ACH	- Air Changes Per Hour-The number of times that air in a house is completely replaced with outdoor air in one hour.
ASTM	- American Society for Testing and Materials.
ASHRAE	- American Society of Heating, Refrigerating and Air Conditioning Engineers.
Air Handler	-The cabinet for a central furnace, air conditioner, or heat pump, which contains a fan that propels air through the duct system.
Backdrafting	- Reverse flow of combustion gases down the chimney of a vented combustion appliance, which is often caused by depressurization of the room where the appliance is located.
Blower Door	- A large powerful variable-speed fan mounted in a doorway that blows air into (pressurizes) or sucks air out of (depressurizes) a house. It is used to test for air leakage in a house.
Buffer Zone	- An area within the home between the conditioned zones and the outside. Not typically conditioned (for instance, attics attached garages, crawl spaces, basements and porches).
Boot	- A piece of duct used to connect ducts with registers.
Conduction	-The transfer of heat through a solid material.
Convection	- The movement of heat by air flow.
cfm	- Cubic feet per minute (a measure of air flow).
Duct Tape	- An adhesive material used to seal duct connections.
Ductwork	- Round or rectangular passageways for conditioned air.
Envelope	- The air barrier that separates the conditioned space from the outside and from unconditioned spaces like attics and garages. Exfiltration- Uncontrolled air leakage out of a building.
Flame Roll-out	- A dangerous situation that occurs when flame is pushed out of the bottom of a combustion appliance.
Flex Duct	- Usually installed in a single, continuous piece between the register and plenum box, a flexible duct usually has an inner lining and an insulated coating on the outside.
Flow Hood	- A diagnostic tool used to measure air flow through ducts, supply registers, and return grills.
Heat Exchanger	- A device that transfers heat from outgoing stale air to incoming cold air. In warm climates, this process is reversed.
HVAC Systems	- Heating, ventilating and air conditioning systems.
Infiltration	- Unintentional movement of outdoor air into a house. It results from the forces of wind, temperature difference, and HVAC operation.
Mastic	- An adhesive paste used in the fabrication and sealing of ductwork. It spreads easily and dries permanently.
Manometer	-An instrument that measures air pressure differences between locations. Tubes are usually attached to a manometer and run to the spaces where pressures are measured.
Pascals (Pa)	- A small unit of air pressure. One pound per square inch equals 6,895 pascals. Supply- The ductwork that carries air from the air handler to the rooms in the house.
Radiation	- The transfer of heat directly from one surface to another (without heating the intermediate air acting as a transfer mechanism). Return - The duct work that carries air from the house to the air handler.
Plenum	- Airflow passage made of duct board, metal, drywall, or wood. Joins supply and return ducts with HVAC equipment. Pressure Balancing - The process of neutralizing pressure differences within a house. Registers and Gilles - Coverings for the ducts where they open to the conditioned space.
Smoke Stick	-A diagnostic tool used to observe air flow. Usually it consists of a chemical in a squeezable container. When squeezed, it emits smoke, which visibly follows air currents.
Zone	- 1) Conditioned space in a house under the control of a thermostat. 2) A space within a house with a distinct pressure compared to other pressure zones.

Referenced Documents

ASTM - (American Society for Testing of Materials) NFPA (National Fire Protection Association) SMACNA
UBC - (Uniform Building Code)
UL - (Underwriters Laboratories, Inc.)
ULC - (Underwriters Laboratories, Inc. of Canada)
C 168-03 - Terminology Relating to Thermal Insulating Materials". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 177-97 - "Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 390-03 "Standard Practice for Sampling and Acceptance of Preformed Thermal Insulation Lots". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 335-03a "Standard Test Method for Steady-State Heat Transfer Properties of Horizontal Pipe Insulation". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)

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C 411-97 "Standard Test Method for Hot -Surface Performance of High-Temperature of Pipe Insulation". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)
C 518-02e1 "Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 727-01 "Standard Practice for Use and Installation of Reflective Insulation in Building Constructions." 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)
C 1158-01 "Standard Practice for Use and Installation Radiant Barrier Systems (RBS) in Building Construction". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 1224-03 "Standard Specification for Reflective Insulation for Building Applications". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)
C 13041-01 "Standard Test Method for Assessing Odor Emission of Thermal Insulation Materials". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)
C 1313-00 "Standard Specification for Sheet Radiant Barriers for Building Construction Applications." 2002 Annual Book of ASTM Standards. Vol. 04.06 (2002)

C 1338-00 "Standard Test Method for Fungi Resistance of Insulation Materials" and 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002).
C 1363-97 "Standard Test Method for the Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
C 1371-98 "Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers". 1997 Annual Book of ASTM Standards, Vol. 04.06 (1997).
D 3310-00 "Standard Test Method for the Determining Corrosivity of Adhesive Materials" 2002 Annual Book of ASTM Standards, Vol. 15.06 (2002).
E 84-03b "Standard Test Method for Surface Burning Characteristics of Building Materials" 2002 Annual Book of ASTM Standards, Vol. 04.07 (2002).
E 96-00e1 "Standard Test Method for Water Vapor Transmission of Materials". 2002 Annual Book of ASTM Standards, Vol. 04.06 (2002)
G 21-96 "Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi". 2002 Annual Book of ASTM Standards, Vol. 14.04 (2002).
NFPA 255 "Standard Method of Test of Surface Burning Characteristics of Building Materials". 2000 Edition.
NFPA 286 "Standard Test Method for Fire Test of Interior Finish Material"
SMACNA "HVAC Duct Construction Standards"
UL 181 "Standard for Factory-Made Air Ducts and Air Connectors". 9th Edition, April 4,1996
UL 723 "Standard Test Method for Surface Burning Characteristics of Building Materials". 9th Edition, August 29, 2003.
UL 1715 "Standard for Fire Test of Interior Finish Material".
UBC 26-3 "Room Fire Test for Foam Plastic Finishes".

For Further Information

Better Duct Systems for Home Heating and Cooling. U.S. Department of Energy. January 2001.
Home Energy Magazine, Special Issue-Ducts Rediscovered. September/October 1993. 2124 Kittredge Street, No. 95, Berkeley, CA 94704.
Are Your Ducts in a Row? U.S. Environmental Protection Agency. EPA 430 F-00-018, February 2001. www.energystar.gov/ducts.
Seal Your Ducts. U.S. Environmental Protection Agency, www.epa.us.gov., www.energystar.gov/ducts.
Duct Fixing in America. (Penn). Home Energy Magazine Online September/October 1993. www.homeenerqv.org.
Guidelines for Designing and Installing Tight Duct Systems. (Stum). Home Energy Magazine Online September/October 1993. www.homeenerqy.org.
Will Duct Repairs Reduce Cooling Loads? (Parker, Cummings, and Meier). Home Energy Magazine Online September/October 1993. wwwJiomeenerqv.org.
Can Duct Tape Take the Heat? (Sherman and Walker). Home Energy Magazine Online September/October 1993. www.homeenergv.org. Duct Sealants. Home Energy Magazine Online September/October 1993. www.homeenerqv.org.
Integrated Heating and Ventilation: Double Duty for Ducts. This Old House; Heating, Ventilation, and Air Conditioning. Trethway, Richard. Little, Brown. 1994.
Duct Design for Residential Winter and Summer Air Conditioning and Equipment Selection (Manual D). Air Conditioning Contractors of America, 1513 16th Street, N.W., Washington DC 20036.Flexible Duct Perfoimance and Installation Standards. Air Diffusion Council, One Illinois Center, Suite 200,111 East Wacker Drive, Chicago, IL 60602-5398.
Installation Standards for Residential Heating and Air Conditioning Systems. Sheet Metal and Air Conditioning Contractors' National Association, Inc. 4201 Lafayette Center Drive, Chantilly, VA 22021.

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Air Distribution Design for Small Heating and Cooling Systems. In Systems and Equipment Handbook, American Society of Heating, Refrigerating, and Air Conditioning Engineers, 1791 Tullie Circle, N.E., Atlanta, GA 30329.
Energy-Efficient Design of New Low-Rise Residential Buildings. Standard 90.2-1993. American Society of Heating, Refrigerating, and Air Conditioning Engineers, 1791 Tullie Circle, N.E., Atlanta, GA 30329.

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