TECHNICAL BULLETIN

Flex Duct Installation & Inspection Requirements

Modified March 4, 2009

Flex duct is permitted by the code and is required to be installed in accordance with the manufacturer's listing and instructions. Improperly installed flex duct results in an inefficient HVAC operating system, poor comfort performance and increase operating costs. The following lists the key points that will be used by inspectors when inspecting flex duct installations:

1. Install duct fully extended, do **NOT** install in the compressed state or use excess lengths. This will noticeably increase friction losses. (Note: flex duct 96% stretched has twice the pressure loss as round metal duct, 85% stretched has five times the pressure loss as round metal duct[1]) ***Excessive duct lengths are unacceptable.***
2. If suspended, product shall be supported at no more than 4 feet intervals by hanger, saddle, or ceiling joist or other commonly used support of no less than 1-1/2" width at contact points with maximum permissible sag of 1/2" per lineal foot of spacing between supports. ***Excessive sags are unacceptable.***
3. Avoid bending ducts across sharp corners or incidental contact with metal fixtures, pipes or conduits. Radius at center line of bend shall **NOT** be less than one duct diameter. ***Kinked or compressed ducts are unacceptable.***
4. Sheet metal collars to which the product with plain ends is attached shall be a minimum of 2 inches in length. Sheet metal sleeves used for joining two sections with plain ends shall be a minimum of 4 inches in length.
5. Ducts must be sealed using approved mastics and/or tapes. The outer jacket and insulation must be rolled back to expose the ducting sealing of the inner core for inspection.
6. If the internal core is damaged, replace the duct entirely or cut the duct and repair the affected area in the same manner as a connection or splice.

Flexible duct installations that are not installed in accordance with the manufacturer's listing and/or installation instructions will not be accepted. This is not intended to be a complete installation guide. For additional instructions, refer to the manufacturer's instruction or see Chapter 4, Installation Guidelines, "Flexible Duct Performance & Installation Standards," Third Edition, published by the Air Diffusion Council for more details; or, contact your HVAC professional. The web site for the Air Diffusion Council is www.flexibleduct.org.

[1] Static Pressure Losses in 6, 8, and 10-inch Non-Metallic Flexible Ducts, for the complete report see: http://txspace.tamu.edu/handle/1969.1/5275