



FEED AND BIOFUEL

IMPROVE FEED QUALITY AND INCREASE FLEXIBILITY

FEED EXPANDER

ANDRITZ

ENGINEERED SUCCESS

Optimizing the process line

THE FEED EXPANDER IS THE EFFICIENT SOLUTION FOR SECURING:

- Lower percentage of fines
- Better physical pellet quality
- Increased pellet mill capacity
- Better raw material composition possibilities without consideration of the binding properties of raw materials
- Improved activation of the natural binding properties of raw materials
- Reduction/elimination of bacteria, etc. by heat treatment
- Reduction of growth-inhibiting substances
- Better digestibility of the feed compound

DESIGN

The feed expander screw is composed of modules and is self-centering, just like the rest of the ANDRITZ extruder program. The process pressure and the motor load are controlled by hydraulic adjustment of the outlet nozzle, **A** closed, **B** open.

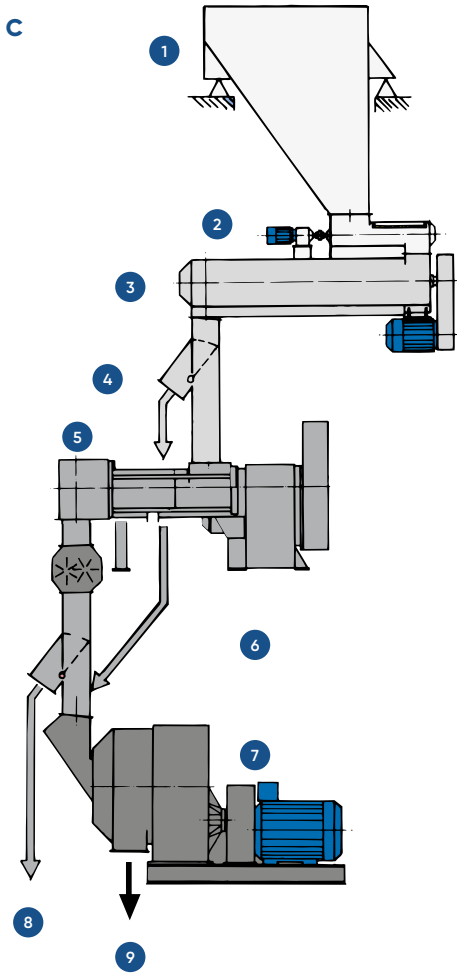
This construction ensures maximum mechanical stability and easy/quick access to the nozzle, and the screw. The temperature in the nozzle as well as the degree of opening are recorded continuously. During operation, the nozzle is housed in a stainless steel outlet housing. The outlet housing is constructed as a sandwich construction with a layer of heat insulating foam between the outer and inner metal shell.

FACTORY LAYOUT

To ensure maximum flexibility, a by-pass system is recommended for both the feed expander as well as the pellet mill. **C**

As shown here **D**, the feed expander is built onto a separate platform. ANDRITZ experts can advise concerning mounting possibilities to suit the customer's wishes and requirements. The ANDRITZ feed expander can be combined with pellet presses of any make.





- 1 Pre bin
- 2 Feed screw
- 3 Conditioner
- 4 By-pass
- 5 Feed expander
- 6 Wing crumbler
- 7 Pellet mill
- 8 By-pass
- 9 Warm pellets to cooler



APPLICATION

The ANDRITZ feed expander is primarily used for mechanical/thermal superconditioning, and stabilization of the feed mixture before pelletizing, but can also stand alone in connection with thermal treatment and crumbling of feed mixtures as well as individual raw materials.

FUNCTIONING PRINCIPLE

The feed expander consists of a "high-capacity" extruder screw with an adjustable outlet nozzle. The pre-heated mixture is fed to the feed expander from a cascade mixer as used in traditional pelletizing. In the feed expander screw the material is further kneaded, compressed, and heat-treated in a continuously controlled HTST (high temperature, short time) process. The product is discharged from the expander through

a wing crumbler and into the die of the pellet mill or to the cooler if pelleting is not required.

Heating of the product in the feed expander screw is achieved by the friction heat (electrical energy). The process pressure, temperature, and friction energy are chosen depending on which of the above product improvements is required.

FEED EXPANDER

| | |
|-------------------|-----------|
| Temperature range | 90-150 °C |
| Pressure | 10-80 bar |
| Process time | 1-4 sec. |



GLOBAL SUPPLIER – LOCAL PRESENCE

With sales, service, engineering, manufacturing and production sites located all around the world, ANDRITZ Feed and Biofuel is truly a global organization with a local presence. ANDRITZ is vital to ensuring a reliable global supply of aqua feed, animal feed, pet food, and biofuel. With full process lines accounting for half the world's production of aqua feed and biomass alone, we continuously support leading producers in achieving the highest levels in safety, quality, and control from feedstock to final product.

How can we help grow your business?

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