Building Energy 2017

Air (vital stuff) - Strategies for Getting it into (and out of) Multifamily Buildings

Steve Bluestone

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1203.4.1.3 Bathrooms and toilet rooms in R and I-1 occupancies. Bathrooms or toilet rooms in R or I-1 occupancies shall be provided with natural ventilation in accordance with Section 1203.4.1.3, unless provided with exhaust ventilation in accordance with the New York City Mechanical Code. Openings providing required natural ventilation shall be windows.

(1203.4.1.4 covers kitchens in a similar manner)
Vertical Duct Risers
Baths and kitchens are often located away from exterior walls. Bedrooms and Living Rooms are required to have windows.
IN LINE FAN
PANASONIC: FV-10NL1
DIMENSIONS:
13 3/8" x 9 1/2" x 8" HIGH

BEDROOM
130 SQ. FT.

356 SQ. FT.

8x4
LINEN
CLOSET

8x4
ELEC. PANEL

8x4
(26)
KITCHEN
TYPE A

8x4
BATH
TYPE A
The code says ERV exhaust and intake ports need to be separated by a minimum of 10’. I’m sorry, but size does matter.
3. The petitioner states that, based on a survey of several major manufacturers of smaller, apartment sized ERVs (including Ultimate Air, Venmar, Lennox, Fantech, and Panasonic), across the board the recommended minimum separation between the systems' exterior intake and exterior exhaust ports was only 6'-0". These smaller units typically have a relatively low volume of environmental air being conveyed (at times as low as 25CFM to 30CFM) as compared with larger 5,000 CFM ERV systems (that is referred to in 503.2.6 Energy recovery ventilation systems).
STATE OF NEW YORK
DEPARTMENT OF STATE

In the Matter of the Petition of:
Banta Homes Corp.
For a Variance to the New York State
Uniform Fire Prevention & Building Code

PETITION NO. 2015-0385

Upon the application of Banta Homes Corp., filed pursuant to 19 NYCRR 1223 on June 23, 2015, and upon all
other papers in this matter, the Department makes the following determination:

NATURE OF GRIEVANCE AND RELIEF SOUGHT

The petition pertains to the construction of a new mixed-use building, R2, multiple dwelling, and I-I, mercantile
occupancies, 6 stories in height, of type I-B construction, and having a gross area of approximately 256,000 square feet,
located at 42 West Broad Street, City of Mount Vernon, County of Westchester, State of New York.

Relief is requested from:

1. 19 NYCRR, Part 1223, The Mechanical Code of New York State, Section 501.2.1, which requires that the
termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following
minimum distances:

   1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet from property lines;

   2. For other product-conveying outlets: 10 feet from the property lines; 3 feet from exterior walls and
doors; 10 feet from operable openings into buildings; 10 feet above adjoining grade.

   3. For environmental air duct exhaust: 3 feet from property lines; 3 feet from operable openings into
buildings for all occupancies other than Group U, and 10 feet from mechanical air intakes.

   4. For specific systems: For clothes dryer exhaust, see Section 504.4; for kitchen hoods, see
Section 506.3; for duct, stack and conveying systems, see Section 511.2; and for subslab soil exhaust systems, see
Section 512.4.

   [The petitioner requests that the termination point of exhaust outlets be less than the required distance from mechanical
air intakes.]

New York
Department of State
The SFX vent cap is identical to the SX with an exception of the hood. This model is excellent for exteriors where protection from the elements is necessary and not already carried out by the building design. Insect screens are an option.

**SFX**

(Model SFX-N: With Screen)

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**MATERIAL**
- Aluminum

**FINISH**
- Clear Anodized
- Custom Colors Available

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DUCT SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>FREE AREA</th>
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<td>SFX3</td>
<td>3</td>
<td>2 28(\frac{1}{2})</td>
<td>4 (\frac{3}{4})</td>
<td>3 (\frac{25}{32})</td>
<td>2 1(\frac{1}{16})</td>
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<td>0.31 sq.ft.</td>
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Product information is subject to change without notice. All dimensions in inches.
42 Broad Street
Fleetwood, NY
World’s Tallest Passive House Building