ENGINEERING SPECIFICATIONS

TOC Systems Online Combustion TOC

Model/Name	Online Combustion Analyzer	Notes
Analysis Method	Combustion/Non-Dispersive Infrared (NDIR) CO ₂ Detection	
Analytes Measured	Total Organic Carbon; Total Carbon; Total Inorganic Carbon; Non-Purgeable Organic Carbon; TOC-True (including purgeable Organics)	
Detector Type (CO₂)	NDIR (solid state; no moving parts; computer-controlled; non-reflective sample cell-impervious to corrosion and guaranteed for 5 years)	See NDIR vs Conductivity Chart
Control/Data Handling	Industrial Microsoft Windows CE Computer, Touch Screen, Paperless Chart Recorder	

Sample Introduction	Digital Injection	
Sample Handling	Up to 400 Microns Suspended Solids	
Measurement Specifications		
Measurement Range (mg/L)	0-25,000 configurable	
Accuracy/Repeatability (%)	+/- 3	
Carrier Gas Flow (mL/min.)	300 mL/max - Computer Controlled Mass Flow Controller CO ₂ & HC - FREE AIR, OR O ₂ 15 +/- 2 PSI	
Average Analysis/Response Time (minutes) including TIC	5-9 (application dependent)	

Outputs RS-232

RS-485 (option)
4-20 mA (2 ea.)
Alarm Relays (3)
2 Level Alarms
1 Malfunction Alarm

Loss of Carrier

Out of Service Signal (when unit in calibration or validation

check)

Display Flat Panel Color Paperless Chart Recorder

Data Storage Internal Memory

Sample Requirements

Temperature Range 4° - 90°C

40° - 194° F

Star offers cooler for higher temperatures

Sample Flow Rate 20 mL/min

Fast by-pass loop suggested

Inlet pressure 0-0.5 psi

Sample Drain gravity/air break

UTILITIES Required

Power 100/240 VAC

50/60 HZ.

15 Amp Service

Carrier Gas $CO_2 \& HC$ - free air, O_2 or N_2 (300 mL/minute-max.);

15 +/- 2 PSI

Reagents Hydrochloric Acid

Phosphoric Acid Calibration Standards

D.I. Water

Environment Operating Temperature: 10° - 50°C

50° - 122°F

Construction		
Enclosure	FRP	
Dimensions (HxWxD)	Varies depending on cabinet selection	
Mounting	Rack or Wall Mount	
Weight	Varies depending on cabinet selection	
Area Classification Option	NEMA - 4, IP 65 Enclosure	
Conformity	Complying with all International Standards, such as: DIN-EN 1484, DIN-ENV 12260, DIN 38409-H3, ISO 8245, Standard Method 5310B, Standard Method 5310C, Standard Method 5310D, USEPA 415, USEPA 9060, ASTM D5173, EN 13137	
General Features	Historical Data/Time and Date Stamped	
Options	Auto-Calibration Auto-Validation Auto-Cleaning	
	Multi-Stream Analysis	User to specify number of streams
	Oxygen Generator (electricity only)	Eliminates Gas Bottles for up to 5 analyzers. Plant Air Not Required. (For indoor/climate controlled environments only)
	TOC Systems also offers custom options.	

(All performance specifications have been verified in a controlled laboratory environment. Actual field performance may vary with application measuring range and detection limits depend on the method, injection volume, vessel purity, chemicals and gases used, and the qualification of the operators.)