

CHAPTER 6 DUCT SYSTEMS

SECTION 603 is amended as follows:

603.9 Joints, seams and connections. ~~All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards Metal and Flexible and SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standard. All joints, longitudinal and transverse joints seams and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic plus embedded fabric systems or tapes. Tapes and mastics used to seal ductwork listed and labeled in accordance with UL 181A shall be marked "181A-P" for pressure sensitive tape, "181A-M" for mastic or "181A-H" for heat sensitive tape. Tapes and mastic used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181B-FX" for pressure sensitive tape or "181-M" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Unlisted duct tape is not permitted as a sealant on any metal ducts.~~

All joints and connections shall be sealed and securely fastened in accordance with Sections 603.9.1 and 603.9.2.

603.9.1. Sealants. All joints of duct systems used in the heating or cooling of a conditioned space, including all flanged connections to equipment, shall be sealed by means of tapes, mastics, aerosol sealant, gasketing or other approved closure systems. Where mastic is used to seal openings greater than ¼ inch (6.4 mm), a combination of mastic and mesh shall be used.

Exception: Adjustable metal elbow gore, longitudinal pipe joints, integral seams within a boot fitting or similar fitting, and integral seams within a "Y" fitting.

603.9.1.1 Rigid Fibrous Glass Ducts. Closure systems used to seal rigid fibrous glass duct joints shall comply with UL 181 A and shall be marked "181 A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat-sensitive tape.

603.9.1.2 Flexible Air Ducts. Closure systems used to seal flexible air duct joints and flexible air connector joints shall comply with UL 181B and shall be marked "181 B-FX" for tape or "181 B-M" for mastic. Tape shall be a minimum of 12 mil (0.38 mm) total thickness.

603.9.1.3 Metal to Metal Ducts. Closure systems used to seal metal to metal duct joints shall comply with UL 181B and shall be marked "181 B-FX" for tape or "181 B-M" for mastic. Tape shall be a minimum of 12 mil (0.38 mm) total thickness, and shall include butyl rubber adhesive/sealant. Joints of metal to metal duct systems and their components shall not be sealed with cloth backed tapes.

603.9.2. Fastening. Duct connections to flanges of air distribution system equipment or sheet

metal fittings shall be mechanically fastened. Crimp joints for round ducts shall have a contact lap of at least 1.5 inches (38 mm) and shall be mechanically fastened by means of at least three sheet metal screws or rivets equally spaced around the joint. Connections of metal ducts and the inner core of flexible ducts shall be mechanically fastened per the manufacturer's installation instructions. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C.

SECTION 604 is amended as follows:

604.1 General. Duct insulation shall conform to the requirements of Sections 604.2 through 604.13 and ~~the *International Energy Conservation Code*, Chapter 13 of the *Oregon Structural Specialty Code*.~~

~~**604.11 Vapor retarders.** Where ducts used for cooling are externally insulated, the insulation shall be covered with a vapor retarder having a maximum permeance of 0.05 perm [2.87 ng/(Pa·s·m²)] or aluminum foil having a minimum thickness of 2 mils (0.051 mm). Insulations having a permeance of 0.05 perm [2.87 ng/(P·s·m²)] or less shall not be required to be covered. All joints and seams shall be sealed to maintain the continuity of the vapor retarder.~~