FEED AND BIOFUEL
IMPROVE FEED QUALITY AND INCREASE FLEXIBILITY
FEED EXPANDER
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.
**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 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). The process pressure, temperature, and friction energy are chosen depending on which of the above product improvements is required.

**FEED EXPANDER**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>90–150 °C</td>
</tr>
<tr>
<td>Pressure</td>
<td>10–80 bar</td>
</tr>
<tr>
<td>Process time</td>
<td>1–4 sec.</td>
</tr>
</tbody>
</table>
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?

ANDRITZ Feed and Biofuel A/S
Glentevej 5–7
6705 Esbjerg, Denmark
p: +45 72 160 300
andritz-fb.dk@andritz.com

AUSTRALIA
p: +61 3 8773 4888
andritz-fb.au@andritz.com

BANGLADESH
p: +88 (02) 9844800
andritz-fb.bd@andritz.com

BRAZIL
p: +55 47 3387 9146
andritz-fb.br@andritz.com

CHILE
p: +56 2 24624608
andritz-fb.cl@andritz.com

CHINA
p: +86 21 5774 5781
andritz-fb.cn@andritz.com

COLOMBIA
p: +57 (1) 744 8200
andritz-fb.co@andritz.com

DUBAI
p: +971 4 299 5555
andritz-fb.uae@andritz.com

FRANCE
p: +33 24 75 06 364
andritz-fb.fr@andritz.com

GERMANY
p: +49 2104 9197 0
andritz-fb.de@andritz.com

INDIA
p: +91 87544 15287
andritz-fb.india@andritz.com

ITALY
p: +39 (0445) 575 695
andritz-fb.it@andritz.com

MEXICO
p: +52 443 323 1530 ext 364
andritz-fb.mx@andritz.com

NETHERLANDS
p: +31 40 2627777
andritz-fb.nl@andritz.com

POLAND
p: +48 60 906 1037
andritz-fb.pl@andritz.com

SOUTH AFRICA
p: +27 82 781 0808
andritz-fb.za@andritz.com

TURKEY
p: +90 232 570 38 00
andritz-fb.tr@andritz.com

UK
p: +44 1482 825119
andritz-fb.uk@andritz.com

USA
p: +1 570 546 1253
andritz-fb.us@andritz.com

VIETNAM
p: +84 8 6253 9434
andritz-fb.vi@andritz.com

All data, information, statements, photographs and graphic illustrations in this leaflet are without any obligation and raise no liabilities to or form part of any sales contracts of ANDRITZ AG or any affiliates for equipment and/or systems referred to herein. © ANDRITZ AG 2018. All rights reserved. No part of this copyrighted work may be reproduced, modified or distributed in any form or by any means, or stored in any database or retrieval system, without the prior written permission of ANDRITZ AG or its affiliates. Any such unauthorized use for any purpose is a violation of the relevant copyright laws. ANDRITZ AG, Stattegger Strasse 18, 8045 Graz, Austria.