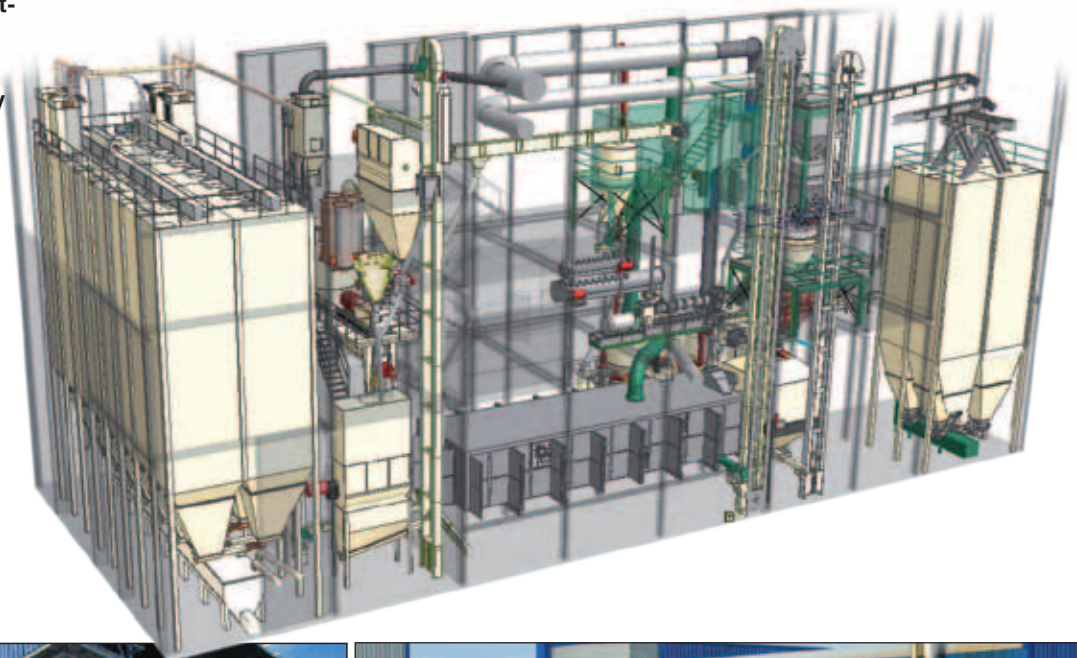


Extrusion



The ANDRITZ FEED & BIOFUEL concept

Today's high demands for cost-effective, quality and high-performance feeds make it obvious that producing quality feeds requires a high level of specialized processing technology.



ANDRITZ FEED & BIOFUEL is a unique company with the ability to manufacture and supply each and every machine in the feed extrusion line. With an intricate knowledge of each key process, we can supply a compatible and homogeneous solution from raw material intake to finished feed bagging.

Complete plant solutions

Our solutions are simple and effective. We strive to be a "one-stop" all-round supplier for all extrusion needs. Our packages are tailor-made to suit the specific requirements of our customers, whether it be know-how, engineering, individual process machines, complete processing

lines or spare parts and service availability.

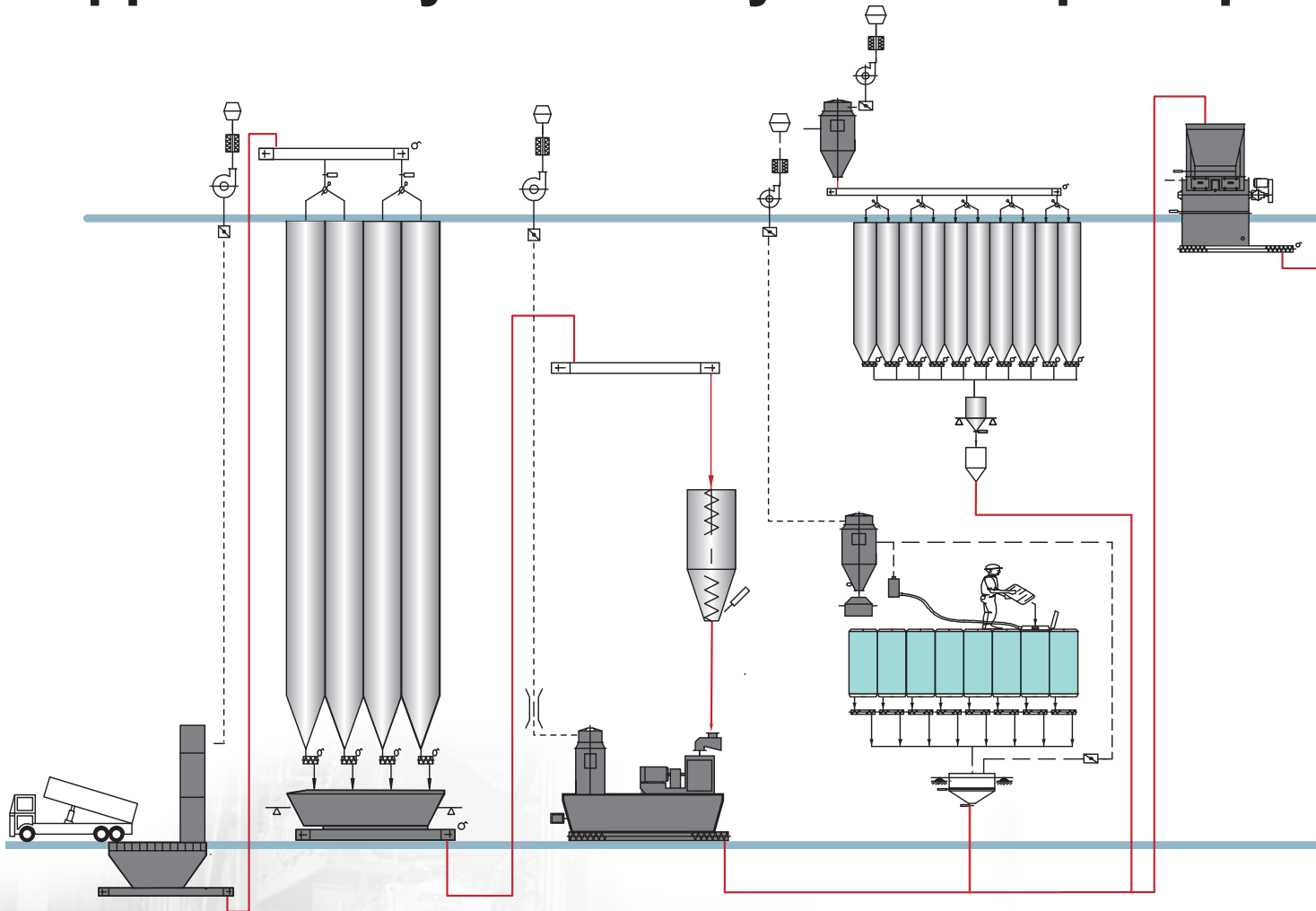
Project management

Easy-to-operate and maintainable plants and systems with short implementation time and excellent performance set us apart from the competition. Competence, engineering leadership and worldwide co-operating business units in addition to staff commitment and dynamics distinguish us from other suppliers. Through outstanding performance, mastery of key-process technologies and engineering capabilities, ANDRITZ FEED & BIOFUEL has become a globally leading supplier of extrusion equipment and systems.

Experienced project managers and experts from specialized functions ensure that the expected performance will be achieved.

Being the worldwide largest supplier of equipment to the feed industry with more than a century of experience, manufacturing facilities on three different continents, 14 sales and service companies plus a supplementary worldwide distribution network, we are confident to claim that ANDRITZ FEED & BIOFUEL is able to supply an optimum technology solution for any possible need for aquatic feed and petfood plants.

Supplier of key machinery and complete pro



Raw material intake

Weighing

Grinding

Premix-/micro-weighing and mixing



Bulk intake system with aspiration filter

Bulk intake hopper and conveying system with filter, type DFE.

Ingredients silos and hopper scales

Hopper scales for weighing of individual constituents in formula mixtures.

Live bin

For pre-mixing of feed ingredients prior to grinding to ensure optimum hammer mill performance and homogeneous particle size distribution.

Multimill hammer mill

3000/3600 rpm hammer mill with small hammer-to-screen clearance. Screen perforations as small as 0.75 mm (1/32"). Capacity: 0.5-25 TPH.

Optimill hammer mill

1500/1800 rpm grinder in a variety of sizes for low-fat raw materials and high capacities. Capacity: 0.5-60 TPH.

Aspiration filters

Fully automatic, continuously operating bag filters cleaned by compressed air. A variety of filters support any need for process air filtration throughout the entire extrusion plant.

Premix and micro-ingredients weighing unit

Micro-ingredients weighing unit for weighing/metering of premix and micro-ingredients in formula mixtures.

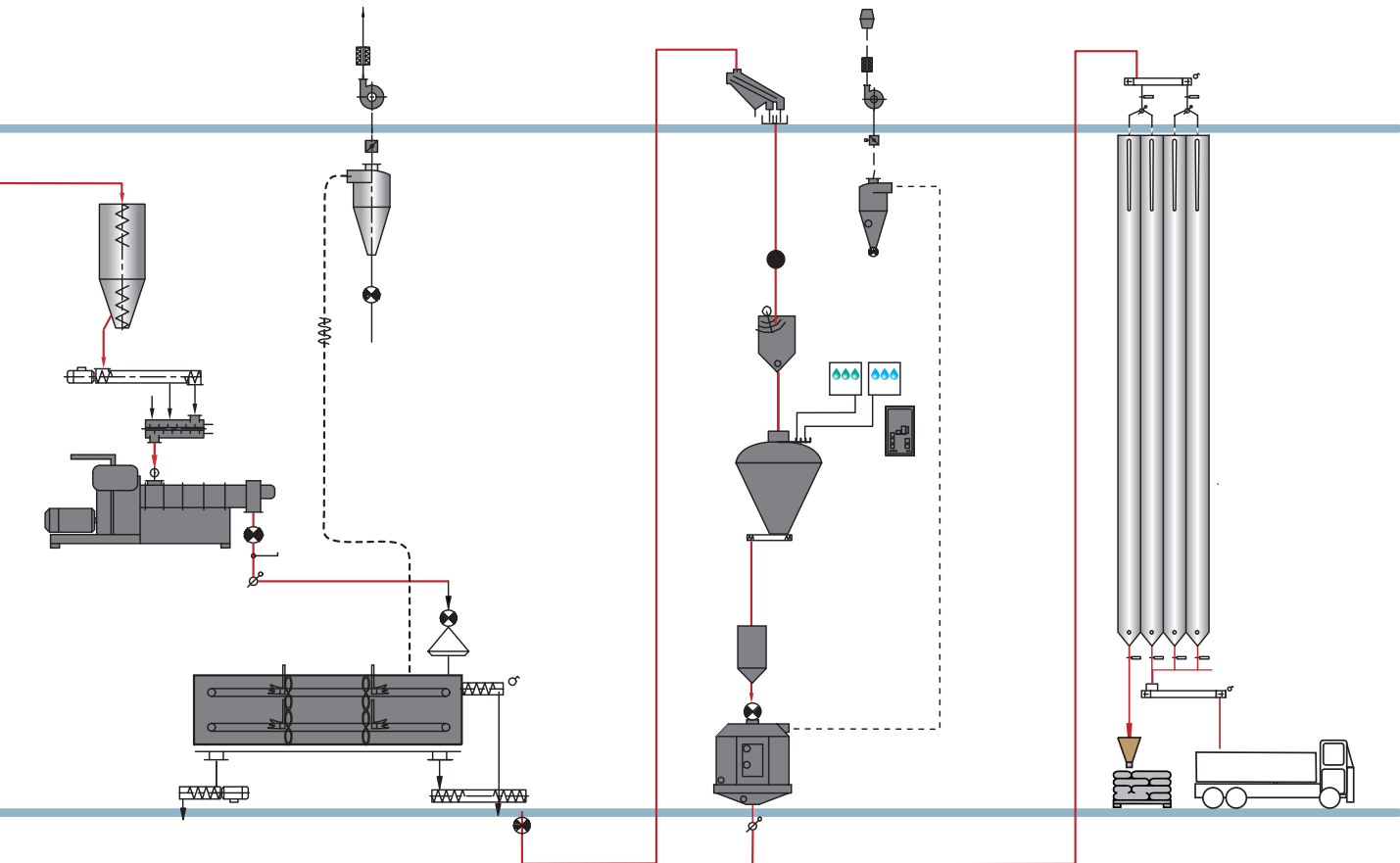
Paddle mixer

Paddle mixer for dry mixing in connection with addition of high amounts of liquids. Capacity: 0.5-40 TPH. Batches: 0.1-6 T.

Ribbon mixer

Ribbon mixer for standard dry mixing extrusion operations. Capacity: 1.5-30 TPH. Batches: 1-4 T.

Process plant solutions



Conditioning, extrusion and drying

Coating and cooling

Finished feed silo/packing



Conditioner

CM series for pre-conditioning with addition of liquids and steam, providing optimum mixing and retention time. Dual conditioning for perfect mixing-in of liquids and extended conditioning time as well as availability of CRT first-in-first-out solutions.

Extruder EX600, EX900 and EX1250

High-performance extruders, providing low operating costs combined with exceptional feed quality and unique process flexibility. Capacity: 1.5-20 TPH.

ECS and Flextex

Expansion Control System for in-line controllability of extruded feed expansion/sinkability. Flextex for easy adjustment of extrusion SME during operation.

Dryer

Combi-Zone dryer for improvement of fish feed and petfood, covering a variety of production capacities (up to 30 TPH) and product sizes (0.8 – 40 mm), including unique energy efficiency and minimum spreading of product moisture.

Coater

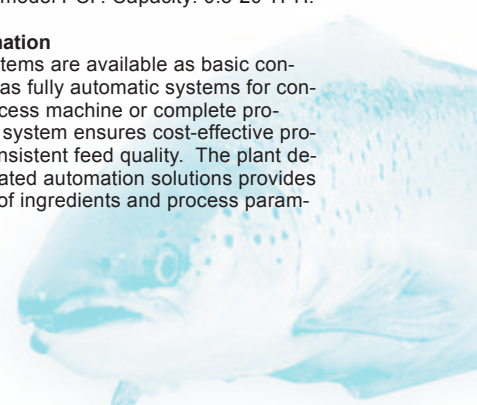
Vacuum coater VAC in simple design for unique results, e.g. high addition of liquids, no product damage and production of special products. Capacity: 0.5-25 TPH and up to 35% added oil/fat.

Cooler

Vertical or horizontal coolers on the basis of customer applications and preferences. Vertical cooler, model PCF. Capacity: 0.5-20 TPH.

Process automation

Automation systems are available as basic control systems or as fully automatic systems for control of each process machine or complete process lines. The system ensures cost-effective processing and consistent feed quality. The plant design with integrated automation solutions provides full traceability of ingredients and process parameters.



Efficient extrusion technology

Industrially produced feed is undergoing a continuous quality improvement process to keep pace with the efficiency in the aquaculture and petfood industry. ANDRITZ FEED & BIOFUEL single-screw extruders represent state-of-the-art technology, ensuring high-quality feed at minimum operating costs.

ANDRITZ FEED & BIOFUEL offers a close co-operation based on:

- State-of-the-art technologies
- Complete product range to fulfil every need for process lines
- High performance
- Superior product quality
- PC-based automation and process monitoring

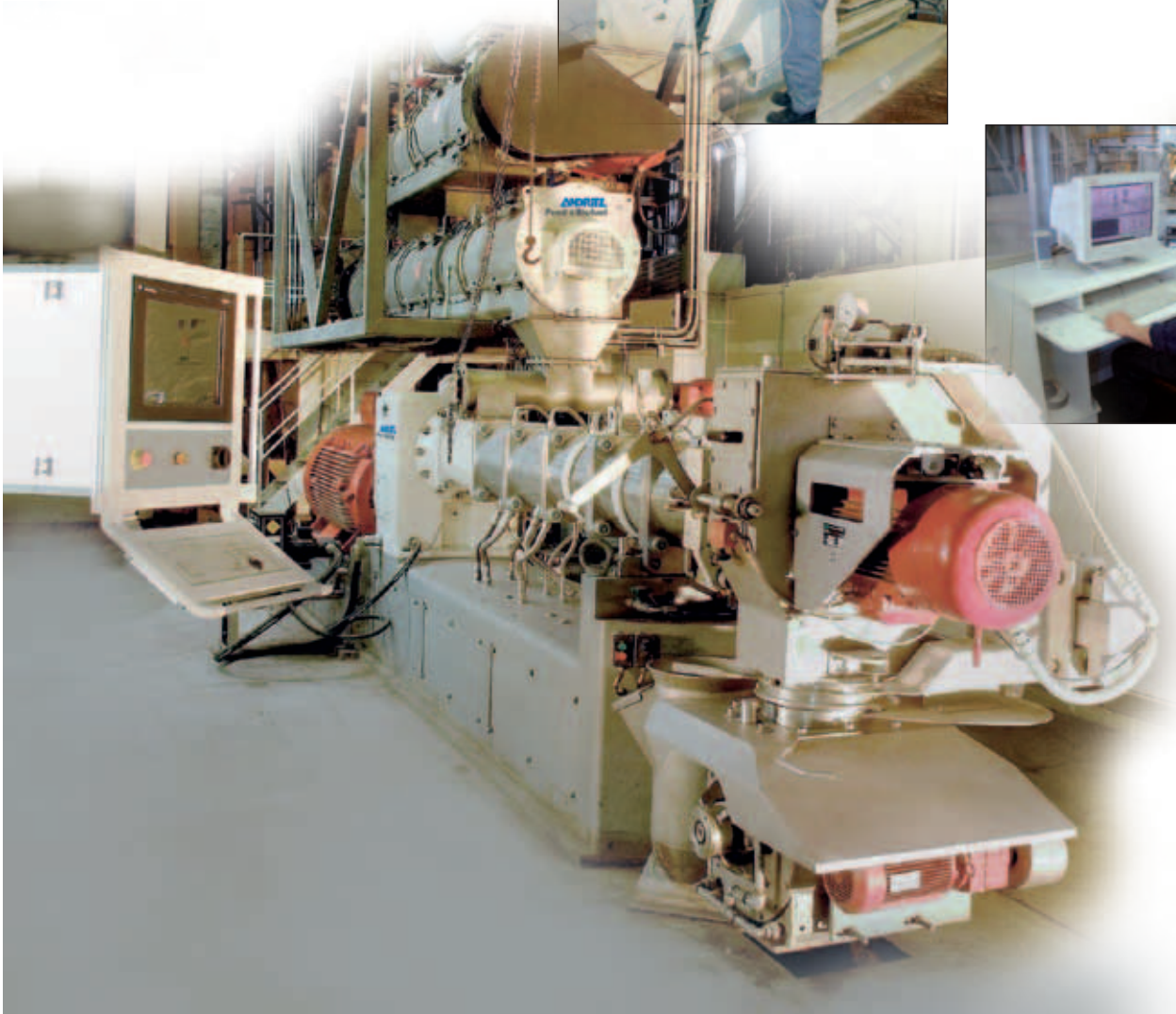


Customized solutions

Products from ANDRITZ FEED & BIOFUEL ensure high process consistency and flexibility. With multiple design features and modular systems as a starting point, our engineers are at any time capable of designing a solution, which fulfils all demands for high production capacity and quality.

Formula management

Having entered a formula into the advanced process control system, the complete process – from intake of ingredients to finished product – is started. The operator can follow the entire process on-screen. The continuous data logging system ensures full process and product traceability, and the automation includes preventive maintenance systems.



ANDRITZ FEED & BIOFUEL service

Excellent support for aquatic feed and petfood plants. Being able to supply equipment for an entire feed pellet production is one thing, but being able to serve customers from nearby warehouses after the installation in terms of support and supply is yet another essential ANDRITZ FEED & BIOFUEL competence.

Our worldwide presence is implemented through regional service centres that guarantee highly reliable process operations by means of close contact and support. ANDRITZ FEED & BIOFUEL engineers are available for plant audits and support in order to assist the customer in identifying and ensuring a possible production increase, locating cost-saving opportunities and fine-tuning the production process.

Spare parts

ANDRITZ FEED & BIOFUEL provides worldwide availability of spare parts, including dies and rolls. High-quality parts and consumables offer long life and good economy in the process plant.

Service contracts, including products and support:

- Spare parts
- Wear parts
- Regular service
- On-line process support
- Process optimization
- Renovation and improvement
- Recommendations for spare parts stock
- Standby service technicians



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