

# ChemScan<sup>®</sup> mini Ni

## NICKEL ANALYZER

Real-time Data for Process Monitoring, Cost Control

The new single parameter in-line analyzer family utilizes years of ChemScan experience and proven technology to provide reliable and accurate analysis of water and wastewater. This device has been designed from the ground up to reduce maintenance requirements, includes large ID sample tubing to minimize plugging and only needs quarterly reagent refills.

### FEATURES

- Automatic Analysis Utilizing Proven Dimethylglyoxime Method
- Low Maintenance
- Proven Sample Handling with Large I.D. Flow Paths
- Simple Field Adjustable Calibration
- Sample Blank to Eliminate Background Interference
- Automatic Cleaning

### CAPABILITIES

- Automatic Analysis
- Continuous Output
- Multiple Data Communication Interface Options

### APPLICATIONS

- Potable Water
- Wastewater Effluent

### BENEFITS

- High Reliability
- Low Capital Cost
- High Accuracy
- Low Operating Cost



### SPECIFICATIONS

Range:	0.05 - 6.0 mg/L (Method 1057)
Accuracy:	2% of value or 2x detection limit (whichever greater)
Cycle Interval:	9 minutes to 9999 minutes (field programmable)
Environment:	5 - 50 degrees C (method dependent)
Power:	100 - 240 VAC, 50 W
Enclosure:	NEMA 4X
Safety Approval:	CSA-US
Sample Requirements:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi, <150 mg/L TSS, <60 NTU
Maintenance:	Reagent replacement every 3 months, pump kit yearly
Relay Contacts:	1 SPDT Concentration, 1 SPDT Programmable
Serial Interface:	RS-232 Maintenance Port
Analog Output:	Isolated 4-20 mA

**ChemScan**  
An **In-Situ** Brand

"Monitoring a World of Water"

REPRESENTED BY:  
**CCLYNCH**  
& ASSOCIATES  
The Water Monitoring People

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## Nickel Monitoring ChemScan® mini Ni Technical Specification<sup>1</sup>

### FUNCTIONS AND OUTPUTS

Parameter	Nickel (Total Soluble Ni)
Measurement Principle	Optical Absorbance
Detector	Photodiode
Spectral Range	470 nm
Calibration Technique	Factory calibrated for Dimethylglyoxime based absorbance
Number of Parameters	One – Nickel (See UV- Series ChemScan Analyzers for multiple parameters)
Data Communications	Isolated 4-20 mA Analog (2 outputs available), RS-232
Data Log	10,000 Values Time / Date Stamped
Auto Zeroing	Yes (Standard)
Auto Cleaning	Yes (Standard)
Analyzer Sample Pump	No – Pressurized sample required – See below
Reagent Addition	Yes (Standard), Direct Reagent Injection
Number of Sample Lines	One (See UV- Series ChemScan Analyzers if multiple sample lines are required)

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

Reading Interval	8 to 9999 minutes
Response Time	8 minutes minimum
Range	0.05 – 6.0 mg/L
Accuracy	2% of value or 2x detection limit (whichever is greater)
Precision	Less than 0.5% of Range
Zero Drift	Less than 0.5% of Range (with Auto Zero)

### SAMPLE PARAMETERS

Sample Pressure	Pressurized Sample Line Required Regulated to 15-70 kPa (2-10 psi), (Sample extraction accessory available – Pump and Sample Circulation Loop Assembly)
Sample Flow	0.5 to 5.0 l/min. 1.5 L flush per sample (0.13 to 1.32 gpm – 0.4 gallon flush)
Filtration Requirement	None (For samples meeting turbidity and solids requirements)
Strainer Requirement	#20 Mesh - Openings of 0.7 mm (0.03 inches) provided
Sample Temperature	1 <sup>o</sup> - 60 <sup>o</sup> C (34 – 140 <sup>o</sup> F)
Sample Turbidity	0 - 60 NTU (Standard)
Sample Suspended Solids	0 - 150 mg/l TSS

### MAINTENANCE

Reagent Replacement	As Required (12 weeks typical)
Cleaning Solution Refill	As Required (12 weeks typical)
Peristaltic Mixing Pump Head	Replace after six months of operation
Peristaltic Mixing Pump Replacement	Replace after twelve months of operation
Peristaltic Zeroing/Cleaning Pump Head	Replace after two years of operation

### INSTRUMENT SPECIFICATIONS

Size	66 cm tall x 24 cm wide x 18 cm deep (26" tall x 9.5" wide x 7" deep)
Weight	12.25 kg (27 lbs)
Mounting	Wall (Standard)
Finish Coating / Material	Fiberglass Reinforced Plastic (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 Cell Material	Polymer Body with Quartz Windows
Sample Connection	¼" FNPT Fitting
Waste Connection	6 foot length of 5/8" ID clear vinyl tube provided (route to open drain)
Cleaning Solution Container	10 Liters (2.5 gallon) Typical location is on the floor below the analyzer
Reagent Container	4 Liter (1 gallon) Wall-mounted, PVC rack (provided)

### OPERATING ENVIRONMENT

Enclosure Ratings	Upper Enclosure: NEMA 4X (Fiberglass Reinforced Plastic) Polyester, Acrylic window Lower Enclosure NEMA 4X (Fiberglass Reinforce Plastic) Polyester
Ambient Temperature	5 - 35 <sup>o</sup> C (41 – 95 <sup>o</sup> F)
Relative Humidity	0 - 100% (Non-Condensing) For installation in an indoor or sheltered location

### SAFETY APPROVAL

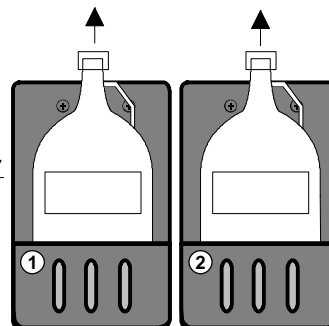
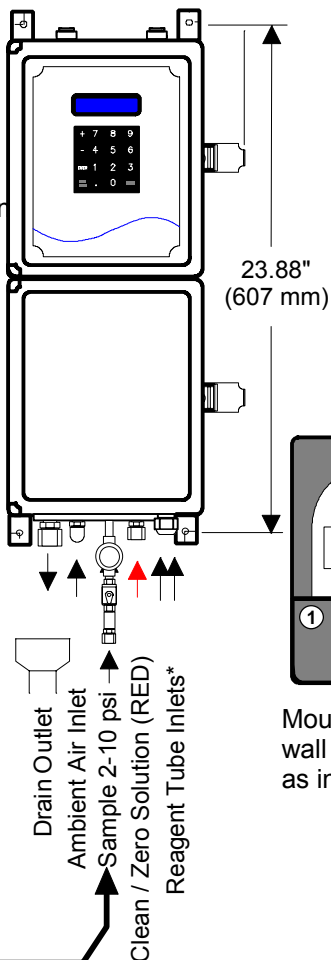
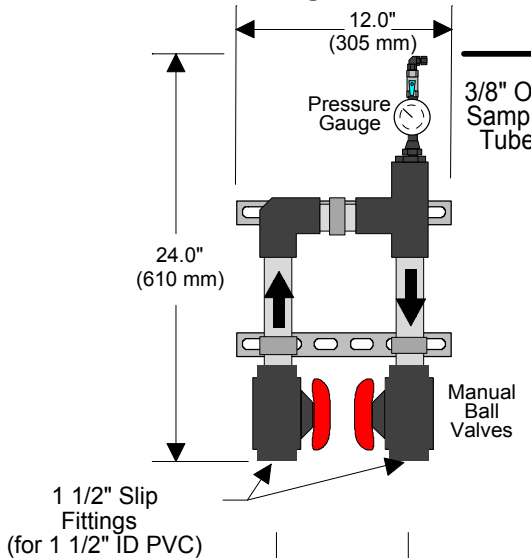
CSA - US

#### Notes:

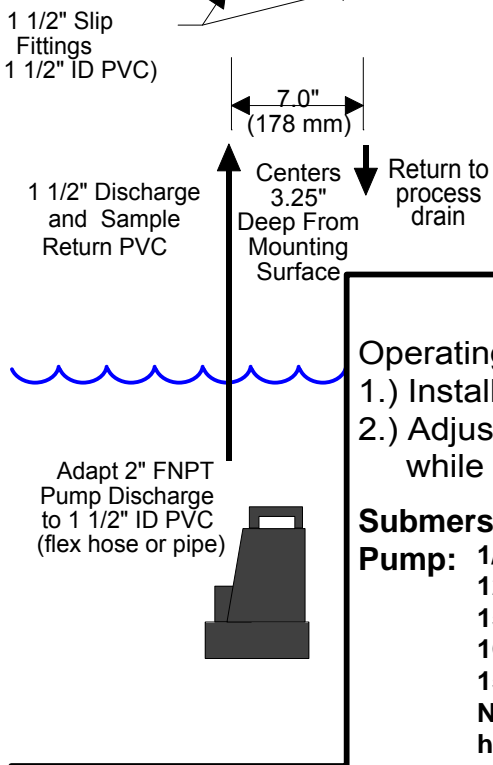
1. Technical Specifications are subject to change without notice.
2. All performance specifications are based on analysis of water standards under factory conditions.

66.00"  
(1676 mm)  
Mounting height  
above floor level  
for typical installation  
- NOT TO SCALE-

**Sample Pressurization  
Loop Accessory  
FRONT VIEW**



Mount reagent container(s) to the wall surface adjacent to the analyzer as indicated on the installation diagram.



**Operating Instruction:**

- 1.) Install as shown per applicable codes.
- 2.) Adjust ball valves to provide 2-4 psi on gauge while maximizing flow through the assembly.

**Submersible Pump:**

1/4 HP  
120 VAC (20 ft cord, 6 meters)  
150 Watts  
16 lbs (7.2 Kg), 9.5"Lx7"Wx15"H  
15 feet max. TDH (no flow at 22 ft.)  
NOTE: Select 1/2 HP Pump for heads from 15 feet to 30 feet.

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<b>ChemScan mini Analyzer Sample Extraction System</b>	
FILE # CMPSPMJ3	

**ChemScan mini Analyzer  
and Sample Extraction Accessory  
(Sample Pump & Sample Loop)**