

## Mega Fish Migration Friesland Vijfhuizen

Application market	Construction
Market segment	Dewatering & Drainage Flood Control Fish & Aquaculture
Pumped medium	Sweet water
Pump product	Immersible
Country	Netherlands



### Challenge

Due to climate change, heavy rainfall causes flooding problems in northern Friesland. The eel and the three species of spiny minnow fish are in danger as their natural migration is blocked by dams and dikes. In the Netherlands, the eel population has declined by 95% over the last 50 years and is now considered an endangered species. Reliable, fish-friendly solutions are required to not obstruct fish migration and not to further endanger the fish population.

### Solution

Realization of a brand new pumping station with two Archimedean Screw Pumps and a Hidrostaal Screw Centrifugal Pump. The Screw Pumps drain the area with an overall capacity of approx. 4'000 liters per second. In addition, the Hidrostaal pump lifts fresh water into a 1.5 km long canal. This provides the migratory fish with a continuous and gentle transfer from fresh to seawater. The inlet is controlled by a valve system and the evenly generated flow is regulated by the Hidrostaal pump. The pump has an operating time of about 4,000 hours per year.

### Benefits

The fish can pass the station without any problems. A new recreation area is being developed around the station. In the newly formed wetlands, flora and fauna can thrive unhindered and sustainably.

Quantity of units sold	1
Pump type	M28Z-VH880052R + MESC8-X with overall weight 4'500 kg
Motor data	32 kW / 8 pole / 15 Hz / 200 V with VFD
Material combination	Cast iron pump body and wear parts, impeller of ductile iron with ceramic composite coating
Duty point	Flow : 800 litres per second / Head : 2.4 meters (at max. shaft speed 230 rpm)
In operation since	November 2018