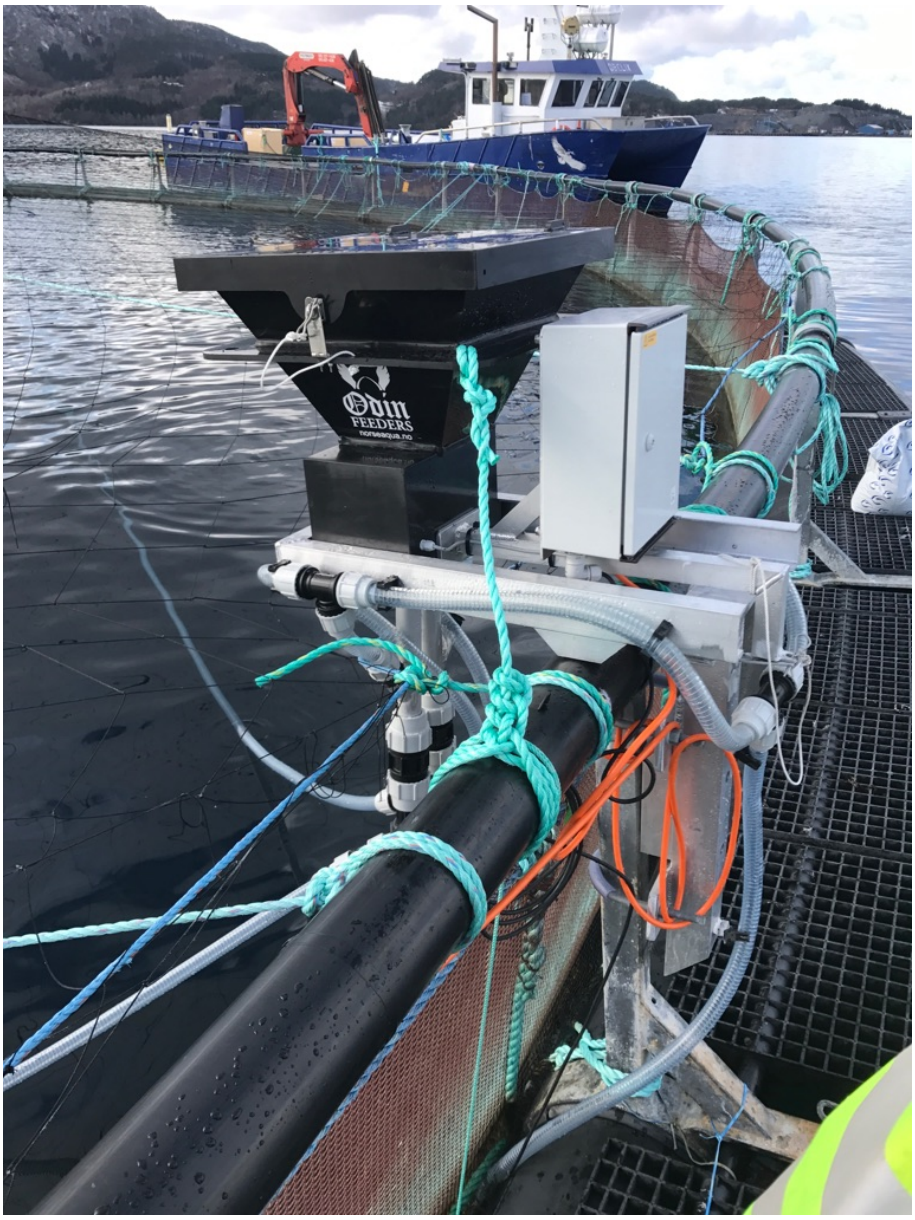
NorseAqua

User Manual



Odin Feeders

Version: 1.2

Date: 06.06.2017

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1 Introduction

The User Guide describes important information about how the water pump machine Odin Feeder should be transported, handled, installed, inspected and maintained to get maximum utilization of properties and lifetime.

In this user manual you will find a suggested form for inspection, monitoring, reporting deviations and repairs. These are intended as templates with the necessary points for control and monitoring of water pump machine.

Contact NorseAqua for ordering spare parts and servicing.

There are no knowledge requirements for reading and understanding this document. Please contact us if further explaining is needed. We are glad to provide further guidance and advice. All feedback will be included in the further development of the User's Guide

2 About NorseAqua

NorseAqua was founded in 2014. First and foremost, NorseAqua is best at producing and offering advice around adequate cleanerfish equipment. Furthermore, the vision of the company is to develop innovative solutions for the aquaculture industry with local value creation in focus. The company is wholly owned by product developer, entrepreneur and founder Lars Berg-Hansen.

The dream of the founder is to create attractive jobs in his home town, so that young people who grow up see the opportunity to work and settle in Bindal.

This must be done in cooperation with our customers. We therefore welcome feedback on how the equipment we deliver works, improvements and new solutions to everyday challenges in the aquaculture industry.

3 Contact information

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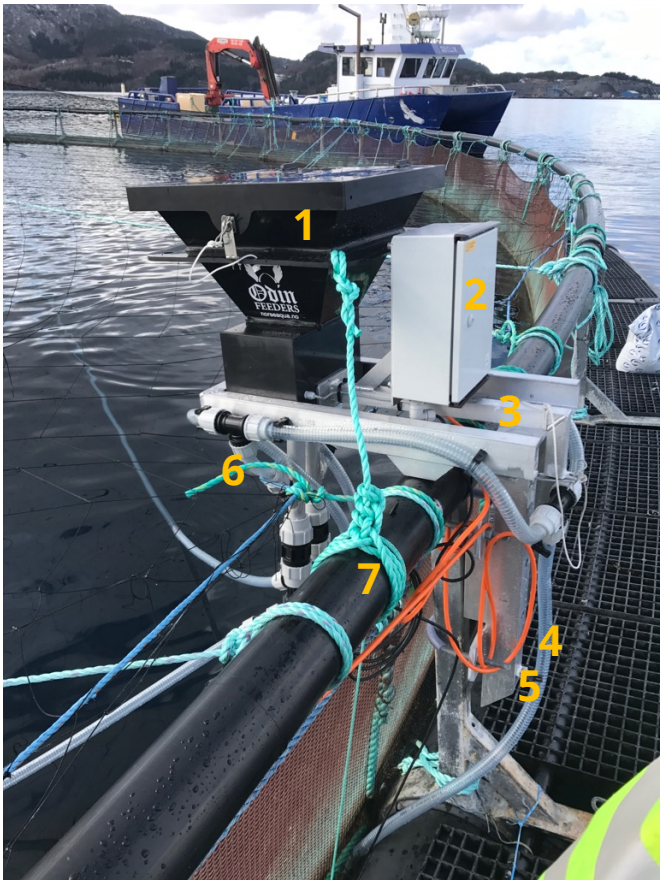
4 Definition

4.1 Odin Feeder and its parts

The Odin feeder is a simple and reliable feeder, requiring a power supply for feeding the lumpfish.



1. Food container with lid
2. Control cabinet
3. Power supply
4. Bracket (Tighten the nut so that it is firmly attached!)
5. Water supply 1″ from pump (Attach a hose to a walkway
6. T-coupling for connecting the intake of seawater and the feeding hose
7. Security rope

4.2 Technical information

Odin Feeder is adapted for lumpsucker food pellet of 2-3 mm diameter.

It has a capacity of 20 kg and can transport the food up to 35 meters from the machine. A two-point delivery system for better distribution of food is fully possible if required. Depending on the amount of cleanerfish and demand for food, the dispenser can feed approximately a week without refill. In continuous operation it runs about 3 kg per hour.

There are two models:

- Water pump machine with 1 feeding tube.
- Water pump machine with 2 feeding tubes.

Pump dispenser is made of PE plastic and aluminum.

The dispenser is dependent on 230 Volt power supply.

5 Identification of product

Figure 1: Identification of product

Figure 1 shows where to find the identification on the machine.

6 How to set up the machine

1. The main food-container is mounted in a frame. This frame attaches directly on banister post going up against the handrail. Bracket / undercarriage is attached to the post with galvanized brackets delivered in the package.
2. Raise the undercarriage 2-5cm before tightening the nuts. Push feeding unit/container into the frame and lock them with carabine hooks.
3. NB: Key to wiring closet is hanging on the carabines.
4. Power supply to the water pump is coupled into connector in electrical cabinets. Then turn to seal the control cabinet.
5. Mount 1 hose on the pump hose coupling and lower the pump on the walkway and tie firmly with rope supplied with the pump.

Pump depth	Situation	Comment
1,5m	Cage without skirits.	Minimizes risk of interference with the net.
3m	Cage with skirts.	Avoids more lice.

6. Connect hose from the pump at the T-junction (Frame)
7. Tubes from eductor to Curtain kelp is mounted in a straight line to the point of attachment to kelp.
8. The machine is ready for use.

6.1 Testing electricity

Fuses are activated, Blue Button on contactor in control cabinets is pushed in for testing of power. NB You should hear a click in dosage unit located in the plastic container. It uses about 300W.

Note: If fuses short, check the power supply to the electric box on the cage.

6.2 Interfaces with other main components

6.2.1 Assembly instructions against other major components

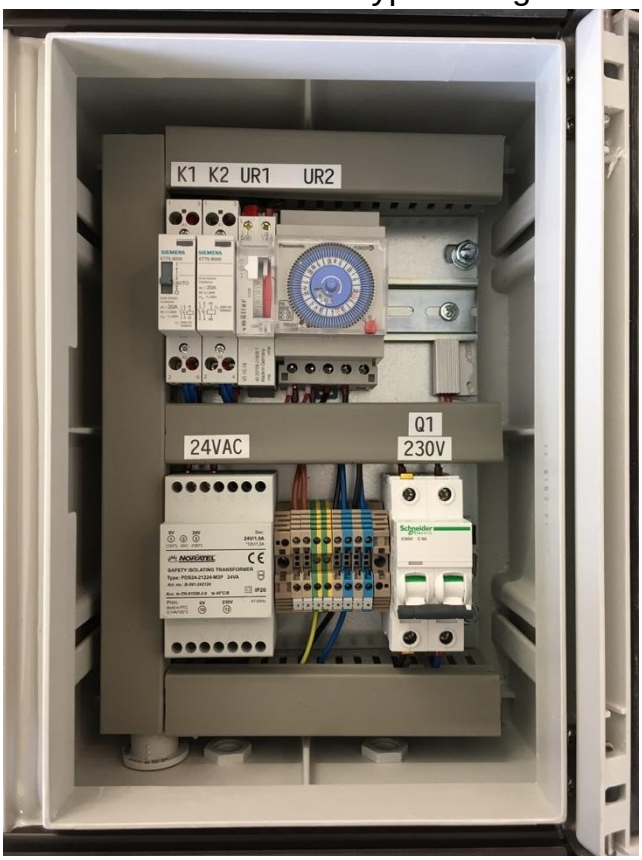
Make sure to avoid conflict with dead fish net, liftup, not, rope and other components.

6.2.2 Restrictions (in use against other components)

Be sure that the feeding tube does not rub against the pen wall. Always control the end of the tube.

7 Operation and maintenance

7.1 Controller cabinet type - Programming the feeding interval



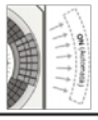
1. Connect 230V power to the control cabinet, with the supplied orange pur-cable. Then connect the socket for the water pump under the cabinet and ensure that the water pump is installed in accordance with instructions for use.

2. Set the present time on the mechanical timers, and the required time for feeding with setting pins.
3. Ensure that the contactor K1 is set to Auto. To set the water pump to run continuously, select I and lock it. Setting 0 should never be used.
4. Set main switch- Q1 to on.
5. Feeding will now follow the time interval specified in the mechanical timers. Please check the present time on the timers after power loss.

See also the user manuals of each product can be obtained by scanning the QR code at the bottom of this page.

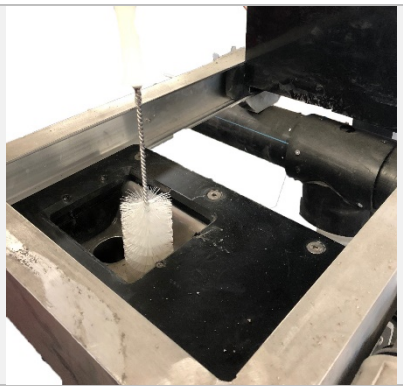
Please visit www.norseaqua.no for more information about your new product.

Programming the mechanical timers

Timer daily – UR1		Timer weekly – UR2	
	**Slide Switch** **Permanently off** **Automatic operation:** The output switches according to the program selected with the tappets **Permanently on**		**Slide Switch** **Permanently off** **Automatic operation:** The output switches according to the program selected with the tappets **Permanently on**
	**Input actual time :** Turn the tappet wheel in the direction of the vertical arrow. The time is shown by the horizontal arrow **Attention:** The tappet-wheel has a 24h scale.		**Input actual time :** Turn the wheel to set actual time. Only turn clockwise.
	**Switch-program input :** Move the tappets to the left to switch ON. The time period of one tappet is 15 minutes.		**Switch-program input :** Move the tappets out from the center to switch ON. The time period of one tappet is 2 hours.

Kursoversikt		**Terminal**
K1	Bilge pump – Auto as default. For continuous operation of the pump, switch to I and lock.	4-5
K2	Arvotec – Set feeding time in UR1 og UR2	1-2
Ur1	Mechanical timer, daily type	
Ur2	Mechanical timer, weekly type	
24VAC	Transformer 24VAC 20VA – Power supply for the Arvotec pump	
Q1	Main switch 6A – 230VAC	7-8

7.2 General maintenance

When	What	
On refilling	Check tube lining that there is no accumulation of feed in the tube. Clean the pipe with a brush If the pipe is clogged .	
Monthly	Flush the pump to avoid fouling.	

7.3 Icing

Icing can cause extra loads. Remove ice if problems arise.

7.4 Storage

Keep all units clean. Store in a cool, dark, dry place.

7.5 Tracking

Contact NorseAqua.

7.6 Requirements and restrictions in use

Used for feeding of lumpsucker. To be securely mounted, use description in this manual.

7.7 Deviation and handling of errors

Contact NorseAqua.

8 Requirements for changes, rebuilding or expanding

NorseAqua must be contacted at any need to amend the product.