



3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

MCV SERIES ENERGY RECOVERY VENTILATORS (MCV500; MCV500E; MCV1000; MCV1000E)

STANDARD CONSTRUCTION

CABINET & PANELS

20 (1.0) gage galvanized steel.

PANELS

20 (1.0) gage galvanized steel.

MOTORS

110 Volt 1 Phase (500 SERIES)

208/230 Volt 1 Phase (500 & 1000 SERIES)

FINISH

Polyester Resin based powder coat.

Gray color

CORE

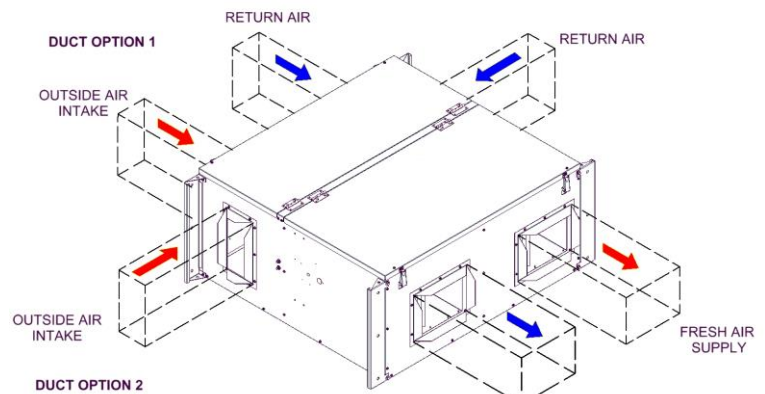
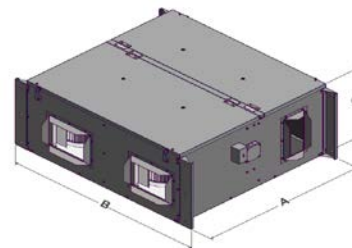
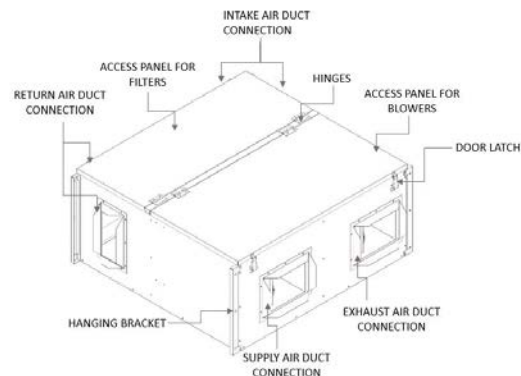
AHRI rated Internal Polymer Core

FILTERS

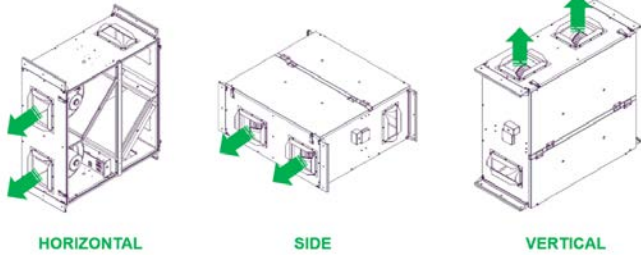
Intake and Exhaust: 2" Pleated MERV 8.

- EC Motors
- Controller kit (2 pressure differential sensors (transducers) for air monitoring; Return air humidity sensor; Fresh & Supply air temperature sensors; FAC Controller 2611)
- CO2 Sensor
- Dirty Filter Sensor + Dirty Filter switch/sensor (in conjunction with Controller)
- Metasys BACnet MS/TP – MAP Gateway
- MERV 13 Filters
- Display Panel / 18" Connection Cord
- Fresh Outside Air OR Exhaust air Motorized Air Damper (Field)
- Enclosure for control kit (floor mounts)
- Occupancy switch (via BMS)
- Floor or Ceiling Vibration Isolators
- Speed Controller Module

The all new high performance series of enERVent Energy Recovery Ventilators feature the latest in air to air heat exchange CORE technology and delivers the most economical value for energy recovery performance in applications ranging from 300 to 1,200 CFM. Utilizing a patented polymer membrane, Ruskin's enERVent MiniCore ERV provides tremendous energy savings during both summer and winter operation. The Ruskin indoor MiniCore Ventilators, combined with available EC motors and Metasys technology, are perfect for applications such as office buildings, schools, meeting rooms and residential buildings.



AIR FLOW



NOMENCLATURE

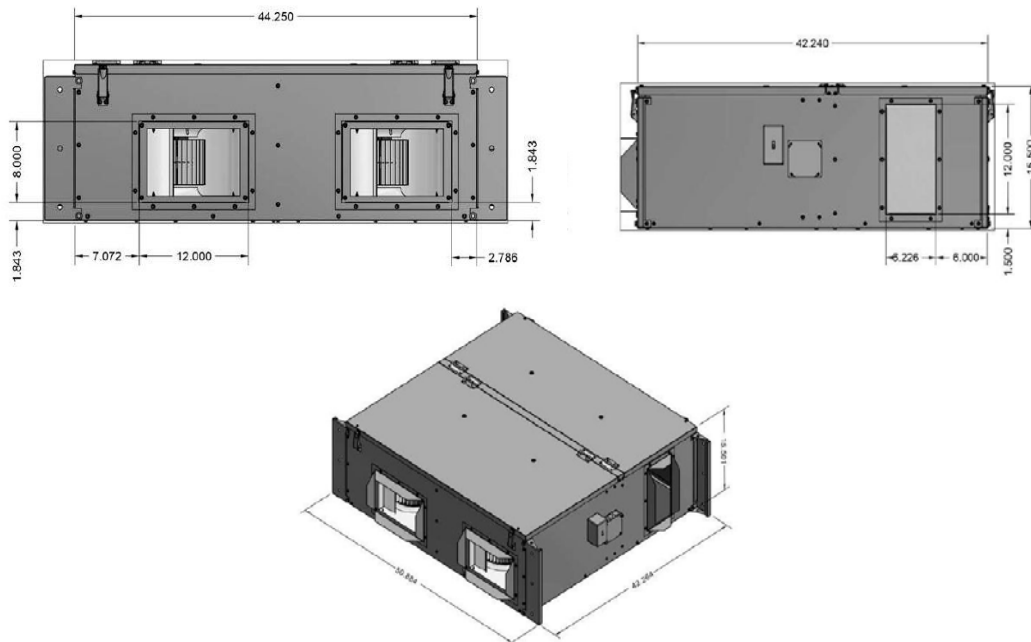
MCV500 Series a.k.a. 01xH/E-01/21

- MCV500 Standard model includes – (Permanent Split Capacitor Motor, Blowers and Static Core)
- MCV500E – (Electronically Commuted Motor, Blowers and Static Core)

MCV1000 Series a.k.a. 01xH/E-21

- MCV1000 Standard model includes – (Permanent Split Capacitor Motor, Blowers and Static Core)
- MCV1000 E – (Electronically Commuted Motor, Blowers and Static Core)

DIMENSIONS



| MiniCore Ventilator | Dimensions (L x W x H) (in) | Duct size (in) | | cfm | Voltage (v) | Fuse amps (A) | Phase |
|---------------------|-----------------------------|----------------|----------|----------|-------------|---------------|-------|
| | | Supply | Return | | | | |
| MCV500/MCV500E | 44.25 x 42.25 x 15.50 | 12" x 6" | 12" x 8" | 300-700 | 120/208-230 | 30/15/25/15 | 1 |
| MCV1000/MCV1000E | 44.25 x 42.25 x 20.66 | | | 500-1000 | 208-230 | 20/20 | 1 |

FILTER

| MiniCore Ventilator Series | Filter Type | Dimensions (in) | Filter type | Dimensions (in) |
|----------------------------|-----------------|-----------------|-------------|-----------------|
| MCV500/MCV500E | MERV 8/ MERV 13 | 14 x 20 x 2 | Throw away | 14 x 20x 1 |
| MCV1000/MCV1000E | | 20 x 20 x 2 | | 20 x 20 x 1 |

ELECTRICAL

| MiniCore Ventilator Series | Voltage In (Vac) | MCA* | MOCP* |
|----------------------------|------------------|-------|-------|
| MCV500 | 115 | 22.5 | 30 |
| | 230 | 11.25 | 15 |
| MCV500E | 115 | 18.23 | 25 |
| | 230 | 10.8 | 15 |
| MCV1000 | 230 | 15.75 | 20 |
| MCV1000E | 230 | 15.08 | 20 |

*MCA - minimum current ampacity; MOCP - maximum over-current protection

BLOWER

| MiniCore Ventilator Series | Motor Horse Power | Wheel size (dia × width) (inches) | Motor speed (s) | No. of Blowers | Motor type |
|----------------------------|-------------------|-----------------------------------|-----------------|----------------|---|
| MCV500/MCV500E | 1/2 | DD 9 × 4A | 3/2(Modulating) | 2 | Permanent Split Capacitor Motor/ Electronically Commuted Motor |
| MCV1000/MCV1000E | 3/4 | DD 9 × 6A | 3/2(Modulating) | 2 | Permanent Split Capacitor Motor/Electronically Commuted Motor |

PERFORMANCE

| MCV500 CORE | | | |
|--------------------------|-------|-------|-------|
| CFM | 350 | 500 | 750 |
| Core size unframed (mm) | 550 | 550 | 550 |
| Plate size framed (mm) | 575 | 575 | 575 |
| Core width unframed (mm) | 279.6 | 279.6 | 279.6 |
| Core width framed (mm) | 304.8 | 304.8 | 304.8 |
| PD open channel (in) | 0.22 | 0.33 | 0.52 |
| PD corrugated (in) | 0.56 | 0.87 | 1.48 |
| Sensible (Summer) | 71% | 67% | 63% |
| Latent (Summer) | 57% | 52% | 46% |
| Total (Summer) | 62% | 57% | 52% |
| Sensible (Winter) | 71% | 67% | 63% |
| Latent (Winter) | 56% | 51% | 44% |
| Total (Winter) | 66% | 61% | 56% |
| Average | 65% | 60% | 54% |

| MCV1000 | | | |
|--------------------------|------|------|------|
| CFM | 750 | 1000 | 1250 |
| Core size unframed (mm) | 550 | 550 | 550 |
| Plate size framed (mm) | 575 | 575 | 575 |
| Core width unframed (mm) | 482 | 482 | 482 |
| Core width framed (mm) | 508 | 508 | 508 |
| PD open channel (in) | 0.28 | 0.39 | 0.50 |
| PD corrugated (in) | 0.73 | 1.05 | 1.42 |
| Sensible (Summer) | 68% | 65% | 63% |
| Latent (Summer) | 53% | 49% | 46% |
| Total (Summer) | 59% | 55% | 53% |
| Sensible (Winter) | 68% | 65% | 63% |
| Latent (Winter) | 53% | 48% | 45% |
| Total (Winter) | 63% | 60% | 57% |
| Average | 62% | 58% | 55% |

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, mechanical cooling system complete with an Energy Recovery Ventilator (ERV). The Energy Recovery Ventilator will contain an energy recovery component rated in accordance with AHRI Standard 1060-2000 with ratings certified by AHRI. ERV shall have movable duct flanges for OA and RA intake. All other airstreams shall be horizontal as standard. Cabinet shall be galvanized steel construction with a powder coat paint finish electrostatically bonded to the metal. Where the conditioned air is handled, cabinet panels shall be fully insulated to prevent sweating and minimize sound. Knockouts shall be provided for power connections. Hanging or pad mount installation capability shall be standard. Test ports shall be provided so airflow can be measured across the energy recovery wheel. Intake and exhaust air blowers of the ERV shall contain a centrifugal forward curved blower. They shall have ball bearings with direct drive motors.

ERV's shall be complete with low ambient kit for frost control, "Climate Smart" controller for Economizer Mode, and rotation sensor utilizing dry contact switch that closes upon failure.

The energy recovery device shall be a static core heat exchanger per AHRI Standard 1060 description. The device will be a core coated with a polymer membrane by a patented process without the use of binders or adhesives which may plug the desiccant aperture. The substrate shall be a lightweight polymer. Desiccant shall not dissolve or deliquesce in the presence of water or high humidity. The core shall be easily cleanable with a standard cleaning solution or mild soap and water solution. The core shall have a crossover exhaust air transfer ration <0.5% and should accommodate a low-pressure drop of 0.35 in w.g @ 100% Rated CFM. The air transfer shall happen without virus transfer and should be compliant with ASTM F-1671 for zero penetration. The Core itself will be built sturdy using an aluminum frame and also shall be mold and bacteria resistant (ISO 846 – Rating 0).

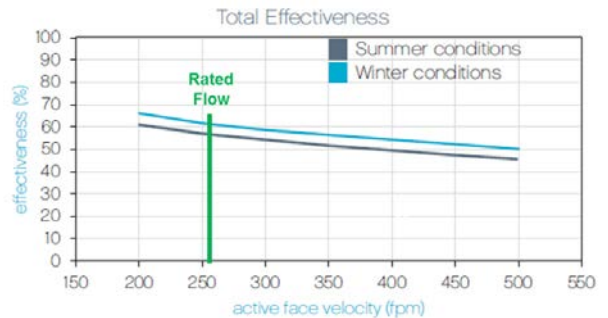


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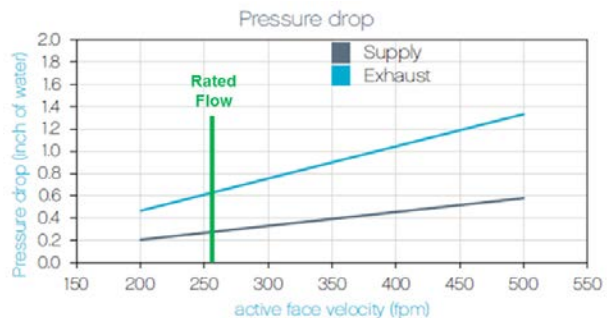
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www.ruskin.com



MCV500



MCV1000



* CORE operating performance @ 100% Rated CFM