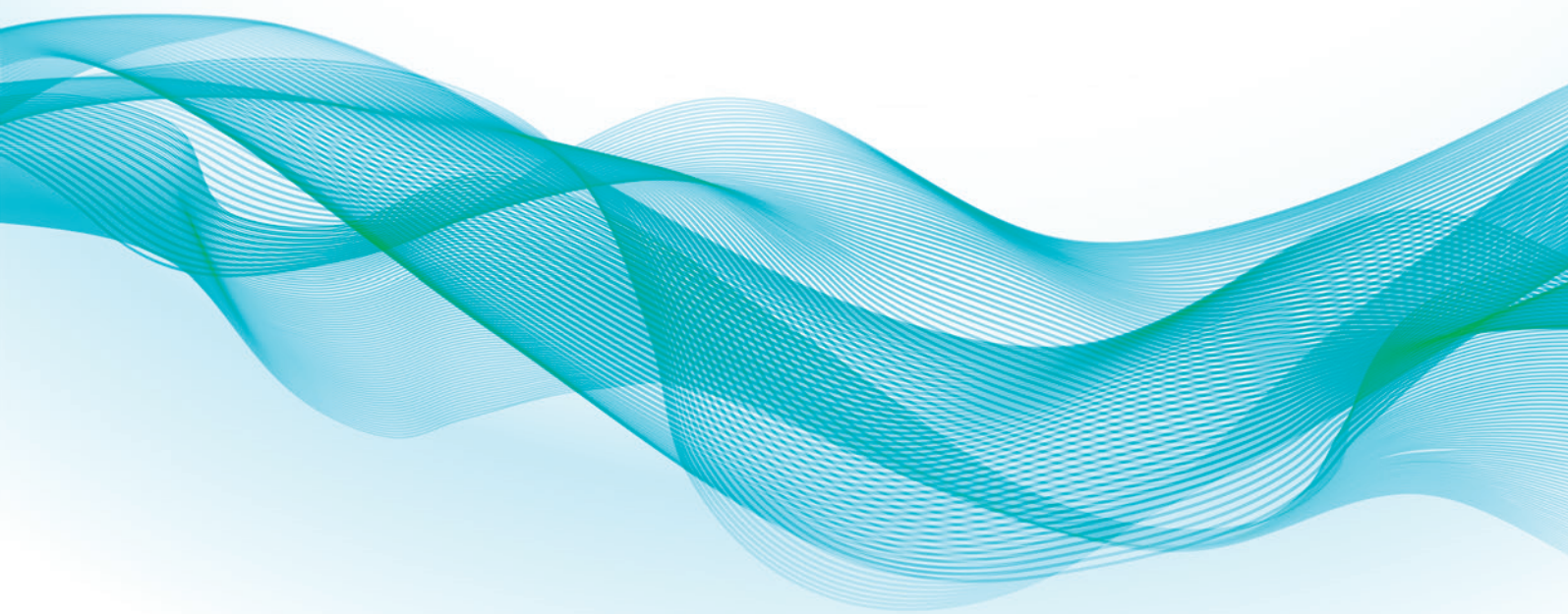


ChemScan[®]
mini Analyzers



ChemScan® mini Analyzers

Accurate, Reliable AND Affordable

Capabilities:

- Continuous, Real Time Analysis of Constant Flow Sample Stream
- Isolated Analog Output

Features:

- Long Life LED Light Source
- Low Maintenance
- Large I.D. Flow Paths
- Simple Field Adjustable Calibration
- Direct Diode Detection
- Sealed Electronics Enclosure
- Auto Cleaning and Zeroing
- No Lamp Replacement or Alignment Required



No Filtration Required

- When TSS < 150 mg/L
- After Secondary Clarifier

The single parameter in-line analyzer family from ASA Analytics utilizes years of ChemScan experience and proven technology to provide reliable and accurate analysis of water and wastewater.

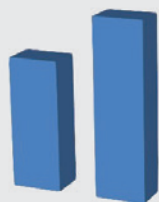
This device has been designed from the ground up to reduce maintenance requirements. Large I.D. sample tubing minimizes plugging. Reagent only needs quarterly change out.

The Manitowoc Wisconsin WWTF was able to Significantly Reduce Ferric Consumption using the ChemScan® mini oP

*Down 3550 gallons (or 114 gpd) from 2011
Down 5396 gallons (or 174 gpd) from 2010*

Better Removal Efficiency

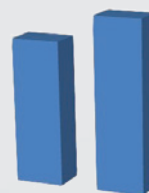
**38% Increase in
Phosphorus Removed**



*From .728 to .989 influent
phosphorus pounds removed
per gallon of ferric added*

Better Removal Rates

**19.2% Increase in
Total Load Removed**

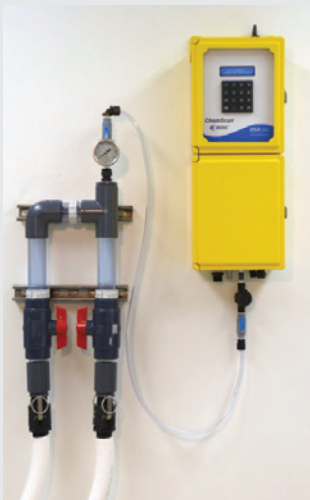


*From 1.225 to 1.460
pounds removed
per gallon ferric added*

The Fond du Lac Wisconsin Regional Wastewater Treatment Facility has saved thousands in chemical costs.

The Fond du Lac facility, with an average flow of 9.8 MGD, treats all of the city's wastewater along with that of neighboring communities. For the last three years, the facility has used a ChemScan mini oP to monitor the chemical feed pump that doses Aluminum Sulfate for Phosphate removal. Jeremy Cramer, Operations Manager for the plant, reports "Alum cost savings of approximately \$100,000 per year have been realized." In the last 6 months, the unit has been tied directly to the chemical feed pump via their SCADA system. The system ramps the chemical dosing up and down as needed. "We are on pace to save approximately \$50,000 **more** per year." This results in a total savings estimated at \$150,000 per year.





Sample Extraction Accessory

Provides a pressurized sample to the ChemScan mini analyzer.

TSS is less than 150 mg/L
NTU is less than 60

(Includes Pump and Sample Circulation Loop Assembly)

Sample Circulation Pumps

Submersible Pump
1.3" Max. Dia. Solids
Weight: 20 - 30 lbs
Power: 1/4 - 3/4 HP, 120 VAC 60 Hz
Power Cable: 20 feet



Deck Mounted Self Priming Pump - 1/3 - 1/2 HP
Weight: 40 lbs
Mounting: Base



Reagent Enclosure



Optional Reagent Enclosure
Size: 18" x 20" x 9"
Weight: 19 lbs.

Legend:

TSS - Total Suspended Solids
NTU - Nephelometric Turbidity Units

asa
ANALYTICS

Applied Spectrometry Associates, Inc.
2325 Parklawn Dr., Suite I, Waukesha, WI 53186
PH 262-717-9500, FAX 262-717-9530
www.ASAanalytics.com

Specifications

General (Common to all minis)

Accuracy:	2% of value or 2x detection limit (whichever greater)
Environment:	5 - 50 degrees C
Power:	100 - 240 VAC, 50 W
Enclosure:	NEMA 4X
Safety Approval:	CSA-US
Relay Cointacts	1 SPDT Concentration, 1 SPDT Programmable
Serial Interface	Serial, RS-232, Modbus RTU
Analog Output	Isolated 4-20 mA

ChemScan mini oP

Range (as PO4-P):	0.03 - 3.0 mg/L (Std), 0.1 - 6.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini LowoP

Range (as PO4-P):	0.003 - 1.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

CHLORAMINATION SUITE

ChemScan mini Free Am

Range (as N):	0.01 - 2.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every month, pump kit yearly

ChemScan mini Mono

Range (as N):	0.02 - 10.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

DRINKING WATER SUITE

ChemScan mini Mn

Range:	0.01 - 8.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini Fe

Range:	0.01 - 5.0 mg/L
Cycle Interval:	8 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

WASTEWATER DISINFECTION SUITE

ChemScan mini Sulfite

Range:	0.01 - 4.0 mg/L
Cycle Interval:	5 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every month, pump kit yearly

ChemScan mini LowChlor

Range (as CL2):	0.005 - 2.0 mg/L
Cycle Interval:	10 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every month, pump kit yearly

ChemScan mini LowAm

Range (as N):	0.01 - 10 mg/L (method 1028)
Cycle Interval:	10 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini Cu

Range:	0.02 - 6.0 mg/L
Cycle Interval:	7 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini CrVI

Range:	0.03 - 5.0 mg/L
Cycle Interval:	12 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini LowCrVI

Range:	1 - 1000 µg/L
Cycle Interval:	12 minutes to 9999 minutes (field programmable)
Sample:	0.5 - 1 Liter/analysis, pressure 2 to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly

ChemScan mini UV254

Range (as N):	0.1 - 100%T
Cycle Interval:	Continuous
Sample:	2 - 10 psi continuous flow
Maintenance:	Replace zero/clean solution