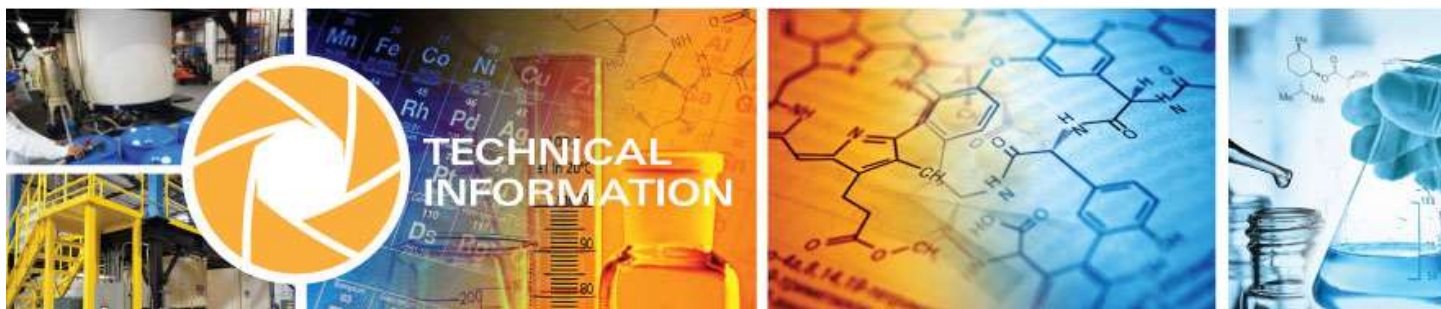




FOCUSTECH™ Gravitrol SG-7000v3.0

Specific Gravity Controller



PRODUCT DESCRIPTION

The Gravitrol SG-7000 is a specific gravity controller designed for accurate, reliable control of nitric acid-based tin and solder or alternative oxide processes. The Gravitrol SG-7000 continuously monitors process specific gravity and automatically adds fresh feed solution when the specific gravity climbs above the user-defined set point. The Gravitrol SG-7000 also controls process level and will automatically transfer spent material to a drum or holding tank. Optional FOCUSTECH Connect cloud data sharing is available for this system.

FEATURES

High-quality process instrumentation

Automatic delivery of replenishment chemicals from factory packaging or from working solution directly to the process

Compact, wall mount design

BENEFITS

Provides stable and accurate specific gravity readings

Minimize chemical handling

Saves space and is easy to install

THEORY OF OPERATION

The SG-7000 operates by continuously measuring the specific gravity of a sample solution being pumped past a float system. The float is connected to two magnets that move around a sensor. The sensor detects the magnetic fields created by the magnets and calculates a deviation from center (the control set point). This deviation value determines when the chemical addition pump turns on and is also adapted into an SG value for displaying.

Once the specific gravity value exceeds the operator defined setpoint, indicating the solution has become too concentrated, the SG-7000 activates a bellows pump to introduce fresh solution into the system. This dilution process lowers the specific gravity back within the acceptable range. The operator interface allows real-time adjustment of setpoints and monitoring of system performance, offering flexibility to meet process-specific requirements.

To maintain bath quality and prevent chemical degradation or contamination, the controller also features an automated spent solution transfer system. When necessary, the controller triggers a transfer of excess or spent fluid to a drum or holding tank, minimizing risk of overflow and maintaining chemical consistency. This automated cycle reduces manual handling, enhances safety, and ensures that the chemical treating process operates under optimal conditions.

TYPICAL OPERATING RANGES AND TOLERANCES

Parameter	Common ranges	Control Tolerance
Specific Gravity (alt oxide)	1.06 – 1.13 SG	± 0.005 SG
Specific Gravity (etchant)	1.150-1.400 SG	± 0.005 SG

SYSTEM REQUIREMENTS

Electrical	115 VAC, 60Hz, 2.7 amps
Dimensions (free standing)	70" X 28" X 28" (H X W X D)
Dimensions (wall mount)	32" X 28" X 9" (H X W X D)

SYSTEM OPTIONS

FOCUSTECH Connect cloud connection

