

Standard Operating Procedure <b>Room Air Change Rate</b>	SOP No. 8.026
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DCR No. 97027  
Revision No. 1

**Effective:** 3-7-97  
**Supersedes:** 3-7-97  
**Revision Date:** 5-7-97  
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- 1 Purpose
  - 1.1 To establish a standard procedure to determine room air change rate.
- 2 Scope
  - 2.1 This procedure will apply to all rooms.
- 3 References
  - 3.1 NEBB Procedural Standards for Certified Testing of Cleanrooms, First Edition - October, 1988.
- 4 Definition
  - 4.1 CFM Cubic Feet per Minute
  - 4.2 Room Air Change Rate
    - 4.2.1 The number of times the total volume of a given room in cubic feet is changed in a one hour span.
  - 4.3 TAB Test, Adjust, and Balance
- 5 Responsibility
  - 5.1 TAB technicians shall record all test readings on Form FN 8.026.1 (Air Changes Per Hour Test Report).
  - 5.2 All test reports shall be saved in files located in the TAB Department of Therma.
  - 5.3 All test equipment utilized shall be in calibration in accordance with NEBB Standards and traceable to the National Institute of Standards and Technology (NIST).
- 6 Materials Requirement
  - 6.1 None
- 7 Test Equipment

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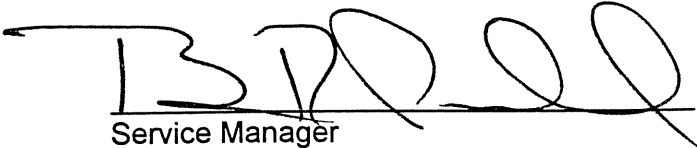
- 7.1 Tape Measure
- 8 General Procedures
  - 8.1 Review available blueprints and room pressure design diagrams.
  - 8.2 Inspect any room pressure measurement devices.
  - 8.3 Inspect the room for any obvious deficiencies that would affect the room pressure and airflow rates.
  - 8.4 Determine the volume of each room to be tested by using the tape measure to determine the room length, width and height.  $\text{Volume} = L \times W \times H$ .
  - 8.5 Measure the actual inlet airflow as per SOP 8.005 (Air Outlet Testing).
  - 8.6 Record all data on the Form FN 8.026.1 (Air Changes Per Hour Test Report).
  - 8.7 Room air change rate =  $(\text{Supply CFM} \times 60) / \text{Room Volume}$
- 9 Review and Approval
  - 9.1 Return the Form FN 8.026.1 (Air Changes Per Hour Test Report) to the TAB Department for review.

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## Document Approval

  
General Foreman

4-15-97  
Date

  
Service Manager

4-15-97  
Date

  
Quality Assurance Manager

4-16-97  
Date

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