

Hydrofeed

Aquaculture Feeding Systems of The Future

We have developed a waterborne fish feeding system for a more efficient and sustainable future of our industry and our planet.

- **Reliability:** minimalistic engineering to reduce CAPEX and OPEX
- **Efficiency:** ensures the least damage to the integrity of the feed
- **Flexibility:** surface or subsea feeding to mitigate sea lice infestation
- **Sustainability:** saves money and reduces a farm's environmental impact

Waterborne Feeding Technology

Food Delivery:

Unlike the current pneumatic solutions, water-based feeding - unaffected by wind or currents - ensures that more food is delivered to the fish. The food is handled gently eliminating the dusting or heating created in pneumatic feeding systems.

"The feeder area is 100% clear of any food dust we are used to seeing in pneumatic systems"

Food integrity:

Our experience-with current installations shows food integrity remains high despite early contact with water. We see better FCR and response conceivably due to pre-moistening.

"We see strong response from fish to the food, much more than the compared cages. We believe there is an elevated FCR of 4-8%"

Reliability:

"The project was started due to inevitable amortization and high wear we suffered with the pneumatic systems. Pipes and parts in the blower unit needed to be replaced every few years."

Energy:

By comparing both specs of the off-the-shelf pneumatic feeding system, you can easily identify the power consumption difference.

"We believe a mid-size farm could save up to 100Mwh/Year, and when most of it produced by black diesel generators, the saving can amount to \$160,000 a year!"

Water Cycle:

We use the same water in which the fish are raised, at a rate of 50m³/Hr. (100% circulation). In sea cages we use water nearby the cages, in ponds - secure intake area and in RAS we can tap into the water cycling system.



Operation Modes

Manual, remote controlled, automatic

Dimensions (Net)

L-6m, W-2m, H-1.5m; 750Kg.

Energy

3*10A 380V, significantly below pneumatic feeding system

Heavy Duty

Up to 25 ponds / cages per module

Net Feeding Ratio

1.7 tons/Hr. Max,

Feed Intake

4 separated dry fishmeal food containers

Durability

Supports both Fresh and marine water, 90% of components are stainless steel

Feeding Pipes

Simple stocked 63 or 75 mm at 10 PSI, Distance over 500m

Outlet

Hydrofeed floating sprinkler, surface or subsea

Hydrofeed

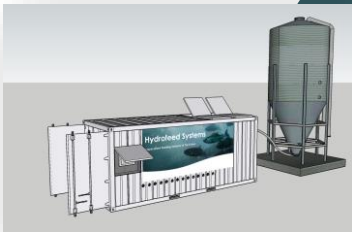
Versatile and Dynamic Solution

Indoor / Integration



The indoor version allows for an easy and seamless integration with RAS farms or barges that have the existing physical envelope.

Outdoor



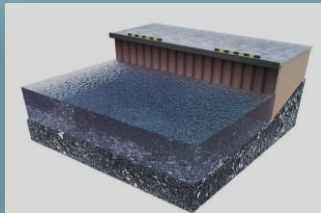
The outdoor version is made for fast deployment where no overhead structures is in place. Mainly for open barges, quays/platforms and ponds.

Installations

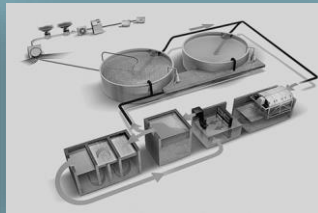
Barge
sea-cage farming



Quay
Sea cage



RAS
Inland, Flowthrough



Pond
Alongside



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Features Matrix

	Food Cannon	Pneumatic	Hydrofeed Waterborne
Wear and Tear / Reliability / Amortization	Medium	Unreliable, Intensive erosion of pipes and rotors	Close to zero amortization in both pipes and pumps
Food Integrity – Dusting and heating	Mainly dusting	Dusting and Heating	None!
Fishmeal lose due to wind / streams	Very high	High	None!
Underwater Feeding (sea lice, floating pallets, etc.)	None	None	Both surface and underwater feeding capabilities!
Energy Consumption (Power)	High	Very High	30% of pneumatic consumption
HR Operation Involvement	High (manual)	Low	Low
Automation and IoT	None	Depends on model and generation	Digital by design: full traceability and control
Cost (CAPEX)	Depends on installation	Very high + requires special expensive pipes!	\$200k per unit for 20 cages, requires simple stock feeding pipes
Additive/Medic no-residue assurance	Low	Low	High – full rinsing between feeding session

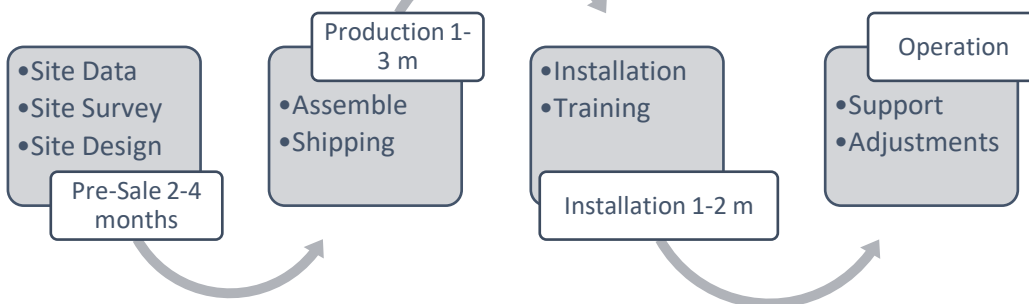
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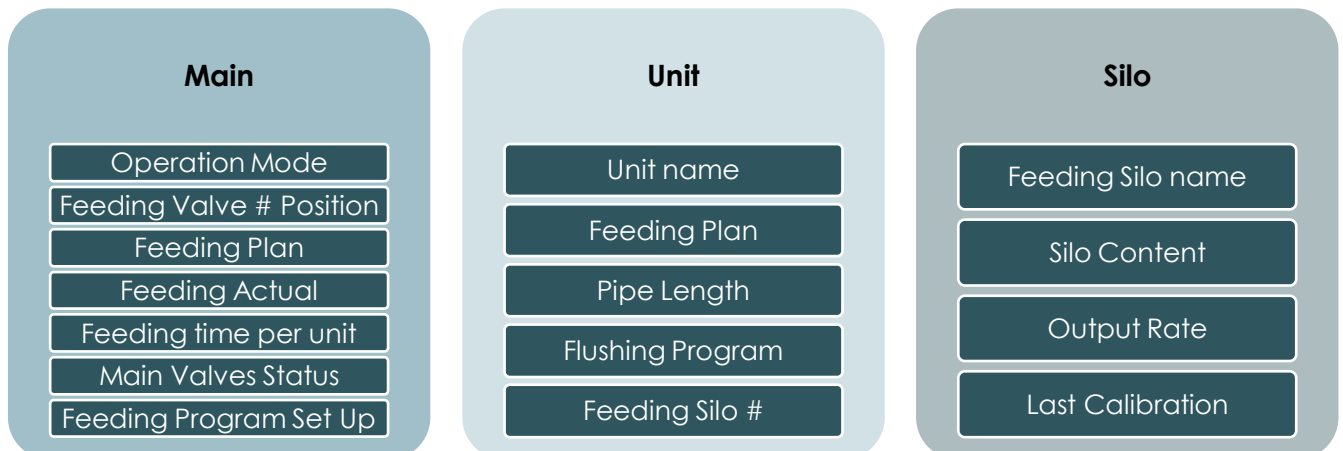
Upgrading to Hydrofeed Waterborne Feeding:

- Our pre-sales team will ensure collecting the data and the needs of the current installation. The site survey will allow us to determine, along with the farmer, the best location, integration and installations required.
- Set up of the location doesn't require special ground/floor treatment as the feeder is relatively light weight (60Kg/m² dry; 100Kg/ m² wet).
- The installation itself requires replacement of the outlet pipes to a simple stocked 63 or 75 mm at 10 PSI and connection to our floating "sprinkler" unit within the cage/pond/tank.
- Installing the water intake station as close as possible to the feeder.
- Food conveyers to be set up between the farm silos and the feeder silos.
- Secure power connection of 3*10A 380V
- Installation takes a few days to complete followed by full training for the feeder manager.

Set Up Cycle, 6-10 Months



Digital, Automation, Control and Communication



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Sustainability Impact:

Energy – 80% reduction of black diesel generator-power

Animal welfare – 100s of millions salmon affected by sea lice annually

Feeding Efficiency – Lowering FCR and reducing food waste

Microplastic – Released into environment, reduced to zero



Hydrofeed Ltd.

www.Hydrofeed-ltd.com