

Optical Consistency or Suspended Solids Sensor for Open Vessels & Channels



Product Description

The Ashcon AC500T sensor measures the consistency or suspended solids of process streams. The sensor uses a high-energy nIR diode light source with focused optics. The measurement head is fixed to an extendable shaft that is clamped onto a mounting assembly.

The sensor is factory pre-calibrated on a typical material mix to simplify on-site calibration. The sensor automatically compensates for process temperature changes as well as any component drift with a reference correction for the nIR light source.

A clamp mounting assembly allows the AC500 to be easily removed for inspection when mounted in a vessel. For open channels such as drains, the clamp allows the rod sensor to pivot and avoid fouling. The head design prevents dirt build-up and can include automated cleaning. The shaft length can be cut to the required length on-site.



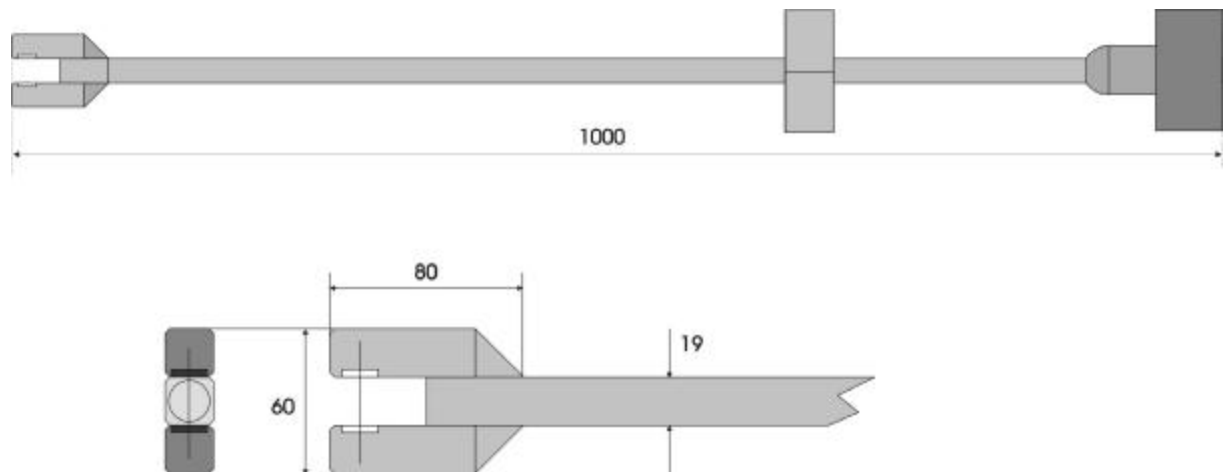
AshCon Typical Applications

Open vessel applications of the AC500T sensor normally measure paper stock consistency up to 5%Cs. (50g/Ltr). For these consistency measurement installations the sensor can include up to four grade specific calibrations for different pulp types. The mounting bracket normally provides a fixed clamping for the sensor shaft. An automated cleaner is not normally fitted for consistency measurement installations.

Channel applications for the AC500T sensor normally are for drains or flumes with a typical solids range up to 20g/Ltr (20,000 mg/Ltr or ppm). For these drain/flume suspended solids applications the sensor uses a single factory calibration that can be customised on-site. The mounting bracket for the sensor shaft provides a pivot to enable the sensor to move and allow objects to pass without fouling the sensor. The automated cleaning system uses a directional spray of either water or air at timed intervals to keep the optics clean. The standard sensor shaft length is 1 metre long and can be cut to size on-site (min. 250 mm) A shaft extension kit allows the length to be extended to 1.75 metres.

Typical installations include; effluent aeration basins or clarifiers, collection tanks, flumes and drains. For influent management applications mill drain solids can be tracked with sensors positioned through the process and linked to drain collection sumps prior to transfer to effluent treatment. Tracking drain losses / influent loads allows; the treatment plant to correctly respond to changing loads, monitor losses and maintain environmental limits.

Product Drawing



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Technical Specification

Measurement:	Optical transmission of near infra-red light.	Material :	Wetted parts 316 St.Steel
Optical Gap:	20mm.	Weight:	5 Kgs
nIR source:	GaAs Diode, typically 880nm wavelength	Connection:	8 core plug (IP65)
Range:	0 – 5%Cs. (50g/L) consistency 0 – 20g/L Solids 4-20ma signal scaled 0-100% range	Cable:	5 Metres (std.) upto 15 Mtrs
Accuracy:	Within 5% of range (lab. to sensor 2sigma)	Protection:	IP65 (NEMA 4X)
Pressure:	Open Vessel / Channel	Mount:	Quick disconnect clamp
Temperature:	0 – 80 deg. C (max.)		

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