

IT'S LIKE HAVING YOUR BEST OPERATOR ON-SITE 24-7!

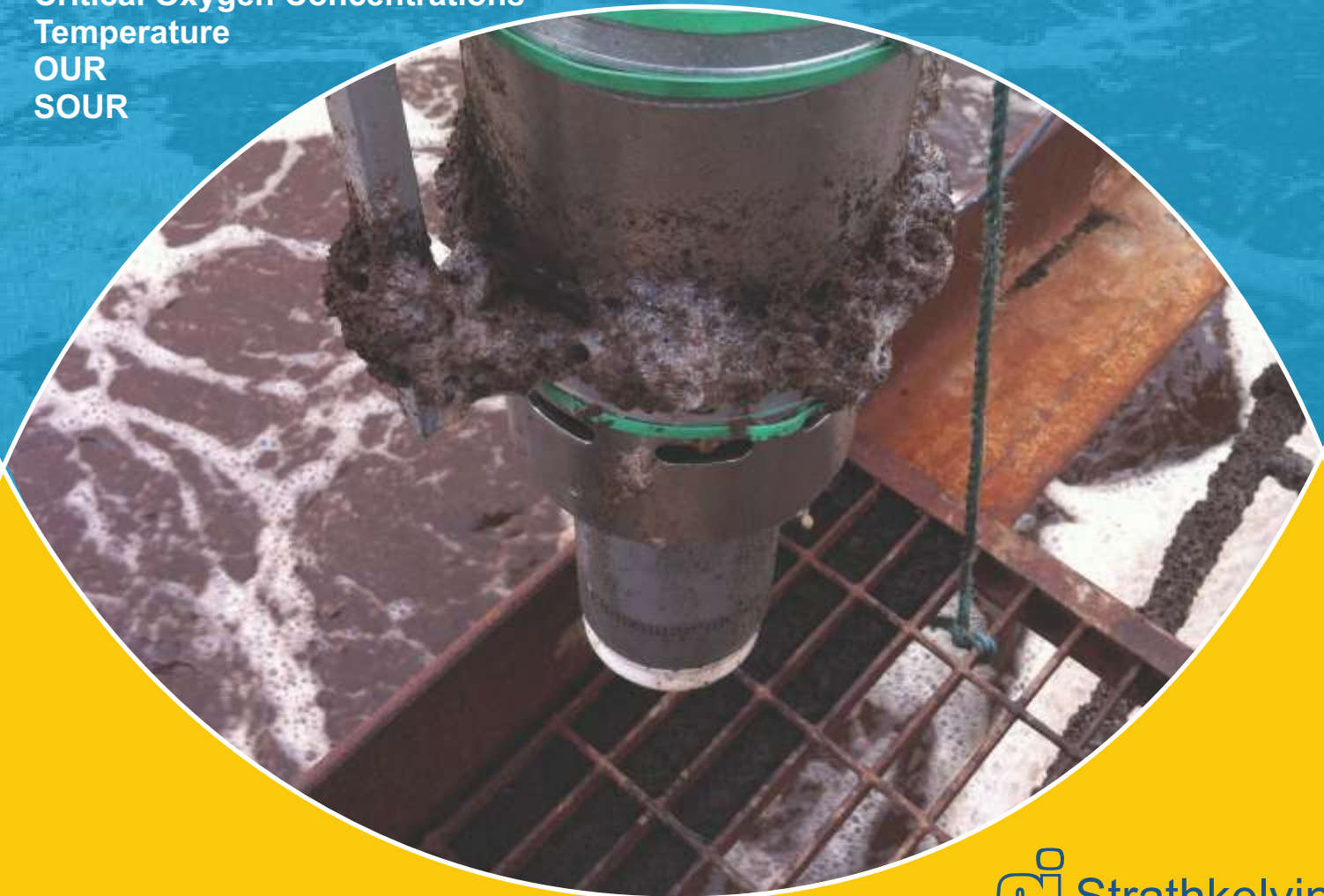
On-line Real-time
Toxicity Monitoring

Online Energy and
Treatment Optimisation

LOW MAINTENANCE:
Self-cleaning, Self-calibrating,
Rag-handling, Robust

DIRECT MEASUREMENTS:
Dissolved Oxygen MLSS
Ammonia SVI/SSVI
pH RAS
Potassium TSS (predicted)
Critical Oxygen Concentrations
Temperature
OUR
SOUR

DERIVED MEASUREMENTS:
F:M Ratio (predicted)
Plant Loading (predicted)
Effluent Loading (predicted)
Sludge Nitrifying Health



STRATHKELVIN
ASP-CON
Activated Sludge Plant Controller

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ASP-CON: is a self cleaning, self-calibrating instrument that interfaces into your plant's control system.

It provides continuous data on dissolved oxygen levels, bacterial activity based on respiration rates, suspended solids, sludge settlement, pH and Ammonia concentrations, inhibitory conditions and the minimum DO concentration that your bacteria requires for optimal operation.

Using these parameters it is possible to dynamically control your plan to achieve the optimum performance at the lowest cost.

Interfacing:

RS485 serial output with MODBUS RTU protocol
4-20mA output programmed for DO concentration

Sample chamber with perspex cover to show internal aeration mixing and sensor pucks



DIRECT MEASUREMENTS:

Dissolved Oxygen	MLSS
Ammonia	SVI/SSVI
pH	RAS
Potassium	TSS (predicted)
Critical Oxygen Concentrations	
Temperature	
OUR	
SOUR	

DERIVED MEASUREMENTS:

F:M Ratio (predicted)
Plant Loading (predicted)
Effluent Loading (predicted)
Sludge Nitrifying Health



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ASP-CON Specification Sheet.

Self-Cleaning / Self Calibrating Multi-Sensor

Weight		
Stand alone apparatus	30 lbs	Approx
Mounting bracket	35 lbs	Estimated

Voltage Supply	12 Vdc
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Operating Temp range	Low	-13	F	TBC
	High	104	F	TBC

External communications:	
Dual PID loop controller built in to Display unit with two 4-20mA outputs	
RS485	
Zigbee wireless	
Modbus protocol	

Sensor Specification

Operator selectable variables
Settlement test frequency
OUR / SOUR test frequency
Toxicity check frequency
Cleaning frequency
DO Calibration frequency
ISE electrode calibration frequency
Sludge health test frequency
% Nitrification frequency
Critical Carbon DO frequency
Critical Nitrification DO frequency

Dissolved Oxygen - LDO	
2 sensors installed for continuous in basin measurement and simultaneous respirometry	
Range	
0 - 100	%Saturation
Response Time	
Respirometer	0-90% full range 15 seconds
In-Basin	0-90% full range 120 seconds

Ammonia	
Single ISE electrode	
Range	
0 - 100mg/l	
Response Time	
0-90% full range 50 seconds	

Potassium	
Single ISE electrode	
Range	
0 - 50mg/l	
Response Time	
0-90% full range 50 seconds	

Measurement Capability	
Dissolved Oxygen	
Ammonia	
Solids MLSS	
Settlement Test	
SVI / SSVI Of settlement test	
TSS Of settlement supernatant	
Oxygen Uptake Rate	
Specific Oxygen Uptake Rate	
Carbonaceous bacteria % and health	
Nitrification bacteria % and health	
Critical Carbonaceous DO	
Critical Nitrification DO	
Potassium	
pH	
Toxicity	

Solids Measurement Sensor	
Transmitted and Reflected light sensor	
Range	
0 - 24,000mg/l	
Response Time	
0-90% full range	0.2 second
pH	
Single Glass	
Range	
0 - 14	
Response Time	
0-95% full range	30 seconds

Reference Electrode	
Teflon single junction	
Range	
0 - 14	
Response Time	
0-90% full range 50 seconds	