

GG226-14

802.3

Proponent: Brenda Thompson, Clark County Development Services, Las Vegas, NV, representing SEHPCAC

Delete and substitute as follows:

~~**802.3 Air-handling system filters.** Filter racks shall be designed to prevent airflow from bypassing filters. Access doors and panels provided for filter replacement shall be fitted with flexible seals to provide an effective seal between the doors and panels and the mating filter rack surfaces. Special tools shall not be required for opening access doors and panels. Filter access panels and doors shall not be obstructed.~~

802.3 Air-handling filtration and bypass pathways. Air handling equipment and HVAC equipment shall be designed and installed to limit the amount of airflow that bypasses the air filters. Channels, racks and other filter holding constructions that do not seal tightly to the filter frame by means of a friction fit shall provide a means to seal the filter frame to the filter holding construction. Where standard size filters are installed in banks of multiple filters, gaskets shall seal the gap between the frames of adjacent filters. As an alternative to gaskets, the frames of adjacent filters shall be compressed tightly together by means of spring elements that are built into the filter holding construction. Channels, racks and other filter holding constructions shall be sealed to the duct or housing of the HVAC equipment served by the filters. Filter access doors in ducts and HVAC equipment shall be designed to limit the amount of airflow that bypasses the filters. Field or shop fabricated spacers shall not be installed for the purpose of replacing the intended size filter with a smaller size filter. Gaskets and seals shall be accessible for repair, maintenance and replacement.

Reason: ASHRAE 189.1 has Section 8.3.1.3 c that addresses filter bypass. The IgCC address this important concern under Section 802.3. Text very similar to this proposed text was recently approved for 189.1 to clarify the intent. This proposed language updates the IgCC language to address concerns that were addressed by ASHRAE, but not IgCC, such as filters installed in banks (the third sentence in the proposal). High efficiency filters prevent air from flowing around the filters instead of through them. Bypass leakage can be substantial if the filters are not tightly sealed in the framework that holds them. Often installers fashion a sheet metal spacer to block off part of the filter holding construction area so as to allow a smaller filter to be installed because the correct filters may not be on hand or convenient. This practice increases the flow velocity through the filters, causes flow resistance and turbulence and results in a loss of efficiency of the air handler and the filters. Any gaskets used to seal filters must be resilient enough to consistently create a seal as filters are changed over the life of the system.

This proposal was submitted by the ICC Sustainability Energy and High Performance Code Action Committee (SEHPCAC). The SEHPCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance International Codes with regard to sustainability, energy and high performance as it relates to the built environment included, but not limited to, how these criteria relate to the International Green Construction Code (IgCC) and the International Energy Conservation Code (IECC). This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. In 2012 and 2013, the SEHPCAC has held six two-day open meetings and 50 workgroup calls, which included members of the SEHPCAC as well as any interested parties, to discuss and debate proposed changes and public comments. Related documentation and reports are posted on the SEHPCAC website at: <http://www.iccsafe.org/cs/SEHPCAC/Pages/default.aspx>.

Cost Impact: Will not increase the cost of construction.