



PRODUCT RELIABILITY REPORT NT® INTEGRATED FLOW CONTROLLER

Introduction

Entegris pressure and flow measurement products have been used in the semiconductor industry since 1996. The NT® Integrated Flow Controller has been successfully tested to quantify long-term reliability and performance.

Reliability Testing

Long-term reliability tests are routinely performed on all Entegris products to ensure they meet the performance expectations of the most demanding semiconductor applications. Our rigorous tests evaluate long-term performance, reliability and effects on accuracy and response time.

Cycle Testing

The NT® Integrated Flow Controller has successfully completed long-term cycle tests at ambient temperature with pressurized gas and deionized water.

Extended Life Batch Testing: (Typical operation control function including full closure.) To more aggressively test the flow controller, the valve component is fully closed each cycle, opened to three-fourths full stroke, and then closed completely again. The NT® Integrated Flow Controller has successfully tested to over 7.5 million cycles with no effect on accuracy and response time. This long term testing continues, contact the factory for current data.

Ongoing fatigue testing continues to evaluate the extended life. Contact the factory for current data.



NT® Integrated Flow Controller, Model 6500

Summary

During one year of typical service, an NT® Integrated Flow Controller is expected to experience 0.5 million cycles, with an estimated service life of three to six years.

CYCLE TEST SUMMARY INFORMATION

TEST	CONDITIONS	NUMBER OF CYCLES (MILLIONS)
Extended Life, (Batch)	Typical control operation, valve closes every cycle	7.5*

* Testing continues

Production Testing

Quality tests are completed on 100% of Entegris measurement products prior to shipment. All units are assembled and tested under Class 100 conditions and calibrated using ultrapure DI water or high purity nitrogen gas. Prior to shipping, the products are wiped down, purged with high purity nitrogen and double bagged.

Chemical Compatibility

Entegris products are manufactured with high purity and inert materials of construction to withstand the harshest chemical environments. Wetted materials are PTFE, CTFE, PFA, and Kalrez®. All internal electronic components are potted for protection from corrosive liquids and gases. The pigtail cable version should be selected for NT® Integrated Flow Controllers that are subjected to corrosive chemical fumes and exterior splashes.

CE Compliance

Entegris products are designed and tested to meet the most current CE requirements. Please consult the product's User Guide or visit www.entegrisfluidhandling.com for the most current information.

Entegris designs and manufactures measurement instruments for the high purity and corrosive chemical environments of the semiconductor industry. Our products measure flow, pressure and level for the various acids, caustics, solvents and slurries used in the industry.

For More Information

For more information on integrated flow controller systems or our complete line of fluoropolymer fluid handling solutions, contact your local Entegris distributor or Entegris, Inc.

To review our complete line of sensing and control product solutions visit Entegris' Web site at www.entegrisfluidhandling.com or contact Entegris Customer Service.

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