



FOOD AND BEVERAGE

Solutions for smolt/land based fish farming

Delivering integration and reliability

ABB AS

Main office

Bergerveien 12 P.O.Box 94 N-1375 Billingstad Norway

abb.no

Contact center: +47 22 87 20 00 Email: contact.center@no.abb.com

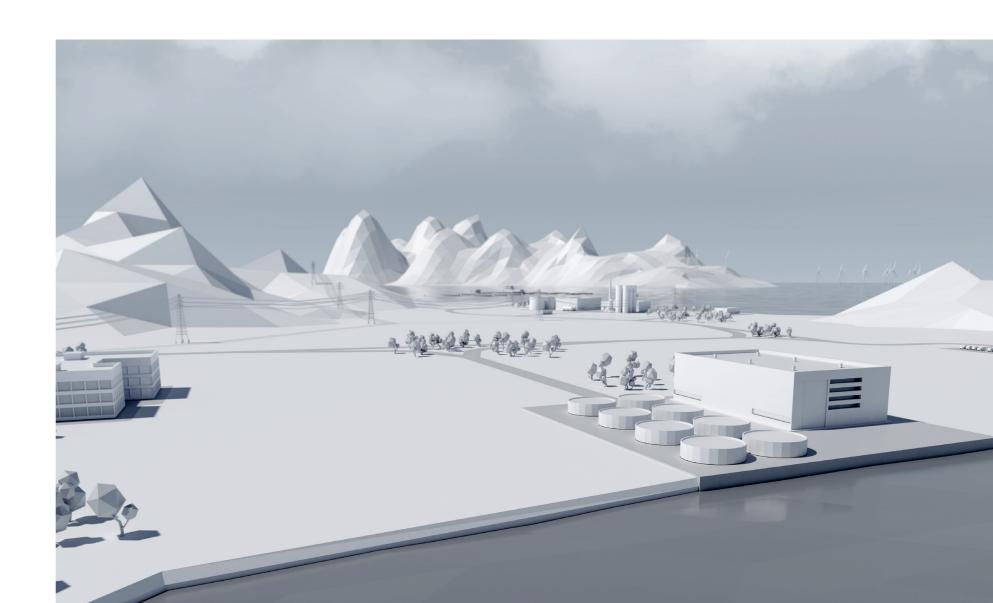
ABB AS

Ole Deviks vei 10 N-0666 Oslo Norway

abb.com/foodandbeverage

Contact Center offers you a single point of contact for all your inquiries to ABB. Your inquiries will be routed to correct person or registered for further follow-up.

Customers with a service agreement may contact our dedicated Service Desk on a separate number.



SOLUTIONS FOR LAND-BASED FISH FARMING INSTRUMENTATION, AUTOMATION AND DIGITALIZATION

Systems and solutions for all land-based production facilities

Smolt and full growth cycle, large-scale concepts

ABB can help you build flexible and cost-effective production systems.

- · Uncompromised safety, hygiene and traceability
- · Continous, reliable operations
- · Automation, instrumentation and digitalization enable optimization and greater control of production
- Service agreements, remote support and lifecycle management of assets
- Integration across products, systems and suppliers
- Integration across value chain, from roe, through smolt, grow-out and to processing



Main contractor responsibilities

Intelligent infrastructure integrated products and systems from ABB's automation, instrumentation, power/electrical and telecommunications portfolios. The intelligence within many of ABB's smart devices and systems refers to the fact that many have Ethernet interfaces and can easily join the fourth industrial revolution - connecting the psysical world within the digital world.

Intelligent engineering embraces ABB's expertise as a main automation contractor (MAC), main electrical contractor (MEC) and main instrumentation contractor (MIC). As the main contractor, ABB provides project management together with design and engineering expertise. It also oversees interface management of the engineering suppliers and takes reponsibility for the data transfer between parties.

of experience.

To operate any process efficiently, it is essential to measure, actuate and control. With ABB's measurements and analytical solutions the customer receives the best technology and expertise based on more than a century

Instrumentation, automation and digitalization Keep production running and increase productivity

> Our automation solutions provide users with a comprehensive view of the plant by integrating data from all plant areas and systems, including remote SCADA systems. The control system's open architecture can seamlessly consolidate and rationalize plant data and enhance operator response to changing conditions, improving both plant safety and uptime.

ABB Ability™ is our unified, cross-industry digital capability extending from device to edge to cloud -with devices, systems, solutions, services and a platform that enable our customers to know more, do more, do better, together

Sensing data and then analyzing it to create insights are two necessary steps. Realizing these insights in the physical world of a company's operations is the crucial third step ehere all customers value creation occurs. This is where ABB stands apart; in our unparalleled ability to act, delivering end-to-end solutions and closing

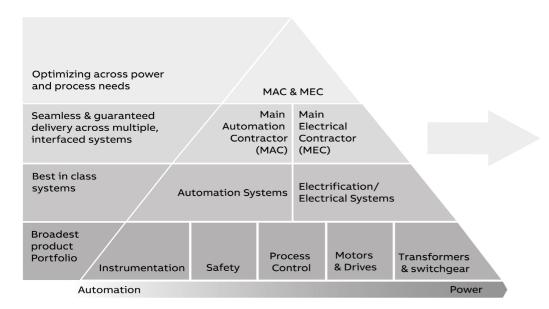
Closing the loop is how we unlock new opportunities for our customers to reduce downtime, lower energy or fuel consuption. lower maintenance effort, increase resource efficiency, elevate performance, and improve productivity via enhanced uptime, speed and yield.

From power connection to end of line packaging

- · Picking, Packing, Palletizing
- · Automation and mechanical
- · Power distribution, protection and quality
- Control
- · Safety and protection
- Instrumentation

ABB as Main Automation and Electrical Contractor

The Power of Integration



Integrated Process and Power Automation benefits

Project benefits

- Reduced CAPEX (20 percent typical)
- Faster project startups
- Reduced engineering
- · Less equipment required

Operational benefits

 Reduced OPEX (20 percent typical)

- Energy management
- Operator efficiency
- and safety
- Reduced lifecycle costs

