

MECHANICAL CODE DISCUSSION

Code Requirements for Flex Ducts

A COUPLE OF MONTHS AGO, I had the opportunity to serve on the ICC Mechanical Code Development Committee, during the Code Action Hearings held in Memphis. Flex Duct and (Flex Connector) was the focus of the discussion

for a significant portion of the Hearings, with ten proposals submitted and presented, specifically aimed at eliminating or severely restricting the use of these materials. The reason given for each

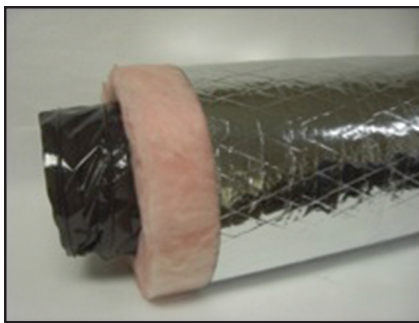
proposal was based on the continual incorrect installation or application of flex duct. All proposals were rejected by the committee, correctly, as the issue is not the material, rather installation issues. Also in the past weeks, I received questions concerning flex duct; specifically the allowable length of these materials. Reviewing a couple of code requirements:

603.6.1 Flexible air ducts. *Flexible air ducts, both metallic and nonmetallic, shall be tested in accordance with UL 181. Such ducts shall be listed and labeled as Class 0 or Class 1 flexible air ducts and shall be installed in*

accordance with Section 304.1.

603.6.1.1 Duct length. *Flexible*

air ducts shall not be limited in length.

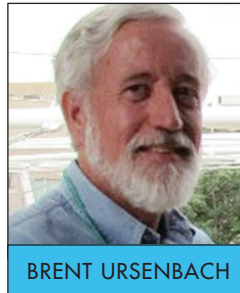


603.6.2 Flexible air connectors. *Flexible air connectors, both metallic and nonmetallic, shall be tested in accordance with UL 181. Such connectors shall be listed and labeled as Class 0 or Class 1 flexible air connectors and shall be installed in accordance with Section 304.1.*

603.6.2.1 Connector length. *Flexible air connectors shall be limited in length to 14 feet (4267 mm).*

603.6.2.2 Connector penetration limitations. *Flexible air connectors shall not pass through any wall, floor or ceiling.*

Of course the question is; what's the difference between a flex duct and a flex connector. Both are UL 181 listed ducts, allowed by the code as identified above. An "Air Duct" must successfully pass all of the seventeen tests in the UL181 Standard. An "Air Connector" is not tested to three of the



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seventeen tests in the UL181 Standard that Air Ducts must pass - Flame Penetration, Puncture, and Impact tests. Because the testing protocol for connector material is less stringent than it is for duct material, the length is limited to 14 feet. Both ducts and connectors are required to be identified with a label.

Remember, all duct systems, including connectors must be installed in accordance with code requirements including references to in ACCA Manual D, ASHRAE Handbook and SMACNA Duct Standards.

Thanks again for asking questions, they give me ideas for the next code discussion article! —Brent ■

