



# Optiflush Treatment Unit™

The provision of low-pressure waterjets surrounding the complete circumference of the fish body represents a gentle impact on the fish and the welfare of it. Combined with other thermal treatment systems, it reduces the temperature needed for efficient de-licing with approximately 2° C, and consequently it also increases the efficiency of lice removal if leaving the water temperature unchanged.

## How does it work:

The Optiflush is constructed as an array of dewater units with flushing stations between each unit. The nozzles are placed on an outer pressure ring, covering the full circumference of the fish trail. This prevents the fish from coming too near the nozzles, at the same time giving the fish a 360 degree flush while it flows through the system. The Optiflush nozzles are designed to avoid clogging – which means that water speed and pressure is maintained stable at all nozzles, unlike with conventional flushing where fish may get damaged because of clogged nozzles as the still open nozzles are subject to increased water speeds.

Water is pumped into the fish tunnel via a manifold on the side of the Optiflush-unit by means of pipes or hoses. The pressure can be read from each of the three pipe branches with nozzles. The pressure and water flow can be adjusted with valves and the pump's frequency inverter.

Each branch of pipes is equipped with nozzles which spray water towards the center of the optiflush, and thus on to the fish. The water that follows the fish into the Optiflush-unit is filtered and gathered with the water used to flush the fish. This water is transported to the vessels' water treatment system.

At the end, fresh seawater is added to ensure a gentle transport back to the net pen.

The product is available in configurations with single or double fish tunnels in different sizes depending on required capacity. Additional units may be combined in a system to get the capacity needed.

## Benefits:

A gentle mean of increasing the amount of lice removed, and also to decrease the necessary water temperature during delousing operation, which will lead to less power consumption and ultimately a more humane handling of the fish.

Scientific studies where the Optiflush is used in combination with reduced temperature on initial treatment proves almost total removal of Skotte lices and mobile lices, and a high degree of removal of spawned lices and attached lices.

The Optiflush can be delivered as a standalone unit or as combination treatment with Optilice and other thermal treatments. It can also be used in combination with freshwater treatment.

## Specifications:

- Available now as combination treatment with Optilice or other delicing systems.
- STAND-ALONE VERSION is still under testing and will be available during 2022.
- Water consumption: 160 m<sup>3</sup>/h per fish tunnel
- Water pressure perceived on fish body: <0,1bar
- Capacity: 50-600 tons/hour depending on size and configuration.
- The product fish welfare and de-licing effect have been documented scientifically by Akvaplan Niva.

