**Simple, Accurate, and Reliable Single-Parameter Analysis**

# ChemScan mini LoP Analyzer

The ChemScan mini LoP Analyzer provides operators with reliable process chemistry measurements. The analyzer data ensures proper control of phosphate treatment and addition processes. This reduces the need for frequent manual sampling or laboratory analysis while producing the best water quality.

## APPLICATIONS

- Analysis of low range ortho phosphate in potable water, wastewater and industrial processes

## FEATURES

- Robust design for demanding operating environments
- Blockage-resistant internal sample tubing
- No filtration required on samples with low solids
- Minimal replacement parts for low maintenance
- Sample Blank eliminates electrical/optical drift
- Simple field-adjustable calibration
- Separate enclosures for electronics and sample handling
- LED light source for 10+ years of life
- Self-cleaning to eliminate internal fouling
- Separate external-sample line cleaning available
- Full range of sampling accessories available for all applications

## BENEFITS

- Assure process conformance
- Control energy and chemical costs
- Confirm plant compliance in real time
- Improve process performance
- Reduce reagent and maintenance costs

## ACCESSORIES

**Sample-Extraction Accessory**
Provides a continuous flow of fresh sample to the ChemScan mini analyzer. Designed to reject algae and other larger solids.

**ChemScan Cartridge Filter Wand**
For high-solids applications. No pressurized air, water or chemicals required for cleaning.

**ChemScan mini Outdoor Enclosure**
A turnkey solution for mounting the ChemScan analyzer and related items.

**Submersible Pump**
Provides a continuous flow of fresh sample to sample-extraction accessory.

**Deck-Mounted, Self-Priming Pump**
Provides a continuous flow of fresh sample to sample-extraction accessory (when submersible pump is not applicable).

*Discuss with your ChemScan representative the most suitable accessories for your application.*

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# Mini LoP Technical Specifications[1]

| FUNCTIONS AND OUTPUTS | |
|---|---|
| ANALYZER OPERATION | Automated, Continuous Analysis of Water and Wastewater |
| MEASUREMENT PRINCIPLE | Reagent-Assisted Optical Absorbance with sample zero correction |
| NUMBER OF PARAMETERS | One |
| PARAMETER OPTION | Low Range Ortho Phosphate – as either PO4 or P |
| ALARM OUTPUTS<br>SPDT, 5 AMP, INDIVIDUALLY FUSED | Alarm 1: High/low concentration<br>Alarm 2: Programmable, high/low concentration or operates with sample valve (for external sample pump) |
| DATA COMMUNICATIONS | 4-20 mA (2 outputs) |
| DATA LOG | Time Date, Date, Concentration, Diagnostic Info, 5,000 events |
| NUMBER OF SAMPLE LINES | One |
| REAGENT ADDITION | YES, Direct Reagent Injection |
| AUTO MAINTENANCE | Auto Clean |
| CALIBRATION | Factory calibrated for reagent response, field adjustable |
| **SAMPLE PARAMETERS** | |
| SAMPLE PRESSURE | Pressurized sample line required regulated to 2-10 psi (15-70 kPa), (sample conditioning and pressurizing accessories available) |
| 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 mgl TSS ( filter required for WW influent and primary effluent) |
| STRAINER REQUIREMENT | #20 Mesh - Opening of 0.7 mm (0.027 inches) Provided |
| SAMPLE TEMPERATURE | 10 - 60°C (50 -140°F) |
| SAMPLE TURBIDITY | 60NTU or 150mg/l Suspended Solids |
| **OPERATING ENVIRONMENT** | |
| ENCLOSURE RATINGS | Upper Enclosure: NEMA 4X Fiberglass Reinforced Polyester, Acrylic window<br>Lower Enclosure NEMA 4X Fiberglass Reinforced Polyester |
| AMBIENT TEMPERATURE | 5 - 45°C (41 – 113°F) |
| RELATIVE HUMIDITY | 0 - 100% (Non-Condensing) |
| INSTALLATION | Indoor or Sheltered (from rain and sun) Location |

| PERFORMANCE SPECIFICATIONS[2] | |
|---|---|
| READING INTERVAL | 7- 5999 minutes |
| DEFAULT READ INTERVAL | 13 minutes |
| RESPONSE TIME | 7 minutes minimum |
| ACCURACY | 2% of value or 2x detection limit (whichever is greater) Per EPA SP 846 (The detection limit is the low concentration stated in ranges below) |
| PRECISION | Less than 0.5% of Range |
| ZERO DRIFT | Less than 0.5% of Range |
| RANGES | Method 1034 Phosphate 0.003-1.00 mg PO4-P/L<br>Method 1071 Phosphate 0.02-3.0 mg PO4/L |
| **INSTRUMENT SPECIFICATIONS** | |
| SIZE | 66 cm tall x 24 cm wide x 18 cm deep (26 in tall x 9.5 in wide x 7 in deep) |
| WEIGHT | 12.25 kg (27 lbs) |
| FINISH COATING MATERIAL | Fiberglass Reinforced Polyester (FRP) |
| POWER | 120-240 VAC ±10%, 50-60 Hz, 70 VA |
| POWER CONNECTION | 120 VAC US cord / plug set (Standard) (conduit connection optional) |
| POWER CONDITION | Dedicated branch circuit free from: surges/dips > 10%, RF and switching noise |
| OPERATOR INTERFACE | 2 x 20 LCD and 4 x 4 Keypad |
| SAMPLE CONNECTION | ¼ in FNPT Fitting |
| WASTE CONNECTION | 1.83 m length of 15 mm (6 ft length of 5/8 in) ID clear vinyl tube provided (route to open drain) |
| MOUNTING | Wall (Standard) |
| **MAINTENANCE** | |
| REAGENT REPLACEMENT | As required (3 months at default read interval) |
| CLEANING SOLUTIONS REFILL | As required (3 months typical) |
| PERISTALTIC MIXING PUMP HEAD | Replace after six months of operation |
| PERISTALTIC MIXING PUMP FULL ASSEMBLY | Replace after twelve months of operation |
| PERISTALTIC ZEROING/CLEANING PUMP HEAD | Replace after two years of operation |

MADE IN USA

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

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