switchmed

Funded by the European Union

FFF Fish Farm Feeder

FishFarmFeeder

FEEDING SYSTEM - CAGES

Description of Solution : Intelligent and autonomous feeding system for aquaculture offshore cages *(Silo personalised for 1 Ton)*

- Individual feeding system for on growing in fish farms at sea or on large land areas.
- Manual and simple operation to be carried out by a single operator.
- Can connect to Artificial Intelligence systems.

Function and Application : The solution allows automated and autonomous feeding of a fish cage in the sea. By means of algorithmic systems, it is able to control each dose and the necessary dosing time on a daily basis. It has a specific API that facilitates its integration with other systems and is enabled to collect information from external sensors for feedback and improved.

Application to all sub-sectors where feed has to be applied to the culture organisms:

- Easy to use
- Affordable price
- Without automation
- Powered by solar energy
- Ready to work with AI

SPECIFICATIONS : Solution developed accordingly project requirements (Silo for 1 Ton)

Specifications	Feeder 250kg	Feeder 1 Ton
Spreader: kilograms of feed / min	5 Kg/min max. Variable according to type of feed and programming	5 Kg/min. Variable according to type of feed and programming
Dimensions	N/A	N/A
Weight	200 kg	615 kg
Material	Stainless steel	Stainless steel
Power	Autonomous Solar Panel 2 m2 Battery Autonomy: 3 hours	Autonomous Solar Panel 2 m2 Battery Autonomy: 3 hours
Pellets Size	1,5 – 5 mm	1,5 – 5 mm
Dispersion Radius	4,5 m	4,5 m
Pipe Diameter	50 mm	50 mm

Availability : Market readiness, trade mark, existing market coverage, commercialization strategy

This smart feeder is part of FFF's portfolio of intelligent offshore feeders. FFF is a globally operating company with business partners in more than 25 countries. From a marketing point of view, the adaptation and implementation of our systems is done through our commercial partners. The equipment is manufactured in Vigo (Spain) and shipped to our customers for commissioning with additional support from our local partners (when available) or directly by Feding Systems personnel.

Targeted and Type of Local Business Partners :

Distributors trained to install and maintain the power systems installed in their geographical area, giving the first level support of proximity that the customer demands.

Requirements : to adapt the solution to the local market and potential applications/market size

This solution is adapted for its correct operation regardless of its location (local market). All its manufacturing has been made according to European quality standards (of international application).

On-site After Sales Services Support : FFF has remote support for all its installations. For on-site technical support, it has a network of partners in more than 30 countries. All the system is supplied with components of the world's leading brands, which guarantees the adequate replacement of the same in case of need. Once an installation has been commissioned, technical training is planned for the people designated by the client to provide first class on-site technical support, in addition to the other resources mentioned above.

Implemented by
UNIDO UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
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MedWaves the UNEP/MAP Regional Activity Centre for SCP

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Economic and Environmental Benefits

Economical Aspects :

- **Optimized Feed Usage:** Can dispense the exact amount of feed needed, reducing waste and saving on feed costs. Precision feeding ensures that each fish receives the right quantity of nutrients necessary for its growth.
- **Improved Growth Rates:** By providing consistent and timely feeding, can help improve the growth rates of the fish. Regular feeding schedules and optimal nutrition contribute to healthier and faster-growing stock.
- **Reduced Labor Costs:** Automation reduces the manpower needed for feeding operations. This can significantly cut down labor costs and also minimize human error in feeding practices.
- **Enhanced Monitoring and Control:** Is enabled to receive data form external sensors and/or software that allow for monitoring and control of feed delivery. This can include adjustments based on the biomass in the cages, the behavior of the fish, and environmental conditions.
- **Better Health Management:** Overfeeding or underfeeding can lead to health issues in fish. This FFF system can help maintain an optimal feeding regime that keeps fish healthy, reducing the need for treatments and potential losses due to diseases.
  Data Collection and Analysis: Can collect data on feeding patterns, growth rates, and feed conversion ratios, which can be used to further optimize feeding strategies and overall fish farm management.
- **Scalability:** Can be easily scaled up or down depending on the size of the aquaculture operation. This makes it easier for businesses to expand and adapt to market demands.
- **Operational Consistency:** Provides consistency in feeding, which is crucial for maintaining the health and growth rate of the fish stock. This consistency is difficult to achieve with manual feeding.
- **Remote Operation and Notifications:** Can be operated remotely, allowing for adjustments to be made without being physically present at the site. Notifications can alert operators to issues with the feeding system, allowing for quick responses.
- **Integration with Other Systems:** Can be integrated with other farm management systems, such as water quality monitoring and climate control, for a more holistic approach to farm management.

Environmental Aspects :

- **Environmental Sustainability:** By minimizing feed waste, this automated feeder help reduce the environmental impact of aquaculture operations. Excess feed can lead to water pollution and negatively affect local ecosystems.
- **Energetically Clean:** uses solar panels to power electromechanical systems, guaranteeing their correct operation through clean energy.

Company Overview : FishFarmFeeder is a company founded in 2008 that manufactures feeding systems for aquaculture with a complete catalog of feeders that cover all stages of fish life: hatcheries, pre-grow and ongrowing, both on land and at sea. Globally offer specialized solutions only in the field of automation of feeding systems for aquaculture.

- Contribute to sustainable aquaculture by helping to optimize production and improve fish welfare.
- Respond to the needs of automation in the feeding of all stages of the fish's life.
- Develop a cost-effective, reliable, accurate and safe technology.
- Facilitate integration with other existing technologies in aquaculture such as sensors, software...

Contact:

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