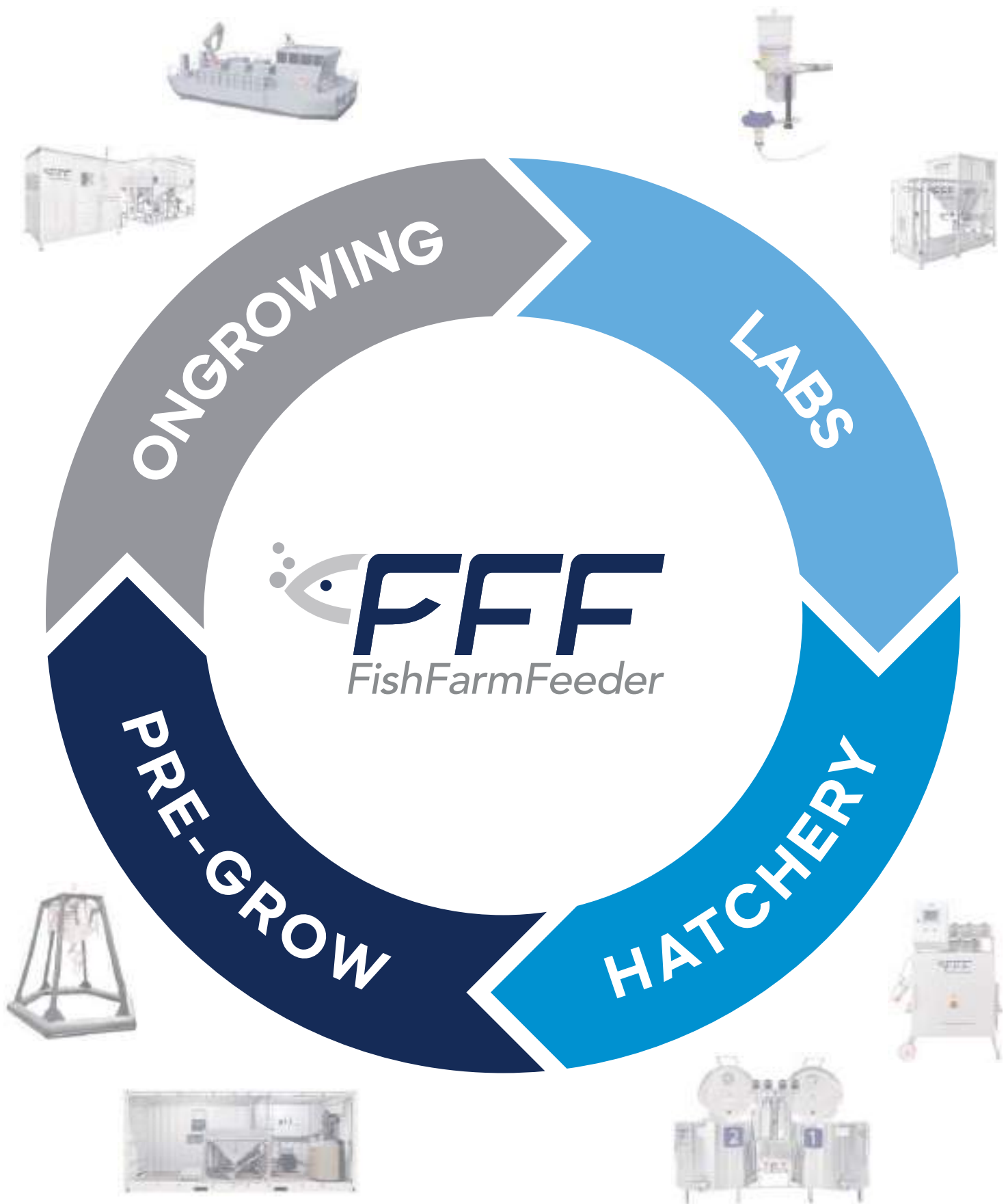


# AUTOMATED FEEDERS FOR AQUACULTURE

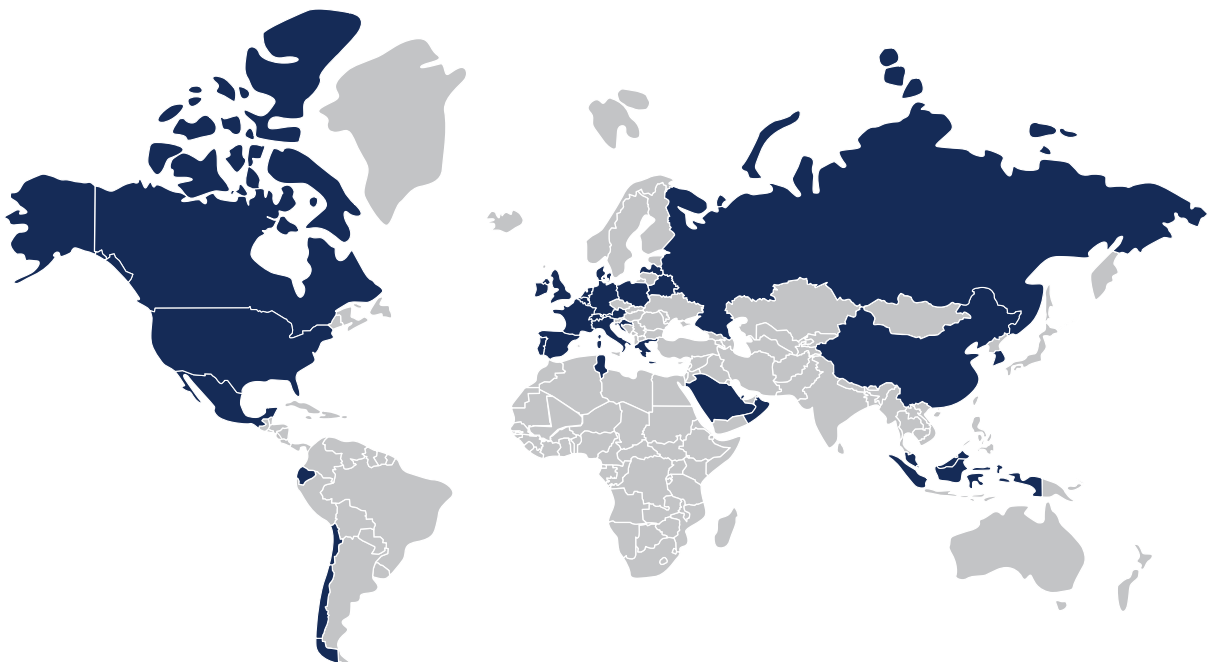
FOR ALL FEEDING STAGES OF FIN FISH AND SHRIMP



SINCE 2011



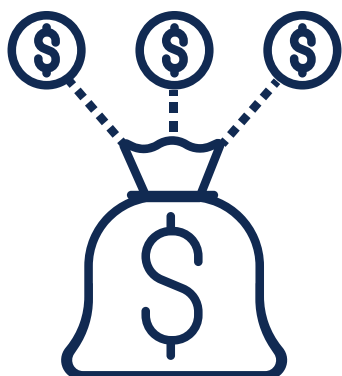
OPERATING WORLDWIDE



CLIENTS

Spain | Portugal | Italy | Poland | USA | Germany | Indonesia | Chile | Netherlands | Denmark  
Scotland | Cyprus | Switzerland | France | Croatia | Singapore | South Korea | Greece | Malta  
England | Austria | China | Ireland | Russia | Canada | Mexico | Oman | Qatar | Latvia  
Saudi Arabia | Tunisia | Ecuador | Belarus

## BENEFITS OF AUTOMATED FEEDERS



- FEED SAVING
- LABOR SAVINGS
- FASTER GROWTH: SGR optimization
- LESS POLLUTION
- SAVINGS IN OXYGEN CONSUMPTION
- SAVINGS IN FILTRATION
- REDUCTION OF MORTALITY
- INCREASE IN BIOSECURITY
- INCREASE IN ANIMAL WELFARE
- EASIER AND LESS COSTLY SUPERVISION

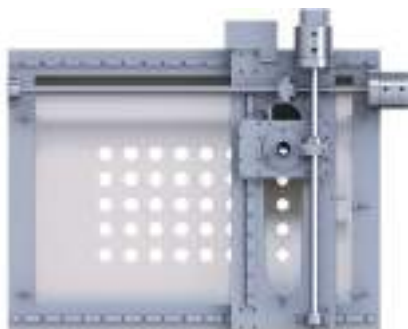
## CENTRAL FEEDERS BY FFF



## COMPONENTS

**Selectors:** Our matrix, with up to 200 outlets, is much faster than traditional revolving systems.

**Dosers:** Volumetric dosing through the use of auger screws designed for each pellet size and dose.



## For Medium and Big-Scale Hatcheries

Automatic Feeding System of Artemia, Rofiter and Microalgae.



	Minimum	Maximum	
Selector Matrix	6	24	Number of outlets per selector
Feed Type			Live Feed, Microalgae
Number of Silos	1	4	Number of silos per feeder
Length of Pipes	1	100	Length of pipes in meters

## For Labs and Small-Scale Hatcheries



## For Medium and Big-Scale Hatcheries

Dosing of micro diets from 200 up to 800 microns



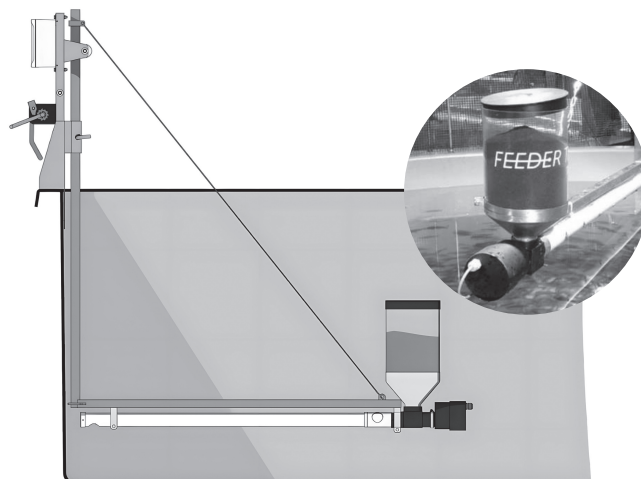
	Minimum	Maximum	
Selector Matrix	20	100	Number of outlets per selector
Size Pellet	300 µm	800 µm	Size of pellet to use
Feeding Pipe Size	20	20	Diameter of HDPE pipe
Individual Dose	> 10 gr	100 gr	Size of each individual dose
Compressor	5.5 kW	7.5 kW	kW of power consumption
Doses per Day	1	> 4000	Number of doses per day
Number of Silos	1	4	Number of silos per feeder
Length of Pipes	1	100	Length of pipes in meters

## For Labs and Small-Scale Hatcheries





Centralized feeding systems for nurseries in land-based fish farms and/or RAS.



Centralized feeding systems for pre-growing in land-based fish farms and/or RAS.



	Minimum	Maximum	
Selector Matrix	20	200	Number of outlets per selector
Size Pellet	1 mm	4 mm	Size of pellet to use
Feeding Pipe Size	25	40	Diameter of HDPE pipe
Individual Dose	> 10 gr	25 Kg	Size of each individual dose
Blower   Compressor	5.5	7.5	kW of power consumption
Doses per Day	1	> 4000	Number of doses per day
Number of Silos	1	8	Number of silos per feeder
Length of Pipes	1	400	Length of pipes in meters







Centralized feeding systems for pre-growing in land-based fish farms and/or RAS.



Selector



Silos-Dosing



Blower



Feeding systems for ongrowing in land-based fish farms.



	Minimum	Maximum	
Selector Matrix	10	100	Number of outlets per selector
Size Pellet	4 mm	> 20 mm	Size of pellet to use
Feeding Pipe Size	50	100	Diameter of HDPE pipe
Individual Dose	> 5 Kg	> 400 Kg	Size of each individual dose
Blower   Compressor	7.5	> 30	kW of power consumption
Doses per Day	1	1440	Number of doses per day
Number of Silos	1	8	Number of silos per feeder
Length of Pipes	1	800	Length of pipes in meters





Selector

Intermediate Hopper

Blower & Cooler





## Feeding Capacity

	50 T	200T	400T
Number Silos:	6	4	8
Silo Capacity	9 T	50 T	50 T
Total Silo Capacity	50 T	200 T	400 T
Silo Volume	12 m <sup>3</sup>	45 m <sup>3</sup>	70 m <sup>3</sup>
Total Silo Volume	72 m <sup>3</sup>	280 m <sup>3</sup>	460 m <sup>3</sup>
Dosers (Auger Screws)	12	16	16



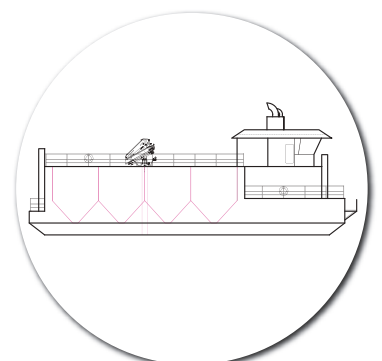
## Selector

	50 T	200 T	400 T
Feeding Lines	4	3	4
Selector Matrix	4x8	3x6	4x6
Diameter	63 mm	75 mm	90 mm
Max. Pellet Size	8 mm	15 mm	25 mm
Blower	4x15 kW	3x15 kW	4x22/30 kW
Feeding Rate	40 kg/m	50 kg/m	100 kg/m



## Barge Specifications

	50 T	200 T	400 T
Generators	2x100 kW	2x100 kW	65+180 kW
Diesel Tank	2x1 m <sup>3</sup>	2x11 m <sup>3</sup>	2x13 m <sup>3</sup>
Freshwater Tank	1 m <sup>3</sup>	2x3 m <sup>3</sup>	2x5 m <sup>3</sup>
Sewage	0,5 m <sup>3</sup>	3 m <sup>3</sup>	5 m <sup>3</sup>







## Measures and Components

	50 T	200 T	400 T
Length - Total (LOA)	16.50 m	22.10 m	26.65 m
Beam - Total (BOA)	8.22 m	10.00 m	13.00 m
Minimum Freeboard	2.35 m	1.65 m	3.07 m
Weight	80 T	120 T	160 T
Cranes	Optional	Optional	Optional
Waves	4 m	2 m	2 m





## For Circular Tanks

Inverted Cone



Spreader Rotator Down



Spreader Rotator Up



Cyclone



## For Rectangular Tank

Lengthwise



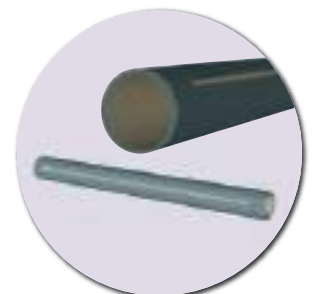
Breadthwise



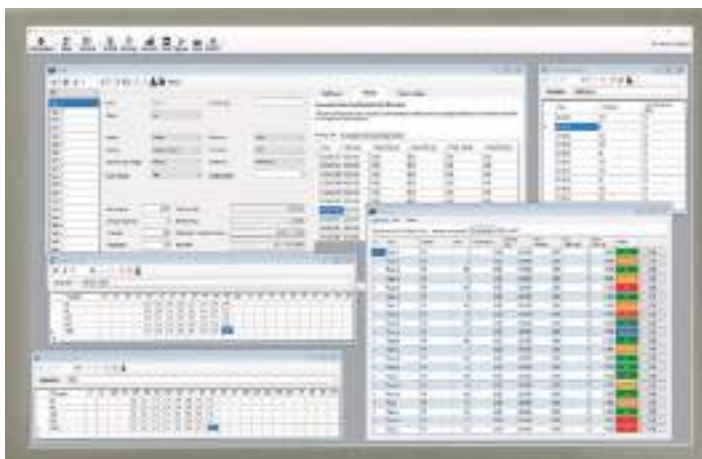
Bifurcator



Parabole



FishFarmFeeder includes in all its feeders **a powerfull and complete software** for feeding and production control. You can program the feeder to send **multiple doses** of small quantities **throughout the day** or schedule larger quantities to be distributed in a few doses in a few hours.



Parameterizable for any species of fish or shrimp

**Feeding tables** valid for all feed manufacturers

**FCR tables** valid for all feed manufacturers

**Feeding Distribution tables** with customizable

**Doses at any time** of the day

**Standard reports** and possibility to export  
**Information to Excel**

Storage of the food history

Individual configuration of each tank with:

**Tank status** (ON, OFF, Stand-by)

**Feed, FCR and distribution** tables per tank

Number of fish and biomass

Custom feeding program

**Tank temperature**

**Percentage of total feed to be given**, more or less, at the discretion of the fish farmer

**Types of feeding** to be used in feed, being able to mix different feeds in the same dose

**Feeding plan simulator** with time and quantity



SETUP



SCADA



CREATE



FISHFARM



DOSING



PLANNING



PELLETS



SPECIES



SENSORS



HISTORICAL



REPORTS

The FishFarmFeeder App allows **real-time monitoring of the FFF feeders**. It is accessible from any **smartphone or tablet**, both for **iOS and Android systems**.

Connect with your feeder in real time from anywhere and at any time.



Download our App and you can easily interact remotely with the feeder.



Real Time Monitoring



Warning and Alarm System



Know the State of the Feeder



Accessible through Smartphone or Tablet

## Software | Integration

**INTEGRABLE** with any production or management software

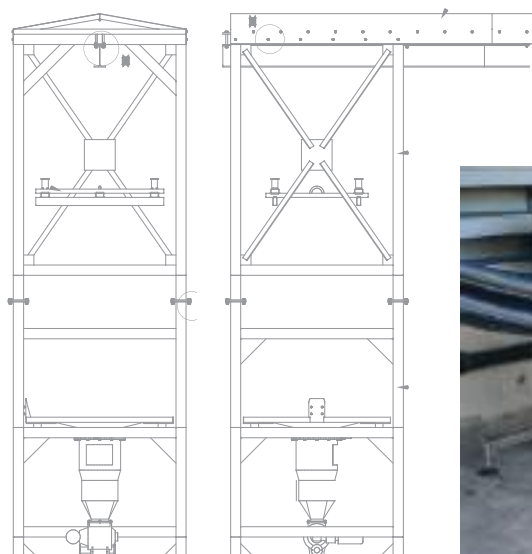
**Exportable SCADA** information

**Real Time reading** of all manufacturers of temperature and oxygen **SENSORS**

Fish and Food **TRACEABILITY**



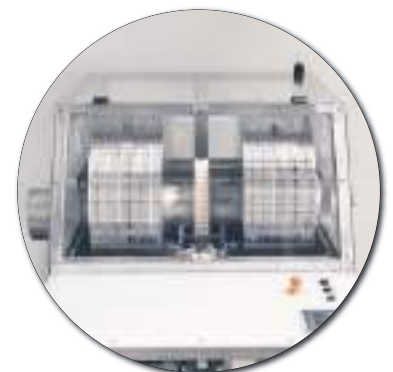
## Big Bag Loader



Diameter	75 mm
Side Channel Blower	7.5 kW
Hoist	1500 kg
Structure	AISI 316 stainless steel
Protections	Polycarbonate

## Silos Loader





## Features

Can hold up to **50 liters of Vaccine** solution at standard dilution (expandable to 150 liters using an optional kit).

**Vaccination time** configurable from **33 to 85 secs** by the operator.

Fed by a fish pump, the Vaccinator can work with variable **water flows up to 15 m<sup>3</sup>/hr**.

Can be equipped with oxygenation of the Vaccine solution.

Connectable to a 2.5" fish pump. Adaptive to a 4" fish pump.

**Can also be used for anesthetic bath** or other therapeutics.

Low energy input (0.55 kW).

Requires an additional external flow of clean water of around 1-1.5 m<sup>3</sup>/hr to carry the fish post-vaccination.

**Capacity** of the vaccinator: **1000 to 1500 Kg/day** @ around **2 gr average body weight**.

## Labour Savings

The FFF Vaccinator remains under the control of a single operator for the whole process when vaccination at hatcheries often requires a team of 5 or 6 people to reach the same vaccination rhythm.

## Tough Construction

The Vaccinator is built from carefully chosen material and equipment. It is seawater resistant and highly reliable.

## Commissioning

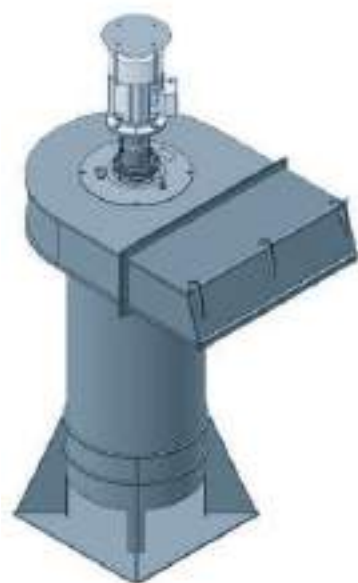
Very easy and shall not require specific assistance. However, FFF is keen to support any new user if needed.





Fish Range:	from 5 mm thick
Gates:	3 (standar version)
Feeding:	Manual
Speed Grading:	Adjustable
Conveyor:	Rubber
Material:	AISI 304
Power:	Monophasic

## Propeller Pumps



### Propeller Pumps

Our pumps have been specifically developed for RAS and the reuse of water in aquaculture farms. They produce large flows at low elevation. Their HDPE combined stand and impulsion pipe is unique.

### Main Models

V4-P-100:	designed for 100 l/sec at an elevation of 1.2 m - 3 kW
V4-P-200:	designed for 200 l/sec at an elevation of 1.2 m - 5.5 kW
V4-P-250:	designed for 250 l/sec at an elevation of 1.2 m - 7.5 kW



## FEEDING SYSTEMS



Live feed

### HATCHERIES

Pellet 50-800  $\mu$   
 $\varnothing$  Pipe 20 mm



Dry feed



### PRE-GROW

Pellet 1-4 mm  
 $\varnothing$  Pipe 25-40 mm



### ONGROWING

Pellet 4-20 mm  
 $\varnothing$  Pipe 50-90 mm



## EQUIPMENT



Propeller Pumps



Spreaders



Immersion Vaccinator

