



**Capitol  
Group**

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**SOUTHWARK METAL  
MANUFACTURING COMPANY  
DUCT SCHOOL**

# Air Flow Fundamentals & Residential Duct Sizing

This four-hour course provides all the primary information and theory needed to understand how air flows in a residential HVAC system. It explains how the quantity of flow is calculated based on the energy demand for a particular residence and the effect that the system components have on the air flow. This course also provides more advanced information and theory needed to calculate the proper duct size in a residential forced air system. It will explain how basic air flow fundamentals must be used along with complete information on the dwelling, all installation components, proposed equipment and best practices for installation.

**Topics Include:**

- Air flow measurements and terminology
- Basic residential design and air flow calculations
- System components pressure drop dynamics
- Complete instruction for the use of the sheet metal duct calculator
- Residential venting engineering and installation and filter size calculations
- Supply distributions system and return distribution system review and calculations
- Heat gain/heat loss dynamics and calculations
- Sensible heat formula and CFM calculation
- Forced air pipe/duct and fittings review
- Duct gauges and good installation practices
- Duct sizing theory and velocity limits

**DATE: Wednesday - April 10, 2019**  
**PLACE: 3125 Cockrell Lane - Springfield**  
**TIME: 8:00a - 12:00p**

**NOTICE:** This course can provide 4 NATE Continuing Education Hours (CEH) to approved technicians. Please be sure to bring your current NATE certification card to obtain these credits thru Southwark.

**Class size is limited - don't delay sign-up today!**



**RSVP BEFORE APRIL 3, 2019**

*Please print clearly*

Name \_\_\_\_\_ Name \_\_\_\_\_

Company Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ Fax \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Email \_\_\_\_\_

**3 Ways to RSVP Before 04/03/19: Online:** [capitolgroupinc.com/Events](http://capitolgroupinc.com/Events) – **Call:** 217.793.8611  
**Email:** [dcox@capitolgroupinc.com](mailto:dcox@capitolgroupinc.com) (Subject: Duct Sizing Training)