

# Sentinel 6T

## Refrigerated Sewage Sampler

N-CON Systems Co., Inc.



*The Sentinel 6T Refrigerated Sewage Sampler  
Setting the Standard for Reliability and Accuracy*

- **Sample** raw sewage, final effluent or other process points for in-plant control or operation reports
- **Collect** composite samples accurately proportioned to flow
- **Comply** with NPDES permit requirements
- **Sample** sewage or industrial waste at point of interception for sewer use charges
- **Simplify** sampling procedures to avoid operator errors and missed samples
- **Preserve** composite samples in an efficient thermo-electric refrigerator
- **Collect** corrosive or solids bearing industrial waste samples

The Sentinel 6T refrigerated sewage sampler provides the ultimate in sampling accuracy and long term system reliability for your wastewater sampling program. The Sentinel 6T is a flow-through, fixed dipper automatic sampler. A 2 inch inlet, 3 inch exhaust line and open dipper assure a clog resistant system suitable for use with all types of wastewater. The Sentinel 6T's efficient thermoelectric refrigeration system preserves a 2 gallon composite at 4-10°C and eliminates problems with Freon® or other pressurized gas.

### How it Works

Sewage or process wastewater flows into the integral sampling chamber through a 2" NPT inlet line at the rate of ten to thirty gallons per minute by either gravity or external pump. Representative samples are assured by thorough mixing of the liquid before it flows over an adjustable weir to waste through a 3" NPT exhaust line.

A sampling dipper attached to an oscillating shaft is located in the sampling chamber. Responding to flowmeter signals or actuated by the sampler's adjustable timer, the dipper collects a precisely repeatable 25 ml sample from the flow in the sampling chamber. The dipper then returns to the raised position, and deposits the sample in the composite container in the sample storage compartment. The sample is stored in a thermostatically controlled refrigeration compartment until removed by the operator. A non-contact switch turns the system off when the composite is complete.

# Technical Specifications

## Cabinet

Material: Rigid, Unplasticised White PVC  
Dimensions: 14" wide 14" deep 36" high  
Weight: Approximately 85 pounds

## Sample Control Programmer

Programmable Logic Controller:  
Timed interval, counts between samples or 4-20 MADC input.

Sample Selector Switch:  
Time/Off/Flow

Green Lighted Push Button:  
Test/Sampling indicator light Lights when in operation.

Refrigeration Switch: On/Off Red light: Lights when Sample Complete

## Sampling Chamber

Integral with sampler cabinet Flow Capacity: 10-30 GPM Head adjustment by adjustable overflow weirs Inlet: 2" NPS Exhaust 3" NPS

## Sample Storage Compartment

Stainless Steel with 2" polyurethane foam insulation Door 1" thick PVC, with gasket Chrome plated latch handle and self-closing hinges

## Refrigeration System

Thermoelectric with no moving parts except exhaust fans Capacity: 680 BTU/hour Thermostatic Control adjustable from 4°-10°C will maintain 45°F below ambient

## Sampling Dipper System

Constant volume, 25ml open dipper. Cast aluminum with Teflon®

## Dipper Drive Motor

Type: Shaded pole, oil immersed Enclosure: Cast Aluminum NEMA4X (IP65)

## Sample Container

Material: Polyethylene  
Capacity: 2.5 US gallons  
Opening: 4" with screw cap

## Flowmeter Compatibility

Operates in conjunction with any flowmeter providing a momentary unpowered switch closure every preset number of gallons or a 4-20 MADC flowmeter signal

## Electrical Requirements

115VAC 60Hz, 1000W maximum  
220VAC 50Hz, 1000W maximum

## Accessories Provided

Two 2.5 gallon Polyethylene sample containers  
Flexible 2" and 3" inlet & exhaust couplings  
Instruction Manual

## Optional Accessories

Pump Control Timer (05-042) Weatherproof Outdoor Housing (01-165)  
Auxiliary Sample Pump (several types available)

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