



# Instrumentation for the Wastewater Treatment Industry

(8182)63-90-72  
+7(7172)727-132  
(4722)40-23-64  
(4832)59-03-52  
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(473)204-51-73  
(343)384-55-89  
(4932)77-34-06  
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(4872)74-02-29  
(3452)66-21-18  
(8422)24-23-59  
(347)229-48-12  
(351)202-03-61  
(8202)49-02-64  
(4852)69-52-93

: rcy@nt-rt.ru | <http://royce.nt-rt.ru>

# Royce Technologies Instrumentation Line



## MEASUREMENT TECHNOLOGIES BY ROYCE

### **Dissolved Oxygen Monitoring and Control**

- Single and Multi-channel Analyzers
- Bioreactor and Lagoon Systems

### **Total Suspended Solids Monitoring and Control**

- Portable Analyzers
- Single and Multi-channel Analyzers
- Solids density

### **Interface Level analyzers**

- Primary, Secondary and Thickener Analyzers

## COMMON FEATURES OF ROYCE PRODUCTS

- Microprocessor based, self-diagnosing electronics
- Rugged, mil-spec electronic components
- One step, automatic calibration
- Analog and digital output communications, including multiple BUSS options
- Programmable setpoints and solid state relays
- Space age composite sensor materials
- Polymer, unbreakable sensor optics
- Color compensating optics (TSS)
- Self cleaning sensors throughout the line of products
- Intelligent, menu driven setup and operation
- Enclosure sun screens (Optional)
- Sensor fault feedback on all controllers
- Backlit displays



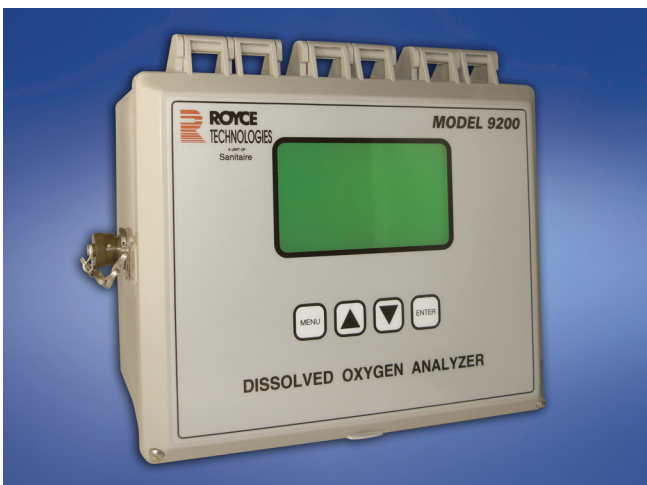
# Galvanic Parts Per Million Dissolved Oxygen Systems



**Model 9110/9120/9210/9220 Analyzer**

## Features

- Single & Dual Channels
- One step, push button calibration
- Displays DO & temperature for each channel
- Two 4 - 20 mA per channel for DO and temperature
- Two relays per channel
- RS - 485 & Modbus (Standard)
- Profibus DP (Optional)



**Model 9200 Analyzer**

## Features

- Range 0 - 99.9 PPM and percent saturation 0 - 99.9%
- One step, push button calibration
- Two methods of calibration are standard
- Automatic Temp, altitude and salinity compensation
- Isolated 4 - 20 mA
- Digital serial output available

# Total Suspended Solids Systems



**Model 711  
Portable MLSS/ILA System**



**Model 7110/7120 Series  
Analyzer**



**Model 7011A  
Continuous Analyzer**

## Features

- Two complete analyzers in one package (TSS & Interface Level)
- One sensor for both applications
- Microprocessor based
- Automatic Ranging
- Simple, insitu calibration
- Electronic self diagnostics
- Nine volt battery with automatic shut off
- Waterproof, completely submersible, rugged housing

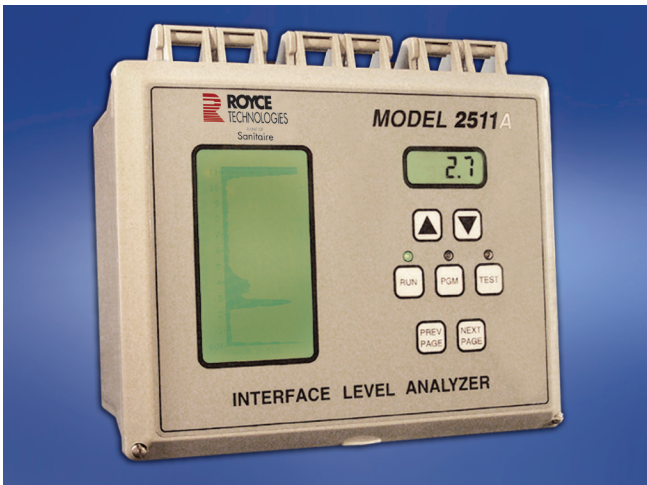
## Features

- Single & Dual Channels
- Automatic, push button, insitu calibration to a known value
- Range 10 - 80,000 mg/l
- Measured range depends on sensor
- 72 Series: 10 - 1500 mg/l
- 73 Series: 300 - 30,000 mg/l
- 74 Series: 800 - 80,000 mg/l
- 76 Series: 300 - 30,000 mg/l
- Two 4 - 20 mA per channel
- Two relays per channel
- RS-485 & Modbus (Standard)
- Profibus DP (Optional)

## Features

- Automatic ranging
- 10 to 80,000 mg/l
- Phased array source for automatic color compensation (Model 73B)
- Automatic, push button, insitu calibration to a known value
- Automatic ambient light compensation on all models
- User selectable calibration curves
- Two Programmable setpoint relays
- Outputs 4 - 20 mA, 0 - 1 VDC (isolated)
- RS-485 (Standard)

# Interface Level Analyzer

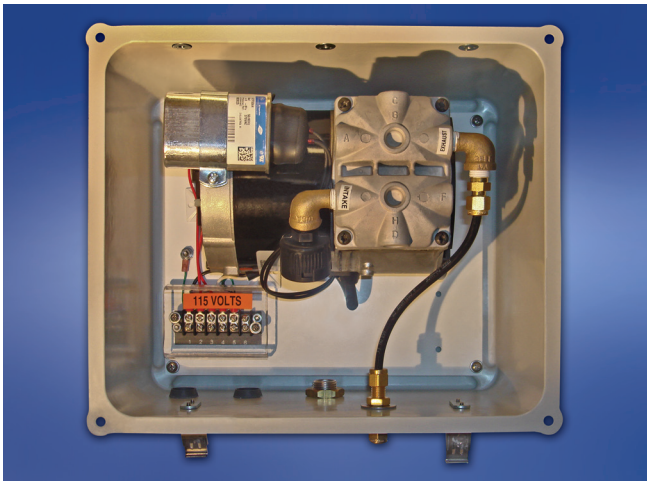


**Models 2511A Analyzer**

## Features

- Measures both interface and clarity
- No moving parts, no maintenance, no recalibration required
- Surface skimmer friendly
- Microprocessor based electronics
- Backlit LCD displays
- Full featured set point relays available
- Simple user friendly menu driven programming
- Numerical and graphical displays

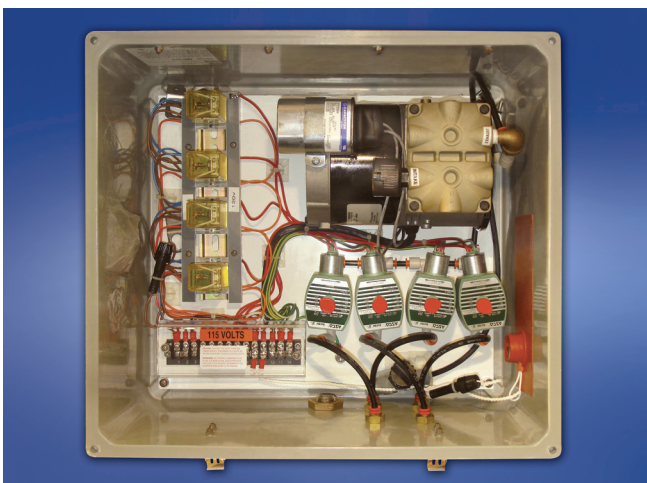
# JC Series Compressor Cleaning Systems



**Model JC-1 Compressor (Single Channel)**

## Features

- One channel, two channel and four channel systems available
- Utilizes the highest grade compressor available

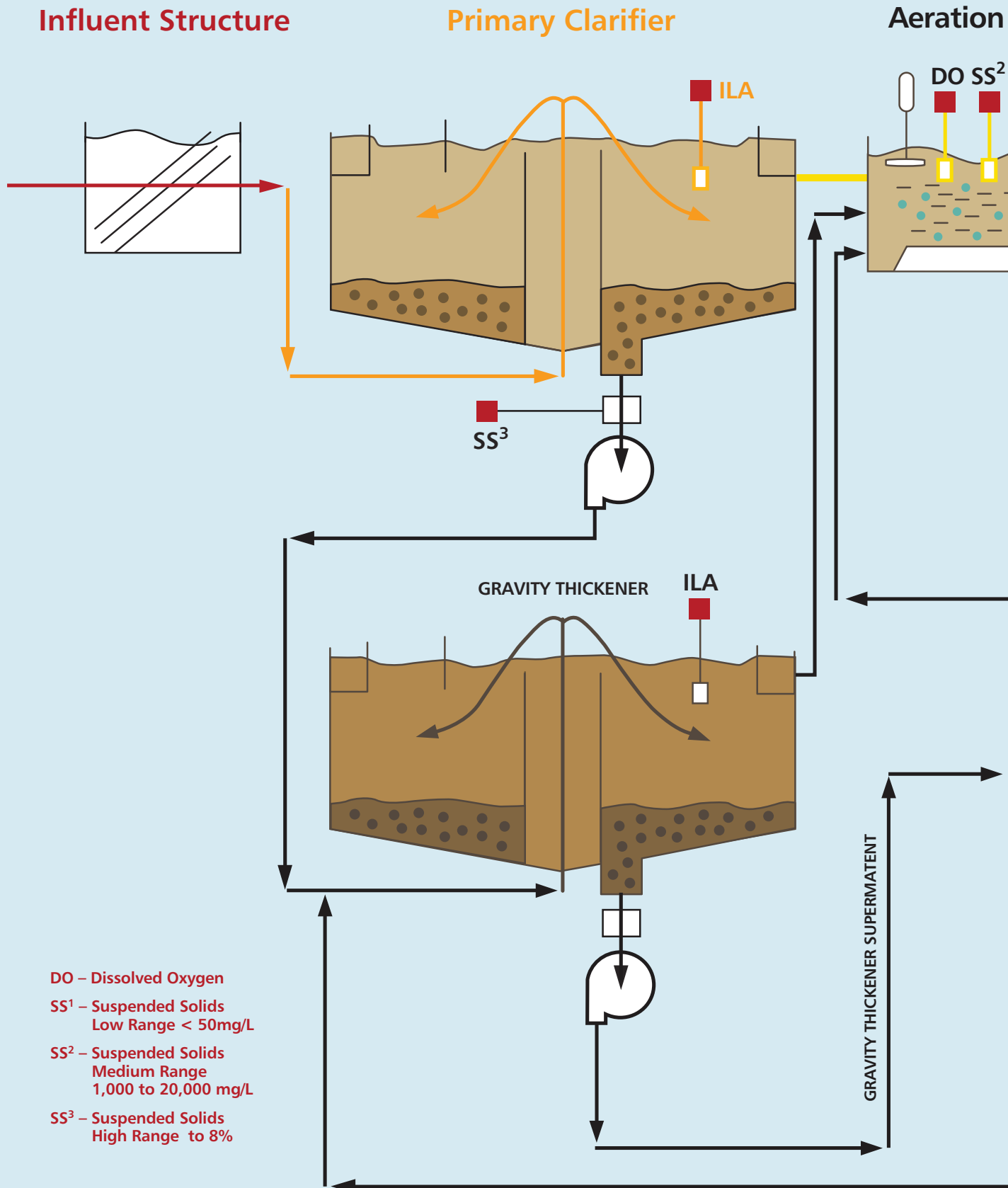


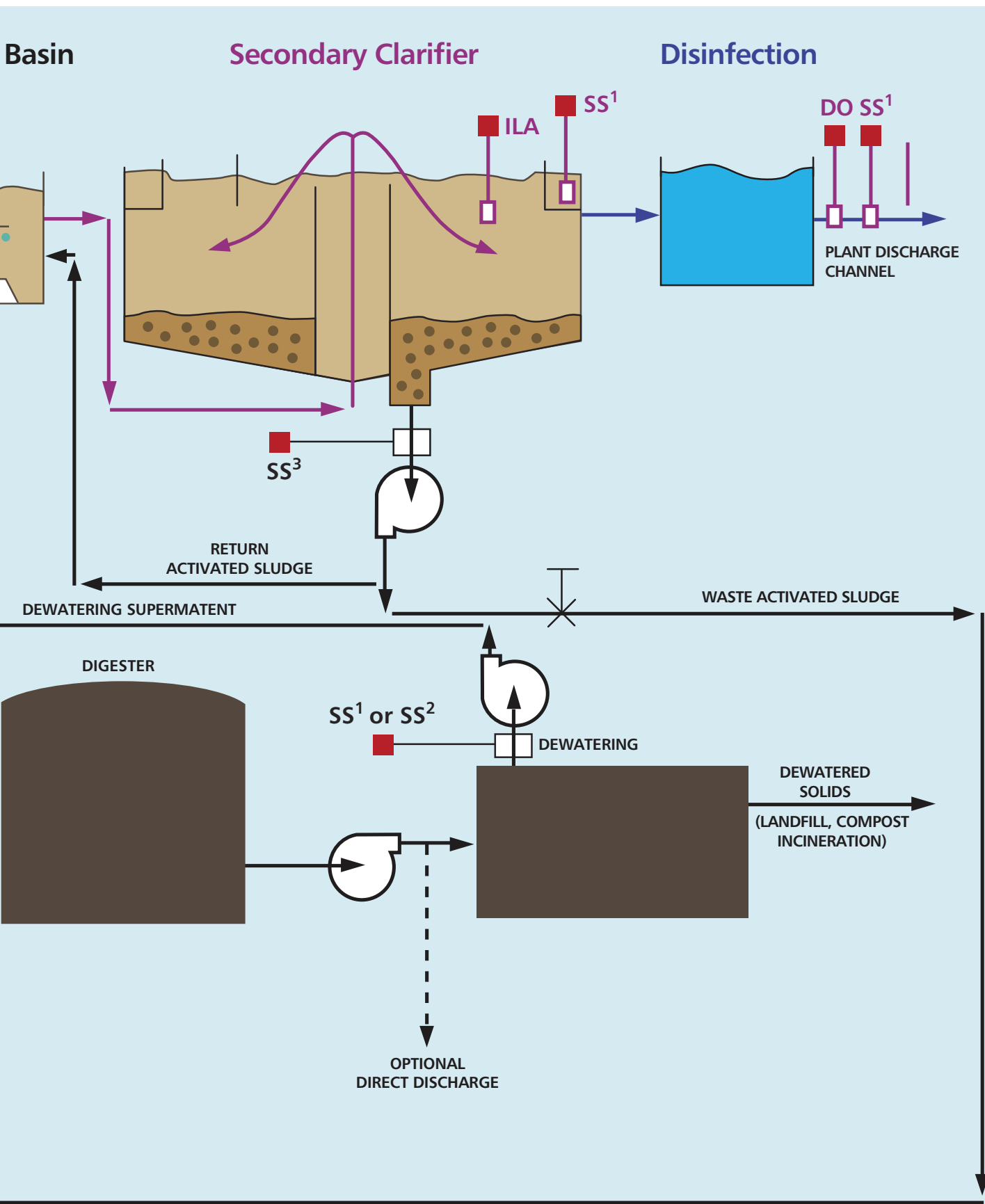
**Model JC-4 Compressor (FOUR Channel)**

## Features

- Can be used on any Royce sensor
- Can be controlled by a Royce analyzer or controller
- Thousands in use worldwide

# PROCESS CONTROL INSTRUMENTATION AT A TYPICAL SECONDARY WASTEWATER TREATMENT PLANT





Royce, a Xylem brand, provides high quality monitoring and control instrumentation and sensors specifically designed for municipal and industrial wastewater treatment applications. Recognized throughout the wastewater treatment industry as experts in the biological wastewater treatment process.

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