

## Optical Suspended Solids/Turbidity or Ultra-low Consistency Sensor

### AshCon Product Description



The Ashcon AC200ST (20 or 40mm gap) sensor measures the suspended solids and turbidity simultaneously within process streams. The sensor uses a high-energy pulsed *nIR* diode light source with dual-range transmission and 90° back-scatter measurement channels (turbidity to ISO 7027 / EN 27027 standard).

To simplify on-site calibration, the sensor is factory pre-calibrated on a custom material mix for solids and a formazine FNU/NTU standard. The Turbidity effect on solids can be compensated to give a true solids reading independent of the clarity of the sample (turbid). The sensor automatically compensates for process temperature changes as well as component drift with a reference correction of the light source.

An automated brush cleaning mechanism can be fitted to the sensor as well as a water flush.

A single sensor can measure two process measurement streams using an optional dual-sample manifold. Sample sequencing is controlled by the SIU and calibration / scaling values set for each sample. The SIU has up to four (4) calibration tables available.

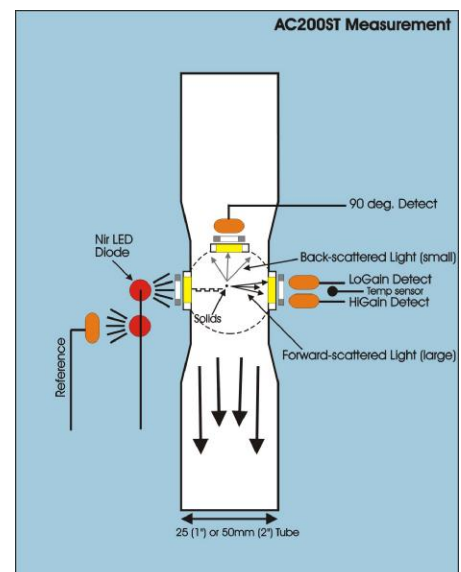
### Applications & features

The Ashcon AC200ST sensor is normally used to measure environmental or ultra-low solids process streams. Common applications are around DAF units, clarifiers and fibre / water recovery systems. Environmental measurement applications normally include additional equipment for ; process sampling (de-aeration), automated cleaning and signal processing.

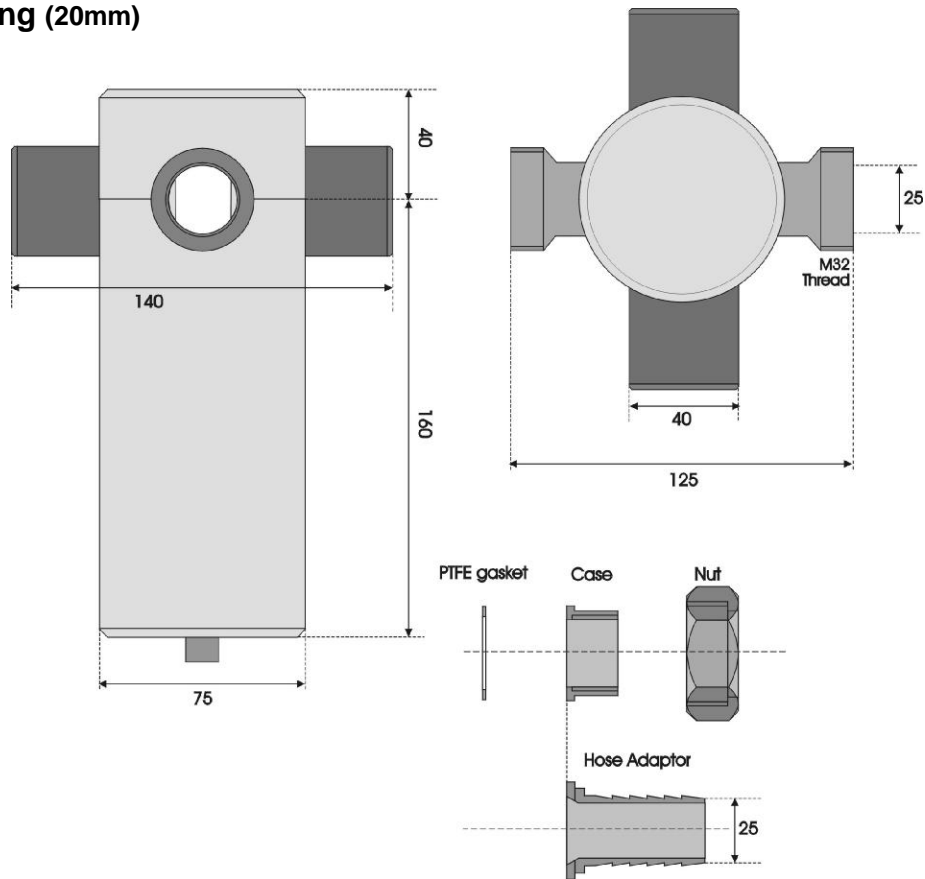
A Sensor Interface Unit (SIU) provides real-time signal processing for each sensor. The operator interface has ; on screen trending (1hr to 24hr), history data-logging (MS Excel format) with microSD transflash card and optional remote data communications.(Modbus, Ethernet or 3G /GPRS modem).

The SIU allows mill laboratory to sensor calibration values to be entered. Full diagnostic functions are also provided for real-time analysis of sensor performance.

The SIU provides analogue signal outputs for the mill control system interface as well as digital input signals for grade selection and an alarm contact output.



**Product Drawing (20mm)**



**AshCon**

**Technical Specification**

Measurement:	Optical transmission and backscatter (Turbidity) of near infra-red light .	Temperature:	0 – 80 deg. C (max.)
Optical Gap:	20mm with Venturi from 25mm bore 40mm with Venturi from 50mm bore	Material :	Wetted parts 316 St.Steel
nIR source:	GaAs Diode, typically 880nm wavelength	Weight:	3 Kgs
Range:	0 – 50mg/L up to 2%Cs. / 20g/L 0 – 100NTU up to 1,000NTU	Connection:	5 core plug (IP65)
Accuracy:	Within 3% of range (lab. to sensor 2sigma)	Cable:	4 Metres (std.) upto 20 Mtrs
Flow rate:	10 L/min to 50 L/min (min. to max.)	Protection:	IP65 (NEMA 4X)
Pressure:	PN10 (146 psi.g. / 10 bar.g.)	Mount:	Clamp plate or piping

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