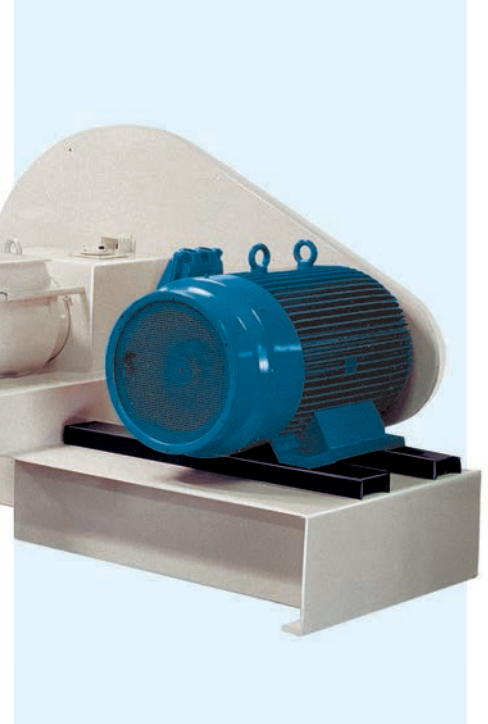


Feed expander

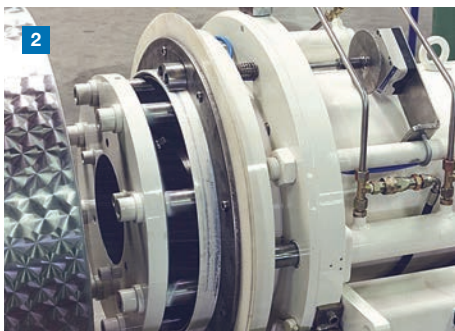
Increased flexibility – improved feed quality



Optimizing the process line



▲ Feed expander



The feed expander is the efficient solution for securing:

- Lower percentage of fines
- Better physical pellet quality
- Increased pellet mill capacity
- Increased addition of liquid, fat/oil, molasses, to the feed mixture before pelleting (without any negative influence on the pellet quality)
- 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

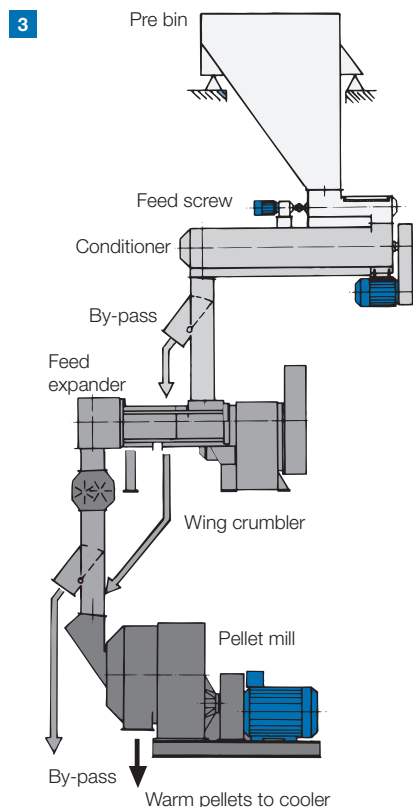
The feed expander screw is composed of modules and is self-centering, just like the rest of the ANDRITZ extruder program. The process pressure and the motor load are controlled by hydraulic adjustment of the outlet nozzle, **1** closed, **2** open.

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 **3**

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

For all types of pellet mills



able outlet nozzle. The preheated 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) and by steam injection directly into the screw. The process pressure, temperature, and distribution of steam and friction energy are chosen depending on which of the above product improvements is required.

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



expander system makes it possible to add large quantities of liquid additives.

As shown here **4**, 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.

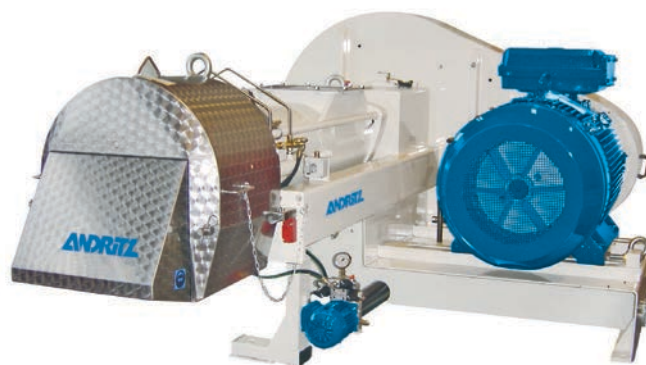
Application

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 adjust-

Feed expander



FEX34 feed expander ▲



FEX42 feed expander ▲

Where to find us

Global supplier – local presence

ANDRITZ is truly a global organization – but also with local presence. We are represented all over the world. The global market for feed technologies is served from five main locations:

- Esbjerg, Denmark
- Sanshui, Guangdong Province, China
- Geldrop, Netherlands
- Muncy, PA, USA
- Humenné, Slovakia

In addition, we operate from several strategic regional sales, engineering, and service locations in China, Vietnam, India, Australia, Mexico, Venezuela, Brazil, Chile, France, the UK, and Germany – and are also represented locally by agents and distributors in many other markets.



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