

## ChemScan UV-4200 Analyzer

### FOR ON-LINE, REAL-TIME WATER ANALYSIS

The ChemScan UV-4200 Analyzer provides operators with timely process chemistry measurements. The analyzer provides data to ensure proper control of nutrient, disinfection and other dissolved chemical treatment processes. This reduces the need for frequent manual sampling or laboratory analysis while producing the best water quality.

The ChemScan UV-4200 is equipped with a Graphic User Interface built to handle the challenges of a municipal/industrial environment. The display simplifies navigation making the analyzer user friendly. Large display numbers allow the operator to view current parameter values at a glance. And maintenance and troubleshooting videos can be accessed and viewed on the display.

#### BENEFITS

- Ensure process conformance
- Control energy and chemical costs
- Confirm plant compliance in real time
- Improve process performance
- Keep reagent and maintenance costs low

Advanced sample handling and conditioning accessories provide reliable operation in challenging process applications while minimizing maintenance. These include both at-process wand systems and centralized pump systems.

#### AVAILABLE PARAMETERS

- Nitrate
- Nitrite
- Ammonia ( $\text{NH}_3 + \text{NH}_4$ )
- Phosphate
- UV % Transmittance
- And others

#### ANALYZER FEATURES

- Simple to use and maintain
- Designed for the harsh in-plant operation environment
- Reagent-assisted, multiple-wavelength UV absorbance technology ensures accuracy across varying water conditions
- Clog-proof, internal, multi-sample line manifold
- Automatic zero and cleaning eliminates electrical/optical drift and flow cell-fouling
- Benign, inexpensive reagents
- No ion-specific electrodes to clean or replace
- Multiple data communication options with plant SCADA

#### INTERFACE FEATURES

- Industrial hardened interface
- Local data visualization for simplified use
- Auto fault detection, auto recovery
- Graphic representation of system operation
- Multiple user levels; log of user changes
- Recovery to factory default setting
- Upgradeable via USB port



### Applications:

- WATER & WASTEWATER MONITORING IN MUNICIPAL/ INDUSTRIAL ENVIRONMENT

## FUNCTIONS AND OUTPUTS

|                        |   |
|------------------------|---|
| ANALYZER OPERATION     | Automated, Continuous Analysis of Water and Wastewater  |
| MEASUREMENT PRINCIPLE  | Reagent-Assisted, Multiple-Wavelength UV Absorbance Technology Using Pattern Recognition of Spectral Data |
| NUMBER OF PARAMETERS   | Four per Sample Line  |
| PARAMETER OPTIONS      | Nitrate, Nitrite, Ammonia (NH <sub>3</sub> + NH <sub>4</sub> ), Phosphate, UV Absorbance or Transmittance |
| DATA COMMUNICATIONS    | 4-20 mA (4 outputs per sample line max.), Modbus RTU, Modbus TCP/IP, EtherNet/IP                          |
| DATA LOG               | Time Date, Concentration, Diagnostic Info, Calibration Spectra  |
| NUMBER OF SAMPLE LINES | 1 or 2 through Internal Manifold  |
| REAGENT DETECTION      | YES (Standard)  |
| AUTO MAINTENANCE       | YES (Standard)  |

## SAMPLE PARAMETERS

|                        |   |
|------------------------|---|
| SAMPLE PRESSURE        | Internal pump provides sample flow with max. lift 5 ft. and max. run 20 ft. to sample location or line connection. Pressurized Sample Lines must be 10 psi maximum, |
| SAMPLE FLOW            | 0.5 to 1.0 l/min. 1 L Flush Per Sample (0.13 to 0.26 GPM - 0.26 Gallon Flush)   |
| FILTRATION REQUIREMENT | For samples with more than 150 mg/l TSS   |
| STRAINER REQUIREMENT   | #20 Mesh - Opening of 0.69 mm (0.027 inches) Provided   |
| SAMPLE TEMPERATURE     | 50-140°F (10° - 60°C)   |
| SAMPLE TURBIDITY       | 0-60 NTU  |

## OPERATING ENVIRONMENT

|                     |   |
|---------------------|---|
| ENCLOSURE RATINGS   | Upper Enclosure: NEMA 4 (NEMA 4X Optional, 316 SS)<br>Lower Enclosure NEMA 3R (Optional, 316 SS) (shielded spill drain) |
| AMBIENT TEMPERATURE | 41 - 113°F (5° - 45°C)  |
| RELATIVE HUMIDITY   | 0 - 100% (Non-Condensing)<br>For Installation in an Indoor or Sheltered Location  |

## PERFORMANCE SPECIFICATIONS<sup>2</sup>

|                  |   |
|------------------|---|
| READING INTERVAL | 5-9999 Minutes (parameter and sample-line dependent)  |
| RESPONSE TIME    | 5-10 Minutes (parameter and sample-line dependent)  |
| ACCURACY         | Typ. 2% to 5% of Range, Parameter/Site Specific   |
| PRECISION        | Less than 0.5% of Range   |
| ZERO DRIFT       | Less than 0.5% of Range   |
| STANDARD RANGE   | Nitrite 0.1 - 5.0 mg/l as N<br>Nitrate 0.1 - 20.0 mg/l as N<br>Ammonia 0.2 - 20.0 mg/l as N<br>Ortho Phosphate 0.05 - 5.0 mg/l as P<br>Transmittance 0 - 100% T, Absorbance 0 - 3.000 AU<br>(Higher Ranges Available) |

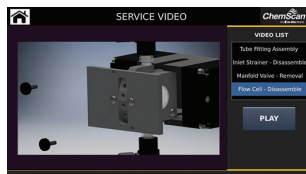
## INSTRUMENT SPECIFICATIONS

|                         |  |
|-------------------------|--|
| SIZE                    | 40 x 20 x 10 inches (102 x 51 x 26 cm)   |
| WEIGHT                  | 130 lbs (59 kg)  |
| FINISH COATING MATERIAL | Polyurethane Enamel over Polyester Urethane on Steel (Standard) or Type 316 Stainless Steel (Optional) |
| POWER                   | 120 VAC ±10%, 50-60 Hz, 4 Amps maximum   |
| POWER CONNECTION        | Hard Wired (Standard) or Plug (Optional)   |
| POWER CONDITION         | Dedicated Branch Circuit Free From: Surges/Dips > 10%, RF and Switching Noise                          |
| OPERATOR INTERFACE      | 7" TFT, LCD, Touch HMI Panel   |
| SAMPLE CONNECTION       | ¼" FNPT Fitting  |
| WASTE CONNECTION        | ¼" FNPT Fitting (Open Drain Required)  |
| MOUNTING                | Wall (Standard) or Stand (Optional)  |

## MAINTENANCE

|                                  |                               |
|----------------------------------|-------------------------------|
| LIGHT SOURCE REPLACEMENT         | Every 4 years                 |
| ZERO & CLEANING SOLUTIONS REFILL | As Required (4 weeks typical) |
| REAGENTS REFILL                  | As Required (4 weeks typical) |

Step by step maintenance and troubleshooting videos can be viewed on the display, simplifying the service process with graphic representation of the system's operation.



### Notes:

- Technical Specifications are subject to change without prior notice.
- All performance specifications are based on analysis of drinking water standards under factory conditions.