Inspection
Upon receipt of shipment at the job site, carefully check the shipment against the bill of lading. Make sure all units have been received. Inspect the carton or crating housing of each Rooftop Unit and inspect each unit for damage. Assure that the carrier makes proper notation of any shortages or damage on all copies of the freight bill and that he completes a Carrier Inspection Report. Concealed damage not discovered during unloading must be reported to the carrier within 15 days of receipt of shipment. **NOTE: It is the responsibility of the purchaser to file all necessary claims with the carrier.**

Storage
Upon the arrival of equipment at the job site, immediately store units in a clean, dry area. Do not stack units. **Do not remove equipment from pallets until equipment is required for installation.**

Unit Protection
Cover rooftop units on the job site. Cap the open ends of pipes. In areas where painting, plastering, roofing, or the spraying of fireproof material has not been completed, all due precautions must be taken to avoid physical damage to the units and contamination by foreign material. **Physical damage and contamination may prevent proper start-up and may result in costly equipment cleanup.**

Application
Field supplied balancing dampers in duct are recommended.

Recovery Wheel Mode
The Recovery Wheel mode is accomplished by two blowers providing continuous exhaust of stale indoor air and replacement by equal amount of outdoor air. Energy recovery is achieved by slowly rotating the energy recovery wheel within the cassette frame work. In winter, the ERV adsorbs heat and moisture from the exhaust air stream during one half of a complete rotation and gives them back to the cold, drier intake air supply during the other half rotation. In summer, the process is automatically reversed. Heat and moisture are absorbed from incoming fresh air supply and transferred to the exhaust air stream. This process allows outdoor air ventilation rates to be increased by factors of three or more without additional energy penalty or increase in size of heating or air conditioning systems.

Rigging Unit For Lifting
1. Maximum weight 300-1200 lbs. See Physical Data Table.
2. Remove crating.
3. All panels must be in place for rigging.
4. Remove barometric exhaust hood from door marked filter access. Install barometric exhaust hood over exhaust blower outlet.
5. Forklift channels must be removed from the base of ERV.
6. Position unit and provide service access to ERV control access door and wheel.
7. Duct work should be installed into roof curb before installing ERV on curb.
8. Roof curb gasket must be applied to all top surfaces of the curb.
9. Position unit on roof curb and provide service access to ERV control access door and wheel.

⚠️ CAUTION! ⚠️
**CAUTION!** Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.

⚠️ WARNING! ⚠️
**WARNING!** Electric shock hazard. Can cause injury or death. Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch(es). Unit may have multiple power supplies.

⚠️ WARNING! ⚠️
**WARNING!** To avoid equipment damage, do not use these units as a source of heat during the construction process. The mechanical components and filters used in these units will quickly become clogged with construction dirt and debris which may cause system damage.

⚠️ WARNING! ⚠️
**WARNING!** The installation of water-source heat pumps and all associated components, parts, and accessories which make up the installation shall be in accordance with the regulations of ALL authorities having jurisdiction and MUST conform to all applicable codes. It is the responsibility of the installing contractor to determine and comply with ALL applicable codes, regulations and ANSI/NFPA No. 70
This Page Intentionally Left Blank
Installation

Fresh Air Hood Assembly (See Figure 1)

1. Attach duct work to duct flanges on roof curb.
2. Remove forklift channels from base of ERV.
3. Set ERV on curb. Verify ERV is positioned on curb properly.
4. Remove barometric exhaust hood from door marked filter access. Install barometric exhaust hood over exhaust blower outlet.
5. Remove ERV control access panel to connect field wiring.
6. Route class II low voltage wire (3 conductor) from thermostat or energy management through small bushing in end panel of ERV. See wiring diagram.
   a. Thermostat (dependent) - connect in parallel at rooftop unit with “G”, “C” and “W”. Then connect matching color at terminal 1, 2, and 3 respectively on ERV circuit board.
   b. Energy Management - provide +24 VAC to “1” and common, 24 VAC to “2” terminals on ERV circuit board.
   c. Thermostat (dedicated) - splice into +24 vac (blue wire) at (control circuit board) transformer connection run wire to “R” terminal. Then run another wire from “G” terminal to ERV (control circuit board) terminal block #1.
7. All electrical connections must conform to any local codes and current National Electric Codes (NEC) and Canadian Electric Codes (CEC). Refer closely to unit wiring diagram in unit and/or in these instructions for proper wiring connections.
8. Refer to the unit nameplate for minimum circuit ampacity (MCA) and maximum overcurrent protection size (fuse).
9. Electrical data is listed on unit rating plate and motor name plates.
10. Connect line voltage power supply to ERV fuse block in control box of unit from disconnect switch. See wiring diagram.
11. Ground unit with a suitable ground connection either through unit supply wiring or an earth ground.
   Note: Unit voltage entries must be sealed weather tight after wiring is complete.
12. Remove motor access panels. Locate belts fastened to blower assembly. Install belt onto motor and blower pulley. Adjust motor sheave to correct blower RPM for CFM and external static pressure requirements. See charts in this instruction. Multiple pulley arrangements are available to meet the entire range.
13. Replace access panel onto the ERV unit and secure.
14. Restore power to unit.
15. Cleanup once unit is operating properly, caulk any open joints, holes or seams to make the units completely air and water tight.
16. Leave this instruction manual with owner or in an envelope to be kept near unit.

Operation
(How It Works)

The unit contains an Energy Recovery Wheel (ERW) that is a new concept in rotary air-to-air heat exchangers. Designed as a packaged unit for ease of installation and maintenance, only the connection of electrical power is required to make the system operational.

When slowly rotating through counter flowing exhaust and fresh
air streams the ERW adsorbs sensible heat and latent heat from the warmer air stream and transfer this total energy to the cooler air stream during the second half of its rotating cycle. Rotating at 50-60 revolutions per minute, the wheel provides constant flow of energy from warmer to cooler air stream. The large energy transfer surface and laminar flow through the wheel causes this constant flow of recovered energy to represent up to 85% of the difference in total energy contained within the two air streams.

Sensible and latent heat are the two components of total heat. Sensible heat is energy contained in dry air and latent heat is the energy contained within the moisture of the air. The latent heat load from the outdoor fresh air on an air conditioning system can often be two to three times that of the sensible heat load and in the winter it is a significant part of a humidification heat load.

During both the summer and winter, the ERW transfers moisture entirely in the vapor phase. This eliminates wet surfaces that retain dust and promote fungal growth as well as the need for a condensate pan and drain to carry water.

Because it is constantly rotating when in the air stream, the ERV is always being cleaned by air, first in one direction then the other. Because it is always dry, dust or other particles impinging on the surface during one half cycle, are readily removed during the next half cycle.

During the heating season, when outdoor air temperatures are below 15ºF, it is recommended to use the (optional) low ambient kit (field installed).

Low Ambient Kit is appropriate for climates with limited HVAC system operation when outdoor temperatures are below 10ºF.

The frost threshold is the outdoor temperature at which frost will begin to form on the ERV wheel. For Energy Recovery Ventilators, the frost threshold is typically below 10ºF. Frost threshold is dependent on indoor temperature and humidity. The table shows how the frost threshold temperatures vary depending on indoor conditions.

<table>
<thead>
<tr>
<th>INDOOR RH AT 70ºF</th>
<th>FROST THRESHOLD TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>0ºF</td>
</tr>
<tr>
<td>30%</td>
<td>5ºF</td>
</tr>
<tr>
<td>40%</td>
<td>10ºF</td>
</tr>
</tbody>
</table>

Because Energy Recovery Ventilators have a low frost threshold, frost control options are not necessary in many climates. Where outdoor temperatures may drop below the frost threshold during the ERV operational hours, exhaust only frost control option is available.

Low Ambient Kit (Optional)
Low Ambient Kit turns off the supply blower when outdoor temperatures fall below the frost threshold. The exhaust only thermostat set points are field adjustable. Supply fan operation is automatically restored when the exhaust air temperature rises above the thermostat set point. Provisions for introducing make-up air into the building when the supply blower is off to avoid depressurization should be considered.

Recovery Wheel Mode
On a thermostat call for blower operation in heating, cooling or continuous blower, the ERW will rotate between fresh air and exhaust air streams. Both the fresh air and exhaust air blowers will also be operating to overcome the air resistance of the ERV.

System Check
1. Disconnect main power.
2. Turn to “Cont” for blower operation on thermostat controlled models.
3. Restore power to unit. Observe ERV wheel rotation and both fresh air and exhaust air blowers will operating.

NOTE: If Low ambient kit is used the jumper between TB37-5 & TB37-6 should be removed. Also if system check out is being conducted at low ambient temperatures, technician should be aware that this kit can cause system not to operate.

4. Verify that the ERV (3) three phase blower motors are phased sequentially ensuring correct rotation and operation.
   a. Disconnect power.
   b. Reverse any two field power leads to the ERV.
   c. Reapply power.
5. Verify that both blower motors are operating under their full load AMP rating (FLA). The FLA can be found on each motor and the unit nameplate.

A. Return Damper Settings
Manually adjust position of field installed dampers to balance air flow.

B. Air Flow / Blower Speed Adjustment
Blower speed selection is accomplished by changing the sheave setting on both fresh air and exhaust air blowers. To set ERV for the required air flow (CFM), the external static pressure applied to the ERV (duct static) must be known. See the CFM vs External Static Pressure chart for the appropriate unit to determine the correct blower RPM for the specified CFM and External Static Pressure.

After blower speed adjustments have been made. Ensure that when the belt is replaced it is tensioned correctly. The motor mounting plate can be adjusted to tension the belt. If using a belt tension checker, adjust the span to the appropriate setting and check the belt deflection force. The belt deflection force should be between 5-8 lbs or the lowest tension at which the
belt will not slip under peak load conditions.

1. Disconnect main power to unit before making adjustment to economizer and/or ERV unit.
2. Replace ERV control access cover.
3. Set thermostat to normal operating position.
4. Restore power to unit.

**Maintenance**

1. All motors use pre-lubricated sealed bearings; no further lubrication is necessary.
2. Make visual inspection of motors, belts and wheel rotating bearings during routine maintenance.
3. Eight pie-shaped segments, are seated on stops between the segment retainer which pivots on the wheel rim and secured to the hub and rim of wheel. Annual inspection of the self cleaning wheel is recommended. With power disconnected, remove ERV access panels (rear) and unplug [J150 & P150] (Refer to wiring diagram in this instruction manual). Remove segment and wash with water and/or mild detergent.
4. To install wheel segments follow steps A through E. **See Figure 2.** Reverse procedure for segment removal.
   A. Unlock two segment retainers (one on each side of the selected segment opening.
   B. With the embedded stiffener facing the motor side, insert the nose of the segment between the hub plates.
   C. Holding segment by the two outer corners, press the segment towards the center of the wheel and inwards against the spoke flanges. If hand pressure does not fully seat the segment, insert the flat tip of a screw driver between the wheel rim and outer corners of the segment and apply downward force while guiding the segment into place.
   D. Close and latch each segment retainer under segment retaining catch.
   E. Slowly rotate the wheel 180°. Install the second segment opposite the first for counterbalance. Rotate the two installed segments 90° to balance the wheel while the third segment is installed. Rotate the wheel 180° again to install the fourth segment opposite the third. Repeat this sequence with the remaining four segments.

**Pulley Kit Installation**

The units are shipped from the factory at the low static setting. Pulley kits are available for the medium and high static settings. To install a pulley kit.

1. Check content of pulley kit, if pulley kit contains:
   a. An adjustable sheave and a fixed pitch pulley then remove belt and both motor and blower pulley
   b. An adjustable sheave then remove the motor pulley.
   c. A fixed pitch pulley then remove the blower pulley.
2. Replace pulley(s) with the pulley(s) from pulley kit. Make sure each pulley is installed with a key. Tighten the set screw on the pulley(s) to 100 in.lb.
3. Install the belt that came with the pulley kit. Tension belt as explained in the blower speed adjustment section.
4. Check the speed of the blower. Adjust the motor sheave to increase or decrease the speed of the blower. See blower adjustment section.
O Series Stand Alone ERV’s for Over and Under Duct Arrangements

Features and Notes:
1. Stand alone design allows higher levels of outdoor air to be introduced into the a/c space.
2. Static test ports provided to verify intake and exhaust CFM.
3. Balancing damper(s) is field provided when connected to ductwork. System will not operate properly without balancing damper.
4. Roof curbs are available for the ERV’s.
5. See blower performance charts for airflow at various E.S.P.
6. Filter rack with 2” pleated filters included.

**ERV Data**

<table>
<thead>
<tr>
<th>ERV Series</th>
<th>CFM Range</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>O11-B</td>
<td>300-1100</td>
<td>56.75</td>
<td>32.13</td>
<td>39.50</td>
<td>11.00</td>
<td>27.00</td>
<td>6.50</td>
<td>10.00</td>
<td>2.56</td>
<td>1.00</td>
<td>11.00</td>
<td>55.00</td>
<td>30.25</td>
</tr>
<tr>
<td>O20-C</td>
<td>1200-2000</td>
<td>54.38</td>
<td>37.25</td>
<td>37.50</td>
<td>12.00</td>
<td>30.00</td>
<td>8.00</td>
<td>4.00</td>
<td>3.63</td>
<td>1.50</td>
<td>20.32</td>
<td>52.75</td>
<td>35.50</td>
</tr>
<tr>
<td>O28-D</td>
<td>1200-2800</td>
<td>60.00</td>
<td>42.63</td>
<td>43.56</td>
<td>14.00</td>
<td>32.00</td>
<td>9.56</td>
<td>4.50</td>
<td>5.31</td>
<td>1.50</td>
<td>18.32</td>
<td>49.50</td>
<td>41.00</td>
</tr>
<tr>
<td>O36-E</td>
<td>2000-3600</td>
<td>60.00</td>
<td>46.69</td>
<td>57.37</td>
<td>16.50</td>
<td>39.50</td>
<td>12.13</td>
<td>6.38</td>
<td>3.59</td>
<td>5.88</td>
<td>18.32</td>
<td>55.75</td>
<td>41.81</td>
</tr>
<tr>
<td>O46-F</td>
<td>3000-4600</td>
<td>60.00</td>
<td>52.69</td>
<td>57.37</td>
<td>16.50</td>
<td>39.50</td>
<td>12.13</td>
<td>6.38</td>
<td>6.59</td>
<td>5.88</td>
<td>18.32</td>
<td>55.75</td>
<td>47.81</td>
</tr>
<tr>
<td>O62-G</td>
<td>4600-6200</td>
<td>72.00</td>
<td>70.88</td>
<td>63.63</td>
<td>19.50</td>
<td>39.50</td>
<td>12.13</td>
<td>6.50</td>
<td>15.69</td>
<td>5.88</td>
<td>18.32</td>
<td>67.75</td>
<td>66.00</td>
</tr>
</tbody>
</table>

**ERV with Horizontal Ductwork**
(balancing damper(s) field supplied)
**ERV UNIT SCHEMATIC DIAGRAM**

**NOTES:**
1. Remove jumper to install field optional low ambient switch.
2. Selective voltage terminals for proper unit voltage.
3. Optional low ambient switch.
4. Optional motorized intake damper.
5. Optional Stop, Start and Jog Control.
6. For energy management systems connect +24v to “G” and common 24v to “C”. 

**COMPONENT CODE**

- A131 Fixed Relay Board
- B26 Motor, Exhaust Air
- B27 Motor, Fresh Air
- B28 Motor, Desiccant Wheel
- B30 Motor, Damper (Optional)
- C23 Capacitor, Wheel Motor
- C25 Capacitor, Exhaust Air
- C26 Capacitor, Fresh Air
- D43 Delay, Cycle Timer (Optional)
- F29 Fuse
- J33 Jack, Cycle Control (Optional)
- J34 Jack, Cycle Control Harness (Optional)
- J48 Jack, Cycle (Optional)
- J46 Jack, Control Box (Fresh Air)
- J50 Jack, Control Box (Wheel)
- J58 Jack, Control Box (Damper)
- J148 Jack, Fresh Air Motor Harness
- J150 Jack, Wheel Motor Harness
- J160 Jack, Exhaust Air Motor Harness
- K94 Relay, On/Off (Optional)
- K163 Contactor, Exhaust Air Motor
- K164 Contactor, Fresh Air Motor
- P33 Plug, Cycle Control (Optional)
- P34 Plug, Cycle Control Harness (Optional)
- P48 Plug, Fresh Air Motor Harness
- P50 Plug, Wheel Motor Harness
- P51 Plug, Exhaust Air Motor Harness
- P58 Plug, Damper Motor Harness
- P148 Plug, Fresh Air Motor
- P150 Plug, Wheel Motor
- P151 Plug, Exhaust Air Motor
- P156 Plug, Damper Motor
- S23 Thermostat - Low Ambient (Optional)
- S26 Switch, Low Ambient (Optional)
- S51 Switch, Door
- S125 Switch, Ambient Override (Optional)
- T27 Transformer, Control
- T28 Transformer, Step-down (Optional)

**WIRE COLOR**

- BK Black
- BL Blue
- GR Green
- GY Gray
- OR Orange
- PK Pink
- RD Red
- WH White
- YL Yellow

---

208/230-1-60

OB-OC
Notes:
1. Remove jumper to install field optional low ambient switch.
2. Step-down transformer assembly for 460/575 volt units.
3. Selective voltage terminals for proper unit voltage.
4. Optional low ambient switch.
5. Optional motorized intake damper.
6. Optional Stop, Start and Jog Control.
7. For energy management systems connect +24v to “G” and common 24v to “C”.

WIRE COLOR
- BK Black
- BL Blue
- GR Green
- GY Gray
- OR Orange
- PK Pink
- RD Red
- WH White
- YL Yellow

COMPONENT CODE
- A131 Fixed Relay Board
- B26 Motor, Exhaust Air
- B27 Motor, Fresh Air
- B28 Motor, Desiccant Wheel
- B30 Motor, Damper (Optional)
- C23 Capacitor, Wheel Motor
- J34 Relay, Cycle Timer (Optional)
- J39 Fuse
- J33 Jack, Cycle Control (Optional)
- J34 Jack, Cycle Control Harness (Optional)
- J40 Jack, Cycle (Optional)
- J46 Jack, Control Box (Fresh Air)
- J50 Jack, Control Box (Wheel)
- J51 Jack, Control Box (Exhaust Air)
- J56 Jack, Control Box (Damper)
- J148 Jack, Fresh Air Motor Harness
- J150 Jack, Wheel Motor Harness
- J151 Jack, Exhaust Air Motor Harness
- J152 Jack, Transformer (High Voltage)
- J160 Jack, Damper Motor Harness
- K94 Relay, On/Off (Optional)
- K163 Contactor, Exhaust Air Motor
- S23 Thermostat - Low Ambient (Optional)
- S26 Switch, Low Ambient (Optional)
- S51 Switch, Door
- S125 Switch, Ambien Over ride (Optional)
- T27 Transformer, Control
- T28 Transformer, Step-down (Optional)
- P33 Plug, Cycle Control (Optional)
- P34 Plug, Cycle Control Harness (Optional)
- P40 Plug, Wheel Cycle (Optional)
- P48 Plug, Fresh Air Motor Harness
- P50 Plug, Driving Air Motor Harness
- P51 Plug, Exhauster Air Motor Harness
- P56 Plug, Damper Motor Harness
- P148 Plug, Fresh Air Motor
- P150 Plug, Wheel Motor
- P151 Plug, Exhaust Air Motor
- P152 Plug, Transformer (High Voltage)
- P160 Plug, Damper Motor
- S23 Thermostat - Low Ambient (Optional)
- S26 Switch, Low Ambient (Optional)
- S51 Switch, Door
- S125 Switch, Ambient Override (Optional)
- T27 Transformer, Control
- T28 Transformer, Step-down (Optional)
- P33 Plug, Cycle Control (Optional)
- P34 Plug, Cycle Control Harness (Optional)
- P40 Plug, Wheel Cycle (Optional)
- P48 Plug, Fresh Air Motor Harness
- P50 Plug, Driving Air Motor Harness
- P51 Plug, Exhauster Air Motor Harness
- P56 Plug, Damper Motor Harness
- P148 Plug, Fresh Air Motor
- P150 Plug, Wheel Motor
- P151 Plug, Exhaust Air Motor
- P152 Plug, Transformer (High Voltage)
- P160 Plug, Damper Motor
- S23 Thermostat - Low Ambient (Optional)
- S26 Switch, Low Ambient (Optional)
- S51 Switch, Door
- S125 Switch, Ambient Override (Optional)
- T27 Transformer, Control
- T28 Transformer, Step-down (Optional)
ERV UNIT WIRING DIAGRAM

Notes:
1. Remove jumper to install field optional low ambient switch.
2. Selective voltage terminals for proper unit voltage.
3. Optional low ambient switch.
4. Optional motorized intake damper.
5. Optional Stop, Start and Jog Control.
6. For energy management systems connect +24v to "G" and common 24v to "C".

Desiccant Wheel for Rooftop Unit
208-230V (1 PH)
ERV UNIT WIRING DIAGRAM

Notes:
1. Remove jumper to install field optional low ambient switch.
2. Step-down transformer assembly for 460/575 volt units.
3. Selective voltage terminals for proper unit voltage.
4. Optional low ambient switch.
5. Optional motorized intake damper.
6. Optional Stop, Start and Jog Control.
7. For energy management systems connect +24v to “G” and common 24v to “C”.

Desiccant Wheel for Rooftop Unit
208-230/460/575V (3 PH)

OB-G
### Mist Eliminator Filter in Intake Hood (1.5HP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>N/A</td>
<td>N/A</td>
<td>1175</td>
<td>1350</td>
<td>1450</td>
<td>1605</td>
<td>1730</td>
</tr>
<tr>
<td>500</td>
<td>N/A</td>
<td>1170</td>
<td>1340</td>
<td>1540</td>
<td>1655</td>
<td>1725</td>
<td>1840</td>
</tr>
<tr>
<td>700</td>
<td>1295</td>
<td>1425</td>
<td>1600</td>
<td>1625</td>
<td>1795</td>
<td>1960</td>
<td>2035</td>
</tr>
<tr>
<td>900</td>
<td>1540</td>
<td>1660</td>
<td>1720</td>
<td>1790</td>
<td>2030</td>
<td>2110</td>
<td>2195</td>
</tr>
<tr>
<td>1100</td>
<td>1785</td>
<td>1915</td>
<td>2025</td>
<td>2185</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Mist Eliminator Filter in Intake Hood (2HP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>1055</td>
<td>1135</td>
<td>1295</td>
<td>1420</td>
<td>1540</td>
<td>1650</td>
<td>1725</td>
</tr>
<tr>
<td>1400</td>
<td>1140</td>
<td>1240</td>
<td>1340</td>
<td>1490</td>
<td>1600</td>
<td>1690</td>
<td>1795</td>
</tr>
<tr>
<td>1600</td>
<td>1200</td>
<td>1330</td>
<td>1460</td>
<td>1565</td>
<td>1645</td>
<td>1740</td>
<td>1830</td>
</tr>
<tr>
<td>1800</td>
<td>1320</td>
<td>1405</td>
<td>1525</td>
<td>1615</td>
<td>1705</td>
<td>1785</td>
<td>1885</td>
</tr>
<tr>
<td>2000</td>
<td>1415</td>
<td>1515</td>
<td>1605</td>
<td>1690</td>
<td>1775</td>
<td>1875</td>
<td>1960</td>
</tr>
</tbody>
</table>

### Barometric Hood, 2” Pleated Filters (1.5HP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>N/A</td>
<td>N/A</td>
<td>1030</td>
<td>1225</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>500</td>
<td>N/A</td>
<td>1025</td>
<td>1180</td>
<td>1265</td>
<td>1425</td>
<td>1535</td>
<td>N/A</td>
</tr>
<tr>
<td>700</td>
<td>1120</td>
<td>1190</td>
<td>1340</td>
<td>1445</td>
<td>1540</td>
<td>1646</td>
<td>1720</td>
</tr>
<tr>
<td>900</td>
<td>1285</td>
<td>1525</td>
<td>1500</td>
<td>1575</td>
<td>1670</td>
<td>1785</td>
<td>1865</td>
</tr>
<tr>
<td>1100</td>
<td>1570</td>
<td>1665</td>
<td>1670</td>
<td>1775</td>
<td>1860</td>
<td>1920</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Barometric Hood, 2” Pleated Filters (2HP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>1010</td>
<td>1195</td>
<td>1350</td>
<td>1445</td>
<td>1580</td>
<td>1685</td>
<td>1735</td>
</tr>
<tr>
<td>1400</td>
<td>1125</td>
<td>1315</td>
<td>1435</td>
<td>1545</td>
<td>1620</td>
<td>1730</td>
<td>1800</td>
</tr>
<tr>
<td>1600</td>
<td>1185</td>
<td>1370</td>
<td>1500</td>
<td>1610</td>
<td>1695</td>
<td>1790</td>
<td>1965</td>
</tr>
<tr>
<td>1800</td>
<td>1305</td>
<td>1485</td>
<td>1600</td>
<td>1685</td>
<td>1781</td>
<td>1965</td>
<td>2030</td>
</tr>
<tr>
<td>2000</td>
<td>1410</td>
<td>1550</td>
<td>1670</td>
<td>1765</td>
<td>1855</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Notes:**
1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only
**Blower RPM for OD**

### SUPPLY

<table>
<thead>
<tr>
<th>CFM</th>
<th>External Static Pressure (in water)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1200</td>
<td>N/A</td>
</tr>
<tr>
<td>1600</td>
<td>750</td>
</tr>
<tr>
<td>2000</td>
<td>900</td>
</tr>
<tr>
<td>2400</td>
<td>1005</td>
</tr>
<tr>
<td>2800</td>
<td>1125</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>CFM</th>
<th>External Static Pressure (in water)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1200</td>
<td>750</td>
</tr>
<tr>
<td>1600</td>
<td>870</td>
</tr>
<tr>
<td>2000</td>
<td>1015</td>
</tr>
<tr>
<td>2400</td>
<td>1125</td>
</tr>
<tr>
<td>2800</td>
<td>1250</td>
</tr>
</tbody>
</table>

**Notes:**
1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

### Blower RPM for OE

### SUPPLY

<table>
<thead>
<tr>
<th>CFM</th>
<th>External Static Pressure (in water)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>2000</td>
<td>725</td>
</tr>
<tr>
<td>2400</td>
<td>800</td>
</tr>
<tr>
<td>2800</td>
<td>900</td>
</tr>
<tr>
<td>3200</td>
<td>1000</td>
</tr>
<tr>
<td>3600</td>
<td>1055</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>CFM</th>
<th>External Static Pressure (in water)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>2000</td>
<td>750</td>
</tr>
<tr>
<td>2400</td>
<td>820</td>
</tr>
<tr>
<td>2800</td>
<td>925</td>
</tr>
<tr>
<td>3200</td>
<td>1035</td>
</tr>
<tr>
<td>3600</td>
<td>1100</td>
</tr>
</tbody>
</table>

**Notes:**
1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

---

**RPM Range**

- **Low**: 750-975 Standard Unit
- **Medium**: 1000-1315 Optional Kit
- **High**: 1311-1708 Optional Kit
## Blower RPM for OF
### SUPPLY

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>965</td>
<td>1085</td>
<td>1150</td>
<td>1230</td>
<td>1295</td>
<td>1345</td>
<td>1420</td>
</tr>
<tr>
<td>3400</td>
<td>1035</td>
<td>1145</td>
<td>1250</td>
<td>1290</td>
<td>1335</td>
<td>1415</td>
<td>1475</td>
</tr>
<tr>
<td>3800</td>
<td>1120</td>
<td>1245</td>
<td>1285</td>
<td>1315</td>
<td>1440</td>
<td>1470</td>
<td>1535</td>
</tr>
<tr>
<td>4200</td>
<td>1215</td>
<td>1305</td>
<td>1355</td>
<td>1430</td>
<td>1485</td>
<td>1530</td>
<td>1595</td>
</tr>
<tr>
<td>4600</td>
<td>1300</td>
<td>1375</td>
<td>1450</td>
<td>1460</td>
<td>1540</td>
<td>1590</td>
<td>1650</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>1010</td>
<td>1105</td>
<td>1195</td>
<td>1255</td>
<td>1300</td>
<td>1375</td>
<td>1415</td>
</tr>
<tr>
<td>3400</td>
<td>1100</td>
<td>1190</td>
<td>1250</td>
<td>1320</td>
<td>1370</td>
<td>1410</td>
<td>1480</td>
</tr>
<tr>
<td>3800</td>
<td>1185</td>
<td>1245</td>
<td>1360</td>
<td>1410</td>
<td>1440</td>
<td>1475</td>
<td>1540</td>
</tr>
<tr>
<td>4200</td>
<td>1240</td>
<td>1355</td>
<td>1425</td>
<td>1465</td>
<td>1530</td>
<td>1590</td>
<td>1630</td>
</tr>
<tr>
<td>4600</td>
<td>1345</td>
<td>1410</td>
<td>1485</td>
<td>1520</td>
<td>1585</td>
<td>1650</td>
<td>1700</td>
</tr>
</tbody>
</table>

Notes:
1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

### Barometric Hood, 2" Pleated Filters (SHP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>815</td>
<td>900</td>
<td>975</td>
<td>1045</td>
<td>1085</td>
<td>1125</td>
<td></td>
</tr>
<tr>
<td>3400</td>
<td>880</td>
<td>940</td>
<td>1015</td>
<td>1080</td>
<td>1135</td>
<td>1175</td>
<td>1215</td>
</tr>
<tr>
<td>3800</td>
<td>915</td>
<td>975</td>
<td>1045</td>
<td>1125</td>
<td>1150</td>
<td>1195</td>
<td>1250</td>
</tr>
<tr>
<td>4200</td>
<td>975</td>
<td>1045</td>
<td>1085</td>
<td>1175</td>
<td>1250</td>
<td>1260</td>
<td>N/A</td>
</tr>
<tr>
<td>4600</td>
<td>1000</td>
<td>1075</td>
<td>1165</td>
<td>1200</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Blower RPM for OG
### SUPPLY

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4600</td>
<td>825</td>
<td>915</td>
<td>1000</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
</tr>
<tr>
<td>5000</td>
<td>890</td>
<td>975</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
</tr>
<tr>
<td>5400</td>
<td>925</td>
<td>1025</td>
<td>1085</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>1280</td>
</tr>
<tr>
<td>5800</td>
<td>975</td>
<td>1025</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>6200</td>
<td>1025</td>
<td>1120</td>
<td>1170</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4600</td>
<td>825</td>
<td>915</td>
<td>1000</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
</tr>
<tr>
<td>5000</td>
<td>890</td>
<td>975</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
</tr>
<tr>
<td>5400</td>
<td>925</td>
<td>1000</td>
<td>1085</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>1280</td>
</tr>
<tr>
<td>5800</td>
<td>975</td>
<td>1025</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>6200</td>
<td>1025</td>
<td>1120</td>
<td>1170</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:
1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

### Barometric Hood, 2" Pleated Filters (SHP)

<table>
<thead>
<tr>
<th>CFM</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.25</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4600</td>
<td>825</td>
<td>915</td>
<td>1000</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
</tr>
<tr>
<td>5000</td>
<td>890</td>
<td>975</td>
<td>1025</td>
<td>1100</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
</tr>
<tr>
<td>5400</td>
<td>925</td>
<td>1000</td>
<td>1085</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>1280</td>
</tr>
<tr>
<td>5800</td>
<td>975</td>
<td>1025</td>
<td>1140</td>
<td>1170</td>
<td>1240</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>6200</td>
<td>1025</td>
<td>1120</td>
<td>1170</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
ClimateMaster, Inc.

LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY

This Limited Express Warranty is given in lieu of all other warranties. If, after installation, the equipment is not performing as specified in the literature or as expected, contact ClimateMaster, Inc. for advice or service. This warranty shall not apply to such damages, defects, or failures of the equipment which have not been properly installed, maintained, used, or repaired by ClimateMaster, Inc. or its authorized dealer, contractor, or service organization. This warranty is the sole and exclusive remedy for any claims of breaches of this warranty.

ClimateMaster, Inc. • 2700 S.W. 48th Street • Oklahoma City, Oklahoma 73129 • (405) 246-6000

Please refer to the CM Installation, Operation, and Maintenance Manual for operating and maintenance instructions.
Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Item</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/15/16</td>
<td>Text</td>
<td>Updated</td>
</tr>
<tr>
<td>04/04/14</td>
<td>Logos - page 1 &amp; 16</td>
<td>Updated</td>
</tr>
<tr>
<td>11/21/13</td>
<td>Created</td>
<td></td>
</tr>
</tbody>
</table>