

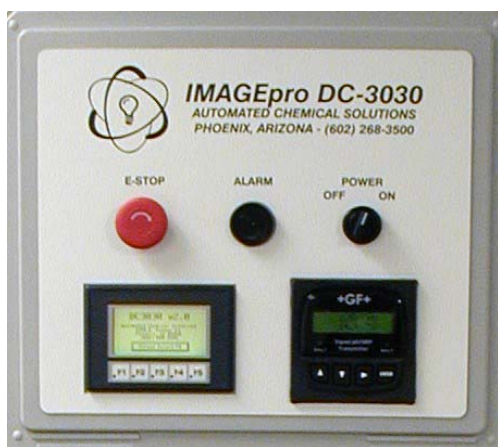
AUTOMATED CHEMICAL SOLUTIONS

Chemicals and Controllers for PWB Fabrication

Technical Data Sheet

IMAGEpro DC-3030

Developer Controller



Description

The IMAGEpro DC-3030 provides accurate, reliable control for developing processes. The IMAGEpro DC-3030 controls solution concentration, resist loading and, most importantly, process breakpoint. Automatic delivery of chemical concentrate directly from factory packaging minimizes chemical handling. The IMAGEpro DC-3030's user friendly, easy-to-install design allows it to be used with all conventional developing processes.

Features

- High quality process instrumentation
- Automatic delivery of replenishment chemicals from factory packaging to the process
- Compact, wall mount design

Benefits

- Accurate, reliable process control
- Minimizes chemical handling
- Saves space and is easy to install

Theory of Operation

Process breakpoint is the critical variable in controlling a developing process. Maintaining a consistent breakpoint over a narrow range opens the process operating window and minimizes the chance for many of the major quality issues associated with developing and subsequent processes. The two process variables that have the greatest impact on process breakpoint are working solution concentration and resist loading. Controlling these variables to good tolerances will produce a consistent and reproducible breakpoint.

A continuous process sample loop is drawn from the spray manifold, passes a pH sensor and returns to the process sump. As parts are processed, resist loading increases and the pH of the process drops. When the pH falls below the desired set point, the DC-3030 opens a solenoid and allows water to flow through the proportioning pump and into the process. The proportioning pump automatically draws concentrate directly from a drum and mixes it with the motive water at a set proportion that is independent of the water flow rate. This control strategy consistently maintains process breakpoint with less than 5% variation.

System Requirements

Electrical	120 VAC, 60Hz, 10 amps
Dimensions	42" X 34" X 10" (H X W X D)
Water	1 – 10 gpm