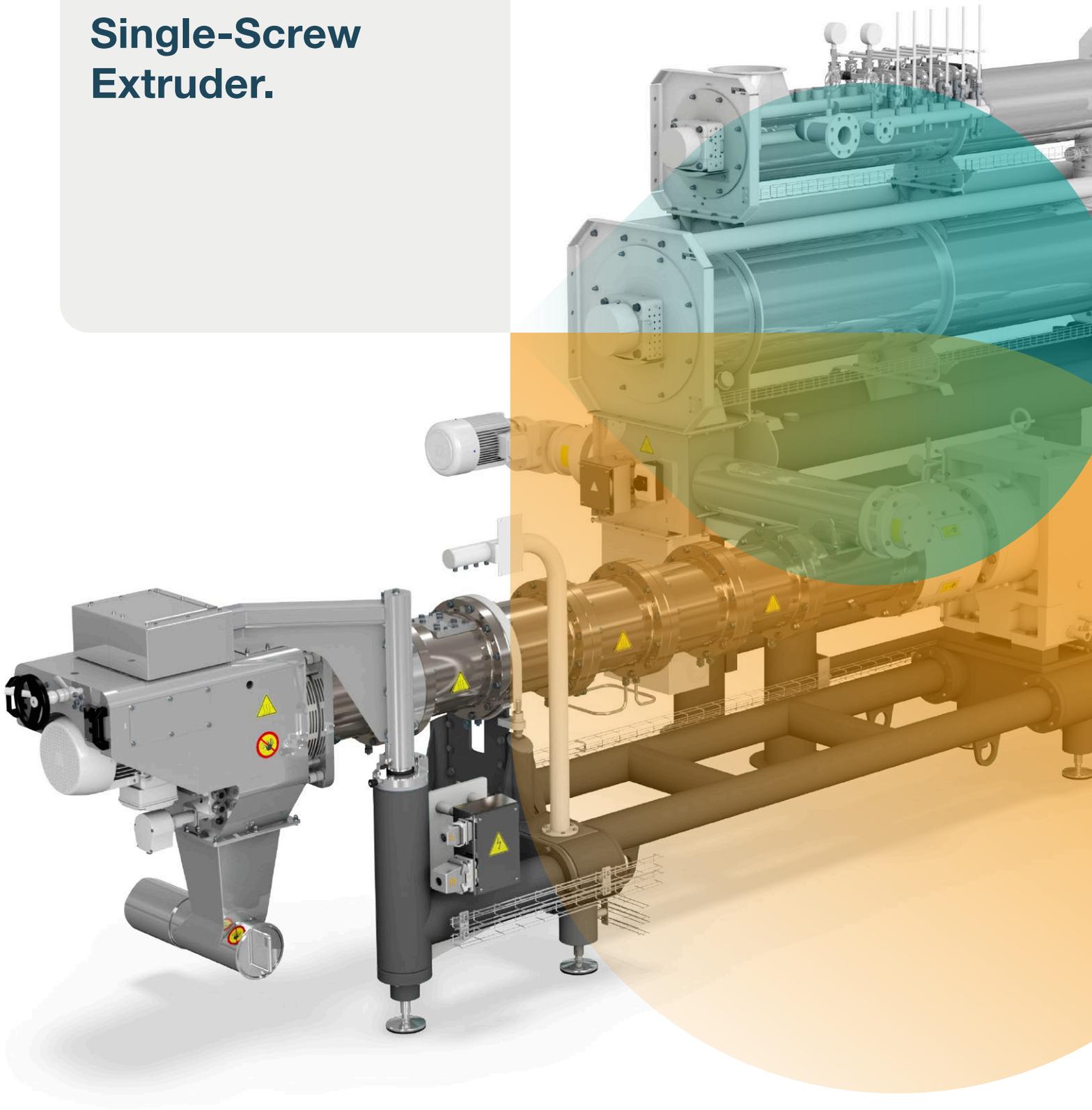
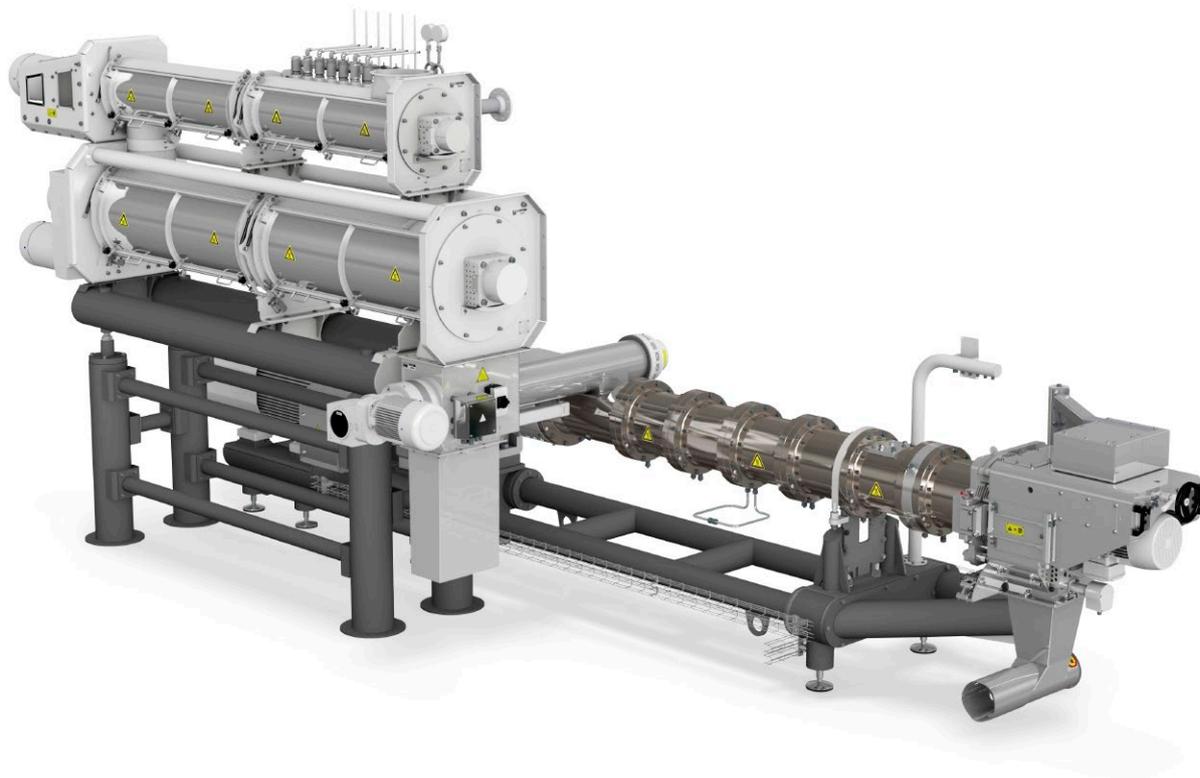


The Bühler  
**Single-Screw  
Extruder.**



# Mutifunctional Single-Screw Extruder. Ideal solutions for every process.



The Single-Screw Extruder features a mobile, intuitive control panel which enables reliable process control.

## Application examples:



### Pet Food:

- Direct-expanded kibbles
- Semi-moist pet food
- Foods for small pets



### Aqua Feed:

- Micropellets
- Floating feeds
- Sinking feeds
- Fish feed for industrial fish farming

# For Pet Food and Aqua Feed Industry. **Perfectly designed for all demands.**

The Single-Screw Extruder completely fulfills process requirements of the pet food and aqua feed industry as capacity, screw speed, torque and pressure. Thanks to its modular design, this machine is extremely flexible in application and can be adapted to the specific needs. High sanitation standards, excellent workmanship and an outstanding price-performance ratio make the extruder the ideal solution in the field of Pet food and Aqua feed extrusion.

## **State-of-the-art technology for reliable process control.**

In order to guarantee an end product of consistent quality, the Single-Screw Extruder is equipped with an intelligent recipe memory. This offers two significant benefits: Susceptibility to process errors decreases, and production can be quickly adapted to other recipes. Predefined start-up and shutdown sequences optimize the starting and shutting down of the machine. Virtually no raw material is wasted, and the production process speeds up considerably.

## **Modular design for variable use.**

The innovative design of the housing according to the “shell principle” offers special advantages: the housing excels through its mechanical stability, resistance to wear and highly efficient tempering, with spiral or conical liners.

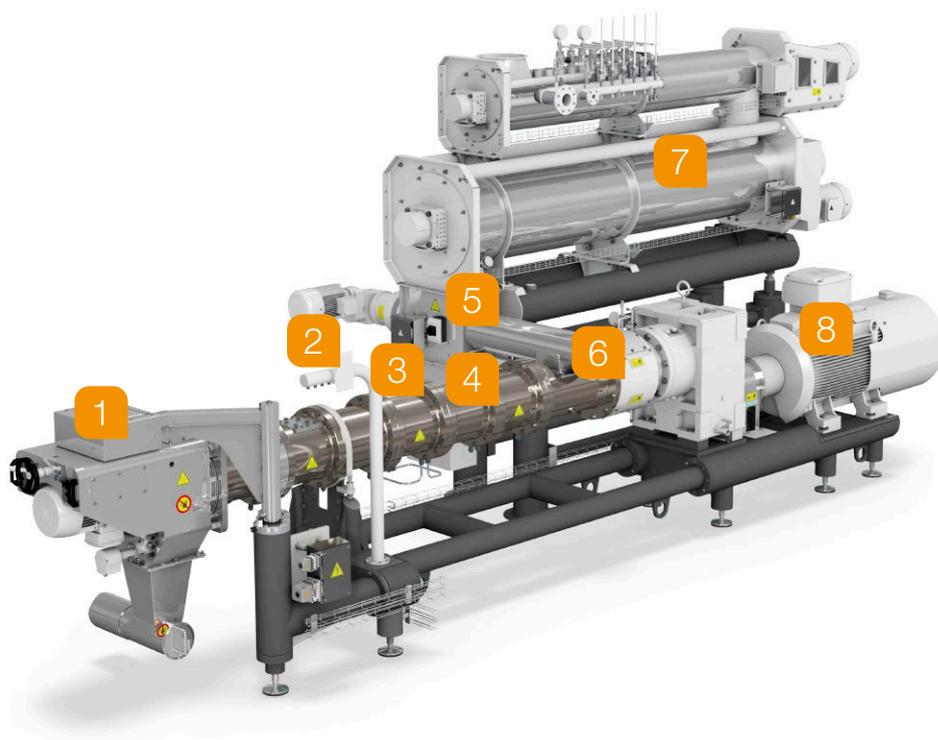
The modular process component can be easily adapted to higher capacities and different processes and upgraded with additional modules, which are bringing the flexibility and production quality to the next level.

Maintenance costs for the extruder are minimized: the interior casing is extremely resistant to wear. Bühler offers a barrel wear measurement service to detect wear and tear in good time. In this way, parts can be replaced at an early stage to ensure stable product quality.

### **The extruder offers:**

- High sanitation standards
- Consistently high product quality
- Modular machine design
- Intelligent process control

# Modular technology ensures success. Performance features at a glance.



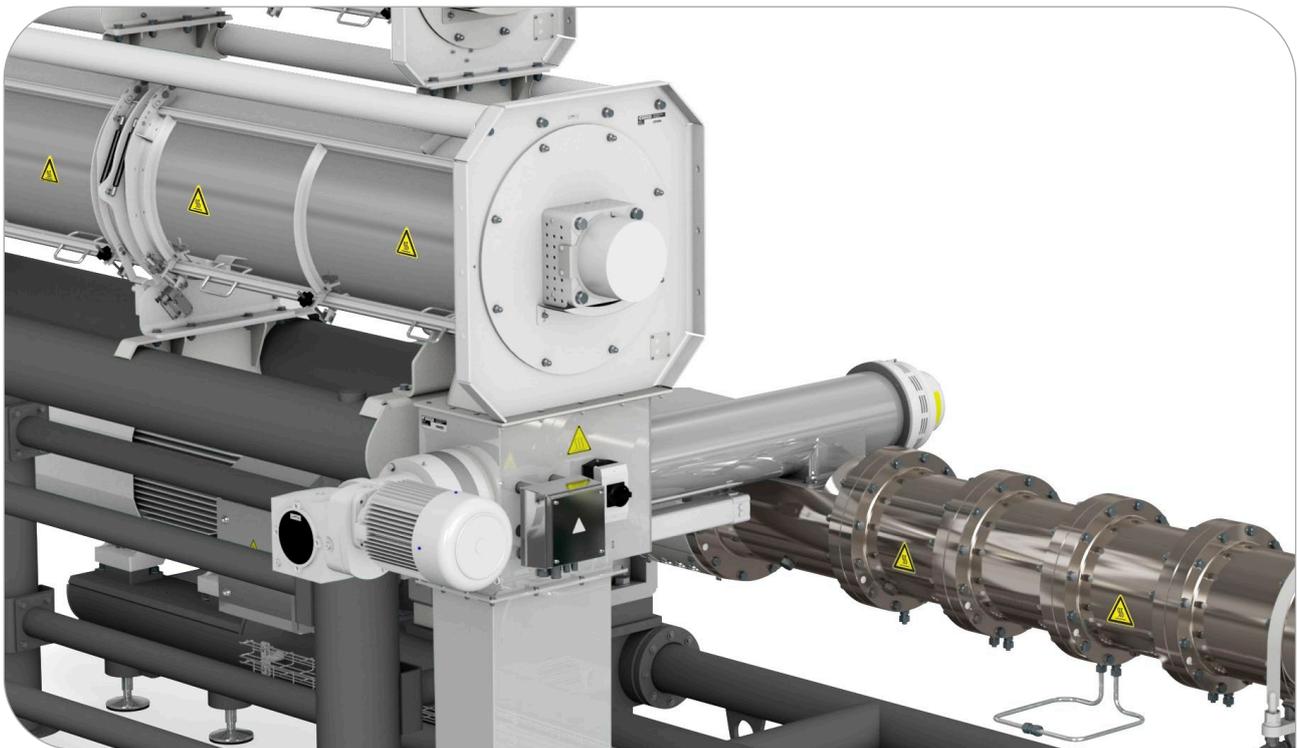
- 1 Cutter
- 2 Control unit
- 3 Screw elements
- 4 Barrels Heating / Cooling
- 5 Feeder in Extruder
- 6 Steam- and waterdosing
- 7 Preconditioning
- 8 Main Drive

## User-friendly automation system for efficient and safe production.

The Single-Screw Extruder is equipped with a user-friendly and intuitive touchscreen control system. Safety circuits prevent damage due to improper use. Emergencies trigger self-stopping of the extruder fully automatically.

For quality and food safety reasons, the control system contains important functions such as logging and trending of actual and historical data. It also features some of the required functionalities of FDA21CFR part 11 such as user management, event logging of operator interventions, and logging of quality-related data.





New feeder screw for stable running conditions.

## Double-stage preconditioner for consistently high product quality.

The double-stage preconditioner separates the mixing zone from the retention zone. This ensures optimal, intensive mixing at high screw speeds and gentle retention across a narrow time range at a low screw speed. The design of the double-stage preconditioner is such that the material inlet is vertically positioned above the outlet.

## Feeder screw as transition between preconditioner and extruder.

With the new feeder screw higher throughput due to enforced infeed and therefore, higher filling degree, are possible. This also results in stable running conditions and improved production security. To ensure best accessibility and risk reduction of cross contamination during cleaning, the condition is moved away from above the extruder to the side. Therefore, the dirty cleaning water is no longer spatter over the extruder.

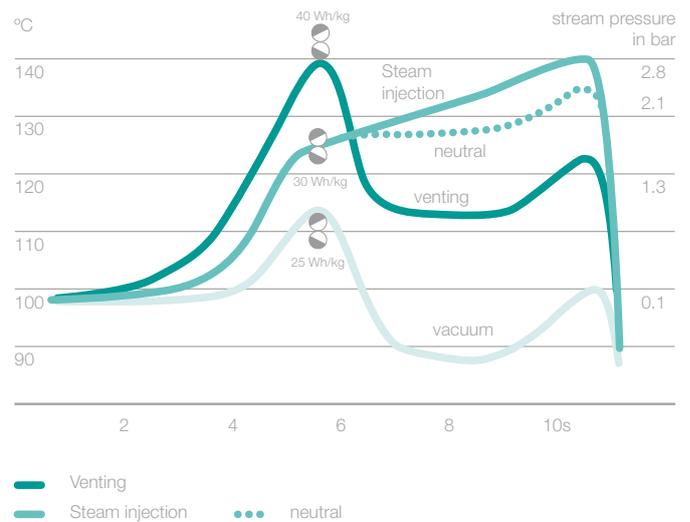
## Modules to improve flexibility.

SME Module, and the Density Control, are available on the Single-Screw Extruder.

Those systems are enabling producers:

- to optimize the raw material costs without compromise in product quality due to flexible mechanical energy input without changing the screw configuration.
- Produce consistent product quality even with some fluctuations in raw material quality with automated adaptation of those two systems.

SME and density control module



Different temperature - time sequences with SME Module and Density Control in use.

## Modules to improve food safety.

### End barrel valve

Sanitary startup valve to separate product streams uncooked product flow can be separated from the and sterilizes product streams without contaminating the extruder die and the cutter.

### High Hygiene Design cutter and air pick up

- Highest Hygienic design requirements
- No cross contamination form conveying air



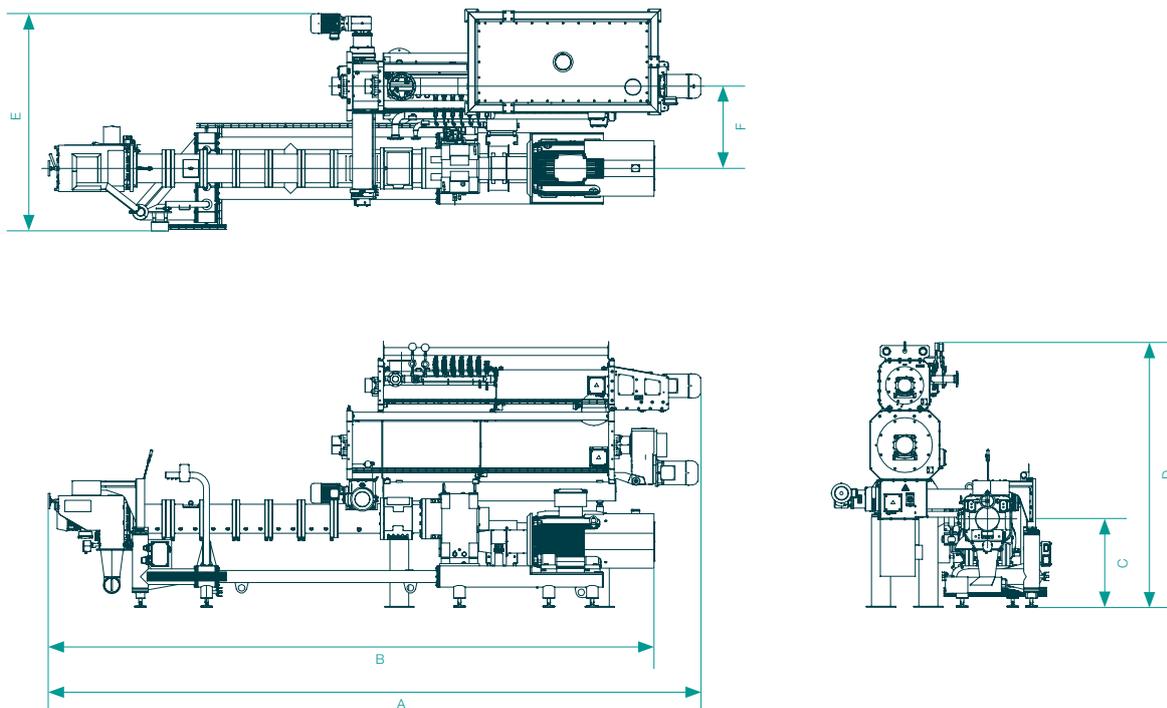
# Technical data.

## Single-Screw Extruder.

Technical data of the Single-Screw Extruder at a glance:

Model	Extruder screw diameter mm	Pressure max. bar	Temperature °C	Throughput max. kg/h	Motor power max. kW	Gear ration 1/rpm	Screw speed max. rpm	Torque max. Nm
AHSJ	265	100	200	18'000	710	1 : 3.8	395	17'180
AHSK	215	100	200	10'000	355	1 : 3.0	500	6'800
AHSL	185	100	200	5'000	250	1 : 2.85	525	4'524

Model	Dimensions mm					
	A	B	C	D	E	F
AHSJ	9'728	9'728	1'150	3'624	3'531	1'220
AHSK	8'396	7'807	1'150	3'436	2'834	1'064
AHSL	7910	7300	1150	3224	2673	1064



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