



TRIO-TECH
INTERNATIONAL

MODEL G-400 PRESSURIZATION SYSTEM

A pressurization system
assuring military standard
microelectronics
gross leak testing

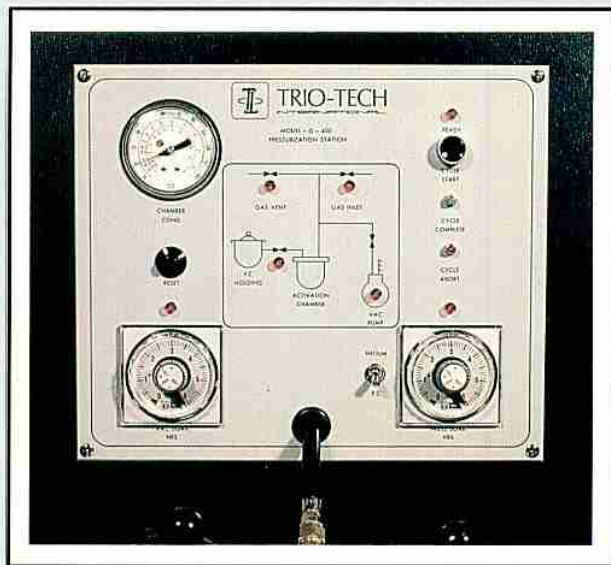
- AUTOMATIC, MICROPROCESSOR CONTROLLED
- STAND-ALONE CONSOLE UTILIZING MINIMAL FLOOR SPACE
- FUNCTIONAL DESIGN FEATURES ELIMINATE OPERATOR ERROR AND DOWNTIME
- VIRTUALLY MAINTENANCE-FREE OPERATION
- GROSS LEAK DETECTION $\geq 10^{-5}$ ATM CC/SEC
- SELF-CONTAINED CLOSED LOOP SYSTEM
- SELF-FILTERING, SELF-MONITORING
- MINIMIZE COSTLY FLUORINERT® LIQUID USAGE
- ASSURE PRODUCTION CONTINUITY WITH ON-TIME RAPID TESTING
- REDUCE SEMICONDUCTOR INVENTORIES BY SCREENING AND SHELVING ONLY HI-REL DEVICES
- SATISFY EXACTING MILITARY STANDARD PROCEDURES AND RELIABILITY WITH EQUIPMENT BUILT AROUND THE TEST CONDITION 'C' PROCEDURE

The G-400 Pressurization System is designed to operate with a Trio-Tech Model G-203 Leak Detector to detect minute defects in the package seals of microelectronic components. In a two-phase sequence the Pressurization System performs evacuation and pressurization of components as part of a gross leak detection process. Testing allows detection of gross leaks in the range of 10^0 to 10^{-5} atmospheric cubic centimeters per second (atm cc/sec) in accordance with MIL-STD-883, Method 1014.8, Condition C.



The G-400 consists of three main components: vacuum pump, activation chamber, and fluorocarbon holding tank. Microelectronic components are soaked in a vacuum for a specified period of time. Then, while still in a vacuum, the components are preconditioned with Fluorinert® Liquid FC®-72 through a pressurization cycle. Leaks, if present, are actually observed during the final phase when

the components are placed in the Leak Detector containing heated Fluorinert® Liquid (FC®-40). Once in the Leak Detector, the elevated temperature causes components with leaks to emit bubbles due to the increased pressure inside their cavities. The parts that bubble are considered "failures" and should be rejected.



From the start of the evacuation cycle through the pressurization and vent cycles, the process within the G-400 is completely automatic.



ALSO AVAILABLE IS MODEL G-489 PRESSURE SYSTEM FOR LARGER PRODUCTION QUANTITY GROSS LEAK TESTING

G-400 SPECIFICATIONS

Chamber Capacity5 gallon
 Mechanical Dimensions 14" wide x 24" deep
 x 49.5" high
 Pressure Soak Time Control 0–60 hours
 Vacuum Soak Time Control 0–60 hours
 Chamber Press./Vac. Indicator . . 30" Hg – 150 psi
 Vacuum Indicating Controller atm to .1 torr
 Vacuum Pump 1 @ 1.9 CFM
 Gas Supply Regulator Dry N₂ @ 90 psig
 or Filtered Dry Air
 Power 120 VAC, 50/60 Hz, 1φ @ 30 amp
 Shipping Weight 275 pounds

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