



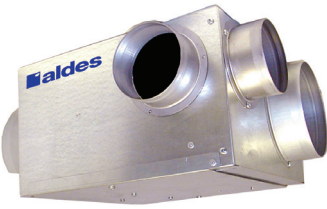


# Home Ventilation Systems One Size Does NOT Fit All

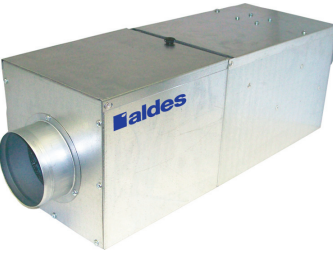
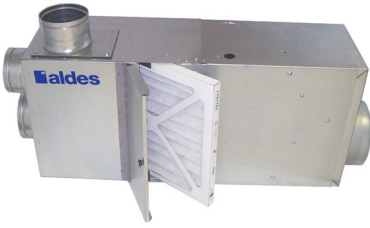
APPLICATION  
GUIDE



Today's green-home-building revolution is creating quite a bit of confusion when it comes to the important "Indoor Environmental Quality" component and the requirement to include a whole-house ventilation system in energy-efficient homes to ensure proper indoor air quality. Much of the confusion stems from the fact that there are many different ventilation methods, products, and so-called experts touting one solution over the other. There are many factors that determine which ventilation solution is appropriate: climate, building technique, home design, utility cost, occupancy density, building codes, equipment costs, and more.

Claims that one solution fits every application are simply not true. The following tables present a simplified mechanical ventilation guideline for exhaust, supply, and balanced systems.

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|--|---|---|--|
| <p><b>EXHAUST</b><br/>Removes stale air directly from the source area and draws fresh, dry air into the home, usually through infiltration (leaks in the home's envelope) or dedicated air inlets (AIRLETS™) in the wall or windows.</p> |    |   |   |
| <p><b>PRODUCT:</b></p>   | <p>Ceiling-Mount Exhaust Fan *</p>  | <p>Single-Port Exhaust Fan</p>  | <p>Multi-Port Exhaust Fan</p>  |
| <p><b>BEST FOR:</b></p>  | <p>Cold or Dry Climates</p>   | <p>Cold or Dry Climates</p>   | <p>Cold or Dry Climates</p>  |
| <p><b>RELATIVE PRICE:</b></p>  | <p>Low</p>  | <p>Low/Medium</p>   | <p>Medium</p>  |
| <p><b>PROS:</b></p>  | <ul style="list-style-type: none"> <li>• Can use one fan for IAQ and single bathroom exhaust</li> </ul>   | <ul style="list-style-type: none"> <li>• Can be mounted remotely to reduce noise</li> <li>• Can use one fan for IAQ and bathroom exhaust</li> </ul>   | <ul style="list-style-type: none"> <li>• Can be mounted remotely to reduce noise</li> <li>• Can use one fan for IAQ and ALL exhaust ventilation needs (kitchen and bathrooms)</li> <li>• Only one roof or wall penetration for multiple exhaust locations</li> <li>• Improved fresh-air distribution</li> </ul>  |
| <p><b>CONS:</b></p>  | <ul style="list-style-type: none"> <li>• Noisy</li> <li>• Negative pressure created by fan may result in backdrafting of naturally vented gas appliances</li> <li>• Negative pressure created by fan in humid climates introduces excess moisture, which increases the potential for condensation</li> <li>• Cannot filter incoming air unless AIRLETS™ are used</li> <li>• Poor fresh-air distribution</li> <li>• Multiple roof or wall penetrations (one for each fan)</li> </ul> | <ul style="list-style-type: none"> <li>• Negative pressure created by fan may result in backdrafting of naturally vented gas appliances</li> <li>• Negative pressure created by fan in humid climates introduces excess moisture, which increases the potential for condensation</li> <li>• Cannot filter incoming air unless air inlets are used</li> <li>• Poor fresh-air distribution</li> </ul> | <ul style="list-style-type: none"> <li>• Negative pressure created by fan may result in backdrafting of naturally vented gas appliances</li> <li>• Negative pressure created by fan in humid climates introduces excess moisture, which increases the potential for condensation</li> <li>• Cannot filter incoming air unless air inlets are used</li> </ul> |

\* American Aldes does not sell ceiling-mount bathroom exhaust fans.

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| <p><b>SUPPLY</b><br/>Delivers air directly into the home, either through dedicated ducts and/or forced air conditioning systems OR through dedicated duct(s).</p> |    |    |
| <p><b>PRODUCT:</b></p>  | <p>Filtering Supply Fan</p>   | <p>Blending Fan</p>   |
| <p><b>BEST FOR:</b></p>   | <p>Hot and Dry / Mild Climates</p>  | <p>All except extreme cold</p>  |
| <p><b>RELATIVE PRICE:</b></p>   | <p>Low/ Medium</p>  | <p>Medium</p>   |
| <p><b>PROS:</b></p>   | <ul style="list-style-type: none"> <li>• Positive pressure can help reduce introduction of unwanted outside air contaminants and VOCs from attached garages</li> <li>• Direct delivery of outside air into dwelling</li> <li>• Low power consumption</li> <li>• Ability to filter incoming air and accurately control fresh air amounts</li> <li>• Supply air offsets negative pressure caused by kitchen exhaust, dryer exhaust, chimneys, and stack effect</li> </ul> | <ul style="list-style-type: none"> <li>• Same as Filtering Supply fan, but tempers outside air with indoor air before delivering to home</li> <li>• Good fresh-air distribution</li> <li>• Supply air offsets negative pressure caused by kitchen exhaust, dryer exhaust, chimneys, and stack effect</li> </ul> |
| <p><b>CONS:</b></p>   | <ul style="list-style-type: none"> <li>• Use in cold climates can force interior humidity into wall cavities, which condenses and often results in mold growth</li> <li>• Additional exhaust fans are still required</li> </ul>   | <ul style="list-style-type: none"> <li>• Use in cold climates can force interior humidity into wall cavities, which condenses and often results in mold growth</li> <li>• Additional exhaust fans are still required</li> </ul>   |

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| <p><b>BALANCED</b><br/>Uses two fans to exhaust stale air and deliver fresh air to the home. Both airstreams pass through a heat exchanger to temper the incoming air and reduce total energy impact of ventilation.</p> |   |    |
| <p><b>PRODUCT:</b></p>   | <p>Heat Recovery Ventilator (HRV)</p>  | <p>Energy Recovery Ventilator (ERV)</p>   |
| <p><b>BEST FOR:</b></p>  | <p>Extremely Cold Climates</p>   | <p>Hot and Humid Climates</p>   |
| <p><b>RELATIVE PRICE:</b></p>  | <p>High</p>  | <p>High</p>   |
| <p><b>PROS:</b></p>  | <ul style="list-style-type: none"> <li>• Saves energy in extreme climates</li> <li>• Tempers outside air before delivering to the home</li> <li>• Should not cause any pressure imbalances (positive or negative) in the home</li> </ul>   | <ul style="list-style-type: none"> <li>• Saves energy in extreme climates</li> <li>• Tempers outside air AND reduces outside air humidity before delivering to the home</li> <li>• Should not cause any pressure imbalances (positive or negative) in the home</li> </ul>   |
| <p><b>CONS:</b></p>  | <ul style="list-style-type: none"> <li>• Energy saved in mild climates is often not enough to offset the energy consumed by the two fan motors in these appliances</li> <li>• More difficult to install and set-up than traditional fans</li> <li>• Requires more maintenance than traditional fans</li> </ul> | <ul style="list-style-type: none"> <li>• Energy saved in mild climates is often not enough to offset the energy consumed by the two fan motors in these appliances</li> <li>• More difficult to install and set-up than traditional fans</li> <li>• Requires more maintenance than traditional fans</li> <li>• Hygroscopic exchange can cause freezing and damage the recovery core in cold climates (unless provisions are made for frost prevention)</li> </ul> |