



# Turbi-Tech 2000HR

## High Range Suspended Solids Sensor

PRODUCT DATASHEET

### APPLICATIONS

Membrane Batch Reactors  
Returned Activated Sludge  
Surplus Activated Sludge

### MEASUREMENT PRINCIPAL

Light Attenuation  
Wavelength 860 nm

### FEATURES

Fully automatic Self Cleaning  
Flexible Mounting System  
Large Optical Surface

### BENEFITS

Automated Aeration Control  
Low Cost of Ownership

### COMPATIBLE MONITOR

7200 Monitor

### ALTERNATIVE SENSORS

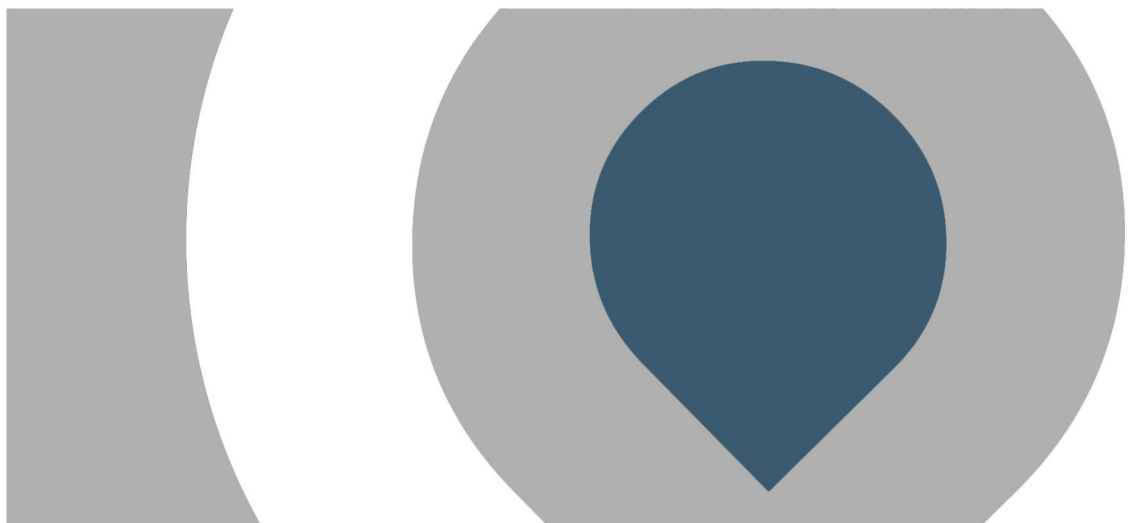
Turbi-Tech 2000LA  
Soli-Tech 20v2  
Infrared Sensors



The Turbi-Tech 2000HR Sensor has been specifically designed for use in wastewater treatment systems where high levels of suspended solids are desirable in the aeration phase. Membrane Batch reactors typically run with MLSS values in the region of 8,000 to 14,000 mg/l. MLSS concentrations promote numerous process benefits, including stable operation, complete nitrification, and reduced biosolids production reducing biological volume requirements (and associated footprint) to only 20–30 percent of conventional biological processes. Further, the membrane tanks provide extremely space efficient solids separation and do not require a clarifier in the system.

The Turbi-Tech 2000HR sensor is suitable for monitoring solids in higher ranges than the standard LA version of the sensor due to its shorter path length. The large optical surface and sample volume combine to ensure that the sensor is providing information that is reliable and representative of the solids present in the process. Deposits of fats and grease on the sensing area do not prevent the sensor from measuring unlike sensors with small optical surfaces

In addition the sensor incorporates a self cleaning mechanism that ensures that the optical surfaces are kept clean at all times, the cleaning system is designed to avoid problems with ragging and does not smear the optical system. The cleaning system ensures that manual intervention on a routine basis is not required, the sensor should simply be checked as part of general site housekeeping.



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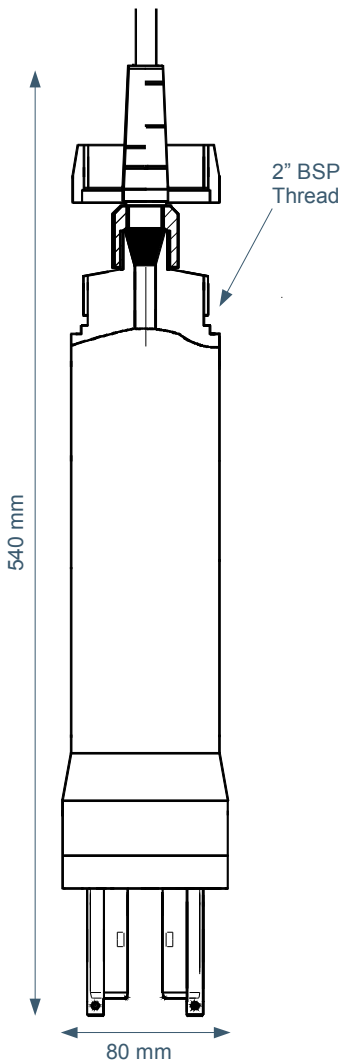




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### Physical

Dimensions	80 mm diameter x 540 mm long
Weight	2.2 kg (inc 10 metres of cable)
Protection Class	IP68
Enclosure Material	Black Acetal Co-Polymer
Cable Entries	Integral Cable Gland
Wetted Parts	Black Acetal, 316 Stainless Steel, Glass
Seal Material	Polyurethane and Nitrile (Viton option)
Cable Type	6 core, 9mm O/D Polyurethane Coated
Cable Length	10 metres standard, 100 metres maximum
Service Requirement	Automatic Self Cleaning Seal Service every 3500 cleans (application dependent)

### Environmental Data

Operating Temperature	0 to 50°C
Storage Temperature	-20 to 60°C
Location	Indoor/Outdoor

### Electrical

Power Supply	12VDC from 7200 Monitor
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### Interface to Monitor

Type	PWM Digital Signal
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### Measurement

Accuracy	Better than +/-5% FSD on real sample
Resolution	Dependent on range setting, typically +/-2%
Repeatability	Better than +/-1% FSD on real sample
Measurement Principle	Light Absorption
Wavelength/Frequency	860 nm Infrared
Response Time	0.5 seconds - damping provided by monitor
Pressure Rating (Depth)	10 mWC
Flow Rate	Not affected by flowrate, avoid dead spots and extreme turbulence
Maximum Range	0 - 30,000 mg/l
Minimum Range	0 - 10,000 mg/l
	Measuring range will depend on the nature of the sample being monitored

### Mounting

Installation Type	Dip, Flowcell or Stilling Tube
Mounting Shaft	0.5 to 3 metres in 0.5 metre increments
Handrail Attachment	Part Numbers 160000 + 160080
Stilling Tube	Available

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The company reserves the right to alter the specification without prior notice. E&OE

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