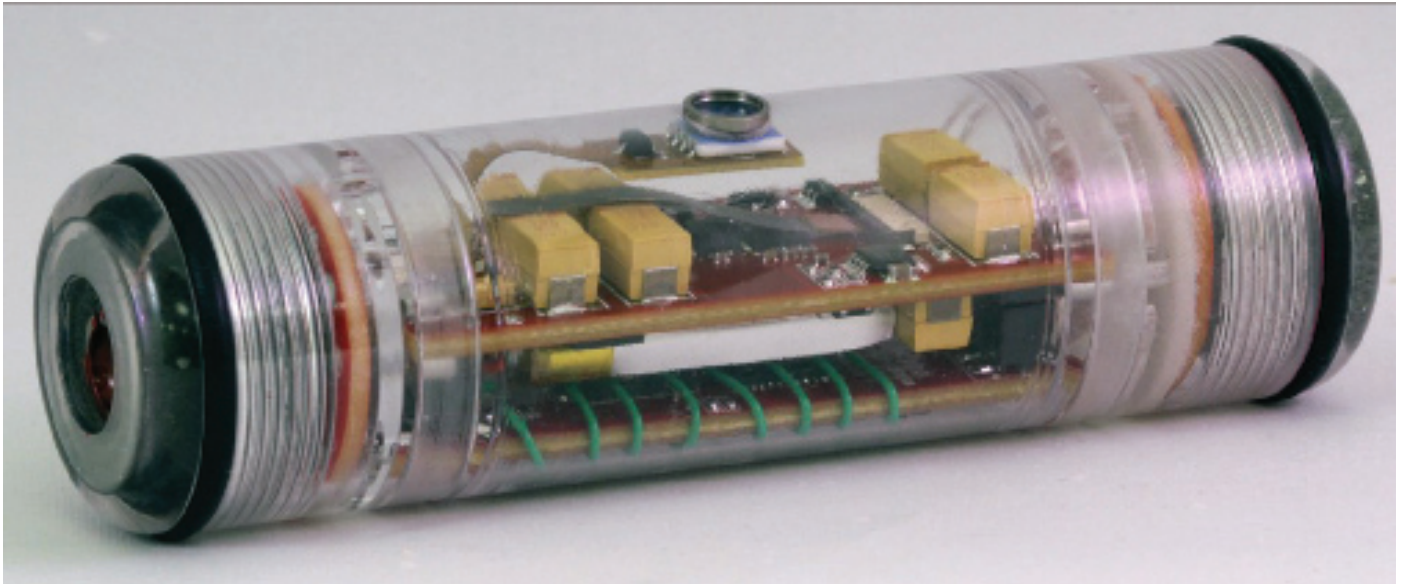


# ATS Sensor Fish Model ARC800

World's Most Reliable Transmitters and Tracking Systems

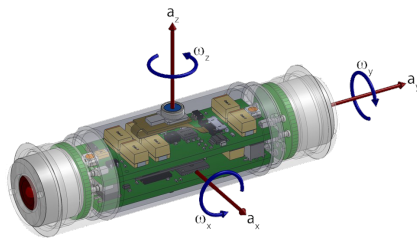


## The ARC800 Sensor Fish will help your dam be more fish-friendly.

Hydropower provides over 6% of the United States' electricity, mostly from large hydroelectric dams. Most of these large dams will soon need to be relicensed. This includes evaluating and often reducing a dam's environmental impact.

One of the evaluations examines how well fish are able to withstand passage through the dam. ATS now offers a solution for dam owner/operators to help provide data needed to make that evaluation: the Sensor Fish.

The Sensor Fish is a small autonomous device that analyzes the physical conditions fish experience as they pass through dams and other hydro structures. The synthetic "fish" is helping existing hydroelectric dams and new, smaller hydro facilities become more fish-friendly. The measurements derived from Sensor Fish can improve the environmental performance of hydropower.



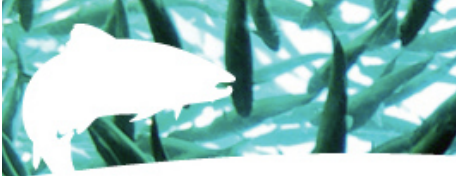
- On-board Sensors: temperature, pressure, acceleration, and gyroscope to measure stresses placed on small fish
- Applications:
  - Hydro turbines such as Kaplan, Francis, and gravitation water vortex turbines
  - Small hydropower, pumped storage hydroelectric facilities
  - Spillways, irrigation structures, and pumping stations
- Physical:
  - Length: 3.5 inches (90 mm)
  - Diameter: 1 inch (25 mm)
  - Weight: 1.5 ounces (43 gr)

TRANSMITTERS  
RECEIVERS  
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ADVANCED TELEMETRY SYSTEMS

470 FIRST AVE NW · ISANTI, MN 55040  
sales@atstrack.com · www.atstrack.com  
763-444-9267

## ATS Sensor Fish Model ARC800

### Data Recorded -

- Approximately 5 minutes of data with flash memory (turbine passage is usually less than 2 minutes)
- 2,048 measurements per second
- Up to 174 pounds per square inch of pressure

### Acceleration -

- Acceleration up to 200 times the force of Earth's gravity (200 Gs)
- 2,000 degrees per second of rotational velocity
- Temperatures between -40 and +260 degrees Fahrenheit

**Buoyancy** - Neutrally buoyant. Automatically floats to surface at end of test by dropping a small pair of environmentally friendly weights

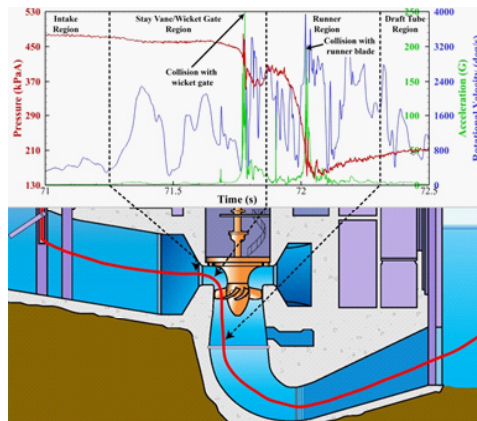
**Displays** - Four multi-color LED lights for diagnostics and status.

**Retrieval** - An integrated VHF Transmitter can be tracked in order to retrieve the Sensor Tag.

## ATS Sensor Fish Model ARC800

### PHYSICAL AND SENSOR SPECIFICATIONS

Physical Dimensions:	89.9 x 24.5mm
Density:	1.01 mg/mm <sup>3</sup>
Excess mass (wet weight):	0.5 g
Sensor Sampling rate:	2048 Hz
Maximum Sampling Time:	4 min
3D Acceleration:	0 - 200 g
3D Rotational Velocity:	0 - 2000 ° /s
Pressure:	0 - 203 psia
Temperature Sensor:	-40 - 125 °C



Example of the pressure, acceleration, and rotational velocity data collected by the Sensor Fish device during passage through a Kaplan turbine.

### WARRANTY

ATS transmitters are covered by a limited warranty for one year from time of shipment, or up to the calculated minimum battery life, whichever occurs first.

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