# ENGINEERING SPECIFICATIONS

# TOC Systems Online UV/Heated Persulfate TOC

| **Model/Name** | **Online UV Heated Persulfate TOC Analyzer** | **Notes** |
|---|---|---|
| **Analysis Method** | UV heated Persulfate/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 ($CO_2$)** | 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 | |

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| **Sample Introduction** | Continuous Pumps or Digital Injection (Pumpless) | User to specify choice |
| **Sample Handling** | Up to 1000 Microns Suspended Solids | |
| **Measurement Specifications** | | |
| Measurement Range (mg/L) | 0-10 thru 0-1000 (w/o dilution)<br>0-25,000 (with automatic on-board dilution) | |
| Accuracy/Repeatability (%) | +/- 2 | |
| Carrier Gas Flow (mL/min.) | 300 mL/max - Computer Controlled Mass Flow Controller<br>$CO_2$ & HC - FREE AIR, OR $O_2$<br>15 +/- 2 PSI | |
| Average Analysis/Response Time (minutes) including TIC | 7 | |

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| **Outputs** | RS-232<br>RS-485 (option)<br>4-20 mA (2 ea.)<br>Alarm Relays (3)<br>2 Level Alarms<br>1 Malfunction Alarm<br>Loss of Carrier<br>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<br>40° - 194°F | TOC Systems 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<br>50/60 HZ.<br>15 Amp Service | |
| Carrier Gas | $CO_2$ & HC - free air or $O_2$ (300 mL/minute-max.);<br>15 +/- 2 PSI | |
| Reagents | Prepackaged Sodium Persulfate<br>Phosphoric Acid<br>Calibration Standards<br>D.I. Water | |
| **Environment** | Operating Temperature: 10° - 50°C<br>50° - 122°F | |

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| **Construction** | | |
| Enclosure | FRP | |
| Dimensions | 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<br>Auto-Validation<br>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.)