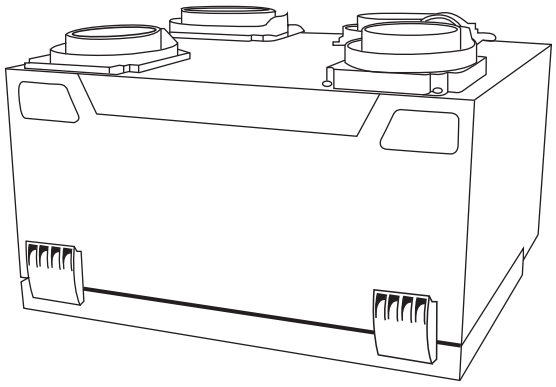
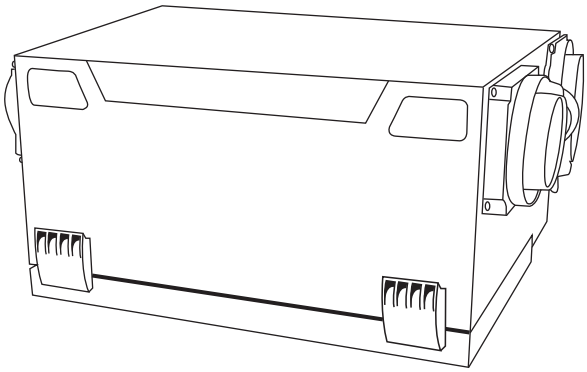
# ERVCCSVA, ERVCCSHA
# Energy Recovery Ventilators

Carrier®
Turn to the Experts℠

# Product Data



ERVCCSVA



ERVCCSHA

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The Energy Recovery Ventilation (ERV) system offered by Carrier is the finest on the market today. The ERV provides efficient and cost effective heat recovery during the heating season when needed most.

As temperatures drop below 23°F (-5°C), indoor air is recirculated periodically through the heat exchanger core to prevent frost from forming. Competitors' methods of supplementary electric defrost waste energy. Unlike rotary wheel heat exchangers which mix air streams, these cross-flow or counterflow heat exchangers ensure that there is no mixing of the stale air stream with the fresh outdoor air stream.

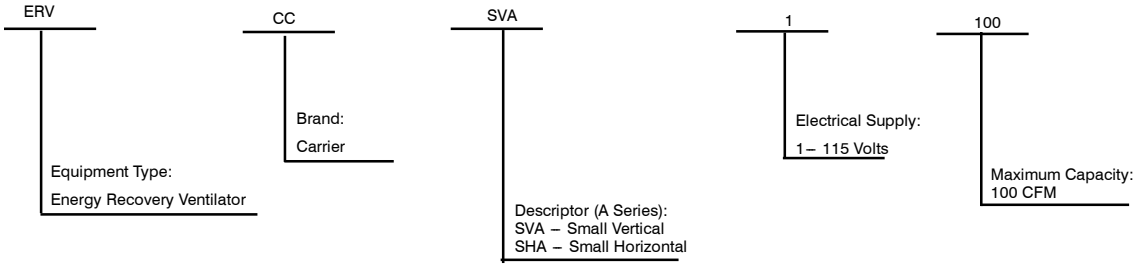
A filter installed on the incoming outdoor air stream removes large airborne particles from the intake air stream before they enter the heat exchanger and reduces the maintenance required. The units' acoustically engineered design makes the Carrier ERV the quietest on the market and ensures that comfort is felt, not heard.

Unlatching two (2) suitcase style latches allows easy removal of the filters and core for cleaning.

## STANDARD FEATURES

- Drainless design
- Integrated airflow balancing points
- Integrated furnace interlock
- High pressure blowers
- Onboard control for continuous high/low ventilator operation
- Energy saving defrost cycle
- Cross-flow, counterflow heat exchangers
- One filter on incoming air; one filter on outgoing air to protect core
- No-tools maintenance
- Enthalpic heat exchanger core

## Model number nomenclature



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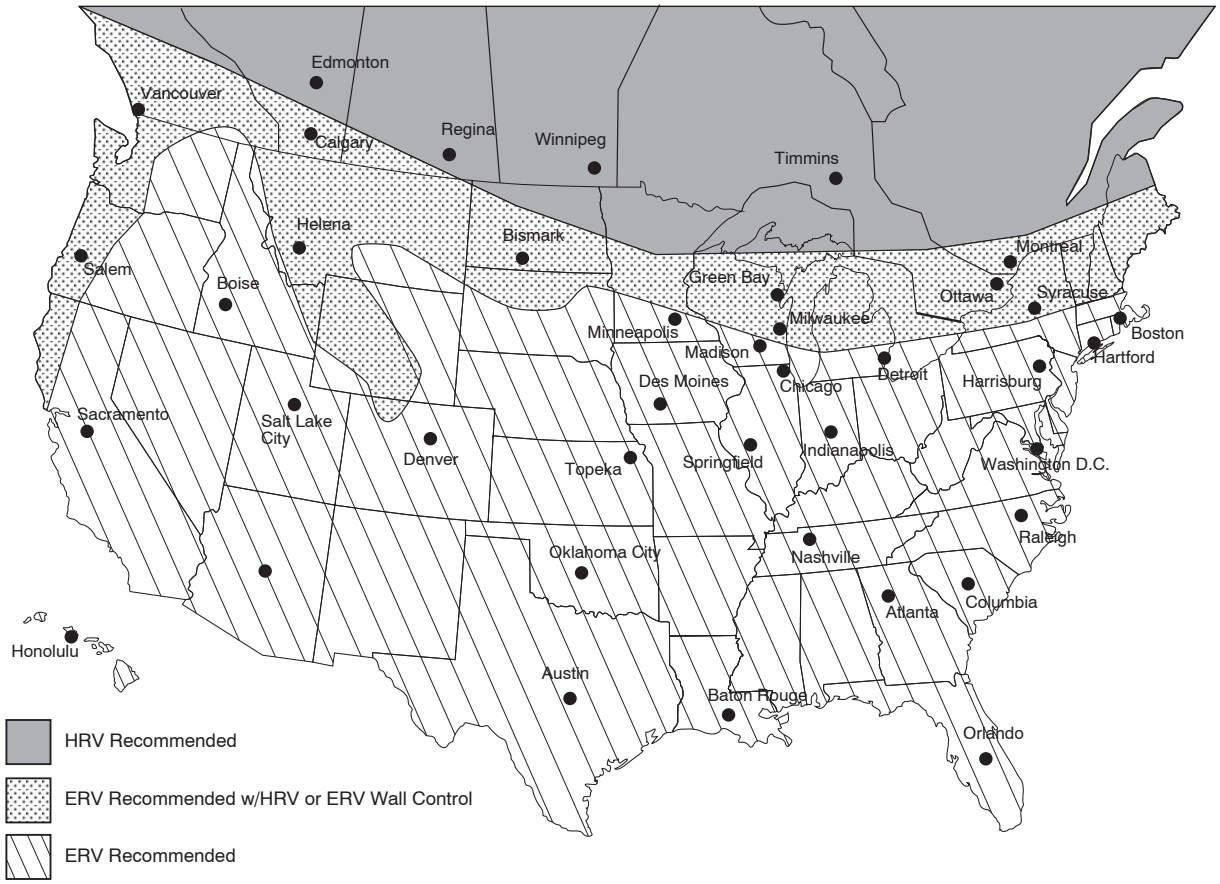
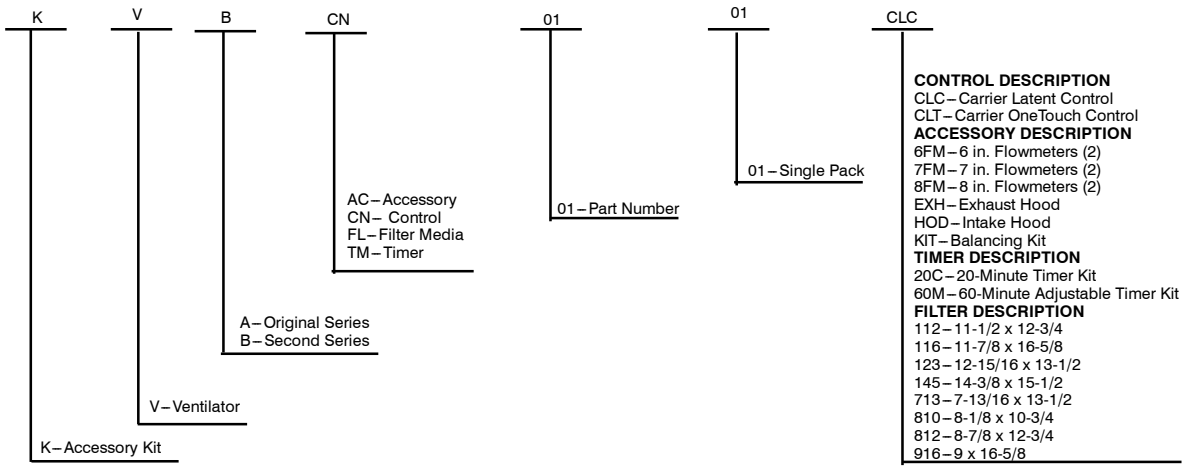
## Climate Map for Energy and Heat Recovery Ventilators



## Controls and accessories part number nomenclature






| Kit Number | Description | Where Used |
|---|---|---|
| **KVBCN0101CLT** | Carrier OneTouch Control | Used with all ERVs as a main wall control |
| **KVACN0101CLC** | Latent Control | Used with all ERVs |
| **KVAAC0101HCO** | Intake and Exhaust Hood | Used as a single intake/exhaust for ERVCCSVA1100, ERVCCSHA1100 only. |
| **KVAAC0101HOD** | Exterior Intake and Exhaust Hood | 2 Required |
| **KVATM010120C** | 20 Minute Push Button Timer | Used with all ERVs when 20 minute manual operation is required |
| **KVATM010160M** | 60 Minute Timer | Used with all ERVs, time is adjustable between 10 and 60 minutes |
| **KVAAC0101KIT** | Start–Up Balancing Kit | Start up Balancing Kit, includes (2) 6 in. Flow Meter Collars & Magnehelic Gage |
| **KVAFK0101100** | Internal Filter | Used with ERVCCSHA1100, ERVCCSVA1100 Unit 10 1/2 in. x 6 3/4 in. x 1/2 in. |

| Control Description | Fan Speed Control | Humidistat Control | Continuous Mode | Intermittent Mode |
|---|---|---|---|---|
| **OneTouch** | Yes | No | Yes | Yes |
| **Latent** | Yes | Yes | Yes | Yes |

## Control features

**OneTouch Control:**

Allows control of ventilator with the touch of a button. This control will operate as a main wall control. The OneTouch will operate the unit in Intermittent Mode (20 minutes per hour), continuous low speed, continuous high speed, and off.

**Latent Control:**

Low Exchange Mode—If the relative humidity inside the building is lower than selected, air exchange would occur with the outside at high speed. If the relative humidity inside the building is higher than selected, air exchange would occur with the outside at low speed. This ensures continuous air exchange for constant air quality.

Intermittent Mode—If the relative humidity inside the building is higher than selected, no air exchange would occur and the system would turn off. If the relative humidity inside the building is lower than selected, air exchange would occur with outside at high speed. this mode is ideal for maintaining the proper humidity level when the continuous mode cannot.

## Automatic Defrost Cycle Features

All models offer a non-electric defrost cycle feature which prevents frost and ice buildup within the heat recovery core. When the outside air temperature falls below 23°F (-5°C) it is electronically sensed and the dampers close the outside air ports. This allows warm indoor air to recirculate within the heat recovery core. The frequency of this cycle increases as the outside air temperature decreases.

| Model | 25°F TO 55°F (−5°C TO −15°C) | | 4°F TO −17°F (−15.6°C TO −27.3°C) | | BELOW −18°F (−27.8°C) | |
|---|---|---|---|---|---|---|
| | DEFROST* | EXCHANGE† | DEFROST* | EXCHANGE† | DEFROST* | EXCHANGE† |
| ERVCCSHA | 6 Minutes | 60 Minutes | 6 Minutes | 32 Minutes | 6 Minutes | 20 Minutes |
| ERVCCSVA | 6 Minutes | 60 Minutes | 6 Minutes | 32 Minutes | 6 Minutes | 20 Minutes |

* All defrost times are in the standard mode (as shipped)
† Time between defrost when within specified temperature range

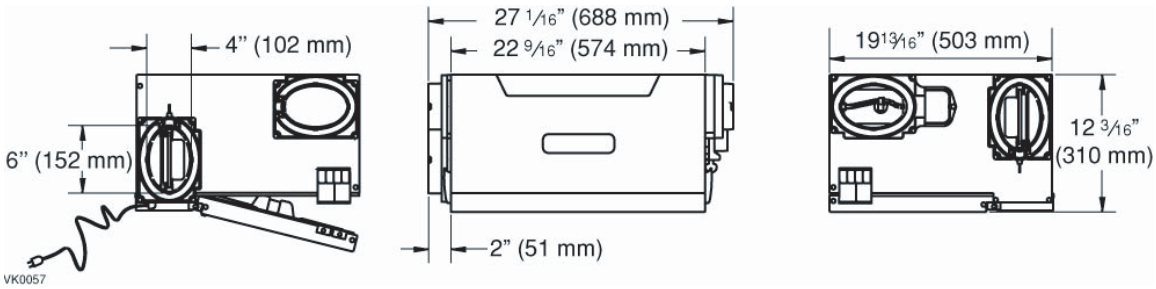



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**Fig. 1 - ERVCCSHA Unit Dimensions**

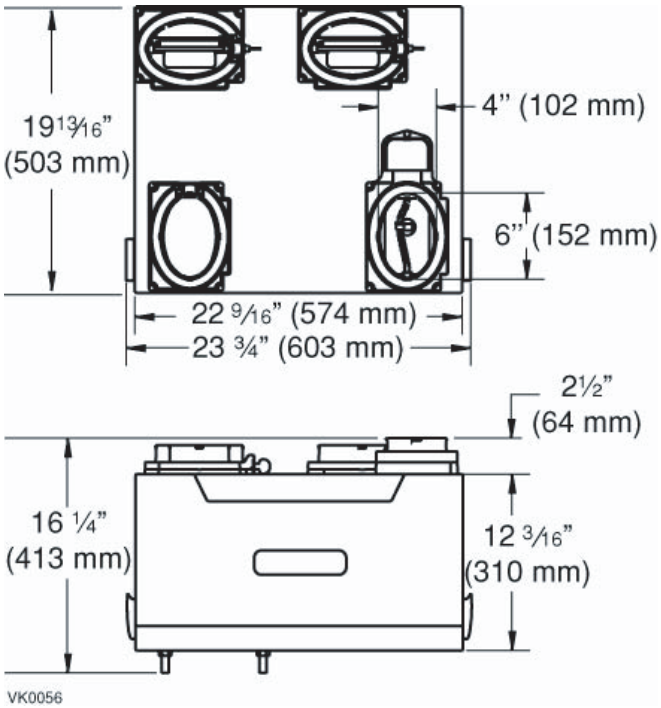


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**Fig. 2 - ERVCCSVA Unit Dimensions**

## Physical data

| Model | ERVCCSVA1100 | ERVCCSHA1100 |
|---|---|---|
| **Port Locations** | Top | Side |
| **Core Type** | Enthalpic transfer media with plastic stack | Enthalpic transfer media with plastic stack |
| **Weight — lb (kg)** | 42 | 42 |
| **Shipping Weight — lb (kg)** | 48 | 48 |
| **Shipping Dimensions (in.)**<br>**Height**<br>**Width**<br>**Depth** | <br>25.5<br>17.5<br>23.0 | <br>30.0<br>15.0<br>23.0 |

| Model | ERVCCSVA1100 | ERVCCSHA1100 |
|---|---|---|
| **Capacity—CFM @ 0.5-0.3ESP (in. wc)** | 99 – 107 | 99 – 107 |
| **Efficiency (Sensible)—Percent 32°F (0° C) --13°F (--25° C)** | 67 | 67 |
| **Efficiency (Latent)—Percent @ all temperatures** | 60 | 60 |
| **Heat Core Exchange Area— cu ft (cu m)** | 56 (5.2) | 56 (5.2) |

| Model | ERVCCSVA1100 | ERVCCSVA1100 |
|---|---|---|
| **Voltage** | 120 | 120 |
| **Max Power — watts** | 150 | 150 |
| **Max Amps** | 1.3 | 1.3 |

 Printed in U.S.A. Edition Date: 1/06 **Catalog No: ERV–4PD**

 Replaces: ERV-3PD