density Control modules enable the cooking degree and the bulk density to be separately controlled. Two process sections are created. In the first, the SME is specified for optimizing the texture and the cooking degree. In the second, the temperature at the die and thereby the expansion degree or bulk density of the pellets is selectively set.



The temperature profile inside the extruder can be separately controlled in the cooking and shaping zones.

### SME Control

The module consists of a throttling device with two valve cylinders. Closing of the valve cylinders will increase the material backup length ahead of the throttle. This causes the filling degree and the retention time to rise, in turn increasing the SME. The module can be incorporated at any required point of the process. This creates the possibility of separating the cooking and shaping processes.



### Density Control

The Density Control module allows accurate and continuously variable selection of the bulk density regardless of the SME introduced. This is done by the addition of steam (light product), by returning of the steam to the preconditioner (semi-heavy product), or by generation of a vacuum (heavy product). A large portion of the thermal energy is returned to the process.



### Control system

The *ECOtwin™* is equipped with a touch-screen user interface. The PLC control system and the user interface ensure easy process control and excellent process transparency. The control system offers online fault message, alarm, and auxiliary systems as well as a system for recipe management.



# Service.



Customer training in the extrusion engineering laboratory

### Extrusion engineering laboratory

The functional extrusion engineering laboratory supports the practical development of new products, processes, and equipment as a supplement to the scientific problem-solving approach.

It allows various process operations to be simulated in isolation as well as in a wide variety of combinations.

### Engineering

Our project engineers ensure smooth handling of your order and will make sure our systems are properly integrated in your production environment.

### Installation and start-up

The installation and start-up specialists from the Extrusion Systems unit ensure competent installation and construction site management and smooth project processing up to the point of start-up.

### Training of customers' operating personnel

If required by customers, Bühler also offers an alternative to on-site personnel training in the form of training in our pilot plant. In this case, the people to be trained will benefit from a highly varied program directed by the relevant specialists available at our headquarters.

### Customer Service

Our engineers and service specialists are available for on-site consulting. They ensure trouble-free service of the machines we supply throughout the life cycle of the equipment. This concept is supported by a global, efficiently organized spare parts service.