

## AshCon Portable Solids Analyser With Fibre / Ash Determination



The AshCon Portable Solids Analyser is designed for use in the wet end of paper, board and tissue machines. It is normally used to measure whitewater solids and/or thinstock consistency to give a continuous reading of paper machine retention

Best suited for machine wet end use in raw material and additive trial work; the unit is easy to install, set-up and use.

### Key features:

- AshCon ACP400 sensor for fibre / ash determination and consistency.
- Factory pre-calibration of sensor for ease of set-up and reliable results.
- Graphical operator interface including calibration, trending & datalogging
- Automated water flush for cleaning and water zero verification
- Sample pump and de-aeration equipment
- Datacomms interface for remote monitoring.
- Lightweight portable unit for ease of transportation and installation.

### **AshCon** Product Description

The Ashcon sensor measures the consistency of process streams containing a mixture of cellulose fibre and minerals. The sensor uses a high-energy *nIR* diode light source with polarised optics with multiple measurement channels. The light depolarising effect from fibre and the scattering effect from filler is modelled to provide a measurement of the fibre proportion and filler proportion.

The sensor is factory pre-calibrated on a custom 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 of the light source. The operator interface allows mill lab. to sensor calibration values to be entered as well as any grade-specific measurement compensation.

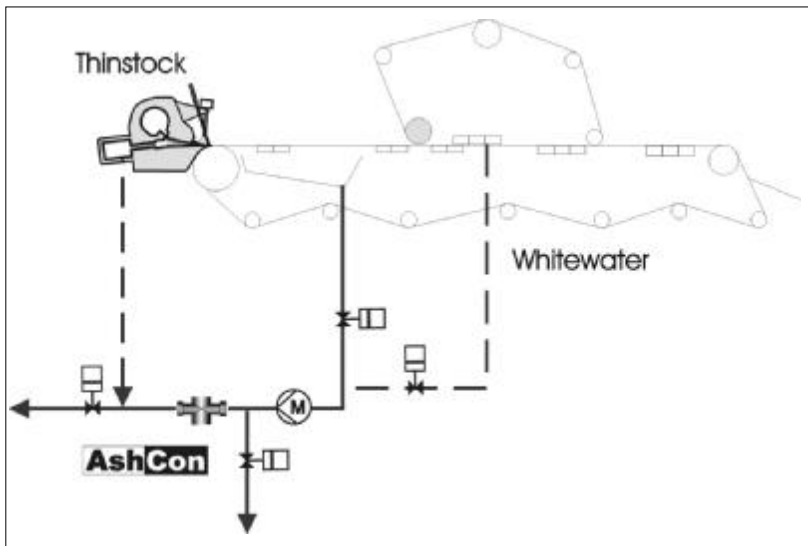
### Typical Applications

The Ashcon sensor is normally used to measure the paper machine wet end Whitewater and Thinstock process streams. It can also be used on other low consistency fibre lines where fillers are present. It is normally installed within a Retention measurement system that includes; process sample handling, automated cleaning and signal processing. If used for wet end chemical trial work or simple wet end monitoring; the local trending provides operators and mill technical personnel with an immediate indication of changing wet end conditions. Material additives can be optimised, machine stability improved, process disturbances can be corrected and grade change times reduced.

The measurement of whitewater and thinstock allows the continuous calculation of total and ash retention. Each sample stream can be measured individually providing a continuous reading or sequentially sampled (typically 10mins whitewater and 2mins. Thinstock).

Care must be taken during installation to avoid excessive air entrainment in sample lines since this can effect the measurement.

Measurements can be connected to dataloggers, a mill DCS or remote datacomms for trending.



#### ACP400PSA Information

Typical measurement range : 0 – 20 g/Ltr (2%Cs.)

Dimensions: 100cm tall, 45 cm wide, 50cm long

Weight: Typical 45 Kgs

Power requirements : 250-110vac, 6-10A, 1phase

Air supply: Min 5 bar.g 6mm O.D. line

Water supply: 19mm Flexi-line 100 l/m @ 2 bar.g

Sample: 25mm Flexi-line

Drain: 25mm Flexi-line

Protection: Enclosures IP65 (plastic cover supplied)

Datacomms: Modbus, 4-20ma (upto 4) & RFID option

#### ACP400 Sensor Technical Specification

Measurement:	Optical transmission of depolarised near infra-red light.	Material :	Wetted parts 316 St.Steel
Optical Gap:	4mm with Venturi tube from 25mm bore	Weight:	3 Kgs
nIR source:	GaAs Diode, typically 880nm wavelength	Connection:	7 core plug (IP65)
Range:	0 – 100mg/L upto 2%Cs. / 20g/L (Total) 0 – 10g/L Fibre (typical) = 4-20ma signal 0 – 10g/L Filler (typical) = 4-20ma signal	Cable:	2 Metres (std.) upto 15 Mtrs
Accuracy:	Within 3% of range (lab. to sensor 2sigma)	Protection:	IP65 (NEMA 4X)
Flow rate:	10 L/min to 50 L/min (min. to max.)	Mount:	4 by M8 Threads (sensor) or Extension fixing (optional)
Pressure:	PN10 (146 psi.g. / 10 bar.g.)		
Temperature:	0 – 60 deg. C (max.)		

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